How to achieve *Real* EA benefits using a *Virtual* EA team

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Objectives

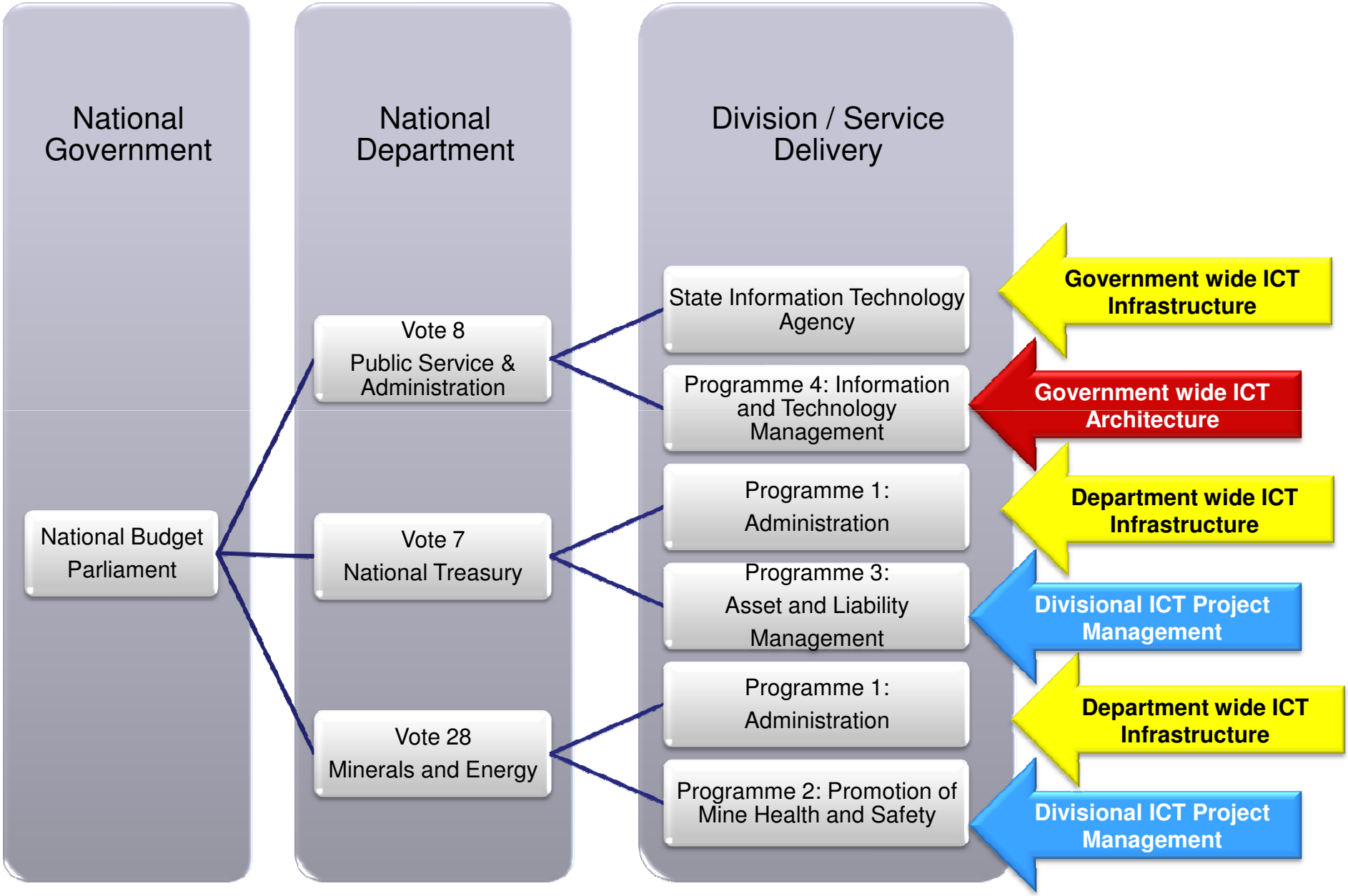
- Scoping of Enterprise Architecture initiative
- Overview of Role players and Organisational structure
- Aligning Organisational Structure with EA approach

- It is not always easy to justify the cost of having a dedicated EA practice within an organisation, as the benefits is sometimes difficult to justify to a management group that is focused on finding the next silver bullet.
- This presentation will walk through an "EA lite" approach,
  - based on TOGAF,
  - which will demonstrate how to assemble a virtual EA team from within the ICT organisation and
  - how to integrate and direct their activities
  - in such a manner that there is greater synergy and alignment with organisational objectives
  - when executing the business strategy.
- The approach will be explained based on a practical case study within the public sector.

Acknowledgements

- TOGAF 8.1.1
- COBIT 4.1
- Val IT
- IBM RUP
- King Report II
- Enterprise Architecture as Strategy

Simplified National Government Service Delivery Overview



IT Governance not optional anymore..

