



Maintaining & Increasing Stakeholder Confidence in IT Architecture

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About Me

- Experienced IT architect
 - 15 years industrial experience
- Product developer, consultant, IT architect
 - Bull, Sybase, InterTrust, Zuhlke
- Today, IT architect at investment bank
 - Cross business stream consultant architect

Defining IT Architecture

■ Software Architecture

- The key design decisions for a system
- Dictates the properties of the system
- Designed to meet stakeholder needs

■ Domain Architecture

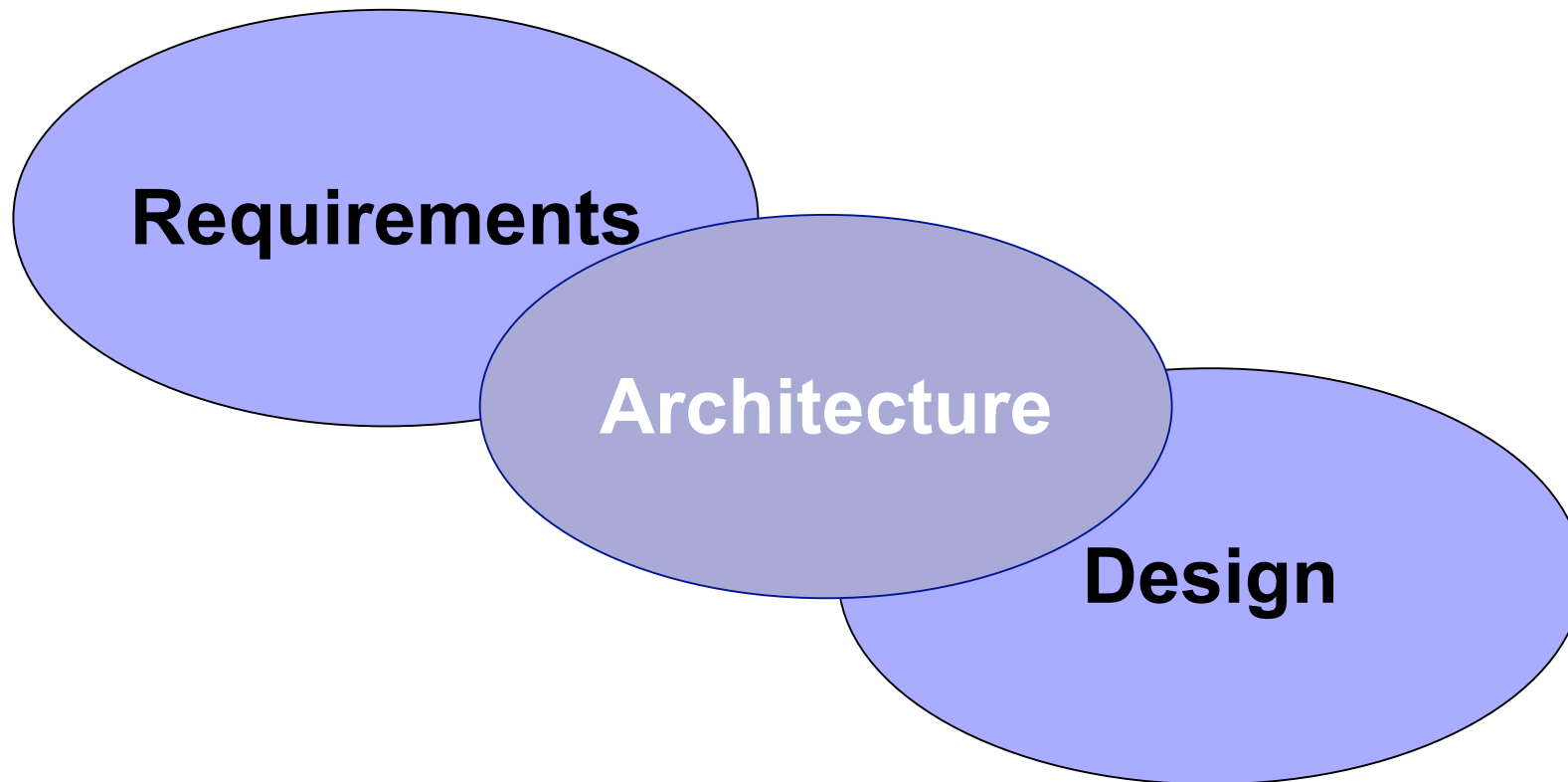
- The systems of a business line

■ Enterprise Architecture

- The systems across the organisation

Role of Software Architecture

A crucial bridge between requirements and design



Architecture & Requirements

- Requirements are an input to architecture
 - Requirements frame the architectural problem
 - Stakeholder needs and desires

- Architecture must influence requirements
 - “The art of the possible”
 - Stakeholder understanding of risk/cost
 - Stakeholder understanding of possibilities

Identifying Stakeholders

- Who are the stakeholders?
 - People, Groups, Entities
 - Those who have an interest in or concerns about the realisation of the architecture
- Importance of Stakeholders
 - Architectures are built for stakeholders
 - Decisions must reflect stakeholder needs
