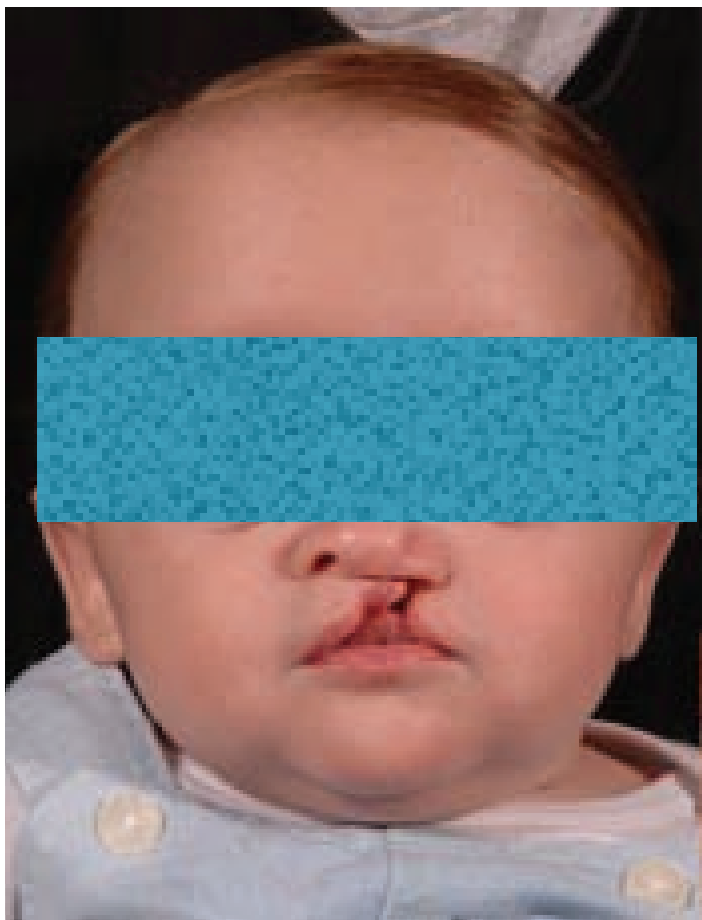


3D PRINTING OF CUSTOMIZED IMPLANTS FOR CLEFT LIP, PALATE AND OROFACIAL DEFORMITIES AND DEFECTS

DEVELOP A METHOD THAT PRODUCES A CUSTOMIZED 3D PRINTED SCAFFOLD TO BE USED IN ALVEOLAR CLEFT SURGERY.



The proposed research will focus on fabrication and testing of novel 3D-printed bioactive constructs for prototype development of patient specific apparatus for alveolar cleft surgery. This in vitro demonstration can be used as a proof of concept to show the feasibility of the process for future in vivo examinations. We hypothesize that bioactive 3D printing can offer the promising potential of patient specific treatment for cleft alveolar palate.

MILESTONES

- 1. **YEAR ONE:** Printing of basic construct using polycaprolactone (PCL), polylactic acid (PLA) and halloysite nanotubes (HNTs).
- 2. **YEAR TWO:** 3D printing a patient specific construct using PCL, PLA and HNTs
- 3. **YEAR THREE:** In vitro biocompatibility analysis of the 3D printed construct using mesenchymal stem cells



SCAN QR CODE FOR TAYEBIGROUP.MU.EDU

ABOUT OUR TEAM

Lobat Tayebi, PI
Gerard Bradley, Co-PI
David Mills, Co-PI

Dr. Lobat Tayebi, Associate Professor and Director of Research at MUSoD: She will have the primary leadership and responsibility for the scientific and financial integrity of this project. She will facilitate effective collaboration and communication among the PIs to achieve the final goal of the project.

Dr. T. Gerard Bradley, Professor, orthodontist and Associate Dean of Research at Marquette School of Dentistry: He will provide models of previously treated cleft cases and these will be used as templates for the design and fabrication of a new generation of 3D printed construct that will be tested and evaluated for their customized fit.

Dr. David Mills, Professor of Biological Sciences and Biomedical Engineering at Louisiana Tech: His group was the first in the world to 3D print absorbable antibiotic beads, chemotherapeutic eluting stents or customized catheters. His expertise is required for printing and loading of the 3D printed construct.

BEYOND BOUNDARIES Research in Action

The approach described in this proposal will foster the spirit of interdisciplinary research, innovation and entrepreneurship as described in Marquette’s mission, and will also boost Marquette’s national research reputation as described in the strategic plan.

MU places strong emphasis on collaborative research and scholarship and this project will establish strong linkages with Louisiana Tech, a pioneer in biomedical 3D printing. It will embody research, innovation, and entrepreneurship that should fundamentally change the treatment of orofacial development defects and encourage growth in the area of great research potential. It will advance the University’s goal of receiving a “High Research Activity” Carnegie Research Classification.

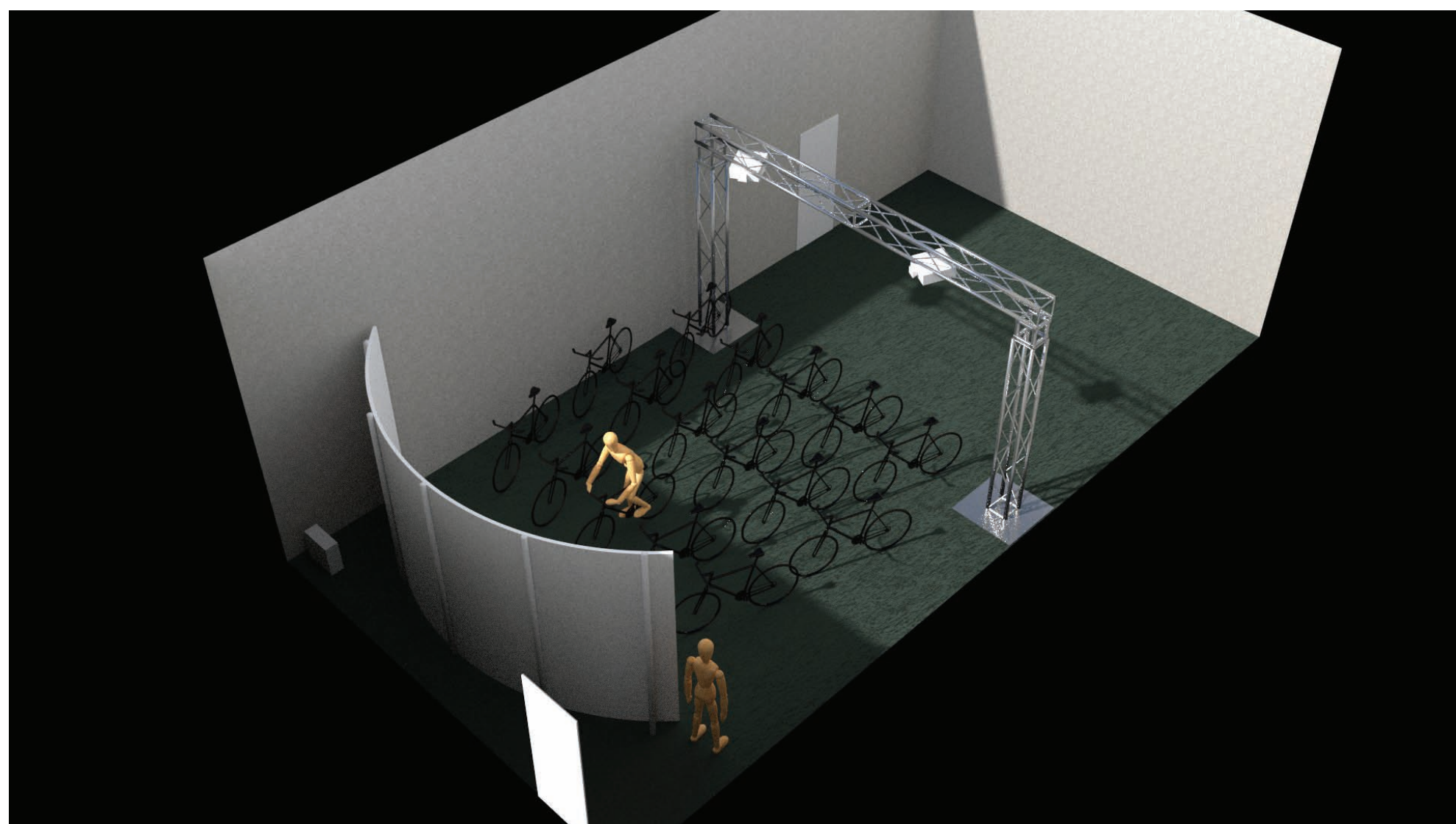


A.L.I.V.E - ASSISTED LIVING IMMERSIVE VIRTUAL ENVIRONMENT

Panoramic, Portable Virtual Room Where Users Can Exercise In A Simulated Outdoor Scene

A.L.I.V.E. - ASSISTED LIVING IMMERSIVE VIRTUAL ENVIRONMENT

In ALIVE, users ride on a recumbent bike surrounded by a large screen rather than a head mounted system. Our current system is not a traditional, computer-generated virtual environment. We are taking actual recorded nature footage to create the most realistic experience possible. ALIVE has many applications, ranging from anti-anxiety virtual reality treatment to hospital recovery and physical therapy.



Model of implemented prototype of portable system in Marquette Recreation Center



ABOUT OUR TEAM

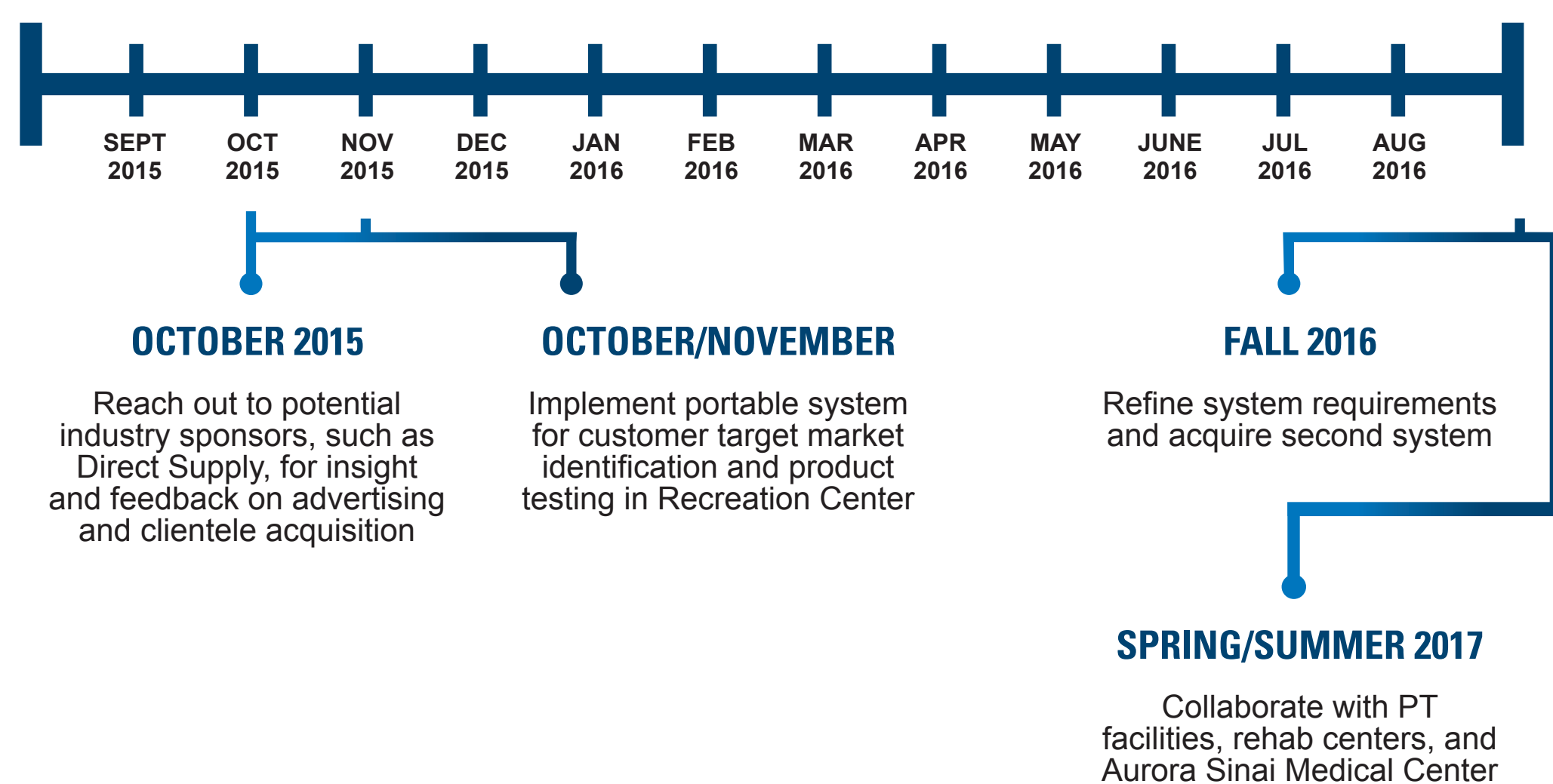
Alex Barrington, Chief Executive Officer (CEO)
Michael Barrowclift, Chief Technology Officer (CTO)
Tim Pawlicki, Chief Marketing Officer (CMO)

ALIVE's inception began with an engineering design challenge last November. Direct Supply hosted the challenge here at Marquette with one objective: "Make life better for Grandma and Grandpa". All three of us are very passionate and invested in confronting the challenges of an aging senior population, and we used the challenge to springboard our efforts. Over the past nine months, with our research, personal experiences, and familiarity with the senior care market, we brought ALIVE to life.

BEYOND BOUNDARIES Social Responsibility and Community Engagement

ALIVE promotes, encourages, and enables its customers to reestablish their connection with nature and enjoy an active lifestyle despite their abilities to do so. Our project emphasizes overall health and well-being for users who otherwise find it difficult or impossible to enjoy the benefits of nature and the outdoors. ALIVE is also **research in action**. Its unique combination of mental, emotional, and nature immersion therapy with exercise and physical motion creates an interdisciplinary research environment where the mind and body can be studied together.

MILESTONES



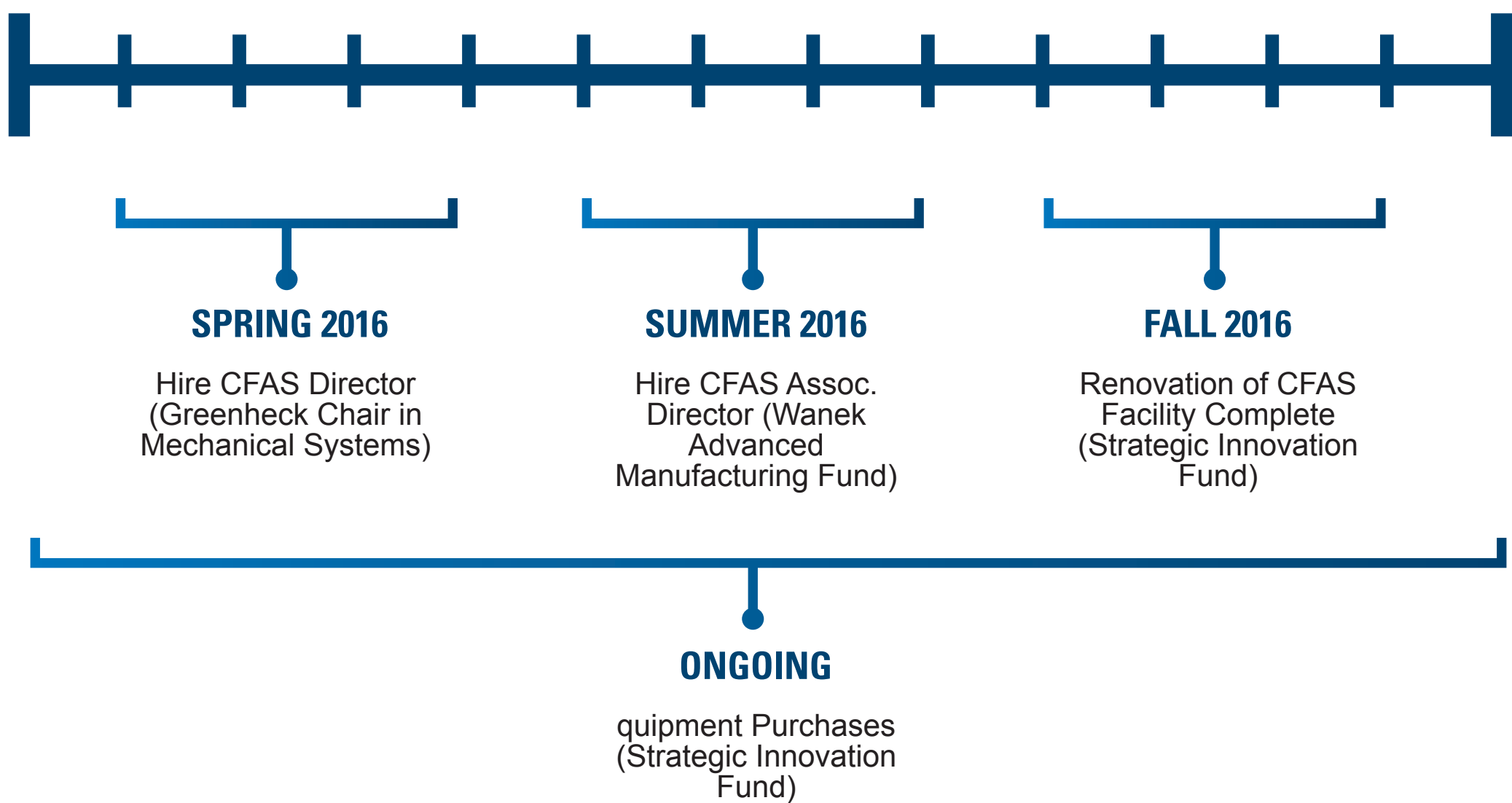
CENTER FOR FLEXIBLE ASSEMBLY SYSTEMS (CFAS) STARTUP

A Research Center Directed Toward Advanced Manufacturing

CENTER FOR FLEXIBLE ASSEMBLY SYSTEMS (CFAS) STARTUP

The project will establish a collaborative research center with the purpose of guiding, coordinating, and performing pre-competitive research directed toward making manufacturing assembly operations more flexible, i.e., more responsive to product/process change. The Center for Flexible Assembly Systems (CFAS) will develop the processes and equipment needed to achieve higher-quality, higher-throughput smart assembly automation systems. Local industry demand for a center of this type is high and future federal support is expected. Strategic Innovation Funds will bootstrap the center startup through renovation of existing space and the purchase of equipment needed for CFAS research.

MILESTONES



BEYOND BOUNDARIES Research in Action

The project most closely relates to Research in Action in that most of the center's activities will be both basic research (benefiting the international engineering science community) and applied research (most often benefiting specific companies and the local community).

The project also relates to the **Pursuit of Academic Excellence for Human Well-being** in that CFAS will help develop the technical workforce needed to realize smart manufacturing in local, regional, and national industries through co-curricular activities funded by CFAS projects. CFAS will offer opportunities for undergraduate and graduate student professional growth through CFAS co-operative educational programs (i.e., CFAS undergraduate co-op and CFAS graduate assistance programs).

ABOUT OUR TEAM

- Joseph Schimmels** Interim Director
- Kyle Kim** CFAS Project Advisor
- Chung Hoon Lee** CFAS Project Advisor
- Henry Medeiros** CFAS Project Advisor
- Mark Nagurka** CFAS Project Advisor
- James Rice** CFAS Project Advisor
- Philip Voglewede** CFAS Project Advisor

Faculty in the Department of Mechanical Engineering have been seeking funding for an Advanced Manufacturing Center for at least three years. Potential industrial partners recommended that the focus of the center be narrowed to flexible assembly systems because of a perceived greater opportunity to make an impact in this area and an opportunity to involve more faculty members (from the Electrical and Computer Engineering Department) in the automation aspects of the research program.



CENTER FOR SALES EXCELLENCE

Developing A Pipeline For Students To Move Into Advanced Sales Positions, Gain Funding From Partner Companies, And To Provide Training To Sales Employees For Executive Education.

CENTER FOR SALES EXCELLENCE

In order to develop a quality sales program, we are looking to create a link between the university and the local and national business community. Initially, we will seek out these relationships to create internship and career opportunities with these firms. We will then seek to expand on this relationship by providing opportunities for sales managers to observe and suggest improvements for our sales course offerings to ensure that our students are receiving quality sales education.

Additionally, we will enlist corporate help in preparing students to compete in university sales competitions. These competitions will help promote Marquette as a top program for sales education. Success in these competitions should spur investment from companies for a sales competition on Marquette's campus. While we are building the sales program's reputation, we will build an advanced sales curriculum for on-site corporate training and development, leading to an executive training program as well as a certificate in Professional Selling through the business school.

ABOUT OUR TEAM

Dr. Alex Milovic: Sales Center Director

Responding to a call from companies to increase the number of sales graduates, many top universities have started to develop sales programs to provide students with the education and experience necessary to succeed upon graduation. Building on the success of these university programs, we are looking to develop and promote our program both internally (among our students and students who are applying for admission to the university) and to regional and national companies.

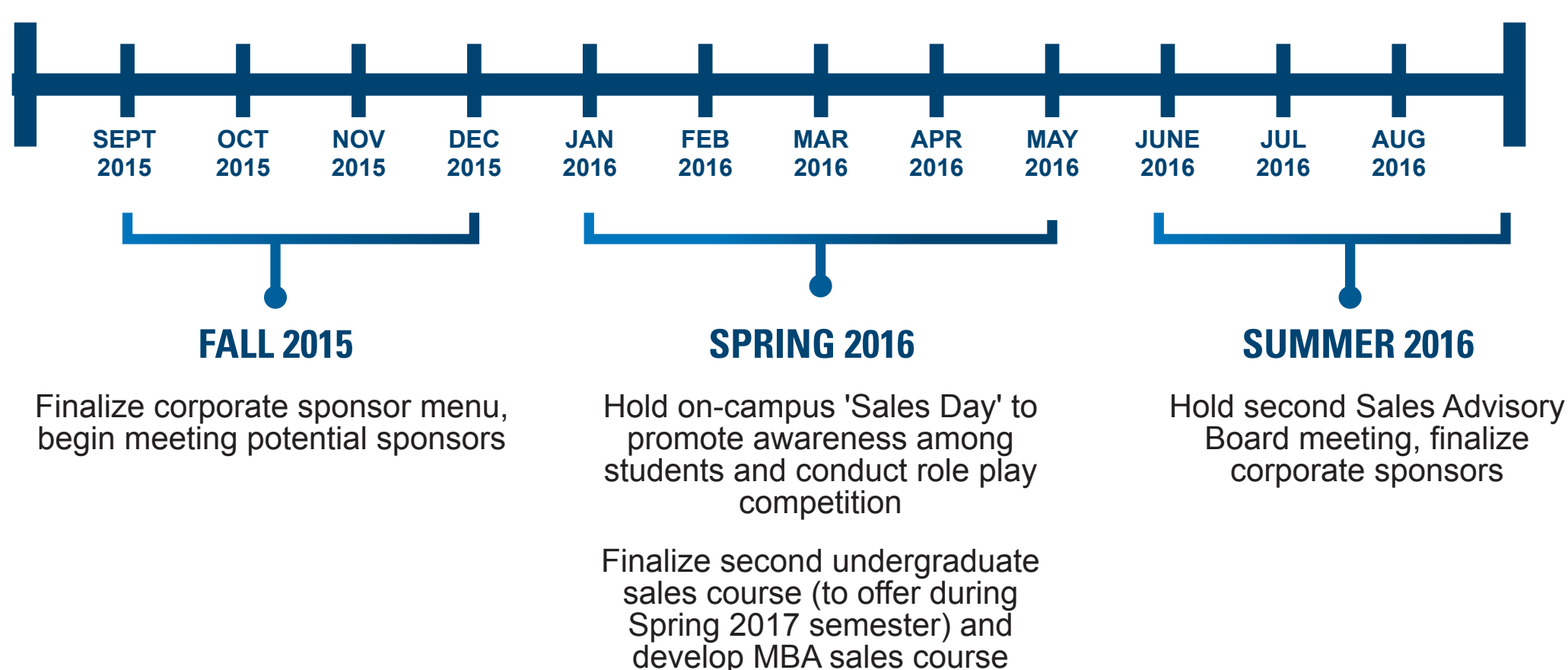
Dr. Alex Milovic was hired to begin a sales program within the marketing department. Prior to entering academia, Dr. Milovic spent eight years in various sales, marketing, and IT roles for Black and Decker, Weaver Partners, and Goldman Sachs. He understands the need to train students for careers in sales in an ethical manner, focusing on developing long-term relationships in order to maximize the benefits for both buyers and sellers .

BEYOND BOUNDARIES Pursuit of Academic Excellence for Human Well-being

Our students and parents seek a return for their time and money, and developing a top-tier sales program that provides strong sales education within our ethical framework will allow both stakeholders to see the benefit of selecting Marquette University when compared to other top universities. Our mission as business educators is to provide students with opportunities to succeed beyond the classroom. Students who have sales training will be more attractive on the job market, increasing the reputation of Marquette graduates to the business community.

Firms have high expectations for Marquette business graduates; allowing these organizations to assist in curriculum development will help bridge the gap for our students between college and careers (Excellence and Leadership). Sales skills are also essential to non-profit employers, who often require well-trained salespeople for fundraising activities (Service). Most importantly, we are teaching professional selling skills within a strong ethical framework; having the ability to demonstrate our ethical sales techniques to employers in sales competitions will benefit students during the interview process and companies through the execution of strong corporate social responsibility.

MILESTONES





CHANGEMAKER CAMPUS RENEWAL

Supporting and Strengthening Social Innovation Work at Marquette and Igniting New Opportunities for Faculty, Staff, and Students.

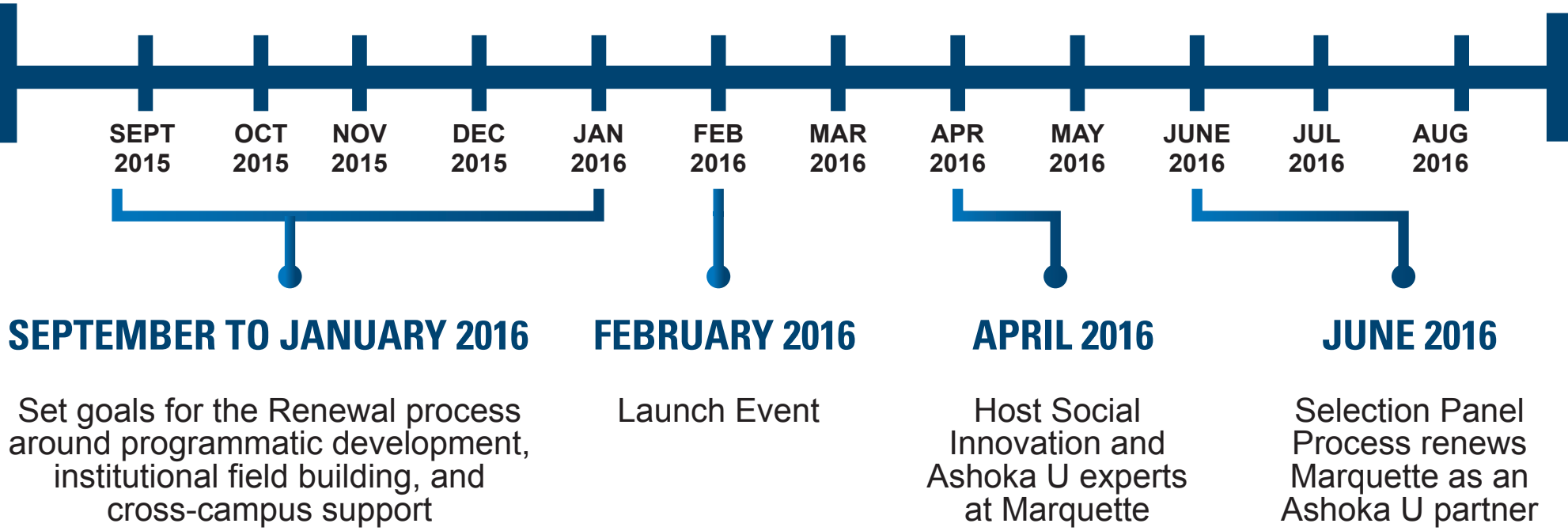
CHANGEMAKER CAMPUS RENEWAL

The Changemaker Campus consortium is a dynamic, global network of leading colleges and universities who commit to advancing social innovation at their campuses and beyond. Since 2008, 30 colleges and universities in five countries have become Changemaker Campuses, including Marquette University in 2010. The Renewal is a process of institutional re-commitment to social innovation as a core value. This cohort-based process is designed to build partnerships, facilitate connections, and propel Changemaker Campus to the next level of leadership.



