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Secure Architecture

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Agenda:

- Enterprise Architecture
- 5 Steps of Scalable & Secure Enterprise Architecture
- Case Study (Lesson Learned)
- Case Study (Best Practice)

Enterprise Architecture

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Enterprise architecture is like building a house

- Start with your dream!
- Resources
- Regulations (Including safety & security)
- Boundaries
- Scalability considerations

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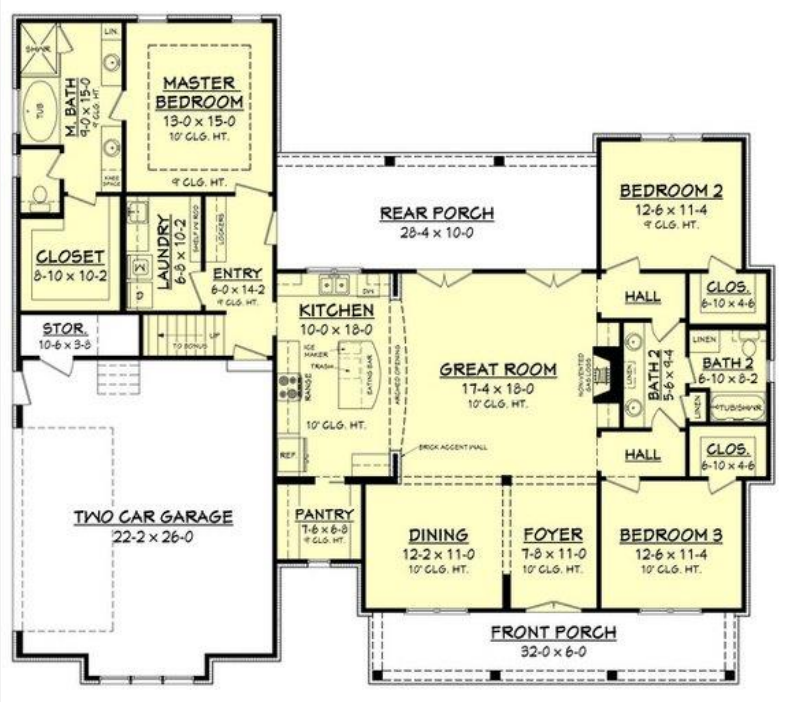
Further considerations

- Start with your land and applicable laws and regulations in the community
- Design the desire architecture and have building drawing
- Decide the electricity spots, kitchen form, swage, water, etc
- Pay attention to compliance all the way
- Start with interior prior moving in
- Ensure insurance & security
- Get orientation from the developer upon hand over



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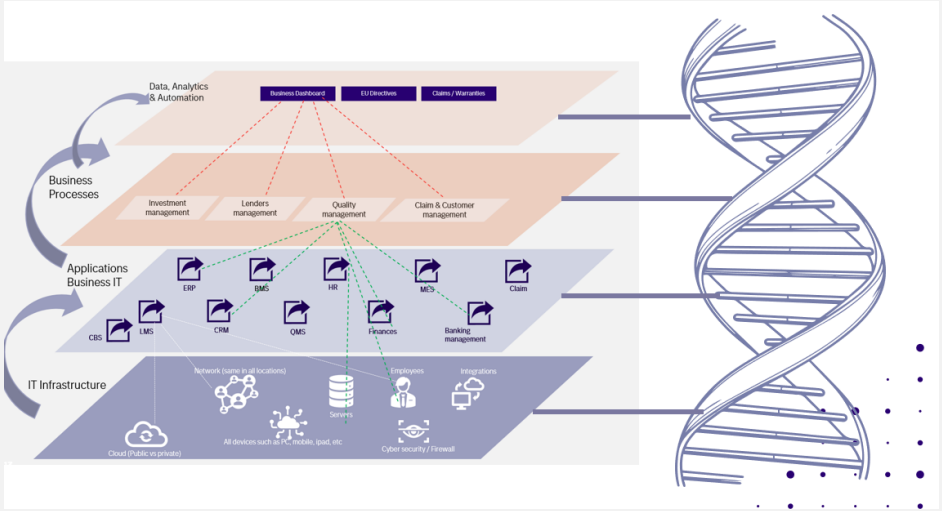
What is meant by enterprise architecture?

