Comprehensive Evaluation

Of Maine's Economic Development Incentive Programs

Department of Economic & Community Development

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DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT AND THE STEERING COMMITTEE

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Executive Summary

Introduction

The public sector can directly influence private sector investment and location decisions through the use of incentives, credits, and other programs aimed to enhance a community's business competitiveness. However, no incentive can completely change the nature of a community's strengths and weaknesses. Indeed, incentives often work best when augmenting a community's already known advantages and mitigating any shortcomings, to the extent possible. This is true whether the program is designed to attract investment in from outside, to assist new innovation companies, or to retain companies within the State of Maine.

To this end, the State of Maine has developed a suite of policy and investment tools aimed at attracting investment and at meeting the State's overall economic development goals. These tools vary in influence due to changing economic conditions and specific requirements of businesses. These needs and targets change over time, and the toolset must be evaluated and updated accordingly. This is the rationale and the purpose with this report.

Many communities, however, disregard the costs and effectiveness of different economic development programs, ignoring the importance of a thorough evaluation. They may not even consider the possibility to adjust, modify or alter certain State programs or incentives.

The State of Maine is establishing a best practice example by requesting a comprehensive R&D Biennial Progress Report, as well as an Evaluation of Investments in Economic Development, due in 2014. If approved, subsequent evaluation reports will be due in 2016 and 2018. Also due in 2018 is a Comprehensive Evaluation of Investments in Research and Development report covering six years.

Methodology

The present report has been constructed to meet the Maine Legislature's requirement to examine the effectiveness of economic development programs on a biennial basis. This has been accomplished through performing the following analyses and actions:

- Reviews of the previous studies performed for the State of Maine on the use and effectiveness of its programs;
- Interviews with public sector entities and their partners responsible for the administration of the State's various economic development programs;
- Interviews with a sample of private sector companies who have received benefits and assistance from the State;
- Benchmarking the State of Maine's natural competitiveness against several of its peer states, both in terms of basic location fundamentals and of the incentive and credit tools available;
- Developing a Location Quotient Analysis to identify and examine the trends of the state's primary industries;

- Data collection through a rigorous survey collecting information of program usage, increased hiring, salary rates, capital investment, and return on investment to the State (recipient lists provided by program administrators where those lists were not considered confidential);
- Cost-benefit analysis of survey data by program (for all State programs where more than 15 responses were received for that program); and
- Examination of annual reports (for those programs that generate annual reports and provided those reports along to the consultant team).

Note that the survey indicated above has created a means for direct reporting on behalf of the private sector companies who have benefitted from use of the State's economic development programs. Companies do report to program administrators where required. However, this data is regarded as confidential by program administrators based on the same language that requires its collection. As a result, program administrators are often unwilling or unable under state law to share this reporting with third-party evaluators or even with other branches of the State Government. Data on company performance is collected, but it is stored within the respective government agencies and is not readily shared.

While not within the scope of the current project, this survey collected data that was not available through other means and was critical to the success of the cost-benefit analysis.

Findings

- Each of the State's programs is run independently and within a host of departments and organizations. This results in the following difficulties:
    - Inability for potential recipients to identify programs for which they qualify;
    - Challenging inter-program coordination (potential failed handoffs and difficult networking situation);
    - Concerns over program-based incentive philosophy rather than business-based problem solving philosophy (focus in the wrong direction);and
    - A philosophy that results in state administrators introducing companies to individual programs rather than holistically solving business problems.
- In many cases, a strict level of confidentiality is required by legislative mandate. This causes the data on program usage and the performance of participating companies to be held in confidence without ability to for a third party to analyze and without the ability to hold such information centrally.
- While the State's programs to respond to the individual mandates of the entities that manage them, the effectiveness of the incentive programs would be greatly enhanced by clarification of their role in an overall economic development strategy for the state.
    - A comprehensive framework for the state's vision, goals, advantages and tools would provide a clear framework for the role of incentive and related tools.
    - Such a framework would also by its nature force a statewide conversation on the complete needs of the business community. This would provide an ideal framework for

developing tools that comprehensively respond to business needs rather than to the mission of an individual organization or department of state government.

- Along these lines, the State's current initiatives align relatively closely to the seven sectors approach adopted in the 1990's. The initial rationale for the sector focus was based on the awareness that the state performs best when it is nurturing complete economic networks, and not just individually successful companies. However, there are several risks in such an approach:
    - Misperceiving the state's relative advantages or disadvantages for a particular sector;
    - Backing an industry sector at the wrong point in its market cycle;
    - Not having the ability to shift funding from one industry sector to another as opportunities arise; and
    - Lacking tools to foster new sectors or opportunities that fall outside of the sector system.

Recommendations

The analysis suggests a series of small and large improvements that may be made to Maine's Economic Development programs that would enhance both effectiveness and transparency. It is important to note that any companies already participating in existing programs should be assured that their benefits will continue, and that changes will only affect future awards. The most critical recommended changes are:

- Developing a new or existing entity for the application for, coordination of, and reporting for all incentives and credits;
- Developing Central Storage for Incentive Report Documentation; and
- Adjusting program legislation to allow sharing of data with contracted third parties for monitoring and evaluation.

Above all, the State should create or repurpose a function or organization whose responsibility it is to work with new, growing, and relocating companies to better understand their motivations, needs, and the ways in which the State of Maine can be a welcome and effective partner.

With regards to specific programs, the State of Maine should:

- Adjust incentives focus from the 7 sectors to a philosophy of supporting all growth regardless of sector;
- Continue to fund the Pine Tree Development Zone program and re-establish funding for York and Cumberland Counties;
- Consolidate the Maine Made - Maine Products Marketing Program into the broader Maine Tourism Marketing Promotion Fund;
- Eliminate the Maine Micro-Enterprise Initiative Fund due to inactivity;
- Consolidate the MTI Cluster Initiative Program into other MTI active programs;
- Likewise, the North Star Alliance Cluster Award Matching Fund is inactive - consolidate any remaining funds from this program into MTI active programs;

- Consolidate the various sector-based Sales Tax Exemptions into an overall, flexible sales tax exemption program with no sector focus;
- Eliminate the Shipbuilding Facility Credit and incorporate into the broader BETR program;
- Eliminate the Jobs and Investment Tax Credit due to inactivity and redundancy to other programs;
- Combine the High-Technology Investment Tax Credit, Super Credit for Substantially Increased Research and Development, and Research Expense Tax Credit into one program;
- Re-examine the Commercial Facilities Development Program and Speculative Industrial Buildings Program to change the funding for these into a program that can more directly address the needs of Rural Maine; and
- Re-examine the Agricultural Marketing Loan Fund, Maine Farms for the Future Grants, Potato Marketing Improvement Fund, and Agricultural Development Grant Program to find more robust and innovative ways to nurture Maine's Agricultural sectors.

In addition to this, states and regions can most directly advance their chances for economic success by providing programs for continuing education and for specialized training. Aside from the Maine Quality Centers, these programs are not in scope for the current project, but should be a considered as integral to the state's economic development efforts.

We also suggest that the State should:

- In addition to the sector-specific programs, provide a series of programs that are available more broadly and which may be utilized by companies who are looking to start up, grow, or locate in Maine, regardless of industry or technology sector;
- Within those programs that are sector and technology focused, allow for the transference of resources between programs as markets grow and wane in activity;
- Continually evaluate the state's competitive advantages and disadvantages to ensure that the programs and their efforts are properly matched to Maine real and realistic opportunities;
- Consider adding clawbacks to certain programs to ensure companies pay back the money with penalties if they do not fulfill their obligations based on program requirements;
- Consider requiring or enforcing annual purges for non compliant programs; and
- Consider adding or modifying the duration that companies are eligible for the incentive.

Follow On Actions

As a means for implementing a general recalibration of the State's economic development and research & development, we propose the following measures:

1. Develop a coordinating team of individuals to include members of the Executive branch, the Legislature, and selected stakeholders to facilitate conversation and action on economic development and research & development activities.

2. Confirm the State's economic development goals and overall strategy, including a plan for coordinating business establishment, growth, retention, and attraction. This plan should

contain a firm understanding of the State's advantages and disadvantages, the profiles of business types that this naturally attracts, and the motivations behind their location decisions.

3. Review the list of program consolidation, expansion, reconfiguration, and elimination recommendations made above. Work with the State legislature to make appropriate program changes and also to implement new mechanism for reporting and for information sharing between and among responsible parties within the government of the State of Maine

4. Develop (or alter) enabling legislation for the new (or repurposed) Centralized Coordinating Agency for economic development activities and investments.

Each of the above findings and recommendations is addressed in further detail in the following pages. We encourage the reader to read and absorb all of the facts and nuances to better understand how the State's investments perform at present, and suggestions for how they made be improved over time.

Introduction

History of the Science and Technology Plan

The Maine Innovation Economy Advisory Board (MIEAB) was established in 2007 by Title 5, section 12004-I, subsection 6-G to coordinate the State's research and development activities and to foster collaboration among its higher education and nonprofit research institutions and members of the business community. MIEAB replaced the Maine Science and Technology Advisory Committee (MSTAC), which had been established by Executive Order in 2003 and generated the 2005 Science and Technology Plan. The original Science and Technology Plan was produced in 2001 by the Science and Technology Foundation.

Starting in 2010, the advisory board was tasked with developing a Science and Technology Plan beginning in 2010 and then every five years thereafter. MIEAB also was tasked with submitting yearly Science and Technology Plan updates. It should be noted that these reports have not been completed to this point.

Moving Forward – A New Plan for Evaluation of State Incentives

The Investment Consulting Associates team (Team) was retained by the Maine Department of Economic and Community Development (DECD) to generate a new series of action plan reports to examine the state's investments in both economic development and in research & development. One series of reports is focused specifically on Research and Development (R&D) in the State of Maine and the other more generally on Economic Development in the state. Biennial progress reports are due in 2014, 2016, and 2018 and will be based on the format of the 2010 Science and Technology with some modifications and additions. Major changes include:

- Moving definitions, abbreviations, and other general support sections to the appendices;
- Separating R&D analysis and recommendations into a separate report from Economic Development analysis and recommendations (required by the RFP); and
- Providing more significant, refined, and implementable action items.

The body of the current report contains summaries, findings and action items, while the appendices contain the full research behind the concepts presented. This revised format was approved by the steering committee and is intended to bring focus to:

- What is working and what does not work;
- What changes need to be made or what actions need to be performed;
- Who will perform future activities; and
- When these activities should be completed.

Vision

Incentives and special economic zones are among the most visible economic development tools available to attract new companies, expansions, or other forms of domestic and foreign direct investment. These tools complement a state or community's innate characteristics to enhance the overall competitiveness of the business climate. A successful competitive business climate positively contributes to a state's domestic economic development goals through job creation, capital investment, knowledge, and R&D creation, with spill-over effects on quality-of-life as a whole. Quality-of-life is important if and when it improves particular businesses' access to qualified workforce and improves the ability to attract workforce with skills not present in the area.

The benefits of investments in the abstract are highlighted and frequently cited by business owners, policy makers and politicians, yet less is known about how the benefits of these investments compare either directly or indirectly to the costs of incentives awarded to attract the investment. Greater knowledge of the role and efficiency of incentives to attract investment is required to gain insight into policy effectiveness and the return on investment for taxpayer's money. This is even more urgently required when the situation is viewed against the background of increased public scrutiny of tax expenditures in general and corporate incentives in particular.

Governments are often pressured to offer incentives because their competitors do, leading to what some have called "bidding wars." The current debate about this escalating competition has been reflected at numerous International Economic Development Council (IEDC) conferences and in a three-stage cycle of articles in *The New York Times* in 2012.

Today there are four main perspectives on investment incentives: no impact, great impact, a blended perspective, and as a price of doing modern business. The academic view normally claims that incentives have little or no effect on investment decisions and their location. A more industry-based perspective, however, often asserts that site selection and investment decisions rely heavily on incentives. Between those two extremes is a more mixed and balanced view that claims that incentives do matter - but within a larger context of factors like competitiveness of business environment, industry, business activities of investment, investment motives, availability of labor and resources, access to market, etc.

The price of doing modern business perspective combines the company perspective and the public perception. The companies cannot be blamed for seeking deals to make their business more viable and the public recognizes this. The public feels the state needs to offer incentives out of necessity, but they are not always viewed positively. In fact, incentives become an accepted means of differentiation, and – if used wisely – can provide a useful tool for developing relationships. Ultimately, there is a fairly fixed set of reasons for governments to provide incentives to attract investment:

- To overcome a competitive weakness such as high costs or weak business climate (so-called site-equalization outlays);
- To promote investment in deprived areas by offering incentives;

- To attract particular industries by offering specific incentives;
- To correct for market failures in the provision of capital and risk-taking of companies; and
- To change the image of a location to convey a more advantage-business and marketable message.

Incentive policies that aim to attract specific industries or diversify a region's economy tend to be more effective, as well as those that facilitate start-up investments. In contrast, incentives policies that focus on attracting investment in deprived areas are less effective since many firms do not want to be held responsible for economic development policies that aim to create jobs in regions that do not have a clear value proposition for specific industries.

In addition, incentives and other such programs tend to be more effective when companies have already more or less reached the final stages of a site selection process and have shortlisted cities or regions that have a comparable business environment. In these cases incentives can play a crucial role in facilitating the final decision in favor of one location over another.

Finally, incentives work best when responding to or addressing a holistic business situation and in support of a well-defined economic development strategy. Rather than working to select component programs from a series of menus, offered by a range of government agencies, programs work best when they originate as a response to a business need. Likewise, a program of dissociated and uncoordinated incentive programs is often a reflection of departmental level reaction, rather than an effort to build strategic advantage.

Companies also regard well-integrated, business-based incentive and assistance strategies as a positive reflection of sound and business friendly policy. A long menu of narrow programs often provides many tools without providing true solutions for the problem at hand. A short list of business-based tools often provides the flexibility required to address a wider range of common needs.

Even so, some firms increasingly view incentives as less important in realizing their investment decisions, but focus much more on talent availability, expertise, capabilities and level of education of the regional labor force as well as the stability of government policies. However, for those investments driven by efficiency-seeking and risk mitigation motives (e.g., cost reduction and managing risk), incentives can play a larger role than investments that are driven by market potential or resource availability (i.e., natural, talent, etc.). In the latter two cases, customer potential and the availability of resources are the key driving factors of an investment.

To sum up, incentives and credits are part of the overall business environment and are often (and should be) regarded as the end game. Incentives can and often do affect the decision when the final three or four locations are under consideration however they rarely are a key driver for the location decision. Incentives are, in most cases, not the key driver of an investment location decision by a company. They are a useful tool, but meaningless if business necessities are not met first. Depending upon the industry and type of business activities, companies explore multiple location drivers or factors before they take a final decision on where to invest.

A Note on Transparency

As mentioned above, further public and corporate attention has been focused on tax credits, grants and other incentives. As a result, governments around the world over are trying to determine and then demonstrate the true effectiveness of these programs. They want to know what works, what does not, and how to measure the return on the investment. This information provides critical guidance at a time when governments are increasingly mindful of budgets and want to maximize results to their communities and their electorate.

At the same time, companies and the general public alike are seeking clarity into how incentives are awarded and the mutual responsibilities that such programs require from both the granting community and the receiving company. Such transparency allows frank discussion on business needs and how the public sector can help bring in attractive companies. It can also help to build an understanding of the expectations made of companies as they invest in a community.

The current study team has worked with many governments to comprehensively evaluate the economic development incentive programs used to attract and retain companies. Each project has been a robust review of costs, benefits, program goals, and outcomes. Important as well are proper institutional alignment, clear eligibility criteria development and monitoring and evaluation mechanisms that are workable. Additionally, the Team has produced a transparency index that uses a global incentives deal database to rank US states on the level of disclosure and the availability of information on how awards are granted.

Lessons learned from both areas are included throughout this and follow-on reports. This will also result in suggested best practices for the State and for its communities on how construct and evaluate incentive programs that work effectively, are transparent in their operations, and which provide clear means for compliance.

As mentioned earlier, companies participating in Maine's various programs appear to be in compliance for the most part. However, regulatory hurdles enshrined in program legislation prohibit or impair the ability for state and third-party evaluators to view the data collected in these efforts. Such legislation must be changed for state policy makers to have a full picture of program effectiveness.

Analysis and Findings

Introduction to Additional Analyses

Two comprehensive State incentive evaluation reports were submitted to the Department of Economic and Community Development (DECD) and the Steering Committee in February 2014. Following Maine's legislative requirements, a clear distinction was made between Economic Development and R&D related incentive programs. Despite common characteristics, both reports compiled a set of distinctive recommendations based on an extensive number of stakeholder interviews, two customized surveys, literature and desk research, as well as on analytical cost benefit models. The results and key findings of both studies have been presented to the legislature and both reports were made publicly available.

The current overall evaluation report leverages the results and insights from the evaluations of the research and development programs and economic development programs, and also integrates additional benchmark and evaluation methods. This results in a comprehensive study that provides the State of Maine with the tools required to determine if it is getting the best return on its investments.

The matrix below illustrates three additional benchmarking efforts undertaken by ICA's team of advisors and analysts. It is essential for Maine's policy makers, economists and program administrators to understand if and to what extent programs are being evaluated. Positioning Maine's competitiveness and its incentive offerings in a wider context exemplifies the State's relative strengths and weaknesses. Reviewing successful incentive programs from other States, either general by nature or industry specific, also allows the state to learn from other programs and to assimilate powerful elements.

	Internal	External
Competitiveness Benchmark	-	Benchmarked the business climate and competitiveness indicators of 3 of Maine's largest metropolitan statistical areas (MSA's) with 22 other MSA in 14 different US States
Incentive Program Benchmark	Evaluation and benchmark of Maine's 58 active incentive programs based on a batch of qualitative and quantitative indicators	Compared Maine's incentive programs with incentive programs of 14 other US States (note: same States used as in the Competitiveness Benchmark)

From a corporate perspective, these benchmarks simulate the decision making process of corporate investors. In the initial stage of location and site selection projects, different communities are analyzed, benchmarked, and ranked. The importance of location factors fluctuate per industry sector and business activity. This is simulated in this external competitiveness benchmark too by using a reverse site selection approach. This approach allows the team to differentiate the model by varying with weights allocated to location factors. In other words, key drivers within certain industries (such as labor costs or quality of infrastructure) are accentuated.

Once corporate investors have reduced the number of communities, they typically explore for different incentive opportunities offered in the respective States. At this stage, all communities that are still *in the game* are considered more or less qualified and providing the right type of incentives becomes increasingly important. The External Program Benchmark analysis first shows a general overview of the programs offered for each of the 14 US States as well as a more industry specific assessment of incentive programs with a special focus on Maine's seven priority sectors. As a result of this benchmark exercise, six best practice incentive programs have been selected as case studies.

When corporate investors decide that Maine is among the finalists, they seek to understand which programs they might qualify for. The team evaluated Maine's programs on criteria such as transparency, traceability, openness and compliance, evaluation and monitoring protocol and accessibility. Further details on the approach and techniques for each of the three benchmark

assessments as well as the results and recommendations are provided in the remaining part of this section. Specific program details and modeling results can be found in Appendices D-I.

Programs Removed from Analysis

Due to nature of the program, the following programs have been removed from our evaluation process. The decision to do so was based on conversations with DECD and the program administrators. These programs are typically either federally funded (and therefore not state-level programs) or are not direct subsidies or credits:

- Municipal Tax Increment Financing (MTIF);
- Business Ombudsman;
- North Star Alliance (discontinued);
- Maine Microenterprise Program (temporarily suspended);
- Maine Made;
- Economic Development Program Community Enterprise Grant Program;
- Community Enterprise Grant Program;
- Downtown Revitalization Grant Program;
- Communities for Maine's Future;
- Maine Biomedical Research Fund (temporary suspension); and
- Maine Marine Research Fund (temporary suspension).

Previous Incentive Cost Benefit Findings

In the previous report the team provided comprehensive quantitative cost benefit reviews of four of Maine's incentive programs to assess whether or not these programs yield any positive returns. Despite the fact that the State of Maine is currently offering a suite of close to 60 programs, there were several reasons behind the fact that four specific incentive programs were subject to such an extensive cost benefit evaluation.

First, a cost benefit evaluation requires substantial data input for multiple years. Potential costs and benefits of a program occur over a longer time period. In quite a few instances there was a lack of quantitative data and for other programs the data was not consistently gathered or was outdated, which would make this type of evaluation a meaningless exercise.

Secondly, a cost benefit evaluation integrates finance related data such as weighted average cost of capital, operating expenses such as labor cost and taxes as well as economic cash flow measures such as cost of sales and local supplies of goods and services. A combination of interviews, annual reports and a dedicated survey was used to obtain this information, indicating that a certain response level, scale and significance was required.

Thirdly, by their nature, certain incentive programs (such as assistance programs or the ombudsman) are less suitable for a comprehensive cost benefit evaluation, because the perceived incremental net benefits are less tangible. In other words, it is impracticable to claim additional investment or job creation effects as results of these broad programs.

Finally, the majority of the 58 incentive programs were too small to evaluate in terms of public funding or usage levels, with too little evaluation reporting available to conduct a full CBA model.

Thus the four programs fully evaluated were:

1. Business Equipment Tax Reimbursement (BETR);
2. Development Loans by MTI;
3. PTDZ; and
4. FAME's Commercial Loan Insurance.

The Cost Benefit Analysis full writeup can be found on the January report titled *Comprehensive Evaluation of Maine's Economic Development Incentive Programs* on the CD on Appendix L of this report.

Previous Annual Report Findings

In the previous report, the team provided a qualitative review of four of Maine's incentive programs based on data obtained from annual reports. The team abbreviated the comparison because of the short time between receipt of many of the annual reports and the due date of the report.

As noted in the January 31, 2014 reports, the team reviewed annual reports for four Maine incentive programs. Some annual reports were provided in a timely manner at the first request, while others have remained more elusive. In some cases, there has been silence even after several attempts to contact the administering organization.

The team reviewed the following programs using this process:

- The Loring Development Fund;
- Target Technology Incubator (R&D specific);
- Maine Tourism Marketing Promotion Fund (MTMPF); and
- Maine Manufacturing Extension Partnership (MEP).

The Annual Report Findings full writeup referenced in this section can be found on the January report titled *Comprehensive Evaluation of Maine's Economic Development Incentive Programs* on the CD on Appendix L of this report.

Updated Annual Report Findings

The team updated annual report findings based on additional reports obtained after the original January submission deadline. Not only were the annual reports difficult to obtain in a timely manner, the quality and depth of data presented in the reports varied greatly, resulting in difficulty comparing the effectiveness of the programs.

A solution for the data problem would require state workers and other program administrators to fill out a spreadsheet for each program each year with complete and comparable information. Going forward, having comparable data for all programs will allow evaluators to perform a quantitative effectiveness assessment. Current data from the annual reports makes this assessment impossible.

Recommendations that come from this analysis focus on improving program and data transparency and on data collecting and reporting procedures.

The team attempted to address concerns noted in this section by sending a spreadsheet of desired information to each program administrator. Results obtained from that query were varied. More details on this data gathering effort can be found in the Internal Program Benchmarking section of this report as well as Appendix E.

Maine's Internal Program Benchmark

Our team of analysts evaluated Maine's active incentive programs, by carefully reviewing existing annual reports and also incorporating program administrators' responses to ICA's additional information request. Inactive or suspended programs were omitted, as were programs that are funded and monitored at federal level. In all, 11 programs were excluded and a total of 49 active incentive programs monitored and administered at State level were evaluated and benchmarked.

In general, significant differences exist in reporting standards, transparency and quality of third-party evaluation practices among the active programs. Ideally, if the annual evaluation reporting is well designed, well defined, and customized to the specific program, then a more quantitative assessment and evaluation to overall economic development outcomes is more practicable.

The fact that these 49 programs are administered and governed by multiple organizations - such as the DECD, MTI, Maine Revenue Services (MRS), FAME, Small Business Administration (SBA) - adds to the complexity. But despite these challenges, there are also similar characteristics on which a useful evaluation can be conducted. These characteristics can be classified into four distinct categories:

- Transparency of annual evaluation reporting and protocol;
- Inquiry Handling and Significance for Maine's economy;
- Openness and Compliance; and
- Traceability and online accessibility of programs.

Each of the 49 programs has been uniformly scored by evaluating a combination of qualitative and quantitative sub-factors within each of the four categories above. Appendix F provides a complete overview of the methodology used to evaluate and finally rank the different programs. Below are the highlights of the results translated into a set of policy recommendations.

Annual evaluation reporting and protocol

47 out of the 49 programs provided an annual report in some format. However, we also found that only 4 of the annual programs reports were published in such a way that they were easily accessible. These four programs are the Manufacturing Extension Partnership program (MEP), Maine Tourism Marketing Promotion, Maine Quality Centers and Maine International Trade Center. Results of 14 other incentive programs were published but not in a logical way, or the reports were not easily obtainable. In other words, 29 programs do have annual reporting in place but do not readily share the results in the public domain.

Involvement and Significance for Maine's economy

Upon request for information, we received 29 formal data responses with complete or partial information and 6 responses with limited or no information. This means that for 14 out of 49 programs the analysis team received no reply whatsoever.

The PTDZ and BETR programs serve as best practices with regards to responsiveness. Both provided the most important economic development indicators such as program beneficiaries, jobs created, jobs retained and the amount of capital invested. Moreover, statistics were consistently available for multiple years, making trend analysis possible. The PTDZ program has also a measurable and significant impact on Maine's overall economy results in the maximum score of 6 stars. In total, 14 programs responded in such a way that all or most of the economic development indicators were covered, while 7 programs were able to partly provide the requested information.

Out of the 31 smaller funded programs (i.e. less than $2 million), 8 provided complete annual data reporting, while for the remaining 23 programs no or only partial data was provided. In addition to reporting concerns, these 23 programs represent a significant risk of fragmentation, redundancy, and inefficiency.

Openness and Compliance

Openness of program achievements provides the public with a level of confidence that tax revenues are being used to provide tangible economic benefits. However, company sensitive information such as revenue and tax payments must remain confidential for taxpayer privacy reasons. A minimum reporting of aggregated results will add to the desired levels of openness and transparency. Following to our request, confidentiality was stated as a reason for not being able to provide the requested data for 20 programs.

The analysis shows that in 65% of the program admissions, the companies are tracked throughout the whole admission and compliance process. PTDZ and MTI's Equity Capital Fund use performance measurements and clawback provisions when companies fall short and do not comply with their original estimates. In 9 other programs (mostly MTI and FAME programs), there are results-based performance indicators on which awards and or limitations in funding are based. In 29 out of 49 programs there were no direct result based awarding measurements, nor clawback provisions found.

Traceability and online accessibility of programs

4 out of the total of 49 programs qualified for the maximum score of 3 stars for traceability and online access. These programs, Maine Quality Centers, AMLF, Maine New Markets Tax Credit Program and TechStart Program from the MTI were most transparent on the benefits, eligibility criteria, and responsibilities. This review used the following indicators:

- Is there a program website discoverable with an internet search?
- Does it include annual reports in a readily findable location?
- Does the website include application process and forms?
- Are the benefits of the program stated clearly?
- Are the eligibility requirements posted online and stated clearly?

- Does the program claim to purge non-compliant companies?
- Are there any caps on benefits?

15 incentive programs provided annual evaluation statistics, but it proved difficult to find and trace these statistics. Relatively limited efforts could enhance the traceability and online accessibility of these programs by considering a search engine optimization.

Overall score

Aggregating all sub-category scores provided a possible total 18 stars. Maine Quality Centers (14 stars) scored as best evaluated program, followed by the PTDZ and the Agricultural Marketing Loan Program (both scoring 13 stars). These programs outperform all other programs due to consistently high scores across all four sub-categories.

The Economic Recovery Loan Program and the Potato Marketing Improvement Fund follow closely with 12 stars. These programs are annually evaluated and results are publicized and easily accessible. Furthermore, 25 programs achieve moderate scores between 10 and 8 stars, while 15 programs score 7 or less stars. All other details can be found in Appendix F.

Maine's External Program Benchmark

The qualitative assessment of Best Practice case studies results in a number of observations and recommendations that are relevant to the context of Maine's incentive programs. These function as possible guidelines to policy-makers in terms of incentive framework design and development.

It is not surprising that the six case studies, formulated as Best Practice on their economic performance of Maine's key industries, entail explicit and uniform eligibility criteria accompanied by structured M&E systems, including but not limited to performance based inclusion and clawback provisions. These intertwined components enhance the quality of incentive programs and – as demonstrated by the benchmark – result in enhanced performance in terms of attracting investments and economic impacts.

The case studies demonstrate the importance of clearly defined and straightforward eligibility criteria, which function as *pre-implementation assessment* and initial screening for potential investors. The Best Practice case studies precisely indicate multiple indicators that can be applied to determine eligibility, including but not limited to:

- Industry (e.g. life sciences, biotechnology);
- Business activity (e.g. headquarters, R&D);
- Geographical scope (e.g. counties economically lagging behind);
- Number of jobs (both in absolute and in relative terms);
- Amount of capital investment (both in absolute and in relative terms);
- Payroll and wage levels (both in absolute and in relative terms); and
- Qualification of personnel (e.g. unemployed).

Nearly all of the programs utilize some form of the following:

- Eligibility criteria – this criteria determines if the company is eligible to participate in the program;
- Application process – the process by which an eligible company applies for inclusion in the incentive program (lists state and company commitments and terms of those commitments);
- Reporting Requirement – a method by which the program reports specific performance measures back to the program administrator;
- Monitoring and evaluation process – the process by which the incentive administrator monitors and verifies the company's performance for continued inclusion in the incentive program;
- Performance based inclusion – at the end of the reporting period, the company continues to be included if they meet their goals but is excluded with no payback clause or penalties if they have not; and
- Clawback – if the company does not fulfill their required job creation or capital investment goals, the incentive is paid back, often with penalties.

Eligibility

Eligibility criteria also relate to delineating which companies are not eligible by defining the above indicators to sectors and business activities that ineligible for incentives. For instance, "retail" and "extraction" industries are often ineligible for financial assistance, as well as investment projects located in counties or metropolitan areas that are already economically prospering.

Application Process, Reporting Requirement and Monitoring and Evaluation

Just as important as selecting potential incentive beneficiaries prior to application, monitoring their actual performance against the projected requirements after a successful application (defined by the eligibility criteria) ensures an efficient follow-up of the consumption of incentives. Monitoring and evaluating through annual reports, site visits, audits, scoring cards, impact models is a logical step subsequent to assessing eligibility criteria. M&E systems basically control whether eligibility criteria are actually achieved during participation in the incentive program. The eligibility criteria thus function in all of the six incentive programs as baseline against which post-implementation M&E systems function. In other words, nearly all incentive programs use the actual number of created jobs as milestone after which incentive funds are distributed.

Reporting Requirements

To ensure reliable data on which evaluation of incentive objectives can be executed, (annual) report, measurement, and account standards need to be incorporated into the incentive design and administration in order to guarantee a clear M&E process.

Performance Based Inclusion or Clawbacks

In case the achieved outcomes do not match with the projected outcomes, clawback mechanisms might be enforced upon the beneficiaries and/or the amount of funds are adjusted. Many if not most of Maine's programs are performance-based, meaning that awards are *only* given to companies *after* they

can demonstrate achieving specific hiring or capital investment goals. However, the following concepts regarding clawbacks are applicable for those remaining programs for which proactive awards are given.

Analyzing the six case studies revealed several types of enforcement actions which are at the disposal of authorities in case initial eligible companies (i.e. according to the eligibility criteria) fail to adhere to defined requirements. The interplay between these two elements is crucial as this functions as reliable baseline against which incentives are granted and, in case pre-defined objectives are not met by the recipient, can be reclaimed. Such clawback mechanisms, depending on the degree of the project's failure, can result in:

- *Cancellation of the project*: applies to projects without an executed contract that are being eliminated from the program;
- *Reduction of the rate and/or term of the tax credit*: applies to projects with an executed contract that have failed to meet the requirements as defined in the tax credit agreement; and
- *Termination of the project and enforce full clawback*: applies to projects that cease operations at their designated project site.

A Best Practice procedure of enforcing clawback mechanisms is provided by the Ohio Tax Credit Authority and includes a three step process to enforce (partial) repayment of the incentive award:

- The first step is to send notice to the taxpayer of pending termination with clawback;
- The second step is a "First Reading" at the Authority's monthly meeting, where the project and its economic impact are reviewed; and
- The third procedural step, known as the "Second Reading", occurs at the Authority's subsequent monthly meeting, and includes a final determination on a clawback percentage to be applied to prior certificates issued to the taxpayer.

Incorporating eligibility criteria with M&E systems, performance based inclusion, and clawback mechanisms enhances the *transparency* of the incentive program as it avoids potential fraud. In addition, a great amount of data and details on awarded incentives, recipients and providers allows for an effective assessment of the cost vis-à-vis the benefits of the incentive program on the whole. Policy-makers rely for a great deal on these assessments as to develop and further enhance incentive frameworks. *Completeness* reflects transparency and reduces business risks since corporate investors instantly know whether or not their investment project is eligible for financial assistance.

In turn, transparency increases the *public accountability* and *credibility* of both the incentive program and the overall governance performance. Just because potential investors on beforehand understand the incentive program's entitlement, requirements and implications in case milestones are not achieved, the commitments of all parties are open and explicit. To ensure credibility and public accountability, good records and information are crucial, once again emphasizing the importance of M&E mechanisms.

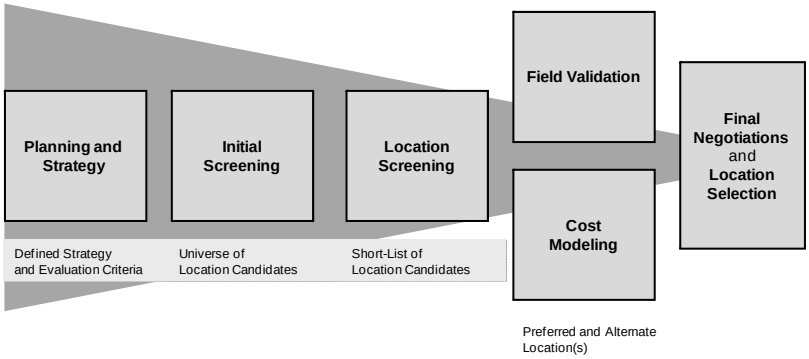
Maine's existing Pine Tree Zone program is an example of a performance-based program, wherein companies are only awarded the credit after they have demonstrated that they have met employment and/or investment thresholds. In cases such as these, the need for clawbacks becomes moot.

See Appendix G for the full external benchmarking analysis.

Maine Competitive Analysis

A proper evaluation of Maine's incentive, credit, and other economic development tools must begin with an understanding of the State's natural advantages and disadvantages for attracting investment. Companies making expansion and relocation decisions typically go through a process similar to that which is shown on this page. This process begins with the company identifying their business opportunities, constraints and needs for the new facility, and then progresses through an evaluation of location options. This evaluation process continues to narrow the list of options until the company is prepared to negotiate with the last (and best-fit) handful of communities and sites remaining on the list.

Importantly, this process usually starts with a regional, national, or even international long list of location options. Metropolitan areas are usually the units of geography being evaluated at this point, not towns or sites. Once an appropriate MSA is selected, the process advances to selecting a town and a site.



In the site selection process, three or four locations usually emerge from the screening model as the clear leaders. Local economic development agencies in those locations are typically contacted at this point. This then gives them the opportunity to present incentives, specific communities and sites within the broader region. It is important to note that the economic development agencies and incentive programs are not considered until this step.

The Maine Competitive Analysis compares the Portland, Bangor, Lewiston-Auburn MSAs with 22 other MSAs with similar attributes likely to be considered when making a location decision. All sources may be found in Appendix H. All comparisons in the following writeup are in the context of the three Maine and 22 peer metropolitan areas. This is the most appropriate context in which to review Maine's competitiveness when attracting or retaining corporate investments.

