



# We Can See It From Here

## The Next Generation of Regional Public Education in CESA 6



The CESA 6 Next Generation Design Team  
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# We Can See It From Here

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## PART ONE: “WISCONSIN, WE HAVE A PROBLEM!”

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“Houston, we have a problem!” Those five words trigger instant recall for anyone who watched the 1995 movie Apollo 13 starring Tom Hanks as astronaut and flight commander Jim Lovell. Apollo 13 suffered a crippling explosion that started an avalanche of problems in the complex spacecraft that was on its way to the moon for what looked to be a routine lunar landing. NASA went to work, trying desperately to reconfigure existing components to solve the complicated and interconnected set of problems that threatened the lives of the three men on the mission. Solutions required that entire sections of the craft be jettisoned into space and that other sections be re-purposed. The lunar landing module, never designed to serve this purpose, became the lifeboat for the crew’s re-entry to earth’s atmosphere. It’s a powerful story about American ingenuity: when faced with a life-or-death situation, inventiveness and creativity can prevail. It’s a story appropriate for regional education in CESA 6.

### The Messy Nature of Wicked Problems

Problems like Apollo 13 and the CESA 6 school districts face are a special breed. They are called “wicked” problems, and they’ve been known to students of organization and planning since at least 1973. Wickedness is not a matter of difficulty, but a matter of the inadequacy of traditional solutions. Writing in the Harvard Business Review, John Camillus observed that, “A wicked problem has innumerable causes, is tough to describe, and doesn’t have a right answer.... Environmental degradation, terrorism, and poverty—these are classic examples of wicked problems. They’re the opposite of hard but ordinary problems, which people can solve in a finite time period by applying

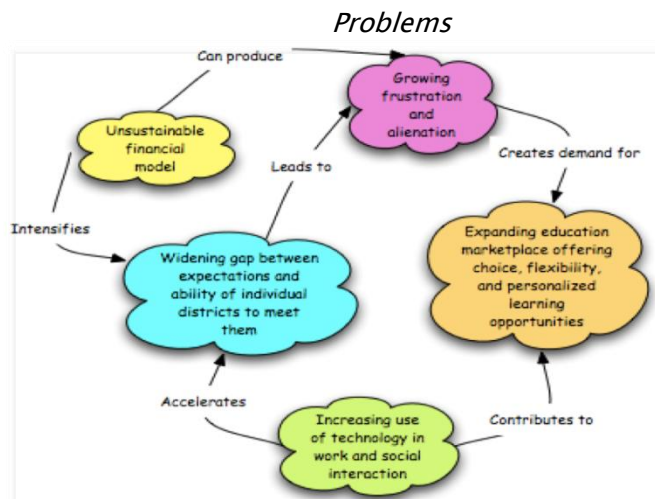
standard techniques. Not only do conventional processes fail to tackle wicked problems, but they may exacerbate situations by generating undesirable consequences.”<sup>1</sup> We can add contemporary education problems to the list Camillus published.

Wicked problems are no fun! They come in bunches. They do not appear in a nice list, ready to be solved and checked off one-by-one. Instead, they are a tangle of interactions...a set of interconnected forces that operate on each other in a variety of ways and in varying strengths. They may not have been seen before. They do not have known solutions. To make things worse, they are often the source of disagreement among different groups of people, and that social aspect makes them even harder to address. The wicked problems facing CESA 6 are new but not unique to Wisconsin. In fact, they are the very ones facing educators and communities all over the nation.

The way to work on wicked problems is to redesign. Only by reconfiguring and repurposing the parts of the existing system, by challenging assumptions that lock the future inside the past, by tapping the creativity and inventiveness of people committed to success, is it possible to generate the novel solutions that wicked problems demand. This is why the Design Team for CESA 6 was chartered.

Their first job was to understand the set of wicked education problems the region faces.

*Figure 1: Public Schools in CESA 6 Face Wicked Problems*



<sup>1</sup> J.C. Camillus. "Strategy as a Wicked Problem." Harvard Business Review. May, 2008.

## Wicked Problem 1

Go no further than the young people you see every day to find a starting point for this set of problems. A growing frustration with the education experience alienates too many students. About one-third of American students drop out of high school each year. For Hispanic and African American students, the number is about one-half. Nearly half (47%) of the American high school dropouts interviewed for a major national study in 2006 said that their number one reason for leaving school was that classes were not interesting.<sup>2</sup> Although specific numbers just for the CESA 6 region are unavailable, some 18% of students do not graduate from high school in Wisconsin every year.<sup>3</sup> Failure to graduate creates long-term negative social and economic impact on the students and on their communities and states. Authors of *The Silent Epidemic* reported that dropouts are more likely than their classmates who graduate to be unemployed, living in poverty or on public assistance, in prison, divorced, unhealthy, or single parents of children who continue the cycle by becoming dropouts, themselves. Estimates suggest that high school graduates are likely to earn up to \$10,000 more a year than students who don't graduate, and one credible source estimated that "dropouts from the class of 2008 will cost Wisconsin almost \$3.9 billion in lost wages over their lifetimes."<sup>4</sup> The alienation that leads students to drop out does not begin in high school. Failing to learn to read by third grade and persistent patterns of absenteeism are only two of the well-known early indicators of the danger of dropping out later on.

