



5-YEAR PORTFOLIO

THE NORTH AMERICAN NEBULA SHOWING THOUSANDS OF NEWLY FORMED STARS—PHOTO COURTESY OF NASA, JPL-CALTECH, L. REBULL (SSC, CALTECH)

**One of the greatest pains
to human nature is the
pain of a new idea.**

—Walter Bagehot

Contents

OVERVIEW

- 01** Welcome to Your Institute
- 03** Looking Ahead
- 04** Our Process, Our Commitment
- 06** Our Symposia
- 08** The Made In Michigan Pipeline™
- 09** What Has the ESD Institute Done?
- 10** What Does It Take to Change?
- 11** Implementing Sustainable Change

12 COMMUNITY

- 14** Next Community
- 19** Why Does Hull Matter?
- 20** Social Impact Bonds
- 24** Re-Envisioning Our Future Together:
Building Davison 48423

26 EDUCATION

- 28** K to Job®
- 31** STEM
- 32** Direct Instruction
- 33** Restorative Practices
- 37** Future Detroit: Envisioning Tomorrow Together
Youth Symposium
- 39** DEPSA Lean Green School Symposium

40 ENVIRONMENT

- 42** Michigan Clean Water Initiative
- 44** Michigan Clean Energy Initiative
- 47** Detroit Water & Sewerage Department:
The Road to Compliance and Beyond

48 ECONOMY

- 51** Michigan Green Enterprise Zone
- 53** Building Consensus for Michigan's
Integrated Global Freight Hub
- 55** Waste in Healthcare
- 57** Construction Productivity
- 59** Next Manufacturing

60 PROFESSIONAL DEVELOPMENT

- 63** Master Series™
- 64** Custom Facilitation & Symposium Services
- 65** Public Facilitator Certification

NEXT

- 66** Why Golf and Give to the ESD Institute?
- 67** David A. Skiven Leadership Fund
- 69** The Journey Ahead

DETAILS

- 70** Our Speakers
- 73** Our Facilitators
- 74** Our Participants
- 77** Our Sponsors
- 78** Our Board of Directors
- 79** Our Team
- 81** About the ESD Institute
- 82** About ESD



Welcome to Your Institute

In 2008, the Board of Directors of The Engineering Society of Detroit decided to take action in the face of America's Great Recession.

Marshalling its resources of over 65,000 professionals, 3,000 companies, and 50 unions, ESD created a facilitative Institute modeled on the National Academy of Sciences. The goal was to identify consensus-based solutions by bringing diverse and often conflicting stakeholders together to find common ground for implementable action. Its mission was simple: build upon a foundation of trust and skills creation and Michigan will be a global destination for the world's talent and the place for employment and investment.

Today, as the Great Recession fades, Michigan is faced with new and perhaps more difficult challenges. We read headlines and find them hard to believe. Consider that 68% of Michigan's 8th graders cannot read at proficiency, there are school districts on the brink of financial insolvency, and there are cities experiencing emergency intervention or bankruptcy. Now more than ever we need to craft a comprehensive growth strategy. This means we must challenge the status quo in an unprecedented way.

In the following pages, you will find an integrated roadmap for positive collective change grounded upon root cause and not symptomatic analysis. The roadmap is based on reading proficiency at the elementary age. The ability to read is a fundamental component of ESD's K to Job® Initiative. Basic skill mastery combined with proactive behavioral practices provides true confidence and choices. With skills and confidence comes respect. With respect, inclusion. With inclusion, a quality of life for many and not just the few. For industry and labor, no issue is more pressing than the growing shortage of employable people. For communities, it is their lifeline to stability and vibrancy. Our Five-Year Portfolio expresses a journey with thousands of contributors and, most importantly, guides us for the years ahead.

Respectfully,



Christopher J. Webb, JD, FESD
Director and Co-Founder

Looking Ahead: The Engineering Society of Detroit Institute K to Job® Initiative to Fuel the Next Community

In this portfolio, you will learn about the K to Job® and Next Community Initiatives of The Engineering Society of Detroit Institute (ESDI). These pages illustrate what an inner-city kindergartner and a society of engineers have in common.

ESD offers Science, Technology, Engineering, and Math (STEM) programs in schools throughout Wayne County. We know that 80% of jobs created by 2020 will have a STEM component. But we also know that these programs and the future of engineering jobs in Michigan will wither on the vine unless proper care is given to grow basic skills in reading and math, beginning in kindergarten and earlier. Businesses and communities simply cannot thrive without a competent workforce.

According to the National Assessment of Educational Progress, "The Nation's Report Card," the following percentages of Michigan 8th graders were NOT proficient in 2011: 68% in reading, 69% in math, and 62% in science. The percentages of non-proficient African American and Hispanic students are much higher. This is not just a problem of poverty. According to a new study from AmericaAchieves.org, American middle-class students are outperformed by 27 countries in math and 20 countries in science. We are at a critical crossroads. The direction we take will determine the future of cities like Detroit and our entire state.

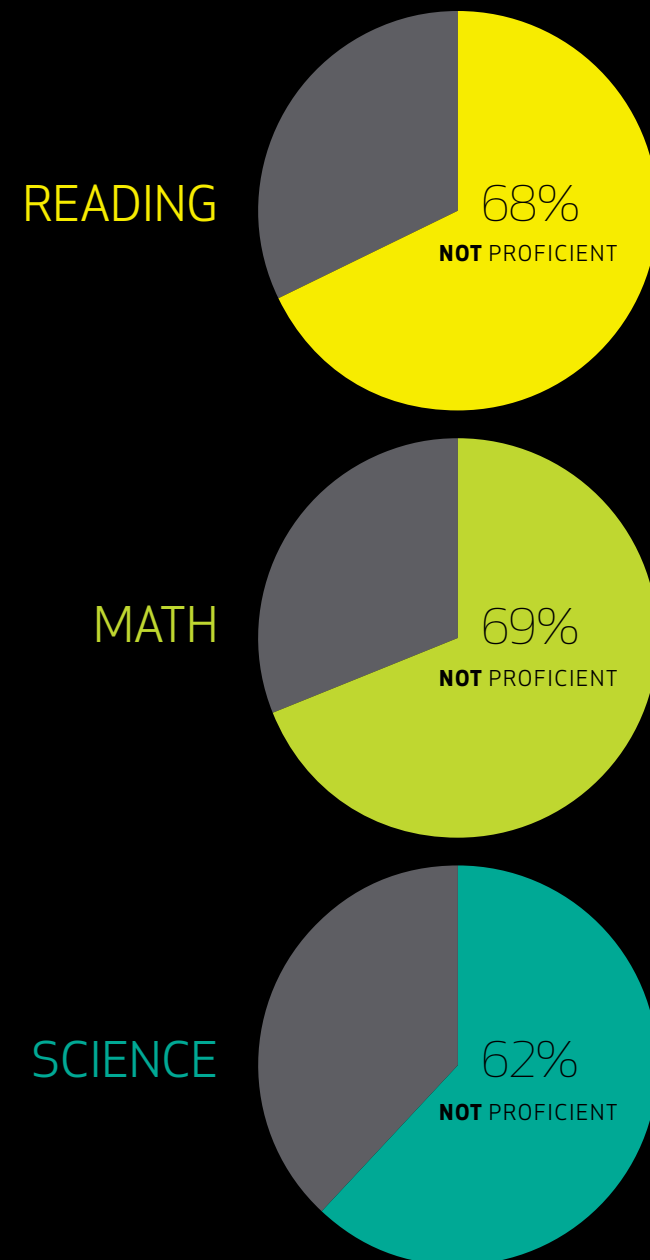
ESDI's K to Job® Initiative will support school communities to provide the educational and behavioral skills needed to attract businesses and manufacturers and to create the jobs that will revitalize communities. ESDI proposes to include K to Job® in its Next Community Initiative, which will help transform a Michigan community from distressed to vibrant in every respect.

ESDI's Next Community Initiative is the culminating project that seeks to eliminate silos and integrate all of its past projects. ESDI has tackled problems related to community, education, environment, economy, and the need for professional development. The five categories on the pages that follow provide consensus-based answers that solve root problems rather than treat symptoms. Achieving a Next Community where every citizen prospers is our top priority; however, we cannot achieve this alone. Please join us and help make a difference for Michigan as we work to build our Next Community.

Respectfully,



Susan J. Butterwick, JD
Deputy Director



Proficiency of Michigan 8th Graders by Subject



Our Process, Our Commitment

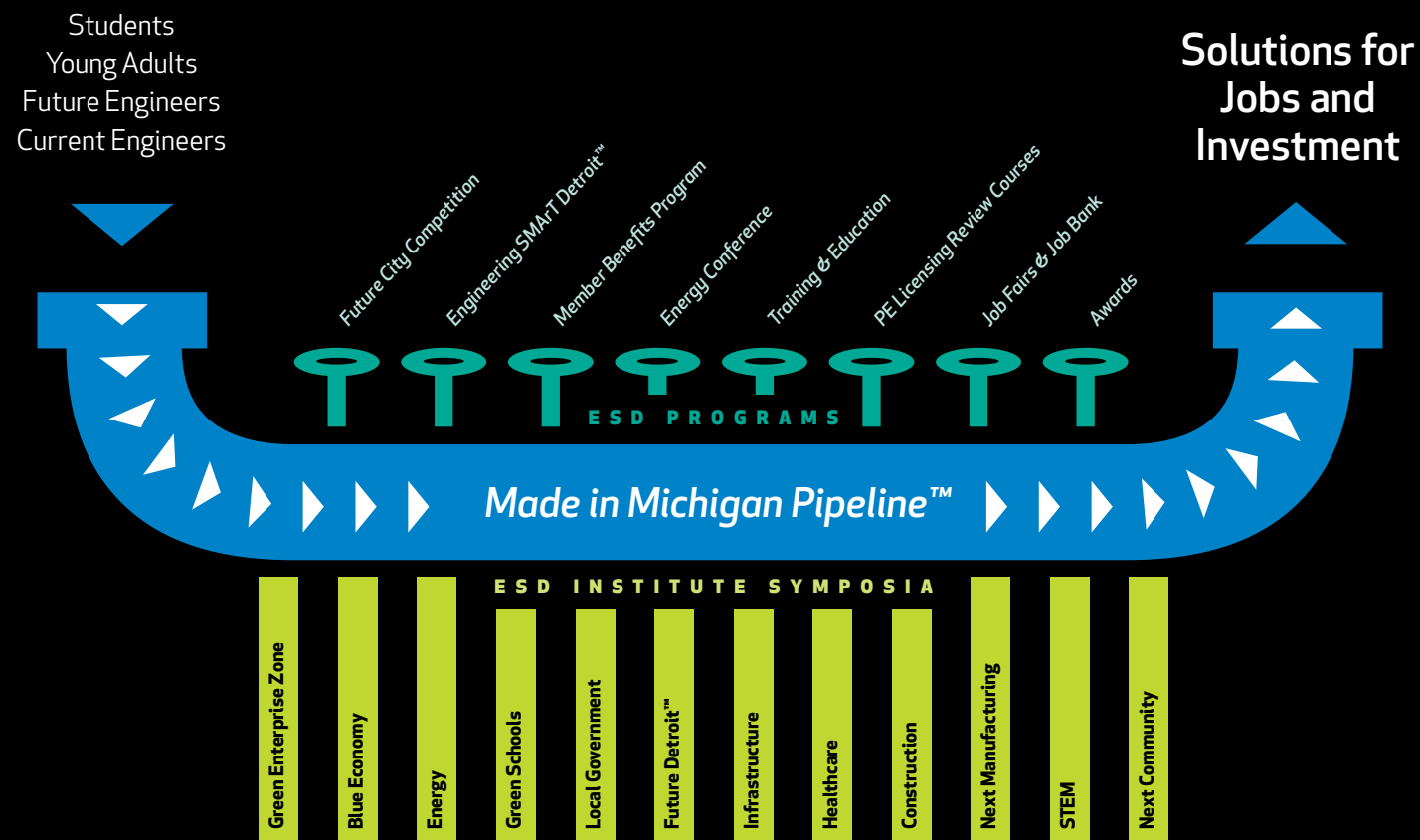
In tackling some difficult public policy issues (termed “wicked problems” because of their difficulty and the fact that no stakeholder owns the issue) and identifying breakthrough solutions, the ESD Institute (ESDI) considers two questions as it seeks sustainable implementation:

- Does a potential solution target root causes or does it only treat symptoms?
- Is it a systemic approach (comprehensive and integrated) or a silo approach (isolated and narrowly focused)?

