



# What are IT Architects and what do they do all day ?

## IT Architect Roles and Responsibilities

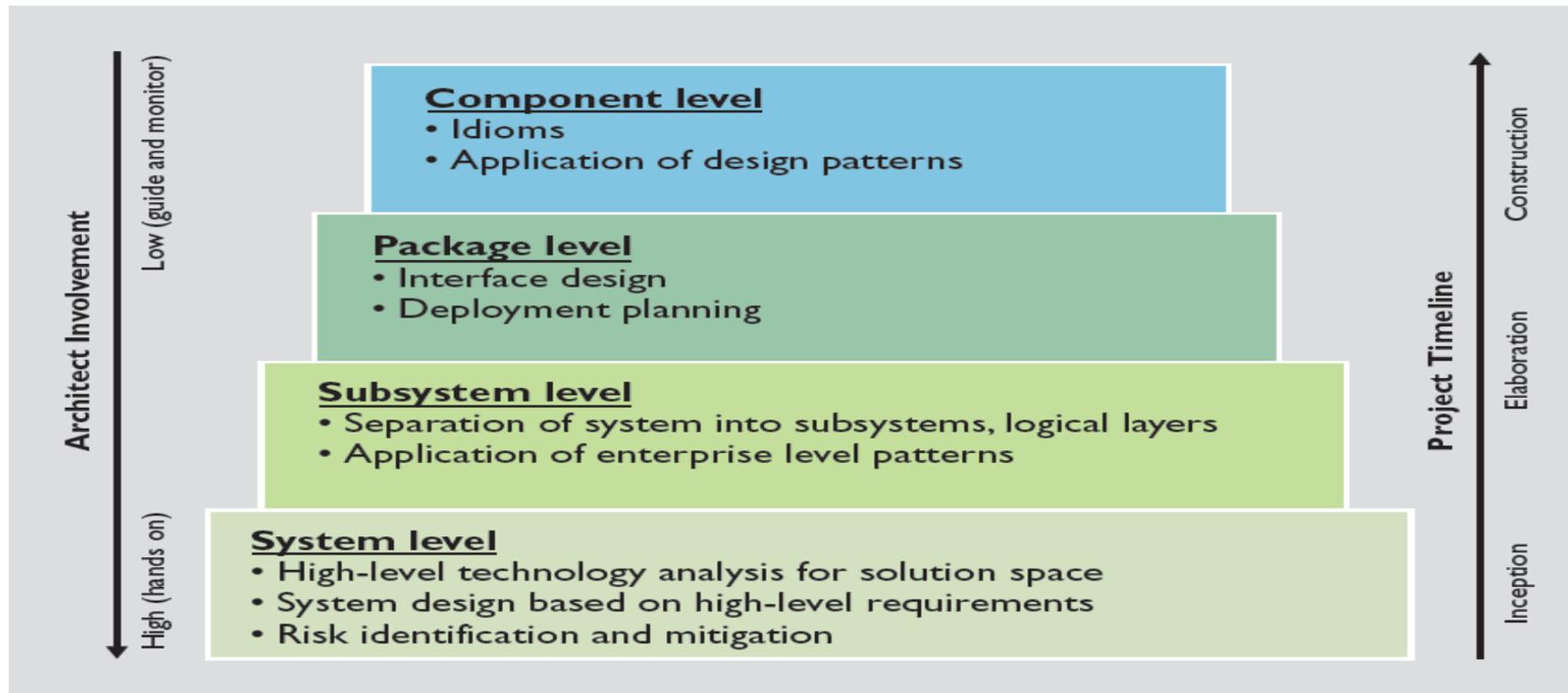
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