Technology Innovation Program

Innovating for Critical National Needs

2010 TIP Proposers' Conference

National Institute of Standards and Technology
U.S. Department of Commerce

Today's Program
Gaithersburg

9:00 a.m.

– *Welcome to TIP and the 2010 Competition*

Lorel Wisniewski, Deputy Director, TIP

9:45 a.m.

– *Guidelines for Preparing a TIP Project Narrative*

Thomas Wiggins, Director, Selection Management Office

10:30 a.m. BREAK

10:45 a.m.

– *Preparing and Submitting a TIP Proposal*

Calvin Mitchell, Grants Officer, Audits, TIP and Construction

Today's Program
Gaithersburg *(cont'd)*

11:15 a.m.

- *Questions and Answers*

12:00 p.m. BREAK

12:45 p.m.

- *TIP Budget Narrative and Budget Review*

  Michael Walsh, Analyst, Selection Management Office

1:45 p.m.

- *Questions and Answers*

Today's Program
Outline - Gaithersburg

- Welcome to TIP and the 2010 Competition
  - Technology Innovation Program
  - Recent Funding
  - 2010 Competition
  - TIP Selection Process and Criteria
- Guidelines for Preparing a TIP Project Narrative
- Preparing and Submitting a TIP Proposal
- Hands-on Budget and Forms Tutorial

What is the Technology Innovation Program?

- TIP is a cost-shared, federal funding program that focuses on high-risk, high-reward research that is expected to transform the Nation's capacity to deal with major societal challenges that are not being addressed.

The Technology Innovation Program
Funding Transformational Research for Critical National Needs

TIP's Mission

- Assist United States businesses and institutions of higher education or other organizations, such as national laboratories and nonprofit research institutions
- Support, promote, and accelerate innovation in the United States through high-risk, high-reward research
- In areas of critical national need

K. Talbott/NIST

Credit: NIST

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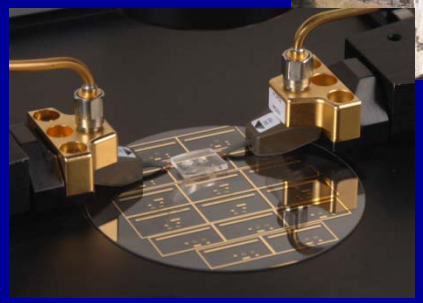

Credit: Denease Anderson/NIST

America COMPETES Act, (PL 110-69)
August 9, 2007

FUNDING: $69.9 million for FY 2010, including management of ongoing TIP and Advanced Technology Program awards

NIST Mission and Programs

To promote U.S. innovation and industrial competitiveness by advancing

- *measurement science,*
- *standards, and*
- *technology*

in ways that enhance economic security and improve our quality of life


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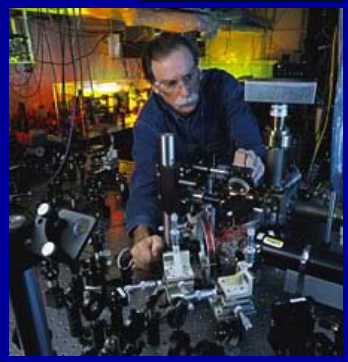
Courtesy Steuben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Major Programs

- NIST Laboratories
- Baldrige National Quality Program
- Manufacturing Extension Partnership
- Technology Innovation Program

Critical National Need

What is a *Critical National Need*?

- An area that justifies government attention because the magnitude of the problem is large and the societal challenges that need to be overcome are not being addressed, but could be addressed through high-risk, high-reward research

Societal Challenge

What is a *Societal Challenge*?

- A problem or issue *(not a solution or answer)* confronted by society that:
  - When not addressed could negatively affect the overall function and quality of life of the nation, and as such justifies government attention
  - Can be addressed through high-risk, high-reward research

High-Risk High-Reward Research

Research that:

- Has the potential for yielding transformational results with far-ranging or wide-ranging implications;
- Addresses areas of critical national need that support, promote, and accelerate innovation in the United States and is within NIST's areas of technical competence; and
- Is too novel or spans too diverse a range of disciplines to fare well in the traditional peer-review process.

Transformational Results

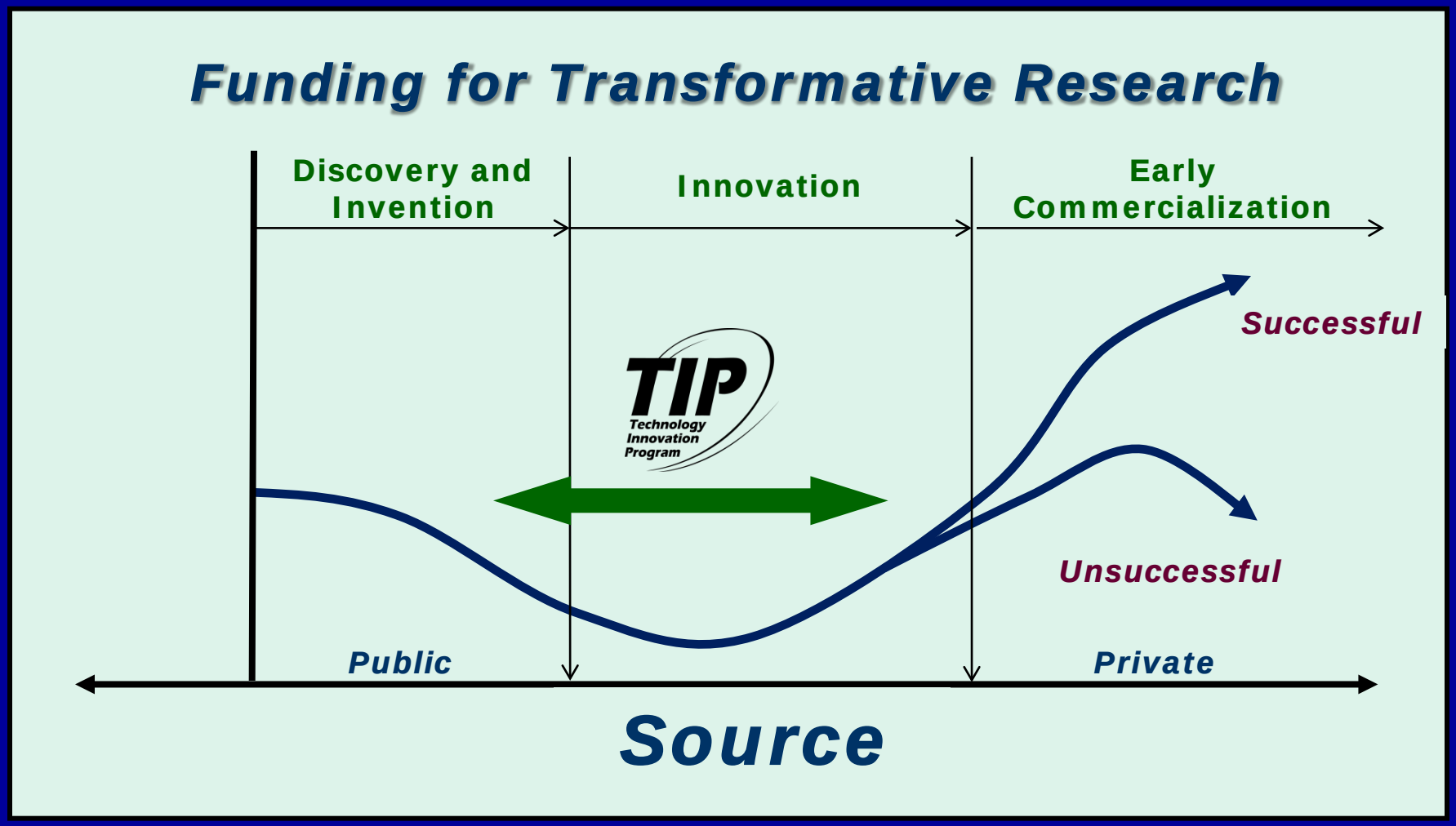
Potential project outcomes that:

- Enable disruptive changes over and above current methods and strategies
- Have the potential to radically improve our understanding of systems and technologies, challenging the status quo of research approaches and applications

What is TIP Looking For?

- Novel Purpose
  - Address societal challenges not being addressed in areas of critical national need with benefits that extend significantly beyond proposers
- Scientific & Technical Merit
  - High-risk, high-reward research
- Transformational Results
  - Strong potential for advancing state-of-the-art and contributing to U.S. science and technology base

Provide Funding Not Possible by Others



Participants in Innovation

- Recipients CAN be
  - Small and medium-sized, U.S., for-profit businesses
  - Institutes of higher education
  - National laboratory, governmental laboratory (with the exception of NIST)
  - Nonprofit research institutes
  - Other organizations

- Large companies (i.e., Fortune 1000 companies)
  - MAY participate as a JV member and fully fund their participation,
  - MAY act as a contractor under Procurement Standards CFR Part 14

Single Company Proposers

- Single Company – a small or medium-sized for-profit company doing a majority of its business in the U.S. and is either:
  - A U.S. owned company or
  - A U.S. subsidiary of a foreign parent
- Funding limitations
  - Up to $3M federal funds for up to 3 years
  - May be used only for direct costs
  - Must be not greater than 50 percent of total project costs

Joint Venture Proposers

- Joint Venture – A business arrangement that includes either:
  - At least two separately owned small or medium-sized for-profit; or
  - At least one small or medium-sized for-profit company and one institute of higher education or other organization such as a national laboratory, governmental laboratory (not NIST) or nonprofit research institute.
- Funding limitations
  - Up to $9M federal funds for project lengths up to 5 years
  - May be used only for direct costs
  - Must be not greater than 50 percent of total project costs

Either a small or medium-sized business or an institute of higher education may lead a joint venture project

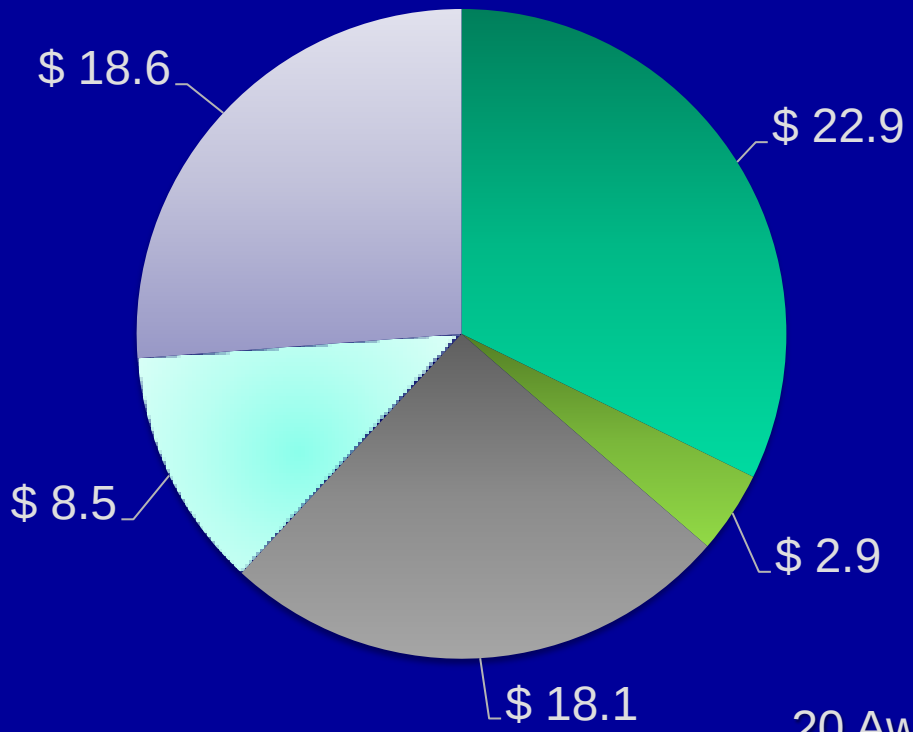
2009 Competition
Summary Statistics

• Number of Proposals Received	**138**
- Number of Single Companies and JV Members* in Submitted Proposals	244
• Number of Awards	**20**
- Civil Infrastructure	**8**
- Manufacturing	**12**
- Joint Ventures	9
- Single Applicants	11
- Number of Participants in Awarded Projects	38
- Total TIP Funds Committed	$71 M
- Total Industry Cost Share	$75 M
- Award Size for Projects - Range	$1.4 M - $8.8 M