An enterprise architecture (EA) is a conceptual blueprint that defines the structure and operation of organizations. The intent of enterprise architecture is delivering benefits around:

- Optimized efficiency & Security
- Closer alignment between current business and IT needs
- Greater innovation and the enablement of new business models through future-proofed architectures



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5 Steps of Scalable & Secure Enterprise Architecture

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How to design an EA which is based on future risks, secured & scalable?

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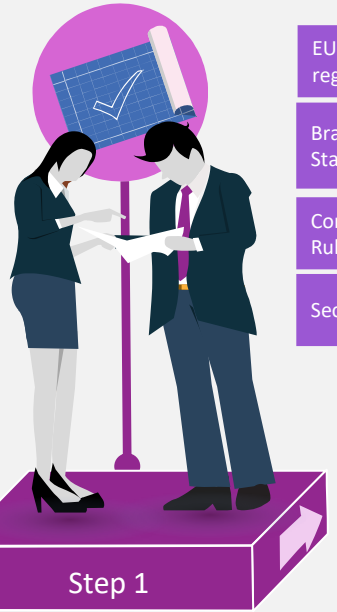
How to design an EA which is based on future risks, secured & scalable?

Compliance Assessment



Step 1

Scope & Risk management

Non-compliance Awareness & Training

Business continuity & Resilience

Stakeholder management

EU & Country regulations

Branch Norms & Standards

Company specific Rules

Security, Scalability

Scope

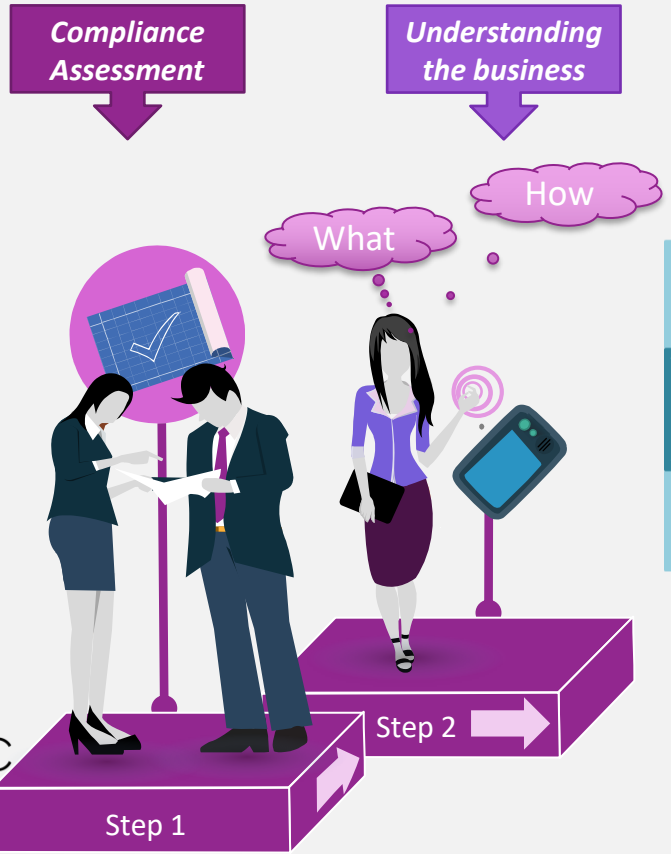
Way of working

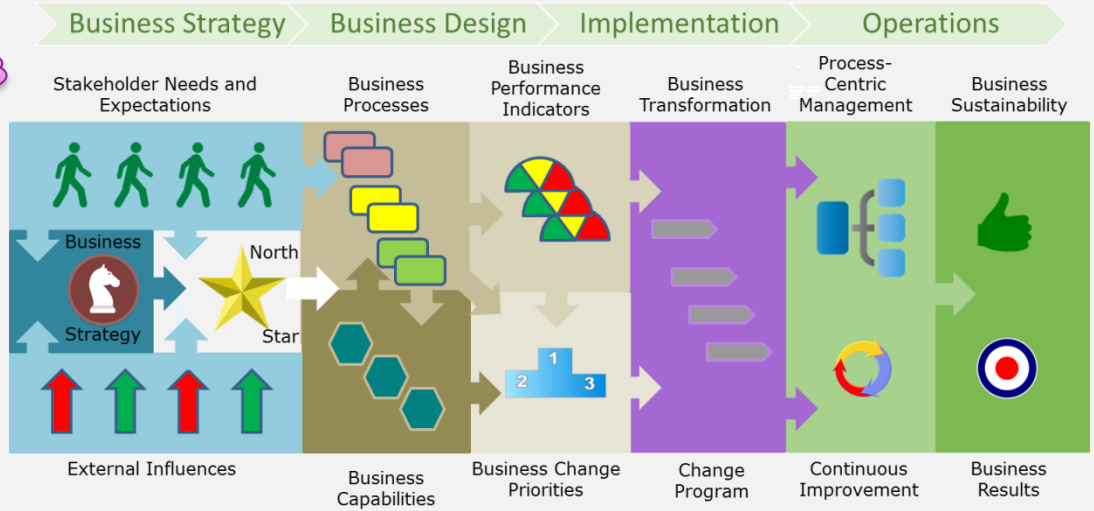
Flexibility & Resilience

Change management

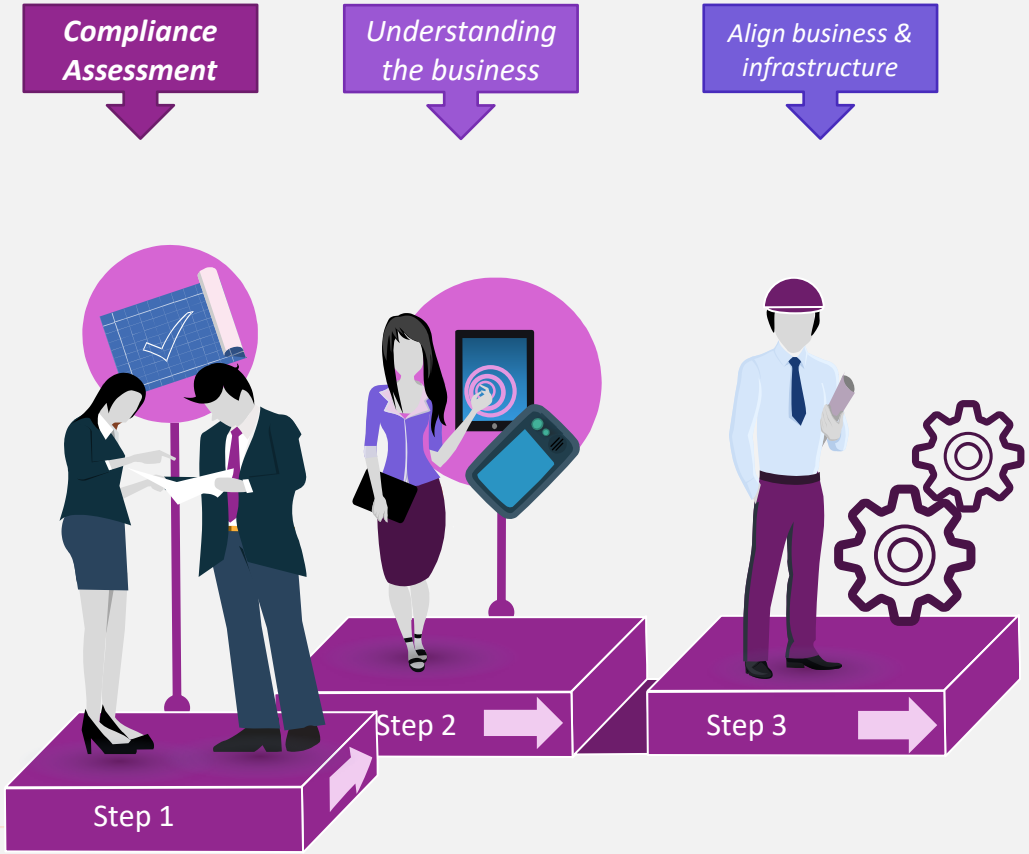
Management system & Base for EA

How to design an EA which is based on future risks, secured & scalable?





How to design an EA which is based on future risks, secured & scalable?