Renewal will help build a robust ecosystem, support longevity planning, and emphasize impact measurement as part of the campus social innovation work. There are no other universities in Wisconsin, nor the Midwest, with the designation and partnership with Ashoka U. Renewal will help make sure that Marquette is a leader in the field and ultimately the first-choice university for students who want to better understand the power that emerges when social justice and entrepreneurship converge. The continued partnership with Ashoka U will build excitement across campus and encourage students to become leaders that are called to serve “the well-being of the world.”

MILESTONES



SCAN QR CODE FOR CHANGEMAKERS MU FACEBOOK PAGE



ABOUT OUR TEAM

Nicholas Santos, S.J. Co-Chair of the Social Innovation Initiative
Kelsey Otero Social Innovation Coordinator, Campus Liaison with Ashoka U Marquette University ChangeMakers
Rebecca Kagan Ashoka U ChangeMakers @ MU, Marquette Student Organization

Marquette University became the 10th University (and first Jesuit University) to be named an Ashoka U Changemaker Campus. Ashoka U has designated the term ‘Change Leaders’ to help lead the renewal effort at each University. A Change Leader is an intrapreneurial faculty, student affairs professional, or staff working full-time at a college or university to advance social innovation education across their entire institution and in higher education more broadly. They see advancing changemaking across the institution as their key professional priority, and have time and budget dedicated to these goals, as well as senior leadership support. Marquette University has two Change Leaders: Nicky Santos, S.J. and Kelsey Otero. Much of Nicky’s research focuses on the bottom of the pyramid and other ethical social innovation initiatives. Kelsey, will support the internal institutional goals during the renewal process.



BEYOND BOUNDARIES Social Responsibility and Community Engagement

The new guiding values call us all to “embody a spirit of interdisciplinary curiosity, research, innovation, entrepreneurship, and application to change and improve ourselves, our community, and our world.” This is synonymous with Ashoka U’s mission to catalyze social innovation at the university level. The renewal creates a future generation of changemakers who are going to Be the Difference. The Ashoka U partnership provides one outlet for students to explore community engagement and their social responsibility and calling. Marquette should continually seek new ways to prepare young men and women to be agile thinkers, effective doers, and committed citizens, and the Ashoka U renewal is one channel to do so.



DIVERSE, FIELD-BASED MASTERS/TEACHER CERTIFICATION PROGRAM

Development Of A More Racially
Diverse Teaching Force That
Serves The Educational Needs In
The Milwaukee Community

CREATION OF A DIVERSE, FIELD-BASED MASTERS/TEACHER CERTIFICATION PROGRAM

This project explores the viability of creating a stronger, more diverse, K-12 classroom-grounded masters’ program with teacher certification. In partnership with Marquette Educational Opportunities Program and City Year Milwaukee, we will analyze market need, research best practices, and explore alignment of these practices, state certification requirements, and existing course offerings and structures in our current programs.



ABOUT OUR TEAM

Sharon Chubbuck Doctoral Program Coordinator
Ellen Eckman EDPL Chair
Joan Whipp Director of Teacher Education
Cynthia Ellwood Director of Graduate Studies
Jeff LaBelle EDAD Program Committee Chair
Samantha Boynton Research Assistant

PARTNERING WITH:
City Year Milwaukee
Jason Holton Executive Director and Vice President
Amanda Panciera, Chief of Staff
Educational Opportunities Program
Joseph Green, Director
T. Ulrich, Associate Director, Pre-College Programs
Eddie Guzman, Associate Director, College Division

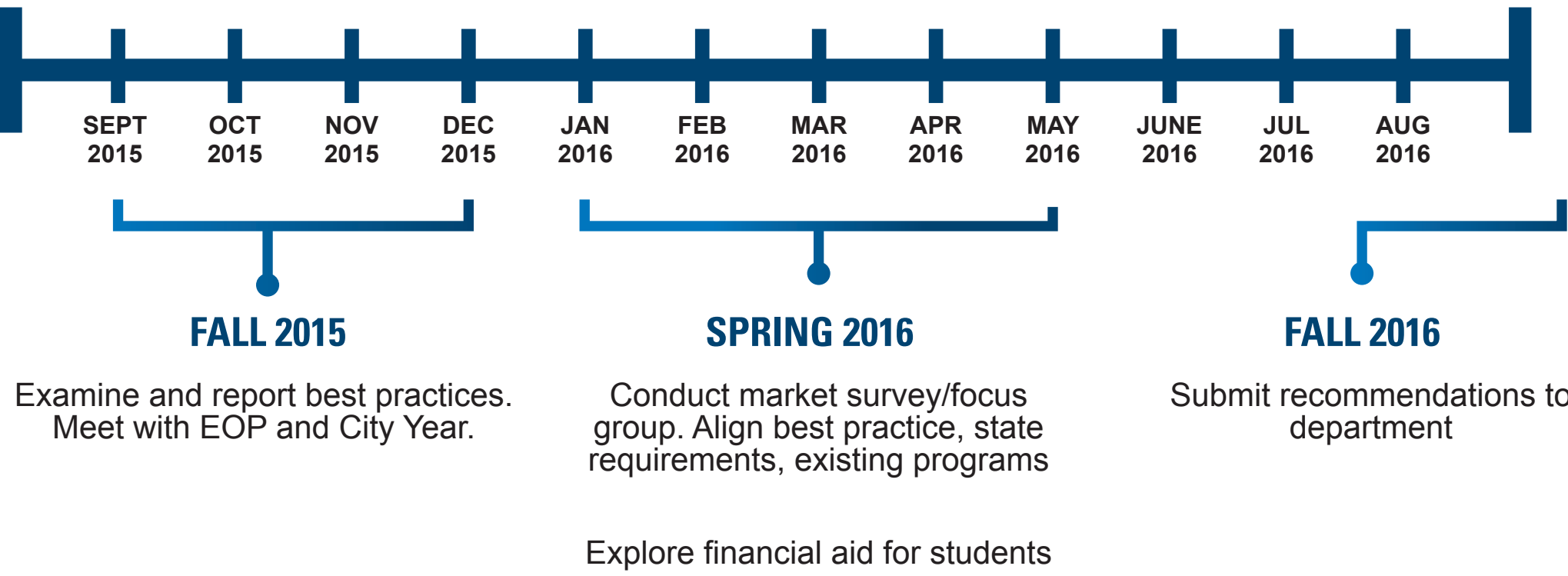
Our EDPL team trains future educators. Together we recognized the need for a more racially diverse teaching force, current/projected teacher shortages, and the value of more classroom-based teacher preparation. We are envisioning a program in partnership with City Year and EOP that could potentially meet all three of these demands.

BEYOND BOUNDARIES Social Responsibility and Community Engagement

Our project, in partnership with MU EOP and City Year, explores the development of a more racially diverse teaching force that serves the educational needs in the Milwaukee community. Preparing a more racially diverse teaching force, representative of the nation’s students, addresses a crucial issue of social justice. Collaborating with community agencies and schools provides rich opportunities to learn from and support each other in this goal.



MILESTONES





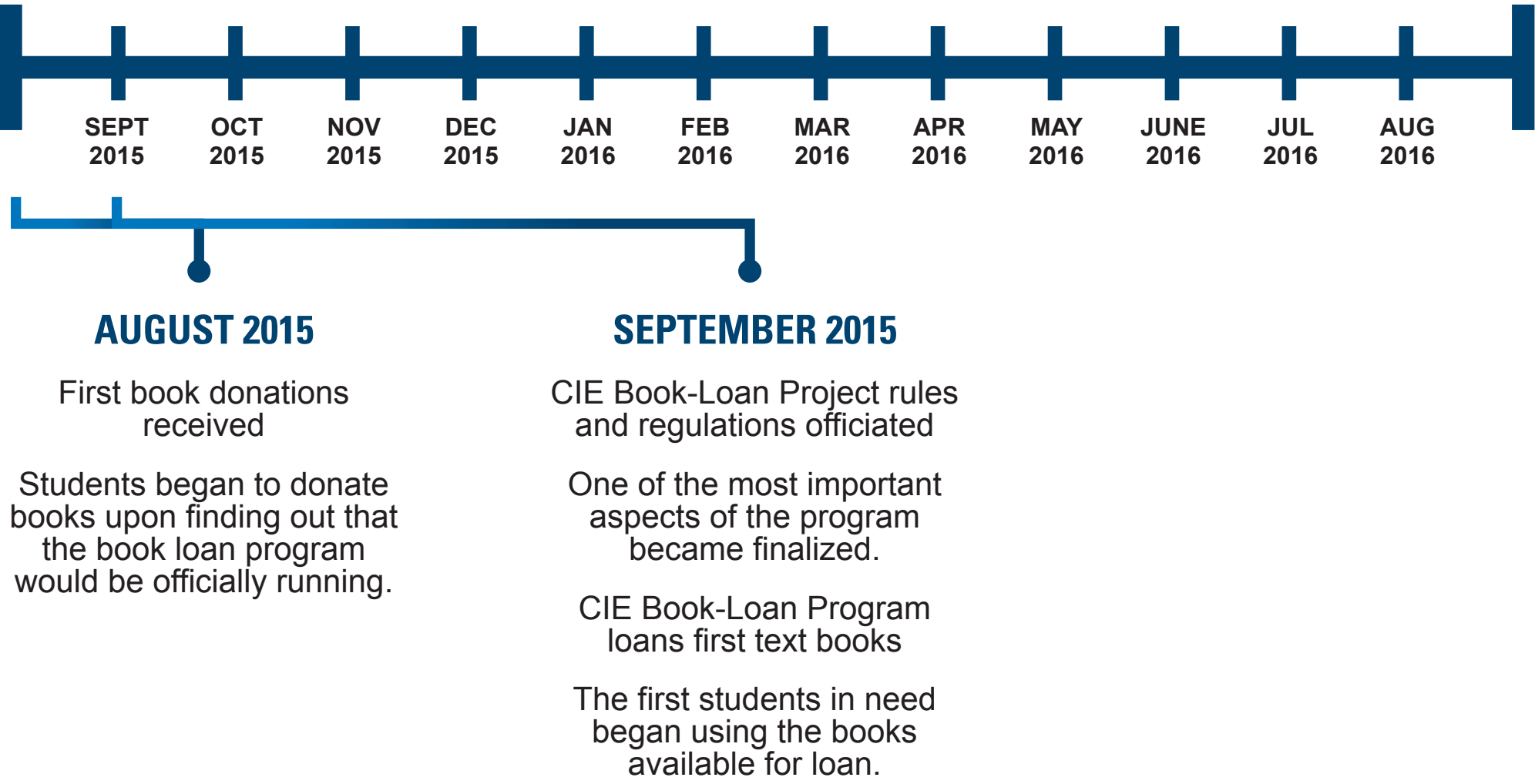
CIE BOOK LOAN PROGRAM

Providing Under Resourced And Underrepresented Students The Opportunity To Have The Necessary Textbooks For Class.

CIE BOOK LOAN PROGRAM

The ultimate goal of the CIE Book-Loan program is to bridge the resource gap of students who may not otherwise be able to afford or access necessary class text books. Today’s higher education costs involve much more than tuition, the high cost of textbooks becomes a large financial burden for college students throughout campus. While this may be a manageable financial burden for some, for other low income and underrepresented groups the access to necessary textbooks could make or break their performance in the classroom. The Center for Intercultural Engagement dedicates itself to serve the Marquette population with inclusive programming, but more specifically hopes to provide assistance to low income and underrepresented students. Through the CIE Book-Loan Program students are able to access textbooks for Core of Common Studies courses and other introductory level courses free of cost. With our ongoing book drive, the CIE hopes to have a greater amount of books to offer for the 2016 spring semester.

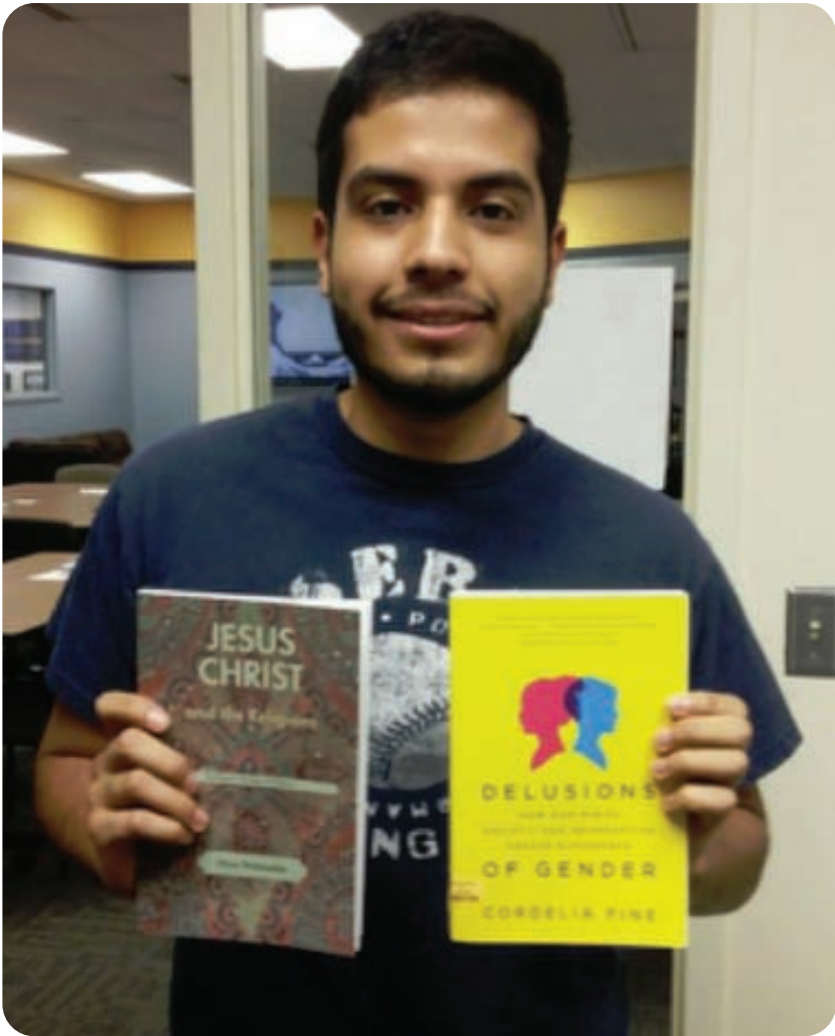
MILESTONES



Eva Martinez Powless Staff Supervisor
Bianca Howell Staff Supervisor
Karla Navarro-Vega Lead Book-Loan Coordinator
Marina Murphy Book-Loan Coordinator
Marina Arias Book-Loan Donation Coordinator

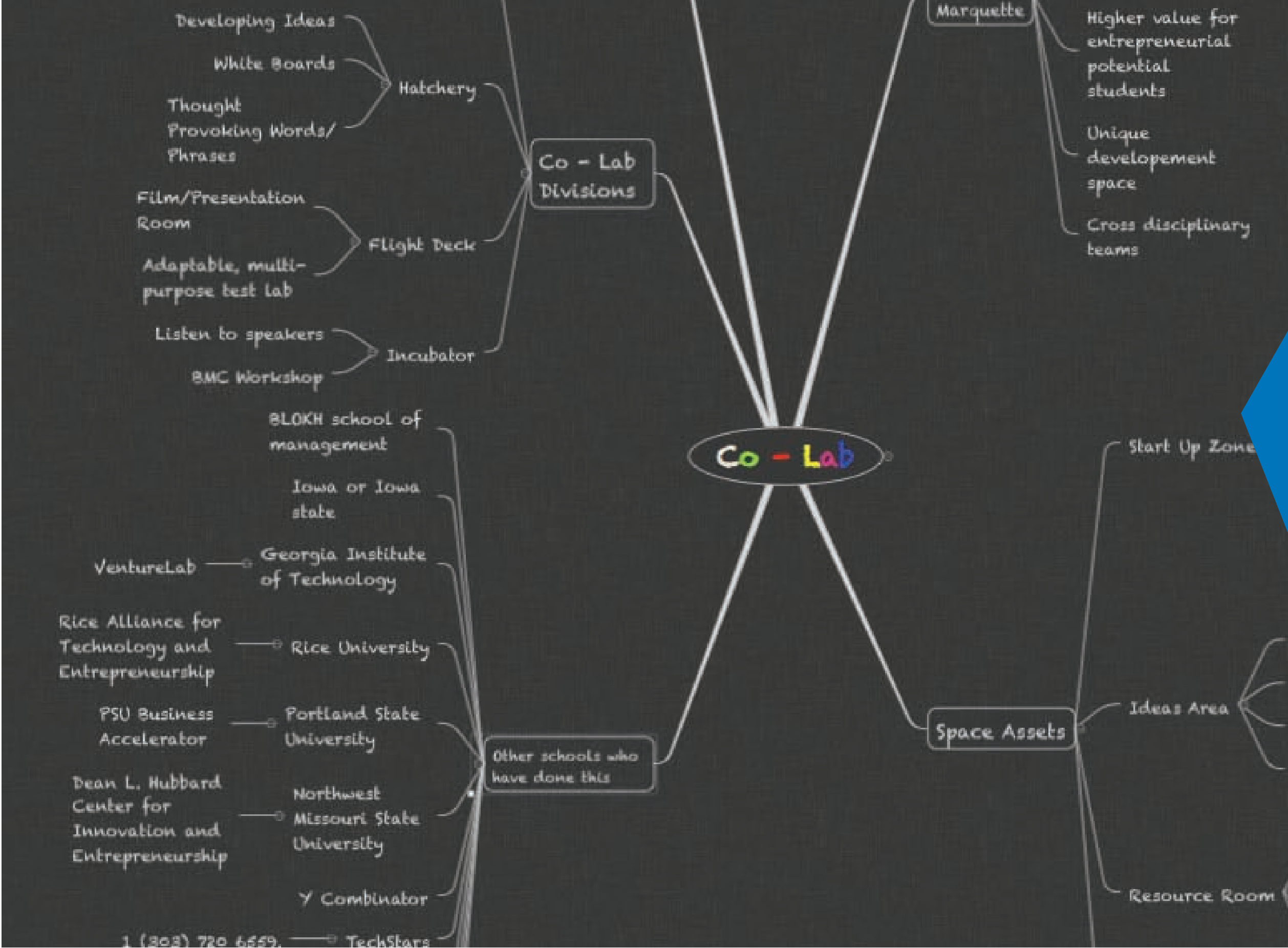
ABOUT OUR TEAM

Our team originally came together when the Center for Intercultural Engagement’s director, Eva Martinez Powless challenged the program assistants of the CIE to brainstorm and address an issue relevant to the students serviced by the CIE. Being first generation and underrepresented students themselves, one of the first ideas that came to the program assistants’ mind were the issues involved with high cost textbooks. This idea led to the development of the CIE Book-Loan Project as the program assistants took the lead in its submission for Social Innovation Funding.



BEYOND BOUNDARIES Social Responsibility and Community Engagement

The CIE Book-Loan program focuses on acting in social responsibility and community engagement servicing the under resourced and underrepresented students in the Marquette community.



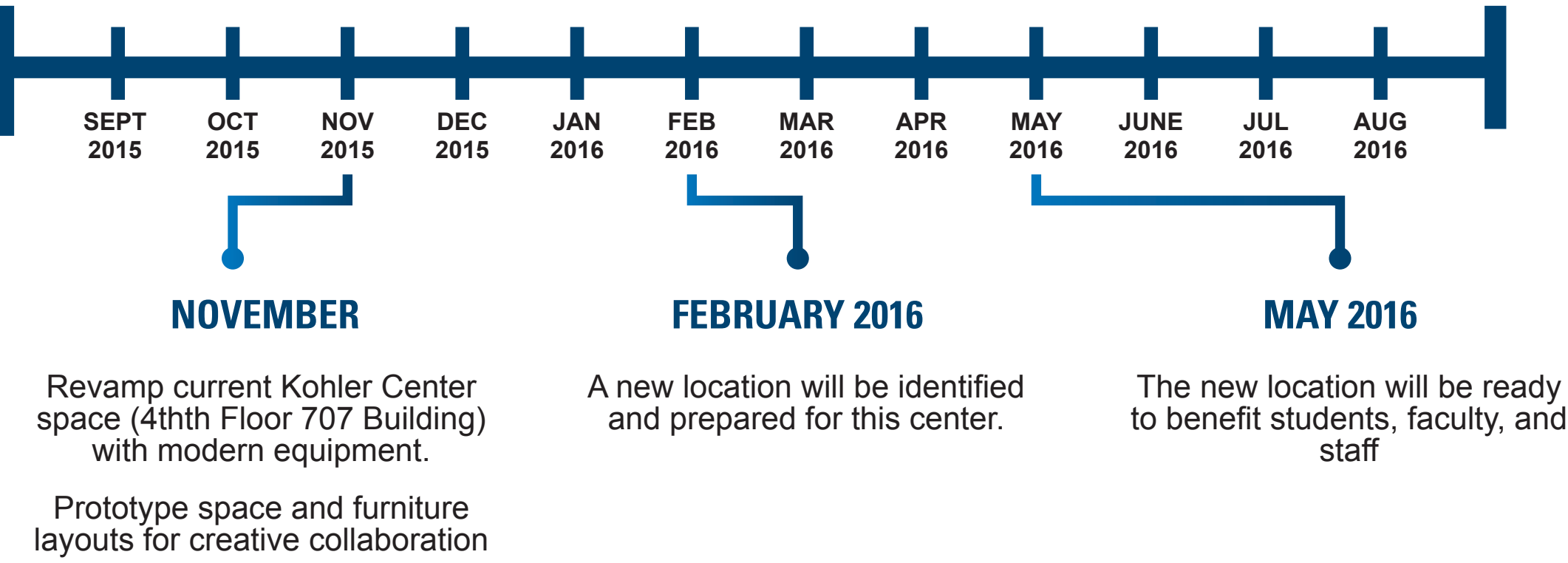
The CoLab

An Innovation And Entrepreneurship Hub On Marquette’s Campus

The CoLab

The CoLab is a joint project with Marquette faculty, the Kohler Center for Entrepreneurship and Marquette students. We are looking to create a center where students can explore ideas that interest them and develop projects and businesses on Marquette’s campus. The CoLab will provide students with resources, mentor’s and space needed to push students toward their passions. In addition, the CoLab will stand as a focal point for prospecting students and university visitors to showcase how Marquette embodies their philosophy of “Being the Difference”.

MILESTONES



BEYOND BOUNDARIES

Pursuit of Academic Excellence for Human Well-being

The CoLab provides Marquette with a visual representation of innovation on campus. It is meant to push students beyond their structured coursework and instead allow them to explore their interest within a resource filled environment. The CoLab also serves as a statement to Marquette students that innovation, entrepreneurship and social entrepreneurship are vital when looking to “Be The Difference”.



Sam Wesley, Student Lead
Creighton Joyce, Student Lead
Dr. Jeanne Hossenlopp, Faculty Advisor, Vice President for Research and Innovation
Holly Neel, Innovation Design Coordinator

ABOUT OUR TEAM

Creighton and Sam met on the LeaderShape retreat where a constant theme was the pursuit of your own vision. Both being passionate students with a large interest in entrepreneurship, they decided to pursue an innovation fund proposal for a t-shirt printing company. After the first Innovation Fund meeting they realized there was a much larger issue to address, which was the lack of a cross discipline hub for entrepreneurship, thus the CoLab was born. Creighton has had experience with using the lean principles of entrepreneurship when applied to his work as treasurer of Society of Automotive Engineers on campus and has been a resident of the Kohler Center as well as an ambassador. Sam has had experience building a profitable student run business during his time abroad, as well as providing a small counseling service for Milwaukee locals on starting a business and finally being the current co-founder Seiva, a startup that provides muscle-based biofeedback in the form of a wearable.



PROPOSAL FOR A COGNITIVE SCIENCE MAJOR

Research And Writing Of A Full Proposal For A New Interdisciplinary Cognitive Science Major

PROPOSAL FOR A COGNITIVE SCIENCE MAJOR

We will develop a proposal for a Cognitive Science major, while concurrently developing and debuting a Philosophy of Science and Mind track in the Philosophy department. The track will teach science majors to engage with their subject matter from a philosophical perspective, and introduce Philosophy majors to important interdisciplinary questions. The major will enable students who aim to understand the mind to have an integrated learning experience combining courses in Philosophy, Psychology, Biological Sciences, Computer Science and English with an interdisciplinary capstone seminar.



ABOUT OUR TEAM

Corinne Bloch-Mullins, Philosophy Department, project lead, CS proposal, curriculum development
Yoon Choi, Philosophy Department, curriculum development
Nakia Gordon, Psychology Department, curriculum development
Kristy Nielson, Psychology Department, curriculum development
Anthony Peressini, Philosophy Department, curriculum development
Katherine Rickus, Philosophy Department, curriculum development
Ericka Tucker, Philosophy Department, curriculum development

Our project began with conversations with students. What we kept hearing is that while students interested in the mind can cobble together a curriculum for themselves with courses from different departments, their learning experience is not integrated. As philosophers and psychologists who value interdisciplinarity in our own work, we realized there is a need that could be met with minimal investment by leveraging extant resources in various departments under the banner of a new Philosophy of Science and Mind track within the Philosophy department and a new Cognitive Science major.

MILESTONES

1. **Fall 2015** – submit a proposal of Philosophy of Science and Mind track
2. **Spring 2015** – submit a proposal of Cognitive Science major
3. **Fall 2016** – launch Philosophy of Science and Mind track (pending approval)
4. **Fall 2017** – launch Cognitive Science Major (pending approval)

BEYOND BOUNDARIES Pursuit of Academic Excellence for Human Well-being

The university’s strategic plan sets out ambitious goals for Marquette’s future: to become a leading research institution that recruits and empowers faculty at the cutting-edge of their fields, and to become a first-choice school for the most promising students. Should Marquette choose to move forward with our proposal for a Cognitive Science major, it would contribute to these goals by becoming the first Jesuit university to offer such a program. This interdisciplinary major will teach students how to think and communicate in ways that transcend traditional disciplinary boundaries and how to bring the broadest range of insights to bear on the ongoing task of understanding the nature of the mind.





Dual Degree Master of Arts in Corporate Communication

A Comprehensive Degree With A Global Perspective

DUAL DEGREE MASTER OF ARTS IN CORPORATE COMMUNICATION MARQUETTE UNIVERSITY & COPENHAGEN BUSINESS SCHOOL

A double degree program involves studying towards two university degrees in parallel at two internationally acclaimed institutions and completing them in the time that it would take to earn one degree. Students satisfy degree requirements of both institutions. Students receive two full degrees.