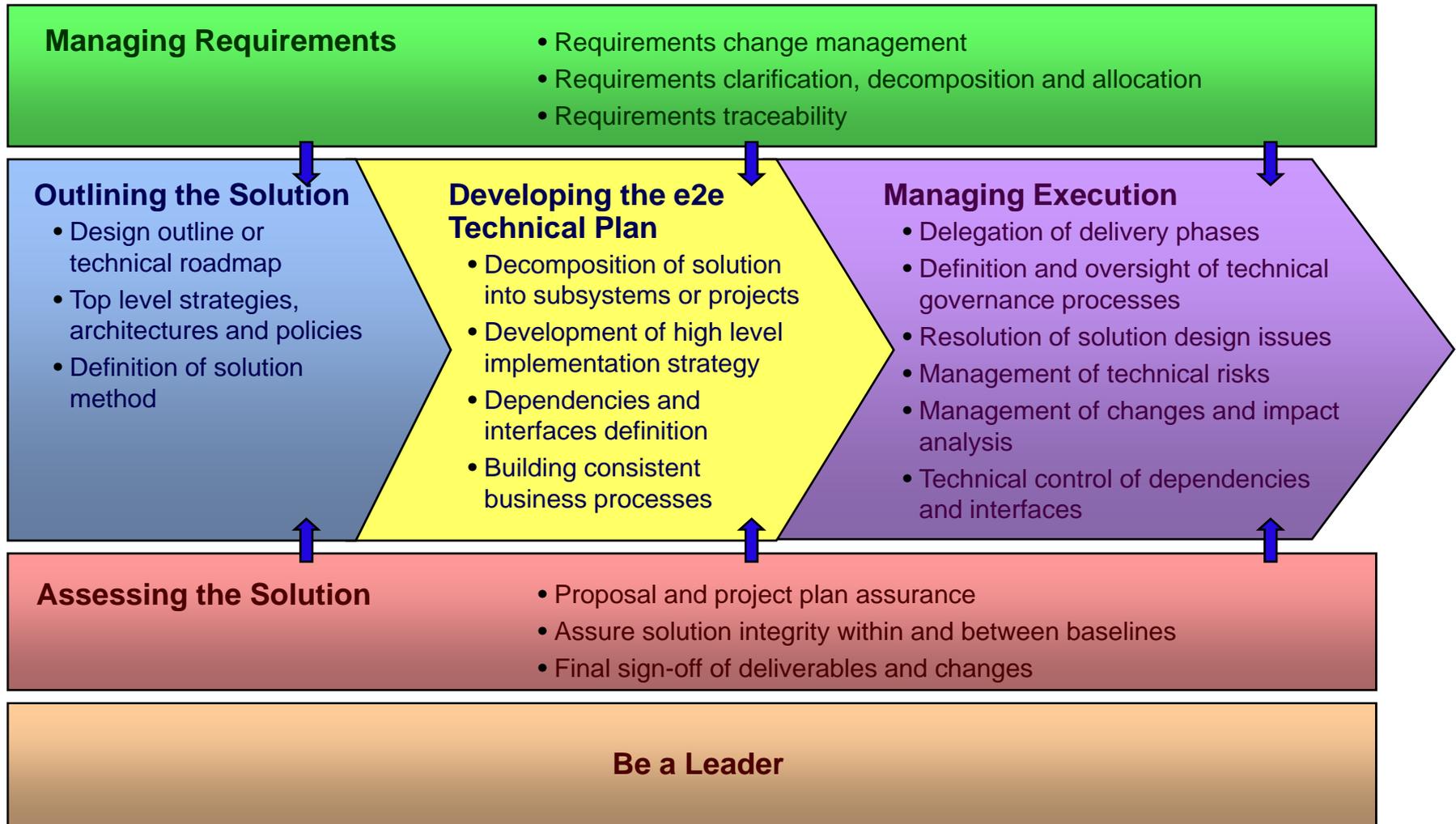
IT Architects are **technically competent system-level thinkers**, guiding planned and economically efficient design processes to bring a system into existence.