- Innovate & Suggest good solutions
- By agile technology ensure flexibility and support business
- IT shall enable the business & not hinder
- Manage & Mitigate IT and business risk
- Ensure technology investment support business goals

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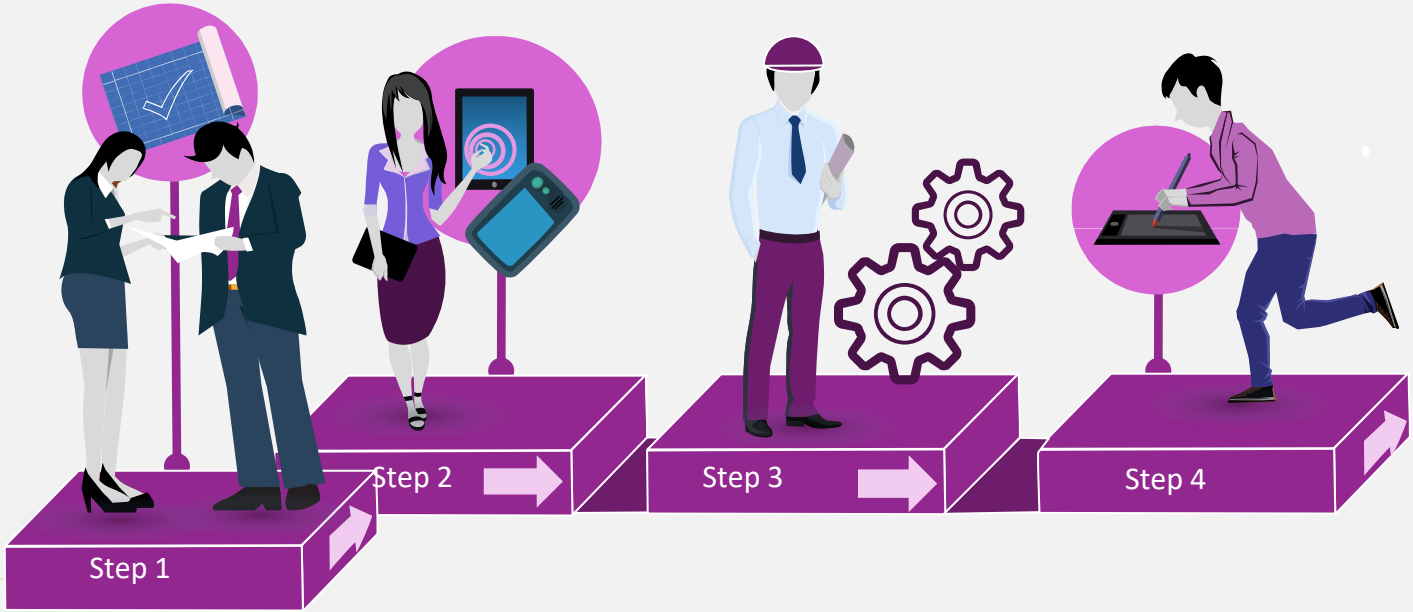
How to design an EA which is based on future risks, secured & scalable?

Compliance Assessment

Understanding the business

Align business & infrastructure

Test & training



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What kind of training?