Dual degree programs are the cutting edge of internationalization of higher education institutions led by aspirational institutions such as UW-Madison and Georgetown University.

The past decade have seen the rise of the Chief Communication Officer whose responsibility is to oversee all communication functions of a large-scale global organization. There is considerable demand for professionals who have a strong background in communication and leadership, the business acumen to ensure an appropriate return on investment for communication efforts and a global perspective allowing them to succeed adapt to an every-changing corporate landscape. To date, few programs are in place to prepare professionals for this type of role.

Of those institutions offering dual degree programs approximately 47% are in business, 39% in engineering and 26% in the social sciences (IIE, 2011).

Marquette's program will stand out as unique and groundbreaking in the field of communication. Preparing graduates with a comprehensive understanding of the cultural nuances relevant to corporate communication is an extraordinarily innovative solution to a growing need amongst large global corporations.

The MA in Corporate Communication will intentionally integrate advanced communication theory and practice, advanced business education and international collaboration. It will include topics such as Organizational Communication, Finance, International Business and Communication, Corporate advocacy, & Organizational leadership.

MILESTONES

NEXT STEP OBJECTIVES INCLUDE:

1. Engage alumni and corporate partners to conduct market research that will allow us to fine-tune our focus.
2. Cultivate a deeper relationship with Copenhagen Business School
3. Collaborate with faculty in Corporate Communication and Management to develop program requirements, curriculum and policies
4. Creation of a classroom space that will allow for team teaching between MU and CBS faculty through the use of web-based tools



ABOUT OUR TEAM

Sarah B. Feldner – Coordinate overall program; course and curriculum development

Jeanne Simmons – Develop MA proposal documents for university

Terence Miller – Assist with international agreements

BEYOND BOUNDARIES Pursuit of Academic Excellence and Human Well-being

- Unique program that joins Communication with Business
- Creation of a destination program that will grow our national reputation and international presence.
- A shared commitment to develop student abilities as ethical leaders with an understanding of corporate social responsibility.



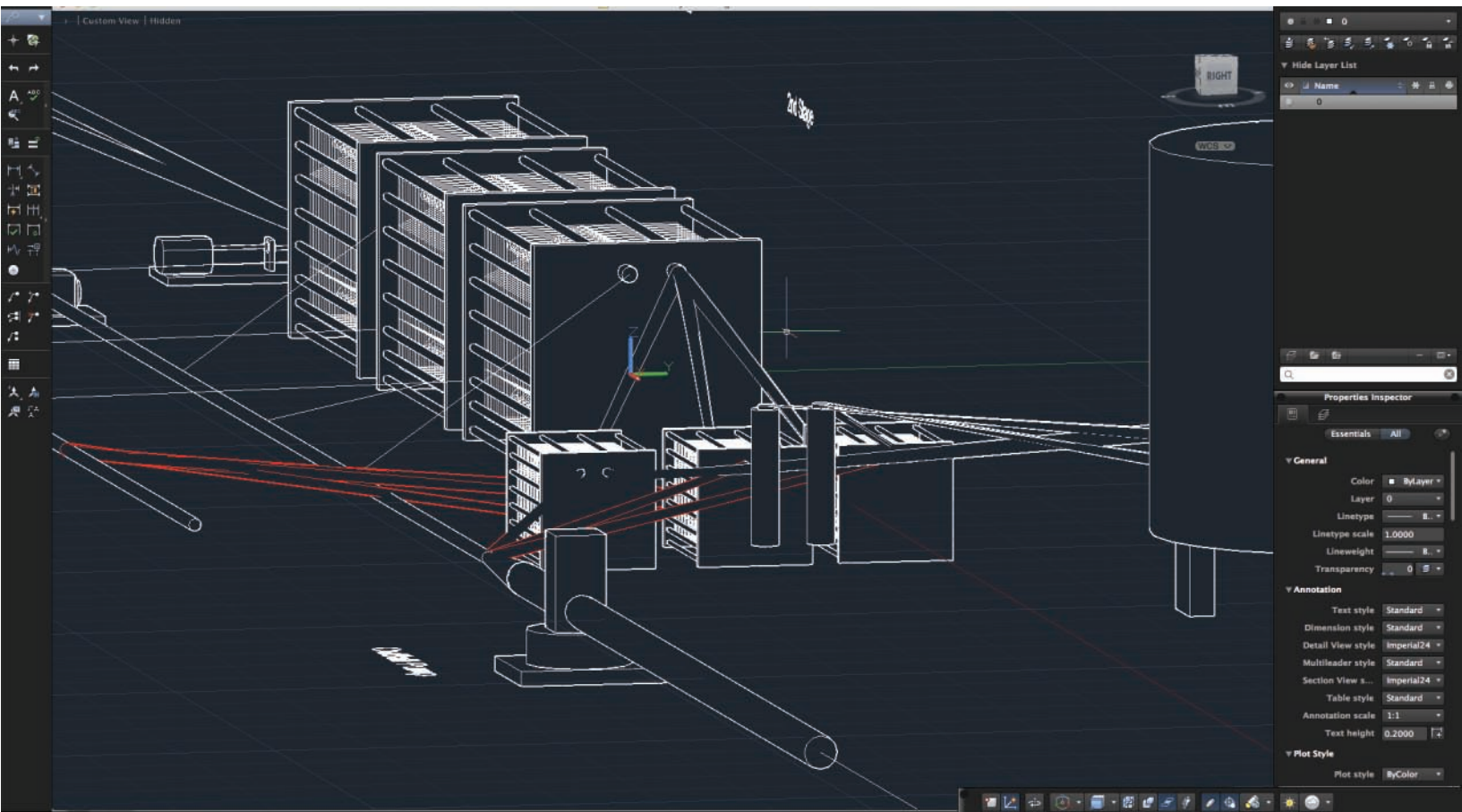
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BUSINESS SCHOOL WEBPAGE

MEMBRANE AND RESIN DESALINATION SYSTEM

Construct And Test A System That Reduces The Power Consumption Required To Desalinate Ocean Water

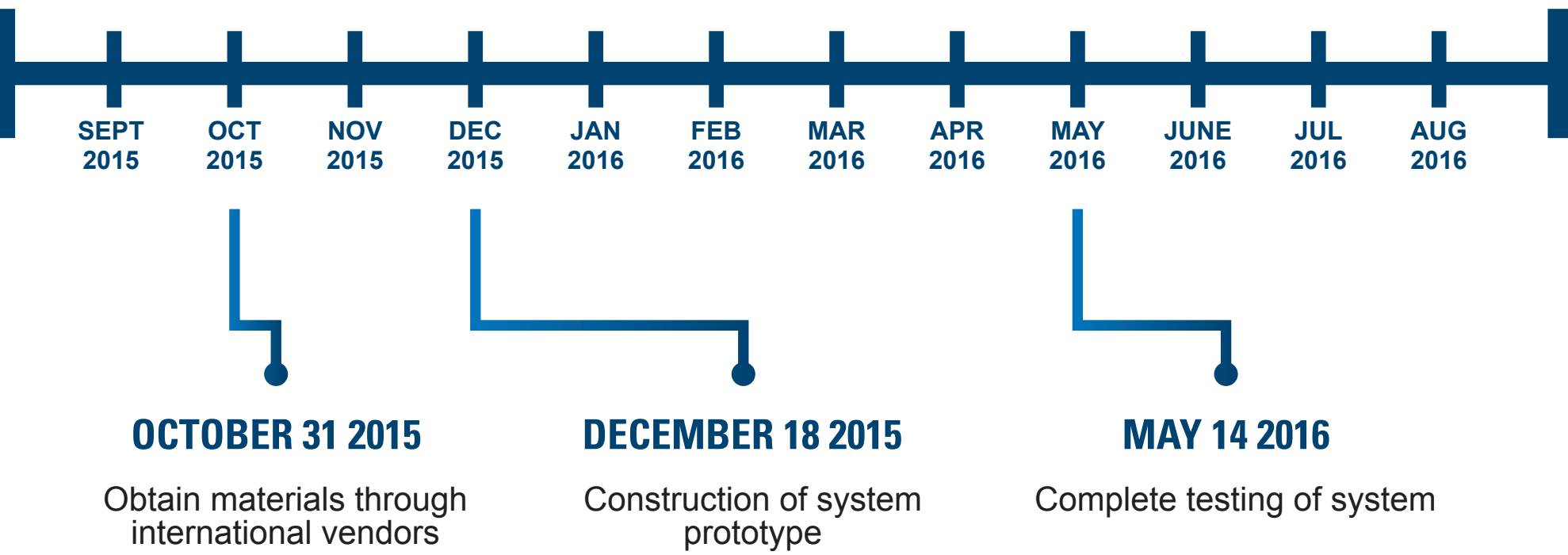
Membrane And Resin Desalination System

The concept for this system arose from a need to make desalination processes more efficient and economical around the globe. Current methods such as reverse osmosis, and thermal distillation, are cost prohibitive due to the high amount of electricity used. The Membrane and Resin Desalination System uses a novel patent-pending approach to transport ions through semi-permeable membranes under the influence of an applied electric potential, thus reducing the power consumption of desalination.



Overview of Desalination System

MILESTONES



ABOUT OUR TEAM

Dr. Mayer, Faculty Mentor/Advisor (Civil, Construction and Environmental Engineering)
Emmanuel Kayiwa, Student Lead
Matthew Vitello, Design and Build Engineer
Alex Zucca, Design and Build Engineer

The idea for the system started when Emmanuel saw the firsthand effects that water scarcity had on wide array of people. He felt compelled to do something about the problem by researching, experimenting, and building various desalination systems. He then sought the expertise of Dr. Mayer, and additional engineering help from Matt and Alex to streamline the construction and testing of the system.

BEYOND BOUNDARIES Sustainability of Valuable Resources

One of the main goals of this system is to help increase the sustainability of water resources around the world. As a Jesuit institution, Marquette is invested in being a responsible steward of environmental resources. This project embodies this principle of sustainability through reduced power consumption, resulting in a more affordable desalination process which can provide safe drinking water to larger numbers of people. Succesfully implenting this system worldwide would play a large part in resolving the water scarcity issue facing millions of people.



BUILDING THE TECHNOLOGY TRANSFER PROGRAM AT MARQUETTE UNIVERSITY

Making Marquette Knowledge And Technologies Accessible To Local And Global Communities

BUILDING THE TECHNOLOGY TRANSFER PROGRAM AT MARQUETTE UNIVERSITY

We want to take the knowledge developed by Marquette faculty and make it accessible to those who could most benefit. An Innovation Manager has been hired to develop a long term road map for expansion and sustainability. In the short term, she will:

- Develop outreach and education programs for faculty
- Implement an electronic invention disclosure system
- Redesign the technology transfer website
- Develop training materials and events for the campus
- Connect with other initiatives on campus.



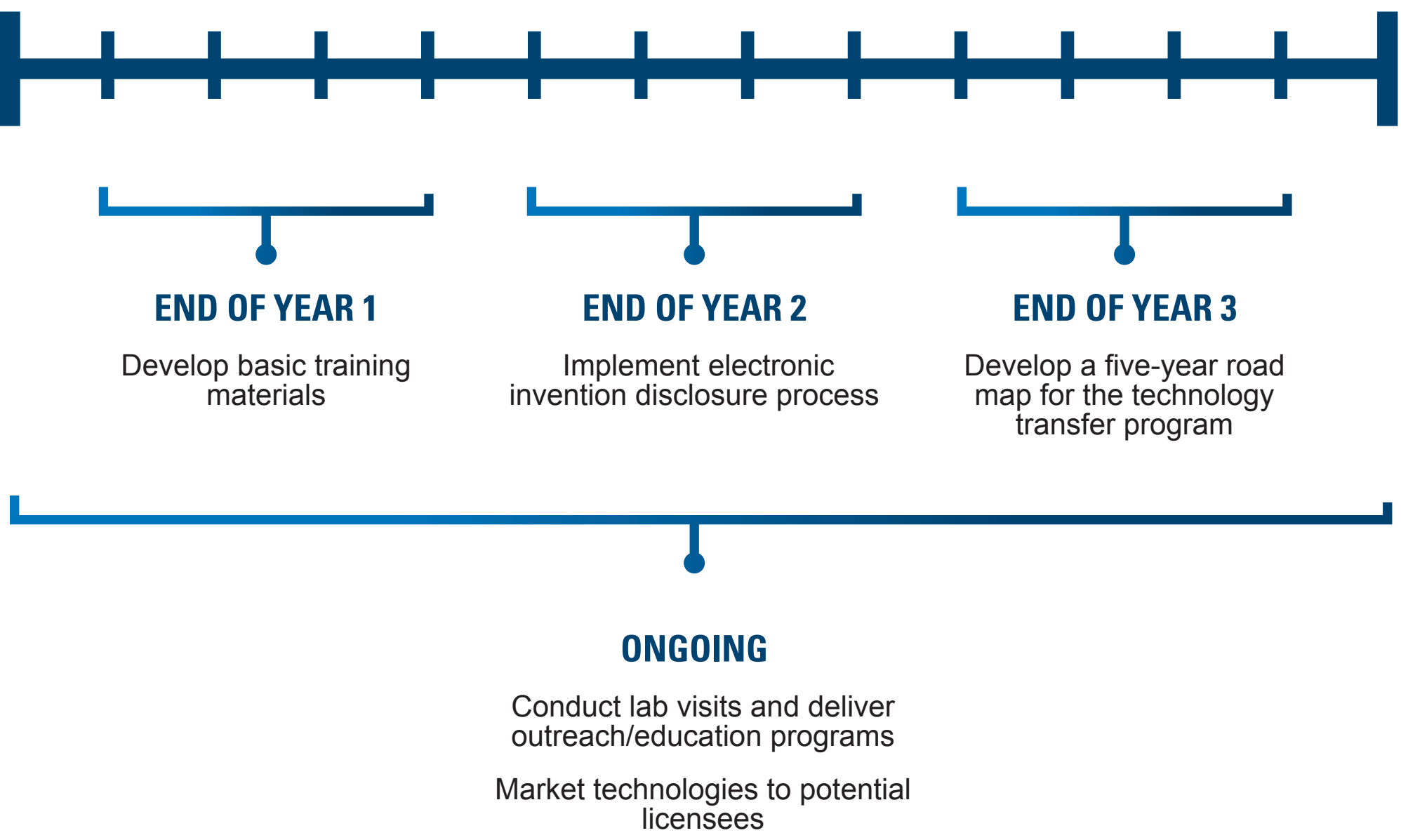
ABOUT OUR TEAM

The Intellectual Property Review Board (IPRB) is a standing committee. The members looked at what other institutions are doing in the area of technology transfer and saw great opportunities for Marquette. These were largely hampered by the lack of a position that was dedicated solely to tech transfer efforts. There were thoughtful discussions about what the proposal should look like and a shared vision for what Marquette’s technology transfer program could be.

- Katherine Durben**, Office of Research and Sponsored Programs
- Sherri Kirsch**, Office of Research and Sponsored Programs
- Kali Murray**, Intellectual Property Review Board
- Robert Scheidt**, Intellectual Property Review Board
- Sheila Schindler-Ivens**, Intellectual Property Review Board
- Mel Austin**, Intellectual Property Review Board
- Laura Bautista**, Intellectual Property Review Board
- Norah Johnson**, Intellectual Property Review Board
- Tim Keane**, Director of Technology Commercialization
- Doug Smith**, Intellectual Property Review Board
- Marianne Weiss**, Intellectual Property Review Board
- Pinfen Yang**, Intellectual Property Review Board
- Carmel Ruffolo**, Office of Research and Innovation



MILESTONES



BEYOND BOUNDARIES Research in Action

This project will extend research in action even further by sharing knowledge and inventions with those outside of the university. The development of a comprehensive and coordinated technology transfer program at Marquette will also **enhance our organizational effectiveness** by creating a clear, seamless, and user-friendly process for transferring knowledge and technologies from our institution to other entities.

PILOT PROJECT FOR COLLABORATIVE RESEARCH WITH INDUSTRY AT THE GLOBAL WATER CENTER

Linking University Research, Local Industry, And Municipalities To Put Research Into Action For The Betterment Of Society

PILOT PROJECT FOR COLLABORATIVE RESEARCH WITH INDUSTRY AT THE GLOBAL WATER CENTER

The Global Water Center (GWC) provides an exceptional opportunity to connect MU with industry and public utilities. This proposal outlines a plan to develop collaborative infrastructure at the GWC. This infrastructure plan will involve an initial demonstration project focusing on collaboration among MU, private industry, and the Milwaukee Metropolitan Sewerage District. This plan will be based on wastewater research stemming from MU. We plan to conduct pilot-scale research with partners at the GWC to setup up infrastructure for future projects at the GWC.

MILESTONES

- 1. **JUNE 2016 - Establish lab resources at the GWC to perform wet experiments to test biochar as a pollutant removal technology.** The graduate student will develop science to maximize use of biochar – an activated carbon like product that can be made from waste products produced at wastewater treatment plants – for removal of chemicals from wastewater treatment plant effluent.
- 2. **DECEMBER 2016 - Develop a novel sensor for real-time continuous measurements of triclosan in wastewater.** NanoAffix Science, LLC will develop a sensor to continuously measure triclosan in wastewater. This technology can be used to determine how effective biochar is at removing triclosan from wastewater.
- 3. **JUNE 2017 - Determine the ability of biochar to remove triclosan from wastewater by taking continuous measurements using a sensor.** Both the biochar removal process and the sensor have opportunity for full-scale use. MU will have space at the GWC along with NanoAffix Science, allowing for easy collaboration on this project to help develop technologies that can clean our waters.

BEYOND BOUNDARIES Research in Action

The research described will be performed by a graduate student from Marquette, and is driven by motivation of protecting our most precious resource - water. This project is grounded in the **Pursuit of Academic Excellence for Human Well-being**. We have a social responsibility to engineer systems that protect environmental and human health, and at MU we can pursue these goals while simultaneously pursuing graduate research education. This project will directly **engage with the community** by teaming with Milwaukee Metropolitan Sewage District to provide and protect water quality through Milwaukee. An overarching goal of this project is to develop a plan to engage with the Global Water Center.



ABOUT OUR TEAM

Dr. Patrick McNamara, PI, Project Lead (advisor to Marquette graduate student)
Dr. Brooke Mayer, Co-PI
Lee Kimbell, Marquette University Graduate Student conducting research for this project
Dr. Junhong Chen, NanoAffix Science, LLC. Project lead for development of sensors
Matthew Magruder, Milwaukee Metropolitan Sewerage District, project mentor

Our team brings together University researches with industry and municipality members. Often times problems are too complex to be solved by one entity. Today, chemicals that get flushed down peoples toilets or pass down our sinks are entering our wastewater treatment plants and being discharge to Lake Michigan. We need solid research to understand how to solve this problem, but we also need to integrate our fundamental science with understanding of real-world issues and develop real-world solutions. We hope this university-industry-municipality model will serve as a template for future solution expeditions.

IMPROVING THE GRANT MANAGEMENT PROCESS FROM APPLICATION TO CLOSEOUT



Employing An Electronic System To Maximize Efficiency And Oversight Of Grant Applications And Awards

IMPROVING THE GRANT MANAGEMENT PROCESS FROM APPLICATION TO CLOSEOUT

This project will allow us to implement a software system to better manage applications, awards and compliance issues:

- Documents are stored in an electronic repository
- Registration forms are electronically routed
- Federal applications are submitted via system-to-system technology
- Compliance modules provide tracking features
- Robust reports are accessible
- Award information imports directly into Marquette’s financial system
- Investigators will readily know how much money is in their account

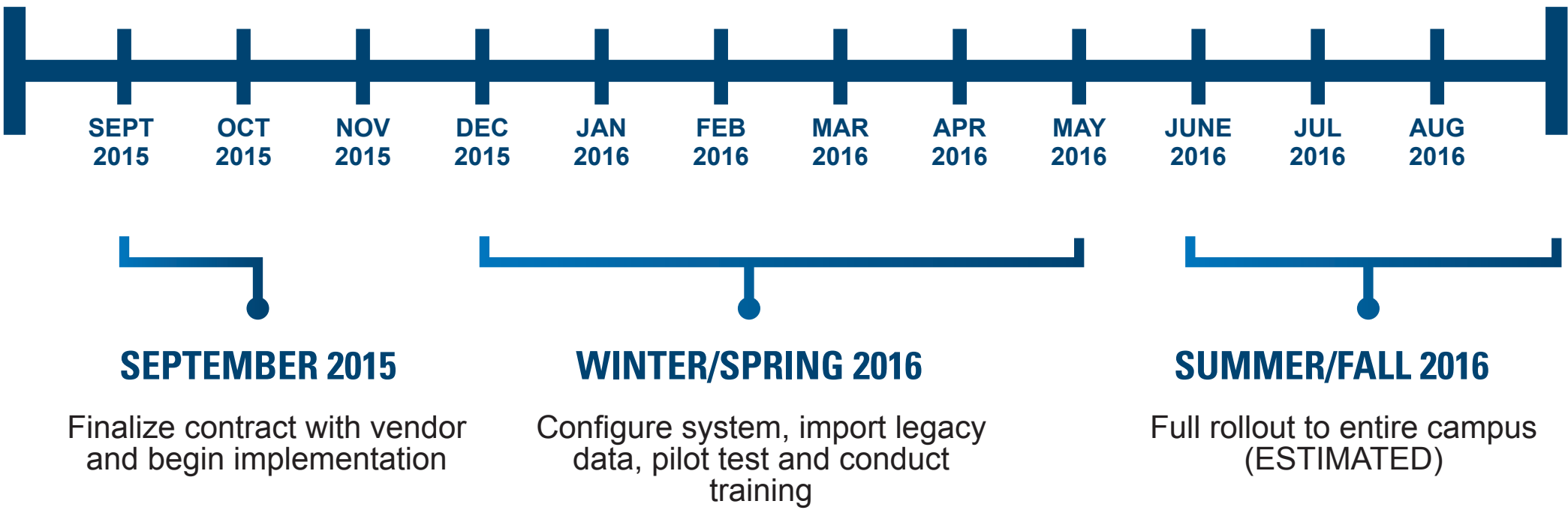


BEFORE



AFTER

MILESTONES



ABOUT OUR TEAM

- Laura Buikus**, IT Services
- Sherrie Dorff**, Office of Research and Sponsored Programs
- Katherine Durben**, Office of Research and Sponsored Programs
- Mary Dunnwald**, Helen Way Klingler College of Arts & Sciences
- Austin Fritsch**, Office of Research Compliance
- Erin Folstad**, Office of Research and Sponsored Programs
- Judy Kaiser**, Office of Research and Sponsored Programs
- Ben Kennedy**, Office of Research Compliance
- Sherri Kirsch**, Office of Research and Sponsored Programs
- Barb Ploszay**, Office of Research and Sponsored Programs
- Michelle Raclawski**, College of Health Sciences
- Jose Saenz**, Office of the Comptroller
- Rosita Tormala-Nita**, Office of Research and Sponsored Programs
- Mindy Williams**, Office of Research and Sponsored Programs
- Sa Yang**, Office of the Comptroller

A small group of us first got together in Summer 2014, well before the innovation program existed, as this was a pressing issue. We made a list of our needs and wants, then saw three vendor demos. With innovation funds, we were able to fast-track our process. We brought in IT Services, held new demos and invited many others on campus to weigh in on the selection. KualiCo was selected as our vendor. We are finishing the contracting process and look forward to beginning implementation very soon!

BEYOND BOUNDARIES Enhancement of Organizational Effectiveness

Improved research infrastructure (i.e., enhancement of organizational effectiveness) will support the grant application and award management process (i.e., research in action). As the university doubles its research, we need to make sure we have processes in place to support faculty/staff with their applications and awards. Any efficiencies will go a long way as we increase our volume. More importantly, we need to have good systems in place to make sure that we are in compliance with federal and other sponsor guidelines at all times.

GREAT LAKES ENVIRONMENTAL FILM FESTIVAL (GLEFF)

A Student Run Film Festival That Presents On A Variety Of Ecological Issues



GREAT LAKES ENVIRONMENTAL FILM FESTIVAL (GLEFF)

GLEFF is an annual event that examines themes of sustainability, environmental justice, and ecological awareness in the media. GLEFF is part of the burgeoning environmental film festival circuit that includes: The Environmental Film Festival at Yale (EFFY) & the Finger Lakes Environmental Film Festival (FLEFF) at Ithaca College, as well as many other environmental film events. Plans for growing the festival include: creating satellite events, starting an environmental filmmaking center, and partnering with local non-profit groups in need of environmental media.



MILESTONES

- 1. May 2015:** Presented first annual GLEFF with 16 filmmakers in attendance, including two National Geographic Producers and a 2014 Oscar Nominee.
- 2. Sept 2015:** Began accepting film submissions for the 2016 festival.
- 3. Jan 2016:** Will present a “mid-year” environmental film festival event to raise awareness about the festival.
- 4. April 21st to 23rd:** Second Annual GLEFF at Marquette University
- 5. Summer 2016:** Begin planning for possible environmental filmmaking center.



SCAN QR CODE FOR WWW.GLEFF.ORG



ABOUT OUR TEAM

Joe Brown, GLEFF Director, Professional In Residence in Digital Media
Theresa Soley, Graduate Student in Communication
Dave Denomie, Advisor and Staff Member in the College of Communication
Bob Griffin, Advisor and Professor in the College of Communication

We are a group of students who share a passion for our environment. Our passion leads us to take action towards creating a more sustainable, environmentally just and ecologically aware community. The push for change started with talking and we want to keep the discussion going. We want to be the difference and care about the future of our home - the Earth. Through the presentation of films that look at our world through a critical/political/theoretical/adventurous/nature-loving lens, we hope you gain a fresh perspective of our lakes and the land around us.

BEYOND BOUNDARIES Formation of the Mind and Heart

The Great Lakes Environmental Film Festival (GLEFF) is directly related to Marquette’s mission in that it is meant to act as a catalyst for change. The proverbial Jesuit question; “how ought we to live,” can be extended to questions of stewardship and the environment. The specific strategic theme touched upon by GLEFF is: Formation of the Mind and Heart. One must develop an appreciation, or love, for the environment in order to step up as a steward; a film festival that celebrates the environment is an event that shapes hearts.

GLEFF relates to the Beyond Boundaries strategic theme in two major ways. First, GLEFF is a community-oriented event that is meant to strengthen relationships between Marquette and the environmental community. Second, GLEFF is meant to encourage collaboration between departments, colleges, and other university units. GLEFF will serve as a rallying point for environmentally minded individuals both within and outside of the Marquette Community.



FOSTERING 21ST CENTURY LITERACY ACQUISITION AND INSTRUCTION IN MARQUETTE UNIVERSITY'S HARTMAN CENTER

Bringing The Reading Intervention Program For Urban Children Into The Digital Era Through The Use Of Technology-mediated Instruction.

FOSTERING 21ST CENTURY LITERACY ACQUISITION AND INSTRUCTION IN MARQUETTE UNIVERSITY'S HARTMAN CENTER

Our project is a re-envisionment of the center’s reading intervention program for urban children who struggle with literacy acquisition. Our goals are to develop children’s traditional literacies of reading and writing while fostering their acquisition of new literacies—those skills, strategies, insights, and dispositions needed to use and adapt to the information and communication technologies inherent in the world today, and to develop the technological pedagogical content knowledge of the teacher preparation students who serve as children’s instructors.



