A short introduction of
The
**Good enough Architecture MEthodology**
Architecture & Enterprise Architecture

ANSI/IEEE standard 1471-2000

- Conceptually an IT Architecture is
  - The fundamental organization of a system,
  - embodied in its components,
  - their relationships
    - to each other
    - and the environment,
  - and the principles governing its design and evolution.

- Practically it is represented in Architectural Descriptions from the viewpoints of the Stakeholders

- Enterprise architecture consists of the vision, principles, standards and processes that guide the purchase, design and deployment of technology within an enterprise.
  - Forrester Research

- The primary reason for developing an enterprise architecture is to support the business by providing the fundamental technology and process structure for an IT strategy. This in turn makes IT a responsive asset for a successful modern business strategy.
  - The Open Group

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Enterprise Architecture is the art of making sure that the right people do the right things in the right place at the right time!
Architecture

- **Business Architecture**, describes the business vision, mission, processes, benefits, organization, roles/responsibilities, terminology, business information definition, ...
- **Application Architecture**, including the detailed architecture design of the application, how it is put together using a number of different layers (at least Presentation, Business Logic and Data layer), what components are used where and for what.
- **Data Architecture**, including the artifacts such as Information Objects and their relations, a detailed Data Model, rules and principles for data creation, update, delete, read.
- **Infrastructure Architecture**, including the physical components that provide and support the above.
- **Security Architecture**, including the routines and components that secure the architecture
- **Governance Architecture**, including the operational routines and processes to manage and maintain the above architectures.
Architecture perspectives (maturity levels)

- Governance
- Business
- Application
- Data
- Infrastructure
- Security

Architecture validation

Architecture realization

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The Good Enough Architecture MEthodology

Fits into any applicable framework or methodology in the market:

And many more ...

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The GAME process to establish a real-life EA

By 2010, enterprise architecture processes without effective means of measuring impact on the business (improved cycle time, more efficient IT operations, improved information quality, lower cost per project) will be either discontinued or restructured.

Source: Gartner

Survey of Enterprise architecture programs:
- 25 percent are maturing and active
- 25 percent have failed repeatedly
-50 percent take two steps forward and one step back

Source: Gartner
Major work steps of the GAME

- **Scope definition**
  - Principles & Guidelines
  - Goals
  - Vision

- **Business definition**
  - Processes
  - Information definitions
  - Functional Requirements
  - Architecture Scenarios

- **Lifecycle definition**
  - Functions/Services
  - Measurement points
  - Non-Functional Requirements
  - As-Is Architecture

- **Vision**
- **Goals**
- **Principles & Guidelines**
- **Needs & Concerns**
- **As-Is Architecture**

- **Information definitions**
- **Measurement points**
- **Locations**

- **Stakeholders**
- **More (if needed)**

- **Hand-over, Operation & Maintenance**

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Architectural maturity levels and deliverables during RUP or similar steering and development processes

RUP

- Inception
  - Contextual Architecture v0.9x
  - Application Architecture v0.1
    - Conceptual v0.1
    - Logical v0.1
    - Physical v0.1
  - Process model v0.1
  - Information model v0.1
  - SAD v0.1

- Elaboration
  - Contextual Architecture v1.0
  - Application Architecture v0.5
    - Conceptual v0.9
    - Logical v0.5
    - Physical v0.5
  - Process model v0.9
  - Information model v0.9
  - Data model v0.1
  - Class models v0.1
  - Design models v0.1
  - SAD v0.5

- Construction
  - Application Architecture v0.9x
    - Conceptual v0.9x
    - Logical v0.9x
    - Physical v0.9x
  - Process model v0.9x
  - Information model v0.9x
  - Data model v0.9x
  - Class models v0.9x
  - Design models v0.9x
  - SAD v0.9x

- Transition
  - Application Architecture v1.0
    - Conceptual v1.0
    - Logical v1.0
    - Physical v1.0
  - Information model v1.0
  - Data model v1.0
  - Class models v1.0
  - Design models v1.0
  - SAD v1.0

The GAME

Contextual

Conceptual

Logical

Physical

An agile and iterative approach, by default!
<table>
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<tr>
<th>Deliverable</th>
<th>Short description</th>
<th>Responsible</th>
<th>Involved</th>
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<tr>
<td>Contextual Architecture</td>
<td>Vision, scope, stakeholders, Core business/IT principles, As-Is core information objects, processes &amp; functions, To-Be information objects, processes &amp; functions</td>
<td>Project Architect</td>
<td>Business (via business owner/strategists, business people, requirement mgr/team)</td>
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<td>Process model</td>
<td>Core processes drilled down to work steps and the supporting functions and information objects</td>
<td>Business analyst (Process modeller)</td>
<td>Business (via requirement mgr/team, information architect), Project Architect</td>
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<td>Information model</td>
<td>High-level model of all information objects including core attributes, and relations between the objects</td>
<td>Business analyst (Information architect)</td>
<td>Business (via requirement mgr/team, process modeller), Project Architect</td>
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<tr>
<td>Solution architecture</td>
<td>Conceptual, Logical, Physical Architecture, integration Architecture, Core information objects, Functions, processes, User groups</td>
<td>Project Architect</td>
<td>Business (via requirement mgr/team, information architect), Software Designer (Design Leader)</td>
</tr>
<tr>
<td>Data model</td>
<td>Model of data objects and the relations between them.</td>
<td>DBA/Software Designer (Design Leader)</td>
<td>Project Architect</td>
</tr>
<tr>
<td>Class models</td>
<td>Model of classes and the relations between them, call methods, inputs and outputs,</td>
<td>Software Designer (Design Leader)</td>
<td>Project Architect</td>
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<td>Design models</td>
<td>Model of realization of different design scenarios. Design Models should be created for the complex scenarios.</td>
<td>Software Designer (Design Leader)</td>
<td>Project Architect</td>
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<td>Solution Architecture Document</td>
<td>A document that combines the above deliverables and documentations. A complete story beginning from the vision to sample-codes used to describe, visualize and demonstrate why the architecture has been selected and how it is supposed to be build and delivered as a solution.</td>
<td>Project Architect (responsible for the entire document, while only some parts are delivered by him/her)</td>
<td>Software Designer s(Design Leaders), software developers, DBA and others that will write certain parts and contribute to the document.</td>
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Architectural reviews during RUP or similar steering and development processes

RUP

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- Contextual Architecture Review

- Business Architecture Review
  - Process model
  - Information model
  - Requirements

- Solution Architecture Review
  - If changes in context:
    1) Contextual Architecture Review

- Software Architecture Review
  - If changes in the underlying architecture(s):
    1.1) Solution Architecture Review
    1.2) Business Architecture Review
    2) Contextual Architecture

- Architecture Deliverables Acceptance Review

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Advantage of the GAME: Jump-starters
From Real-life implementations & experiences ➔ Success enablers

Strategies
Reports
Point of Views
Applicable Scenarios
Best practices
Guidelines
Solution Reference Architecture
Meta Models
Building Block Definitions
Data Models
Design standards
Code standards
Samples
And more

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Q&A

Do you want to deliver? Better?

Do you want to develop things? Faster, cheaper?

Do you want to improve yourself? Are you sure?

Get yourself some advantages through people who know how to play the GAME!