

Making the Transition

Preparing for Large, Center-Level Research Proposals

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Proposal Coordination

Office of the Vice President for Research
and Partnerships

Purdue Research Development Services



Office of the Executive Vice President for Research and Partnerships

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Funding and Grant Writing

The goal of the EVPRP Research Development staff is to assist faculty in the development of research and education proposals. [EVPRP staff](#) provide a broad range of services and resources related to funding and grantsmanship. Below are some of the ways we can assist.



[Funding Resources](#)

The funding page provides information on internal, external, seed, and early investigator funding opportunities. Links to helpful funding search tools and e-mail alerts can also be found here.



[Limited Submissions](#)

Check here for details on internal competitions including deadlines, templates and submission guidelines.



[Grant Writing Services and Resources](#)

Research Development staff can provide assistance with both large and small proposals. This page explains our services and provides links to other useful proposal preparation resources.



[Site Visits](#)

Our staff can assist with the logistics and coordination of site visits allowing the research team to focus on their science and team. Follow this link to find out more about these services.

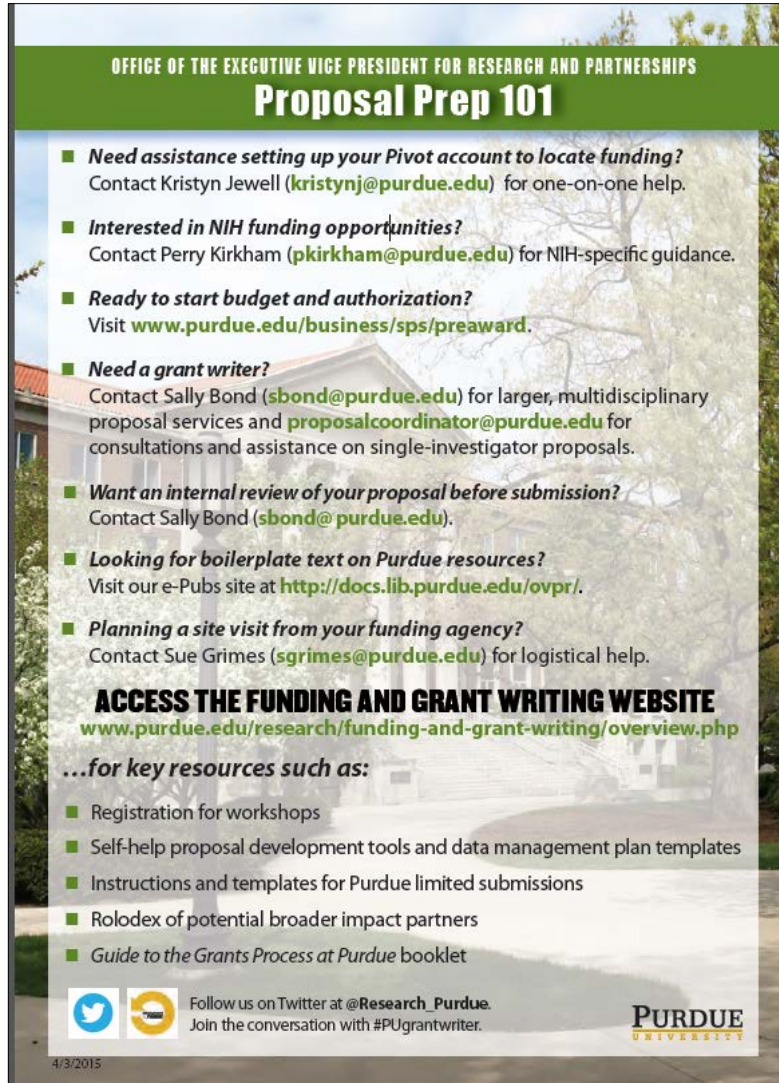


[Events](#)

The events page provides information on upcoming grantsmanship workshops and events including dates, times, and registration information. Presentations from previous events can also be accessed from this site.

Grant Writing Resources

Proposal Prep 101

A flyer titled "Proposal Prep 101" from the Office of the Executive Vice President for Research and Partnerships at Purdue University. The flyer lists seven bullet points with questions and contact information for various grant-related services. It also includes a section for accessing the funding and grant writing website and a list of key resources. Social media icons for Twitter and YouTube are at the bottom left, and the Purdue University logo is at the bottom right. The date 4/3/2015 is printed at the bottom left.



