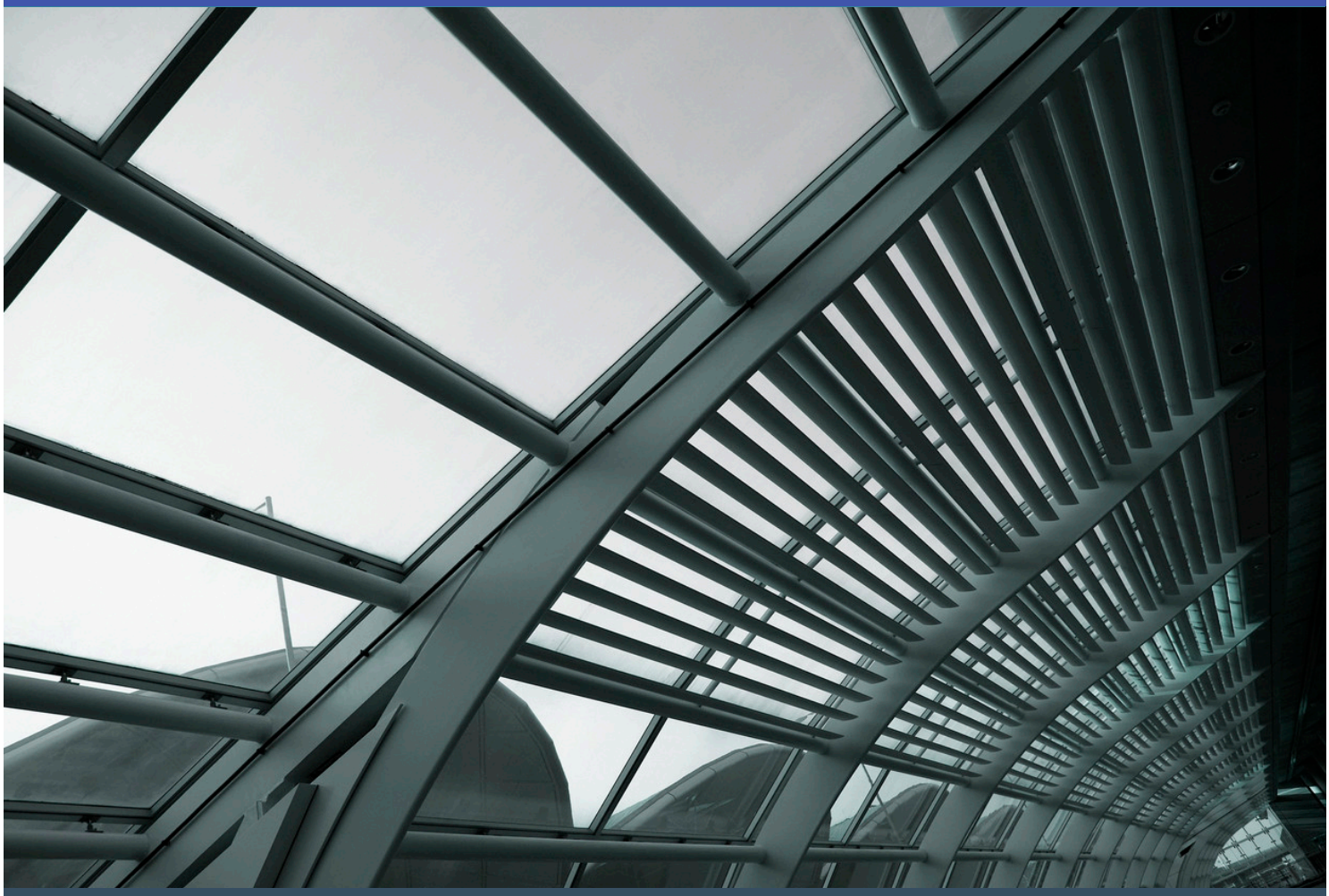

The Road Ahead:
Restoring Wisconsin's Workforce Development

Tim Sullivan

Prepared for Governor Scott Walker 2012

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INTRODUCTION

This report will provide a comprehensive review of the background and current issues pertaining to workforce development in Wisconsin, with a specific focus on the phenomena commonly referred to as the "skills gap." It will provide historical perspective as to how current workforce development problems originated, as well as how those problems have evolved over the last three decades. The report will describe the extent of these problems today and current impact on economic development. But, most importantly, this report will explain how we correct these problems *now*.

This report contains data pertinent to Wisconsin, the U.S., and other countries, as this issue has become a worldwide concern. All facts and figures were referenced to allow for more thorough research for those who may be so inclined. This report was also prepared in a collaborative effort with the Public Policy Forum, a nonpartisan research group from southeastern Wisconsin, as well as Competitive Wisconsin, a nonpartisan coalition that engages business and education, in their parallel research on skills clusters and workforce development.

Although this report was researched and prepared during my role as Special Consultant to the Governor on Economic, Workforce and Education Development, the solutions and recommendations in this report are my own. The two councils that I chair, the Council for Workforce Investment and the College and Workforce Readiness Council, have reviewed parts of this report. However, they have not approved or taken formal action regarding the proposed recommendations. Nevertheless, many of the recommendations that appear in this report will be referred to these two bodies so that they can take further action.

This report was researched, written, and edited in conjunction with Ms. Jessie Augustyn, Deputy Director of Wisconsin's Office of Business Development. The working group that reviewed the findings and offered input on the solutions consisted of Reginald Newson, Secretary of the Wisconsin Department of Workforce Development; Lisa Boyd, Administrator Division of Employment and Training for the Wisconsin Department of Workforce Development; Mary Isbister, President of Genmet Corporation of Mequon, Wisconsin and Vice Chair of Wisconsin's Council for Workforce Investment, as well as various staff members from the Wisconsin Department of Workforce Development. I would also like to acknowledge the support of Peter Maternowski, Executive Policy and Budget Manager in the State Budget Office, and others in Wisconsin's Division of Executive Budget and Finance.

EXECUTIVE SUMMARY

Wisconsin, the U.S., and other countries are experiencing above-average unemployment; yet employers say they cannot find the skilled labor they need to fill vacant positions. This phenomenon is known as the “skills gap,” and it is hurting economic competitiveness around the world.

This report provides information on the skills gap, which is a product of a changing job market and an education system that has not been able to keep pace with evolving workforce needs. Further, this report lays out steps for correcting the skills gap, as well as ideas to move workforce development forward in Wisconsin. These recommendations cover topics from education to economic development and matters in between because workforce development begins in the cradle and ends at the grave. Our recommendations are based on the best practices from our own state, other states, and the private sector. Recommendations are divided into those that are actionable immediately and those that should be considered in the immediate in the future.

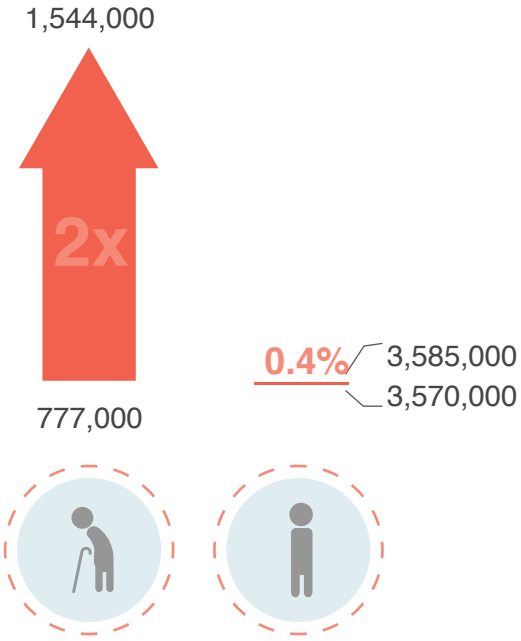
THE CHALLENGE

WORKFORCE DEVELOPMENT

Our education systems have not been able to keep pace with changing workforce needs. However, even if we were to immediately and vastly improve our education system, Wisconsin would still face workforce challenges, as our eligible workforce population is decreasing.

Wisconsin's Shrinking Workforce

Wisconsin faces an aging population. **Between 2010-2040, the number of senior residents in Wisconsin will nearly double, increasing from 777,000 to 1,544,000. Over the same time, our working age population will grow from 3,570,000 to 3,585,000, an increase of 0.4%.** Baby boomers are also aging out of the workforce, leaving gaps that cannot be met by our current projected population, or the education system in which they develop working skills.



Between 2010-2040, the number of senior residents in Wisconsin will nearly double, increasing from 777,000 to 1,544,000. Over the same time, our working age population will increase from 3,570,000 to 3,585,000, an increase of 0.4%.

In addition to our aging population, Wisconsin is not always educating its young people for future job opportunities. For example, **Wisconsin is, per capita, the number one state in the U.S. for manufacturing jobs**. More than 20% of our gross domestic product comes from manufacturing. There are current and projected job openings in this vital industry. **Of the country's 50 largest metro areas, Milwaukee is currently the second largest host of manufacturing jobs.** Yet as Wisconsin employers struggle to fill the current manufacturing positions, Wisconsin's K-12 educators tell us that students do not want to go into manufacturing. This is troubling because the educational requirements for these jobs is increasing beyond a high school diploma.

If we don't expose our students to various career opportunities beyond a four-year degree, industries like manufacturing will continue to struggle. This is especially true because Wisconsin has a difficult time recruiting and retaining workers. Employers continually report that they cannot draw workers into the state, especially in manufacturing jobs.

JOB NUMBERS

In order to retrain our workforce for available jobs, we need timely, accurate data on the job openings. The Department of Workforce Development is responsible for managing job numbers in Wisconsin. Currently, job numbers are derived from a quarterly report based on the U.S. Department of Labor's Bureau of Labor Statistics (BLS). BLS releases the Quarterly Census of Employment and Wages report approximately six months after the end of the quarter in which the data is collected. This means that **Wisconsin will only see its job numbers from the first three months of the year at the end of September.**

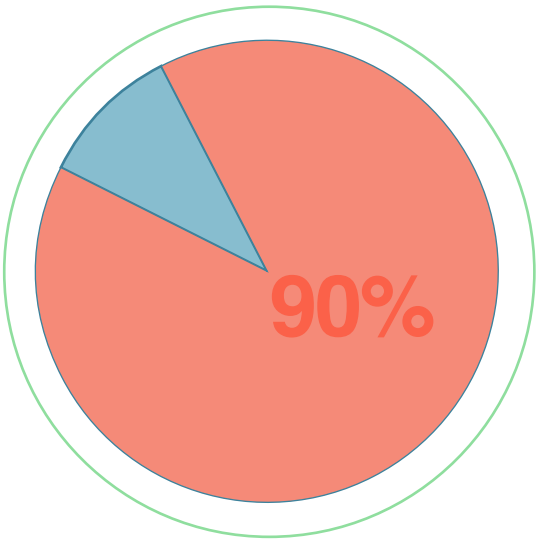
BLS also compiles job projection needs for a ten-year period. The way the data is collected and reported, we get job projections in two-year delayed cycles. **For example, our 2010-2020 projections will arrive late this summer 2012.** We will have projections for almost two years that have already passed.

The slow nature of this information makes it very difficult for Wisconsinites to act on both the current and projected job needs of the state.

WORKFORCE TRAINING

Our workforce training programs in Wisconsin are also in need of improvement. **Currently, more than 90% of the state's workforce training funding comes from the Federal Government.** Of the $410 million job training funds administered through the state, $377 million comes from the Federal Government. This funding is oftentimes not flexible enough to meet our needs, and our overall funding level has proven insufficient to fill the skills gap.

Wisconsin's administration of workforce training is also inefficient. Currently, nine different state agencies administer workforce training programs. Actually, **Wisconsin's Department of Workforce Development now administers less worker training funding than our Department of Children and Families.** This fractured administration is inefficient and creates confusion in the public about which services are available.



Currently, more than 90% of the state's workforce training funding comes from the Federal Government.

UNEMPLOYMENT INSURANCE

Above-average unemployment rates have strained our unemployment insurance (UI) system. **Wisconsin had to borrow money from the Federal Government that it has to pay back.** This borrowing will result in an additional $128 million in charges to employers in 2011-2012. The

Special Assessment for Interest alone was more than $42 million in 2011.

Wisconsin also owes the Unemployment Insurance Reserve Fund (UIRF) more than $1 billion. There is a federal provision that creates an additional cost to the State for each year Wisconsin has an outstanding UIRF balance. **This will cost Wisconsin employers nearly $49 million in 2012, and a projected $98 million in 2013 and $147 million in 2014.**

Finally, Wisconsin faces fraudulent claims. In 2011, the Department of Workforce Development found that fraud affected 28,232 claimants and totaled $44.6 million in fraudulent overpayments.

ECONOMIC DEVELOPMENT

Proper education and workforce development are the foundation of economic development. But economic development in Wisconsin also has its own challenges.

The major challenge is the fractured nature of our system. **Wisconsin has more than 600 groups that list economic development as part of their mission.** These include, but are not limited to, the Wisconsin Economic Development Corporation, 11 Workforce Development Boards, and nine Economic Development Regions.

Each one of these groups covers different territories, and the boundaries of different organizations don't always align. This misalignment makes it difficult for groups to share goals and funding.

Finally, Wisconsin's research universities, especially UW-Madison and UW-Milwaukee, could also be an important economic engine for start-up companies if the research funding is used effectively. UW-Madison alone brings in over $1 billion in research funding each year. However, the school doesn't turn this funding into startup companies at a comparable rate with similar schools. This results in lost economic opportunities for Wisconsin.

EDUCATION

The U.S. skills gap widened due in part to government intervention in the 1980s. The country, fearing international competition, began to focus students on a four-year college preparatory curriculum. Alternative forms of education, like shop class or apprenticeships, were deemphasized and defunded.

Wisconsin has
600+
groups that list economic development as part of their mission.

U.S. students **used to be** ranked #1 in achievement, where now U.S. students rank **14th** in reading, **17th** in science, **25th** in math.

Wisconsin creates roughly
14,000
high school dropouts each year.

UWS's four-year graduation rate is
36%
below the national average.

Despite this philosophical shift in education, the job market continues to need middle- and low-skilled workers. A recent Georgetown University study determined that between 2008-2018, Wisconsin will have 925,000 job positions available due to retirements and/or growth. **Roughly 70% of those jobs will require less education than a four-year degree.**

The skills gap has become especially prominent since the last recession, as the U.S. is experiencing what David Altig of the Federal Reserve Bank of Atlanta calls "the mother of all jobless recoveries." Without the prior positions available for workers, people need to adapt more to the needs of the employer.

Of course it is difficult for our workforce to be successful without a solid K-12 educational foundation. America's K-12 system is also faltering. **Whereas U.S. students used to rank number one in achievement, U.S. students now rank 14th in reading, 17th in science, and 25th in math, outperformed by a diverse grouping of countries like Korea, Canada, and Poland.** The gap is particularly bad in math.

Nationally, Wisconsin fares better than many states. Wisconsin has a roughly 90% high school graduation rate, which is usually the country's highest rate. But graduation does not mean students are prepared for their next steps. Many of those students need remediation when they attend postsecondary school. **Further, even with our high rate of success, Wisconsin creates roughly 14,000 high school dropouts each year.** Dropping out of high school can have a multigenerational effect, creating decades of poverty and stress on our social welfare systems. "Wisconsin's high school dropouts from 2010 will experience lost lifetime earnings of $3.7 billion." **As of 2010, Wisconsin had 285,933 working-age adults that had not completed high school (or its equivalent).**

Wisconsin's test scores are above average for the U.S. According to the National Assessment of Educational Progress (NAEP), "In 2011, the average score of eighth-grade students in Wisconsin was 289. This was higher than the average score of 283 for public school students in the nation." However, further examination of the numbers show that we have persistently failed in certain areas. This is especially true in our urban areas and for minorities. According to NAEP,

> *In 2011, Black students had an average score that was 39 points lower than White students. This performance gap was not significantly different from that in 1990 (42 points).*

As of 2010,
285,933
working-age adults had not completed high school or its equivalent.

Only **29%** of students seeking an associate's degree complete it within three years.

The US spends **2x** as much on education as many other countries despite poor college completion rate.

78% of Milwaukee Public School students that attended UW-Milwaukee needed remediation.

In Wisconsin, many students in our postsecondary education systems are not prepared based on their K-12 education. **For students that enter the University of Wisconsin System (UWS), one out of five requires math remediation.** That number increases to one out of two for African American students. **In Milwaukee, 78% of Milwaukee Public School students that attended UW-Milwaukee needed remediation. For the 2007-2008 academic year, Wisconsin spent an estimated $66 million on postsecondary remediation.**

Our K-12 schools also face declining enrollment. Between 2001-2006, almost 70% of our public schools saw lower enrollments. Due to the way we fund schools in Wisconsin, many of those institutions will lose money. These regions will also have a more difficult time filling job needs.

The key to matching workers with available careers is education. Yet despite some improvements, our education systems continue to falter. **The term "drop out factory" normally applies to high schools that graduate fewer than 60% of students that enroll; but if we used that term for Wisconsin's postsecondary institutions, practically the whole system would qualify.** For students starting in the fall of 2005, UWS (excluding UW-Colleges) had a four-year graduation rate of only 29.3%. After six years that rate climbed to just over 65%.

According to the National Center for Education Statistics, UWS's four-year graduation rate is below the national average of 36%.

Our two-year colleges, the Wisconsin Technical College System (WTCS) and UW-Colleges, also face a completion problem. **Only 29% of students seeking an associate's degree complete it within three years.** Some students drop out, while others leave because they have gotten a job. Because of the way these students are measured, even those that leave for employment are counted as a dropout, which is misleading.

Students that do drop out cost the state a significant amount of money. **Between 2003-2008, students that began college but did not return for a second year cost Wisconsin $23.4 million in federal grants and a cumulative $140.9 million in State expenditures.**

College completion is a national challenge. According to the Organization for Economic Co-operation and Development (OECD), an international think tank, only 46% of Americans complete college once they start. **This ranks the U.S. dead last for college completion among the 18 OECD countries.** We are even behind Slovakia, a country that has only been sovereign since 1992.

Despite our poor international ranking for completion, we spend more money than any other country. According to American Institutes for Research, a nonpartisan think tank, **the U.S. "[spends] about twice as much per student as the United Kingdom, Germany or Japan, and about three times as much as most other industrialized countries in Europe and Asia."**

Our two-year colleges are very expensive. A recent study found that the cost per degree completion was $71,226 and state and local funding per completion was $57,071, which puts Wisconsin in the top ten states for two-year college expense. All of our neighboring states were more efficient and cost-effective.

WTCS, the education system tasked with a significant portion of our postsecondary technical learning, spends

a large portion of its budget on non-technical education. About eight percent of WTCS's annual budget is spent on non-postsecondary services, like GED courses. At least $14 million per year is spent on liberal arts transfer classes. **Before any technical college training occurs, WTCS has already allocated a significant portion of its budget for other purposes.**

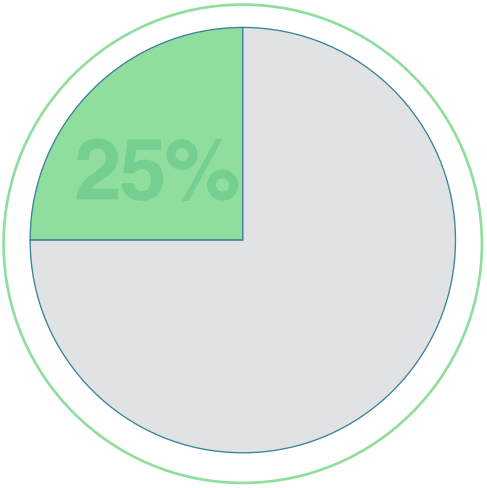
Many students still take on the expense of a degree, especially a four-year degree, because education is the key to success. However, even if our students complete a four-year degree, the credential is no longer a promise of success. A 2012 study by the Associated Press found that more than half of bachelor's degree holders under 25 years old were either jobless or underemployed. This number is the highest it has been in over a decade. As Jordan Weissmann, an editor at The Atlantic points out,

> *"college grads are actually faring worse in the job market than the overall youth population."*

Further, some students that attain an associate's degree or less earn higher wages than the average four-year college graduate. A recent Georgetown University Center on Education and the Workforce study quantified what certificates and degrees are worth to workers. On average, certificate holders earn $34,946 per year, or 20% more than workers with only high school diplomas. Associate degree holders earn $42,088 per year on average. Someone with a bachelor's degree earns an average of $53,400 per year. **But roughly one-quarter of students that attain a certificate earn more than the average bachelor's degree recipient.** Additionally, many associate degree jobs pay well and require a far less expensive education than a four-year degree.

For example, a two-year degree at UW-Colleges costs about $14,000. A four-year degree at UW-Madison is just under $60,000. This is a difference of $46,000. An associate degree holder can also enter the workforce in half of the time it takes to obtain a four-year degree, and can start making money earlier than the four-year degree student.

Choosing to attain a four-year degree instead of a two-year degree is expensive for the student and the taxpayers. But the more expensive option is when a



Roughly one-quarter of students that attain a certificate earn more than the average bachelor's degree recipient.

student attains a four-year degree and then later attains a two-year degree. **In 2011, there were an estimated 34,000 students in WTCS that already had a four-year degree. Many of these students were 20-some-things who couldn't find good-paying jobs,** so they were seeking a specific skill set. This means taxpayers subsidized these students for six years when

a two-year degree may have been sufficient to gain a good-paying job.

Wisconsin's postsecondary systems face yet another challenge. Even students that attend and complete a postsecondary degree may not be prepared for the workforce. A national survey conducted by the Conference Board, an independent business organization, revealed that "far too many young people are inadequately prepared to be successful," including students that attained two or four-year degrees. Although four-year graduates fared better, both groups were deficient in multiple areas.

Finally, a challenge that we came across with all education systems was a lack of consistent, easily accessed data. Our K-12 system is in the process of updating its data system for the whole state, which should help. Our K-12 system also recently adopted the Common Core Standards, new education standards developed by states and coordinated by the National Governors Association Center for Best Practices and the Council of Chief State School Officers. These standards are intended to better prepare our students for education and the workforce. This is crucial for changing course.

Other positive changes are happening, as well. Many technical colleges already have relationships with their local high schools and businesses. Another positive change is the newly announced UW-Flexible Degree. Students will be able to take online, competency-based tests to earn cost-effective UW degrees. This will especially help our nontraditional and low-income students. But Wisconsin needs to do more.

We need to provide pathways for students to lead productive lives if we are to keep the American Dream alive.

SOLUTIONS

WORKFORCE DEVELOPMENT AND ECONOMIC DEVELOPMENT

Wisconsin's workforce and economic development go hand-in-hand. One can help the other. **Regional alignment is critical to advance economic, workforce, and educational initiatives.** We have found that there is either occasional or no formal collaboration between the various economic development organizations in Wisconsin. If we are serious about driving improvements in our state, these groups must coordinate. To that end, Wisconsin needs to organize our efforts around the nine main economic regions, with the goal of coordinating education and workforce development to drive economic development.

There is also great economic development potential through our UW research facilities, mainly UW-Madison and UW-Milwaukee. Their research has the potential to turn into jobs. Although the system brings in a large amount of money, over $1 billion per year, UW lags behind similar schools that turn research money into start-up companies, which in turn generates new economy/jobs. Recently, the Wisconsin Economic Development Corporation (WEDC) and UWS hired a person to help facilitate more start-ups. Although new data

reporting requirements created by the legislature touch on how UWS should report some of this economic activity, we think **UWS and WEDC should submit an annual report on their progress in increasing startups through research.**

In the meantime, **Wisconsin needs timely, accurate job numbers to form the basis of policy decisions for economic development organizations and other groups. These numbers should come from new Labor Market Information (LMI) software.** The State should provide this software so that all groups and State employees have a common, reliable starting point to discuss workforce need. This will also save money, as many State-funded groups already purchase LMI software independently.

Once we have accurate job numbers by region, our Department of Workforce Development (DWD) should work with our economic development organizations to fill job needs by region. In order to accomplish this, Wisconsin will need to designate extra funds to workforce development, as roughly 90% of Wisconsin's workforce funding currently comes from the Federal Government. Unfortunately, Federal funding is insufficient and oftentimes inflexible. As it will take time to implement LMI software, DWD should use the data being collected by Competitive Wisconsin to arrive at a reasonable budgetary request to be implemented in the next State budget. **That money should be administered as competitive grants to regions.**

Further, **all workforce development programs should be coordinated through DWD.** Currently, nine state agencies administer workforce development funds, which leads to administration inefficiencies and a duplication of services. Consolidation will save the state money and provide a clear source for workforce development services.

DWD should also look at the administration of Unemployment Insurance (UI). There has been some fraud in the system that must be weeded out.

Finally, **Wisconsin should institute an easy to understand form of Evidence-Based Budgeting (EBB).** The Pew Center on the States has developed free software that creates a stock-like portfolio for legislators regarding the effectiveness of programs. For example, the software shows that if a state invests $1 million in a specific workforce development program, that the investment is 90% likely to produce a 100% return on the investment. This type of easy to understand analysis could make it much easier for policy makers to understand whether programs are effective and efficient. Ultimately, that will allow the state to use taxpayer money in the best way possible. If we are going to designate more funding for workforce development to correct the skills gap without raising taxes, we need to be more efficient.

EDUCATION

Education is the foundation of workforce development. Education, like workforce development, starts when we are born and ends at the grave. That is why it is so critical for the economic health of Wisconsin that we provide a solid foundation for our children and flexible adult education options for those already in or about to enter the workforce.

First, we should reduce the time to completion for a

four-year degree student. **The University of Wisconsin four-year colleges should develop a contract that guarantees four year completion.** The contract can be modeled after the University of Minnesota's contract, which basically states that if a student cannot complete a four-year degree on time through no fault of his own, the school will pick up the added expense. This will encourage students to complete on time, saving them money and speeding them into the workforce.

Second, **Wisconsin should increase tuition for WTCS students that have already attained a four-year degree.** There were roughly 3,500 full-time enrollees in WTCS last year seeking a two-year degree, many because they could not find a good job. From a taxpayer perspective, these students are being subsidized for six years of education when two years may have been enough. Reducing the State subsidy for these students is consistent with other UW Regent tuition policies for higher education.

Before postsecondary education, our first step towards preparing our K-12 students for the future is providing them with accurate information about their options. The bridge to this information should be an Academic and Career Plan (ACP). **An ACP is an individual roadmap for all students in Wisconsin to achieve their academic and career goals, regardless of their background or which school they attend.** ACPs allow students to assess their strengths and interests. ACPs then help direct students to how their education and career goals can be attained. **All information is provided on the backdrop of accurate job opportunity projections, which help students choose their most effective postsecondary option.** A successful ACP involves the whole community, from students, parents, and educators, to businesses and community leaders that help provide real-world learning opportunities.

Wisconsin also needs to provide more educational opportunities for adult learners. This involves building more flexibility into the system, which will especially benefit low-income students. **One way to build in flexibility is through stackable credentials.** These credentials allow students to more easily step in and out of education systems by granting them credit for things they already know instead of measuring time spent in a seat. **Stackable credentials should be based on competency to maximize efficiency and encourage adult learners to further their education.**

Along with the flexibility of leaving and returning to school, students need flexibility for moving around Wisconsin. To this end, **Wisconsin's postsecondary public schools should develop a statewide credit transfer system of some common credits.** This will allow students to move around the state if they so choose, which could help fill employer's needs. A statewide transfer system would also be more efficient in terms of time and money as students won't have to repeat classes on topics they already have learned. Further, students and taxpayers won't have to repay for that education. A base credit transfer system benefits the students while allowing faculty to retain a say in whether more specific, upper-level classes will transfer from institution to institution.

Another change that will benefit low-income adult learners is **increasing funding options and flexibility in education, especially for students enrolled less than half time. One funding option would be to increase access to Wisconsin Higher Education Grant**

(WHEG) funding. Currently, public postsecondary students only qualify for financial aid if they are enrolled more than half time. Low-income students have cited lack of funding options as a barrier for continued education. We want to encourage adult learners to continue with more education. Wisconsin could increase WHEG funding and accessibility for students enrolled less than half time. **Another alternative would be to revisit the Wisconsin postsecondary Education Credit, which allows employers a nonrefundable tax credit for helping fund a student's education.** This credit could be examined to determine whether it is working or needs to be improved. Regardless of how, Wisconsin should open education opportunities for students that want to attend a postsecondary institution less than half time.

Finally, **Wisconsin should reward educational institutions that provide excellent service to the state and encourage that behavior in all our schools through Performance-Based Funding (PBF).** PBF has been thoroughly examined at a postsecondary level and other states have laid out formulas that Wisconsin can follow. For WTCS and UWS, PBF should be a portion of the base funding, starting with a smaller percentage and increasing over time.

