

**“Redesigning Maine’s K-12 Education Delivery System:
The Demographic and Economic Imperative”**

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Slide 1: Introduction

It is truly an honor to be here today to talk about “Redesigning Maine’s K-12 Education Delivery System: The Demographic and Economic Imperative”.

We frequently talk about what’s happening in Maine right now. We focus on cyclical changes and get caught up in recent events. But today, I’d like to step back and focus on structural changes and the challenges that these changes are creating for Maine’s school systems.

While I may not be an expert on exactly what is happening in your district, I do believe that all of Maine’s school systems are under tremendous and mounting pressure.

As school leaders:

- You are facing more complex physical, social, and emotional issues with the children you serve than any other generation before you.

As employers:

- You are facing shortages of trained professionals in areas that are critical to success in today's economy – math, science, and foreign language.
- You are facing an aging workforce, many of whom could choose to retire with few to take their place.
- You are also facing more competition for your clients from private and parochial schools and home schooling.

As school leaders, you are facing:

- higher expectations from the communities you serve;
- fewer resources to fulfill those expectations; and
- vastly increased numbers of mandates, some of which have absolutely nothing to do with your core business – educating children.

And I believe that, to a certain extent, the strain you are under is due to some slow-moving yet unquestionably powerful economic and demographic trends.

Slide 2: 6 Major Trends Influencing K-12 Education

Today, I am going to talk with you about 6 trends:

- that are driving much of what you are experiencing;
- that have, ultimately, made the job you are doing today more important than ever before;
- and that are forcing us to fundamentally rethink the way we deliver K-12 educational services.

These trends are:

1. Maine's population is growing slowly.
2. Maine's population is growing older.
3. Maine's population is growing unevenly.
4. Maine's population is spreading out.
5. Our economic base is changing, and
6. Our State and Local budgets are under tremendous pressure.

Slide 3: Ship on Ice

I want to start with this image. Some of you may recognize this as the ship used by Ernest Shackleton as he sailed to Antarctica, the Endurance. The ship got trapped in these huge icebergs. For a

long time, Shackleton and his men tried to wait for the ice to break up – then something started happening.

Slide 4: Ship Tipping Over

While not visible or noticeable on a daily basis, the ice flows were exerting pressure on the ship.

Slide 5: Ship Destroyed

Slowly, silently these forces destroyed the ship; forcing Shackleton and his men to rethink/reengineer their mode of transport, their shelter, and their lifeline.

This illustration is a bit extreme, but it shows how pressure applied for a long period of time wreaks havoc and can completely change our world. It can be every bit as challenging as one catastrophic event, yet frequently goes unnoticed.

A tidal wave of change is upon us and will touch every aspect of life in Maine; our economy, communities, institutions, and systems, but if we understand the forces that are in play, we can find a path through.

Slide 6: **Vision**

The Maine Economic Growth Council puts forth a vision for Maine that is “A high quality of life for all Maine people”. Granted, high quality of life means different things to different people, but in no instance does it mean living in poverty or struggling for economic survival.

Slide 7: **National Rank on Per Capita Income 1980-2002**

So how are we doing in moving towards that vision?

Well, this chart shows that Maine currently ranks 35th in per capita income. If our vision for Maine is one of prosperity, we must strive to improve this.

Slide 8: **Multiple Job Holdings**

But right now, over 8% of Maine workers have at least two jobs at any given time. The multiple job holding rate in Maine is 60% above the U.S. average. That means that a sizable number of our parents are working at least two jobs to make ends meet for their families. This does not support our vision.

Slide 9: Poverty Rates by County

And the rate of poverty varies widely from 9% in southern Maine to 19% in Washington County. If we truly want a “High quality of Life for all Maine people” - we have a lot of work to do.

As we work through these 6 critical issue areas, I'd ask you to actively think about how these trends affect your school system and the people in your community, and what you can do to adapt to the change and move us toward our vision.

Slide 10: Population Growth – New England

The first critical issue is that Maine's population is growing slowly. As this chart shows, from 1990 – 2007, Maine's population growth was among the slowest in the New England region, growing less than 0.5% per year.

Slide 11: Population Growth – US

And New England's population growth is among the slowest in the nation. Some other regions of the US are growing as much as 3 to 7 times faster than New England.

