



Carnegie Mellon University  
**Software Engineering Institute**

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# Experiences in Architecture Based Development

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# Purpose

- Identify key issues that have emerged from experiences with architecture based development
- Discuss approaches for addressing these issues
- Develop a potential research agenda for next steps



# Agenda

Panel presentations: 1:00 - 2:00

Identification and discussion of issues (all): 2:00 -2:30

Break and selection of issues for more detailed discussion:  
2:30 - 2:45

Discussion of first issue: 2:45 - 3:30

Discussion of second issue: 3:30 - 4:15

Summary and next steps: 4:15 - 4:45



# Panel Members

Morris Brill, TRW

Kris Christianson, Joint National Test Facility (TRW)

James Hager, Penn State, SRI

John Ohlinger, National Reconnaissance Office

Jaap Schekkerman, Cap Gemini Netherlands



# Template for Discussion

Describe the problem

- why it is important
- what are the implications

Current approaches to addressing the problem

Unanswered questions

Next steps



# Some Initial Issues: 1

Need for new concept of operations

Connection of software architectures to the business life-cycle

Representation of architectures

Migration strategies for legacy systems

Acquisition strategies that support systematic reuse

Architectural conformance

Organizational leadership

Resolution of conflicting stakeholder views



# Some Initial Issues: 2

Obtaining a cross organizational system wide perspective

Making tradeoffs between system qualities

Architectural extraction

Developing and enforcing policies for architectural conformance

Architectural evaluations

Evolving the architecture

Architectural development phases

Managing different architectural views