Overall Findings

The overall findings from the Maine Competitive Analysis rank Portland MSA as performing moderately well at 15 overall in an unweighted ranking. In the same circumstance, Lewiston-Auburn (referred to as Lewiston) ranks 24 and Bangor ranks 23 out of the 25 candidates. In general, Portland MSA ranks as a generally desirable location for access and quality of life as peer areas, but the community also has a higher cost of living and is overall a more expensive operating location than the selected competitive peers. Maine as a state ranked poorly for tax regime.

Portland has particularly favorable labor force availability and has fairly good basic education statistics. Even with harsh New England winters, Portland ranks fairly well for climate and natural hazards. Portland struggles with retaining overall population and working age population, as well as with transportation and market access.

Lewiston has reasonably good labor force availability, reasonably low crime, paired with a good quality of life. Additionally, Lewiston has the lowest average salaries of all the candidates in the screening model. Lewiston struggles with other statistical categories including population and demographics, household statistics, education, transportation and market access, tax regime, and climate and natural hazards.

Bangor does not have the available labor force of Portland or even Lewiston, but still performs favorably for the labor force statistics (unemployment specifically) when compared to the peer set. Bangor also has comparatively competitively low average salaries along with low crime and a high quality of life. Similar to Lewiston, Bangor performs comparatively poorly in all other statistical categories including population and demographics, household statistics, education, transportation and market access, tax regime, and climate and natural hazards.

In order to provide regional counterparts in the Maine Competitive Analysis, the Portland, Lewiston-Auburn, and Bangor MSA's were compared against larger Maine, New England, Northeast and US geographies where the data was available. This comparison was not ranked and scored, but has been provided for comparative purposes.

Portland and Bangor have more favorable rates of population retention or growth, but are below regional and US growth rates. In this regard Lewiston performs poorest of the Maine, regional, and US locations. Bangor and Lewiston have the highest rates of owner occupied housing while Portland has the second highest rate of renter occupied housing. Lewiston has the lowest rate of vacant housing units and Bangor has the highest growth of housing units.

All three Maine MSAs perform better than their regional competitors for labor force growth, unemployment rates, and change in unemployment rates. Lewiston-Auburn and Bangor score poorly for climate and quality of life because of high snowfall and high precipitation. Portland scored low for climate only due to high snowfall.

All three MSAs had lower than US average property and violent crime rate and commute times. Only Portland's cost of living was higher than US average. Portland and Bangor had higher than average access to physicians while Lewiston-Auburn and Bangor had higher than average access to hospital beds.

Please see the chart below for rankings by category by location. Please see Appendix H for the full Maine Competitive Analysis writeup and data table information as well as an advantage and disadvantage chart specifically focused on the three Maine MSAs.

	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Population and Demographics	17	17	17	9	17	17	17	9	3	9	1	2	9	9	3	3	17	8	17	9	17	9	3	9	3
Household Statistics	11	24	23	2	11	9	19	2	1	16	4	9	11	16	25	11	21	19	11	16	5	5	5	21	8
Labor Force Availability	2	6	8	8	14	19	14	12	7	21	2	14	5	14	8	14	24	2	25	13	21	8	1	23	19
Industry-Specific Employment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupation-Specific Employment (per 1000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupation-Specific Salaries (Annual Mean 2010)	8	1	3	25	22	5	10	14	19	14	12	21	5	8	2	13	5	4	22	16	16	19	16	10	24
Education 2010	6	23	16	3	4	7	9	18	18	23	5	13	25	18	22	13	16	9	18	1	13	9	2	12	7
Transportation and Market Access	19	24	22	4	3	24	13	1	5	9	16	5	21	22	17	1	5	13	17	19	5	13	9	9	9
Tax Regime	23	23	23	18	15	15	21	**21**	1	5	5	5	4	5	5	17	5	5	12	12	1	1	18	18	14
Climate and Natural Hazards	6	19	19	6	6	22	16	2	6	6	2	2	24	16	25	19	16	13	6	13	15	22	6	2	1
Crime and Quality of Life	12	6	3	15	9	1	6	1	12	9	17	24	20	20	24	15	8	18	22	3	12	18	3	9	22
Overall Rank	**15**	**24**	**23**	**13**	**11**	**16**	**21**	**7**	**3**	**14**	**1**	**6**	**19**	**20**	**22**	**10**	**17**	**5**	**25**	**4**	**12**	**8**	**2**	**18**	**9**

Maine Competitive Analysis – Industry/Sector Analysis

The analysis in the section is based on a standard site selection or evaluation model designed to show how likely a company would be to select Portland, Bangor or the Lewiston Auburn areas. This model has been further modified to develop insights to show how likely a company in a particular industry or function would be to select Portland, Bangor, or the Lewiston Auburn area.

The following 7 industries or sectors are defined as current areas of focus for Maine incentive programs:

- Biotechnology;
- Composites & Advanced Materials;
- Environmental Technologies;
- Forest Products & Agriculture;
- Information Technology;
- Marine Technology & Aquaculture; and
- Precision Manufacturing.

Methodology

For each of the industry sectors, the team assigned a series of drivers particularly valued by a company in that industry. These drivers were chosen based on project data obtained from our proprietary incentives database tool and our experience as site selection consultants for the private sector. The team assigned a series of factors to measure each driver. Factors were limited to statistics that are available for the entire US by state or MSA.

It is important to note that this analysis by industry/sector does not take into account incentive programs in place which might help make up for drawbacks identified in this analysis. Incentive programs normally come into the site selection process further into the process when the candidates have been narrowed to less than four.

Overall Findings

Portland ranks 20 or lower (out of 25) for all but Marine Technology & Aquaculture and Precision Manufacturing. Both Lewiston-Auburn and Bangor ranked 24th or 25th for all except Precision Manufacturing (Lewiston-Auburn ranked 3rd and Bangor ranked 2nd). The following chart shows how Portland, Lewiston Auburn, and Bangor area compare against the other 25 candidates.

Industry/Sector Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Biotechnology Score	23	25	24	1	2	8	3	4	12	21	10	9	22	17	15	5	11	7	14	6	19	18	16	20	13
Composites & Advanced Materials	23	25	24	10	9	22	18	13	15	19	8	11	20	16	14	2	6	7	12	5	4	3	17	21	1
Environmental Technologies	23	25	24	11	3	19	7	2	17	18	14	13	20	16	15	1	4	5	10	6	9	8	21	22	12
Forest Products & Agriculture	20	25	24	1	15	21	7	6	11	17	19	18	22	12	5	9	16	13	8	14	3	10	2	23	4
Information Technology	23	25	24	6	15	22	20	9	11	17	1	3	21	13	10	5	18	12	16	4	8	14	7	19	2
Marine Technology & Aquaculture	18	24	25	6	17	21	22	15	11	20	9	13	19	4	2	3	7	5	16	10	8	12	14	23	1
Precision Manufacturing	17	3	2	19	11	16	14	22	13	15	20	10	1	12	9	4	8	21	18	25	7	6	23	24	5

Please see Appendix I for a more detailed review of the Maine Competitive Analysis Industry/Sector Analysis

Location Quotient Analysis

No economy is self-sufficient. Most develop and grow around industries that generate more than enough output to export to other locations and in turn import other goods and services from those locations. Trade takes place because the local economy has advantages in producing some goods and services and other economies are better at producing other things. The industries that generate excess production are referred to as base industries. The base industries generate the income that allows the economy to import goods from other economies and that support employment in other sectors needed to support local activity. The simplest example of such a framework is a coal mining town. The base industry is coal mining, the coal is exported which generates income for the miners who spend it on non-base activities such as groceries available at local supermarkets after being trucked in from other parts of the country.

The first step in developing an economic development strategy is to identify the base industries of the regional economy. One of the simplest approaches is by identifying which industries have employment levels that suggest they produce a level of output that exceeds local demand. Economists have developed the concept of Location Quotients (LQ) for this purpose. The LQ is computed in three steps:

1. Each industry's share of employment is calculated for the local economy;
2. The same is done for the national economy; and
3. The ratio, called the Location Quotient (LQ), is calculated from the employment of the local economy relative to the national economy.

An industry with a LQ greater than 1 is considered a base industry. For example, in the Bangor Metropolitan Statistical Area (MSA) 325 people are employed in the Wood Product Manufacturing (NAICS 321) while 338,977 people are employed nationally in this industry. Total employment in the Wood Product Manufacturing sector in the Bangor MSA accounts for 0.58% of total employment while the US total employment accounts for 0.31% of employment. Hence, the LQ for Wood products Manufacturing in the Bangor MSA is 1.89 = 0.58%/0.33%. Since the LQ for this industry in the Bangor MSA is greater than one, it is considered a base industry. The industry employs more people and produces more product than would be needed by the Bangor MSA market alone.

Findings

Location Quotient analysis was performed on four areas and for the State of Maine as a whole:

- Portland-South Portland, ME MSA;
- Lewiston-Auburn, ME MSA;
- Bangor, ME MSA;
- Augusta, ME "MSA" (Augusta Micropolitan NECTA or Kennebec County); and
- State of Maine.

Augusta is a micropolitan statistical area, and is defined as fully coterminous with Kennebec County. All other regions were examined using the geographic definitions described by the US Office of Management and Budget. The industry base results are as described below:

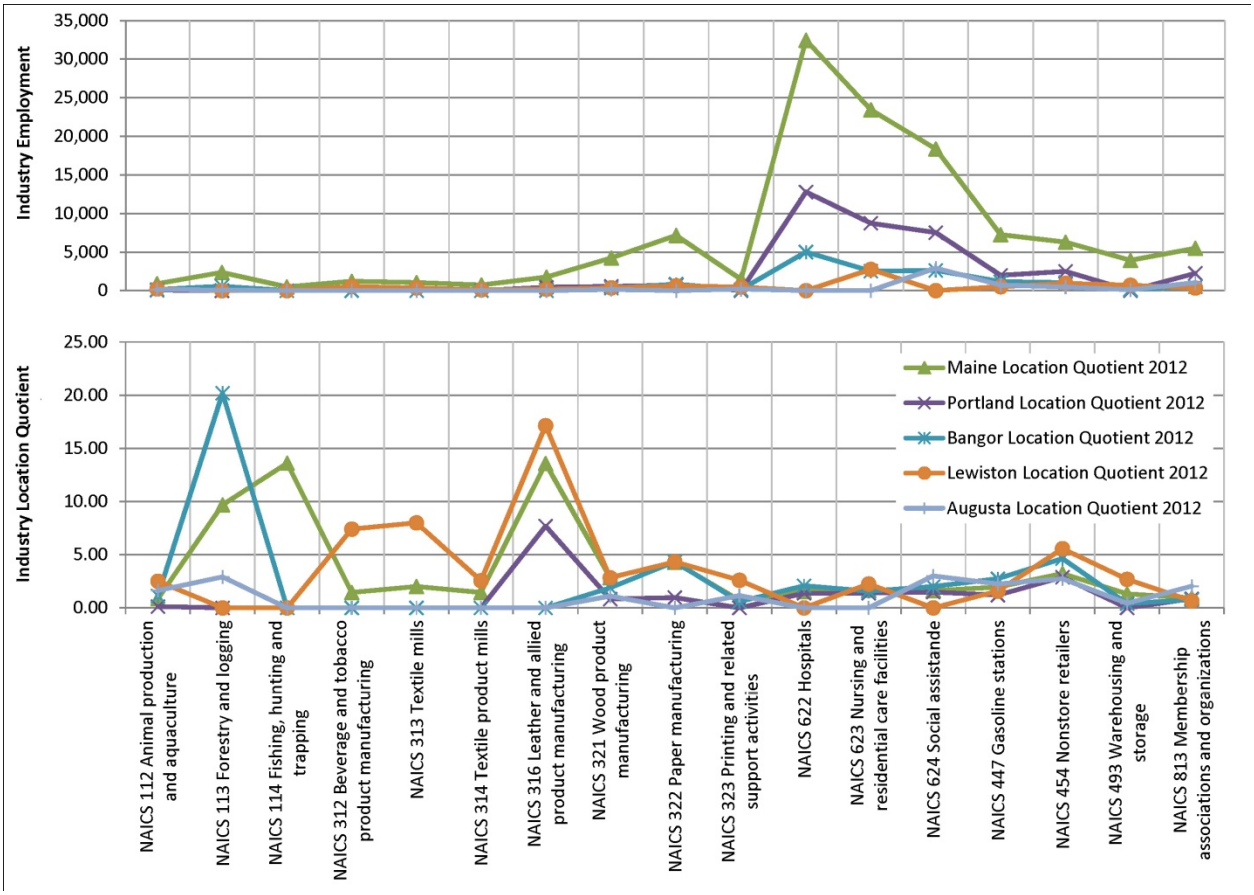
Geography	Number of Base Industries (at 3 digit NAICS level)	Number of Base Industries with LQ above 2
Portland-South Portland, ME MSA	21	2
Lewiston-Auburn, ME MSA	30	11
Bangor, ME MSA	26	6
Augusta, ME "MSA" (Kennebec County)	21	5
State of Maine	30	9

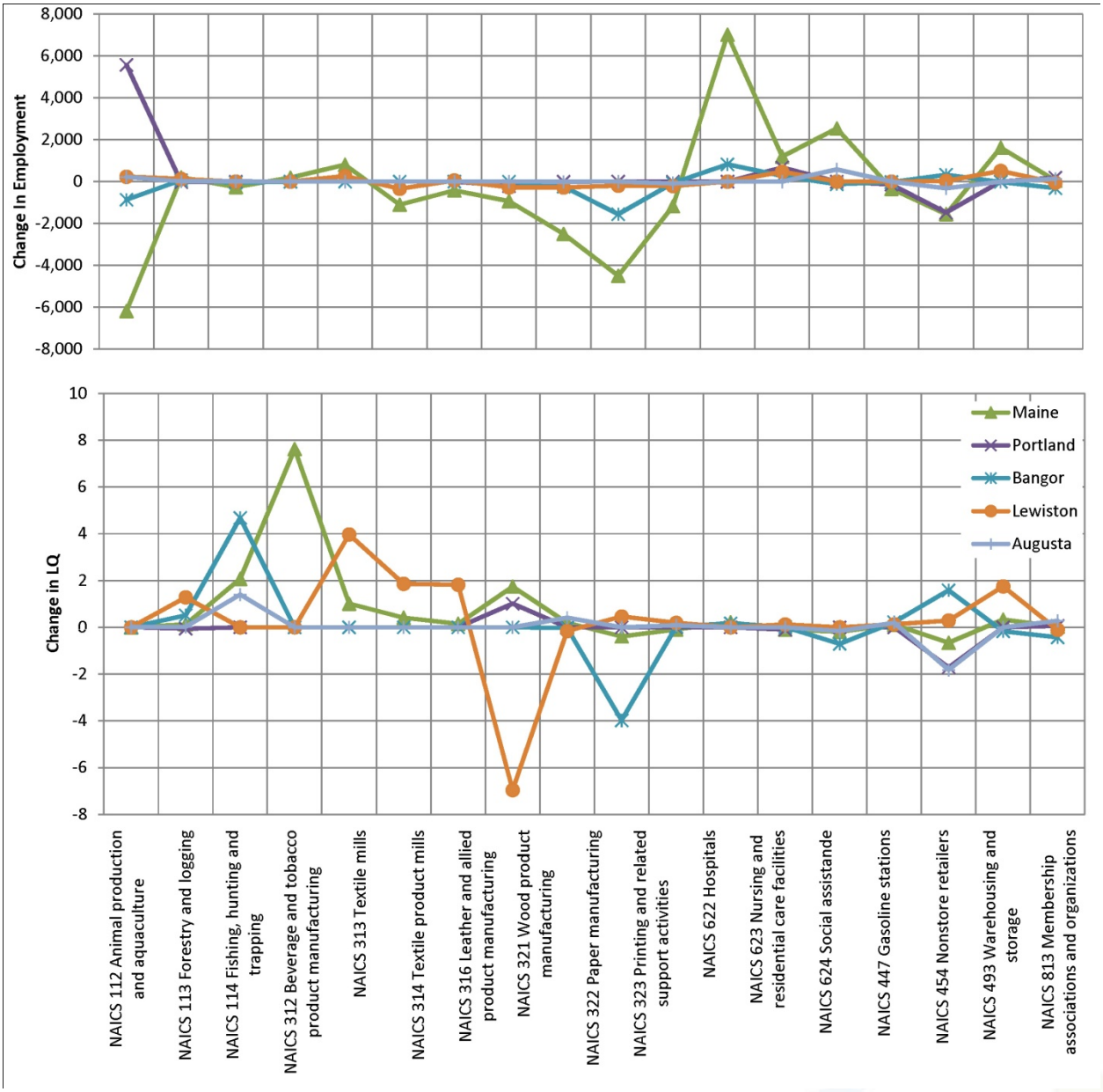
Many of the industries within the State of Maine and sub-geographies that have high LQ values also have low employment. Overall, the State of Maine has highest employment in industries based on natural resources found within the State. All geographies show high LQ for non-store retailers. Portland and Lewiston have a surprisingly high LQ in leather and allied product manufacturing. Lewiston appears to be a manufacturing heavy area with high LQ in textile mills, beverage and tobacco product manufacturing, paper manufacturing, and many other similar areas. Augusta (being the state capital area with supporting services) has high LQ in social assistance, forestry and logging, gas stations, and membership organizations and associations. Bangor is highly reliant on the forestry and logging industry. Bangor also has strong LQ for paper manufacturing, gas stations, hospitals and social assistance.

It is worth noting that nearly half the industries normally included in the LQ analysis experienced low employment, including low employment to the point of triggering confidentiality issues that cause employment and LQ numbers to remain unreleased. These industries varied slightly by geography, but were present in a significant number.

Industry	Location Quotient 2012	Change in LQ	Total Employment 2012	Change in Employment
State of Maine				
NAICS 114 Fishing, hunting and trapping	13.6	7.62	491	189
NAICS 316 Leather and allied product manufacturing	13.57	1.74	1756	-933
NAICS 113 Forestry and logging	9.69	2.07	2364	-258
NAICS 322 Paper manufacturing	4.29	-0.39	7156	-4499
NAICS 454 Nonstore retailers	3.23	-0.66	6280	-1553
NAICS 321 Wood product manufacturing	2.84	0.19	4235	-2495
NAICS 487 Scenic and sightseeing transportation	2.36	0.44	296	56
NAICS 491 Postal service	2.19	--	47	--
NAICS 313 Textile mills	2.01	0.41	1042	-1100
Portland-South Portland, ME MSA				
NAICS 316 Leather and allied product manufacturing	7.69	1.01	444	-208
NAICS 454 Nonstore retailers	2.89	-1.71	2504	-1477

Industry	Location Quotient 2012	Change in LQ	Total Employment 2012	Change in Employment
Lewiston-Auburn, ME MSA				
NAICS 316 Leather and allied product manufacturing	17.14	-6.96	193	-275
NAICS 313 Textile mills	8	1.86	361	-340
NAICS 312 Beverage and tobacco product manufacturing	7.41	3.97	542	265
NAICS 454 Nonstore retailers	5.57	0.29	942	33
NAICS 322 Paper manufacturing	4.33	0.46	629	-194
NAICS 321 Wood product manufacturing	2.83	-0.16	367	-280
NAICS 493 Warehousing and storage	2.69	1.75	697	509
NAICS 323 Printing and related support activities	2.6	0.19	457	-211
NAICS 314 Textile product mills	2.56	1.82	113	57
NAICS 112 Animal production and aquaculture	2.51	1.28	227	128
NAICS 623 Nursing and residential care facilities	2.25	0.12	2747	470
Augusta, ME "MSA" (Kennebec County)				
NAICS 624 Social assistance	3.01	-0.16	2924	583
NAICS 113 Forestry and logging	2.92	1.4	61	17
NAICS 454 Nonstore retailers	2.74	-1.82	456	-318
NAICS 447 Gasoline stations	2.25	0.19	715	5
NAICS 813 Membership associations and organizations	2.05	0.28	1026	139
Bangor, ME MSA				
NAICS 113 Forestry and logging	20.19	4.68	567	-49
NAICS 454 Nonstore retailers	4.64	1.58	1,039	327
NAICS 322 Paper manufacturing	4.34	-3.98	833	-1,557
NAICS 447 Gasoline stations	2.74	0.22	1,168	-23
NAICS 622 Hospitals	2.09	0.17	5,003	827
NAICS 624 Social assistance	2.01	-0.71	2,624	-122


Industry Employment
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Industry Location Quotient
25.00
20.00
15.00
10.00
5.00
0.00
Maine Location Quotient 2012
Portland Location Quotient 2012
Bangor Location Quotient 2012
Lewiston Location Quotient 2012
Augusta Location Quotient 2012
NAICS 112 Animal production and aquaculture
NAICS 113 Forestry and logging
NAICS 114 Fishing, hunting and trapping
NAICS 312 Beverage and tobacco product manufacturing
NAICS 313 Textile mills
NAICS 314 Textile product mills
NAICS 316 Leather and allied product manufacturing
NAICS 321 Wood product manufacturing
NAICS 322 Paper manufacturing
NAICS 323 Printing and related support activities
NAICS 622 Hospitals
NAICS 623 Nursing and residential care facilities
NAICS 624 Social assistande
NAICS 447 Gasoline stations
NAICS 454 Nonstore retailers
NAICS 493 Warehousing and storage
NAICS 813 Membership associations and organizations



Please see Appendix J for LQ charts showing all industries with LQ above 1.0 for the five geographies discussed in this section.

Survey of Research Universities

A survey is considered one of the most powerful instruments that can be used to collect primary data from a group of carefully selected survey participants. In April this year, a customized survey was sent to Maine's Research Universities with the purpose to evaluate the State's innovation capacity and to review the results.

An invitation to participate in this survey was sent to the following Universities and R&D related affiliates:

- Gulf of Maine Research Institute;
- Bowdoin College;
- Bigelow Laboratory for Ocean Sciences;
- Ocean Renewable Power Company;
- Foundation for Blood Research;
- University of Southern Maine;
- University of Maine (both the Law School and Orono campuses);
- Jackson Laboratory;
- Affiliated Drug Testing Services;
- Carnegie Science Hall;
- Mt Desert Island Biological Lab;
- Maine Maritime Academy Board of Trustees;
- Maine Medical Center Research Institute;
- Maine Space Grant Consortium;
- University of New England; and
- Colby College.

From the initial list of 17 participants, our team of analysts received 7 responses, equivalent to a response rate of 47%. However, only 5 out of 7 submissions were completely filled out, whereas in 2 cases virtually all questions were skipped. The following research institutes and laboratories contributed to the survey's aggregated results:

1. Bigelow Laboratory for Ocean Sciences;
2. University of Maine Orono;
3. Colby College;
4. University of Southern Maine; and
5. Mt Desert Island Biological Lab.

Because of the limited sample size, and the variance in the answers, it is statistically erratic to calculate sample averages. Nor are the results of these 5 participants representative for the total survey population. Rather, the results present the current condition of Maine's R&D capacity as well as an overview of major achievements in terms of intellectual property, R&D infrastructure, grants, and economic development.

Important findings of the survey:

- The battle for talent might hinder Maine in further developing a thriving R&D sector with 684 enrolled graduate students and 171 graduating students in 2013 and 957 undergraduate students with degrees in science and engineering; This suggests a continuing need to both

support native populations in science and technology and also to attract trained talent into the state;

- Approximately 5, 820 undergraduate and graduate students choose science and engineering on a total student population of 230,000, which equals 2.5% and is significantly below the National average of 11% (we do not have a baseline to compare this against, but will over time);
- In terms of physical R&D infrastructure, the survey results show that 751,000 square feet of lab space is available and a little over $3.1 million was invested in research equipment; The total R&D expenditures for 2013 was equal to $79.5 million;
- The majority of the funding for R&D expenditures (i.e. 65%) comes from the Federal level, followed by State funds (25%), industry grants and donations (5%) and individuals and foundations (5%);
- Approximately 1,500 part time and 4,200 full time workers are employed in the R&D sector either as a faculty staff member, professional staff or classified personnel (e.g. technicians, clerical);
- 644 extramural research proposals were submitted in 2013, worth over $220 million. Close to $53.5 million actually materialized, which equals a ratio of 24.3%, in line with success ratios of research proposals submitted in cooperation with organizations outside of the state;
- In 2013, 15 research proposal with other Maine institutions were submitted, worth over $23.4 million. However, only 0.1 million materialized resulting in a success ratio of 0.4%;
- The success ratios of 27.5% and 29.3% for research proposals in cooperation organizations outside of the state are significantly higher; The total value of research funds provided are $3.5 million and $3.0 million respectively;
- This proves that most of the successful R&D research proposal exceed State borders and national or even international alliances in R&D development is required;
- With a total value of $17.6 million, 4 of these research grants or contracts were awarded under the Experimental Program to Stimulate Competitive Research (EPSCOR) program in 2013;
- Out of a total of 349 industrial research grants with a value of $3.6 million, 189 industrial grants were awarded by Maine companies, worth of a total of $1.7 million;
- In total, 28 patent applications were filed of which 18 new patents were granted. In addition, 3 new breeder rights were obtained in 2013;
- The R&D development efforts have led to a total of 19 license agreements, of which 14 are with Maine companies, and the annual license and royalty income is close to $250,000; and
- In terms of economic developments, 3 new spin-off companies were established in 2013; Unfortunately, this has not yet resulted in any additional job creation effects.

Academic spin-offs are receiving growing interest from both researchers and policy-makers, due to their ability in creating wealth and in encouraging the development of scientific knowledge. Moreover, these companies are believed to have growth rates more rapid than companies operating in industries with lower technological intensity. According to the survey and interviews, the phases that an academic spin-off goes through are: research; opportunity framing; pre-organization; and re-orientation and

sustainability. This might imply that positive job creation efforts might be expected in the subsequent year, during which the initial stages are finalized and products and services are conceptualized.

Research Interview Findings

In addition to the survey, the analyst team also performed one-on-one phone interviews with a sample of the entities involved in research across the state. Entities interviewed included:

- University of Maine;
- University of Maine Advanced Structures and Composites Center;
- University of Southern Maine;
- Bigelow Laboratory for Ocean Sciences;
- The Jackson Laboratory; and
- Mount Desert Island Biological Labs.

Mission Description

Research performed at the institutions above largely aligns with the State's targeted industry groups. Specific areas of study, research and development noted include:

- Biological models and tools for biomedical research;
- Biotechnology and life sciences from marine environments;
- Aquaculture studies;
- Advanced materials research, engineering, and applications;
    - Construction; and
    - Aeronautics and wind generation.

The University-based programs also noted that in addition to research, their programs provide significant counseling and education in entrepreneurship itself. Some noted that while they cannot play the same significant role in research that the major campuses play, they can be helpful to students and startups alike by providing assistance in obtaining grants (especially for sciences, women, minorities, veterans, and individuals with disabilities). They can also provide direct training for students so that they emerge with skills relevant to the technologies and industries that will form the State's economic and innovation base.

Involvement of State in Funding Research

The institutions interviewed reported varying degrees of historic and current support from the State of Maine. Some do not use tools of any kind, while others are in the State University system and are reliant in whole or in part on State funding for basic operations.

Several of the private and non-profit research organizations, noted that the State previously had more direct support available for research in the form of the Maine Biomedical Research Fund. This fund – administered by MTI – awarded approximately $42.5 million from 2001-2005. Interviewees felt that the MBRF could still support the State's role in biotech research. Funds in past helped to build a research facilities, allowing institutions to attract scientists. Likewise, the MTAF (Maine Technology Asset Fund)

has been used by the interviewees in the past for similar purposes, but the program is not currently funded.

Often, funding is constrained by the difficulty of finding match funding – a requirement from both federal and state sources. Sometimes the only match funding can be obtained from large donors. In some cases, large corporations also have funds available, but these also require non-federal funding matches.

Several of the interviewees noted that funding is generally cooled across the board at the present time. The effect of budget sequestration at the federal level has resulted in a lack of funds to match other grants. While funding has been kept level (rather than cut), costs have continued to escalate, resulting in less funding power in real terms.

Involvement of State in Commercialization of Research and Development

Interviewees expressed an opinion that the current Administration's priorities favor development of only those technologies and research which can be imminently commercialized and converted to a revenue stream.

Some expressed concern with this philosophy, noting that there is a difference between basic and applied research, and that there is a need for both. In many cases, commercial applications may not be immediately identifiable, but may be critical to the advancement of the science or technology regardless.

The interviewees did specifically note both MTI and FAME as necessary and effective partners in technology development. Access to venture capital (VC) and other forms of early stage funding was cited as a frequent and significant obstacle to funding both research and commercialization. FAME and MTI assist in addressing these needs to a degree. However at least one interviewee noted that FAME is not large or robust enough, and often can be at least as risk-averse as more conventional forms of commercial financing. The same individual noted that it would be helpful to have an institution in Maine "who can really look after and nurture homegrown companies."

Several interviewees noted the need to have a truly sustainable plan and infrastructure for research and development over time. The current Maine state system appears to fund projects for a few years and then move on to something else. Interviewees noted that this strategy of giving institutions money and then pulling back is not effective in growing an economy.

Research by its very nature often takes years to come to maturity. In order to be effective, the State – and the institutions it supports – needs to be able to establish longer term policies and strategies. Infrastructure needs to be replaced over time, and research needs assurances of support until results can be obtained. To this point, the state has not been able to make research finding self-sustaining or indeed able to weather political changes.

Suggestions and Best Practices

Interviewees suggested several areas in which the State might improve the effectiveness of involvement in research & development.

Technology Cluster Targets

- Institutions need flexibility on the technology sectors that they fund and also on how the awarded funds are used.
- However, at the same time, there should be a higher level of scrutiny on the *outcomes* from supported research. If the outcomes match program goals, then the process becomes less important.
- The State should also critically examine the current seven target technology areas and shift focus from the seven sectors to a philosophy of supporting all growth regardless of the sector.

Adjust Metrics to Bring In line with Goals

- The MIEAB (Maine Innovation Economy Advisory Board) has in past played a role in establishing and validating the State's R&D efforts. This role needs to be re-examined and perhaps reaffirmed.
- Project metrics should be changed to be more in line with the State's R&D and economic development goals. These goals have to be reflected in the outcomes expected from supported research.
- Systems need to be put in place to appropriately measure outcomes.
- The State also needs to be able to coordinate research and interests across the system.

Address Continuity and Sustainability Issues

- The State should consciously examine its perspective on realistic timeframes over which returns are expected on investment.
- As a result of the above, the State should also consider revising the metrics it uses to evaluate the effectiveness of its research programs. Licenses, reputation, jobs, skills, patents, and wage levels may all be factors, but the matrix of measures should reflect the mix of investment desired and an appropriate understanding of their development and business cycle.
- Develop the means to provide continuity on programs between administrations.

See Appendix K for a word version of the Survey Monkey R&D survey.

Recommendations and Implementation

The following section lays out specific recommendations for program changes, consolidation, elimination, and the establishment of new programs. However, it is important to begin by pointing out the sheer number and diversity of programs included in Maine's economic development and research & development toolbox.

The team collected as much data as possible on and evaluated the 58 programs identified by the Maine Department of Economic and Community Development for this initiative. At a very basic level, this results in several problems:

- While individual companies appear to be in compliance for reporting requirements, administration of programs and evaluation of data is cumbersome, overall program reporting to public or state officials is inadequate, and accountability is diminished by the sheer number of programs to be evaluated;
- Redundant administration for a wide variety of small programs is also an inefficient use of resources, as compared to a smaller number of more robust programs;
- Each program on its own can be too small and narrowly defined to make a material impact; and
- Unfocused and dispersed toolset results in confusion among companies the systems are attempting to assist, resulting in lost opportunities for the State.

Hence, the recommendations below address both the programs on offer and also suggest more general changes to improve Maine's overall ability to comprehensively and meaningfully participate in business formation, retention, growth, and attraction.

A Discussion on the Seven Technology Sectors

As established in the 2010 Science and Technology report, the State of Maine reinforced the focus on the seven technology sectors, including mature industries (like forestry and agriculture) as well as emerging ones (such as composite materials and biotechnology) for investment and other types of support. Much of the design of the state's incentive and investment programs has explicitly or implicitly begun with these seven sectors in mind:

1. Biotechnology;
2. Composites & Advanced Materials;
3. Environmental Technologies;
4. Forest Products & Agriculture;
5. Information Technology;
6. Marine Technology & Aquaculture; and
7. Precision Manufacturing.

The initial rationale for the sector focus was based on the awareness that the state performs best when it is nurturing complete economic networks, and not just individually successful companies. By focusing the state's efforts and resources in industries where the state is known to have an advantage and where clusters already exist, the state should theoretically be able to multiply the impact of any one award.

However, there are several risks in such an approach:

- Misperceiving the state's relative advantages or disadvantages for a particular sector;
- Backing an industry sector at the wrong point in its market cycle;
- Not having the ability to shift funding from one industry sector to another as opportunities arise; and

- Lacking tools to foster new sectors or opportunities that fall outside of the sector system.

In other words, it makes perfect and considerable sense for the state's incentives to follow the goals and objectives of Maine's broader economic development strategy. However, we suggest the following changes:

- In addition to the sector-specific programs, provide a series of programs that are available more broadly and which may be utilized by companies who are looking to start up, grow, or locate in Maine, regardless of industry or technology sector;
- Within those programs that are sector and technology focused, allow for the transference of resources between programs as markets grow and wane in activity; and
- Continually evaluate the state's competitive advantages and disadvantages to ensure that the programs and their efforts are properly matched to Maine real and realistic opportunities.

Workforce Development

When speaking of a region's natural strengths, it is important to note and emphasize the concept of workforce and specialized talent. Many surveys of corporate executives and site location professionals list access to talent and skilled workforce as a - if not the - key driver in many location decisions.

The provision of a talented workforce is first and foremost the responsibility of a region's education system. The primary, secondary, and post secondary education system must be tuned to provide the community's young people with the tools and thinking skills needed to be successful in a changing and dynamic economy.

In addition to this, states and regions can most directly advance their chances for economic success by providing programs for continuing education and for specialized training. According to a June 10 report by the US Labor Department, there are now 4.46M job openings, the most since 2007.[1] Companies have stated that this is due at least in part to the fact that they are unable to find enough candidates with the proper skills or training to fit their needs.

By offering training and workforce incentives to companies that the state is trying to attract, retain, or grow, the state has an opportunity to improve overall competitiveness whether or not the target company survives or stays. While the immediate goal is the target company, the workforce and skills improvements will remain in the community even if the project company moves on. These become a longer term advantage and a powerful investment in overall competitiveness.

Maine currently offers recruiting and training assistance through the Maine Quality Centers and formerly provided customized training with funds from the Governors Training Initiative. While other workforce training capabilities were within the scope of the current report, the evaluation team urges the State of Maine to consider these programs and resources as critical to the State's business attraction

[1] (http://www.bloomberg.com/news/2014-06-10/job-openings-in-u-s-rose-by-289-000-in-april-to-4-46-million.html)

and retention tools. These should be part of the holistic and comprehensive conversation on economic development.

Summary of Programs and Recommendations

The following is a summary of current and recommended new programs which includes a review of general effectiveness and suggested changes. These are listed by the department or organization that administers each program.