So what does slow population growth mean for Maine and why is it a critical issue? Slow population growth means that the vast majority of today's workforce will be the workforce next year and 5 and 10 years out. If the workforce "team" we're fielding today puts us in 35th place and we're not expecting many new players, then we must fundamentally upgrade the skill level and educational attainment of every workforce "team" member. Our challenge is to bring every Maine worker to his/her highest potential with regards to contribution and earnings. Education K-16 is the key.

Slide 12: With Additional Education

In fact, national data shows clearly that with every additional increment of formal education, unemployment declines and earnings rise.

As this chart highlights, as you move from a High School degree to a Bachelors degree – average unemployment is cut in half and average income rises 50%. So as a State, if we want to raise incomes, we must move people along the educational continuum.

Slide 13: Maine Live Births

The second critical issue is that Maine's population is growing older. Now, there are tidal waves and there are tidal waves...this is a Tsunami!

This chart shows the number of babies born in Maine each year from 1900 to 2007. That crest that you see is the Baby Boom generation born from 1946-1964. And if you can imagine, that wave is about to crash on the shores of retirement. Are we ready?

Slide 14: Percent of Population Change by Age Cohort

Another even more striking illustration is looking at the projected change by age cohort. From 2000 – 2025, the school age population is projected to decline; college age will decline; and the young working age cohort will also shrink. Over the same period,

the number of 65-74 year olds will double, and the number of 75-84 year olds will grow by 55%.

The implications of this chart alone are phenomenal. Think about the pressure an aging population places on the transportation system, the health care system, housing, labor supply, and buying patterns. How do we reshape/restructure our institutions and companies to serve an older population? What can schools do to prepare?

Slide 15: Age Composition – 2000 & 2025

In 2000 – 14% of the population was over 65. By 2025 – 21% will be over 65.

At the same time, school age children will drop from being 26% of the population to 22%. How do school systems prepare for the likely budget priority shift that will accompany the population shift when 1 in 5 Mainers is a senior citizen? This is a huge issue for schools to consider now rather than later.

Slide 16: Population Forecast by County 2004-2020

The third critical issue is that Maine's population is growing unevenly. From 1990-2000, the population changes in Maine counties ranged from a high of nearly 15% in mid-coast to a 15% decline in Aroostook.

This chart shows the forecasted population growth by county through 2020. This forecast highlights a red hot coast, a stagnant middle, and a declining north and east.

How do you adapt state education policies to effectively serve such vastly different trends?

Slide 17: Population Change 1960-2006 Center/Non-Center

The fourth critical issue is that Maine's population is spreading out, which is extremely expensive. In my lifetime, the percent of population living in more rural areas has grown from 37% in 1960 to 52% in 2006.

This type of growth – known as SPRAWL – has cost us dearly.

From 1970-1995, there was a decrease in school age population, yet $\frac{3}{4}$ of a billion dollars was spent on new school construction. As of the late 1990s, research showed that the construction of new and often redundant infrastructure added an estimated \$50-\$75 million annually to the General Fund expenditures to support our sprawling K-12 system.

The fact that Maine is the 3rd or 4th most rural State in the nation makes the delivery of government services a challenge and an expense to begin with. When that rural population spreads out even further, the challenges are exacerbated.

Slide 18: Percent of Change in School Enrollment

No where has the cost of sprawl been more evident than in our school systems. From 1970-2002, enrollment in our service-center communities dropped 31%. At the same time, enrollment in our suburban and rural communities rose 8%.

Slide 19: % Change in School Enrollment – Lewiston Area

Even more dramatic is to look town by town. For an example, in the Lewiston area from 1970-2002, Lewiston and Auburn saw

25% - 35% drops. The surrounding suburban and rural towns of Sabattus, Greene, Durham and New Gloucester saw increases in enrollment of 80%-115%.

Similar patterns can be seen in other service center communities around the state.

So while our Service Center communities try to cover the fixed costs of an older school infrastructure with declining enrollment and tax base, the outlying communities are forced to build schools to meet rapidly increasing demand.

Slide 20: Maine Manufacturing vs. U.S.

The fifth critical issue is the changing composition of our job base. There is a huge transformation going on in Maine and the U.S. workplace. As we have transitioned away from manufacturing towards service-based and knowledge-based economic activity; U.S. manufacturing employment has dropped 25 percentage points and Maine manufacturing has fallen closer to 50 percentage points.