- **King II Recommendations on Information Systems**
  - Information technology has had a profound effect on processes within organisations. Accordingly, boards need to ensure that the **necessary skills** are in place to ensure that their responsibilities in respect of internal control systems are adequately discharged.
  - Potential benefits that result from using technology **to improve reporting and transparency** should be embraced.
  - **Auditing around the computer is no longer an option for the auditors**, the controls and processes incorporated in modern systems have to be evaluated and tested. In many instances, internal control systems are altered to bring them in line with best practices included with the basic functionality of many of these systems.
  - Employees across the organisation have been empowered with a greater degree of responsibility. **Some important controls occur, at transaction level rather than in a central accounting area.**
  - All of these changes have had fundamental implications for management in discharging their responsibility for maintaining a sound control environment**. Responsible management needs to demonstrate adequate knowledge of modern IT-enabled systems as well as an appreciation of the related changes in the organisation's internal control system.**

Legislation is also driving the need for better control over information systems..

- Public Finance Management Act
- SITA Act
- Financial Intelligence Centre Act
- Treasury Regulations
- Etc..

Using Enterprise Architecture to achieve compliance and alignment..

- “The Enterprise Architecture is the organising logic for business processes, information, applications and IT infrastructure reflecting the integration and standardisation requirements of the company's operating model. The Enterprise architecture provides a long-term view of a company's processes, systems, and technologies so that individual projects can build capabilities - not just fulfil immediate needs.“
  - Modified by Robert Weisman and based on ” EA as Strategy” Jeanne Ross, Peter Weill, David Robertson Harvard Business School Press

Responsibilities of Enterprise Architects

Understand and interpret requirements

- Probe for information, listen to information, influence people, facilitate consensus building, synthesise and translate ideas into actionable requirements, articulate those ideas to others.
- Identify use or purpose, constraints, risks, etc.
- Participate in the discovery and documentation of the customer's business scenarios that are driving the solution.
- The architect is responsible for requirements understanding and embodies that requirements understanding in the architecture specification.

Create a useful model

- Take the requirements and develop well-formulated models of the components of the solution, augmenting the models as necessary.
- Show multiple views through models to communicate the ideas effectively.
- Responsible for the overall architecture integrity and maintaining the vision of the offering from an architectural perspective.
- Maintain these models as a framework for understanding the domain(s) of development work, guiding what should be done within the organization, or outside the organization.

Validate, refine, and expand the model

- Verify assumptions, bring in subject matter experts, etc. in order to improve the model and to further define it, adding as necessary new ideas to make the result more flexible and more tightly linked to current and expected requirements.

Manage the architecture

- Continuously monitor the models and update them as necessary to show changes, additions, and alterations.
- Represent architecture and issues during development and decision points of the program or project implementation.
- Be an "agent of change“.

Core Skills for Enterprise Architects

Producing Designs

- Proficient in the techniques that go into producing designs of complex IT systems,
- including requirements discovery and analysis,
- formulation of solution context,
- identification of solution alternatives and their assessment, technology selection, and design configuration.

Technical Breadth & Depth

- Should possess an extensive technical breadth through experience in the IT industry.
- Must have, skills in at least one discipline that is considered to be at the level of a subject matter expert.

Method-Driven Approach

- Approach his or her job through the consistent use of recognized design methods such as the TOGAF Architecture Development Method (ADM).
- Should have working knowledge of more than one design method and be comfortable deploying parts of methods appropriate to the situation in which s/he is working.
- Proficiency in methodology use is in knowing what parts of methods to use in a given situation, and what methods not to use.

Project Scope Experience

- Vital to have experience with all aspects of a project from design through development, testing, implementation, and production.
- The impact of full project scope experience should lead the Enterprise Architect to make better design decisions, and better inform the trade-offs made in those decisions.

Leadership

- The Enterprise Architect must have strong communications and relationship skills.
- Ability to communicate complex technical information to all stakeholders of the project, including those who do not have a technical background.
- Good technical skill and the ability to lead with strong negotiation and problem-solving skills.

