

CoE - Advanced Materials and Manufacturing

Steering Advisory Board

Meeting #2

October 4th, 2018

3:00 – 5:00 pm

**Milwaukee Area Technical College
Rm # M210 (2nd floor - Main Building)
1015 N. 6th St., Milwaukee WI 53203**

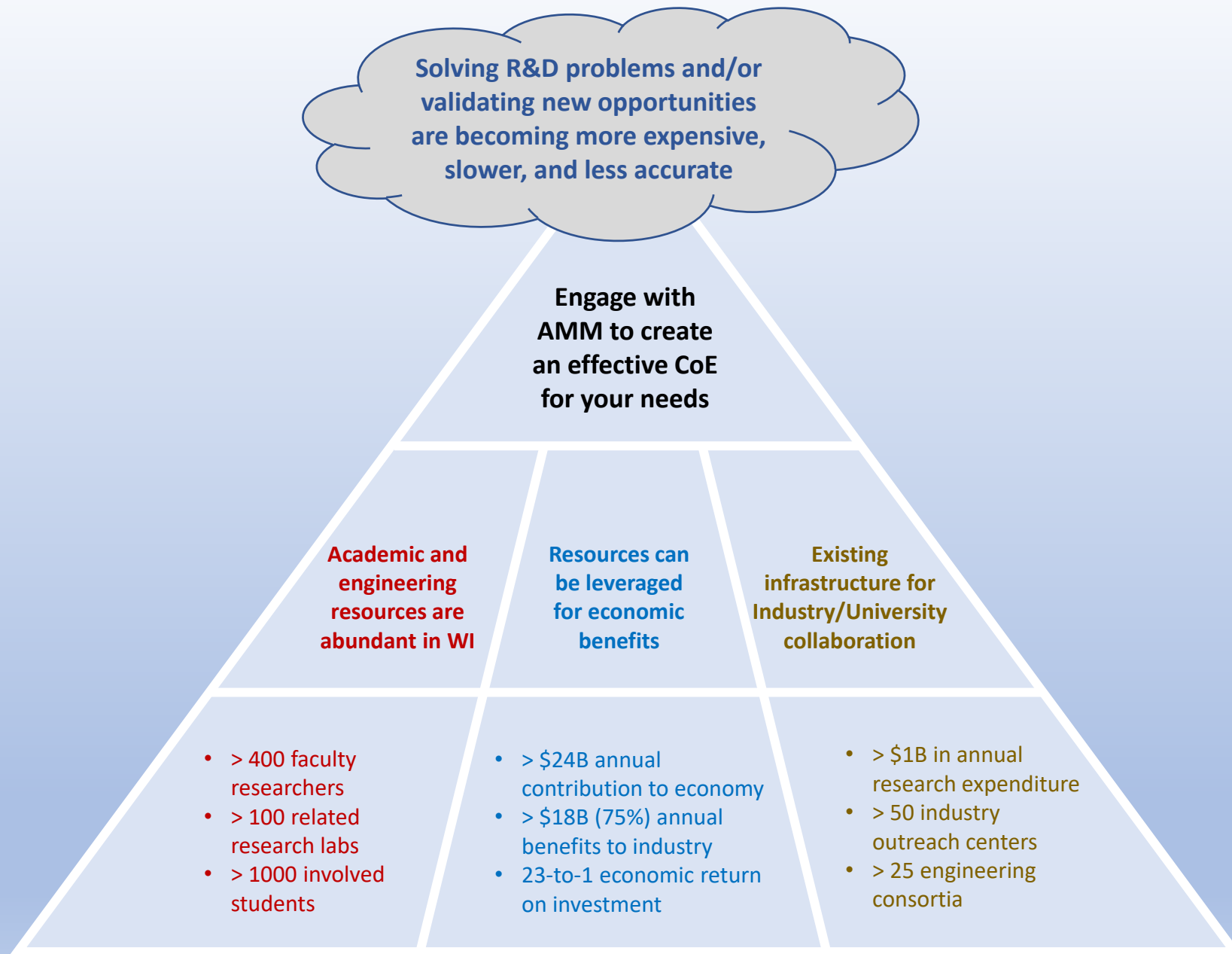
**Call in number:
(414) 297-6787**

(vouchers available for the BMO parking structure – see map on the last page)