Slide 21: Changing Composition of Maine's Employment

In the 1940s, one out of two employees held manufacturing jobs. By 1990, only 17% of the job base was in manufacturing, and by 2006, it had further dropped to 9%. Government jobs as a percent of the total also dropped. At the same time, health care has gone from being 10% to representing 15% of our employment base. Now, $\frac{3}{4}$ of all jobs are in the service sector.

Are we providing the appropriate infrastructure for this new economy? The old economy's infrastructure involved roads, bridges, ports, and airports. The new economy's infrastructure also involves telecommunications, research and development, and education – particularly higher education.

The economic transformation away from manufacturing as a provider of jobs has other implications as well. For example, historically, a typical manufacturing job paid quite a bit more than a service sector job for similar educational attainment, and, more importantly, provided much more in the way of benefits.

As some families have lost pay and benefits, schools have picked up the job of providing food and health care for children.

Finally, this transition away from the more traditional manufacturing industries has hit rural Maine much harder than the more diversified urban areas. Some regions of Maine have been much more vulnerable because their concentration of jobs in manufacturing is much higher.

Slide 22: Higher Education

The sixth major factor that is forcing us to re-think the way we deliver K-12 education is that Maine State and Local Governments are under pressure. Our governments are being asked to simultaneously make large investments in infrastructure that are critical to Maine's ability to grow and prosper in the new economy AND to cut costs so that our businesses can compete and our households can prosper.

Let's start with the areas that require increased public sector investment:

First off, Maine State Government is under pressure to invest more of our limited resources in Higher Education. The research that has been done on income levels in different states and

countries shows a direct tie between higher incomes and higher educational attainment.

If investing in higher education is one of the most important investments we can make in Maine's future, then we must find a way to free up limited resources to invest. In 1968, fully 18% of State Government's General Fund Investment went to Higher Ed. Now it is only 9% - or one half the level of commitment.

Slide 23: Research and Development

The other area of investment that is very closely tied to higher income levels in the new economy is investment in Research and Development. Maine has certainly made progress in this area, but with less than 1% of our total economic output being invested in innovating new products for Maine, our investment is less than ½ the level of US investment and less than ¼ the level of R&D investment in New England.

Without investment in Maine, the new, higher-paying jobs in the new growth industries go to other states.

Slide 24: Roads and Bridges

Both our State and Local Governments are under extreme pressure to invest in roads and bridges. Much of our infrastructure was built decades ago and is in need of major repair or rebuilding.

- 12% of Maine's bridges are structurally deficient with an additional 13% being functionally obsolete.
- 25% of Maine's roads are in poor or critical condition – taking a daily toll on our vehicles increasing needed repairs and travel times and decreasing fuel efficiency
- Roughly 2,000 miles (or 20%-25%) of Maine's roads are not built to modern standards and must be "posted" in the spring.

Modern transportation infrastructure is essential to our ability to grow.

Slide 25: Telecommunications

And in the knowledge-based economy, telecommunications infrastructure has grown to be equally important to commerce.

While Maine's High speed internet subscription levels have grown 10-fold since 2000, we still lag the US and New England in our penetration of technology.

Slide 26: Cost of Doing Business

While pressure mounts for our Government to make critical investments, businesses and households are demanding cuts in the basic costs of living and doing business in Maine.

As this chart shows, the cost of doing business in Maine was fairly close to the US average in 1990, but over the next 16 years, our costs grew out of line.

As of 2006, the cost of doing business in Maine was 7 percentage points above the US – putting our businesses at a distinct disadvantage. The global economy is very unforgiving of excessive costs.

Slide 27: State & Local Taxes as % of Personal Income

Looking within the total cost of doing business, we can clearly see pressure in many areas. For the past decade, taxpayers have

been near revolt – putting enormous pressure on both State and local governments to cut taxes. Most recent Census figures show that Maine’s tax burden is about 17% above the US average.

We can not simply raise taxes to pay for needed investments.

Slide 28: Health Care Average Cost of Electricity

Health care costs in Maine as a percent of our total economic output have grown from 10% in 1991 to 22% in 2004 – a level that is 50% higher than the US average.