** Members: A Joint Venture Member is any entity that is a signatory on the joint venture agreement.*

2009 Competition Award Characteristics

TIP Funding ($ Millions) By Type of Organization



- **SA Small Businesses** (10 awards)
- **SA Medium-Sized Businesses** (1 award)
- **JVL Small Businesses** (4 awards)
- **JVL Medium-Sized Businesses** (1 award)
- **JVL Universities** (4 awards)

SA = Single Applicant Participant
JVL = Joint Venture Lead Participant

20 Awards Announced - $71 M TIP

- 12 in Manufacturing
- 8 in Civil Infrastructure

2010 TIP Competition
Manufacturing and Biomanufacturing: Materials Advances and Critical Processes

2010 TIP Competition
Manufacturing

- Critical National Need
  - Manufacturing

- Societal Challenge
  - The competitiveness of U.S. manufacturing is being challenged by other industrialized nations such as Japan, Germany, and Korea, as well as emerging economies such as China. To retain competitiveness in the global marketplace, the United States must make investments in innovation, funding state-of-the-art technologies for manufacturing.

2010 TIP Competition
Manufacturing

- TIP's Response for 2010
  - *"Manufacturing and Biomanufacturing: Materials Advances and Critical Processes"*
  - *Three* elements:
    - Process scale-up, integration and design for materials advances
    - Predictive modeling for materials advances and materials processing
    - Critical process advances (related to the manufacturability of materials and manufacturing of both new and existing products)

2010 TIP Competition
Manufacturing *(cont'd)*

What's Different for 2010?

- Expanded emphasis
  - Material types within scope
    - *Elements 1 and 2:* nanomaterials; superalloys, alloys and smart materials; composites; ceramics; and glasses including bulk metallic glasses
    - *Element 3:* see the FFO for full details
  - Some 2009 exclusions removed, e.g. electronic or photonic, and biological sources
  - Explicit inclusion of biomanufacturing, i.e. biopharmaceuticals

2010 TIP Competition
Manufacturing *(cont'd)*

What's Different for 2010? (cont'd)

- Three elements, not two
  - Element 1: Process scale-up, integration and design for materials advances
  - Element 2: Predictive modeling for materials advances and materials processing
  - Element 3: Critical process advances *(new for 2010)*

2010 TIP Competition
Manufacturing: Element 1

Element 1: Process scale-up, integration, and design for materials advances

Innovations are being sought to:

- Increase to commercial scale the quantity and quality of available advanced materials
- Help incorporate advanced materials into new, revolutionary products based on the material's properties
- Create new instrumentation and measurement capabilities
  - To measure real time process parameters
  - To ensure and/or verify materials are being correctly incorporated into manufactured products while maintaining their revolutionary functions

Scale-up processes may be next generation or an entirely new process

2010 TIP Competition
Manufacturing: Elements 1 & 2

Element 1: Process scale-up, integration and design for materials advances

Element 2: Predictive modeling for materials advances and materials processing

Table 1

Technological Needs		Nanomaterials	Superalloys, Alloys & Smart Materials	Composites	Ceramics	Glasses
Materials Processing	Scale-up from Laboratory Quantities / Controls	✓			✓	
	Incorporate into New Uses / Maintain Functionality					
Predictive Modeling Tools	Rules / Understand Why It Does What It Does					
	Process Modeling / Design & Product Design Tools	✓				

✓ Example

Proposed solutions must map into one or more cells and be derived from biological or other sources for the proposal to be responsive and considered for funding

2010 TIP Competition
Manufacturing: Element 1 *(cont'd)*

Responsive proposals

- Must consist of ***one or more*** of the following:
  - A single process to achieve the goals of the scale-up, or multiple processes integrated together into a coherent solution (i.e., diverse processes or multiples of a single process for "intensification")
  - Scale-up of materials processes to manufacture and apply coatings that are within the scope requirements for the material types (*nanomaterials; superalloys, alloys and smart materials; composites; ceramics; and glasses, including bulk metallic glasses*)
  - Scale-up of materials processes for healthcare applications (e.g., imaging, therapeutics, etc.)

Proposals will be considered more competitive if they:

1. *Include validation methodologies by or with processors or end users; and/or*
2. *Address sustainability issues.*

2010 TIP Competition
Manufacturing: Element 1 *(cont'd)*

- Responsive proposals must address ***all*** of the following:
  - Address one or more of the materials areas specified in this announcement
  - Quantify the baseline processing capabilities
  - Describe how the results of the process scale-up could lead to new products and manufacturing process capabilities
  - Provide quantification and qualification of the estimated output of the final project results
  - Scale-up of the quantities produced during the project must be targeted to increase by a factor of 1,000 fold or more (unit quantity per unit time) as compared to the baseline
  - A detailed scientific rationale and description of the challenges to accomplish scale-up of the process(es)

2010 TIP Competition
Manufacturing: Element 2

Element 2: Predictive modeling for materials advances and materials processing

Innovations are being sought to:

- Enable researchers to use constitutive relations and rules (with validation) concerning the underlying behavior of materials (understanding structure vs. function) and the changes to behavior due to manufacturing processes
- Enable a better and quicker understanding of why materials do what they do
- Enable extrapolation of knowledge, with validation and verification, beyond the laboratory conditions for which they were developed
- Significantly improve capabilities within the manufacturing communities to quickly incorporate advanced materials breakthroughs into revolutionary products based on new materials functionality

2010 TIP Competition
Manufacturing: Element 2 *(cont'd)*

Responsive proposals

- Must address ***all*** of the following:
  - Address one or more of the eligible materials included in this announcement (*nanomaterials; superalloys, alloys and smart materials; composites; ceramics; and glasses, including bulk metallic glasses*)
  - Quantify the baseline modeling capability
  - Describe how the results of the proposed modeling capabilities could lead to new products and manufacturing process capabilities

2010 TIP Competition
Manufacturing: Element 2 *(cont'd)*

Responsive proposals (cont'd)

- And must also address ***one or both*** of the following:
  - Develop constitutive relationships and rules that describe the behavior and the process of the materials at a level that is useful for describing laboratory results as well as for developing a greater understanding of the materials for end users
  - Develop or use the constitutive relationships and rules to develop process design tools for manufacturing processes for these materials advances

2010 TIP Competition
Manufacturing: Element 2 *(cont'd)*

Responsive proposals (cont'd)

- Proposals that include the following will be considered ***more*** competitive
  - Collaboration by or with those who manufacture the advanced materials, in order to validate their models
  - How users will specifically benefit from the acceleration and implementation of the proposed models in support of materials reliability (i.e. final properties or mechanical performance) and materials behavior before and after processing

*Proposals that **do not** include validation of models will be considered **less** competitive*

2010 TIP Competition
Manufacturing: Element 3

Element 3: Critical process advancements

Innovations are being sought for:

- Modifications in manufacturing processes that augment and expand current limited capabilities, e.g.
  - Creation of novel methods to fabricate unique components from complex, difficult-to-machine materials
  - Design and implementation of real-time, sensor-based, feedback-optimized systems for discrete, continuous or batch manufacturing processes
- Improvements in *quality*, *throughput*, *costs*, *sustainability*, *new capabilities*, and *agility*, relative to the state-of-the-art for the process being proposed

Proposers should quantitatively address the benefits, tradeoffs, and advancements envisioned over current practices

New for 2010

2010 TIP Competition
Manufacturing: Element 3

Element 3: Critical process advances

Table 2

State-Of-The-Art Approaches to Critical Manufacturing Process Advances for:	Process		
	Batch	Discrete	Continuous
Improving quality			☑
Increasing throughput			☑
Reducing costs			
Enhancing sustainability		✓	
Enabling new capabilities		✓	
Improving agility		✓	
Other improvements			

✓ Example 1

☑ Example 2

Proposed solutions must map into one or more cells for the proposal to be responsive and considered for funding

2010 TIP Competition
Manufacturing: Element 3 *(cont'd)*

Responsive proposals

- Improvements in one or more critical processes integrated together into a coherent solution to significantly enhance process efficiencies and reduce process variability

Biomanufacturing in this competition refers to:

1. *Bioprocessing for production of biopharmaceuticals such as recombinant proteins as vaccines, therapeutics, or as molecular probes for diagnostics*

2. *Advanced biofabrication and processing for production of cell or tissue-based biopharmaceuticals such as engineered cells and engineered tissues as therapies*

2010 TIP Competition
Manufacturing: Element 3 *(cont'd)*

Responsive proposals (cont'd)

- Must address ***all*** of the following:
  - How the improved manufacturing processes are transformational compared to the state-of-the-art
  - How the results of the research will lead to new and improved manufacturing processes enabling safe, cost effective and reliable production and new and improved products such as customized medical implants, large bearings, etc.
  - Why the technological solutions are high-risk, high-reward in nature
  - Provide quantification and qualification of the estimated output of the final project results

Proposals will be considered more competitive if they:

1. *Include multiple improvement areas from the table above;*
2. *Include validation methodologies by or with processors or end users; and/or*
3. *Address sustainability issues.*

2010 TIP Competition
Nonresponsive Proposals

***All* Manufacturing Proposals**

- Projects whose principal focus is on discovery of new materials
- Efforts related to the physical extraction of raw materials
- Straightforward improvements to existing processes or materials without the potential for a transformational increase in performance to the technical requirements
- Integration projects using only existing state-of-the-art processes, models or materials

2010 TIP Competition
Nonresponsive Proposals *(cont'd)*

***All* Manufacturing Proposals** *(cont'd)*

- Software development that is predominantly straightforward, routine data gathering using applications of standard software development practices

- Projects that do not include a quantitative baseline and quantitative metrics for tracking research

