



Plenary Session: MTO and the Outside World

Dr. William Jeffrey

President and CEO,
HRL Laboratories

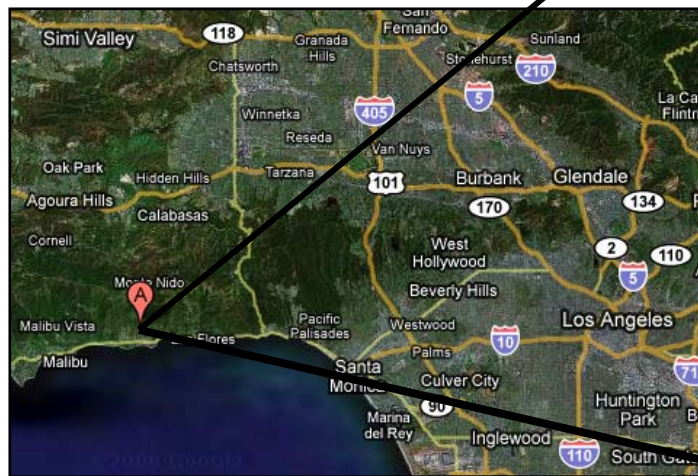
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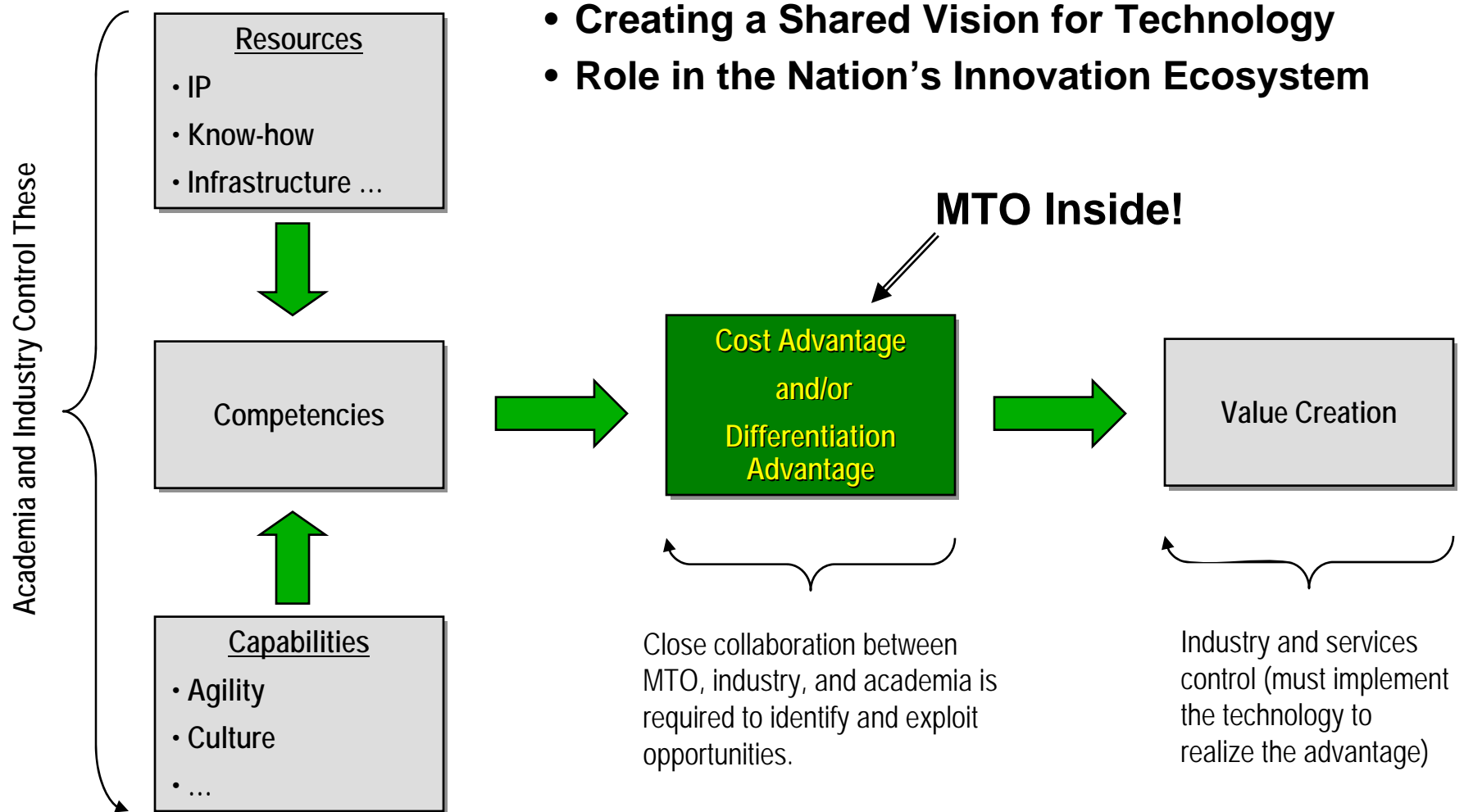
MTO: A Critical Component of the Nation's Innovation Ecosystem