ABOUT OUR TEAM

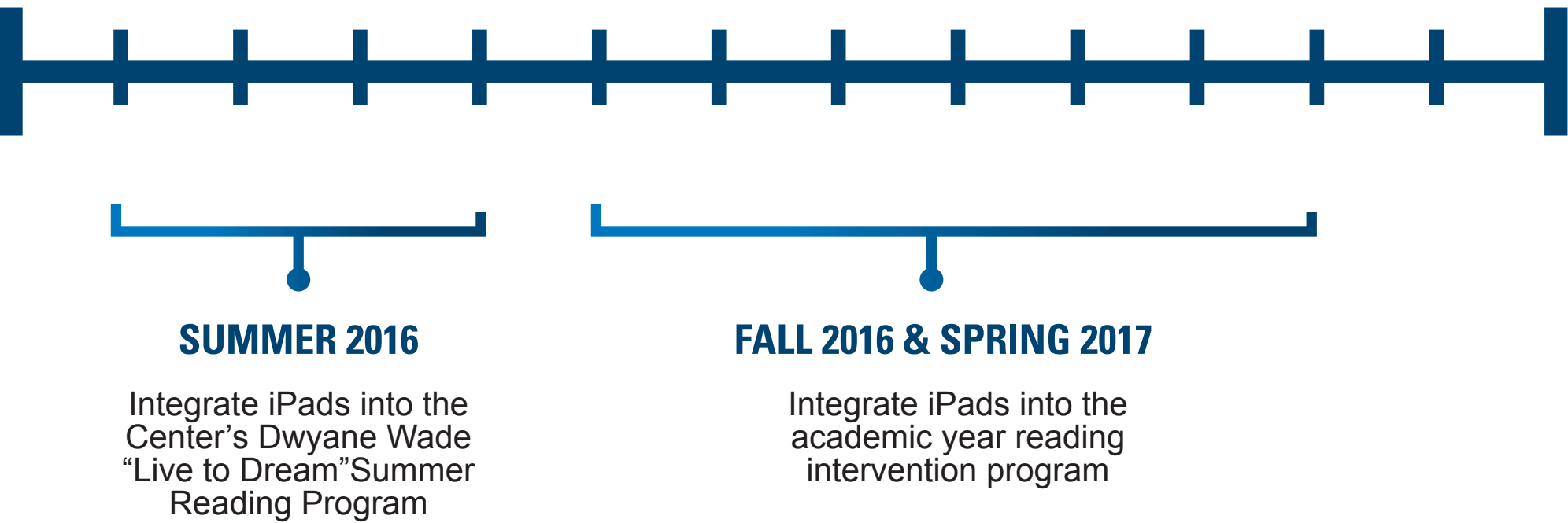
Kathleen Clark, Ph.D. Associate Professor & Director, Hartman Literacy Center
Caillin Hostad, M.L.S. Assistant Director of Communications Strategy and Enrollment, College of Education

We worked together for five years in the Hartman Center as director and literacy faculty member (Kathleen) and program coordinator (Calley). Our activities on behalf of the center included fundraising, and technology for the center was always a goal. Securing technology would enable the center to foster the digital literacy of the urban low-income children it serves and to prepare children’s Hartman Center instructors to teach with technology.



SCAN QR CODE FOR HARTMAN CENTER WEB PAGE - www.marquette.edu/hartman

MILESTONES



BEYOND BOUNDARIES Pursuit of Academic Excellence for Human Well-being

Our project is closely aligned with Pursuit of Academic Excellence for Human Well-Being and **Social Responsibility and Community Engagement**. The Hartman Center employs the knowledge and instructional talents of literacy faculty and the teacher preparation students with whom they work to accelerate the reading progress of impoverished and low-income children who enter the Hartman Center’s program reading well below their grade placements in school.

Following the initial integration of iPads into the Hartman Center program, possibilities exist for research that addresses literacy teaching and learning with technology with primary grade children. Leu and his colleague (Forzani & Leu, 2012) have highlighted the need for such research with young children as the preponderance of research of this kind has been conducted with much older students. Thus, moving forward with the project, we will be able to address the Strategic Plan theme of **Research in Action**.

HPGM MARQUETTE

Creating A Strong Network Of Students
And Professionals Who Exercise
Leadership And Responsibility Within
Their Workplaces And Communities

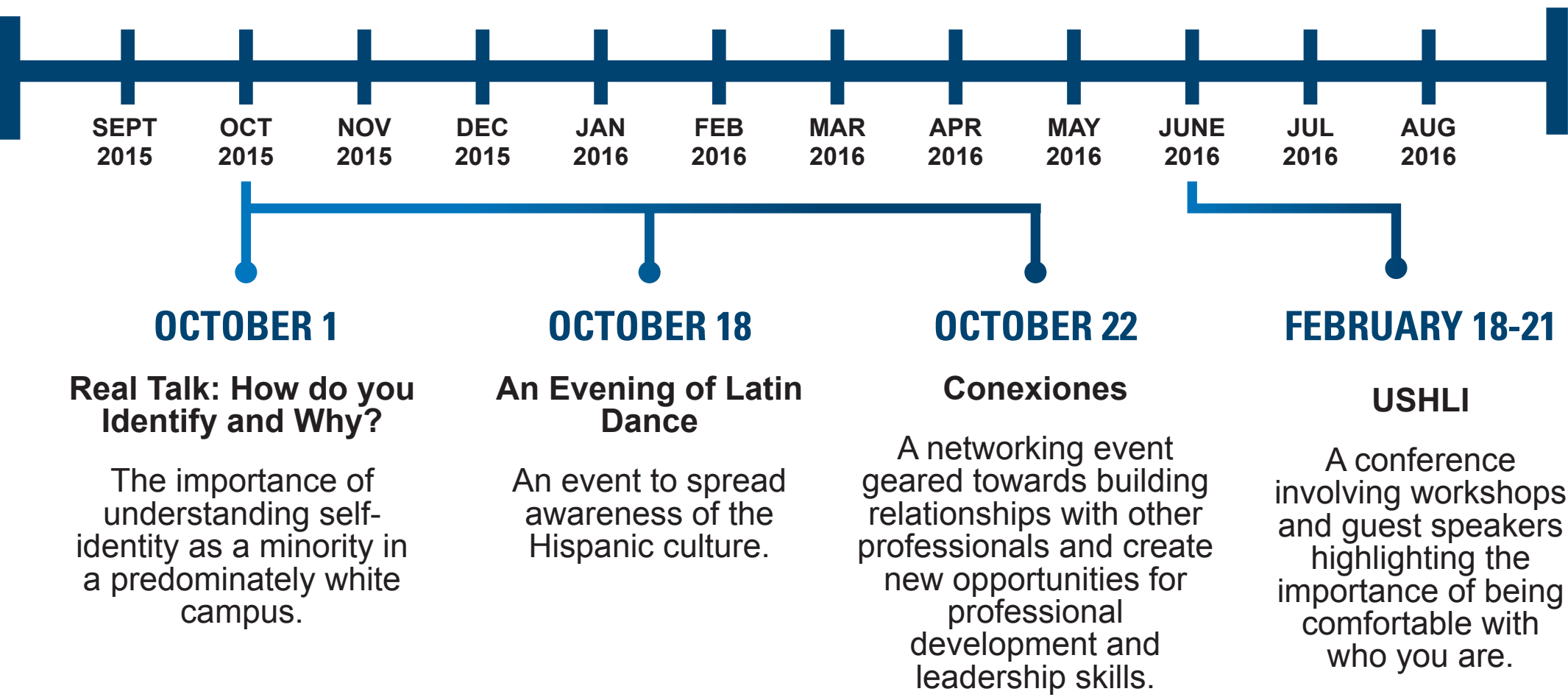


HISPANIC PROFESSIONALS OF GREATER MILWAUKEE MARQUETTE

Students have the chance to take a leadership role on-campus, while engaging in corporate and non-profit partnerships with diverse organizations throughout the city. With the help of HPGM, the students can connect their peers with professional connections and resources based on their specific major or field of interest. The students can also work with HPGM to tailor programming specific to their desired goals, such as honing their interview skills or creating a strong social media presence. Students collaborate with other student groups, such as the Latino Student Union, and are supported by faculty who are committed HPGM members.

In 2015 and beyond, it is increasingly difficult for students to gain knowledge that employers are looking for. It is important for students to learn in new and innovative ways. HPGM students at Marquette—and in other chapters—will be offered the opportunity to participate in workshops on resume building, mock-interviews and professional etiquette to gain an advantage and learn outside of a traditional classroom setting.

MILESTONES



SCAN QR CODE FOR HPGM WEBPAGE



Antonio Martinez - President
Melissa Parry – Vice President
Erick Herrera Hernandez - Treasurer
Alexandra Perez – Secretary
Dan Ortego – Assistant Director – Business Career Center
Marina Arias – Executive Administrative Assistant and Marketing Coordinator
Eva Martinez – Director for Intercultural Engagement
Kim Schultz – Associate Director of Corporate Events

ABOUT OUR TEAM

In the spring of 2013, HPGM reached out to several students interested in the possibility of starting a student chapter at Marquette University. They presented the idea of connecting with professionals and other universities in the area by means of networking. Above all, HPGM wished to assist students in instilling confidence in themselves; confidence in their thoughts, in the ability to speak and network, and in building professional skills. A major component that drew the attention of the students approached was the idea of assisting in the intentional growth of the Hispanic student population in higher education.

BEYOND BOUNDARIES Pursuit of Academic Excellence for Human Well-being

Many minority students lack the resources and knowledge necessary to succeed in and after college. HPGM as an organization works to provide these resources to students by providing them the opportunity to participate in internship events, networking sessions, and skill building workshops. Additionally, HPGM is working to assist students in building upon the skillset founded in the classroom; students are able to foster lasting relationships with professionals and other students in a variety of professions.

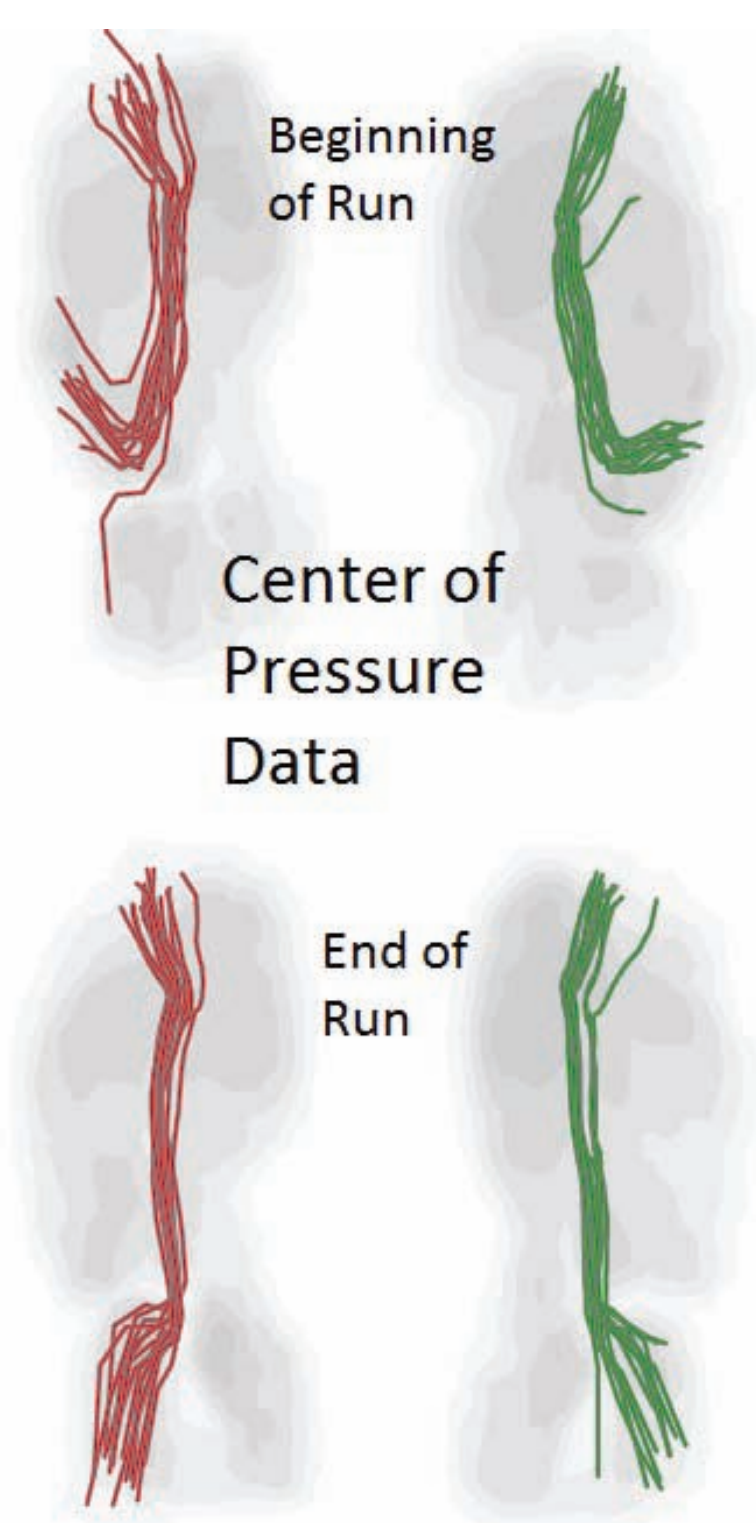


HUMAN PERFORMANCE ASSESSMENT CORE (HPAC)

Enhancing The Quality Of New And Existing Research, Facilitating Cross Disciplinary Projects, And Providing Expertise In Translational Research Related To Human Performance And Health/fitness

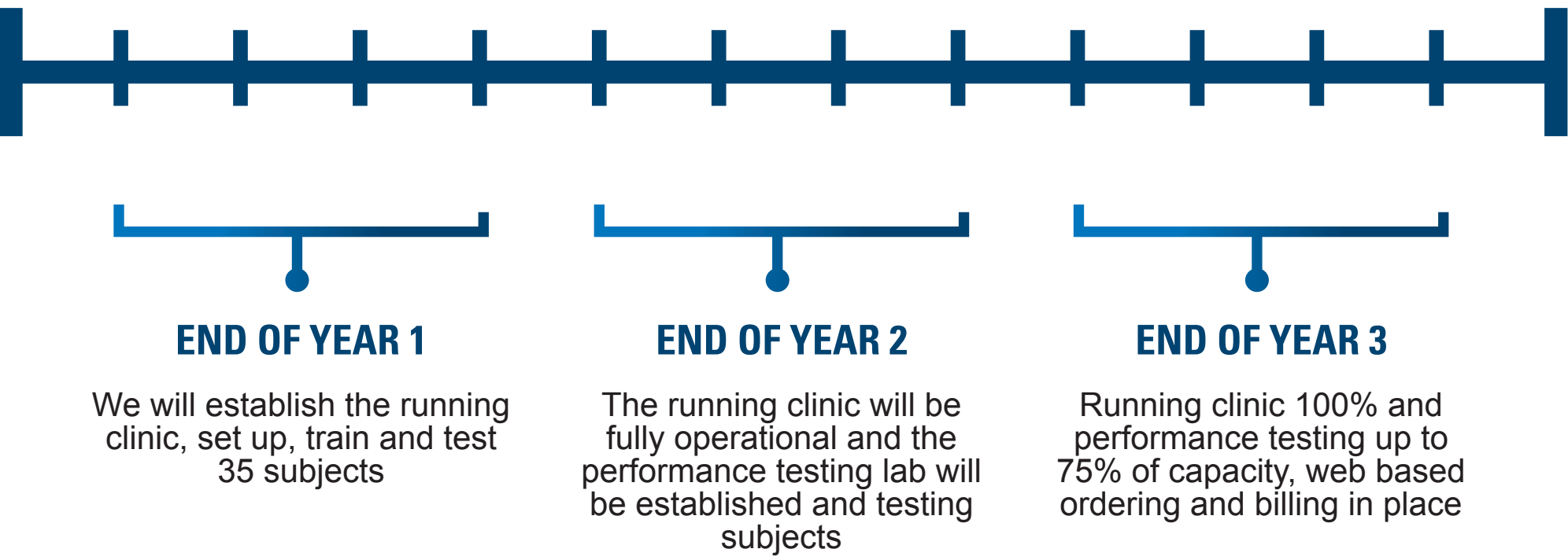
HUMAN PERFORMANCE ASSESSMENT CORE (HPAC)

Human Performance Assessment Core or HPAC will be an innovative, self-sustaining, and fee-for-service core for assessment of human performance/health/fitness for all populations (i.e., healthy, athletic, and clinical) servicing researchers, MU community, and the greater SE Wisconsin region. HPAC will enhance the quality of new and existing research, facilitate cross disciplinary projects, and provide expertise in translational research related to human performance and health/fitness. We will increase the opportunities for studies that rely on human performance research, as well as provide health/fitness assessments for MU student/employee wellness community. HPAC will also serve as a satellite and pilot test site to determine the feasibility of a much larger fee for service billing being considered in the sport science research facility under development.



"Center of Pressure images before and after fatigue. Images show how foot strike pattern shifts toward the rearfoot, which results in greater impact forces as the runner fatigues, which contributes to their running-associated pain"

MILESTONES



SCAN QR CODE FOR A MARQUETTE VIDEO ON THE UP-COMING ALTHETIC PERFORMANCE RESEARCH CENTER!

ABOUT OUR TEAM

PE Papanek, EXSC/PT. Principal lead, will hire physiologist, chair oversight committee, coordinate equipment purchases, renovation of space and train/supervise new physiologist, assist with budget reports and use core.
K Kipp, EXSC/Biomechanist. CoPrincipal and lead on running clinic, will be on oversight committee, assist in equipment purchase, set up and developing protocols. Will use core for future grants.
S Hunter, EXSC. On oversight committee, will use core for future grants for herself and her grad students
C Geiser, ATTR/PT. Oversee purchases for running clinic, set up protocols, train clinic staff. Will use core.
B Schidt, BME. On oversight committee. Will use core for future work
Kristin Kipp, Employee Wellness. Runs wellness programs, will coordinate measurements/classes offered via employee wellness with offerings in the HPAC. Will assist with fee scheduling for wellness offerings.
J Wilkens MU Sports Rehab Clinic Director. Refer clients, use reports for patient rehabilitation plans. Will be on oversight committee and use core.
C. Smith, MU Medical Clinic Director. On oversight committee. Will refer students to HPAC, collaborate on research project in the core.

Originally, HPAC was submitted as 2 preproposals. We saw the cost savings and potential to enhance each others proposals so we combined teams and became 1.

Our team is committed to innovation, engaging others and servicing the greater Marquette community in a state of the art, self-sustaining, fee-for-service core for research and measurement of human performance and clinical gait/running.

BEYOND BOUNDARIES Research in Action

The HPAC will epitomize “research in action”, because it supports objective assessment services and development of evidenced-based treatments that could potentially target clinical (e.g., MS, post cancer, diabetes, stroke, obese, spinal cord injury), healthy and athletic populations via a collaborative research model. HPAC will support the growing MU employee wellness initiatives by providing state of the art services and referring to employee wellness when clients seek programs to help them improve upon their health after testing. This facility is particularly powerful for faculty who do not have access or collaborations with laboratories that do have the equipment to provide specialized assessments

Social Responsibility and Community Engagement: HPAC will provide testing for the broader SE WI community, both healthy and clinical populations. There are no such facilities available to the community, special populations or even within Marquette. The expansion of wheelchair/body weight support testing is seen as important to community engagement given the MU adaptabilities club/wheelchair lacrosse team, (new on campus) and local Milwaukee veteran populations.

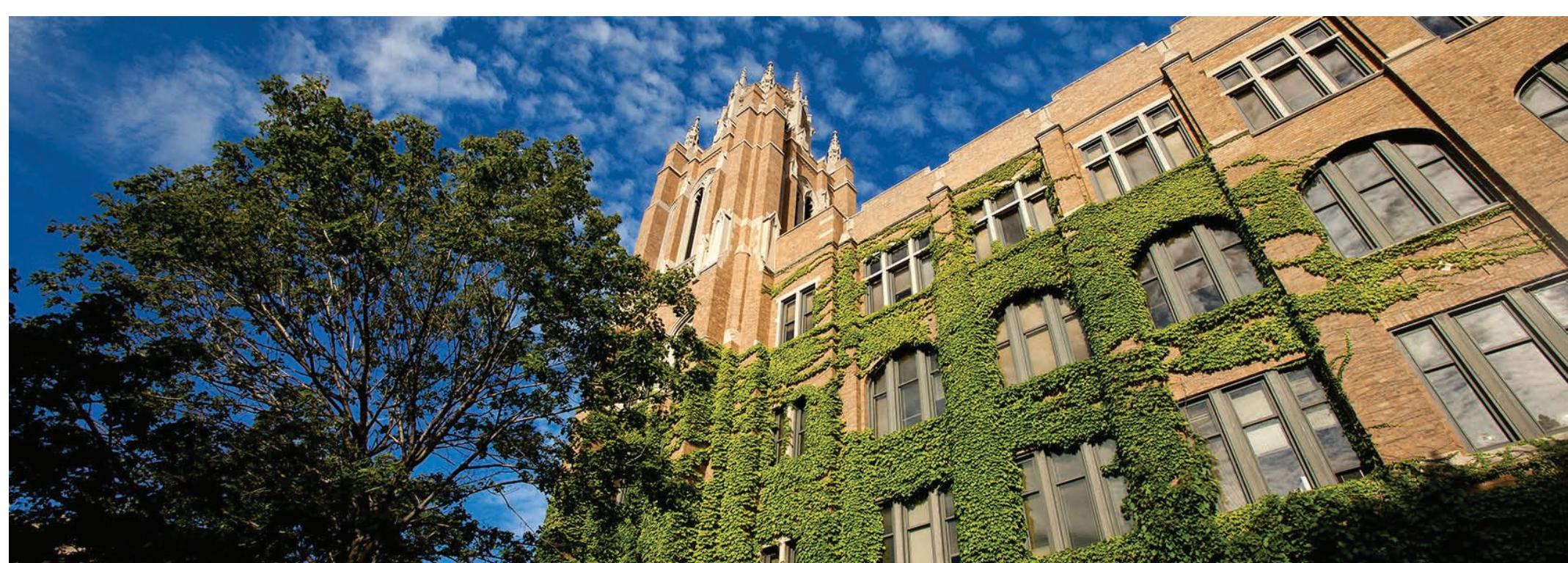
Enhancement of Organizational Effectiveness: Requests for exercise and functional assessments from within the athletic and research community will be centralized through one facility/office, will be revenue generating and promote efficient stewardship of MU resources. At present requests are made from within and outside the Marquette community on an adhoc and disparate basis, often by contact of individual faculty who try to make accommodations.

THE HUMANITIES RESEARCH COLLOQUIUM

Bringing Faculty And Students Together From Across The University To Discuss New Research In The Humanities

THE HUMANITIES RESEARCH COLLOQUIUM

The colloquium provides a forum for scholars to present and discuss new research in the humanities. The topics are wide-ranging and interdisciplinary in focus, and we invite participation by both faculty and students from across the schools and departments at Marquette. In particular, we aim to foster exchanges among colleagues working in fields such as English, History, Philosophy, Theology, and Foreign Languages and Literatures as well as Communication, Law, and the Health Sciences. We also plan to host speakers from other universities. In this way, we aim to foster intellectual dialogues both within and beyond Marquette.



ABOUT OUR TEAM

Melissa J. Ganz, Co-Organizer

Angela Sorby, Co-Organizer

We first began discussing the idea of a research colloquium in the spring of 2014. With support from the Association of English Graduate Students, we launched a successful series of Faculty Research Lunch Talks in the English Department last fall. We decided to expand our focus this year to include the humanities broadly conceived. Our goal is to promote lively discussions about a range of topics in the humanities and humanistic social sciences, while fostering interactions among faculty and students from across the University.

BEYOND BOUNDARIES Research in Action

The colloquium contributes to the University's mission and Strategic Plan by fostering a spirit of intellectual curiosity, creativity, and community both within the College of Arts and Sciences and across the University. As many faculty at Marquette work on questions concerning ethics and social justice, many of the talks will directly engage with concerns at the heart of the University's mission. At the same time, the colloquium will help to break down boundaries between departments and schools here on campus, providing a forum for the dissemination and discussion of interdisciplinary work.

MILESTONES

We have three talks currently scheduled for the Fall semester:

1. **SARAH WADSWORTH** Department of English, "The Mysterious History of the First American Novel; or, The Clue in the Diary" Thursday, September 24, 4 PM Marquette Hall 105
2. **AMY BLAIR** Department of English, and **RUBY THOMPSON** '16, Writing-Intensive English Major, "Tasting and Testing Books: Reading Advice in Good Housekeeping Magazine" Wednesday, October 28, 4 p.m., Marquette Hall 105
3. **JANIE KIM** Law School, "Racial Emotions and the Feeling of Equality" Thursday, November 19, 4 p.m., Marquette Hall 105



CONTACT INFORMATION: melissa.ganz@marquette.edu, angela.sorby@marquette.edu

Academic Programs and
Student Support



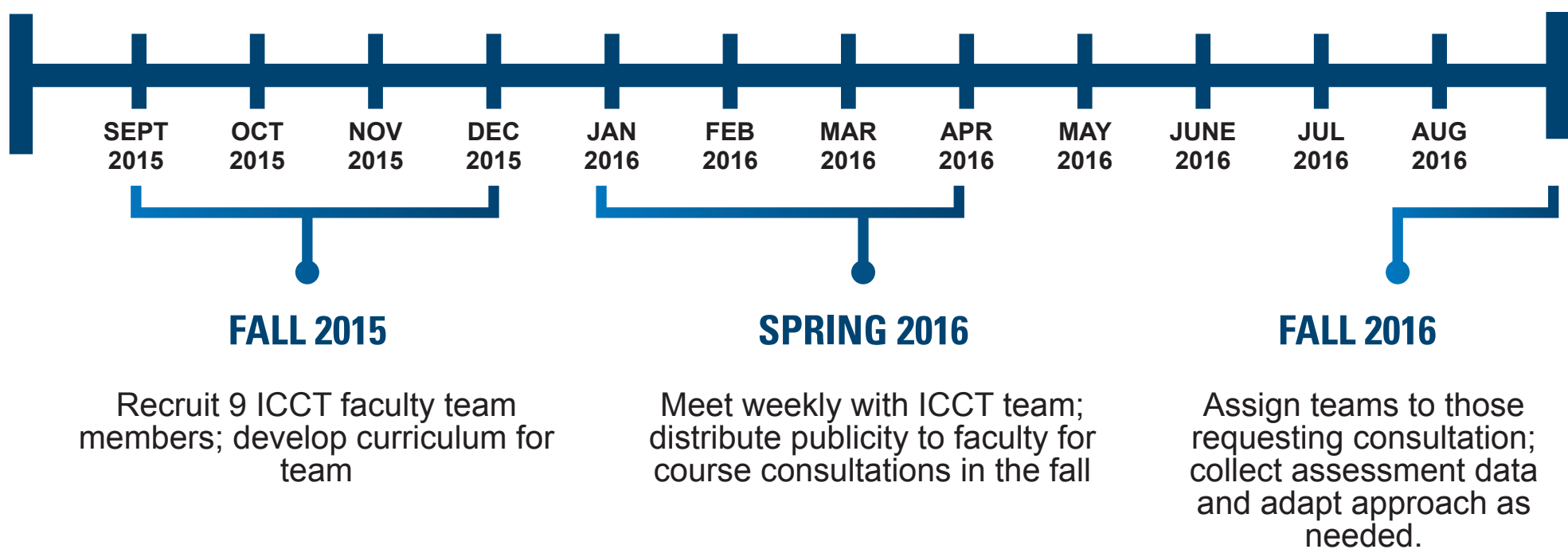
Ignatian Course Consultation Team

Collaborative faculty teams provide assistance in improving the pedagogical and Ignatian effectiveness of courses.

