The “Push” and “Pull” of Innovation

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What is Innovation? – The Public University Perspective

**Public U.**

- **TEACHING**
- **RESEARCH**
- **SERVICE**

**Definition of innovation**

1. the introduction of something new
2. a new idea, method, or device: **NOVELTY**
University Innovation Ecosystem

Basic Research
- Government
- Industry
- Self-Funded

Applied Research
- Industry
- Government

Licensing Revenue

University Intellectual Property

Basic Research
Proof of Feasibility
Technology Development
Technology Demonstration
Product Development
Commercialization
Research Parks
Innovation Hubs
Startup Activity
Student/Faculty

“Marketplace”
How do universities measure innovation?

- Creation of Intellectual Property
  - Invention Disclosures
  - Patents
- Licensing Revenue
- Number of Faculty and Student Startups
- Economic Impact
What are the major obstacles to innovation?

Most university tech transfer must be subsidized

How do we incentivize and reward Innovation and Tech Transfer?

How to Teach Innovation?

It’s necessary for universities to do basic research

Lack of investment “The Valley of Death”

Financial Sustainability

Basic Research
- Government
- Industry
- Self-Funded

Applied Research
- Industry
- Government

Technical Development
- University Intellectual Property
- Licensing Revenue
- “Marketplace”

Research Parks
- Innovation Hubs
- Startup Activity
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University Intellectual Property
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- “Marketplace”

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- Basic Research
- Proof of Feasibility
- Technology Development
- Technology Demonstration
- Product Development
- Commercialization

Lack of investment "The Valley of Death"
What are the major obstacles to innovation?

- Basic Research
- Applied Research
- Government
- Industry
- Self-Funded

- University Intellectual Property
- Licensing Revenue
- Public "Marketplace"

- entrepreneurship
- startup activity
- innovation hubs
- research parks
- product development
- technology demonstration
- technology development
- proof of feasibility
- basic research

- How do we incentivize and reward innovation and tech transfer?
- How to Teach Innovation?

- Financial Sustainability
- "Lack of investment "The Valley of Death"
- CULTURE
How can R&D-push and user-pull be coordinated?

Awareness of the tech transfer pipeline, possibly in conjunction public-private partnerships.

Faculty / Subject Matter Expert Exchanges

Student Opportunities

Robust Exchange of Information

Technology Opportunities

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- Industry
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Applied Research
- Industry
- Government

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Innovation Hubs

Product Development

Commercialization

Basic Research
- Proof of Feasibility

Technology Development
- Technology Demonstration

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What are the key challenges and opportunities for USACE?

- Creating sustainable partnerships with universities…
  - “Pulling” meaningful technologies, possibly in conjunction with industry or the startup community.
  - “Pushing” the right information to universities so that we are solving relevant problems.