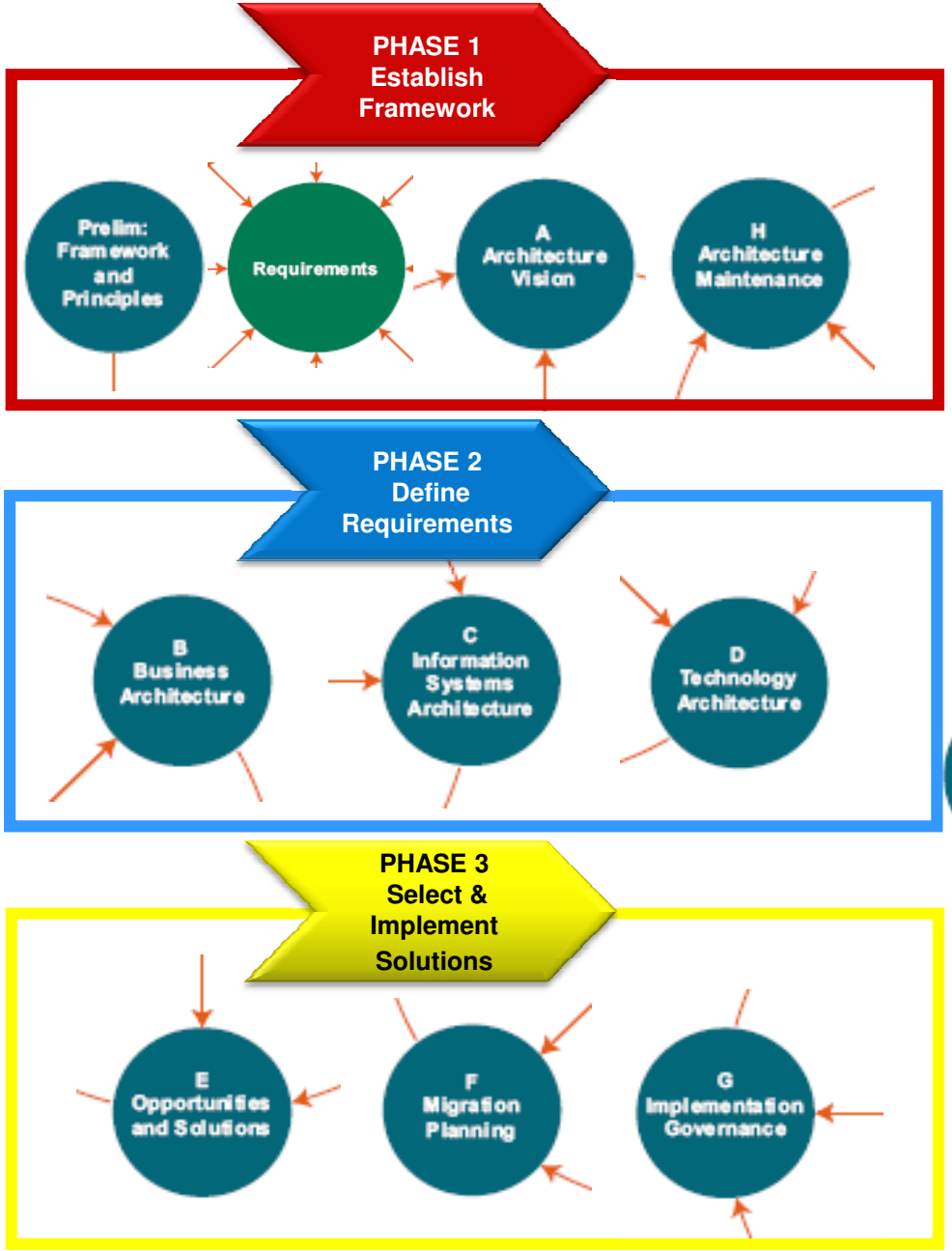
THE TOGAF Architecture Development Methodology (ADM)

Why use TOGAF?

- Reduced complexity in IT infrastructure
- Maximum return on investment in existing IT infrastructure
- The flexibility to make, buy, or out-source IT solutions
- Reduced risk overall in new investment, and the costs of IT ownership
- Faster, simpler, and cheaper procurement
- Buying decisions are simpler, because the information governing procurement is readily available in a coherent plan.
- The procurement process is faster - maximizing procurement speed and flexibility without sacrificing architectural coherence.

Source: Togaf 8.1

The TOGAF ADM can logically be divided into 3 phases



Overview of the objectives of the 3 phases

Phase 1: Establish Framework

- Review or establish a new IT engagement model that includes a system of governance mechanisms that will ensure that the business and IT projects achieve alignment and meet organisational objectives.