 - Involving a wide stakeholder community increases your chances of success

Who Are Our Stakeholders?

- Executive Management?
- Business Unit Heads?
- End Users?
- Developers?

All of these and more!

Identifying Stakeholders

- **Acquirers** pay for the system
- **Assessors** check for compliance
- **Communicators** create documents and training
- **Developers** create it
- **Maintainers** evolve and fix it
- **Suppliers** provide parts of the system
- **Support Staff** help people to use the system
- **System Administrators**, keep it running
- **Testers** verify that it works
- **Users** have to use the system directly

Effective Stakeholders

■ Informed

- to allow them to make good decisions

■ Committed

- to the process and willing to make themselves available and make hard decisions

■ Authorised

- to make decisions

■ Representative

- of their stakeholder group so that they present its views validly

Engaging Stakeholders

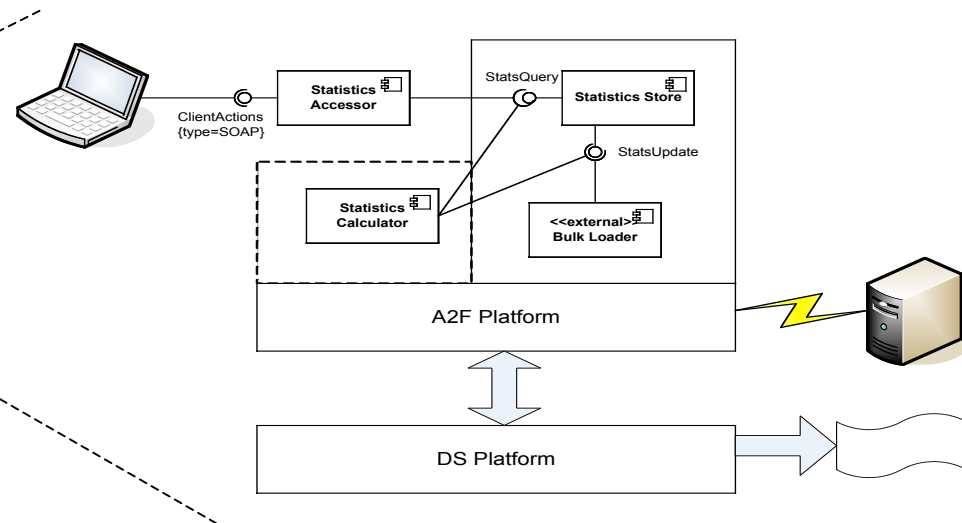
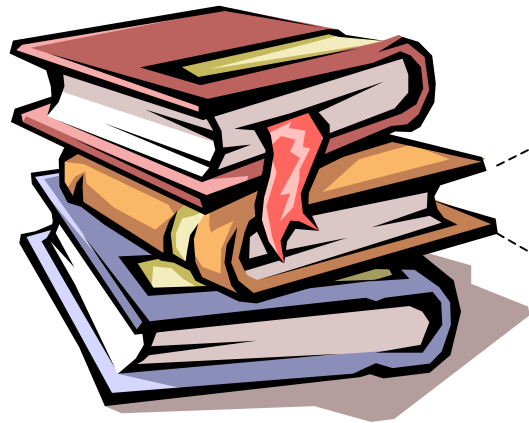
- **Understand** their needs for the system(s)
 - needs vs. desires!
- **Make decisions** that reflect these needs
 - decisions driven by stakeholder needs
- **Make tradeoffs** where required
 - the “right” answer often isn’t possible
- **Deliver bad news** where necessary
 - honestly and quickly to allow early remedy