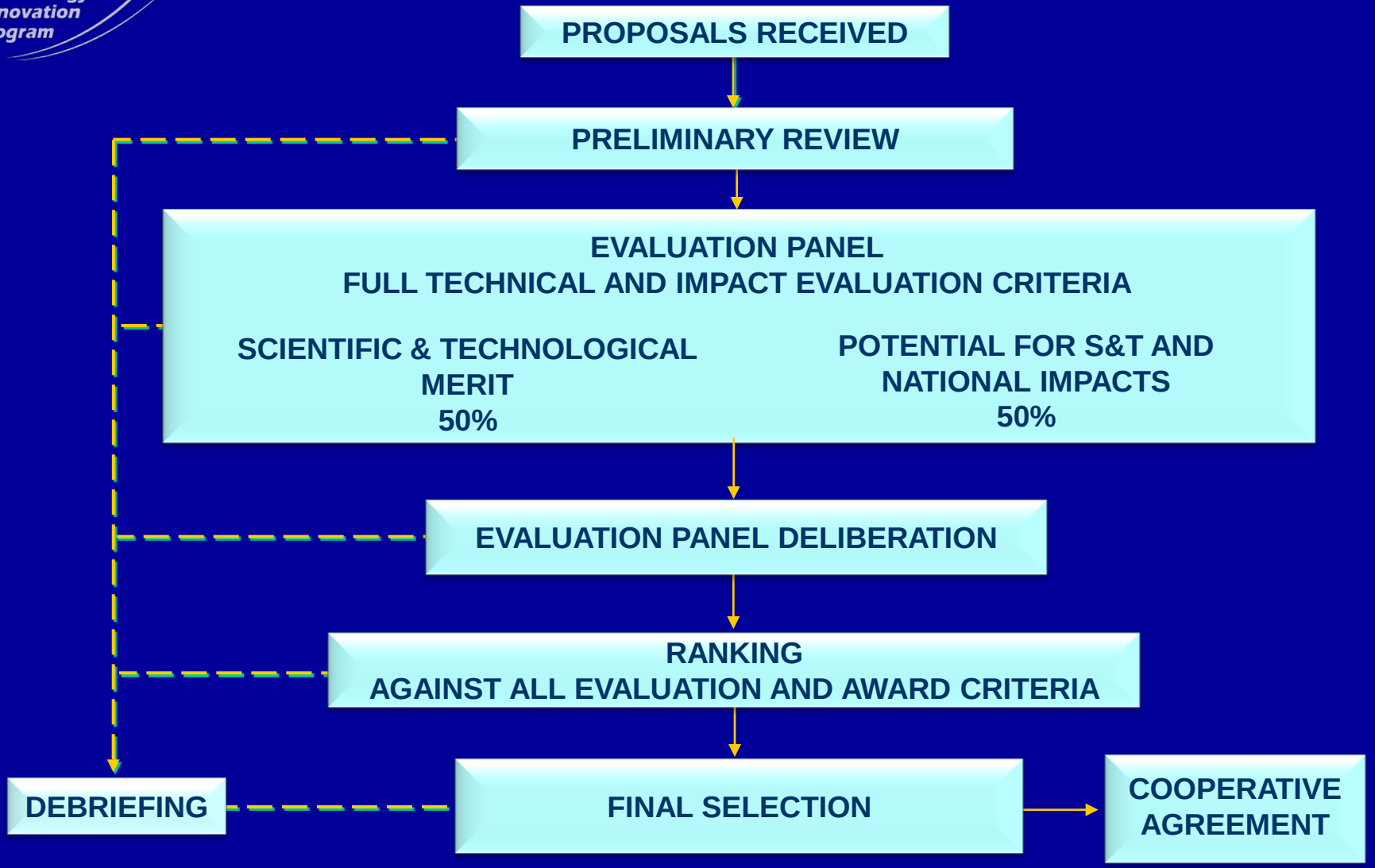
- Other areas of research specially identified as nonresponsive within the TIP *Federal Funding Opportunity (FFO)* (see pgs. 11-12)

- Other ineligible projects, as described in the TIP *Proposal Preparation Kit,* Chapter 1, pgs. 7-11

2010 TIP Competition
Manufacturing

- The previous slides outline the scope of the 2010 Competition
- Proposers should READ the entire FFO to obtain full details
- Questions regarding the FFO should be directed to:
  - Thomas Wiggins, 301-975-5416, thomas.wiggins@nist.gov

Project Selection Process



TIP Award and Evaluation Criteria

- Proposals are selected for funding based on:
  - TIP Award Criteria (15 C.F.R. § 296.22), and
  - TIP Evaluation Criteria (15 C.F.R. § 296.21)
- No proposal will be funded unless TIP determines:
  - It has scientific and technical merit
  - The proposed research has strong potential for addressing a societal challenge within the TIP-identified area(s) of Critical National Need

Peer Review is the foundation for all proposal evaluations and decisions

TIP Award Criteria
Why Propose to TIP?

Two award criteria explain the need for TIP financial support

- Why is TIP support necessary?
- Efforts to secure alternative funding

*Failure to adequately address these two criteria, **and** novelty of the research (technology) results, will prevent a proposal from moving beyond Preliminary Review*

TIP Award Criteria
Technical Planning

One award criterion forms the foundation of your technical planning

- Scientific and technical merit and may result in intellectual property vesting in a U.S. entity

… and is expanded upon and evaluated as part of the "Scientific and Technical (S&T) Merit" evaluation criterion

What is Needed to Accomplish Technical Success?

TIP Award Criteria
Impact Planning

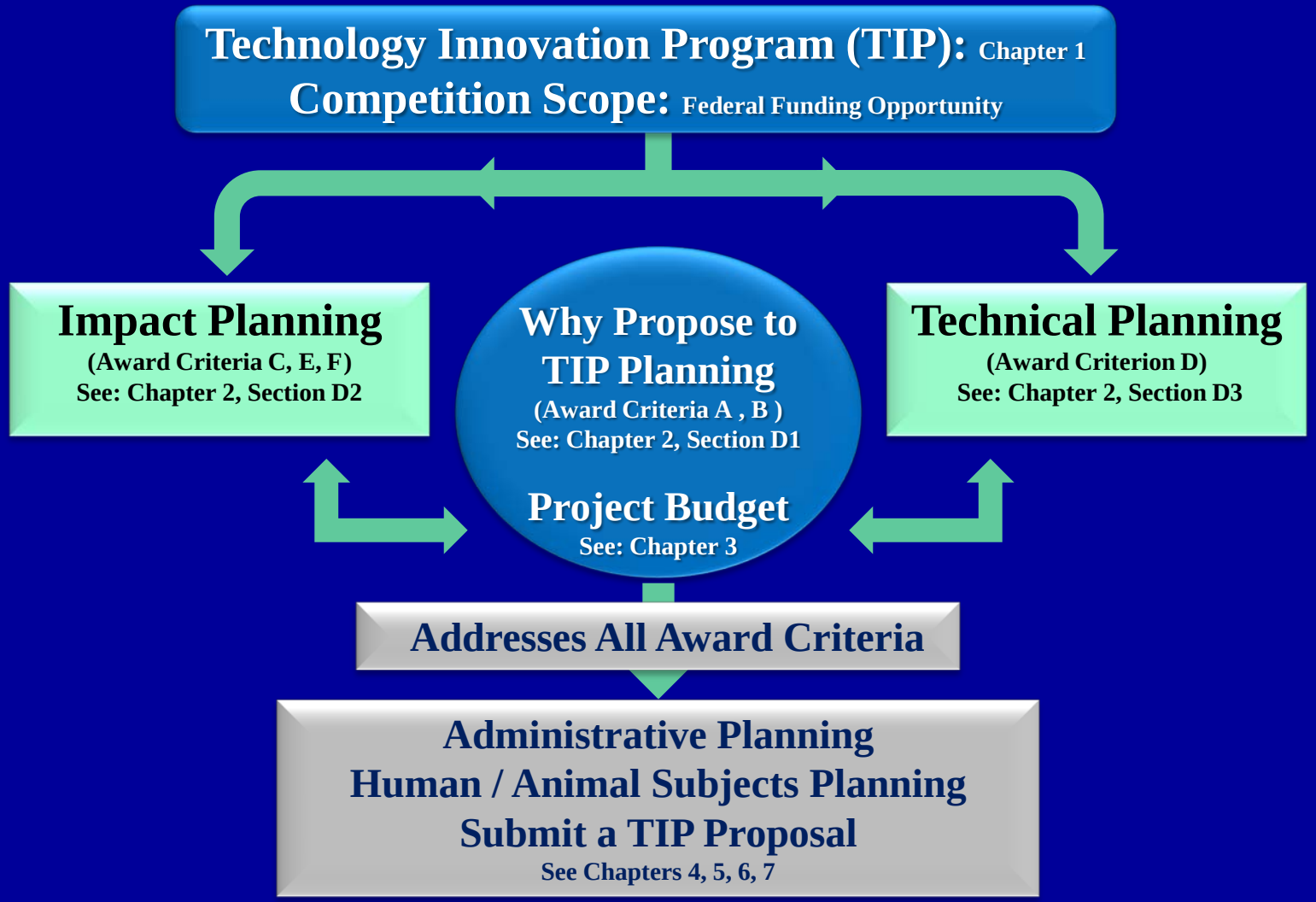
Three award criteria form the foundation of planning for transformational impact

- Novelty of the proposed research (technology) results
- Strong potential to advance the state-of-the-art and contribute to the U.S. science and technology knowledge base
- Strong potential to address areas of critical national need through transforming the Nation's capacity to deal with major societal challenges

What is Needed to Accomplish a Transformational Impact?

The TIP Proposal Preparation Kit

Guide for Planning a TIP Proposal



Key Contacts

- Administrative, budget, cost-sharing, and eligibility
  - Michael Walsh, (301) 975-5455, michael.walsh@nist.gov
- Project selection, evaluation and award criteria
  - Thomas Wiggins, 301-975-5416, thomas.wiggins@nist.gov
- Electronic proposal submission
  - Chris Hunton, 301-975-5718, christopher.hunton@nist.gov
- NIST-1022 and associated forms
  - Deborah Dubeau, 301-975-3462, deborah.dubeau@nist.gov

Key Contacts *(cont'd)*

- Human and/or animal subjects
  - Lawrence Uhteg, 301-975-8779, lawrence.uhteg@nist.gov
- Foreign-owned company participation
  - Kathleen McTigue, 301-975-8530, kathleen.mctigue@nist.gov
- Grants and cooperative agreement rules and regulations
  - Grants and Agreements Management Division, 301-975-5718, grants@nist.gov

For Info on TIP and the 2010 Competition

- Visit TIP's website
  - *www.nist.gov/tip*
- Register for the TIP mailing list
  - *http://tipmailing.nist.gov/forms/mailing_list.cfm*
- Examine "Current Competition"
  - *http://www.nist.gov/tip/cur_comp/index.cfm*
- Participate in TIP webcasts
  - *Stay tuned*

2010 TIP Competition Important Dates

- The Competition is currently **OPEN**
- Paper submission or electronic submission via Grants.gov
- The **deadline** is: **Thursday, July 15, 2010 11:59 p.m. Eastern Time**
  - All proposals must be received by TIP by the deadline (regardless of submission method) WITHOUT EXCEPTION

To ensure timely receipt, DO NOT wait to submit until deadline day!

Module 2
Guidelines for Preparing a TIP Project Narrative

Module 2
Guidelines for Preparing a TIP Project Narrative

Module 2 Outline

- Early Stage Planning
- Key Elements of a TIP Project Narrative
  (Chapter 2)
  - Why Propose to TIP
  - Impact Planning
  - Technical Planning

Early Stage Planning

Does my envisioned TIP project idea meet the following?

- Fits within the TIP mission
- Falls within the competition technical scope
- Feasibility of securing needed resources
  - Team members and collaborators
  - Project budget and cost-share
- Satisfies eligibility requirements

Early Stage Planning *(cont'd)*

What is Needed to Accomplish the Transformational Impact?

What is Needed to Accomplish Technical Success?

Early Stage Planning *(cont'd)*

- Teaming is often critically important to successful proposals
  - Multidisciplinary approaches often advance the state-of-the-art
  - For the results of the research to be adopted by others
- Teaming partners and collaborators
  - Single applicant proposers
  - Joint Venture members
  - Contractors and subrecipients
  - Informal collaborators
    (not part of the project's budget)

Early Stage Planning *(cont'd)*

What Type of Team Might Make Best Sense?

