Minutes from the CEAS Industry Advisory Board Meeting
November 14th, 2019

The Parkview Room, D132 Floyd Hall Parkview Campus, Kalamazoo, MI

Industry Attendees: Nicole Remily, Doug Wales, Jeff Krusinga, Mike Preston (IAB Chair),
Bob Lynch, Joanna Johnson, Jennifer Lentner, Yasir Khogali, Hamid Parsei, David Jerovsek,
Sandra Cochrane

WMU attendees: Steve Carr, Steve Butt, Kristen DeVries, Osama Abudayyeh, Brad Bazuin,
Tim Greene, Matthew Cavalli, Andy Kline, Koorosh Naghshineh, John Patton Chew, Kecheng
Li, Buffy Nespodzany, Amanda Jeppesen

IAB Meeting convened at 12:15 PM by IAB Chair Mike Preston. Introduction given by each
person present.

Action Item: Nominate a Vice Chair for the IAB as leadership is important. Good news: Jeff
Krusinga has volunteered to take on this job.

Agenda topics as shown in Appendix A.

Dean Steve Butt gave a PowerPoint presentation on the fall enrollment numbers. Fall
enrollment numbers at WMU total 18,972; CEAS enrollment 2,828. A small dip in enrollment,
with CEAS representing 200 of the 1000 students down in WMU. Dip in number of graduate
students; this is a product of country wide drop in international students admitted into the
country. Also, a dip in the number of Mechanical and Aerospace engineering students, caused
by higher than average graduation in spring 2019. Expect the number to return to normal.
Expect to see rise as we have a return to an equilibrium point in MAE. Similar issue in IEEM
where more graduates than MBA program last year. MSIE graduates does create extra capacity
where we can explore the systems engineering program.

Kristen DeVries- Capital Campaign
Campaign Timeline has been approved by the foundation board. This is WMU first campaign
since 2003. Donor base should be fresh and it means we are able to create a new structure and
organization and we are not limited by bad habits.

Campaign is a 7 year effort to unite the university and community around ideas and themes for
the growth of WMU.
Only discussing plan for year 1.
Q1 Goals: Hire a campaign manager. Hired a Wealth Screening Firm to handle the thousands of
applications.
Explore themes that we can build around
Nominate committee members
Each college will have their own committees
Starting with 8 members, but growing over the campaign.
Need members to be able to:
1. Minimum 2 year commitment (1 year is not enough, but don’t want you to overcommit)
2. Attend meetings- 3 a year. Electronic attendance possible, but prefer physically present
3. Open 5 doors- email other people about meeting with the CEAS deans, about getting them in the building and engaging with the college.
4. Write thank you notes- people are gracious and expect them.
   Makes a huge impact, we receive 50% faster and 25% more from donors who receive thank you notes, A Thank you communication, not necessarily a note.

Q2:
Select a campaign consultant
Launching the campaign committees before the end of the year
Hire a campaign assistant. Lots of data coming in that needs to be managed
Identify themes to test

Q3:
Feasibility Study & Preparedness Study- is WMU ready? does it need training or staffing?
These are done after starting the campaign because campaign sparks energy and we don’t want to lose momentum and donations that donors are already to give.

Alumni Attitudinal Survey- Feelings about WMU leadership, would they recommend WMU, what communications from the university do individuals read, what were their stories of being at WMU.

Q4:
Decide on themes and goal- the university makes final decision based on the studies
Setting up committee meetings
Setting up website/videos

Campaign Launch- January 1st Donors think in calendar years, not fiscal years.

After Q4- connect with faculty, prep volunteers, train faculty/staff/committees on how to open doors to bring in more donors. Need more engagement with corporate buy-in, particularly early corporate buy-in. About changing WMU through philanthropy. Want to get corporations and WMU using the same language, saying the same things throughout the region.

