



Engineering Research Centers

Gen-4 ERC:

Research Thrusts and  
Testbeds

NSF 19-503

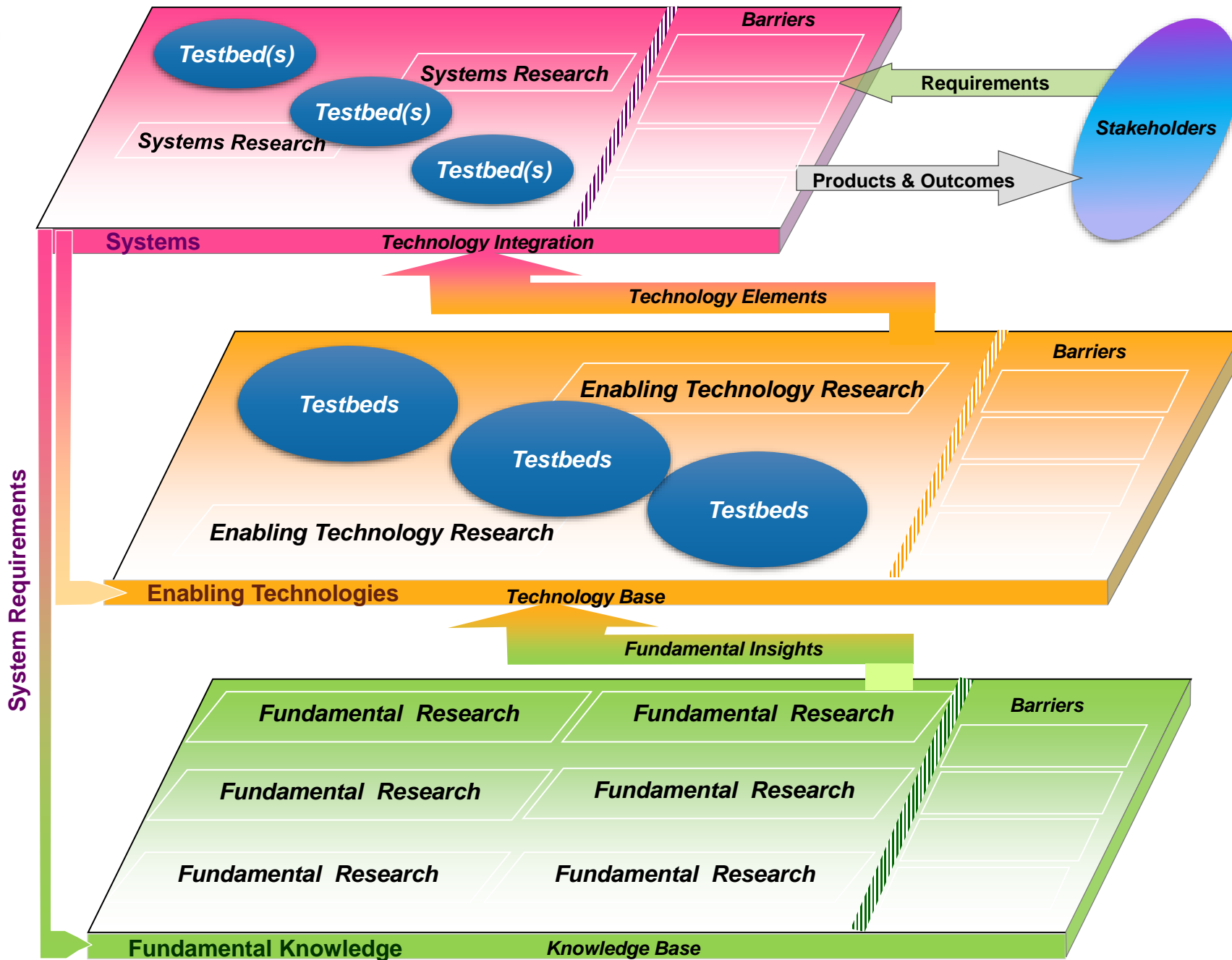
Kickoff Meeting  
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# Outline