We tackle wicked problems and identify breakthrough solutions by bringing business, labor, government, nonprofits, and communities together and building trust and consensus as we work from the bottom up.

Our Symposia

The ESDI symposium format is modeled after the process of the National Academy of Sciences. A mega question and workgroup questions, designed uniquely for each symposium, guide symposium participants in discussion of the wicked problem at hand. Trained facilitators build trust and consensus among symposium participants and assist them in developing an implementable action plan. Symposium recommendations are the product of the collaborative effort of diverse stakeholders.



What has the ESD Institute DONE



Under the banner of the ESD Made in Michigan Pipeline™ initiative, ESDI has constructed a roadmap of specific, actionable steps that will accelerate the growth of Michigan's economy as the export state of choice. Action steps include:

- Enact investment authority legislation that can lower the cost of doing business in Michigan up to 30% without fiscal and tax incentives;
- Establish within the authority new labor management relations between business and organized labor to envision a collaborative partnership for advanced manufacturing;
- Incorporate best practices into the authority's two-tier healthcare delivery system that will lower the cost of healthcare for employers while optimizing patient care and making Michigan the first state to eliminate workers' compensation;
- Adopt executive mandates for best construction practices for publicly funded projects to remove waste and lower construction costs;
- Craft our K to Job® and STEM Initiatives to benefit students, parents, and teachers to deliver the skilled engineering and technical workforce necessary to grow the economy and our communities with jobs right here in Michigan;
- Move Michigan past "silos of excellence" in STEM education to bring educators, teachers, government, and, importantly, industry together to link classrooms to STEM-related careers that will give students jobs being created in engineering and manufacturing so they stay, live, and work here;
- Build the foundation for our Next Manufacturing Symposium in November 2013 to craft the consensus for a new competitive growth platform with industry and labor to end needless polarization of stakeholders who need each other today more than ever; and
- Transform distressed communities into a destination for employment and responsible growth, drawing on the training of resident facilitators in neighborhoods and the integration of best practices in social services, juvenile justice, schools, healthcare, and the workplace from around the world under the banner of our Next Community Initiative.

Please visit www.esdinstitute.net for more details on how we are working to build a better future for Michigan. We're just an implementable idea away!

WHAT DOES IT TAKE TO Change?

Large-scale and sustainable social change requires cross-sector coordination and collaboration.¹ Integration between sectors, rather than the isolated intervention efforts of individual sectors, has the potential to create a truly lasting and collective impact. In one case, a core group of community leaders in Cincinnati and northern Kentucky abandoned their individual agendas in favor of a collective impact approach to improving student achievement.

Hundreds of individuals and organizations joined the collaborative effort: leaders of private and corporate foundations, city government officials, school district representatives, university and community college presidents, and the executive directors of education-related nonprofit and advocacy groups. The collective impact of diverse stakeholders united in a common goal was huge.

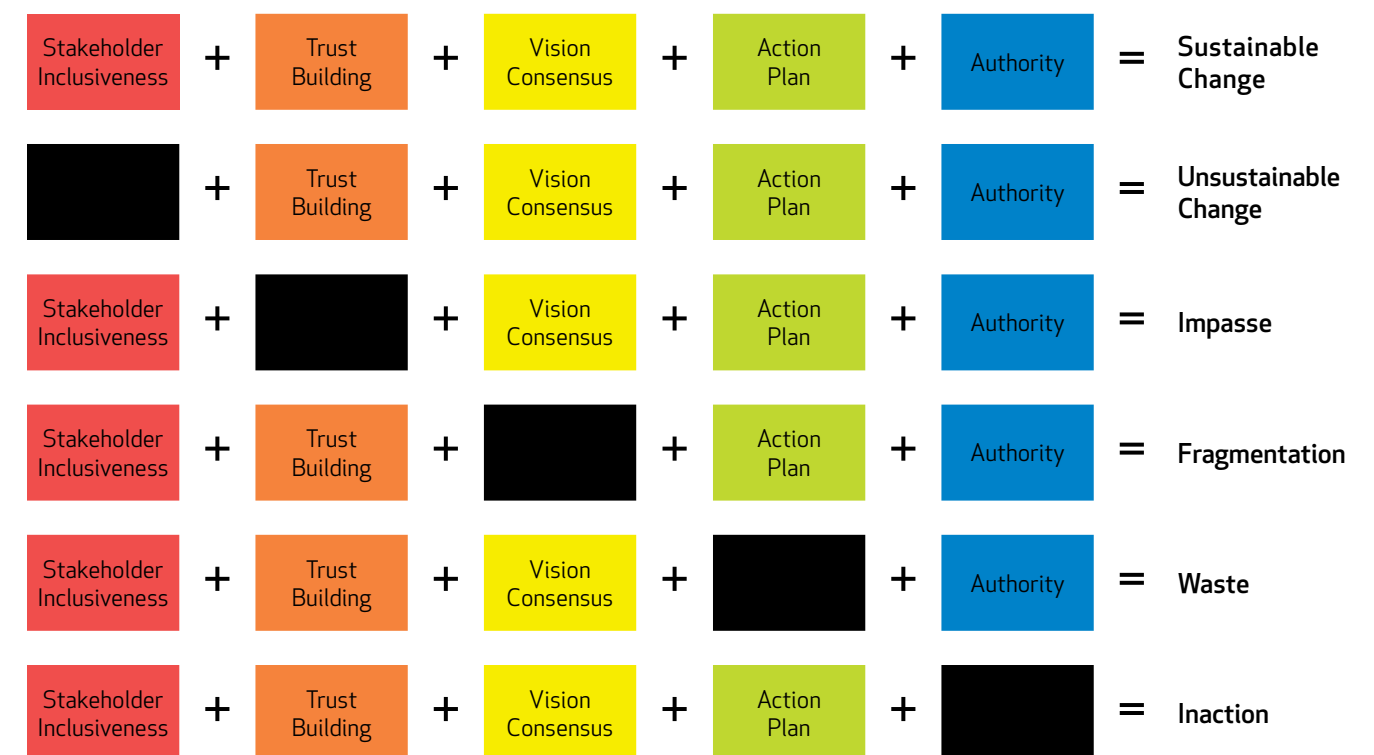
Collective impact refers to the commitment of a group of important actors from different sectors (nonprofits, governments, businesses, and the public) to a common agenda for solving a specific social problem. Collective impact initiatives involve a centralized infrastructure, a dedicated staff, and a structured process that leads to a common agenda, shared measurement, continuous communication, and mutually reinforcing activities among all participants.

At the ESD Institute, we are motivated by the potential collective impact of diverse stakeholders working collaboratively to solve a difficult societal problem. Our symposia process for implementing sustainable change reflects this goal.

1. J. Kania & M. Kramer, *Nonprofit Management: Collective Impact*, Winter 2011. Stanford Social Innovation Review.

Integration between sectors, rather than the isolated intervention efforts of individual sectors, has the potential to create a truly lasting and collective impact.

Implementing Sustainable Change



Adapted from T. Knoster, R. Villa, & J. Thousand (2000). *A framework for thinking about systems change*. In R. Villa & J. Thousand (Eds.), *Restructuring for caring and effective education: Piecing the puzzle together* (pp. 93-128). Baltimore: Paul H. Brookes Publishing Co.

community

ESDI will focus on a distressed community, tackle the community's wicked problems that are so difficult to resolve, and work to restore the community from the bottom up—turning it from a distressed community into a vibrant one.

NEXT COMMUNITY

The primary objective of the Next Community initiative is to join business, labor, educators, and Michigan's communities together to optimize the quality of life for citizens, especially children, because they are the future of our communities. Without skills, children will not be employable. Without an employable workforce, jobs and investments disappear.

Through its current initiative Next Community, ESDI will focus on a distressed community, tackle the community's wicked problems that are so difficult to resolve, and work to restore the community from the bottom up to transform it from distressed to vibrant. ESDI's goal is to advance the community as a destination and sustain it by economic growth based on a competitive and ready workforce. Next Community will be an essential inquiry this coming fall as ESDI and all stakeholders work together to develop a new and sustainable engineering and manufacturing platform for Michigan that will be globally competitive.

Drawing upon prior initiatives, ESDI is committed to bringing a system-wide, ground-up organizational collaboration to community transformation. Programs should not operate in a vacuum, but rather they should work together toward the same goal with consistent measurable systems. Stanford University's "Collective Impact" model for channeling large-scale change provides a process model for bringing about organizational partnerships and collaboration. As this paper notes, "Large-scale social change requires broad cross-sector coordination, yet the social sector remains focused on the isolated intervention of individual organizations."²

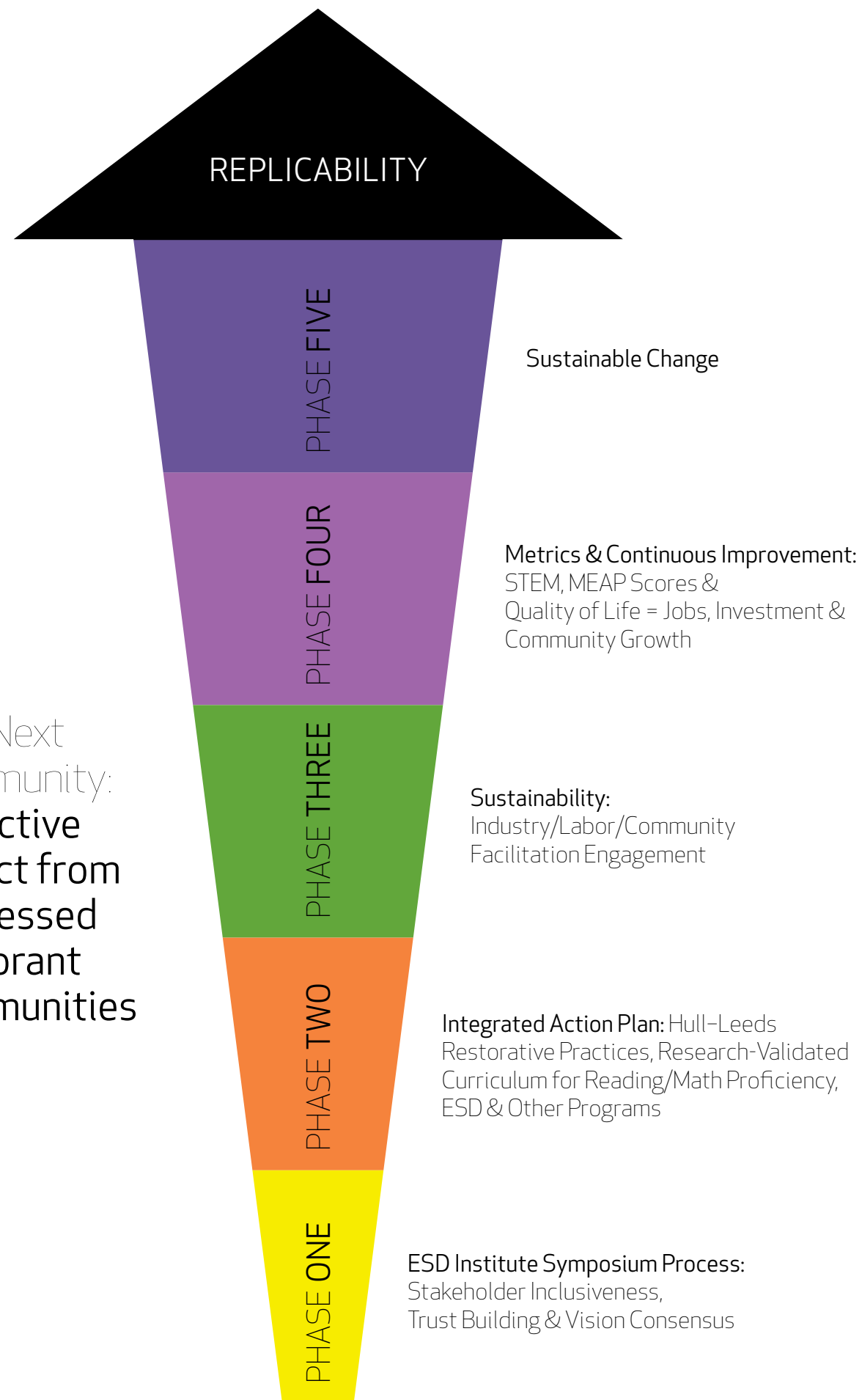
Our North Star is the 98% of children who are in need. They deserve better. They deserve a vibrant community where they can learn, live, work, and thrive. Michigan stands at a crossroads. Now is the time to begin the journey together.