Department of Economic and Community Development

Program	Program Type	Recommendation
Certified Media Production Tax Credit	Economic Development	• Retain in place • Develop more thorough measures for program reporting, including jobs creation or local investment
Economic Development Program	Economic Development	• Incorporated in federal HUD programs • Retain in place, but remove from future evaluation due to Federal status
Maine Tourism Marketing Promotion Fund	Economic Development	• Retain in place • Develop more thorough measures for program reporting, including jobs creation or local investment
Maine Made - Maine Products Marketing Program	Economic Development	• Create more awareness • Consolidate with Maine Tourism Marketing Promotion Fund
Community Enterprise Grant Program	Economic Development	• Incorporated in federal HUD programs • Retain in place, but remove from future evaluation due to Federal status
Maine International Trade Center	Economic Development	• Retain in place • Operated as a trade advisory program, and not as a grant or credit program
Downtown Revitalization Grant Program	Economic Development	• Incorporated in federal HUD programs • Retain in place, but remove from future evaluation due to Federal status
Business Ombudsman	Economic Development	• Retain and enhance program to more fully coordinate **ALL** incentive program information, interaction and reporting
Communities for Maine's Future	Economic Development	• Relatively low funded program • No economic development parameters, hence difficult to review
Loring Development Authority	Economic Development	• Retain in place • Improve program marketing and information availability

Program	Program Type	Recommendation
Maine Technology Centers	Economic Development	• Retain in place • Develop more thorough measures for program reporting, including jobs creation or local investment
Brunswick Naval Air Station Job Tax Increment Financing	Economic Development	• Retain in place • Improve program marketing and information availability
Municipal Tax Increment Financing	Economic Development	• All reporting is local and therefore out of the scope of the information available to this evaluation
Maine Micro-Enterprise Initiative Fund - INACTIVE	Economic Development	• ELIMINATE program due to inactivity
Development Loans (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
Seed Grant Program (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
Equity Capital Fund (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
TechStart Program (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
Phase 0 and Phase II SBIR Application awards plus TAP support (MTI)	Research & Development	• Retain and enhance through consolidation of smaller programs
Cluster Initiative Program (MTI)	Research & Development	• Very low funding • Consolidate into Seed Grant, Equity Capital Fund, TechStart, and Phase 0 Programs
North Star Alliance Cluster Award Matching Fund (MTI) - INACTIVE	Research & Development	• Did not carry funding in this study • To the extent possible, consolidate into Seed Grant, Equity Capital Fund, TechStart, and Phase 0 Programs
Maine Technology Asset Fund (MTI)	Research & Development	• Retain program
Marine Research Fund (MTI)	Research & Development	• Retain program
Maine Biomedical Research Fund (MTI)	Research & Development	• Retain program

Department of Economic and Community Development/ Maine Revenue Services

Program	Program Type	Recommendation
ETIF	Economic Development	• As with PTDZ, Continue with non-compliance purging. • Perform on a yearly basis around the start of the new financial year based on the previous year. • Modify program description on the website to note non-compliance purging.
Pine Tree Development Zones	Economic Development	• Continue with non-compliance purging for PTDZ started in 2013. • Perform on a yearly basis around the start of the new financial year based on the previous year. • Modify program description on the website to note non-compliance purging.

Maine Revenue Service (MRS)

Program	Program Type	Recommendation
Business Equipment Tax Reimbursement	Economic Development	• Retain in place • Use the template of the information request to enhance their annual evaluation effort. • Using a uniform reporting standard improves the accountability and improves monitoring and adjustment
Business Equipment Tax Exemption	Economic Development	• Retain in place • Use the template of the information request to enhance their annual evaluation effort. • Using a uniform reporting standard improves the accountability and improves monitoring and adjustment
Sales Tax Exemptions (Manufacturing Machinery , Equipment and Tangible Personal Property)	Economic Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Sales Tax Exemptions (Fuel and Electricity for Manufacturing)	Economic Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program

Program	Program Type	Recommendation
Sales Tax Exemptions (Products Used in Agricultural and Aquaculture Production, and Bait)	Economic Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Sales Tax Exemptions (Commercial Agriculture, Commercial Fishing, and Commercial Wood Harvesting Machinery and Equipment)	Economic Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Sales Tax Exemptions (Machinery and Equipment for Research)	Research & Development	• Retain in place • Consolidate into one overall Sales Tax Exemptions Program
Shipbuilding Facility Credit	Economic Development	• Eliminate Program • Credit only applies to very large shipbuilding facilities with more than 5,000 employees that do not qualify for BETR and make more than $200,000,000 investment. • Modify BETR rules to include all shipbuilding companies under current BETR rules with current BETR caps.
Jobs and Investment Tax Credit	Economic Development	• Eliminate Program due to lack of participation and redundancy
Credit for Rehabilitation of Historic Properties	Economic Development	• Not strictly applicable for economic development purposes
High-Technology Investment Tax Credit	Research & Development	• Combine with RETC and Super Credit
Super Credit for Substantially Increased Research and Development	Research & Development	• Combine with RETC and HTITC
Research Expense Tax Credit	Research & Development	• Combine with Super Credit and HTITC

Finance Authority of Maine (FAME)

General recommendations for FAME also include modifying the process by which FAME loans are evaluated. While FAME loans and loan guarantees are of benefit to a company and are tax incentives, they do not need to be re-analyzed by this report process.

- FAME already performs an internal and independent external analysis and assures the programs are self-sustaining.
- Additional analysis for program effectiveness should not be necessary

Program	Program Type	Recommendation
Commercial Loan Insurance Program	Economic Development	• Retain in place • Alter programs as identified in general write up earlier in this section
Economic Recovery Loan Program	Economic Development	• Retain in place • Alter programs as identified in general write up earlier in this section
Maine Seed Capital Investment Tax Credit	Economic Development	• Retain in place • Alter programs as identified in general write up earlier in this section
Regional Economic Development Revolving Loan Program	Economic Development	• Retain in place • Alter programs as identified in general write up earlier in this section
Linked Investment Program for Commercial Enterprises	Economic Development	• Retain in place • Alter programs as identified in general write up earlier in this section
Maine New Markets Capital Investment Program	Economic Development	• Retain in place • Alter programs as identified in general write up earlier in this section
Linked Investment Program for Agriculture	Economic Development	• Retain in place • Alter programs as identified in general write up earlier in this section
Maine Economic Development Venture Capital Revolving Investment Program (VCRIP)	Research & Development	• Retain in place • Alter programs as identified in general write up earlier in this section

Department of Economic and Community Development/ U.S. Department of Labor

Program	Program Type	Recommendation
Maine Manufacturing Extension Partnership (MEP)	Economic Development	• Retain in place • Operated as a trade advisory program, and not as a grant or credit program

Small Business Administration/ Department of Economic & Community Development

Program	Program Type	Recommendation
Small Business Development Centers (SBDC)	Economic Development	• Retain in place • Operated as a trade advisory program, and not as a grant or credit program

Rural Development Authority

Program	Program Type	Recommendation
Commercial Facilities Development Program	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core rural issues, including basic infrastructure
Speculative Industrial Buildings Program	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core rural issues, including basic infrastructure

Maine Community College System

Program	Program Type	Recommendation
Maine Quality Centers	Economic Development	• Retain in place • Operated as a trade advisory program, and not as a grant or credit program • Ensure that workforce training and improvement is incorporated in comprehensive economic development efforts, not as stand alone

Department of Defense

Program	Program Type	Recommendation
Maine Procurement Technical Assistance Center (PTAC)	Economic Development	• Retain in place • Operated as a trade advisory program, and not as a grant or credit program

Center for Law and Innovation - University of Maine Law School

Program	Program Type	Recommendation
Maine Patent Program	Research & Development	• Retain in place • Operated as a trade advisory program, and not as a grant or credit program

Department of Agriculture

Program	Program Type	Recommendation
Agricultural Marketing Loan Fund	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core agricultural issues, including basic infrastructure
Maine Farms for the Future Grants	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core agricultural issues, including basic infrastructure
Potato Marketing Improvement Fund	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core agricultural issues, including basic infrastructure
Agricultural Development Grant Program	Economic Development	• Determine ways of consolidating funding and increasing flexibility to address core agricultural issues, including basic infrastructure

General Recommendations

General experience in and study of location selection projects suggests the following general observations on the effective role for incentives, credits, and similar programs.

- It is important to have a coherent strategy on whether incentives will emphasize comparative advantages of states or compensate for the lack of these comparative advantages. Generally, most incentive and credit programs cannot successfully compensate for a competitive weakness, except for specific worker-training programs.
- The use of incentives in attracting investment is most effective when precisely targeted. Incentive programs are best directly aligned with and subsidiary to other more substantive factors that influence investment decisions. These are primarily market/business factors (customer base, labor supply, raw materials, etc.) and investment infrastructure/environment (risk to investment assets, dispute resolution, etc.).
- As more and more countries and states seek to boost investment and target specific types of investment, competition increases with possible negative repercussions. This results in negative social and environmental consequences or escalating commitments of public funds with diminishing benefit.
- Consider consolidating like programs administered by the same program into one larger program. As identified in the grid above, many of the tax credit programs are very similar or identical but geared towards a different type of company. These should be consolidated to enhance applicability, impact, and efficiency.
- Encourage R&D programs participants to work with the right partners rather than favoring Maine-based partners as this will greatly enhance the R&D participant success.

- Work to transition R&D program participant companies into Maine's existing economic development incentive programs as appropriate. Given the nature of these companies, quite often its management is not even aware of the fact that there are programs out there to assist and facilitate further business growth.
- Make sure all active credit programs have a website with program description and contact information at very least. If the incentive cannot be located through a web search, it does not have the visibility, clarity, or tractability needed for an incentive program. FAME may be used as existing local best practice as it has many good webpages that clearly list the following: program name, how the program works, who can apply, the application process, and the benefits to the company.
- Define one government organization should collect and archive incentive program annual reports. Create a set of standard data that should be included in all annual reports from all programs:
    - Develop a standard annual report format; OR
    - Develop a standard chart format which is mandatory and includes information needed to evaluate the program.
    - If the annual report contains data for more than one program, the above data MUST be submitted for each incentive program.
- This governing body should also do the following:
    - Host a public webpage listing ALL Maine's incentives sortable by administrator, program name, type of program, and industry or company characteristics with links to the official incentive webpage;
    - This webpage should indicate active or inactive status of program if inactive programs are to be used;
    - The webpage should have an individual identified as the "owner" to manage, identify and coordinate webpage updates on a regular basis; and
    - Host a description and contact information for all active incentive programs that do not have websites.

Eligibility and Benefits of Programs

- Any investment incentive program succeeds best in achieving its goals when it is clear, simple and certain, and performance-based against pre-determined criteria.
- Likewise, application and administration processes should be as simple and concise as possible to avoid bureaucratic overload while retaining sufficient rigor. It is important to develop incentive frameworks that can be effectively administered and monitored.

The above recommendations provide a number of action items that can be implemented over time and provide a better incentive screening, data collection process as well as institutional collaboration between various government departments of the State of Maine.

Benefits of a Strong Coordinating Agency

Enterprise Florida, Inc. (EFI) provides one best-practice example on how to coordinate both economic development activities and investments in a statewide setting, and among several public and private partners. Enterprise Florida (sometimes referred to as "eFlorida") is a public-private partnership between Florida's business and government leaders and is the principal economic development organization for the state of Florida. EFI works to expand and diversify the state's economy through job creation. In pursuit of its mission, EFI works closely with a statewide network of economic development partners and is funded both by the State of Florida and by private-sector businesses.

Enterprise Florida markets the state of Florida, recruits new business to the state, and works to retain and expand existing industry and business. EFI focuses its economic development efforts on aviation & aerospace, life sciences, information technology, defense & homeland security, clean energy, financial & professional services, and manufacturing, but is also prepared to work towards non-core sector opportunities if supported for other reasons.

While economic development investments are actually awarded by the State of Florida and its' departments, EFI is the centralized clearinghouse of program information, and also assist companies in identifying appropriate programs and in reporting compliance. EFI's own activities are measured and reported regularly through its performance-based contract with the State Department of Economic Opportunity.

Enterprise Florida has stated a steadfast commitment to accountability and transparency regarding economic development incentives, and the state of Florida ranks highly in Transparency Evaluations. EFI supported and coordinated DEO's efforts to develop an online economic development incentives portal providing access to information about the state's economic development incentives. EFI supported legislation to accelerate the release of agreements with companies to create jobs. Furthermore, EFI's board meeting materials, including the agenda and board book, are posted on EFI's website and the meetings are being televised live.

The organization has been successful in both supporting economic growth, and in doing so in an open and transparent manner.

Implementation

As a means for implementing a general recalibration of the State's economic development and research & development, we propose the following measures:

- Develop a coordinating team of individuals to include members of the Executive branch, the Legislature, and selected shareholders to facilitate conversation and action on economic development and research & development activities. The current project's steering committee may act as the core for this team.
- Confirm the State's economic development goals and overall strategy, including a plan for coordinating business establishment, growth, retention, and attraction. This plan should contain a firm understanding of the State's advantages and disadvantages, the profiles of

business types that this naturally attracts, and the motivations behind their location decisions. It should also include an explicit identification of the organization which will act as the coordinating entity for economic development activities and investments.

- Review the list of consolidation, expansion, reconfiguration, and elimination recommendations made above. Work with the State legislature to make appropriate program changes and also to implement new mechanism for reporting and for information sharing between and among responsible parties within the government of the State of Maine.
- Develop (or alter) enabling legislation for the new (or repurposed) Centralized Coordinating Agency for economic development activities and investments. This may take the form of something similar to the model used by Enterprise Florida, or it may be an entirely new concept. It may be created out of an existing organization or it may be new. Regardless, such as organization is recommended.

These four measures should be taken alongside the State's continuing efforts to analyze the effectiveness of economic development and research & development programs in supporting Maine's continued economic sustainability and success. The current program – of which the current report is a component – provides an important periodic opportunity to evaluate results and change tactics based on data and on changing economic need.

Appendix A – Advisory and Stakeholder Member List

Table 1 Advisory Committee Members and affiliations

Advisory Committee	Affiliation
George Gervais	Maine Department of Economic & Community Development
Brian Whitney	Maine Department of Economic & Community Development
Peter DelGreco	Maine and Company
Bob Martin	MTI
Senator Emily Cain	Maine Legislature
Senator Andre Cushing	Maine Legislature
Jake Ward	University of Maine
LuAnn Ballesteros	Jackson Labs
Steve Levesque	Midcoast Regional Redevelopment Authority

Table 2 Stakeholder Representatives and affiliations

Stakeholder Representative	Affiliation
Cynthia Izon	Business Answers Programs
Miriam White	Center for Law and innovation, UMaine Law School
Darryl Sterling	Central Maine Growth Council
Jason Brown	Maine Department of Economic & Community Development
Deborah Johnson	Maine Department of Economic & Community Development
Ronald McKinnon	Maine Department of Economic & Community Development
Carolann Ouellette	Maine Department of Economic & Community Development
Laura Santini-Smith	Maine Department of Economic & Community Development
Karen Warhola	Maine Department of Economic & Community Development
Brian Whitney	Maine Department of Economic & Community Development
Janine Bisaillon-Cary	Maine Department of Economic & Community Development/MITC
Jackson Caldwell	Department of Agriculture
Beth Bordowitz	FAME
Jim McGowan	Maine Community College System
Michael Allen	Maine Revenue Service
Bob Corey	Maine Rural Development Program
Muriel Mosier	MEP
Bob Martin	MTI
Melody Weeks	PTAC
Mark Delisle	SBDC
Patricia Ballesteros	
Mike Aube	Eastern Maine Development Corporation
Jake Ward	University of Maine

Appendix B - Definitions

Table 3 List of definitions used in this report

Item	Definition
Angel Investors	Individuals who back emerging entrepreneurial ventures, sometimes as a bridge to venture capital. Funding levels typically range from $50,000 to $2 million. Usually successful, sophisticated business people but the term can apply to all individual investors in a company regardless of business experience.
Applied Research	Original investigations undertaken in order to acquire new knowledge but are directed primarily towards a specific, practical aim or commercial objective.
Basic Research	Experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying phenomena and observable facts, without any particular application or use in view.
Commercialization	Sequence of actions necessary to achieve market entry and general market competitiveness of new innovative technologies, processes, and products.
Entrepreneurship	The art or science of innovation and risk-taking for profit in business; the quality of being an entrepreneur
EPSCoR	Experimental Program to Stimulate Competitive Research is a federal program to assist those states that have historically received lesser amounts of federal R&D spending and have demonstrated a commitment to develop their research bases and to improve the quality of science and engineering research conducted at their universities and colleges. Maine has been a member of EPSCoR since 1980
Industry Cluster	Groups of competing, collaborating and interdependent businesses working in a common industry and concentrated in a geographic region. Clusters draw on shared infrastructure and a pool of skilled workers and represent the specialization and comparative advantage of the region.
Innovation	A new way of doing something. It may refer to incremental and emergent or radical and revolutionary changes in thinking, products, processes, or organizations. A distinction is typically made between invention, an idea made manifest, and innovation, ideas applied successfully.
Invention	The creation of a new technology, item, or process, as opposed to its application in widespread use.
License	A legal agreement where an owner of a technology allows another organization to use or develop that technology in return for consideration.
NAICS	North American Industry Classification System
Open Innovation	A paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology.
Targeted Technologies	Established in statute - 5 MRSA Chapter 407 - biotechnology, aquaculture and marine technology, composite materials technology, environmental technology, advanced technologies for forestry and agriculture, information technology and precision manufacturing technology.
Technology Transfer	The transfer of the commercialization rights for a technology from the originator to another organization, typically private. Also involves the legal protection of intellectual property.

Appendix C – List of Abbreviations

Table 4 Acronyms and definitions used in this report

Acronym	Definition
ADM	Aerospace, Defense and Marine
CBA	Cost-Benefit Analysis
CEO	Chief Executive Officer
DC	District of Columbia
EDO	Economic Development Organization
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HQ	Headquarters
ICA	Investment Consulting Associates
ICT	Information and Communication Technology
IPA	Investment Promotion Agency
IT	Information Technology
ITT	Information Technology and Telecom
MNE	Multinational Enterprise
NAFTA	North American Free Trade Association
NPV	Net Present Value
R&D	Research and Development
RDD	Research, Design and Development
US	United States
USD	United States Dollar
VAT	Value Added Tax

Table 5 Lead agency acronyms and full program names used in this report

Lead Agency Acronym	Full Program Name
DECD	Maine Department of Economic and Community Development
MTI	Maine Technology Institute
DOL	Department of Labor
FAME	Finance Authority of Maine
MRDA or RDA	Maine Rural Development Authority
MITC	Maine International Trade Center
MCED	Maine Center for Entrepreneurial Development
REDC	Regional Economic Development Corp
MPP	Maine Patent Program
MRS	Maine Revenue Services

Program Acronym	Full Program Name
CDBG	Community Development Block Grant program
LDA	Loring Development Authority program
MTC	Maine Technology Centers
SBIR	Small Business Innovation Research
STTR	Small Business Technology Transfer
SBA	Small Business Administration loan program
ETIF	Employment Tax Increment Financing
PTDZ	Pine Tree Development Zone
BETR	Business Equipment Tax Reimbursement
JITC	Jobs and Investment Tax Credit
VCRIP	Maine Economic Development Venture Capital Revolving Investment Program
MEP	Maine Manufacturing Extension Program
SBDC	Small Business Development Centers
MPTAC or PTAC	Maine Procurement Technical Assistance Center
AMLF	Agricultural Marketing Loan Fund
PMIF	Potato Marketing Improvement Fund

Appendix D – Programs Identified for Evaluation

Please see CD on back cover of this report for file "Maine Economic Development Programs for Evaluation.xls" for details by program. The following is a list of programs covered in our evaluation efforts. The programs highlighted in gray below have been removed from our list of programs to evaluate.

- Department of Economic and Community Development
  - Economic Development
    - Certified Media Production Tax Credit
    - Economic Development Program – CDBG
    - Maine Tourism Marketing Promotion Fund
    - Community Enterprise Grant Program – CDBG
    - Maine International Trade Center
    - Downtown Revitalization Grant Program – CDBG
    - Business Ombudsman – Not an incentive program
    - Communities for Maine's Future - CDBG
    - Loring Development Authority
    - Maine Technology Centers
    - Brunswick Naval Air Station Job Tax Increment Financing
    - Maine Made - Maine Products Marketing Program – CDBG
    - Municipal Tax Increment Financing – Federal money and no tracking or involvement beyond initial evaluation
    - Maine Micro-Enterprise Initiative Fund – Program on hold
  - R&D
    - Cluster Initiative Program (MTI)
    - Development Loans (MTI)
    - Seed Grant Program (MTI)
    - Equity Capital Fund (MTI)
    - TechStart Program (MTI)
    - Phase 0 and Phase II SBIR Application awards plus TAP support (MTI)
    - North Star Alliance Cluster Award Matching Fund (MTI) - Inactive
    - Maine Technology Asset Fund (MTI)
    - Marine Research Fund (MTI) – Temporary suspension
    - Maine Biomedical Research Fund (MTI) – Temporary suspension
- Department of Economic and Community Development/ Maine Revenue Services
  - Economic Development
    - ETIF
    - Pine Tree Development Zones – INCLUDED but modified since initial January reports
- Maine Revenue Service (MRS)
  - Economic Development
    - Business Equipment Tax Reimbursement
    - Sales Tax Exemptions (Manufacturing Machinery , Equipment and Tangible Personal Property)
    - Sales Tax Exemptions (Fuel and Electricity for Manufacturing)

        - Business Equipment Tax Exemption
        - Shipbuilding Facility Credit
        - Sales Tax Exemptions (Products Used in Agricultural and Aquaculture Production, and Bait)
        - Sales Tax Exemptions (Commercial Agriculture, Commercial Fishing, and Commercial Wood Harvesting Machinery and Equipment)
        - Jobs and Investment Tax Credit
        - Credit for Rehabilitation of Historic Properties
    - Research and Development
        - High-Technology Investment Tax Credit
        - Sales Tax Exemptions (Machinery and Equipment for Research)
        - Super Credit for Substantially Increased Research and Development
        - Research Expense Tax Credit
- Finance Authority of Maine (FAME)
    - Economic Development
        - Commercial Loan Insurance Program
        - Economic Recovery Loan Program
        - Maine Seed Capital Investment Tax Credit
        - Regional Economic Development Revolving Loan Program
        - Linked Investment Program for Commercial Enterprises
        - Maine New Markets Capital Investment Program
        - Linked Investment Program for Agriculture
    - Research and Development
        - Maine Economic Development Venture Capital Revolving Investment Program (VCRIP)
- Department of Economic and Community Development/ U.S. Department of Labor
    - Economic Development
        - Maine Manufacturing Extension Partnership (MEP)
- Small Business Administration/ Department of Economic And Community Development
    - Economic Development
        - Small Business Development Centers (SBDC)
- Rural Development Authority
    - Economic Development
        - Commercial Facilities Development Program
        - Speculative Industrial Buildings Program
- Maine Community College System
    - Economic Development
        - Maine Quality Centers
- Department of Defense
    - Economic Development
        - Maine Procurement Technical Assistance Center (PTAC)
- Center for Law and Innovation - University of Maine Law School
    - Research and Development
        - Maine Patent Program
- Department of Agriculture
    - Economic Development

- Agricultural Marketing Loan Fund
- Maine Farms for the Future Grants
- Potato Marketing Improvement Fund
- Agricultural Development Grant Program

Overview of the programs of the State of Maine within the evaluation scope of this report

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
Cluster Initiative Program (MTI)	Research and Development	MTI's Cluster Initiative Program makes competitive awards up to $50,000 for feasibility and planning on a rolling basis and up to $500,000 semi-annually for collaborative initiatives that boost the strength and scale of Maine's high-potential technology intensive clusters.	Stimulate the growth of technology businesses and infrastructure in Maine	Appropriation from State General Fund	Grants	$2,171,706	$118,000 (estimated)	Collaborative projects led by non- or for-profit groups
Certified Media Production Tax Credit	Economic Development	A media production company engaged in a media production that is certified by the Department of Economic and Community Development is allowed a credit equal to the Maine income tax related to the income from the certified media production. The credit may not reduce the entity's tax liability below zero and unused credit amounts may not be carried over to prior or future years.	Encourage the creation of production related jobs in Maine, improve the general economy of the State, and attract visual media productions to the State	General Fund	Tax Reimbursement	$1,545,198	N/A	Production companies and companies serving an ancillary function to production companies
Development Loans (MTI)	Research and Development	Up to $500,000 per project to support research and development of new products and services that lead to market, including prototype development and testing, patent applications, small scale manufacturing and scale up for manufacturing with limited production. Awarded three times per year. Match required. All projects must fall under one of Maine's seven technology clusters.	Support development of new technology products and services for commercialization in seven targeted technology sectors	State General Fund	Awards that require payback to MTI when technology is commercially successful.	$1,521,036	$2,902,968 (estimated)	Maine Businesses
Economic Development Program - CDBG	Economic Development	The Economic Development Program provides gap funding in the form of grants and loans for communities to assist businesses in the creation/retention of quality jobs for low and moderate-income persons.	Create quality jobs for low and moderate-income persons	Federal Funds - CDBG Money	Grants and Loans	$1,400,000	$2,700,000 (Estimated. Fed budget not known)	Communities receive funds and assist businesses
Seed Grant Program (MTI)	Research and Development	MTI Seed Grants of up to $25,000 are offered three times a year to support early-stage research and development activities for new products and services that lead to the market. Funded activities may include activities such as proof of concept work, prototype development, field trials, prototype testing, pilot studies, or technology transfer activities.	Support early product development, commercialization, and business planning	State General Fund	Grants	$938,953	$631,196	Maine Businesses
Maine Tourism Marketing Promotion Fund	Economic Development	To create and implement programs to stimulate and expand the travel industry within the tourism regions while strengthening the State's image by coordinating the promotional efforts of private industry and the Office of Tourism. To support development of special events that attracts visitors to Maine and provides impact on multiple regions.	Statutory-must be used for regional marketing promotion and regional special events promotion	Minimum of 10% of the Tourism Marketing Promotion Fund (sub-section 2 of section 13090-K)	Grant that requires specific level of matching funds	$893,200	$1,140,000	Eight official regional tourism marketing organizations and two special events groups each year
Community Enterprise Grant	Economic Development		Assist small and micro-businesses and revitalize	Federal Funds - CDBG	Grants	$750,000	$700,000	Communities and micro-enterprises

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
Program - CDBG			downtown business districts	Money				
Maine International Trade Center	Economic Development	MITC offers global exposure to Maine's small and medium-sized businesses that want to succeed in international markets. MITC's staff helps businesses with a range of issues, provides technical trade assistance and trade education workshops, and organizes international trade show booths and trade missions to help SMEs develop export sales. MITC also runs the Invest in Maine and Study Maine international business attraction and student attraction programs.	Enhance the competitive advantage of state businesses desiring to compete in the international market and to attract new international businesses and international students to the state	State General Fund and private sector match	Technical Trade Assistance and International Business Attraction	$632,918	$608,292	Maine small and medium sized businesses engaged in international business
Downtown Revitalization Grant Program - CDBG	Economic Development	The Downtown Revitalization Grant Program provides funds for communities to implement comprehensive, integrated and innovative solutions to identified problems facing their downtown districts. These downtown revitalization projects must be part of a strategy that targets downtown service and business districts and will lead to future public and private investment.	Encourage public and private investment in downtown services and business districts	Federal Funds - CDBG Money	Grants	$500,000	$400,000	Communities
Business Ombudsman – Not an incentive program	Economic Development	A program that provides quick access to information about local and state business assistance programs, Maine's regulatory requirements and a host of other business-related issues.	Assist new and existing businesses with start-up and expansion	State General Fund	Business Assistance	$456,212	$585,946	Businesses
Communities for Maine's Future - CDBG	Economic Development	Establishes a dedicated, non-lapsing fund for the rehabilitation, revitalization and enhancement of downtowns, village centers, and main streets in the State.	Assist and encourage communities to revitalize and to promote community development and enhance projects	State General Funds	Grants	$448,289 (Expended)	Bonds suspended	Communities
Equity Capital Fund (MTI)	Research and Development	Investments in MTI-funded companies. Available with companies who have successfully commercialized their venture and who were previous recipients of MTI Development Loans or SBIR/STTR funding.	Help bridge the gap for companies seeking to raise equity capital needed to bring new products and services to market - intended to help ventures secure additional private equity capital	State General Fund	Co-investments with individual and/or institutional investors.	$264,973	$125,000 (estimated)	Maine businesses
Loring Development Authority	Economic Development	The Loring Development Authority provides businesses with assistance needed to address concerns and meet the due diligence and business research, development and operation requirements.	Support economic development at the former Loring Air Force Base	State General Fund	Business Assistance	$200,000	$200,000	Businesses Investing in former Loring Air Force Base Property
Maine Technology Centers	Research and Development	Each of Maine's seven targeted technology sectors has its own incubation center. The incubation centers provide critical early-stage technical, business, administrative and	Permit early-stage development of technology-based	State General Fund	Technical Assistance	$178,838	$178,838	Businesses in one of Maine's seven targeted industries

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
		financial resources and training for participating firms.	businesses while minimizing or eliminating debilitating overhead expense					
TechStart Program (MTI)	Research and Development	This is offered to individuals and companies across Maine looking to develop their new ideas and products. Grants are awarded up to twelve times each year, for up to $5,000 per project. Funds must not be readily available from another service provider. Grants may support specific activities such as business plan development, intellectual property filings, market analysis, or planning and preparation activities related to Federal SBIR/STTR Phase I grants or Federal Broad Agency Announcement for technology development. Projects must have defined outcomes and endpoints for the specifically funded scope of work not to exceed six months. Requires a 1:1 cash or approved in-kind match.	Support early product development, commercialization, and business planning	Appropriation from State General Fund	Grants	$107,714	$171,000 (estimated)	Maine Businesses
Phase 0 and Phase II SBIR Application awards plus TAP support (MTI)	Research and Development	Up to $5,000 to support competitive federal Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) proposal submissions from Maine applicants. Match required. Proposals accepted and reviewed on a rolling basis.	Help prepare proposals for SBIR/STTR awards	State General Fund	Grants	$97,593	$127,500 (estimated)	Maine businesses
Brunswick Naval Air Station Job Tax Increment Financing	Economic Development	The Brunswick Naval Air Station Job Tax Increment Financing program reimburses Midcoast Regional Redevelopment Authority and Southern Maine Community College 50% of the personal income tax withholdings of net new jobs created at the former Brunswick Naval Air Station. The program is in effect from 2011 to either 2030 or when 5,000 jobs have been created within the base area, whichever comes first.	Provide a funding source for the Midcoast Regional Redevelopment Authority and the Brunswick campus of Southern Maine Community College	State Income Tax Withholdings	Tax Reimbursement	$80,612	N/A	Midcoast Regional Redevelopment Authority and the Brunswick campus of Southern Maine Community College
Maine Made - Maine Products Marketing Program - CDBG	Economic Development	The Maine Products Marketing Program builds recognition for hundreds of Maine made products, their producers, and Maine's industries in general. MPMP also provides marketing assistance through the Business Ombudsman Program and works to expand market opportunities for Maine's producers.	Promote Maine products and Maine as an investment opportunity	State General Fund	Marketing Assistance	$25,000	$25,000	Qualified Maine producers
North Star Alliance Cluster Award Matching Fund (MTI) - INACTIVE	Research and Development	This Fund is available to eligible companies and non-profit organizations in Maine's boatbuilding, composite materials and related marine trade industries that win MTI seed grants, development awards and cluster enhancement awards. Resources can be used for a co-investment of up to 75% of an eligible MTI awardees' seed grant, development award, or cluster enhancement award. Program is closed.	Further the development and commercialization of new technologies in these industries (boatbuilding, composite materials, marine trade industries), thus boosting	Federal WIRED Grant	Grants	$0	$0	Businesses in select industries on coastal Maine

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
			the competitiveness and growth of Maine companies in these sectors and creating quality jobs for Maine people					
Maine Technology Asset Fund (MTI)	Research and Development	The Maine Technology Asset Fund was a competitive award program funded by Maine State bond proceeds. The awards must be used to fund capital and related expenditures supporting research, development and commercialization projects that will lead to significant economic benefits for Maine. The program is no longer accepting applications.	Fund capital and related expenditures to support research, development and commercialization projects that will lead to significant economic benefits to Maine	State Bond Funds	Awards. Some may require repayment.	N/A	N/A	Maine private and public universities, non-profit organizations and private organizations and in seven targeted state technology sectors
Municipal Tax Increment Financing - Federal money, state handles evaluation but cannot track	Economic Development	Tax Increment Financing is a flexible finance tool used by municipalities, towns, plantations, and the Unorganized Territory to leverage new property taxes generated by a specific project or projects within a defined geographic district. Any portion of the new taxes can be used to finance public or private projects for a defined period of time up to 30 years.	Provide new employment opportunities; improve and broaden the tax base; and improve the general economy of the State	Local Property Taxes	Project Financing	No State funding; strictly municipal	No State funding; strictly municipal	Municipalities are eligible entities and may negotiate/execute reimbursement agreements with companies or developers.
Marine Research Fund (MTI) – Temporary Suspension	Research and Development	Awards from $25,000 up to $500,000 to conduct high-quality, scientifically rigorous marine research programs that will have positive economic impact on the state of Maine. Private Maine companies may collaborate with these institutions as partners in proposed projects. Fund is now closed as all funds have been awarded. MTI awarded approximately $6 million of state bond funds since 2002.	Support research and development in Maine	State Bond Funds	Grants	$0	$0	Non-profits, laboratories, and academic organizations conducting marine research; private businesses in partnership
Maine Biomedical Research Fund (MTI) – Temporary Suspension	Research and Development	Grants available to eligible Maine institutions that conduct competitive, scientific biomedical research related to the biology, causes, diagnosis, treatment, control and prevention of physical and mental diseases or impairments afflicting humans. Program is closed.	Promote economic development and job growth and support non-profit laboratories in Maine that perform peer reviewed biomedical research	State General and Bond Funds	Grants	$0	$0	Non-profits, laboratories, and academic organizations conducting marine research; private businesses in partnership
Maine Micro-Enterprise Initiative Fund – Program on hold	Economic Development	The Maine Microenterprise Initiative Fund is established as a non-lapsing fund and consists of money appropriated to it by the Legislature from the General Fund and eligible investment earnings from fund assets to encourage micro-	Provide grants to community-based organizations to aid them in providing technical	State General Fund	Grants	$0	$0	Community based organizations providing technical and training

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
		enterprise growth in Maine.	assistance and training to microenterprises					assistance to small business
ETIF	Economic Development	For-profit, non-retail, non-utility businesses adding a minimum of five net new Maine jobs within a two-year period may be eligible for Maine's Employment Tax Increment Financing. Under the ETIF program, businesses are reimbursed from 30% to 80% of their new employees' Maine income tax withholdings for up to 10 years. To qualify, new employees must receive an annual income greater the county's per-capita personal income, and be provided access to group health insurance and an Employee Retirement Income Security Act (ERISA)-qualified retirement program.	Encourage the creation of net new quality jobs in Maine, improve and broaden the tax base and improve the general economy of the State	State Income Tax Withholdings	Tax Reimbursement	$9,581,303	N/A	Maine businesses
Pine Tree Development Zones – Included but modified since January Reports	Economic Development	Works with and enhances existing programs for specific businesses meeting economic and geographic criteria. Benefits: Corporate Income Tax Credit of up to 100% for first 5 years and up to 50% for next 5 years; Insurance Premiums Tax Credits on the same schedule (financial services sector only); Personal Income Tax Reimbursement up to 80% for 10 years (ETIF); Sales and Use Tax Exemption up to 100% for 10 years on new personal property; Sales and Use Tax Reimbursement up to 100% for 10 years on new tangible property purchases to be permanently incorporated into existing real estate; and reduced Electricity Rates.	Provide new and improve existing employment opportunities; improve and broaden the tax base; and improve the general economy of the State	State General Fund	Tax Credits, Tax Reimbursements, and Rate Reductions	Tax offset	Tax offset	Maine manufacturers; financial services, biotechnology, aquaculture, composite engineering; marine, environmental, advanced forest and agricultural, information technology sectors
Business Equipment Tax Reimbursement	Economic Development	Qualified business equipment first subject to property tax assessment on or after April 1, 1996, the program reimburses local property taxes paid on qualified business property. To qualify, qualified business property must have been first placed in service in Maine after April 1, 1995.	To encourage capital investment by businesses in Maine and remove disincentives to growth.	State General Fund	Tax Reimbursement	$55,220,851	$48,802,794	Maine Business
Sales Tax Exemptions (Manufacturing Machinery, Equipment and Tangible Personal Property)	Economic Development	Sales of machinery and equipment used by the purchaser directly and primarily in the production of tangible personal property for later sale or lease and in the generation of radio and televisions broadcast signals by broadcast stations are eligible for a sales tax exemption. In addition items consumed or destroyed directly or primarily in production, and repair and replacement parts for qualified production equipment are exempt from sales tax.	Support manufacturing in Maine	State General Fund	Sales Tax Exemption	$21,663,990 (1760.31) $98,621,400 (1760.74)	$21,915,360 (1760.31) $99,836,640 (1760.74)	Maine Manufacturers
Sales Tax Exemptions (Fuel and Electricity for Manufacturing)	Economic Development	Manufacturers are exempt from paying 95% of the sales tax on fuel and/or electricity used in the manufacturing operation.	Support manufacturing facilities in Maine	State General Fund	Sales Tax Exemption	$24,456,915	$24,701,484	Maine manufacturers