Want donations coming in from the beginning. Builds trust with donors, needed for long term campaigns, people who invest early will invest repeatedly. Will have incremental donation goals. Last year was WMU best funding year.
Want professors more involved because students have good connections memories with their professor, and professors are the ones most likely to last through the campaign. Faculty can speak to growth over time in the university, better than presidents and deans.

Thinking of themes means moving beyond scholarship. Large scholarship donations look great but they spend off quickly and rarely elevate the university. Investing in funded internship programs or exciting research focus

Moving away from targeting traditional donation (males, white, 65+). Increasingly diverse array of donors. Getting donors to pledge in their 30s means they are more likely to donate in their 60s. Discussing estate pledges in their 30s when they write their first will and they are thinking of their children is easier than in their 60s when will is written and they feel you are vulturing in on them. 95% pay out for estate pledges; people do not write you out of their will. Increasing data analytics to identify who is likely to give. Alumni married to alumni give significantly more. Discuss wealth transfer, people giving in the name of deceased loved on. Typically wait till five years after graduation so they have established budgetary habits, friends group, stability.

International students an important part, but difficult. Looking to hire someone who specializes in international communications. Different cultural expectation can lead to alienating alumni through miscommunication. Different strategies for different communities. Targeting parents of alumni giving as parents will then push students to give. Missteps with international students can not only alienate individual donors, but harm future student attendance from those countries. However, an untapped market. Faculty is best at maintaining the international student relationship.

WMU has historically low alumni giving (4%, average for competitors is 6%), but has a lot of growth potential (2nd most purchased licenses tags in state). WMU has done well at building school spirit, however, they are not giving. Indicates that alumni have loyalty and connections, but we are not asking them the right way for them to donate. If you change how you speak, they will change their patterns of giving. Exploring ways to increase giving, such as WMU/CMU competitive giving day.

**IOO Action Items from Discussion**

**Action Item:** Committee member nominations. Need volunteers willing to take the lead on being on Capital Campaign for CEAS.

**Action Item:** Pay attention to messaging and other universities and contact Kristen DeVries or committee about what we should focus on, what is working, and what is not working.

What is outside of the university that is getting your attention. What are other universities doing? What is interesting but hidden within WMU? What should we bring more attention to? What will transform WMU? What are the needs for your industry? How can WMU answer the big questions you might not be able to answer? How can we use the campaign to deliver a message of what interesting things we are doing?
**Action Item:** Nominate a vice chair as leadership on Industry Advisory Boards is important in getting a voice to the committees and people working on the capital campaign.

**Action Item:** Identify whose voice needs to be in the campaign. Send names to Steve Butt or Kristen DeVries so they can reach out to them.

**Action Item:** Participate in the surveys that the campaign sends you. Advocate for what you like or dislike. Email Steve Butt or Kristen Devries when you see something you like or you find interesting, things that get your attention. Or email to say something isn’t very good. We need feedback on what is connecting with you.

**1:20 PM Systems Engineering**
Discussion led by Tim Greene, Acting Chair of Department of Industrial and Entrepreneurial Engineering and Engineering Management.

What is the industry side of systems engineering? What are we not aware of?

Preston:

Multiple business groups in Eaton. Lots of systems getting electrified. Need systems engineering to deal with that growth. College needs this in their program. Still have to have deep product knowledge, can’t just be theoretical. Minnesota University systems degree built around five core courses, but then had specialization areas built around particular specializations. Eaton has developed programs internally, but growing need would like to link with WMU. Primarily graduate program, don’t see an immediate need for undergraduate program.

**Core Principles:**
- Understanding Customers’ Needs
- Understanding the environment that the product will work in
- Structural Breakdown of the product- how parts interact
- Top down break down of complex systems.
- Mechanical/Electrical/ Software needs to understand how they come together.
- Move through a structure
- Structural Breakdown
- Functional breakdown
- V Thinking: Function/Form
- Industry 4.0
- Need some industrial
- Product life cycle
- Supply Chain Management
- Soft Skills (communication, project management, presentation and delivery)

**V-Model:**
- Start with upper level requirements
- This gets broken down to individual requirements/ design
- Come back together into product- validation.
- Test/production.
One for electrical/mechanical/ lots of little V-models.