2. J. Kania & M. Kramer, *Nonprofit Management: Collective Impact*, Winter 2011. Stanford Social Innovation Review.

Next Community Roadmap



ESD Next
Community:
Collective
Impact from
Distressed
to Vibrant
Communities



Our social, political, and economic fortunes are interdependent. By integrating best practices in every area, we can help turn a distressed community into a vibrant one.



Hull is a living model of true hope and tangible accomplishments that can help guide our quest for transformation of our distressed communities right here in Michigan.



Why Does Hull Matter?

Ten years ago, Hull, a community in England with a population of 275,000 residents, had hit bottom. The fishing industry was slowly disappearing. Manufacturing plants were shuttered. Schools were failing. Children were at risk. Unemployment, crime and poverty were taking over.

But a handful of residents decided to make a stand against the juggernaut of decline. As a city with over 30 different languages and cultures, the job seemed daunting. Those who had the vision of a restored community and the drive to initiate change used an integrated restorative approach, with the key goals of empowerment of individuals, groups, and communities; mutual accountability; and building and repairing relationships. Fast forward to today, Hull is a living success story and has been so successful that its best practices are now being implemented in Leeds, England's second largest city of 1.75 million residents, which is becoming the world's "second restorative city."

Earlier this year, key stakeholders at The Engineering Society of Detroit Institute brought Hull to our attention. Since its inception in 2008, the Institute has focused on identifying implementable best practices to advance our quality of life. One of our key observations has been that our social, political and economic fortunes are interdependent. And the "thread" connecting those fortunes is our children—and the consideration of our children's futures. So, earlier this year, we decided to visit Hull to learn more about its success story. We learned about the systemic improvement, behavioral transformation, monetary savings, and reduction of youth entering foster care and the justice system that were evident in the community.

Hull is the story of a community-wide transformation that began in a single school. It only takes a moment of reflection for us to think of our neighborhoods that are or may be at risk. Hull is a living model of true hope and tangible accomplishments that can help guide our quest for the transformation of our distressed communities right here in Michigan. Michigan must attract businesses and jobs for its economic survival, and it must turn its distressed communities into vibrant ones for the good of its people.

Hull is our lighthouse to restore our communities and a unifying force that focuses on the children of Michigan and their futures. Michigan can be home to the world's "third restorative city"—the future of our state may depend on it.

Social Impact Bonds

BEGIN WITH THE
END IN MIND,
WITH AN IDEA FOR
MOVING FORWARD

SIBs are a way to tackle the challenges of shrinking budgets, the responsible use of taxpayer dollars, and ballooning needs in the social sector.

As ESDI envisions a Next Community and works with all stakeholders to build it, the question of funding arises. The development of a vibrant community holds promise of a very positive social impact, and so ESDI is considering the use of Social Impact Bonds as a funding vehicle.

Social Impact Bonds (SIBs) are an innovative new public-private approach to paying for social programs in which government agencies pay only for improved social outcomes *after* the outcomes have been achieved and verified. SIBs are a way to tackle the challenges of shrinking budgets, the responsible use of taxpayer dollars, and ballooning needs in the social sector.

SIBs fund “Pay for Success” initiatives (i.e., recidivism reduction, school improvement, community development, etc.). Pay for Success is the Obama administration’s umbrella term for a new breed of financing tools for social programs in which the emphasis is placed on paying for measurable outcomes rather than for inputs or activities.³

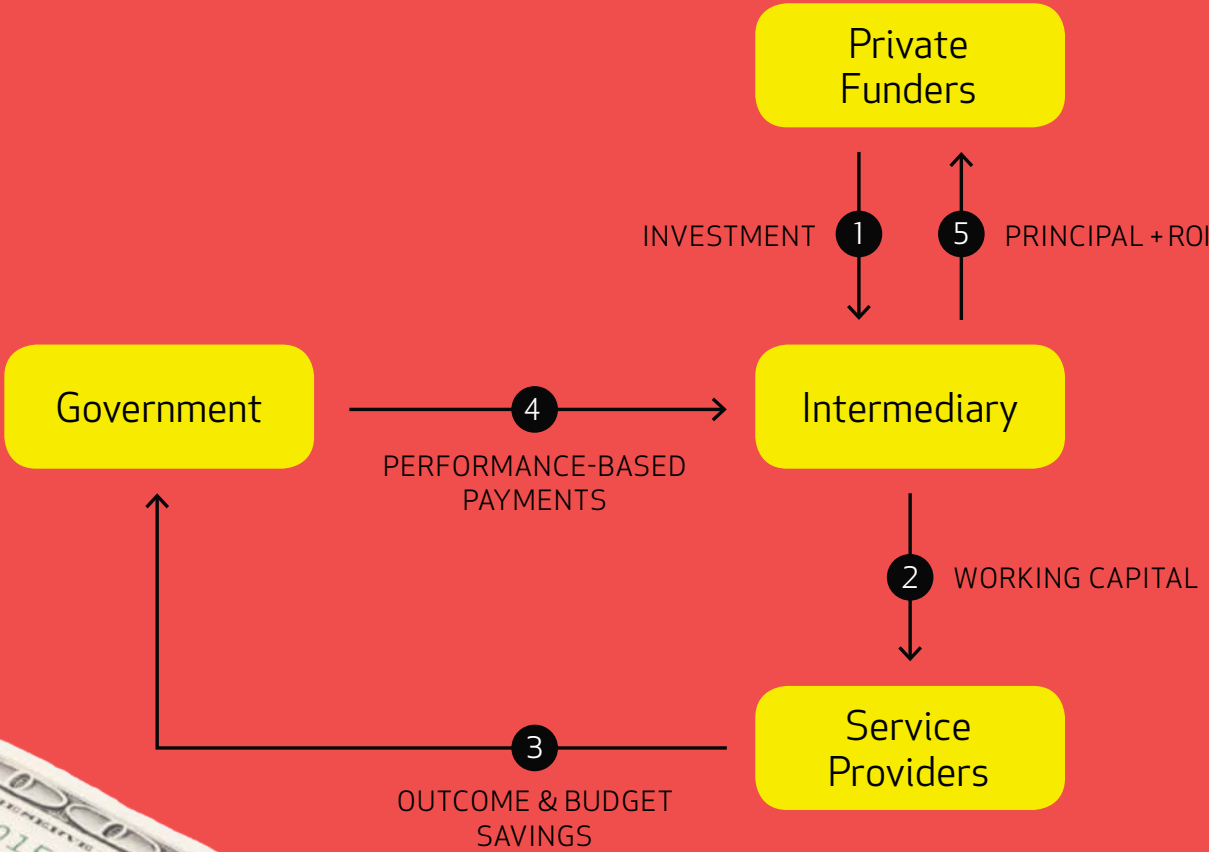
SIBs depend on a begin-with-the-end-in-mind model and follow the process below:

- A government agency defines a specific desired outcome to be reached in a designated time period;
- An intermediary finds private investors;
- The investors fund the activities needed to achieve the outcome; and
- An independent evaluator assesses whether the outcome was achieved. If the outcome was achieved, the investors receive payment; if the outcome was not achieved, the investors lose their capital.⁴

SIBs, by nature, are risky. There is potential for great payoff (both monetarily and socially) if social degradation is prevented or reduced. However, it can take a lot of time to see the impact, and thus investors may be hesitant to invest because up-front costs outweigh up-front benefits. For SIBs to be worthwhile, great foresight, thoughtful trust, and an ability to see long-term benefits are required. To reduce risk to the investor, the philanthropist organization can cap the amount of money the investor can lose.

3. S. Shah & K. Costa, *Social impact bonds: Pay-for-success programs could help OMB with grant guidance*, April 26, 2013, Center for American Progress.
4. J. Liebman & A. Sellman, *Social impact bonds: A guide for state and local governments*, June 2013, Harvard Kennedy School.

Social Impact Bond (SIB) Structure

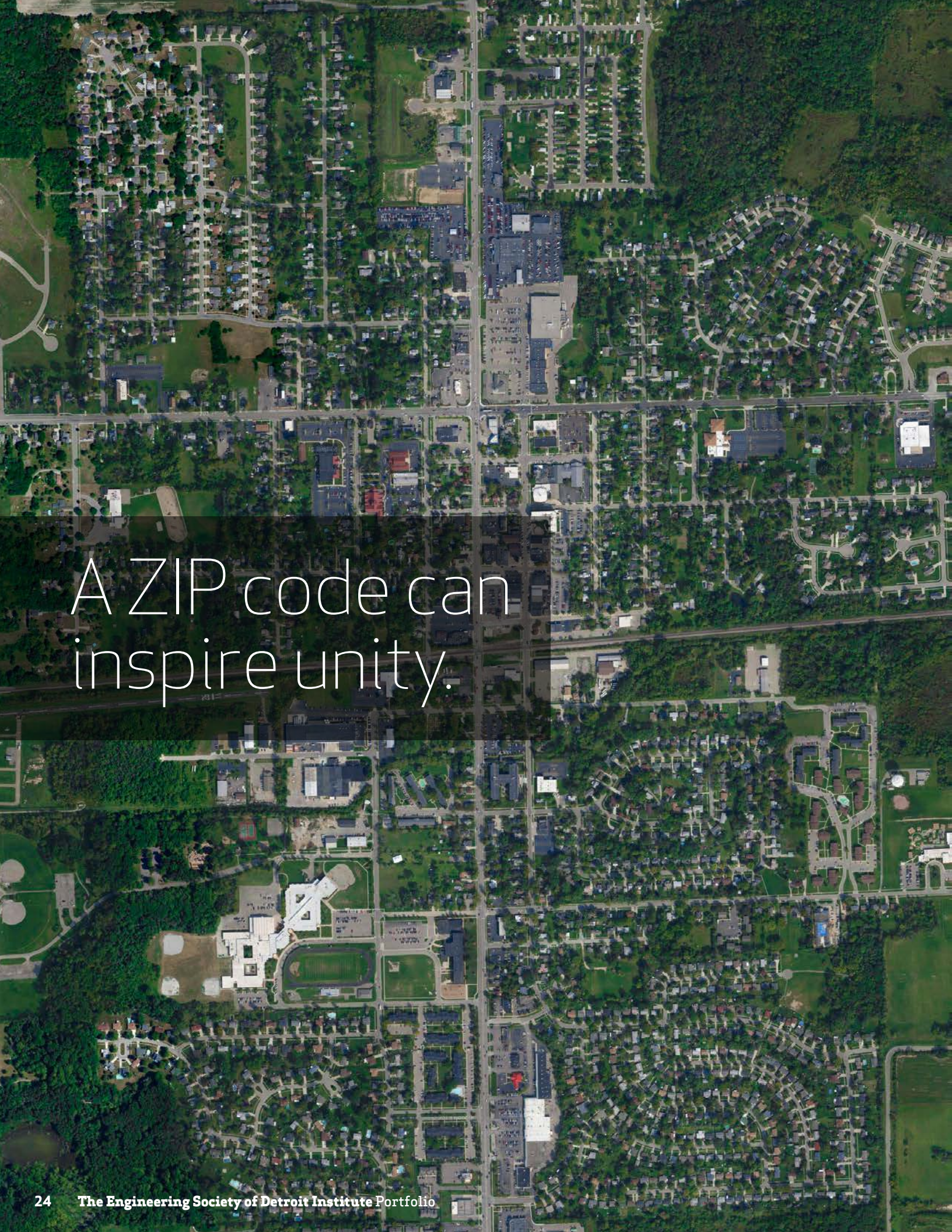


Source: J. Liebman & A. Sellman, *Social impact bonds: A guide for state and local governments*, June 2013. Harvard Kennedy School.

