

University of Maryland

# Project Management Symposium

*NEXT SESSION*

## New Product Development Projects Portfolio: Effective Decision Making to Maximize Value

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PROJECT MANAGEMENT  
CENTER FOR EXCELLENCE

A.J. CLARK SCHOOL OF ENGINEERING  
Civil & Environmental Engineering Department

This session will be recorded.

# Project Management Symposium

**New Product Development Projects  
Portfolio: effective decision making to  
maximize value.  
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# Project Portfolio Management

*"Portfolio Management is a dynamic decision process, whereby a business's list of active new product (and R&D) projects is constantly updated and revised."*<sup>2</sup>

47% of unsuccessful projects are impacted by poor decision making<sup>1</sup>

<sup>1</sup> Pulse of Profession: Capturing the Value of Project Management through decision making. August 2015

<sup>2</sup> (Cooper, Robert G., Scott J. Edgett, and Elko J. Kleinschmidt. "New product portfolio management: practices and performance." *Journal of Product Innovation Management: An International Publication of The Product Development & Management Association* 16.4 (1999): 333-351.)





# Decision making during the continuum of Innovation portfolios

## Fuzzy Front End

- Decisions: selection and prioritization to yield balanced portfolio

## In flight

- Decisions for portfolio optimization

## Post-Launch

- Value realization

Lean and Six Sigma support a methodical approach to effective decision making.

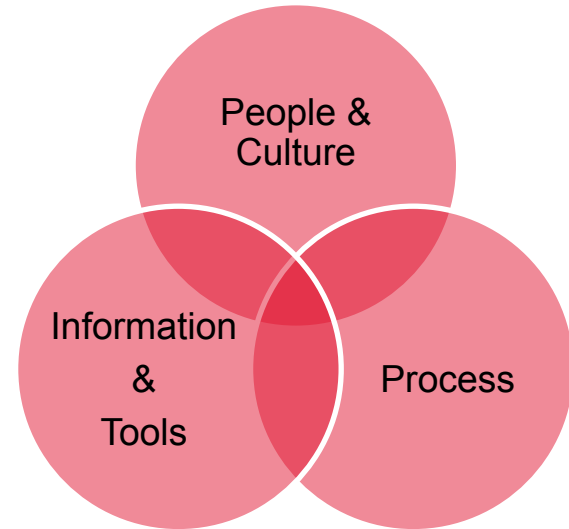
Unknown

Known



# Effective Decision Making <sup>1</sup>

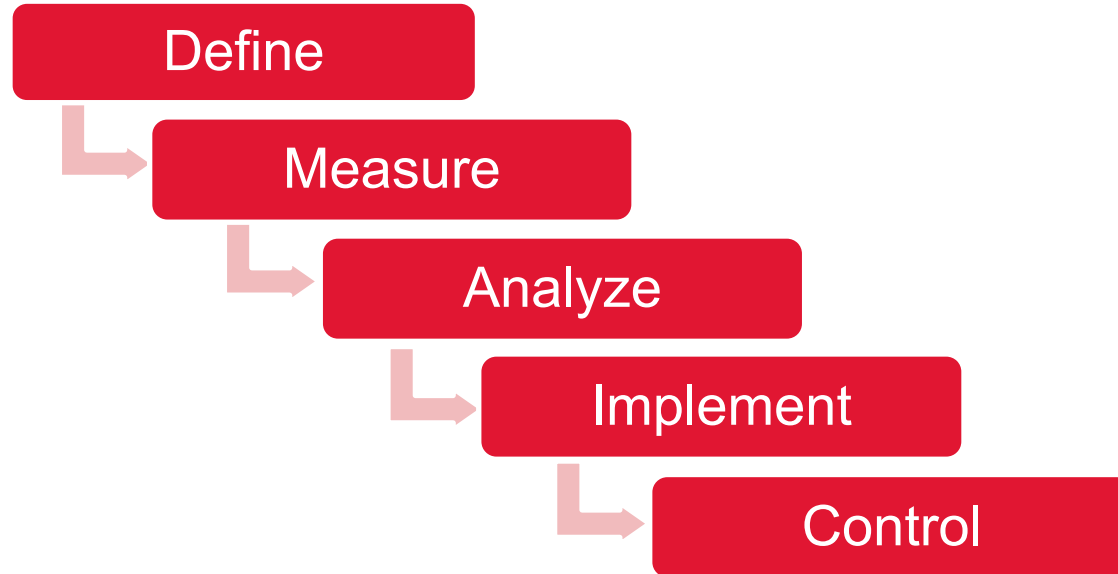
1. Define the problem
2. Brainstorm solutions
3. Evaluate and select
4. Assess implementation
5. Collect lessons learned