William Jeffrey
President and CEO
HRL Laboratories, LLC



MTO's Role in Value Creation

(based on Michael Porter, Harvard)



Creating a Shared Vision for Technology

Market Driven Example:
Innovator's Dilemma, Clayton Christensen

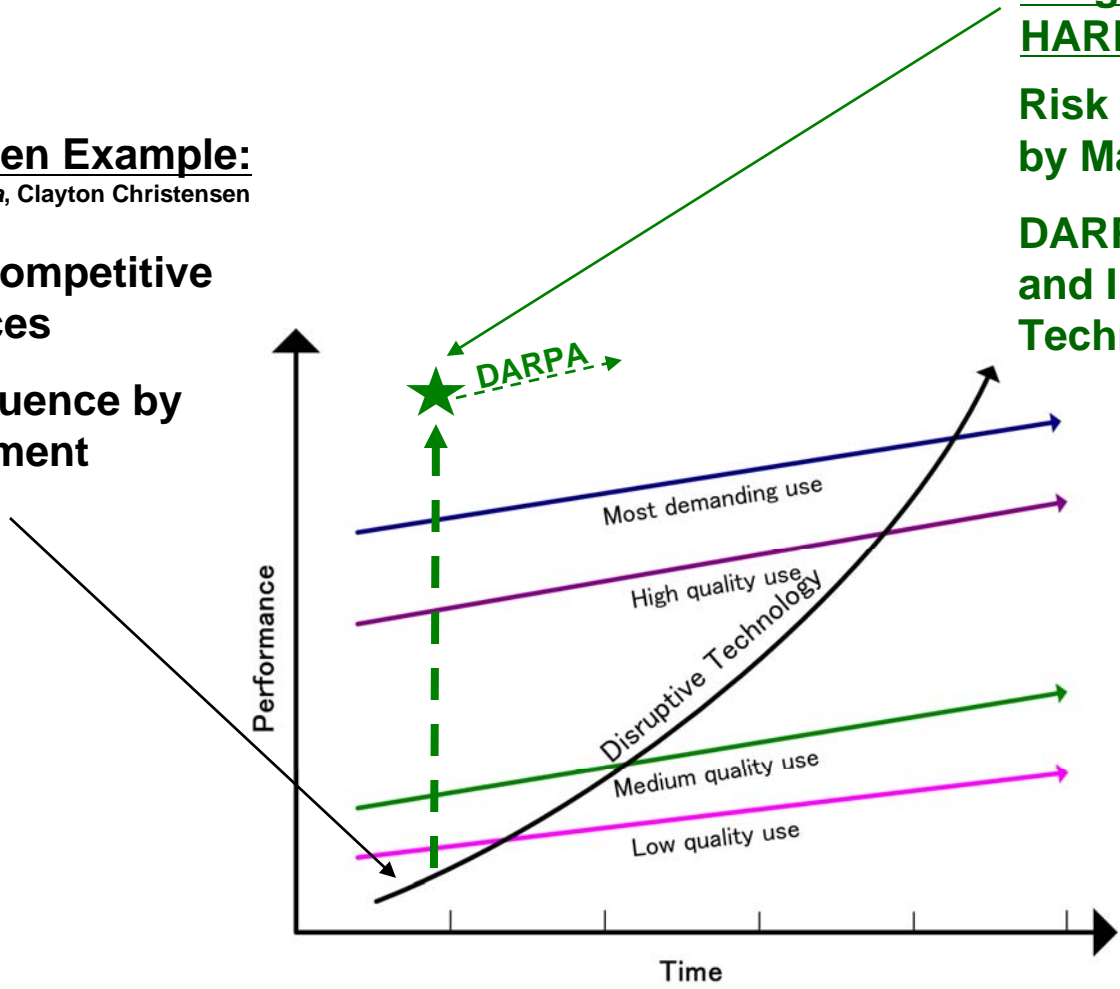
Driven by Competitive Market Forces

Minimal Influence by the Government

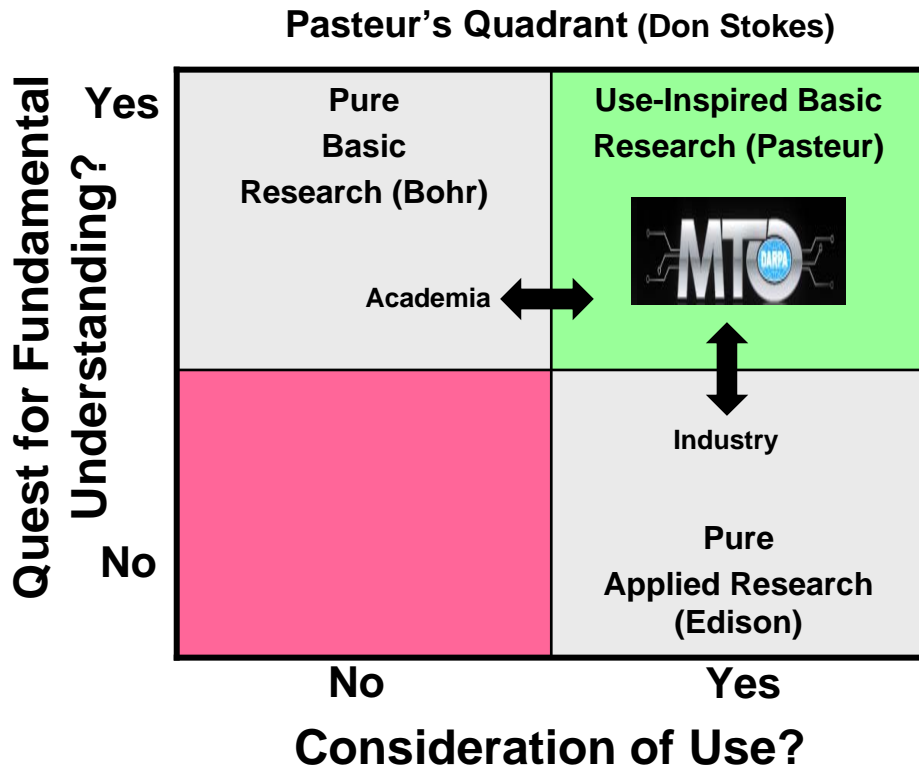
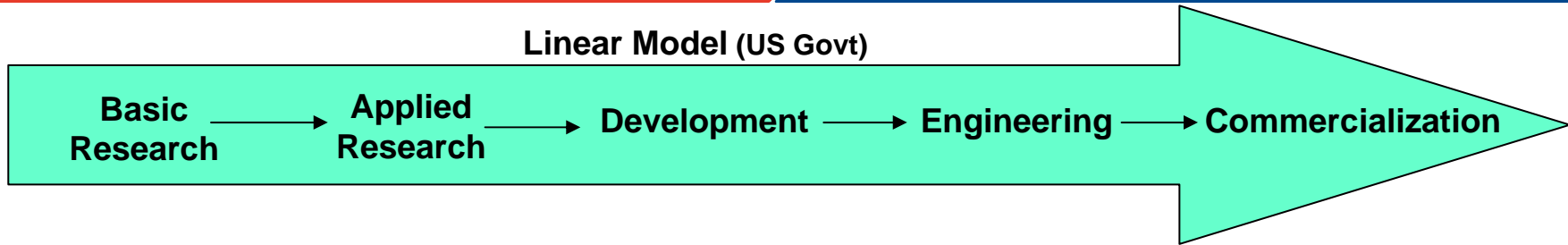
Imagination ("DARPA HARD") Driven Example:

Risk can not be Supported by Market Forces Alone

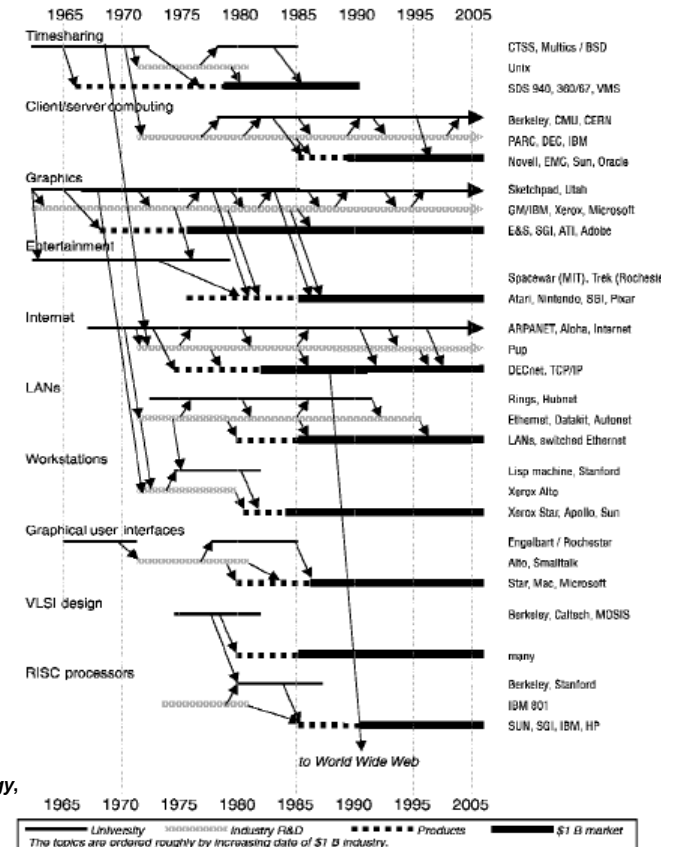
DARPA Facilitates Academia and Industry to Push the Technology Frontier



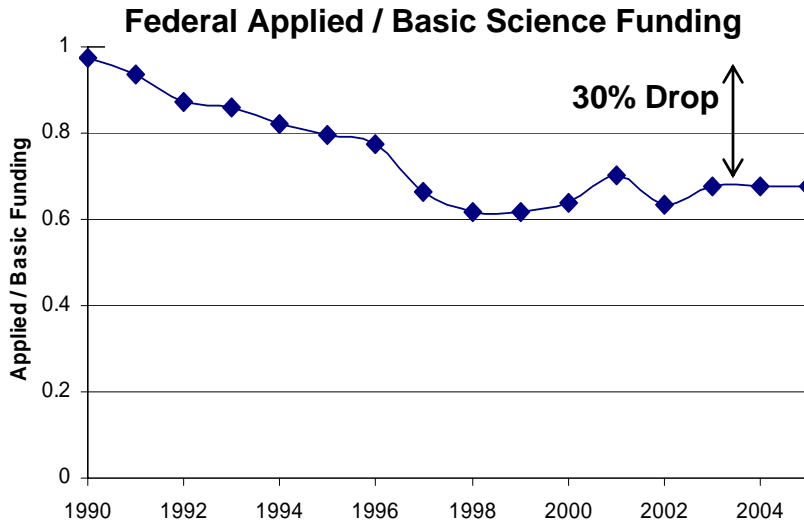
Role in the Nation's Innovation Ecosystem