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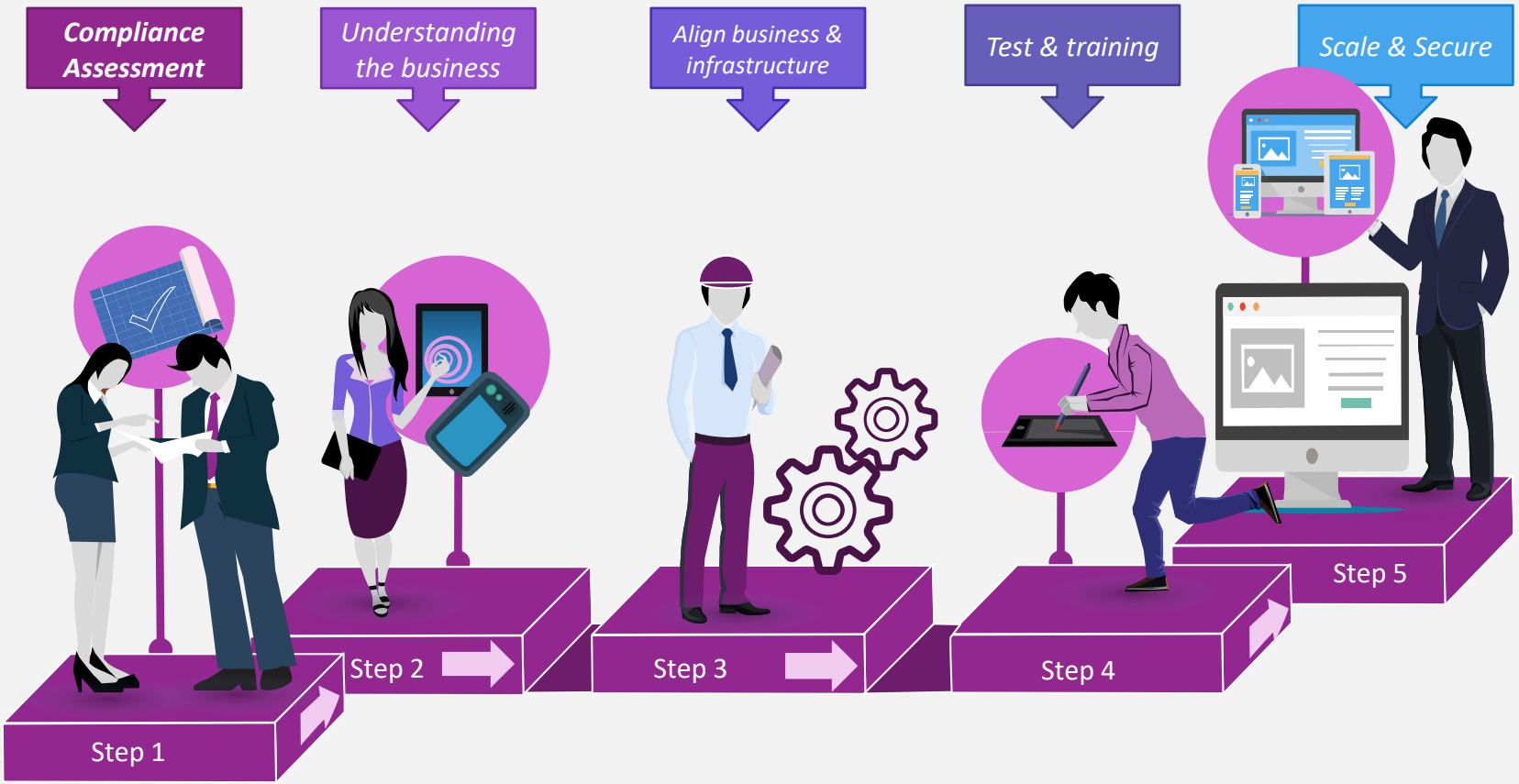
How to design an EA which is based on future risks, secured & scalable?



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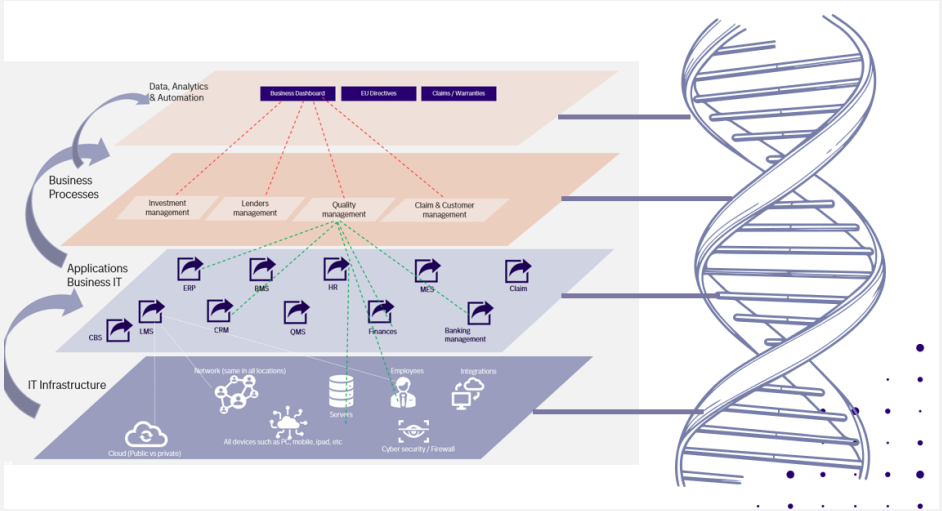
How to scale and keep secure?