## Wicked Problem 2

Some say that when students drop out they are voicing their dissatisfaction with their feet. With dissatisfaction come alternatives to public education. Alternatives such as charter schools, home schooling, private schools and online courses can be more

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<sup>2</sup> J. M. Bridgeland, et al. (2006). *The Silent Epidemic: Perspectives of High School Dropouts*. A report by Civic Enterprises in association with Peter D. Hart Research Associates for the Bill & Melinda Gates Foundation.

<sup>3</sup> [http://www.all4ed.org/files/Wisconsin\\_wc.pdf](http://www.all4ed.org/files/Wisconsin_wc.pdf) retrieved on 4 May 2010

<sup>4</sup> Ibid.

attractive to students and their families than their regular public schools. According to the Wisconsin Department of Public Instruction (DPI), there are thirty charter schools in the CESA 6 region. In addition, 2,418 students from 1,336 families in CESA 6 were enrolled as home schoolers in 2008-09, the last year for which data are available. This is the third highest rate of home schooling among the CESA regions, following CESA 1 and CESA 2. For 2009-10, DPI reported private (nonpublic) school enrollment in CESA 6 of 15,425--second only to CESA 1. The Wisconsin Legislative Audit Bureau reported in 2010 that full-time enrollment in online virtual charter schools increased from 265 pupils in the 2002-03 school year to 2,951 pupils in the 2007-08 school year. In the five largest schools, which enrolled 92.2 percent of all pupils in 2007-08, total enrollment ranged from 245 to 865 pupils. The smallest school enrolled two full-time pupils. Furthermore, 7.6 percent of virtual charter school pupils attended schools that were chartered by the districts in which they resided. In contrast, 91.1 percent attended through open enrollment, which requires payment from the district of residence (the sending district) to the district that chartered the virtual school (the receiving district). (CESA 6-specific data on online participation are unavailable.) Wisconsin Act 222 limits the number of full-time pupils who may attend virtual charter schools through open enrollment to 5,250 per year, beginning in the 2009-10 school year. The open enrollment limit will likely be reached in the near future.<sup>5</sup> But virtual education is not just a Wisconsin phenomenon.

Innovation expert Clayton Christensen has studied the trends for online course delivery in American public education, predicting that by 2019 over half of high school courses will be delivered online.<sup>6</sup> He reported that the “substitution of online-delivered learning for live-teacher instruction” is happening most rapidly in rural schools, where by 2006 some 43 percent were providing students online access to courses that would not otherwise be available to them. According to Christensen and his colleagues, the rapid adoption of online education is being driven by technology and economics. Students benefit by more personalization, access to courses not

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<sup>5</sup> WI Legislative Audit Bureau (2010). An Evaluation: Virtual Charter Schools. Report available at <http://www.legis.state.wi.us/lab/reports/10-3highlights.htm>.

<sup>6</sup> C. Christensen et al. (2008). *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*. McGraw Hill: New York.

available in the standard school curriculum, and convenience. Schools and school districts are attracted to costs that range from \$200 to \$600 per course--at the lower end of the range this represents a lower cost delivery model than the conventional school. National studies from the US Department of Education conclude that online learning--for students and for teachers--is one of the fastest growing trends in educational uses of technology. Several sources agree that adoption rates rise as fast as 65% from year-to-year. Picciano and Seaman (2009) estimated that more than a million K-12 students took online courses in school year 2007-08, suggesting that more than two million students are currently enrolled in online courses.<sup>7</sup> Internationally, enrollment is rocketing upward, too. From 1999 to 2006, China's enrollment burst from 4 million to 137 million. India, using technology as a way to expand access to education and good teachers, is also developing courseware in English and looking to export these products to English-speaking markets like the United States. Singapore reports that 100 percent of its secondary schools use online learning, and that all teachers are trained to teach online.<sup>8</sup>

Before we leave online learning, we should ask the quality question: do kids learn as well with online learning? The US Department of Education answered with an emphatic, "yes!" In a meta-analysis that combined the findings from studies dated 1996-2008, researchers found that, on average, students in online learning conditions performed better than those receiving face-to-face instruction.<sup>9</sup>

Taken as a group, the alternatives to public education are part of the wicked problems because they erode the existing public school system. Scarce funds are spread thinner. The richness that comes from diversity of the public school population is threatened when groups splinter off. But most important, the alternatives are the canary in the coal mine--when taken with the dissatisfaction students express, their growth is a strong indicator of the declining appeal of the conventional model of schooling.

