

Making Maine Work: The Role of Maine's Public University System

SLIDE 1: Cover MMW: The role of the University System

Good morning!

It is a pleasure to be with you today to share with you -
*Making Maine Work: The Role of Maine's Public
University System*

This research was a joint partnership of the Maine Development Foundation and the Maine State Chamber of Commerce and was prepared at the request of Chancellor Rich Pattenauode.

This represents the first in what will be a series of more focused "drill down" reports on the primary issues and opportunities identified in our original report – Making Maine Work: Critical Investments for the Maine Economy.

Today – I will:

1. First – provide some background from the original report and discuss the 3 key economic/demographic

factors that are influencing our ability to grow, and making education more important now than ever before,

2. Second – share our study approach and major findings, and
3. Finally – explain our recommendations.
 - a. There are 12 recommendations in total,
 - b. with 4 being foundational or over-arching and
 - c. the other 8 address the primary roles of the University in economic development

SLIDE 2: Original MMW Report

The original report, published in July of 2010,

- put forward 12 recommendations for policy and business leaders
- based on a review and summary of over 100 reports
- and on the survey responses of over 1,000 business leaders across all sectors and geographic regions

The survey responses very clearly identified a set of priorities for the new Governor and Legislature.

The primary barriers to growth included:

- The cost of health insurance and health care
- The cost of energy

- Regulatory burdens
- Taxes and
- Transportation

The report also identified Maine's greatest opportunities and supports for future growth.

- Our quality of life and
- Our loyal and skilled workforce

Clearly, Maine's workforce and Quality of Life are our greatest assets and require ongoing investment if Maine is to enjoy economic prosperity and Maine's University System has a big part in both.

SLIDE 3: Vision

When considering how to best re-focus or refine the role of the University system to more effectively serve the new economy, it is critically important to understand what our over-arching vision is for Maine.

The Vision put forth by the Maine Economic Growth Council is:

A High Quality of Life for All Maine People.

The Council believes that in order to attain the vision we seek, we must have a vibrant, sustainable economy, vital communities and a healthy environment.

SLIDE 4: Per Capita Income Rank

While each person may have his or her opinion of what constitutes a high quality of life, likely all could agree that economic security and the ability to earn a decent standard of living to support yourself and your family are absolutely essential.

As we look at Maine's national standing in Per Capita Income, we see that Maine is no longer the poor state that it was in the seventies, which is the good news.

However, our rank of 30th in 2009 means that we still have some work to do if we are to move towards our vision.

In addition, Maine ranks at the bottom of the New England states – the very states with which we compete to keep our young people.

It is important to note that while our per capita income ranks 30th, our wages actually rank 45th, which heightens the sense of urgency for change.

SLIDE 5: Value Added – Maine vs. US

Along with income, the other major indicator of economic health and our ability to compete in a global economy is the productivity of our workforce.

While Maine's value-added per worker (shown in red) has increased significantly since the seventies, it has not kept pace with the nation's (green).

As of 2008, Maine's productivity per worker was only 79% of the national average, giving us a rank of 45th.

The productivity of Maine's workforce is not due to our work ethic or skill levels, but far more likely due to the fact that Maine has not created an environment that is conducive to private sector investment in state-of-the-art equipment, technology and processes and in the education of their workers – putting our industries at a competitive disadvantage.

Maine cannot effectively compete in a global economy without raising productivity across all sectors.

SLIDE 6: Decennial Population Growth

There are also a number of demographic and economic trends that are challenging our ability to grow and making higher education more important today than ever before.

The first is that our population is growing very slowly. From 2010-2020, Maine's population will grow at half the pace of the U.S.

And during the decade 2020-2030, Maine's population is not expected to increase at all.

This exceptionally slow growth means:

- The workforce that we have today will largely be the same workforce that we have 5 and 10 years out
- We will not just “grow out” of our challenges, and
- Now, more than ever before, investing in education is the most important investment that we can make

as a state – lifting each and every person to his or her greatest potential.

SLIDE 7: Population Growth by Age Cohort

A second factor is that Maine's population is growing older.

From 2010 – 2030;

- the 0-19 age cohort will decline 6%, and
- the young working age cohort, 20-29 year olds, will drop 28%.

On the other end of the spectrum:

- the 65-74 year olds will increase 73% over the period and
- the 75-84 cohort will nearly double.

Because one-quarter of our population will soon be over the age of 65, it is imperative that:

- Maine employers begin to alter the way they engage older workers, and
- we must find ways to re-train and re-tool our incumbent workforce to keep them engaged in the economy and to make them more productive.

SLIDE 8: Changing Composition of Job Base

And the third factor has to do with the changing composition of our job base.