IGNATIAN COURSE CONSULTATION TEAM

The ICCT creates interdisciplinary, faculty-run consulting teams whom any faculty member may access to help assess and improve the (a) overall pedagogical effectiveness and (b) Ignatian character and methodology of her/his courses. The model is based loosely on the Quaker tradition of “clearness committees,” which call into service Friends who assist a fellow Quaker to solve a problem or make a decision. ICCT teams work with faculty who are creating or redesigning syllabi with the goal of high-quality teaching and infusing Ignatian practice and philosophy into their courses.

MILESTONES



Dr. Stephanie Russell – Project Co-coordinator; VP for Mission and Ministry
Dr. C. Shaun Longstreet – Project Co-coordinator; Director, Center for Teaching and Learning

BEYOND BOUNDARIES Pursuit of Academic Excellence for Human Well-being

The ICCT advances Academic Excellence and Human Well-being through the cultivation of effective teaching and course design, as well as the centuries-long tradition of Ignatian pedagogy. Course consultations will have an immediate effect on the lives of students, as faculty implement new methodologies and paradigms in the classroom, and construct new or revised courses. Additionally, the ICCT offers a creative means for Formation of the Mind and the Heart, bringing conversations about mission and the purpose of Jesuit higher education to the core of faculty work. The 9-member ICCT members will be credible interpreters of the university’s mission, and of creative, researched teaching practice.

ABOUT OUR TEAM

Among the foci of the Center for Teaching and Learning is the encouragement of faculty to engage in conversations about teaching, based on contemporary research on teaching, learning, and mentoring. These fruitful, interdisciplinary discussions are made richer in the context of the principles and practices of Jesuit higher education, which undergird Marquette’s mission and place in the American higher education landscape. Thus the partnership of the CTL and the Office of Mission and Ministry offers faculty a practical opportunity to improve their teaching in these two key areas.



MARQUETTE DEMOCRACY LAB

Using Evidence-based
Research To Increase
Civic Engagement

MARQUETTE DEMOCRACY LAB

MDL brings together faculty, students and stakeholders to conduct impact evaluations of local policies, programs and practices. Our goal is to identify interventions that can increase civic engagement, strengthen community connections, and increase neighborhood wellbeing. We work collaboratively with community partners to design studies of mutual interest to scholars, organizations, and policymakers. By connecting social science to local public policy, we hope to build a repository of best practices in civic engagement.

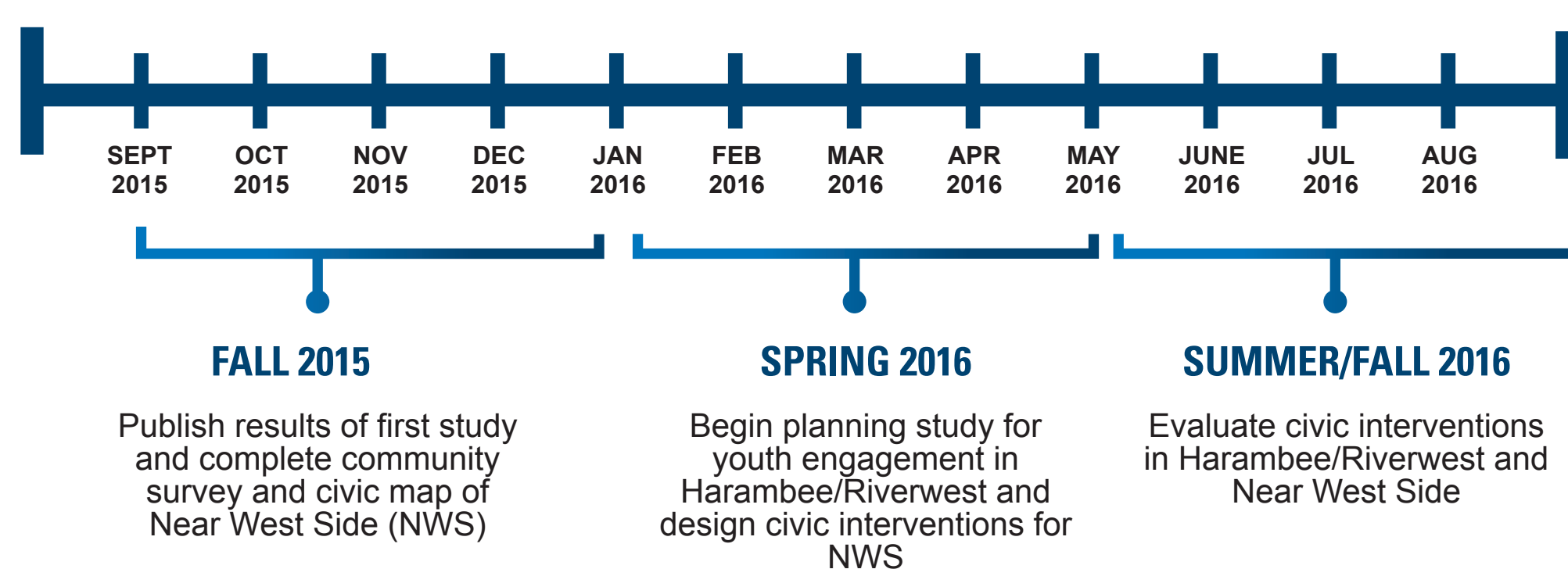


ABOUT OUR TEAM

Dr. Amber Wichowsky, Director
Dan Matthews, Assistant Director

Amber Wichowsky, assistant professor of political science, studies the politics of inequality, particularly the factors that shape socioeconomic disparities in civic engagement. Dan Matthews earned his M.A. in Nonprofit Leadership and Public Administration, with a focus on entrepreneurial leadership and social innovation, in 2015. The proposal for MDL grew out of our work on two pilot evaluations (one conducted in Milwaukee's Harambee neighborhood and the other in collaboration with middle schools in the Milwaukee Archdiocese). Our third study, in partnership with the Near West Side Partners, has just begun.

MILESTONES



BEYOND BOUNDARIES Social Responsibility and Community Engagement

Our studies engage students in collaborative research that prepares them to be more active in civic life. Through our community partnerships, students apply knowledge and gain skills; community stakeholders learn what works and build relationships across and between sectors; and the research community benefits by conducting these studies and replicating them in a variety of contexts. Most critically, we hope MDL provides students with opportunities to live Marquette's mission as we discover and share knowledge in order to serve others.

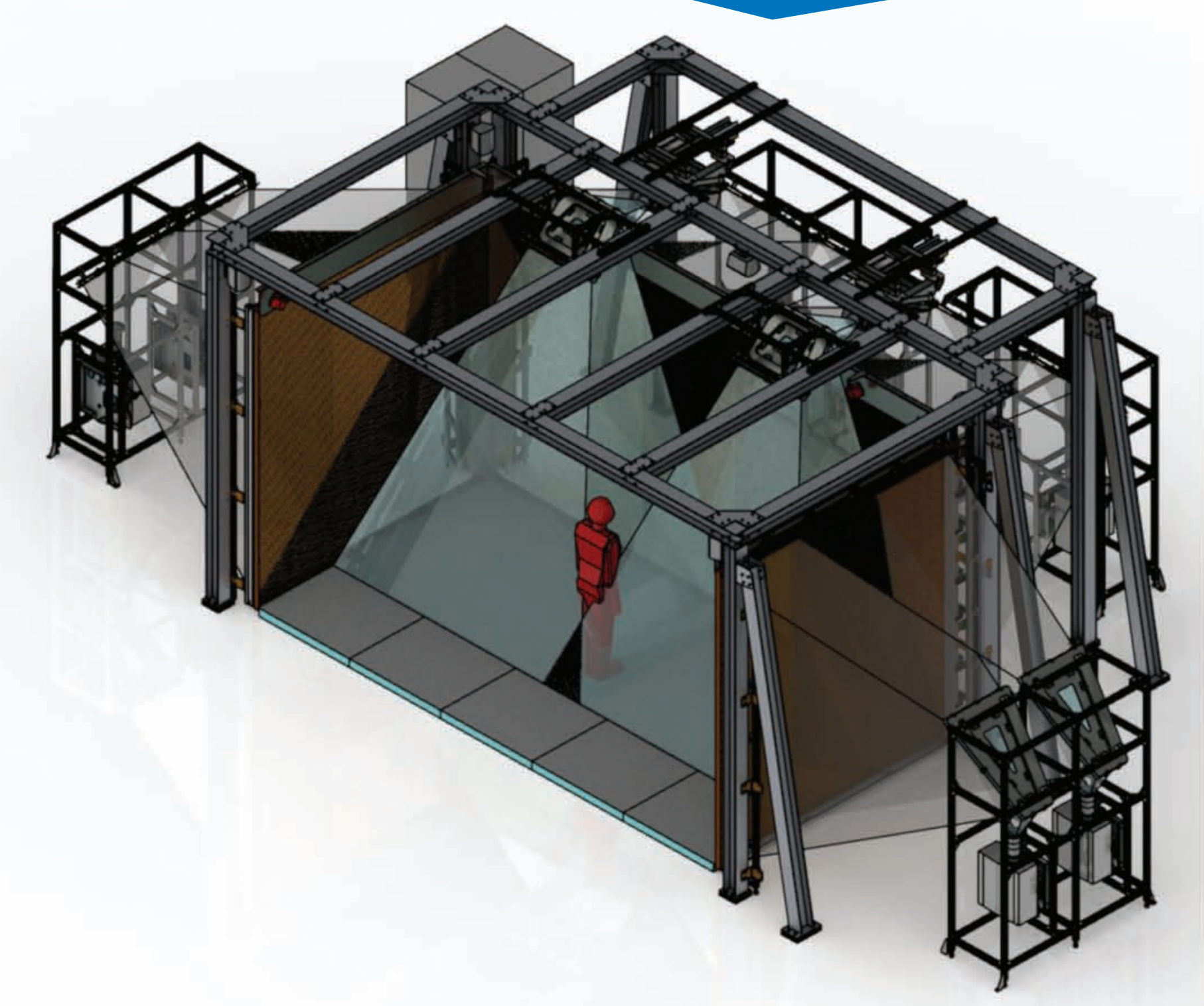


CONTACT INFORMATION: amber.wichowsky@marquette.edu

**Community Collaboration
and Outreach**

PARTNERSHIPS FOR EXCELLENCE THROUGH ADVANCED VISUALIZATION

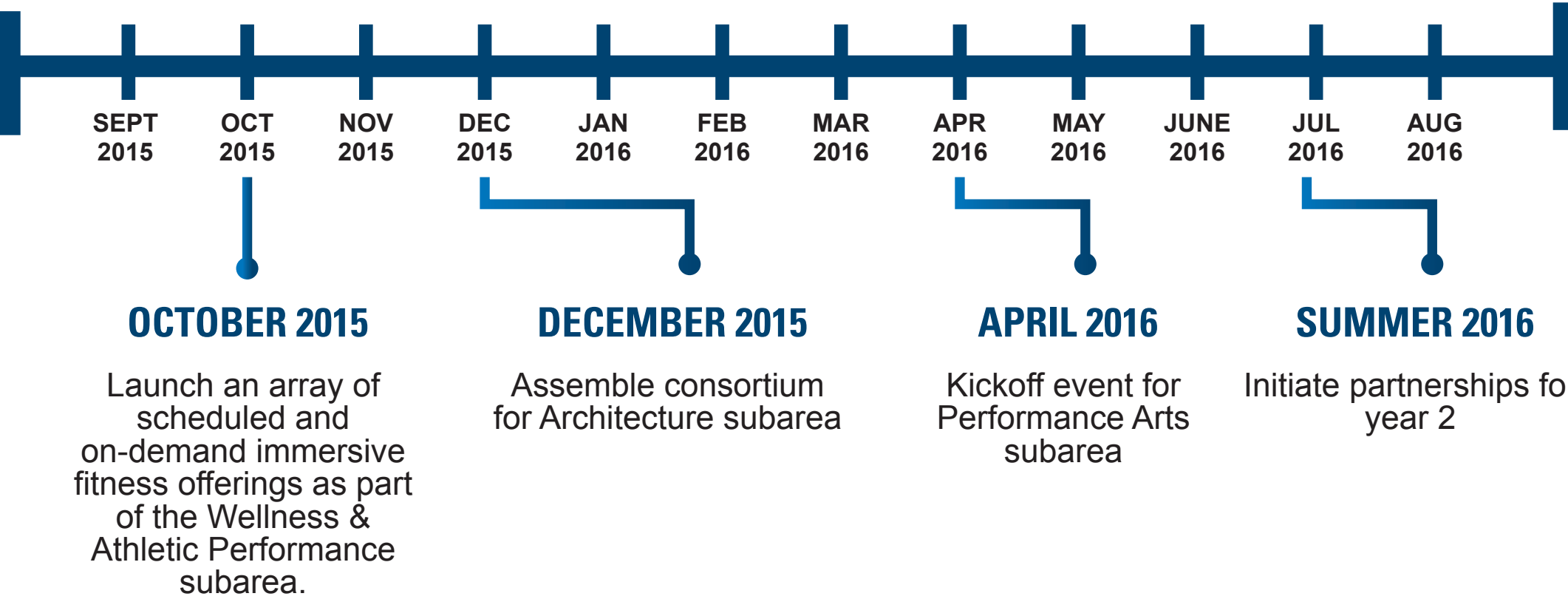
Fostering MARVL's Sustainability By Creating Partnerships And Operating Funding From Industry (Private & Public)



PARTNERSHIPS FOR EXCELLENCE THROUGH ADVANCED VISUALIZATION

The MARquette Visualization Lab is a state-of-the-art, \$1.2M, 1,700 sq ft space with computers, projectors, and other hardware and software to produce immersive (i.e. >180 degree field of view) virtual reality environments (see Figure). The facility can be used to walk through simulated buildings that do not yet exist, show blood flow through an artery in vivid 3D, or simulate the dangerous collapse of a building in an earthquake with no danger to the viewers. This project will focus on creating partnerships in subareas where MARVL research champions have already created impressive content that can now be tailored to industry. Additional subareas will be added each year to broaden opportunities for strategic partnerships in Southeastern Wisconsin. This approach is modeled after the 35-year success of the NSF Industry/University Cooperative Research Center Program that provides a structural template for industry collaboration and funding for university center operations.

MILESTONES



ABOUT OUR TEAM

MARVL has demonstrated benefits for 8 subareas, and research champions have been identified. Many of these individuals are now developing derivative projects with potential industry champions.

- Architecture - Giuseppe Mazzone** (Student-Centered Active Learning Educator, OCCE)
- Computational Fluid Dynamics (CFD) - John LaDisa** (Associate Professor of Biomedical Engineering & MARVL director)
- Hazards, Risk & Resilience - Ting Lin** (Assistant Professor of Civil, Construction & Environmental Engineering)
- Health Care Simulation - Kerry Goeptert** (Associate Dean of Undergraduate Programs & Clinical Associate Professor, College of Nursing)
- Performance Arts - Chester Loeffler-Bell** (Artistic Assistant Professor, Digital Media & Performing Arts, Diederich College of Communication)
- Visual Arts - Lynne Shumow** (Curator of Education & Community Outreach, Haggerty Museum of Art)
- Infrastructure Visualization - Chris Foley** (Professor & Chair, Civil, Construction & Environmental Engineering)
- Wellness & Athletic Performance - Kristin Kipp** (Wellness Coordinator & Adjunct Physical Therapy Instructor)

BEYOND BOUNDARIES Pursuit of Academic Excellence for Human Well-being

This project exemplifies innovative academic excellence informed by the humanities and sciences. MARVL projects are having a dramatic impact on teaching and outreach initiatives also aligned with the theme of community engagement. As a new learning and research technology, MARVL has provided ~1,000 transformative educational experiences. Users from across campus have visited MARVL to address problems, provide engaging community-based programs, and extend knowledge beyond existing boundaries for areas benefiting from immersive visualization. In <2 years, MARVL has proven to be a valuable resource for faculty, staff and students in all engineering departments, Nursing, Theology, Philosophy, Spanish, Communication, as well as the Haggerty Museum of Art and Helfaer Theater.

ME(D)³ PROGRAM: AN IMMERSIVE UNDERGRADUATE MARQUETTE EXPERIENCE IN DRUG DISCOVERY AND DEVELOPMENT

ME(D)³

A Student-directed, Immersive Research Experience In Drug Discovery And Development That Combines High School Outreach With Undergraduate Research.

ME(D)³ is an undergraduate student-directed research program with a high potential to generate publications and patentable research products. The project includes collaboration with the MSOE SMART team program that enables undergraduate and graduate student mentorship of Milwaukee area high school students in protein biochemistry and structural biology. Four MU undergraduate students will participate in the 2016-2017 pilot program that includes immersion in synthetic organic chemistry, biochemistry, structural biology, cell-based assays and animal models.



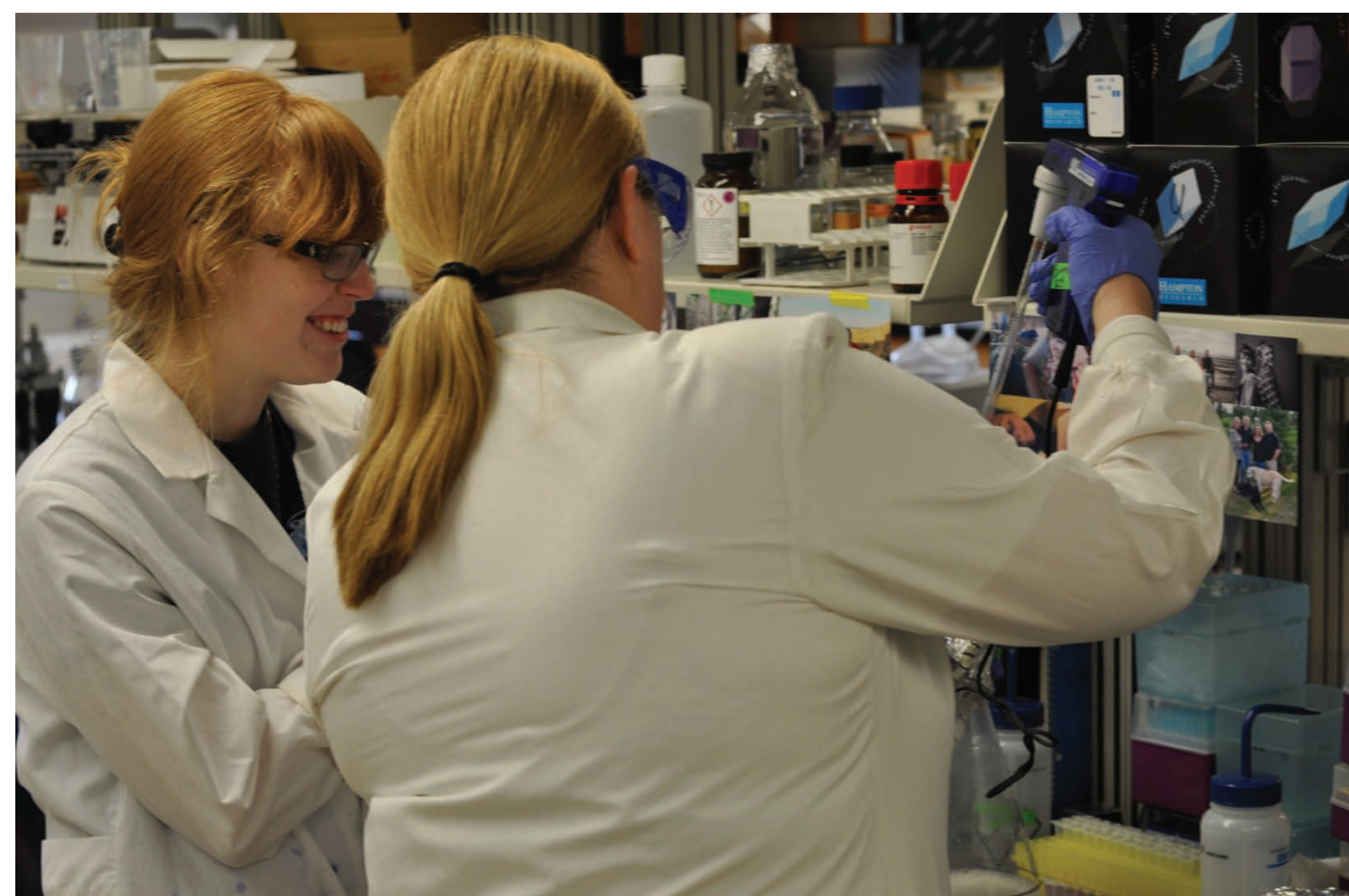
ABOUT OUR TEAM

Martin St. Maurice, Associate Professor. Marquette Biological Sciences. PI and Research Mentor
Chris Dockendorff, Assistant Professor. Marquette Chemistry. Research Mentor
Bill Donaldson, Professor. Marquette Chemistry. Research Mentor
Ed Blumenthal, Associate Professor. Marquette Biological Sciences. Summer research mentor. Fly memory impairment assay development.
Doug Lobner, Associate Professor. Marquette Biomedical Sciences. Summer research mentor.
David Baker, Associate Professor. Marquette Biomedical Sciences. Summer research mentor.
Gina Vogt, Program Director. MSOE SMART team program. Outreach Liaison
Brittney Wyatt, Graduate Student In Biological Sciences. Outreach lab instructor

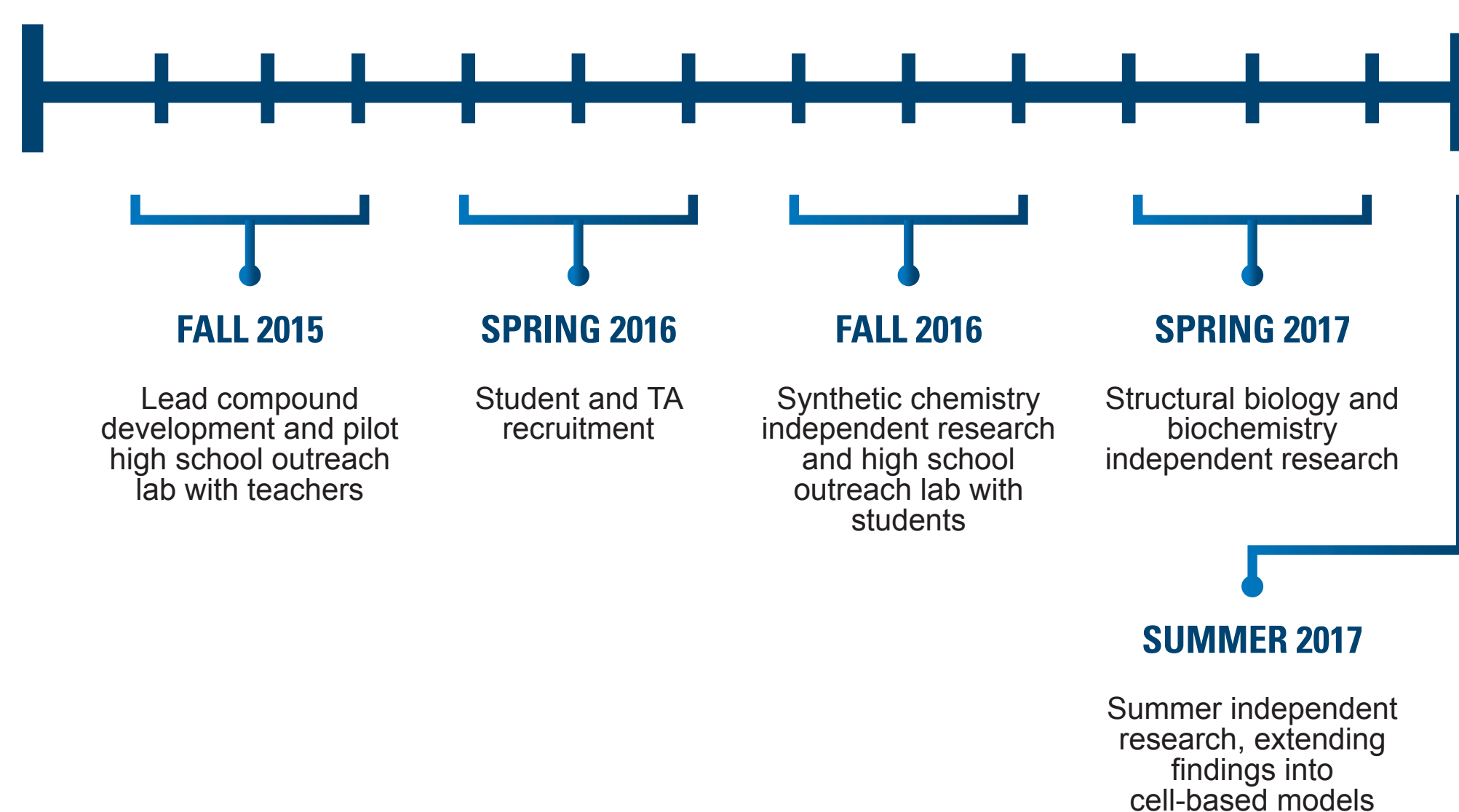
Our team is comprised of faculty members in Biological Sciences, Chemistry and Biomedical Sciences. We have come together to develop a new kind of undergraduate research experience for Marquette, where teams of self-directed undergraduate students experience cutting-edge research across multiple research disciplines (chemistry, biochemistry and cell biology). This model will increase research opportunities for our students while generating high quality publications and patents for our research laboratories.

BEYOND BOUNDARIES Research in Action

This project will develop chemical probes that will serve as valuable research tools and that have therapeutic potential in treating diseases such as type-2 diabetes, obesity and cancer. These products will extend Marquette's intellectual property portfolio and will also serve to advance basic research in key areas of human disease. Combining our existing research program with a small group of undergraduate researchers will advance our basic and applied research programs, will strengthen current and future grant applications and will generate publications and patents that include undergraduate authors.



MILESTONES



CONTACT INFORMATION: E-mail Martin St. Maurice: martin.stmaurice@marquette.edu

Academic Programs and
Student Support



PARC: PROMOTING ASSETS AND REDUCING CRIME

Making The Near West Side An Even Better Place To Live, Work, And Play By Promoting Assets And Reducing Crime.

PARC: PROMOTING ASSETS AND REDUCING CRIME

PARC, an initiative of Near West Side Partners, promotes assets - through engagement with residents, employers, employees, students, and visitors - in the areas of housing, commercial corridor development, safety, and neighborhood identity and branding. In the process, PARC builds community and changes perceptions of the Near West Side. PARC reduces crime using a law enforcement strategy known as community prosecution, which proactively addresses problem places and positively engages residents, businesses, and organizations.