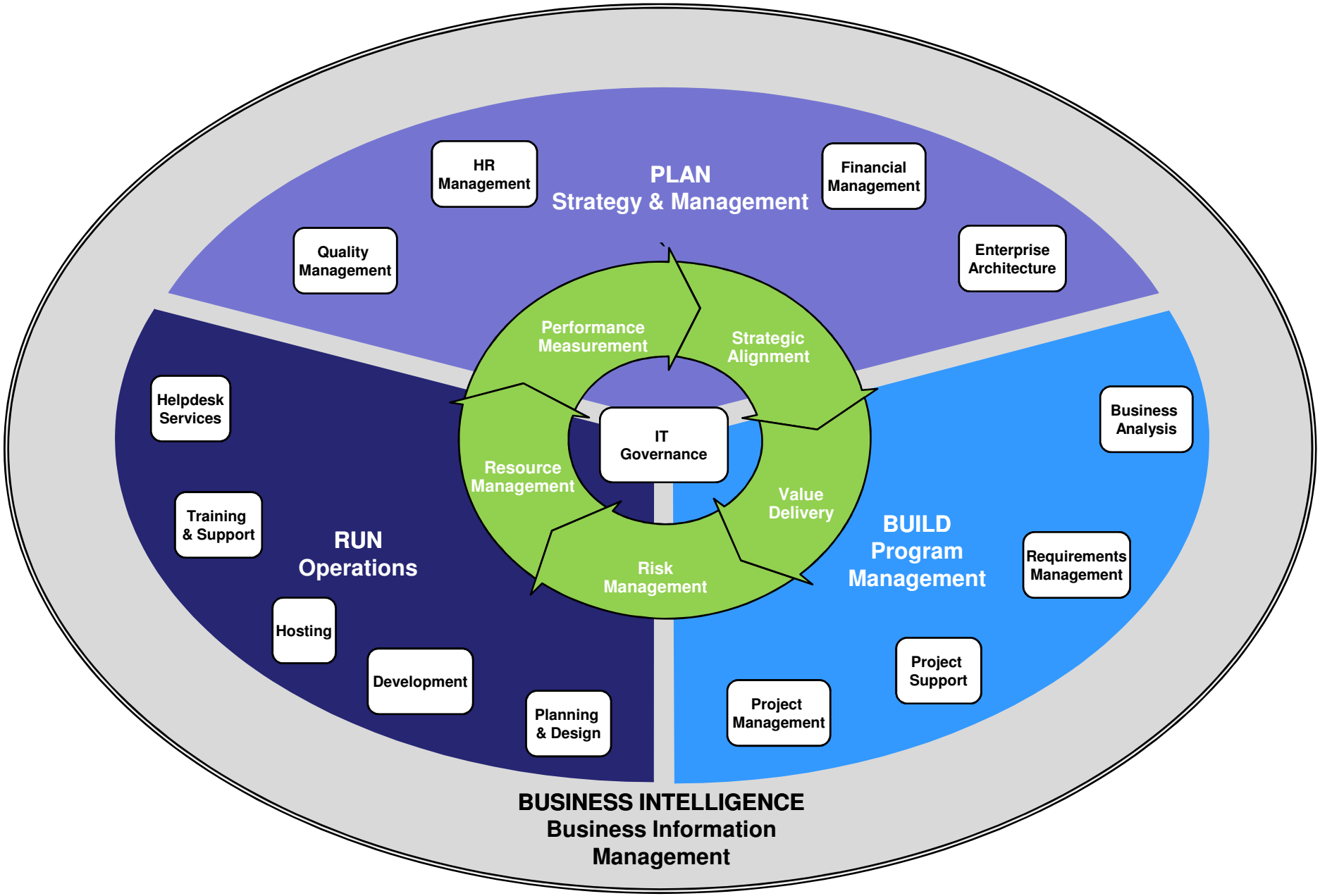
Phase 2: Define Requirements

- The Operating Model of an organisation defines the level of business process integration and standardisation appropriate for that particular organisation and commitment on how the business will operate. The purpose of this phase is to understand and model the Operating Model and baseline business, systems and technology architectures against long-term target organisational processes, systems and technologies that can be built through individual projects to realise the target Operating Model.

Phase 3: Select & Implement Solutions

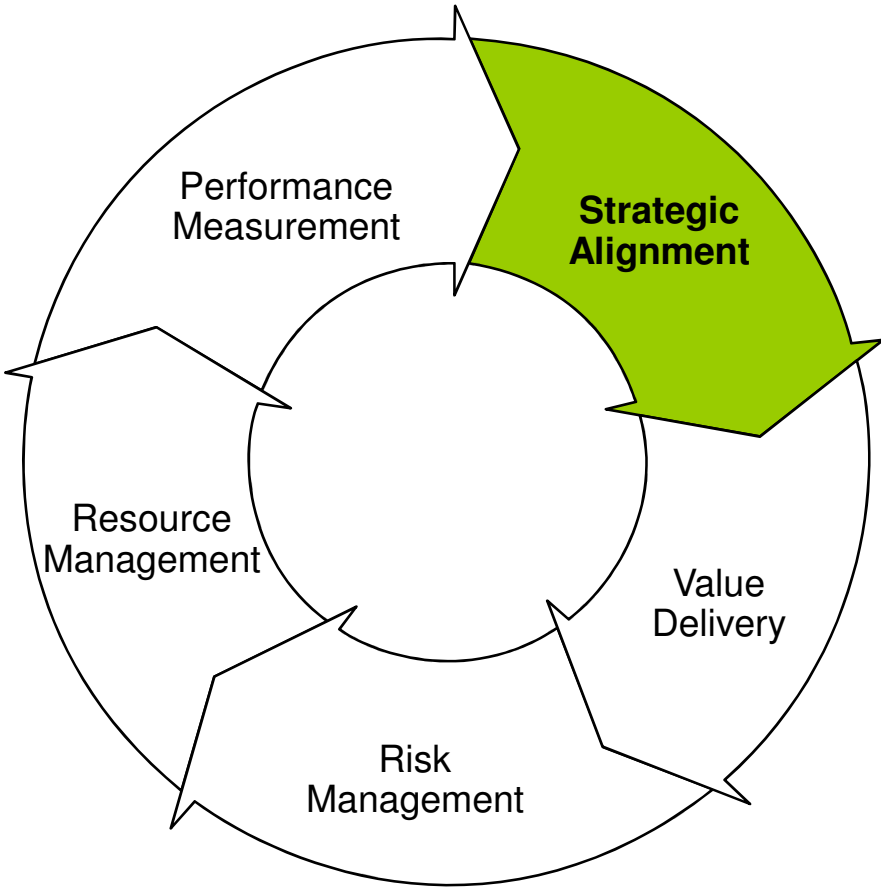
- implement project using organisational solution lifecycle methodology.. Prioritise and select appropriate building blocks required to realise the target architectures and Operating Model.