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
Business Equipment Tax Exemption	Economic Development	Qualified business equipment first subject to property tax assessment on or after April 1, 2008 will be exempt from property taxes. The State is required to reimburse municipalities for property revenue loss according to the following schedule: 100% in 2008, 90% in 2009, 80% in 2010, 70% in 2011, 60% in 2012, and for 2013 and subsequent years, 50%. Alternative reimbursement may be chosen by municipalities with business property exceeding 5% of total taxable value.	Encourage capital investment by businesses in Maine and remove disincentives to growth	State General Fund	Tax Exemption	$19,128,057	$20,209,617	Maine Business
Shipbuilding Facility Credit	Economic Development	Tax credit for up to $3 million annually in state income taxes deducted and withheld from employees of shipbuilding facilities with at least 5,000 employees. Beginning July 1, 1999, available credit increases with number of employees up to $3.5 million and 7,000. Beginning July 1, 2003, decreasing credit is available down to $2.625 for 3,500 to 4,000 employees.	Encourage major investments in shipbuilding facilities in Maine and the preservation of substantial numbers of jobs, preserve numerous opportunities for jobs for Maine people, to make Maine more competitive in the shipbuilding industry and thus ensure the preservation and betterment of the economy of the State for the benefit of its people	State General Fund	Income Tax Credit	$3,000,000	$3,000,000	Large-scale Maine shipbuilders with over 5,000 Employees
Sales Tax Exemptions (Products Used in Agricultural and Aquaculture Production, and Bait)	Economic Development	Sales tax exemption on sales of feed, hormones, pesticides, antibiotics and medicine for use in aquaculture production and sales of bait to commercial fishermen; sales of seed, fertilizers, defoliants and pesticides, including, but not limited to, rodenticides, insecticides, fungicides and weed killers, for use in commercial agricultural production; sales of breeding stock, semen, embryos, feed, hormones, antibiotics, medicine, pesticides and litter for use in animal agricultural production and sales of antiseptics and cleaning agents used in commercial animal agricultural production, including the raising and keeping of equines.	Provide funding to agricultural, aquaculture, and commercial fishing industries through a sales tax exemption.	State General Fund	Sales Tax Exemption	$2,745,500	$2,793,000	Qualifying Maine commercial agriculture and aquaculture businesses.
Sales Tax Exemptions (Commercial Agriculture, Commercial Fishing, and Commercial Wood Harvesting	Economic Development	Sales tax is refunded to any person, association of persons, firm or corporation that purchases electricity, or that purchases or leases depreciable machinery or equipment, for use in commercial agricultural production, commercial fishing, commercial wood harvesting or commercial aquaculture production.	Provide financial support to commercial agriculture, aquaculture, wood harvesting and fishing	State General Fund	Sales Tax Exemption	$2,737,886	$2,822,823	Commercial fishermen, farmers, aquaculturalists, and wood harvesters

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
Machinery and Equipment)								
Sales Tax Exemptions (Machinery and Equipment for Research)	Research and Design	Sales of machinery and equipment used by the purchaser directly and exclusively in research and development are eligible for a sales tax exemption including the application of technologies such as recombinant DNA techniques, biochemistry, molecular and cellular biology, immunology, genetics and genetic engineering, biological cell fusion techniques and new bioprocesses using living organisms or parts of organisms to produce or modify products, improve plants or animals, develop microorganisms for specific uses, identify targets for small-molecule pharmaceutical development, transform biological systems and useful processes and products or to develop microorganisms for specific uses.	Support research and development in biotechnology applications	State General Fund	Sales Tax Exemption	$250,000 - $999,999	$250,000 - $999,999	R&D and Biotechnology Companies
Jobs and Investment Tax Credit	Economic Development	The Jobs and Investment Tax Credit (JITC) provides a credit of 10% of the investment of at least $5,000,000 in personal property that creates at least 100 new jobs within 2 years of the investment. Retail facilities are excluded from taking the credit. The JITC used in any one year is limited to the lesser of $500,000 or the tax liability of the taxpayer. Any unused credit may be carried forward for up to six years for a maximum credit claimed of $3,500,000.	Encourage industry to make substantial capital investments in Maine and an increase of at least 100 new jobs following the investment	State General Fund	Income Tax Relief	Not Available	Not Available	Maine Businesses investing at least $5 million in personal property and creating 100 new jobs over 2-year period
Super Credit for Substantially Increased Research and Development	Research and Development	The credit is available for taxpayers who qualify for the research expense tax credit and is based on qualified research payments exceeding 150% of the average for the three taxable years immediately proceeding June 12, 1987. The credit is limited to 50% of the tax otherwise due after all other credits. Further, the credit cannot reduce tax liability below the amount due the previous year after credits. The credit cannot be carried back, but can be carried forward for up to five years.	Provide incentive for businesses to substantially increase investment in research and development in Maine	State General Fund	Income Tax Credit	Not Available	Not Available	Qualified Maine businesses making research investments in Maine
High-Technology Investment Tax Credit	Research and Development	The credit is based on the adjusted basis of eligible equipment. Limitations: the credit is limited to high-tech equipment purchased (or leased) by businesses engaged primarily in high-tech activities. The credit cannot reduce tax to an amount below the previous year's tax after credits. The credit cannot be carried back, but can be carried forward for up to five years.	Provide an incentive for businesses to invest in equipment that is used in high-technology business activity	State General Fund	Income Tax Credit	Not Available	Not Available	Manufacturers of computer equipment, accessories, and components and providers of internet service and advanced telecommunications

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
Research Expense Tax Credit	Research and Development	The credit is based on a percentage of the federal credit for increasing research activities. The credit is equal to 5% of the excess qualified research expenses over the previous three-year average plus 7.5% of the basic research payments under IRC § 41(e)(1)(A). For corporate taxpayers, the credit is further limited to 100% of the first $25,000 in tax liability plus 75% of the tax liability in excess of $25,000. For taxpayers other than corporations, the credit is limited to the taxpayer's liability. The credit cannot be carried back, but can be carried forward for up to 15 years.	Encourage Maine businesses to invest in research and development in Maine	State General Fund	Income Tax Credit	Not Available	Not Available	Qualified Maine businesses making research investments in Maine
Credit for Rehabilitation of Historic Properties	Economic Development	This credit is available to taxpayers who qualify for the federal rehabilitation credit and those who would qualify for the credit if not for the "substantial rehabilitation" test. The credit is equal to 25% of qualified rehabilitation expenditures as defined by IRC Section 47. If an eligible rehabilitation project involves affordable housing, the developer may be eligible for a credit of 30% of qualified rehabilitation expenditures. The credit is limited to $5,000,000 per project and is refundable.	Enlist private funds for the rehabilitation of historic properties	State General Fund	Tax Credit	Not Available	Not Available	Taxpayers rehabilitating historic Maine properties
Commercial Loan Insurance Program	Economic Development	The Loan Insurance Program insures a portion of a loan made to a business by a financial institution. The two types of loan insurance include: advantage-rata which covers a certain percentage of lender's loss after a default and liquidation, up to 100%; and leveraged which covers a certain percentage of lender's loss up to 25% of the loan amount at the time of default.	Help Maine businesses access commercial credit. The program insures a portion of a loan made by a financial institution to the borrower	No funding unless loss, then FAME's Loan Insurance Fund	Loan Insurance - dollars distributed	$4,339,945 (Payouts)	Not available	Maine businesses subject to some guidelines
Economic Recovery Loan Program	Economic Development	This program provides subordinate (gap) financing to assist businesses in their efforts to remain viable and/or improve productivity. From time to time, FAME utilizes funds in this program to address specific business community needs. Maine-based businesses that exhibit a reasonable ability to repay the loan and demonstrate that other sources of capital have been exhausted are eligible for loans up to $750,000. Loans up to $1,000,000 may be available if substantial public benefit is demonstrated and sufficient funds available.	Provide loans to businesses that do not have sufficient access to credit but demonstrate the ability to survive, preserve and create jobs, and repay the obligations	State Bonds	Loans	$3,587,990 (Disbursed)	Not available	Businesses attempting to remain viable and/or improve productivity
Maine Seed Capital Investment Tax Credit	Economic Development	This program is designed to encourage equity and near equity investments in young business ventures, directly and through private venture capital funds. FAME may authorize State income tax credits to investors for up to 40%, or 60% in a high unemployment area, of the cash equity they provide to eligible Maine businesses. Investments may be used for fixed assets, research or working capital.	Encourage equity and near equity investments in young business ventures, directly and through private venture capital funds	State General Fund	Income Tax Credit	$2, 744,014 (Awarded)	Not available	Investors owning less than 50% of a business located in Maine with annual gross sales of not more than $3 million

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
Regional Economic Development Revolving Loan Program	Economic Development	This program is designed to make loans through Maine's regional economic development agencies for the purpose of creating or retaining jobs. FAME makes disbursements to regional economic development agencies and the agencies in turn make loans to eligible borrowers. Amount any corporation may receive is limited to $3.5 million. Loans may not exceed $250,000 to a borrower or $100,000 for quality child care projects. Eligible businesses have sales under $5,000,000 or employ 50 or fewer employees, conducting business in specific categories.	Provide financial assistance to businesses needing assistance in order to create or retain jobs.	State Bonds	Grants to regional agencies	$601,132 (Disbursed)	Not available	Businesses that have sales under $5,000,000 or employ 50 or fewer employees, conducting business in specific categories
Maine Economic Development Venture Capital Revolving Investment Program (VCRIP)	Research and Development	Designed to allow the State to invest as an equal partner with others in eligible private venture capital funds to support emerging and early-growth businesses in Maine. It is intended to utilize professional fund managers to increase the probability of successful investments in recipient companies. It is available only to established venture capital funds with a strategy for the creation and retention of jobs in Maine through: investments in Maine high-growth businesses; a marketing and technical assistance plan; appropriate monitoring of its investment; a technical assistance program to assist the businesses in which it invests; a process for complying with proposed measurement and goals.	Provide venture capital to businesses needing assistance to create or retain jobs	FAME Economic Revolving Loan	Venture Capital	$500,000 (Disbursed)	Not available	Established venture capital funds with a strategy for the creation and retention of jobs in Maine
Linked Investment Program for Commercial Enterprises	Economic Development	This program reduces a borrower's interest rate on a loan. Loans are approved and funded by lenders according to their own policies. The Maine State Treasurer makes a deposit at up to 2% below prevailing rate, provided similar discount is applied on the lender's loan to the business. Eligible entities are non-agriculture, for-profit Maine businesses with 20 or fewer employees and annual sales less than $2.5 million. Must be a manufacturer or have 70% of sales outside Maine and 50% owned by Maine residents. Loan proceeds are for real property, fixed assets, research or working capital and must retain one job for each $20,000 of deposited funds.	Reduce a borrower's interest rate on a loan.	Treasurer's Fund	Loan Interest Rate Reduction	$360,000 (Disbursed)	$180,000 (Disbursed)	Financial institutions receive money from the state to lower interest rates for non-agricultural, for-profit businesses located in Maine with 20 or fewer employees or annual sales of less than $2,500,000
Maine New Markets Capital Investment Program	Economic Development	The Maine New Markets Capital Investment Program provides refundable state tax credits of up to 39% to investors in qualified community development entities (CDEs) that reinvest in certain businesses in eligible low-income communities in Maine. The program is modeled after the federal New Markets Tax Credit Program, and is administered by the Finance Authority of Maine, in cooperation with Maine Revenue Services and the Maine Department of Economic and Community Development.	Attract business investment in low-income Maine communities	General Fund	Tax credits	Not available	Not available	Community Development Entities

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
Linked Investment Program for Agriculture	Economic Development	This program reduces a borrower's interest rate. Loans are approved and funded by lenders according to their own policies. The Maine State Treasurer will make a deposit in the form of a Certificate of Deposit (CD) with the originating lender at up to 2% less than prevailing rate, provided similar discount is applied to the interest rate on the lender's loan to the business. An eligible business' principal source of income must derive from producing crops or raising livestock. Must be applied to an agricultural operating loan (for the purchase of seed, feed, fertilizer, chemicals, veterinary services, labor, production-related energy and/or other production), not loans for capital projects.	Make low-interest loans available to agricultural enterprises involved in cultivating soil, producing crops and raising livestock or their by-products. Loans are targeted to geographic areas of need	Treasurer's Fund	Loan Interest Rate Reduction	$0 (Disbursed)	Not available	Maine Agricultural Businesses
Maine Manufacturing Extension Partnership (MEP)	Economic Development	The Maine MEP is a non-profit organization with a culture of innovation that leverages resources in the application of new ideas to clients, products and processes. The MEP is able to leverage a vast array of public and private resources and in makes these resources and services available to every manufacturing enterprise in the state. The Maine MEP is part of a nationwide network of technical, manufacturing, business specialists linked together by the US. Department of Commerce and the National Institute of Standards and Technology. The program is a resource for manufacturers to transform from a traditional to world-class organization. The program provides affordable, innovative solutions to problems facing today's manufacturing enterprises.	Guides manufacturers through enterprise-wide transformations, identifying product and process improvements, energy efficiencies, product innovations and new market opportunities that can improve the financial sustainability of Maine companies and promote the state's economic growth - This enables Maine manufacturers to expand their capacities and capabilities	State and Federal Funds; Fees for Service	Business services and workforce strategies tailored to small- to medium-size manufacturers	$1,464,151	$1,603,244 (projected)	Maine manufacturers having less than 500 employees
Small Business Development Centers (SBDC)	Economic Development	The Maine Small Business Development Centers' mission is to engage it and others in development activities that contribute to the improvement of the economic climate for and the success of entrepreneurs and small businesses in the State of Maine. The Maine SBDC's focus is to assist in the creation, growth and the maintenance of viable small businesses and the jobs these businesses provide.	Assist in the creation of and the growth of viable small businesses and the jobs these businesses provide	Private, State and Federal Funds	Business Assistance	$2,068,498	NA	Maine entrepreneurs and small businesses
Commercial Facilities Development Program	Economic Development	The Commercial Facilities Development Program provides financial resources to assist in the development of new commercial facilities and the acquisition and redevelopment of nonproductive commercial facilities for subsequent return to productive use through sale or lease. The MRDA can serve as lender, principal developer, partner or investor in the acquisition of property and redevelopment of existing commercial properties.	Restore or create job opportunities by serving as principal, partner, lender or investor: in the acquisition and redevelopment of nonproductive commercial facilities for	Bond	Loans	$441,946	$995,000 (as of 5-1-2013)	Private or public entities developing new facilities or purchasing non-productive facilities

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
		Investments for the program are available up to $500,000. Municipalities or other local entities must provide 25% of the funding provided by the authority. The authority may waive this requirement given a lack of local resources. Undeveloped land or personal property may be financed only as part of the overall development or redevelopment project.	return to productive use through sale or lease; and in areas of economic need in the acquisition of property and development of commercial facilities for sale or lease into private productive use					
Speculative Industrial Buildings Program	Economic Development	The Speculative Buildings Program provides communities and their local development corporations with financial assistance in the form of loans for the construction and associated costs of speculative commercial and industrial buildings. Loans are available up to $500,000.	Create new employment opportunities; retain or improve existing employment; or improve the competitiveness of the occupant business	Bonds	Loans	$0	$0	Communities and Local Development Corporations
Maine Quality Centers	Economic Development	Maine's Community College System offers free training and education to qualified new and expanding businesses. Under this program, businesses – or consortia of small businesses – creating a minimum of eight new full-time jobs in Maine are eligible for customized recruitment and guaranteed fast-track training designed to employer specifications. An incumbent training offering is expected to be available in FY14.	Encourage and facilitate the creation of new jobs in the State by offering customized education and training programs at community colleges free to businesses seeking to create new jobs in the State	State General Fund	Workforce Training	$872,677	$850,576	Small businesses apply and employees receive the training
Maine Procurement Technical Assistance Center (PTAC)	Economic Development	The Maine PTAC is part of a nationwide network of Procurement Technical Assistance Centers that helps Maine small businesses obtain government contracts with the Department of Defense, other federal agencies, state and local governments and federal prime contractors.	Provide specialized and professional assistance to individuals and businesses wanting to learn about or actively seeking contracting and subcontracting opportunities, and/or performing contracts and subcontracts with Department of Defense, other Federal Agencies, or State and Local governments	State General Fund and Federal Funds	Technical Assistance	$732,126	$550,566	Maine businesses with a product or service the government can buy
Maine Patent Program	Research and Design	Helping Maine inventors and small businesses understand how to identify and protect their intellectual property. A resource for information and education on the patent process and other means of intellectual property protection. Inform what needs to be done to obtain and	Support the commercialization and manufacturing of innovations in the State by providing education	State Funds	Technical Assistance	$0	$0	Maine inventors and small businesses

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
		maintain legal rights in ideas, if possible, and to provide assistance with the patent process to those who qualify. Maine Patent Fund is established as a revolving, non-lapsing fund.	and assistance with the patent process of the United States Patent and Trademark Office to companies, inventors and entrepreneurs in the State					
Agricultural Marketing Loan Fund	Economic Development	This loan program offers a loan for either 75% or 90% of the total cost of a capital improvement project for the business. At a 5% interest rate, it can help agricultural enterprises making improvements save money. This program provides assistance to the design, construction or improvement of commodity and storage buildings and packing and marketing facilities; the purchase, construction or renovation of buildings, equipment, docks, wharves, piers or vessels used in connection with a commercial agricultural enterprise; the purchase of land in connection with development of new cranberry acreage; the purchase of land for irrigation reservoirs or to provide direct access to water for irrigation; the purchase of land necessary for the start-up of a new agricultural enterprise; the expansion of an existing agricultural enterprise to comply with land use regulations; the development of a business plan; improvements to pastureland, including seeding and actions to promote rotational grazing; or as security for, payment due on any term loans insured by the Finance Authority of Maine to an eligible dairy farmer.	Provide assistance to agricultural enterprises in Maine	Bonds	Loans	$242,589	Not Available	Parties engaged in agricultural enterprises
Maine Farms for the Future Grants	Economic Development	This program provides grants of technical assistance to farmers developing business plans, and funds to help implement those plans. Eligibility is limited to farmers who own at least 5 acres of land in active agricultural production and have produced agricultural products commercially in the state for at least two years prior to application.	Provide selected farms with assistance in developing a detailed business plan that involves changes in the farm's operation to increase the vitality of the farm and investment money to help implement the plan	State General Fund, bonds, federal funds	Business Assistance and Grants	$205,885	N/A	Farmer-landowners

PROGRAM	Type of Program	Description	Purpose	Funding Source	Type of Assistance	TOTAL FUNDING 2012	TOTAL FUNDING 2013	Target Recipients
Potato Marketing Improvement Fund	Economic Development	Funded through the Maine Department of Agriculture, Conservation and Forestry, this program provides low-interest financing to potato growers and packers to improve the quality and marketing of Maine potatoes. Funds may be used for new construction or improvements to storage and/or centralized packing facilities as well as for the acquisition of packing, sizing, washing and drying equipment. Funds may be used to fund programs and activities that improve the economic viability of the potato industry. Such improvements include irrigation equipment and water source development projects. The program also pays the administrative costs of processing loan applications and servicing and administering the fund and loans and grants made therein, to the extent that the costs exceed the fee for administrative costs. Loans are limited to 45%-55% of total project costs.	Provide assistance to potato farmers farming-related expenses, expansion, equipment, and industry related activities	Bonds	Loans	$156,000 (Disbursed)	Not available	Any person or business engaged in growing, processing or marketing potatoes in Maine
Agricultural Development Grant Program	Economic Development	The Agricultural Development Grants assists farmers in assessing market potential of new ideas, increasing market promotion of existing businesses, or improving the adoption of new technology on the farm. At least 25% of the total project cost must be funded by the applicant and at least 10% must be from nonpublic sources.	Accelerate new market development, adoption of advantageous technologies and promotion of state agricultural products by state producers	Agricultural Marketing Loan Fund Interest	Grants	$0	Not Available	Anyone supporting agricultural products

ICA identified a handful of programs referenced in annual reports but which were not included on our list of programs to incorporate. Please note this is not a list of all other incentive programs in Maine that we have excluded.

Program	Administrator	Have annual reports?	Evaluation
Target Technology Incubator			
Capital Investment Tax Credit	FAME	Yes	Tax Incentive
Major Business Expansion Program	FAME	Yes	Loan Insurance
Intermediary Relending Program	FAME	Yes	Loan
State Small Business Credit Initiatives (SSBCI)	FAME	Yes	Loan
Nutrient Management Program	FAME	Yes	Loan - Agricultural
Oil Storage Facility and Tank Replacement	FAME	Yes	Loan

Program	Administrator	Have annual reports?	Evaluation
Program			
Revenue Obligation Securities Program	FAME	Yes	Bond
Smart Bond Program	FAME	Yes	Bond
Smart E Bond Program	FAME	Yes	Bond
Municipal Securities Approval Program	FAME	Yes	base for Bond
Energy Conservation Loan Program	FAME	Yes	Loan
Maine Food Processing Grant Program	FAME	Yes	Grant
Maine Center for Entrepreneurial Development	Maine Technology Centers	Yes	Training
Accelerated Commercialization Fund	MTI	Yes	Unclear - R&D
Sector Specific Assistance: renewable energy technology	MTI	Yes	Unclear - R&D

Appendix E – Response from Program Administrators

The following chart includes annual report status, status of additional data request, traceability, and other factors that pertain to the annual report review and the internal benchmarking activities.

	Annual report	Additional data on programs?	Can the Program Website be located with an Internet Search?	Does website Include Annual Report?	Does website Include Application Process and Forms Online?	What are the Target Sectors of the Program?	Are the Benefits of the Program Clearly Stated?	Are the Eligibility Requirements Posted Online and Clear?	Does the Program Claim to Purge Non-Compliant Companies?	Are There any Caps on Benefits?	Responsiveness 1-5; 0 = No Data)	Was the data obtained useful? (0 = No Data; 1-5)	Was confidentiality sited as a concern?	Do the administrators track clients all the way through the process?	Are awards revoked based on not obtaining results?
Cluster Initiative	Yes	No - Website only with old data	Yes	Yes but not easily	Yes	R&D	Yes	Yes	No	Yes	0	0	No	Yes	Results Based
Maine Attraction Film Incentive Program	Yes	No	Yes	No	Yes	Film	Yes	Yes	No	Yes	5	3	Yes	Unknown	No
Development Awards	Yes	No - Website only with old data	Yes	Yes but not easily	Yes	R&D	Yes	Yes	No	Yes	0	0	No	Yes	Results Based
Economic Development Program	No	NA	Yes but not easily	No	Yes	Maine communities	Yes	Yes	Yes	Yes	3	0	No	Unknown	Unknown
Seed Grant	Yes	No - Website only with old data	Yes	Yes but not easily	Yes	R&D	Yes	Yes	No	Yes	0	0	No	Yes	Results Based
Main Tourism Marketing Promotion Fund (MTMPF)	Yes	Yes	Not Easily	No	Yes	Tourism Industry	In Annual Report and legislative mandate only	Yes	Yes	Yes	4	1	No	Unknown	Unknown
Community Enterprise Grant Program	No	NA	Yes (PDF)	No	No	Micro-businesses	Yes	Yes	Yes	Yes	3	0	No	No	Unknown
Maine International Trade Center	No	No	Yes	Yes	Yes*	Maine companies	Yes*	Yes*	No	NA	0	0	No	Unknown	Unknown
Downtown Revitalization Grant Program	No	NA	Yes	No	Yes	Maine communities	Yes	Yes	No	Yes	3	0	No	No	Unknown
Business Ombudsman [answers?]	Yes	NA	Yes but not easily	No	No	Small businesses	Yes	No	No	NA	3	0	No	No	No
Communities for Maine's Future	No	NA	Yes	No	No	Municipalities	Yes	No	No	Yes	3	0	No	Unknown	Unknown

	Annual report	Additional data on programs?	Can the Program Website be located with an Internet Search?	Does website Include Annual Report?	Does website Include Application Process and Forms Online?	What are the Target Sectors of the Program?	Are the Benefits of the Program Clearly Stated?	Are the Eligibility Requirements Posted Online and Clear?	Does the Program Claim to Purge Non-Compliant Companies?	Are There any Caps on Benefits?	Responsiveness 1-5; 0 = No Data)	Was the data obtained useful? (0 = No Data; 1-5)	Was confidentiality sited as a concern?	Do the administrators track clients all the way through the process?	Are awards revoked based on not obtaining results?
Equity Capital Fund (MTI)	No	No - Website only with old data	Yes	Yes but not easily	Yes	Innovative businesses	No	No	No	No	0	0	No	Yes	Results Based
Loring Development Fund	Yes	Yes	Yes	No	No	None	Yes	No	No	Yes	5	5	No	Yes	Unknown
Maine Technology Centers	Yes	Yes	No	No	No	Unclear	No	No	No	No	4	3	No	Yes to some	Unknown
TechStart Program (MTI)	No	No - Website only with old data	Yes	No	Yes	Innovative businesses	Yes	Yes	Yes	Yes	0	0	No	Yes	Results Based
Phase 0 Program	Yes	No - Website only with old data	Yes	No	Yes	Innovative businesses applying for SBIR/STTR grants	Yes	Yes	No	Yes	0	0	No	Yes	Results Based
Pre phase II SBIR/STTR Matching Grants	Yes	No - Website only with old data									0	0	No	Yes	Results Based
Technical Assistance securing federal SBIR/STTR funding	Yes	No - Website only with old data									0	0	No	Yes	Results Based
Brunswick Naval Air Station Job Tax Increment Financing	No	Yes	Yes but not easily	No	Yes but not easily	Innovative businesses	Yes	No	No	NA	5	5	No	Unknown	Unknown
Maine Made - Maine Products Marketing Program	No	NA	Yes	No	Yes	Maine industries	Yes	Yes	No	NA	3	0	No	Unknown	Unknown
North Star Alliance Cluster Award Matching Fund (MTI)	No	NA									NA (Not Active)	NA (Not Active)	NA (Not Active)	NA (Not Active)	NA (Not Active)
Maine Technology Asset Fund	Yes	No - Website only with old data	Yes	Yes but not easily	No	R&D	Yes	No	Yes	No	0	0	No	Yes	Results Based

	Annual report	Additional data on programs?	Can the Program Website be located with an Internet Search?	Does website Include Annual Report?	Does website Include Application Process and Forms Online?	What are the Target Sectors of the Program?	Are the Benefits of the Program Clearly Stated?	Are the Eligibility Requirements Posted Online and Clear?	Does the Program Claim to Purge Non-Compliant Companies?	Are There any Caps on Benefits?	Responsiveness 1-5; 0 = No Data)	Was the data obtained useful? (0 = No Data; 1-5)	Was confidentiality sited as a concern?	Do the administrators track clients all the way through the process?	Are awards revoked based on not obtaining results?
Municipal Tax Increment Financing	Data, no report	Yes	Yes		Yes	Municipalities	Yes	No	No	NA	5	1	No	Yes	Unknown
Maine Marine Research Fund	Yes	NA	Yes	Yes but not easily	NA	Research	NA	NA	NA	NA	NA (Not Active)	NA (Not Active)	NA (Not Active)	NA (Not Active)	NA (Not Active)
Maine Biomedical Research Fund	Yes	NA	Yes	Yes but not easily	NA	Biomedical	NA	NA	NA	NA	NA (Not Active)	NA (Not Active)	NA (Not Active)	NA (Not Active)	NA (Not Active)
Maine Micro-Enterprise Initiative Fund	No	NA	Yes	No	Yes	Micro-enterprises	Yes	Yes	No	Yes	NA (Not Active)	NA (Not Active)	NA (Not Active)	NA (Not Active)	NA (Not Active)
ETIF	Yes	Yes	Yes	No	Yes	No Specific Sector	Yes	Yes	No but has started the process	Not listed on website	5	5	No	Yes	Yes Employment goals - Unknown if incentives would be revoked
PTDZ	Yes	Yes	Yes	No	Yes	No specific targets	Yes	Yes	No - recently started	Yes	5	4	No	Yes	Yes, started purging this year
BETR	Yes	Yes	Yes	No	No	No specific targets	Yes	No	No	NA	5	3	Yes	Yes	No
Sales Tax Exemptions (Manufacturing Machinery , Equipment and Tangible Personal Property)	No	Responded but with no info for this program	Yes (PDF)	No	No	Agricultural Production	No	Yes (PDF)	No	NA	5	0	Yes	No	No
Sales Tax Exemptions (Fuel and Electricity for Manufacturing)	No	Responded but with no info for this program	Yes (PDF)	No	No	Manufacturing	No	Yes (PDF)	No	NA	5	0	Yes	No	No
Business Equipment Tax Exemption	No	Yes	Yes	No	No - website contains broken links	No Specific Targets	Yes in annual report	Yes in annual report	Yes	Yes	5	2	Yes	No	No
Shipbuilding Credit	Yes	Yes	Legislature Code Only	No	No	Shipbuilding	Yes in annual report	Yes in annual report	Yes in annual report	Yes in annual report	5	3	Yes	No	No
Sales Tax Exemptions (Products Used	No	Responded but with no info for this	Yes but not easily	No	No	Aquacultural Production	No	Yes but not easily	No	NA	5	0	Yes	No	No

	Annual report	Additional data on programs?	Can the Program Website be located with an Internet Search?	Does website Include Annual Report?	Does website Include Application Process and Forms Online?	What are the Target Sectors of the Program?	Are the Benefits of the Program Clearly Stated?	Are the Eligibility Requirements Posted Online and Clear?	Does the Program Claim to Purge Non-Compliant Companies?	Are There any Caps on Benefits?	Responsiveness 1-5; 0 = No Data)	Was the data obtained useful? (0 = No Data; 1-5)	Was confidentiality sited as a concern?	Do the administrators track clients all the way through the process?	Are awards revoked based on not obtaining results?
in Agricultural and Aquaculture Production, and Bait)		program													
Sales Tax Exemptions (Commercial Agriculture, Commercial Fishing, and Commercial Wood Harvesting Machinery and Equipment)	No	Responded but with no info for this program	Yes but not easily	No	No	Commercial Agricultural Production	No	Yes but not easily	No	NA	5	0	Yes	No	No
Sales Tax Exemptions (Machinery and Equipment for Research)	No	Responded but with no info for this program	Yes	No	Yes	Research Activities	No	No	No	NA	5	0	Yes	No	No
Jobs and Investment Tax Credit	No	Yes	Yes but not easily	No	No	Not Specified	Yes	Yes	No	Yes	5	2	Yes	No	No
Super Credit for Substantially Increased Research and Development	No	Yes	Yes	No	Yes	Research Activities	Yes	No	No	Yes	5	3	Yes	No	No
High-Technology Investment Tax Credit	No	Yes	Yes	No	Yes	Research Activities	Yes	No	No	Yes	5	3	Yes	No	No
Research Expense Tax Credit	No	Yes	Yes	No	Yes	Research Activities	Yes	No	No	Yes	5	3	Yes	No	No
Credit for Rehabilitation of Historic Properties	No		Yes	No	No	Historic Structures	Yes	Yes	No	Yes					
Commercial loan Insurance Program	Yes	Yes	Yes	Yes but not easily	Yes	No Specific Sector	Yes	Yes	Not on website	Yes	5	5	Yes	Yes	No
Economic Recovery Loan	Yes	Yes	Yes	Yes but not	Yes	No Specific Sector	Yes	Yes	Not on Website	Yes	5	4	Yes	Yes	No

	Annual report	Additional data on programs?	Can the Program Website be located with an Internet Search?	Does website Include Annual Report?	Does website Include Application Process and Forms Online?	What are the Target Sectors of the Program?	Are the Benefits of the Program Clearly Stated?	Are the Eligibility Requirements Posted Online and Clear?	Does the Program Claim to Purge Non-Compliant Companies?	Are There any Caps on Benefits?	Responsiveness 1-5; 0 = No Data)	Was the data obtained useful? (0 = No Data; 1-5)	Was confidentiality sited as a concern?	Do the administrators track clients all the way through the process?	Are awards revoked based on not obtaining results?
Program				easily											
Maine Seed Capital Tax Credit Program	Yes	Yes	Yes	Yes but not easily	Yes	No Specific Sector	Yes	Yes	Not on Website	Yes	5	4	Yes	Yes	No
Regional Economic Development Revolving Loan Program	Yes	Yes	Yes	Yes but not easily	No	small technology businesses	Yes	Yes	Not on Website	Yes	5	3	Yes	Yes	No
Maine Economic Development Venture Capital Revolving Loan Investment Program	Yes	Yes	Yes	Yes but not easily	No	Early growth business	Yes	Yes	Not on Website	Yes	5	3	Yes	Yes	No
Linked Investment for Commercial Enterprises	Yes	Yes	Yes	Yes but not easily	No	No Specific Sector	Yes	Yes	Yes	Yes	5	3	Yes	Yes	No
Maine New Markets Tax Credit Program	Yes	Yes	Yes	Yes but not easily	Yes	No Specific Sector	Yes	Yes	Yes	Yes	5	3	Yes	Yea	No
Linked Investment Programs for Agricultural Enterprises	Yes	Yes	No	Yes but not easily	No	Agriculture	Yes in Annual report	Yes in Annual report	Not on Website	Not on Website	5	3	Yes	Yes	No
MEP	Yes	Yes	Yes	Yes	No	Manufacturing	Yes	No	No	No	5	4	No	Yes	No
Small Business Development Centers	Yes	No	Yes	No	Yes	Small Businesses	Yes	Yes	No	No	0	0	No	Yes	Unknown
Commercial Facilities Development Program	No	Yes	Legislature Code Only	No	No	Real Estate	Yes	Yes	No	No	5	3	No	Yes	No
Speculative Industrial Buildings Program	No	Yes	Legislature Code Only	No	No	Municipality	Yes	Yes	No	Yes	5	0	No	Yes	No
Maine Quality Centers	Yes	Yes	Yes	Yes	Yes	Education	Yes	Yes	No	Yes	5	4	No	Yes	No
PTAC	Yes	Yes	Yes	No	Online PTAC registration	Military	Yes	No	No	No	5	3	No	Yes	No

	Annual report	Additional data on programs?	Can the Program Website be located with an Internet Search?	Does website Include Annual Report?	Does website Include Application Process and Forms Online?	What are the Target Sectors of the Program?	Are the Benefits of the Program Clearly Stated?	Are the Eligibility Requirements Posted Online and Clear?	Does the Program Claim to Purge Non-Compliant Companies?	Are There any Caps on Benefits?	Responsiveness 1-5; 0 = No Data)	Was the data obtained useful? (0 = No Data; 1-5)	Was confidentiality sited as a concern?	Do the administrators track clients all the way through the process?	Are awards revoked based on not obtaining results?
Maine Patent Program	No	Yes	No	NA	NA	NA	NA	NA	NA	NA	5	3	No	Yes	Unknown
Agricultural Marketing Loan Fund (ALMF)	Yes	Yes	Yes	Yes but not easily	Yes	Agriculture	Yes	Yes	Yes	Yes	3	4	No	Yes	No
Maine Farms for the Future	Yes	No	Yes	No	No	Agriculture	Yes	Yes	No	Yes	0	0	No	Yes	No
Potato Marketing Improvement Fund Program	Yes	Yes	Yes	Yes but not easily	No	Potato Farming	Yes	Yes	Not on Website	Yes	3	4	No	Yes	No
Agricultural Development Grant Program	No	No	Yes	No	No	Farming	Yes	No	No	No	0	0	No	Yes	No

Appendix F – Internal Program Benchmark

Notwithstanding significant challenges in identifying and locating annual evaluation reports of close to 50 programs, additional difficulties arise due to a lack of consistent and comparable data due to the very different nature and purpose of these programs. These programs offer, amongst other types of support, support in the form of loans, grants, loan insurance, equity participation, bonds, business and technical assistance, international trade, tax credits and workforce training aid. The fact that these 49 programs are administered and governed by various organizations such as the DECD, MTI, Maine Revenue Services (MRS), FAME, Small Business Administration (SBA), even adds to the complexity.