ABOUT OUR TEAM

Patrick Kennelly- Principal Investigator (Director, Marquette University, Center for Peacemaking)
Kelsey Otero- Co-Investigator (Social Innovation Coordinator, Office of Research and Innovation)
Jacqueline Schram- Co-Investigator (Governmental and Community Affairs Associate, Office of Public Affairs)
Rana Altenburg- Vice President, (Office of Public Affairs and Near West Side Partners)
Daniel Bergen- Interim Assistant Vice President (Student Affairs).
Anthony Pennington Cross- Chair and Professor (Business Finance)
Keith Stanley- Executive Director (Avenues West Association/BID 10, Near West Side Partners)
Sherri Walker, Program Coordinator (Center for Peacemaking)
Amber Wichowsky- Assistant Professor (Political Science) and Director of Marquette Democracy Lab

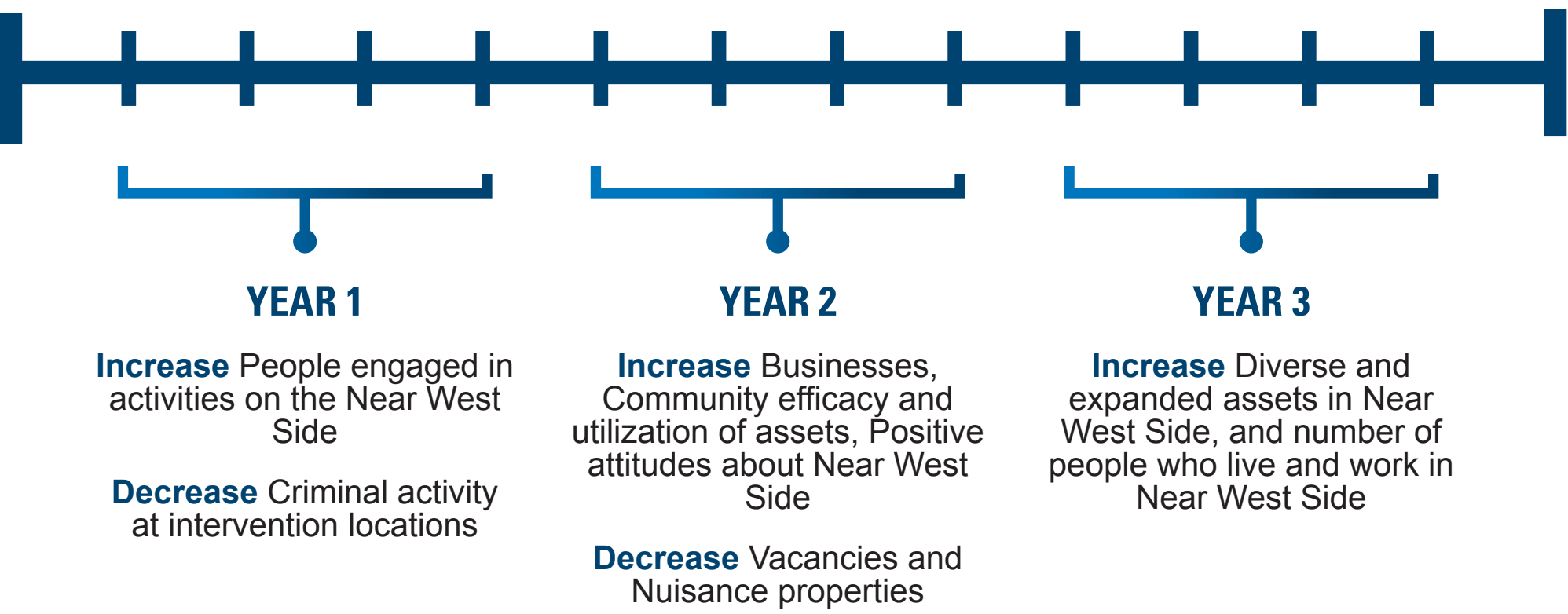
Partners: Datashare, District Attorney, Milwaukee Police Department, Marquette University Police Department, Safe & Sound

PARC is rooted in the idea that the Near West Side has tremendous assets and the challenges can be solved. PARC relies on collaboration of campus and community partners to address specific opportunities and issues. PARC's partners include the Center for Peacemaking, College of Arts & Science, College of Business, Datashare, Democracy Lab, District Attorney, Marquette University Police Department, Milwaukee Police Department, Off-Campus Housing, Public Affairs, Safe & Sound, Social Innovation, and Student Affairs.

BEYOND BOUNDARIES Research in Action

PARC builds on Marquette's mission, strategic plan, and guiding values to engage in key social issues in our community, bringing the university's intellectual resources, students, and organizational capacity to serve others. PARC engages Marquette's faculty, staff and students to pursue research in action to transform the community. Students and faculty will contribute to interdisciplinary community based research projects to address neighborhood challenges while assembling residents, businesses, government agencies, nonprofits to invest in the community.

MILESTONES





SCAN QR CODE FOR NEAR WEST SIDE PARTNERS WEB PAGE

<http://www.nearwestsidemke.org/parc/>



CREATE SUSTAINABLE PSYCHOLOGY INTERNSHIP AND IMPROVE EFFECTIVENESS OF SELECT MILWAUKEE NON-PROFIT AGENCIES

Establish Sustainable Psychology Department Internship And Work With Non-profits On Effective Use Of Interns.

This project will result in a sustainable internship program for Marquette’s Psychology Department. Internships are a demonstrated high-impact learning experience as they provide students with opportunities to integrate self-reflection, academic pedagogy, and off-campus field experience. Yet many hosting agencies, particularly non-profits, lack the resources (time, training, personnel) required to effectively use interns to benefit the organization. So we also provide workshops and monitor the internship to assure that reciprocal benefit occurs.

MILESTONES

- Summer 2015** Choose five Project Return Intern Mentors and introduce them to the internship model. Match 5 MU interns to these mentors.
- Academic Year 2015-16** Direct Project Return interns. Provide formal and informal direction to non-profit. Reach out to additional potential sites.
- Summer 2016** Develop assessment tools. Choose additional sites and intern mentors.
- Academic Year 2016-17** Pilot assessment tools. Meet interns weekly and provide guidance to mentors and organizations.
- Summer, 2017** Finalize assessment tools. Add additional sites and prepare intern mentors.
- Fall 2017** Sustainable internship program begins.



Ed de St. Aubin, Innovator

Partners: MU students and Milwaukee community leaders (Executive Directors of Non-Profits)



ABOUT OUR TEAM

Both the need for an internship program in the Psychology department and my involvement with many Milwaukee non-profits combined to result in this project. I felt positioned to make the intern-agency relationship a truly reciprocal one. If done correctly, this project should result in three sustainable realities: 1) A great way for the University to stay present and meaningful in local social justice issues; 2) A high impact learning experience for students; and, 3) Non-profits that more efficiently serve constituents and meet their missions.



BEYOND BOUNDARIES Formation of the Mind and Heart

This project is thickly aligned with the social justice mission of Marquette University. In terms of Formation of the Mind and Heart, it provides a high impact real world experience for our students. It also aligns with Social Responsibility and Community Engagement for the Director spends considerable time at these non-profits helping them make effective use of interns. Finally, Pursuit of Academic Excellence for Human Well-being is achieved as student interns, agency mentors, and the director interact in ways that significantly enhance the academic experience of the student and more effectively serve the client base of the various internship sites.



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WWW.MARQUETTE.EDU/PSYC/FACSTAFF_DESTAUBIN.SHTML



MILWAUKEE POVERTY DATABASE

Creating A Searchable,
Sortable Database Of
Information On Poverty
Issues In Milwaukee

MILWAUKEE POVERTY DATABASE

The database will be free, comprehensive and publicly available. Data would include unemployment and poverty rates; incarceration rates; health statistics including morbidity and mortality, lead poisoning, substance abuse and asthma; and education statistics such as student achievement, dropout and truancy rates. The database could stimulate reporting and community action that would drive progress and improve lives in the central city. It also would inform student work and academic research.



SCAN QR CODE FOR
WWW.MILWAUKEENNS.ORG

For previous coverage of MKE Poverty visit:
<http://milwaukeeenns.org/poverty-in-milwaukee/>



ABOUT OUR TEAM

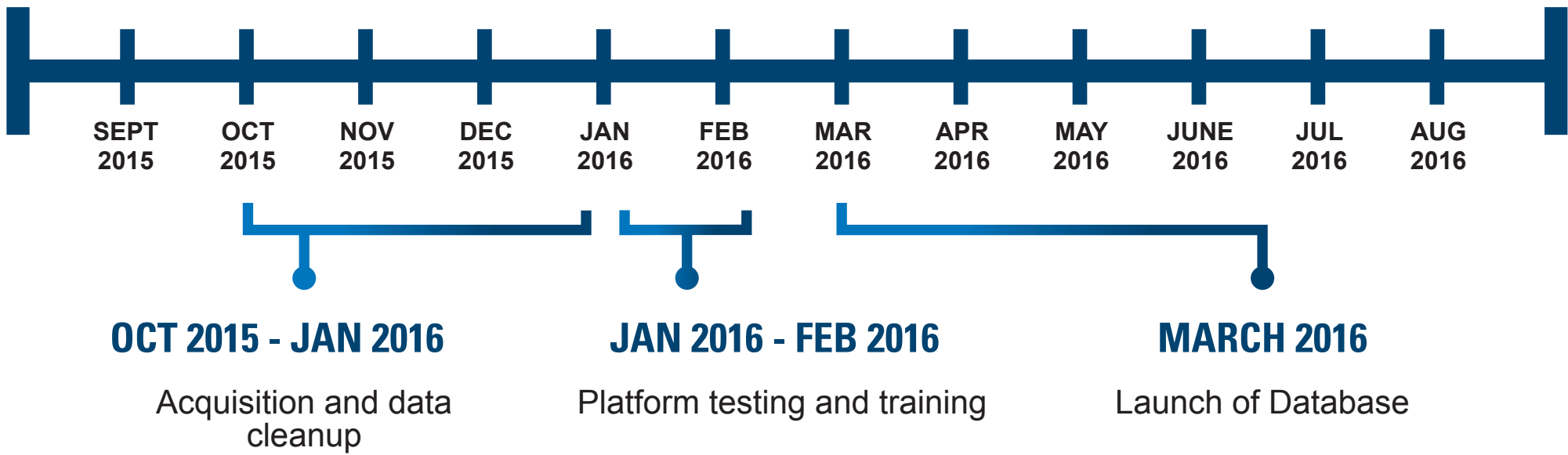
Milwaukee Neighborhood News Service recognized the need for easy access to local data related to poverty, and applied for and won a competitive grant from the Online News Association, a national organization. The original team comprised journalists, Diederich faculty, community representatives and data experts. Matt Richardson, CEO of SmartWave Consulting, brings expertise in open government technology and project management.

Dr. John Pauly: Diederich College of Communication, journalism department chair; lead project advisor
Sharon McGowan: Diederich faculty; editor, Milwaukee Neighborhood News Service (NNS)
Matt Richardson: Milwaukee Data Initiative; technology consultant
James Brust: Wakerly Media Lab director; technology consultant
Herbert Lowe: Diederich faculty; project advisor (not pictured)



Photos by Milwaukee Neighborhood News Service

MILESTONES



BEYOND BOUNDARIES Social Responsibility and Community Engagement

Community organizations, students, researchers and others will have access to information they need to counter the pervasive notion that poverty is permanent and that nothing can be done to alleviate it. Users will be able to demonstrate that public and private policies and decisions affect the extent and degree of poverty. The data will inform the work of community organizations and individuals pursuing social justice in the city's poorest neighborhoods. NNS and other news outlets will produce stories based on the data, making the wider community more knowledgeable about these issues.



PROJECT FRESHWATER

Introducing Li/fg Students To Freshwater Biology, Policy, Law, And The Technologies That Sustain This Valuable Resource.

PROJECT FRESHWATER

Project Freshwater explores freshwater usage/sustainability and technologies via hydrological cycle inquiries, water quality assessments and conservation practices, population and water usage studies, water law and social policies assessment, engineering investigations, and water as image/metaphor in the culture and arts. A day aboard the Denis Sullivan, water collection/evaluation of Milwaukee's rivers, a tour of the wastewater treatment facilities, and conversations with innovators dedicated to improving water quality and usage embody the dynamic learning experience.

MILESTONES

- 1. May 2015:** Develop Project Freshwater curriculum and consult with University/community partners
- 2. June-July 2015, 2016, 2017:** Offer Project Freshwater to rising senior cohort of Upward Bound students; Update curriculum
- 3. September-May 2016, 2017:** Meet with University/community partners and seek new partners and funding sources
- 4. September 2017-May 2018:** Prepare overall evaluation and realize new sources of support and funding



Aboard the Denis Sullivan learning about nautical history and lake ecology

ABOUT OUR TEAM

T Ullrich, Associate Director, Educational Opportunity Program
Margaret Cinto, Ph.D. Student, College of Education, EOP Pre-College Curriculum Specialist
Science, Math, and Social Innovation Educators
Professional Engineers
Marquette University Graduate Students

Project Freshwater is educators, team-teaching in partnership with MU's College of Engineering, Water Quality Center, and Law School, the Global Water Center, and Veolia Water, offering a project-based investigation into water science, law, and engineering, connecting the real world and its knowledge makers to students' personal college/career aspirations. In the spirit of Marquette's response to racial inequality with the founding of EOP, the team seeks to help mitigate the persistent socio-economic and racial barriers our students face to life-affirming careers and futures..

BEYOND BOUNDARIES Sustainability of Valuable Resources

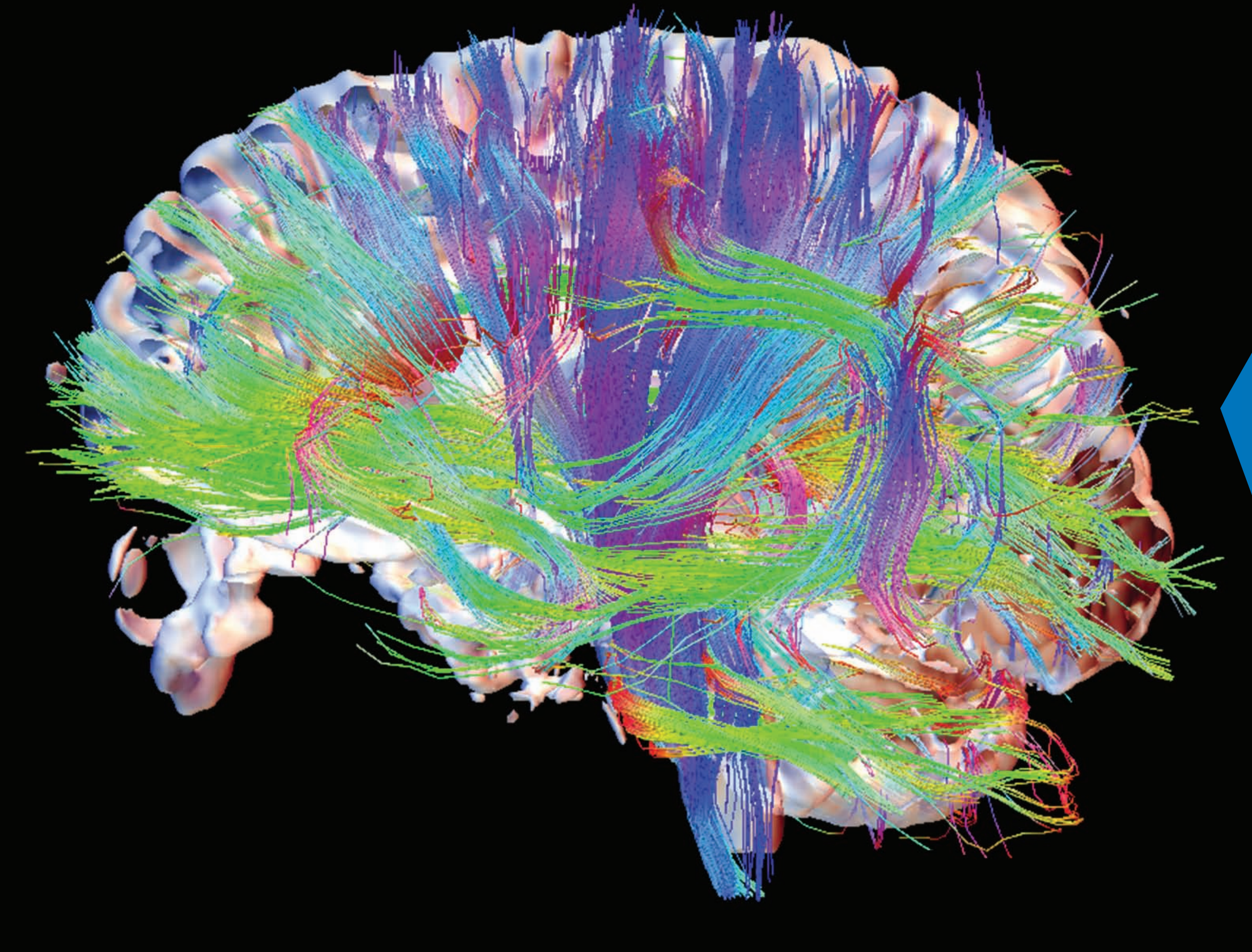
Social Responsibility and Community Engagement

Pursuit of Academic Excellence for Human Well Being

Project Freshwater advances Marquette's mission to serve others, to foster personal/professional excellence, and to discover and share knowledge. Innovative learning experiences promote academic excellence for human well-being. Connecting Milwaukee's natural and intellectual resources to college/career information and the ways intellectual pursuits make a difference demonstrate social responsibility and community engagement. Project Freshwater students see education in practice, advancing high school completion, college graduation, and fulfilling lives that position young men and women to be stewards for the community, outcomes that promote sustainability of valuable resources.



In the lab creating a water filtration system

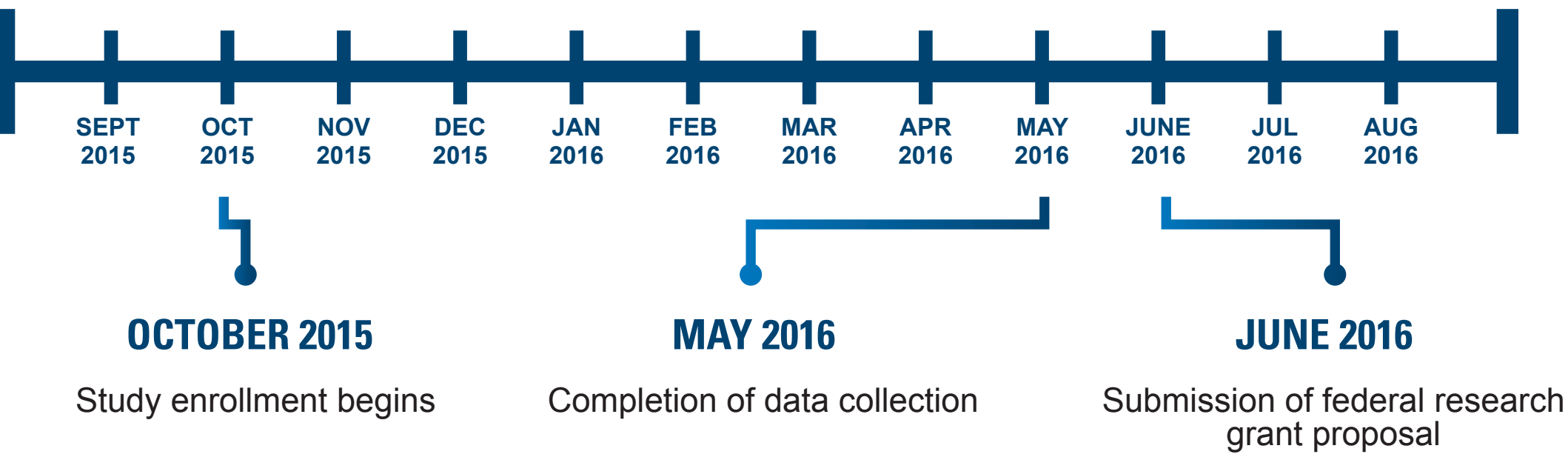


RESEARCH PROGRAM OF THE STROKE REHABILITATION CENTER OF SOUTHEAST WISCONSIN

Catalyzing The Research Program Of The Stroke Rehabilitation Center.

This project will develop a core research program for the Stroke Rehabilitation Center of Southeast Wisconsin, a multi-department, multi-institutional center aimed at developing stroke rehabilitation research, enhancing stroke education, improving clinical services and engaging the community. The proposed project targets the theme: Neuroimaging for Stroke Rehabilitation. New imaging tools for measuring function of the brain will be developed and applied in people with acute stroke to predict clinical outcomes and guide therapy.

MILESTONES



ABOUT OUR TEAM

Brian D. Schmit, PhD, Department of Biomedical Engineering, Marquette University, Center Co-Director
John R. McGuire, MD, Department of Physical Medicine and Rehabilitation, Medical College of Wisconsin, Center Co-Director
Scott A Beardsley, PhD, Department of Biomedical Engineering, Marquette University, Project Leader
Karin Goodfriend, MD, Department of Physical Medicine and Rehabilitation, Medical College of Wisconsin, Project Leader
Sheila Schindler-Ivens, PhD, Department of Physical Therapy, Marquette University, Project Leader
Nicholas Huegel, Graduate Research Assistant
Benjamin Kalinosky, Graduate Research Assistant

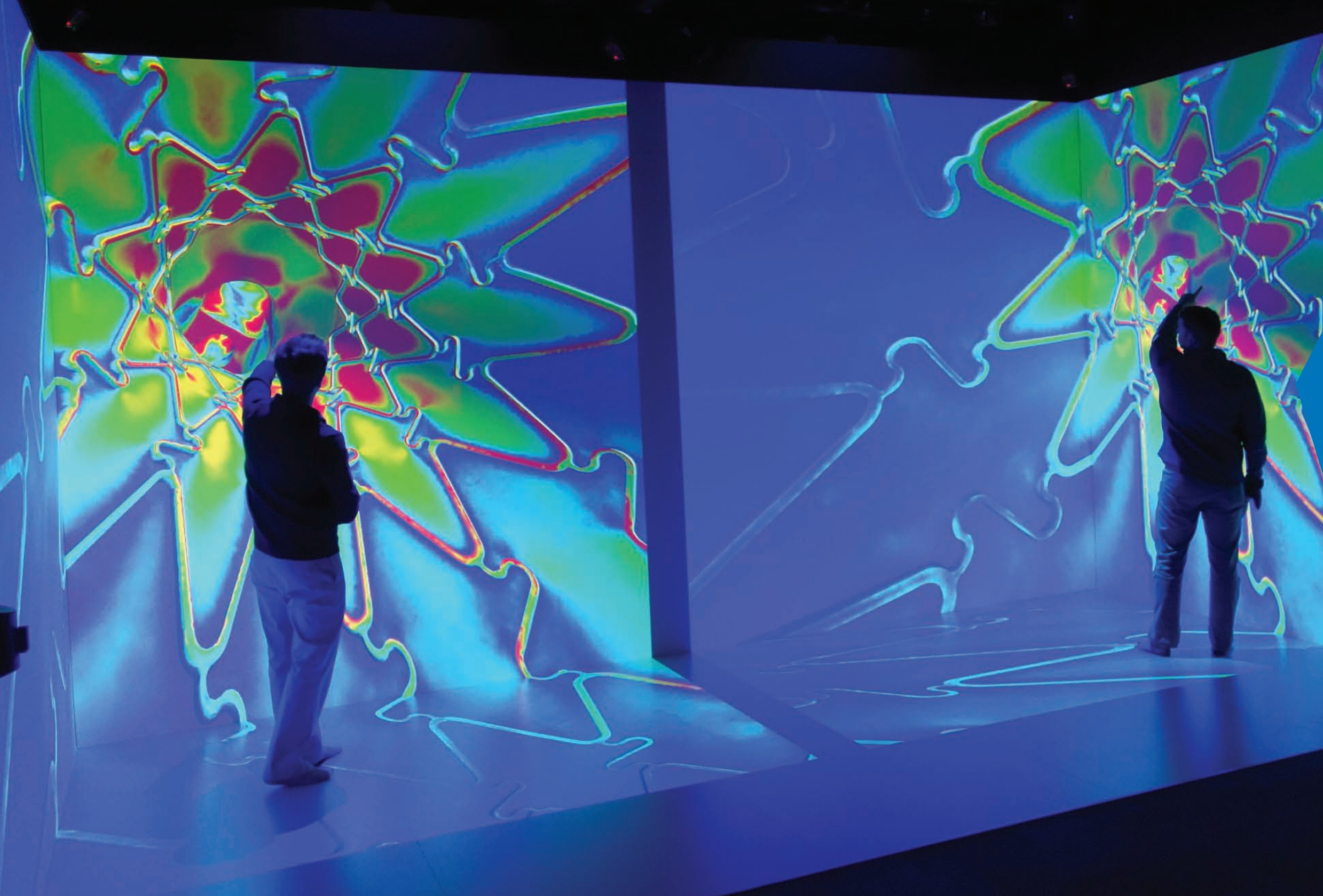
The current partners in the SRC include the Departments of Physical Therapy and Biomedical Engineering at Marquette University and Physical Medicine and Rehabilitation at the Medical College of Wisconsin. This one-year catalyst project will establish key collaborations across these departments and institutions through innovative, high impact research studies.

BEYOND BOUNDARIES Research in Action

This proposal strongly supports the strategic plan for research because it builds on strengths of Marquette and helps to establish collaborative research programs across departments and with the Medical College of Wisconsin. The proposed activities engage active research faculty at Marquette University in both Biomedical Engineering and Physical Therapy. These departments are poised to take leadership in this research area and the program builds important collaborations with clinical faculty at the Medical College of Wisconsin. This combination of expertise in technology, therapy and clinical medicine is essential to developing new therapeutic strategies to aid stroke survivors in our community.

Pursuit of Academic Excellence for Human Well-Being:

The Stroke Rehabilitation Center will draw high quality students and faculty interested in conducting research that impacts human lives. As part of this project, Marquette students will have the opportunity to be trained by Medical College of Wisconsin clinical and research faculty. The research and scholarly activity produced through the Stroke Rehabilitation Center will ultimately improve the academic reputation of the university while simultaneously impacting the quality of life of stroke survivors in our community.



INNOVATIONS IN TEACHING AND RESEARCH: TECHNOLOGY DAY AT MARQUETTE

TECHNOLOGY DAY AT MARQUETTE

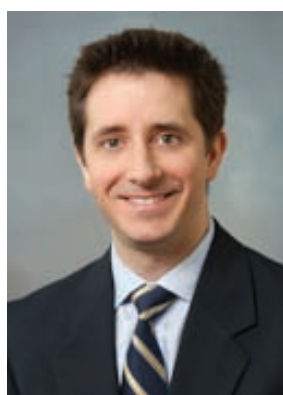
Demonstrating The Innovative Use Of Technology In Teaching And Research At Marquette University, To Encourage Collaboration Among Peers, And To Initiate A Dialogue Regarding Academic Technology Within The Institution.

The Committee on Academic Technology plans to host this event to promote and encourage academic technology. The goals of the event are 1) to demonstrate the innovative use of technology in teaching and research at Marquette University; 2) to encourage collaboration among peers; and 3) to initiate a dialogue regarding academic technology within the institution.

This year, the day included opening remarks from Marquette University President Michael R. Lovell, a keynote speaker, Dr. Bryan Alexander, Lightning Talks from Marquette faculty, Faculty panel discussions, and tours of campus technology labs and facilities, including the Opus College of Engineering visualization lab.

The keynote speaker is a futurist, researcher, writer, speaker, consultant and teacher, working in the field of how technology transforms education. He consults throughout higher education in the U.S. and abroad on topics including mobile devices, gaming, pedagogy, scholarly communication, forecasting, and the future of academia.

The goal of the Lightning Talks was to present a single topic quickly and clearly. Presentations were centered on innovative teaching and research practices; they were interesting, engaging and entertaining. The faculty presenters were Monica Adya, Associate Professor of Management; Eugenia Afinoguénova, Professor of Spanish, Foreign Languages and Literatures; Lisa Koenig, BChD, DDS, MS, Professor and Predoctoral Program Director for Oral Medicine and Oral Radiology; and John LaDisa, Ph.D., Associate Professor of Biomedical Engineering.



The purpose of faculty panel discussions was to provide an opportunity for dialogue about the technology presented and academic technology innovations in general. The keynote speaker also participates in the panel discussion.

The tours of technology labs and facilities provided another opportunity for the Marquette community to see existing use of technology and consider new ways to implement technology for academic purposes. The four tours sites in 2015 were College of Nursing Wheaton Franciscan Healthcare Center for Clinical Simulation; College of Engineering Visualization Lab; School of Dentistry Preclinical Simulation Laboratory; and Center for Teaching and Learning International Collaborative Learning Classroom.

The Innovation Fund covered some of the expenses for this year's event.