- Each layer’s security impact other levels. (GRC)
- Ensure every new element fit for the purpose and is aligned with the rest layers



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Case Study (Best Practice)

Case Study Dell: (Publicly available by Oracle)

- Michael Dell founded Dell in 1984 in Austin, Texas, with $1,000 and a unique vision of how technology should be designed, manufactured and sold.
- More than 30 million customers later and with an annual IT budget of approximately $88 billion per year
- The company ships more than 10,000 systems every day to customers in 180 countries and employs over 140,000 people worldwide.
- Dell has grown into not only a multi-national hardware and infrastructure provider but also an IT services and solutions provider as well
- Dell ended up with unique manufacturing facilities, regional order management systems, and different operating processes and systems throughout the world.

Dell's Vice President of IT Strategy, Technology & Governance, is charged with mapping out a future direction for the IT giant, with a three-year roadmap driven by Dell's Enterprise Architecture (EA) team. At an enterprise level this roadmap includes ten major programs, each of which involves investments in the tens of millions of dollars—and, in some cases, hundreds of millions of dollars. Some examples of these programs include: Global Quote to Cash, Global Service Delivery, Solution Selling, Global Manufacturing Execution, and Recurring and Usage based transactions.

"It's important for enterprise architects to have a hand wherever the company invests in IT. Our organized effort around EA has accelerated time-to-value, made us more agile, and driven significant cost savings. As we free up dollars spent running the business we are able to reinvest in transforming the business."

Rhonda Gass, Vice President of IT Strategy, Technology & Governance, Dell

The problem

Dell began as domestic PC vendor to a rapid multi-country diverse products and acquired many small companies on its way. Dell wanted to implement secure common electronic payment system.

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A process for rationalization

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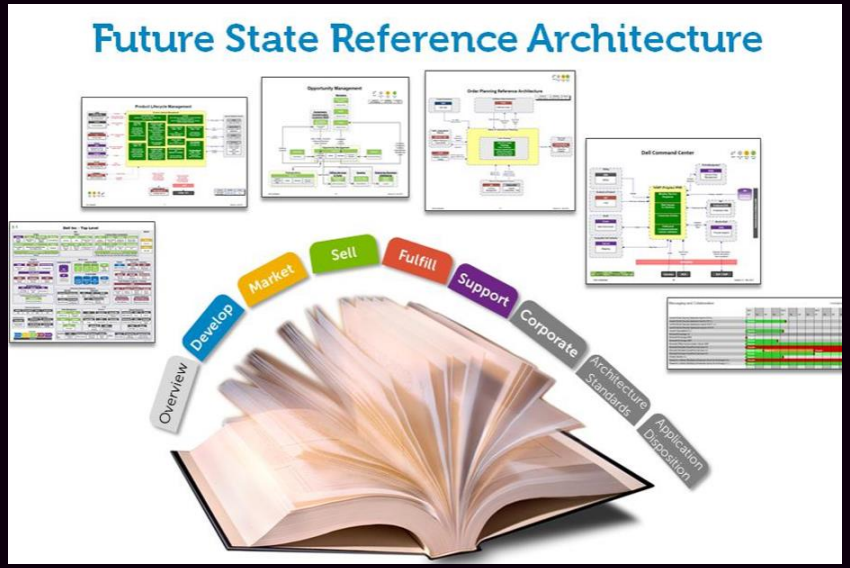
From Physical Process to logical cross domain capabilities

- Cross check capabilities of all applications and secure and rationalize the selection
- Think from end-user perspective & compliance



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- IT must lead the business in any type of large, transformative project. “The business doesn’t always have the correct discipline or an established program management office, like IT does,” Gass the VP explains.