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<sup>7</sup> Picciano, A.G. & Seaman, J. (2009, January). K-12 online learning: A 2008 follow-up of the survey of U.S. school district administrators. The Sloan Consortium.

<sup>8</sup> Presentations at the Virtual School Symposium held in Austin, TX; November 15-18, 2009.

<sup>9</sup> Report available at <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>

### Wicked Problem 3

Can there be any doubt that we are living in a time when work and social interaction are dominated by technology? As you read this report, how many people in earshot are talking on a cell phone? How many in your field of vision are checking their email? Or on FaceBook? Or plugged by their ears into an audio device that streams non-stop music, video, or read-aloud books? Real-time connections any time of day or night, irrespective of local, state or national boundaries, keep people accessible and hungry for even more connections. Access to information that once lay in a library book or in the head of an expert is now available with a click of the computer mouse. All of these contemporary realities have implications for the redesign of regional education in CESA 6.

From a work perspective, computers and information technology pop up in nearly every career imaginable. The pace of technological change even threatens the concept of “career” as a long-term proposition for today’s students. Careers are and are likely to continue to be punctuated with the introduction of new hardware and software, making job success dependent to a large extent on the ability to master new technology quickly. The number of Americans using computers to work from home is growing dramatically. In his new book *Microtrends*, author Mark Penn notes that 4.2 million Americans now work exclusively from home (nearly double the number in 1990), while some 20 million do it part time.<sup>10</sup> At a level up from the tech user is the tech developer. The explosion of iPhone apps--offered free or for a few dollars--is just one example of the job opportunity that technology brings. Traditional lines blur for these jobs. We read of Cameron Cohen, 11, who taught himself to program after some summer computer and robotics programs and developed iSketch for the Apple iPhone while he recovered from surgery on a benign tumor on his leg. Appreciative of the quality of care he received while hospitalized and concerned for other children

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<sup>10</sup> Mark Penn (2007). *Microtrends: The Small Forces Behind Tomorrow’s Big Changes*. New York: Hachette Book Group USA.

there, Cameron donated \$20,000 of the proceeds from his app to the hospital.<sup>11</sup> (Apparently his cognitive and socio-behavioral sides are well-balanced!) How can the 42 school districts in CESA 6 meet the challenge of serving students like Cameron? What talents lie hidden in the region's students? What careers could they enter (or create) with good access to technology at school?

From a social perspective, information technology and telecommunications make it possible for people to be in continuous contact. Want to know where your friend is right now? Check the GPS on your phone where she has given permission for you to know her whereabouts anytime. Want to know what someone is thinking during the President's State of the Union speech? Follow the tweets on Twitter. Don't want to know? Unplug. What must conventional school be like for students accustomed to such connectivity? Do they feel as out-of-touch as a superintendent in a meeting room with no wireless? How much of their dissatisfaction with the traditional school experience can be traced to communication patterns?

Technology is a wicked problem because it puts pressure on the school system to do two things at once: incorporate the benefits of technology and communications into the learning experience and develop career-ready skills for rapid learning, critical thinking, design, and a host of other "21st Century skills."

#### Wicked Problem 4

Technology is only one of the wedges driving a widening gap between the expectations placed on the public school system and the system's ability to deliver. There are others. Politics aside, federal education policy has set higher and higher performance targets. School district communications are careful to specify "all" students; the goal for high school graduation is 100 percent; students with disabilities are, by law, held to completion of the rigorous academic standards expected of their undesignated peers. The national dropout rate of one in three or Wisconsin's estimated dropout rate of nearly one in five falls far short of that "all students" goal.

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<sup>11</sup> [http://www.usatoday.com/news/health/2010-04-07-isketch-iphone\\_N.htm](http://www.usatoday.com/news/health/2010-04-07-isketch-iphone_N.htm) Retrieved on 5 May 2010.



Parents would like for each child to have personal attention from great teachers. Global demographic and economic realities demand the best of all our workforce to ensure that the American competitive edge is held sharp. “Show me the data,” makes sense, but who will gather it, format it, store and retrieve it when it’s needed? As the goals have risen, so have the challenges. For a variety of reasons, children are coming to school with more complex social and behavioral issues than ever before. Unless they are addressed, these issues will block learning and hobble student progress.

The conventional school model struggles to meet these policy, parent, and process challenges. The dropout rate (one in three students nationally and an estimated nearly one in five in Wisconsin) shows that the conventional system falls far short of the expectation that all students will complete at least a high school education and be ready for college or good jobs. In the international comparison for performance of 15-year-olds in 57 nations (PISA), top American students perform generally as well as top students anywhere else in the world. The trouble is that there is a much wider range of performance from the lowest to the highest among American students than among students from other countries. On average, more American students fall in the lowest proficiency levels than do students from other nations. Too many American students cannot read and think critically or apply their math and science knowledge to real problems very well.<sup>12</sup> With globalization affecting everything from economics to what’s on television, the global achievement gap<sup>13</sup> is yet another troubling part of the wicked problems CESA 6 school districts are facing.

