**EA Principles**

Enterprise architecture principles are a set of guidelines to be applied to increase the consistency and quality of technology decision making.

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**Vision**

To transform ABC into an architecture-led organization.

**Mission**

To harness the power of architectural thinking in the creation of our products and capabilities to materially enhance the value we bring to our customers.

**Buy Vs Build**

**Statement**

Buy commodities, build for strategic differentiation and competitive advantage.

**Rationale**

* We can differentiate with our own solution but don't need to build everything.
* Industry common problems often have solutions in the market that can be cost effective to use.

**Implications**

* Consider
  + Differentiation: The features you're looking to build or acquire will help you stand out among your competitors. Nobody else is offering it, but your customer research has identified a need among your existing users.
  + Market maturity: Conversely, competitors are investing in a new feature set and thus, they've become table stakes. You need to build or buy these features to keep up.
  + Opportunity cost: Resources otherwise spent on solving core business problems could outweigh efforts to build this solution and be more impactful to the bottom line
* When buying, understand the product feature and limitations

**Common Use**

**Statement**

Develop solutions that can be applied across the enterprise, instead of those only provided narrowly to a particular team or organization.

**Rationale**

* Duplicating capability is expensive and proliferates conflicting data and data representations.
* Improves maintainability and drives operational consistency.

**Implications**

* Systems should be mapped to the Business/Technical Capabilities.
* Build a catalog of assets
* Teams have to
  + Proposed new components should be evaluated to ensure that it does not duplicate existing systems.
  + Scope of potential reuse should be established before building any component and be built accordingly.
  + Effort should be put upfront to ensure that it does not add complexity to reuse
  + Build Common Capabilities that can serve the entire enterprise for enterprise-wide use.
  + Strive to conform to enterprise data definition standards (data dictionary).
  + Conform to approved Integration pattern to consume services across organizational boundaries.
  + Customer-centric solutions helps reuse between Card and Bank line-of-business.

**Manage Technology Diversity**

**Statement**

Optimize the number of redundant technologies to reduce the non-trivial cost of maintaining expertise and operational support.

**Rationale**

* There is a real, non-trivial cost of infrastructure required to support alternative technologies for processing environments and integrations.

**Implications**

* Although the development teams have the autonomy to choose their own technologies, this principle states that you will try to keep the multiple technologies that provide the same capability to a minimum.
* Products must focus on providing business and technical capabilities, and not aligned directly to a specific technology or vendor offering.
* Procedures for augmenting the acceptable technology set to meet evolving requirements and industry trends will have to be developed and put in place.
* Ties with the Decommissioning principle to retire old technologies as new ones are added to the blueprint.
* The technology baseline is not being frozen.

**Compliance as Code**

(Regulatory/Legal, Operational Risk, & Customer commitments)

**Statement**

Document and integrate required compliance controls into the software delivery pipeline

**Rationale**

* Designing for compliance in technology practices, supports seamless adherence to laws, regulations, industry and company standards.
* It facilitates early detections of errors, minimizes productivity disruptions, thus reduces costs and risk.

**Implications**

* Education and access to compliance rules
* Be mindful of regulatory, industry, and, company standards and policies when considering technology stack, and implementing and operating compliant designs and solutions.
* Automate compliance practices wherever possible to add consistency, built-in compliance, reduce errors and subsequent costs and risks.
* Design should account for Process Observability.

**Secure By Design**

**Statement**

Incorporate security at every design and delivery phase to build products that are foundationally secure.

**Rationale**

* Attacks are eminent, care should be taken to minimize the impact
* Considering and building-in security features early, enables faster delivery of services, and reduces costs of remediation activities.
* Protecting customer assets builds customer trust in brand, enables DFS to be a leading financial services provider, and increases overall company value.

**Implications**

* Adopt Zero-Trust framework that requires all users, whether in or outside the organization's network, to be authenticated, authorized, and continuously validated for security configuration and posture before being granted or keeping access to applications and data.
* Design to work with fewest privileges
* Wherever possible, make security seamless, automate security testing, recovery and use standardized solutions and pipelines.

**Decommissioning Principle**

**Statement**

Decommission old system or technology when new is operational.

**Rationale**

* Facilitates transition and retooling of resources, such as, compute, people, operations, and, security.
* Applies well-defined standards to provide clarity, reduce confusion, and eliminate redundancy.
* Reduces technical debt, which increases innovation, capacity, and flexibility, promotes simplification, and reduces costs.

**Implications**

* As part of any new system deployment plan, there must be a roadmap item to retire the previous system.
* Old System remains active, though not used, until the new version is completely validated and successful, and, all data and processes are transitioned successfully to the new environment.
* Automate the decommissioning process where possible.
* Regularly survey products to identify discontinuity points, and capture and reclaim outliers.

**Managed Data**

**Statement**

Understand lineage and only consume authoritative, curated data from trusted sources to ensure high quality data, consistency and reduced replication.

**Rationale**

* The data landscape is getting more distributed and fragmented making it harder to trace the ownership, lineage and ensure the quality of data.
* It is inefficient to gather similar data from multiple places and resolve any potential conflicts.

**Implications**

* The source application for all types of data is known and documented.
* Source Applications make it easy for others to access data in decoupled and self-serviced manner.
* Applications should acquire data from the authoritative source (golden dataset).
* Replication of data is accepted when properly motivated.
* Replicas are never updated, unless a controlled synchronization mechanism is in place.
* Anytime a golden data set is blended with another data set to create a new golden data set, it should be stored separately from the original golden data set.