



Let's Talk Digital Series #6

Enterprise Architecture and Your Digital Transformation Journey

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Digital

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Journey

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Probably one of the hottest industry buzz words over the past 5 years has been “Digital Transformation”, and for good reason, technologies such as a relatively stable and reliable internet, mobile computing devices and enhancements in machine learning have meant that new business models have become possible, sometimes, at the expense of more traditional business models.

Companies such as Grab, Airbnb, Alibaba have shown how these new technologies can disrupt long established business models in various industries.

The financial Industry has not been spared either. With the emergence of eWallet and remittance services, virtual banks and other online financial services providers, banks are finding that their revenue streams are being eroded by some of these niche service providers who are more flexible, asset light and cater to a niche clientele.

Fundamentally, digital transformation happens when an organisation figures out how to leverage technology in order to drive business goals; whether this means developing new business models, digitalisation of existing processes, transforming customer experiences or developing insights through data.

This requires tight integration between the business and IT organisations within a company. The challenge is that this is not how companies normally operate.

Traditionally, IT was seen primarily as a tool to improve business efficiencies. IT systems basically automated the work that could have already been done by a human, did it faster, and with fewer errors. Thus, the operating model in most organisations was that business would develop requirements and this was then passed to IT to execute.

Business and IT essentially worked in silos, by and large this model worked as businesses knew what they wanted, and IT would build a system to do it. Thus, businesses would develop the requirements, get IT to fulfil them and when the project was completed, pass “the system” to businesses as seen in Figure 1.

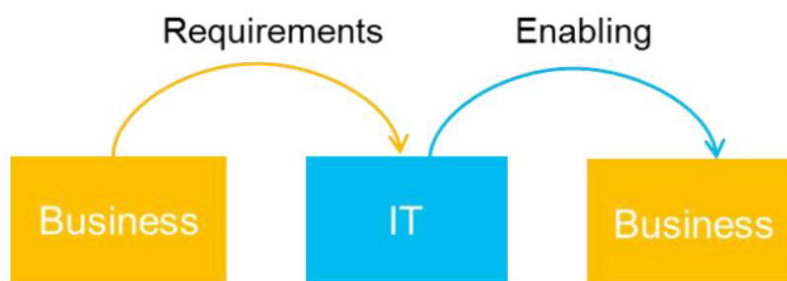


Figure 1: Traditional Business and IT working model

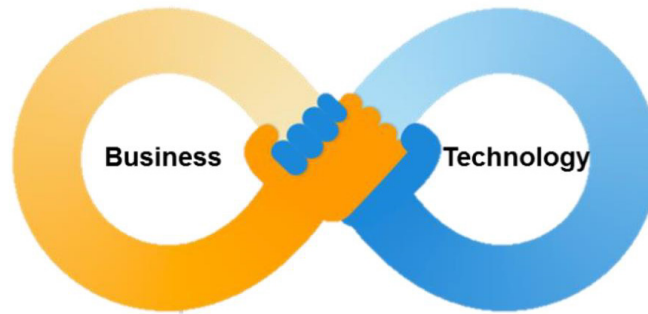


Figure 2: Value Co-creation between business and IT

The table below illustrates some of the shifts that are going to be required in how we think about business and IT functions within an organisation.

Traditional	Digital Age
Business Decides, IT creates	Value Co-creation between business and IT
Do it right the first time	Produce a minimally viable product and evolve
Inside out (the inner strengths and capabilities of the organisation will make the organisation prevail)	Outside in (customer value creation, customer orientation and customer experiences are the keys to success)
Command and Control	Sense and Respond
IT is an Operational Necessity	IT as a Strategic Enabler
Segregation of Functions between business and IT	Integration of Skills across the enterprise

Table 1: Traditional versus Digital Age IT

Enterprise Architecture

The reality today is that business transformation should not be seen as an activity that is undertaken once every 5 to 10 years, rather it is a continual process of evolving the business to ensure its relevance in the environment. The need for Enterprise architecture is to ensure that this continuous process is part of an organisation's culture and way of work.

Enterprise Architecture is about strategy realisation. It bridges the business goals and strategy to the execution activities by identifying the gaps between the target and current state of an enterprise and the recommended actions required to close those gaps across four domains; Business, Data, Applications and Technology.

