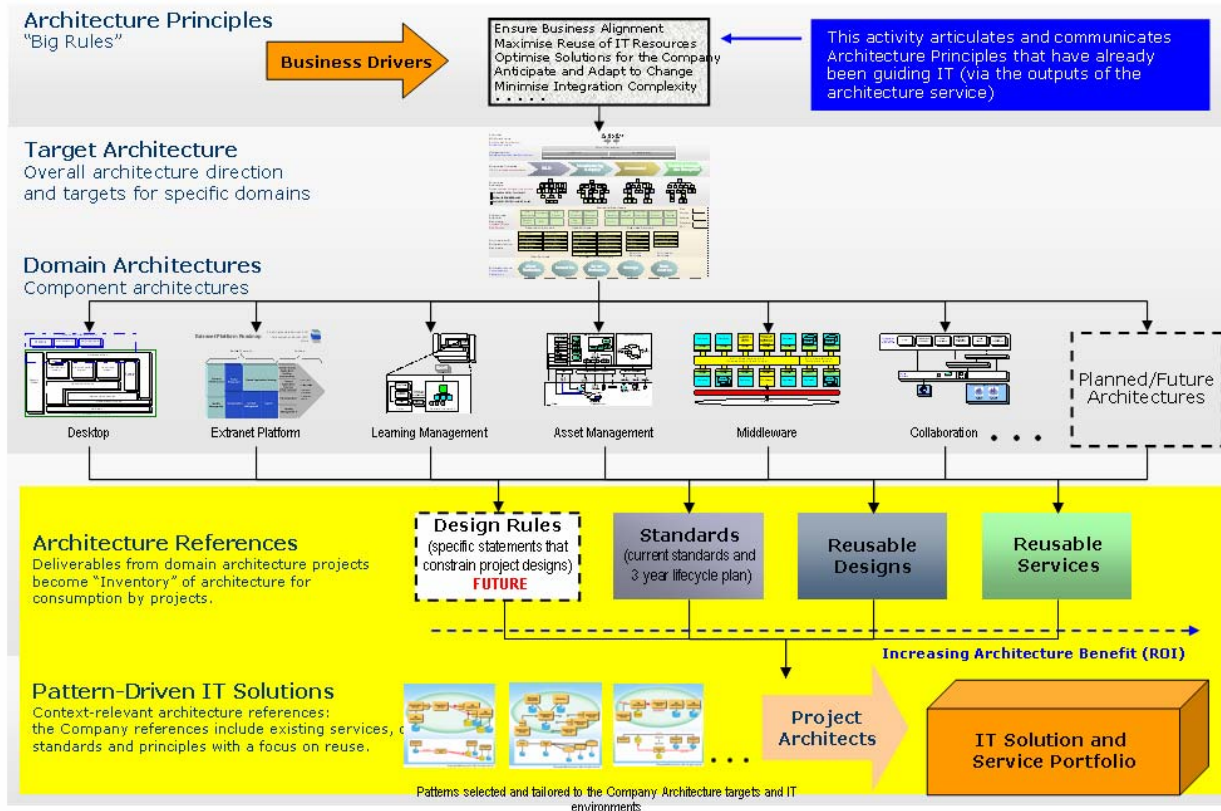


## Principles: “Big Rules” to Guide IT



2

## Principles: What, Why, How

### What are the principles?

- Underlying rules and guidance for design, deployment and use of IT
- Enduring and seldom amended
- Reflection of architectural intent

### Why have principles?

- Inform and support the way IT fulfils its mission
- Form the basis for making IT decisions
- Drive desired behaviour across IT

### How are principles used?

- Principles are interrelated and need to be applied as a set
- As functional requirements for architectures and standards
- To assess existing and planned systems for architectural compliance
- Provide guidance in moving from current-state to target-state

## Drivers and Principles

Drivers	IT Response	Principles
<b>Maximise Return on Investment</b>	IT decisions must maximise return on IT investment for the Company as a whole.	<u><b>Ensure Business Alignment</b></u> <u><b>Maximise Reuse of IT Resources</b></u> <u><b>Optimise Solutions for the Company</b></u>
<b>Enable Business Change</b>	IT decisions must enable the Company to dynamically adapt to business and technology change without incurring excessive costs.	<u><b>Anticipate and Adapt to Change</b></u> <u><b>Minimise Integration Complexity</b></u> <u><b>Design Solutions for Scalability</b></u>
<b>Enable Informed Business Decisions</b>	IT must ensure that the business can rely on the data stored in and processed by IT systems, and that business information is available when needed.	<u><b>Manage Data as a Business Asset</b></u> <u><b>Ensure Integrity and Quality of Data</b></u> <u><b>Build Appropriately Reliable Systems</b></u>
<b>Manage Exposure to Risk</b>	IT must identify risks, and implement controls optimised between risk impact, risk likelihood, business needs and costs.	<u><b>Design to Mitigate Risk</b></u>

4

### Principle: Alignment

#### Ensure Business Alignment

Establish clear visibility and linkage between IT solutions and services and the business processes they support. Eliminate duplication and gaps.