Gaining Stakeholder Confidence

- Stakeholders need to feel that
 - Their needs are being addressed
 - Their concerns are understood
 - Their input is valued and used
 - Their involvement makes a difference

- In short: ***involve and communicate***

Traditional IT Communication

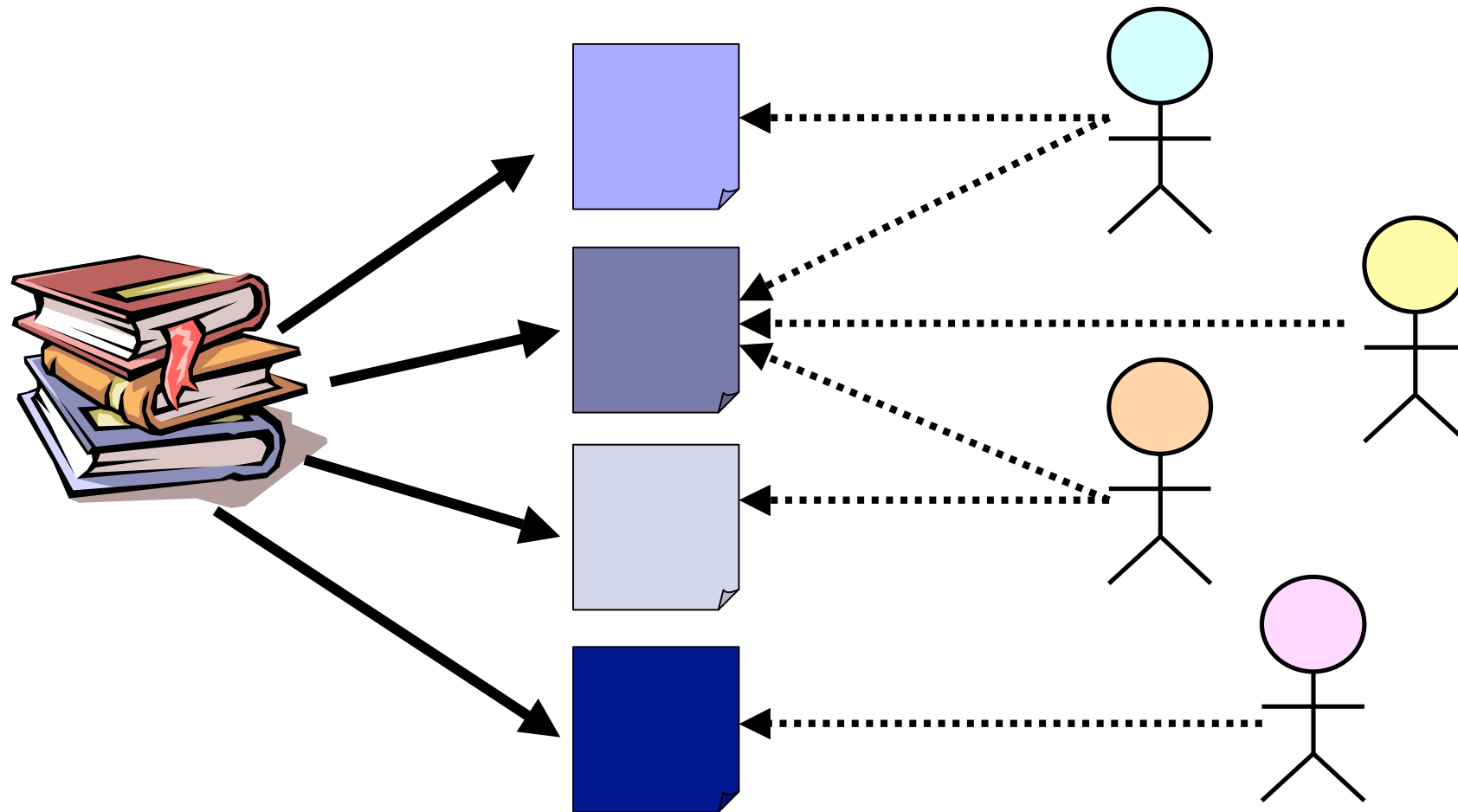


Who does this speak to? Anyone?