The historically remarkable success of the American public school model is its own worst enemy. It clings to old structures and practices even though they no longer match the needs of students today. The problem is complicated by the fact that many members of our communities would like for schools to be just like they were when

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<sup>12</sup> United States Department of Education. National Center for Educational Statistics (2007). “Highlights from PISA 2006: Performance of US 15-Year-Old Students in Mathematics and Science Literacy in an International Context.” Report available at <http://nces.ed.gov/pubs2008/2008016.pdf>. Results from the November 2009 PISA administration will be available in December 2010.

<sup>13</sup> For more information see Tony Wagner’s book *The Global Achievement Gap* (2008). Basic Books: New York.

they were in school. If we just choose a few aspects of how conventional schools work, we can get the point. Schools are organized into grade levels primarily by student age, which makes it hard for teachers to adjust for personal interests or teach in a way that matches an individual student's learning level. The school day runs from eight to three-thirty, and the school year is 180 days long. Time is fixed, and what students manage to learn during any period is variable. Learning is organized by a curriculum divided into subjects...and each subject has teachers who specialize in it. Even knowing what might be best for developing career-readiness, the science and math teachers battle the schedule to combine their classes even though it is crystal clear that being a good engineer requires the blending of knowledge from both disciplines. Even knowing that a student is taking piano lessons for several hours a week from a top-notch teacher, schools cannot legally extend music credit for this experience. Even knowing that grading varies dramatically from teacher to teacher, grades--not competency--remain the currency of the education realm. And we could go on, but the point is made: society's expectations for schools outstrip schools' ability to meet the challenge with the conventional delivery model.

### Wicked Problem 5

It's especially wicked when one way of doing things that worked well for a long time is no longer effective. Today's financial model is unsustainable. Historically, school districts have had two primary sources of revenue--local tax levies and state funds. Districts would periodically ask taxpayers for higher tax rates to meet higher expenses, and the legislative process would regularly address the state's school budget. The dominant assumption was that school revenues would rise to meet rising school expenses. Those days are no more. Schools that have worked within their communities' ability to pay face the bitter reality that the communities cannot pay more at the very time the expectations are at their highest. In the fifteen years from 1995-96 to 2009-10, Wisconsin saw a 50.42% increase in levy while CESA 6 saw just a 36% increase. At the same time, the state saw an average 39.25% decrease in the tax rate while CESA 6 saw a 39.4% decrease. According to the national report of per-pupil funding published in Quality Counts 2009, Wisconsin rates 18th among the fifty states

and Washington, D.C., with a regionally-adjusted figure of \$10,529. (Vermont tops the list at \$15,139; Utah anchors it at \$5,964; the US average is \$9,963.)

Writing for the Wisconsin Policy Research Institute in January, 2010, author Richard Chandler reported that “under the 2009 budget bill as signed by the governor, the state’s ongoing base level of spending in fiscal year 2011-12 (FY12) would exceed available ongoing base revenues by \$899 million, and ongoing expenditures in fiscal year 2012-13 (FY13) would exceed available ongoing revenues by \$1.150 billion, for a total cumulative two-year gap of \$2.049 billion.” The Institute titled the report Wisconsin’s State Budget Outlook: The Worst Is Yet To Come.

Neither states nor local citizens can continue the upward funding spiral, but what about the federal government? The infusion of federal funds for education, although the largest in history, may simply forestall the inevitable. A 2009 national report of the Economic Policy Institute (EPI) sketched a bleak picture through 2012 and beyond without an extension of federal stimulus funding: “Widening state and local budget shortfalls present a ticking time bomb for the economy. If they are not addressed, state and local governments will be forced to accelerate layoffs, reduce pay, reduce services, and raise taxes and fees. These moves create a drag on the economy, weaken the recovery, and result in the loss of millions of public and private-sector jobs.”<sup>14</sup>

Schools are left with the possibility that the current model is simply no longer affordable.

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<sup>14</sup> EPI Briefing Paper #252. November 19, 2009. P. 11.

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## PART TWO: PLAN OR BE PLANNED FOR

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### Wicked Problems Demand Design

Even though the problems are wicked and there is no known solution, most people would rather plan than be planned for! They figure that the future is not just sitting out there waiting to happen to them and that what they do in the present has a lot to do with how the future turns out. They realize that the same principle that holds when working a maze holds when change is afoot: it's better to start from where you want to be and work backward than to start where you are and feel your way forward. The next generation of regional education in CESA 6 can be created intentionally by a group of people committed to the fulfillment of a future they have invented or designed together.