- Single company team and application
  - Small- or medium-sized for-profit company as the applicant
  - Contractors or subrecipients, as needed
  - *Maximum* 3 Year, $3 M TIP funding + at least 50% cost share
- Joint Venture (JV) team and application
  - Two ways to propose
    - At least two separately owned small- or medium-sized for-profit company

    or
    - At least one small- or medium-sized for-profit company and one institute of higher education or other organization such as a national laboratory, governmental laboratory (not NIST) or nonprofit research institute
  - Contractors or subrecipients, as needed
  - *Maximum* 5 Year, $9 M TIP funding + at least 50% cost share

Early Stage Planning *(cont'd)*

Budget Considerations

- Magnitude of the proposed project and resources required?
- Availability of cost-share?
- Who does what?
- Details of the technical plan?

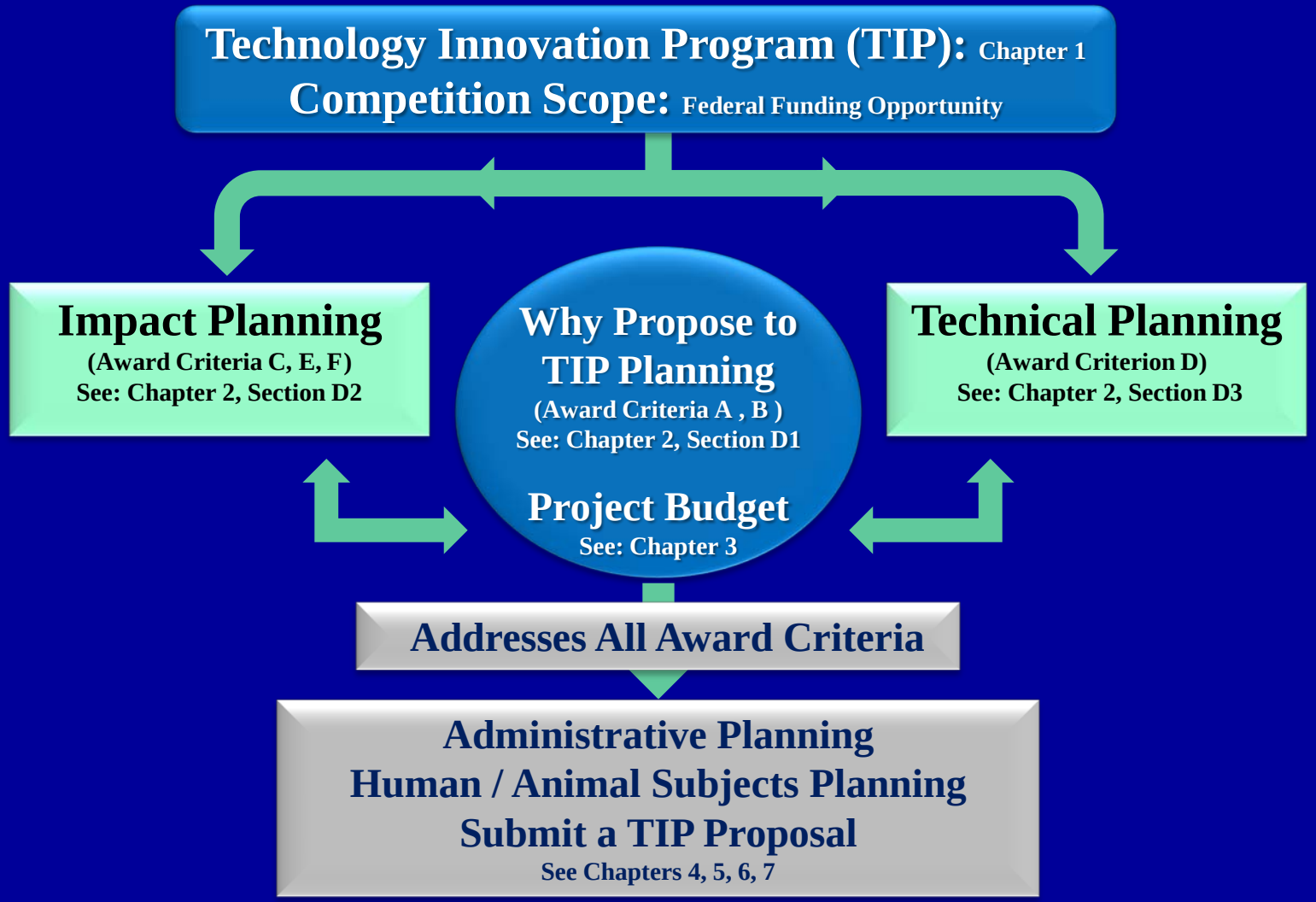
Module 2 Outline

- Early Stage Planning

- Key Elements of a TIP Project Narrative
  (Chapter 2)
  - Why Propose to TIP
  - Impact Planning
  - Technical Planning

The TIP Proposal Preparation Kit

Guide for Planning a TIP Proposal



TIP Award and Evaluation Criteria

Award Criteria	Essential Aspects
Why TIP Support is Necessary	Proposal Preparation Kit, pgs. 11, 16
Efforts to Secure Alternative Funding	Proposal Preparation Kit, pgs. 11, 16-17
Novelty, Part 1: **Novelty of the Proposed Research (Technology) Results/Outcomes**	Proposal Preparation Kit, pgs. 11, 17-18

Award Criteria	Evaluation Criteria	Essential Aspects
Strong Potential to Advance the State of-the-art and Contribute to the U.S. Science and Technology Knowledge Base	**Potential for S&T and National Impacts (50%)**	Proposal Preparation Kit, pgs. 11, 18
Strong Potential to Address Areas of Critical National Need by: • **Transforming the Nation's Capacity to Deal with Major Societal Challenges** • **Generate Substantial Benefits to the Nation that Extend Significantly Beyond the Proposer**		Proposal Preparation Kit, pgs. 11, 18-20
Scientific and Technical Merit and may Result in Intellectual Property Vesting in a U.S. Entity	**Scientific and Technical (S&T) Merit (50%)**	Proposal Preparation Kit, pgs. 20-25

Why Propose to TIP | **Impact Planning** | **Technical Planning**

Why Propose to TIP

Award Criteria	Essential Aspects
Why TIP Support is Necessary	Proposal Preparation Kit, pgs. 11, 16
Efforts to Secure Alternative Funding	Proposal Preparation Kit, pgs. 11, 16-17
in a U.S. Entity	**(S&T) Merit (50%)**

Why Propose to TIP Planning | **Impact Planning** | **Technical Planning**

Two Award Criteria explain the need for TIP financial support

- Why TIP support is necessary
- Efforts the proposer has made to secure alternative funding

This is the link that connects your impact and technical planning to the Federal government and TIP!

Why Propose to TIP
Why TIP Support is Necessary

- Why does the specific project need taxpayer funds?
- What will happen with ***and*** without TIP funding?
  - Consequences to the research?
  - What evidence exists that the research will not be conducted within a reasonable time period without TIP funding?

Why Propose to TIP
Efforts to Secure Alternative Funding

- Each proposer, single or each JV member, must have adequately sought alternative funds but such funds are not available or not available in a reasonable time period
  - Internal funding?
  - External private sources?
  - Other government sources?
- Documented evidence ***must*** be provided

Proposers must demonstrate that reasonable and thorough attempts have been made to secure funding from other sources

Impact and Technical Planning

What is Needed to Accomplish the Transformational Impact?

What is Needed to Accomplish Technical Success?

Impact and Technical Planning
Addressing the Two TIP Evaluation Criteria

- Effective, detailed impact and technical planning is essential to adequately address the evaluation criteria used by TIP

- Two Evaluation Criteria
  - Potential for S&T and National Impacts (50%)
  - Scientific and Technical (S&T) Merit (50%)

- Subject to multidisciplinary peer review

Impact Planning

Award Criteria	Essential Aspects
Why TIP Support is Necessary	Proposal Preparation Kit, pgs. 11, 16

Three award criteria are essential for your impact planning

- Novelty of the proposed research (technology) results
- Strong potential to advance the state-of-the-art and contribute to the U.S. science and technology knowledge base
- Strong potential to address areas of critical national need through transforming the Nation's capacity to deal with major societal challenges

Impact Planning

Novelty of Proposed Research Results

- Discuss and provide specific details about …
  - How the proposed research (technology) is novel relative to similar research (technology) results others have developed, commercialized, marketed, distributed, or sold
  - Why the project has the potential to more fully address the societal challenge(s) where others do not
  - How the research (technology) results are transformational
- Science-based and performance-based detail (metrics) are critical to making a competitive case

Research (technology) results/outcomes from TIP funded research must be novel and transformational!

Impact Planning

Novelty of Proposed Research Results *(cont'd)*

Proposed Solution: The New State of the Art

Project objectives?

Key system requirements and quantified performance metrics?

How the project may more fully address the challenge?

Yields transformational outcomes enabling disruptive change?

Comparison to competing solutions?

TIP Innovation

Baseline: Today's State of the Art

Within the industry at large?

What others have already developed, commercialized, marketed, distributed or sold?

Within the team?

Impact Planning

Award Criteria	Essential Aspects
Why TIP Support is Necessary	Proposal Preparation Kit, pgs. 11, 16

***And two of these* criteria are expanded upon and evaluated as part of the *"Potential for S&T and National Impacts"* evaluation criterion.**

- Strong potential to advance the state-of-the-art and contribute to the U.S. science and technology knowledge base
- Strong potential to address areas of critical national need through transforming the Nation's capacity to deal with major societal challenges

Impact Planning
Impact Evaluation Criterion

Potential for S&T and National Impacts (50%)

- **Establishes that the proposed research has strong potential**
  - For advancing the state-of-the-art and contributing significantly to the United States science and technology base
  - To address areas of Critical National Need through transforming the Nation's capacity to deal with a major societal challenge(s) that is not currently being addressed
  - To generate substantial benefits to the Nation that extend beyond the direct return to the proposer

Impact Evaluation Criterion

Advancing the State-of-the-Art

TIP's Impact Perspective

*Successfully accomplishing the proposed research and surmounting the technical challenges should result in a **transformational** change in the future direction and state of the technology.*

This "path change" should be a major leap forward, advancing the state-of-the-art significantly.

Supported by three key elements

- What might advancing the state-of-the-art look like in terms of impact?
- What are the potential pathways for the impacts?
- How might the impacts cross disciplines or industries?

Impact Evaluation Criterion
Transforming the Nation's Capacity

Three elements need to be addressed adequately to be competitive

1. Analysis of the potential magnitude of the transformation or change across the Nation, including any planned commercial consequences
2. An implementation plan that explains how and when results of the proposed technology will have positive effects on the project participants and the Nation more broadly
3. The capacity and commitment of each project participant to enable or advance the transformation, dissemination of research results, and any commercialization of the proposed research results (technology)

Impact Evaluation Criterion
Transforming the Nation's Capacity *(cont'd)*

1. The potential magnitude of the transformational results

- How will the Nation's capabilities to address a societal challenge be different once the results of this research are put to use?
- What is the magnitude or difference that the technology will make? Quantify!
- What are the specific differences TIP funding makes in realizing the *societal benefits* of the proposed project?
- How could the results extend beyond the initial targeted societal challenge(s) and proposers?