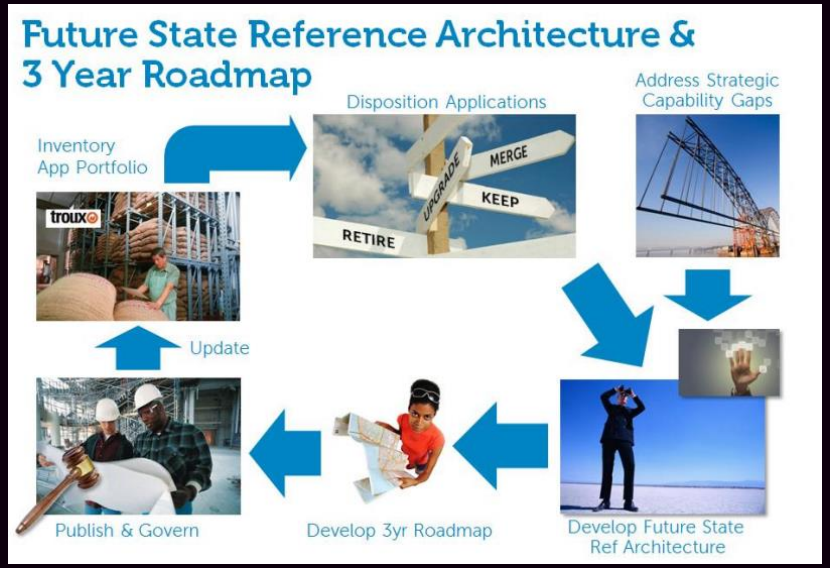
A Foundation for Execution

Establishing business architecture involves capturing various “views” of the enterprise such as the business strategy, business capabilities, business processes, knowledge, and organization. In most EA projects, this information is used throughout the architecture development process to:

- Identify business and IT “owners” to sponsor and participate in the architecture review and transformation process
- Prioritize the areas in which to focus rationalization efforts
- Capture business capabilities and business process insight
- Eliminate redundancies and gaps in the applications portfolio
- Align IT initiatives with business strategies and goals

Creating Business/IT Alignment

- The reference architectures include templates, guidelines and patterns that ensure consistency across projects, domains, and functions.
- Starting to get more practical by creating a program architecture document about top 25 business programs
- There is no process owner but capabilities' owner
- Enterprise architects are not typically asked to define or optimize business processes, but they do need to be equipped to understand those processes in relation to the organization's overall business strategy.



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Conclusion

Enterprise architecture is the organizing logic for business processes and IT infrastructure, providing a long-term secure view of a company's processes, systems and technologies!

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Case Study (Lesson Learned)

Case Study : Focusing on IT Infrastructure at the Expense of Cross-Functional Process Optimization

ABC Financial Corporation, a global financial services firm, embarked on a multi-million-dollar project to modernize its **IT infrastructure**, including migrating core systems to the cloud, upgrading data canters, and improving its global network. The primary goal was to improve **security**, **scalability**, and **operational efficiency**. However, the company failed to address a key opportunity: optimizing **cross-functional processes** and improving **application management** security across its business units.

Key challenges:

While ABC successfully enhanced data security (Partially) and system scalability to some extent. However, lack of focus on integrating business processes led to several problems:

- Redundant Applications: Different business units continued using multiple systems for similar tasks (e.g., CRM, risk management), leading to increased licensing costs.
- Siloed Customer Data: Customer information was fragmented across platforms, resulting in inconsistent data, which affected compliance and customer experience.
- Process Inefficiencies: Without standardizing processes like customer onboarding, transaction handling, and compliance tracking, workflows remained slow and inefficient.

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Missed Opportunity: A Center of Excellence (CoE)

ABC’s IT-centric approach overlooked the potential of a Center of Excellence (CoE) that could:

- Standardize Processes: Streamlining workflows across departments would have eliminated inefficiencies and enhanced compliance with regulations.
- Application Rationalization: A CoE could have audited the existing application landscape, reducing redundancy and unlocking hidden capabilities of existing systems, saving millions.
- Enhanced Security and Scalability: Standardized, cross-functional systems would better integrate with the new IT infrastructure, leveraging cloud scalability while improving security governance.
- Improved Data Management: By centralizing customer data, the CoE would ensure better data governance, helping the company meet stringent compliance requirements.

Shortened Outcome

Despite IT modernization improvements in **security (Partially)** and **scalability (Partially)**, ABC's lack of a CoE resulted in **higher IT costs**, fragmented processes, and slower decision-making. The company missed opportunities to integrate applications, improve efficiency, and reduce costs by focusing too much on infrastructure and ignoring broader business process optimization.

Key Lessons:

1. Balancing Infrastructure and Process Optimization: IT modernization must go hand-in-hand with cross-functional integration to fully unlock value.
2. Security and Compliance: Standardizing processes not only drives efficiency but also strengthens security and ensures better regulatory compliance.
3. Leverage Existing Capabilities: A CoE can ensure existing applications are optimized for performance, reducing unnecessary costs and improving overall business scalability.

EA Tools

Figure 1: Magic Quadrant for Enterprise Architecture Tools

Source: Gartner (November 2023)

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Thank you!

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