Design really is about inventing a preferred future. Design asks the question, "What would we have if we could have what we want right now?" Design shines a light so that people can challenge assumptions that have become so common that they are invisible. Design sketches out in as much detail as possible the novel solution that will solve the wicked problems and holds up its best answer as the ending point of the maze. It is design methods that allow architects to create buildings that solve the problems of site and use, and design methods that allow engineers to develop new products that excite us and make our lives easier. Designing things is different from designing organizations, however, so culture, habits, beliefs, knowledge, conventional wisdom, and a host of other human characteristics have to be woven into the design of something like regional education. When people have designed something, they understand it, they are committed to it, and they will work hard to make it a reality.

For six days in early 2010, school district superintendents and CESA 6 staff joined forces to design the next generation of regional education in their area. There is no guarantee that they got it 100 percent right, but one thing is for sure: there is no

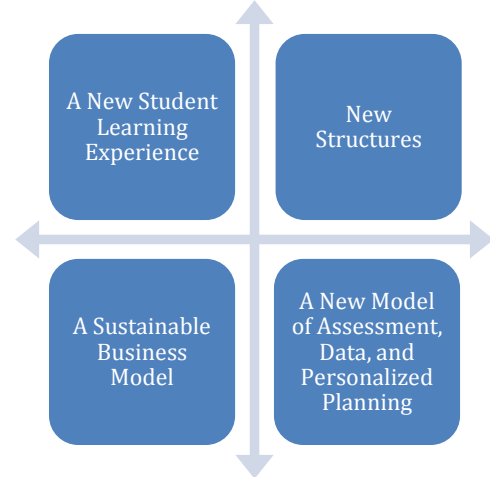
known solution to the set of problems they tackled except the one they have developed. It's their best answer, not THE answer. Just like the NASA team, they had to take the components and knowledge at their disposal to make a new vision of regional education. Let's see what they can see from here.

### Four Design Keys

Four elements emerged as cornerstones of the CESA 6 regional design. The core of all educational practice is the **learning experience of students**, and the wicked problems of alienation, dropout, and competitive alternatives make it clear that something vastly different and vastly better for kids has to lead the design. The other keys are support for the first one. A

**new model of assessment, data, and personalized planning** will give students, families, social service providers, and educators the information and processes they need to make sure the student learning experience is all it can be. **New structures** will make the learning resources of the region accessible to all of its students. And a **sustainable business model** will replace the outdated upward spiral that states and communities can no longer afford or support. The design keys jettison some sections of the conventional education model into space and re-purpose others. Foremost in the minds of the design team were the students in the spacecraft called CESA Region 6.

Figure 2: Design Keys



Visit the next generation. *Imagine for a moment that your thirteen-year-old son Ted is pulling up his chair to the breakfast table. It's a big day. He's worked hard at his local*

*elementary school and passed all the competency tests that show he has mastered required standards. His backpack is piled on the kitchen counter, bulging with samples of what he has done to show that he doesn't just know about things well enough to pass tests, but that he also knows how to apply what he's been learning. All those work samples have been scanned into his electronic portfolio, but he still has his favorites in "hard copy," as he likes to say. His portfolio shows that he has completed some exciting hands-on work—his favorite was designing the promotional materials for the presentation to the city council about a water quality project his class did two years ago. He can't seem to get enough of graphic design on the little computer he carries to and from school. He's been a class mentor for younger students and exhibits a growing sense of his role as a contributing citizen to his school and his community. You think to yourself, "He's not just learning to learn...he's learning to do and learning to be. That's pretty exciting!"*

*Ted's especially wound up today because it's the day you and he go to the regional learning center to meet with his learning coach—his own educational facilitator. The next stage of his public education will take him through age 16. He'll finish a basic diploma during this time, have many enrichment opportunities that build on his interests and talents, and develop his postsecondary plans—maybe the International Baccalaureate program that will qualify him for the best international universities; maybe early entry to the local community or technical college; maybe dual or even direct enrollment into the university or another four-year school. You really embrace this idea of "move on when ready," but you realize that it's pretty hard to know what the opportunities will be for Ted even three or four years from now. The regional learning center makes it possible for kids to learn anywhere...and with the use of virtual learning tools, at any time of day or any time of the year.*

*The regional learning center is now a place, but it hasn't always been that way. You remember when your daughter Sarah, now at the University of Wisconsin-Madison,*

*met with her learning coach at the local high school and the communications with other schools and learning sites around the region were virtual. There weren't too many regional learning centers in place then, but now all the school districts in the region are members of one center or the other. "Time to go, Ted. We don't want to be late."*