About 80% of the time the issue is figuring out the problem.

Remily- use European concept of Industry 4.0, graduates don’t have this knowledge.

Greene- Jim Burns is developing these skills in classes at WMU.

Preston- People want to move up the system over the course of their time at a job, but it’s a long process, Master’s program can speed that process up.
Focus less on academic requirement, need letter of recommendation from employer. Need a minimum amount of time in the industry to become experienced.

Minnesota University first systems class built around theory, Systems II built around competition or case study and applying V.

Greene- Diamond shape program, with entry level class, that expands to system sources and different engineering programs specific to individual needs, and then culminates with a final overview course where everything is put together.

Parsei- University of Houston created Masters of Engineering, instead of Masters of Science, no GRE required, rather letter of 5 years of employment. Masters of Engineering differentiates program from other schools.

Greene- WMU does not need to require GRE for Masters
Who is the audience for this degree? What does the Grand Rapids/Battle Creek/Kalamazoo communities need? What is the threat from online schools such as Purdue?

Remily- Likes the idea of using WMU for training purposes rather than using internal systems they are/have developing.

Greene- We can create a certificate program. You can build an M.S. through certificates so that employees don’t have to take everything in one sitting, rather can complete multiple certificates which once all completed will grant you an M.S.
We don’t currently advertise our master’s levels program. Many of the classes currently offered. If you get 12 employees wanting to take a course we will even host it in your building.

Preston- just brought in professors from University of Wisconsin
Remily- every semester University of Wisconsin sends a list of course they offer.

Greene- graduate courses typically run from 4-9PM, so they are built in a way that employees can attend classes while working full time.

Krusinga- Programs for professional development? P.E. continuing education certificates?
Continuing education units is important with PE license would be helpful.
Naghshineh - fewer seeking PE

Johnson- Need to develop soft skills. How to share information
  Communication skills
  Project management
  Presentation/delivery

Greene- Need in service sectors verses manufacturing. Can bring in people from
Bronson/Borgess/retail/construction. Program could be a way for engineers to get a quick focus
in a needed area of development.

Butt- earliest launch could be Fall 2021. Process takes a long time, take to college curriculum
committee, then university curriculum committee, then to the provost then to the state. Must get
Board of Trustee approval and only then can we publicly announce the program. Till then we
cannot publicly say we are developing the program. If we can complete in 12 months then we
can begin offering program in Fall 2021. We can begin courses next fall and use them once
degree is finished and then roll them into the program.

**IOO Action Items from Discussion**

**Action Item:** WMU will create list of graduate courses being offered in the spring and get them
to industry representatives. Continue practice with subsequent semester. Get industries one-
page application needed for engineers to take courses as non-degree seeking students. *(Kline)*

**Action Item:** WMU develop a curriculum, compare to competitors to differentiate, and begin
the paperwork on developing a Masters level program (or possibly certificate). Potential startup
for Fall 2021. *(IEEM department)*

**Action Item:** Meet with Kellogg’s and build off what they are currently doing with similar
training to identify what works and what does not. Could be individual courses offered at
Kellogg’s, workshops, or short courses offered on a contract basis. *(Greene to lead)*

**2:20 Industrial Outreach Office Review**
Discussion lead by John Patton Chew, Employer Relations Specialist, Industrial Outreach Office.

Chew- Put together review of systems engineering programs in the Midwest region that was
distributed to IAB.