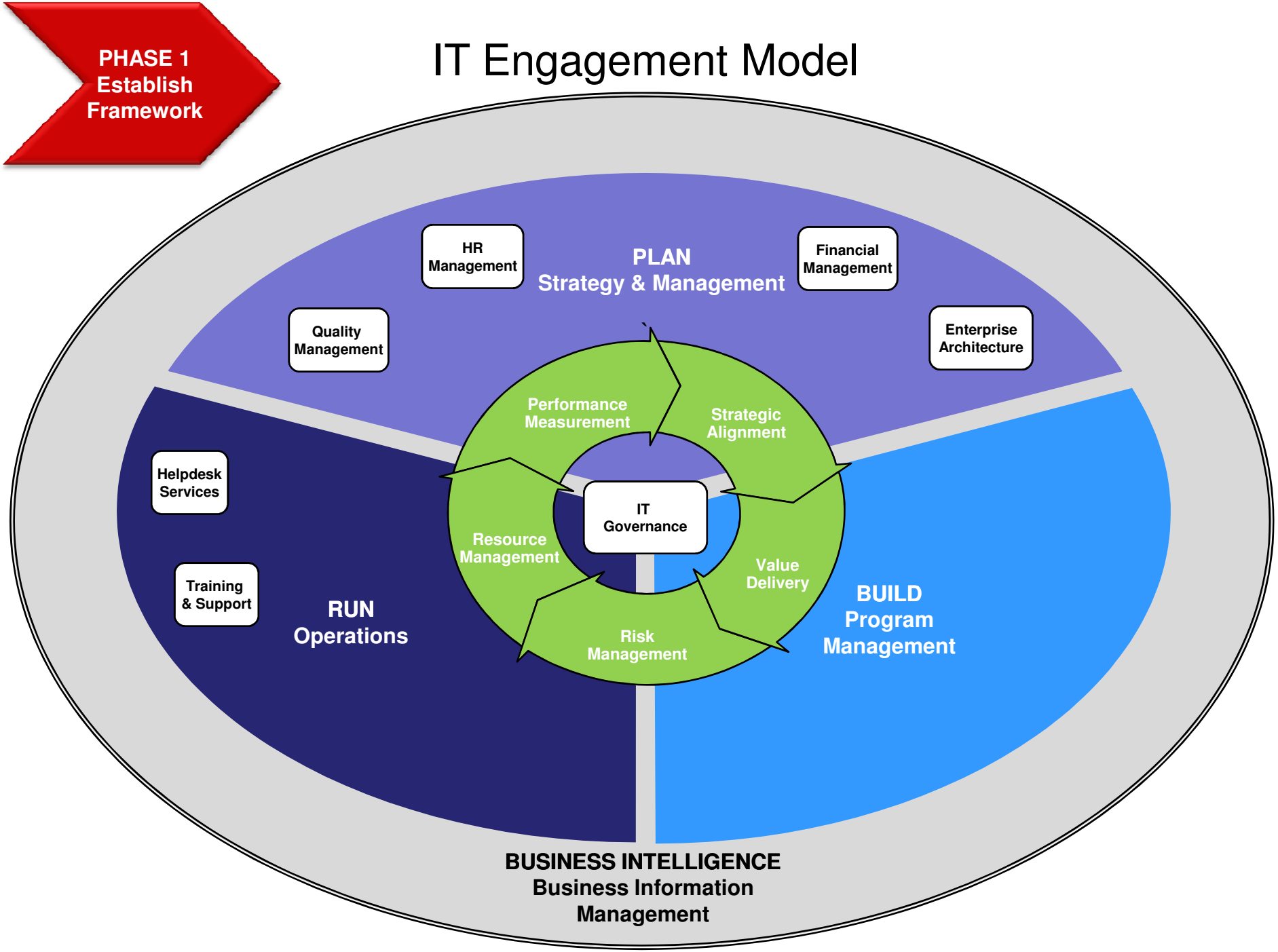
Logical overview of an ICT environment



IT Governance Life Cycle

- The **strategic alignment** processes include:
  - Business strategy planning involving IT
  - IT strategic planning
  - IT operational planning
  - Stakeholder analysis: services (current and future requirements), performance expectations and satisfaction, and risks
- The basic principles of **IT value** are **delivery** on time, within budget and with the benefits that were intended.
- **Risk management** should be a continuous process that starts with the identification of risks (impact on assets, threats and vulnerabilities). Once identified, risks must be mitigated by countermeasures (control).
- **Resource management** is about establishing and deploying the right IT capabilities for business needs. It primarily targets human resources, including knowledge, skills and infrastructure.
- **The performance measurement** phase includes audit and assessment activities and continuous performance measurement, and provides a link back to the alignment phase by providing evidence that the direction is being followed. This also creates the opportunity to take timely corrective measures, if needed.