Step-by-Step SIB Development Process

1. Determining whether SIBs are a Good Fit for Your Organization				
■ Enthusiasm and commitment among leadership	■ A realistic possibility of taking a successful initiative to scale	■ Alignment with other performance goals	■ Sufficient interest from investors	
2. Selecting a Suitable Policy				
Sources of initial ideas		Criteria for filtering ideas		
■ Internal government discussions ■ Informal conversations ■ Lists of programs with successful program evaluations ■ A formal "request for information"		■ Priority policies ■ Strong agency leadership ■ Potential for high net benefits ■ Technically feasible		
3. Navigating the Development Process				
Data Analysis Tasks		Financial Modeling Tasks		Structural Tasks
■ Match administrative data sets ■ Analyze historical baselines ■ Choose target population ■ Analyze historical performance of specific providers ■ Conduct analysis necessary to develop evaluation methodology		■ Conduct a benefit-cost analysis ■ Build a model of payment schedule options ■ Develop a financial cash flow model for the project		■ Begin initial engagement with potential partners ■ Obtain authority from the legislature ■ Undertake a procurement process to engage services of an intermediary ■ Undertake a process to engage services of providers ■ Hire an independent evaluator
4. Putting All the Pieces Together				
■ Negotiate payment terms	■ Support the intermediary as it raises private capital	■ Develop operating procedures	■ Draft and execute contract	■ Establish plan for making decisions about scaling/expanding
5. Implementing and Monitoring				
■ Monitoring and oversight		■ Field office support		■ Evaluation support
6. Wrapping Up				
■ Final determination of outcomes and payments		■ Interpreting the results		■ Decision about follow-on contracts

Source: J. Liebman & A. Sellman, *Social impact bonds: A guide for state and local governments*, June 2013. Harvard Kennedy School.



A ZIP code can
inspire unity.

Re-Envisioning Our Future Together: Building Davison 48423

Symposium: June 9–10, 2010

Davison community members came together to discuss ways to tackle fiscal, economic, and social disparities and save local viability through service delivery, economic development, taxation, and land use.

MEGA QUESTION

How can local governments, on a cost-effective basis, work together to improve the structure of government, delivery of services, attraction of jobs and investment, and opportunities of formal and lifelong education?

RECOMMENDATIONS

- Form a “48423 Davison as a Destination” Leadership Task Force to provide guidance for four identified primary efforts, including evaluating initiatives to result in a win-win scenario for both the City of Davison and Davison Township.
- Form a task force with representatives of both communities and state, and support organizations to evaluate, develop, and recommend a course of action for financial issues, including millage discrepancies.
- Form a task force of representatives of the City of Davison and Davison Township to improve the business climate within the community, and to devise a marketing plan focused on innovation and entrepreneurship, including training and education programs in the areas of innovation and entrepreneurship for residents.
- Combine duplicate services to improve overall effectiveness and cost efficiency.

Education

Our children deserve better—their improved learning will benefit their own personal and professional lives, the economy, national security and the broader society.

K to Job®

We face a crisis in education. Our children deserve better. Their improved learning will benefit their own personal and professional lives, the economy, national security,⁵ and the broader society. A vibrant and successful educational system is part of our vision for Next Community. The statistics below reveal serious problems in our teacher preparation programs⁶ and compel the ESD Institute to work to improve the education—and lives—of children.

EARLY READING INSTRUCTION

Only 10% of evaluated elementary programs in Michigan are preparing teacher candidates in effective, scientifically based reading instruction, an even lower percentage than the small minority of programs (29%) providing such training nationally.

ELEMENTARY MATH

A mere 19% of evaluated elementary programs nationwide provide strong preparation to teach elementary mathematics, training that mirrors the practices of higher performing nations such as Singapore and South Korea. Just 11% of the evaluated elementary programs in Michigan provide such training.

STUDENT TEACHING

Of the evaluated elementary and secondary programs in Michigan, the vast majority—87%—fail to ensure a high-quality student teaching experience, in which candidates are assigned only to highly skilled teachers and receive frequent concrete feedback. Across the country, 71% of programs failed this standard.

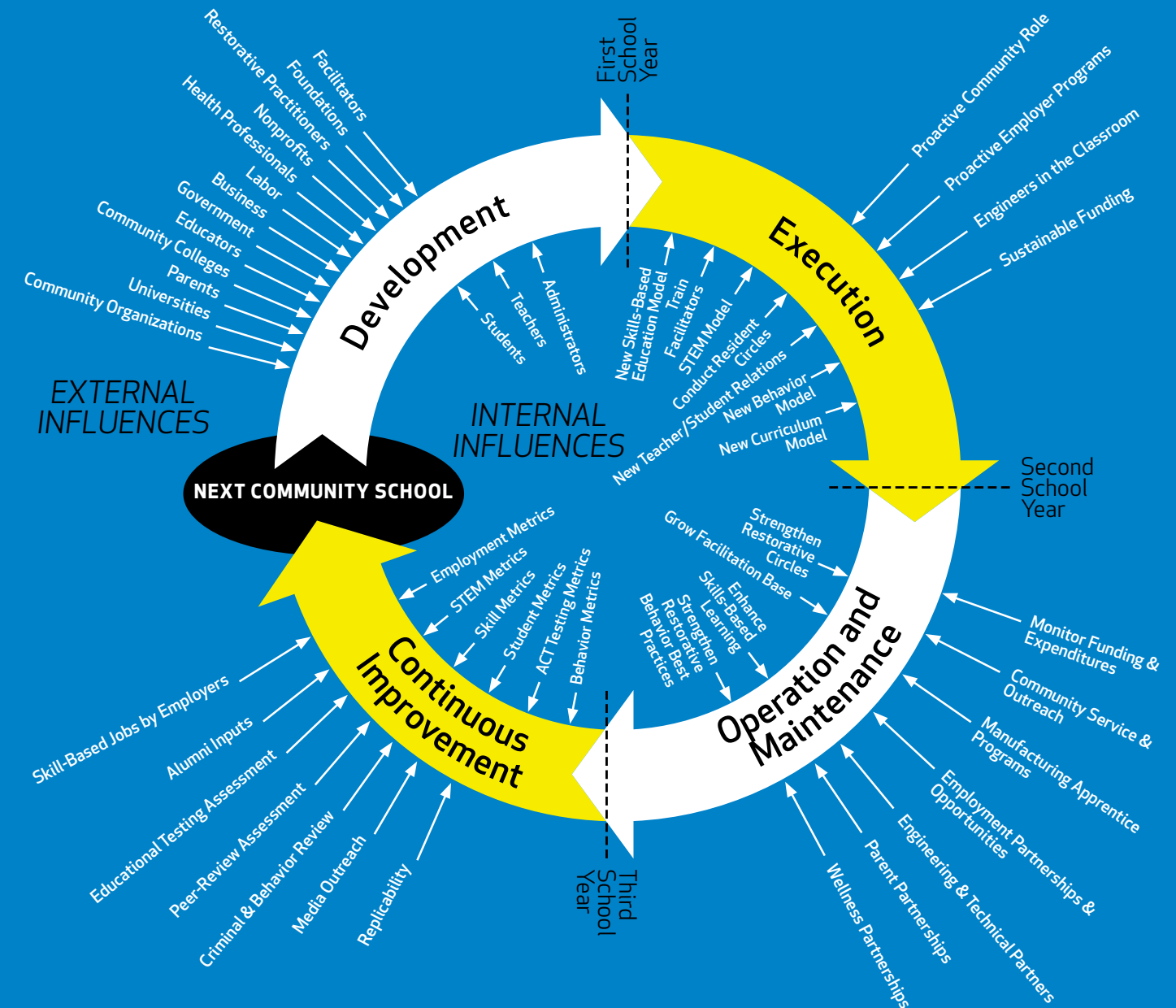
CLASSROOM MANAGEMENT

Only 20% of the evaluated Michigan elementary and secondary programs earned a perfect four stars for providing feedback to teacher candidates on concrete classroom management strategies to improve classroom behavior, compared to 23% of evaluated programs nationwide.

The ESD Institute sees improved outcomes in education as the result of improvements along the entire continuum. That is why we have created the K to Job Continuum (page 29)—to improve the well-being and success of young children until they enter the workforce.

5. U.S. Education and National Security, a Task Force Report from the Council on Foreign Relations.
6. Teacher Prep Review, 2013; National Council on Teacher Quality

K to Job® Continuum



SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS

An optimized STEM educational path can increase the workforce readiness and quality of life for all students in Michigan.



STEM

Symposium: March 1-2, 2013

All Michigan students deserve to be well-educated in science, technology, engineering, and mathematics (STEM) so they are prepared for the workforce and qualified to enter high-demand jobs in STEM fields.

MEGA QUESTION

If you were envisioning an optimized, statewide STEM initiative for Michigan, what would it look like and how would you get it done?

RECOMMENDATIONS

- The Michigan legislature should enact a STEM authority to provide a sustainable and unified voice for the promotion of STEM and the advancement of Michigan as the center of STEM-based investment and jobs.
- Increase student proficiency skills in reading and math and incorporate STEM into reading.
- Create early exposure to STEM education for pre-kindergarten.
- Organize a STEM stakeholder steering group with all key stakeholders to plan next steps and achieve political consensus for legislative action.
- Integrate best curriculum and behavior practices for students in underachieving schools.

Direct Instruction

Direct Instruction is a research-validated method of teaching that fits into our Next Community initiative. If we want vibrant communities, children need skills, and Direct Instruction effectively helps students learn those skills.

- 1 “...the underlying principles of Direct Instruction place it among the most successful outcomes.”
- 2 “Strongest Evidence of Effectiveness”
- 3 “Strong Evidence of Positive Effects on Student Achievement”
- 4 “[One of three reform models that] have shown the greatest degree of effectiveness and are supported by the largest body of research.”
- 5 “...one of the top two comprehensive school reform programs.”
- 6 “Only Direct Instruction had positive effects on basic skills, on deeper comprehension measures, on social measures, and on affective measures.” (Concerning the outcomes from Project Follow Through, the largest federally funded study in education ever conducted)
- 7 “By using a Direct Instruction approach to teaching, more children with learning disabilities, who were thought to be unable to improve in any academic area, can make incredible gains in their schooling.”
- 8 “...Direct Instruction [is] the oldest and most validated program....”

- 1 J.A.C. Hattie, *Visible Learning: A synthesis of over 800 meta-analyses related to achievement*, 2009, p. 205. New York, NY: Routledge Publishers.
- 2 Geoffrey D. Borman, et. al., *Comprehensive School Reform and Student Achievement: A Meta-Analysis*; Center for Research on the Education of Students Placed at Risk, Table 5. November 2002.
- 3 American Association of School Administrators, www.aasa.org/issues_and_insights/district_organization/Reform/overview.htm
- 4 Association for Supervision & Curriculum Development, *Comprehensive School Reform and Student Achievement*, September 30, 2003. Research Brief, Vol. 1, No. 20.
- 5 American Institutes of Research. www.air.org/news/documents/Release200611_csrq.html
- 6 J.A.C. Hattie, *Visible Learning: A synthesis of over 800 meta-analyses related to achievement*, 2009, p. 258. New York, NY: Routledge Publishers.
- 7 University of Michigan Department of Psychology, sitemaker.umich.edu/delicata.356/direct_instruction_and_special_needs
- 8 Ian Ayres, *Super Crunchers: Why Thinking-by-Numbers Is the New Way to Be Smart*, 2007, p. 166.

Restorative Practices

Restorative Practices are clearly defined procedures for enhancing organizations and communities, resolving and preventing conflict, and responding more effectively to crime and school misconduct. According to Ted Wachtel, president and founder of the International Institute for Restorative Practices:

*The fundamental premise of Restorative Practices is that people are happier, more cooperative and productive, and more likely to make positive changes when those in authority do things with them, rather than to them or for them.*⁷

Restorative Practices are derived from ancient interpretations of justice, which are known collectively as Restorative Justice. Studies throughout the world are demonstrating positive outcomes, from lower adult re-offending rates in communities to more productive learning environments in schools. Restorative Justice has become national law in several countries. It is now state law in Colorado, and several other states are currently considering legislation. Police departments, courts, school districts, and businesses throughout the nation are beginning to employ these effective methodologies.

A Michigan Department of Education publication entitled “Restorative Justice and the Achievement Gap” states:

Restorative Justice has been shown not only to decrease suspension rates anywhere from 40% to 80%, but has also resulted in a nearly 50% drop in absenteeism, and a 60% decrease in tardiness. Restorative Justice has also been credited with 50% reductions in disciplinary referrals and recidivism rates.

The Michigan State Board of Education “strongly urges” all Michigan school districts to: “Implement or expand the use of proven alternative behavior management strategies like Restorative Practices...”⁸

Restorative Practices and Direct Instruction can begin to place failing institutions and students on a path to success. With this foundation, we can transform distressed communities into vibrant ones that are sustainable based on the engagement and collaboration between the public and private sectors for social and economic growth.⁹

The fundamental premise of restorative practices is that people are happier, more cooperative and productive, and more likely to make positive changes when those in authority do things with them, rather than to them or for them.



