



# Enterprise Architecture(EA)

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# Enterprise architecture - Overview

- Essentially the conceptual blueprint that defines the structure and operation of organizations
- Its intent is to determine how an organization can effectively achieve its current and future objectives
- Enterprise architecture involves the practice of analyzing, planning, designing and eventual implementing of analysis on an enterprise
- businesses going through digital transformation, since EA focuses on bringing both legacy applications and processes together in order to form a seamless environment



# Importance of EA

- Aids multiple departments in a business understand the broader business model and articulate challenges and business risks
- EA has an important role in unifying and coordinating departmental processes across an organization
- Being able to access and understand business capability should also help individuals identify gaps in their business, allowing them to make more informed decisions



# Purpose of EA

- to create a map or blueprint of the structure and operations of an organization
- Such a blueprint should include information such as a map of IT assets and business processes
- Further goals such as promoting team alignment and standardization can be achieved through EA with the implementation of protocols that unify environments across teams and organizations
- Guidance is normally based on an organization's business requirements



# EA process

- Four key components
  - Business perspective
  - application perspective
  - information perspective
  - technology perspective
- Business perspective- defines the processes and standards by which the business operates on a day-to-day basis
- Application perspective- defines the interactions among the processes and standards used by the organization
- Information perspective- defines and classifies the raw data (such as document files, databases, images, presentations and spreadsheets)
- Technology perspective- defines the hardware, operating systems, programming, and networking tools used by the organization



# Models and methodologies of EA

- Many frameworks of EA exist, each catering to the unique needs to various businesses
- Some key frameworks include
  - The Zachman Framework for Enterprise Architecture --
    - covers six architectural points + six primary stakeholders that aid in defining + standardizing IT architecture components
  - Unified Architecture Framework (UAF) --
    - a complex but flexible enterprise architecture framework suitable for military + government software development as well as use in commercial businesses
    - implemented as a UML profile
  - Agile enterprise architecture --
    - focuses an organization around a flexible, extended collection of structures + processes that can grow
    - can become an important part to agile software delivery
  - Federal Enterprise Architecture Framework (FEAF) –
    - a reference model introduced in 1996 for IT effectiveness
    - designed for the U.S. government, but can be used in private companies as well



# Benefits of EA

- Improved decision-making
- Improved adaptability to changing demands or market conditions
- Elimination of inefficient and redundant processes
- Optimization of the use of organizational assets
- Minimization of employee turnover
- Support organization changes for redesigns and reorganization
- Makes it easier to evaluate architecture against long-term goals
- Can give views of IT architectures to those outside of IT
- Can help with the unification of processes in IT
- Can help simplify finance teams
- Facilitates collaboration with project management



# Overview of TOGAF

- The Open Group Architecture Framework (TOGAF) is an enterprise architecture methodology that offers a high-level framework for enterprise software development
- TOGAF helps organize the development process through a systematic approach aimed at reducing errors, maintaining timelines, staying on budget, and aligning IT with business units to produce quality results
- by 2016, 80% of Global 50 companies and 60% of Fortune 500 companies used the TOGAF framework
- free for organizations to use internally, but not for commercial purposes
- tools, software or training programs certified by The Open Group available to businesses
- currently eight certified TOGAF tools and 71 accredited courses offered from 70 organizations





# Aims of TOGAF

- Ensure everyone speaks the same language
- Avoid lock-in to proprietary solutions by standardizing on open methods for enterprise architecture
- Save time and money, and utilize resources more effectively
- Achieve demonstrable ROI
- Provide a holistic view of an organizational landscape
- Act as a modular, scalable framework that enables organizational transformation
- Enable organizations of all sizes across all industries to work off the same standard for enterprise architecture



# The TOGAF framework

- helps businesses align IT goals with overall business goals, while helping to organize cross-departmental IT efforts
- helps businesses define and organize requirements before a project starts, keeping the process moving quickly with few errors
- Substantial focus on organizations using the agile methodology, making it easier to apply the framework to an organization's specific needs
- framework is broken into two main groups, which include the TOGAF fundamental content and extended guidance
  - fundamental content includes all the essentials and best practices of TOGAF that create the foundation for the framework
  - extended guidance portion of TOGAF includes guidance for specific topics such as agile methods, business architecture, data and information architecture, and security architecture



# Benefits of TOGAF

- helps organizations implement software technology in a structured and organized way, with a focus on governance and meeting business objectives
- TOGAF helps address any issues around getting key stakeholders on the same page with regard to multi-departmental software development
- helps create a systematic approach to streamline enterprise architecture and the development process so that it can be replicated, with as few errors or problems as possible as each phase of development changes hands, allowing greater clarity for all parties involved