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Office of Pipeline Safety Presentation on

Tech Transfer & Demonstrations

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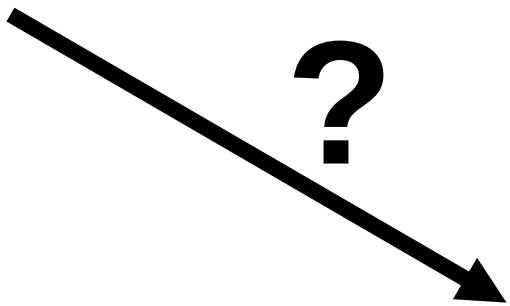
Technology Transfer

How can it be defined?

Definition: The process of taking the results of research and technology development and putting them to practical use.

Pre Award through “Proof of Concept”



Pre Award through “Putting Outputs to Practical Use”

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Technology Transfer

What research outputs are conducive?

Technology Transfer can be planned for the following types of research outputs:

- A new commercial product or service
- Revised methods, practices or operations
- New knowledge - discovery or problem solving
- New information for decision making
- Impacts on codes, standards and regulations.

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Technology Transfer
What is the success rate?

R&D for New Technologies

55% - 65% of technology research succeeds after market launch

R&D for New/Revised Regulations or Consensus Standards

No data to report but since less roadblocks are present and the process is more straight forward, success rates should be higher.

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Technology Transfer
What are the difficulties?

- Technology transfer requires different processes and strategies than R&D
- Technology transfer is a process of change
- Technology transfer is expensive
- New technologies face a barrier some have called the “risk-cost premium”
- Technology transfer is complicated by public policy and intellectual property issues

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Technology Transfer

What are the general rules of thumb?

Rule No. 1 - Plan for technology transfer from day one.

Rule No. 2 - Commit manufacturer or provider of services early.

Rule No. 3 - Involve end users.

NOTE: The organization performing the R&D is often not the manufacturer or *provider* of services and the *provider* is generally not the *end user.*

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Technology Transfer

Pre-Award/How to get started?

1. Road map the goal of the research topic
2. Have evaluation criteria
3. Identify/involve end users
4. Develop early commitment between research funding organization and all involved

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Technology Transfer

Post-Award/How to get through it?

- Determine decision points and how to grant approval for research to continue.
- Secure personnel and other resources on your commitment
- Align resources with proscribed stages of research decision points
- Design demonstrations with all involved organizations
- Widely broadcast planned demonstrations with as many end users as possible
- Benchmark your R&D in demonstrations in association with decision points
- Identify/understand government/industry issues on IP issues

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Technology Transfer

Why have we failed to be successful?

- Tech transfer does not happen by itself
- Seem to rely on credible researchers to carry this burden
- No integration of a systematic tech transfer process into a program's strategy
- Tech transfer cost uncertainties from one project to another:
  - > Each R&D ultimate goal proscribes a different level of sponsorship
  - > Individual annual appropriations are not guaranteed
  - > Restrictions on how you can use your appropriations
  - > Justifying future expenditures on projects that have many uncertainties
- We can't seem to resolve the Intellectual Property conundrum

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Technology Transfer

- Evaluate the merit of technologies that are reaching the prototype stage
- Expose the technologies to the environment in which the technology must be operated successfully
- Promote the deployment and utilization of new technologies through observations and participation by pipeline operators, equipment vendors, standards organizations, and pipeline safety officials
- Just one stage in a technology transfer process but can be considered a major milestone for achieving an ultimate research goal.

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Technology Transfer

- OPS desires a process that integrates technology, standards and regulations with research projects that address these thrust areas
- We want to transfer research outputs to end users
- For companies who develop electro components, manufacture NDE and internal inspection devices, who have technology test beds and for standards organizations, we ask you to register with OPS.