However, despite these challenges there are also similar characteristics on which a useful evaluation can be conducted. These characteristics can be classified into three distinct categories:

- Annual evaluation reporting and protocol;
- Inquiry Handling and Significance for Maine's economy;
- Openness and Compliance; and
- Traceability and online accessibility of programs.

Each of the 49 programs has been consistently scored by evaluating a combination of qualitative and quantitative sub-factors within each of the four main categories. In the methodology section we will further stipulate on the specific set of sub-factors as well as the scoring mechanisms that has been applied. First we will highlight why it is important to periodically undertake this exercise and how it can improve the policy and decision making process.

Importance of periodically evaluating Maine's suite of incentive programs

Investment incentives have gradually evolved into a globally applied tool in order to attract investments. The dynamic relation between globalization, liberalization and regional integration is generally considered as one of the main causes of intensification of incentive-based competition. The intensification in using appealing incentives as a tool to attract (foreign) investment puts a considerable pressure on the quality and sustainability of incentive programs. Transparency and opened are the new buzz words among economic developers and policy makers.

- ***Openness*** relates to how and how frequently governments communicate the positive and negative impacts generated by incentives to the public. After all, incentives are funded with taxpayer money so public disclosure is necessary to foster public trust and accountability. Openness and transparency enable tax payers to closely examine the economic effects. ICA's Transparency Index functions as indicator to capture the degree of openness of state's tax incentive programs.

- ***Transparency*** relates to releasing full details on incentive programs thorough *evaluation* of the effectiveness of granted incentives. Ensuring effective evaluation of incentive programs, it is necessary to provide full transparency on the policy, registration process, eligibility criteria, performance measures, sunset clauses and value of incentives. Notwithstanding the economic

benefits of the awarded incentives, the interplay between these two components is instrumental for the success of any incentive program.

Various nationwide incentive benchmark reports[2] illustrate the strong correlation between openness and transparency in relation to business climate and competitiveness. States with higher scores on the first two indicators in general also enjoy higher rankings on business climate and competitiveness. The private sector applauds transparency since it improves the decision making process, reduces (financial and operating) risks and eases enrollment. From a different perspective, and in response to today's intensive debate on incentives, administrating bodies who fail to react promptly and accurately on inquiries might stimulate suspicion or encourage further prejudice against specific business incentives or policies. The public demands a transparent evaluation as to what extent taxpayers' money has generated economic development. These arguments illustrate the essence of a solid evaluation and monitoring protocol.

Methodology

For each program administrator it is essential to try and keep improving the quality of their incentive programs. Besides reviewing their own program it is useful to understand and learn how other administrators govern their programs. This internal program benchmark incorporates a range of variables to compare and benchmark each of Maine's 49 active incentive programs. The objective is to consistently assess the fundamentals for each program, such as evaluation methods, openness, traceability and accessibility.

Information request

In addition to reaching out to all administrators to ask for available annual reports in 2013, it should be noted that an additional and customized program evaluation request was sent in April 2014. This information request included, amongst others, a list with variables for the period 2010 -2013, such as:

- Number of Companies/Loans Involved with the Program;
- New Jobs;
- Average wage for new jobs;
- New and Retained Jobs;
- Loan Amount;
- Investment/Reimbursement (or cost to the State of Maine);
- Total Program Investment/Reimbursement ;
- Average Benefit; and
- Funding sources.

Programs for which our team of analysts received input were incorporated in the benchmark results of this analysis. However, a quantitative benchmark, with the exception of the funding amount, is virtually impossible as a result of a complete or partial lack of other quantitative measurements such as job creation statistics and capital investment data. When it comes down to benchmarking, this means that

[22] Investment Consulting Associates' IEDC white paper on Incentive Transparency Index 2014

the scoring mechanism is mostly based on qualitative descriptions such as “Yes”, “Partly”, “Yes but not easily” or “No”.

Annual evaluation reporting and protocol

The first assessment focuses on the quality of the programs in terms of annual evaluation reporting and protocol. The first variable is a qualitative description if and to what extent administrator publicize their annual evaluation results. The variables are as follows:

Variables	Connotation
Description of program evaluation	Brief description of evaluation reporting standards
Annual evaluation of program results	Yes or No
Easy access to publicized results	“Yes, easily” / “Yes, but not easily” / “No”

If the annual reports were located in the same location where all other program details were found, than access to the program evaluation results were considered easy to find. When program results were published but not intuitively traceable, the programs were classified in the group “Yes, but not easily”. The scoring mechanism is as follows:

Evaluation Criteria	Score	Nr. of Programs
2 x Yes	****	4
Yes and Yes but not easily	***	14
Yes and No	**	29
2 x No	*	2

Four programs were considered most transparent in providing the annual evaluation results and these were MEP, Maine Tourism Marketing Promotion, Maine Quality Centers, and Maine International Trade Center. Another 14 programs do report their annual results online but these reports were not intuitively traceable.

Recommendation: It is relatively easy to improve the reporting quality by publicizing the annual reports online. Annual reports contain valuable insights for new applicants and enhance the general exposure of the program to a much wider audience.

Involvement and Significance for Maine’s economy

The second part of the assessment focuses on the active involvement and relative importance of the program to Maine’s *overall* economic development objectives. After ICA sent an additional information request to the program administrators, the response rate as well as the quality of the response varied. In some cases the team received a quick and complete reply, while in other cases no formal reply was ever received. If and to what extent the information request was appropriately handled are two variables in this section to measure “involvement and inquiry handling”.

Variable	Connotation
Description of program evaluation	Brief description of evaluation reporting standards
Response of Administrator after inquiry	Yes, Responded but no data, or No
Economic Development Parameters (i.e. Jobs / Capex)	Yes, Partly or No

If (most of) the economic development parameters such as job creation, job retention, investment and loan amounts were provided, the program was awarded with the connotation "Yes". When program administrators were able to provide quantitative data on a selection of parameters then these programs were labeled with "Partial" while "No" was included in case no data was available.

Evaluation Criteria	Score
2 x Yes	***
Yes and Partly	**
Yes and No	*
2 x No	-

In addition, and referring to "Significance", our current scoring model favors programs with relatively high levels of State funding. The reason why is because comprehensive state programs (compared to smaller or more specific programs) tend to benefit more from frequent interaction with private sector users and as a result incorporate learning effects and ideas for improvement. This does not say anything about the efficiency nor does this mean that the program is less important in achieving *specific* economic development goals.

Evaluation Criteria	Score
> 10% of State Annual Budget for incentives	***
Between State average and 10%	**
< State average	*

Programs with an annual budget funding of more than 10% of the State budget receive 3 stars, all programs above the State's average but below 10% 2 stars, while programs smaller than the annual State average receive 1 star. This means that in combination with the *"Involvement and Inquiry Handling"* score a total of 6 stars could be achieved.

For 14 out of 58 programs our team of analysts received a complete or nearly complete overview of economic development indicators. These 14 programs received a score of ***, while the 7 programs with a Partial status received two stars. For 37 programs (or 64%) no information was received.

Evaluation	Score	Number of Programs
Yes	**	14
Partial	*	7
No	-	37

The second sub-variable analyzes the significance of the program. The annual program funding as a percentage of the total State of Maine funding for all programs has been used as a proxy. The most substantial programs with 10% or more of the State budget obtain 3 stars, while programs with lower than the average annual budget of $13.7 million receive 1 star. The PTDZ and the Sales Tax Exemption for machinery and manufacturing together account for close to 75% of the total State budget. The BETR, Fuel Sales Tax Exemption and Business Equipment Tax exemption complete Maine's top 5 funded programs.

Evaluation	Score	Number of Programs
> 10% of State Budget per program	***	2
< 10% of State Budget per program	**	3
< Average State Budget per program	*	42

The significant number of smaller programs implies that Maine has adopted a strategy to customize programs to specific economic development goals, community improvements, rural or business improvement programs. However, the State of Maine might face the risk of fragmentation and create duplications among programs.

In the overall score, it is the PTDZ and BETR program that rank first and second with 6 and 5 stars respectively. Both programs comply with annual reporting protocols, summarizing their annual contribution to Maine's economy. In absolute terms, these two programs also exhibit a significant private sector contribution.

Role and Significance	Score	Number of Programs
Significant & Yes	******	1 (PTDZ)
<10% of State Budget & Yes	*****	1 (BETR)
Various combinations	****	11
Various combinations	***	8
Various combinations	**	11
< Average State Budget & No	*	17

Out of the smaller funded programs, we found that in 28 cases none or only very limited amount of requested data could be provided.

Recommendation: Program administrators can use the template of the information request to enhance their annual evaluation effort. Using a uniform reporting standard improves the accountability and improves a uniform program benchmark.

Openness and Compliance

Openness of program achievements is important, because the public demands a level of confidence that their tax contributions are being used to provide tangible economic benefits. On the other hand, in most cases company sensitive information such as turnover, and tax payments must remain disclosed. It remains arbitrary to what extent results may be disclosed. However, a minimum reporting of

aggregated results will add to the desired levels of openness and transparency. To assess the level of openness and transparency, we evaluated the incentive programs by looking at the following three questions:

Variable	Connotation
Was confidentiality cited as a reason why we were not able to obtain data or complete data?	Yes / No
Do the administrators track clients or companies all the way through the incentive process?	Yes / No
Are awards based on results and incentives revoked based on not obtaining those results?	Yes / Results Based* / No

* "Results based" is considered same as "Yes"

Following to our request, we found that in 20 cases, confidentiality was stated as a reason for not being able to provide the requested data. Refusing data provision based on this argument causes program administrators to think of other ways to present the program results. Hence, when scoring a "Yes" results in a lower score. In the context of compliance measurements, the analysis shows that in 65% of the program admissions, the companies or tracked throughout the whole admission process. The PTDZ as well as MTI's Equity Capital Fund use performance measurements and clawback provisions when companies fall short and do not comply with their original estimates. In 9 other cases, consisting mostly of MTI and FAME programs, there are result based performance indicators on which awards and or limitations in funding are based. In 29 out of 49 programs there were no direct result based awarding measurements, nor clawback provisions found.

Role and Significance	Score	Number of Programs
2 x Yes | 1 x No (1st Questions)	****	9
Various combinations	***	15
Various combinations	**	12
Yes 1st Question | 2 x No	*	13

Traceability and online accessibility of programs

The fourth and final category relates to traceability and online accessibility of programs. Compared to 20 years ago, investors nowadays expect easy online access and enrollment applications to incentive programs. Essential information such as the program's eligibility criteria, application process, potential benefits and possible restrictions should be clearly stated upfront in order to manage the expectations and reduce (financial) risks among prospective investors.

Variable	Connotation
Is There a Program Website you can find with an Internet Search?	Yes, Yes but not easily, No
Does it Include Annual Reports in a Location That You Can Readily Find?	Yes, Yes but not easily, No
Does it Include Application Process and Forms Online?	Yes, Yes but not easily, No
Are the Benefits of the Program Clearly Stated?	Yes, No
Are the Eligibility Requirements Posted Online and Clear?	Yes, No

Variable	Connotation
Does the Program Claim to Purge Non-Compliant Companies?	Yes, No
Are There any Caps on Benefits?	Yes, No

In our evaluation we found that 4 out of the total of 49 programs qualified for the maximum score of 3 stars. These programs, Maine Quality Centers, AMLF, Maine New Markets Tax Credit Program and TechStart Program from the MTI were transparent on the benefits, eligibility criteria, and responsibilities. In addition, these programs were easily found and offered online enrollment application forms.

Evaluation	Score	Number of Programs
6 or 7 x Yes	***	4
4 or 5 x Yes	**	24
< 4 x Yes	*	21

According to our evaluation, 24 incentive programs did not fully utilize the online benefits nor did they provide full transparency online. This does not mean that these programs are less important or that information on eligibility criteria and benefits is completely lacking, it is just that the administrators use different ways to disseminate the information (i.e. through webinar, face to face meetings, etc.). It is best practice to have at least the most fundamental information regarding the program online. It is generally appreciated that the information for each of the program is presented in the same uniform way. Unfortunately, still 21 out of the total of 49 programs are scored with just 1 star, indicating poor accessibility or lack of key information provision.

Recommendation: Most likely untraceable programs will fail to exploit the full potential of its investor community. Undertake a search engine optimization (SEO) effort if the program is not easily found online.

Use a password protected Intranet environment to engage with investors. Such a secured environment improves the sensitive communication between administrator and investors, offers the opportunity for Q&A sessions, and provides for items such as a forum with other investors or shared blogs.

Overall score

Aggregating all sub-category scores, in which a total of 18 stars could be achieved, marks the Maine Quality Centers (14 stars) as best evaluated program, together with the PTDZ and the Agricultural Marketing Loan Program both scoring 13 stars. The Economic Recovery Loan Program as well as the Potato Marketing Improvement Fund follows closely with 12 stars. These programs outperform all other programs because they consistently score well on all four sub-categories. Any investor looking for further details can easily trace the programs online, and read about the most important aspects of the program. Online enrollment forms ensure a seamless initial application procedure. The programs are relevant and highlight how the program contributes to economic development objectives.

Overall Evaluation Score	Score
Maine Quality Centers	**********
PTDZ; Agricultural Marketing Loan Fund (AMLF)	**********
Economic Recovery Loan Program;	**********
Maine Tourism Marketing Promotion Fund (MTMPF); Commercial loan Insurance Program; Regional Economic Development Revolving Loan Program; Maine Seed Capital Tax Credit Program	**********
10 programs	**********
7 programs	*********
8 programs	********
10 programs	*******
1 program	******
4 programs	*****

Overall recommendation: There are different administrators and, as a result, many different ways of presenting and evaluating the current incentive programs. In our view, one incentive related organization should be formed, presenting a complete overview of all existing incentives and accountable for one seamless and harmonized way of reporting. This reduces the risk of fragmentation and improves a consistent reporting protocol, which is supported by all stakeholders.

Appendix G – External Program Benchmark

This external incentive program benchmark consists of three parts that subsequently follow on each other:

1. External Incentive Program Benchmark – per State;
2. External Incentive Program Benchmark – per Key Industry; and
3. In-depth Analysis of the most competitive Incentive Programs including M&E systems.

Incentive program-specific data has been collected from ICAincentives.com in order to construct a preliminary analysis on how Maine compares in terms of the competitiveness of its incentive programs to its peer states. To some extent, this benchmark reflects the degree of transparency state's expose with regards to their incentive programs. In other words, the more public information a state discloses on its incentive program(s), the more consistent the results in this external incentive program benchmark. As a matter of fact, the state of Maine ranks lowest in the benchmark due to its very limited number of programs. The database has administered awarded incentives from only three Maine incentive programs, of which actually two are federally issued incentive program: the Community Development Block Grant Program (CDBG), the Maine Economic Recovery Loan Program and the USDA Rural Economic Development Loan and Grant (REDLG). In total, the three Maine incentive deals administered within these three incentive programs have a combined value of $7.5 million, thereby attracting $13 million worth of investments and creating only 95 jobs. No other of the benchmark states comes close: Washington, of which ICAincentives.com registered five incentive programs including ten awarded incentives, represents a value of $42.4 of incentives but attracted $60 million of investments and over 1,000 jobs[3].

Incentive Programs:

State	No. of Incentive Programs	No. of Awarded Incentives	Value of Incentives (mln)	Value of attracted Capex (bln)	Total Jobs Created
Florida	13	203	$148.1	$1.96	23,262
Indiana	5	84	$79.6	$0.98	8,762
Kentucky	12	410	$589.4	$4.87	26,998
Louisiana	9	253	$2,660.2	$15.22	16,761
Maine	3	3	$7.5	$0.01	95
Massachusetts	8	164	$138.1	$0.88	9,269
Michigan	15	206	$452.7	$3.05	22,382
Missouri	7	109	$226.2	$1.31	12,174
New York	13	250	$548.2	$2.75	24,283
North Carolina	10	188	$514.1	$3.95	36,252
Ohio	13	240	$338.3	$2.31	20,967
Pennsylvania	18	309	$252.7	$1.40	33,171
South Carolina	4	26	$17.5	$0.84	3,344
Virginia	9	92	$73.0	$2.66	11,775

[3] Source: ICAincentives.com 2014

State	No. of Incentive Programs	No. of Awarded Incentives	Value of Incentives (mln)	Value of attracted Capex (bln)	Total Jobs Created
Washington	5	10	$42.4	$0.06	1,047

In addition to the overall incentive program benchmark, a total of six benchmarks have been produced specifically tailored to the seven key industry sectors identified by the DECD. For methodological purposes, the key industry sectors "Forest Products & Agriculture" and "Marine Technology & Aquaculture" have been merged, resulting in six rather than seven key industry incentive program benchmarks. Comparing incentive programs that have awarded incentives and successfully attracted investment projects within a particular industry could provide sector-specific best practices and examples. In order to assess which incentive programs have successfully competed for investment from the seven key industries, further incentive program data has been retrieved from ICAincentives.com, resulting in six industry benchmarks. State incentive programs are compared on a total of six indictors, resulting in a top-5 per key industry. Apart from (1) the absolute number of awarded incentives, (2) the total value of these awarded incentives, (3) total jobs created and (4) total value of attracted capital expenditure per incentive program, two indicators have been calculated to measure the relative benefits per incentive program:

- Incentive per job: proxy measuring the on-average incentive value per created job by dividing the total value of awarded incentives by the number of created jobs.
- Return per invested $: proxy measuring the return per dollar invested per awarded incentive by dividing the total value of attracted capital expenditure by the total value of awarded incentives.

For the **Biotechnology** sector, the Massachusetts Life Sciences Tax Incentive Program stands out, both in terms of investment attracted as well as jobs created. The tax credit program attracted at least 84 investment projects, followed on a distance by the Florida Qualified Target Industry Tax Refund (QTI), which awarded incentives to 29 biotechnology investments. Massachusetts' incentive program created over 3,000 jobs while Florida's QTI resulted in an employment of nearly 2,800 jobs. The smaller difference in terms of jobs is expressed in the incentive value per created job, which is considerably higher for the Massachusetts-based program: $21,682 per created job as opposed to $5,108 for the Florida incentive program. Other successful biotechnology incentive programs – in terms of a relatively low incentive value per created job in combination with a relatively high return per invested incentive dollar – is the Louisiana Enterprise Zone Program.

Biotechnology:

State & Program	No. of Awarded Incentives	Value of Incentives (mln)	Total Jobs Created	Incentive per Job	Value of attracted Capex (mln)	Return per invested $
Massachusetts Life Sciences Tax Incentive Program	84	$66.72	3,077	$21,682	0	NA
Florida Qualified Target Industry Tax Refund (QTI)	29	$14.24	2,787	$5,108	$362.69	$27.53

State & Program	No. of Awarded Incentives	Value of Incentives (mln)	Total Jobs Created	Incentive per Job	Value of attracted Capex (mln)	Return per invested $
Louisiana Enterprise Zone Program	21	$7.50	881	$8,507	$321.25	$43.98
New Jersey Business Employment Incentive Program (BEIP)	18	$57.34	1,853	$30,944	$34.47	$1.26
Kentucky Business Investment Program	17	$12.88	685	$18,803	$103.84	$8.06

Source: ICAincentives.com 2014

The Kentucky Business Investment Programs appears to have awarded the most incentives to companies within the **Composites & Advance Materials** sector. The difference with regards to the number of awarded incentives is not as large as for the biotechnology sector but still remains substantial. Kentucky's incentive program awarded 52 incentives to companies in the composites & advanced materials sector, with Ohio's Job Creation Tax Credit and One North Carolina Fund having granted 29 and 22 incentives, respectively. Despite the fact that Kentucky's tax credit program attracted the largest number of composites & advanced materials investments as well as jobs and capital expenditure, other states' incentive programs outperformed the Kentucky Business Investment Program in relative terms. The program of North Carolina, and to a lesser extent Ohio's tax credit, awarded a significant lower on-average incentive value combined with a higher return per invested dollar. Just as for the biotechnology sector, Louisiana's Enterprise Zone Program attracted a significant amount of capital expenditure - every incentive dollar spent generated over $45 on investments – though granted a relatively large incentive per created job: $36,990.

Composites & Advanced Materials:

State & Program	No. of Awarded Incentives	Value of Incentives (mln)	Total Jobs Created	Incentive per Job	Value of attracted Capex (mln)	Return per invested $
Kentucky Business Investment Program	52	$54.21	2,829	$19,164	$657.65	$12.22
Ohio Job Creation Tax Credit	29	$14.66	1,346	$10,892	$248.43	$29.99
One North Carolina Fund	22	$7.88	1,375	$5,728	$357.66	$45.41
Tennessee FastTrack Job Training Assistance	16	$1.30	1,043	$1,253	0	NA
Louisiana Enterprise Zone Program	14	$9.66	261	$36,990	$810.86	$84.60

Source: ICAincentives.com 2014

The number of companies in the **Environmental Technologies** sector that have been awarded incentives appears to be limited. With a maximum of seven granted incentives to environmental technology

investors, Florida's Qualified Target Industry Tax Refund (QTI) and New Mexico's Job Training Incentive Program (JTIP) are among the leading incentive programs. Apart from Pennsylvania's Alternative and Clean Energy Program, incentive programs attracting investments from the environmental technologies industry score reasonably well with regards to both absolute and relative benefits. All on-average incentive value per job vary between $9,100 and $11,300 with high returns on publically spent money, ranging from $14.18 for New York's program up to $49.52 for Florida's QTI.

Environmental Technologies:

State & Program	No. of Awarded Incentives	Value of Incentives (mln)	Total Jobs Created	Incentive per Job	Value of attracted Capex (mln)	Return per invested $
Florida Qualified Target Industry Tax Refund (QTI)	7	$3.75	410	$9,146	$168.35	$49.52
New Mexico Job Training Incentive Program (JTIP)	7	$0.62	57	$10,877	0	NA
One North Carolina Fund	4	$4.12	452	$9,115	$109.5	$26.58
Pennsylvania Alternative and Clean Energy Program	3	$5.11	44	$116,136	0	NA
New York Excelsior Jobs Program	3	$2.16	191	$11,309	$30.6	$14.18

Source: ICAincentives.com 2014

Apart from Iowa's High Quality Jobs Program, all top-5 programs with regards to **Forest Products, Agriculture, Marine Technology & Aquaculture** have been encountered before in other key industries. Again, Kentucky's Business Investment Program is by far the greatest supplier of incentives in the forest, marine, aquaculture and agriculture industry. It stands out in absolute terms too as it has attracted a large amount of capital expenditure ($1.17 billion), resulting in over 5,000 jobs. However, Louisiana's Enterprise Zone Program awarded only $13.56 million incentives to companies investing in forest products, agriculture, marine technology and aquaculture – as opposed to $108.8 million Kentucky spent – while it attracted over $848 million of capital expenditure, thereby creating nearly 1,600 jobs. The relative numbers confirm this finding. The same, though to a lesser extent, is valid for One North Carolina Fund and the Ohio Jo Creation Tax Credit.

Forest Products, Agriculture, Marine Technology & Aquaculture:

State & Program	No. of Awarded Incentives	Value of Incentives (mln)	Total Jobs Created	Incentive per Job	Value of attracted Capex (mln)	Return per invested $
Kentucky Business Investment Program	85	$108.82	5,052	$21,540	$1,167.86	$10.77
Ohio Job Creation Tax Credit	38	$18.10	2,295	$7,888	$381.28	$22.76

State & Program	No. of Awarded Incentives	Value of Incentives (mln)	Total Jobs Created	Incentive per Job	Value of attracted Capex (mln)	Return per invested $
One North Carolina Fund	36	$36.63	3,489	$10,499	$833.56	$34.00
Louisiana Enterprise Zone Program	31	$13.56	1,560	$8,689	$848.32	$62.91
Iowa High Quality Jobs Program	27	$33.80	1,350	$25,033	$778.98	$23.05

Source: ICAincentives.com 2014

With regards to the **Information Technology** sector, a few incentive programs have generated large benefits: Florida's QTI attracted over $105 million worth of investments accompanied by 3,470 jobs by spending $19.1 million on 23 incentives. The New York Excelsior Jobs Program attracted over $203.5 million capital expenditure resulting in 2,430 jobs by spending $79.8 million on 14 incentives. When these two incentive programs are compared by contrasting the incentive value per jobs as well as the return per invested dollar, Florida's QTI outperforms New York's incentive program by a large margin. The low incentive per job of $5,513 Florida paid for information technology jobs through its QTI program is much lower than the $32,825 per job for the New York Excelsior Jobs Program. Such low incentive values per job are also detected for New Mexico's JTIP and Ohio's JCTC. However, the incentive program of Florida also offers the highest return on invested dollar: $8.05.

Information Technology:

State & Program	No. of Awarded Incentives	Value of Incentives (mln)	Total Jobs Created	Incentive per Job	Value of attracted Capex (mln)	Return per invested $
Florida Qualified Target Industry Tax Refund (QTI)	23	$19.14	3,471	$5,513	$105.35	$8.05
New Mexico Job Training Incentive Program (JTIP)	21	$3.63	620	$5,855	0	NA
Ohio Job Creation Tax Credit	15	$10.08	1,744	$5,778	$41.66	$4.83
New York Excelsior Jobs Program	14	$79.77	2,430	$32,825	$203.55	$3.34
Kentucky Business Investment Program	13	$19.48	1,682	$11,581	$125.03	$6.42

Source: ICAincentives.com 2014

For the final industry, **Precision Manufacturing**, no new state incentive programs appear. Just as the agricultural sector, the number of incentives awarded to precision manufacturing investors seems limited to a maximum of 16 (Kentucky's BIP). Despite the small difference in terms of number of jobs created between Kentucky's BIP and Ohio's Job Creation Tax Credit, the difference of $100 million with regards to value of attracted capital expenditure is enormous. This is reflected by the low on-average incentive value per created job ($5,295) accompanied by a high rate of return on investment ($61.46).

In this sense, Ohio's JCTX outperforms Kentucky's BIP when competing for investments in the precision manufacturing industry. New York's Consolidated Funding Application and Tennessee's FastTrack Job Training Assistance are similar to Ohio's incentive program in terms of low incentive values per job but are outperformed on the ratio of return on invested dollar.

Precision Manufacturing:

State & Program	No. of Awarded Incentives	Value of Incentives (mln)	Total Jobs Created	Incentive per Job	Value of attracted Capex (mln)	Return per invested $
Kentucky Business Investment Program	16	$14.17	1,041	$13,608	$79.34	$5.60
Ohio Job Creation Tax Credit	10	$4.54	858	$5,295	$178.4	$61.46
New York Consolidated Funding Application (CFA)	9	$9.85	3,047	$3,232	$61.98	$8.26
Tennessee FastTrack Job Training Assistance	6	$2.99	699	$4,278	0	NA
Florida Qualified Target Industry Tax Refund (QTI)	5	$3.58	325	$11,000	$31.54	$8.82

Source: ICAincentives.com 2014

Comparing the various state incentive programs for the seven key industries based on the six benchmarks above reveals a few successful state incentive programs overlap. In other words, very few incentive programs are particularly targeted at one or two sectors but are part of a wider investment incentive framework. These programs generally combine high absolute economic benefits (i.e. total number of created jobs and value of attracted capital expenditure) while effectively spending public money. This is measured by low on-average incentive values per job and a large return on invested dollar. Based on these results, six incentive programs have been selected that comply with this combination of absolute economic benefits and an effective manner of spending public money. Thus, these programs successfully compete for investments from a specific (Maine identified key) industry, thereby effectively spending public money. To gain insights into the overall performance of the benchmarked incentive programs and to identify eligibility criteria as well as benefits the programs offer, the following six programs have been qualitatively assessed:

1. Kentucky Business Investment Program;
2. Florida Qualified Target Industry Tax Refund;
3. Massachusetts Life Sciences Tax Incentive Program;
4. Ohio Job Creation Tax Credit;
5. Louisiana Enterprise Zone Program; and
6. One North Carolina Fund.

A special focus is put on the Monitoring and Evaluation (M&E) mechanisms and clawback provisions of these six incentive programs. Though the point of departure of these six Best Practice programs is not per se their M&E mechanisms (after all, these six Best Practice programs are based on the previous benchmarks of key industry incentive programs), the six programs incorporated a wide range of M&E mechanisms based on eligibility criteria. As such, including a focus on M&E mechanisms is a further elaboration of the case studies.

Most incentive programs have eligibility criteria in order for governments and companies to assess whether the specific business case or business activities are eligible for the incentive package offered. Incentives are administered through various stages, from initiation, through application to compliance and auditing. M&E mechanisms as well as clawback provisions are usually proclaimed in the last phase to ensure that the investment project runs according to plan and complies with the pre-defined eligibility criteria and, often contractually defined, commitments, requirements and milestones. Incentives are often allocated after achieving several milestones within a fixed period of time. Any incentives policy must be designed in concert with a system for monitoring the application of the policy. This assists in enhancing openness and avoiding fraud as quantitatively measuring and monitoring awarded incentives reveals details on the beneficiaries as well as the authorities which granted the incentives. Transparency is ensured, which protects against potential fraud and corruption in terms of awarding incentives. In addition, a great amount of data and details on the incentive, recipients and providers allows for a thorough assessment of the benefits and effectiveness of the incentive program on the whole. Policymakers rely for a great deal on these assessments as to develop and further enhance incentive frameworks.

M&E systems can take different shapes depending on the complexity and objective of the particular incentive framework. Often a set of pre-determined eligibility criteria functions as preliminary filter in that the criteria clearly, and in a transparent manner, state which industries and business activities are eligible for the incentive framework. Such a screening process enhances uniformity and permits a greater targeting of potential eligible incentive recipients. Scoring cards and pre-implementation impact models assess the impact of incentives are mostly executed in a quantitative manner through awarding points to a set range of criteria. Impacts are benefits that, to some extent, are quantified. Such systems are virtually always part of the eligibility phase of an investment project when potential beneficiaries are required to achieve a certain minimum score to be qualified as “eligible” for incentives. These scores can be calculated by quantifying expected outcomes against a desired threshold score. The vast majority of incentive regimes do not evaluate the *estimated* impact of incentives but rather evaluate the actually *achieved* impacts (post-implementation), particularly in the light of M&E systems, which function almost exclusively on the provision of information on achieved outcomes. In case the achieved outcomes do not match with the projected outcomes, clawback mechanisms might be enforced upon the beneficiaries and/or the amount of funds are adjusted. Site visits and surveys are other, very time-consuming, methods to monitor and evaluate awarded incentives on a post-implementation basis.

All case studies possess a pre-assessment M&E mechanism in that they clearly stipulate which eligibility criteria apply to be considered for incentive application. Eligibility criteria vary from a wide range of industries and business activities to very particular industries (Florida’s Qualified Industry Tax Refund

and Massachusetts Life Sciences Tax Incentive). Some incentive frameworks include geographical areas with differing incentive rates (Kentucky Business Investment Program) or set standards for the qualifications of the persons to be hired (Louisiana Enterprise Zone Program). All incentive programs have a few eligibility criterion in common, which obviously is related to the policy objective of the incentive frameworks: job creation with sufficient wages and payroll, and, to a lesser extent, capital investment.

The discrepancy between the projected and realized number of jobs differs between the incentive programs. For instance, North Carolina and Kentucky use 90% of the projected number of created jobs as threshold while Massachusetts uses a lower threshold of 70%. In case investment projects achieve below these thresholds, clawback provisions are applied. All incentive programs possess some clawback mechanisms or other, ranging from an incentive repayment by the recipient to the authority of up to 100% to a reduction of the actual incentive value. Particularly the Ohio Job Creation Tax Credit, the Kentucky Business Investment Program and the Massachusetts Life Sciences Tax Incentive provide good examples of M&E systems with straightforward clawback enforcements.

Implications and Recommendations

The qualitative assessment of the Best Practice case studies result in a number of implications and recommendations that are relevant to the context of Maine's incentive programs. These could function as guidelines to policy-makers in terms of incentive framework design and development.

- It is not surprising that the six case studies, formulated as Best Practice on their economic performance of Maine's key industries, entail explicit and uniform eligibility criteria accompanied by structured M&E systems with clawback provisions. These intertwined components enhance the quality of incentive programs and – as demonstrated by the benchmark – result in a profound performance in terms of attracting investments and economic impacts. After all, all six case studies consistently rank among the top-5 of Maine's key industries incentive programs benchmarks.
- The case studies provided demonstrate the importance of clearly defined and straightforward eligibility criteria. These eligibility criteria function as *pre-implementation assessment* and initial screening model of potential investors. The Best Practice case studies indicate multiple indicators that can be applied to determine eligibility, including:
    - Industry (e.g. life sciences, biotechnology);
    - Business activity (e.g. headquarters, R&D);
    - Geographical scope (e.g. counties economically lagging behind);
    - Number of jobs (both in absolute and in relative terms);
    - Amount of capital investment (both in absolute and in relative terms);
    - Payroll and wage levels (both in absolute and in relative terms); and
    - Qualification of personnel (e.g. unemployed).
- Eligibility criteria also relate to delineating which companies are not eligible by defining the above indicators to sectors that cannot apply for incentives rather than just mentioning industries etc. that are eligible to incentives. For instance, "retail" is often cited as industry not

eligible for any financial assistance, just as investment projects located in counties that are economically prospering are not typically eligible.

- Just as important as a selection of potential incentive beneficiaries prior to application, monitoring their actual performance against the projected requirements after a successful application (defined by the eligibility criteria) ensures an efficient follow-up of the consumption of incentives. Monitoring and evaluating through annual reports, site visits, audits, scoring cards, and impact models is a logical step subsequent to assessing eligibility criteria. M&E systems basically control whether eligibility criteria are actually achieved during the term of the incentive program. The eligibility criteria thus function in all of the six incentive programs as baselines against which post-implementation M&E systems function. In other words, nearly all incentive programs use the actual number of created jobs as milestone after which funds are distributed.
- To ensure reliable data on which evaluation of incentive objectives can be executed, (annual) report, measurement, and account standards need to be incorporated into the incentive design and administration in order to guarantee a clear M&E process.
- In case the achieved outcomes do not match with the projected outcomes, clawback mechanisms might be enforced upon the beneficiaries and/or the amount of funds are adjusted. Analyzing the six case studies revealed several types of enforcement actions which are at the disposal of authorities in case initial eligible companies (i.e. according to the eligibility criteria) fail to adhere to defined requirements. Such clawback mechanisms, depending on the degree of the project's failure, can result in:
    - *Cancellation of the project*: applies to projects without an executed contract that are being eliminated from the program;
    - *Reduction of the rate and/or term of the tax credit*: applies to projects with an executed contract that have failed to meet the requirements as defined in the tax credit agreement; and
    - *Termination of the project and enforce full clawback*: applies to projects that cease operations at their designated project site.
- A Best Practice procedure of enforcing a clawback mechanism is provided by the Ohio Tax Credit Authority and includes a three step process to enforce (partial) repayment of the incentive:
    - The first step is to send notice to the taxpayer of pending termination with clawback;
    - The second step is a "First Reading" at the Authority's monthly meeting, where the project and its economic impact are reviewed; and
    - The third procedural step, known as the "Second Reading", occurs at the Authority's subsequent monthly meeting, and includes a final determination on a clawback percentage to be applied to prior certificates issued to the taxpayer.
- In addition, most case study incentive programs stipulated the rates of which clawback mechanisms apply, depending on the degree to which the incentive recipient failed to achieve the requirements. Most common, a threshold of achieving at least 90% of, for instance, the number of jobs created is applied. Below this threshold, investigation into the likelihood of the

investment project achieving the requirements the following year is advised in order to avoid a waste of time and resources.