PHASE 1
Establish
Framework
IT Engagement Model
HR
Management
PLAN
Strategy & Management
Financial
Management
Quality
Management
Enterprise
Architecture
Performance
Measurement
Strategic
Alignment
Helpdesk
Services
IT
Governance
Resource
Management
Value
Delivery
Training
& Support
RUN
Operations
Risk
Management
BUILD
Program
Management
BUSINESS INTELLIGENCE
Business Information
Management

Business Scorecard

Financial Perspective ▪ Improve corporate governance and transparency. ▪ Manage IT-related business risk. ▪ Provide a good return on investment of IT-enabled business investments.	**Customer Perspective** ▪ Achieve cost optimisation of service delivery. ▪ **Create agility in responding to changing business requirements.** ▪ **Establish service continuity and availability.** ▪ Improve customer orientation and service. ▪ Offer competitive products and services.
Internal Perspective ▪ Improve and maintain business process functionality. ▪ Improve and maintain operational and staff productivity. ▪ Lower process costs. ▪ Manage business change. ▪ Provide compliance with external laws, regulations and contracts. ▪ Provide compliance with internal policies.	**Learning and Growth Perspective** ▪ Acquire and maintain skilled and motivated people. ▪ Manage product and business innovation. ▪ Obtain reliable and useful information for strategic decision making.

IT Goals that support the selected Balanced Scorecard Goals

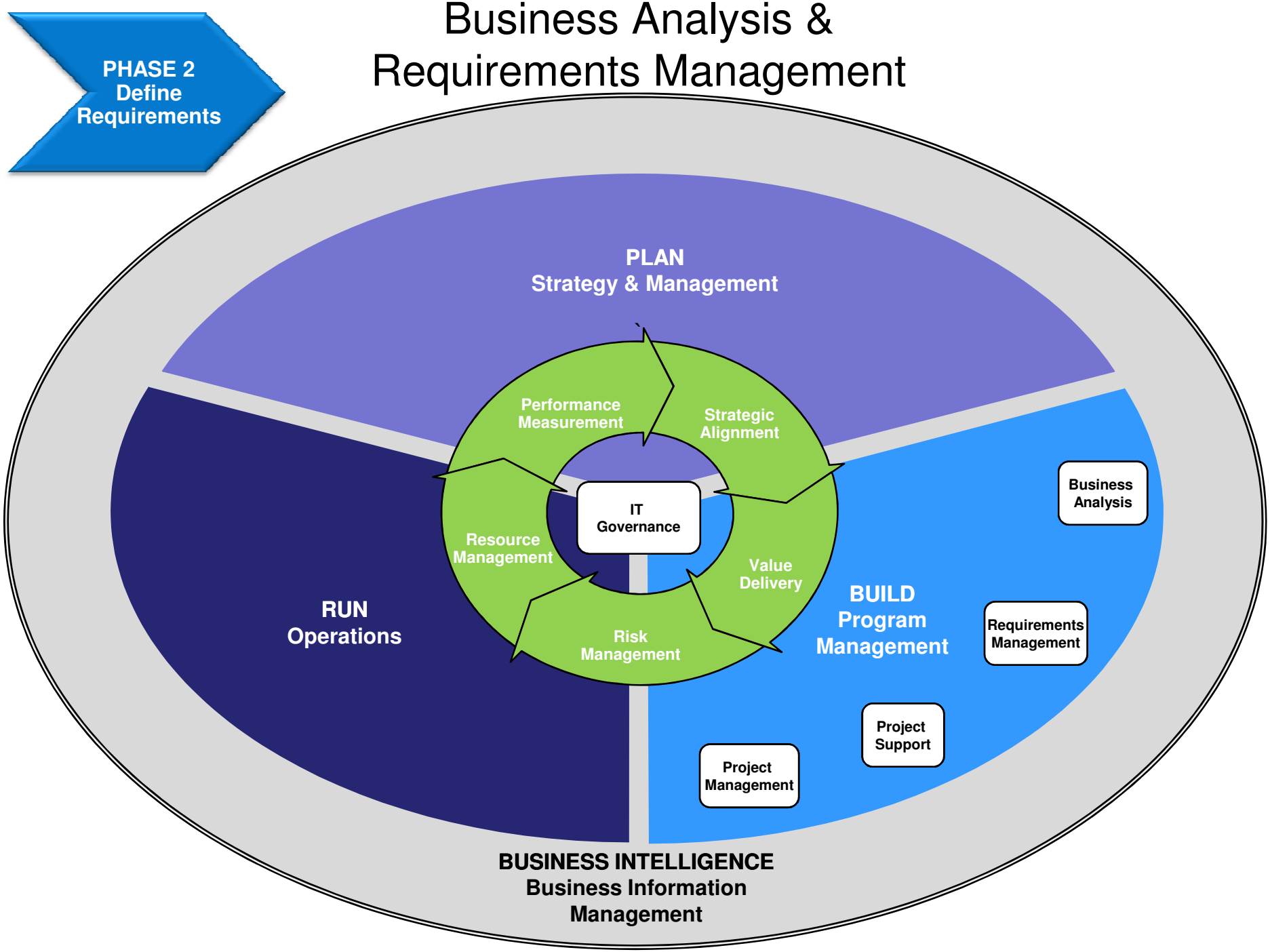
- **Establish service continuity and availability.**

1. Ensure mutual satisfaction of third-party relationships. **[DS2]**
2. Reduce solution and service delivery defects and rework. **[PO8,AI4,AI6,AI7,DS10]**
3. Ensure minimum business impact in the event of an IT service disruption or change. **[PO6,AI6,DS4,DS12]**
4. Make sure that IT services are available as required. **[DS3,DS4,DS8, DS13]**