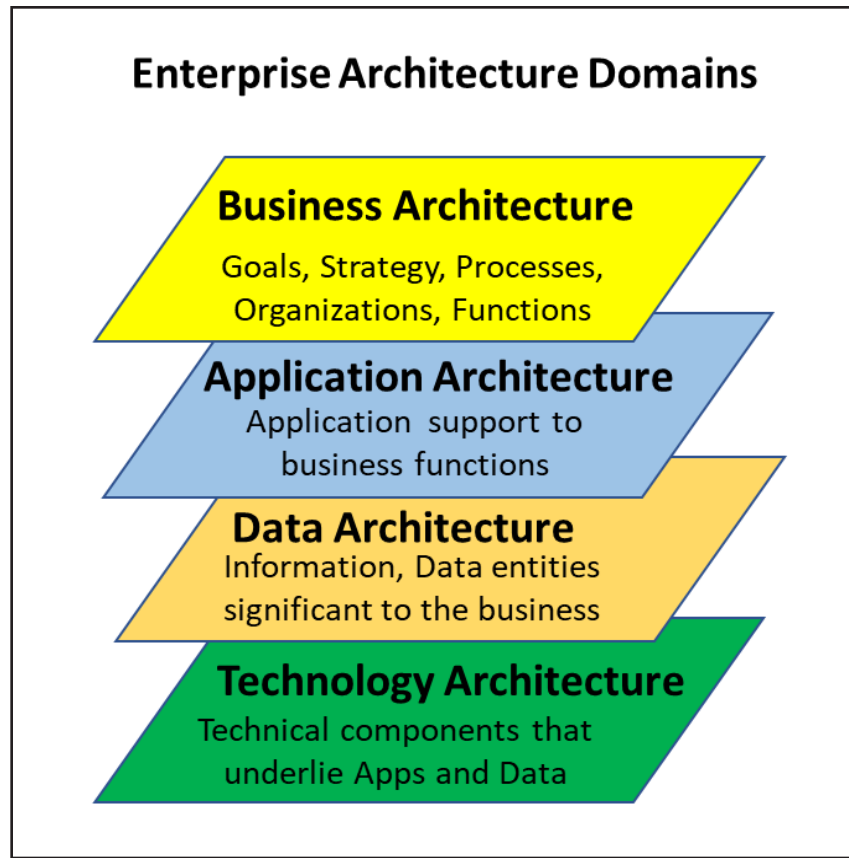


Figure 3: Enterprise Architecture Domains

Enterprise Architecture is guided by a business' goals and strategy. It defines how transformations in the business data, applications and technology domains should happen and the relationships between the domains. This is especially relevant today as enterprises are trying to decide how new technologies such as machine learning, blockchain and other emerging technologies can be leveraged in their digital transformation journey.

Some of the benefits of Enterprise Architecture include: -

- Allowing more open collaboration between IT and business units
- Giving businesses the ability to prioritise investments
- Making it easier to evaluate existing architecture against long-term goals
- Establishing processes to evaluate and procure technology
- Giving comprehensive view of IT architecture to all business units outside of IT
- Providing a benchmarking framework to compare results against other organisations or standards

Popular EA Frameworks

As with other disciplines such as project management, process improvement and IT Operations, over the years, several frameworks have emerged for Enterprise Architecture. According to COMPTIA, the following are the leading Enterprise Architecture Frameworks.

Source: <https://www.comptia.org/content/research/planning-a-modern-it-architecture>

TOGAF: The Open Group Architecture Framework (TOGAF) is a framework for enterprise architecture that provides an approach for designing, planning, implementing, and governing an enterprise information technology architecture. The Open Group claims that TOGAF is employed by 80% of Global 50 companies and 60% of Fortune 500 companies.

Source: https://en.wikipedia.org/wiki/The_Open_Group_Architecture_Framework

Zachman: The Zachman Framework for Enterprise Architecture, named after one of its founders, John Zachman is best described as a taxonomy or a collection of views of an Enterprise Architecture across six architectural focal points and six primary stakeholders. The framework does not do much from the perspective of methodology or process on how to create and maintain EA.

FEAF: In 1996, The National Association of State Chief Information Officers (NASCIO) created a framework which eventually became the Federal Enterprise Architecture Framework (FEAF) under the Office of Management and Budget (OMB) in response to the Clinger Cohen Act. FEAF is focused on the U.S. government, but the taxonomy and process can also be applied to private companies.

Gartner: After acquiring the Meta Group in 2005, Gartner established best practices in enterprise architecture and applied them to the company's consulting practices. While not strictly providing a methodology or a taxonomy, it focuses on bringing the business owners, information specialists, technology implementers together and unifying them behind a common vision.

Source: <http://www3.cis.gsu.edu/dtruex/courses/CIS8090/2013Articles/A%20Comparison%20of%20the%20Top%20Four%20Enterprise-Architecture%20Methodologies.html>

Conclusion

To summarise, in order to effectively embrace the digital transformation,

- i) The siloed working mentality (business decides, IT builds) between business and IT needs to be replaced with a more cooperative approach (we co-create)
- ii) IT needs to position itself as a strategic capability rather than a tactical enabler of business demands.

Recognising the importance of the integration of skills and capabilities within an Organisation, Bank Negara Malaysia has provided guidance that “A financial institution should establish an enterprise architecture framework (EAF) that provides a holistic view of technology throughout the financial institution” in their Risk Management in IT policy document (July 2019).



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This article is part of the Digital Banking Learning Series, 'Let's Talk Digital', an initiative by the ABS Center for Digital Banking. It is written by industry practitioners and are aimed at educating the general public on the intricacies of digital applications in banking and other related industries, including the latest insights and trends of Digital Banking.

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