Three primary steps in a top down approach to developing a forecast

1. **Labor force** – We look at population and labor force participation trends to develop a top line rate of job growth.

2. **Industry employment** – Some industries are gaining and others are losing jobs. Changes in technology, the competitive environment, product demand, and a range of other factors impact growth prospects for industries.

3. **Occupational employment** – Many occupations are primarily found in certain industries (carpenters in construction, doctors in healthcare, etc.) so occupational trends are partly driven by industry trends. Additionally, occupational staffing changes as technology and work practices evolve.
Demographic Trends & the Labor Force Outlook
The median age in Maine increased even more sharply than the nation over the last four decades.
After decades of growth, the total population has not changed much in the last 10 years.
We are aging because the number of births is down sharply. The population is not growing because the number of deaths now exceed births.
Net-migration to the state improved the last two years after a prolonged slump. This trend needs to continue to offset negative natural change from fewer births than deaths.
Fewer births caused an imbalance in our population structure. Maine has a high share of people in their 50s and 60s and low share of young people relative to the U.S.
The number of prime-age workers is expected to continue to decline as more baby boomers become seniors.
Aging matters because a larger share of the population will be beyond their peak years of labor force participation.

*Employment to Population –*
The share of population that is employed increases in young adulthood, peaks between 35 and 54, then decreases after age 55.
As a result of population trends and increased participation at all ages, employment is expected to be close to the same level in 2026 as 2016.
Industry Job Trends & Outlook
Employment has long been shifting from businesses that produce goods to those that provide services.
Strong job growth is expected to continue in healthcare & social assistance, with few other sectors changing by more than 2,000 jobs.
The rate and direction of job change varies by industry but is consistent with long-term trends. Overall, industry structure will be little changed over the decade.
Occupational Job Trends & Outlook
Occupational Job Trends & Outlook

1. Broad trends
2. By educational requirement and median wage
3. STEM jobs
Parallel to industry trends, the occupational structure of employment has shifted away from blue-collar jobs.
Skill Demands are Changing

• **High Skill Occupations** – Functions require analytical ability, critical thinking, problem solving, reasoning, and creativity. Most require post-secondary education.

• **Middle Skill Occupations** – Routine and repetitive tasks that tend to be procedural. Often require on the job or other forms of training.

• **Low Skill Occupations** – Physical work that cannot be (or has not yet been) automated. Limited educational requirements.

Many middle skill jobs being eliminated by automation
The mix of jobs by occupation will continue to gradually shift. An aging population will continue to drive demand for healthcare jobs.
The mix of jobs by occupation will continue to gradually shift. Automation and information technology will continue to reduce the number of jobs in occupations that generally perform routine or repetitive tasks.
Though there will be differences in growth or decline, the structure of employment will only change moderately.
We tend to focus on growth as a primary indicator of opportunity and prosperity.

That focus is TOO NARROW, failing to account for the constant flow of workers into and out of the workforce. This dynamism is indicated by openings.

In nearly every occupation there will be openings as workers leave jobs for all kinds of reasons.
Even in occupations expected to have fewer jobs, there will be significant numbers of job openings because the number leaving jobs will be larger than the net reduction.
Occupations that require advanced or specialized training and pay higher than average wages tend to have a more established workforce with lower rates of turnover.
Occupational Job Trends & Outlook

1. Broad trends
2. By educational requirement and median wage
3. STEM jobs
Growth is expected to continue to be concentrated in occupations that require post-secondary education...

![Bar chart showing projected job change between 2016 and 2026 by usual education requirement.](chart.png)
...Though the distribution of jobs is expected to change only marginally and most jobs do not require post-secondary ed...
Most job openings will be to replace incumbent workers and higher turnover is expected in categories with lower education requirements.
Growth is expected to be concentrated in occupations that pay at the upper and lower ends of the earnings spectrum, with somewhat fewer middle wage jobs...
...Though the distribution of jobs by median wage is only expected to change marginally
Occupational Job Trends & Outlook

1. Broad trends
2. By educational requirement and median wage
3. STEM jobs
The U.S. Bureau of Labor Statistics designates 102 occupations as STEM.
The O*Net Consortium designates more than 200 occupations as STEM.
We use a combined list, totaling 143 occupations found in Maine.
STEM occupations are not a homogeneous group; education and skill requirements, wage levels, and job outlook differ greatly.
The number of STEM jobs is expected to rise offset by declining numbers of non-STEM jobs...
...Though jobs in STEM occupation are expected to rise from just 11 to 12 percent of employment.
STEM jobs often are described as a homogeneous group—they are not. 56% are in healthcare occupations and 16% in computer and math occupations. Not all are growing.
More on the job outlook from 2016 to 2026

• Detail on the demographic outlook is at www.maine.gov/labor/cwri/outlookDemographic.html
• Detail on the job outlook for industries and occupations is at www.maine.gov/labor/cwri/outlook.html

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