7. The International Institute of Restorative Practices has been a pioneer in the area of restorative practices. More is available from their website at www.iirp.edu.
8. See http://www.michigan.gov/documents/mde/Final_Resolution_School_Discipline_Issues_Impacting_Student_Outcomes_389055_7.pdf.
9. ESD and its Institute gratefully acknowledge the contribution of Bill Sower, Founder of the Christopher and Virginia Sower Center for Successful Schools, relating to our Next Community Initiative and in particular the sections of this Portfolio relating to Direct Instruction and Restorative Practices. More regarding the Sower Center is available at www.thesowercenter.com.



FUTURE DETROIT

Envisioning Tomorrow Together Youth Symposium

Symposium: February 12, 2011

Rising generations have new and different perspectives on what a prosperous city looks like, visions that often differ from those of generations preceding them. The Future Detroit Youth Symposium was a breakthrough in reaching young voices often not heard.

MEGA QUESTION

If you were envisioning a Future Detroit, what would it look like and how would you accomplish it?

RECOMMENDATIONS

- Form a transparent Schoolplace Security Advisory Council (SSAC) that focuses on schoolplace abuse and crime that directly reports to the DPS Police. Similar to the Board of Police Commissioners at the Detroit Police Department, SSAC would consist of critical stakeholders that care about the reduction and elimination of school-based abuse and crime.
- Institute, through the DPS Division of Academic Affairs, a transparent, district-wide Learning Interactive Council (LIK) that would be led by an appointed school administrator. The membership of LIK should be led by a math/science instructional specialist and consist of advisors ranging from students and parents to engineering and scientific professionals.
- Establish, through the City of Detroit and interested foundations, an incubator for Detroit middle and upper school student talent development and arts-related programs entitled the “Detroit Talent Incubator,” including a student subcommittee to play an active advisory role to benefit incubator work.



DEPSA Lean Green School

Symposium: December 16–17, 2009

The educational community is a unique resource for leadership and initiatives related to the green technology space as well as technology transfer and commercialization programs. ESD selected the Detroit Edison Public School Academy (DEPSA) Lean Green School Initiative as the subject for a standalone symposium.

MEGA QUESTION

How can DEPSA, on a cost-effective basis, retrofit an existing building on a Brownfield site as a Lean Green High School with broad community support, best design and construction practices, and innovating contracting to carry out its educational mission for the betterment of its students?

RECOMMENDATIONS

- Continue engagement between ESD and DEPSA to ensure optimum collaboration, as recommended in Appendix I to the Symposium Report.
- Form an advisory committee within ESD, staffed with volunteer representatives experienced in the four areas highlighted in the scratch questions of the symposium. The committee would be led by a funded leader that would work closely with DEPSA.
- Adherence to the roles and responsibilities identified in the RASI charts of each workgroup should be followed and tracked as indicated in the report.



Repurposing
land can
jumpstart
education.

Environment

Michigan's natural resources create endless opportunities for innovation, business and growth.

Michigan Clean Water Initiative

Symposium: May 19–20, 2009

A national crisis in freshwater quality and supply could affect the nation's economy, the livability of our communities, and health of our ecosystems; Michigan is at the epicenter.

MEGA QUESTION

How does Michigan fairly and effectively build a policy consensus for a critical resource that everyone needs?

RECOMMENDATIONS

- Form a collaborative steering group for the development of a Blue Economy blueprint, building upon the regional success of collaborative public models such as the DWSD, TAC, and the CWSC.
- Establish state funding sources, drawing upon the North Dakota “water bank” model, or the issuance of bonds for water projects and enterprises.
- Establish a State University Water Research Collaboration & Center of Excellence to enable greater collaboration and transparency between the various organizations.
- Grow and support the Blue Economy within the DWSD service area.



Michigan Clean Energy Initiative

Symposium: September 14–15, 2009

Optimizing Michigan's energy profile—inclusive of more in-state renewable resources—is a worthy priority in the development of an economic framework that will attract investment.

MEGA QUESTION

How does Michigan reach a consensus on implementing a Clean Energy Policy that supports energy independence, affordability, and economic development?

RECOMMENDATIONS

- Create a center of energy excellence in Michigan as a first step in achieving a comprehensive energy plan to accelerate energy conservation and efficiency within the state.
- State leadership to aggressively pursue a two-to-five year energy diversification plan to diversify energy supply while creating jobs and broadening the economy of the state.
- Develop a roadmap for a carbon-free footprint through an inclusive and collaborative process of all stakeholders to ensure buy-in.

Innovative
wastewater
treatment can
turn a region
around.

Detroit Water & Sewerage Department Waste Water Treatment Plant: The Road to Compliance and Beyond

Symposium consensus action report submitted: July 26, 2010



On behalf of the Detroit Water & Sewerage Department, the ESDI assessed and identified immediate emergency corrective steps and a sustainable, long-term remediation strategy relating to certain National Pollutant Discharge Elimination System (NPDES) violations, and recent pleadings relating to such NPDES violations as filed under Civil Action No. 77-71100 in the United States District Court.

RECOMMENDATIONS

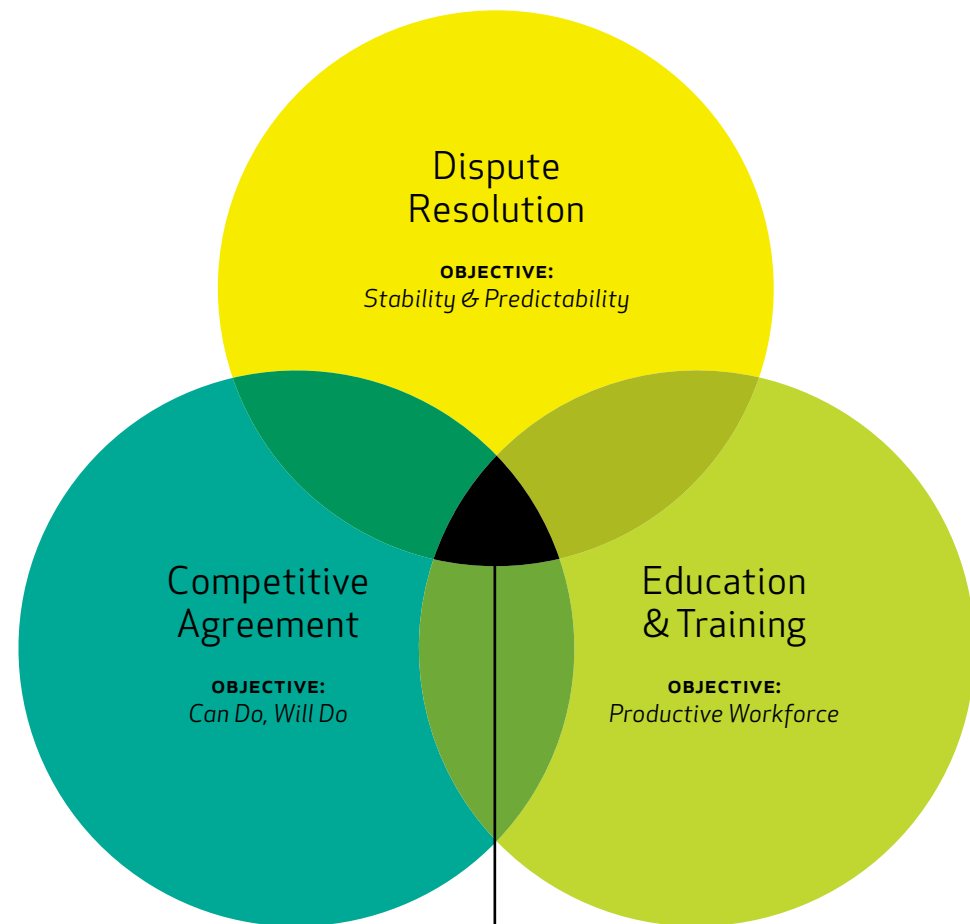
- Establish an effective City Integrated Enterprise Agency (CIEA) based on visionary management, best operating practices, financial sustainability, smart capital expenditures, reduced maintenance risk, optimum staffing and skills, competitive treatment rates, and zero noncompliance.
- Create an Empowered Enterprise Change Office (EECO) reporting to the Office of the Mayor and specifically the City's Chief Operating Officer (COO) and the DWSD Director.
- Implement the long-term capitalization plan that provides significant cost reductions by \$200 million through a No-Incineration Green Option, as set forth in the ESD Corrective Action Plan.

PHOTO BY ANDERS ADERMARK (FLICKR CREATIVE COMMONS)



Innovation reaches beyond the tangible: Michigan has an auspicious opportunity to create the environment necessary to attract capital and investment.

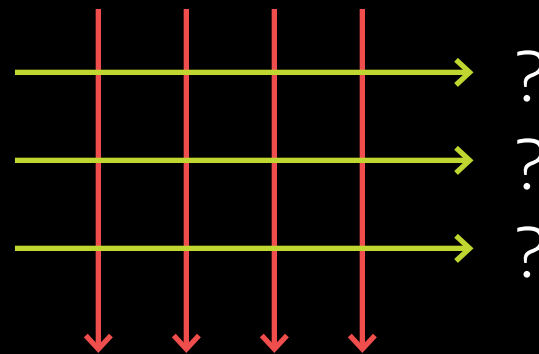
Economy



An innovative investment zone can lower the cost of doing business in Michigan by 30%.

Michigan Green Enterprise Zone

Symposium: March 19–20, 2009



The Zone fosters long-term predictability that addresses current political instability, labor history, and public debt to maintain and attract investment for manufacturing to return Michigan to an export state.

MEGA QUESTION

How can Michigan maintain and attract investments beyond the use of public funds or tax incentives to reclaim global competitiveness?

RECOMMENDATIONS

- Develop the conceptual ideas generated from this symposium into an implementable prospectus for the Zone itself, spelling out the details of operation and governance.
- Enact the Michigan Investment Corporation Act in the legislature.

CHOOSE:

- A) optimize silos or
- B) optimize integration



Building Consensus for Michigan's Integrated Global Freight Hub

Symposium: March 9–10, 2011

Moving freight through Detroit will move Michigan forward.

Michigan's "Hub" of transport for trade (which extends north to Saginaw and Flint, west to Lansing and Ann Arbor, south to Toledo, east to the Windsor-Essex region of Canada, and is centered on Detroit) is currently underused, and opportunity lies in re-envisioning our Hub into a world-class platform, competing on a global basis and giving both Michigan and the United States a strategic competitive advantage for the 21st century.

MEGA QUESTION

How do we create a consensus to build a global freight hub to serve the needs of our 21st century economy?

RECOMMENDATIONS

- Appoint a Neutral Global Freight Hub Panel with a 90-day cooling-off period. This seven-person panel of independent and neutral experts should examine and recommend whether or not an integrated GFH optimizing trucking, rail, air, and sea system makes sense and, if so, provide a master conceptual plan for its implementation.
- Appoint a Neutral Economic Development Panel, charged with assessing the scope and nature of an integrated freight hub to serve Michigan, and preparation of a business case that considers investment models and the questions raised in this symposium.

PHOTO COURTESY OF PORT OF TACOMA (FLICKR/CREALINK/COMMONS)



PHOTO COURTESY OF MERCY HEALTH (FLICKR CREATIVE COMMONS)

Waste In Healthcare

Symposium: April 12-13, 2011

Restructuring healthcare delivery can attract jobs and investment.

The cost of healthcare continues to rise at a staggeringly exponential rate; the waste and inefficiencies can be reduced or eliminated from the system.

MEGA QUESTION

How can divergent stakeholders build a consensus to identify and reduce inefficiencies and waste on a sustainable basis within the U.S. healthcare delivery system?

RECOMMENDATIONS:

- Appoint, through the governor of the State of Michigan, an independent, nine-member blue-ribbon Waste in Healthcare Commission consisting of employer, labor, insurer, administrator, provider, physician, academic, governmental, and nonprofit stakeholders to serve on a volunteer basis. The commission would be to present its finding to the governor within three months of its formation.
- Restructure healthcare delivery to consist of two layers, in order to reduce the risk of zero coverage. The first layer is to be privately provided, affording predictability of coverage costs. The second layer is to be public, in place to address catastrophic or chronic claims.



Construction Productivity

Symposium: September 13–14, 2011

Implementation of best practices can reduce the cost—and risk—of building in Michigan.