For our K-12 system, PBF could be awarded as bonus money in the form of competitive grants, as the research on K-12 systems is less established. **Only 2.6%, or $280 million of our $11.5 billion annual DPI budget goes towards "Career and Technical Education (CTE)." PBF grants should encourage CTE and alternative education, like apprenticeships, that have been deemphasized in favor of college-prep education.**

PBF will incentivize schools based on a variety of factors, like graduation rates and job placement. The exact formula and percentage should be developed with input from the College and Workforce Readiness Council, which includes representation from all levels of state education, as well as a bipartisan body of the legislature and businesses.

CONTINUING EFFORT

Throughout this process, we met many people that are working hard to address these challenges and move Wisconsin forward. One of the larger challenges Wisconsin faces is a lack of a continuing, coordinated effort. We believe that coordination is truly the key to success. Without it, good ideas will languish.

Although this report was written in conjunction with the Office of Business Development, we recommend that the Council on Workforce Investment and the Council on College and Workforce Readiness continue these efforts by filing a joint annual report. The report should include updates on whether these recommendations were implemented and/or successful, and what new ideas and goals Wisconsin should pursue.

OTHER CONSIDERATIONS

Our first set of recommendations involved steps that are ready for immediate action. This section includes three issues that will need to be addressed further in the future. Finally, there is a section addressing the so-called "myth of the skills gap."

First, the way workforce training is funded in the future could be tied to Unemployment Insurance. **When the economy improves, instead of reducing employer's UI payments to the lowest possible level, the State could retain 0.2% above the base employer fee.** That money could only be used to fund workforce training. Through this solution, workforce training funding won't be reduced by the State when employers need it the most.

Second, **Wisconsin needs to reset its tax structure.** The way in which we tax ourselves is inefficient for job creation. The negative perception of our tax structure makes it difficult for businesses to attract workers into our already dwindling workforce. Even without changing the amount of overall money the State collects, we could shift to more consumption tax and lower property and personal income taxes, thus improving Wisconsin's economic competitiveness. This would boost the state's economy and encourage national migration.

Third, **a key way to fill the gaps in our workforce is through international migration.** Wisconsin should set up a panel to find effective ways of welcoming and integrating legal immigrants into our society. Immigrants have a positive financial impact, even if they have lower educational attainment, because they bring in more tax revenue than they take out in other state expenses. They especially have a positive impact if they have high educational attainment. Further, international immigration actually increases employment and education among natives because many immigrants have skills that compliment the native workforce. Immigrants have been and will continue to be a vital component of our workforce. Helping them integrate will improve the economic health of the state.

Finally, although not an item for legislative action, **we address the criticism that a skills gap wouldn't exist if employers paid higher wages.** To do this, we examined a hypothetical high school graduate involved in Marinette Marine's training program. The program is having a difficult time finding workers, which some say is because the company does not pay enough. We showed that a recent graduate could actually make enough money to live comfortably while being trained. A frugal student could even save enough money to pay for one year of postsecondary education.

At my company Bucyrus, our starting pay for production floor work was $22 per hour increasing to almost $30 per hour with unlimited overtime after a worker was proven fully competent. We also spent millions every year training our workforce, which made them more valuable to the company, as well as more valuable if they sought work elsewhere. **There may be companies that do not pay market value for workers, but there are plenty, like Bucyrus, that pay family-supporting wages and still have a difficult time finding workers.**

CONCLUSION

Our recommendations do not require governance changes, but rather they establish a comprehensive statewide plan that will address our skills gap crisis. Some aspects of our plan can be instituted and reap immediate benefits. Other recommendations will take time to implement; however, we believe that they will provide positive long-term results.

Successful private sector companies implement a fact-based general plan, allow the various independent

entities within the organization to perform their tasks according to the plan, and incentivize them to achieve the desired results. It is never necessary, desirable, or efficient to control all decisions centrally. Instead, companies reach their goals by rewarding those entities that achieve their objectives as part of the overall plan. In Wisconsin, we have reasonably strong and capable independent entities, but we have neither a plan nor an incentive system to drive us to achieve our overall objectives. Like in the private sector, we must be willing to fail and reset rather than to take a nonspecific and ambiguous course of action.

In summary, we recommend the following for immediate action:

- Realign our economic development organizations to the extent practicable
- Request a joint annual report from WEDC and UWS on the efforts and progress of turning research funding into startups
- Immediately implement a real-time Labor Market Informational (LMI) system
- Devote state funding for job training that DWD will fund competitively to the nine economic development regions
- Coordinate workforce training programs at DWD
- Overhaul Wisconsin's Unemployment Insurance System
- Adopt the "Results First" model of evidence-based budgeting
- UWS should adopt a four-year guarantee for students
- WTCS should reduce state subsidies for students that already have four-year degrees
- Establish Academic and Career Plans for all students with the help of the Council on College and Workforce Readiness

- Establish “stackable credentials” for two year programs and competency testing for degree achievement
- Establish core credits that will be transferred between all postsecondary education institutions
- Expand funding options for than half time two-year degree and certificate students
- Incorporate performance based funding at all levels of education
- The Council on College and Workforce Readiness and the Council for Workforce Investment should file an annual joint report regarding progress and updates to this report

We recommend the following areas for further study and future consideration:

- Establish future workforce training funds by retaining 0.2% once the Unemployment Insurance Fund is replenished and reaches its minimal level
- Reform tax system to combat net negative migration and recruitment of workers
- Establish a committee to find ways of encouraging international immigration

THE CHALLENGE

THE NATIONAL SKILLS GAP

Wisconsin, the U.S., and other countries are experiencing above-average unemployment; yet employers say they cannot find the skilled labor they need to fill vacant positions. This phenomenon is known as the "skills gap," and it is hurting economic competitiveness around the world.

The skills gap has two sources: changing workforce needs and low levels of educational attainment.[1] Today's jobs require technical and problem-solving skills, as well as so called "soft" skills, like the ability to work in teams.[2] New technology has also allowed employers to do more with less and use workers that may live far away.[3] This quickly changing job market has out-paced education policy.

These challenges are not new, but have recently become more pronounced in the wake of the Great Recession and our jobless recovery. We are now experiencing what David Altig, the research director at the Federal Reserve Bank of Atlanta, calls "the mother of all jobless recoveries."[4] This means that while the economy is improving, there aren't new jobs available for many of our unemployed workers.[5] This type of recovery means workers must adapt to the needs of employers in a way they haven't had to before. Employers need more from workers, including specific skills.

As our economic recovery demands more educated workers, our education systems are falling short of preparing the students we need. A report by McKinsey Global Institute shows by 2020 there will be 5.9 million more high school dropouts nationwide than jobs available for workers with that level of education.[6] According to Harry Holzer, Professor of Public Policy at Georgetown University and Institute Fellow at the Urban Institute, "There is little doubt among most labor market analysts that the growth of education and skills among American workers has not kept up with growth in the labor market demand for these skills in the past three decades."[7]

THE SKILLS GAP AND WISCONSIN

Unfortunately, Wisconsin has not escaped the skills gap. Research shows the state is becoming less economically competitive due to our diminished workforce.[8] Wisconsin is being hit in three ways. First, the state has a shrinking working age population due to an aging populace. Second, our students aren't always being educated for available jobs. Third, Wisconsin has a difficult time recruiting and retaining workers.

According to the Wisconsin Department of Workforce Development (DWD), due to the aging population, "there's no question that businesses looking to recruit staff in the coming years will be hiring in a more challenging labor market. Wisconsin and many other areas will be forced to deal with stagnant, and possibly outright shrinking, labor pools."[9] Our percentage of residents age 55-64 will increase more rapidly than a majority of states in the country.[10] In the not too distant future, the number of Wisconsin seniors will nearly double. By 2030, the majority of baby boomers will no longer work.[11] This creates a challenge because older workers have been propelling our economy by continuing to work, as they have the necessary skills.[12]

The most alarming statistics show Wisconsin is not projected to gain workers. Between 2010-2040, the number of senior residents in Wisconsin will nearly double, increasing from 777,000 to 1,544,000. Over the same time, our working age population will grow from 3,570,000 to 3,585,000, an increase of 0.4%. As an overall percentage of the population, our working age citizens will decrease from 63% in 2010 to 55% in 2040.

If these projections hold true, Wisconsin's challenge of producing an adequate workforce will only get worse.

In addition to our aging population, Wisconsin is not always educating its young people for future job opportunities. For example, Wisconsin is, per capita, the number one state for manufacturing jobs.[14] More than 20% of our gross domestic product comes from manufacturing.[15] **Of the country's 50 largest metro areas, Milwaukee is currently the second largest host of manufacturing jobs.[16]** There are current and projected job openings in this vital industry.

Yet, Wisconsin employers continually report that they cannot draw workers into the state, especially in manufacturing jobs.[17] Yet as Wisconsin employers struggle to fill the current available positions, Wisconsin's K-12 educators tell us that students do not want to go in to manufacturing.[18]

This is especially troubling because the educational attainment necessary for manufacturing careers is increasing. A recent national survey of manufacturers found that, "Overall, the education requirements of openings demonstrate that the in-demand jobs in manufacturing are not for workers with limited skills and education," and "higher education requirements indicate the need for an advanced skill set that cannot be acquired through on-the-job training and must be obtained in a formal classroom setting in order to perform the tasks associated with a position."[19] This means without students filling the workforce pipeline, businesses will have an almost impossible time meeting production

needs even without a shrinking workforce.

To remain competitive in a global economy, Wisconsin must adapt its policies to align with the needs of the workforce.

WORKFORCE DEVELOPMENT[23]

As much influence as our education systems have over our workforce, according to Professor Holzer, "a strong workforce system remains critical to maintaining a labor market in which skilled workers are well-matched to the jobs that require and reward such skills."[20] Wisconsin's Department of Workforce Development (DWD) is tasked with providing many of these services to the state.

First, DWD is responsible for tracking job numbers in the state. DWD collects the data that is compiled into our state and national job reports. The department also employs economists to help Wisconsin make sense of the numbers.

DWD is also responsible for some of the state's workforce training. The Employment and Training Division also offers services for people who are unemployed, in addition to managing the state's apprenticeship and youth projects.

Finally, DWD oversees the Unemployment Insurance (UI) divisions. UI is the financial safety net for eligible workers during times of unemployment. The program is funded by taxes collected from Wisconsin's employers.[21]

JOB NUMBERS

Since the recession and the last gubernatorial election, the goal for the state has been more jobs. As we've also seen, job numbers can be contentious. Wisconsin lacks a universal and accepted source of labor market information that can be used to provide guidance to policymakers in the development of education or training programs to meet labor needs. Therefore, it is very difficult for workforce training money to be spent effectively when we don't have accurate and timely job numbers.

Current measures of the workforce are subject to significant volatility and frequent revision, relying on sampling techniques to account for job gains and losses. The United States Department of Labor's Bureau of Labor Statistics (BLS) releases the Quarterly Census of Employment and Wages, a complete count of jobs gained and lost, approximately six months after the end of the quarter in which the data is collected (e.g. data for the first three months of 2012 will be released on September 27th).[22]

BLS also compiles and releases 10-year national employment projections to provide a "snapshot" of projected labor needs by occupation and industry. This data is based on economic conditions at the time the projections are developed. DWD's Office of Economic Advisors provides state-level projections derived from the national data and expects to provide employment projections covering the period from 2010 to 2020 later this summer. That means this summer we will finally have job data from two years ago.

The slow nature of the current development of

employment projections does not allow the workforce delivery system sufficient time to shift based on identified needs from Wisconsin businesses. Specifically, BLS and DWD projections currently provide long-term forecasting capability without tracking intermediate or short-term changes in the labor market. These shorter-term labor market changes could be addressed through the provision of targeted training, as well as certificate and degree programs to meet recognized skill shortages.

WORKFORCE TRAINING

DWD oversees a number of workforce training programs that are attempting to bridge the skills gap. The challenge, however, is that workforce training programs are currently provided through nine different state agencies in Wisconsin. As such, job seekers and employers must navigate through the bureaucracy of several state agencies to identify available training services.

What's more, a recent report on funding for workforce training programs in Wisconsin by the Public Policy Forum (PPF), a nonpartisan think tank, indicates similar programs are administered by different state agencies, providing duplicative services. (Full report available at http://www.publicpolicyforum.org/pdfs/2012WorkforceMap.pdf). To access funding, job seekers and employers must work with multiple agencies, which can be time consuming and inefficient.

Some of this inefficiency comes from how we fund our workforce training programs. PPF reports that roughly 90% of Wisconsin's workforce training money comes from the Federal Government.[24] This funding comes with earmarks and cannot always be spent in the most efficient way. Moreover, excluding the Wisconsin Works (W-2) program for impoverished families, federal funding has decreased by 47% in real dollars over the last 30 years.

Perhaps more curious, DWD now administers less workforce training funding than Wisconsin's Department of Children and Families (DCF), which administers the W-2 program. The PPF study shows that the number of agencies involved in workforce development activities has been constant over the last four years, with DWD and DCF receiving more than 80% of total workforce development funding for the state. But because of the rapid increase in funding for the W-2 program, DCF now administers a larger proportion of workforce development funding than DWD.

The PPF study underscores the difficulty of accessing programs through multiple agencies and the wasting of resources through duplication of efforts. Many workforce programs have performance criteria that prevent agencies from combining programs. These disparate outcome measures dampen the State's ability to effectively allocate resources to job creators and to redirect funding to meet emerging needs. Inefficiency leads to frustrated unemployed and underemployed people trying to gain the skills they need to compete in our workforce.

Without efficient, targeted efforts, the state is wasting resources that could be used to put unemployed people back to work and fill Wisconsin's skills gap.

UNEMPLOYMENT INSURANCE – UI

DWD faces a number of challenges related to the downturn in the economy and the skills gap. UI claims are up because people can't find work. The Unemployment Insurance Reserve Fund (UIRF) has steadily decreased from a high balance of over $1.8 billion in 2000 to a low balance of -$1.1 billion in 2011. The reserve fund is collected during good economic times to offset the bad times. But Wisconsin, like 30 other states, did not collect enough funding to cover the downturn.[25] Federal law does not allow the state to borrow from Wisconsin's general fund to cover the shortfall. Instead, Wisconsin had to borrow the money from the Federal Government, which will result in additional charges to employers of $128 million (in 2011 and 2012).

Year	Fund Balance*	Year	Fund Balance*
2000	$1.816 billion	2007	$734.1 million
2001	$1.770 billion	2008	$557.9 million
2002	$1.571 billion	2009	($141.4 million)
2003	$1.202 billion	2010	($989.4 million)
2004	$914.7 million	2011	($1.125 billion)
2005	$846.8 million	2012	($857.3 million)
2006	$832.5 million	*UI Reserve Fund balance on April 30 of each year.	

This amount includes the Special Assessment for Interest (SAFI), created by Wisconsin in the early 1980s to fund interest payments on loans made by the Federal Government to the UIRF. SAFI payments exceeded $42 million in 2011 and DWD anticipates another payment of approximately $37 million in September of 2012.

In 2011, DWD found that fraud affected 28,232 claimants and totaled $44.6 million in fraudulent over-payments.

To make things more complicated, there is also a federal provision that decreases the 5.4% credit on federal unemployment tax contributions on the first $7,000 in wages per worker by 0.3% each year Wisconsin has an outstanding balance to the federal UIRF. This will total nearly $49 million in additional taxes to Wisconsin employers in 2012 and a projected $98 million in 2013 (0.6% credit reduction) and $147 million in 2014 (0.9% credit reduction) before the UIRF returns to solvency. This is assuming the economy does not return to recession. Finally, UI also faces fraudulent claims where individuals not entitled to receive UI benefits falsify their information in order to collect compensation. This cost is passed on to employers. In 2011, DWD found that fraud affected 28,232 claimants and totaled $44.6 million in fraudulent overpayments. This past session, the legislature addressed this issue by allowing a one-week delay in payments. We have yet to see the effects of the new law.

Wisconsin's UI system was not set up to handle the most recent recession. A complicated, insufficiently funded program has placed an increased burden on our employers when they can least afford to pay more. What's more, we have not adequately aligned our worker training programs to help employers that cannot afford to retrain workers during a down economy.

ECONOMIC DEVELOPMENT

If education and workforce development are aligned, economic development should follow. Currently, our economic development organizations (EDOs) have an uphill battle. In 2011, the UW-Center for Community Development and the Wisconsin Economic Development Institute, in partnership with the Wisconsin Economic Development Association, conducted a survey of local development organizations. The survey reported more than 600 groups in the state had economic development as part of their mission.[26] Of these groups, 53% are listed as nonprofit EDOs and 32% are a separate function within a local government.

In addition to these EDOs, Wisconsin has other layers of economic development. There is the newly formed Wisconsin Economic Development Corporation (WEDC), the federally mandated Governor's Council on Workforce Investment, 11 Workforce Development Boards (WDBs), 16 technical colleges, and nine Economic Development Regions (ERDs). Wisconsin also has 12 Cooperative Education Service Agencies (CESAs) that are available to help schools share resources and assist in business involvement. This list does not encompass all the economic development groups in the state.

The sheer number of agencies makes it difficult to have consistent coordination around the state. A further complication is that each of these organizations has a specific region to cover. Many times, the territories of one group do not align with those of the other organizations in the area. For example, a technical college boundary may not align with a WDB boundary. This creates confusion as to which group should be handling what services and how resources should be directed.

EDUCATION

Education has long been thought of as the ticket to a better life with better pay and more possibilities. While there is still a consensus that education is the key to success, even students that continue with postsecondary education have met with great difficulty in finding jobs. In fact, people are widely questioning whether a college degree is worth the cost.[27] For some students, that question only arises after a large investment of time and money.

In addition to increased costs, the time to complete a postsecondary degree has lengthened over the last three decades, especially for students that begin their postsecondary education at public colleges. Of U.S. students that began four-year degrees in 1972, 58% of eventual degree recipients graduated within four years of finishing high school; but for the 1992 high school cohort that number dropped to 44%.[28] According to the National Center for Education Statistics, only 36% of first-time, four-year degree seeking students complete within four years.[29] That number increases to only 57% after six years.

The term "dropout factory" normally applies to high schools that graduate fewer than 60% of students that enroll, but if we used it for postsecondary institutions, practically the entire U.S. system would qualify.

The term "dropout factory" normally applies to high schools that graduate fewer than 60% of students that enroll, but if we used it for postsecondary institutions, practically the entire U.S. system would qualify.[30] Completion is a challenge at both two and four year colleges. Only 29% of students who seek an associate's degree obtain it within three years. According to the Organization for Economic Co-operation and Development (OECD), an international economic organization that facilitates an exchange of ideas between countries, only 46%, of Americans complete college once they start. **This ranks the U.S. dead last among the 18 OECD countries.[31]** In these tough economic times, it is easy to blame a lack of funding for our problems. But if money were the only solution, we wouldn't be in this situation. According to the non-partisan American Institutes for Research, "the United States spends more on higher education than any other nation in the world. We spend about twice as much per student as the United Kingdom, Germany, or Japan and about three times as much as most other industrialized countries in Europe and Asia."[32] The report concludes, "American students' success is not commensurate with these world-class expenditures."[33] This indicates that the answer is more complicated than higher spending.

It is not just our postsecondary institutions that need work. Our country's K-12 systems are falling behind the international competition. Where the U.S. used to be considered number one, we now rank 14th in reading, 17th in science, and 25th in math, outperformed by a diverse grouping of countries like Korea, Canada, and Poland.[34] The gap is particularly bad in math, where the U.S. was ranked "statistically significantly" below OECD countries.[35] Despite our performance rankings, the U.S. is ranked second in spending on students between six and 15 years old.[36] The lower K-12 student outcomes increase pressure on our postsecondary institutions.

We need to provide pathways for students to lead productive lives if we are to keep the American Dream alive.

Further, we have limited education options for our K-12 students by decreasing funding for Career and Technical Education.[37] This is despite the fact that our job projections show a need for workers in these areas. As a country, we cannot continue to educate students for opportunities that will not exist. We need to provide pathways for students to lead productive lives if we are to keep the American Dream alive.

Many of Wisconsin's industries are showing the need for increased education, but perhaps not needing a four-year degree. A Georgetown University Center for Education and the Workforce study reports that of the 925,000 job openings Wisconsin will have between 2008-2018, more than 70% will require educational attainment less than a four-year degree.[38] This is not to say we shouldn't be encouraging bachelor's degree graduates. Wisconsin is also projected to need more baccalaureate degree holders. But these numbers illustrate that our educational attainment is not in line with our future job opportunities. It is inefficient to have students earning four-year degrees when what they really need for work is a two-year degree.

Sixty-one percent of the 925,000 jobs between 2008-2018 will require some postsecondary training.[40] Over 50% of those jobs will be middle-skills jobs. Those are jobs that require some postsecondary education, but less

than a four-year degree. Wisconsin is not positioned to meet those needs. Currently, only 56% of those enrolling in a four-year college actually earn a bachelor's degree after six years.[41] Less than 30% of students who enroll in community college obtain an associate's degree within three years.[42] If these students graduate, their entry into the job market has been slowed down considerably.

Not only are we not graduating enough postsecondary students to fill workforce needs, we are also not producing enough high school graduates. By 2018, the National Center for Education Statistics predicts the number of high school graduates in Wisconsin will actually slightly decrease (-1.2%), while employment opportunities will increase (10,000 more jobs available).[43]

Preparing the proper workforce is going to take more than just making the numbers match. It will take a philosophical shift in Wisconsin society about how we define success. Wisconsin should never force students onto a specific career path just to meet job projections. Students should be able to choose an education and career that will allow them to fully participate in society.

That is the point: students should be able to choose more than one pathway to success.

That is the point: students should be able to choose more than one pathway to success. Recently, our country has only offered high school students one path to success: a four-year college degree.[44] Instead of celebrating the success of people who choose an education that may better suit their needs, like a two-year degree or trade school, we disenfranchised two generations of non-baccalaureate students who have since "lost considerable ground versus their counterparts only a decade earlier."[45] In 2010, 511,068 working-age Wisconsin adults (18-64) were working with no college education and living in families with a combined income less than a living wage (twice the poverty level). Wisconsin also had 285,933 working-age adults that had not completed high school (or equivalent).[46] We've done these students a great disservice. Job opportunities for these disenfranchised former students have dried up. Unemployment of young adults (age 20-24) has more than doubled.[47] Nationally, the drop in employment for young workers also far surpassed that of older workers. Since 2000, young workers have seen a 17% drop in employment, while workers aged 25-54 have seen only an eight percent decline.[48]

Further, what we are seeing now is the hardest jobs to fill are mid-level jobs. Those jobs mostly require some postsecondary education or certificate, but not a four-year degree.[49] During the 1980s and 90s, we told students they had to be academics to be successful.[50] Now, mid-level jobs sit vacant, while some of those former students are unemployed without hope of entering the middle class. If projections are correct, this problem will become worse as a majority of our job openings will be for those people with less education than a four-year degree.[51]

We have even misled some of our students that complete the four-year degree option. In April 2012, the Associated Press, with the assistance of researchers from Northeastern University, Drexel University, and the Economic Policy Institute, published an employment report based on data from the Census Bureau's Current Population Survey and the U.S. Department of Labor.[52] The report found, "About 1.5 million, or 53.6 percent, of

bachelor's degree-holders under the age of 25 last year were jobless or underemployed, the highest share in at least 11 years."[53] (We could not find numbers for Wisconsin).

> *"…college grads are actually faring worse in the job market than the overall youth population."*
>
> -Jordan Weissmann

Jordan Weissmann, an associate editor at The Atlantic, went one step further. He wrote, "in December 2011, only a fifth of 16 to 19-year-old Americans couldn't get work. Meanwhile, according to the OECD, just 18.4 percent of all Americans under the age of 25 were unemployed in 2010. By those measures, college grads are actually faring worse in the job market than the overall youth population."[54] Weissmann described these numbers as bizarre, presumably because they don't align with our traditional view of a four-year graduate.[55] These degrees are no longer a guaranteed key to success. Despite this evidence, we still persist in placing a premium on the four-year degree. Perhaps what some people don't know is that many of those jobs actually pay less than the associate's degree or certificate jobs. In fact, "27 percent of people with postsecondary licenses or certificates – credentials short of an associate's degree – earn more than the average bachelor's degree recipient."[56]

In addition to some sub-baccalaureate degree jobs paying more than four-year degree jobs, the education is less expensive to obtain. One example is dental hygienists, an occupation that is projected to have increased job openings.[57] Madison College, a two-year technical college, offers a dental hygienist certificate for a total cost of $18,787.25.[58] According to the Bureau of Labor Statistics (BLS), "The lowest 10 percent earned less than $45,000, and the top 10 percent earned more than $93,820."[59] Meanwhile, a 2011 nationwide report of four-year college graduates reported a median salary of $27,000 per year for those entering the job market in 2009-2010.[60] This is not a direct comparison, as BLS didn't break the numbers into entry-level and non-entry-level hygienists. However, even the lowest 10% of hygienists made more than the average nationwide entry-level four-year degree holder.

For additional context, compare the cost of a four-year degree to that of an associate's degree. The average net cost in 2010-2011 for an incoming, in state freshman at UW-Madison was $14,940.[61] If that number remained consistent and the student completed the degree within four years, the total cost would be just shy of $60,000. The average cost at University of Wisconsin Colleges was $6,951 per year, meaning a two-year associate's degree would cost $45,858 less than the UW-Madison degree. [62]

This is not to imply that a UW-Madison degree is less valuable than a UW-Colleges degree. There are numerous reports touting the overall higher lifetime earning potential of a four-year graduate compared to a high-school graduate (estimates range from roughly $300,000-$1,000,000 over a lifetime).[63] This example illustrates that a sub-baccalaureate degree can be less expensive and take less time to attain while providing a pathway to a good paying job.

Further, directing students to postsecondary education does not mean that students will have to attain any degree. Certificate holders, students that earn credentials in a particular area of study, like computer science, do

not need to complete more than the necessary classes, yet can earn more than even some four-year degree completers.[64] Anthony Carnevale, Director and Research Professor of the Georgetown University Center on Education and the Workforce, writes:

> *Certificates hold tremendous promise for expanding our skilled workforce and are increasingly popular for a variety of reasons. They are relatively cheap — with net costs ranging from roughly $6,780 to $19,635…. For example, in computer and information services, male certificate holders can earn $72,498 per year — more than 72 percent of men with an associate degree and 54 percent with a Bachelor of Arts.[65]*

We can call attention to viable family-supporting alternatives for those students who may not have the capacity or desire to pursue a four-year degree. As the Georgetown studies show us, a majority of our students may want to seriously consider education alternatives. Education reform is a complicated issue and our challenges will not easily be fixed. Even if students do get the appropriate degree, there is evidence that they still won't have the necessary skills to meet the workforce demand. In 2006, the Conference Board, an independent business membership and research association that advises on public interest issues, conducted a survey of 400 employers across the country. Employers reported that students from all levels of education lacked necessary skills. The report concluded that, "Far too many young people are inadequately prepared to be successful."[66]

Deficiencies varied based on education level. High school graduates were deficient in the basic knowledge and skills of writing in English, mathematics, reading comprehension, written communication, critical thinking, and work ethic. Two and four year graduates were better prepared than high school graduates, but still deficient in writing in English, written communication, and leadership.[67]

In addition to the type of postsecondary degree a student pursues, the major plays a key role. For four-year degree students, the AP reported that students who graduated in the sciences or other technical fields were much less likely to be jobless or underemployed than humanities and arts graduates.[68] So even if we get students graduated from high school and into postsecondary education, if students don't choose a major with job opportunities, they may be in trouble. This report aligns with the College Board's conclusion that applied skills are more important to employers than basic knowledge skills, such as reading and mathematics.[69]

If we want to improve our education systems in Wisconsin, we need to understand where the challenges come from, which we will explore in the next segment.

ORIGIN OF THE CHALLENGE

While the skills gap arose in part from a changing job market due to larger economic and technological forces, Wisconsin should focus on what it can change: education. Wisconsin has three main public education platforms: Kindergarten through 12th grade (K-12), the Wisconsin Technical College System (WTCS), and the University of Wisconsin System (UWS). At all levels,

there is a disconnection between student achievement and available job opportunities. The root of this gap is in our curricula.

Some of this disjointed curriculum arises from the structure of our country's education system. In the late 1800s, there were no common standards for college admission, so high school educators wanted a more uniform system.[70] To that end, educators formed a commission that recommended a liberal arts education for all students.[71] Because of these uniformities, colleges and high schools worked together to set curriculum.[72] As the number of high schools grew rapidly, colleges could no longer keep up a collaborated curriculum. Instead, high schools and colleges began setting curriculum independently. This division deemphasized alignment.

The expanding high school enrollment led to educators realizing that not all students were capable of learning the same curriculum. Educators began to administer placement tests for teenagers and comprehensive high schools were created. These schools offered different options based on student aptitude. But this also meant curriculum became even more fractured. After World War II, aptitude tests, like the SAT, replaced subject matter standards. Despite some recent efforts to coordinate, the K-12 and college systems have never come back together to develop curriculum.