- Overall, the six Best Practice case studies underline the significance of a solid framework containing both pre-implementation eligibility criteria as well as post-implementation M&E systems with stipulated clawback provisions. The interplay between these two elements is crucial since it serves as a reliable baseline against which incentives are granted and, in case pre-defined objectives are not met by the recipient, can be reclaimed.
- Incorporating eligibility criteria with M&E systems and clawback mechanisms enhances the *transparency* of the incentive program as it avoids potential fraud. In addition, a great amount of data and details on awarded incentives, recipients and providers allows for an effective assessment of the cost vis-à-vis the benefits of the incentive program on the whole. Policy-makers rely for a great deal on these assessments as to develop and further enhance incentive frameworks. *Completeness* reflects transparency and simplicity in that corporate investors know in an instance whether or not their investment project is eligible for financial assistance.
- In turn, transparency increases the *public accountability* and *credibility* of both the incentive program and the overall governance performance. Just because potential investors understand beforehand the incentive program's entitlement, requirements and implications in case milestones are not achieved, the commitments of all parties are open and explicit. To ensure credibility and public accountability, good records and information are crucial, once again emphasizing the importance of M&E mechanisms.

The **Kentucky Business Investment Program** provides income tax credits and wage assessments to new and existing agribusinesses, regional and national headquarters, manufacturing companies, and non-retail service or technology-related companies that locate or expand operations in Kentucky.	Kentucky UNBRIDLED SPIRIT Cabinet for Economic Development

Economic impacts

- Deals awarded: 353
- Total Capex: 3,686.60 US $ Millions
- Total Incentives awarded: 477.28 US $ Millions
- Jobs created: 24,437
- Safe-guarded jobs created: 637
- Incentive type: tax credit

Eligibility criteria

- Companies engaged in manufacturing, agribusiness and regional and national headquarters are eligible sectors;
- Non-retail service or technology, designed to serve an outer-Kentucky market with a customer base that includes more than 50% non-residents (e.g. call centers, distribution centers, data centers and R&D facilities) are eligible;
- Forestry, fishing, mining, coal or mineral processing, the provision of utilities, construction, wholesale trade, retail trade, real estate, rental and leasing, educational services, accommodation and food services or public administration services are non-eligible business activities and industries;

- Incurring eligible costs (land, building, development and start-up expenditures) of at least $100,000, thereby creating 10 new Kentucky jobs while maintaining another 10 Kentucky jobs; and
- Depending on the county, certain minimum wage standards and employee benefits are required to be met.

Benefits

- Tax incentives are available for the approved company for up to 15 years in economically distressed counties or up to 10 years in other counties;
- A tax credit of up to 100% of corporate income or limited liability entity tax liability arising from the investment is awarded; and
- The package offers wage assessment incentives up to 5% of gross wages of each employee in economically distressed counties or up to 4% (including up to 1% required local participation) of gross wages of each employee in other counties.

Monitoring & Evaluation and Clawback Mechanisms

- Eligibility criteria are monitored and annually reviewed. In case minimum eligibility criteria are not met, incentives may be suspended or even terminated. This requires the appropriate approval of the Kentucky Economic Development Finance Authority (KEDFA);
- A Tax Incentive Agreement has to be signed, which states the maximum approved costs that may be recovered as well as the maximum approved costs for each year of the agreement;
- If the eligible costs incurred as of the activation date are less than the maximum approved costs, the maximum approved costs will be reduced to the confirmed amount of eligible costs and the annual maximum approved costs will be modified accordingly;
- Anticipated targets in terms of jobs and wages higher than the minimum requirements will be negotiated and included. These targets will be measured against actual amounts as of the activation date and averaged annually for the company's fiscal year throughout the term of the tax incentive agreement and are divided into two categories:
    - Projects that achieve actual job and wage results equal to or greater than 90 % of the targets will be eligible to claim 100 % of the annual maximum approved cost for the following year; and
    - Projects that achieve actual job and wage results less than 90 % of the targets will incur a reduction of the annual maximum approved cost for the following year equal to the same proportion by which the project fell below its targets. If both targets are missed, the greater percentage reduction will be required.

Source: Investment Consulting Associates – ICA Research and www.ICAincentives.com

Florida's **Qualified Target Industry Tax Refund** incentive is available for companies that create high wage jobs in targeted high value-added industries. Refunds on corporate income, sales, intangible personal property, insurance premium, and certain other taxes make up the incentive program's benefits.

Economic impacts

- Deals awarded: 178
- Total Capex: 1,612.25 US $ Millions
- Total Incentives awarded: 129.34 US $ Millions
- Jobs created: 20,116
- Safe-guarded jobs created: 1,034
- Incentive type: tax credit

Eligibility criteria

- The program aims at manufacturing, headquarters and R&D activities in cleantech, life sciences, infotech, aerospace, defense and financial/professional services; and
- New or expanding industries creating jobs in these target industries are eligible.

Benefits

- The general benefit consists of a tax refund of $3,000 per net new Florida full-time equivalent job created and $6,000 in an Enterprise Zone or Rural Community;
- Businesses paying 150 % of the average annual wage are eligible to add $1,000 per job;
- Businesses paying 200 % of the average annual salary are eligible to add $2,000 per job;
- Businesses falling within a designated high impact sector or increasing exports of its goods through a seaport or airport in the state by at least 10 % in value or tonnage in each year of receiving a QTI refund, are eligible to add $2,000 per job;
- Projects locating in a designated Brownfield area are eligible to add $2,500 per job; and
- No more than 25 % of the total refund approved may be taken in any single fiscal year.

Monitoring & Evaluation and Clawback Mechanisms

- All QTI projects include a performance-based contract with the State of Florida, which outlines specific milestones that must be achieved and verified by the State prior to payment of refunds;
- Payments are generally spread out over multiple years and eligible companies must demonstrate they met the contractual requirements as outlined in the agreement;
- The business submits a claim each year for the scheduled tax refund after which the Office of Tourism, Trade, and Economic Development (OTTED) verifies the job creation requirements through detailed verification processes (involving audited data) of information reviews, analysis and further audit;
- QTI Tax Refund contracts can be terminated when businesses do not meet a portion of its contract commitments;
- If all the terms of the tax refund agreement are met, then OTTED pays the refund directly to the business; and
- If any of these businesses do not meet the milestones required for the payments to be disbursed, the escrowed funds will be returned to General Revenue.

Source: Investment Consulting Associates – ICA Research and www.ICAincentives.com

The primary goal of the Massachusetts **Life Sciences Tax Incentive Program** is to incentivize life sciences companies to create new long-term jobs in Massachusetts. The program authorizes to award up to $25 million in tax incentives each year in order to promote health-related innovations and stimulate R&D, manufacturing and commercialization in the life sciences.	MASSACHUSETTS LIFE SCIENCES CENTER

Economic impacts

- Deals awarded: 86
- Total Capex: 0.00 US $ Millions
- Total Incentives awarded: 67.05 US $ Millions
- Jobs created: 3,097
- Safe-guarded jobs created: 0
- Incentive type: tax credit

Eligibility criteria

- Companies engaged in life sciences R&D, commercialization and manufacturing in Massachusetts;
- Existing companies in or re-locating companies to Massachusetts that add a minimum of 50 net new full-time in the first year, permanent jobs;
- Companies do not need to make significant capital investments in Massachusetts;
- Companies must receive certification from the Massachusetts Life Sciences Center (MLSC) and must demonstrate both the scientific and academic merit of their expansion plans; and
- Strict "claw-back" mechanisms are in place in order to ensure companies meet the statutory job creation targets

Benefits

- 10 % Life sciences investment tax credit (90 % of excess credit refundable);
- Designation as R&D company for sales tax purposes;
- Sales tax exemption for property used in development of facilities;
- If the jobs credit exceeds the amount of tax that may be offset by the credit for a taxable year, 90 % of such excess credit shall be refundable to the taxpayer; and
- Excess credit amounts may not be carried forward to other taxable years.

Monitoring & Evaluation and Clawback Mechanisms

- The MLSC monitors its awarded tax incentive for compliance purposes based on the baseline and projected headcounts, which are aggregated to a total projected headcount. This indicator is used for MLSC agreement and compliance purposes;
- The statute provides for clawback mechanisms for companies that are found not to be fulfilling their net new job creation requirement according to the agreement;
- Beneficiaries are obliged to provide an annual report to the MLSC for evaluation purposes;
- Companies that fail to achieve at least 70% of their employment targets at the end of any annual reporting period, and fail to create at least 50 net new jobs, are subject to an investigation to determine the cause. This results in the following scenarios:
    - Failure to achieve at least 40% of the job target: de-certification and a clawback procedure to recover the tax value of any award provided;
    - Achieving less than 70% and at least 40% of the job target and failing to create at

least 50 net new jobs: MLSC conducts investigation and in case MLSC determines that it is unlikely the company will achieve its job target, de-certification and a clawback procedure follows.;
    - The investigation concludes the company has the potential to achieve its employment target by the end of the year following on the initial failure to achieve at least 70% of the employment target and failing to create at least 50 new net jobs: MLSC may permit the company this second year to meet its job targets;
- Companies that fail to achieve at least 70% of their employment targets for two consecutive years are de-certified; and
- Companies that fail to achieve at least 80% of their employment targets by the end of any extension period and failing to create at least 50 net new jobs are de-certified and a clawback procedure follows.

Source: Investment Consulting Associates – ICA Research and www.ICAincentives.com

The **Ohio Job Creation Tax Credit** provides corporate franchise or state income tax credits for businesses that expand or locate in Ohio. Projects receiving a higher tax credit tend to have a higher number of jobs, pay higher wages, and involve more substantial fixed-asset investment.

Ohio Development Services Agency

Economic impacts

- Deals awarded: 203
- Total Capex: 1,720.44 US $ Millions
- Total Incentives awarded: 165.42 US $ Millions
- Jobs created: 19,297
- Safe-guarded jobs created: 23,505
- Incentive type: tax credit

Eligibility criteria

- Companies creating at least 10 new jobs (within three years) for high-wage industries and at least 25 new jobs (within three years) for other industries;
- Generating at least $660,000 additional payroll in Ohio that pay at least 150 % of the federal minimum wage;
- Headquarters, manufacturing, science and technology, R&D, distribution and certain types of service projects are eligible; and
- Retail projects and services projects with low-paid jobs are not eligible.

Benefits

- The tax credit is measured as a percentage of the state income tax withholdings for all new employees hired under the program, and is applied toward the company's commercial activity tax liability;
- Approved projects generally range between a 25 and 55 % credit for a period of five to seven years; and
- The tax credit is refundable: should the amount of the credit exceed the company's commercial activity tax liability for any given year, the difference is refunded.

Monitoring & Evaluation and Clawback Mechanisms

- Four types of enforcement actions are available to the Ohio Tax Credit Authority in case initial eligible companies fail to adhere to defined requirements:
  - Cancel the project: applies to projects without an executed contract that are being eliminated from the program;
  - Reduce the rate and/or term of the tax credit: applies to projects with an executed contract that have failed to meet the requirements as defined in the tax credit agreement;
  - Terminate the project without a clawback: applies to projects with an executed contract that have failed to meet the requirements as defined in the tax credit agreement;
  - Terminate the project and administer a clawback to (partly) refund the tax credit: applies to projects that cease operations at their designated project site;
- Terminating the project and administering a penalty for non-compliance is executed in a three step clawback mechanism:
  - The first step is to send notice to the taxpayer of pending termination with clawback;
  - The second step is a "First Reading" at the Authority's monthly meeting, where the project and its economic impact are reviewed;
  - The third procedural step, known as the "Second Reading", occurs at the Authority's subsequent monthly meeting, and includes a final determination on a clawback percentage to be applied to prior certificates issued to the taxpayer; and
  - The Authority may require the taxpayer to refund up to 75% of any financial assistance received during the post-term reporting period of the tax credit against a refund of up to 100% of assistance during the term of the tax credit.

Source: Investment Consulting Associates – ICA Research and www.ICAincentives.com

The **Louisiana Enterprise Zone Program** is a jobs incentive program that provides Louisiana income and franchise tax credits to a new or existing business located in Louisiana. Its objective is to create permanent new full-time employment particularly targeted at targeted groups of unemployed.

LED LOUISIANA ECONOMIC DEVELOPMENT

Economic impacts

- Deals awarded: 144
- Total Capex: 1,937.02 US $ Millions
- Total Incentives awarded: 43.66 US $ Millions
- Jobs created: 6,629
- Safe-guarded jobs created: 0
- Incentive type: tax credit

Eligibility criteria

- Open to new or expanding Louisiana businesses;
- Excluded industries are on-site gaming, video poker or residential development;
- Create a minimum of five permanent new full-time jobs within first 2 years of their project start date or increase their current state-wide workforce by 10 % within the first year;
- Hire 35 % of the net new jobs created from one or more of the certification requirements

from these targeted groups:
- Residents: someone living in Enterprise Zone within the state;
- People receiving an approved form of public assistance;
- People lacking basic skills; and
- People unemployable by traditional standards.

Benefits
- A one-time $2,500 job tax credit for each net new job created; and
- A 4 % rebate of sales and use taxes paid on qualifying costs or a 1.5 % refundable investment tax credit on the total capital investment.

Monitoring & Evaluation and Clawback Mechanisms
- If a business is found to be in violation of the investment contract, the board may cancel the contract and the business must refund all jobs tax credits taken on income tax and franchise returns, all state and local sales and use tax rebates, investment tax credit, and any other taxes that would have been applicable to the eligible business; and
- The department shall notify the Department of Revenue of the cancellation, and the Department of Revenue will proceed by all appropriate means to recapture all benefits received pursuant to this Chapter, including any penalty and interest due.

Source: Investment Consulting Associates – ICA Research and www.ICAincentives.com

The **One North Carolina Fund** helps recruit and expand quality jobs in high value-added, knowledge-driven industries. In addition, the fund assists expanding companies that are considered to be crucial to North Carolina's economy. On the whole, the fund is expected to increase competitiveness.

Economic impacts
- Deals awarded: 134
- Total Capex: 2,937.96 US $ Millions
- Total Incentives awarded: 196.73 US $ Millions
- Jobs created: 16,449
- Safe-guarded jobs created: 758
- Incentive type: cash grant

Eligibility criteria
- Qualifying costs include purchase of equipment, real estate improvements and construction of utility requirements;
- Allocation is determined by companies locating or expanding in areas that have experienced severe and sudden economic disruptions;
- The company must agree to meet an average wage test; and
- Local units of government (city or county) must agree to match financial assistance to the company.

Benefits
- Financial assistance consists of negotiated challenge grants; and
- The exact value of the incentive is of a discretionary nature but grants up to several

millions have been registered.

Monitoring & Evaluation and Clawback Mechanisms

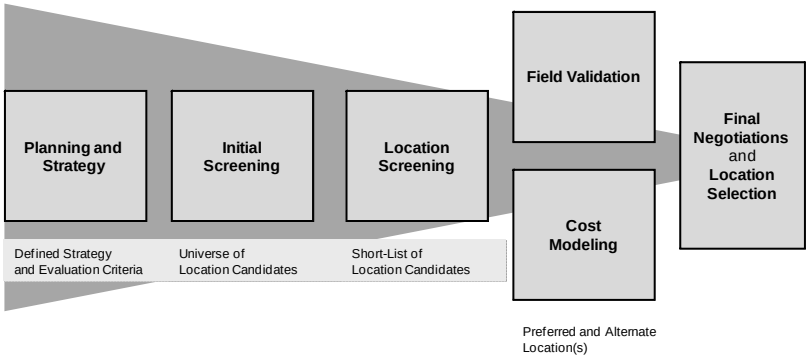
- A certain number of jobs must be created and the company must meet all criteria set out in the performance agreement before disbursement is made. In the event criteria set out in the performance agreement are not satisfied, the recipient is contractually obliged to repay the grant;
- Example of a repayment provision include:
    - If at any time before the close out of the grant, the company fails to retain 100% of existing permanent full time jobs or fails to provide health insurance to employees in all permanent full time jobs, the company may be required to reimburse all or part of the funds;
    - If at the termination of the grant, the average weekly wage is less than $692, if the company has failed to provide the required health insurance, or if the existing jobs have not been retained, the Company must reimburse all grant funds previously disbursed; and
    - If the company fails to make 90% of the required investment, create 90% of the new jobs, or the expenses made were not allowable under the incentive program, the amount of the grant will be reduced on a advantage rata basis.

Source: Investment Consulting Associates – ICA Research and www.ICAincentives.com

Appendix H – Maine Competitive Analysis

A proper evaluation of Maine's incentive, credit, and other economic development tools must begin with an understanding of the State's natural advantages and disadvantages for attracting investment. Companies making expansion and relocation decisions typically go through a process similar to that which is shown on this page. This process begins with the company identifying their business opportunities, constraints and needs for the new facility, and then progresses through an evaluation of location options. This evaluation process continues to narrow the list of options until the company is prepared to negotiate with the last (and best-fit) handful of communities and sites remaining on the list.

Importantly, this process usually starts with a regional, national, or even international long list of location options. Metropolitan areas are usually the units of geography being evaluated at this point, not towns or sites. Once an appropriate MSA is selected, the process advances to selecting a town and a site.



In the site selection process, three or four locations usually emerge from the screening model as the clear leaders. Local economic development agencies in those locations are typically contacted at this point. This then gives them the opportunity to present incentives, specific communities and sites within the broader region. It is important to note that the economic development agencies and incentive programs are not considered until this step.

The Maine Competitive Analysis compares the Portland, Bangor, and Lewiston-Auburn MSAs with 22 other MSAs with similar attributes likely to be considered when making a location decision.

Competitive Set

The Maine Competitive Analysis comparison candidates were chosen specifically because the communities have similar assets to the three Maine MSAs. Many of the competing MSAs are larger in population though not all. We adjust for differences in size between compared areas by looking at change in parameters rather than straight numbers. For example, we do not rate total population but rather change in population over time. The following MSAs are included in the Reverse Model:

- Portland-South Portland-Biddeford, ME MSA
- Lewiston- Auburn, ME MSA
- Bangor, ME MSA
- Boston-Quincy, MA MSA
- Albany-Schenectady-Troy, NY MSA
- Rochester, NY MSA
- Pittsburgh, PA MSA
- Harrisburg-Carlisle, PA MSA
- Louisville-Jefferson County, KY MSA
- Raleigh-Cary, NC MSA
- Charlotte-Gastonia-Concord, NC MSA
- Baton Rouge, LA MSA
- Jacksonville, FL MSA
- Orlando-Kissimmee, FL MSA
- Indianapolis-Carmel, IN MSA

- Cleveland-Elyria-Mentor, OH MSA
- Columbus, OH MSA
- Detroit-Livonia-Dearborn, MI MSA
- Ann Arbor, MI MSA
- St. Louis, MO-IL MSA
- Kansas City, MO-KS MSA
- Madison, WI MSA
- Milwaukee-Waukesha-West Allis, WI MSA
- Portland-Vancouver-Beaverton, OR-WA MSA

	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Population and Demographics	17	17	17	9	17	17	17	9	3	9	1	2	9	9	3	3	17	8	17	9	17	9	3	9	3
Household Statistics	11	24	23	2	11	9	19	2	1	16	4	9	11	16	25	11	21	19	11	16	5	5	5	21	8
Labor Force Availability	2	6	8	8	14	19	14	12	7	21	2	14	5	14	8	14	24	2	25	13	21	8	1	23	19
Industry-Specific Employment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupation-Specific Employment (per 1000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupation-Specific Salaries (Annual Mean 2010)	8	1	3	25	22	5	10	14	19	14	12	21	5	8	2	13	5	4	22	16	16	19	16	10	24
Education 2010	6	23	16	3	4	7	9	18	18	23	5	13	25	18	22	13	16	9	18	1	13	9	2	12	7
Transportation and Market Access	19	24	22	4	3	24	13	1	5	9	16	5	21	22	17	1	5	13	17	19	5	13	9	9	9
Tax Regime	23	23	23	18	15	15	21	**21**	1	5	5	5	4	5	5	17	5	5	12	12	1	1	18	18	14
Climate and Natural Hazards	6	19	19	6	6	22	16	2	6	6	2	2	24	16	25	19	16	13	6	13	15	22	6	2	1
Crime and Quality of Life	12	6	3	15	9	1	6	1	12	9	17	24	20	20	24	15	8	18	22	3	12	18	3	9	22
Overall Rank	**15**	**24**	**23**	**13**	**11**	**16**	**21**	**7**	**3**	**14**	**1**	**6**	**19**	**20**	**22**	**10**	**17**	**5**	**25**	**4**	**12**	**8**	**2**	**18**	**9**

Below is a chart describing the advantages and disadvantages of each factor for the three Maine MSAs.

	Advantage	Disadvantage
Population and Demographics- Low positive overall population growth with negative working age growth		
Portland ME – Ranked 17		• Low projected population growth • Projected loss of working age population
Lewiston ME - Ranked 17		• Smallest MSA in population included in the screening model • Almost 0% projected population growth • Projected loss of working age population

	Advantage	Disadvantage
Bangor ME- Ranked 17		• Second smallest MSA in population included in the screening model • Low projected population growth • Projected loss of working age population
Household Statistics – Portland does better, Lewiston and Bangor struggle		
Portland ME – Ranked11	• Favorable ratio of owner to renter occupied housing units • Stable housing unit growth • Midline median home value, household income, and disposable income	• High vacant housing rate
Lewiston ME – Ranked 24	• Lowest vacant housing rate of the Maine MSAs • Housing unit growth is appropriate based on vacancy rates	• Higher percentage of renter occupied units • Low housing unit growth • Low median home value, household income and disposable income
Bangor ME – Ranked 23	• Favorable ratio of owner to renter occupied housing units	• Low median home value, household income and disposable income • Rapid housing unit growth given vacancy rate
Labor Force Availability – Maine did NOT suffer high unemployment as a result of the economic downturn		
Portland ME – Ranked 2	• Slow but steady labor force growth between 2008 and 2013 while some candidates experienced negative growth • Very low 2008 and 2013 unemployment rates • Just over 1% increase in change in unemployment between 2008 and 2013	• Small labor force compared to other candidates
Lewiston ME – Ranked 6	• Slow but steady labor force growth between 2008 and 2013 while some candidates experienced negative growth • Low 2008 and 2013 unemployment rates • Less than 1% increase in unemployment rate between 2008 and 2013	• Smallest labor force of all candidates
Bangor ME – Ranked 8	• Slow but steady labor force growth between 2008 and 2013 while some candidates experienced negative growth • Low 2008 and 2013 unemployment rates • Just over 1% increase in change in unemployment between 2008 and 2013	• Second smallest labor force of all the candidates

	Advantage	Disadvantage
Industry Specific Employment- Maine overall has strength in Retail Trade while most employment strengths not identified through industry specific employment		
Portland ME – NOT RANKED	• High retail trade industry employment • Significant wholesale trade, finance/insurance/real estate, and service industries employment	• Lowest manufacturing and Information employment
Lewiston ME - NOT RANKED	• Highest manufacturing employment in Maine • High retail trade and information services industries employment • Some finance/insurance/real estate industry employment	• Lowest wholesale trade and services industries employment
Bangor ME – NOT RANKED	• High retail trade employment • Significant wholesale trade and service industries employment	• Lowest manufacturing, information, and finance/insurance/real estate employment
Occupation Specific Employment- Maine has overall strength in healthcare support functions		
Portland ME – NOT RANKED	• Significant employment in healthcare support functions and transportation/material moving occupations	• Lowest employment in business/financial operations and office/administrative occupations • Lower employment in computer/mathematical, production, and transportation/material moving
Lewiston ME - NOT RANKED	• High employment in healthcare support functions and production occupations • Significant employment in transportation/material moving occupations	• Lowest employment in business/financial operations, computer/mathematical, and office/administrative
Bangor ME – NOT RANKED	• Highest employment in healthcare support function occupations across all candidates	• Lowest employment in business/financial operations, computer/mathematical, office/administrative, and production occupations • Lower employment in transportation/material moving occupations
Occupation Specific Salaries – Maine is overall very competitive for salaries		
Portland ME – Ranked 8	• Best salaries for production occupations • Very competitive salaries for business/financial operations, computer/mathematical, and office/administrative occupations	• Only two occupations in Maine rank 3 out of five: Healthcare support functions and transportation material and moving (Portland only)
Lewiston ME – Ranked 1	• Best salaries for business/financial operations,	

	Advantage	Disadvantage
	computer/mathematical, office/administrative, and production occupations • Very competitive salaries for healthcare support functions and transportation/material moving occupations	
Bangor ME – Ranked 3	• Best salaries for business/financial operations, computer/mathematical, and office/administrative occupations • Very competitive salaries for healthcare support functions, production, and transportation/material moving occupations	
Education- Portland ranks well and Bangor mirrors Portland (with less success) while other areas of Maine struggle with education levels		
Portland ME – Ranked 6	• High percentage of people who graduated high school • Slightly better than average for percentage of population receiving college experience through a bachelors degree	• Fewer people with master's and doctorate degrees
Lewiston ME – Ranked 23		• Lewiston struggles with education at all levels, including having a significant high school drop-out rate
Bangor ME – Ranked 16	• High percentage of people who graduated high school	• Very low education rates beyond high school
Transportation and Market Access – All of Maine struggles with transportation and market access		
Portland ME – Ranked 19	• Households that can be access within a 4 hour drive have a high median household income • Very close to a medium sized airport	• Low population and household access within 4 hour drive • Low household growth rate within 4 hours • Long drive to nearest "Large" airport • Low access to interstates
Lewiston ME – Ranked 24	• Households that can be access within a 4 hour drive have a high median household income • Close to a medium sized airport	• Low population and household access within 4 hour drive • Low household growth rate within 4 hours • Long drive to nearest "Large" airport • Low access to interstates
Bangor ME – Ranked 22	• Households that can be access within a 4 hour drive have a high median household income • Very close to a small airport	• Lowest population and household access within 4 hours drive of all the candidates • Low household growth rate within 4 hours • Long drive to nearest "Large" airport • Low access to interstates

	Advantage	Disadvantage
Tax Regime- Tax regime is examined at the state level and Maine struggles with this from a site selection perspective		
Portland ME – Ranked 23 Lewiston ME – Ranked 23 Bangor ME – Ranked 23	• Only New Hampshire has a lower state sales tax in New England	• Ranks very poorly for state corporate tax climate score • High state corporate income tax though not the highest • High state sales tax as compared to the competitors • Highest property tax as percent of income
Climate and Natural Hazards – Maine as a state receives a significant amount of snow, but does not often suffer other natural hazards		
Portland ME – Ranked 6	• Low number of days with precipitation • Average rainfall indicates good crop/plant growing environment • Portland area and costal Maine have the least snowfall of anywhere in Maine • Few annual days with thunderstorms • Very slight risk of tornadoes	• The area still gets a significant amount of snow
Lewiston ME – Ranked 19	• Low number of days with precipitation • Average rainfall indicates good crop/plant growing environment • Area also receives similar snowfall to the Portland area • Higher thunderstorm risk than other Maine candidates but still low • Very slight risk of tornadoes	• The area still gets a significant amount of snow
Bangor ME – Ranked 19	• Lower days with precipitation • Average rainfall indicates good crop/plant growing environment • Few annual days with thunderstorms • Very slight risk of tornadoes	• Most snowfall of all the candidates
Crime and Quality of Life – Low crime rates and areas outside of Portland have appropriate cost of living		
Portland ME – Ranked 12	• Very low violent crime rates • Lowest property crime rates of the Maine candidates • Slightly longer commute time to work but still short	• Higher than US average cost of living index • Low access to physicians but still best of the Maine candidates • Low rate of hospital beds compared to population
Lewiston ME – Ranked 6	• Very low violent crime rates • Slightly higher property crime rates than Portland	• Low access to physicians

	Advantage	Disadvantage
	• Lower than US average cost of living index and lowest of the Maine candidates • Short commute time to work • High rate of hospital beds compared to population	
Bangor ME – Ranked 3	• Lowest violent crime rates • Highest Maine property crime rate but still overall low • Lower than US average cost of living index • Short commute time to work • High rate of hospital beds compared to population	• Low access to physicians

Explaining the Tables

The full Maine Competitive Analysis model contains 25 different MSAs that were compared against each other to show how Maine does against possible competitors. The tables included below show all three Maine MSAs and the best and worst ranking

Population and Demographics

Population dynamics give an overall indication of a community's "health," or whether it is growing at a sustainable pace. Negative growth can indicate a failing economy or an obsolete community. Explosive growth can be a warning sign for strain on infrastructure or on community finances. This analysis, which typically examines growth of working age population over a specified time period, typically favors young or newer communities.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Cleveland-Elyria-Mentor, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Milwaukee-Waukesha-West Allis, WI MSA
% Population Growth 2012-2017	0.76%	0.07%	1.09%	3.00%	1.43%	1.07%	0.51%	3.02%	3.37%	12.93%	8.79%	4.21%	4.29%	-0.60%	-1.43%	2.02%	1.42%	3.51%	1.92%
% Population 15-65 Growth 2012-2017	-1.93%	-2.51%	-1.55%	0.52%	-1.14%	-1.56%	-2.34%	0.35%	0.82%	10.55%	6.37%	1.72%	1.62%	-3.30%	-3.93%	-0.16%	-1.15%	1.05%	-0.52%
Subscore	**17**	**17**	**17**	**9**	**17**	**17**	**17**	**9**	**9**	**1**	**2**	**9**	**9**	**17**	**17**	**9**	**17**	**9**	**9**

Most candidates have low but positive population growth while the working age population is flat or slightly negative. Raleigh-Cary, NC MSA ranked first for population statistics, followed by Charlotte-Gastonia-Concord, NC MSA. This is consistent with the trend that MSAs in the Southern census region tend to have the most significant growth of all locations within the US. Raleigh and Charlotte, respectively, had the highest and second highest projected overall population growth and projected working age population growth rates. The following candidates rank last for population statistics: Detroit-Livonia-Dearborn, MI MSA; Cleveland-Elyria-Mentor, OH MSA; St. Louis, MO-IL MSA; Pittsburgh-Carlisle, PA MSA; Rochester, NY MSA; Albany-Schenectady-Troy, NY MSA; Portland-South Portland-Biddeford, ME MSA; Lewiston-Auburn, ME MSA; and Bangor, ME MSA. Detroit has the most negative population growth and the most negative working age population growth. The three Maine MSAs rank among the last candidates in the set, with all three having nearly flat projected population growth and negative working age population growth.

Maine VS Area	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Maine	New England	Northeast	US
% Population Growth 2012-2017	0.76%	0.07%	1.09%	0.67%	1.34%	1.50%	3.47%
% Population 15-65 Growth 2012-2017	-1.93%	-2.51%	-1.55%	-2.15%	-1.23%	-1.08%	0.89%

Portland has slightly better projected growth for both the general population and working age population than the state of Maine as a whole, but Bangor has somewhat better projected growth than Portland or the state. Lewiston ranks last among the three MSAs. All three, and the state overall, fall short of growth expectations for New England, the Northeast, and the US overall.

Population and Demographic Sources

- ESRI Business Analyst Online (BAO) by MSA

Household Statistics

Household statistics indicate community involvement, residential health, income information as well as disposable income. Communities with a high number of owner occupied units are more likely to have involved and supportive residents and families. Those with low owner occupied

units are more likely to house an apathetic population. Those with low vacancy rates show a healthy community while those with large vacancy rates show the community is struggling. Household growth shows trending for the area over the last 10 years. Median home value, median household income, and median disposable income all indicate the affordability of the area and touch on quality of life.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond, VA MSA	Raleigh-Cary, NC MSA	Orlando-Kissimmee, FL MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Total Owner Occupied Housing Units 2010	56.85%	58.15%	58.19%	57.49%	62.07%	63.26%	63.66%	62.12%	61.68%	53.57%	63.26%	56.57%	63.99%	57.63%	56.85%	57.88%
Total Renter Occupied Housing Units 2010	24.40%	32.13%	27.06%	36.00%	30.28%	27.63%	28.64%	29.74%	30.70%	31.16%	25.91%	36.40%	26.53%	35.71%	36.02%	35.93%
Total Vacant Housing Units 2010	18.76%	9.73%	14.75%	6.51%	7.65%	9.11%	7.70%	8.15%	7.62%	15.27%	10.84%	7.03%	9.48%	6.66%	7.13%	6.19%
% Housing Unit Growth 2000-2010	12.60%	6.81%	10.49%	7.51%	6.61%	2.19%	10.96%	17.44%	41.45%	37.86%	4.97%	12.59%	9.08%	18.91%	8.35%	16.97%
Median Home Value 2012	$212,031	$148,892	$143,086	$332,818	$126,364	$135,433	$174,174	$197,216	$204,695	$138,834	$109,184	$170,245	$165,878	$196,766	$179,854	$241,412
Median Household Income 2012	$53,595	$43,326	$39,692	$67,700	$52,131	$46,280	$53,574	$55,712	$56,678	$48,354	$49,579	$54,333	$51,224	$56,977	$50,442	$54,279
Median Disposable Income 2012	$43,277	$36,587	$34,296	$52,521	$39,794	$37,596	$42,999	$45,727	$46,315	$40,157	$40,595	$44,798	$41,207	$45,652	$40,068	$43,067
Subscore	**11**	**24**	**23**	**2**	**9**	**19**	**2**	**1**	**4**	**25**	**11**	**16**	**5**	**5**	**21**	**8**

Richmond, VA MSA came in first for household statistics and rated the best for median disposable income. Lewiston-Auburn, ME MSA came in last for household statistics with the lowest median household income and lowest median disposable income. Bangor, ME MSA came in next to last in the category with the second lowest median household income and second lowest median disposable income. Portland-South Portland-Biddeford, ME MSA came in 11th with the lowest renter-occupied housing and most sustainable (moderate) housing unit growth rate, but Portland also had the highest housing vacancy rate in the set and the second lowest owner-occupied housing rate.

Maine VS Area	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Maine	New England	Northeast	US
Total Owner Occupied Housing Units 2010	56.85%	58.15%	58.19%	55.06%	57.81%	55.83%	57.69%
Total Renter Occupied Housing Units 2010	24.40%	32.13%	27.06%	22.14%	30.44%	33.88%	30.93%
Total Vacant Housing Units 2010	18.76%	9.73%	14.75%	22.80%	11.75%	10.29%	11.38%
% Housing Unit Growth 2000-2010	12.60%	6.81%	10.49%	10.73%	8.04%	6.61%	13.63%
Median Home Value 2012	$212,031	$148,892	$143,086	$169,014	$240,208	$226,867	$167,749
Median Household Income 2012	$53,595	$43,326	$39,692	$45,063	$58,980	$55,432	$50,157
Median Disposable Income 2012	$43,277	$36,587	$34,296	$37,574	$47,145	$43,757	$40,615

Bangor has a greater percentage of owner occupied units than any of the regions, followed by Lewiston. Portland, ME had a lower owner occupied percentage than New England or the country overall, but was higher than the Northeast or the state of Maine as a whole. Portland had the second lowest renter occupied unit percentage (after Maine as a whole), among the MSAs and against the regions, but also had the second-highest vacancy rate (also after Maine). In contrast, Lewiston had the lowest vacancy rate, but the second highest renter occupied percentage. Compared with all regions, Bangor had the lowest median home values, median household incomes, and median disposable incomes. Lewiston finished next to last all those three categories as well. New England and the Northeast region respectively were the highest and second highest in those three categories. Portland scored significantly higher in all three than Lewiston or Bangor, as well as the state and country overall, but remained below the two leading regions. Bangor scored best versus the region on housing unit growth, with moderately strong but not unsustainable growth last decade, putting it close to the state average, above the New England and Northeast regional averages, and below the US average. Portland's moderate housing growth was somewhat higher than Bangor's but still a bit below the national average. Lewiston's housing growth was on the lower end, well below the other two Maine MSAs and the state, as well as below the average for New England and the US overall. Lewiston's housing growth was almost the same as that of the Northeast region.