*You marvel at how welcoming the staff of the learning center are. Teachers come and go as they finish learning sessions at this center and head off to another assignment at one of the schools in the region or to mentor a student in a community project. Couches in the waiting area are full of parents and kids Ted's age, some older, and a few younger. It's obvious that some of the kids are coming back to the learning center at the age of 18 or 19. You know that kids are welcome to have multiple entry and exit points from the regional system. When it's Ted's turn, the two of you are met by Mr. Mills, Ted's coach. "Ted," he thunders in a voice much bigger than you ever expect from his small frame, "so glad to see you again! I've been reviewing your portfolio and your assessments, and it's going to be fun to help you and your folks build a personalized learning plan for you. I know that you're really interested in computers and graphic design. We've got a number of kids here in the region who are, too. They keep in touch and work on projects together by using our virtual reality lab." You chuckle to yourself, remembering the community uproar when the regional learning center set up that lab to serve the eight member districts. But when people realized the hardware cost about the same as a high-end laptop computer, and that all the districts had pooled their purchase orders through CESA 6 to drive the prices down 30 percent from retail, things settled down. Now kids all over the region cooperate on projects just the same way engineers in the biggest companies do. And you've heard that teachers are doing the same thing to share instructional practices through the regional Teacher Effectiveness Center. Things have come a long way since the overhead projector that hummed in your math class!*

Visiting Ted in the next generation is a quick way to get the vision of a new way of “doing education” in CESA 6. The new student learning experience is front and center. Behind the scenes are some new structures like regional learning centers, learning coaches, and teachers that serve multiple exciting assignments. The ready availability of data from a variety of learning assessments makes it possible to create a personalized plan for Ted. Personalized learning plans for all students will finally make available to learners what manufacturers have been able to do for consumers for years – customize on a massive scale. Ted’s learning coach will develop a strong, person-to-person relationship with him and will monitor his progress, helping him when he is ready to move on to his postsecondary learning experiences. And, finally, the regional center is a cost-effective way to share resources among the member districts. In addition, they are pooling purchases through the CESA to negotiate the best prices. Ted could give us a pretty good tour of the next generation of education in the CESA 6 region, but the designers had even more detail in mind.



### Design Key #1: New Student Learning Experiences

The next-generation regional education design springs from the core of all educational practice—the **learning experience of students**. The goal of the regional education system is to produce success for all students in ways that are personalized to each, and in ways that are interesting, active, and perceived as worth doing. The personalization will begin in the preschool and elementary years as students from birth to about age 13 have an opportunity to explore lots of subjects, try out lots of ways of learning, and get firm footing by mastering the fundamental skills they will need for success as they continue their development. The elementary years will also provide a time for relationship-building and socialization. Wrap-around social services will be available to the students and families needing them. Early intervention will prevent or reduce the impact of academic and social problems that can so drastically limit student success.



Personalization will continue in the secondary learning experience. Like Ted showed us, students and their families will have choices about how to learn, where to learn, and when to learn. Online courses will combine with face-to-face instruction and community-based activities that produce real solutions like Ted’s water quality project. Educators in the region will develop partnerships with public and private sector organizations to identify learning opportunities—problems to solve, projects to undertake, mentors to shadow—and make them safely available to students. The ability to match opportunity with student interest and readiness will be a highly valued skill in learning coaches and others involved in developing and supporting students’ personalized learning plans. Learning coaches will design personalized learning plans in 3-D: ensuring that students have experiences in all three areas of learning—learning to *learn*, learning to *do*, and learning to *be*. This means students will be able to learn all during their lives; that they will be able to apply what they know; and that they will be able to contribute to their communities, the arts, sport, and culture.

Personalization will continue yet again as students move on to postsecondary experiences when they are ready. A variety of exciting choices ahead of them will motivate students to reach for the mastery tests like ladder rungs along the way. Just like the levels of mastery in the digital games they love, levels of learning mastery will open doors and opportunities. Some will open the door to college or university, and others to technical programs at a two-year school or in partnership with employers. Others may choose to enter a specialized study program of their own design. The learning coaches will help students choose and transition into the postsecondary options.

Teachers will develop new courses of study to coincide with the development of new knowledge in their fields. Student demand and interest will determine which of these new courses survive. In this way, both students and teachers will be constantly learning. Both will be doing interesting work that is worth doing.



## Design Key #2: A New Model of Assessment, Data, and Personalized

### Planning

The second design key is a new model of **assessment, data, and personalized planning**. Mastery is critical to student success, and there will be many ways for students to prove that they have it. Tests will assess critical thinking and other skills known to be important for success in the 21<sup>st</sup> Century. High quality tests at transition points from elementary to secondary and from secondary to postsecondary will plug leaks between the standards of performance from one section to the next in the learning pipeline. Credit for rigorous non-classroom experience will be commonplace in the new system. Like Ted, students will create portfolios that demonstrate their ability to convert their subject knowledge to useful and novel applications. Once mastery is demonstrated, students will be able to move on—to enrichment, to new levels of learning, and even to new domains of learning.