Examined Co-op programs and how they are offered. Three different models. Mandatory
programs such as Kettering/Toledo/ Cincinnati. These universities require all students to do at
minimum a three-term co-op. Optional but supported programs at Purdue and Akron are not
required, but the university helps to connect students to particular industry partners and push for
students to take co-ops. The Individual/Internship model means schools offer co-op but the
student has to find it and then construct a graduation schedule. We also are looking at how
different departments integrate co-ops and which industries areas are likely to want co-ops.
Preston- use co-ops and have success, students seem to enjoy, get hands on experience, they typically get higher entry level wages as they are now more competitive in the market.

Yasir- concern with the language as students often do not know the difference between what internships and co-ops.

Chew- Reached out to Platinum Industry Partners about their use of handshake and how we can improve. Handshake is a system that is built to connect students and industries by being a single, primary location for students to post their resumes and find jobs. This allows industries to focus their attention on particular universities and receive increase applications for their job postings. Model 1 showed industrial training concerns where industry had internal change over and relied on WMU to post jobs. Model 2 companies were thrilled with handshake, great for identifying employees and interns. However, they use internal hiring systems to filter students. Companies identified WMU has key university to open up to, however, hiring coordinates may be in charge of identifying which universities to open their applications up to, which means we need to work to build connection between WMU and those industries. System has evaluation tools built in, but most businesses prefer their own internal system, meaning some underutilization exists.

Nespodzany- Handshake developed by Michigan Tech grads and has grown to be the recognized leaders in connecting students and industries. WMU was one of the first universities to adopt and so training on it has been developed at WMU and our staff in Career and Student Employment Service are leaders in using the systems. The system is set up to sidestep legal issues about identifying students which occur when you have university/professors telling employees about students. All students share a system and post resume on equal standing.

Jeppesen-Anyone can post jobs, don’t need to be head of HR, as long as you are associated with the university. If you have questions we can connect address those needs. Links have been added on manual of how to best use Handshake on IOO website. Handshake is also piloting a program to link their system with internal hiring systems, so we may soon has a system that talks with the major internal hiring systems.

Kline- IOO has many opportunities for industries to connect with students. As partners you already have a representative on Innovation Day. We are looking to connect industries with senior design projects and faculty research. We are going to get a location in Floyd Hall for Industry presence. We will look to bring in industry representatives for Q&A sessions and expanded programs for freshman and sophomores to explore industries. We will work to create Spotlight Days so individual industries can sell themselves to students. We are looking for ways to schedule events during the spring so that industries can be more present outside of the career expos in the fall.

**IOO Action Items from Discussion**

**Action Item:** Invite representatives from Industry Partners for Innovation Day in December (Kline).
Action Item: Find space for industries to be more present in Floyd Hall. Work with CEAS and Industries to help brand areas of Floyd Hall with Industry Partners. (Chew and Kline)

IAB meeting adjourned at 3:00PM.

DRAFT minutes sent December 20, 2019 to all IAB members for comment.

Minutes finalized January 10, 2020 by John Patton Chew.
Appendix A.   IAB Agenda

CEAS Industry Advisory Board Meeting
Thursday, November 14, 2018
Noon to 3 PM

The Parkview Room, room D132 Floyd Hall at Parkview Campus
4601 Campus Drive, Kalamazoo, MI  49008

Noon     Welcome and Introductions and Lunch

    Mike Preston, IAB Chair
    Steve Butt, Interim Dean

12:20ish PM   Upcoming WMU Capital Campaign

    Kristen DeVries, Vice President, University Advancement

1:00 PM   Systems Engineering – Industry Perspective

    Mike Preston, IAB Chair
    Steve Butt, Interim Dean
    Tim Greene, Acting Chair, IEEEM and EDMMS departments

2:00 PM   Industry Outreach Office (IOO) Updates

    John Patton Chew, Employer Relations Specialist
    Andy Kline, Associate Dean
    Buffy Nespodzany, Assistant Director for Employer Engagement

Open Discussion for Other Topics from IAB members, as part of Systems Engineering or after IOO topic

Adjournment by 3 PM

Industry Outreach Office website:  https://wmich.edu/engineer/about/ioo