OFFICE OF THE EXECUTIVE VICE PRESIDENT FOR RESEARCH AND PARTNERSHIPS
Proposal Prep 101

- **Need assistance setting up your Pivot account to locate funding?**
Contact Kristyn Jewell (kristynj@purdue.edu) for one-on-one help.
- **Interested in NIH funding opportunities?**
Contact Perry Kirkham (pkirkham@purdue.edu) for NIH-specific guidance.
- **Ready to start budget and authorization?**
Visit www.purdue.edu/business/sps/preaward.
- **Need a grant writer?**
Contact Sally Bond (sbond@purdue.edu) for larger, multidisciplinary proposal services and proposalcoordinator@purdue.edu for consultations and assistance on single-investigator proposals.
- **Want an internal review of your proposal before submission?**
Contact Sally Bond (sbond@purdue.edu).
- **Looking for boilerplate text on Purdue resources?**
Visit our e-Pubs site at <http://docs.lib.purdue.edu/ovpr/>.
- **Planning a site visit from your funding agency?**
Contact Sue Grimes (sgrimes@purdue.edu) for logistical help.

ACCESS THE FUNDING AND GRANT WRITING WEBSITE
www.purdue.edu/research/funding-and-grant-writing/overview.php

...for key resources such as:

- Registration for workshops
- Self-help proposal development tools and data management plan templates
- Instructions and templates for Purdue limited submissions
- Rolodex of potential broader impact partners
- Guide to the Grants Process at Purdue booklet

  Follow us on Twitter at @Research_Purdue.
Join the conversation with #PUgrantwriter.

PURDUE
UNIVERSITY

4/3/2015

Today


- small team vs large center proposal development
- tips prior to solicitation
- keys to sausage making
- three action items for today
- panel discussion

Basic Grantsmanship is the Same

Strategies for a strong proposal submission

- tell a compelling story
- respond to solicitation
- answer “Why this team?”
- know your audience
- conduct internal review

Fuller spectrum of components. Complexity of scale and scope. Leadership.

[illegible]

....But More to Consider

Fuller spectrum of components. Complexity of scale and scope. Leadership.

Complex management

marketing Ten-year milestones

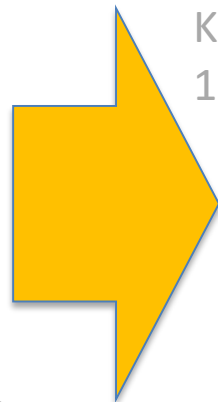
Contracting

General 10-week project timeline:

	1	2	3	4	5	6	7	8	9	10
Analysis and Planning										
Distribute documents noted in RFP										
Identify previously successful proposals										
Identify PI										
Notify Pre-Award Center for assigned budget specialist										
Problem Overview										
What is the problem										
What has already been done to address problem										
What gaps remain										
How we propose to address gaps										
Vision Goals										
Identify proposal win themes/discriminators										
Program Officer Input										
Contact PO	initial									
Team debrief on meeting										
Refine initial analysis/planning										
Proposed Outline										
Discuss/refine outline structure										
More detailed outline, if needed										
Identify graphics needed										
Partnerships										
Recruit collaborative partners										
Produce "talking points" brochure or website										
Recruit industry affiliates										
Recruit advisory board members										
Collect letters of commitment										
Management and Personnel										
Identify basic management structure										
Collect biosketches										
Proposal Writing and Editing										
Assign writing										
Write section components										
Compile 1 st draft										
Project team 1 st edit										
Any outside review input/edit										
Editing iterations										
Write summary or abstract										

Red Test: Important to have agreement (and explicit text for problem overview) prior to proposal writing