<sup>1</sup>*Pulse of Profession: Capturing the Value of Project Management through decision making. August 2015*



# Six Sigma to maximize value





# Lean to maximize value

- Visual management tools to minimize waste
- Voice of Customers



# Decisions at the fuzzy front end of innovation

*“Successful firms spend about twice as much time and money as unsuccessful firms on these vital front-end activities”.<sup>3</sup>*

Customer's  
Feedback

Technical  
assessment



<sup>3</sup> (Cooper Robert G.; The drivers of success in new-product development, *Industrial Marketing Management* 76 (2019) 36-47)



# Define the problem: Voice of Customers



*“decision makers in 81 percent of organizations don’t always have access to what they need”<sup>1</sup>*

<sup>1</sup>Pulse of Profession: Capturing the Value of Project Management through decision making. August 2015





# Brainstorm barriers and challenges

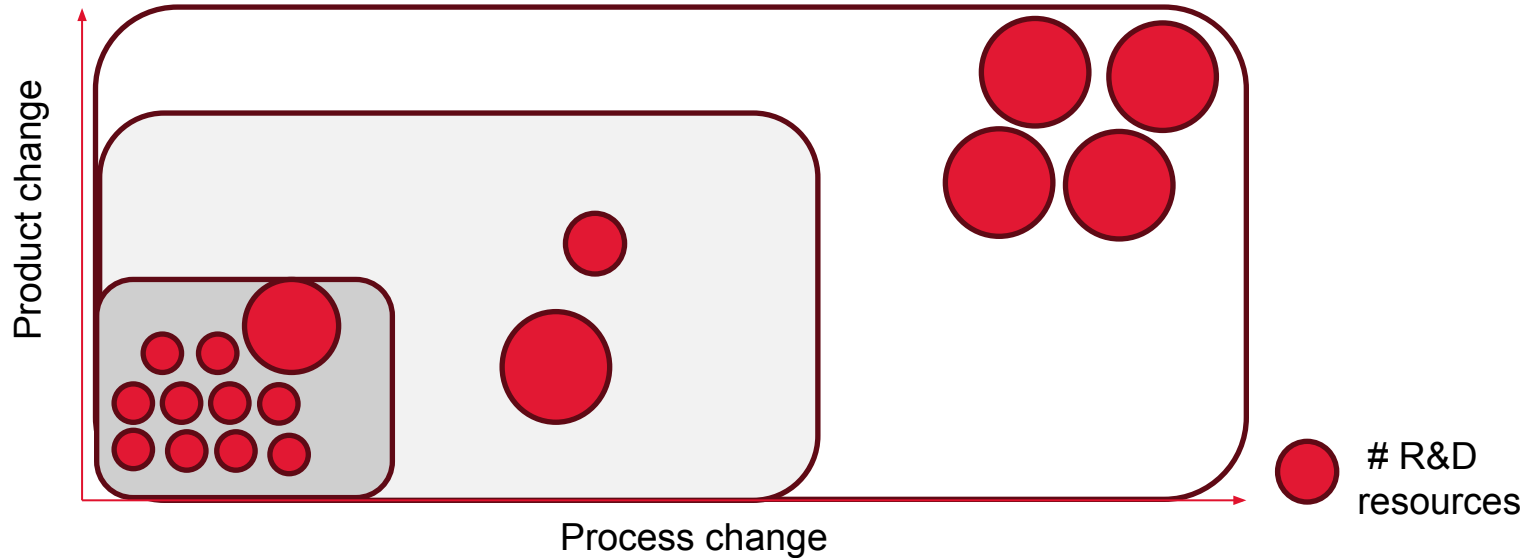
	Assumptions	Barriers	Challenges
Strategic alignment			
Market opportunity			
Org Capability			
Profitability			