Architects **focus on system- and subsystem-level issues** to establish a solid foundation for detailed design, particularly for large-scale efforts

The software architect  
Matthew R. McBride, Communications of the ACM  
Volume 50, Number 5 (2007), Pages 75-81

# Architect's Responsibilities across the full life-cycle



# Architect Roles

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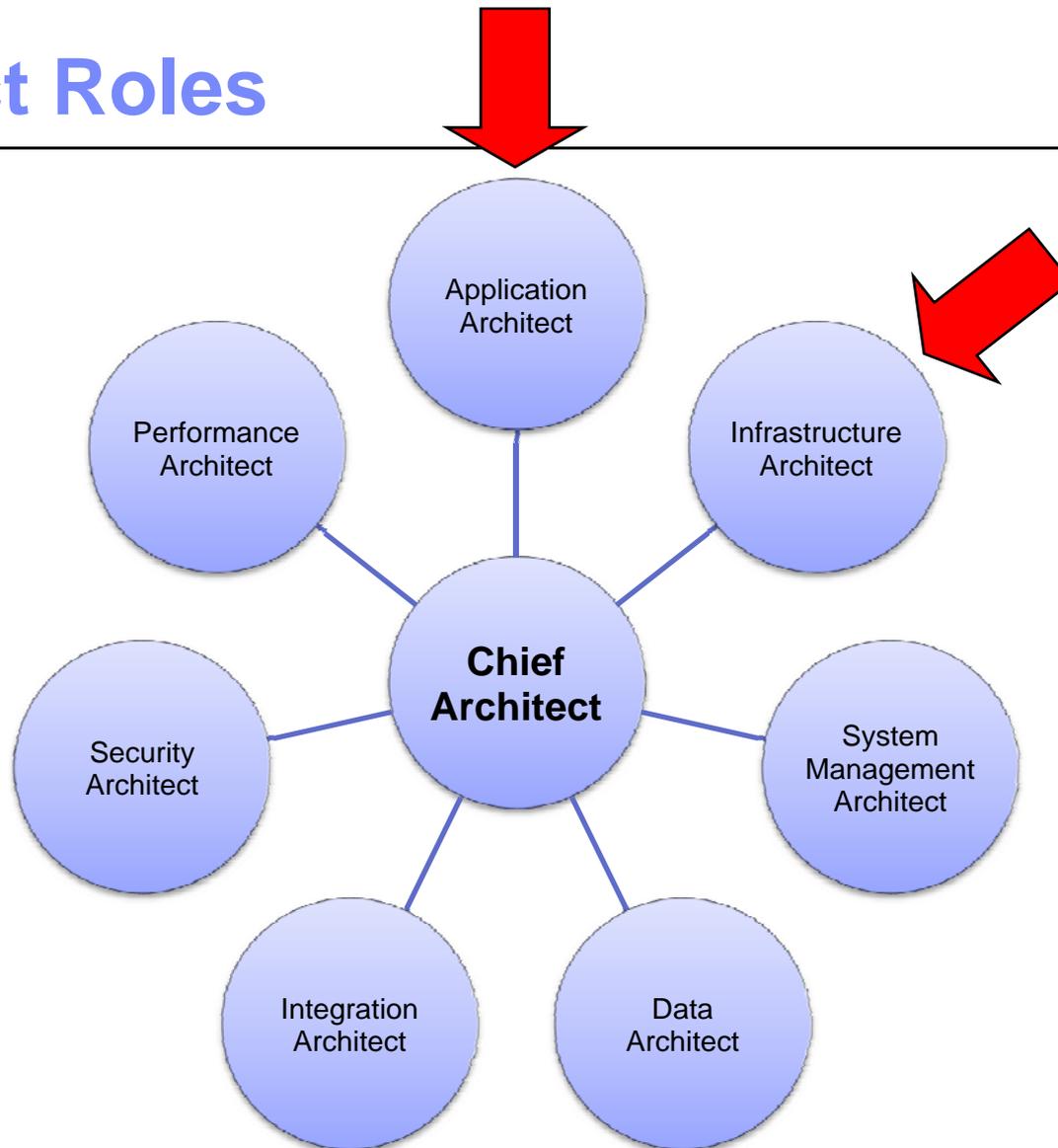
## Chief Architect Roles and Responsibilities

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- Provide the **technical leadership** necessary to implement or achieve a business strategy through an IT solution
- Carry end-to-end **technical solution responsibility**
- Carry the whole scope of the **problem to be solved**, and the **solution** in his/her head
- Technical management of **Requirements, Issues, Risks & Changes**
- Definition of applicable **Architectural Principles**
- Manage **reviews**
  - Work products and deliverables
  - Co-ordinating external reviewers, Quality Assurance
- **Internal**: Advise the program manager and project executive on all aspects of the technical solution
- **External**: Develop relationships with client technical executives