State agency partners



K-12

Site visit

Professional staffing

Timeline

Commercialization

Headquarter space

Fee-based industrial membership

Research thrusts

Team travel

WBS

Cross-institutional educational programming

mentoring

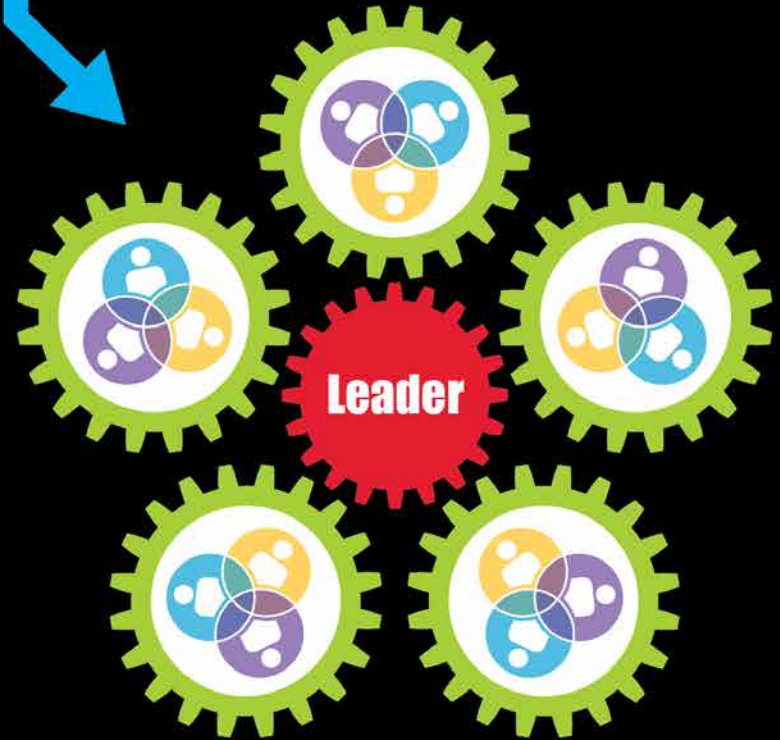
ERC Full Proposal (25 pages) Due Thursday, June 18

	1	2	3	4	5	6	7	8	9	10
Industry and Innovation Partner Recruitment										
Developing team consensus for IPAB and process conceptualization										
Identify industry partners										
Draft fee-based membership program (requirements and privileges) and proprietary agreement/terms/conditions										
Develop EPO, legal and personnel brochures										
Identify industry Liaison Officers (could be TBD in proposal)										
IPAB membership list finalized										
National statistical government agencies and professional organizations as non-fee membership partners										
Configuration Strategizing										
Develop management/leadership organizational chart for conceptualization										
Team Leadership Positions:										
Required: Director, Deputy Director, Workforce Development Program Director (can split with faculty director of university and faculty personnel education co-director), Diversity Director, Research/Target Leaders										
Optional: staff Managing Director and staff Industrial Liaison Officer										
Facilitate a NSF advising Northwestern as domestic partner university										
Facilitate any additional academic institutions										
Identify up to five pre-college education institutions including community colleges										
Final list of faculty/staff participants (e.g. senior personnel) that identify external evaluation for workforce development program										
Developing investigative space agreement										
Assignment share-point person to implement partners										
Counter-wide Contextual Strategizing										
Any refinement of storyline based on preproposal reviews										
What is the problem										
What has been done to address the problem										
What is the gap that remains										
How do we propose to address the gap										
Overall Goals of CHSTAR ERIC										
Goals and Objectives of Research, Training and Education (identify up to 5 items/discriminators)										
Refine 2-page diagram										
Develop 25-year milestone chart										
Proposal Outline										
Discuss/refine outline structure with page allocations										
Assign writing leaders and teams										
Identify graphics needed										
Proposal Writing and Editing										
Assign writing leaders for feedback/iteration prior to writing										
Team write section components										
Complete 1 st draft and editing iterations										
Provide draft in internal review period										
Red Panel Review										
All team debate on review and strategy for revisions										
Writing iterations										
Write non-page summary										
Budgeting										
Initial meeting with Faculty and specialist and cost share point person										
Costing and Pricing										
Meeting with faculty and regarding preliminary budget for personnel salary and distribution										
Required cost-sharing tables and distribution										
Supplementary Documentation										
Collect any letters of commitment:										
Two from Partner team and one higher level agent official										
• Dean of engineering from each partner										
• Partner unit, organizations and/or state local government agencies										
• Administrators at pre-college partners										
• Officials at partner firms/agencies										
• National laboratories										
• Domestic affiliated faculty										
• Foreign collaborators										
• ADIPAB members										
Collect faculty and equipment information from all partners										
Collect biosketches and collaborative team										
Propose conflict of interest for PI team on PI										
Provide non-conflict plan										
Form management plan										
Optional list of engaged review on										
Submit June 18th										