Michigan has a strong base in advanced manufacturing and construction engineering and trades. New, innovative ways to increase efficiency in the Michigan construction industry are needed; something needs to change immediately for the industry to remain viable.

MEGA QUESTION

How can Michigan create consensus for a model comprehensive construction implementation standard that will serve the needs of the 21st century?

RECOMMENDATIONS

- Appoint, by the governor of the State of Michigan, a blue-ribbon voluntary task force made up of key public and private stakeholders to assess the findings of the ESDI report and submit its white paper recommendations for implementation of best construction practices for any construction project with public funding.
- Enact legislation to create an authority under Michigan law that would mandate the use of best construction practices within the jurisdictional scope and purpose of the authority.

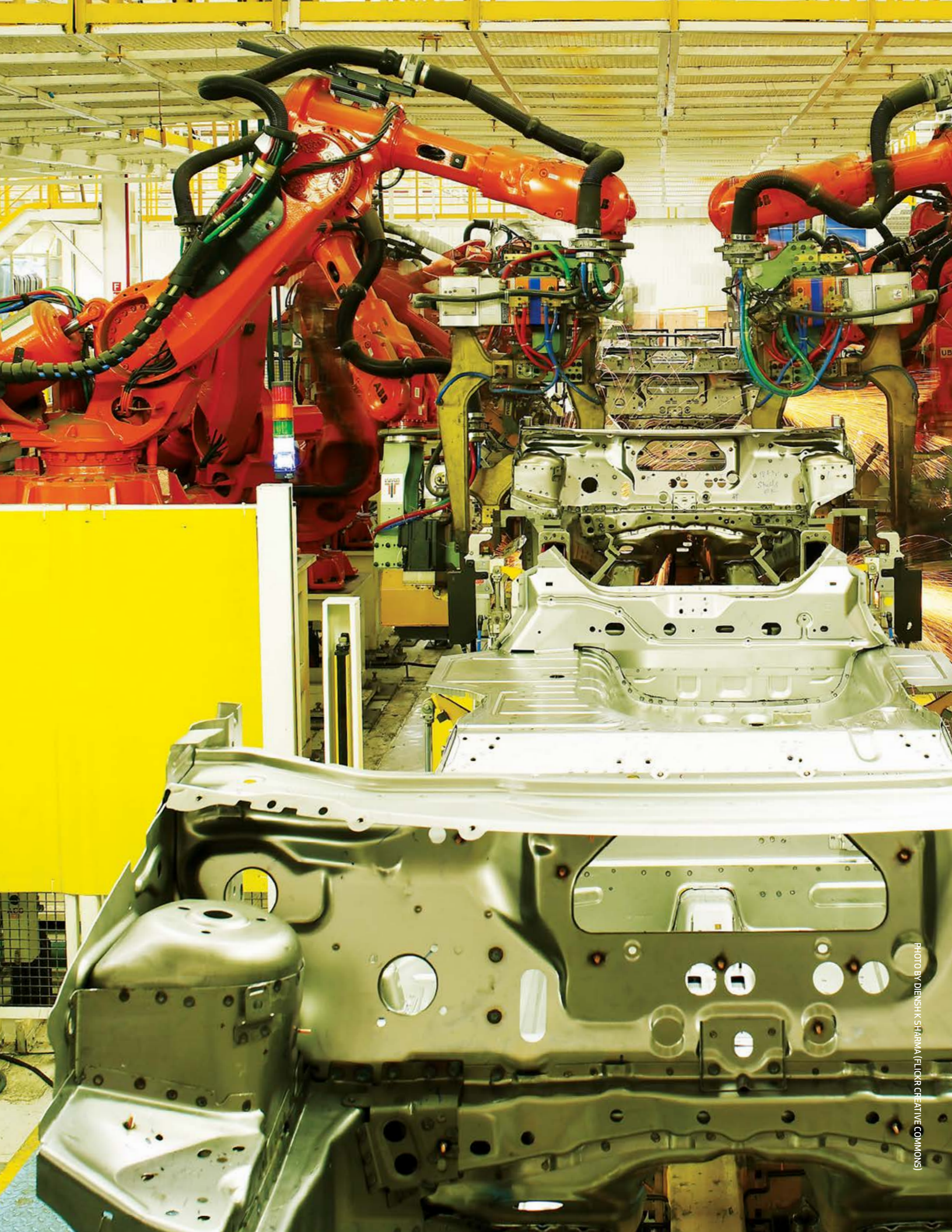


PHOTO BY DIENSH K SHARMA (FLICKR CREATIVE COMMONS)

Next Manufacturing

Symposium **scheduled for November 13-14, 2013**¹⁰

Manufacturing puts Michigan in a position to grow and regain its competitive advantage.

With its access to resources, proximity to navigable waterways, and ability to meet demand for Michigan- and American-made products, Michigan is poised to become a renewed manufacturing center for the 21st century.

MEGA QUESTION

How can Michigan achieve a consensus among its diverse stakeholders to create and implement a global manufacturing platform to be the export location of choice in the 21st century?

WORKGROUPS

- Workforce Readiness
- Labor-Management Relations
- Manufacturing Business Case
- Role of State Government
- Community Envisioning

¹⁰. See www.esdinstitute.net/manufacturing for abstract, agenda, and more information.

Professional Development

Workforce
development
advances careers
AND economies.

PHOTO BY LAUSTININC (FLICKR CREATIVE COMMONS)



ESD MASTER SERIES™ COURSE TAUGHT BY CHRISTOPHER J. WEBB

ESD Master Series™

Designed for all business professionals, the Master Series is interactive, hands-on, solution-based workshops crafted with career advancement in mind. The ESD Master Series is ideal for mid-career and executive track professionals in a variety of areas: purchasing, project management, estimators, executives, contracting, and countless others.

The ESD Master Series workshops are scenario-based, experiential learning modules that provide professional development and career growth opportunities on the topics most requested by career-path professionals. The ESD Master Series is led by ESD Institute Director Christopher J. Webb, JD, FESD. Topics include:

- Proactive Project Management from the Start to Completion of the Job
- Effective Writing Techniques for Engineering and Technical Professionals
- Successful Reflective Management
- The Art of Reflective Selling
- The 360° Manager: Train the Trainer
- Advanced Negotiation Skill Building: Complex Multi-Party Transactions

A certificate of completion is provided. All workshops are held at ESD Headquarters in Southfield, Michigan. Breakfast is provided for half-day sessions; breakfast and lunch provided for full day. All proceeds go toward the David A. Skiven Leadership Fund.

Feedback from the ESD Institute's Custom Facilitator Training for the UAW, given by Christopher J. Webb, on September 14, 2012:

"This was one course I can honestly say had no weaknesses. The session was attention capturing from start to finish. Topics, interaction, and literature."

"Solid facilitation training."

"I came with an open mind and no expectations. This allowed me to be open to be inspired and I was. I was also re-energized and that was much needed. Thanks!"

Custom Facilitation & Symposium Services

Recognizing the growing need for organizational transformation in the face of today’s tough challenges, the ESD Institute is now offering custom facilitation and symposium services. From “bet your business” problems to the location of new markets, the ESD Institute process is invaluable for building internal consensus as a roadmap for success.

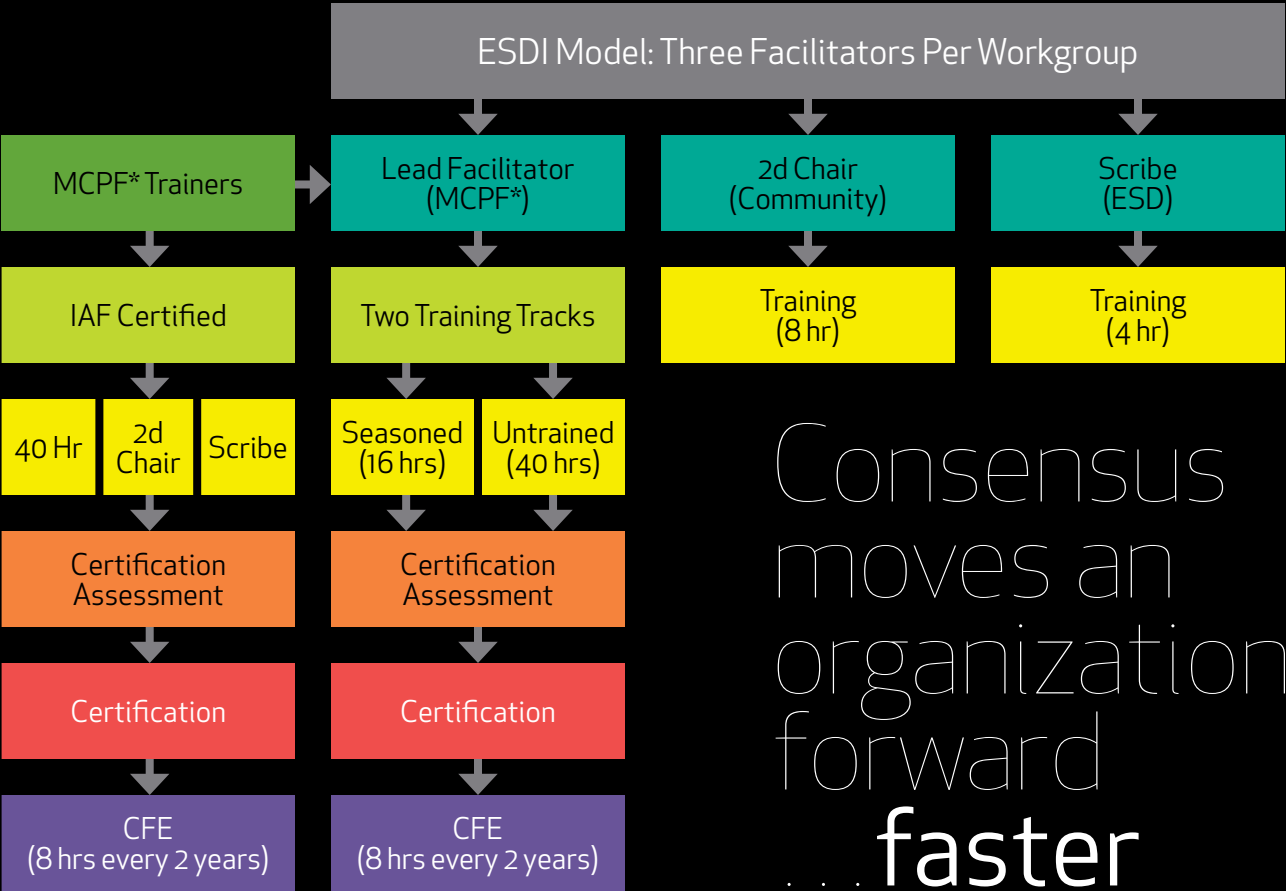
The ESD Institute’s proven symposium process can be adopted for individual organizations around any chosen topic. Custom symposia and facilitation provide a unique, off-site opportunity for stakeholders to think through strategies for moving forward. The assistance of neutral facilitators maximizes group decision-making capabilities. We enable the identification

of common ground, optimize strengths, and repair weaknesses on a fast-track basis.

The ESD Institute offers facilitation services for any group faced with situational challenges or organizational changes. Depending upon needs, these services may include preliminary assessment, group interaction in a structured format, and neutral facilitators who will manage the dialogue, with the option to record the efforts and outcomes of the group. Importantly, if desired, our work can take place on a confidential basis to achieve the greatest level of candor and effectiveness. All proceeds resulting from custom symposia and facilitation go toward the David A. Skiven Leadership Fund.



Public Facilitator Certification



*Michigan Certified Public Facilitator (MCPF).



2013 ANNUAL ESD GOLF-OUTING—PHOTO BY RALPH ADAMS

WHY GOLF AND GIVE TO THE ESD INSTITUTE?

The Short Answer: In tackling our wicked public policy issues and identifying breakthrough solutions, the ESD Institute (ESDI) considers two questions as it seeks sustainable implementation:

- Does a potential solution target root causes or does it only treat symptoms?
- Is it a systemic approach (comprehensive and integrated) or a silo approach (isolated and narrowly focused)?

We tackle wicked problems and identify breakthrough solutions by bringing business, labor, government, nonprofits, and communities together and building trust and consensus as we work from the bottom up.