In addition to disjointed curriculum, the country recently broke the worker pipeline. In 1983, a national education commission released "Nation at Risk," which foretold a bleak future for the country. The study reported that, "about 13 percent of 17-year-olds were functionally illiterate, SAT scores were dropping, and students needed an increased array of remedial courses in college."[73] The report stressed the importance of a solid math and language foundation.[74] According to the Center for Advanced Human Resources Studies at Cornell University, "CTE [Career and Technical Education] could no longer be an alternative to strong academic skills. CTE students were now being required to develop their occupational skills on a strong academic foundation."[75]

Twenty-five years later, the Department of Education released a follow-up report: "A Nation Accountable." According to the report, we are worse off than we were in the 1980s. Spending per student has increased, but results have flat lined. Instead of a rigorous education for all students, courses have been watered down. The Commission stated that it was:

> *…disturbed by the easy courses and "curricular smorgasbord" available to high school students. Unfortunately, this [has] not changed greatly. Both easy courses and this smorgasbord still remain, with diluted content [hidden] behind inflated course names.*[76]

We made it look good instead of fixing the problem.

Reports like "Nation at Risk" brought to light the country's need for more highly educated citizens, a call that has been echoed again recently. This time, educators and employers need to collaborate with the job market in mind, so that we don't produce students who are ill suited to enter the workforce.

Why "One Size Fits All" Does Not Work

The "Nation at Risk" commission understood that the country was suffering from a lack of educated citizens. But instead of allowing multiple pathways to postsecondary education, we took a different course. People thought the best postsecondary option for all students was a traditional four-year college degree. Parents wanted educators to help their children achieve this goal. This in turn put pressure on educators to graduate more students.[77]

Educators also became concerned with college access, which came into conflict with academic rigor. If educators pushed students too hard, they might either drop out or not have the grades to get into a four-year school. So students graduated from high school, but many weren't prepared for college.

Another problem with the "four-year college for all" approach is that not all students have the capacity to pursue that option, whether for financial or other reasons. Encouraging students to pursue only one postsecondary educational option has results in thousands of students who do not complete high school in Wisconsin every year. Students realize early on whether they can succeed in the academic world; students who don't see a purpose to education drop out.[78]

Further complicating the situation is that even if a student completes high school and begins a four-year degree, there is no guarantee the student will finish the four-year degree. In 2005 in Wisconsin, the most recent year available for the data, only 55.5% of students graduated in four years.[79] While some of the remaining students do complete a degree, the extended time means higher cost and delayed entry into the work force.

55% of African American students that enroll in UWS schools need math remediation.

Part of the UWS dropout rate comes from admitting unprepared students. In 2007, UWS reported that 21% of its freshman class needed math remediation.[80] That number increased to 35% for students of color (American Indiana, Asian, Hispanic, and African America), and a shocking 55% for African Americans as a stand-alone population.[81] The report also showed that students that didn't complete remediation were more likely to drop-out.[82] These numbers show that even if students do complete high school, it is likely many students will find themselves without the capacity to complete a college degree. Those students may then be carrying educational debt while looking for a job. The average debt for a UW bachelor's degree graduate in 2010 was roughly $18,000. A strong majority of overall graduates, 71%, completed with some debt.[83] Perhaps the most pressing concern is that a four-year degree does not necessarily provide the skills to secure a job, especially as Wisconsin is trending towards jobs that require less educational attainment than a four-year degree. By 2018, the largest single occupation group will be blue-collar jobs.[84] The worker, and sometimes the taxpayer, will have to expend additional resources to reeducate students to make them suitable for the new workforce.

We are already seeing the impact of four-year degree students without job-ready skills. A recent Milwaukee Journal Sentinel article reported:

a surprising number of [WTCS] students in the past three years were 20-somethings who already had bachelor's degrees, but couldn't find good-paying jobs. So they went back to school for a more specific job skill set.[85]

For 2011, there were an estimated 34,000 students in WTCS who already have a four-year college degree. While graduates with two degrees may be very well prepared for the workforce, this means taxpayers of UWS and WTCS graduates are subsidizing their postsecondary education for at least six years.

As we see, Wisconsin faces many of the same challenges as the rest of the country, with some unique issues to address, too.

Challenges Facing Education in Wisconsin

In many respects Wisconsin has a solid education system. We consistently have one of the higher, if not the highest, high school graduation rates in the country, and have a well-regarded postsecondary system in both WTCS and UWS. Yet, Wisconsin's workforce is suffering due to the skills gap. We need to address this challenge directly and immediately to remain economically competitive. Some problems are system-wide, while others are unique to each level of education. We will now break down the challenges by level.

K-12

The importance of a solid K-12 education cannot be overstated. Wisconsin spends $22.5 billion per biennium on K-12 education, including property taxes, as well as state and local spending. K-12 has the most time with our children and sets the foundation for the rest of their lives. Wisconsin's K-12 schools should have two primary goals: (1) provide students the education they need to be successful in life, and (2) get students to complete high school. On both fronts, Wisconsin has done better than many states, but we must do more.

1. Provide students with the education they need to be successful in life

Wisconsin has consistently provided its students with an education at a level equal to or above the national average, according to the National Assessment of Educational Progress (NAEP). NAEP is "the largest nationally representative and continuing assessment of what America's students know and can do in various subject areas."[86] The State's test results show students are usually ahead of their national peers in math, science, and reading. According to NAEP, "In 2011, the average score of eighth-grade students in Wisconsin was 289. This was higher than the average score of 283 for public school students in the nation."[87]

Breaking down the NAEP data, however, also reveals where Wisconsin is failing. Fifteen percent of the students who participated in NAEP testing for fourth grade math skills were below basic levels. For "black non-Hispanic" students, that jumps to 45%. What's more, the NAEP tests show our students are getting worse as they progress through the system. So while 15% of the students were below basic level in fourth grade math, 21% were below basic in 8th grade math. This includes 62% of black students, which is 11% higher than the national average.[88] This disparity between our white and minority students is called the achievement gap. Wisconsin has the second

largest achievement gap in the country.[89]

Our numbers for the achievement gap are not getting better. According to NAEP, "In 2011, Black students had an average score that was 39 points lower than White students. This performance gap was not significantly different from that in 1990 (42 points)."[90]

We also see the shortcomings of our K-12 system in the remediation students need when they reach post-secondary education. In "Nation At Risk," we told our students to take a slate of college-prep classes - four years of English and three each of mathematics, science and social studies - which was supposed to prepare them for the rigors of a postsecondary education.[91] Yet, more than two decades later, only one in four students were adequately prepared for college in all four areas.[92] Another 19% nationwide weren't prepared in any of the four areas, the same percentage for Wisconsin in 2011.[93]

Further, Wisconsin has not adequately addressed our education challenges before students reach high school. Research shows that academic success can be accurately predicted in eighth grade.[94] In fact, according to the American College Testing Program (ACT):

> *Eighth-grade achievement is the best predictor of students' ultimate level of college and career readiness by high school graduation—even more than students' family background, high school coursework, or high school grade point average. Compared to eighth-grade academic achievement, the predictive power of each of the other factors we examined was small, and in some cases negligible.*[95]

Without a solid K-8 foundation, our students have little hope of succeeding in high school and beyond. If our NAEP scores tell us that one out of every five children is deficient in math in the eighth grade, we can reasonably conclude that those students will not be proficient in math when they graduate high school or attempt to enter college.

On top of the academic challenges, Wisconsin schools face declining enrollment. Between 2001 and 2006, almost 70% of Wisconsin's public K-12 school districts experienced declining enrollment.[96] This decline was not uniform across the state. Several school districts saw substantial increases in enrollment, mostly in urban areas. Statewide public school enrollment leveled out, experiencing only a slight decline (1.4% decline in K-12 students between 2001 and 2006).[97] Due to the way we fund schools, nearly 70% of our districts will experience decreased funding. Even if the sheer number of students can supply the workforce in our urban areas, our rural areas are in trouble. To tie into the bigger picture, as Jonas Prising, Executive Vice President and President of the Americas for Manpower Group, puts it, "Business strategy is immaterial without the people to carry it out."[98]

Getting our students 100% proficient in NAEP math and reading scores would be a major achievement, but even if we accomplished this, we are sorely lacking in a key area. A crucial challenge is that Wisconsin does not have a meaningful, uniform way of measuring student achievement. A high graduation rate and better than average NAEP scores are a start, but we know that many of our graduates aren't prepared for work or college. If 21% of students entering the UW schools need remediation in math, what do we imagine the number is for students that don't continue on, or, worse yet, drop out? Without

understanding whether students are actually gaining and retaining knowledge, we won't have an accurate picture of how schools are preforming. A student that completes a degree but is neither prepared for work nor continuing education should not be considered a success, no matter how many good grades that student accumulates.

For a more specific example, look at Milwaukee Public Schools (MPS). MPS's graduation rate has increased drastically, shooting up 18 points between the 1996-1997 and 2008-2009 school years.[99] Certainly, that is good news. But there's no evidence that the students are gaining more knowledge. ACT scores went down and statewide standardized test scores remained relatively unchanged. What's more, 78% of MPS students that enrolled at the University of Wisconsin-Milwaukee needed remedial education before they could take college level courses.[100] As we can see, while a graduation rate is one indication of performance, it is far from the whole story.

On a positive note, earlier this year, Wisconsin put out a Request For Proposal (RFP) for a statewide student data information system. An RFP is part of the state's formal procurement process. Currently, all school districts in the state are free to use whichever software program they choose to track student information. Some programs track different data or the same data in different ways. This makes it difficult to compare results around the state. A statewide data system will help Wisconsin determine not only what our students are achieving, but also what data we should be tracking if there is something missing.

Since we do not always have complete data, we need to look at other examples to shed light on our situation. One area of debate has been funding levels. While we know the amounts spent, we don't always know whether the funding is proportionate to results. For example, look at Milwaukee Public Schools (MPS), the largest district in Wisconsin and 33rd largest by enrollment in the nation.[101] MPS has 62 high schools.[102] The district has four schools that received gold, silver, or bronze medals in U.S. News's Best High Schools rankings.[103] In comparison, Texas's Dallas Independent School District (DISD) contains 34 high schools and is the 14th largest in the nation.[104] The district contains 13 schools that received gold, silver, or bronze medals in U.S. News's Best High Schools rankings.[105] DISD spends $9,073 per pupil.[106] MPS spent more per pupil than all but three East Coast districts in the 2009-10 at $14,038 per student.[107] (For fiscal year 2009, the most recent data available, Wisconsin spent $10,688 per pupil for K-12 public education.)

Juxtaposing MPS and DISD is not meant to be an apples to apples comparison. Instead, it should be part of the discussion of how to improve our education system.

	Dallas Independent School District	Milwaukee Public Schools
Graduation Rate	77.3%[108]	62.8%[109]
Population	Total: 157,174 Hispanic - 66.5% African American – 27.6% White – 4.6%	Total: 81,372 Hispanic - 23.1% African American - 56.1% White -14.9%
Limited English proficiency	35%	9.8%
Economically disadvantaged	86.1%	82%[110]
8th grade scores NAEP Scores (2011) **At or above basic**	Math - 64% Reading - 58%	Math - 41% Reading - 46%

2. Get students to complete high school

In addition to providing students with the skills they need, Wisconsin's second goal for our K-12 students should be 100% graduation rate. Wisconsin often ranks best in the country for high school graduation. U.S. News and World Report wrote that Wisconsin had the nation's highest graduation rate of 2009 at 90%.[111] As good as that number is, Wisconsin still produces more than 14,000 kids every year without a high school diploma.[112]

The consequences of dropping out of high school can have a multi-generational effect. High school dropouts have a very difficult time finding jobs. A 2008 Alliance for Excellent Education (AEE), a national policy and advocacy group, study explains the cost is much more than that:

> *Individuals who fail to earn a high school diploma are at a great disadvantage, and not only when it comes to finding good-paying jobs. They are also generally less healthy and die earlier, are more likely to become parents when very young, are more at risk of tangling with the criminal justice system, and are more likely to need social welfare assistance. Even more tragic, their children are more likely to become high*

school dropouts themselves, as are their children's children, and so on, in a possibly endless cycle of poverty.[113]

In Wisconsin, most of our dropouts are from urban areas.[114] Our dropout rates are particularly troubling among minorities. The class of 2008 had an 81% overall graduation rate, but only a 51% and 56% graduation rate for blacks and Hispanics, respectively.[115] We are failing our minority students at a drastically higher, and quite frankly unacceptable, rate.

Despite Wisconsin's strong standing in high school graduation rankings, we cannot ignore the students we are failing. Jonas Prising, Executive Vice President and President of the Americas for Manpower Group, called the high school dropout rate "the most important issue Wisconsin should address."[116] We know without a high school education, students are less likely to make a family-supporting wage and more likely to end up incarcerated.[117]

High school dropouts may not only hurt themselves, but also the economy. According to the Alliance for Excellent Education, "over 14,200 students did not graduate from Wisconsin's high schools in 2010; the lost lifetime earnings in Wisconsin for that class of dropouts total $3.7 billion."[118] That's $3.7 billion dollars that could have gone into our economy and generated tax revenue.

The challenges facing K-12 education do not entirely arise from within the system. There are many situations beyond the educator's control. But many dropouts express reasons for leaving that could have been prevented. Most students already realize the importance of a high school diploma. Roughly 80% of American students agree that a high school diploma is important for success in life.[120] Of those that dropout, nearly half leave because classes aren't interesting.[121] When asked what could keep them in school, 81% asked for real-world learning opportunities.

Wisconsin has some real world learning opportunities available, but the dropout rate and skills gap show us that supply is not meeting demand. Further, some real world learning opportunities have declined. This kind of education includes programs like Career and Technical Education (CTE). Many generations would call this category "shop class," but CTE also includes classes like home economics and accounting. Wisconsin has some excellent CTE programs in a few high schools, but statewide spending has not increased to match job market needs. **Statewide, only 2.6%, or $280 million, of our $11.5 billion annual K-12 expenditures go towards CTE.**

Another option to keep students engaged is dual enrollment. Dual enrollment allows high school students to earn high school and college credits at the same time. This not only brings down the cost of college education for the students, but also gives them an incentive to continue their education. It is easier for students to go to college if they already have a pocket full of credits, a better idea of what to anticipate, and are already vested in their postsecondary education. WTCS has been involved in dual enrollment for decades. Just this year, the Department of Public Instruction (DPI - our K-12 administration) and UWS announced that the two systems will partner to offer dual enrollment courses.

Increased dual enrollment is an excellent idea if there is follow-through. A recent Milwaukee Journal Sentinel

article pointed out what happens to these well-intentioned initiatives without any follow-through:

> *The report arrived with fanfare. Written with input from faculty, students, staff and elected officials, it aimed to launch the University of Wisconsin System into the 21st century with a bold new plan, including a guarantee of a cap and gown in four years at all campuses.*
>
> *The UW System would work with high-schools so students could take college courses while still in high school. A high-performing student could graduate from high school in three years and head off to college early to earn a degree faster.*
>
> *The year was 1996.*[122]

The renewed attempt to increase dual enrollment is under new leadership that may be able to help this effort continue more successfully than the past attempt.

DPI and the Governor's office have taken steps to improve education in the past couple years. The "Read to Lead" taskforce has brought attention to the importance of learning to read at a young age. Wisconsin is also instituting new Common Core Standards (CCS). DPI sets the state's standards, while each school board decides curriculum. The CCS seek to avoid some of the mistakes made in the 1980s when we began offering a smorgasbord of classes. Instead, CCS seek to teach a deeper understanding of topics. DPI Superintendent Tony Evers has also worked on incorporating CTE into the new standards.

The new reality is that K-12 education will have to face its challenges without much, if any, additional financial support. A new survey by the Thomas B. Fordham Institute, a non-profit education think tank, found that 48% of respondents want their school districts to cut costs by making "dramatic" changes. Even if a school district faces a substantial budget deficit, only 11% of people would favor a tax increase to correct the finances.[123] We will explore options for improving K-12 education within these constraints in the Solutions segment of this report.

WISCONSIN TECHNICAL COLLEGE SYSTEM – WTCS

Wisconsin has a highly regarded technical college system. In a 2010 national survey of community colleges, two WTCS schools ranked in the top ten (Wisconsin Indianhead Technical College was sixth and Chippewa Valley Technical College was tenth).[124] More importantly, despite a tight job market, WTCS graduates are still being hired. WTCS conducted a survey of its 2011 graduates that reported 88% were employed within six months of graduation, 71% of which were employed directly in their field of study.[125] This number is much higher than the 44% of 2006-2010 four-year recent college graduates that reported working very closely in their field of study.[126] Further, 86% of respondents said they work in Wisconsin, which means the taxpayers are getting a return on their education investment.[127]

Moreover, WTCS graduates are being paid a living wage. The median salary for all new graduates is $31,822, and graduates with associate degrees receive a median salary of $36,033.[128] Some programs have a starting

median wage of about $60,000.[129]

WTCS is able to achieve these results while still being accessible to students. A 2012 report by the Institute for a Competitive Workforce (ICW) gave WTCS an "A" in accessibility and success, beating out all of our neighboring states.[130] This means despite WTCS's open door policy to students who may not be academically inclined, the colleges are able to produce results in the form of jobs.[131]

Despite these promising numbers, some Wisconsinites regard WTCS as the lesser postsecondary option; however, the 34,000 students in WTCS who already have a four-year degree might not think this is the case. Wisconsin has an extensive technical college system with 16 campuses. Those campuses offer a variety of services: from courses to complete a high school equivalency diploma, to technical certificate programs, to liberal arts college transfer. Many people are starting to take notice of WTCS as an affordable pathway to a good-paying job.

Moreover, WTCS has actively focused on providing students the education they need rather than measuring time spent in a seat. One way WTCS has done this is through its Credit for Prior Learning policy, adopted in 1999.[132] This policy allows technical colleges to grant credits for knowledge students already possess. The original policy in part mandated that WTCS:

> *shall provide maximum recognition for work completed through nationally or regionally accredited postsecondary institutions or other education, training or work experiences pertinent to the student's new educational programming and the technical college's graduation requirements.*[133]

Taking this concept one step further, in 2010 WTCS adopted a more liberal policy. Students may now receive credit for qualifying registered apprenticeships, on the job experience, and passing nationally recognized, competency-based skills tests.[134] These policies are much more focused on actual learning than the more traditional model of the classroom. Knowledge-based credits make much more sense, especially in light of the skills gap.

Despite these successes, WTCS is facing its own challenges. One area of concern is the cost. WTCS has an annual budget of roughly $1.6 billion per year, a majority of which comes from property taxes. WTCS is one of the more expensive community college systems in the country. ICW gave Wisconsin's two-year institutions (which includes WTCS) an "F" in efficiency and cost-effectiveness.[135] The cost per degree completion was $71,226, with state and local funding per completion of $57,071, landing us among the highest ten states.[136] All of our neighboring states scored better.[137]

The cost per degree completion was $71,226, with state and local funding per completion of $57,071, landing us among the highest ten states. All of our neighboring states scored better.

Rising costs may be a result of the variety of jobs WTCS provides to the state. Through legislative action,

Wisconsin has tasked WTCS with a broad set of objectives. Chapter 38 regarding WTCS states:

> *The legislature finds it in the public interest to provide a system of technical colleges which enables eligible persons to acquire the occupational skills training necessary for full participation in the work force; which stresses job training and retraining; which recognizes the rapidly changing educational needs of residents to keep current with the demands of the work place and through its course offerings and programs facilitates educational options for residents; which fosters economic development; which provides education through associate degree programs and other programs below the baccalaureate level; which functions cooperatively with other educational institutions and other governmental bodies; and which provides services to all members of the public.*[138]

This section alone is a full plate of objectives. On top of that, the statute states WTCS must provide customized training to business and industry partners, contract with secondary schools to provide opportunities for high school students, and provide a collegiate transfer program, among other things.

Having so many tasks has stretched WTCS's resources. For example, WTCS spends about 8% of its annual budget on providing non- postsecondary services, including GED courses. WTCS spends another $14-30 million of its budget on liberal arts college transfer. Before any technical education even comes into the picture, WTCS has already spent millions.

WTCS also has a complicated governance structure. The structure makes it difficult for the system as a whole, and sometimes individual schools, to respond to the needs of the local people. In turn, local taxpayers become frustrated, as roughly 60% of WTCS funding comes from their property taxes.

WTCS also has a low completion rate for students. Only about 30% of WTCS students that begin a course of study actually complete the intended program.[139] This is for a variety of reasons. Like our K-12 system, WTCS is not measured accurately. For example, if a student is hired before he completes his WTCS program, he is counted as a dropout, even if it was his education that got him a job. Further, to get federal financial aid, students need to enroll in a degree-seeking program. Students may choose to enroll in a WTCS program, take the classes they need, and then leave. This includes students who transfer into UWS from another program, which may have been their intention since the beginning of their education. These students also count as incompletions for WTCS. If the point of the system is to get students the education they need to work, then it doesn't make sense that the data would punish the system for achieving its end. This is not to say that all students who leave WTCS before completing their programs are successful. Since that data isn't measured, we can't know for sure. The best data we have from WTCS comes from its own follow-up survey. Unfortunately, what we do know is that Wisconsin ranks fifth in the nation for cost of two-year postsecondary students who start school, but do not return for a second year.[140] The state loses about $35.6 million per year on these students.

Finally, although the technical colleges have business advisory boards, some schools are not meeting the job

needs in their areas. Most technical college graduates remain close to the school from which they graduate. This should make the colleges' task easier: match classes offered and skills taught with the needs of local employers. Some schools do this very well while others fail to meet employer needs. For example, according to the Metropolitan Milwaukee Association of Commerce, Milwaukee is the country's second-largest per capita manufacturing city after San Jose.

For years, Milwaukee Area Technical College (MATC) has not enrolled or graduated enough welders to meet the area's needs. Metropolitan Milwaukee Association of Commerce recently cited Economic Modeling Specialists Int. (EMSI) data that there are over 5,600 manufacturing production positions open in the Milwaukee region. Approximately 757 of these positions are jobs that require a welding or machining skill. In just these two skill sets, EMSI projected that by 2018 the Milwaukee region will need to fill an additional 1,860 openings. Between 2008-2010, MATC reports that of the 167 students enrolled in its two-year welding degree program, only 15 graduated (9%). During the same period, 469 students enrolled in the one-year welding program, but only 93 graduated (20%).

As the above statistics illustrate, some schools are not able to meet businesses' needs in their regions. This is unacceptable because the taxpayers are not getting what they pay for and students aren't being educated for the jobs in their areas. Of course there are substantial challenges. In the MATC example, we know not every student wants to, or even can become a welder. However, the graduation rate is very low.

Job projections show that a majority of Wisconsin's career opportunities will require some postsecondary education, but less than a four-year degree. Without an increasingly functional and efficient technical college system, we may not be able to meet those workforce needs.

UNIVERSITY OF WISCONSIN SYSTEM – UWS

The University of Wisconsin is a highly regarded post-secondary education system. It consists of 13 four-year universities, 13 freshman-sophomore UW College campuses, and statewide UW-Extension.[141] The flagship school is UW-Madison. UWS serves more than 181,000 students each year.[142]

In addition to its long-standing traditional education, UWS has recently made major innovative steps in offering online education. In June 2012, UWS announced that it is developing an online UW flexible degree. This degree is partly modeled after the non-profit Western Governor's University (WGU), an online school that has gained support by offering high-quality online education at very affordable prices. Like WGU, the UW degree offers a competency-based degree model that will transform higher education in Wisconsin.

The UW flexible degree is innovative and the first of its kind offered by a public university in the United States. Students will be able to gain access to education in any way they choose: online classes, real world experience, reading books, etc. If a student can pass a competency-based online test, the student will get credit. Students will be able to choose from a number of different models, including a six-month "all you can eat" option. During that time, students can take as many classes and tests as

they wish for a flat tuition rate (TBD, but it will likely be based on the WGU pricing model and should be cost effective). Students can also choose to take more traditional classes depending on what suits them.

Whatever model students choose, this degree can change the face of education in Wisconsin. Like the WTCS program that gives students credit for demonstrated knowledge from real world experience, UWS is acknowledging that education comes in many different forms. A student could feasibly learn what he wanted for free, either online or using library resources, sign up for the six-month option, and earn an entire bachelor's degree in that short time. We don't anticipate this as a normal method. But a system that is flexible enough to offer that option has so many possibilities for our students, and by extension, businesses as those students enter the workforce.

The UW flexible degree will also help non-traditional students who currently find themselves with fewer educational options. In Wisconsin, there are 17,000 students enrolled in for-profit online schools. UWS recognized that the needs of these students were not being met and stepped up to help. Many working parents who can't afford to spend extra time away from their families will be able to further their education without breaking the bank.

Of course this program can also help fill the skills gap. For example, Wisconsin has a shortage of welders. A great deal of welding needs to be taught with hands-on instruction in a lab. But many of the courses needed to complete a welding certificate, like a math class, may not have to happen face-to-face. A student could attend a welding class when it best fits in his schedule and complete the other classes at home. This could speed the time to graduation, provide the student with the skills he needs, and provide employers the skilled laborers they need.

UW-Madison and UW-Milwaukee are also research facilities, with UW-Madison being the more financially prominent research facility. In 2010, UW-Madison spent more than $1 billion on research, making it the fourth largest research institution in the country.[143] However, the school has struggled to turn that money into licensing deals and start-up businesses.[144] Nationally, the school ranked 11th for options and licenses executed and 14th for the number of start-ups it created in fiscal 2010, which was the most recent data available.[145] University of Michigan, which had comparable spending, produced ten start-up companies to UW-Madison's five.[146]

Another challenge for UWS is the increasing time it takes for students to complete a degree. The four-year schools don't usually turn out to be four-year schools. The average time to completion for a UW four-year student is actually 4.79 years. The reasons for increased time to completion vary. Many students switch majors or choose to spend more time enrolled. For example, some students take time away from requirements to study abroad. However, we have heard from other students that for reasons beyond the students' control, they aren't always able to complete the classes they need for their major. This means the state and students may be paying for more time at the university than they need.

…the U.S. was dead last for the percentage of students who completed college once they started it — even behind Slovakia, a country that's only been sovereign since 1992.

UWS, like WTCS, also faces a degree completion problem. For students starting in the fall of 2005, UW System (excluding UW-Colleges) had a four-year graduation rate of only 29.3%.[147] After six years that rate climbed to just over 65%.[148] That means that after six years, 35% of students that started at UWS had not actually completed a degree. The state spent six years' worth of subsidies for some four-year degrees, if the students completed the degree at all. Students who drop out of postsecondary school cost the state a lot of money. In the fall of 2009, nearly 20% of students that started at UWS didn't return.[149] Over the five years from 2003-2008, "students in Wisconsin who began college but did not return for a second year received a cumulative $23.4 million in federal grants and a cumulative $140.9 million in state expenditures."[150] That's roughly $28 million per year.

For the 2007-2008 academic year, Wisconsin spent an estimated $66 million on remediation at the postsecondary level.

Like WTCS, UWS also faces extra costs for remediation. For the 2007-2008 academic year, Wisconsin spent an estimated $66 million on remediation at the postsecondary level. Without the cost of that remediation, students could have earned an additional $41 million. That means Wisconsin lost $107 million on teaching students skills they already should have cultivated.[151] Another hurdle to efficient education is that UWS lacks a statewide credit transfer or articulation program. Some UWS institutions accept associate degrees earned in either WTCS or other UWS schools as general education requirements, but not all institutions have these agreements. Under the current setup, students need to regularly check if the agreements are still applicable at the time they choose to transfer.

Students must also be mindful if individual classes transfer, as well. Currently, if students want to know whether earned credits will transfer, they must follow a guide on the transfer information system website. The website is helpful for students who plan on transferring and know which school they want to attend. However, if students decide a year or two into their program that they would rather attend another school, it could be too late to plan out their courses accordingly. This could mean repeating classes of knowledge that has already been gained. The current system costs the students time and money, the schools additional resources, and the taxpayers additional subsidies.

Finally, UWS needs a better way to measure student success. A national study by Rutgers University found that even when students earn their four-year degree, recent graduates are "far from a secure career path with a full time job and benefits."[152] The report reflects interviews with 444 four-year college graduates from the classes of 2006 through 2011.[153] Of those students, "only 51 percent were working full time, 20 percent were attending graduate or professional school and 12 percent were either unemployed or employed part time and looking for full-time work."[154] The report also concluded that students

that had real world experience, like internships, were more likely to be earning a higher salary. We were unable to find a recent graduate survey to shed more light on UWS student outcomes.

UWS needs to focus on preparing students for their next steps in a timely manner. Delayed entry into the job market and not educating students for the workforce both contribute to the skills gap. Solutions to address these challenges are discussed in the Solutions section of this report.