Impact Evaluation Criterion
Transforming the Nation's Capacity *(cont'd)*

2. How and when the ensuing transformational results will unfold

- How will the research results (technology) be put to use to address the societal challenge(s)?
- How will the research results (technology) move from the research team to those who will use it to address the societal challenge(s)?
- What strategies will be employed inside or out of the proposing team to realize the transformation?
  - e.g. organizations; potential first users; strategies to overcome barriers; timeline for reaching first users and the broader community of potential users

Impact Evaluation Criterion
Transforming the Nation's Capacity *(cont'd)*

3. The capacity and commitment of <u>each</u> project participant

- Organizational Commitment
  - To perform the proposed research
    - Financial, time, key people, equipment, facilities
  - To enable or advance the transformation during and after the project is completed
    - Strategies, resources, and team actions
    - Manage and plan any commercial, marketing, manufacturing, and strategic planning endeavors (Note: these expenses are NOT allowable and can not be bill to NIST)
  - Relationship of the project to each organization's strategic vision or mission and how technological success will be incorporated into the organization's research and/or commercial goals

Technical Planning

What is Needed to Accomplish the Transformational Impact?

What is Needed to Accomplish Technical Success?

Technical Planning

Award Criteria	Essential Aspects	
Why TIP Support is Necessary	Proposal Preparation Kit, pgs. 11, 16	
Scientific and Technical Merit and may Result in Intellectual Property Vesting in a U.S. Entity	Scientific and Technical (S&T) Merit (50%)	Proposal Preparation Kit, pgs. 20-25

Why Propose to TIP Planning | **Impact Planning** | **Technical Planning**

One award criterion is essential for your technical planning

- Scientific and technical merit and may result in intellectual property vesting in a U.S. entity

… and is expanded upon and evaluated as part of the ***"Scientific and Technical (S&T) Merit"*** evaluation criterion

Technical Planning
Scientific and Technical Evaluation Criterion

Scientific and Technical Merit (50%)

The proposer(s) adequately addresses the scientific and technical merit and how the research may result in intellectual property vesting in a United States entity …

Technical Planning
Competitive Technical Narratives

- The second aspect of novelty is the novelty of the proposed research approach
- How the research addresses the technical needs associated with a major societal challenge not currently being addressed
- The high-risk, high-reward nature of the research approach and potential outcomes
- A scientifically sound technical plan with milestones and associated metrics, and access to adequate resources
  - e.g., personnel with appropriate scientific and technical expertise, equipment, and facilities

S&T Evaluation Criterion
Novelty of the Proposed Research Approach

The proposed <u>research</u> approach must be novel!

- Ask yourself, "Why is the research project novel?"
  - Novel technical approach?
  - Novel integration?
- Is the research transformational, not just incremental or predictable?
- How is the research innovative relative to alternative approaches being pursued?
  - By others inside or outside of the team
  - Domestic or foreign competitors
  - If others have tried and failed, why will I succeed?

Discuss state-of-the-art knowledge and ongoing work by others

S&T Evaluation Criterion
Addresses Technical Needs

The proposed research must have the potential to address the technical needs associated with the societal challenge(s)

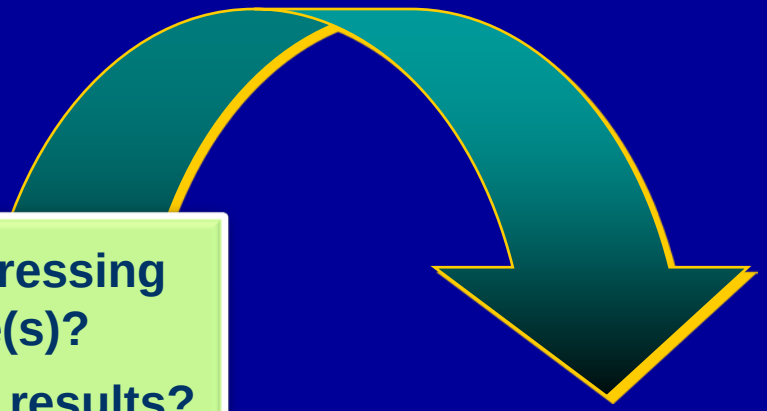
- How does the research address a solution to the societal challenge(s)?
- What are the expected outcomes of a successful research plan?
- What are the measureable success criteria?
  - Link them to key requirements and performance metrics

Proposals that are predominately basic science or best level of effort without measurable targets will be less competitive

S&T Evaluation Criterion
High-Risk, High-Reward Research

High-risk, high-reward research is core to TIP's purpose!

Does your idea…



- ✓ **Enable significant advances in addressing the solicitation's societal challenge(s)?**
- ✓ **Have potential for transformational results?**
- ✓ **Have far- or wide-ranging implications?**
- ✓ **Embodies too-novel or spans too-diverse a range of disciplines?**

High-Risk, High-Reward R&D

S&T Evaluation Criterion
High-Risk, High-Reward Research

A competitive proposal will address …

- The scientific risks and technical barriers
- How the results have the potential for far- or wide-ranging implications if successful
- How the work, if successful, will dramatically transform the future direction and state of the technology
- How the team seeks to overcome extremely difficult scientific or technical challenges
- The leveraged technical and scientific benefits beyond the initial applications

S&T Evaluation Criterion

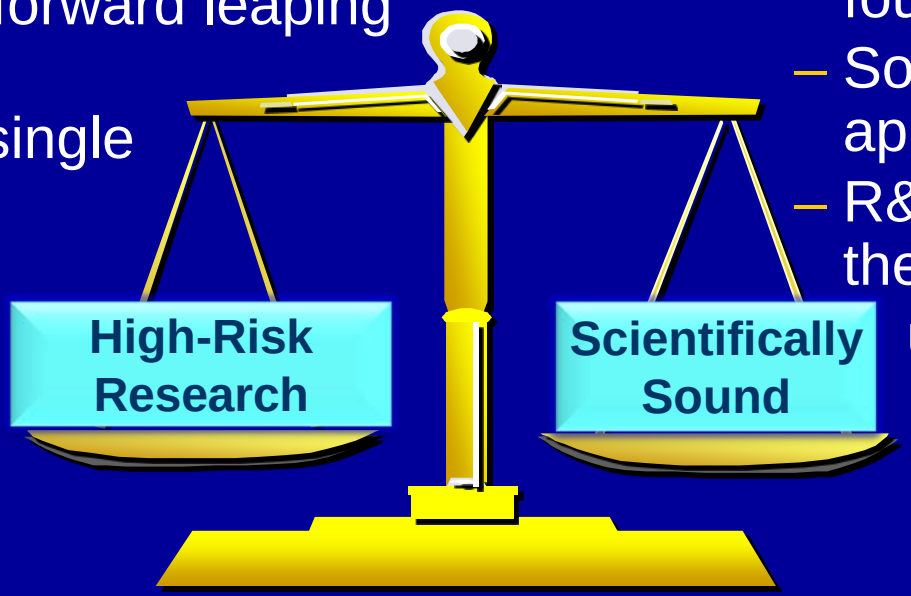
High-Risk Research and Scientific Soundness

High-Risk Research

- Extremely difficult scientific risks or technical challenges
- Possibility that technical challenges may not be overcome
- Path changing, forward leaping technology
- Includes either single innovations or integration of disparate technologies, or both

Soundness

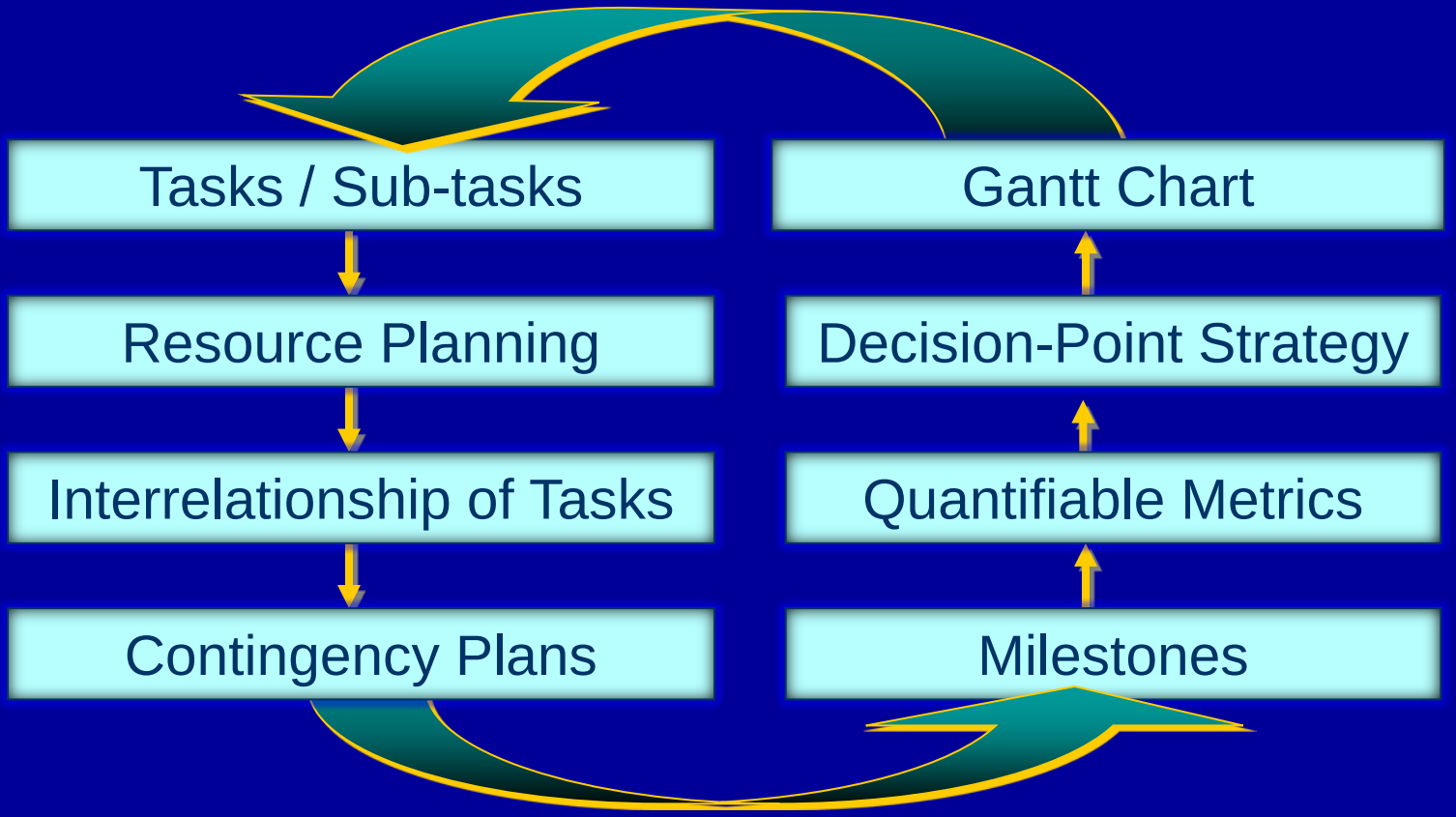
- Approach and metrics to manage project are based on
  - Sound scientific foundation
  - Sound engineering approach
  - R&D evidence and theory based understandings



Your TIP proposal should balance both!

S&T Evaluation Criterion
A Scientifically Sound, Detailed R&D Plan

How will you achieve your goals?