Why golf and give? All net proceeds from our annual golf outing go directly to the David A. Skiven Leadership Fund that Dave and his family created for the benefit of ESDI. What makes the ESDI unique is our process: unprecedented collaboration and consensus among the business, labor, educators, government, and communities. No other organization is like it in Michigan. With your help we can continue to optimize Michigan's strategic advantages—its people, its water and its location—to achieve a sustainable and vibrant quality of life for all of us. Please visit www.esdinstitute.net for more details. Thank you for joining us as we work to build a better future for Michigan. We're just an implementable idea away!

DAVID A. SKIVEN

Leadership Fund

FOR THE BENEFIT OF THE ENGINEERING SOCIETY OF DETROIT INSTITUTE

Dave put people first. He had in his travels seen all kinds of folks. He saw leaders in name only and he saw greatness in those unrecognized.

—Christopher J. Webb, JD, FESD

The David A. Skiven Leadership Fund honors the memory and contribution of David A. Skiven, PE, FESD, who co-founded The Engineering Society of Detroit Institute and served as its volunteer co-director from 2008 until his death in November 2011. The salient purpose of the Fund is to provide a sustainable funding source for the Institute to advance its work as conceived and envisioned by Mr. Skiven. In addition, the Fund will support an annual award entitled The David A. Skiven Leadership Award. The management of the Fund is under the executive leadership of ESD and the ESD Board of Directors. An annual summary report on the activities of the Fund is available upon request.

If you are interested in contributing to this fund, please visit www.esdinstitute.net, call 248-353-0735, or email esd@esd.org. You may also mail donations, payable to ESD with "Skiven Fund" in the memo field, to:

**The Engineering Society of Detroit
David A. Skiven Leadership Fund
20700 Civic Center, Suite 450
Southfield, MI 48076**



The Journey Ahead

Michigan is on the clock. The decisions made this year by all those with a stake in our state will have strong ripples not only geographically, but across class lines and into history. We have many opportunities to positively change the course of Michigan's destiny for the good of the country, the good of the state, and the good of each of us. We are in this together, and we can all make a difference. Join us on our journey: share your expertise at our upcoming Manufacturing Symposium,¹¹ contact us with your thoughts on Next Community, or donate to the David A. Skiven Leadership Fund and join the fun at our next Golf and Give Outing. No matter how fast the tick of the clock, you have the power to stand up and be heard, and your ESD Institute is standing with you. Let's work together to build a Next Community and truly make a difference.

¹¹. See www.esdinstitute.net/manufacturing for abstract, agenda, and more information.

Our Speakers*

MICHIGAN GREEN ENTERPRISE ZONE INITIATIVE

- Thomas Aldrich, Esq.,** Senior Consultant, International Institute for Conflict Prevention & Resolution, New York, New York
Richard C. Boothman, Chief Risk Officer, University of Michigan Health System
Richard L. Braun II, Esq., Past Chair ADR Section, State Bar of Michigan
Doug Buckler, Executive Secretary/Treasurer of the Michigan Regional Council of Carpenters and Millwrights
Jeff Hartfield, Mediator & Director of Elections, National Center for Dispute Settlement
Jan Holdinski, Vice President, American Arbitration Association
Richard Hurford, Esq., Director of Litigation, Masco Corporation
John Rakolta, Jr., FESD, Chairman and CEO, Walbridge, Detroit
Ernest Walker, Esq., Fredericks, Peebles & Morgan, LLP, Louisville, Colorado
Dennis J. Whittlesey, Esq., Dickinson Wright PLLC, Washington, D.C.
Terry J. Woychowski, General Motors Corp, Executive Director North American Regional Chief Engineers; ESD Board Director

MICHIGAN CLEAN WATER INITIATIVE

- David Berdish,** Manager of Sustainable Business Strategies, Ford Motor Company
Charlie Fleetham, Founder and President, Project Innovations, Inc.
David A. Hamilton, Chief, Water Mgmt. Section, Michigan Dept. of Environmental Quality, Land and Water Management Division
Peter Ostlund, Field Operation Section Chief, Michigan Department of Environmental Quality-Water Bureau
Gil Pezza, Director, Water Technology Initiative, Michigan Economic Development Corporation
David Sonntag, Engineer, DTE Energy
Rob Threlkeld, Utilities Engineer, General Motors Corporation

MICHIGAN CLEAN ENERGY INITIATIVE

- Janice A. Beecher, PhD,** Institute of Public Utilities, Michigan State University
Rich Creegan, VP Market and Product Strategy, Itron Inc.
Jon Creyts, Principal, McKinsey & Company, Inc.
David B. Harwood, Director & Project Manager, Nuclear Development, DTE Energy
Chris Detjen, Program Development Manager, NextEnergy
Martin Dober, Vice President of New Markets, Michigan Economic Development Corporation
Walter Grondzik, Professor of Architecture, Ball State University
Martin Kushler, PhD, Director, Utilities Program, American Council for an Energy-Efficient Economy
Monica Martinez, Director, Michigan Public Service Commission
Mike McNalley, Director, Business Energy Services, DTE Energy
Rebecca Stanfield, Senior Energy Advocate, Natural Resources Defense Council

LEAN GREEN SCHOOL INITIATIVE

- Ralph Bland,** Superintendent, Detroit Edison Public School Academy
Angela Calabrese Barton, PhD, Professor, Department of Teacher Education, Michigan State University
John Castellana, Chairperson, TMP Architecture
Carol Goss, President & CEO, The Skillman Foundation
Daniel H. Jacobs, AIA, LEED AP, Chair, Green Schools Committee, United States Green Building Council – Detroit Regional Chapter, 3C–Collaborative Architecture’s Director of Sustainable Design
Gary P. Jelin, AIA, Vice President, TMP Architecture
Milo Mattox, Project Director, Barton Malow
James Seaman, AIA, LEED AP, TMP Architecture
Lee Sellenraad, CCM, LEED AP, Director of Project Development, Barton Malow
Paul Twigg, CTS Director, Technology Services, Barton Malow

RE-ENVISIONING OUR FUTURE TOGETHER: BUILDING DAVISON 48423

- Soji Adelaja, PhD,** Director, Michigan State University Land Policy Institute
Charles Ballard, PhD, Professor of Economics, Michigan State University
Derek Bradshaw, Genesee County Planning Commission
Armen Hratchian, Senior Consultant, Public Sector Consultants, On Special Assignment to Prima Civitas Foundation
Dale Martin, City Manager, City of Davison
Mark Skidmore, PhD, Betty and David Morris Chair in State and Local Government Finance and Policy, Department of Agricultural Economics; Professor of Economics
James Smiertka, JD, General Counsel, Prima Civitas Foundation
Kurt Soper, Davison Township Supervisor

FUTURE DETROIT: ENVISIONING TOMORROW TOGETHER YOUTH SYMPOSIUM

- Ralph Bland,** Superintendant, Detroit Edison Public School Academy
Peter Stuart Egeli, Commander, U.S. Navy
Robert Ficano, JD, Wayne County Executive; ESD Board Director
Karla Henderson, Group Executive of Planning and Facilities, Mayor’s Office, City of Detroit
Alycia Meriweather, Interim Director, Math & Science Center, Detroit Public Schools
Bill Winfrey, Senior Manager, Chrysler Corporation; Future City Mentor for Bates Academy, Detroit
Ron Smith, Director of Education and Community Outreach, ESD

BUILDING CONSENSUS FOR MICHIGAN'S INTEGRATED GLOBAL FREIGHT HUB

- Sandy K. Baruah,** President & CEO, Detroit Regional Chamber
Michael H. Belzer, PhD, Professor, Dept. of Economics, Wayne State University; Chair, Great Lakes Gateway, Inc.
Peter Berry, Harbour Master, Windsor Port Authority
William H. Black, Executive Director, Teamsters Joint Council No. 43
Kenneth D. Boyer, PhD, Professor of Economics, Michigan State University
Michelle Braun, Director North America Inbound Logistics, General Motors
Patrick J. Devlin, Chief Elected Officer, Michigan Building & Construction Trades Council; ESD Board Director
Thomas M. Dooley, Manager, Detroit Intermodal Office
Paul DuVoisin, Commercial Vice President, Port of Halifax
Robert Ficano, JD, Wayne County Executive; ESD Board Director
Matthew Moroun, Vice Chairman, CenTra Inc., The Detroit International Bridge Company
Doug Rothwell, Chair, MEDC Executive Committee, President and CEO, Business Leaders for Michigan, Detroit
Kirk Steudle, PE, Director, Michigan Department of Transportation; ESD Board Director

WASTE IN HEALTHCARE

- Gregory Auner, PhD,** Director, SmartSensors and Integrated Microsystems programs at Wayne State University
Richard C. Boothman, JD, Chief Risk Officer, University of Michigan Health System
Joseph Fortuna, MD, Co-founder and CEO, PRISM
Michael A. Geheb, MD, FACP, FCCM, President, Oakwood Hospital and Medical Center
Bob Kelley, Senior Vice President: Center for Healthcare Analytics, Thomson Reuters
Mary Kramer, Vice President/Publisher, Crain’s Detroit Business; ESD Board Director
Bruce K. Muma, MD, Chief Medical Officer, Henry Ford West Bloomfield Hospital
James Safran, PE, President, Jones Lang LaSalle at Beaumont Hospitals; ESD Board Director
Marianne Udow-Phillips, Director, Center for Healthcare Research & Transformation
Dennis Pawley, President & CEO, Pawley Enterprises, LLC
Norman D. Tucker, JD, Plaintiff’s Medical Malpractice Attorney, Sommers Schwartz PC

* Companies and titles reflect time of symposium

Our Speakers continued

CONSTRUCTION PRODUCTIVITY

Digby Christian, Senior Project Manager, Sutter Health Care, Castro Valley Project
David Ciuffoletti, Vice President, Durr Systems
Parviz Daneshgari, PhD, President and CEO, MCA, Inc.
Carl T. Haas, PE, PhD, Professor, University of Waterloo Dept. of Civil Engineering, Canada Research Chair in Construction & Management of Sustainable Infrastructure, Director of the Centre for Pavement and Transportation Technology
Theodore C. Kennedy, Co-founder, BE&K, Inc.; Chair, National Academy of Engineering
Robert Mauck, AIA, PE, FESD, Vice President of Virtual Design and Construction, Ghafari Associates
William J. O'Brien, PE, PhD, Assoc. Professor of Construction Engineering and Management, University of Texas at Austin
Robert Pleasure, JD, Special Assistant to the President, Building and Construction Trades Department, AFL-CIO
William Terrasi, Director of Enterprise Project Mgmt., Construction & Engineering Major Enterprise Projects, DTE Energy

STEM

Barbara Bolin, Executive Director, Michigan STEM Partnership
John Calabrese, Vice President, Global Vehicle Engineering, General Motors
Amy Cell, Senior Vice President, Talent Enhancement, MEDC
Dave Dugger, Director, Early College, Eastern Michigan University
Janene Erne, Apprentice Coordinator and Program Manager, Oakland Community College
Sarah Harfst, Junior Consultant, Orbitak International, LLC
David Hecker, Vice President, AFT
Michael Khoury, President, Detroit Cristo Rey
Alan Lecz, Director of Employer Strategies, Workforce Intelligence Network
Doug Oppliger, Engineer and Lecturer, Department of Engineering Fundamentals, Michigan Technological University
Todd Palmer, President, Diversified Industrial Staffing
Julie VanPortfliet, Program Manager, TRAC
Filza Walters, Director, Department of Architectural Engineering, Lawrence Technological University
Rich Wells, Vice President and Site Director of Michigan Operations, Dow Chemical

Our Facilitators

Tracy Allen, JD
Shani Allison
John Amrhein
Barbara Aylesworth, PMP, PLM
Katherine Banicki, PE, FESD
Garry Bulluck
Susan Butterwick, JD
John Casey
Michael Cooper, PE, LEED AP, FESD
Larry Crittenden
Shawn Crump
Denis Devos, PE
Thomas Guise
Kamesh Gupta, PE, CEM
Theresa Harris, AIA, LEED, AP, EDAC
Edward Hartfield
Jeff Hartfield
Christy Hicks
Mary Hones-Burr
Eric Hufnagel
Richard L. Hurford
Dale Ann Iverson
Alan Jaros
Barbara Johannessen, JD
Victoria Kovari
Ralph Kummeler, PhD, FESD
Steven Kurmas, PE
Emile Lauzzana, AIA, LEED AP
Claire Layman
Bob Leonard
David Lomas, PE, QEP, MASCE
Gary Mach
Speranta Maior