While employment in Maine has been growing quite slowly in recent years, there continues to be a huge transformation going on.

From 1990 – 2008 alone, the percentage on our job base in manufacturing went from 17.4% - 9.6% (cream colored).

And Health Care employment (maroon) rose from 10.3% - 15.6%.

The problem is – walking off a factory floor and into a hospital job is not that easy and requires a great deal of education and training.

SLIDE 9: Education and Income

As you look across the 50 states and compare educational attainment and per capita income, there appears to be a clear relationship between the two which means our success as a state is directly dependent

on our ability to get people into and successfully through higher education.

SLIDE 10: Findings: 4 Key Roles

The research on this report was done in the fall of 2010 by a small team of researchers at MDF who:

- reviewed all of the reports that had been done in recent years on this topic,
- Interviewed the Campus Presidents
- Reviewed literature on best practices, and
- Interviewed key business leaders around the state

Here are the major findings:

First, there are four primary ways that higher educational systems, in general, and the University System specifically, drive economic development, they include:

1. Educating people for the economy
2. Driving innovation and supporting entrepreneurship
3. Serving the public and supporting businesses

4. Playing the role of community and cultural centers

While these roles may seem obvious to those of you who work within the system, they are frequently not as clear to the average business person in Maine nor, necessarily, to our elected officials.

SLIDE 11: Findings:

Other major findings include:

- In a knowledge-based, innovation-driven economy, education is the single greatest investment we can make in our future,
 - The higher the educational attainment, the stronger our engines of growth
- The University is already doing exceptional work,
 - but the general public doesn't necessarily know about it or see how it relates to our prosperity, and
- The business community wants, needs and expects more
 - They are operating in an increasingly competitive, ever-changing marketplace and

they expect their University to keep or even set the pace of growth and change

SLIDE 12: Foundation I: Operate as a True System

From the feedback we received from leaders around Maine, there were four over-arching, or foundational, recommendations that emerged:

Foundation I:

- Maine's Public University System must:
 - operate as a true system
 - Entering system at any point should give access to all the system has to offer
 - A true system allows for the easy exchange of people and ideas

This is the responsibility of:

- the University System and
- the Board of Trustees

SLIDE 13: Campus Map

To give you an idea of the relative size and scope of the University of Maine System:

- The system has
 - 7 campuses,
 - 9 regional outreach centers and
 - 75 distance learning sites
- 68% of all students enrolled in public postsecondary education are at UMS
- 32,340 students enrolled
- 22,355 baccalaureate students
- 16% of students from out of state

Organizing and coordinating all parts is no small feat!

SLIDE 14: Foundation II: Communicate the Value

Foundation II:

- Maine's Public University system must:
 - communicate the value of the system and its parts
 - The University system is an economic force
 - 3.3% of GDP

- Directly supports 13,000 jobs and indirectly another 7,700
 - Generates an 8:1 return for every public sector dollar invested
-
- But the people of Maine are not fully aware
 - Because of this, the University is undervalued
 - You have a great story to tell, but you've got to share your story in a compelling and frequent manner

This is the responsibility of:

- The UM System Office, and
- Individual Campuses and their
- Boards of Visitors

SLIDE 15: USM

Each of the campuses has a compelling story to share of driving regional vibrancy.

I want to highlight for you just a few examples of all that is going on across the state:

The University of Southern Maine has developed programming specifically for the semi-conductor industry and the insurance industry.

USM is also a system leader in the use of Prior Learning Assessments and in working directly with employers in the region to meet their specific needs.

Plus it is home to the State's Law School and the renowned Muskie School of Public Service.

SLIDE 16: KinderKollege - UMFK

At the University of Maine at Fort Kent, they run KinderKollege – where all kindergarteners receive packages of fun materials about a career – and they learn the type of education necessary if they want to pursue that career.

In fact, UMFK runs the College Community Project that is a collection of six programs that represent a lifespan of college readiness and learning options.

SLIDE 17: UMF

The University of Maine at Farmington is the state's leader in preparing our educational leaders and also serves the educational needs of the 4-season outdoor recreation industry so important to the western mountain region.

SLIDE 18: UMM

UMaine Machias offers environmental sustainability and entrepreneurial business skills in a region dominated by extremely small businesses.

SLIDE 19: UMA

And UMA is serving the needs of non-traditional students through a wide-array of flexible course offerings, including distance learning options.

UMA has also been nationally recognized for serving our veterans with post secondary opportunities. GI Magazine selected UMA as a Military Friendly School – a designation that puts our capital city campus in the top 15% nationally for embracing America's veterans as students.