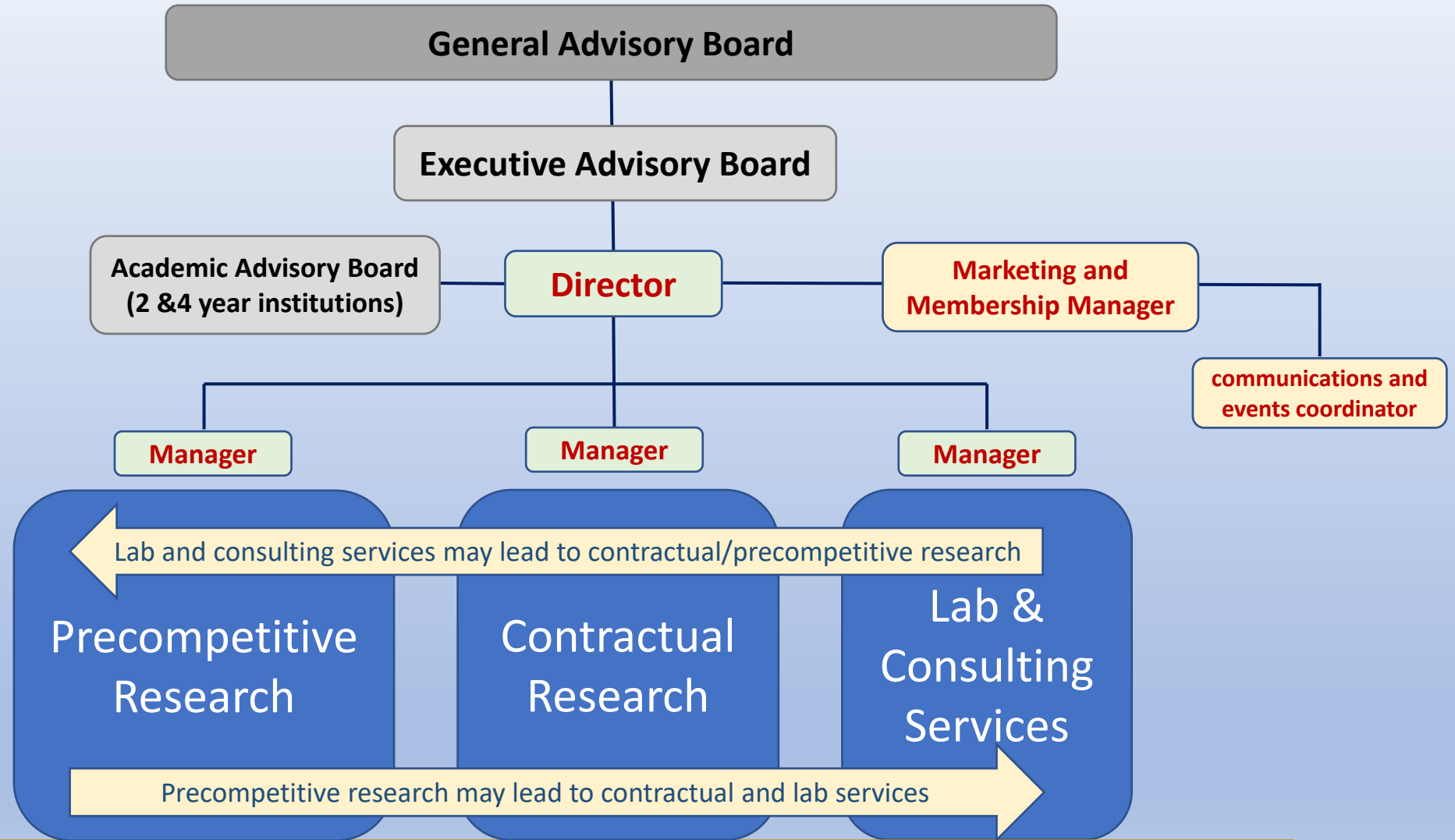
Agenda

1. Welcoming remarks 3:00 - 3:10 pm
2. General updates 3:10 – 3:20 pm
3. Review notes from SAB meeting #1 3:20 – 3:30 pm
4. New discussion items
 - i. Operations and structure 3:30 – 3:40 pm
 - ii. Funding sources and support 3:40 – 4:00 pm
 - iii. Membership and Benefits (continued discussion) 4:00 – 4:30 pm
 - iv. Workshop schedule (October 18th) 4:30 – 4:50 pm
5. Closing Remarks (WEDC) 4:50 – 5:00 pm