“Scoring models often fail to discriminate well”<sup>6</sup>

6 (Cooper, Robert G., Scott J. Edgett, and Elko J. Kleinschmidt. "New problems, new solutions: making portfolio management more effective." *Research-Technology Management* 43.2 (2000): 18-33)



# Evaluate to reach balance



<sup>5</sup> Steven C. Wheelwright and Kim B. Clark, "Creating Project Plans to Focus Product Development," HBR March–April 1992

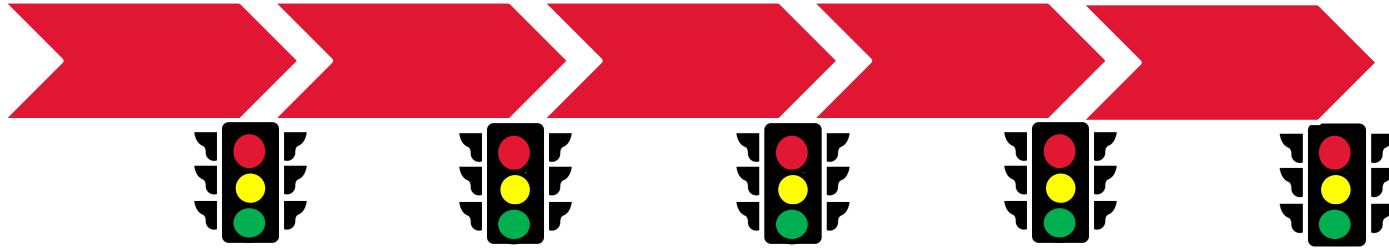


# Decisions at the fuzzy front end of innovation

- Fully understand the problem
- Analyze technical and market information
- Brainstorm to challenge assumptions and uncover optimism biases



# Decision when projects are in flight: optimize for value creation



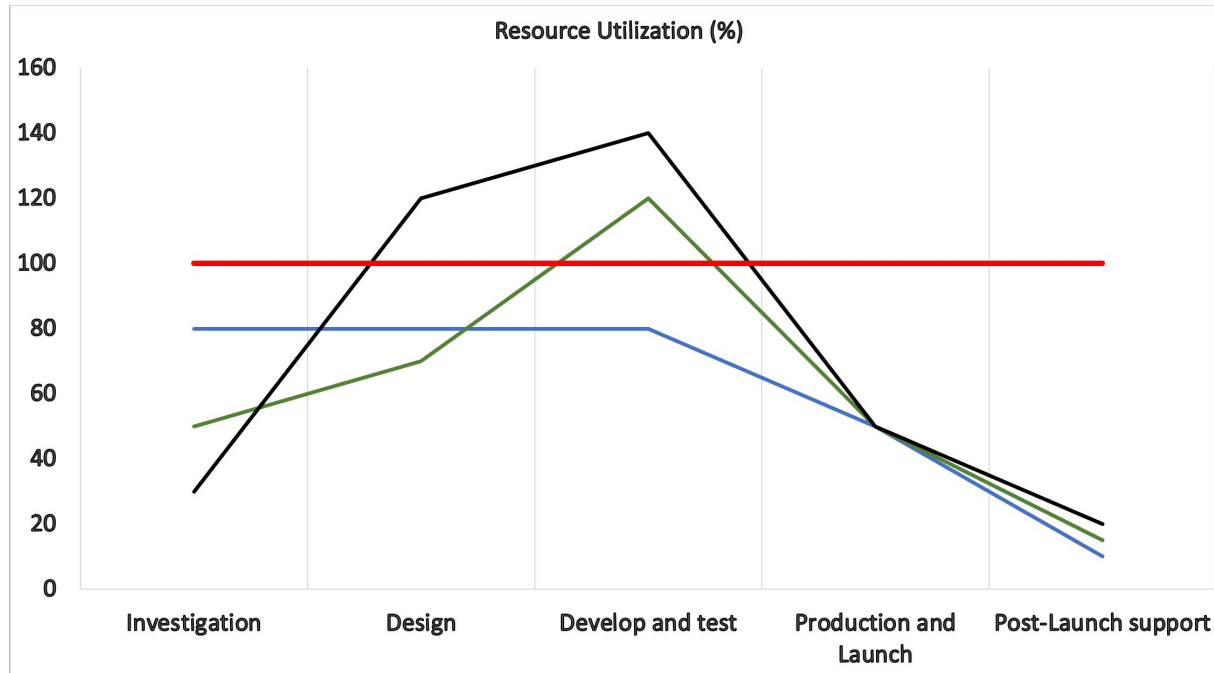
*“General managers who need to know how many projects their development organizations can handle—and how quickly those projects can deliver new products to market—must think in terms of managing a process.”<sup>7</sup>*

