

# Software Architecture in Context

Lian Loke - Coordinator  
John Reekie  
University of Technology, Sydney

Contributors  
Rohan McAdam, Honeywell Inc.

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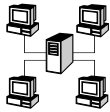
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## A computer system



*We have the technology*  
*We can build it*

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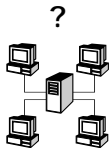
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## A computer system in isolation...



In space, no-one can hear you *compute*

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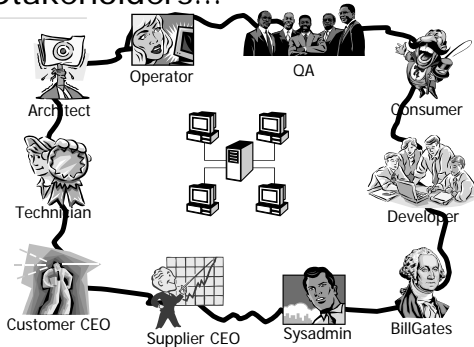
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## Stakeholders...



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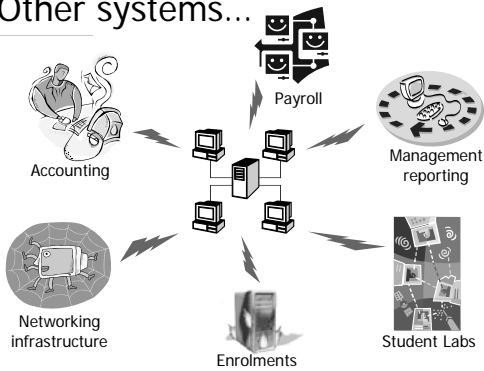
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## Other systems...



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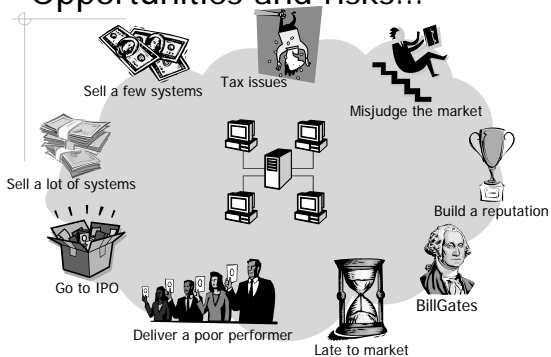
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## Opportunities and risks...



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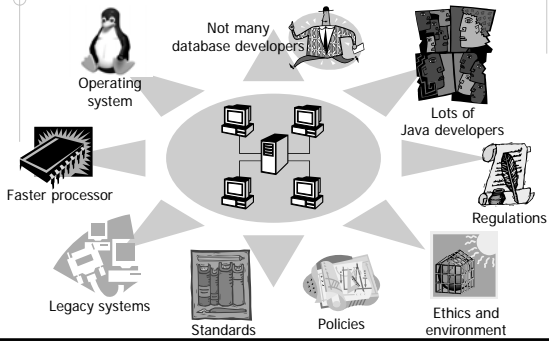
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# Constraints and enablers...



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# It's complicated.



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# What is the role of architecture?



Leaning tower image from Gary Feuerstein.  
Other images from *The Big Ball of Mud*, by Yoder and Foote.

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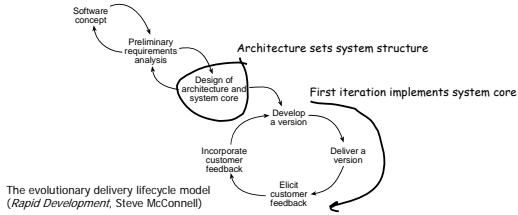
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# Development lifecycle



Architecture plays a vital role in establishing the structure of the system, early in the development lifecycle

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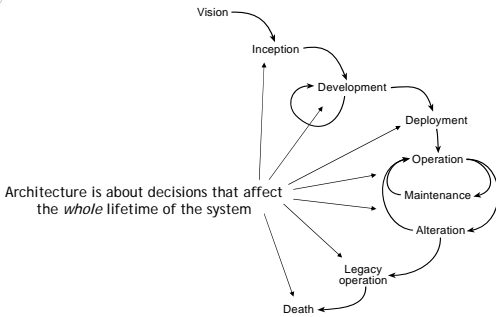
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# System lifetime



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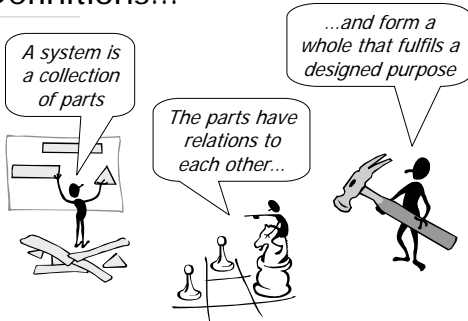
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# Definitions...



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Let's look at some examples...



Aside: In engineering, we work with *models* a lot. A model is a representation that abstracts from inessential details, and can be manipulated in ways that the "real thing" cannot.

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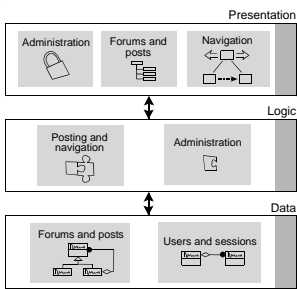
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## Web bulletin board



Availability



A 3-tier architecture is commonly used in client-server and web systems

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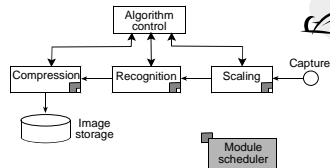
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## Image processing



Performance



Configurability



A processing "pipeline" is commonly used in realtime and embedded systems

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That's all, folks!

◆ Questions or comments?



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