Slide 29: Cost of Energy, Maine (1990-2006)

As of 2006, energy costs in Maine had risen to be 38% above the US average, and we all know that pressures have increased even further in recent months.

Slide 30: Municipal Expenditures (2007)

At the municipal level, K-12 spending is, by far, the largest piece of the budget. Statewide, education averages 58% of total municipal expenditures, with Public Works a distant 2nd at 13%.

Education expenditures do vary by town size. In cities of 10,000+, education expenditures are 47% of the budget; in towns 1,000-3,500, education expenditures are 66%.

Slide 31: Maine State Expenditures (2007)

Looking within the state budget, K-12 is 38% of total General Fund expenditures - the single largest item, with Human Services and Mental Health totaling 33%.

An important question to ponder as we look at the current spending priorities is – “How will our State’s budget priorities change when the Baby Boomers age and 1 of every 5 Mainers is over the age of 65?”

Slide 32: K-12 Expenditures vs. Enrollment

But at the very heart of the discussion around why Maine needs to re-design the way we deliver our K-12 education is this: Over the past 25 years, enrollment in Maine’s public schools has

declined 16% and yet the costs of providing the education has grown 451%.

This trend is simply unsustainable. With mounting pressures to divert limited resources into other critical investments, such as Higher Education, Research and Development, basic infrastructure and Human Services, Maine's taxpayers can not continue to finance this level of expenditure growth for K-12 education.

Now let me be perfectly clear:

- The pressure to reduce the costs of K-12 Education in no way, shape or form is meant to imply that primary and secondary education is no longer important to Maine's future. This remains absolutely foundational to our future growth.
- Secondly, and equally important to emphasize, this does NOT mean that Maine's K-12 school systems have been wasteful.
 - Over the past few decades, Maine's schools have been asked to provide health services, food services, counseling services and transportation services to a degree as never before.

- In addition, schools have been harnessed with largely unfunded mandates that have greatly increased costs, and
- Our sprawling pattern of development has greatly increased school construction and maintenance costs.

It's no one's fault that costs have gotten out of line - but it has reached a breaking point and must be addressed.

Slide 33: Change in Enrollment by County

Declining enrollments are an issue that has emerged around the state. With the exception of a small uptick in Cumberland County every area of Maine has seen enrollment decline.

Slide 34: Resident Pupil Counts

And, to add insult to injury, the rate of enrollment decline is accelerating. We lost 16% from 1975-2006, a 30-year period. An 11% drop is expected in this decade alone. It will hit some rural areas much harder; with some regions experiencing as much as a 25% drop.

Slide 35: Enrollment vs. Staff

Further, as enrollment has dropped 16%, the number of teachers is up 32%, other instructors by 27%, and non-teaching staff has increased 52%. Again, we're not seeking to place blame here, the reality is that sprawl has added to the ranks, and state and federal mandates have added to the ranks, and we are asking much more of our schools - but we're in a real bind.

Slide 36: Public School Staff

Shown another way, we see the number of teachers is far less of an issue. Other staff has more than doubled as schools are now expected to provide health services, daycare, counseling services, transportation services, food services, even pesticides management services.

Slide 37: Special Education

And then there's the mother of all mandates! - Special Education. Special education costs in Maine have more than doubled from 1993-2007.

Slide 38: Special Education

Since the late 1970s, Special Education costs have grown from being 5% of the total education budget to 14%. It is absolutely out of control; driving overall K-12 education costs.

Everyone's doing the best they can within their own system, but it is simply unsustainable.

Slide 39: Per Capita Income Gap

There are huge changes that are shaping and propelling Maine. We can't control everything, but we can and must take control over those things we can control. We need to keep our eye on the ball, raise incomes for all Mainers, and close this income gap that separates us from the U.S. This will solve many of the challenges we face.

Slide 40: Vision

Let's go back to the beginning. The vision is a high quality of life – we are not there yet. We have huge economic and demographic forces pressing upon us, forcing all of us; state government, local

government, county government, and school systems, to fundamentally rethink and reengineer our systems to adapt to changes and to serve the new economy. Once more, this is nobody's fault; no entity is to blame, but it will require courageous leadership to find a path through this. I for one have no doubts we can do this, particularly given the tremendous record of success Maine's schools have demonstrated for decades.