SOLUTIONS

WORKFORCE DEVELOPMENT AND ECONOMIC DEVELOPMENT

Wisconsin's workforce and economic development go hand-in-hand. One can help the other. Regional alignment is critical to advance economic, workforce, and educational initiatives. We have found that there is either occasional or no formal collaboration between the various economic development organizations in Wisconsin. If we are serious about driving improvements in our state, these groups must coordinate. To that end, Wisconsin needs to organize our efforts around the nine main economic regions, with the goal of coordinating education and workforce development to drive economic development.

There is also great economic development potential through our UW research facilities, mainly UW-Madison and UW-Milwaukee. Their research has the potential to turn into jobs. Although the system brings in a large amount of money, over $1 billion per year, UW lags behind similar schools that turn research money into start-up companies, which in turn generates new economy/jobs. Recently, the Wisconsin Economic Development Corporation (WEDC) and UWS hired a person to help facilitate more start-ups. Although new data reporting requirements created by the legislature touch on how UWS should report some of this economic activity, we think UWS and WEDC should submit an annual report on their progress in increasing startups through research.

In the meantime, Wisconsin needs timely, accurate job numbers to form the basis of policy decisions for EDOs and other groups. These numbers should come from new Labor Market Information (LMI) software. The State should provide this software so that all groups have a common, reliable starting point to discuss workforce needs in the state. This will also save money, as many EDOs already purchase LMI software independently.

Once we have accurate job numbers for the State's nine economic development regions, our Department of Workforce Development (DWD) should work with the state's nine Economic Development Regions to fill job needs by region. In order to accomplish this, Wisconsin will need to designate extra funds to workforce development. This is because roughly 90% of Wisconsin's workforce funding currently comes from the federal government. Unfortunately, Federal funding is insufficient and inflexible. As it will take time to implement LMI software, DWD should use the data being collected by Competitive Wisconsin to arrive at a reasonable budgetary request to be implemented in the next State budget. That money should be administered as competitive grants to regions.

Further, all eligible workforce development programs should be coordinated by DWD. Currently, nine state agencies administer workforce development funds, which leads to administration inefficiencies and a duplication of services. Coordination will save the state money and provide a clear source for workforce development services.

DWD should also look at the administration of Unemployment Insurance (UI). There has been some fraud in the system that must be weeded out.

Finally, Wisconsin should institute an easy to understand form of Evidence-Based Budgeting (EBB). The Pew Center on the States has developed free software that creates a stock-like portfolio for legislators regarding the effectiveness of programs. For example, the software shows that if a state invests $1 million in a specific workforce development program, that the investment is 90% likely to produce a 100% return on the investment. This type of easy to understand analysis could make it much easier for policy makers to understand whether programs are effective and efficient. Ultimately, that will allow the state to use taxpayer money in the best way possible.

REGIONAL ALIGNMENT

Regional alignment is critical to advance economic, workforce and educational initiatives. We have found that there is either occasional or no formal collaboration between the various entities that pertain to these disciplines in the economic regions of Wisconsin. This includes our larger nine Economic Development Regions (EDRs), Workforce Development Boards (WDBs), small business development boards, and Cooperative Educational Service Agencies (CESAs) to name a few. In all, there are more than 600 groups that included economic development as part of their mission.[155] This includes the previously mentioned organizations, as well as non-state groups like Chambers of Commerce. We will refer to all of these groups collectively as Economic Development Organizations (EDOs).

If we are serious about driving improvements in our state, it is essential that we have more consistent coordination among EDOs. As the state does not have control over all EDOs, we need to create an incentive for the groups to work together. For this coordination to happen effectively, each region needs one point group. To that end, Wisconsin needs to organize our efforts around the nine main economic regions, with the goal of coordinating education and workforce development to drive economic development. The nine economic regions are: Momentum West, Grow North, Centergy, Opportunity North (previously Northwest RMG), New North, 7 Rivers Region, Prosperity Southwest Wisconsin, Milwaukee 7, and Thrive (see Chart 1).

These nine regions were established to align similar economic initiatives. For example, the Milwaukee 7 region has a manufacturing emphasis, where New North focuses more on forest product industries. These regions should lead both economic and workforce development regional initiatives with the support of the various EDOs in their geographic area. This is difficult, as the geographic boundaries of EDOs do not specifically align with the development regions. Additionally, each entity is managed by a separate governance structure.

The 11 workforce development boards are generally aligned with the nine development regions with the exception of southeastern Wisconsin where three development boards are in the M7 economic region (see Chart 2). The 16 technical colleges similarly align with several of the development regions with a few exceptions (see Chart 3). The 16 CESA districts correspond in a large part with the 16 technical college districts so there is similar alignment between these entities (see Chart 4). By and large, the 424 school districts fall within the geographic boundaries of the development regions (see Chart 5). Finally, the UW system schools have less defined geographic boundaries but as they exist, they create a challenging profile (see Chart 6). This map illustrates that some areas of the state will have to rely more heavily on other economic development groups as the UW presence is overlapping in some areas of the state and sparse in others.

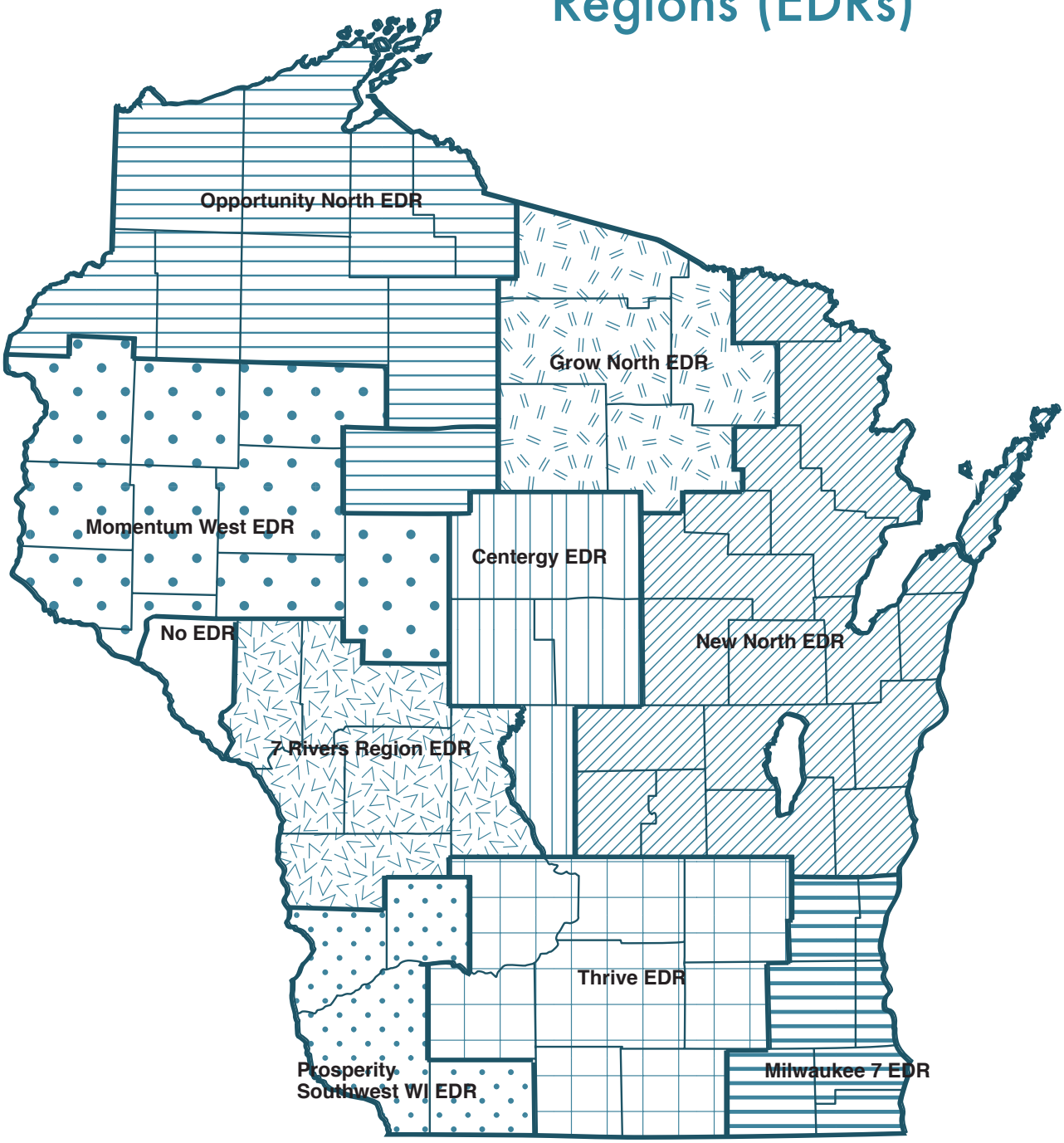
We recommend that the 600 plus economic development organizations coalesce around the nine economic development regions. EDOs should be realigned to fit within less flexible boundaries, like the WTCS system. Legislators and the Wisconsin Economic Development Corporation should work together on this task.

Once the maps are realigned, the nine EDRs need to take the lead in economic development, workforce development, and job training. EDRs should work with the various educational systems to fill the job needs in the region. To encourage coordination, EDRs should apply for competitive grants from the state to close the skills gap. The regions will suggest initiatives that coordinate the efforts of their economic partners. If a region has a good idea to fill skills gap needs, the state should match the funds. Matching the funds encourage regions to share resources and pull in more partners. In return, Wisconsin should see a bigger return on its investment.

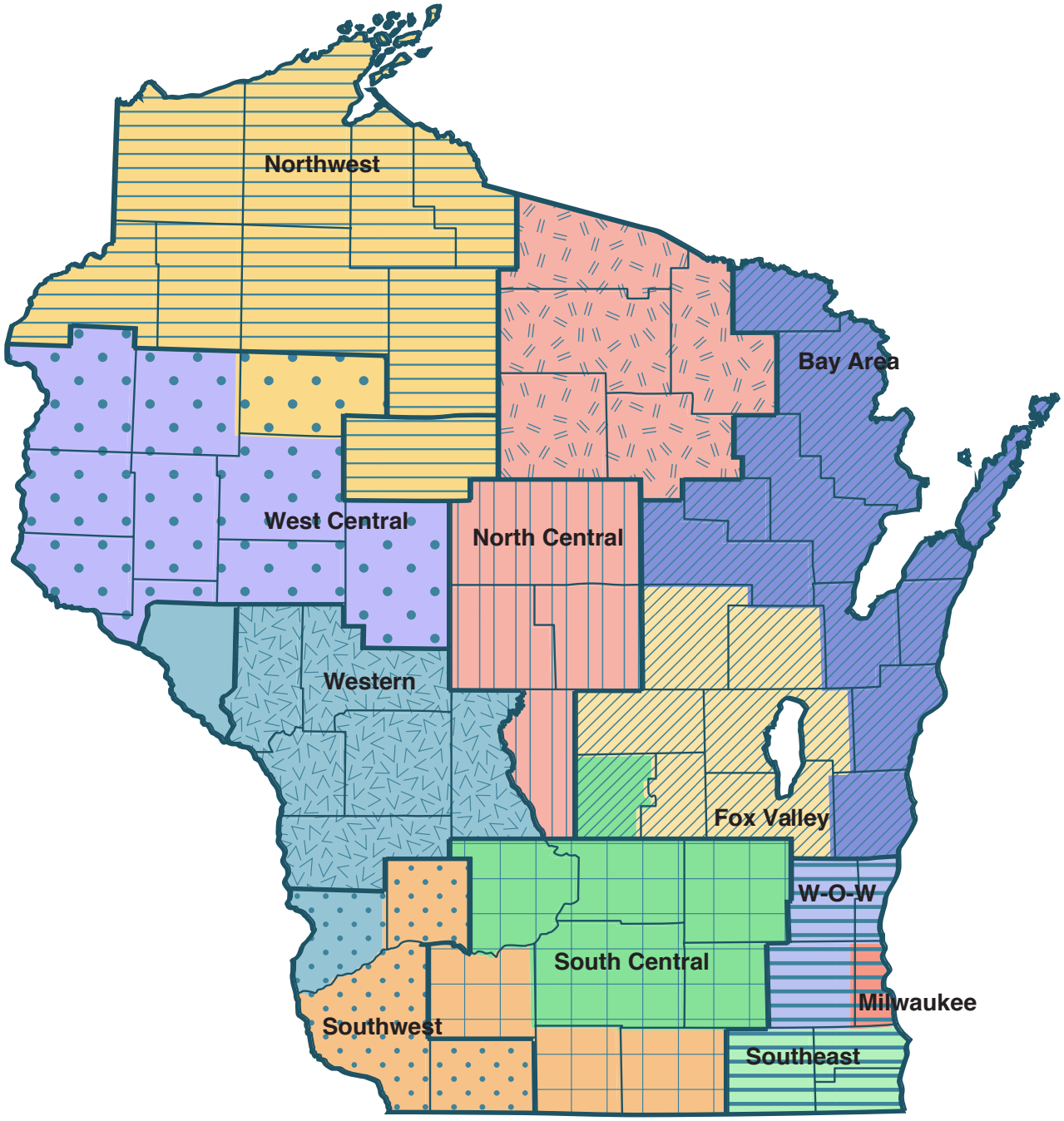
We further recommend that an economic development group needs to be represented on all economic boards for which it qualifies. For instance, if Moraine Park Technical College is split between the New North and Centergy development regions, then Moraine Park needs to actively participate on both boards.

Bottom line, we are attempting to align very disjointed education, workforce, and economic development entities around the state. Each of these organizations shares economic development as at least part of its mission. These groups need structural centers of shared initiatives, which should be the nine economic development regions. Wisconsin should encourage coordination between these groups by awarding matching-fund grants aimed at filling the skills gap to economic regions. Finally, grant recipients must demonstrate good outcomes as determined by DWD to qualify for future funding.

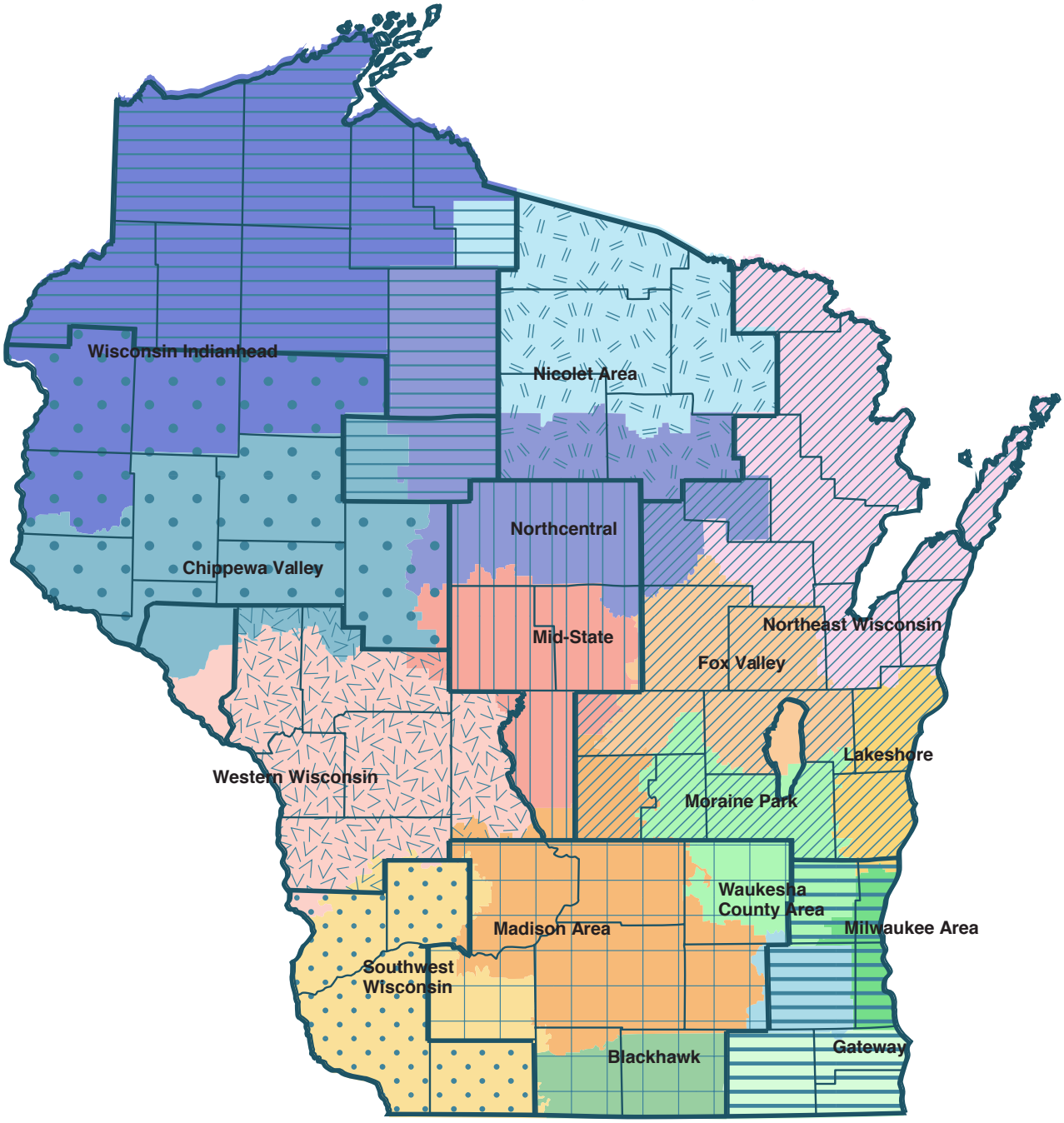
Economic Development Regions (EDRs)



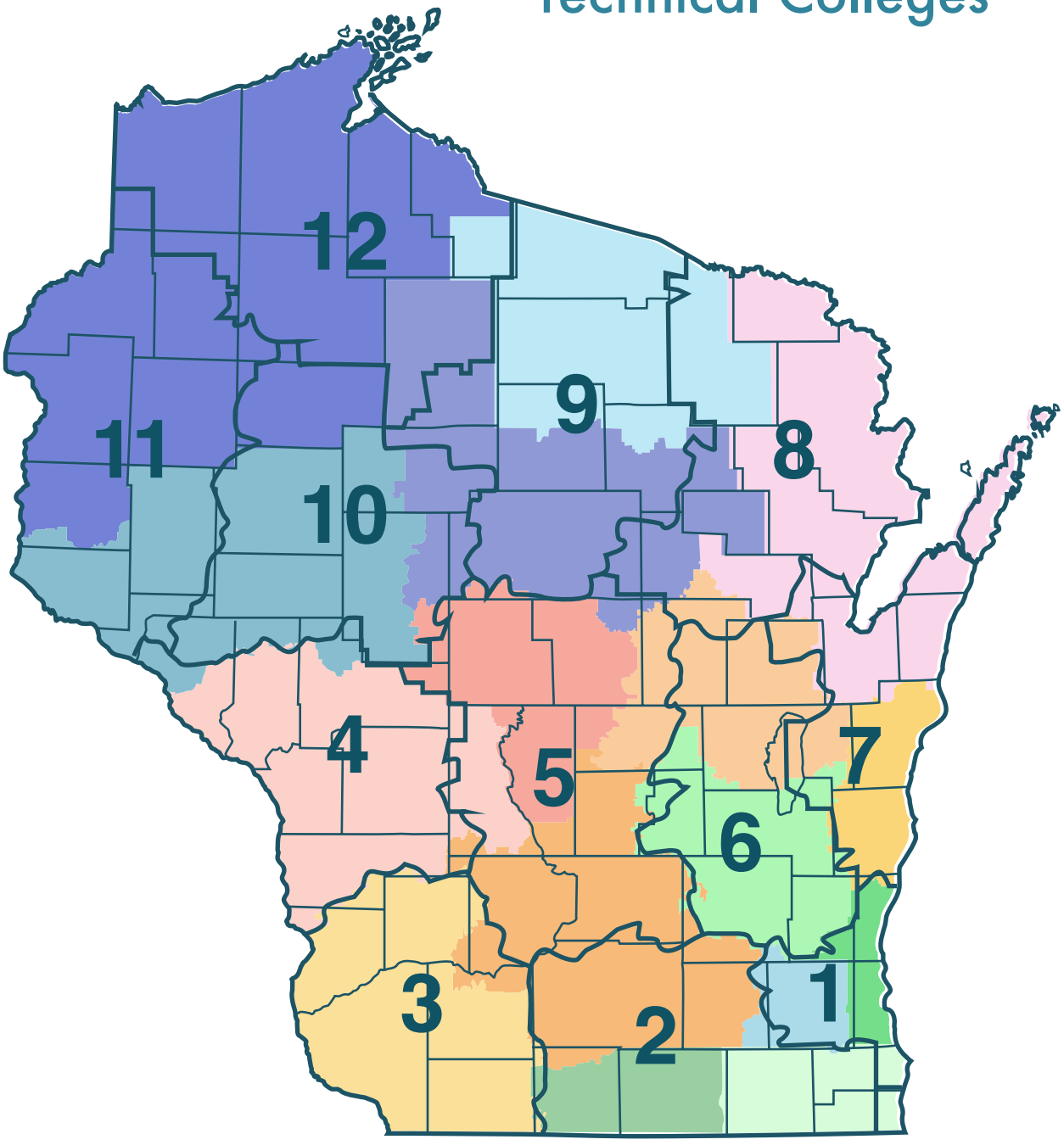
WBDs and EDRs



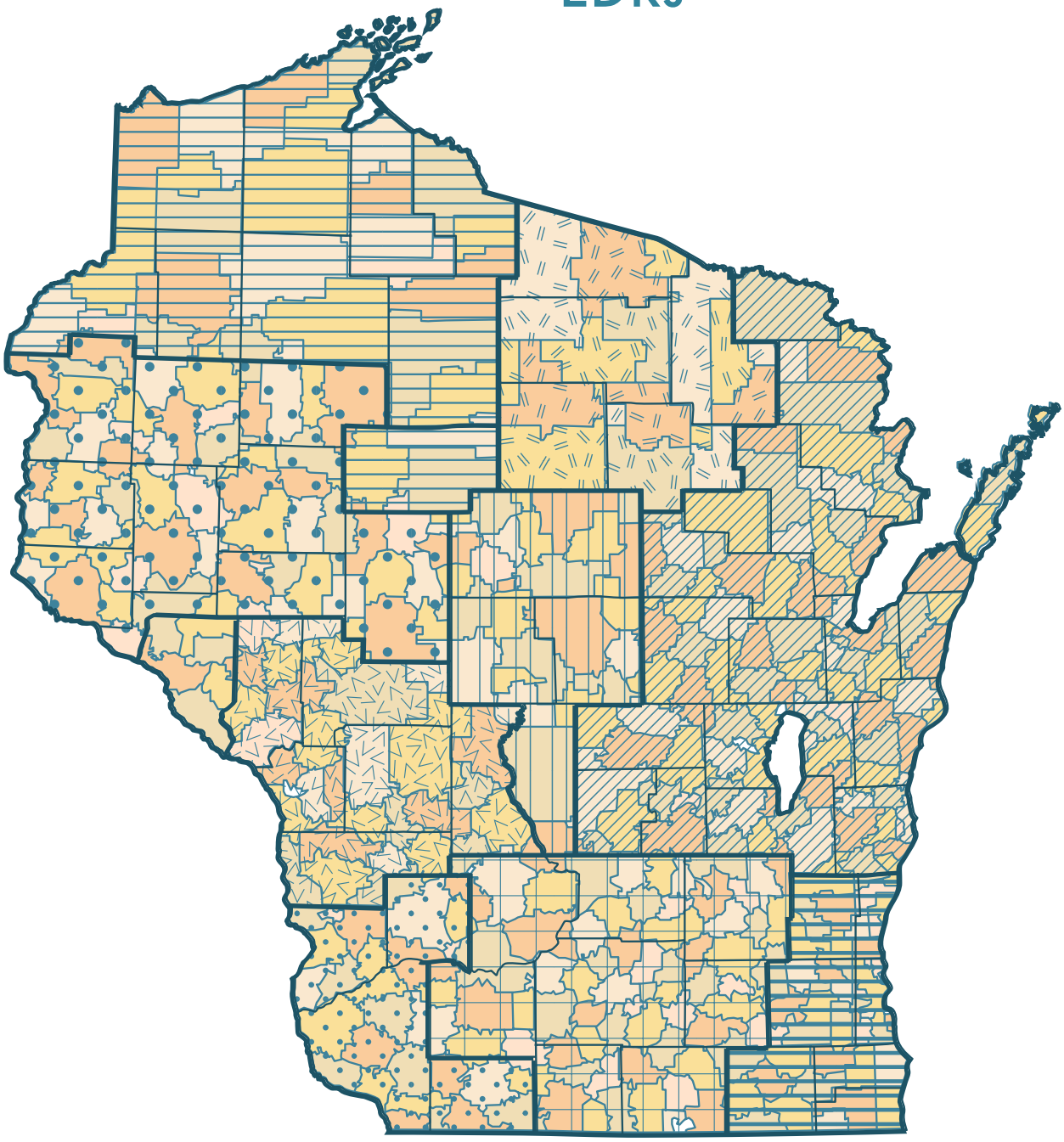
Technical Colleges (WTCS) and EDRs



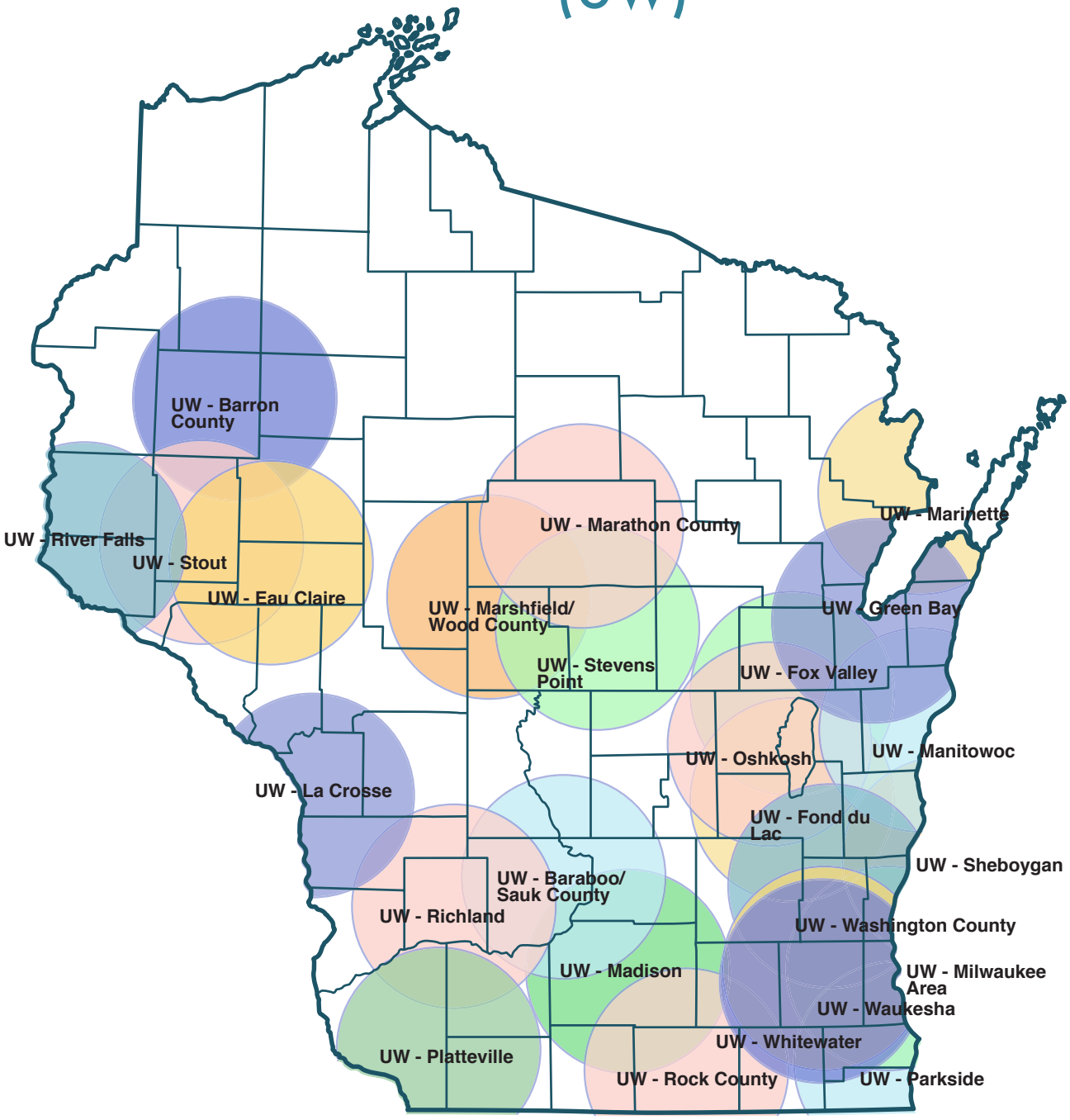
CESAs and Technical Colleges



School districts and EDRs



University of Wisconsin (UW)



TURNING RESEARCH INTO JOBS

The two largest public research universities in Wisconsin are UW-Madison and UW-Milwaukee. Both draw money into the State. In 2010, UW-Madison spent more than $1 billion on research, making it the fourth largest research institution in the country.[156] The money is mostly from grants. While research funding is a good thing, UW-Madison has struggled to turn that money into licensing deals and start-up businesses.[157] Nationally, the school ranked 11th for options and licenses executed and 14th for the number of start-ups it created in fiscal 2010, which was the most recent data available.[158] The University of Michigan, which had comparable spending, produced ten start-up companies to UW-Madison's five.[159]

Turning research into startups is important for a few reasons. First, it has the potential to diversify the businesses in our state. Second, these start-ups can create jobs. For example, if a UW school is able to develop a new medicine, like when UW-Madison created Warfarin, the money from the start-up would not only produce direct drug manufacturing jobs in the State, but could help with spin-off industries. These start-ups have the potential to represent a much-needed economic boost to the state.