<sup>7</sup> (Adler, Paul S., et al. "Getting the most out of your product development process." *Harvard business review* 74.2 (1996): 134.)





# Evaluate Resource utilization

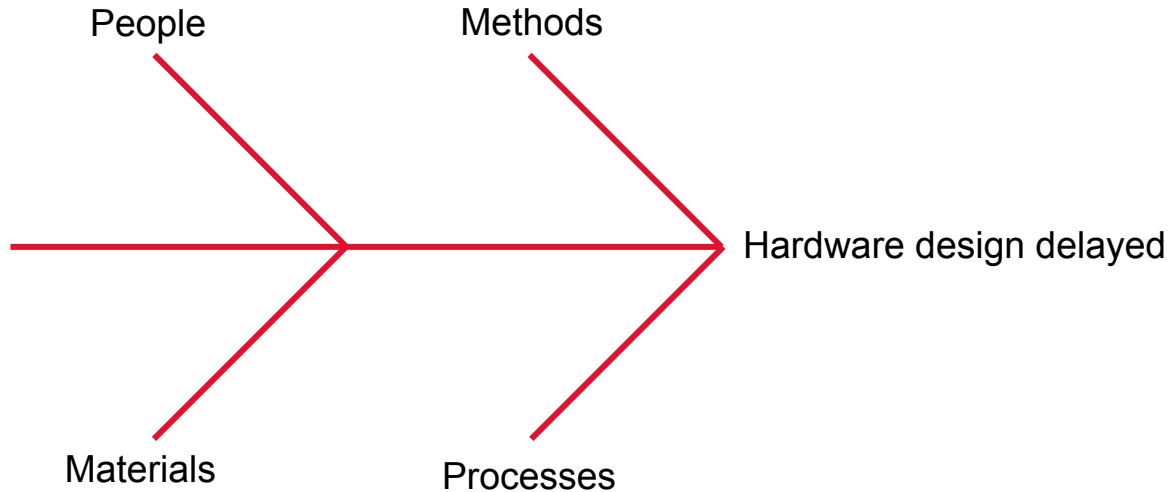


**Resource Utilization (%)**  
= Demand/Capacity \*100





# Identify bottlenecks



Why?  
Why?  
Why?  
Why?  
Why?

Cause and Effect Diagram<sup>10</sup>





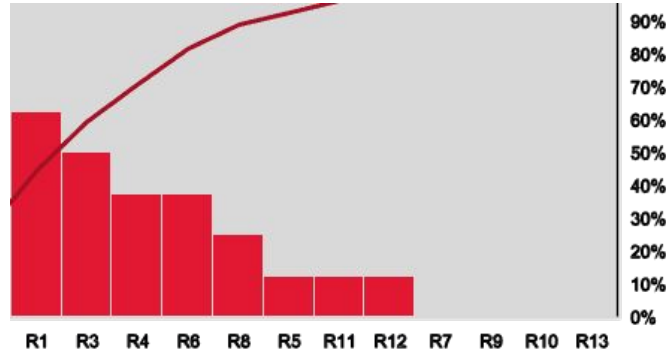
# Decision when projects are in flight

- Use a forward-thinking approach
- Visualize the resource utilization
- Identify bottlenecks





# Post-Launch data assessment



Pareto Chart





# Conclusion

- Apply systematic decision-making
- Minimize waste: select the right information
- Analyze the information with more than one tool
- Analyze lessons learned to inform future decisions





# Questions?

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# Thank you



# Evaluate Session