Overview

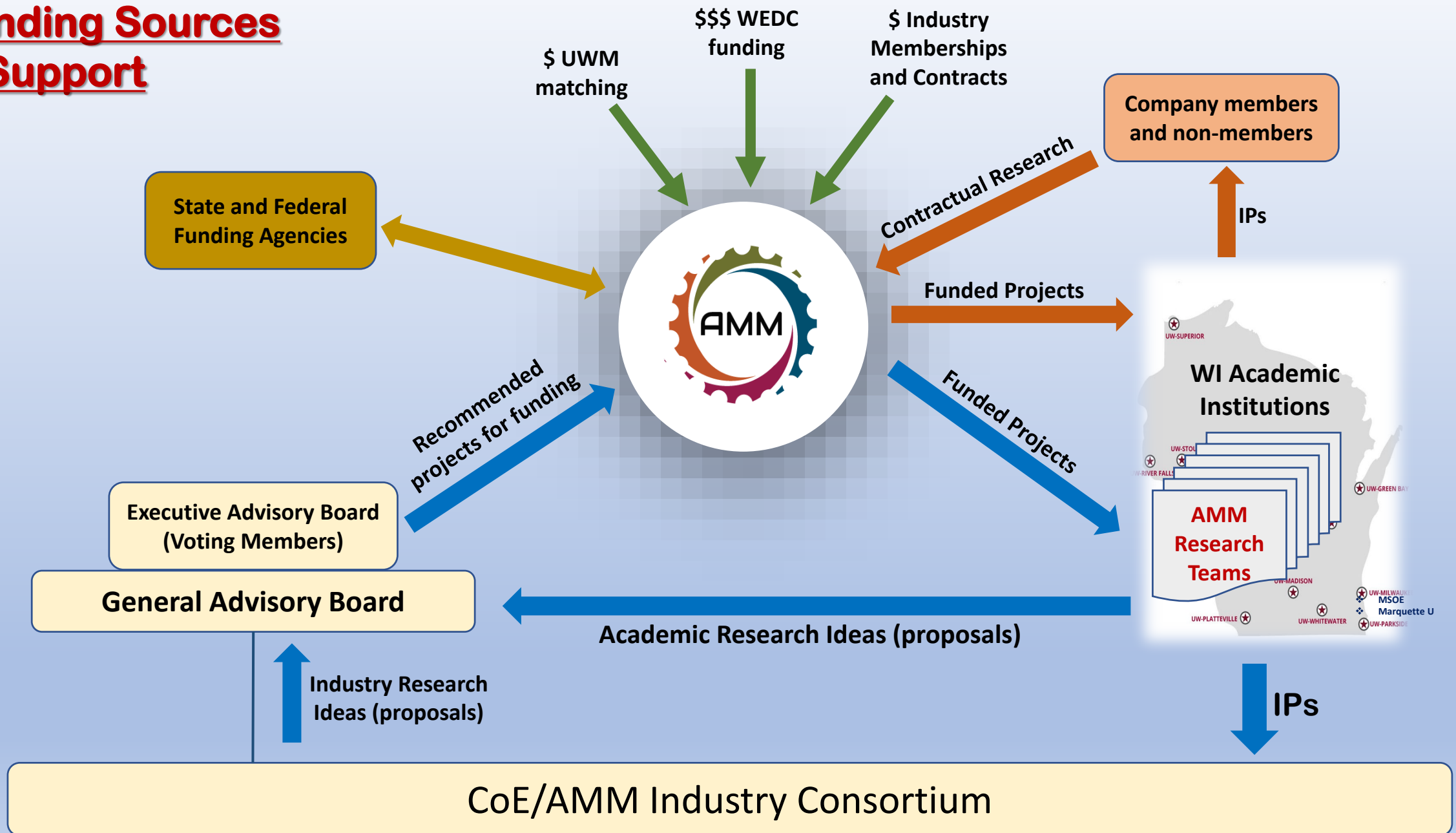


Operations & Structure



CoE Advanced Materials and Manufacturing

Funding Sources & Support



Membership & Benefits

Tiers 2 & 3 will be offered in year 3 or 4

	Tier 1	Tier 2	Tier 3
Assistance with identifying regional/national resources for specific company R&D needs	✓	✓	✓
Assistance with identifying and connecting with experts/collaborators on specific company needs	✓	✓	✓
Assistance with identifying/recruiting students with relevant skills for company needs	✓	✓	✓
Participation in exclusive networking and recruiting events for CoE members and affiliates	✓	✓	✓
Participation in CoE technical workshops, seminars, conferences and symposia	✓	✓-\$	✓-\$\$
Access to non-proprietary data/information generated by CoE funded precompetitive projects for company-specific contractual projects	✓	✓-\$	✓-\$\$
Access to shared space for collaborative group research and scaling up projects	✓	✓-\$	✓-\$\$
Assistance with developing/customizing on-site training courses and workshops	✓	✓-\$	✓-\$\$
Free access to CoE/AMM facilities and equipment	✓	✓	
Discounts on the use of instruments and equipment available at partnering institutions	✓	✓	
Participation in large group state and federal funding proposals submitted by the CoE	✓	✓	
Participation in exclusive CoE technical meetings and presentations of funded CoE projects	✓	✓	
Voting seat on the CoE/AMM steering advisory board	✓		
Voting on precompetitive research projects funded by the CoE/Consortium	✓		
Voting on sharing information and licensing technologies with non CoE members	✓		
Non-exclusive IP licensing, at no cost, and exclusive IP licensing at additional cost	✓		

Projected Cash Flow Analysis

				Year 1 (\$25k)		Year 2 (\$25k, \$50k)		Year 3 (\$25k, \$50k, \$75k)		Year 4 (\$50k)		Year 5 (\$50k)		Year 6 (\$50k)	
Income	WEDC & UWM			\$500,000		\$400,000		\$350,000							
	INDUSTRY MEMBERS														
	Number of Members & Membership Fee/Yr		\$25,000	8	\$200,000	8	\$200,000	8	\$200,000						
			\$50,000			2	\$100,000	2	\$50,000	15	\$750,000	15	\$750,000	15	\$750,000
		\$75,000					2	\$150,000							

**Not including revenue generated from federal funding, on-site workshops and training seminars, etc.*

Total Income*				\$700,000		\$700,000		\$750,000		\$750,000		\$750,000		\$750,000	