UW-Madison is associated with the Wisconsin Alumni Research Facility (WARF). WARF patents the discoveries of UW-Madison researchers and "licenses these technologies to leading companies in Wisconsin, the United States and worldwide."[160] The commercialization of intellectual property has "fostered the formation of at least 283 startup companies," which contribute approximately $2 billion to the State's economy.[161] This is good, but as the comparison between UW-Madison and the University of Michigan shows, there could be improvement (10 in Michigan, five at UW-Madison).

The universities have made progress in this area. UWS and WEDC recently jointly hired "an associate vice president for economic development to strengthen relationships between the UW System and businesses statewide, and to connect researchers among the various campuses to drive statewide economic growth."[162] This hire will also allow for collaboration between the UW and other State agencies.

Another good example is that UW-Milwaukee and UW-Madison have partnered with Wisconsin's largest company, Johnson Controls, to create a research center for batteries for high-tech cars.[163] The collaboration aims to attract engineers and put "southern Wisconsin on the map" as a global energy-storage research facility.[164] This project represents the kind of strategic investment and resource sharing we would like to see grow to scale around Wisconsin.

We request that WEDC put out an annual report comparing the number, type, and location of start-ups generated from UWS research money. We further request that UWS report on the number, scale, and type of business collaborations it is participating in throughout Wisconsin.

REAL-TIME LABOR MARKET INFORMATION (LMI)

Since the recession and the last gubernatorial election, the goal for Wisconsin has been the creation of more jobs. Our current measures of the workforce are subject to significant volatility and frequent revision, relying on

sampling techniques to attempt to account for job gains and losses. To have an honest starting point for debate and to rally Wisconsin around a common goal, we need one real-time set of jobs data. This is the starting point for fixing workforce development in Wisconsin.

Recently, new software companies have developed real-time labor market data. In addition to providing a common data set, the software could potentially save the State millions of dollars. For these reasons, **Wisconsin needs real-time Labor Market Information (LMI), paid for by the state that is available to all citizens. This information should be housed at the Department of Workforce Development.**

The Brookings Institute describes LMI as, "market intelligence derived from the analysis of job postings and resumes placed into public and private labor exchanges. It is real time because it can be based on data pulled from the Internet on a daily basis. It is labor market intelligence because it can provide indications of supply and demand trends, emerging occupations, current and emerging skill requirements, and market-based demand for education and certifications."[165] Wisconsin could use this software to provide current job needs to everyone from job seekers (including people on unemployment) to policy makers. The state could also use the job projections software to determine future requirements and use that data to inform policy debates.

LMI software is relatively new and has developed for several reasons. One reason is that internet job postings now account for 70% or more of all openings.[166] In some markets, like retail and construction, that number jumps to 95%. LMI software uses a "spidering" technique, which is a process where the software collects job postings from job listing services as well as directly from company web pages. The software then de-duplicates listings to arrive at an accurate number.

Even if jobs aren't posted on the internet, new software now has the capability to fill those gaps in the data to give accurate job projections. The cost of this software has also been decreased, making it a viable option for states.

This software could help Wisconsin in both the short and long term. In the short term, it could assist unemployed or underemployed people to match skills accurately with jobs. For example, the State of New York that implemented an LMI software package at the end of 2011. Within the first four months of use, 25,000 New Yorkers had been hired using the service.[167]

This software is different from widely available, free websites, like Monster.com. Those websites are job posting boards. The new software goes beyond that to help job seekers craft resumes and apply for jobs that match their skill sets. If a person applies for a job and is rejected, the software will help the applicant understand why they were rejected. For example, let's say an applicant applies for a job as a machinist in Marinette, WI, but isn't hired. The software can give the applicant profiles of those individuals that were hired, allowing the applicant to see what skills machinist companies in Marinette value. If the software shows that machinists hired in Marinette have taken a college level algebra class and the applicant has not, the software will show the applicant nearby schools where he or she can take that class.

The machinist example is an illustration of the bridge between our short term and long-term goals. LMI software can provide short and long term career and academic

counseling. Short term, we want to get people back to work. LMI software is capable of offering career guidance for the immediate job seeker, as well as projecting vacancies within six to twelve months. The hope is that people don't just use the software when they are out of work, but also if they are underemployed or looking to make a career move.

An example of a career move might be a welder who wants to become a machinist to achieve a higher pay grade and perhaps less arduous working conditions. The software could help him determine the pay level he could earn with such a career move, if he would need to move, and what education or skills he would need to attain before he qualified as a machinist. The software would perform a "personal skills gap" analysis. If our welder can see the job possibilities in the next six to twelve months, he may take that time to acquire a skill set to move into the better paying machining job, benefiting himself, his family, and the economy.

LMI software can also help inform policy decisions. This software could be used for everything from directing workforce training dollars to assisting in the development of K-12, WTCS, and UWS curricula. In fact, one national group is piloting a program that uses LMI software to shape postsecondary curriculum. Jobs for the Future (JFF), a group that develops career and college readiness policy, teamed with the Lumina and Joyce Foundations to develop "Credentials that Work."[168] Credentials that Work uses LMI software in part to "determine what uses may better align postsecondary education offerings with the needs of employers."[169]

In a 2011 news release, JFF program director John Dorrer said, "If colleges expect to attract more students and graduate them prepared for sustainable careers, they must better align program offerings and course curricula to the needs of their local labor markets. Decisions on which programs to offer and what to teach in class should correspond to employers' immediate and ongoing demand for workers in a particular occupation or with a specific set of skills." This statement holds true for all postsecondary institutions, including those in Wisconsin. K-12 could use the data by integrating it into the Academic and Career Learning plans (discussed later in this report), so students have accurate information regarding career opportunities.

Ten different colleges in six states (CA, KY, ME, NY, IL, and TX) are currently piloting the Credentials that Work program.[170] After examining these programs, JFF plans to release a guide on LMI software that will:

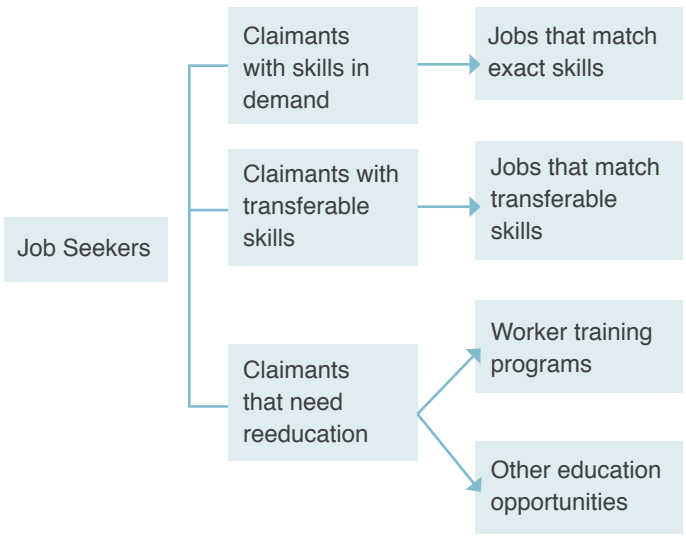
> *review how early implementers are using real-time labor market data and systems; Provide a systematic review of real-time LMI vendors and products most active in the market place; and Review real-time LMI and its emerging role in complementing traditional federal economic and labor statistical systems.*[171]

Since we know that many students remain close to their educational institutions, WTCS, UWS, and our K-12 school boards should use LMI software and this guide to help establish their curriculum decisions.

In addition to the benefits of matching people with jobs and having solid data to inform policy decisions, the LMI software could actually save the State millions of dollars. Recently, Wisconsin began requiring

unemployment insurance claimants to register with the Wisconsin Job Service.[172] That also includes the job posting service www.JobCenterofWisconsin.com. If instead Wisconsin had LMI software, UI claimants could be required at the time of application to upload a resume to the new software format. The more robust job matching capabilities of this new software could allow job seekers to find work more quickly, thus decreasing the amount of UI claims.

The software could cut down on UI claims by grouping claimants into three categories: (1) claimants with skills that are in demand, (2) claimants that have transferable skills and so could get on the job training, and (3) structurally unemployed claimants that need to be reeducated.[173] Claimants in the first two categories would be emailed job openings that match their skill set, while claimants in the third category would be immediately referred to already existing state worker training programs. Those claimants could also be informed of education opportunities available through WTCS and UWS.



Brookings Institute describes this approach as both a "carrot and a stick." The carrot is getting back to work, while the stick is the threat of losing UI insurance. Preliminary estimates show other states have saved one to two weeks of UI claims through this process. Nationally, that would save U.S. taxpayers $3-6 billion dollars.[174] For a state level example, New Jersey realized these savings using LMI software. Compared to its old method, the state had 1,300 more people employed within six weeks of registering. Assuming an average UI benefit, the state saved about $1 million per week. Additionally, almost 20% of LMI software users that got jobs were collecting some other form of government assistance (like food stamps), which means there could be even more savings by documenting the connection between multiple government programs. LMI software will also save Wisconsin money by replacing our current State job posting webpage, www.JobCenterofWisconsin.com. The existing technology supporting the Job Center of Wisconsin website is outdated and does not easily support the features expected by current job seekers and employers.

DWD launched www.JobCenterofWisconsin.com in 2007, enabling job seekers to search job openings posted by employers directly to the Job Center of Wisconsin and job openings posted to partner websites. Since its inception, the Job Center of Wisconsin website has grown dramatically, increasing the number of postings on the website from 108,000 to over 150,000, an increase of 40% in one year.

However, one core weakness in the website is the lack of an automated matching function that identifies the skills and work history of job seekers and displays suitable job openings based on skills and qualifications required by employers for job openings.

To its credit, DWD has already taken steps to improve its website. DWD has sought employer input in ways that the website can better support DWD's mission of connecting jobs and job seekers. The agency held a series of focus groups in De Pere, Eau Claire, and Pewaukee earlier this year with employer representatives, seeking suggestions on what improvements should be made to the website.

Businesses supported changes that would streamline their ability to search for and receive resumes of relevant candidates for jobs they post. Using employer input, DWD has identified self-service functions and automating manual functions on the website as key components for improvement.

We anticipate that new LMI software would greatly reduce these types of functional updates, which would save time and money. Based on the potential benefits to job seekers, employers, and taxpayers, Wisconsin should immediately seek to implement this software. The best agency to be responsible for this software is DWD. DWD currently manages Wisconsin's traditional LMI, so it is a natural fit that it would be in charge of the new LMI.

Further, although this LMI software is relatively new, some technical colleges and other economic development groups already use LMI software. It needs to be scaled so the whole state can benefit. Having one state-funded LMI package would save money for the individual groups that are currently paying for the service.

Once DWD has the timely job numbers provided by the LMI software, the agency should use its training resources to fill current and anticipated job needs. The department could also drive collaboration between our economic development entities, like the Workforce Development Boards, the Regional Planning Commissions, and our education systems. DWD has the expertise to look at the data, research what is working for other states, innovate and implement workforce solutions for the state.

Encourage a Federal Government Role

Finally, Wisconsin should encourage our federal government to institute LMI software nationwide. The Brookings Institute estimated it would cost the federal government roughly $6 million per year to maintain the software. States will then carry the cost of between $15-20 million per year for maintaining the local analysis capacity.[175] One company estimated a full LMI software package for Wisconsin would cost the state approximately $500,000 in licensing fees per year. If the federal government embraced this new technology, states could save money by sharing the cost. Also, national data would be helpful for moving the whole country, not just Wisconsin, in the right direction to bridge our nation's skills gap.

Back-up/Additional Plans

New LMI software should be sufficient to meet Wisconsin's data needs. However, if employers do not believe the numbers are accurate, the data can also be verified and confirmed. DWD has the capability to use its resources to corroborate LMI data without adding another reporting requirement to employers. DWD can gain corroborating data by adding a couple of additional questions to employers in its Quarterly Wage and Contribution Report.

The data is collected from virtually all employers in

Wisconsin and forms the foundation for the Quarterly Census of Employment and Wages. The strength of the data is that it is considered by virtually all economists and policymakers to be the most accurate count of jobs in Wisconsin. By adding categories that will capture demographic information like educational attainment and age, policymakers can see the current state of Wisconsin's workforce, including trend information that shows changes in the workforce. This data would be collected once annually and would be released in aggregate to show the state of Wisconsin's workforce and provide recommendations to meet labor needs. This option should only be used if LMI software is believed to be insufficient, as the accuracy and perceived accuracy of the job numbers are critical.

JOB TRAINING

Using the proper jobs data, all participants should be able to effectively work towards helping citizens into the available job opportunities. LMI software will provide this information. We cannot address our worker shortage without focusing on our current labor force.

At the state level, most of Wisconsin's funding for workforce training programs comes from the Federal Government. In fact, a recent Public Policy Forum (PPF) report showed that Wisconsin spends $403 million per year on workforce training, $371.5 million of which is federal money. While this money can be helpful, it comes with strings attached, which means the funding isn't always flexible enough to meet the state's needs. Further, the federal money for workforce development is distributed through nine different state agencies, WTCS, and DPI. This doesn't include federal money distributed directly to our workforce development boards. Wisconsin will have an easier time meeting our workforce development needs if efforts are coordinated through a single state agency, the Department of Workforce Development.

Coordination of Workforce Training

Workforce training programs are currently provided through nine different State agencies, as well as UWS and WTCS. Because of this division, job seekers and employers must navigate through layers of bureaucracy to find helpful programs.

In 2012, PPF produced a report regarding workforce training funding in Wisconsin. The report shows that in addition to making the process complicated, the division of services is also inefficient. Several State agencies duplicate similar services. Housing our workforce training programs in one agency could cut down on complication and cost. There would be opportunities for combined funding, which could increase the effectiveness of programs for workers and employers.

Part of the challenge arises from the way we fund workforce training. Wisconsin gets more than 90% of its training dollars from the federal government. Federal money often comes with strings attached, making it difficult for the state to efficiently administer the funds. What's more, federal funding in Wisconsin has decreased by almost 50% over the last 30 years (excluding the Wisconsin Works program that includes a large amount of support service funds, like help finding a job, as opposed to direct worker training).

Another complication is the way we measure performance. Different programs have different outcome measurements. This is true even when the programs provide very similar services. Using various outcome measures makes it difficult to combine programs regardless of whether the funding is from the federal or state government.

All workforce training programs should be consolidated, coordinated or administered by DWD to increase efficiency. This makes sense for two main reasons: (1) this is in the DWD's area of expertise and (2) DWD already administers most of the workforce training funding.

If consolidated, DWD would administer six programs: (1) Transitional Jobs, (2) the Adult, Youth, and Dislocated Work Workforce Investment Act (WIA) Program, (3) FoodShare Employment and Training, (4) current Department of Corrections (DOC) workforce training programs, (5) WTCS workforce training programs, and (6) Wisconsin Works (W-2) currently administered by the Department of Children and Families (DCF).

At least one neighboring state is consolidating its workforce training programs. Ohio recently announced a consolidation plan that would combine 77 existing programs into one single training strategy. After a recent study on workforce training, Ohio's legislature concluded that the state needed one entity to lead workforce development and set workforce priorities to reduce duplicated services.

There is also a movement on the federal level to consolidate programs. Congress put forward a proposal to collapse 33 of the 47 federal workforce training programs into four groups. This would give the system greater flexibility to focus on training priorities. If this legislation becomes law, state workforce agencies will be able to reduce administrative overhead through reduced reporting and compliance requirements.

Once programs are consolidated, DWD should align performance measures to encourage efficiency. While all workforce training programs aim to promote employment, we currently measure outcomes in a variety of ways. This lack of consistency increases reporting and compliance requirements and creates a hurdle to programs working together.

The lack of aligned performance measures also creates inefficiencies among service providers. Many state agencies hire service providers instead of conducting workforce training programs themselves. Disparate performance measures make it difficult for service providers to coordinate because they receive funding for different outcome measures. Further, agencies and service providers may then find themselves competing not for what best serves the needs of citizens, but for what looks best on paper.

Consolidating workforce training into DWD would benefit the state. Administrative burdens would be reduced, allowing DWD to focus on the state's workforce needs. As we've seen from job projections, better than half the state jobs in 2018 will be middle-skill jobs. Our workforce training programs should be focusing on this percentage to get the biggest benefit from our diminished budget.

Increase state funding of workforce development

Once DWD has oversight of all workforce development programs, it will need more state funding. State funding will be more flexible than federal funding and could be used to supplement federal funding to increase positive outcomes. Further, state funding can serve as an incentive for our regional workforce development boards to work with DWD.

Measuring Job and Funding Needs

Once LMI software is in place, Wisconsin will have daily updates on workforce needs. In the meantime, however, we need a different approach using outdated census data. Competitive Wisconsin, a consortium of business, education, agriculture and labor leaders in the state, has commissioned Manpower, a workforce solutions company, to analyze and quantify the current skills gap in medium or high-skill occupations.

Manpower has identified a number of "skill clusters," or common skill sets that occur across industries. For example, a nurse will need certain communication and problem solving skills. A home health care aide may share many of the same skills, but also different abilities. By breaking out job needs by skills instead of just occupation, it is possible to determine the current and future career demands in an indicated skill cluster.

In the case of the nurses and home health care aides, we may have a shortage of nurses. We could estimate the number of unemployed home health care aides that already possess some similar skills. Those aides could then get additional training to fill the nursing shortage.

Once the employment demand has been accurately established, the data will be divided into the following categories: (1) people employed in the occupation, (2) people unemployed with relevant skills, (3) the number of those receiving degrees or certificates in the profession, (4) the number of workers entering and exiting mid-career, (5) the number of people working in clusters with like skills, and (6) how many people are retiring and re-entering the occupation. This data will allow us to comprehensively identify the gaps for that occupation. Charting this worker pipeline would enable DWD to anticipate skill needs and prioritizing resources to mitigate the skills gap.

Meeting Employer Needs

Based on the above analysis, DWD can determine the level of funding necessary to meet a certain percentage of the gap between current worker supply and demand. For example, if there is a current statewide supply of 100,000 welders and the demand is 105,000 welders, DWD can divert resources to train specific occupational needs of a region. For a simplified example, imagine Milwaukee needs 1,000 welders, but only has 900. There is a gap of 100 workers. There may also be 100 unemployed people that possess some of the necessary skills to be a welder. DWD would work with partners to provide training to those 100 unemployed people, increasing the supply of welders and partially mitigating an identified skills gap.

Targeting resources in this manner focuses spending within an identified skill set; increasing the needed supply of workers based on short- and long-term needs. When Wisconsin has LMI software, DWD can continue to use this model. This would allow decision-makers to base funding allocations on short- and long-term skill needs.

This information would also shed light on the various vocational and academic programs that supply semi-skilled and skilled workers.

DWD could also use state funding for regional competitive grants in an attempt to coordinate workforce development efforts. For example, DWD could offer a grant to a workforce development board that partners with the local technical college and UW branch to train workers to fill an area job shortage. That way, actors are rewarded for filling the job needs in the area and for sharing resources and working together. This kind of funding would also allow the state to prioritize funding where it would be used most efficiently and effectively.

EVIDENCE-BASED BUDGETING

The silver lining of a fiscal downturn or significant market correction is that it changes the way we think about where and how we spend our money. There is less of it to go around and changes must be made. If done correctly, it will establish more efficient operations in the short term and provide a solid foundation for quicker and more effective future growth.

The simple approach is to make wide-sweeping cuts to all programs. History has proven that this approach is flawed not only because it creates dysfunction, but also because it weakens the entire organization. Reassessment of expenditures must be fact based, surgical and strategic in nature and organized in a fashion to insure a return on investment.

Evidence-based budgeting (EBB) is a policy that requires a rigorous evaluation of whether government programs are producing a return on taxpayer investment.[176] In tight economic times, this policy can help governments do more with less. Although EBB is not a new phenomenon, it has been increasing in popularity since the 2008 recession.[177] In the words of the former Federal Office of Management and Budget director Peter Orszag, EBB's goal is "expanding the approaches that work best, fine-tuning the ones that get mixed results and shutting down those that are failing."[178] This makes perfect sense to most business owners.

EBB is being instituted at both the state and federal levels. Recently, the Obama administration issued an initiative to its agencies to cut expenses by five percent for the 2014 cycle using EBB.[179] Wisconsin has also tried EBB in certain situations. In 2009, the legislature allocated the Department of Corrections $10 million to expand a variety of evidence-based program models.[180] The state contracted with national experts to train its staff in administering the "Correctional Program Checklist" to determine the quality of some community-based correctional programs.[181]

EBB still has its challenges. One of the more significant challenges is limited staff resources.[182] Staff needs time to gather data, develop strategies, and make recommendations regarding expenditures.[183] Another significant challenge involves ensuring that policy makers actually use the gathered data to inform spending decisions.[184]

Recent changes in technology are in part addressing these challenges. Although methods of EBB have existed in the past, new computer software means it doesn't have to be expensive. In fact, governments can use data they already collect to make up a bulk of the data.[185]

In a 2012 report, the Coalition for Evidence-Based Policy wrote:

> *The increasing ability of social policy researchers to conduct randomized controlled trials (RCTs) at low cost could revolutionize the field of performance-based government. RCTs are widely judged to be the most credible method of evaluating whether a social program is effective, overcoming the demonstrated inability of other, more common methods to produce definitive evidence. In recent years, researchers have shown it is often possible to conduct high-quality RCTs at low cost, addressing a key obstacle to their widespread use. Costs are reduced by measuring study outcomes with administrative data already collected for other purposes (e.g., student test scores, criminal arrests, health care expenditures). These developments make it possible now, more than ever before, for policy officials to use scientific evidence about 'what works' to increase government effectiveness.*[186]

These tests have been used with positive results on everything from corrections, to child welfare, to education.

In the U.S., Washington State is leading in their efforts to implement EBB. In collaboration with the Pew Center on the States, Washington is developing a cutting-edge research model for EBB.[187] The initiative is called "Results First."[188]

For states, the "Results First" program has done a great deal of heavy lifting. The Washington State Institute for Public Policy (WSIPP), a nonpartisan center established by the state legislature, has been using a cost-benefit analysis model since the mid-1990s.[189] The board that governs WSIPP includes equal numbers of legislators and staff from both the Republican and Democrat parties, two appointees from the governor, and high-level staff from four universities in the state.[190] WSIPP gets its projects from the legislature. The group then uses its own methodology, in collaboration with legislators, staff, state agencies, and experts, to arrive at the cost-benefit analysis.[191]

Most of the WSIPP's research has been in the criminal justice area.[192] Since the mid-90s, the state has experienced a crime rate lower than the national average and estimates a cost savings of $1.3 billion per biannual budget cycle by "eliminating the need to build new prisons and making it possible to close an adult prison and a juvenile detention facility."[193] Pleased with the results, in the early 2000s, the legislature directed WSIPP to use the same evidence-based approach to K–12 education, early childhood education, prevention, child welfare, mental health, substance abuse, and public health.[194]

After noticing Washington's results regarding criminal justice, the Pew Center on the States contracted with WSIPP to "develop an analytical tool to assist states in identifying evidence-based policies that can reduce crime and lower corrections' costs."[195] An outside panel examined the analytical tool to determine accuracy.[196] Convinced of its completeness, Pew, along with other support, helped other states implement the EBB. What's more, Pew is following in Washington's footsteps, seeking further analytics including child welfare, health care, housing, Pre-K-12 education, mental health, public

assistance, substance abuse, and teen birth-prevention programs.[197]

While there have been EBB analytics in the past, the WSIPP model goes beyond traditional methods.[198] WSIPP works in three basic steps: (1) assessing evidence on "what works" to improve outcomes, (2) calculating costs and benefits for the state and rank available public policy options, and (3) measuring the riskiness of its conclusions by testing how bottom lines vary when estimates and assumptions change.[199]

The three-step process is a simplified overview. The process can be broken down further into seven steps. First, rather than relying on a few studies or anecdotal evidence, WSIPP starts by analyzing studies that assess the outcomes of related programs and policy options, which is a meta-analysis.[200] This helps eliminate bias and cherry picking to support one point of view.[201]

Second, WSIPP then predicts outcomes by applying the state's own data to the meta-analysis. "For example, it examines all available research on early childhood education programs to predict the programs' success in achieving key outcomes such as reducing child abuse, improving students' academic success, and reducing substance abuse in participating families."[202]

Third, WSIPP predicts the future cost to the state to produce the predicted outcomes devised in step two. It then reports "standard financial statistics: net present values (which take into account that costs and benefits might not occur for many years); cost-benefit ratios; and projected returns on-investment.[203] The model then breaks down the benefits and costs by participant. So the report on any program would show the benefits to the participants, nonparticipants, the taxpayers, and the state's bottom line.[204]

Fourth, WSIPP then evaluates its model for potential inaccuracies in the projection.[205] "WSIPP performs a Monte Carlo simulation in which key assumptions are varied to test the sensitivity of the results to these changes. This widely accepted statistical method determines the probability that a particular policy option would produce net benefits to the state if the outcome of some of the basic assumptions were different than predicted."[206]

Fifth, WSIPP takes the potential models from the Monte Carlo simulation and ranks them in a "Consumer Reports" style. That way, policy-makers can look at potential variables to know whether it was too inconclusive to be included in the model.[207]

Sixth, WSIPP then directs policy makers to programs that produce a good return on investment. This is the whole crux of EBB. Effective programs can remain or perhaps have different funding, while ineffective programs can be eliminated.

Even though WSIPP has by this point identified effective and ineffective programs, it goes a step further. For the seventh step, WSIPP compiles something akin to a stock portfolio for legislators. This portfolio is designed to minimize risks in a sort of policy-diversification method.[208] Policy makers can then mix and match programs so they don't put their proverbial eggs in one basket.

In addition to the analysis methodology, WSIPP maintains a close relationship with the legislature to

make the data highly accessible.[209] The group doesn't want the language to be something only statisticians can understand.[210] The legislature also has the ability to request follow-up studies.[211]

Washington's program has had three main positive outcomes: (1) policy-makers can reach a decision based on evidence, not anecdotes, (2) the data has helped legislators transcend partisan gridlock, and (3) the policy makers have been able to look at spending long-term.[212]

Washington State is not alone. Recently, Iowa used WSIPP's data-driven method to institute bipartisan legislation regarding voluntary home visits to reduce child abuse.[213] Maryland adopted a law directing funding towards its successful home visit programs, with success measured by the WSIPP model.[214] In fact, 13 other states have started integrating the WSIPP model: Connecticut, Florida, Idaho, Illinois, Iowa, Kansas, Kentucky, Massachusetts, New Mexico, New York, Oregon, Texas, and Vermont.[215]

Wisconsin has even tried the model, albeit in piecemeal fashion. Earlier this year, the La Follette School of Public Affairs at UW-Madison published a working paper titled "Statewide Expansion of Treatment Alternatives to Incarceration in Wisconsin: A Cost Benefit Analysis."[216] The researchers used the WSIPP-developed analysis to determine results.[217] The graduate students noted that they used the WSIPP model because Wisconsin could not provide the necessary inputs. Utilizing WSIPP's model, they were able to use national averages to arrive at an answer.[218] This did not produce a perfect result, but researchers were able to determine where comprehensive data was lacking in the WSIPP model so that it could be incorporated in future calculations.[219]

"Results First" (the Pew/WSIPP collaboration) is working with states to implement its cost-benefit analysis tools to improve the states' fiscal health. Help offered includes: "providing intensive assistance to states to help them adopt and apply the [WSIPP] cost-benefit analysis model to their own policies and programs, creating opportunities for states participating in "Results First" to share information and lessons learned, [and] releasing a 50-state review of current efforts to make policy decisions based on comparisons of costs and benefits."[220]

If other states are experiencing success with cost-benefit analysis, it stands to reason that Wisconsin could benefit, too. New technology and methodology now makes EBB more possible and cost-efficient than ever. Further, Washington State has already done a great deal of the work developing a legitimate model, focusing on corrections, and the Pew group is willing to help states implement the software. For Pew to offer help, states must meet three criteria: (1) Demonstrated high-level interest (letter of invitation signed by Governor), (2) Access to the data needed to run the model, and (3) Available staff with skill sets needed to operate the model.[221]

Wisconsin should reach out to the Pew group and ask for help in implementing the WSIPP cost-benefit analysis. Governor Walker should send a letter of request. He should then ensure that the necessary staff and data are available to make the project a success.