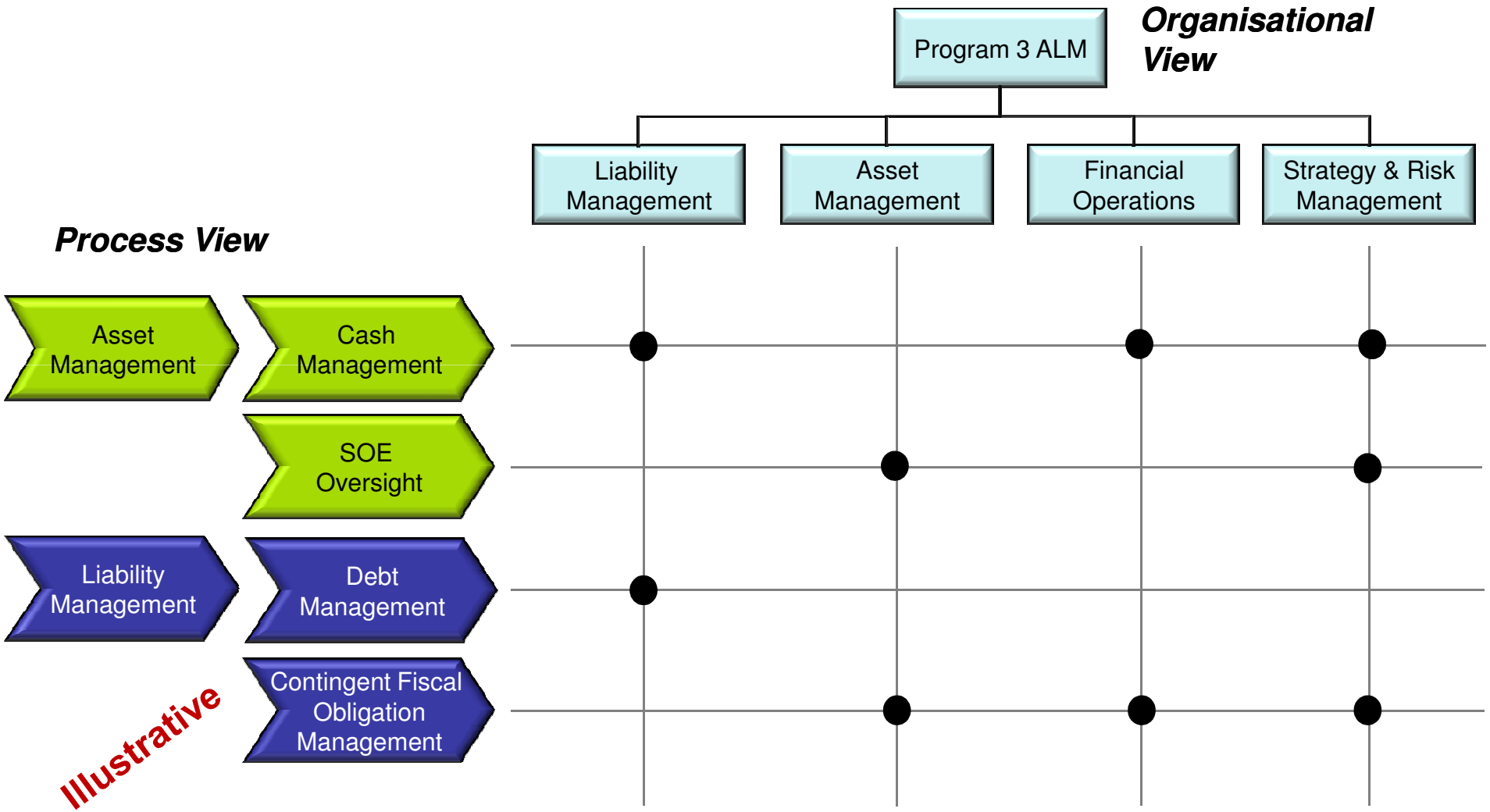
- **Create agility in responding to changing business requirements.**

5. Respond to business requirements in alignment with the business strategy. **[PO1,PO2,PO4,PO10,AI1,AI6,AI7,DS1,DS3, ME1]**
6. Create IT agility. **[PO2,PO4,PO7,AI3]**
7. Deliver projects on time and on budget, meeting quality standards. **[PO8,PO10]**