- Three Plane Chart
- Convergent Research Evaluation criteria
- Research Thrusts Evaluation criteria
- Expectations: ERC Research Thrusts
- Testbeds evaluation
  - Testbed level of Maturity
  - High-Quality Testbeds
- Role of Thrust Leaders



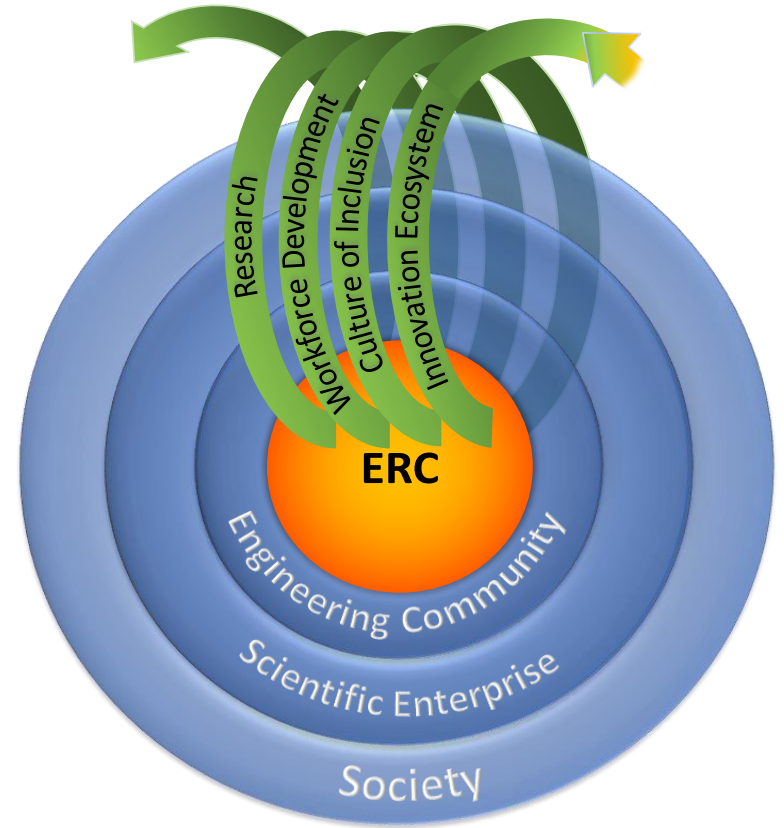


# 3-plane Chart



# Convergent Research Evaluation criteria

- Research Output
- Engineered System
- Convergence
- Societal Impact





# Research Thrusts Evaluation criteria



Research Thrusts (evaluated independently per thrust)

- Relevance
- Interdependence
- Methodology
- Project Management



# Expectations: ERC Research Thrusts

- Thrust and its projects designed to contribute to the goals and vision of the ERC
- Significant research barriers/challenges being addressed through transformative convergent research to deliver powerful scientific discoveries
- Strategic project selection is the key - leverage external inputs
- Communications and interactions among thrusts are critical to the success



# Testbeds are evaluated based on:

- Level of Maturity
- Engineered System
- Function in Research
- Role in Partnerships
- Performance Benchmarking



# Testbed level of Maturity



**Early**: The ERC has begun to define requirements for the testbeds derived from the vision and systems goals of the ERC

**Developing**: The ERC has successfully implemented some of its near-term testbed milestones. Long-term test bed goals continue to push the state of the art.

**Mature**: The ERC has established, clear requirements for the testbeds derived from the vision and systems goals of the ERC.





# High-Quality Testbeds

- Technology Integration
- Function in Research
- Role in Education
- Assessment
- Guidance



# Role of Thrust Leaders



- Sets thrust goals considering vision and strategic plan
- Manages teams of faculty and students effectively
- Coordinates project selection and integrate projects within thrust
- Delivers results across thrusts through effective communication



# Questions?

*Please bring your questions to the Kickoff meeting*