

Enterprise Risk and Product Development Portfolios

Enterprise Product Development

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Research Contribution
 Effect and Quantification of Risk in Enterprise Product Development Portfolios

- Outcomes**
1. Measures of risk and procedures useful at the enterprise product portfolio level
 2. Heuristics and practices for managing risks at the enterprise level in product development
 3. Demonstration of applicability of metrics and practices to an existing product development portfolio
 4. Conference and Journal Papers
 5. Doctoral dissertation June 2008

- Methodology**
 Using a combination of:
- Interviews with portfolio managers
 - Simulation modeling of PD portfolios
 - Field research

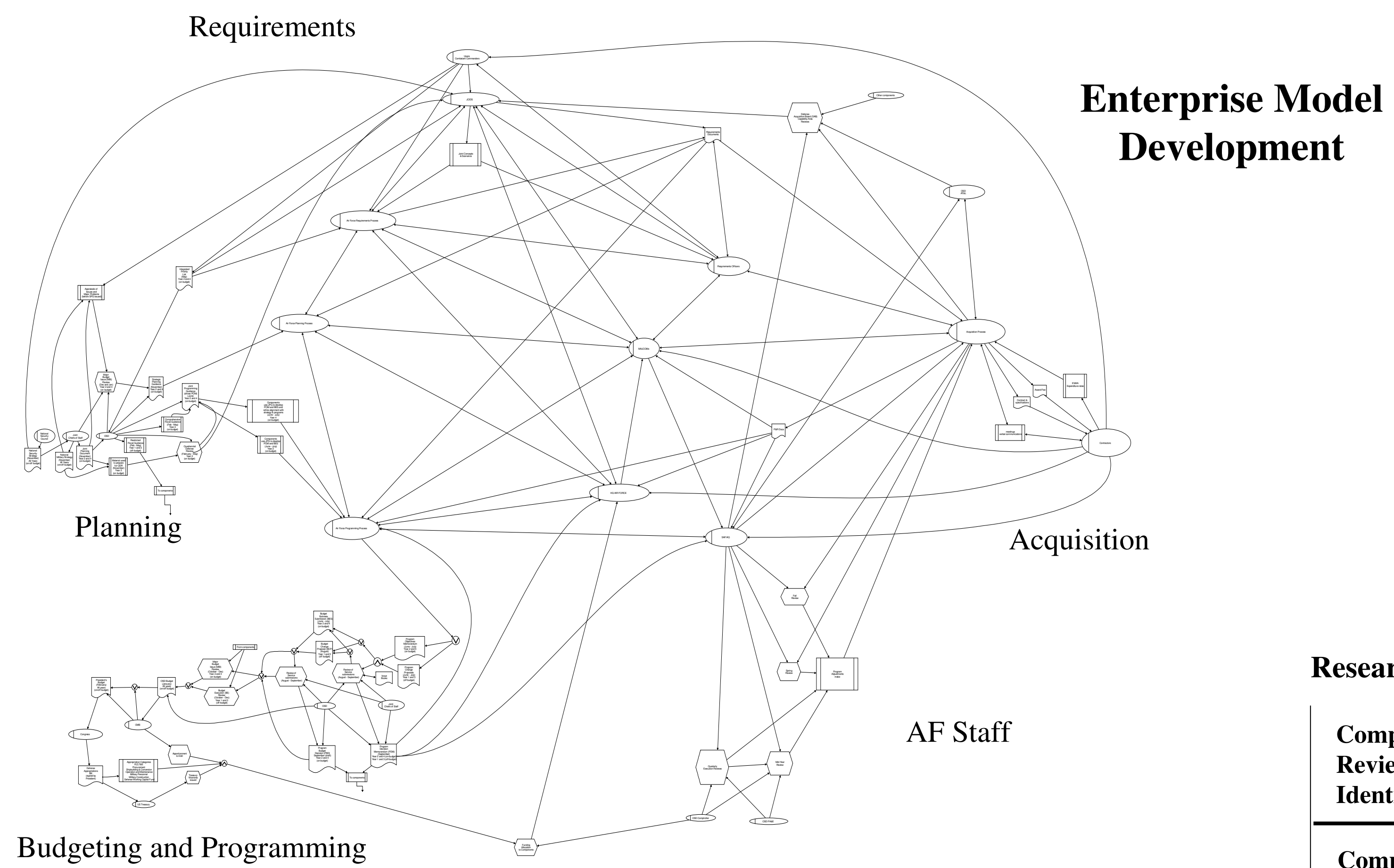
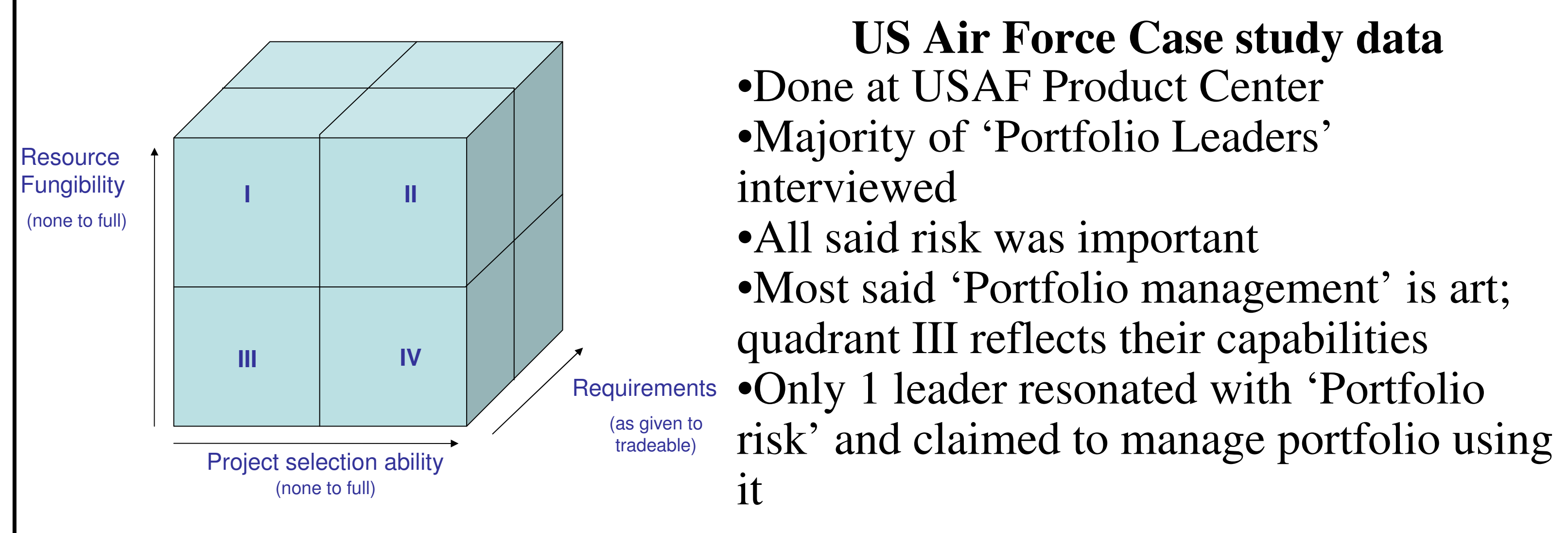
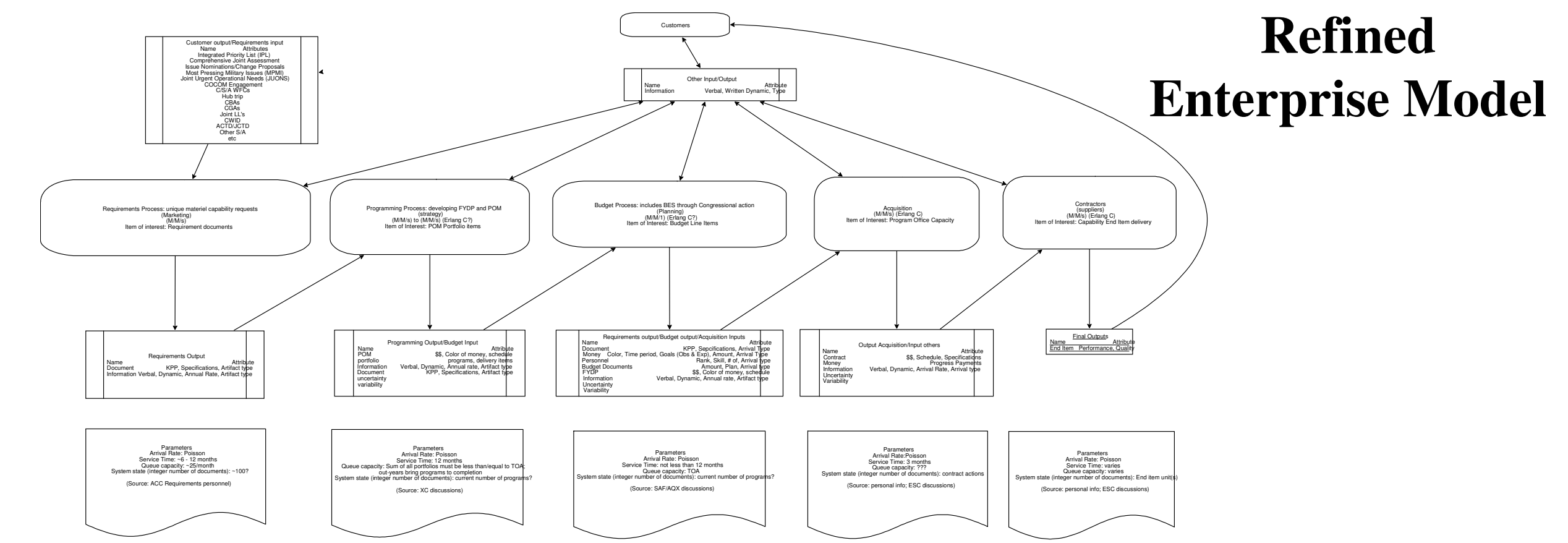
- Provide:**
- Metrics and methods for assessing risk at the Enterprise/portfolio level
 - Best practices for managing risk at the Enterprise/portfolio level