EDUCATION

Education is the foundation of workforce development. Education, like workforce development, starts when we are born and ends when we pass away. That is why it is

so critical for the economic health of Wisconsin that we provide a solid foundation for our children and flexible adult education options for those already in or about to enter the workforce.

Our first step towards preparing our K-12 students for the future is providing them with accurate information about their options. The bridge to this information should be an Academic and Career Plan (ACP). An ACP is an individual plan for every student in Wisconsin, regardless of their background or which school they attend. ACPs allow students to assess their strengths and interests and direct them to how their education and career goals can be attained. All information is provided on the backdrop of accurate job opportunity predictions, which helps students choose the most effective postsecondary option for them. A successful ACP involves the whole community, from students, parents and educators, to businesses and community leaders who can help provide real-world learning opportunities for students that choose take them.

The second step after students have chosen a postsecondary option is to provide opportunities for further education. This involves building more flexibility into our postsecondary systems, which will especially benefit low-income students. One way to build in flexibility is through stackable credentials. These credentials allow students to more easily step in and out of education systems by allowing them credit for things they already know instead of measuring time spent in a seat. Stackable credentials should be based on competency to maximize efficiency and encourage adult learners to further their education.

Along with the flexibility of leaving and returning to school, students need flexibility for moving around Wisconsin. To this end, Wisconsin's public schools should develop a statewide credit transfer system of at least 30 common credits. This will allow students to move around the state if they so choose, which could help fill employer's needs. A statewide transfer system would also be more efficient in terms of time and money as students won't have to repeat classes on topics they already have learned, and students and taxpayers won't have to repay for that education. A base credit transfer system benefits the students while allowing faculty to retain a say in whether more specific, upper-level classes will transfer from institution to institution.

Another change that will benefit low-income adult learners is opening Wisconsin Higher Education Grant (WHEG) funding to non-degree seeking students. Currently, students only qualify for financial aid if they are enrolled in a degree-seeking program. This discourages low-income students from taking a few classes that may improve their economic standing. Further, many students that start postsecondary education are encouraged to continue with more education. This is behavior we want to encourage. Opening WHEG funding to non-degree seeking students will help.

Finally, Wisconsin should reward educational institutions that provide excellent service to the state and encourage that behavior in all our schools. One way to accomplish this is through Performance-Based Funding (PBF). PBF has been thoroughly examined at a postsecondary level and other states have laid out formulas that Wisconsin can follow. For WTCS and UWS, PBF should be a portion of the base funding, starting with a smaller percentage and increasing over time. For our K-12 system, PBF could be awarded as bonus money in the form of competitive grants, as the research on K-12 systems is less established.

PBF will incentivize schools based on a variety of factors, like graduation rates and job placement. The exact formula and percentage should be developed with input from the Council on College and Workforce Readiness, which includes representation from all levels of state education, as well as a bipartisan body of the legislature and businesses.

CREATE A CONTRACT FOR FOUR-YEAR COMPLETION

Not all students that attend a four-year school will be able to complete their intended degree within four years. The problem is not unique to Wisconsin. But some schools offer students a four-year guarantee. The University of Minnesota signs a contract with students stating that if students, through no fault of their own, cannot complete their degree program within four years; the University will cover their added tuition costs. **UWS should offer students this same guarantee.**

Offering students this option could result in significant cost savings. A decrease in time to degree to 4.0 years from the current 4.79 would generate a state subsidy savings of $83.7 million and tuition savings of $82.6 million based on data from the Delta Cost Project data. Not all savings would be realized, as not all students would complete within four years. But these numbers do show the potential for saving millions.

Instituting a contract like the one used by University of Minnesota would encourage students to complete degrees on time. This would save the State, the students, (and potentially their parents) money and it would speed student entry into the workforce. UWS could also compare its results to Ohio, where the state was able to decrease the time-to-degree from 4.7 (1999) to 4.3 years (2003).

INCREASE TUITION FOR STUDENTS THAT ATTAIN MORE THAN ONE DEGREE

Last year, WTCS had just over 34,000 students (headcount) that had already attained a four-year degree." Roughly 3,500 of those FTEs were seeking another degree. While many of these students valued both their four-year and two-year education, we think the state should not be required to fully subsidize this additional education.

We propose increasing tuition to reduce the state subsidy. This approach is consistent with the structure of the Wisconsin GI Education benefits. Veterans who meet the qualifying criteria are eligible to receive 100% remission of standard academic fees (resident tuition) and 100% of segregated fees for 128 credit or 8 semesters, whichever is longer.[222] (It should be noted that the program was modified in the last budget to provide that use of Federal GI Bill benefits does not count towards the state limit.)

Further, charging higher tuition for students that already have a degree is consistent with tuition setting practices of the UW Regents because the State provides a greater subsidy for undergraduate education as compared to graduate training.

UW-Madison Fee Differentials				
	Resident	Non-Res.	% of Non-Res.	% greater than Non-Res.
Under-Grad.	$4,832.50	$12,707.38	38%	163%
Graduate	$5,684.58	$12,563.70	45%	121%
MBA	$6,412.58	$13,375.70	48%	109%
Law	$9,838.54	$19,402.30	51%	97%
Medical	$12,224.50	$17,388.25	70%	42%
Vet Med	$9,283.42	$12,921.18	72%	39%
Pharm	$7,719.82	$13,948.66	55%	81%

Assuming even half of the 3,495 FTE students are pursuing technical degrees that supplement a four-year degree, and one-third of them enter annually (assuming that segment are part-time), the total direct cost for the remaining students are estimated at $5.8 million. That amount includes $0.8 million in state funding, $3.3 million in local funding, and $1.3 million in tuition and student fees.[223]

ACADEMIC AND CAREER PLANS

We know Wisconsin is facing a skills gap and this gap is projected to increase in size. Many of the next decade's jobs will be in middle skill jobs, like subsets of manufacturing and health care. Nevertheless, we hear from K-12 educators that parents, students, or both are not interested in these careers. We believe this lack of interest may from not exposing students to what these careers are like and the opportunities they present. One plan to address this challenge is though Individual Learning Plans, which we will refer to as Academic and Career Plans (ACPs). An ACP is "a document that establishes a set of learning goals and objectives for an individual student."[224] Further,

> *An [ACP] helps identify a particular student's strengths, challenges, interests and learning styles and then matches that profile to resources and tools that can maximize his/her learning potential within a given classroom setting. This resource and record follows a student as they grow and mature, reaching beyond the formal education process into all aspects of professional and personal life.*[225]

These plans are important because they encourage students and parents to reflect on goals and choices, while providing a flexible roadmap of how a student can achieve academic and career success. Modern ACPs, completed online, provide these opportunities wherever a student has access to a computer, like at the library or at home.

In all, 35 states are piloting or using ACPs. So far, 22 states are mandating ACPs. ACPs have shown such promise that **Wisconsin should require ACPs for all students, to be integrated within five years. These plans should share a common, statewide framework. Further, ACP data should be integrated**

into the new statewide data system to allow the state to determine whether the plans are helping students or how the process could be improved. Because these plans are so important and because schools will soon be integrating the new statewide data system, implementing ACPs needs to be an urgent priority.

Research by the College and Workforce Readiness Council

The College and Workforce Readiness Council (CWRC) formed a subgroup on ACPs that met for the first time in July of 2012. At the time of publication, the subgroup had not made formal recommendations to the full committee. However, the initial evidence supporting ACPs has created a strong comfort level for us to issue this recommendation with the caveat that further research into plan details will be necessary.

We are relying mainly on the research and presentation of Joan Wills. Ms. Wills founded the Center for Workforce Development (CWD) at the Institute for Educational Leadership where she now serves as a Senior Policy Fellow with CWD.[226] Wills is currently completing a five-year study on ACPs commissioned by the Federal Office of Disability Employment Policy (ODEP). The study covered 14 schools in four states. Although ODEP commissioned the study, research was based on all students, with additional support services added for children with disabilities. The states were chosen because they have had ACPs the longest. Wills shared the preliminary findings of this study with the CWRC.

There are many benefits of ACPs. First, these plans create the connection between what students are learning and their plans after high school, whether career, college, or military. This is important because more than half of the 1,650 high school students that participated in the study could not describe, "the nature of the career or educational pathways needed to pursue their career interests."[227] These students were then less "prepared to effectively engage in the career navigation strategies needed to successfully manage the uncertainties of their future training and educational pathways beyond high school.[228]

The group found:

> *Students who become more competent in self-exploration, career exploration and career planning and management are more motivated to attend school, become confident learners, actively set goals, and record better grades. In other words, efforts to prepare students to become career ready results in the social emotional and academic skills needed to become college ready.*

Not only do ACPs help students prepare for a better academic future, they help them become better members of society. ACPs may even prevent students from dropping out of high school.

ACPs also present an opportunity for students, parents, and teachers to come together. Research shows that:

> *all three parties perceived that engaging in [ACP] activities resulted in students: (a) being more strategic in selecting a program of course studies that aligned with self-defined career goals, which indicates that they perceive the relevance of education to their future aspirations; (b) selecting more*

rigorous courses that will be more attractive to college admissions officers; and, (c) establishing better communication and relational connections between the school and home.[229]

The student planning process has been so well received, in fact, that educators do not object to the state requiring their implementation when done properly.

Given the potential, Wisconsin should move as quickly as possible to implement ACPs. This raises many questions, which include: what form should these ACPs take? How often should students review them? Who should be involved? Should participation be mandated? What are the associated costs?

The good news is that many Wisconsin districts, like Sheboygan and Green Bay, have already integrated ACPs into their schools. These schools are developing best practices that could be scaled statewide. Some schools use private companies that provide ACPs as an online software program. UW-Madison and WTCS, in partnership with groups like DWD, have developed two different ACP software programs. The WTCS program is www.WiCareerPathways.com and the UW-Madison program is www.WisCareers.com. Each option offers a different approach to ACPs. Wills expressed that using an online software program is the only way to go.

Another question is whether ACPs should be required. This question includes whether all students should participate. For example, should students with learning disabilities that already have ILPs be mandated to complete an ACP? This has been a legal issue in other states.

Ultimately Wills described the choice of whether to require ACPs for all students by saying, “It’s a belief and value question.” Research supports that students will do better with ACPs that focus on academic and career readiness. The question is whether we value the benefits of ACPs enough to require their implementation.

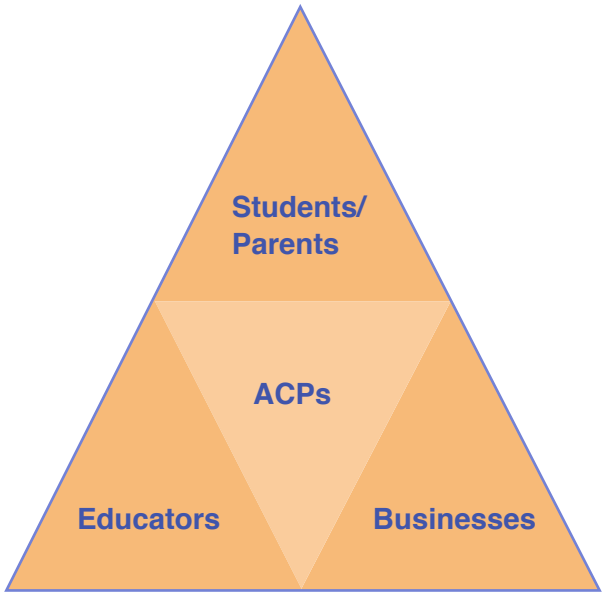
If states did require all student participation, schools preferred what Wills described as the “soft mandate.” This involved a phasing-in period that allowed schools time to adjust to the new goals. Wills said schools want help organizing and providing best practice suggestions for ACPs, since they are already trying to make a connection between academic and career readiness. Many educators viewed a required statewide plan as a way of improving practices they were already attempting. Will said that statewide implementation of ACPs needs to be handled with strong professional development support, marketing, and communication with districts.

Wills also stated that ACPs should only be implemented after thinking through the supporting technology, including the ACP software and career labor market information data. Wills described the supporting software as essential for monitoring how students, parents, and educators are using ACPs and whether the plans make a difference. She also highlighted the need for a common framework, which will allow for cost savings and also crucial data tracking, which Wills said is lacking in some other states.

It is also crucial that students frequently interact with their ACPs. Wills stated that if states were only going to have students check in on their ACPs once per year, that they shouldn’t even bother. Otherwise, plans will have no relevance for students or parents, nor will they help meet institutional goals. Instead, she suggests making

ACPs part of the students' regular routine, either being integrated with curriculum or worked into advisory periods. Students requested that at least 2-3 times per week be made available for them to work on their ACPs. Wills believed an adequate amount of time could be 45 minutes per week. Some schools have integrated ACPs into their curriculum so that setting time aside is not necessary.

In terms of who needs to be involved, the answer varies. Wills said all school staff, businesses, postsecondary institutions, other community organizations, and parents should be involved at the delivery level. However, the roles and functions vary and states and districts need to think through a strategy to promote engagement of each partner.



ACPs can be visualized as a triangle. The three points of the triangle are (1) parents and students, (2) educators, and (3) businesses. Two counselors that spoke to the CWRC subgroup expressed that businesses can be excellent partners in offering options for students to carry out their ACPs, including internships and summer career camps. Career camps involve students working for businesses over the summer with the intent of gaining specific skills. The counselor expressed that these offerings keep students interested in careers because planning doesn't inspire the kids, but hands-on learning does.

Some schools experienced more parent involvement by requiring parents to come in for a conference with their student to talk about the ACP. One school in Wisconsin requiring parent participation saw about 70% parent participation. Another school that with optional attendance only experienced about 25% participation.

When considering educators, Wills said there should be an "owner" of the plan. Some schools assigned English teachers, while others used guidance counselors. Regardless, the best practice was keeping one point of contact that could see the student through all four years of high school.

Beyond a plan owner, emerging research suggests that all staff must be involved in implementation of ACPs. Wills said no one office or dedicated staff can do all that needs to be done in order to meet the college and career ready goals. Getting all staff and teachers to buy into the plan has been one of the challenges other states are still addressing.[230]

Another question is when ACPs should be implemented. Most schools begin introducing students to plans in the

middle school years, with some emerging research showing benefits as early as third grade. Wills said it is "fairly clear" middle school is when states should begin. For example, Kentucky, the first state to mandate ACPs, begins its plans in the 6th grade as students transition to middle school.[231]

There are some unanswered questions, but we are confident Wisconsin can implement a plan and then provide answers, as have other states before us.

Recommendation

There are clear answers for some of the questions surrounding ACPs. First, the authors of this report believe **ACPs should be required because we value the opportunity to provide all students in Wisconsin with access to such a fundamental educational tool.** Further, research has shown that with proper support and implementation, educators responded positively to statewide implementation. Proper communication from the state to the school districts and local educators establishes the importance of ACPs for student success. Educators will welcome the opportunity to improve their schools.

CWRC should investigate best practices for ACP software and implementation and make recommendations to the legislature. After legislative approval, the Department of Administration should then procure the software for Wisconsin. Having one software package is essential for tracking statewide student progress and to achieve cost savings. Since many schools are already paying for software packages, this could potentially save school districts $15-30 million per year.

We further believe **implementation should be phased in to coincide with the new statewide data system.** Legislation passed last session gave schools a five-year period to shift to the new data system. As schools make this shift, they should also integrate ACPs.

Wisconsin should begin administering ACPs in the sixth grade. While there is no universally agreed on best time to begin ACPs, other schools have experienced success beginning in middle school. Emerging research shows that as early as third grade students benefit from career planning, but until proven effective, middle school implementation is the path to follow.

CWRC should investigate the remaining questions and make recommendations to the legislature by the end of this year. Questions like finding best practices for professional development and involvement, and determining whether or not to exempt certain students, are part of a complete and effective ongoing implementation plan.

There are several reasons for the timing of CWRC's deadline. First, Wisconsin should not wait any longer than possible to implement ACPs based on potential benefits. Second, ACP software should be made available as soon as possible to be integrated with the statewide data system. The longer the State waits for recommendations, the more time students will be without the software. Third, Wills research will be vetted and published by October of this year. This research includes an implementation guide that CWRC can use as best practices to help schools.

Finally, as Wills points out, ACPs will be more effective if students have accurate job data. Wisconsin should use

the aforementioned LMI software to work in conjunction with ACPs. Students need the most current and accurate data available to inform their career and college decisions.

STACKABLE CREDENTIALS

Wisconsin needs more educated adults to fill our current and future workforce. Employers facing the skills gap cannot wait for adults to go through months or years of basic academic education before they get to job specific training.[232]

In addition to benefitting employers, the quicker a worker can earn an education, the quicker that worker will earn more money. A recent Georgetown University Center on Education and the Workforce study quantified what certificates and degrees are worth to workers. On average, certificate holders earn $34,946 per year, or 20% more than workers with only high school diplomas.[233] Associate degree holders earn $42,088 per year on average.[234] Someone with a bachelor's degree earns an average of $53,400 per year.[235]

The study also found that certificate holders earn roughly the same amount as workers with some college, but no degree.[236] Certificate holders, however, are generally less academically inclined than people that complete only some college.[237] This indicates that employers reward job-specific skills beyond general academic skills.[238] The report concludes that, "certificate programs are an efficient option for high school graduates with average and below average grades."[239] This is great news for our "forgotten half," the students that don't fit into the "four-year college for all" plan. Students should know that they have the potential to compete in the job market even if they haven't met with traditional academic success.

This data does not mean students shouldn't go to a four-year college. Wisconsin is still going to need workers with four-year college degrees, and those workers are projected to earn more over their lives. But we should acknowledge that not all students are prepared for or want to attend a four-year school. Instead, we should look at education and workforce development as a life-long process. Citizens should be provided on-ramps and off-ramps to education, which would benefit both students and employers.

One educational on-ramp is stackable credentials. Stackable credentials are credentials that "can be accumulated over time to build up an individual's qualifications and help them to move along a career pathway or up a career ladder to different and potentially higher-paying jobs."[240] These programs connect pre-college academics to career-technical coursework.[241]

Ohio has developed a framework of stackable certificates that integrate remedial education into occupational skills certificates.[242] There are two main components to the state's program, which is based on best practices around the country and Ohio. First, stackable credentials allow individuals to get remedial academic education and learn technical skills at the same time, possibly earning college credit if the coursework is of sufficient rigor. This speeds individuals to the workforce by allowing them to do three things at once: get remedial education, attain technical skills, and earn college credit. Second, credentials are "stackable," meaning students attain progressively advanced certificates that can be accumulated over time.

Allowing students to stack credentials provides on-ramps and off-ramps that may encourage adult learners to pursue further education.

In Ohio, all education and training by any community college accumulates so that "certificates stack on top of one another and the credits count at any public community college towards a two-year degree."[243] Students don't have to worry about which school they have attended in the past if they move or wish to continue their education elsewhere.

These educational on-ramps are particularly important to the two generations of citizens that were lead to believe a four-year degree was their only path. Some of this group was unable to attend or complete a four-year degree. These people are more likely to go to non-UW System schools. In 2010, 95% of all freshman enrolled in the UW-System were 19 year-olds or younger, and 97% were full-time enrollees.[244] These numbers were consistent with ten-year trends.[245] The average age of a WTCS student is 29-years-old. Only one-quarter of WTCS students are recent high school graduates.[246] These young adults could benefit from a system that allows them to take time off for family or work reasons without setting them back.

WTCS and UWS should collaborate to develop a system of stackable credentials focusing on technical training to fill our middle-skilled job opportunities. Further, the systems should develop classes that don't require hands-on training to be available online through the UW-Flexible Degree Program (discussed below). Providing classes through the UW-Flexible degree will provide the flexibility and low-cost that many adult learners require.

Once stackable credentials are established, WTCS and UWS should work together to ensure those credentials transfer throughout our Wisconsin's public postsecondary systems. Stackable credentials will encourage students to continue their education by making that transition as easy as possible. This system would also speed students' entry into the job market because students wouldn't be repeating classes for things they already know. This can only be achieved through a WTCS-UWS partnership on curriculum and standards.

ENCOURAGING MORE TECHNICAL AND ASSOCIATE'S DEGREES

We've seen that many of Wisconsin's future jobs are going to be middle-skill jobs, which are jobs that need some postsecondary education, but less than a four-year degree. To that end, Wisconsin should encourage students to attend our technical and two-year colleges. A recent Bill and Melinda Gates Foundation supported study also shows that the number one reason young adults give for dropping out of postsecondary schooling is that juggling work and school is too much.[247] In fact, 71% of students said they didn't complete their program because they had to go to work and make money. More than half said they couldn't afford the tuition and fees.[248] More than half of the students who dropped out were paying for school themselves. Almost 70% of students that didn't graduate received neither financial aid nor scholarship.

The report concluded that "eight in 10 of those who did not complete college supported two proposals that they believe would make college graduation feasible: (1) making it possible for part-time students to be eligible

for more financial aid (81 percent said this would help "a lot"); and (2) offering more courses in the evening and on weekends so that they could continue working while taking classes (78 percent said this would help "a lot")."

Cost

If students did not face as much financial pressure, they may be more likely to stay in school. The state's independent postsecondary schools currently offer a wider range of financial aid than our public institutions.

The state has been working on improving aid options for Wisconsin's students. The Governor's Commission on Financial Aid Consolidation and Modernization has created some recommendations, but they are not yet final. Preliminary recommendations authorize the Wisconsin Higher Educational Aids Board, the administrative agency for all of the state's student aid programs, in consultation with the presidents of UWS, WTCS, and the Wisconsin Association of Independent Colleges and Universities to move to a system of eligibility for less than full-time students at such time as legal and financial challenges are resolved.

For example, the Wisconsin Higher Education Grant (WHEG) Program provides grant assistance to undergraduate residents enrolled at least half time in degree or certificate programs at University of Wisconsin, Wisconsin Technical College, and Tribal institutions. Awards are based on financial need. If Wisconsin opened WHEG funding to less than half-time students, many more students may be encouraged to attend our technical and two-year colleges. However, one of the challenges is that by increasing access to the program, some students will lose financial aid after they have already begun a program. There needs to be a better solution.

One potential solution is that Wisconsin could revisit its Postsecondary Education Tax Credit. Recreating this credit as the "Workers of the Future Tax Credit" would authorize Wisconsin employers to receive a 25 percent nonrefundable tax credit for tuition paid for any individual attending Wisconsin's public or private postsecondary institutions. Employers would be eligible to receive the credit whether the student is full-time or part-time, and whether degree or certificate seeking. We recommend having the tax credit increase to 35 percent if the student is low income (as defined by Pell grant status) or is pursuing a course of study in an area of worker shortage, derived from current LMI data. The colleges and universities would certify both the eligibility of the student to the employers and that the employer has paid tuition to the college for that student to the Wisconsin Department of Revenue.

Schools will also be able to keep tuition costs low for students if they reduce their overall costs. Schools have already been working on reducing costs through various consortiums. We would like to highlight two promising ideas.

The first idea is mobile labs. There are hands-on courses that cannot be taught online, like certain welding or machining skills. The mobile labs have the components of a hands-on classroom, but are in the back of a large trailer. The labs can move the necessary facilities directly to the students.

Northwest Technical College has partnered with the Bay Area Workforce Development Board to build a mobile manufacturing lab. The lab is equipped with the latest

manufacturing technology. The lab was created to save money, as many schools don't have the resources to update their existing labs. The idea of a mobile lab was offered as an alternative idea to serve a larger group of students and a broader region at a cost of $320,000. It will serve 240 students from 20 different schools in one year. High school students will have the opportunity to earn up to four college credits from working in the lab.[249]

Although this solution was developed for high schools, we believe it has opportunities to create flexibility for hands-on adult learning. WTCS schools could partner with economic development groups in their regions to build more mobile labs. These labs could also create flexibility, especially for students that live in rural areas and that have to travel great distances to reach their local technical college labs.

The second option involves a more creative use of existing infrastructure. In the Milwaukee area, schools are expanding their existing brick and mortar to help fill the increased needs for health care graduates. At the same time, however, unused hospital space sits vacant. The state could encourage our schools to save money by partnering with local hospitals to use the space. The State could offer a tax incentive or cover any potential liabilities. The schools wouldn't have to expend millions of dollars building new facilities and the hospitals would benefit by helping to train students for the workforce. If costs are lower, students will be more likely to complete their degrees and enter the labor market.

Flexibility

The second change that students thought would help them from dropping out was more flexibility in course schedules which would allow them of course times to continue working. The new UW Flexible degree program is an excellent way to reach this goal for two main reasons: (1) it should be more affordable than the traditional brick and mortar options, and (2) it tests students for competency instead of time spent in a seat. Students can gain knowledge anytime, anywhere and then test out of a subject area.

In addition to being flexible, the program should also be very affordable. At the time of this report's publication, prices have not yet been set. However, Western Governor's University (WGU), a similar online program, offers very affordable choices to students.

The UW Flexible degree should model itself off of the successful WGU program. WGU offers online, competency-based degree programs. WGU serves more than 30,000 students from all states, including Wisconsin.[250] Tuition is usually $2,890 for six months and $5,800 for twelve months, which includes as many classes and tests as the student would like to take.[251] Additionally, unlike other educational institutions, tuition has only gone up $200 over the past six years.[252] Overall college costs have increased more than 400% in the last 25 years, far outpacing the median family income increase of less than 150 percent.[253] Even community college costs have risen 200% in the last seven years and seven percent since 2009. [254] Nearly 80% of students cited that dropping the cost of education by 25% as a factor that would have helped them complete.[255]

Some people worry that an online degree will not be as valuable as a traditional degree. This is not necessarily the case. WGU's employer survey showed that 98% of WGU graduates met or exceeded their expectations, and

100% wouldn't hesitate to hire a WGU graduate again.[256] Moreover, 94% of students would choose WGU again, while 96% would recommend it to their friends.[257]

In addition to already having an excellent reputation, UWS also already offers online courses. There is no evidence that those graduates are any less qualified than students who attend class in a traditional campus setting.

STATEWIDE CREDIT TRANSFER SYSTEM

When students transfer from one postsecondary institution to another, those students try to bring earned course credits with them. Those credits are transferred through articulation agreements, which are institution-to-institution contracts that allow students to transfer credits earned at a non-UW institution, usually at WTCS, to a specific degree program at a UW institution.[258] For example, Fox Valley Technical College may have an agreement with UW-Green Bay that UWGB will accept the credit students earned from FVTC's English 101 course. If FVTC does not have an articulation agreement with UWGB, the student may have to retake English 101.

The UW System's Office of Policy Analysis and Research (OPAR) has published an annual report on undergraduate transfer students since 2007. The report:

> *provides a wide range of data related to transfer students including the number of transfer students by sending and receiving institution; average first year grade point average of transfer students by sending institution; the percentage of transfer students who enroll as freshmen, sophomores, and upperclassmen; second year retention rates by sending institution and classification; and six-year graduation rates by sending institution and student classification. The information provided below is derived from these memoranda.*[259]

The report does not provide information on how many credits do not transfer, also known as "dead credits."

Transfer has increased in Wisconsin since the first OPAR report. Just over 17,000 students transferred into or within the UW system for the 2010-2011 year. [260] This is an increase of 14% from the 2005-2006 academic year.[261] Since the data is not kept, we don't know how many credits were lost in those transfers. However, there has been an increase of transfer students that qualify as upper classman, which may represent willingness by receiving institutions to award more transfer credits.[262] Additionally, the UW Board of Regents revised its transfer policy in 2011. The Board directed UW schools to work with Wisconsin's technical colleges to identify related programs where articulation agreements could be established.[263] This is good news, but it is not enough.

It is inefficient and expensive to have students lose credits when they transfer from one postsecondary institution to another. Because we don't have the data, arguments for more liberal credit transfer are based on anecdotes and common sense. **If we assume that each student that transfers loses 3 credits (one class) then the cost of imperfect credit articulation is $9.1 million annually ($4.6 state subsidy and $4.5 in tuition).**

Wisconsin is unusual in the way it handles credit transfer.

In states like Ohio, Texas, and Washington, the general education requirements for an Associate of Applied Science (AAS) are part of the same general education that traditional transfer students take.