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Expenses	Precompetitive Research Projects (\$75k/yr)														
	Number of projects & Total Cost		6	(\$450,000)	6	(\$450,000)	6	(\$450,000)	8	(\$600,000)	8	(\$600,000)	8	(\$600,000)	
	Contractual Research Projects - Subsidized at \$25k/yr per project														
			6	(\$150,000)	6	(\$150,000)	6	(\$150,000)							
Facilities & Administrative Expenses			(\$100,000)		(\$100,000)		(\$120,000)		(\$120,000)		(\$120,000)		(\$120,000)		

Total Expenses				(\$700,000)		(\$700,000)		(\$720,000)		(\$720,000)		(\$720,000)		(\$720,000)	
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Net Cash Flow				\$0		\$0		\$30,000		\$30,000		\$30,000		\$30,000	
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Cumulative Cash Flow				\$0		\$0		\$30,000		\$60,000		\$90,000		\$120,000	
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- A Company member joining in Year 1 pays: \$25k-Y1, \$25k-Y2, \$25k-Y3, and \$50k/yr afterward
- A Company member joining in Year 2 pays: \$50k-Y1, \$25k-Y2 and \$50k/yr afterward
- A Company member joining in Year 3 pays: \$75k-Y1 and \$50k/yr afterward
- A Company member joining in Year 4 pays \$50k/yr

Workshop (October 18, 2018)

Harnessing the Power of Collaboration for Advancing Materials Technologies in Wisconsin

Goals:

1. Introduce the CoE/AMM mission, scope, value propositions, and business model to industry and university stakeholders
 2. Introduce CoE teams and prospective partners and collaborators
 3. Present proposal and CoE development process and timeline
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4. Promote strategic partnerships and collaboration between universities and industry on advanced materials and technologies
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5. Gather industry and faculty feedback on the need, value propositions, strengths/gaps, challenges, and operating models (management, financial, IPs, etc.) of AMM
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6. Report out and answer questions related to membership fees and benefits, IPs, collaborations mechanisms, technologies roadmap.