Household Statistics Source

- ESRI Business Analyst Online (BAO) by MSA

Labor Force and Availability

Given as a measure of Civilian Labor Force growth and an area's unemployment dynamics, this section measures the very general strength of the workforce as a whole, without regard for specific skills. Areas with moderate unemployment and stable labor force growth perform well.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Richmond VA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA
%Growth in Labor Force 2008-2013	2.88%	1.61%	1.43%	2.67%	8.41%	6.75%	0.96%	-4.21%	3.07%	-3.97%	-2.09%	3.46%	-1.05%
Unemployment Rate 2008	4.30%	5.50%	5.30%	4.20%	5.00%	6.40%	5.10%	6.80%	5.60%	8.70%	5.70%	3.60%	4.90%
Unemployment Rate 2013	5.50%	6.40%	6.40%	5.90%	6.40%	8.10%	6.90%	7.50%	6.20%	9.40%	5.90%	4.80%	7.30%
Change in Unemployment Rate	1.20%	0.90%	1.10%	1.70%	1.40%	1.70%	1.80%	0.70%	0.60%	0.70%	0.20%	1.20%	2.40%
Subscore	**2**	**6**	**8**	**7**	**2**	**14**	**14**	**24**	**2**	**25**	**13**	**1**	**23**

Madison, WI MSA ranks first among the candidates, with the lowest 2008 and 2013 unemployment rates. Portland-South Portland-Biddeford, ME MSA ranked second overall (along with Columbus, OH MSA and the fast-growing Raleigh-Cary, NC MSA), with the second best 2013 unemployment rate after Madison. Portland also experienced moderate labor force growth and medium unemployment change. Labor force growth and 2007 unemployment rate come in near the middle of the candidate set. Lewiston-Auburn, ME MSA and Bangor, ME MSA performed relatively well, ranking 6th and 8th respectively overall, showing moderately good unemployment and labor force growth numbers, relative to the set as a whole. Detroit, MI MSA came in last for labor force with the highest 2008 and 2013 unemployment rates. Detroit also experienced the second most negative labor force growth and moderate change in unemployment rate.

Maine VS Area	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Maine	New England	Northeast	US
%Growth in Labor Force 2008-2013	2.88%	1.61%	1.43%	0.85%	-0.15%	0.12%	0.71%
Unemployment Rate 2008	4.30%	5.50%	5.30%	5.40%	5.40%	5.40%	5.80%
Unemployment Rate 2013	5.50%	6.40%	6.40%	6.70%	7.10%	7.50%	7.40%
Change in Unemployment Rate	1.20%	0.90%	1.10%	1.3%	1.7%	2.1%	1.6%

All three Maine MSAs out-performed the country as a whole on all labor statistics. Portland, ME had the strongest numbers in labor force growth, as well as 2008 and 2013 unemployment. Portland's 2013 unemployment rate was a full two point below the Northeast average. Lewiston had the most stable unemployment rate of the three in recent years. Lewiston and Bangor both exceeded the labor force growth of the state, New England, the Northeast, and the US overall. Bangor maintained an unemployment rate slightly below the state's and the rates of the three comparison regions in both 2008 and 2013. Both Bangor and Lewiston had 2013 unemployment rates a full point below the US average and over a point below the Northeast average.

Labor Force and Availability Sources

- http://data.bls.gov/cgi-bin/dsrv?la by MSA

Industry Specific Employment

This section contains information on the availability of workers within selected industries. Employment in Utilities, Construction, Manufacturing, Finance, Services, and Professional/Technical/Scientific functions are analyzed as a percentage of overall employment indentifying critical masses of industry partners and workforce. These are selected as they provide an indicator of the presence of basic skills and networks that may be useful across a broad array of new industry and use types.

Industry specific employment is very useful to identify a community's strengths and distribution of workers. While the industry specific employment section was included in the reverse screening model, it is not ranked as it would be in a site selection screening model. The color coding below is indicating strength and weakness of the industry employment rather than positive and negative numbers.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Manufacturing as a % of Total Employment	9.50%	12.00%	5.20%	6.90%	13.30%	9.80%	10.60%	9.40%	5.60%	4.60%	12.70%	18.00%	17.70%	10.50%	9.10%	10.40%	6.20%
Wholesale Trade as a % of Total Employment	2.50%	1.90%	2.60%	2.30%	3.20%	3.10%	3.70%	2.40%	2.00%	2.50%	3.30%	2.40%	2.60%	1.40%	3.00%	2.30%	2.50%
Retail Trade as a % of Total Employment	13.70%	16.20%	14.70%	11.60%	11.30%	11.40%	11.20%	11.70%	12.40%	14.00%	11.80%	10.10%	10.80%	9.10%	11.60%	10.10%	10.30%
Information as a % of Total Employment	1.90%	2.30%	1.70%	1.70%	2.10%	2.70%	2.40%	1.70%	1.70%	2.50%	1.50%	2.20%	1.70%	2.10%	2.70%	2.30%	2.40%
Finance/ Insurance/ Real Estate as a % of Total Employment	7.50%	6.60%	3.70%	9.80%	7.60%	6.30%	11.10%	5.90%	10.70%	6.80%	7.10%	3.10%	6.30%	4.50%	8.40%	8.60%	7.20%
Service Industries as a % of Total Employment	58.50%	55.60%	60.00%	62.00%	54.30%	59.80%	57.10%	55.70%	61.80%	63.60%	55.10%	47.40%	55.00%	68.60%	59.30%	64.10%	65.50%
Subscore	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Cleveland, OH MSA has the highest percentage employment in manufacturing and Orlando, FL MSA has the lowest. Charlotte-Gastonia-Concord, NC MSA has the highest employment in wholesale trade and Ann Arbor, MI MSA has the lowest. Orlando-Kissimmee, FL MSA has the lowest employment in retail trade. Raleigh-Cary, NC MSA has the highest employment in Information and Indianapolis-Carmel, IN MSA has the lowest. Charlotte-Gastonia-Concord, NC MSA has the highest employment in finance/insurance/real estate and Cleveland-Elyria-Mentor, OH MSA has the lowest. Ann Arbor has the highest employment in services industries and Louisville-Jefferson County, KY MSA has the lowest. Portland-South Portland-Biddeford, ME MSA did not have highest or lowest employment among the candidates for any sector. This shows a healthy and diverse economy without a single point of failure. Lewiston-Auburn, ME MSA had the strongest retail sector of any candidate MSAs, but also has the second weakest wholesale trade sector by employment proportion. Bangor, ME MSA had the second weakest manufacturing sector, information sector, and finance sector among the candidates, but performed in the middle on other sectors.

No data was available for the regional and US level comparison.

Industry Specific Employment Sources

- http://www.census.gov/acs/www/data_documentation/data_main/ by MSA

Occupation Specific Employment

In addition to understanding industry trends, the modern economy still requires workers with specific talents regardless of the company employing them. This category examines the availability of some in-demand skills, such as Business and Financial Operations, Computer & Mathematical, Healthcare Support Functions, and Production skills. As with the statements for industry employment, the availability of these broad occupation types is indicative of the strength of the local skills base for a variety of uses.

Occupation specific employment is useful to identify a community's strengths and distribution of workers. While the occupation specific employment section was included in the reverse screening model, it is not ranked as it would be in a site selection screening model.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Cleveland-Elyria-Mentor, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Business and Financial Operations	54.14	34.29	26.89	66.94	67.50	69.06	42.23	59.28	64.61	49.98	49.82	50.39	43.58	66.25	55.83	53.20
Computer & Mathematical	25.73	13.93	11.63	49.47	36.14	33.76	21.13	52.55	27.77	25.47	27.65	32.84	38.18	49.96	28.34	34.16
Healthcare Support Functions	31.51	5.75	43.85	29.00	26.67	25.90	28.66	27.43	28.30	20.55	41.31	35.28	39.66	22.88	29.81	21.61
Office and Administrative	159.20	193.65	167.93	151.14	187.92	168.87	158.26	163.78	189.28	172.43	161.98	153.09	146.90	166.34	159.54	159.95
Production	48.29	78.27	33.34	45.20	43.44	46.72	96.69	39.95	45.73	33.01	90.96	99.99	56.16	60.98	101.27	65.47
Transportation and Material Moving	59.67	73.11	58.29	44.80	98.16	62.27	99.00	51.59	75.42	59.34	60.66	59.84	35.99	56.73	70.68	68.37
Subscore	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Richmond, VA had the highest employment in business and financial, among the candidates. Madison, WI MSA had the highest employment in computer and mathematical. Ann Arbor, MI MSA had the lowest employment in office and administrative. Milwaukee-Waukesha-West Allis, WI MSA had the highest employment in production, while Orlando-Kissimmee, FL MSA had the lowest. Louisville-Jefferson County, KY MSA has the highest employment in transportation and material moving, while Ann Arbor had the lowest. Portland-South Portland-Biddeford, ME MSA has

no strong concentration of employment in any occupation. Lewiston-Auburn, ME MSA had the highest employment of office and administrative, but the lowest employment in business and financial and healthcare support functions, as well as the second lowest employment in computer and mathematical. Bangor, ME MSA had the strongest employment in healthcare support functions, but the lowest employment in computer and mathematical, as well as the second lowest employment in business and financial and production.

No data was available for the regional and US level comparison for 2013.

Occupation Specific Employment Sources

- http://stats.bls.gov/oes/current/oessrcma.htm by MSA

Occupation Specific Salaries (Annual)

Salaries and benefits often make up companies' largest or second largest cost category overall. Hence, costs for specific occupations in each community show the relative cost of doing business for the assembled entity.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Orlando-Kissimmee, FL MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Business and Financial Operations	$63,410	$56,600	$56,570	$81,850	$66,590	$60,040	$70,180	$72,590	$55,440	$62,980	$65,740	$70,030	$67,220
Computer & Mathematical	$69,420	$58,510	$55,290	$93,080	$72,850	$66,440	$82,440	$82,490	$62,850	$69,560	$76,460	$74,180	$ 79,580
Healthcare Support Functions	$29,470	$27,410	$27,370	$33,590	$28,600	$28,080	$27,730	$25,870	$22,900	27,430	$26,440	$27,040	$34,380
Office and Administrative	$34,660	$30,820	$31,330	$41,080	$36,950	$33,480	$34,290	$35,120	$31,300	31,120	$34,680	$35,070	$37,150
Production	$34,530	$32,610	$36,320	$39,530	$40,150	$36,110	$33,060	$34,070	$49,260	$31,360	$32,390	$38,700	$37,250
Transportation and Material Moving	$33,360	$32,730	$31,920	$35,480	$34,580	$37,230	$30,010	$34,690	$32,170	$31,030	$30,560	$36,470	$34,030
Subscore	**8**	**1**	**3**	**25**	**22**	**14**	**12**	**21**	**5**	**2**	**4**	**22**	**24**

Lewiston-Auburn, ME MSA ranked first overall with the lowest salaries in office and administrative, as well as the second lowest salaries in business and financial and computer and mathematical (while scoring very competitively on the other three occupations, too). Bangor, ME MSA

came in third overall, just behind Orlando-Kissimmee FL, MSA, with the lowest salaries in computer and mathematical and competitively low salaries in all other occupations. Baton Rouge, LA MSA had the lowest salaries for business and financial and for healthcare support functions. Raleigh-Cary, NC MSA had the lowest salaries in transportation and material moving. Orlando, ranked between Lewiston and Bangor, had the lowest salaries in production and second lowest in office and administrative. Orlando closely matches or beats Lewiston and Bangor in four of the six fields. Orlando salaries across all occupations are also very similar to (but nearly all slightly lower than) those of Portland-South Portland-Biddeford, ME MSA, which scored 8th overall.

Portland, ME has relatively competitive salaries in all categories, but no high or low standouts. Nearby Boston-Quincy, MA MSA scored in 25th place, with very expensive salaries in nearly all occupations. Within the Northeast, Albany-Schenectady-Troy, NY MSA also fared poorly, coming in at 22nd place.

No data was available for the regional and US level comparison for 2013.

Occupation Specific Salaries (Annual) Sources

- http://stats.bls.gov/oes/current/oessrcma.htm by MSA, state, region, and national

Education

The education levels of a community's population (from high school to professional school graduates) indicated both the capabilities of the workforce and can also be an indication of the regional school system as a quality-of-life measurement. An educated workforce can also help attract talented people to relocate to the region. Due to changes in available data, education statistics are only available at the MSA level.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Baton Rouge, LA MSA	Ann Arbor, MI MSA	Madison, WI MSA
Population less than High School Diploma	6.72%	9.63%	7.28%	8.09%	11.39%	10.95%	12.23%	6.15%	4.43%
Population at least High School Graduate	92.70%	89.20%	91.91%	90.69%	87.31%	88.12%	86.74%	93.40%	94.71%
Population (at least) Some College	64.61%	51.68%	52.59%	66.09%	60.50%	56.57%	53.39%	76.44%	72.24%
Population (at least) Associates Degree	45.09%	28.82%	33.83%	50.16%	39.54%	34.23%	31.70%	57.23%	52.84%
Population (at least) Bachelors Degree	36.54%	18.36%	22.86%	42.94%	32.59%	26.55%	26.83%	49.71%	42.59%

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Baton Rouge, LA MSA	Ann Arbor, MI MSA	Madison, WI MSA
Population Graduate/Professional School Degree	12.63%	6.04%	7.97%	19.07%	12.20%	10.11%	8.62%	25.81%	17.66%
Subscore	**6**	**23**	**16**	**3**	**18**	**23**	**25**	**1**	**2**

University of Michigan flagship campus community Ann Arbor, MI MSA ranked first for levels of education, with the highest proportion of the population holding graduate or professional degrees, Bachelor's Degrees, Associate's degrees, or having attended at least some college. Nearly half the population of Ann Arbor obtained a Bachelor's Degree, well ahead of every other MSA. Ann Arbor also had the second highest percentage of high school graduates and people with some high school. The runner-up was University of Wisconsin flagship campus community and state capital, Madison, WI MSA, which had the highest percentage with some high school and nearly universal high school graduation, as well as second highest percentages with some college or an Associate's Degree. Only Boston-Quincy, MA MSA (3rd overall) had more Bachelor's Degree holders and graduate or professional degrees in the population than did Madison.

Baton Rouge, LA MSA scored last on education, with the lowest percentage of high school diplomas or even partial high school attendance, within the population. Only about a quarter obtained a Bachelor's degree, and Baton Rouge had the second lowest percentage with an Associate's Degree. Lewiston-Auburn, ME MSA tied Louisville-Jefferson County, KY MSA in 23rd place, with Lewiston having the lowest percentages of advanced degree holders, Bachelor's degree holders, Associate's Degree holders, or partial college attendance. Bangor, ME MSA (16th overall) had the second lowest percentages of partial college attendance, Bachelor's Degrees, or advanced degrees. Bangor does, however, have a better high school graduation rate than Boston.

Portland-South Portland-Biddeford, ME MSA (6th overall) has a very solid and favorably educated population even though none of the statistics are highest in the category among the candidates. Portland, ME has the third highest high school graduation rate, almost equal to that of Ann Arbor. Partial college attendance is a solid majority and almost equal to Boston's.

2010 Education data was not available at the regional level.

Education Sources

- http://www.census.gov/acs/www/data_documentation/data_main/ by MSA

Transportation and Market Access

Acting both as a measure of traffic within the community (and therefore workforce attraction) as well as the ability to move goods and personnel into and out of the community, transit and infrastructure measures the availability of air and road capability and its capacity of that capability.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Harrisburg-Carlisle, PA MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Population within 4 Hours Drive Time	14,194,103	12,149,992	6,607,212	32,798,860	46,740,297	10,930,595	50,335,716	20,580,919	23,633,678	8,120,604	14,599,409	33,134,629	27,865,838	23,729,826	32,668,230	9,275,413
Households within 4 Hours Drive Time	5,564,134	4,764,653	2,605,134	12,419,089	17,701,675	4,384,917	19,017,692	7,978,428	9,191,754	3,073,166	5,776,409	12,759,472	11,090,700	9,320,607	12,676,418	3,620,449
Median Household Income w/in 4 Hours	$58,398.0	$58,545.0	$59,341.0	$58,304.0	$57,705.0	$45,644.0	$57,742.0	$47,474.0	$43,697.0	$40,497.0	$42,524.0	$48,549.0	$44,967.0	$45,148.0	$47,388.0	$53,718.0
Household Growth Rate w/in 4 Hours	20.00%	23.00%	32.00%	27.00%	25.00%	-1.00%	39.00%	90.00%	87.00%	67.00%	66.00%	26.00%	-1.00%	-1.00%	6.00%	87.00%
Miles to Mjr Airport	5	35	3	3	10	7	12	15	8	9	15	14	14	23	27	13
Airport Type	Medium	Medium	Small	Large	Medium	Medium	Small	Medium	Large	Medium	Medium	Large	Large	Large	Large	Large
Interstate Highways	1	1	1	2	2	1	3	2	2	2	2	4	4	3	1	2
Subscore	**19**	**24**	**22**	**4**	**3**	**24**	**1**	**16**	**5**	**21**	**22**	**1**	**5**	**17**	**19**	**9**

Harrisburg-Carlisle, PA MSA tied for first overall, on the strength of the largest population and greatest number of households within 4 hours drive time. Co-winner Indianapolis-Carmel, IN MSA tied for the most number of interstate highways and has close access to a large airport.

Lewiston-Auburn, ME MSA ranked last, with Rochester, NY MSA. Lewiston does have the second greatest median income within a 4 hour drive, but had the longest distance to a major airport of all the candidates, at 35 miles, and has only one interstate. Its population within 4 hours was not much greater than that of Rochester. Bangor, ME MSA finished next to last, with one interstate, a small classification airport, and the fewest number of households within 4 hours drive. Bangor does, however, have the shortest distance (along with Boston-Quincy, MA MSA) to a

major airport, at 3 miles. Bangor also has the greatest median household income within a 4 hour drive, exceeding even that of Boston. Portland-South Portland-Biddeford, ME MSA (19th place overall, tied with Ann Arbor, MI MSA) fares similarly well (and also ahead of Boston) on median household income within 4 hours. Portland has the next shortest distance to a major airport at 5 miles. Nearby regional household growth was relatively moderate for all three Maine MSAs, but was well above the declines or slow growth regional rates of the Ohio and Michigan MSAs, and was well below the unsustainable regional growth rates of the North Carolina MSAs and Portland-Vancouver-Beaverton, OR-WA MSA.

Transportation and market access statistics do not apply at a national level.

Transportation and Market Access Sources

- ESRI Business Analyst Online (BAO) by MSA
- Google Maps for distance to Airport
- CWS determination of airport type based on number and length of runways and commercial flight status
- Google Maps for Interstate Highways

Tax Regime

Tax structures can – intentionally or otherwise – be used as a regulatory tool to encourage or discourage corporate investments of various types. Property, income, and sales taxes all impact companies in different ways and should be examined on an institution by institution basis. The tax regime ranking is at the state level.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Portland-Vancouver-Beaverton, OR-WA MSA
State Corporate Tax Climate Score	45	45	45	34	25	25	43	43	6	27	17	13	13	47	9	9	7	7	32
State Corporate Income Tax -Highest Bracket	8.93%	8.93%	8.93%	8.00%	7.10%	7.10%	9.99%	9.99%	6.00%	6.00%	8.00%	5.50%	5.50%	7.50%	6.00%	6.00%	6.25%	6.25%	7.60%
State Sales Tax (Average)	5.00%	5.00%	5.00%	6.25%	4.00%	4.00%	6.00%	6.00%	5.30%	6.00%	4.00%	6.00%	6.00%	7.00%	6.00%	6.00%	4.23%	4.23%	0.00%
Property Tax as a % of Income	4.72%	4.72%	4.72%	3.78%	4.57%	4.57%	3.09%	3.09%	2.99%	2.03%	2.01%	3.45%	3.45%	2.72%	3.79%	3.79%	2.58%	2.58%	3.49%
Subscore	**23**	**23**	**23**	**18**	**15**	**15**	**21**	**21**	**1**	**5**	**4**	**5**	**5**	**17**	**12**	**12**	**1**	**1**	**14**

The leaders were Richmond, VA (with a very favorable corporate tax climate and low property taxes) and St. Louis MO-IL MSA / Kansas City MO-KS MSA (with similarly favorable corporate tax regimes and a lower sales tax and even lower property taxes).

The three Maine MSAs ranked last on tax regime, with the highest property taxes as a proportion of income, the second-highest state corporate tax climate score, and the second greatest highest corporate tax bracket. The Maine corporate tax climate score was second only to that of Indiana, while the top corporate tax brackets were exceeded only by that of Pennsylvania (where the two MSAs finished second to last, just above Maine). The state sales tax was about in the middle of the competitor MSA set. Nearby Massachusetts scored in 18th place, with a substantially lower property tax rate as a proportion of income, and a more favorable corporate tax climate.

Transportation and market access statistics are not available and do not apply at a national level.

Source

- http://taxfoundation.org/ document "bp60.pdf"

Climate and Natural Hazards

Climate is both a quality of life indicator and can also be a measure of business interruption risk. Similarly, no location is without some form of natural hazard risk. Businesses will typically look to establish locations in such a way as to minimize their exposure to any one risk.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Rochester, NY MSA	Harrisburg-Carlisle, PA MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Cleveland-Elyria-Mentor, OH MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
# Days of Precipitation per year	127	129	135	182	125	112	111	108	116	116	156	108	102	117	122	152
Annual Precipitation (in inches)	41	45.1	43	31.3	36	43	43	54	54	51	35	36	37	30	29	38
Annual Snowfall (in inches)	74	71	95	88.4	35	7	6	1.8	0	0	52	18	20	39	45	7
Annual Days with Thunderstorms	18	30	18	29	33	46	42	70	64	81	36	45	53	40	36	7
Tornado Risk	0	0	0	1	13	13	14	31	14	42	14	44	49	24	19	3
Subscore	**6**	**19**	**19**	**22**	**2**	**2**	**2**	**24**	**16**	**25**	**16**	**15**	**22**	**6**	**2**	**1**

Orlando-Kissimmee, FL MSA came in last for climate and natural hazards, primarily on the strength of having the most thunderstorm days per year and the second greatest annual precipitation. Portland-Vancouver-Beaverton, OR-WA MSA came in first with the least number of thunderstorm days, low tornado risk, minimal snowfall, and moderate precipitation by quantity (despite having the third greatest number of precipitation days annually). Bangor, ME MSA and Lewiston-Auburn, ME MSA both finished 19th overall, with high snowfall (Bangor the highest in the set, ahead of Rochester, NY MSA), and slightly more non-snow precipitation than most MSAs. Bangor tied Portland-South Portland-Biddeford, ME MSA on second fewest thunderstorm days. All three Maine MSAs had statistically negligible risk of tornados (followed closely by Rochester and Portland, OR). Portland, ME finished 6th overall on climate and natural hazards, with the third highest snowfall, but reduced risk of thunderstorms (and no tornados), moderate non-snow precipitation, and a moderate number of precipitation days.

Maine VS Area	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Maine	New England	Northeast	US
# Days of Precipitation per year	127	129	135				109
Annual Precipitation (in inches)	41	45.1	43				37.7
Annual Snowfall (in inches)	74	71	95				7
Annual Days with Thunderstorms	18	30	18				39
Tornado Risk	0	0	0				18

All three Maine MSAs are less favorable on precipitation and snowfall when compared to the US averages, but have fewer thunderstorm days and a negligible risk of tornados. This data was not available at the Ohio, East North Central or Midwest levels.

Among the three MSAs, Bangor had the highest snowfall – 21 inches annually greater than Portland. Lewiston had slightly less snowfall than Portland. Bangor also had somewhat more days with precipitation than the other two MSAs (Portland had the lowest). Lewiston had the greatest non-snow precipitation by inches and significantly more thunderstorm days than Portland or Bangor (while still lower than the US).

Source

- Cities Ranked and Rated by MSA - 2007 Edition

Crime and Quality of Life

Crime is a good indicator for how safe a community may feel and businesses use this information to help judge the safety of their personal and real property within a community. Quality of life is a subjective measure and the criteria to measure the concept vary from individual to individual. However, such subjects as cost of living, crime, and health care system capacity carry universal appeal and can have direct business impact.

Maine VS Highest and Lowest Competitors	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	Madison, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Violent Crime	139.5	122.0	82.7	592.7	288.2	360.5	350.6	412.6	330.9	837.7	719.2	821.4	574.4	441.5	1,250.7	344.4	229.40	327.3
Property Crime	2,446.3	2,684.3	2,854.6	2,690.5	3,018.5	2,433.8	2,421.1	3,489.2	2,918.2	5,170.6	4,723.3	4,314.0	4,224.8	4,826.4	4,514.2	2,992.9	2,843.60	4,407.6
Cost of Living Index	109.5	93.1	98.6	134.2	87.1	85.4	87.6	85.2	98.1	93.7	94.4	105.3	81.5	90.6	91.4	104	99.7	110.6
Average Commute Time to Work	24.3	23.3	20.8	28.8	20.7	25.9	22	24.1	24.9	25.4	25.8	26.3	24	22.7	26.1	22.6	21.4	24.9
Physicians Per 10000 people	333.1	231.8	290.5	548.9	320.3	335.5	346.5	276.1	186.7	209.6	181.9	193.7	326	280.7	225.1	809.3	421.6	267.3
Number of Hospital Beds	298.4	474.6	471.8	599.9	478.8	529.7	459.4	435.8	269.1	268.6	479.7	272.2	357	310.1	434.4	479	364	189.3
Subrank	12	6	3	15	1	6	1	9	17	24	20	24	15	18	22	3	3	22

Rochester, NY MSA and Harrisburg-Carlisle, PA MSA both ranked first – with Rochester performing well on all statistics though not first on any, and with Harrisburg having the shortest commute time and lowest property crime rate in the set. Charlotte-Gastonia-Concord, NC MSA and Orlando-Kissimmee, FL MSA both ranked last in the set – with Charlotte topping the property crime rate and finishing second worst on violent crime and hospital beds, while Orlando had the second worst commute time, high crime rates and costly living. In contrast, Bangor, ME MSA tied for 3rd place with Ann Arbor, MI MSA and Madison, WI MSA. Relative to those two MSAs, Bangor performed similarly well on healthcare categories, commute times, and cost of living, while far outperforming Ann Arbor on keeping down violent crime, the category it scored first overall against the set. Lewiston also performed well on crime relative to the set (second lowest violent crime and third lowest property crime) and cost of living, finishing 6th overall. Portland-South Portland-Biddeford, ME MSA finished in the middle (12th place) with no strong standouts, negatively or positively, except that it came in third highest for cost of living. Nearby Boston-Quincy, MA MSA had the highest cost of living,

followed by Portland-Vancouver-Beaverton, OR-WA MSA. (Portland, OR had a cost of living one point higher than Portland, ME.) Boston also had the longest commute time in the set.

Detroit-Livonia-Dearborn, MI MSA had the highest violent crime rate. Baton Rouge, LA MSA had the lowest number of physicians, while Ann Arbor had highest. Portland, OR had the lowest number of hospital beds, while Boston had the highest. Indianapolis-Carmel, IN MSA had the lowest cost of living.

Maine VS Area	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Maine	New England	Northeast	US
Violent Crime	139.5	122.0	82.7				465.5
Property Crime	2,446.3	2,684.3	2,854.6				3517.1
Cost of Living Index	109.5	93.1	98.6				100
Average Commute Time to Work	24.3	23.3	20.8				27.4
Physicians Per 10000 people	333.1	231.8	290.5				244.2
Number of Hospital Beds	298.4	474.6	471.8				420

Crime and quality of life data is not available for Maine, New England, or the Northeast but is available for the US. Among the Maine MSAs, Portland, ME had the highest violent crime rate, but it was still far lower than that of the country overall. Portland had the lowest property crime rate. Portland's cost of living was the highest and exceeds that of the US. Portland had the third best commute time (faster than the US average), but all three MSAs were fairly close in that category. Portland had the highest number of physicians per 10,000 people, but the lowest proportion of hospital beds. Lewiston had the second-lowest violent crime and property crime, the lowest cost of living, the second best commute time, and the most hospital beds, but the worst doctor to patient ratio (lower than the US). Bangor was the safest on violent crime but had the highest property crime rate of the three Maine MSAs (while still remaining well below the US rate). But Bangor had the second best cost of living, the lowest commute time, and the second best ratios of physicians to patients and hospital beds to patients. Bangor surpassed the country in every category.

Source

- Cities Ranked and Rated by MSA - 2007 Edition

Appendix I – Maine Competitive Analysis by Industry/Sector

The analysis in the section above was the standard reverse site selection model which is designed to show how likely a company would be to select Portland, Bangor or the Lewiston Auburn areas. This model has been modified to show how likely a company in a particular industry would be to select Portland, Bangor, or the Lewiston Auburn area.

We look at the following 7 industries or sectors which are defined as areas of focus for Maine incentive programs:

- Biotechnology;
- Composites & Advanced Materials;
- Environmental Technologies;
- Forest Products & Agriculture;
- Information Technology;
- Marine Technology & Aquaculture; and
- Precision Manufacturing.

Methodology

For each of the industry sectors, we assigned a series of drivers which are particularly important for a company in that industry during a site selection process. These drivers were chosen based on our proprietary incentives database tool and our experience as a site selector consultant to the private sector. For each of these drivers, we assigned a series of factors to measure that driver. Factors were limited to statistics that are available for the entire US by state or MSA.

It is important to note that this analysis by industry/sector does not take into account incentive programs in place which might help make up for drawbacks identified in this analysis. Incentive programs normally come into the site selection process further into the process when the candidates have been narrowed to less than four.

Competitive Set

The competitive set for the Industry/Sector Focus analysis is the same as for the Reverse Site Selection Screening Model. Please see Competitive Set for the full candidate list.

Overall Findings

Portland ranks 20 or lower (out of 25) for all but Marine Technology & Aquaculture and Precision Manufacturing. Both Lewiston-Auburn and Bangor ranked 24th or 25th for all except Precision Manufacturing. Lewiston-Auburn ranked 3rd and Bangor ranked 2nd. The following chart shows how Portland, Bangor, and the Lewiston Auburn area compare against the other 25 candidates.

Industry/Sector Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Biotechnology Score	23	25	24	1	2	8	3	4	12	21	10	9	22	17	15	5	11	7	14	6	19	18	16	20	13
Composites & Advanced Materials	23	25	24	10	9	22	18	13	15	19	8	11	20	16	14	2	6	7	12	5	4	3	17	21	1
Environmental Technologies	23	25	24	11	3	19	7	2	17	18	14	13	20	16	15	1	4	5	10	6	9	8	21	22	12
Forest Products & Agriculture	20	25	24	1	15	21	7	6	11	17	19	18	22	12	5	9	16	13	8	14	3	10	2	23	4
Information Technology	23	25	24	6	15	22	20	9	11	17	1	3	21	13	10	5	18	12	16	4	8	14	7	19	2
Marine Technology & Aquaculture	18	24	25	6	17	21	22	15	11	20	9	13	19	4	2	3	7	5	16	10	8	12	14	23	1
Precision Manufacturing	17	3	2	19	11	16	14	22	13	15	20	10	1	12	9	4	8	21	18	25	7	6	23	24	5

Below is an alphabetical listing of how the 25 candidates did on each of the driver categories assigned to one or more motivation. Industry cluster/critical mass varies slightly depending on the motivation. The value presented below excludes the value that causes the ranking to vary.

Industry/Sector Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Ability to Access Raw Materials	16	16	16	25	21	21	16	16	12	15	12	12	5	8	8	2	5	5	21	21	2	2	8	8	1
Ability to recruit Talent to Region	10	19	17	1	6	5	8	11	4	23	12	21	25	22	24	20	14	13	15	2	18	16	3	7	9
Access to Agricultural \Research Institutions	7	7	7	2	7	7	2	2	7	7	7	7	7	7	7	2	7	2	7	7	7	7	1	7	7
Access to Culinary Programs	14	14	14	1	14	14	5	14	9	14	10	8	14	5	3	10	14	14	3	10	7	10	14	14	2
Access to Funding/Investment Partners	16	16	16	1	1	1	1	1	6	16	11	11	16	11	11	16	7	7	9	9	16	16	16	16	11
Access to Fresh & Salt Water Environment	1	7	19	6	7	7	19	19	1	19	7	7	7	1	4	19	7	7	7	7	19	19	7	7	4
Domestic Market Growth Potential	22	22	22	5	15	15	15	15	22	15	3	3	5	5	5	1	5	5	5	5	5	5	15	15	1
Global Access	9	25	23	1	11	12	4	24	22	3	18	2	12	15	12	9	6	8	16	19	16	20	20	6	4
ICT infrastructure	21	21	21	17	21	17	21	13	5	5	5	1	13	1	5	5	17	13	5	5	1	5	13	17	1
Industry Cluster/Critical Mass (varies slightly)	21	21	21	10	21	19	18	12	5	14	1	2	12	10	3	5	25	7	19	16	16	9	7	14	3
Infrastructure and Logistics	21	25	22	9	18	23	6	8	14	7	19	16	20	12	13	4	1	10	5	24	3	2	17	15	11
Lower Costs	7	1	2	25	22	7	13	14	18	11	10	20	4	6	2	15	7	5	23	21	17	19	16	12	24
Natural Resources	2	11	8	1	24	4	18	7	15	9	16	18	24	18	11	14	18	11	18	16	6	9	2	18	4
Proximity to Markets or Customers	22	22	22	5	2	25	5	1	4	13	9	5	19	19	12	3	9	9	15	5	13	19	15	15	18
Regulations or Business Climate	21	21	21	16	16	16	19	19	5	9	13	13	9	1	1	15	11	11	6	6	1	1	24	24	8
Skilled Workforce Availability	5	18	12	3	4	10	6	14	14	24	11	19	25	17	22	14	21	8	20	1	23	7	2	13	9
Universities or Researchers	22	22	22	10	3	3	1	1	11	19	11	11	18	14	14	5	6	6	8	8	16	16	20	20	22

Biotechnology

Overall, Maine locations do not currently host a cluster of biotechnology companies nor do they appear a good fit on paper. ICA interviewed a number of medical/pharmaceutical companies and are aware of many others, but we did not receive interview suggestions or contact information for biotechnology companies.

Portland ranked 23rd, with better than average skilled workforce availability, global access, and ability to recruit talent to the region. Portland fell short on industry cluster/critical mass, proximity to markets or customers, and universities or researchers. Lewiston Auburn ranked 25th with no significant strengths. Lewiston-Auburn struggles with global access, domestic market growth potential, proximity to markets or customers, and universities and researchers. Bangor ranked 24th with average skilled workforce availability. Bangor struggles with Global access, domestic market growth potential, industry cluster/critical mass, proximity to markets or customers, and universities or researchers.

Biotechnology Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Ability to recruit Talent to Region	10	19	16	1	6	5	8	11	4	22	12	21	25	22	24	20	14	13	15	2	18	17	3	7	9
Access to Funding/Investment Partners	16	16	16	1	1	1	1	1	6	16	11	11	16	11	11	16	7	7	9	9	16	16	16	16	11
Domestic Market Growth Potential	22	22	22	5	15	15	15	15	22	15	3	3	5	5	5	1	5	5	5	5	5	5	15	15	1
Global Access	9	25	23	1	11	13	4	24	22	3	18	2	11	15	13	9	4	8	15	18	15	20	20	4	4
Industry Cluster/Critical Mass	22	22	22	1	11	21	14	16	4	18	1	8	11	8	3	13	25	5	8	6	20	17	6	18	14
Proximity to Markets or Customers	22	22	22	5	2	25	5	1	4	13	9	5	19	19	12	3	9	9	15	5	13	19	15	15	18
Skilled Workforce Availability	5	18	13	3	4	10	6	16	14	24	11	19	25	16	23	14	20	8	20	2	22	7	1	12	9
Universities or Researchers	22	22	22	8	3	3	1	1	11	19	11	11	18	14	14	5	6	6	8	8	14	14	20	20	22
Biotechnology Score	**23**	**25**	**24**	**1**	**2**	**8**	**3**	**4**	**12**	**21**	**10**	**9**	**22**	**17**	**15**	**5**	**11**	**7**	**14**	**6**	**19**	**18**	**16**	**20**	**13**

Composites & Advanced Materials

Maine does not appear to be a good location for composite and advanced materials companies. ICA did interview a small number of companies that could be considered advanced materials. At least one of them is very happy with the location specifically because of the available workforce and work ethic of their employees. One company specifically stated they are not interested in incentive programs because they are too much hassle. ICA also received a few other interview suggestions for very small composite and advanced materials companies who are involved in R&D and other state incentive programs that have been reserved for future interview opportunities.