Gaining Stakeholder Confidence

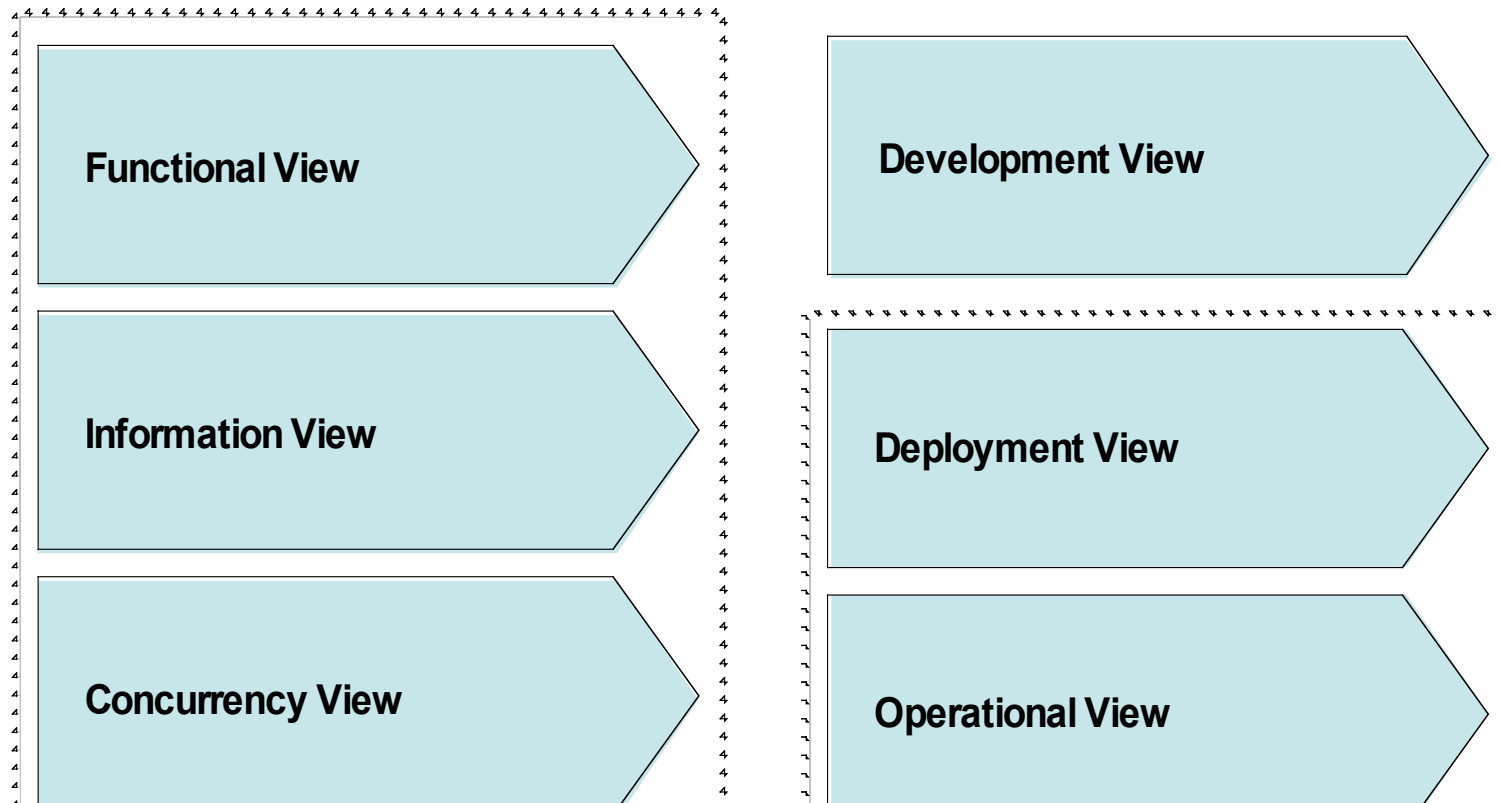
- Stakeholders interests & concerns vary
 - Functions and functional structure
 - Concurrency structures
 - Information stored, managed and used
 - Deployment platform & environment
 - Development constraints needed
 - Operational environment needs
- Need to communicate in their language