Multidisciplinary Team



Large Center



Multidisciplinary Team



Large Center



Millions \$

Tens of Millions \$\$\$

Multidisciplinary Team



Millions \$

Led by strong researcher

Large Center



Tens of Millions \$\$\$

Led by strong, senior researcher

Multidisciplinary Team



Millions \$

Led by strong researcher

Topics reinforce

Large Center



Tens of Millions \$\$\$

Led by strong, senior researcher

No overlap with existing centers

Multidisciplinary Team



Millions \$

Led by strong researcher

Topics reinforce

Collaboration track record helps

Large Center



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No overlap with existing centers

Collaboration track record necessary

Multidisciplinary Team



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Collaboration track record helps

Busy

Large Center



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Led by strong, senior researcher

No overlap with existing centers

Collaboration track record necessary

Major time commitment

Multidisciplinary Team



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Program awareness

Large Center



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Major time commitment

Agency and program culture

Multidisciplinary Team



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Program awareness

PI could write quite a bit

Large Center



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Major time commitment

Agency and program culture

Team must write collaboratively

Multidisciplinary Team



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Led by strong researcher
Topics reinforce
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Busy
Program awareness
PI could write quite a bit
Reviewers close to your discipline

Large Center



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Led by strong, senior researcher
No overlap with existing centers
Collaboration track record necessary
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Interdisciplinary review

Multidisciplinary Team



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Interdisciplinary review
Must build on authentic partnerships

Multidisciplinary Team



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Sustainability required

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Program awareness
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Reviewers close to your discipline
Can quickly add partners
Sustainability appreciated
Management is largely
communication

Large Center



Tens of Millions \$\$\$
Led by strong, senior researcher
No overlap with existing centers
Collaboration track record necessary
Major time commitment
Agency and program culture
Team must write collaboratively
Interdisciplinary review
Must build on authentic partnerships
Sustainability required
Need clear governance structure and
reporting lines

Multidisciplinary Team



Millions \$

Led by strong researcher

Topics reinforce

Collaboration track record helps

Busy

Program awareness

PI could write quite a bit

Reviewers close to your discipline

Can quickly add partners

Sustainability appreciated

Management is largely
communication

Institutional resources leveraged
as needed

Large Center



Tens of Millions \$\$\$

Led by strong, senior researcher

No overlap with existing centers

Collaboration track record necessary

Major time commitment

Agency and program culture

Team must write collaboratively

Interdisciplinary review

Must build on authentic partnerships

Sustainability required

Need clear governance structure and
reporting lines

Institutional role and commitment
clearly delineated



If you wait until
solicitation is
out, you are
already late!

Tips for Prior to Solicitation

Work year(s) ahead not months.

- Meet with campus leaders

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Work year(s) ahead not months.

- Meet with campus leaders
- What can you drop? Is release time available?

Tips for Prior to Solicitation

Work year(s) ahead not months.

- Meet with campus leaders
- What can you drop? Is release time available?
- Travel to funded centers

Tips for Prior to Solicitation

Work year(s) ahead not months.

- Meet with campus leaders
- What can you drop? Is release time available?
- Travel to funded centers
- Travel to funding agency

Tips for Prior to Solicitation

Work ahead years not months.

- Position yourself as a thought leader on this topic

Tips for Prior to Solicitation

Work ahead years not months.

- Position yourself as a thought leader on this topic
- Develop real partnerships with key stakeholders



While You Write the Proposal

How a proposal is written is how the center will likely be run.

- grantsmanship on logistical steroids

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- build team trust and energy

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While You Write the Proposal

How a proposal is written is how the center will likely be run.