MILESTONES

This project was completed on September 15, 2015

We began planning in September 2014.
Secured the Keynote speaker in December 2014.
Solicited and selected faculty presenters from February 2015 to April 2015.
Worked with faculty presenters in July through September to polish and refine presentations.
Coordinated Tours with 4 colleges and departments.
Event was held on September 15, 2015

ABOUT OUR TEAM

Our team is a subset of the Committee on Academic Technology. We have adopted this project to promote innovative use of technology at the university. Currently, there is no forum or showcase to highlight innovative and excellent use of academic technology. By providing this high-profile event, we expect to inspire and encourage additional technological innovations within the Marquette community.

Rev. Michael Class, S.J. A member of the Planning Committee, coordinator of campus technology tours for the day, and general responsibilities for facilitation of day's events.
Ms. Elizabeth Gibes A member of the Planning Committee
Ms. Kathy Lang A member of the Planning Committee, coordinate arrangements for keynote speaker
Mr. Patrick Loftis Co-chair of the Planning Committee
Dr. Gary Meyer A member of the Planning Committee
Mr. G. Jon Pray A member of the Planning Committee, prepare web site for solicitation of speakers and announcement of event
Dr. Kevin Rich A member of the planning committee
Dr. Heidi Schweizer A member of the Planning Committee
Mrs. Janice Welburn A member of the Planning Committee, organize event space and catering
Mr. Tom Wirtz Co-chair of the Planning Committee



SCAN QR CODE FOR FACULTY TECH DAY WEB PAGE

BEYOND BOUNDARIES

Our project is aligned with two strategic themes. One objective of **“PURSUIT OF ACADEMIC EXCELLENCE FOR HUMAN WELL-BEING”** is to develop new learning and research technologies. Our event accomplishes this objective in a few ways. First, the event establishes a campus dialogue about innovative and exciting academic technology. Further, as a showcase of select innovative technology, the event creates a culture that promotes the use of technology to improve academic learning and research. Finally, through the keynote speaker, the Marquette faculty will hear about many innovative trends.

An objective of **“ENHANCEMENT OF ORGANIZATIONAL EFFECTIVENESS”** is to foster personal growth and development through continuous individual improvement. This event fosters personal growth and development by demonstrating technological excellence available at Marquette, by providing a network of peers who have interest and experience applying technology to improve academic learning and research.



THE COMMONS

An Innovative
Entrepreneurial Skills
Accelerator Program

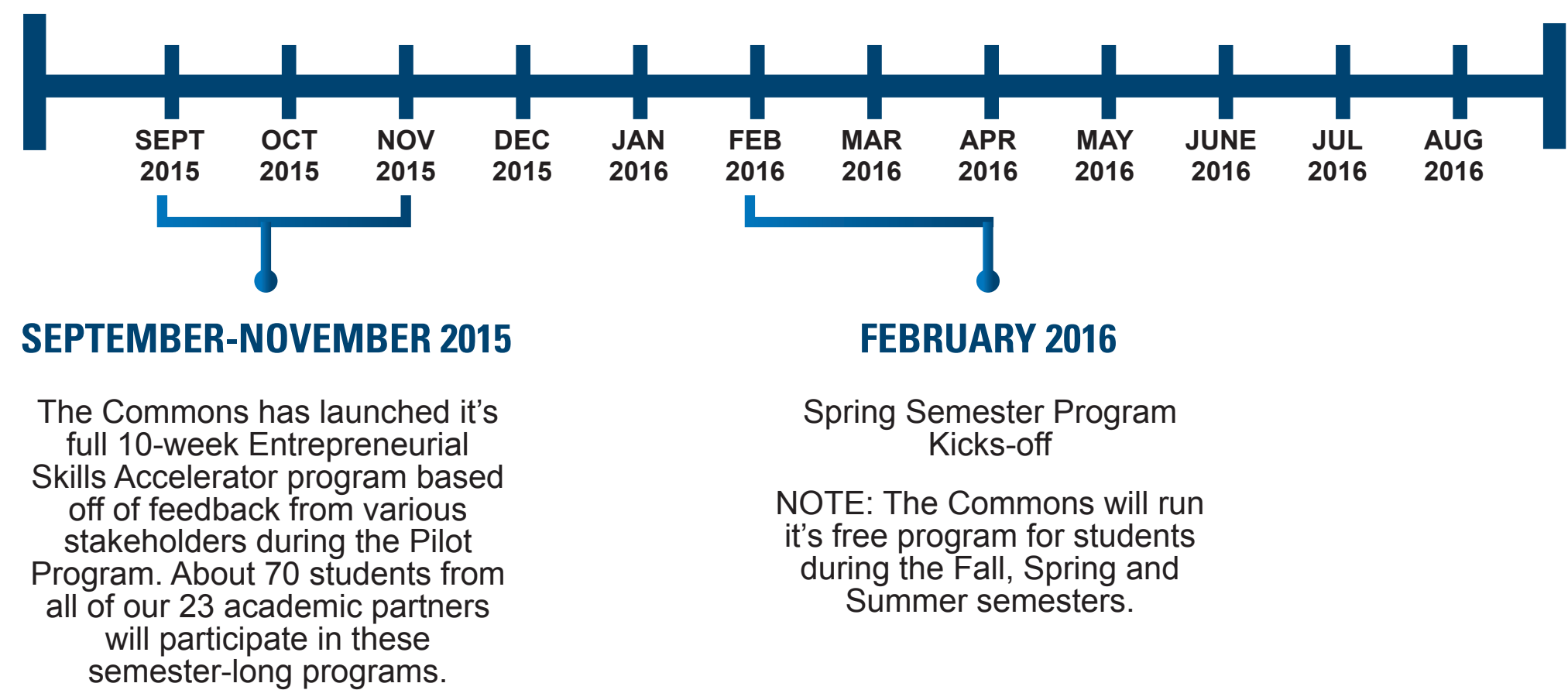


The Commons Aims To Attract, Develop And Retain Southeast Wisconsin's Next Generation Of Entrepreneurs And Corporate Innovators Through Our Innovative Entrepreneurial Skills Accelerator Program That Helps Students Build Their Professional Networks And Launch Their Careers.

For the students of Southeast Wisconsin's 23 colleges and universities, The Commons is an opportunity to get firmly planted in our region's growing innovation economy. Students will put their skills to the test with real-world projects, work with talented peers. Along the way students given mentorship / networking opportunities that are going to be game-changers for their career paths. For the region's academic and business community, this is an unparalleled level of collaboration, creating a vast web of connections and opportunity to retain our best and brightest collegiate students. Together, we are reshaping the economic landscape of Southeast Wisconsin.

Join The Commons in attracting, developing and retaining the brightest entrepreneurial minds in Southeast Wisconsin.

MILESTONES



SEPTEMBER-NOVEMBER 2015

The Commons has launched its full 10-week Entrepreneurial Skills Accelerator program based off of feedback from various stakeholders during the Pilot Program. About 70 students from all of our 23 academic partners will participate in these semester-long programs.

FEBRUARY 2016

Spring Semester Program Kicks-off

NOTE: The Commons will run its free program for students during the Fall, Spring and Summer semesters.



ABOUT OUR TEAM

Matthew J. Cordio, Co-founder
Michael Hostad, Co-founder
Joe Poeschl, Co-founder
Charles P. Ries, Co-founder
David Zachman, Co-founder & Board Chairman
Alicia Boknevit, Program Operations
Maggie Bryde, Program Operations

The Commons was founded by Marquette Alum and entrepreneurs Matthew Cordio (Bus Ad '11) and Joe Poeschl (Comm '08) of Startup Milwaukee, Charles Ries of Marquette University, Michael Hostad of the Greater Milwaukee Committee and David Zachman, a retired healthcare executive. The Commons team is passionate about building a program that has an impact on the creation of new ventures and the retention of bright talent here in Wisconsin.

BEYOND BOUNDARIES Social Responsibility and Community Engagement

We have all seen the headlines lately, Wisconsin ranks 50th in the country in entrepreneurial activity according to the Kauffman Foundation, CEO's are considering relocating or growing operations outside of the state because they can't find the innovative talent needed to run their businesses. Now is the time to take action, step up and develop solutions to help reverse these trends.

The Commons is focused on developing a program that attracts, develops and retains the brightest college students in Wisconsin, here in Wisconsin. This truly unprecedented collaboration among the business, academic and entrepreneurial communities has a chance to make an impact.



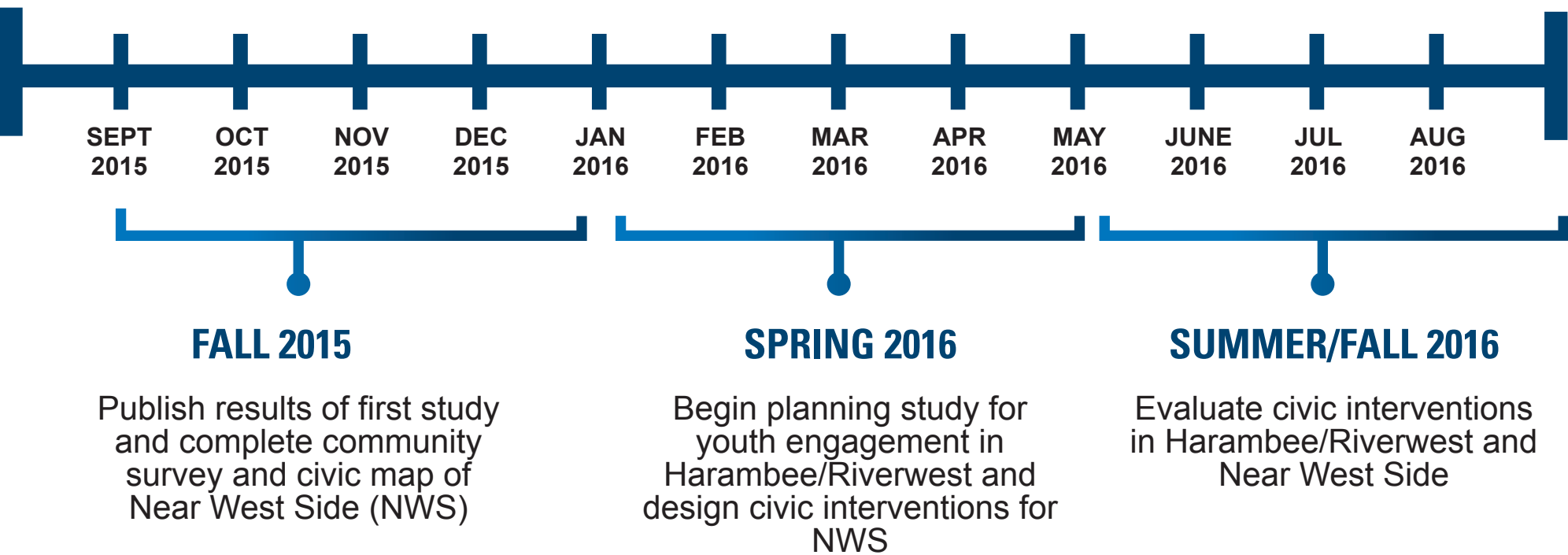


An Engaged Community Partnership to Promote Interpersonal Peace Among Young People in Milwaukee

We Aim To Cultivate A Relationship Between Milwaukee Public Theatre, Marquette University’s College Of Nursing And Center For Peacemaking, And Young People From Milwaukee To Promote Youth Development And Interpersonal Peace By Engaging In Arts-based, Community-based Participatory Action Research Projects.

Our first CBPR project, Afro-Latino Youth Performance Collaboration, is an Afro-Latino percussion-based performing arts troupe involving students from Bruce Guadalupe Community School and Milwaukee High School of the Arts. This project teaches applied ethnomusicology techniques and peace skills to build youth leadership, assertive communication and collaboration skills, self-respect and cultural identity exploration through Afro-Latino musical culture.

MILESTONES



BEYOND BOUNDARIES Social Responsibility and Community Engagement

This proposal fits two themes of the strategic plan namely **research in action** and **social responsibility and community engagement**. Our innovative community academic partnership provides a meaningful and mutually beneficial way for community partners including professionals and youth and their families and MU students and faculty to get to know each other and to work on projects that enhance the community. In our partnership, young people will be key players in identifying and prioritizing strengths and struggles. They will have active roles in development of CBPR projects that generate community leadership, afford direct benefits to the participants, address pressing issues, and promote solidarity with young people and communities in Milwaukee.



ABOUT OUR TEAM

Barry Applewhite, Milwaukee High School of the Arts (MHSa) Principal
Ruth Ann Belknap, MUCN Researcher/ Evaluator, Innovation Grant
Johanna De Los Santos, Bruce Guadalupe Project Coordinator, Proyecto Bembe Co-Founding Director
Aneisha Denson, MHSa Artistic Coordinator
Kristin Haglund, Marquette College of Nursing (MUCN) Research/Evaluator, Innovation Grant
Meaghan Heinrich, Wisconsin Conservatory of Music (WCM) Community Outreach
Ya Ya Kambaye, Xalaat Africa Founder & Musical Director
Patrick Kennelly, MU Center for Peacemaking Director
Roxy Kess, Xalaat Africa Director, MHSa Dance Instructor, & Marquette University (MU) Lecturer
Barbara Leigh, Milwaukee Public Theater (MPT) Artistic/Producing Director
Cecilio Negron, Proyecto Bembe Co-Founding Director & Master Latin Percussionist WCM & MPT

The impetus for the cultivation of this team arises from shared concern and deep commitment to the advancement of peace, health and human flourishing. We intend that this partnership will build trust between the community and university in order to facilitate participation of young people who are vulnerable to experiences of violence and are difficult to access. We bring together a team with specifically relevant and complementary experience.



SCAN FOR MILWAUKEE PUBLIC THEATER WEBPAGE



SCAN FOR PROYECTO BEMBE WEB PAGE



DEVELOPMENT OF MARQUETTE'S UNIVERSITY HONORS PROGRAM

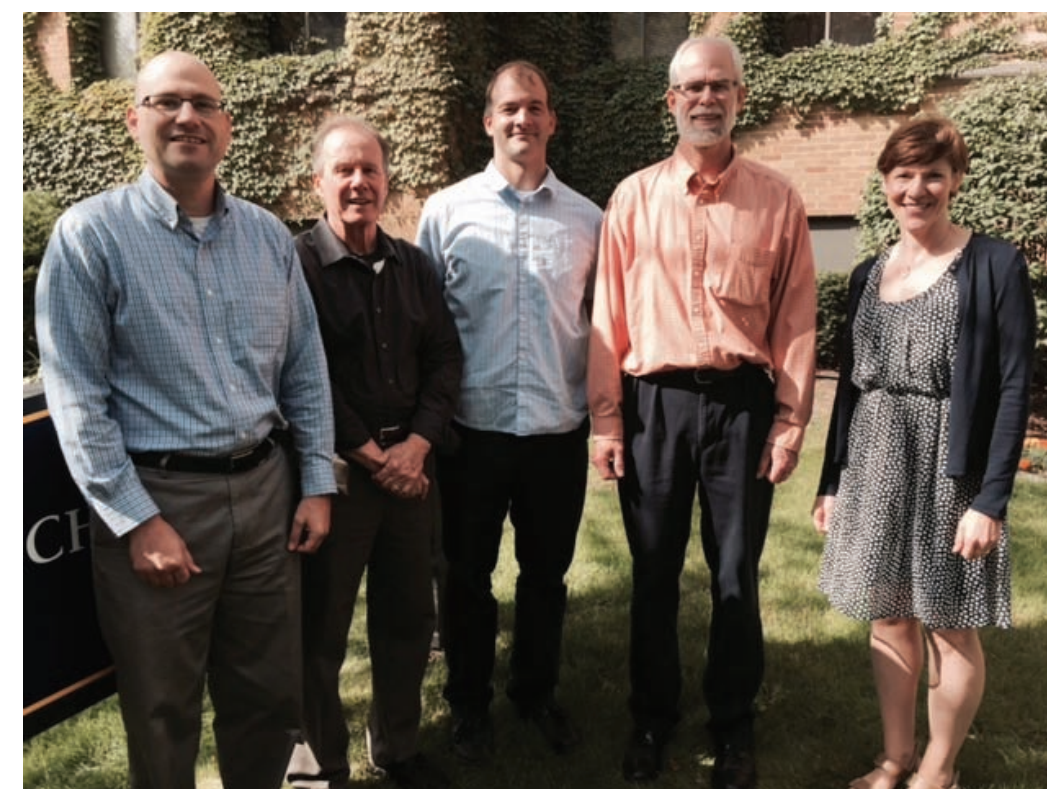
Building Resources, Opportunities, And Collaboration For Academic Excellence Across Marquette

DEVELOPMENT OF MARQUETTE'S UNIVERSITY HONORS PROGRAM

Over the three years of the project, we will build an integrated, sequenced Honors Core focused on interdisciplinary study not just of humanities but also of social and natural sciences. As a capstone to this Core, we will develop and pilot a new, interdisciplinary Honors junior/senior seminar, focused each semester on a major global issue and team-taught by three faculty from different areas. We will also pilot new Honors in the Field programs, developed and administered by individual departments and colleges in partnership with the UHP and focusing on research and interdisciplinarity.

MILESTONES

1. **JAN. 2016:** Submit new Honors Core Plan and Honors in the Majors Guidelines and Requirements to the University for approval
2. **MAY 2016:** Award new Honors Summer Research Fellowships and Honors Study-Aboard Scholarships to students
3. **FALL 2016:** Admit first students to new Psychology and Biomedical Sciences Honors in the Field Programs
4. **FALL 2016 AND SPRING 2017:** Offer first new Honors Core Capstone Seminar to all Honors Core students
5. **FALL 2017:** First Honors Course-Embedded Writing Tutors work in Honors courses across disciplines



ABOUT OUR TEAM

John Davis, Honors Faculty Advisory Board
Deirdre Dempsey, HFAB
Thomas Eddinger, HFAB
Adam Fiedler, HFAB
John Grych, Honors Psychology
Astrida Kaugars, HFAB and Honors Psychology
Laurieann Klockow, HFAB
Lezlie Knox, HFAB
Andrew Kunz, HFAB
Doug Lobner, Honors Biomedical Sciences
Rebecca Nowacek, Honors Writing
John Pustejovsky, HFAB
Grant Silva, HFAB
Erik Ugland, HFAB
Amelia Zurcher, Honors Director

Our team is made up of faculty from across the University. Some have been working on Honors education at Marquette for decades; others, with the expansion of the program, will be involved in Honors teaching or projects for the first time. We all understand Honors' power to recruit and retain outstanding students, and more importantly, its potential for innovative pedagogy, increased undergraduate research, and collaboration across University boundaries.

BEYOND BOUNDARIES

Pursuit of Academic Excellence for Human Well-being

Expanding the Honors Core and enhancing Honors-level work in students' majors will foster a culture of excellence among not only students but also faculty and staff, and will increase national recognition of Marquette as a first-choice university. Our emphasis on undergraduate research, study abroad, and community-based learning will bolster students' understanding of and commitment to address contemporary challenges, and enhance problem-solving across fields. And Honors' focus, as one of the few all-University academic programs at Marquette, on collaboration across boundaries will increase organizational effectiveness throughout Marquette's academic units.





THE MARQUETTE WATER QUALITY CENTER

A Powerful Catalyst for Water Initiatives

THE MARQUETTE WATER QUALITY CENTER

Advancing Marquette University as a recognized leader in interdisciplinary water issues and a first-choice university for excellent students interested in water.

We will establish and manage the Marquette University Global Water Center (GWC) facility. Marquette has secured an 8000 square foot office, meeting and laboratory facility in the GWC building. The GWC is an education, research and business accelerator in Milwaukee's Walker's Point neighborhood, operated by The Water Council and dedicated to addressing key local and global water issues. Other GWC space houses the University of Wisconsin Milwaukee and Whitewater, Badger Meter, A. O. Smith, Veolia Water, Rexnord, Sloan Valve, Fund for Lake Michigan, Greater Milwaukee Committee, The Water Council and others.

The vision for the Marquette GWC facility (MUGWCF) is that it will be a recognized hub for innovative groups pursuing collaborative projects that advance clean water technology, policy, business and public awareness.

The goal of the MUGWCF is to enable our faculty, staff, and students to interact with other tenants and visitors; develop and collaborate on new large-scale research projects; and more effectively contribute Marquette expertise to the GWC and Water Council.

MILESTONES

THREE-YEAR OBJECTIVES INCLUDE:

1. Doubling water research/publication
2. Doubling water invention disclosures
3. Managing the MU Global Water Center space
4. Coordinating with the Water Council
5. Collaborating with Marquette Law School on policy
6. Collaborating with EOP on precollege initiatives.



ABOUT OUR TEAM

Dr. Daniel H. Zitomer, Water Quality Center Director, Professor, Environmental Engineering
Dr. Jim Maki, Professor, Biological Sciences
Dr. Krassimira Hristova, Assistant Professor, Biological Sciences
Dr. Chung-Hoon Lee, Electrical Engineering
Dr. Patrick McNamara, Assistant Professor, Environmental Engineering
Dr. Brooke Mayer, Assistant Professor, Environmental Engineering
Mr. David Strifling, J.D., L.L.M., Law School, Director of Water Law and Policy Initiative
Mr. T. Ullrich, EOP Upward Bound Program

Our team are professionals who have dedicated their careers to solving clean water problems. We have worked together for many years and identified the need to form a collaborative structure to manage water research, teaching and service on campus. We addressed these issue because we would like to pursue larger, collaborative projects with public and private partners. Larger projects will help us more fully foster the search for truth, the discovery and sharing of knowledge, and personal and professional excellence.

BEYOND BOUNDARIES Pursuit of Academic Excellence for Human Well-Being

The project aligns with the theme of the pursuit of academic excellence for human well-being. Clean water resonates with Jesuit goals including a preferential option for the poor, social responsibility and civic engagement. More than 800,000 people die every year from water related disease. Lack of clean water disproportionately hurts the poor, whereas improved water helps social development and alleviates poverty.

In developed countries, there are also challenges. For example, waste antibiotics are disposed of via treatment systems that aren't designed to remove them. These waste antibiotics are released into the environment where they increase the number of antibiotic resistant microbes that are responsible for at least 23,000 deaths each year. Efforts are needed to communicate and solve these and other problems.



MARQUETTE UNIVERSITY WATER LAW AND POLICY INITIATIVE

Establishing The Law School
As A Leading Center For
Exploration Of Water Law And
Policy Issues.

MARQUETTE UNIVERSITY WATER LAW AND POLICY INITIATIVE

The Initiative seeks to assess the legal and regulatory aspects of water policy, to pursue opportunities for information exchange, and to provide a means for the public to become better informed on legal and policy aspects of water-related issues. Projects may include:

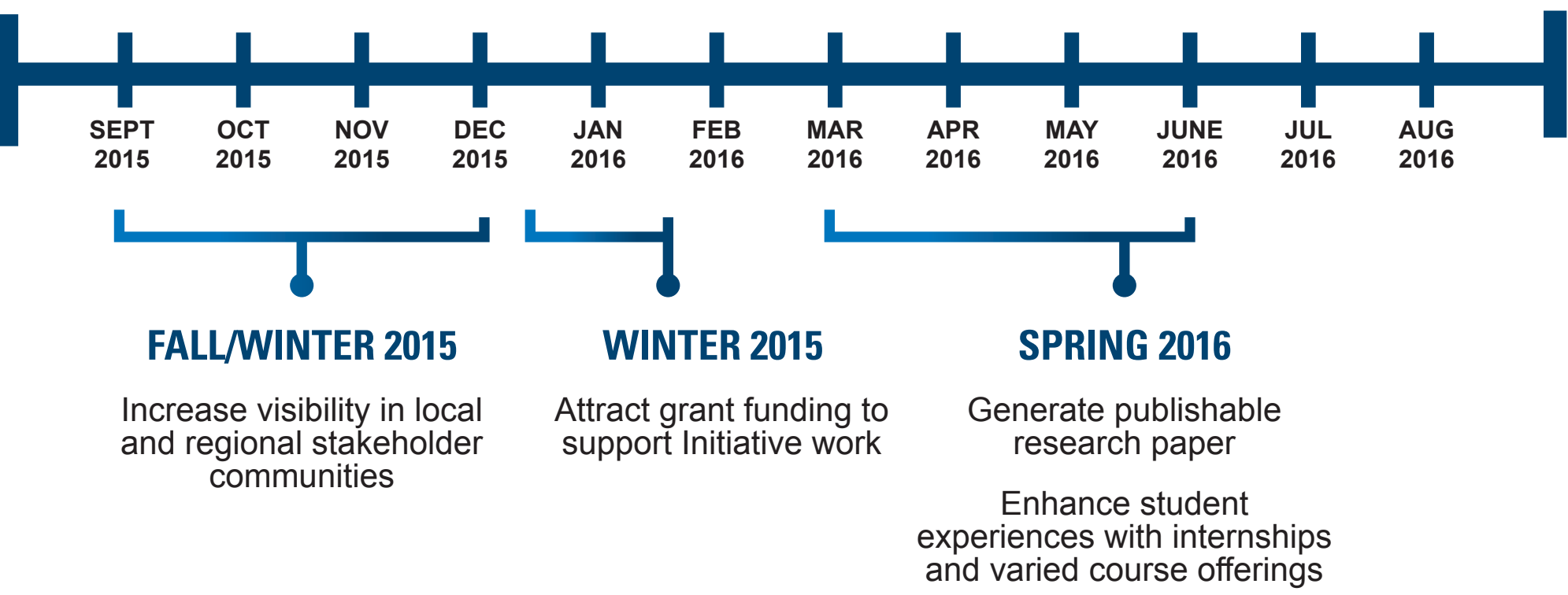
Creating a menu of options for policymakers to reduce chloride discharges to waterways

Exploring the relational nexus among water, energy, food, and climate

Evaluating how “choice of law” issues governing water resources (including the Great Lakes Compact) can affect state and national economies



MILESTONES



SCAN QR CODE FOR WATER LAW AND POLICY
INITIATIVE WEBPAGE

<https://law.marquette.edu/programs-degrees/water-law-water-law-and-policy-initiative>



ABOUT OUR TEAM

David A. Strifling – Director, Water Law and Policy Initiative
Joseph D. Kearney – Dean and Professor of Law
Michael K. McChrystal – Professor of Law and Chair, Law School Strategic Planning
Charles Franklin – Director, Marquette Law School Poll

Through its Public Policy Initiative and related work, the Law School has become known, in the words of the Milwaukee Journal Sentinel, as “Milwaukee’s public square.” This project expands those efforts. The Law School committed a number of years ago to supporting Milwaukee’s water initiative and developed a water law curriculum. We now seize the opportunity to fill a broader gap in the region’s water work, driving legal and policy innovation via collaboration within and outside Marquette and creating a differentiator for the Law School and the University.

BEYOND BOUNDARIES Pursuit of Academic Excellence for Human Well-being

Pursuit of Academic Excellence and Human Well-Being: The project aims to position the University as a leader in water research and policy, involving an undeniable human need.

Sustainability of Valuable Resources: The project is dedicated to the legal and policy aspects of water, a critical resource.

Research in Action: The subject matter addresses community and world problems.

Enhancement of Organizational Effectiveness: The Initiative will draw the Law School together with other parts of the University.