Portland ranked 23rd overall with strengths in skilled workforce availability and better than average ability to recruit talent to the region. Portland struggles with domestic market growth potential and proximity to markets or customers. Portland ranks slightly better but still low for infrastructure and logistics as well as regulations or business climate. Lewiston-Auburn ranks 25th overall with better no significant strengths. Lewiston-Auburn struggles the most with infrastructure and logistics but ranks slightly higher for domestic market growth potential, proximity to markets or customers, and regulations or business climate. Bangor ranks 24th overall with average strength in skilled workforce availability. Bangor struggles with domestic market growth potential, infrastructure and logistics, proximity to markets or customers, and regulations or business climate.

Composites & Advanced Materials Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Ability to Access Raw Materials	16	16	16	25	21	21	16	16	13	12	13	13	5	8	8	2	6	6	21	21	3	3	8	8	1
Ability to recruit Talent to Region	10	19	16	1	6	5	8	11	4	22	12	21	25	22	24	20	14	13	15	2	18	16	3	7	9
Domestic Market Growth Potential	22	22	22	5	15	15	15	15	22	15	3	3	5	5	5	1	5	5	5	5	5	5	15	15	1
Infrastructure and Logistics	21	25	22	9	18	23	6	8	14	7	19	16	20	12	13	4	1	10	5	24	3	2	17	15	11
Proximity to Markets or Customers	22	22	22	5	2	25	5	1	4	13	11	7	19	19	12	3	9	9	15	7	13	19	15	15	18
Regulations or Business	21	21	21	17	15	15	19	19	5	9	13	13	9	1	1	17	11	11	6	6	1	1	24	24	8

Composites & Advanced Materials Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Climate																									
Skilled Workforce Availability	5	18	13	3	4	9	6	16	16	24	11	19	25	14	22	14	20	8	20	1	23	7	1	12	10
Composites & Advanced Materials Score	**23**	**25**	**24**	**10**	**9**	**22**	**18**	**13**	**15**	**19**	**8**	**11**	**20**	**16**	**14**	**2**	**6**	**7**	**12**	**5**	**4**	**3**	**17**	**21**	**1**

Environmental Technologies

Maine also struggles to be a target location for environmental technologies companies. ICA did not interview any companies that fit into the environmental technologies industry/sector. We did receive the name of a few companies but were not able to arrange an interview due to non-response or lack of availability. These individuals are still on our list for future interviews.

Portland ranked 23rd overall with better than average strength in skilled workforce availability. Portland struggles with domestic market growth potential, proximity to markets or customers, universities or researchers. Portland ranks slightly better for infrastructure and logistics as well as regulations or business climate, but still struggles. Lewiston-Auburn ranks 25th overall with no real strengths. Lewiston-Auburn struggles the most with infrastructure and logistics. Lewiston-Auburn also struggles with domestic market growth potential, proximity to markets or customers, universities or researchers, and regulations or business climate. Bangor ranks 24h and is slightly better than average for skilled workforce availability. Bangor struggles with domestic market growth potential, infrastructure and logistics, proximity to markets or customers, and universities or researchers. Bangor fares somewhat better but performs poorly on regulations and business climate.

Environmental Technologies Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Domestic Market Growth Potential	22	22	22	5	15	15	15	15	22	15	3	3	5	5	5	1	5	5	5	5	5	5	15	15	1
Infrastructure and Logistics	21	25	22	8	17	23	6	8	15	7	19	16	20	12	13	4	1	10	5	24	3	2	17	14	11
Proximity to Markets or Customers	22	22	22	5	2	25	5	1	4	13	9	5	19	19	12	3	9	9	15	5	13	19	15	15	18
Regulations or Business Climate	21	21	21	15	15	15	19	19	5	9	13	13	10	1	1	18	11	11	6	6	1	1	24	24	8
Skilled Workforce Availability	5	18	12	3	4	9	6	14	16	24	11	19	25	15	23	16	20	8	20	1	22	7	1	13	10
Universities or Researchers	22	22	22	8	3	3	1	1	11	19	11	11	18	14	14	5	6	6	8	8	14	14	20	20	22
Environmental Technologies Score	**23**	**25**	**24**	**11**	**3**	**19**	**7**	**2**	**17**	**18**	**14**	**13**	**20**	**16**	**15**	**1**	**4**	**5**	**10**	**6**	**9**	**8**	**21**	**22**	**12**

Forest Products & Agriculture

Forest products and agriculture businesses do exist in Maine though they account for a small amount of consistent employment. Forest products employment is less seasonal than agriculture which tends to hire seasonal or migrant workers especially during crop harvest. ICA interviewed a forest stewardship company and one agricultural/food production company (a year previous as part of a different project in the state of Maine). Through these experiences, ICA can see significant growth opportunity for industry/sector.

Portland ranks 20th with strengths in natural resources, skilled workforce availability, and access to agricultural/research institutions. Portland has average access to culinary programs. Portland struggles with proximity to markets, infrastructure and logistics, and regulations or business climate. Lewiston-Auburn ranks 25th overall with strengths in access to agricultural/research institutions and better than average access to natural resources. Lewiston-Auburn has average access to culinary programs. Lewiston-Auburn struggles with infrastructure and logistics, proximity to markets, and regulations or business climate. Bangor ranks 24th overall with strengths in access to agricultural/research institutions. Bangor has average access to culinary programs. Bangor struggles with infrastructure and logistics, proximity to markets or customers, and regulations or business climate.

Forest Products & Agriculture Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Access to Agricultural \Research Institutions	7	7	7	2	7	7	2	2	7	7	7	7	7	7	7	2	7	2	7	7	7	7	1	7	7
Access to Culinary Programs	14	14	14	1	14	14	5	14	8	14	10	8	14	5	3	10	14	14	3	10	5	10	14	14	2
Infrastructure and Logistics	21	25	22	9	18	23	6	8	14	7	19	16	20	12	13	4	1	10	5	24	3	2	17	15	11
Natural Resources	2	11	8	1	24	4	18	7	15	9	15	18	24	18	11	14	18	11	18	15	6	9	2	18	4
Proximity to Markets or Customers	22	22	22	5	2	25	5	1	4	13	11	7	19	19	12	3	9	9	15	7	13	19	15	15	18
Regulations or Business Climate	21	21	21	17	15	15	19	19	5	9	13	13	9	1	1	17	11	11	6	6	1	1	24	24	8
Skilled Workforce Availability	5	18	13	3	4	9	6	16	16	24	11	19	25	14	22	14	20	8	20	1	23	7	1	12	10
Forest Products & Agriculture Score	**20**	**25**	**24**	**1**	**15**	**21**	**7**	**6**	**11**	**17**	**19**	**18**	**22**	**12**	**5**	**9**	**16**	**13**	**8**	**14**	**3**	**10**	**2**	**23**	**4**

Information Technology

Maine also does not appear to be a good fit for information technology companies on paper. Electric costs in Maine are high and real estate costs are high in areas of concentrated population. ICA did not interview any companies that strictly fell into the information technology industry/sector. We interviewed a number that were data and database heavy (healthcare industry) and one from the insurance industry, but none that are strictly information technology based.

Portland ranks 23rd and has strength in skilled workforce and better than average ability to recruit talent to the region. Portland struggles with domestic market growth potential, industry cluster/critical mass, proximity to markets or customers, and ICT infrastructure. Lewiston-Auburn ranked 25th with no real strengths. Lewiston-Auburn struggles with domestic market growth potential, industry cluster/critical mass, proximity to markets or customers, and ICT infrastructure. Bangor ranks 24th with slightly better than average strength in skilled workforce availability. Bangor struggles with domestic market growth potential, industry cluster/critical mass, proximity to markets or customers, and ICT infrastructure.

Information Technology Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Ability to recruit Talent to Region	10	19	16	1	6	5	8	11	4	22	12	21	25	22	24	20	14	13	15	2	18	16	3	7	9
Domestic Market Growth Potential	22	22	22	5	15	15	15	15	22	15	3	3	5	5	5	1	5	5	5	5	5	5	15	15	1
ICT infrastructure	21	21	21	17	21	17	21	13	5	5	5	1	13	1	5	5	17	13	5	5	1	5	13	17	1
Industry Cluster/Critical Mass	22	22	22	4	15	20	19	13	8	17	1	2	13	12	5	11	25	9	20	7	9	16	3	17	5
Proximity to Markets or Customers	22	22	22	5	2	25	5	1	4	13	9	5	19	19	12	3	9	9	15	5	13	19	15	15	18
Skilled Workforce Availability	5	18	12	3	4	9	6	14	16	24	11	19	25	15	23	16	20	8	20	1	22	7	1	13	10
Information Technology Score	**23**	**25**	**24**	**6**	**15**	**22**	**20**	**9**	**11**	**17**	**1**	**3**	**21**	**13**	**10**	**5**	**18**	**12**	**16**	**4**	**8**	**14**	**7**	**19**	**2**

Marine Technology & Aquaculture

Maine has better than average access to marine environment. The Maine coastline stretches for hundreds of miles with a high quality rocky coastline. Much of that coastline is not highway accessible, but most is accessible by smaller roads and tourism traffic. Aquaculture can be done in a marine or brackish environment but also can be based on freshwater species. Highest score for access to fresh and saltwater environment was attributed to MSAs that had access to major rivers, lakes, and a marine environment. ICA did not interview any marine technology or aquaculture companies.

Portland ranked 18th with significant strengths in access to fresh & salt water environments and natural resources. Portland also ranked well for skilled workforce availability and lower costs. Portland struggles with domestic market growth potential, proximity to markets or customers, and infrastructure and logistics. Lewiston-Auburn ranks 24th with significant strength in lower cost and better than average access to fresh & salt water environment and natural resources. Lewiston-Auburn struggles with infrastructure and logistics, domestic market growth potential, proximity to customers and markets, and regulations or business climate. Bangor ranks 25th with a significant strength in lower costs, better

than average natural resources, and average skilled workforce availability. Bangor struggles with domestic market growth, infrastructure and logistics, proximity to markets or customers, and regulations or business climate.

Marine Technology & Aquaculture Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Access to Fresh & Salt Water Environment	1	6	19	6	6	6	19	19	1	19	6	6	6	1	4	19	6	6	6	6	19	19	6	6	4
Domestic Market Growth Potential	22	22	22	5	15	15	15	15	22	15	3	3	5	5	5	1	5	5	5	5	5	5	15	15	1
Infrastructure and Logistics	21	25	22	9	17	23	6	8	15	7	19	16	20	12	13	4	1	10	5	24	3	2	17	14	11
Lower Costs	7	1	2	25	22	7	13	14	18	10	10	20	4	6	2	15	7	5	23	21	16	18	16	12	24
Natural Resources	2	11	8	1	24	4	18	7	17	9	15	18	24	18	11	14	18	11	18	15	6	9	2	18	4
Proximity to Markets or Customers	22	22	22	5	2	25	5	1	4	13	9	5	19	19	12	3	9	9	15	5	13	19	15	15	18
Regulations or Business Climate	21	21	21	15	15	15	19	19	5	10	13	13	9	1	1	15	11	11	6	6	1	1	24	24	8
Skilled Workforce Availability	5	18	13	3	4	10	6	16	14	24	11	19	25	16	23	14	20	8	20	2	22	7	1	12	9
Marine Technology & Aquaculture Score	**18**	**24**	**25**	**6**	**17**	**21**	**22**	**15**	**11**	**20**	**9**	**13**	**19**	**4**	**2**	**3**	**7**	**5**	**16**	**10**	**8**	**12**	**14**	**23**	**1**

Precision Manufacturing

Maine has a long history with manufacturing companies and workforce. Most of the activity takes place outside of the Portland area and fairly close to the I-95 corridor. ICA interviewed a number of precision manufacturing companies and has several deferred to the next round of interviews. Many of the companies were small but they valued many of the Maine incentive programs and valued the historic manufacturing knowledge of the workforce as well as the work ethic. Maine was the right location for them and the incentives helped make the businesses viable and competitive on the national and international market.

Portland ranked 23rd with strength in skilled workforce availability. Portland struggles with domestic market growth potential, proximity to markets or customers, infrastructure and logistics, and regulations or business climate. Lewiston-Auburn ranked 25rd with no specific strengths. Lewiston-Auburn struggles with infrastructure and logistics, domestic market growth potential, proximity to markets or customers, and regulations or business climate. Bangor ranked 24th with average skilled workforce availability. Bangor struggles with domestic market growth potential, infrastructure and logistics, proximity to markets or customers, and regulations or business climate.

Precision Manufacturing Drivers	Portland-South Portland-Biddeford, ME MSA	Lewiston-Auburn, ME MSA	Bangor, ME MSA	Boston-Quincy, MA MSA	Albany-Schenectady-Troy, NY MSA	Rochester, NY MSA	Pittsburgh, PA MSA	Harrisburg-Carlisle, PA MSA	Richmond VA	Louisville-Jefferson County, KY MSA	Raleigh-Cary, NC MSA	Charlotte-Gastonia-Concord, NC MSA	Baton Rouge, LA MSA	Jacksonville, FL MSA	Orlando-Kissimmee, FL MSA	Indianapolis-Carmel, IN MSA	Cleveland-Elyria-Mentor, OH MSA	Columbus, OH MSA	Detroit-Livonia-Dearborn, MI MSA	Ann Arbor, MI MSA	St. Louis, MO-IL MSA	Kansas City, MO-KS MSA	Madison, WI MSA	Milwaukee-Waukesha-West Allis, WI MSA	Portland-Vancouver-Beaverton, OR-WA MSA
Domestic Market Growth Potential	22	22	22	5	15	15	15	15	22	15	3	3	5	5	5	1	5	5	5	5	5	5	15	15	1
Infrastructure and Logistics	21	25	22	9	18	23	6	8	14	7	19	16	20	12	13	4	1	10	5	24	3	2	17	15	11
Proximity to Markets or Customers	22	22	22	5	2	25	5	1	4	13	9	5	19	19	12	3	9	9	15	5	13	19	15	15	18
Regulations or Business Climate	21	21	21	16	16	16	19	19	5	9	13	13	9	1	1	15	11	11	6	6	1	1	24	24	8
Skilled Workforce Availability	5	18	12	3	4	10	6	14	14	24	11	19	25	17	22	14	21	8	20	1	23	7	2	13	9
Precision Manufacturing Score	**23**	**25**	**24**	**15**	**16**	**22**	**20**	**18**	**19**	**21**	**17**	**8**	**1**	**9**	**7**	**2**	**6**	**11**	**10**	**14**	**5**	**4**	**12**	**13**	**3**

Appendix J – Location Quotient

Location Quotient tables by geography are presented below.

	State of Maine			
	Location Quotient 2012	Change in LQ 2002 to 2012	Total Employment 2012	Change in Employment 2002 to 2012
NAICS 11 Agriculture, forestry, fishing and hunting				
NAICS 113 Forestry and logging	9.69	2.07	2364	-258
NAICS 114 Fishing, hunting and trapping	13.6	7.62	491	189
NAICS 23 Construction	1.04	0.08	25,582	-3828
NAICS 236 Construction of buildings	1.08	0.02	5858	-1734
NAICS 238 Specialty trade contractors	1.09	0.16	16756	-1196
NAICS 31-33 Manufacturing				
NAICS 312 Beverage and tobacco product manufacturing	1.45	1.01	1219	805
NAICS 313 Textile mills	2.01	0.41	1042	-1100
NAICS 314 Textile product mills	1.45	0.15	738	-417
NAICS 316 Leather and allied product manufacturing	13.57	1.74	1756	-933
NAICS 321 Wood product manufacturing	2.84	0.19	4235	-2495
NAICS 322 Paper manufacturing	4.29	-0.39	7156	-4499
NAICS 336 Transportation equipment manufacturing	1.27	0.05	8198	-2009
NAICS 44-45 Retail trade	1.24	-0.01	81,224	-4932
NAICS 441 Motor vehicle and parts dealers	1.26	0.05	9602	-795
NAICS 444 Building material and garden supply stores	1.43	0.17	7322	537
NAICS 445 Food and beverage stores	1.37	-0.09	17292	-1956
NAICS 447 Gasoline stations	1.96	0.11	7250	-341
NAICS 451 Sports, hobby, music instrument, book stores	1.13	-0.17	2913	-1056
NAICS 453 Miscellaneous store retailers	1.3	0.02	4539	-1120
NAICS 454 Nonstore retailers	3.23	-0.66	6280	-1553
NAICS 48-49 Transportation and warehousing				
NAICS 487 Scenic and sightseeing transportation	2.36	0.44	296	56
NAICS 491 Postal service	2.19	--	47	--
NAICS 493 Warehousing and storage	1.32	0.33	3935	1622
NAICS 52 Finance and insurance				
NAICS 522 Credit intermediation and related activities	1.07	-0.07	12169	-1757
NAICS 524 Insurance carriers and related activities	1.13	-0.05	10220	-1229
NAICS 56 Administrative and waste services				
NAICS 562 Waste management and remediation services	1.17	0.08	1893	313
NAICS 61 Educational services	1.04	0.05	11,871	2999
NAICS 611 Educational services	1.04	0.05	11871	2999

	State of Maine			
	Location Quotient 2012	Change in LQ 2002 to 2012	Total Employment 2012	Change in Employment 2002 to 2012
NAICS 62 Health care and social assistance	1.36	-0.06	100,451	13208
NAICS 622 Hospitals	1.56	0.21	32454	7020
NAICS 623 Nursing and residential care facilities	1.67	-0.1	23432	1196
NAICS 624 Social assistance	1.62	-0.19	18359	2538
NAICS 71 Arts, entertainment, and recreation				
NAICS 713 Amusements, gambling, and recreation	1.1	0.04	6898	551
NAICS 72 Accommodation and food services	1.02	-0.04	52,946	3518
NAICS 721 Accommodation	1.4	0.06	11201	304

	Portland-South Portland, ME MSA			
	Location Quotient 2012	Change in LQ 2002 to 2012	Total Employment 2012	Change in Employment 2002 to 2012
NAICS 23 Construction	**1.02**	**0.11**	**11,178**	**-791**
NAICS 238 Specialty trade contractors	1.15	0.19	7900	-32
NAICS 31-33 Manufacturing				
NAICS 316 Leather and allied product manufacturing	7.69	1.01	444	-208
NAICS 325 Chemical manufacturing	1.02	0.5	1568	631
NAICS 44-45 Retail trade	1.13	-0.07	32,873	-2651
NAICS 441 Motor vehicle and parts dealers	1.03	0.04	3502	-160
NAICS 442 Furniture and home furnishings stores	1.08	-0.11	927	-333
NAICS 444 Building material and garden supply stores	1.23	0.16	2812	334
NAICS 445 Food and beverage stores	1.3	-0.06	7281	-413
NAICS 447 Gasoline stations	1.2	0	1978	-136
NAICS 448 Clothing and clothing accessories stores	1.25	--	3420	--
NAICS 451 Sports, hobby, music instrument, book stores	1.51	-0.42	1734	-798
NAICS 453 Miscellaneous store retailers	1.27	-0.17	1978	-743
NAICS 454 Nonstore retailers	2.89	-1.71	2504	-1477
NAICS 48-49 Transportation and warehousing				
NAICS 487 Scenic and sightseeing transportation	1.32	--	74	--
NAICS 52 Finance and insurance	1.22	-0.04	13,315	-735
NAICS 524 Insurance carriers and related activities	1.87	-0.25	7574	-1223
NAICS 53 Real estate and rental and leasing				

	Portland-South Portland, ME MSA			
	Location Quotient 2012	Change in LQ 2002 to 2012	Total Employment 2012	Change in Employment 2002 to 2012
NAICS 532 Rental and leasing services	1.19	--	1186	--
NAICS 55 Management of companies and enterprises				
NAICS 551 Management of companies and enterprises	1.17	--	4591	--
NAICS 56 Administrative and waste services				
NAICS 562 Waste management and remediation services	1.21	--	878	--
NAICS 61 Educational services	1.1	0	5,610	1386
NAICS 611 Educational services	1.1	0	5610	1386
NAICS 62 Health care and social assistance	1.24	-0.06	40,995	6753
NAICS 622 Hospitals	1.38	--	12785	--
NAICS 623 Nursing and residential care facilities	1.4	-0.1	8736	677
NAICS 624 Social assistance	1.49	--	7523	--
NAICS 71 Arts, entertainment, and recreation	1.01	0.03	3,899	428
NAICS 72 Accommodation and food services	1.14	-0.03	26,407	3037

	Lewiston-Auburn, ME MSA			
	Location Quotient 2012	Change in LQ 2002 to 2012	Total Employment 2012	Change in Employment 2002 to 2012
NAICS 11 Agriculture, forestry, fishing and hunting				
NAICS 112 Animal production and aquaculture	2.51	1.28	227	128
NAICS 23 Construction	1.02	0.1	2,188	-221
NAICS 238 Specialty trade contractors	1.22	0.09	1634	-215
NAICS 31-33 Manufacturing				
NAICS 312 Beverage and tobacco product manufacturing	7.41	3.97	542	265
NAICS 313 Textile mills	8	1.86	361	-340
NAICS 31-33 Manufacturing	1.07	-0.07	4869	-1898
NAICS 314 Textile product mills	2.56	1.82	113	57
NAICS 316 Leather and allied product manufacturing	17.14	-6.96	193	-275
NAICS 321 Wood product manufacturing	2.83	-0.16	367	-280
NAICS 322 Paper manufacturing	4.33	0.46	629	-194
NAICS 323 Printing and related support activities	2.6	0.19	457	-211
NAICS 326 Plastics and rubber products manufacturing	1.79	-0.63	441	-361

	Lewiston-Auburn, ME MSA			
	Location Quotient 2012	Change in LQ 2002 to 2012	Total Employment 2012	Change in Employment 2002 to 2012
NAICS 331 Primary metal manufacturing	1.53	--	234	--
NAICS 337 Furniture and related product manufacturing	1.02	-0.01	137	-106
NAICS 44-45 Retail trade	1.13	-0.1	6,428	-813
NAICS 441 Motor vehicle and parts dealers	1.32	0.18	877	44
NAICS 444 Building material and garden supply stores	1.14	0.1	506	25
NAICS 445 Food and beverage stores	1.03	-0.66	1132	-764
NAICS 447 Gasoline stations	1.58	0.13	507	-2
NAICS 452 General merchandise stores	1.06	-0.05	1259	38
NAICS 453 Miscellaneous store retailers	1.17	-0.05	357	-104
NAICS 454 Nonstore retailers	5.57	0.29	942	33
NAICS 48-49 Transportation and warehousing	1.34	0.56	2,137	922
NAICS 484 Truck transportation	1.63	0.82	836	411
NAICS 485 Transit and ground passenger transportation	1.35	0.14	225	49
NAICS 492 Couriers and messengers	1.27	0.07	256	-11
NAICS 493 Warehousing and storage	2.69	1.75	697	509
NAICS 51 Information				
NAICS 511 Publishing industries, except Internet	1.27	ND	357	ND
NAICS 52 Finance and insurance	1.21	0.09	2,577	80
NAICS 522 Credit intermediation and related activities	1.97	0.29	1943	186
NAICS 56 Administrative and waste services	1.11	0.06	3,377	258
NAICS 561 Administrative and support services	1.08	0.02	3157	155
NAICS 562 Waste management and remediation services	1.55	0.61	219	102
NAICS 61 Educational services	1.27	-0.11	1,267	212
NAICS 611 Educational services	1.27	-0.11	1267	212
NAICS 62 Health care and social assistance	1.48	0.04	9,511	1964
NAICS 623 Nursing and residential care facilities	2.25	0.12	2747	470

	Augusta, ME "MSA" (Kennebec County) MSA			
	Location Quotient 2012	Change in LQ 2002 to 2012	Total Employment 2012	Change in Employment 2002 to 2012
NAICS 11 Agriculture, forestry, fishing and hunting				
NAICS 112 Animal production and aquaculture	1.63	0.02	145	17
NAICS 113 Forestry and logging	2.92	1.4	61	17
NAICS 23 Construction				
NAICS 236 Construction of buildings	1.11	-0.1	513	-217
NAICS 31-33 Manufacturing				
NAICS 321 Wood product manufacturing	1.11	0.41	142	-7
NAICS 323 Printing and related support activities	1.16	0.09	200	-93
NAICS 332 Fabricated metal product manufacturing	1.27	0.25	674	69
NAICS 42 Wholesale trade	1.09	-0.05	2,319	-146
NAICS 424 Merchant wholesalers, nondurable goods	1.91	-0.33	1412	-325
NAICS 44-45 Retail trade	1.46	-0.01	8,187	-344
NAICS 441 Motor vehicle and parts dealers	1.96	0.08	1281	-75
NAICS 442 Furniture and home furnishings stores	1.01	-1.23	167	-299
NAICS 443 Electronics and appliance stores	1.41	0.5	271	85
NAICS 444 Building material and garden supply stores	1.85	0.07	810	3
NAICS 445 Food and beverage stores	1.31	-0.01	1418	-44
NAICS 446 Health and personal care stores	1.25	0.3	470	128
NAICS 447 Gasoline stations	2.25	0.19	715	5
NAICS 452 General merchandise stores	1.39	0.07	1632	202
NAICS 453 Miscellaneous store retailers	1.58	0.28	474	-10
NAICS 454 Nonstore retailers	2.74	-1.82	456	-318
NAICS 55 Management of companies and enterprises	1.07	-0.19	806	-19
NAICS 551 Management of companies and enterprises	1.07	-0.19	806	-19
NAICS 61 Educational services	1.52	-0.19	1,493	206
NAICS 611 Educational services	1.52	-0.19	1493	206
NAICS 62 Health care and social assistance	1.67	-0.16	10,550	1084
NAICS 624 Social assistance	3.01	-0.16	2924	583
NAICS 81 Other services, except public administration	1.01	0.03	3,899	428
NAICS 813 Membership associations and organizations	2.05	0.28	1026	139

	Bangor, ME MSA			
	Location Quotient 2012	Change in LQ 2002 to 2012	Total Employment 2012	Change in Employment 2002 to 2012
NAICS 11 Agriculture, forestry, fishing and hunting				
NAICS 112 Animal production and aquaculture	1.13	0.51	135	68
NAICS 113 Forestry and logging	20.19	4.68	567	-49
NAICS 23 Construction				
NAICS 238 Specialty trade contractors	1.11	0.26	1,975	91
NAICS 31-33 Manufacturing				
NAICS 321 Wood product manufacturing	1.89	-0.03	325	-237
NAICS 322 Paper manufacturing	4.34	-3.98	833	-1,557
NAICS 44-45 Retail trade	1.51	0.13	11,322	375
NAICS 441 Motor vehicle and parts dealers	1.75	-0.14	1,540	-329
NAICS 443 Electronics and appliance stores	1.29	0.18	331	22
NAICS 444 Building material and garden supply stores	1.53	0.2	900	73
NAICS 445 Food and beverage stores	1.31	-0.2	1,897	-389
NAICS 446 Health and personal care stores	1.05	0.06	531	45
NAICS 447 Gasoline stations	2.74	0.22	1,168	-23
NAICS 451 Sports, hobby, music instrument, book stores	1.24	0.24	366	13
NAICS 452 General merchandise stores	1.38	0.28	2,173	541
NAICS 453 Miscellaneous store retailers	1.40	0.44	562	74
NAICS 454 Nonstore retailers	4.64	1.58	1,039	327
NAICS 48-49 Transportation and warehousing	1.12	-0.1	2,365	-212
NAICS 484 Truck transportation	1.92	0	1,301	-54
NAICS 485 Transit and ground passenger transportation	1.24	-0.57	273	-83
NAICS 492 Couriers and messengers	1.44	0.2	384	12
NAICS 51 Information	1.22	-0.04	13,315	-735
NAICS 515 Broadcasting, except Internet	1.97	-0.68	286	-181
NAICS 517 Telecommunications	1.09	-0.17	473	-304
NAICS 62 Health care and social assistance	1.66	-0.07	14,103	1881
NAICS 621 Ambulatory health care services	1.24	0	3,944	902
NAICS 622 Hospitals	2.09	0.17	5,003	827
NAICS 623 Nursing and residential care facilities	1.57	0.01	2,532	274
NAICS 624 Social assistance	2.01	-0.71	2,624	-122
NAICS 71 Arts, entertainment, and recreation				
NAICS 713 Amusements, gambling, and recreation	1.09	0.49	789	373
NAICS 81 Other services, except public administration				
NAICS 811 Repair and maintenance	1.09	-0.07	656	-102

Appendix K – R&D Survey

The State R&D Investments Survey is based on prior year surveys administered by the Maine Office of Innovation. Survey includes questions primarily based on R&D metrics but includes student enrollment and degree attainment information. R&D recipients that do not have students or student related activities may enter "N/A" or "0" in those fields.

To complete the survey, please have at hand your student and staff headcount data; data on publications as well as research proposals and research awards; and intellectual property implications. If you have any questions, please do not hesitate to contact Brian Whitney at Maine Department of Economic and Community Development (DECD).

As a past or current recipient of State R&D funding, providing this information is part of your responsibility under Maine law. Consequently, we need your help in completing this survey. All information is confidential, according to the contractual terms of your incentive program agreement with DECD.

We recognize that it may be time consuming and, perhaps, inconvenient, but please know that the information you provide will help us to develop and maintain economic incentive programs that are useful and effective for Maine's overall economic development goals. Thank you for taking the time to complete this survey.

Best Regards,

Brian Whitney
Maine Department of Economic and Community Development
(207) 624-9804
brian.whitney@maine.gov

Institutional Capacity FY13

1. Please provide the number (headcount) of enrolled science and engineering graduate students in Fall semester 2013?

Total for your institution:

2. Please provide the number of science and engineering graduate degrees conferred in 2013?

Total for your organization:

3. Please provide the number (headcount) of undergraduate students enrolled in science and engineering majors in Fall semester 2013?

Total for your organization:

4. Please provide the total number of undergraduate students science and engineering degrees conferred in 2013?

Total for your organization:

Facilities and Fixed Assets

5. Please provide the total space of your R&D facilities in 2013?

Total square feet:

6. What is the current, depreciated value (also known as book value) of your R&D facilities in 2013?

Total amount of your R&D facilities:

7. What is the total amount of your fixed assets on your organization's balance sheet in 2013?

Total amount for your organization:

8. Please provide the total amount of major (purchase price >$50,000) research equipment purchased in 2013?

Total amount:

9. Please provide the total number of faculty staff in 2013?

Temporary staff 0 - 16 hours per week

Part time staff 16 - 32 hours per week

Full time staff 32 - 40 hours per week

10. Please provide the total number of professional staff in 2013?

Temporary staff 0 - 16 hours per week

Part time staff 16 - 32 hours per week

Full time staff 32 - 40 hours per week

11. Please provide the total number of classified personnel (e.g. technicians, clerical) in 2013?

Temporary staff 0 - 16 hours per week

Part time staff 16 - 32 hours per week

Full time staff 32 - 40 hours per week

R&D Outcomes FY 13 | Publications

12. Please provide the total number of scientific peer-reviewed journal articles published in 2013?

Number of articles:

13. Please provide the total number of scientific peer-reviewed book chapters published in 2013?

Number of book chapters:

14. Please provide the total number of scientific peer-reviewed books published in 2013?

Number of books:

15. Please provide the total number of other scientific papers published in 2013?

Number of papers:

16. Please provide the total number of other scientific papers not published (e.g. research reports for industry) in 2013?

Number of papers not published:

R&D Outcomes FY 13 | Research Proposals

17. Please provide the total number of extramural research proposals submitted?

Number of extramural research proposals:

18. Please provide the total amount of Dollars (face value) requested on these proposals in 2013?

Dollar value requested:

19. Please provide the total amount of Dollars (face value) actually materialized as a result of these proposals in 2013?

Dollar value materialized:

20. Please provide the total number of research proposals submitted with other Maine institutions only in 2013?

Number of research proposals with other Maine institutions:

21. Please provide the total amount of Dollars (face value) requested on these proposals in 2013?

Dollar value requested:

22. Please provide the total amount of Dollars (face value) actually materialized as a result of these proposals in 2013?

Dollar value materialized:

23. Please provide the total number of research proposals submitted with non-Maine institutions only in 2013?

Number of research proposals with non-Maine institutions:

24. Please provide the total amount of Dollars (face value) requested on these proposals in 2013?

Dollar value requested:

25. Please provide the total amount of Dollars (face value) actually materialized as a result of these proposals in 2013?

Dollar value materialized:

26. Please provide the total number of research proposals submitted with both Maine and non-Maine institutions in 2013?

Number of joint research proposals:

27. Please provide the total amount of Dollars (face value) requested on these proposals in 2013?

Dollar value requested:

28. Please provide the total amount of Dollars (face value) actually materialized as a result of these proposals in 2013?

Dollar value materialized:

Research Awards

29. Please provide the total number of new Federal research grants, contracts, and subcontracts awarded in 2013?

Number of Federal grants and contracts:

30. Please provide the total amount of Dollars (face value) actually materialized as a result of these grants and contracts in 2013?

Dollar value materialized:

31. Please provide the total number of these research grants, contracts, and subcontracts awarded under Experimental Program to Stimulate Competitive Research (EPSCOR) in 2013?

Number of grants and contracts awarded under EPSCOR:

32. Please provide the total amount of Dollars (face value) actually materialized as a result of these grants and contracts in 2013?

Dollar value materialized:

33. Please provide the total number of these awards that were earmarked?

Total number of earmarked awards:

34. Please provide the total amount of Dollars (face value) actually materialized as a result of these grants and contracts in 2013?

Dollar value materialized:

35. Please provide the total expenditures for R&D in 2013?

Total expenditures:

36. Please provide a breakdown of the funds for R&D expenditures by type of source in 2013?

Federal:

State:

Industry:

Individuals and Foundations:

37. Please provide the total number of industrial research grants, contracts and subcontracts awarded?

Number of industrial grants and contracts:

38. Please provide the total amount of Dollars (face value) actually materialized as a result of these grants and contracts in 2013?

Dollar value materialized:

39. Please provide the total number of industrial research grants, contracts and subcontracts awarded by Maine companies?

Number of industrial grants and contracts by Maine companies:

40. Please provide the total amount of Dollars (face value) actually materialized as a result of these grants and contracts in 2013?

Dollar value materialized:

41. Please provide the total number of new foundation grants and individual gifts for research?

Number of foundation grants:

Number of individual gifts:

42. Please provide the total amount of Dollars (face value) actually materialized as a result of these grants and gifts in 2013?

Dollar value materialized by grants:

Dollar value materialized by gifts:

Intellectual Property

43. Please provide the total number of disclosures made in 2013?

Number of disclosures:

44. Please provide the total number of patents applied for in 2013?

Number of patents applied for:

45. Please provide the total number of patents awarded in 2013?

Number of patents awarded:

46. Please provide the total number of copyrights obtained in 2013?

Number of copyrights obtained:

47. Please provide the total number of plant breeder rights obtained in 2013?

Number of plant breeder rights obtained:

48. Please provide the total number of licensing agreements signed in 2013?

Total number of license agreements:

Total number of license agreements with Maine companies:

49. Please provide the total revenues as a result of intellectual property contract in 2013?

License fee revenues:

Royalty revenues:

Other revenues:

Spin-off Companies

50. Please provide the total number of new spin-off companies formed in 2013?

Total number of spin-off companies:

51. Please provide the total number of jobs created in these companies at spin-off in 2013?

Number of jobs created:

52. Please provide any additional information that you feel we may need to fully appreciate the contributions of your institution to economic development in Maine in 2013:

Thank you very much for completing this survey. Please note that you cannot go back and modify your answers after you submit your responses at the end of the survey.

Appendix L – CD with CD index