		Minutes
08:30-08:40	Welcoming Remarks (UWM)	10
08:40-08:50	Opening Address (WEDC)	10
08:50-09:30	CoE/AMM and Workshop Overview (Nidal)	40
09:30-10:30	Keynote speaker - Sheetal Handa	60
10:30-10:40	Coffee Break and relocation to breakout sessions	10
10:40-12:00	Breakout sessions: University and Industry	80
12:00-13:00	Working lunch (round table discussions)	60
13:00-13:50	Report out from breakout sessions	50
13:50-14:00	Coffee Break and Panel Setup	10
14:00-15:00	Q&A Panel Discussion	60
15:00-15:20	Closing Remarks from the Dean, WEDC, and Nidal	20
15:20-15:30	Filling out surveys and Adjourn	10

**The workshop will be followed with a social hour for networking*

Overview

Name	Date	Audience
NIDAL ABU-ZAHRA	October 04, 2018	Academic researchers and industry executives



ACTION:
Engage with AMM to create an effective CoE for your needs

Center of Excellence in Advanced Materials and Manufacturing

OPENING AND PROBLEM ANALYSIS

Problem:

Solving R&D problems and/or validating new opportunities are becoming more expensive, slower, and less accurate

It has these important manifestations:

- Solutions (internal/external) are becoming more expensive (whether it is by assembling internal teams and providing them with the needed resources, or by identifying external resources who may be able to help you at an acceptable cost and risk)
- Problems are becoming more complex (these may start simply as a customer complaint on a product failure, which gets traced back to a structural problem due to an environmental interaction with chemical elements in a surface coating)
- Needed resources (people/facilities) are scattered and sometimes "barriered" (require high familiarity with, and coordination between, various experts and facilities)
- Unsolved problems (status quo) are becoming more costly to put off or ignore (a delay in finding a solution to a customer complaint could result in business losses)

Allusion to the Solution:

Similarly, academic institutions may have resources (people & facilities) which are adequate for a certain type of industry needs, but often short on what is needed to offer complete solutions. They also need to reach out to other institutions. This step often becomes the longest downtime in the entire process, unless, these resources are well identified and the collaboration tools and mechanisms are already established and activated.

TRANSITION

So, you may be wondering "How can AMM help with solving this problem?" First of all,



FIRST INSIGHT

Academic and engineering resources are abundant in WI

Data:

- > 400 faculty researchers
- > 100 related research labs
- > 1000 involved students

TRANSITION

and these,

SECOND INSIGHT

Resources can be leveraged for economic benefits

Data:

- > \$24B annual contribution to economy
- > \$18B (75%) annual benefits to industry
- 23-to-1 economic return on investment

TRANSITION

effectively since,

THIRD INSIGHT

Existing infrastructure for Industry/University collaboration

Data:

- > \$1B in annual research expenditure
- > 50 industry outreach centers
- > 25 engineering consortia