In 2011, Megan Chase published a comparative study of transfer systems in the Community College Review. Chase was a research assistant on the "Wisconsin Transfer Equity Study," published in 2010 by the Center for Urban Education at the University of Southern California. Chase explained: "Because the general education curriculum for AAS students and for students in AA [Associate of Science] programs is the same, the general education units that AAS students earn in OH, TX, and WA are guaranteed to transfer."[264] Not so in Wisconsin, "where general education offered at 11 of the 16 technical colleges is not guaranteed to transfer. This policy means that approximately 55% of the state's technical college students are enrolled in a technical college that does not offer a guaranteed transferable general education curriculum, leaving them with few if any transferable units."[265]

Chase organized the study by benchmarks:

> *Highlighting elements of transfer policies that are equitable or inequitable for technical students. Seven equitable transfer policy indicators were identified. The concluding finding in this study is that none of the sampled states have all seven equitable policy indicators. Washington has the most at five out of seven, followed by Ohio (4), Texas (2), and Wisconsin (0).*[266]

The author concluded that:

> *…the legal code in Wisconsin unintentionally limits transfer opportunities by restricting the number of collegiate transfer programs that can be offered at technical institutions. This speaks to the importance of history and politics in policy, as the Wisconsin Technical College System is the oldest technical college system in the nation, founded on the ideals of trade and apprenticeship education. In the present day, however, the distribution of 2-year college students in Wisconsin is heavily weighted toward the technical colleges, at approximately 24:1, with the largest percentages of ethnic minority students enrolled in the technical colleges. Allowing all technical colleges in Wisconsin to offer a transfer program would create numerous additional opportunities for minoritized students to transfer."*[267]

Although we understand the author's argument, WTCS needs to be focused on technical training if we are to meet Wisconsin's job needs. **We propose an alternative solution that would allow WTCS to focus on technical training, while benefitting all students: a universal core of transferable credits.**

Other states have dealt with credit transfer in a number of ways. A Special Taskforce on UW Restructuring and Operational Flexibilities just completed a review of Wisconsin's credit transfer and articulation process. This passage is a partial summary of UW-Extension Chancellor Ray Cross's testimony to the Taskforce on the credit transfer and articulation:

Faculty members at receiving institutions decide whether or not course credit should transfer. This is appropriate because faculty members are experts in their fields and should have control over the curriculum at their institutions. When forced to accept transfer credits from other institutions, faculty members have added requirements to degrees which ultimately increases time-to-degree for all students. Because faculty members are the ones who make decisions regarding credit transfer, Chancellor Cross stressed the importance of communication between faculty members at neighboring institutions where transfers are most likely to occur.

Although he opposes the creation of a uniform curriculum and numbering system, Chancellor Cross did recommend the creation of a "credit bank" which would be made up of a small number of lower level courses that would be universally transferable within the UW System and possibly the Wisconsin technical colleges. Chancellor Cross also said that there should be statewide policies for articulation agreements as well as a "boilerplate" agreement that could be used by departments. Chancellor Cross stressed the importance of articulation agreements and said that these agreements are a solution to credit transfer problems.[268]

We think there should be a credit bank of lower level courses that would universally transfer within the UW and WTC systems. This solution allows professors the autonomy they desire to maintain standards, while allowing more flexibility and certainty for students.

Indiana has a similar "credit bank" system. Over a decade, Indiana's Commission for Higher Education (ICHE) developed a Core Transfer Library (CTL) of 85 courses.[269] All CTL courses transfer to all public institutions.[270] Moreover, many private colleges choose to participate.[271] Recently, the Indiana legislature established a "common statewide-transfer general-education core." This law will allow students to transfer a block of 30 credits to any state public institution.[272]

In July of 2012, ICHE Commissioner Teresa Lubbers testified before the State's Subcommittee on Higher Education and Workforce Training. As Lubbers testified, "Notably, the general education core is to be based on a set of competencies – what students are able to know and do – rather than a standard set of distribution requirements of credits. The legislation also calls for a common course-numbering system to reduce confusion among institutions and students, alike."[273]

Like Indiana, **we recommend that WTCS and UWS develop a block of basic credits that can be transferred throughout all the State's public postsecondary schools, and any private schools that choose to participate. We further recommend the systems develop a common course numbering system for at least the courses in the common block of credits. The systems should issue an annual joint report to the legislature updating their progress.** The systems should take advantage of the new UW Flexible Degree program, which will offer online, competency-based education courses.

PERFORMANCE-BASED FUNDING

Supplying timely and accurate job numbers from LMI software is the first step to getting Wisconsinites working towards a common goal. The next step is to allocate resources through evidence-based budgeting. Then Wisconsin can increase institutional effectiveness by allocating resources to help improve outcomes through performance-based funding (PBF).

PBF is a finance strategy that links state funding to institutional performance. PBF is comprised of (1) goals, (2) measurements, and (3) incentives.[274] Goals are state priorities, like increasing the number of college graduates. Measurements are tracking progress towards those goals. Incentives in this case are financial or regulatory benefits. Having clear goals, measurements, and incentives will help institutions coordinate efforts, making them more effective and efficient.

For example, Ohio adopted PBF for postsecondary schools. Ohio's central goal was to raise educational attainment. In Ohio, this meant graduating more students, retaining a greater portion of college graduates, and becoming a net importer of workers with college degrees.[275] For the main campus, the school was measured and rewarded based on successful course and degree completion weighted towards graduating at-risk students.[276] For the graduate and medical education schools, PBF was based on a number of factors, including degree completion and "externally funded research expenditures."[278] Regional colleges were measured and rewarded for course completion, while community colleges were rewarded in part for completion of blocks of 15 or 30 credits.[279] Recognizing that change may take time, Ohio chose to guarantee that schools could not lose more than 1% of funding per year.[280]

PBF for postsecondary schools, like that implemented in Ohio, has been refined over decades. Improvements in student data systems and policy refinements have garnered bipartisan support for PBF. Between 1979 and 2007, more than half of the states implemented PBF. During that time, 14 discarded the practice, and two have since reestablished the program.[281] More states are actively pursuing implementation.[282] Additionally, The Lumina Foundation, The Bill and Melinda Gates Foundation, College Board, National Conference of State Legislatures (NCSL), National Governors Association (NGA), and Education Commission of the States (ECS) have promoted PBF to improve school productivity and boost college completion.[283]

Even other countries have used PBF.[284] Germany has seen that with increased PBF comes increased autonomy for the schools.[285]

Maryland's Office of Policy Analysis defines PBF in three forms:

"Output-based: Paying for results in which a funding formula is linked to outcomes such as number of students meeting credit milestones or graduating. The formula can be weighted to account for varying campus missions or give preference to low-income or at-risk students. States implementing this model include Indiana, Ohio, and Tennessee.

- *Performance-based: Encouraging improvement in campus performance through a separate portion or "set aside" of state appropriations. Pennsylvania employs this model to partially fund the state's four-year institutions, while Florida and Washington use it to fund community colleges.*

- *Performance Agreements: Achieving results through negotiated agreement between the state and institutions regarding benchmarks and goals. Louisiana uses this model."*[286]

Wisconsin should institute outcome-based PBF for our education systems, with the goal of expanding the practice to other agencies. Wisconsin should begin with PBF for postsecondary education since research reveals positive short- and mid-range impacts. Wisconsin can also institute the "set aside" version of PBF for our K-12 system through a competitive grant process to increase CTE participation and graduation rates.

Performance-Based Funding in Postsecondary Schools

Tennessee was the first state to implement PBF in higher education in 1979.[287] It has retained PBF ever since, albeit in various forms. Other states, like South Carolina, implemented and then eliminated their PBF systems because the systems were unsuccessful.[288] Having learned from past mistakes, discussed in more detail below, several states are now implementing "performance-funding 2.0."[289]

Using the guidance of recent research, Wisconsin can successfully avoid the pitfalls of prior PBF efforts and reap the benefits of enacting a policy tailored to the State's needs. Not all states use PBF for all postsecondary schools. Some states only apply PBF to community colleges, while others may include four-year schools. Given the amount of research indicating immediate positive impacts, and the dire workforce needs in Wisconsin, the state should initially institute PBF for WTCS and UWS. In the future, Wisconsin should also use PBF for K-12 education.

Impacts of Postsecondary Performance-Based Funding

Researchers have conducted numerous reviews of the strengths and weaknesses of PBF. One especially thorough report by the Community College Research Center (CCRC) at Columbia University posits that when properly formulated and implemented, PBF can have immediate and lasting positive effects on education.[290]

There are immediate, intermediate, and long-term impacts to PBF, although the long-term impacts are not as well documented. Immediate results include a change in funding, increased awareness of state priorities, increased awareness of an institution's own performance, and increased status competition.[291] Increased awareness of an institution's performance caused more self-reflection about student outcomes and the causes of those outcomes. Increased status competition was a catalyst to improve student performance. Simply enacting PBF caused schools to focus on output and encouraged them to start pushing towards the common goal of improved performance.

The intermediate impacts consist of organizational changes, including, "increased use of data in institutional planning, improvements in academic policies and practices, and changes to student services."[291] Increased data use meant that new institutional policies actually reflected the performance measures.[292] Improvements in academic policies meant schools enacted a range of changes, from consolidating like programs, to eliminating low-enrollment programs, or programs that did not lead to employment. For example, "programs that produced few graduates or whose degrees did not lead to jobs on Florida's Targeted Occupations List were shut down."[293] Changes to student services involved, among other improvements: easing registration to increase student satisfaction, more counseling regarding classwork, and job placement services.[294]

As for long-term impacts, the data is inconclusive on the impacts of PBF.[295] However, initial data shows that there are also long-term benefits. Further, the immediate and intermediate successes indicate substantial benefits will occur if Wisconsin institutes PBF. We can draw on the success of other states. Further, with better data tracking, we can revisit our own PBF model periodically to ensure outcomes match state goals. We cannot afford to wait for conclusive long-term data on PBF. Instead we should position ourselves to adopt a successful and flexible formula.

Obstacles/Concerns

There are legitimate concerns surrounding PBF that Wisconsin should address in its process. We can benefit from three decades of other states' trials and errors. Dr. Nancy Shulock, Professor and Executive Director of the Institute for Higher Education Leadership and Policy at California State University at Sacramento, outlined and addressed concerns in a recent policy brief.[296]

First, by rewarding success, PBF encourages colleges that educate the best students and punishes schools that allow open access.[297] Newer state PBF methodologies have addressed this concern in several ways. One way is by measuring student progress over time, so schools that have open admissions are measured on improvements and not data at one point in time.[298]

A related concern is that schools have different starting points, so that PBF may punish schools that are starting from a higher baseline.[299] For example, if a school already has a 90% graduation rate, that school will not have as much room for improvement, and therefore room for additional funding, as a school with a 60% graduation rate. Washington State responded that, regardless of starting point, schools can do better.[300]

Shulock also writes:

> *The concern is likely more theoretical than actual because even those colleges that have been working most actively on success agendas have been doing so at the margins with grant-funded and other "boutique" program approaches. In fact, one of the challenges nationwide that performance-based funding is being used to address is that states have had little success in scaling up their student success efforts. There is likely no college that has been able to "move the needle" to such a degree that they would be greatly disadvantaged by an approach that rewards progress.*[301]

Shulock's argument highlights what we believe is true in Wisconsin, that schools are already making valuable individual efforts, but these efforts need to be scaled so that all students can benefit.

Third, many aspects of student achievement are not measurable, such as intangibles that help students get jobs, like the ability to work in teams.[302] Therefore, schools can't fully be evaluated to include all relevant factors. We can't let this sidetrack us, as it has always been true. An improved way of addressing this concern has been to make degree completion only part of the PBF equation. Further, college faculty and staff should be involved in formulating the PBF equation so they have an opportunity to highlight some of the more elusive data.[303]

Colleges are also concerned that PBF will cut into already depleted funding.[304] But in today's political climate, parties on both sides of the aisle are less inclined to allocate funding without regard to measurable outcomes. In fact, PBF can actually prevent cuts.[305] According to Shulock, "In Washington it has become clear that the existence of the incentive funding program has prevented even deeper cuts in the community and technical college system budget."[306]

Related to this concern is that PBF will destabilize education funding.[307] This concern has never been substantiated.[308] In fact, enrollment-based funding systems may cause more variable funding than PBF.[309] Shulock explains how more states are addressing this concern:

> *[States are] distributing performance funds as part of initial allocations by adjusting the base allocation formula to factor in prior year(s) performance. With this model, there should be no more uncertainty than there currently is. For example, a college would know that 80% of its budget was based on FTES [full-time enrollees] and 20% was based on its prior performance on an array of progression and success measures for which the college has the data.[310]*

This solution means that some schools, dependent on their underlying funding formula, won't have the same funding fluctuations. Improving student outcomes will still remain a key goal.

These concerns are also tied to the way the state allocates funding. Some argue that PBF should only be "bonus money" and not part of base funding.[311] However, other states have learned that for postsecondary education, bonus money didn't initiate desired outcomes.[312] What's more, in tight economic times, states that allocated bonus PBF abandoned the practice.[313] As Shulock writes, "The assumption going forward is that incentives for student success must be part of core funding to reshape institutions around student success goals."[314]

Another concern is that PBF holds the education system to a higher standard than other taxpayer funded investments.[315] Shulock writes, "… postsecondary outcomes can best be improved through shared accountability for outcomes across sectors. The leading states in this effort are developing statewide goals and plans that are supported by new financing models for all sectors of postsecondary education."[316] Education, like all state funded programs, should illustrate measurable outcomes. Due to the extensive research on the initial benefits of

PBF in education, Wisconsin should start with PBF for all levels of education. PBF should be built-in funding for postsecondary education and bonus money for K-12.

Another concern is that faculty and staff may find it insulting that the State assumes they need a financial incentive to care about student outcomes.[317] This is not the assumption behind PBF. Schools are composed of many different decision makers, not just faculty and staff. PBF is a mechanism to focus the attention of all people involved on the needs of students.

Despite their best efforts, individual faculty and staff will have a much more difficult time improving student outcomes if they have to address the challenge alone. In fact, faculty and staff input on the PBF could eventually free them up to concentrate more on helping students succeed. For example, if faculty members believe that students need more counseling, and PBF rewards student improvement, administration may be more supportive of faculty allotting time to counseling than other less-fruitful endeavors.[318]

The next concern is that colleges should not be judged on outcomes over which they have no control.[319] While students will always make individual choices, it is difficult to argue that colleges have no impact on student success.[320] No PBF formula can ever envelop 100% of variables. But the growing body of research shows there are best practices colleges can use for providing student counseling. Further, students are asking their colleges for more direction.[321]

Colleges are also concerned that a quick change to PBF will punish institutions that are not able to adapt quickly enough, causing them to lose funding, which ultimately makes the outcomes worse.[322] Most systems have addressed this concern by phasing in PBF and including a base amount that schools will receive.[323] What's more, Shulock writes, "newer models are predicated on the assumption that the full complement of a college's resources should be directed toward increasing student success. Under that approach, even low-performing colleges would have considerable resources to devote to improvement."[234]

The next concern is that current data systems do not produce the optimal information needed for PBF.[235] Technology has changed drastically since Tennessee first instituted PBF in 1979. Wisconsin is currently instituting a new statewide K-12 school data system. As discussed earlier in this report, Wisconsin should be using the most advanced LMI software to compile accurate and timely job numbers. The technology exists to match student outcomes to state needs. Wisconsin should continually look to new technology advancements to ensure we are providing the most complete data.[326]

Finally, schools are concerned that there is not solid evidence to support PBF, which makes measures difficult to evaluate. As noted earlier, initial and intermediate successes are both documented. Long-term research is not conclusive.[327] Systems have used a pragmatic process to look at what did not work and make changes. The challenge we face now is no different than when schools first began PBF: we must continually evaluate our methods to ensure the best funding approach.

Recommendation

PBF has gone through many evolutions that have resulted in version 2.0. **We recommend Wisconsin use**

the experience of these other formulas to tailor PBF to our state's needs. Wisconsin's College and Workforce Readiness Council (CWRC) should develop PBF formulas for K-12, WTCS, and UWS schools. CWRC should present its recommendations to the Governor and Legislature for their consideration.

Crafting an Effective Performance-Based Funding Formula

Drawing on experience from other states, CWRC should make recommendations to the Governor and legislature for how to craft and institute PBF. CWRC is in the best position to develop these plans as the group has representation from the legislature, executive branch and private sector in addition to WTCS, UWS and K-12. Wisconsin's independent colleges are also represented and could bring input as to what works within that system.

CWRC should use the following guidelines, which are based on the success and failure of other states' PBF experiences. In 2011, the State Higher Education Executive Officers (SHEEO) group recommended the following ten points for states that want to use PBF:

1. Tie performance-based funding measures to the public agenda for higher education. Without goals, performance-based funding is simply a technical exercise.

2. Ensure that you have good data, which is critical to the success of the initiative.

3. Use different metrics for research and comprehensive universities and community and technical colleges. Define performance for audience and levels.

4. Keep metrics simple and be very clear about how metrics will be used.

5. Hold harmless at-risk populations; incentives must be fair.

6. Pay attention to the implementation strategy as well as the design of the performance-based funding system.

7. Put enough money into performance-based funding to make a difference.

8. Determine how much of the budget will be dedicated to performance-based funding—and whether the sources will be new or reallocated.

9. Determine a mechanism for allocating performance-based funding dollars. Should it be built into the regular funding model? Or designed as an add-on or categorical bonus?

10. Don't include tuition money with state appropriations in any metrics or formulas.[328]

We will examine each of these points in turn.

1. Tie performance-based funding measures to the public agenda for higher education. Without goals, performance-based funding is simply a technical exercise.

Wisconsin should tie PBF into the higher public agenda, which is in part creating an environment for jobs. All institutions should be provided LMI jobs data and work towards educating students for potential career opportunities.

2. Ensure that you have good data, which is critical to the success of the initiative.

As with point one, point two relies on LMI job data. Good data is critical at the input phase and the tracking phase. For tracking, DPI is in the process of adopting a new statewide data system that should address this point for K-12 education. Wisconsin should rely on its postsecondary institutions to provide the necessary data to allocate PBF resources. If data systems are insufficient, WTS and UWS should work with the state to develop the necessary software.

3. Use different metrics for research and comprehensive universities and community and technical colleges. Define performance for audience and levels.

K-12 performance measures should be geared towards its two main goals: producing competent graduates and educating students for either further education or a career. A successful WTCS student completes a credential, is hired into a job, or transfers to a four-year institution. A successful UWS student graduates and is either placed in a job or continues to a graduate-level education. The portrait of a successful student should guide performance measures at each level.

At all levels, the measures should also be tied towards addressing our skills gap and high need job areas. This is in part why reliable LMI data is crucial.

4. Keep metrics simple and be very clear about how metrics will be used.

Tennessee, the state that has sustained PBF the longest, uses ten weighted measurements.[329] Wisconsin should keep to ten or fewer measurements per system.

5. Hold harmless at-risk populations; incentives must be fair.

A "hold harmless" provision prevents institutions from having funding decreased below a certain amount. As mentioned above, Ohio chose to guarantee that schools could not lose more than 1% of funding per year.[330] Wisconsin should initially include a similar provision, which could be removed after institutions have had time to successfully incorporate performance measures.

6. Pay attention to the implementation strategy as well as the design of the performance-based funding system.

In addition to developing the PBF formula, Wisconsin's CWRC should review its implementation. For the same reasons noted earlier, including its varied representation, CWRC is positioned to provide feedback on implementation.

7. Put enough money into performance-based funding to make a difference/ 8. Determine how much of the budget will be dedicated to performance-based funding—and whether the sources will be new or reallocated.

We address points 7 and 8 together since they go hand-in-hand. In Wisconsin, the amount allocated for PBF would depend on the institution. For fiscal year 2013, UWS has an approved budget of $1,109.8M of

which $890.7M is in general program operations. UWS has total budget of about $6 billion. PBF from the state level could only impact the GPR base budget, since that is what the state allocates. The same is true for WTCS and K-12.

Considering the relatively low level of State money compared to overall funding, we recommend at least 5% of state funding be allocated through PBF in the first budget cycle. We recommend at least 5% because other states have allocated too little funding to see results. More extensive research and input from institutions would be necessary to find the correct percentage. We do know some states are allocating a much higher percentage. For example, Texas's technical college system requested that the state link 45% of its entire operating budget to PBF.[331] Tennessee is awarding 100% of its funding for universities and community colleges based on performance measures.[332]

Due to less extensive research, PFB for the K-12 level should be added as bonus money through a competitive grant process. State support for K-12 education is $5.8 billion annually, of which roughly $4.3 billion is general school aids.[333] Schools allocate roughly 2.5% of their total budgets to CTE. Considering the job opportunities in Wisconsin, CTE offerings need to increase. School districts with robust CTE programs, perhaps surprisingly, do not spend a significant amount more than school districts without. At these school districts, the spending was just about 4%. Although it is difficult to place a number on an exact amount, we believe the state should offer $3 million in competitive grants to encourage schools to build more robust CTE programs.

Last year, Oregon's legislature passed a CTE revitalization grant in the amount of $2 million for their biennium. Oregon has roughly two-thirds of the students that Wisconsin's schools teach.[334] We think this amount will encourage schools to partner with colleges and businesses to bring CTE back to the classroom. If the grant is successful, the amount could be increased in the next budget.

9. Determine a mechanism for allocating performance-based funding dollars. Should it be built into the regular funding model? Or designed as an add-on or categorical bonus?

PBF should be built into regular state allocations for several reasons. Allocating PBF as part of the base funding insulates these resources from changes in the state budget. According to the Community College Research Center,

> *One way is to include performance funding as part of the basic state funding formula for higher education so that the system does not stand out separately and look ripe for cutting. If state funding goes down, performance funding declines as well, but it is not eliminated."*[335]

Additionally, allocating bonus money didn't produce the desired outcomes in other states.[336] (This did not include research for K-12 education). Finally, in tight economic times, schools that are meeting their marks may see a total dollar increase even as other programs are cut.[337]

10. Don't include tuition money with state appropriations in any metrics or formulas.

This makes sense based on Tennessee's recent experience. The state did not exclude tuition money from the formula, which blurred funding lines.[338] Keeping the lines clear allows the institutions more certainty in how their state funding will be allocated.

Using these guidelines, CWRC should be capable of producing Wisconsin's own PBF version 2.0. Other states have used similar boards to make recommendations within about six months. Our council should be able to do the same.

CONTINUING EFFORT

Throughout this process, we met many people that are working hard to address these challenges and move Wisconsin forward. One of the larger challenges Wisconsin faces is a continuing, coordinated effort. We believe that coordination is truly the key to success. Without it, good ideas will languish.

Although this report was written in conjunction with the Office of Business Development, we recommend that the Council on Workforce Investment and the Council on College and Workforce Readiness continue these efforts by filing a joint annual report. The report should include updates on whether these recommendations were implemented and/or successful, and what new ideas and goals Wisconsin should pursue.

OTHER CONSIDERATIONS

FUNDING WORKER TRAINING THROUGH UNEMPLOYMENT INSURANCE

As a final consideration, the way workforce training is funded could be tied to Unemployment Insurance (UI). When the economy improves, instead of reducing employer's UI payments to the lowest possible level, the state could remain 0.2% above the base employer fee. That money could only be used to fund workforce development.

Wisconsin is allowed by federal and state law to withhold a 0.2% of UI payments from employers specifically to fund workforce development. Thirty-two other states fund their workforce training this way. Considering the burden UI currently places on employers, we would not advocate for this change now. However, if we can reform our UI and workforce development systems, it may be worthwhile to institute this change since it is directly tied to what it should be funding: job training.

TAX STRUCTURE

It is difficult to attract, let alone retain, talent in Wisconsin considering our current system of taxation. Quite frankly, this report would be incomplete if we were to present issues regarding our workforce without discussing taxes. Similar to the skills gap issue, a number of states face antiquated tax systems that harm their economic competitiveness. Jon Shure of the Centre on Budget and Policy Priorities, a think-tank based in Washington, D.C. that studies state tax structures, says that state taxation systems are overdue for reform.[339]

Wisconsin has a unique tax structure that Richard Chandler, Wisconsin's current Secretary of the Department of Revenue, likens to an old car that's still rolling down a hill due to inertia, but will run into problems when it has to climb back up.[340] In Chandler's opinion, "We can't afford to be complacent. Wisconsin should be doing everything possible to promote economic growth and jobs, including changing the state's tax structure."[341] We agree with Chandler.

Wisconsin has earned the reputation of being one of the more heavily taxed states in the country. The Tax Foundation, a Washington D.C. think tank, has ranked our state in the top ten for tax burden every year since it began compiling the numbers 37 years ago.[342] The Tax Foundation calculates the tax burden by finding total amount paid by the residents in taxes, then dividing those taxes by the state's total income.[343] Wisconsin taxpayers

pay $4,427 per capita in state and local taxes.[344]

While total tax burden is an important element of a state's economy, the way in which a state taxes can also enhance or harm a state's competitiveness.[345] In 2011, 24/7 Wall St., an online financial publication, reviewed data from the Tax Foundation, the Census Bureau, the Federation of Tax Administrators, and the Mercatus Center at George Mason University.[346] The report listed Wisconsin as the fourth highest state in terms of total taxes paid as a percent of income at 11%.

Wisconsin's current tax system relies more heavily on personal income tax and property tax than most other states. In fact, both taxes are approximately 25% higher than the national averages.[347] In 2009, Wisconsin collected $8.7 billion in property taxes, followed by $6.2 billion in personal income taxes.[348]

Wisconsin's income taxes disproportionately impact middle and upper class taxpayers.[349] Our middle-class carries the second-largest tax burden in the country, only trailing New York.[350] For our lower-income taxpayers, Wisconsin ranks in the lower third of states.[351]

As already stated, Wisconsin's tax structure has a negative effect on our ability to attract and retain our workforce. Although Wisconsin has recently made great strides towards improving its business climate, the Tax Foundation's State Business Tax Climate Index ranks us 43rd. This ranking is important for Wisconsin as the United States Department of Labor reports that most mass job relocations are from one U.S. state to another, rather than to overseas.[353] Our state is losing out on economic growth to other states. While lawmakers are able to offer tax credits and other incentives to companies, these often cover a systemic issue.[354]

	Overall Rank	Corporate Tax	Individual Income Tax	Sales Tax	Unemployment Insurance Tax	Property Tax
Wisconsin	43	32	45	16	21	32
Minnesota	45	42	44	36	34	26
Illinois	28	45	13	33	43	44
Iowa	41	48	32	25	35	36
Michigan	18	49	11	7	44	30

Source: The Tax Foundation.

The State Business Climate Tax Index is helpful, but is not the complete picture. For example, the numbers do not take into account user fees and revenue generators like vehicle registration. Also, the formula does not report that for combined state and local-option sales tax, Wisconsin is the lowest in the Midwest and 40th among all states.[355] Our sales tax is 14% below the national average.[356]

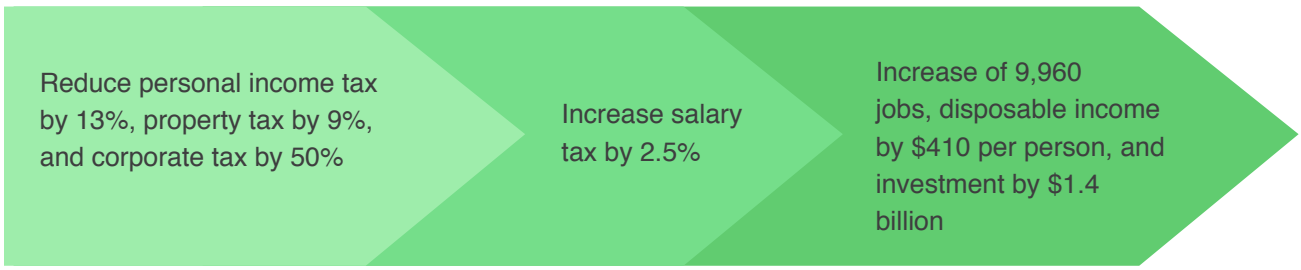
Regardless, from an employer's perspective, Wisconsin has a more difficult time attracting employees due in part to the negative perception created by our tax structure. Personal income tax and the property tax are the most visible and most disliked of the major taxes.[357] These taxes are also easy to compare from state to state. Further, in a 2010 poll, only 26% of respondents believed the State's income tax was the fairest tax, and just 18% found property taxes to be fair.[358] At Bucyrus, we had a difficult time recruiting workers to Wisconsin, but generally retained them once they were here by paying them higher than normal wages to compensate for higher state income and property taxes.

One way to remove this stigma is to reduce our reliance on personal income and property taxes by shifting the burden to consumption tax. Even if Wisconsin rebalanced the system in a revenue-neutral way (meaning no tax increase or decrease), restructuring the tax code could create 10,000 jobs.[359] This is because our current tax structure deemphasizes the impact on the whole economy by instead focusing on more narrow impacts.

Shifting the burden to sales tax would help Wisconsin in a number of ways. First, it would decrease our perception as a so-called "tax hell," making it easier to attract employees. Second, it would allow people more control over their taxes because people have choices for how much they consume. This would not impact essentials like food or medicine that are already exempt from sales tax. Third, we would increase revenue from visitors by virtue of having a tax that out-of-state residents actually pay. This is just a few of the benefits associated with tax reform.