SLIDE 20: UMPI

The University of Maine at Presque Isle's Renewable Energy Commitment includes a 600kW wind turbine and heat pumps in the major classroom building, as well as a federal earmark for solar energy projects, exploration of biofuels and carbon sequestration.

UMPI's Project Compass works to promote the retention of non-traditional students, particularly with Native Americans, from the beginning of their education all the way through to graduation.

SLIDE 21: UMO

And our flagship campus at Orono is leading statewide collaborations in biomedical science, engineering and a number of other fields

SLIDE 22: Foster Innovation Center

UMaine's Foster Innovation Center is driving business development and is the home of the newly developed Innovation engineering curriculum – a unique program

that is becoming the national model for innovation education

SLIDE 23: Doug Hall

UMaine grad and nationally known innovation guru Doug Hall has run Innovation Engineering Leadership Institutes to try to catalyze Maine business growth – working directly with Maine’s business, non-profit and policy leaders to move Maine forward.

SLIDE 24: AEWC

And the Advanced Engineered Wood Composites Center is one of the most exciting places in Maine.

The AEWC is currently constructing a 37,000 square foot expansion that will enable the design, manufacture and testing of structural hybrid composite and nanocomposite components for deepwater, offshore wind structures – AKA massive floating wind mills!

This investment in this lab totals \$25.4 million.

And the lab will be the first in the world to enable design, manufacture and testing of these composite offshore structures.

The University is doing great things – but we have to get the word out more consistently and more fully.

SLIDE 25: Foundation III

OK – we have to

- Operate as a true system and
- Communicate your value

Foundation III:

- Maine’s Public University System Must:
 - Build and maintain the necessary infrastructure to best serve Maine people and business, including state-of-the-art ...
 - Classrooms,
 - Technology,
 - Research facilities,
 - Residential, sporting and cultural facilities

This is the responsibility of:

- The Governor,

- The Legislature, and
- The UM System Office

SLIDE 26: Higher Education Appropriations

But from a look at Maine's State Budget priorities, investment in Public Higher Ed has lost ground.

As this chart shows, from 1968 – 2008, the percentage of our General Fund expenditures invested in Maine's Public Higher Education fell from 18% to 9%.

Within the overall expenditures, the UMaine System went from accounting for 15.2% to 6.5%.

SLIDE 27: Foundation IV: Ensure Affordable

And last but certainly not least,

Foundation IV:

- Maine's Public University System Must:
 - Ensure that tuition is affordable for all Maine people
 - Particularly low and moderate income families

SLIDE 28: % Income Needed to Pay for College

Currently, the percentage of income needed to pay for a four year public college education in Maine is 36%, well above the US average of 28%.

This is making a college education unaffordable and unavailable to Maine's lower and moderate income people.

This is a HUGE barrier to our future prosperity as a state.

This is the responsibility of:

- The Governor,
- The Legislature,
- The University System Office, and
- The Individual Campuses

SLIDE 29: Recommendation 1: Educate more People

In addition to the four foundational recommendations, there are 8 other recommendations that fall within the 4 roles that the University plays in economic development.

The first two have to do with Educating People for the Maine Economy...

Recommendation 1:

- UMS must enroll, educate and graduate more people
- UMS and the State should adopt the Maine Compact for Higher Education goal of 40,000 additional degree holders above current projections by 2020

To do this we must:

- Raise aspirations of our k-12 students
- Provide supports to improve retention and completion
- Support adult learners through established programs and greater flexibility
- Improve access through technology and flexibility

SLIDE 30: Higher Degree Attainment – ME, NE, US

So here is our challenge: at 35.7%, Maine's higher degree attainment among residents aged 25 and over is slightly above the US average of 35.4% and well below the New England region's attainment of 43.2%.

If we can raise our higher degree attainment, we can move Maine's workers up the earnings scale and improve the vibrancy of Maine's economy.

SLIDE 31: College Preparation, Participation and Completion

And, according to a recent report published by the Mitchell Institute, there are many opportunities for educators to dramatically influence educational attainment by focusing on certain populations.

- For example, if our high school graduation rate is 80%, we can expand successful programs like Jobs for Maine's Graduates to raise attainment.
- Currently, only 65% go on to enroll in college, so expanding efforts like College Transitions to capture more of the High School graduates is another strategy to move us forward.
- And the fact that 7% of our working age adults with only a high school degree are enrolled in college means that there is great potential to reach out to the other 93%.

- And certainly an increased focus on retention and completion of post-secondary education by both the Community College System (with a graduation rate of 26%) and the University System (with a graduation rate of 48%) could help increase attainment and, ultimately, productivity and incomes.