Effective Architectural Description



Decompose monolithic descriptions into **views**

Effective Architectural Description



Example set of views for IT architecture

Effective Architectural Description

■ Architectural views

- Targeted at one or more stakeholder groups
- Focus attention on one piece of the problem
- Help to hold stakeholder interest
- Communicate effectively by using the right notations / models etc. for that view
- Encourage stakeholder feedback and involvement due to their relevance

Increasing Stakeholder Confidence

- Views solve part of the problem
 - Decompose a monolithic description
 - But no consistency or standards
- To be effective, and engender confidence, views need to be standardised
 - To reuse effective practice
 - Avoid stakeholder confusion and resistance
 - To encourage consistency
 - Present stakeholders with familiar artefacts

Effective Architectural Description

- Viewpoints provide templates for views
 - patterns, templates and conventions for constructing one type of view.
 - defines the stakeholders whose concerns are reflected in the viewpoint
 - guidelines and principles and template models for constructing its views.
- Viewpoints help to ensure consistency
 - aid adoption
 - increase effectiveness

Benefits of Viewpoints & Views

- A framework for organising work
- A store of knowledge
 - document proven practice
 - help to standardise languages and approaches
- A vehicle for stakeholder communication
- Usable by architects at different career stages
 - **mentor** novice architects
 - **guide** working architects
 - **support** expert architects