Water POD

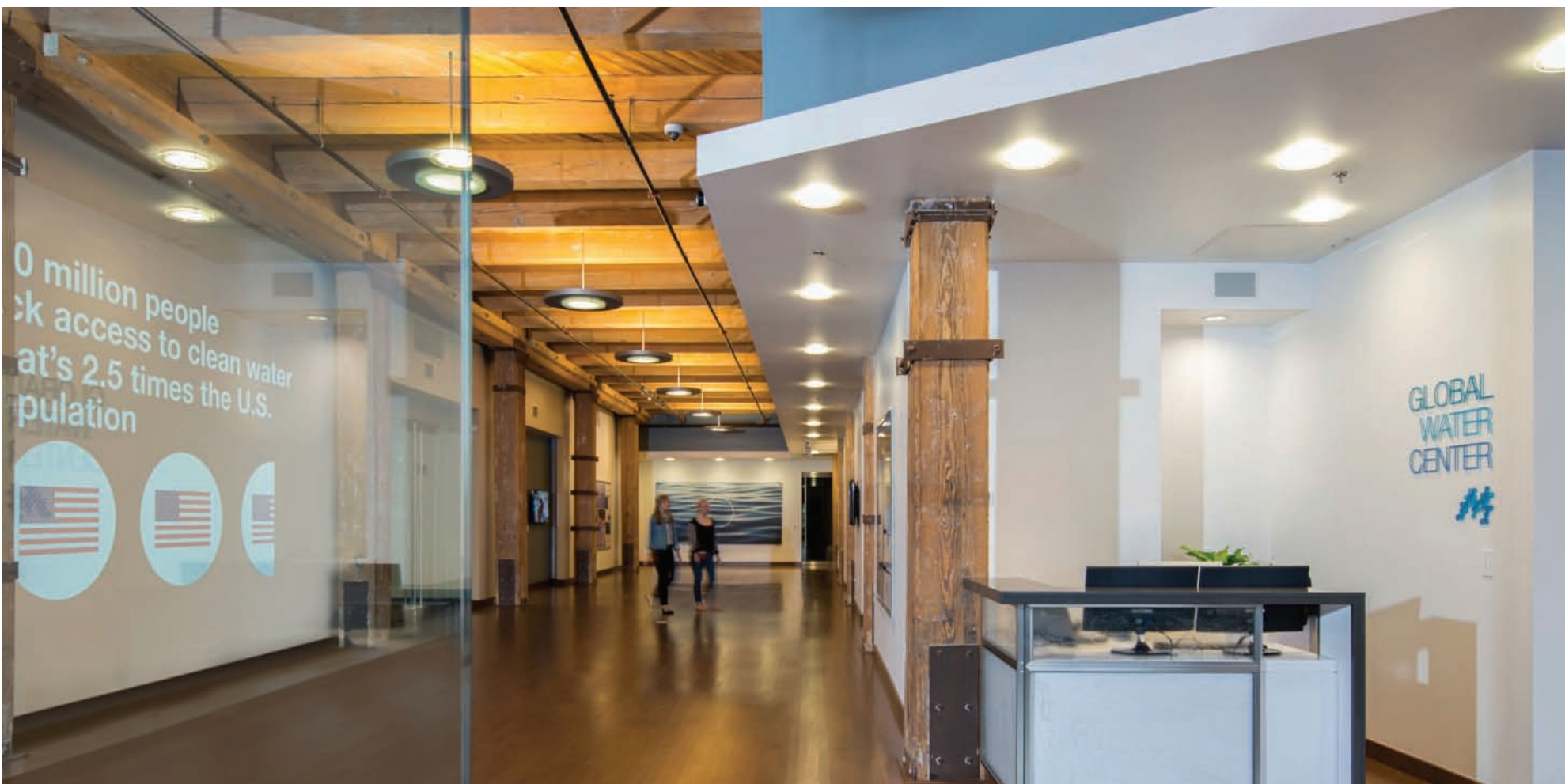
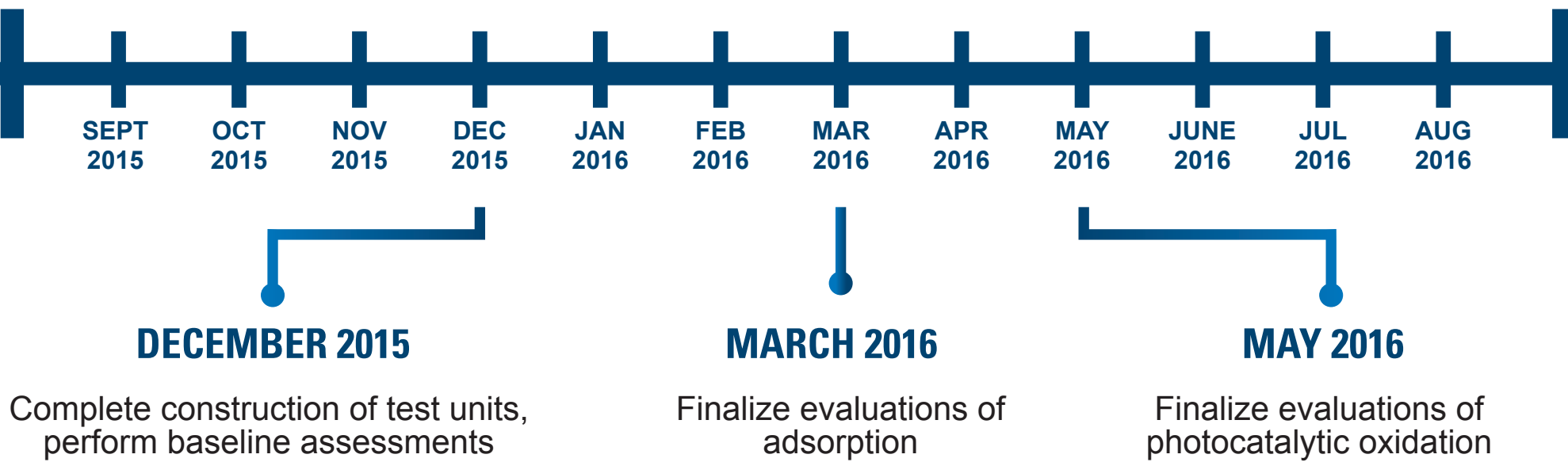
A Mini Water Purification System

WATER POD – A MINI WATER PURIFICATION SYSTEM

Focusing On Using Titanium Dioxide To Enhance Water Treatment Using The Water Pod System.

The aim of this project is to develop and evaluate approaches to integrate titanium dioxide (TiO₂) treatments into the Stonehouse Water Technologies Water POD drinking water treatment system. The team will assess the treatability of different reactor configurations, including A) a filter bed approach designed to adsorb contaminants and physically remove them from the water, and B) a photocatalytic chamber designed to chemically degrade harmful pollutants. The team will initially focus on contamination from organic micropollutants.

MILESTONES



Entrance to the Global Water Center



SCAN QR CODE FOR
[HTTP://STONEHOUSEWATER.COM/](http://stonehousewater.com/)



Brooke Mayer



Krassi Hristova



Stonehouse Water Technologies team with the Water POD

Brooke Mayer, MU Environmental Engineering
Krassi Hristova, MU Microbiology
Hensley Foster, Stonehouse Water Technologies
Charles Bensinger, Stonehouse Water Technologies

ABOUT OUR TEAM

Stonehouse is based in the Global Water Center near Marquette. Their Water POD treatment system was developed as a low maintenance and lost cost approach to providing safe drinking water to people in both developed and developing world contexts. Stonehouse became interested in incorporating titanium dioxide (TiO₂)-based treatments into future versions of the Water POD. The Innovation Fund provided an ideal opportunity for Stonehouse to partner with Drs. Hristova and Mayer, who have expertise in TiO₂ treatments as well as chemical and microbial water quality research.

BEYOND BOUNDARIES

Sustainability of Valuable Resources

Providing access to safe drinking water using advanced science and technology solutions is at the heart of the research and business interests of the Marquette researchers and the team at Stonehouse Water Technologies. Globally, almost one million people die annually from water-borne diseases, and polluted water is the leading cause of death for children. In Wisconsin, 30% to 50% of wells in certain rural areas suffer from contamination. Our project creates an opportunity for industry-university collaboration in the pursuit of solutions restoring wellness and good water stewardship to those individuals and communities presently in need of clean water.

This project addresses multiple aspects of Marquette’s strategic plan in **the pursuit of academic excellence for human well-being, research in action, and sustainability of valuable resources**. An undergraduate student will work together with a research technician and the rest of the Marquette and Stonehouse team to complete this project. The student will benefit from active involvement in research that translates classroom education into action with an ultimate focus on human well-being. The collaboration and research findings of this work are expected to build a strong foundation for future industry-university partnership, intellectual property, and related research pathways.

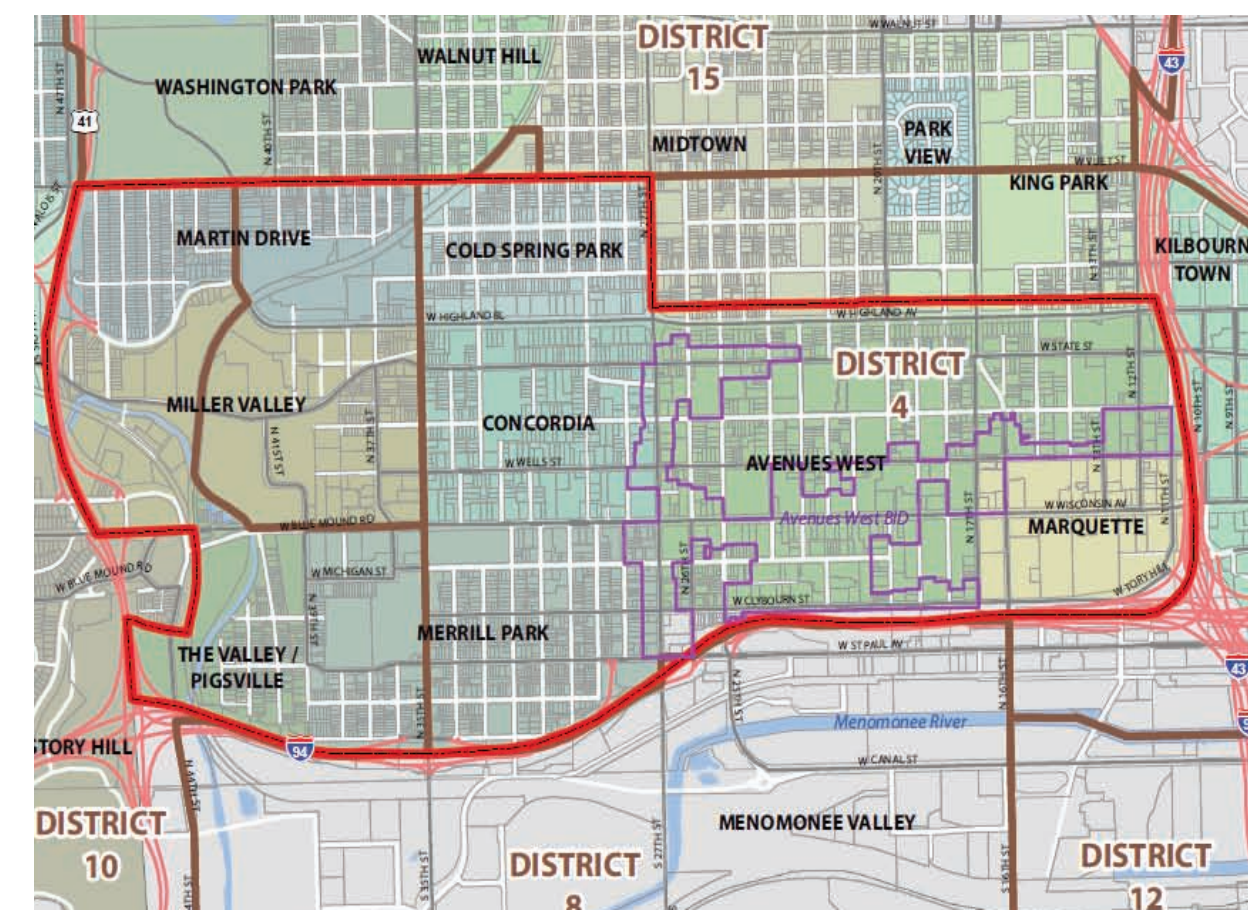


THE PUBLIC MARQUETTE

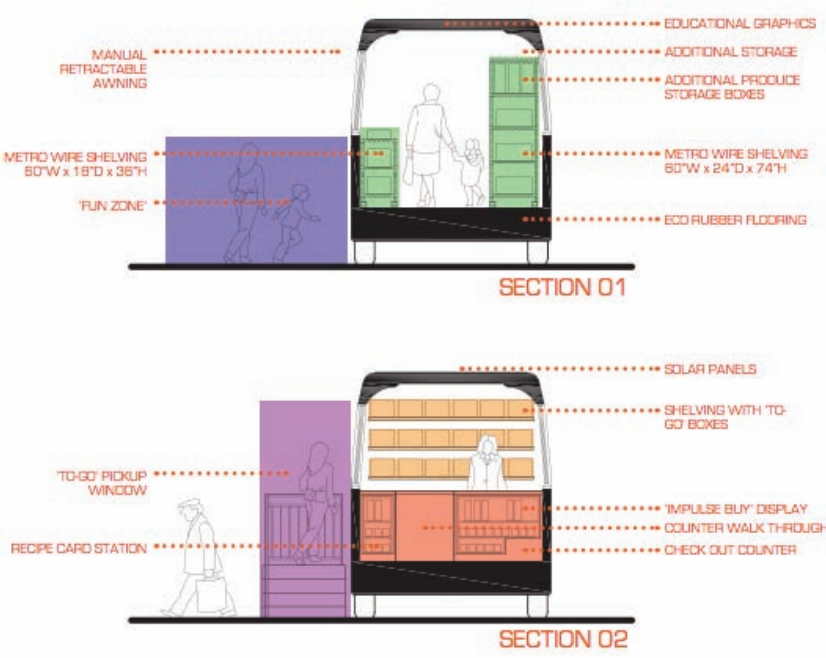
Exploring Non-traditional Means of Providing Fresh and Nutritious Foods to Marquette and the Near West Side

THE PUBLIC MARQUETTE

The Public Marquette concept was started by two Marquette students to address the lack of access to fresh and nutritious foods on the Marquette campus and larger Near West Side neighborhood. Driven by the principles of Jesuit education and focused on breaking the status quo, the Public Marquette is a community oriented spin on a traditional grocery store. The original concept was a mobile market that would target campus and low income/low access neighborhoods in the surrounding community. However the strategic innovation funds have allowed the team to explore new alternatives. The work this year will look at the feasibility of a grocery store, innovative food/grocery models that could work, and community partnerships that will be vital for success.



Map of Near West Side Neighborhoods



Concept for a one-aisled mobile market

Andrew Terenzio Marquette University Student ('15)
Kelsey Otero Social Innovation Coordinator, and Near West Side Commercial Development working team Co-Chair
ChangeMakers MU

ABOUT OUR TEAM

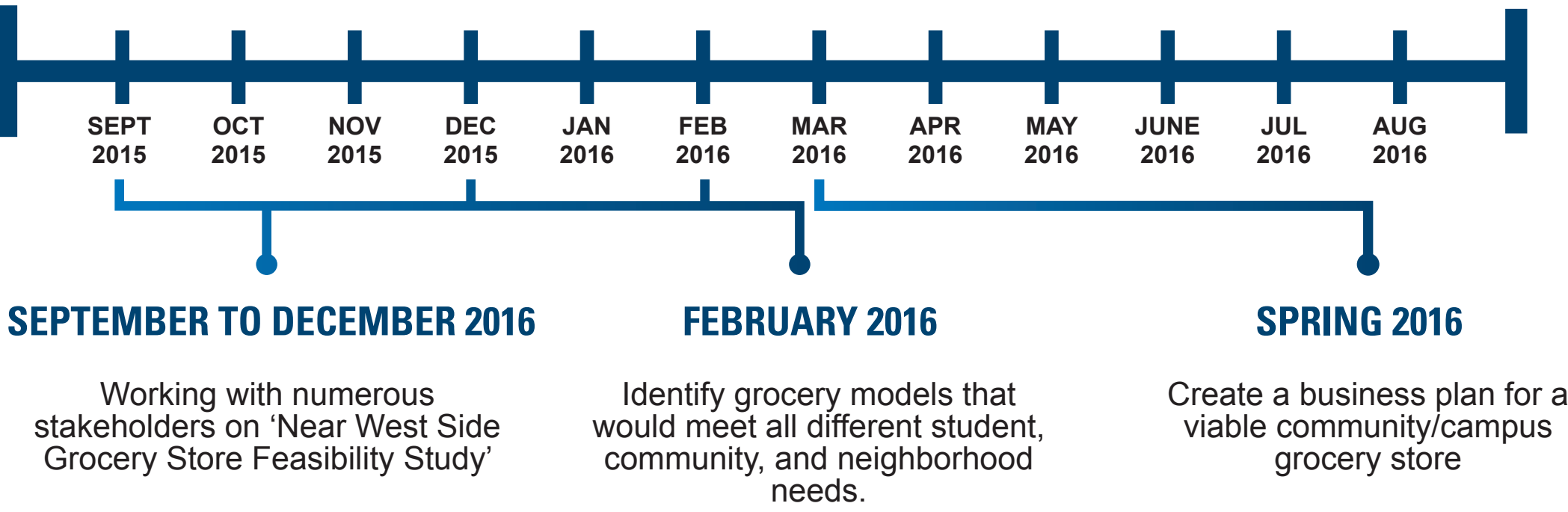
After spending four years as students at Marquette University and frequently discussing the need for fresh groceries on campus and in the community, a group of students started to put pen to paper and outline the possibility in the 2014-2015 AY. The team was inspired by classes such as Social Entrepreneurship, Food, Water and Society, and Ethics.

The core team plans to grow as the planning evolves to include working closely with a number of different community organizations, residents, and the Near West Side Partners.

BEYOND BOUNDARIES Social Responsibility and Community Engagement

The Public Marquette directly upholds Marquette's Jesuit values by acting as an agent for change within the social structure of our community as well as through innovative conceptualization of food supply. The Avenues West Neighborhood (part of the Near West Side), located northwest of the intersection of 27th Street and Wisconsin Avenue, is a food desert, according to the USDA Food Access Research Atlas. This neighborhood is the only community in the city of Milwaukee that is identified as a low income and low access area using the 2010 Census data. The low income and low access identification is defined by the USDA as a community with a minimum of 20% of residents living at or below the poverty level and 33% of residents living more than one mile from the nearest supermarket. The Public Marquette would not only provide produce to an area deemed a food desert, it would also work towards eradicating food desert symptoms that tend to follow urban poverty. We will nurture an inclusive community that fosters new opportunities, partnerships and collaboration.

MILESTONES

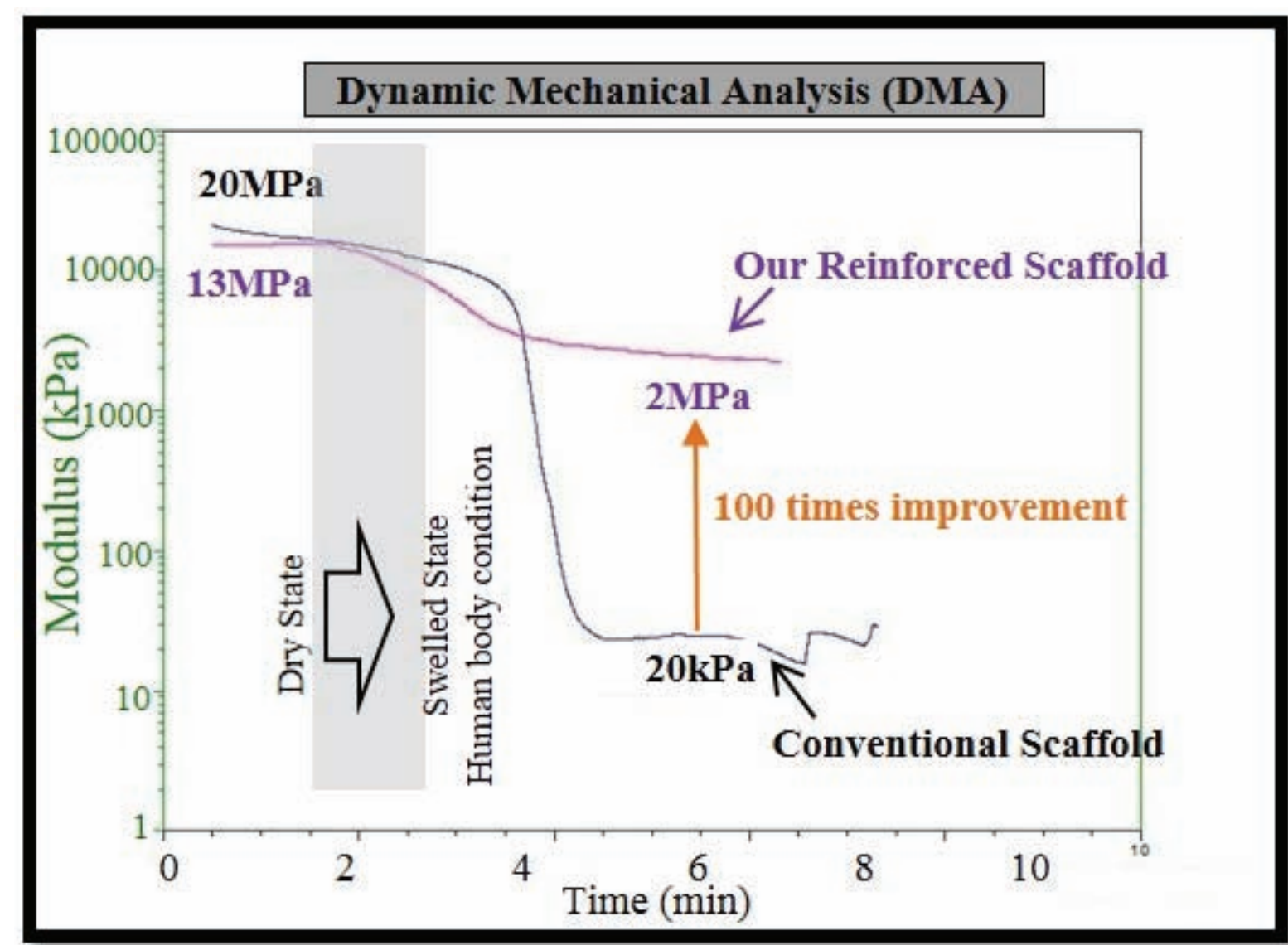




A NOVEL DESIGN FOR HYBRID BIODEGRADABLE BONE SCAFFOLD/IMPLANT WITH ENHANCED MECHANICAL PROPERTIES

ADDRESSING THE DRAWBACK OF INSUFFICIENT MECHANICAL STRENGTH IN CURRENT BONE SCAFFOLDS BY PROPOSING A NEW DESIGN

Metallic implants are widely used in bone treatment, but unfortunately these implants are not degradable, and second surgery is often required for their removal from the body. There have been serious attempts among researchers and manufacturers to produce biodegradable implants/scaffolds to avoid the need for the second surgery. However, poor mechanical strength in these products prohibits their commercialization.



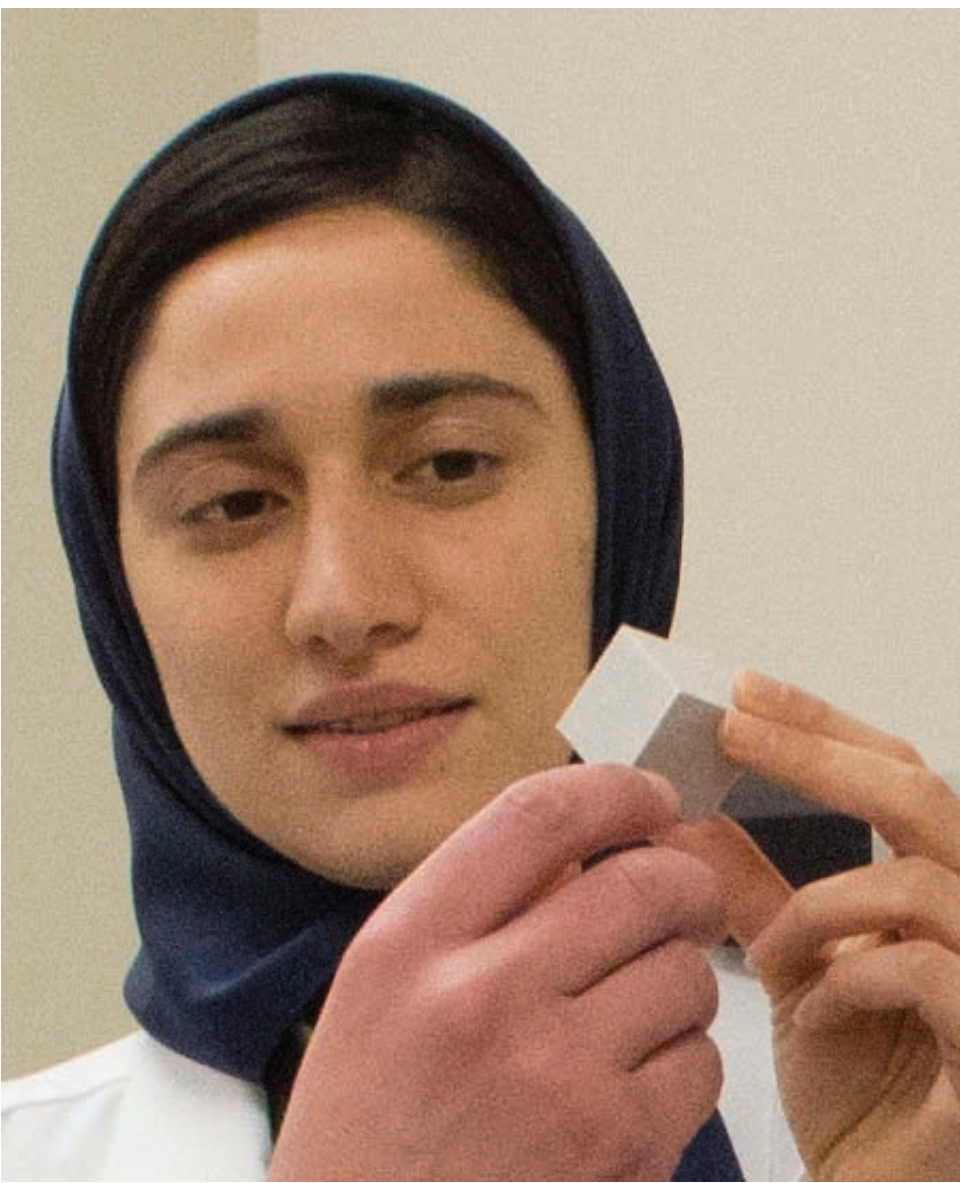
100 times enhancement in the modulus of our new scaffold

MILESTONES

1. **MONTH 1 TO MONTH 5:** Fabrication of scaffolds
2. **MONTH 2 TO MONTH 8:** Characterization of the scaffolds
3. **MONTH 8 TO MONTH 12:** Market analysis for the product



SCAN QR CODE FOR TAYEBIGROUP.MU.EDU



Lobat Tayebi, PI

ABOUT OUR TEAM

Dr. Lobat Tayebi is an Associate Professor and Director of Research at Marquette University School of Dentistry (MUSoD). Scaffolds will be made and characterized by Dr. Tayebi and her students at MUSoD.

BEYOND BOUNDARIES Research in Action

This project will provide new transformational research opportunities at all levels of Marquette's campus,

The product of this project is innovative with very good chance of being commercialized (all the materials involved are FDA-approved), and the PI intends to establish a start-up company based on this product, which is in line with entrepreneurship activities emphasized in Marquette's mission and the strategic plan.

Beyond regular research activity in this project, students from the Department of Marketing at the College of Business will be invited to help the students of the dental school on commercialization of this product (writing a business plan and marketing of the product). It will be a unique and educational opportunity for two groups of students, one major in science and one major in business, to interact closely for commercializing a new product.