A competitive proposal must address all aspects

S&T Evaluation Criterion
Resource Planning

Relevant qualifications of the proposed research team

- Multiple disciplines that may be required by the plan
- Quality and appropriateness of the technical team
- Level of effort/time for the key personnel allocated to the project
- Brief highlight of experience and qualifications of key personnel, including contractors
- If key staff are missing and need to be hired, the qualifications needed and the plan to acquire

S&T Evaluation Criterion
Resource Planning *(cont'd)*

Adequacy of facilities, equipment and resources

- Existing vs. needed
- Timeline for meeting needs
- Link major purchases to the R&D plan
- Equipment or resources collaboration agreements
- Contractors for key expertise, facilities, goods or services

S&T Evaluation Criterion
Resource Planning *(cont'd)*

Contractors and Subrecipients

- What does each contractor or subrecipient bring to the project?
  - Who? What? Why?
- What is the relationship of the contractor's/subrecipient's work to the technical plan?
- How will the contractor's/subrecipient's progress be monitored and directed?

The proposer or JV member(s) should direct and carry out most of the key high-risk and high-innovation tasks

S&T Evaluation Criterion
Non-U.S. Activities

IF the project plan includes work performed by a foreign-owned company or at a non-U.S. site, explain and justify

- For foreign-owned company participation, complete NIST-1022G
- For R&D at non-U.S. sites, complete NIST-1022H

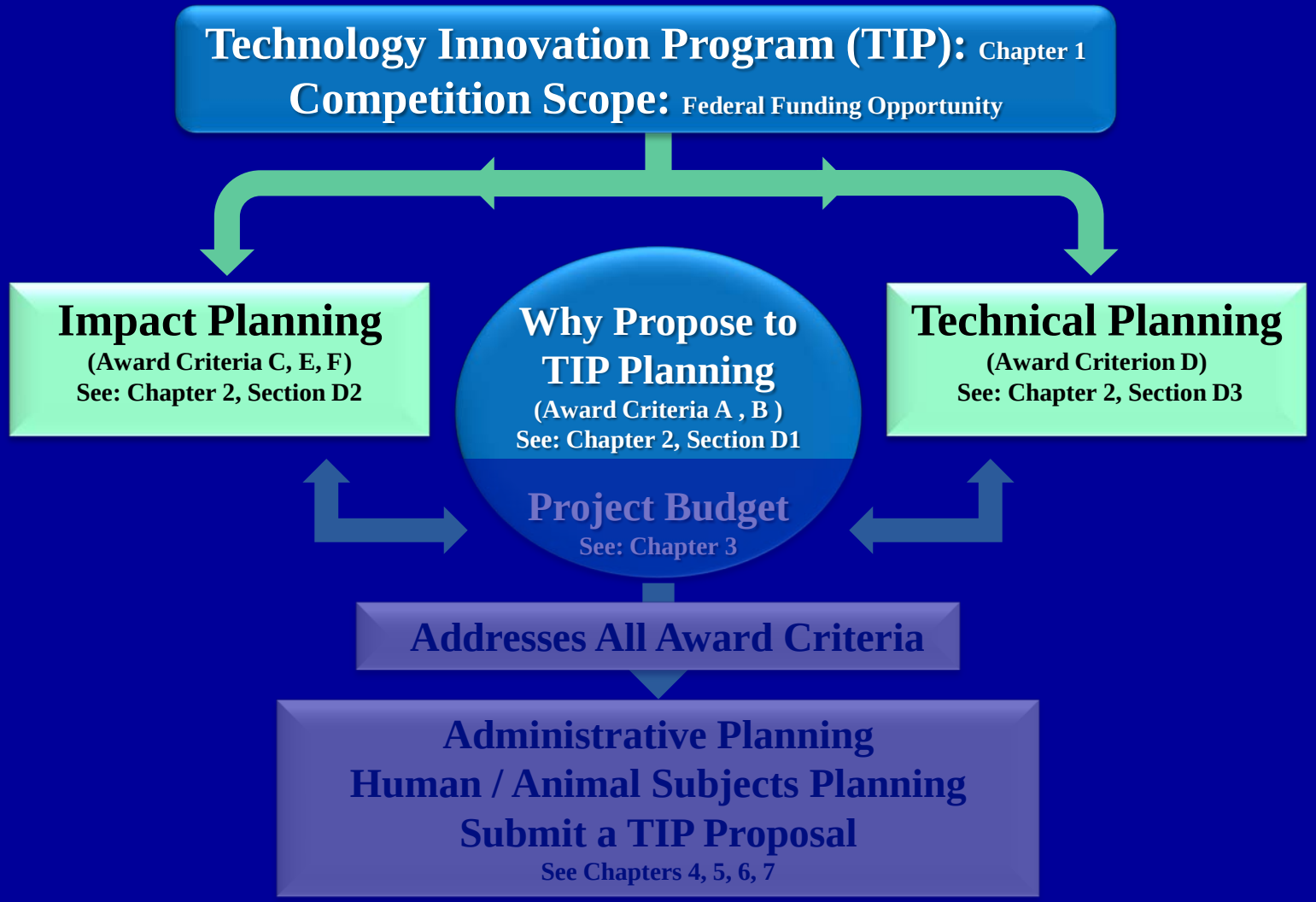
Other Information Required

Other information needed for a competitive proposal

- Organizational Information
  - Financial, organizational, employment, ownership
- Current and Past Federal Awards
  - Throughout the proposers' entire organization
- Required letters and others, as appropriate
  - Letters of commitment, support, and corroboration
  - Other letters as appropriate

The TIP Proposal Preparation Kit

Guide for Planning a TIP Proposal



Weaknesses to Avoid

- Outside the TIP mission
  - Low-risk (e.g., product development) or unbounded (discovery) research
  - Lacks demonstrated need for TIP support
  - Reasonable and thorough efforts for other funding have not been adequately pursued and documentation is weak

- Outside of the solicitation scope
  - Lacks clear alignment to the competition as defined in the FFO notice
  - Fails to clearly and explicitly meet scope requirement

Weaknesses to Avoid (cont'd)

- Insufficient detail and/or unsupported assertions regarding key requirements
  - Absence of convincing case for the novelty of outcome, based on a clear analysis of the competitive landscape of relevant technologies
  - Lack of adequate presentation of how the R&D is high-risk, high-reward and/or how research outcomes could be transformational
  - Insufficient description of how the technical and impact objectives will be accomplished, and by whom
  - Inadequate or incomplete descriptions of the R&D plan, and/or lack of associated metrics, milestones, and relevant alternate pathways; unclear relevancy of technical staff to the technical plan

Weaknesses to Avoid (cont'd)

- Insufficient detail and/or unsupported assertions regarding key requirements (cont'd)
  - Incomplete multi-year budget and/or lack of appropriate linkage of the budget to the technical plan
  - Incomplete or insufficient impact strategies; impact strategies founded solely on a *"build-it-and-they-will-come"* approach
  - Insufficient level of detail regarding analysis of markets, competition, resource requirements, or team capabilities
  - Lack of appropriate detail on partnering strategies, competitive analysis, and depth and strength of the team's capabilities to address the area of critical national need described in the FFO

Some Points to Keep in Mind

- TIP evaluates novelty from two perspectives
  - Novelty of the research (technology) results/outcomes
  - Novelty of the research approach
- Substantial involvement within a Joint Venture
  - Required of:
    - At least ***two*** separately owned eligible companies, or
    - At least ***one*** eligible company and ***one*** institution of higher education or other organization
  - May be demonstrated in a variety of ways, e.g.
    - Documented research contributions
    - Scientific/intellectual role in guiding the R&D
- Failure to adequately address *all* criteria will prevent a proposal from moving forward

For Info on TIP and the 2010 Competition

- Visit TIP's website
  - *www.nist.gov/tip*
- Register for the TIP mailing list
  - *http://tipmailing.nist.gov/forms/mailing_list.cfm*
- Examine "Competition Resources"
  - *http://www.nist.gov/tip/cur_comp/index.cfm*
- Participate in TIP webcasts

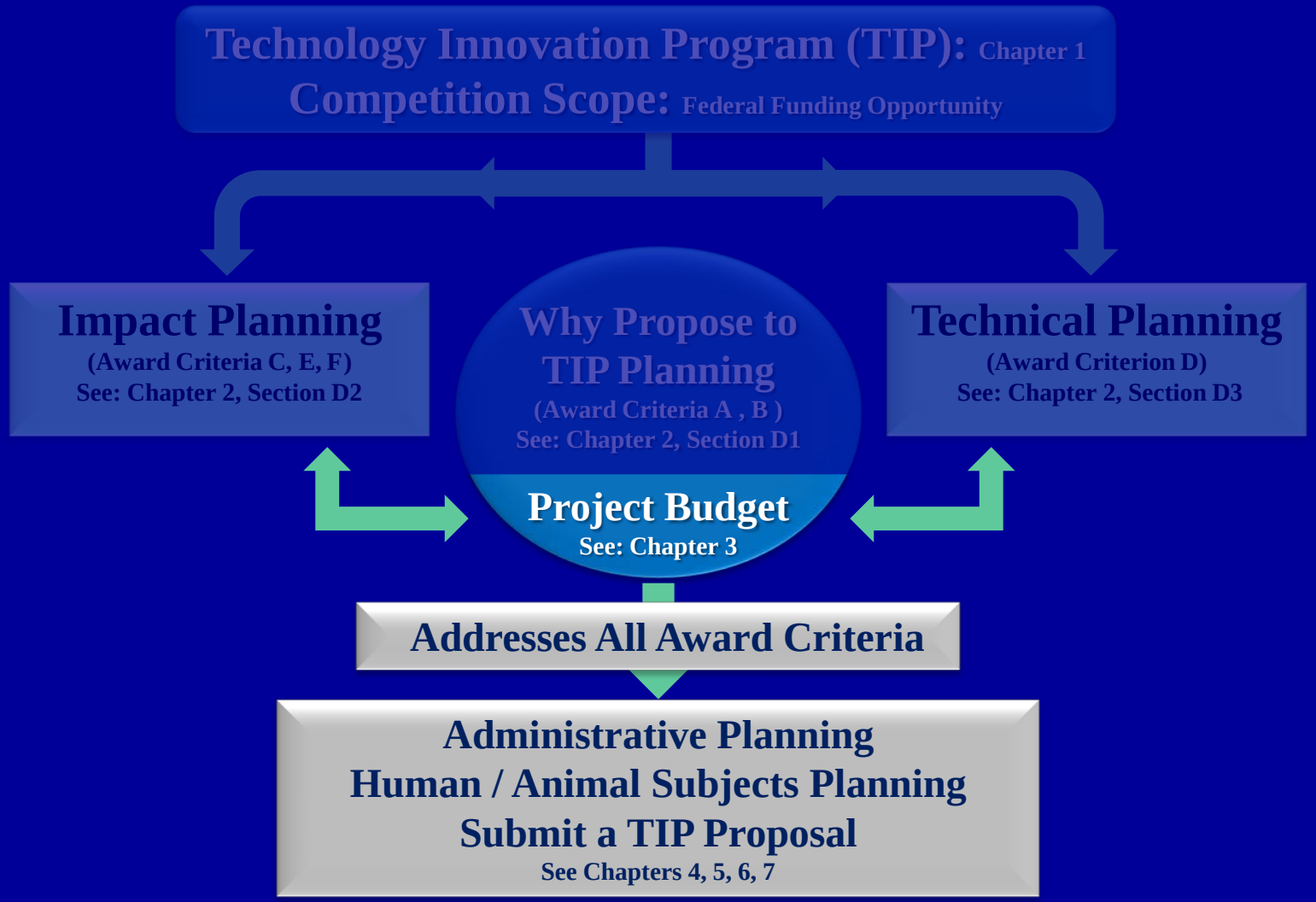
Module 3
Preparing and Submitting a TIP Proposal