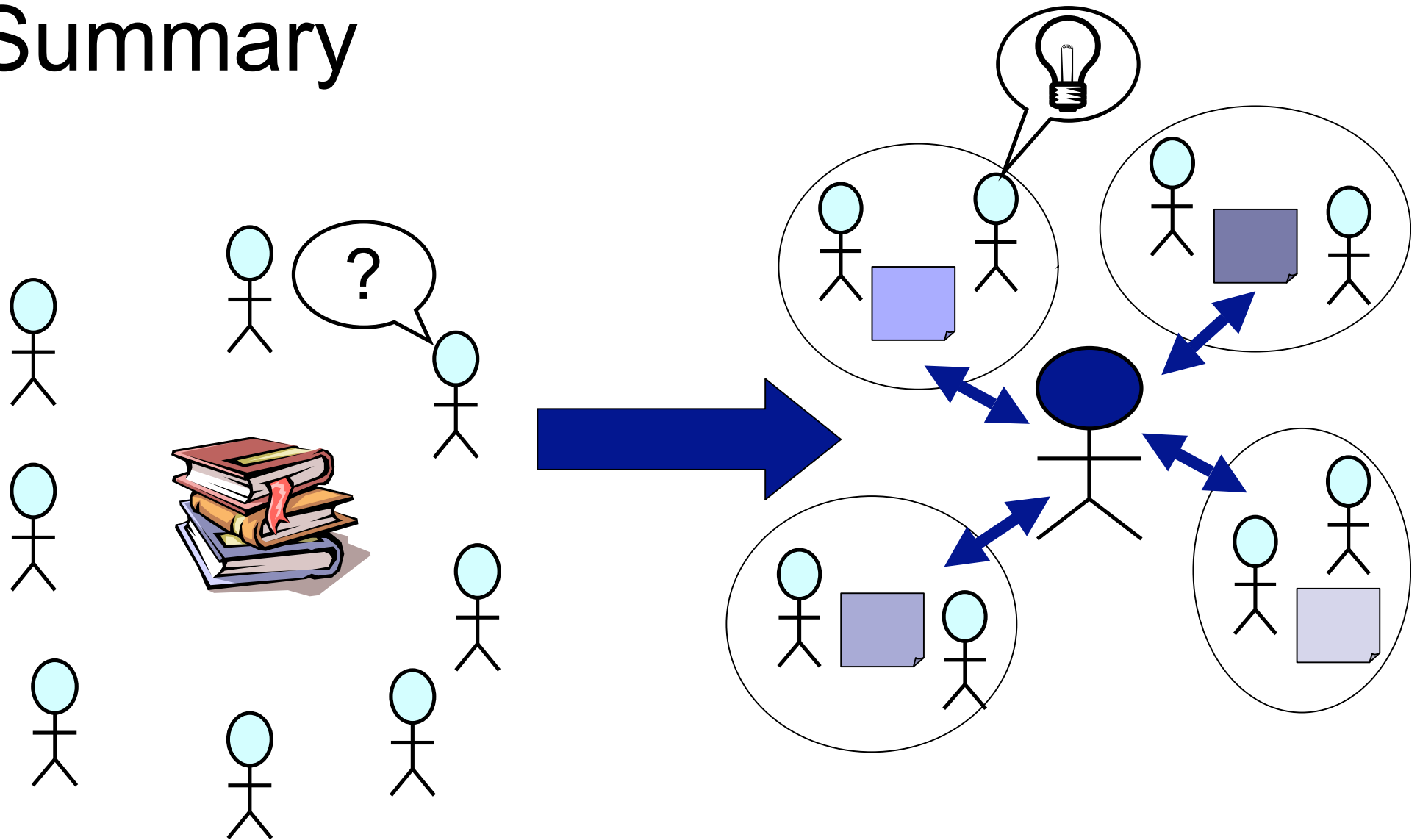
Summary

- Stakeholders need to be part of the architectural process, not outside it
- Traditional descriptions are impenetrable to most stakeholders and so exclude them
- Views open up the architectural description and focus it on stakeholders
- Viewpoints provide guidance and aid the consistency required for effective use

Summary (ii)

- Having stakeholders in the architectural process increases confidence in IT
 - concerns understood
 - tradeoffs and decisions understood
 - two way communication & partnership
- Stakeholders outside the process leads to a loss of confidence and ultimately effectiveness

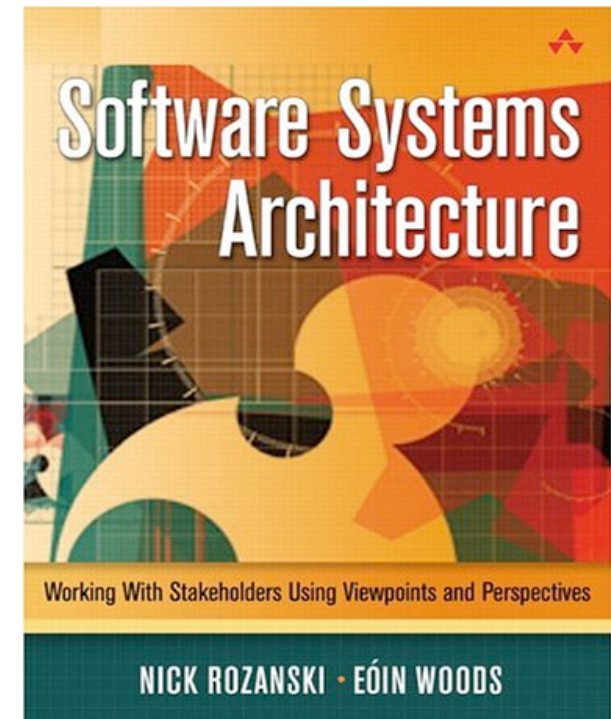
Summary



To Learn More

Software Systems Architecture: Working With Stakeholders Using Viewpoints and Perspectives

Nick Rozanski & Eoin Woods
Addison Wesley, 2005



<http://www.viewpoints-and-perspectives.info>

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Comments and Questions?