# Architect Roles

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# Application Architect

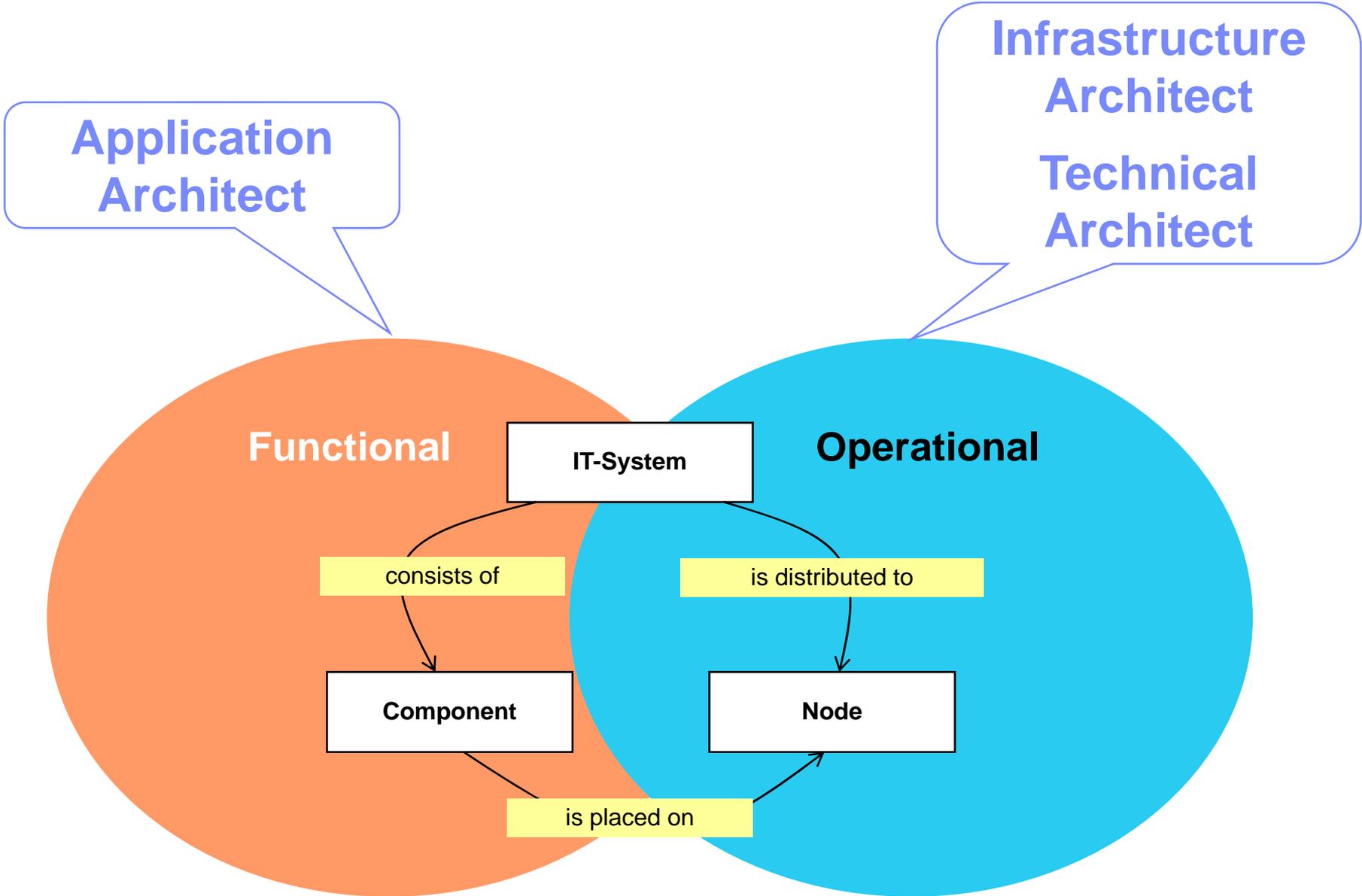
- Defines **what the solution does**
- Responsible for the **Functional Aspects** of the system
- Key responsibilities
  - Understands how the business requirements can be met using application software, and defines what **application software packages** and / or **bespoke code** is needed
  - Develops and maintains **application architectures** and strategies and to ensure the design integrity of the application subsystem and that it meets the agreed requirements
  - Defines **high level data flows** between applications
  - Leads any **bespoke application development**
  - Leads the **configuration of the application software**



# Infrastructure (or Technical) Architect

- Defines the overall system shape
  - What the **building blocks** are from which the solution will be made
  - How the **data** and **functionality** will be **placed**
- Responsible for the **Operational Aspects** of the system
- Key responsibilities
  - Establishes **non-functional and technical infrastructure requirements**
  - Defines the **infrastructure** solution
    - Networking, hardware configurations, system software, middleware
  - Performance, Capacity, Scalability
  - Availability, Recoverability
  - Systems Management, Service Levels

} **Non-Functional Requirements**



# The **Application Architect** is responsible for the **Functional Aspects**, which include these key concepts:

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- **Component**

- Modular unit of functionality which makes this functionality available through an interface

- **Subsystem**

- Any grouping of components in IT system

- **Interaction and Collaboration**

- Collaboration between components
- Sequence of component operations
- Exchanges between two components
- Interface usage contract / protocol

**Link between Use Cases,  
and Components**

**Use Case Realizations**

- **Data**

## The **Infrastructure Architect** is responsible for the Operational Aspects, which include these key concepts:

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- **Node**
  - platform on which software executes
- **Location**
  - type of geographical area or position
- **Zone**
  - an area for which a common set of non-functional requirements can be defined
- **Connection**
  - physical data path between nodes (LAN, WAN, dial-up etc)
- **Deployment Unit**
  - one or more components placed together on a node
- **Non-functional Requirements (NFRs)**
  - Service Level Requirement (SLR) like performance, availability, etc.
  - Constraints: business / geography, IT Standards, current Infrastructure, etc.
- **Walkthrough**
  - description of the flow of a scenario starting from a user all the way through the system and back to the user