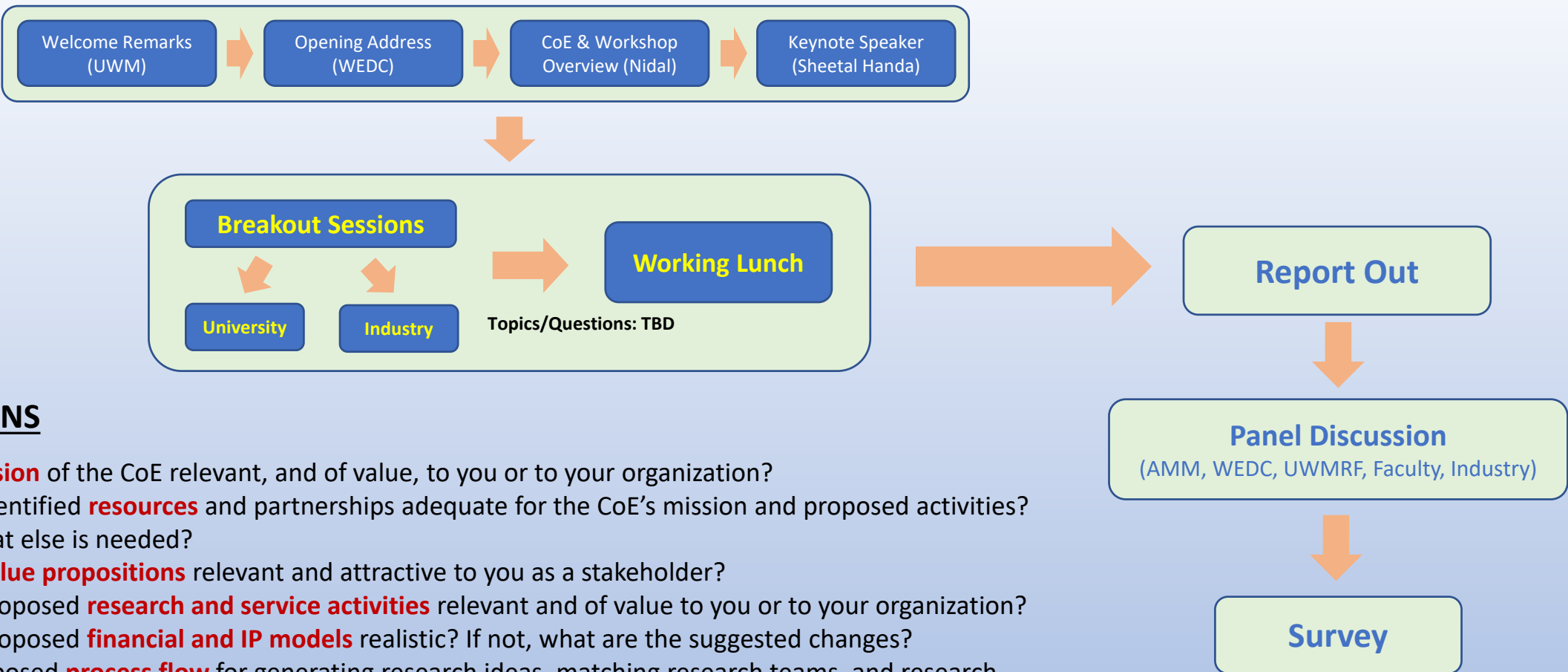


TRANSITION

the broad economic and social benefits should also attract funding from various state and federal offices; such as WEDC, NSF, DOE, etc.

CLOSING

In closing, your demand for faster, economic, and more accurate solutions can be met by pooling resources at various academic institutions in WI, and setting up effective mechanisms for their collaboration. They will be able to help with immediate problems as well as more complex challenges when validating new materials and/or processing technologies. You can help us build this center, so we can be better equipped to tackle your next challenge.



KEY QUESTIONS

1. Is the **mission** of the CoE relevant, and of value, to you or to your organization?
2. Are the identified **resources** and partnerships adequate for the CoE's mission and proposed activities? If not, what else is needed?
3. Are the **value propositions** relevant and attractive to you as a stakeholder?
4. Are the proposed **research and service activities** relevant and of value to you or to your organization?
5. Are the proposed **financial and IP models** realistic? If not, what are the suggested changes?
6. Is the proposed **process flow** for generating research ideas, matching research teams, and research funding reasonable?
7. Is the proposed **management structure** reasonable?
8. What are the current/anticipated challenges in **multi-campus collaboration** between faculty researchers, and how can they be improved?
9. What are the current/anticipated challenges in **university/industry collaboration**, and how can they be improved?
10. Based on the current business model, how likely are you (or your organization) to **participate** in AMM? What changes in the current model can increase the likelihood of your participation?

Click the link in presentation mode for: [Parking lots around MATC Main building](#)