- grantsmanship on logistical steroids
- build team trust and energy
- shared vision and understanding of requirements...no siloes
- buy in for strict review milestones

Action Items: Where to Start

Three ways to coalesce team prior to the solicitation



Develop a compelling storyline



Create an integrative graphic



Outline high-level milestones and deliverables

Develop a Compelling Storyline

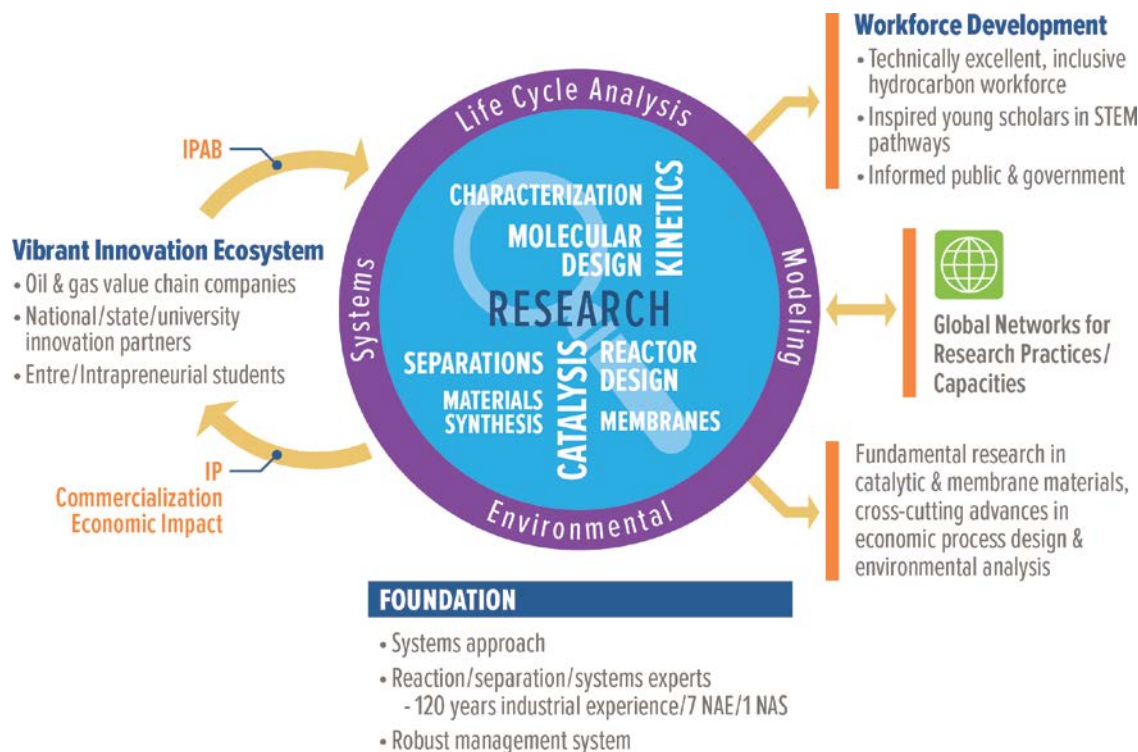


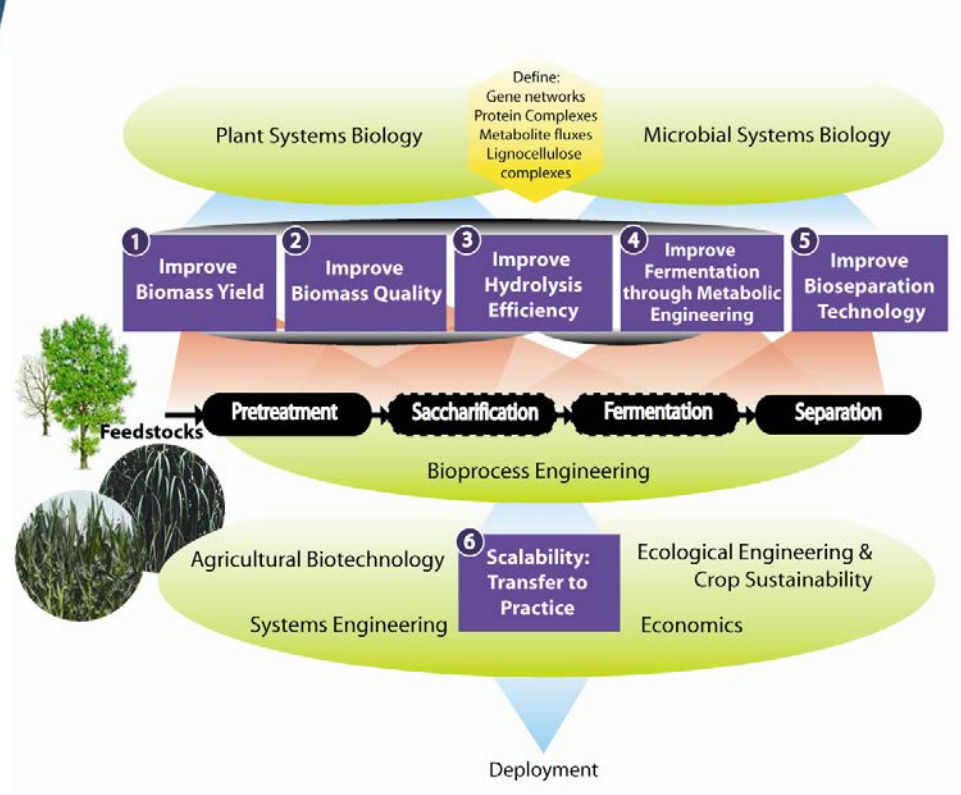
- What is the problem?
- What has been done already to address this problem?
- What is the gap that still remains?
- What do you propose to do?

