

Business

The applications we develop support business models. When an application is part of a business transformation or digital transformation initiative it is important to have a clear understanding of the businesses strategic direction. Some common artifacts to communicate this are¹:

1. Business Glossary
2. Organizational Map
3. Business Capability Model (BCM) : identify and score capabilities against good system design quality attributes {performance, scalability, stability, monitorability, extensibility, security}
4. Process Maps and Re-engineer Processes : Consider value streams. Model process using BPMN.
5. Define the Metrics : Identify what metrics can help assessment and reflection on desired business outcomes. These metrics must be possible to measure and communicate.
6. Understand the Governance Model: Governance is a meta-process. In your value stream, ask how decisions are made, who the authorities are, what roles they have, and what relevant review boards are. Operational scorecards.
7. Business Architecture in Applications : What business strategy does this application map to? Why does this project/application matter? What new capabilities are you creating? What major uses cases are performed? Who are the audiences?

Business Capability Model (BCM)

A common way for the business to communicate what the organization needs and does is through a business capability model (BCM)². There are many uses for a BCM. Product owners can use a BCM to drive convergence in technology and business processes to enterprise standards. Regular review of aligning the BCM with the department strategy and vision can allow enterprise architects and business architects to identify and prioritize the corresponding IT initiatives with business needs. Internal committees, working groups and forums can collaborate to identify reusable business process and push for adoption across the organization. Business capabilities, processes, information flows and value streams should be assessed routinely based on efficiency, priority, and complexity.

Our department has a draft Business Capabiltiy Map (BCM) describing the main capabilities required to fulfill our mandate. To help support the business our technology teams provide a broad range of IT capabilities. Our IT department supports many networks both nationally and internationally. Within the IT

¹Hewitt, Eben. *Semantic Software Design: A New Theory and Practical Guide for Modern Architects*, 2020. - ISBN 978-1-4920-4594-6

²Wikipedia - Business Capability Model

department, our software development team supports an extensive catalog of applications.

Process Maps, Information Flows and Value Streams

Information Flows³ is a business view of how information flows between business responsibility centres. *The main purpose of an information flow diagram is so that sources that send and receive information can be displayed neatly and analysed..*

Introduced in Lean (1950's) a value stream is a set of actions (workflow) to produce value⁴. Value Stream Mapping is visual tool introduced in Lean Management methodology to display the value stream with define icons to show delays and inventory stages. An example value stream might be recruitment "street to seat", "hire to retire" and "procure to pay".

A Process Map⁵ defines the standard business process, and who is responsible for the activity.

Business Governance

The health of our portfolio needs to improve as identified in our Corporate Risk Profile (CRP). Several leadership principles have been established over the years to provide guidance when addressing business needs. Key principles relating to governing and directing architecture and application design are:

1. **Rationalization:** With a large backlog of valuable business requests and opportunities application functionality must be constantly rationalized. During the software development phase, requirements must be rationalized against the original approved project scope and other compete business needs. The costs of increment application development, both in project costs and ongoing costs must be carefully understood. This is the process of rationalizing business needs and can include the senior management team when necessary. [*See Guidance - Rationalization for more information*]
2. **Executive Lead / Change Management:** Projects and programs need executive sponsors who are committed to the change management and rationalization required to allow IT to develop a product.
3. **Business Architecture and Artifacts:** The business plays a key role in shaping the application. Business architecture (capabilities, value streams, information flows, organization model) are essential for successful analysis of the business needs during application development. Significant architecture re-work and design waste result if these are unavailable. As our department adapts agile methodologies, incremental value in the project can be obtained

³Wikipedia - Information Flow Diagram

⁴Wikipedia - Value Streams

⁵Wikipeda - Business Process Maps

by the agile team including maturing business artefacts as part of the product backlog.

Business and Technology Environment

Our Information Technology (IT) operates in a complex and constrained environment due to the sensitivity of information managed. Awareness of the legislative and departmental directives and policies is crucial at the outset of application development. A common phrase used in DevOps is to *shift-left* quality attributes like security and privacy. Key non-functionality quality requirements derived from our environment should be considered at the outset (e.g., official languages act, accessibility act, information management). The non-functional requirements should be realistic and follow the SMART guidelines (Specific, Measurable, Achievable, Realistic, Time-Bound)⁶.

References

⁶Wikipedia (SMART) Requirements