“Tire Track” Model (National Research Council)

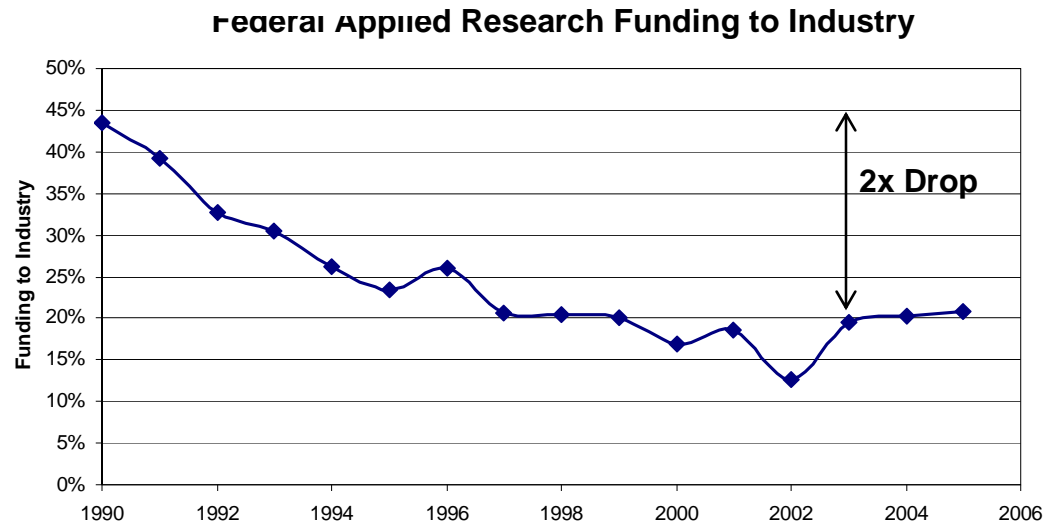


Bridging the Gap



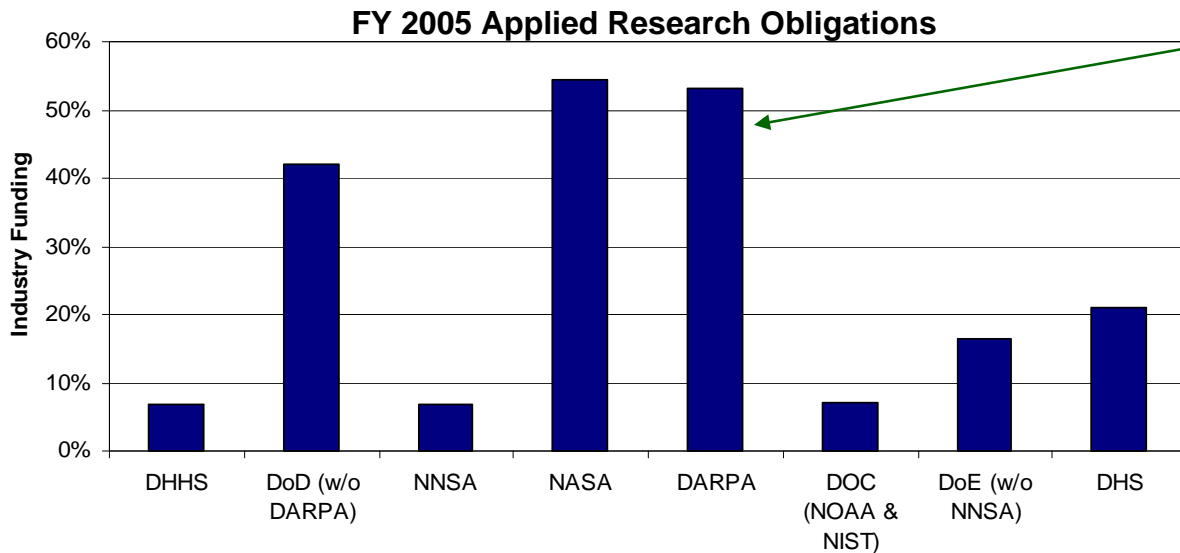
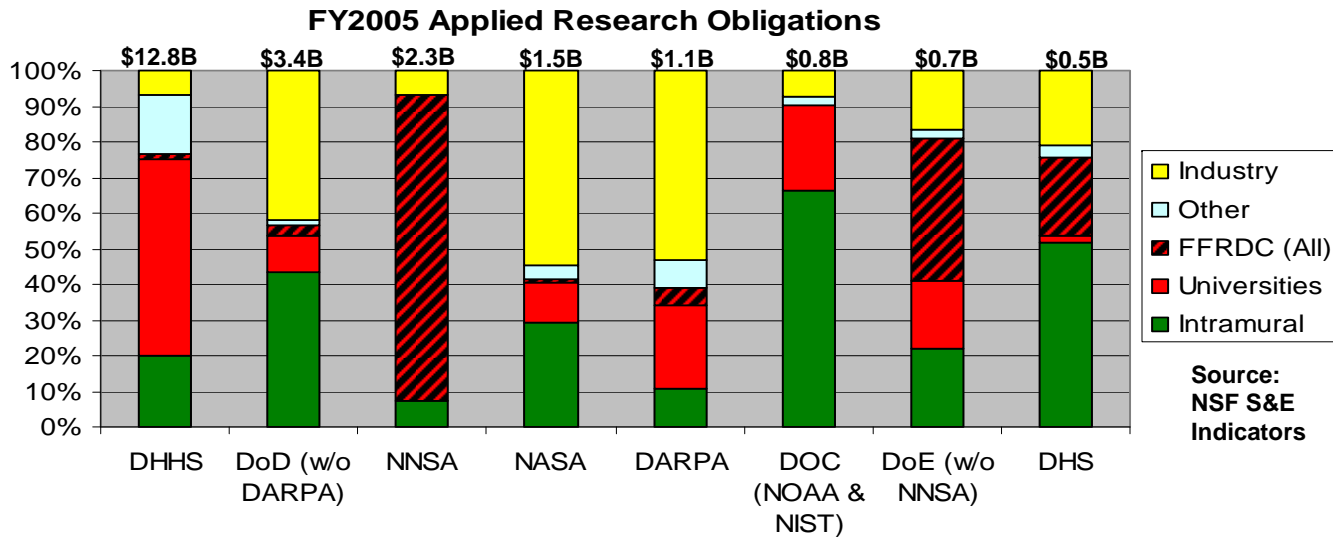
Two Related Gaps:

- Tacit Knowledge – “*Know How*”
- Funding – “*Valley of Death*”



Source: NSF S&E Indicators

Bridging the Gap by Agency



DARPA has maintained a balance in funding universities *and* industry -- facilitating the transition from ideas to innovation

Big Picture Summary

- All segments of the innovation ecosystem must work together to maintain our national competitive advantage
- Facilitating innovation requires a flexible model that encourages knowledge and ideas to flow between academia, industry, and government
- At a time when the global S&T enterprise is becoming more competitive, the Federal government is *unintentionally* reducing the ability of industry to leverage the basic science advances in academia and intramural
- DARPA/MTO plays an increasingly important role in the innovation ecosystem by forcing the various parts of the ecosystem to work together
 - Facilitates a Shared Vision (*Use-Inspired Basic Research*) by Setting the Technical Agenda
 - Fosters Tacit Knowledge Transfer through Funded Project Teams, Workshops, and DARPA PMs

DARPA/MTO: *Bridging Ideas to Innovation*

MICROSYSTEMS TECHNOLOGY OFFICE

MTO SYMPOSIUM



BUILDING THE FUTURE
FROM THE INSIDE OUT



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