Create an Integrative Graphic



Visual integration of all components

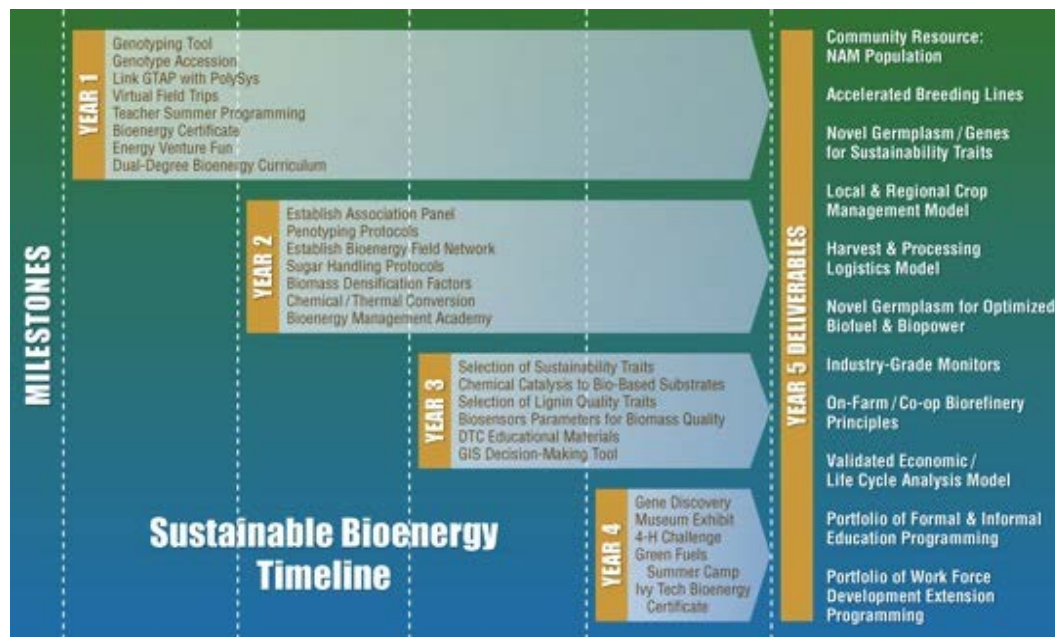


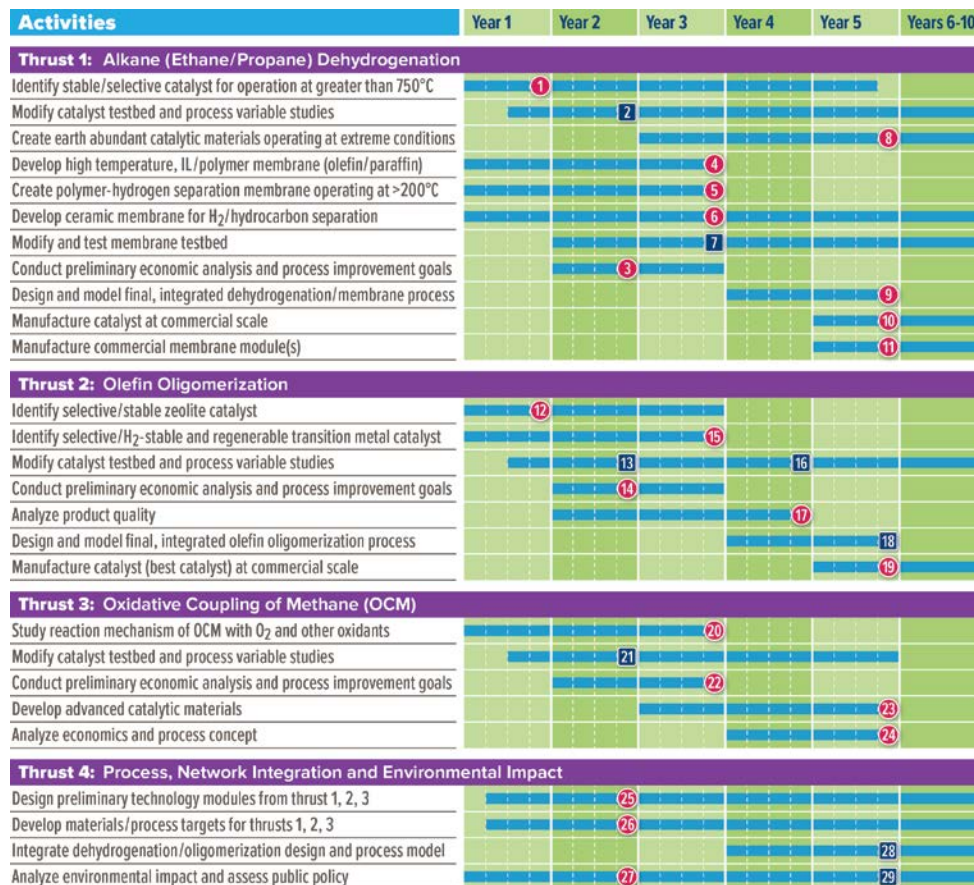
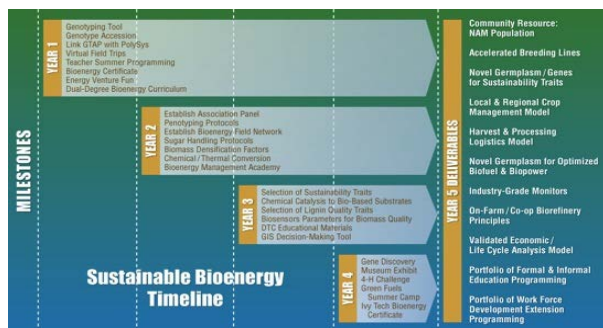


Milestones and Deliverables



- High-level 5 and 10 years
- Helps integrate workflow





● **Milestones** and ■ **Testbed Milestones:**

- 1-2. Preliminary catalyst selection for test bed evaluations
3. Preliminary economic analysis and process design
- 4-7. Selection of membrane for test bed evaluations
8. Development of advance dehydrogenation catalyst
9. Final catalyst/membrane process design and process model
- 10-11. Commercial manufacture of catalyst and membrane module
- 12-13. Preliminary catalyst selection for test bed evaluations
14. Preliminary economic analysis and process design
- 15-17. Preliminary catalyst selection for test bed evaluations
18. Liquid fuels and products analysis

19. Process design and process model of oligomerization process
20. Fundamental studies on OCM reaction mechanisms
- 21-22. Test bed process variable studies on best literature catalysts for preliminary economic analysis
23. Development of advanced catalysts/oxidants
24. Economic analysis of OCM for fuels
25. Integrated design and process model of shale alkanes to liquids and fuels
26. Preliminary process design and module performance targets
27. Network of chemical manufacturing and refining and supply chain models
28. Integrated design and process model of shale alkanes to liquids and fuels
29. Regional economic, environmental, and public policy issues for commercialization of targeted processes

Panel Discussion



Fabio Ribeiro
Director of the
CISTAR NSF
Engineering
Research
Center



**Shelley
MacDermid
Wadsworth**
Director of the
Military Family
Research Institute



Bob Brown
Managing Director
of the Center for
the Science of
Information