Break

Module 3
Preparing and Submitting a TIP Proposal

The TIP Proposal Preparation Kit

Guide for Planning a TIP Proposal



Module 3 Outline

- Forming a TIP project team
  (Chapters 1, 2)
- Preparing a budget and budget narrative
  (Chapter 3)
- Assembling a TIP proposal
  (Chapter 4)
- Additional considerations
  (Chapters 5, 6)
- Submitting your proposal
  (Chapter 7)

Forming a TIP Project Team

There are 2 ways to develop a TIP project team

- Single company application
- Joint venture (JV) application

Teaming is often critically important to successful proposals

- *Multidisciplinary approaches to advance the state-of-the-art*
- *For the results of the research to be adopted by others*

Forming a TIP Project Team
Single Company Proposers

- Single Company – a small or medium-sized for-profit company doing a majority of its business in the U.S. and is either:
  - A U.S. owned company or
  - A U.S. subsidiary of a foreign parent
- Funding limitations
  - Up to $3M federal funds for up to 3 years
  - May be used only for direct costs
  - Must be not greater than 50 percent of total project costs
- May also include contractors, subrecipients, and/or informal collaborators

Forming a TIP Project Team
Joint Venture Proposers

- Joint Venture – A business arrangement that includes either:
  - At least two separately owned small- or medium-sized for-profit companies; or
  - At least one small- or medium-sized for-profit company and one institute of higher education or other organization such as a national laboratory, governmental laboratory (not NIST) or nonprofit research institute.

- Funding limitations
  - Up to $9M federal funds for project lengths up to 5 years
  - May be used only for direct costs
  - Must be not greater than 50 percent of total project costs

- May also include contractors, subrecipients and/or informal collaborators

Only a small or medium-sized business or an institute of higher education may lead a joint venture project

Forming a TIP Project Team
The Joint Venture

Recall …

- A Joint Venture must have ***at least two*** JV members that are substantially involved in the research
- A joint venture agreement is required to issue an award
  - Viable draft as part of the proposal
  - Final signed agreement in place ***PRIOR*** to award
- No separate corporate entity needs to be created
- The JV lead is responsible for all reporting requirements

"Joint Venture" for TIP means a teaming arrangement for the duration of the project

Forming a TIP Project Team
Contractors and Subrecipients

- Contractors
  - Provide supporting work, services, or materials to a project recipient for a fee
  - Can be companies, institutes of higher education, laboratories, governmental laboratories (excluding NIST), nonprofit research institutes or a large company (provided 15 CFR Part 14 requirements are met)
- Subrecipients
  - Receives funds to perform project related tasks and can provide funds that can be used to support a recipient's cost-share requirement
  - Can be any eligible company, institute of higher education, national laboratory, governmental laboratory (excluding NIST), or nonprofit research institute

Forming a TIP Project Team
Contractors and Subrecipients *(cont'd)*

A Note About Contractors and Subrecipients

Projects in which a significant portion of high-risk tasks are assigned to a contractor(s) or subrecipient(s) …

And as a result leave the recipient with a less than substantial role in the project …

May not be considered as competitive!

Forming a TIP Project Team
Intellectual Property Provisions

- Single Company awards
  - Bayh-Dole Act applies, in general, the entity that invents owns the invention
- Joint Venture awards
  - Ownership may vest in any JV participant as agreed by the JV members

Government reserves a nonexclusive, nontransferable, irrevocable paid up license for governmental use in all cases

Forming a TIP Project Team
Foreign-Owned Company Participation

A U.S.-incorporated company with a parent company incorporated in another country may participate if in the economic interest of the U.S.

- Home country of parent must afford U.S. companies:
  - Comparable opportunities to participate in government-funded programs similar to TIP
  - Comparable local investment opportunities
  - Adequate and effective protection of U.S.-owned intellectual property rights
- If a foreign-owned company is involved
  - Must submit NIST-1022G, Foreign-Owned Company Questionnaire (Exhibit 10) as part of the proposal
  - Separate form required for each foreign-owned company in the project, except contractors

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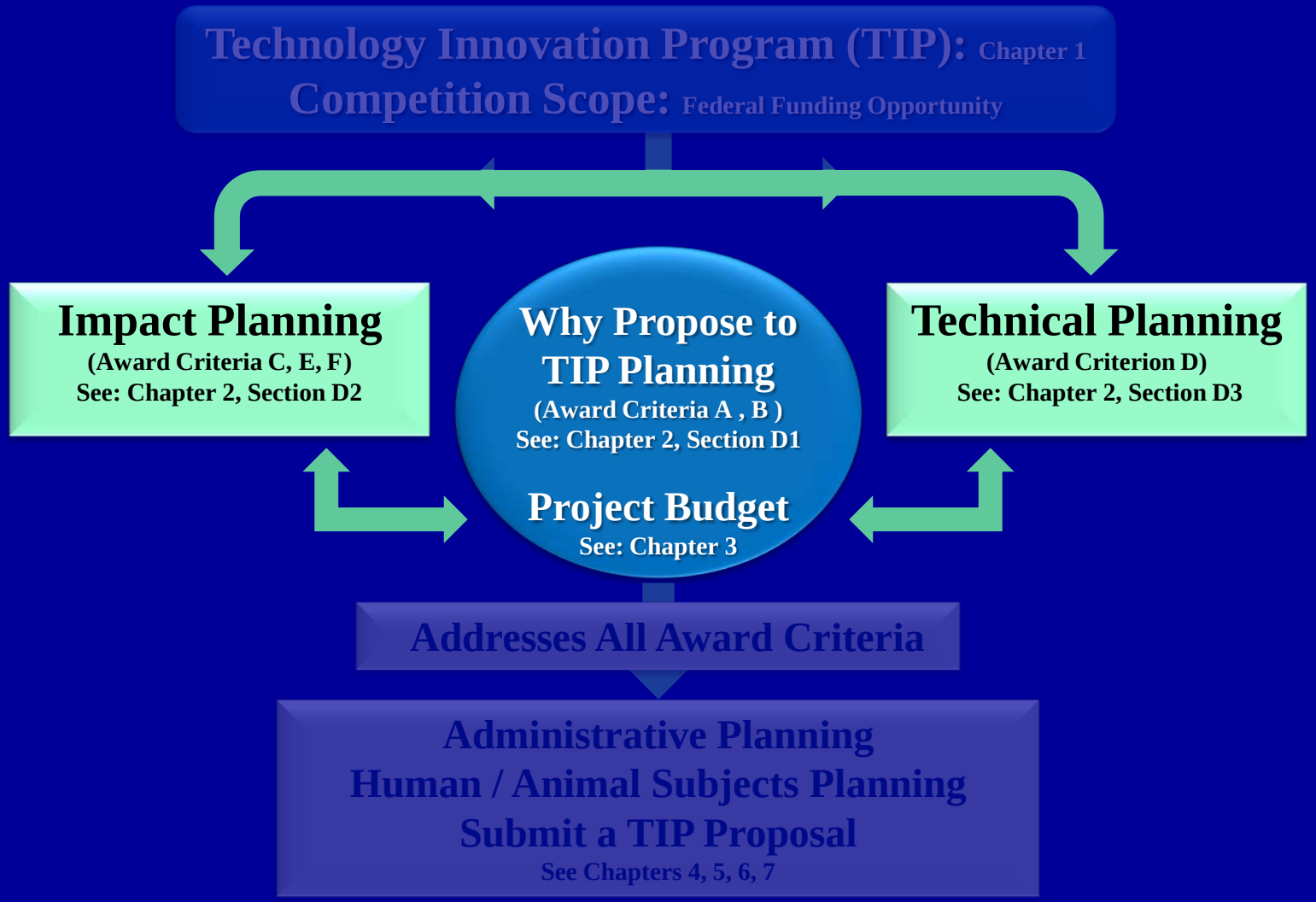
Budget Preparation



Budget Preparation

The budget supports the technical activities embodied within the R&D plan

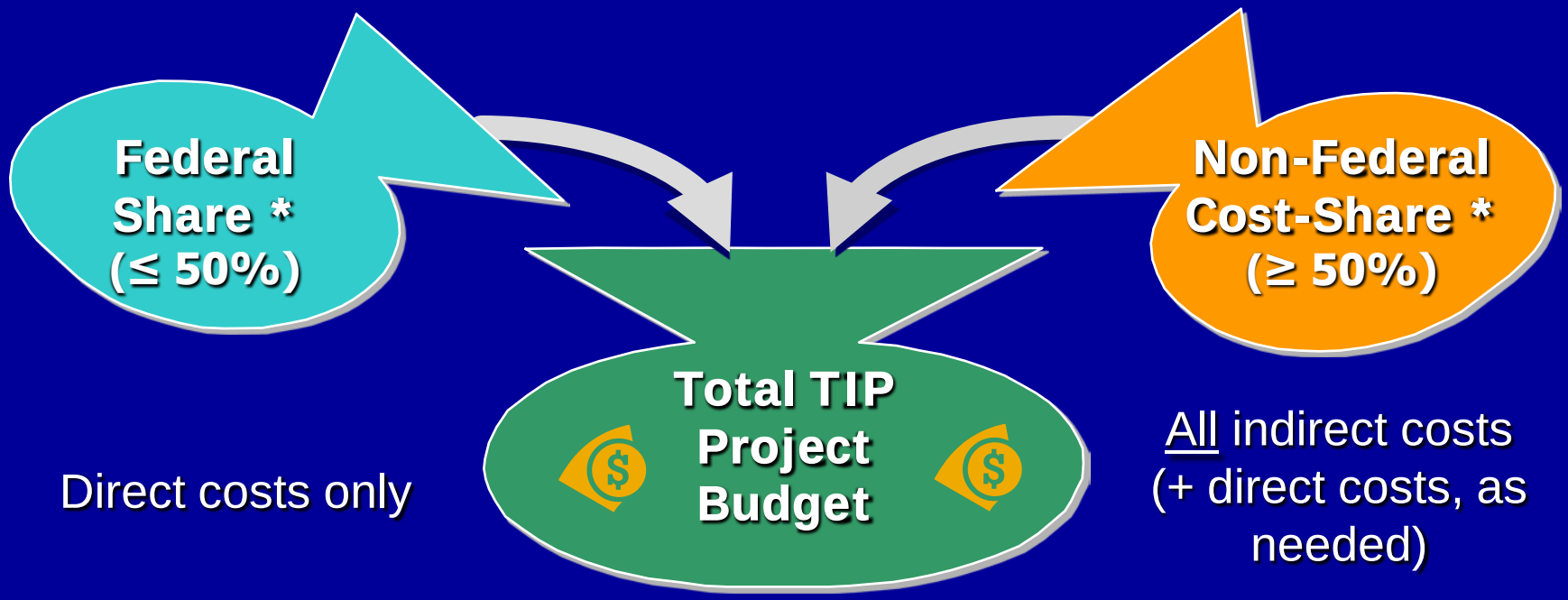
- First, create a detailed budget narrative (NIST-1022C)
- Then, generate estimated Multi-Year Budget
  - NIST-1022E (Single Companies)
  - NIST-1022F (Joint Ventures)
- If needed, also complete Third Party In-Kind Contributions (NIST-1022D)