SLIDE 32: Recommendation 2: Graduate with needed skills

Recommendation 2:

- Graduate more people with the skills and knowledge to meet the current and future needs of Maine business

Strategies to accomplish this might include:

- Establish business board at both the system and campus levels to guide alignment of UMS offerings and programming with industry needs
- Participate with local and regional economic development boards – actively engaging on the community boards
- Align curriculum to better meet needs of the employer community and growth sectors

SLIDE 33: Expected Occupational Growth

When you look at the forecasted job opportunities by usual education or training requirements, the highest growing opportunities require higher educational attainment.

In fact, the job opportunities for people who have postsecondary degrees are expected to grow at a double-digit pace, far above the lower level jobs – shown to the right of the line – where growth is expected to range from 2.5% - 7.5%.

The Department of Labor estimates that 60% of the high-growth, high-wage annual openings will require postsecondary education.

SLIDE 34: Recommendation 3: Increase R&D

The next 3 recommendations fall under the role of Driving Innovation and Supporting Entrepreneurship.

Recommendation 3:

- Increase and expand capacity for UMS to conduct R&D that:
 - leverages funding,
 - generates marketable ideas and
 - supports job growth

Strategies to achieve this might include:

- Increasing MEIF and the Maine Technology Asset Fund
- Create Imminent Scholars program to attract research talent
- Create on-site and off-site joint research with business opportunities

SLIDE 35: R&D

Maine's investment in R&D has increased significantly, but at 1% of Gross State Product, our spending is well below the national average of 2.6% and the New England level of 4.9%

SLIDE 36: R&D by Sector

A look within the R&D investment by sector shows that University and College R&D represents nearly 29% of Maine's total R&D – which is roughly twice the

importance of this sector nationally and three times the New England contribution to total.

The University research in Maine is critically important to our economic growth.

SLIDE 37: Recommendation 4: Develop Entrepreneurial Skills

Recommendation 4:

- Develop entrepreneurial skills in students and faculty to commercialize ideas

Strategies to move this forward include:

- Adding entrepreneurial classes to core curriculum
- Making Innovation Engineering a requirement across disciplines
- Increasing funding for technology centers and expanding centers

SLIDE 38: Index of Entrepreneurial Activity

According to the Maine Economic Growth Council, Maine (shown in red) does have a history of being relatively

more entrepreneurial than the US, New England or the other EpScor states.

SLIDE 39: Recommendation 5: Bring R&D to Business

Recommendation 5:

- Bring the System's R&D and knowledge directly to businesses

Strategies include:

- Supporting and expanding BNAS Innovation Center

SLIDE 40: Recommendation 6: Provide Support

In the area of Serving the Public and Supporting Business

Recommendation 6:

- Provide technical support and capacity to enable Maine businesses to compete globally
 - Support Cooperative Extension – that has over 2,000 visits a year
 - Partner with businesses to develop facilities

- Faculty and staff engage in community development
- Coordinate a system-wide intern program that serves businesses and non-profits
- Develop clear, flexible, standard legal and financial framework to partner with businesses and non-profits

SLIDE 41: Recommendation 7: Regional Economic Development

Recommendation 7:

- Make regional economic development a priority and actively partner

This can be influenced by:

- Establishing an economic development point of contact at the system office and at each campus
- Working with regional and state economic development organizations to align System resources with economic development efforts

SLIDE 42: Recommendation 8: Community/Cultural

And finally, under expanding the role of community and cultural centers:

Recommendation 8:

- Campuses must develop and market their cultural and community assets to attract and retain people in Maine

To achieve this, the University could:

- Work closely with downtown and community development efforts
- Work with state and regional tourism efforts to market System assets
- Actively use the cultural and community assets of the University to attract and retain people to Maine

SLIDE 43: Photos – Working with Businesses

The University of Maine System has much to be proud of. Throughout the state, the University is working closely with businesses to better meet their needs.

However, Maine's business leaders want, need and expect more.

SLIDE 44: With Additional Education

Maine has a tremendous opportunity in that we know that each increment of additional education leads to lower unemployment and higher earnings.

To the extent that we can rise to the challenge before us and help move every single person in Maine towards their greatest educational potential, Maine will move closer to the vision we seek.

SLIDE 45: Vision and Campus Map

The University of Maine System is one of our most important public assets.

If the State and the System work together and commit to:

- Operating as a true system
- Better communicating the value of the system and each of its parts

- Investing in the infrastructure of modern, state-of-the-art facilities and technology,
- Making sure that higher education is affordable to all Maine people, and
- Innovatively expanding their primary roles of:
 - Educating the Workforce
 - Diving Innovation and Entrepreneurship
 - Supporting the public and business, and
 - Providing community and cultural centers

Then the University of Maine System will be a driving force in our State's economic development and prosperity.