Robert Mauck, AIA, PE, FESD
James Meenahan, PE, FESD
David Meynell, FESD
Joel Milinsky
Carol Miller, PhD, PE
Siraj Mumin
Roderick Munro, PhD, ASQ CMQ/OE, ASQ CQE, ASQ CQA, SSMBB, CQI, IRCA QMS
Todd Palmer
David Patterson
Julie Pioch
Megan Prost
Robert Prud'homme
Bethany Prykucki
James Ribbron
Jerome Rock, JD
Cathy Ross
Candice Russ
Christopher J. Salata
Thomas Schneider
John Sier, JD
Melissa Slotta
Jane Tate, JD
Ian Tran
Kristin Van Raaphorst, MPA/CED
Wendy Ventura
Jianli (Jenny) Wang, MBA
Rebecca Wenglinski
Lynley Weston, PE
Howard Wetters
Lea Wojciechowski
Richard Wooten, MUP
Laurie Zoromski

Our Participants

Randy Abdallah	Frances Billingslea	Donna Craig	Larry Filson	Jim Harrison	Karl Klimek	Margaret Matta	William O'Brien	Michael Ryan	Vassilios Theodoracatos
Tariq Abdelhamid	Daniel Billingslea	Matt Cramer	Charlie Fleetham	Joe Harrison	Clarence Knight	Milo Mattox	Don O'Connell	Jim Safran	Rob Threlkeld
Joe Abdoo	Jason Bing	Thomas Crampton	Frank Fleming	Ed Hartfield	Kevin Koehler	Robert Mauck	Tomi Ogundimu	Simone Sagovac	Richard Torri
Jack Abernathy	Chuck Binkowski	Rich Creegan	Keith Flewelling	Jeff Hartfield	Kate Kohn-Parrott	Samuel McCargo	Marcela Orlandea	Nicole Samuel	Brian Townsley
Robert Ackerman	Dennis Bishop	Desmond Crenshaw	Fred Fortner	David Harwood	Mary Kovari	Chris McCarthy	Pete Ostlund	Josee Santagata	Ian Tran
Kay Adair	Tim Bishop	Jon Creyts	Joe Fortuna	LaDawn Hastings	Victoria Kovari	John McClear	Kathleen Owsley	John Sase	Athena Trentin
Soji Adelaja	Richard Bither	John Cristiano	Molly Forward	Kurt Heise	Mary Kramer	Sue McCraven	James Pakkala	Tom Schneider	Dan Tripp
Diane Akers	Bill Black	Larry Crittenden	Brooke Franklin	Gary Hellmer	John Krueger	Robert McCune	Carol Panagiotides	Megan Schrauben	Norman Tucker
Don Albinger	Kim Bland	Shawn Crump	Kevin Frasier	Kevin Hendrick	Ralph Kummmler	Tim McCurley	Brian Pappas	Jerry Schulte	Paul Twigg
Thomas Aldrich	Ralph Bland	Judy Cunningham	John Fredericks	Mona Hendrickson	Stephen Kuplicki	Jo McGlew	Ed Pappas	Mari Kay Scott	Marianne Udow-Phillips
Dorie Alexander	Mickey Blashfield	Jim Czarski	Rick Freeman	Irene Henry	Steve Kurmas	Lisa McKay	Randy Paquette	James Seaman	Mark Urban-Lurain
Ronda Alexander	Dennis Blue	Bob Dabrowski	Jim Frost	Holly Hetzner	David Kurtz	Mike McNalley	Ed Parish	Chad Segrist	Erica Vallance
Bill Allemon	Brittany Bogan	Mary Beth Damm	Mike Gallagher	Christy Hicks	Martin Kushler	Ezella McPherson	Preston Parish	Stephen Selander	Mark Van Avery
Douglas Allen	Richard Boothman	Perry Daneshgari	Heather Gallegos	Charles Hill	Paul Kuwik	Derek Meeking	John Patelski	Lee Sellenraad	Mark Vangyseghem
Tracy Allen	Dennis Bow	Dana Davis	Paula Gangopadhyay	Jerome Hill	Dave Lalain	Jim Meenahan	David Paterson	Paul Sgriccia	Kristin Van Raaphorst
Shani Allison	Kenneth Boyer	Jessica Davis	Gerald Ganske	Robert Hill	Stephen Landes	Jennifer Mefford	Dennis Pawley	John Shallman	Steve VanSlooten
Huda Alkaff	Tim Bracco	Jim Davis	Nancy Garvin	Morris Hoewel	Rogier Lane	Kathy Merrill	Asma Peracha	Robert Sharrow	Loren Venegas
John Amrhein	Derek Bradshaw	Robert Davis	Mario Garza	Jan Holdinski	Mike Langford	Dave Meynell	Tova Perlmutter	Thomas Shaw	Carl Vereen
Bill Anderson	Bill Brandon	Skip Davis	Carolyn Gawlik	Dave Hollister	Glenn Lapin	Carolyn Mickiewicz	Joe Persi	John Sier	Joseph Veryser
Thomas Anderson	Michelle Braun	Michael Decoster	David Gay	Mary Hones-Burr	Lyndon Lattie	Joel Milinsky	Tiina Perttu	Paul Sinelli	John Vine
William Anderson	Tony Braun	Gaile Dedinas	Michael Geheb	Kathi Horton	Emile Lauzzana	Carol Miller	Joseph Petrich	Mark Skidmore	James Vlasic
Arlene Anderson-Vincent	Gary Broad	Steve DeMaagd	Xavier Gillon	Armen Hratchian	Jim Lawrence	David Miller	Gil Pezza	David Skiven	Patty Volway
Briane Arnold	Jeanne Broad	Brian Deming	Patrick Gleason	Larry Hrinik	Claire Layman	Karen Miller	Julie Pioch	Jim Skorna	Denice Wagner
Jim August	Mike Brown	Chris Detjen	Deirdre Golden	Eric Hufnagel	Colleen Layton	Patrick Miller	Gregory Pitoniak	Melissa Slotta	Noelle Wald
Gregory Auner	Wendy Brown	Pat Devlin	Paul Goldsmith	Tom Hughes	Clarence Lee	Raj Mishra	Bob Pleasure	Jim Smiertka	Ernest Walker
David Austin	Mark Brucki	Denis DeVos	Teresa Gonda	Naheed Huq	Rich Leebove	Vanita Mistry	Kyle Polk	Kevin Smith	Lewis Walker
Barbara Aylesworth	Jeff Bryant	Mark Dickens	John Gose	Richard Hurford	Ted Leffler	Ingrid Mitchell	Lana Pollack	Patrick Smithbauer	Richard Wallace
Mohamed Ayoub	Trevor Brydon	Carl DiGiacamo	Carol Goss	Dale Iverson	Bob Leonard	Ralph Mitchell	Jeffrey Potoff	Paul Snyder	Filza Walters
Nancy Bacon	Garry Bulluck	Martin Dober	Trina Govan Scott	Jonathan Jackson	Michael Levich	Joydeep Mitra	Megan Prost	Walter Sobczak	Jenny Wang
Jim Badgero	Andrea Burg	Bob Donaldson	Chris Graff	Dan Jacobs	Bill Liebold	Tom Mittelbrun	Alex Prouhet	Reginald Sobczynski	William Ward
Edward Bagale	Alex Butterwick	Tom Dooley	Richard Green	Jamie Jacobs	Thomas Linn	Helen Monroe	Robert Prud'Homme	David Sonntag	Doug Warner
Tim Bailey	Susan Butterwick	Tim Dooling	Don Greenwell Jr.	John James	Howard Lischeron	Heather Moore	Skip Pruss	Kurt Soper	Valdemar Washington
Jack Bails	Robert Byrom	Rachele Downs	Karl Gregory	Alan Jaros	Austin Little	Morris Moos	Bethany Prykucki	Bill Sower	Christopher Webb
G. Ann Baker	Angela Calabrese Barton	James Duderstadt	Jim Greiner	Gary Jelin	Sue Littles	Lance Morgan	Awni Qaqish	Irene Spanos	Kathleen Wendler
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About the ESD Institute

The ESD Institute was formed through unanimous approval of the Board of Directors of The Engineering Society of Detroit through “Mega-Question” facilitation in December 2008. The ESD Board established the charter of the Institute as follows:

VISION: *Finding a sustainable tomorrow with integrity that serves our members and society.*

MISSION: *Fostering greater unity, focus, and choice for the implementation of innovation, maintenance, and attraction of investment capital and the betterment of society.*

The charge of the Institute is to advance, through excellence and collaboration, the successful implementation of innovation by bridging creative and independent thought with concrete and meaningful action with an emphasis on the needs of Michigan.

Based on the process model of the National Academy of Sciences in Washington, DC, the Institute’s goal is to establish and safeguard a productive problem-solving environment that encourages creativity and dialogue in workgroups that are tasked to achieve new solutions that can be implemented by policymakers. The Institute’s overall focus is to find socioeconomic unifiers and enablers to propel Michigan’s economic and employment turnaround building from the grassroots level.

Our Process

As a matter of process, the Institute identifies subjects for consideration that we call *initiatives*. Individuals are invited to serve as volunteers to examine an initiative within the context of a workgroup, referred to as a *symposium*.

Attendees represent a diverse range of expertise and perspectives. Symposium size is often limited to less than 30 participants, who serve as individuals and not as representatives of organizations or interest groups. Each is selected based upon his/her good judgment, experience, and expertise and is asked to disclose any potential sources of bias or conflict of interest that might prejudice the work of the Institute. To this end, we request that all attendees identify any professional, financial, or other connections or relationships that might adversely reflect on the integrity of the Institute and those engaged in this process.

A symposium usually occurs over a two-day period and may continue for further deliberation if warranted by the initiative. An internal Institute committee made up of the directors and assigned staff of the Institute, a select group of ESD Board members, and on occasion

representatives of outside organizations frames the issues through a summary of the initiative, facilitates the work of the symposium, and acts as a reporter for the symposium.

A symposium usually begins in closed session, during which attendees provide an introductory statement of backgrounds and experience. Our expectation is that attendees will learn from each other and grow during the process. Subgroups are sometimes formed with internal committee members divided into issue-specific groups to promote creativity and the frank and candid exchange of ideas to further the work of the symposium. The goal is to achieve a level of trust and candor, which results in a movement from conflicting or disparate views to unity, focus, and choices that can be implemented for the betterment of society. For this reason, the work of a symposium is confidential and may not be disclosed without the prior written approval of the Institute.

Often the work product of a symposium takes the form of a published report that represents a synthesis of ideas from participants. A report of the findings or recommendations of the symposium is peer-reviewed and may then be shared with the public in order to advance an understanding of potential solutions to problems relating to an initiative. The Institute’s goal is to provide a meaningful and effective contribution geared to the application of new ideas that can then be considered and implemented by policymakers.

While attendees should strive for consensus regarding a report, it is not a requirement, nor should it be at the cost of weakening the analysis or conclusions reached during the symposium. Accordingly, at times it may then be more valuable to explain the rationale behind areas of disagreement than to issue unanimous conclusions that are so limited they fail to contribute to a better understanding of the issues presented by an initiative. At the conclusion of a symposium, the names and affiliations of all participants are released upon publication of any report.

Our Commitment

It is important to note that the role of the ESD Institute is to maintain the independence, objectivity, and integrity of the process and not to advance a specific outcome or result. Any report is the collective work product of those attending the symposium. Contributions may be used without restriction or obligation. Individual submissions or contributions are generally not recognized. The Institute reserves the right to use and publish, or not, any deliberate idea, process, contribution, or report as determined by its Board of Directors.

About The Engineering Society of Detroit



The Engineering Society of Detroit (ESD) was founded in 1895. Its membership consists of over 6,700 individuals and 3,000 corporate members. With its 90 affiliated technical societies, 34 construction associations, and over 52 unions, ESD’s reach extends to over 60,000 technical and scientific professionals. ESD’s Board of Directors includes diverse leaders in business, labor, government, manufacturing, engineering and design, academia, and healthcare.

ESD collaborates with nearly 100 local and national nonprofit organizations. ESD provides professional training, certification, and accreditation programs in conjunction with the majority of Michigan’s universities and community colleges.

ESD VISION
Serving this generation of engineers, scientists and allied professionals and fostering the next.

ESD MISSION
ESD promotes and celebrates excellence, innovation, cooperation, professional growth and fellowship in the engineering, scientific and allied professions.



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