Budget Preparation
Costs and Cost Sharing

- Total project costs must include federal and non-federal costs
  - Account for all costs on a “project year” basis
- Two categories of project costs
  - Direct costs
  - Indirect costs
- TIP funds can only be used for direct costs

Budgets and Cost Sharing

Cost Sharing: Federal and Non-Federal Funds



* **Cost sharing means that portion of project or program costs not borne by the Federal Government and officially part of the award**

* **All project participants, except contractors may contribute to the non-federal share**

Budget Preparation
The Non-Federal Cost-Share

All awards require at least 50% cost share contribution

- Cash contributions
  - Proposer, JV member, and subrecipient contributions are always treated as "**CASH**"
  - Any nonfederal source (except contractors)
  - Proposer, JV member, state and local government, companies, nonprofits, etc.
- ***Third party*** in-kind contributions
  - Any nonfederal source (except contractors) outside the proposer or JV member team
  - Staff, equipment, research tools, software, supplies, etc.
  - Refer to 15 CFR Part 14.23
  - Use NIST-1022D

Budget Preparation
Third Party In-Kind Contributions

Third party in-kind contributions

- Essential, non-cash items to a TIP project recipient that may be considered as part of the recipient's official auditable cost-share commitment
- Can be made by any non-federal source (except contractors working on a TIP project), and include but are not limited to equipment, research tools, software, supplies, and/or services

Budget Preparation
Direct Costs

Costs that can be identified specifically with a particular cost objective, including …

- Personnel
- Travel
- Equipment
- Materials/supplies
- Contracts
- Other

NIST reserves the right to limit both the number of students and salaries on a particular project

Budget Preparation
Indirect/Overhead Costs

Costs that cannot be readily identified with a single cost objective but identified with common or joint objectives, including …

- Salaries / expenses of executive officers
- Personnel administration
- Accounting
- Fringe benefits
- Office rent
- Maintenance
- Library expenses
- Office supplies
- General purpose office equipment, computers, printers, copiers, etc.

Budget Preparation
Indirect Costs

Indirect costs must be part of an approved indirect cost rate

- If you already have other Federal financial assistance awards, you probably have one in place – apply to your proposal costing for TIP
- If not, you will prepare and file a proposal for indirect rate approval with DOC after an award is made ***and*** annually thereafter

Budget Preparation
Fringe Benefits

How to account for fringe benefits?

- Dictated by your approved accounting system and established indirect cost rate
- May be considered as either direct or indirect
- If fringe is a direct cost, include as part of "Other Direct" category in budget

Budget Preparation
Requirements and Principles

- Administrative Requirements
  - 15 CFR Part 14
- Cost Principles
  - For-profit companies: 48 CFR Part 31
  - Universities: 2 CFR Subtitle A, Chapter II, Part 220 (OMB Circular A-21)
  - Non-profits: 2 CFR Subtitle A, Chapter II, Part 230 (OMB Circular A-122)
  - State and local governments: 2 CFR Subtitle A, Chapter II, Part 225 (OMB Circular A-87)
  - Hospitals: 45 CFR Part 74, Appendix E
- See *http://www.nist.gov/tip/helpful-resources.cfm*

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Assembling a TIP Proposal
Resources

Resources

- 2010 TIP Proposal Preparation Kit, Chapters 4, 5, 6
- Proposal Submission Requirements Checklist
- Guidelines and Documentation Requirements for Research Involving Human and Animal Subjects
- TIP Federal Funding Opportunity
- *White paper: "Manufacturing and Biomanufacturing: Materials Advances and Critical Processes"*

Assembling a TIP Proposal

Resources *(cont'd)*

- TIP Web Site

  http://www.nist.gov/tip
- FY 2010 Competition Page

  http://www.nist.gov/tip/cur_comp/index.cfm
- Helpful Resources Page

  http://www.nist.gov/tip/helpful-resources.cfm

Assembling a TIP Proposal
Essential Contents

Proposal Contents and Assembly

- SF424 (R&R) - 2 pages
- Research and Related Other Project Information
- 1022 Family of Forms
- Executive Summary
- Project Narrative
- Bibliography and Technical References
- Table of Abbreviations
- Table 3 & Table 4
- Letters
- Human Subjects information (if applicable)

Assembling a TIP Proposal
Essential Contents *(cont'd)*

NIST-1022 Dynamic Family of Forms

- NIST-1022, Main Form (TIP Proposal Information)
- NIST-1022A, Other Joint Venture Members
- NIST-1022B, Contractors or Subrecipients
- NIST-1022C, Budget Narrative
- NIST-1022D, Third Party In-Kind Contributions
- NIST-1022E, Estimated Multi-Year Budget - Single Company
- NIST-1022F, Estimated Multi-Year Budget - Joint Venture
- NIST-1022G, Foreign-Owned Company Questionnaire
- NIST-1022H, R&D Work Performed Outside the United States by the Recipient or Contractor Questionnaire

Assembling a TIP Proposal
Project Narrative Format

- Page Limit
  - Single company: 30 pages maximum
  - Joint venture: 40 pages maximum
- Font size no less than 12 point
- Figures and diagrams must be readable

Assembling a TIP Proposal
Page Limit Exclusions

- Table 3 – Financial, Employment and Ownership Information
- Table 4 – Federal Awards Received by Company / Organization
- Required and optional letters
  - Commitment, support, corroboration
  - Funding support (Year 1)
  - Efforts to secure external funding
- Forms / Budgets / Other federal awards / Company info
- Bibliography / Abbreviations / Executive summary

Additional Considerations During Proposal Evaluation

- Additional information requests during proposal evaluation may include …
  - Site visits
  - Oral reviews
  - Corrections to forms
  - Clarifications to budget items
- Thus it is essential that complete PI and contact information be provided as part of the SF424
- This contact information is also used to offer debriefings to submitters of less competitive proposals

Quick, timely responses to all requests are required or you jeopardize your potential for selection

Additional Considerations
Accounting Systems Certification and Compliance Audits

- NIST may require some recipients to provide an accounting system certification
  - Cost of certification may be included in "Other" cost category
- Recipients must undergo periodic financial compliance audits
  - Details will be provided as part of the award terms and conditions
  - Include audit costs in proposal budget

Proposal budget becomes the basis for project costs

Additional Considerations
Human and Animal Subjects

- TIP can fund projects involving human and/or animal subjects in research activities
  - Must comply with applicable Federal rules
  - Not just biomedical research
  - You may be required to submit additional information
- Refer to Chapter 6 of the TIP Proposal Preparation Kit and "*Guidelines and Documentation Requirements for Research Involving Human and Animal Subjects*" (http://www.nist.gov/tip/helpful-resources.cfm)
- For more information
  - Archived webcast on the details surrounding H&A Subjects (http://www.nist.gov/tip/archived-webcasts.cfm)
  - Call Human & Animal Subjects Advisor for help

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Submitting Your Proposal
How to Submit

- Paper submission or electronic submission via Grants.gov
- Paper submission
  - An original and 15 color copies required
- Proposers are responsible for ensuring all proposal contents are legible and readable

Submitting Your Proposal
How to Submit *(cont'd)*

- Electronic submission
  - Grants.gov
  - Chapter 7 of TIP Proposal Preparation Kit provides general instructions for submitting TIP proposals electronically
  - Begin Grants.gov registration ***early***!

- *Proposers are strongly encouraged to start their Grants.gov registration process at least four weeks prior to the proposal submission due date.*
- *New businesses w/o an Employer Identification Number (EIN) should allow at least two additional weeks to obtain the number and register.*

Submitting Your Proposal
Key Contacts

- Administrative, budget, cost-sharing, and eligibility
  - Michael Walsh, (301) 975-5455, michael.walsh@nist.gov
- Project selection, evaluation and award criteria
  - Thomas Wiggins, (301) 975-5416, thomas.wiggins@nist.gov
- Electronic proposal submission
  - Christopher Hunton, (301) 975-5718, christopher.hunton@nist.gov
- NIST-1022 and associated forms
  - Deborah Dubeau, (301) 975-3462, deborah.dubeau@nist.gov

Submitting Your Proposal
Key Contacts *(cont'd)*

- Human and/or animal subjects
  - Lawrence Uhteg, (301) 975-8779, lawrence.uhteg@nist.gov
- Foreign-owned company participation
  - Kathleen McTigue, (301) 975-8530, kathleen.mctigue@nist.gov
- Grants and cooperative agreement rules and regulations
  - Grants and Agreements Management Division, (301) 975-5718, grants@nist.gov

Weaknesses to Avoid

- Outside the TIP mission
- Outside of the solicitation scope
- Insufficient detail and/or unsupported assertions regarding key requirements

Weaknesses to Avoid *(cont'd)*

- Content Issues
  - Failure to adequately address all TIP evaluation and award criteria
  - Joint venture members who do not meet eligibility and substantial involvement requirements, if appropriate
  - Failure to submit all required forms, letters, and additional documentation
  - Failure to generate and provide a complete budget and supporting budget narrative

- Electronic Submission Issues
  - Failure to submit on time because of delays caused by last minute bottlenecks
  - Using an incorrect DUNS number in Grants.gov
  - Grants.gov authorized agent didn't submit the proposal

Other Items to Consider

- Be cognizant:
  - Use of subrecipients
    - Recipient bears all risk
    - Managing subrecipients takes time and effort!
  - Indirect cost rate as cost-share
    - Relying on entire provisional indirect rate as bulk of your cost share creates some risk

For Info on TIP and the 2010 Competition

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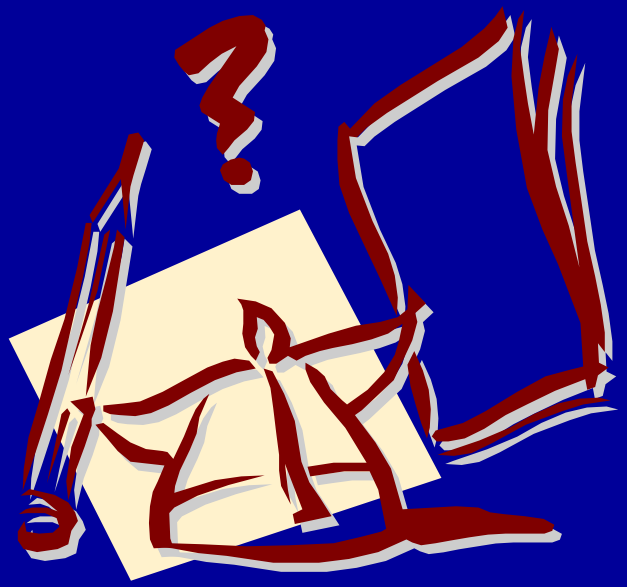
  - *www.nist.gov/tip*
- Register for the TIP mailing list
  - *http://tipmailing.nist.gov/forms/mailing_list.cfm*
- Examine "Competition Resources"
  - *http://www.nist.gov/tip/cur_comp/index.cfm*
- Participate in TIP webcasts

2010 TIP Competition Important Dates

- The Competition is currently **OPEN**
- Paper submission or electronic submission via Grants.gov
- The **deadline** is: **Thursday, July 15, 2010 11:59 p.m. Eastern Time**
  - All proposals must be received by TIP by the deadline (regardless of submission method) WITHOUT EXCEPTION

To ensure timely receipt, DO NOT wait to submit until deadline day!



Questions?