Rigorous standards anchored to international benchmarks are a must in the global context in which contemporary students live and where they will earn a living and make their marks on the world. This may mean seeing to it that a sampling of students in the CESA 6 region will take international assessments such as PISA on a regular basis. Regardless of whether international assessments are included, a uniform set of competencies will be created to assure smooth transitions from elementary to secondary and on to postsecondary settings. The competencies will also guide transitions to new learning levels within each of the programs.

An integrated longitudinal data system will house and make available progress data down to the standard and competency for every learner and for every learning project. This system may be managed at CESA 6 for maximum economy of scale and efficiency. Data will be entered in real time from each of the learning centers as learning coaches

work with students. A secure section of the data system may include information to support wrap-around social services for the students and families involved. From such a rich data source, it will be possible to identify learning needs, gaps, and mastery with much greater precision than ever before. Students, families, teachers, and learning coaches will have access to the information they need as they make choices that match learning opportunity with learning need and interest for every student. The next-generation data system will also make it possible to link student results with programs and personnel. These data will be essential to informing decisions about program quality and the activities to support in the Teacher and Principal Effectiveness Center.



### Design Key #3: New Structures

Reliably making good on the goal of success for all students will require the third key, **new structures**. Although Ted showed us some of these earlier, we see them again here to make sure we aren't missing anything about how the parts of the next-generation regional system fit together.

#### First, let's look at structures across stages for students:

- With early learning as its foundation and a heavy emphasis on interagency partnerships to provide additional support to children and families in need of it, the *elementary program* will put a strong base under each child. Student grouping will follow interest, learning targets, and learning proficiency, not age. Progression will be by mastery and transition readiness, with flexible time limits for completion and attention paid to both academic and social/behavioral skills.
- For youth aged 13-16, the hub of activity will be a *regional learning center*. Formed voluntarily by cooperating districts to increase student learning opportunities and increase efficiencies through economies of scale, the regional learning centers will be distributed across the CESA 6 area. They offer communities a choice: they can complement thriving community high schools

while offering excellent opportunities for cooperation in communities that can no longer support comprehensive high schools. At the regional learning centers, students and their families will work with learning coaches to develop and monitor personalized learning plans. Some face-to-face experiences may occur at the center, while others may occur in community settings, at home, or online. Co-curricular activities will be available in communities to preserve rich traditions. Regional learning center staff will identify regional learning resources and cultivate partnerships that represent learning opportunities for students. Students will submit applications for cooperative learning experiences when they have met readiness criteria academically and socially. Cooperating organizations will “extend an offer” to invite students to study there. High and rigorous standards will guide all personalized learning plans.

- A variety of *postsecondary options* will be available to those who have completed the basic mastery of academic and social/behavioral competencies through personalized learning plans. Some may go on to more rigorous extension of secondary study prior to entering college or the workplace—Advanced Placement Courses or International Baccalaureate programs, for instance. Others may opt for technical programs of study at a two-year or technical college or with a business offering technical certification. Options exist for in-depth study with a sponsor or a mentor. And some who are ready academically and socially may choose to enter college or university. The regional learning centers will help students transition to the postsecondary option of choice.

And then there will be structures for assuring that top-notch professionals serve all students:

- A *Teacher and Leader Effectiveness Center* will be established in the region. It will support the ongoing embedded training and development of teachers, teacher leaders, principals, learning coaches, and other adults working in the system. It will continually renew the capacity of practitioners by providing a space where

groups working on improving student and program results can access data, analyze it, and conduct action research leading to continuous improvement. In this Center groups of teachers or others can work in design teams to develop new learning programs as needs of students and communities change over time. The Center will be focused on linking improved practice to improved results. With regional cooperation to get to efficient economy of scale, the Center will be equipped with state-of-the-art communications technology. It will offer support for completion of professional certificates and organize mentoring systems to increase both the effectiveness and retention of new practitioners.

- A variety of *employment options* will be available to teachers, including the option of operating as an independent consultant. A single teacher may be contracted by several districts at once: as a learning coach in one district, a face-to-face instructor in another, and as a teacher mentor for a group of new colleagues in a third.
- A support system of *wrap-around services* for children and families will be established in the region. A family advocate, an educational facilitator or learning coach will be assigned to children and families from birth through transitions to postsecondary learning or careers. The facilitator/coach will be responsible for coordination of educational and social service needs that are unique to each family. The overarching goal will be to provide students and their families access to appropriate collective learning experiences and corresponding social services that will allow for optimal growth.

And finally, there are structures for governance and communication:

- A corporate *governing board* will oversee the regional system,
- and a *communication system* will manage the flow of information to and from it.