Few product development (PD) enterprises consistently create new products on time and on schedule. This research explores how risk management at the enterprise portfolio level may help enterprises to manage their entire PD value stream more effectively.

Definitions

Enterprise Risk – Risk reflected in cost, schedule or performance of programs by threshold or risk impacting multiple programs, sharing either common operational or common organizational objectives that may or may not have independent resource and decision-making structures.

Enterprise Risk Management - A framework for identifying, planning and reducing cost, schedule and technical risk exposure across multiple programs that share either common operational or common organizational objectives but that may or may not have independent resource and decision-making structures. Not Project Risk management or Program Risk management



Can Risk be used to create an advantage across a product development portfolio?

Key Questions:

- How should risk be aggregated to the portfolio level?
- How does a portfolio manager make use of aggregate risk information?

Initial Observations:

1. Using risk information at the portfolio level is not well understood
2. Risk aggregation methods that bridge the gap between individual programs and a portfolio are lacking
3. Traditional "Portfolio Leaders" in USAF Acquisition do not have real portfolio authorities

Research Timeline

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|--|---|---|--|--|
| Complete Literature Review, Model Identification | Interviews, case study, initial simulation & modeling | Refine & calibrate model, data analysis | Complete cases, data analysis, portfolio application | Finish analysis, finish thesis, publish results, graduate! |
| Complete | Wrapping up | Underway | Summer 2008 | Fall 2008 |

Assertion: A product development portfolio objective is to maximize value in the presence of uncertainty, not to necessarily minimize risk