Actions:

- Ensure that business process/business system relationships are captured, managed and kept current
- Understand related process/systems interdependencies
- Identify the specific business processes (EPM) impacted by the business system
- Indicate solution benefits in KPI terms
- Design logical application boundaries in line with business processes
- Identify opportunities to drive out redundant business systems or system components that support the same set of business processes
- Identify where the business fails to utilise existing IT capabilities

## **Principle: Reuse**

### **Maximise Reuse of IT Resources**

Use existing IT resources (services, solutions, designs, standards) as a first choice. When shared IT resources are not available, design solutions for future reuse.

#### Actions:

- Shared Resource Providers:
  - Publicise and document IT resources available for reuse
  - Design to expose IT functionality as a service, effectively documenting guidance for access, use and service levels
- Solution Developers:
  - Ensure compliance with the Company Architecture and Standards
  - Reuse IT resources before buying or building solutions or solution components
  - When designing solutions (components), follow the provider guidance as above
  - In rare cases where IT resources cannot be reused, exceptions must be thoroughly justified, made visible and approved as per established governance

## **Principle: Optimisation**

### **Optimise Solutions for the Company**

Ensure that IT solutions, acquired or designed, are optimised for use throughout the the Company organisation.

#### Actions:

- Emphasize solutions that apply the Company-wide
- Assess proposed solution functionality to understand how it can be leveraged across other business groups and/or business partners
- Select new systems that can replace existing functionality in other areas of the Company
- Determine if an existing resource in the Company's IT inventory can be extended to provide the needed functionality
- Establish rules and decision criteria to determine whether unique departmental requirements can take precedence over the Company-wide considerations

## **Principle: Adaptability**

### **Anticipate and Adapt to Change**

Design IT solutions to adapt quickly and easily to business and technology change; both anticipated and unanticipated.

Actions:

- Anticipate potential changes beyond currently stated requirements
- Build IT solutions that are modular, and can be realigned quickly to new or changing business processes
- Select/build new systems that can be extended and/or altered in functionality through re-configuration
- Design components to accept change; design applications to reuse components
- Adopt open standards in preference to vendor-specific capabilities
- Balance short-term time/cost considerations with longer-term adaptability considerations
- Integrate systems into our IT environment, rather than modifying our IT environment to accommodate system-specific requirements
- Design for the next system refresh

## **Principle: Simplification**

### **Minimise Integration Complexity**

Use technologies and methods for IT solutions that minimise the complexity of integrating systems.

Actions:

- Use well-documented application integration methods that are based on open industry and/or existing the Company standards
- Use middleware and web services to reduce application integration complexity, using defined message interfaces and avoiding point-to-point solutions
- Leverage existing business-derived definitions (e.g. "product") for existing objects
- Minimise the number of points of potential failure relative to the number and complexity of the interfaces
- Define interfaces as part of business processes, using the Company standard message definitions and interfaces

## **Principle: Scalability**

### **Design Solutions for Scalability**

Enable IT solutions to grow or shrink quickly in response to business demands for increased or changing performance

Actions:

- Plan, design and construct for incremental growth and expansion of services without incurring additional costs of redevelopment
- Ensure that the IT system or service is able to expand quickly and economically in capacity, availability, reliability and responsiveness
- Define plans to support expected growth rates
- Ensure that future technological upgrade and change can be carried out with a minimum of risk and disruption to business operations
- Identify opportunities to achieve scalability via consolidation

**Principle: Data Management**

**Manage Data as a Business Asset**

Manage data and information (data plus context) as a business asset distinct from the business processes and application(s) that use it.

Actions:

- Capture the relationship between data entities and map them to business processes to understand the source and use of critical data across the Company
- Define and manage key business terms, along with the fundamental data representing those terms, consistently across the Company
- Manage data for re-use, ensuring it is available to all (subject to confidentiality/legal constraints)
- Focus data standardisation efforts where there is greatest value to the business (e.g. enabling decision making that improves business performance)
- Ensure that all business processes use standard definitions for data where these exist
- Migrate solutions to utilise standard definitions for data and eliminate redundant data sources

**Principle: Data Integrity**

**Ensure Integrity and Quality of Data**

Establish clear accountability for data quality to ensure that data integrity is not compromised.

Actions:

- Each data attribute should have a single data custodian role responsible for its accuracy.
- Ensure that processes to monitor data quality are in place, and that the data custodian/steward is notified of any infractions
- Safeguard data integrity and availability to ensure information is available to the business when needed
- Design systems to preserve the integrity and quality of data when systems are changed

## **Principle: Reliability**

### **Build Appropriately Reliable Systems**

Ensure that IT solutions provide trustworthy information and are available to the business when needed. Optimise reliability levels and costs

#### Actions:

- Clearly define the expected availability, serviceability and quality parameters for each IT Service or application, and ensure this is well understood and validated as acceptable by business process owners and system users
- Meet required reliability levels and exceed them where cost effective
- Favour applications that can be maintained while staying fully or partially online over those that must shut down for regular maintenance
- Favour applications with infrequent maintenance schedules over those needing regular, frequent support
- Ensure full disaster recovery capability, zero loss of committed transactions and easy understanding of transactions that are complete/committed at the point of failure

## **Principle: Mitigate Risk**

### **Design to Mitigate Risk**

Identify risks and design to mitigate them in accordance with security policies and controls.

#### Actions:

- Identify risks and quantify business impact and costs for different levels of mitigation
- Address security considerations early in the project development process
- Design risk mitigation to focus on high risk areas
- Design to protect the most critical business information in accordance with risk factors and business needs
- Design to favour risk avoidance over risk detection