In a 2010 report, Chandler made a request of the Beacon Hill Institute, a nonpartisan research organization associated with the Department of Economics at Suffolk University. Chandler charged Beacon Hill to propose several methods of restructuring Wisconsin's tax code to benefit the economy. Beacon Hill looked at three reductions: (1) reducing personal income tax, (2) reducing property taxes, and (3) eliminating corporate tax.[360]

Beacon Hill's findings were interesting. Wisconsin could cut personal income tax by 13%, property tax by 9% and corporate income tax by 50% for a total of $2 billion. All this would be offset by a sales tax rate increase of 2.5 cents. This combination would also create nearly 10,000



jobs, increase disposable income by $410 per person, and increase investment by $1.4 billion over a one-year period.[361] We believe Wisconsin can restructure taxes in a way that will stimulate the economy without having to reduce government services. Although the formula does not have to be in the manner prescribed by Beacon Hill, a restructuring is necessary.

A 2010 Ernst & Young study titled: "Analysis of Milwaukee's Relative Business Tax Burdens" supports the Beacon Hill study. Ernst & Young found Milwaukee imposes relatively high individual income and residential property taxes. When adding this to the business tax burden, Milwaukee is one of the least competitive locations for machinery manufacturing, the largest job-providing industry in the state.

The report concludes that for Wisconsin to be competitive with other states, it needs to reduce business tax burdens. Due to the complicated nature of taxes, this will have to involve changing multiple taxes, like property, income, and sales tax. Further, residential and property taxes affect Wisconsin's competitiveness when employers pay relatively higher wages to offset the higher individual tax burdens. Therefore, these taxes must be considered as a package, instead of individually.

We are **not** proposing an overall tax increase. Instead, a revenue-neutral model, such as the one researched by Beacon Hill, could increase Wisconsin's economic competitiveness without changing state funding. Ultimately, with increased savings and investments of citizens, we believe Wisconsin could actually lower taxes if it institutes a more efficient model. Legislators will have to build consensus on any proposed tax increases because under current law any tax increase, even if it is offset by another tax decrease, would require a two-thirds passage vote in both houses of the legislature.[362]

State lawmakers have been investigating ways to change our tax code for many years. We encourage them to take a broad view of our entire tax structure as opposed to taking a narrow look at personal income and sales taxes only. As the Beacon Hill research shows, changing one form of tax impacts other taxes. Therefore, we need to examine the complete tax structure. Restructuring the tax code can be a daunting task, but it is vital for Wisconsin's economic competitiveness.

IMMIGRATION

Wisconsin is not able to meet our current workforce needs and the challenge is increasing. Our workforce numbers are projected to barely increase between 2010 and 2040. Further, Wisconsin isn't attracting the young talent it needs to keep pace with traditional and innovative workforce needs. We are a net exporter of bachelor degrees, and students entering our workforce are not necessarily meeting our employers' needs.[363]

To address this problem and bring in new talent, states end up competing for out-of-state workers. At Bucyrus, we recruited from Kansas to Ohio and south to Tennessee. Yet, despite great cost and time, we were only able to recruit a handful of workers. This anecdote is supported by research that shows that less than one-third of the U.S. population lives in a different state than they were born in.[364] Annually, roughly five percent of the population will move to another county.[365] We have to work primarily with what we have.

Even a national migration, although helpful, would not fully meet Wisconsin's needs. Besides, there has been a downward trend in migration over the past 25 years.[366] According to the Federal Reserve:

> *Not only are migration rates lower in levels than at any point in the post-war period, they have also entered a period of continuous decline that is longer than any recorded in the twentieth century. Migration rates across short distances, such as within a county, have trended down as well.[367]*

As these numbers show, recruiting from within the country has become increasingly more difficult since World War II. Even if we could attract the right number of workers, we would still be recruiting from employee groups with similar skill sets.

Immigrants, however, often possess different skills than native workers, which can help fill the skills gap.

For these reasons, we believe that Wisconsin needs to implement policies that welcome legal immigrants into out state. Wisconsin should also encourage meaningful immigration reform on the national level.[368]

Immigration is Good for the Economy

Considering above-average unemployment, it may seem counterintuitive to encourage more people to come into our state. Nevertheless, increased immigration would boost our economy by filling some jobs that have continued to sit vacant.[369] This ranges from high skilled jobs (doctors) to labor-intensive jobs (roofers). Regardless of the level of skill set, employers have a difficult time filling these positions with U.S.-born workers.[370]

Further, even if we are able to retrain Wisconsin's entire unemployed population and match them with available jobs, we will still fall well short of filling the projected 925,000 jobs created or replaced between 2008-2018. This is because our working age population already peaked in 2010 and is projected to continue declining through at least 2035.[371]

In addition to helping fill projected jobs, immigration can actually create more jobs. In particular, highly skilled immigrants spur growth. Large companies that hire highly skilled immigrants hire more American natives, too.[372] A recent study found that for every 100 immigrants with an advanced degree, 44 additional native-born Americans were hired.[373]

Highly skilled immigrants also make significant tax contributions. A 2011 American Enterprise Institute (AEI) study reported:

> *Highly educated immigrants pay far more in taxes than they receive in benefits. In 2009, the average foreign-born adult with an advanced degree paid over $22,500 in federal, state, and Federal Insurance Contributions Act (FICA, or Social Security and Medicare) taxes, while their families received benefits one-tenth that size through government transfer programs like cash welfare, unemployment benefits, and Medicaid.[374]*

In fact, on average, all immigrants pay more in taxes than their families receive in public benefits.[375] Highly

skilled immigrants contribute more than their lower-skilled immigrant counterparts.

Even lesser skilled, temporary immigrant workers have a positive impact on the economy. According to the National Governors Association (NGA), a bi-partisan group of state Governors that promote visionary state leadership and the sharing of national best practices, lesser-skilled immigrants are indispensable in the workforce.[376] Similar to high-skilled immigrants, they increase native-born employment. Every 100 lesser-skilled, nonagricultural immigrant workers hired resulted in an additional 464 jobs for U.S. natives.[377]

The data show that U.S. employment is not a finite pool, or that immigrants entering the state would just "take a piece of the pie." Immigrants can actually increase the size of the workforce, creating more job opportunities for everyone. This is because some immigrants possess a different skill set that complements our American workforce.

Finally, there is no evidence that immigration has a negative impact on native employment.[378] Older research had shown that immigration may have a moderate negative impact on U.S. employment in the short run, especially among lesser-educated natives.[379] However, there was never research to show this was permanent. Further, even if this was true, there is evidence that immigration encourages U.S. natives to upgrade their skills through additional education or training.[380] This would encourage native-born workers to shift into the middle-class. Overall, immigrants diversify the workforce resulting in higher productivity, lower native unemployment, a more educated native population, and stronger economic growth.[381]

Current and Future State of Immigration

There is a common misconception that immigration is only a federal issue.[382] While the federal government has exclusive jurisdiction over entry into the country, states and localities may implement policies that influence integration, as well as the economic, social, and civil life of immigrants.[383]

In 2011, states were frustrated with a lack of federal immigration reform and instituted a record number of new policies of their own.[384] Although that number sllowed in 2012, the issue is not going away.[385] The National Conference on State Legislatures (NCSL) and the Council on State Governments (CSG), two influential state advisory groups, continually list immigration as a pressing issue for states.[386]

High profile laws, such as Arizona's law requiring police, employers and landlords to expose undocumented immigrants[387], may have given people the impression that immigration only concerns illegal aliens, or that immigration is a bad thing. A 2011 survey published by the Pew Research Center found that "only 23 percent of baby boomers regard the country's growing population of immigrants as a change for the better. Forty-three percent saw it as a change for the worse."[388]

Regardless of perception, the U.S. immigrant population is increasing. Recently, for the first time in American history, white babies became a minority of all births.[389] In fact, almost a quarter of all children in the United States have foreign-born parents.[390] Of those, 80% were born in the United States and are therefore U.S. citizens, regardless of their parents' legal status.[391]

Immigrants are also becoming a more significant portion of our workforce. From 2000-2010, the country would have had a decline in our under-18 population, had it not been for the gain of 5.5 million Hispanic and Asian youths.[392] Nationally, one in six workers is an immigrant.[393]

Nationally, immigrants represent a large portion of small business owners, too. Even though they are 13% of the overall population and 16% of the workforce, immigrants comprise 18% of small business owners.[394] Their businesses brought in $776 billion in sales in 2007.[395] Small businesses are especially important to Wisconsin, where there are roughly 109,000 small business and 2,400 large businesses.[396] Wisconsin's small businesses also employ 2.4 million people.[397]

In Wisconsin, our $27 billion-per-year dairy industry is already seeing the benefits of immigration.[398] Immigrants, mostly from Mexico, have become more than 40% of all hired employees in the dairy industry.[399] Demographic changes are partially responsible for the change, with fewer young people wanting to stay on family farms.[400] Even though there has been heavy investment by the Wisconsin's dairy industry to modernize technology, human labor is still needed.[401]

In a Milwaukee Journal Sentinel article, one farmer commented that he had to hire immigrant workers not because it was cheaper labor, but because, "the immigrant workforce has a commitment to the job that you can't find in the local labor market."[402] Without immigration, many farmers fear the industry would crumble, leaving America's Dairy Land without the Dairy.[403]

	Wisconsin	Illinois	Michigan	Minnesota
Foreign-born Share of Population	4.4%	13.7%	6.0%	6.8%
Foreign-born Share of Labor Force	5%	17.4%	6.9%	7.9%
Number of Foreign-born Business Owners	4,339	48,425	16,744	6,327
Foreign-born Share of Business Owners	4.5%	21.8%	10.4%	6%

Source: Immigrant Small Business Owners, pg. 24.

Immigrants will continue to have a growing impact on the U.S. workforce. According to Brookings Institute Senior Fellow Audrey Singer, "… demographers predict that over the next 40 years, immigrants and their children will be the only source of growth for the nation's labor force, which would otherwise begin to shrink around 2015."[404]

Wisconsin will also see immigration have an increasing impact. Roughly 60% of our schools have seen declining enrollment in the past seven years, and our workforce population is projected to increase only 0.4% by 2040.[405] This means that without immigration we have fewer workers coming into the already depleted pool.

Additionally, Wisconsin is going to be hit as baby boomers exit the market.

If Wisconsin wants a quicker economic recovery and long-term prosperity, we need to embrace immigration. The European Union, facing many of the same economic troubles as the U.S., recently commissioned a study on immigration that concluded, "Immigration is a significant component of any strategy to boost economic growth and competitiveness."[405] Although immigration is also a federal issue, Wisconsin can enact state policies enticing legal immigrants to come to our state. That way, even if Congress remains gridlocked on the subject, Wisconsin can position itself for economic growth and competitiveness.

Realities of Immigration

A recent report by the Brookings-Duke Immigration Policy Roundtable explains why localities should help immigrants. Without a coordinated effort, some immigrants, particularly those that are lower skilled, can strain local resources and create rifts in communities.[406] The report outlines what helps immigrants assimilate into the community:

> *For immigrants, the process of assimilation and integration involves learning English, becoming economically self-sufficient, supporting one's family, and contributing to the community. In the largest sense, it also means understanding and sharing core civic principles and coming to see oneself as a member in full standing of a new political community. For localities, this process means protecting newcomers from unscrupulous landlords and employers, improving the conditions in which immigrants reside and work, setting high expectations and helping newcomers reach them, and ensuring equal treatment under the law and opportunities for civic participation.*[407]

In return, resident citizens get the benefits of more productive citizens and the strengthening of their community.[408]

But as the report noted, immigration is a controversial, emotionally charged issue.[409] Public opinion is mixed and can be confusing. For example, a majority of the public has endorsed measures aimed at restricting the flow of illegal immigration, as well as limiting the path to citizenship for illegals.[410] Even more people (78%) favor stronger enforcement of immigration laws and border security.[411] But nearly as many people (72%) favor providing a way for illegal immigrants already in the country to gain legal citizenship if they meet certain requirements, like passing a background check, paying fines for having been in the country illegally, and having a job.[412]

This data suggests that citizens don't oppose immigration in total, but that citizens would welcome immigrants that can bring benefits to their communities. A targeted approach by Wisconsin to welcome immigrants will boost our economic competitiveness as a state, thus benefitting all citizens.

Targeted immigration policies can benefit both Wisconsin's urban and rural regions. The benefits to our dairy industry are an example of how immigration can help rural areas. A June 2012 study on the economic impact of immigration on St. Louis highlights the benefits of

immigration in urban areas.[413] Using U.S. Census data, the report shows that increasing immigration significantly raises employment and income growth, boosts wages, lowers unemployment rates for blacks and whites, and improves local housing values.[414]

This may seem counter-intuitive. If there are residents now that can't find jobs, how does bringing in a larger population help? The answer depends in part on the type of immigrants coming to the state.

According to Harry Holzer, a professor of public policy at Georgetown University, "[e]conomists have reached a consensus of the benefits of highly-skilled immigration."[415] Studies show highly skilled immigrants "produce a surplus for public coffers by paying more in taxes than they take out in services."[416] Further, immigrants are more likely than native residents to be entrepreneurs.[417] As Roohan Poojara of the American Enterprise Institute points out, "More than 30% of the scientists and engineers in Silicon Valley who have helped America stay at the cutting-edge of technological innovation are foreign born. One-quarter of the Americans who have won Nobel Prizes have been immigrants, even though immigrants comprise just one-eighth of the U.S. population."[418]

Immigrants also have a high rate of advanced education attainment. The Bureau of Labor Statistics (BLS) reported that in 2009 almost seven million immigrants in the U.S. had obtained a bachelor's degree or higher.[419] That was nearly one-third of the entire immigrant labor force, and a nearly four percent increase from a decade earlier.[420] That means legal immigrants are more likely than native-born to have earned a bachelor's degree or higher.[421] Only 27% of immigrants didn't have a high school diploma.[422]

Most immigrants in Wisconsin's metro areas are classified as mid-to-high skilled. In the Milwaukee metro area, mid-to-high skilled immigrants outnumber low skilled immigrants by more than two to one.[423] In Madison, mid- and high-skilled immigrants comprise more than 80% of the immigrant population.[424]

While we see Wisconsin has many high-skilled immigrants, we also have a population of low-skilled immigrants. As Dr. Holzer points out, "less-skilled newcomers and the policies that govern their admission and stay continue to provoke disagreement."[425] But even low-skilled workers can have a positive impact on local economies. This is partially due to the previously mentioned amplifying effect immigrants have on hiring. This is also because foreign-born people participate in the workforce at a higher rate (67.0 percent compared to a native born rate of 63.6 percent).[426]

Addressing the Challenges of Immigration in Wisconsin

Although there are many benefits to immigration, there are also challenges. Some controversy arises due to the federal laws allowing ingress into the country. For example, 63% of our annual legal immigrants are allowed to stay due to family ties, while only 16% are admitted for employment-based reasons.[427]

Recent research, however, reports that if handled properly, immigrants from all walks of life can contribute to the financial health of the state. Therefore, in the short-term Wisconsin should focus on how to improve assimilation and integration of our immigrants, especially the low-skilled workers that may struggle more. We should encourage mid- and high-skilled workers to

come to the state since they can help the state's economy without much intervention. The question then is how do we help these populations?

The good news is that the United States and Wisconsin already have a number of programs and policies in place to help with assimilation. In the U.S., "integration has taken place even despite a laissez faire and seemingly ad hoc policy approach backed up with what appears to be relatively little targeted funding. In fact, the United States makes substantial, if indirect, investments in immigrant integration at all levels of government, particularly through the education systems and through social services at the state and local levels."[428]

In addition to already having some support in place, Wisconsin has additional resources that immigrants might not know about. The University of Wisconsin is home to the Center for the Study of Upper Midwest Cultures, which provides education and outreach services.[429] UW-Stout maintains a multi-cultural resource database.[430] Our technical colleges host multicultural resources centers.[431] The Wisconsin Department of Workforce Development has a number of programs for refugees, immigrants, and migrant workers.[432] There are also resources available throughout the state targeted at both our Latino and Hmong populations.[433] Religious organizations also offer services aimed at aiding immigrants.[434] This list is by no means exhaustive, but illustrates that many Wisconsinites already know that immigration is important, some immigrants need help, and many citizens are willing to provide that help.

1. Considering our existing structure, Wisconsin can aim for specific goals regarding immigration assimilation. The National Governor's Association (NGA), listed five goals for states seeking to improve immigration:[435]

2. Making sure that immigrants who work in highly skilled occupations, such as doctors, nurses, teachers, and researchers, can quickly obtain necessary U.S. licenses and credentials;

3. Making sure that those with limited formal education have access to a combination of English instruction, adult education, and job training to improve their job prospects;

4. Making sure that children of immigrants have access to, and use, programs that will help them be healthy and succeed in school;

5. Making sure that immigrants know they are eligible for citizenship, understand how to apply, and know English well enough to qualify; and

6. Helping immigrants understand the U.S. financial system and how banking and credit can help them.[436]

In addition to these six points, the NGA also encourages states to advance two overarching goals including, "gathering better data about the immigrant population and the benefits of immigrant integration and deploying an effective communications strategy to engage the public constructively in areas where they have concerns."[437] The Department of Public Instruction already collects data on the demographics of immigrant children in our schools.[438] Gathering better data would

include other departments, like revenue, children and families, and workforce development so we can measure whether integration efforts have an impact. Providing this data also fits with the goal of giving Wisconsinites accurate and timely information to advance honest debate surrounding policy decisions.

NGA does not give one prescribed way to address these challenges, but instead gives examples of best practices tried in other states. A handful of states, including Illinois, Maryland, Massachusetts, New York, and Washington, have taken the initiative for integration.[439] For example, in 2005 Illinois created the Office of New Americans Policy and Advocacy.[440] The office has four goals:

> *Assisting adult immigrants to become fully contributing members of society; Assisting children of immigrants to maximize their potential; Ensuring that immigrants have access to state services and opportunities and ensuring that immigrants have local access to state programs.*[441]

Maryland and Massachusetts have more recently developed similar offices.[442]

Other states, like New Jersey, have commissioned advisory panels to develop recommendations for subjects, including workforce and economic growth, education, social services, and state and local government interaction with the immigrant communities.[443]

New Jersey's panel divided its recommendations into four categories: (1) social services, (2) labor and workforce development, (3) education, and (4) state and local governments.[444] Social services included recommendations on improving access for immigrants to medical and other services by removing cultural and language barriers.[445]

Workforce development includes opposing E-Verify (an instant check on legal work status) under state law, addressing worker exploitation, ensuring worker protection improving English as a Second Language (ESL) and Adult Education training options.[446]

Education recommendations include enhancing ESL, eliminating discrimination in schools, granting immigrants in-state tuition rates, improving the state's process of credentialing professionals who previously gained credentials in another country, and ensuring high-quality ESL for preschool children.[447]

State and local government recommendations include recognizing the role of all levels of government in providing services in a "culturally and linguistically competent manner," respecting fundamental democratic values, ensuring opportunities for all citizens to participate in "economic, social, cultural, political and civic life, and ensuring the rights of immigrants to retain their own cultural identity."[448]

Maryland's advisory panel offered some similar recommendations. That panel also focused on helping immigrants become citizens and providing information about financial services.[449]

Building on the research from prior state panels and groups like the Brookings Institute, the Pew Hispanic Center[450], the Cato Institute[451], and the Migration Policy Institute[452], Wisconsin should form its own statewide advisory committee that incorporates rural and urban

interests when considering how the state can encourage legal immigration. The committee should focus on using existing infrastructure and public/private partnerships to minimize costs.

Additionally, Wisconsin should encourage the federal government to have a meaningful, evidence-based dialog that takes into account the benefits and challenges of immigration with the goal of revamping our outdated federal laws.

The American Enterprise Institute, a policy think-tank, studies the fiscal effect of immigrant workers by comparing the benefits they receive versus the taxes they pay. The results indicated federal policy changes would boost U.S. employment without raising taxes or cutting spending. These policies are:

1. Giving priority to workers who earn advanced degrees from US universities, especially those who work in STEM fields.
2. Increasing the number of green cards (permanent visas) for highly educated workers.
3. Making available more temporary visas for both skilled and less-skilled workers.[453]

These policies would spur growth across the U.S.

A show of state-level support could help alleviate the political deadlock. A number of Governors expressed concern over immigration even being discussed on the federal level. Some said that the country should not be focused on immigration when it should be focused on jobs.[454] This is incorrect. Focusing on immigration reform is focusing on jobs. In light of the political gridlock and federal deficit, AEI's recommendation is especially important since the recommendation does not require additional spending, but can produce an economic benefit.

Other countries have already noticed that immigrants are needed to fill their skills gaps and promote economic competitiveness.[455] According to AEI,

> *Meanwhile, every other major developed country puts more emphasis on admitting immigrants that will meet economic needs. Compared with America's 7 percent, Canada admits 25 percent of its immigrants based on employment, Australia 42 percent, and the United Kingdom and Germany almost 60 percent.*[456]

It's time for meaningful federal reform that welcomes productive citizens into the country.

THE SKILLS GAP "MYTH"

In a June, 2012 Milwaukee Journal Sentinel article, Marinette Marine stated it could hire 40 people directly out of high school at $12 per hour. This summer, the company began training workers at a facility located next door to its main plant. The training is provided free of charge and is a partnership between Marinette Marine and Northeast Wisconsin Technical College in Green Bay. As of June, only seven students had applied.

Due to large contracts with the U.S. Navy, work does not appear to be slowing down soon. In fact, over the past 12 months, the company has added 600 jobs. The community may gain as much as $2.6 billion from the

project if the company can find the right workers.[457] The problem, however, is that the average age of a Marinette Marine employee is 45. This means the company will be faced with an aging workforce that is unable to keep up with market demands.

Some critics have said students are not applying to the program because the $12 per hour wage is too low, so we crunched the numbers.

If a student works 40 hours per week, with two weeks of vacation, that student will work 2,000 hours per year. That means the students will gross $24,000 per year. Taking out taxes (federal, state, social security, Medicare) that student will net $19,217.20 per year, or $1,601.43 per month. How far will that get a single, 18-year-old high school graduate?

Just over one mile from the work site in Marinette, a person can rent a studio apartment for around $450/month and a one bedroom for about $450-$495/month.[458] Two bedroom apartments rent for around $600/month.

If the student rents the one bedroom apartment, he then has $1,151.43 of available income. The student might choose to buy a car to get to and from work. Edmunds rates the Hyundai Elantra as the best used compact car. A Cars.com search shows that within 250 miles of Marinette, a 2005 Elantra is about $5,000. Assuming no money down and an interest rate of 15%, the car payment over three years would be $182.53/month. Assuming the student has had no accidents or tickets, has taken driver's education, and has been driving since he was 16, the insurance rate could be about $312/month. That leaves our hypothetical worker with $656.90.

The student will need gas to get to and from work. If the student lived in one of the downtown apartments, the daily work-home commute would be roughly two miles round trip. To and from work, assuming a price of $3.70/gallon in the Elantra, the student would spend $0.25 on his commute. [459] (Of course this doesn't factor using the car for other purposes.) This means if a student works five days per week, four weeks per month, gas would cost about $5.00/month, bringing us to $651.90.

The student will also need a grocery budget. The USDA estimates a cost of $356.52 for an 18-year old eating on a moderate cost plan.[460] This brings available money to $295.38.

Finding a number on clothing expenditures was more difficult. The federal government keeps data on the cost of raising a child. The percentage for clothes seems to be 6% of expenditures. If we take 6% of the net income of the student in this case, we get $96.06, which brings us to $199.32.

The student will also probably want health insurance. The article didn't say whether Marinette Marine provides health insurance. BlueCross Blue Shield offers a high deductible PPO with dental and prescription coverage for $43.95/month. The company also offers a more comprehensive plan with a lower deductible for $97.62/month. Assuming the student took the higher deductible plan, he would have $101.70 in discretionary funds. The student would also have to pay for things like laundry and cell phone out of this money. Wal-Mart offers prepaid cell phone plans of $30 for 1,000 minutes or talk, 1,000 text messages, and 30 megabytes of data.

While $101.70 in discretionary income is not going to be

enough for a person to have a comfortable middle-class life with a retirement, it is important to keep several things in mind: (1) the student will get more valuable and earn higher pay the more skills he learns, (2) the student is being trained while he is working, so the value he's receiving is more than monetary, and (3) the student has choices in how he spends his money. This scenario assumed some higher expenses. We can also examine the budget of a thriftier student. This hypothetical student decided to live with a roommate. That would cut his rent to $300/month in a two bedroom apartment. That leaves him $1,301.43.

The student could save the most money by not buying the Hyundai Elantra. If the student didn't have a car payment or insurance, that would save him $494.53/month. The student will still need transportation. Other options include buying a cheaper car, buying the same car over a longer period of time, or sharing a car. The city also offers a shared-ride taxi service seven days per week.[461] Since affordable apartments are available within one mile of the work site, it is feasible that a thrifty student could walk or bike to work and not need a car. Also without a car, the student won't have to pay for gas. So this student would still have $1,301.43 remaining in his monthly budget.

The student could also eat a healthy diet on a leaner budget. The USDA estimates that a single, 18-year old could eat nutritious food on the "thrifty plan" for $201.96/month. If he were to share with his roommate, that cost could drop to $185.13. That would leave our thrifty student with $1,116.30.

Since there are fewer estimates on clothing costs, this analysis will also use the 6% figure, or $96.06. That brings our student's budget to $1,020.24 remaining per month. We'll also assume our thrifty student takes the lower-cost health insurance at $43.95, bringing the available amount to $976.29. This student would also have miscellaneous expenses, but may choose from some very inexpensive cell phone plans, like 120 minutes to be used any time for just under $30.[462] Including other miscellaneous expenses, like laundry, our student has $900 remaining per month.

That means over one year our student could save up $10,800. Additionally, the student will receive a roughly $500 federal tax return.[463] One year of tuition, room, board, books and other expenses for NWTC is estimated at $14,264.[464] If the student received financial aid, the total cost could actually be under $10,800 per year. This means a thrifty student that works one year, full-time at Marinette Marine could gain one year of work experience and on-the-job training in addition to saving for an entire year of technical college training and still have money to spare.

UW-Marinette would be another local choice. School expenses would cost our student $16,667/year without financial aid. With aid, the cost could be around $10,648.[465]

It is also important to keep in mind that in Marinette the average per capita money income in past 12 months (2010 dollars) 2006-2010 was $20,983.[466] The median household income was just around $37,000.[467] Marinette's poverty rate is 17.5%. Further, while 90% of residents 25 and older have a high school degree, only 14% have a bachelor's degree.[468] Not only is Marinette Marine providing a salary that's above average for the area, with the potential to earn more, but it is providing jobs for the current education level of residents.

It is also important to remember our student would have room to grow at the company. Within three years of employment, workers can earn journeyman status, making in the mid $20 per hour with full benefits.[469] Of course, this is not a scientific study, but these examples illustrate that there are opportunities available if people know where to look and can see the value.

While not every company offers programs like Marinette Marine, there are many more manufacturing companies fighting the perception that these jobs do not pay well. At Bucyrus, our starting pay was $22 per hour. Salaries increased to $35 per hour.[470] We also spent millions of dollars every year training our workforce, which made them more valuable to the company, as well as more valuable if they sought work elsewhere. Bucyrus also provided profit sharing to build a team environment. We still had difficulties finding and retaining workers.

There may be companies that do not pay market value for workers, but there are plenty, like Bucyrus, that paid family-supporting wages and still had a difficult time finding workers. We believe perception is holding back Wisconsin's economic recovery. Our hope is that Academic and Career Plans, combined with real-time labor market information that includes salaries, will direct more workers towards these careers.

CONCLUSION

This report is a framework to repair the skills gap in Wisconsin. Our recommendations do not require governance changes. This report is the beginning of a plan that should be expanded upon and reviewed regularly. Some of the ideas are complex and will take time to implement, while others can be immediately acted upon. But what Wisconsin cannot do is idly sit by and expect the challenge to disappear. If Wisconsin wants to regain its competitive edge, the State needs to act now.

Successful private sector companies implement a fact-based general plan, allow the various independent entities within the organization to perform their tasks according to the plan, and incentivize them to achieve the desired results. It is never necessary, desirable, or efficient to control all decisions centrally. Instead, companies reach their goals by rewarding those entities that achieve their objectives as part of the overall plan. In Wisconsin, we have reasonably strong and capable independent entities, but we have neither a plan nor an incentive system to drive us to achieve our overall objectives. Like in the private sector, we must be willing to fail and reset rather than to take a nonspecific and ambiguous course of action.

Ultimately, our recommendations are about basing discussions and policy decisions on fact instead of intuition. State policies should always be based on the best data available. At multiple points in our research, relevant data was either difficult to locate or didn't exist. Instituting frameworks for relevant, timely and accurate data in all policy areas is crucial for moving Wisconsin forward and keeping us all on the right track.

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