#### Design Key #4: A Sustainable Business Model

The next generation of regional education will require a sustainable **business model**. It is incumbent on educators to be fiscally accountable by designing a system that operates better for less cost to the public. The model will be characterized by reallocation of existing revenues and an investment (not a spending) mentality. It will be increasingly important for individual districts, groups of districts, and the entire region to use strategies such as the following to operate efficiently while raising or at least maintaining quality:

- Draw on existing community resources. (For instance, since county systems are the funding entity for services to families, the regional education system will work closely with them to avoid unnecessary duplication of services and delivery programs.)
- Allow transitions sooner throughout the school years. Create options for transition according to ability, need, interest, and mastery of academic and social/behavioral skills. A recent influential national report estimated that the potential cost savings to the nation of this strategy alone is over \$19 billion.<sup>15</sup>
- For efficiency and cost savings, develop cooperative contracts for operational and non-instructional services. Volume purchasing can drive down unit costs, but there are even more savings to gain. The National Institute of Governmental Purchasing, a non-profit organization serving public purchasing practitioners estimates that purchasing cooperatives save members 15 to 30 percent of the retail price of goods and services<sup>16</sup>. Even services such as maintenance and construction can be purchased in this way, and the savings come in large part by savings in processes like bidding. Rather than 42 business offices in 42 CESA 6 districts completing 42 bid packages, it makes sense to cooperate to produce one for the entire group.
- Secure venture capital to support new initiatives. The virtual reality lab in Ted's learning center is a prime example. An Investing in Innovation grant proposal to establish virtual reality classrooms is already being developed jointly by educational service agencies in Iowa, Ohio, and Connecticut. The proposal has over a million dollars in corporate pledges as of May 1, 2010.

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<sup>15</sup> National Center on Education and the Economy. (2007). *Tough Choices or Tough Times*. San Francisco: Jossey-Bass. P. 120.

<sup>16</sup> Source: NIGP.org.

- Re-purpose negotiations to focus on advancing the regional organization. A clear view of the preferred future put forth in this next-generation design and shared by 42 districts goes a long way to guide negotiations that shift resources toward regional benefit.
- Link referenda to clearly defined performance and designated needs. Accountability increases when requests for public funds are tied to promises for better performance.

## Design Summary...Toward Creating the Future

Four design keys. Easy to remember; not so easy to do, perhaps. The CESA 6 regional design team has put forth its best answer to the wicked problems the region's school districts face. The degree to which a broad base of support can be drawn to these solutions and others that will emerge over time is critical to the future of regional education in the area. Strength will come in numbers, for no one district can muster what it will take to make some of the (to borrow a phrase) tough choices that lie ahead. For every tough choice, though, there is an exciting possibility for creating the region's future. The strength of conviction and independence that come from thoughtful and purposeful *doing*, not waiting to have the future *done to* will be the engine that drives what happens next.

The design team has developed a first-year implementation plan to get things moving. Waivers may be required to allow different and better practices to be developed and tested. Board engagement will be critical. Courageous leadership will be required. A curious thing happens with an exciting design. When people get a shared picture in their minds of what's possible, they have an almost unlimited capability to get there. If the ground crew at NASA could salvage the Apollo 13 mission by redesigning the spacecraft and deliver three astronauts home safely, the leaders of schools, districts, businesses, and communities in CESA region 6 can salvage public education by redesigning the current system and deliver thousands of children securely into their future.

# Appendix

Next Generation of Education in CESA 6: Design Team Members				
	District	Last	First	Position
1	Markesan	Alexander	Sue	Superintendent
2	Freedom	Cuff	Lois	Superintendent
3	Friess Lake	Engstrom	John	Superintendent
4	New London	Fitzpatrick	Bill	Superintendent
5	CESA 6	Fuchs	Keith	Executive Director
6	Menasha	Gundlach	Dave	Director of Curr & Technology
7	Rubicon	Hanrahan	Dan	Superintendent
8	Weyauwega-Fremont	Harlan	Jim	Superintendent
9	West Bend	Herdrich	Pat	Superintendent
10	CESA 6	Hinds	Jeff	Executive Director
11	Hartford UHS	Kremer	Mike	Superintendent
12	Erin	Kriewaldt	Kieth	Superintendent
13		Leddick	Susan	Facilitator
14	CESA 6	Malaha	Cheryl	Executive Director
15	Hartford UHS	Olson	Lisa	Dir Teaching, Learning, Assessment & Technology
16	Waupun	Refsland	Randy	Superintendent
17	Seymour	Ross	Pete	Superintendent
18	North Fond du Lac	Sadoff	Aaron	Superintendent
19	Fond du Lac	Sebert	Jim	Superintendent
20	Wausau	Viegut	Don	Asst. Superintendent
21	CESA 6	Wade	Joan	Administrator
22	Ripon	Zimman	Richard	Superintendent

Table A-1: Design Team Members