Business Analysis & Requirements Management



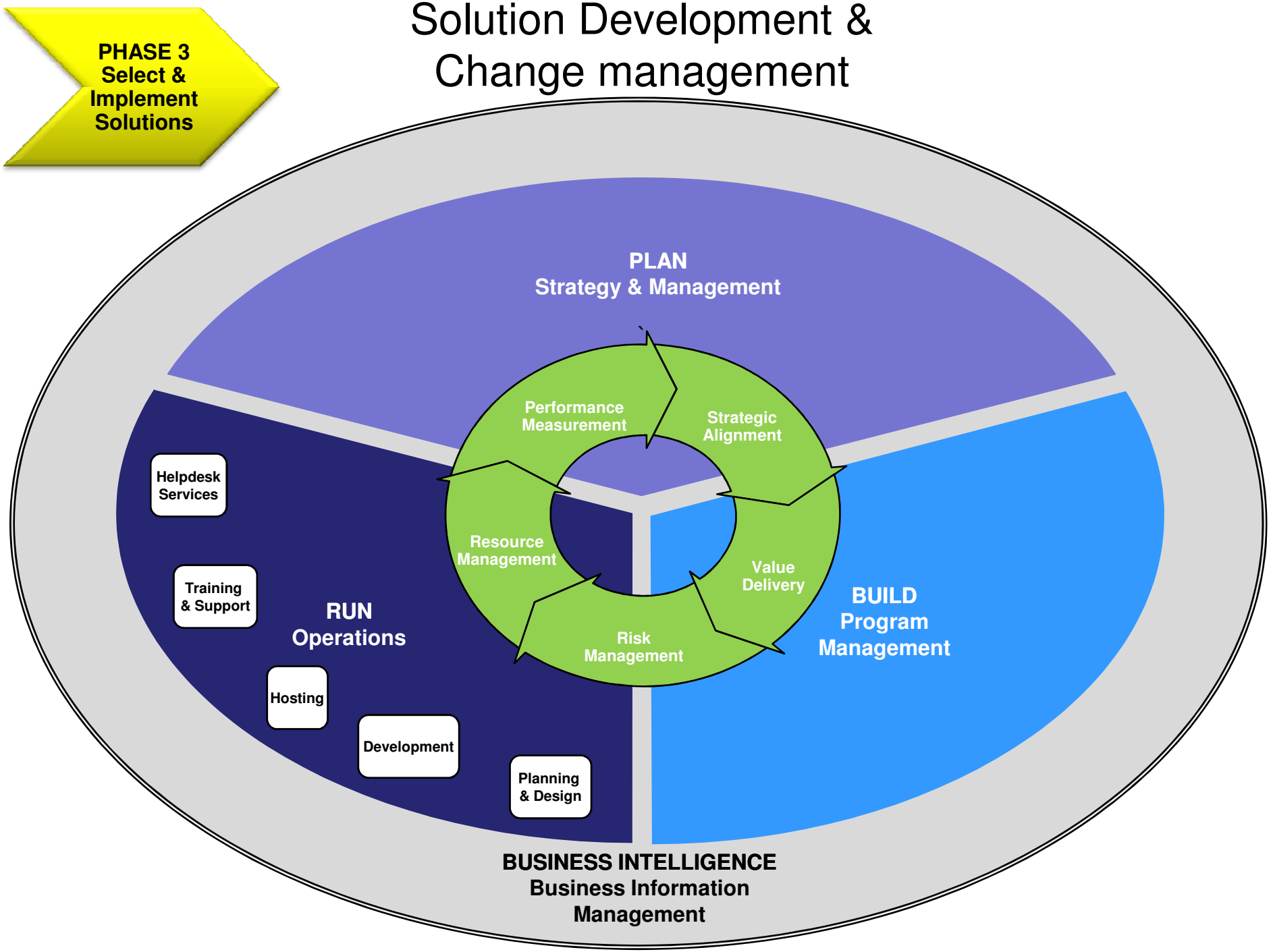
The high-level of process integration within National Treasury Program 3 is only visible when using a Process View



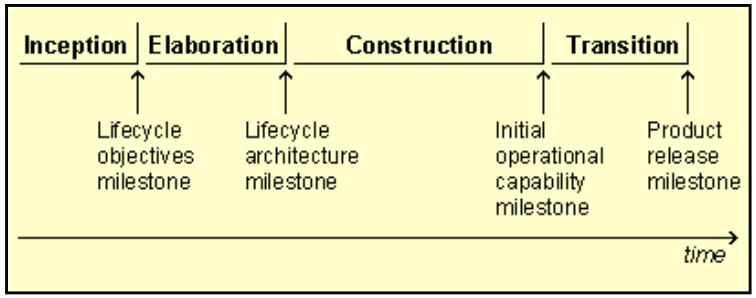
Benefits in analysing the ALM division from a Process viewpoint

- Capturing complexity e.g. considering the main relationships (Directorates, responsibilities, roles, systems,…)
- Developing ownership of issues e.g. identifying roles and responsibilities: “Who gets involved, how and where?”
- Improving steering effectiveness e.g. a process based operating model gives the possibility to intervene in case of errors
- Meeting internal and external stakeholder expectations e.g. knowing and understanding expectations of previous and following processes
- Continuous process improvement e.g. introducing process awareness across all directorates touching a specific process
- Providing a process description including a start-to-end-relation e.g. what are the important processes of the business

Solution Development & Change management



Software Project Development & Implementation Process



Inception

The overriding goal of the inception phase is to achieve concurrence among all stakeholders on the lifecycle objectives for the project. The inception phase is of significance primarily for new development efforts, in which there are significant business and requirements risks which must be addressed before the project can proceed. For projects focused on enhancements to an existing system, the inception phase is more brief, but is still focused on ensuring that the project is both worth doing and possible to do.

Elaboration

The goal of the elaboration phase is to baseline the architecture of the system to provide a stable basis for the bulk of the design and implementation effort in the construction phase. The architecture evolves out of a consideration of the most significant requirements (those that have a great impact on the architecture of the system) and an assessment of risk. The stability of the architecture is evaluated through one or more architectural prototypes.

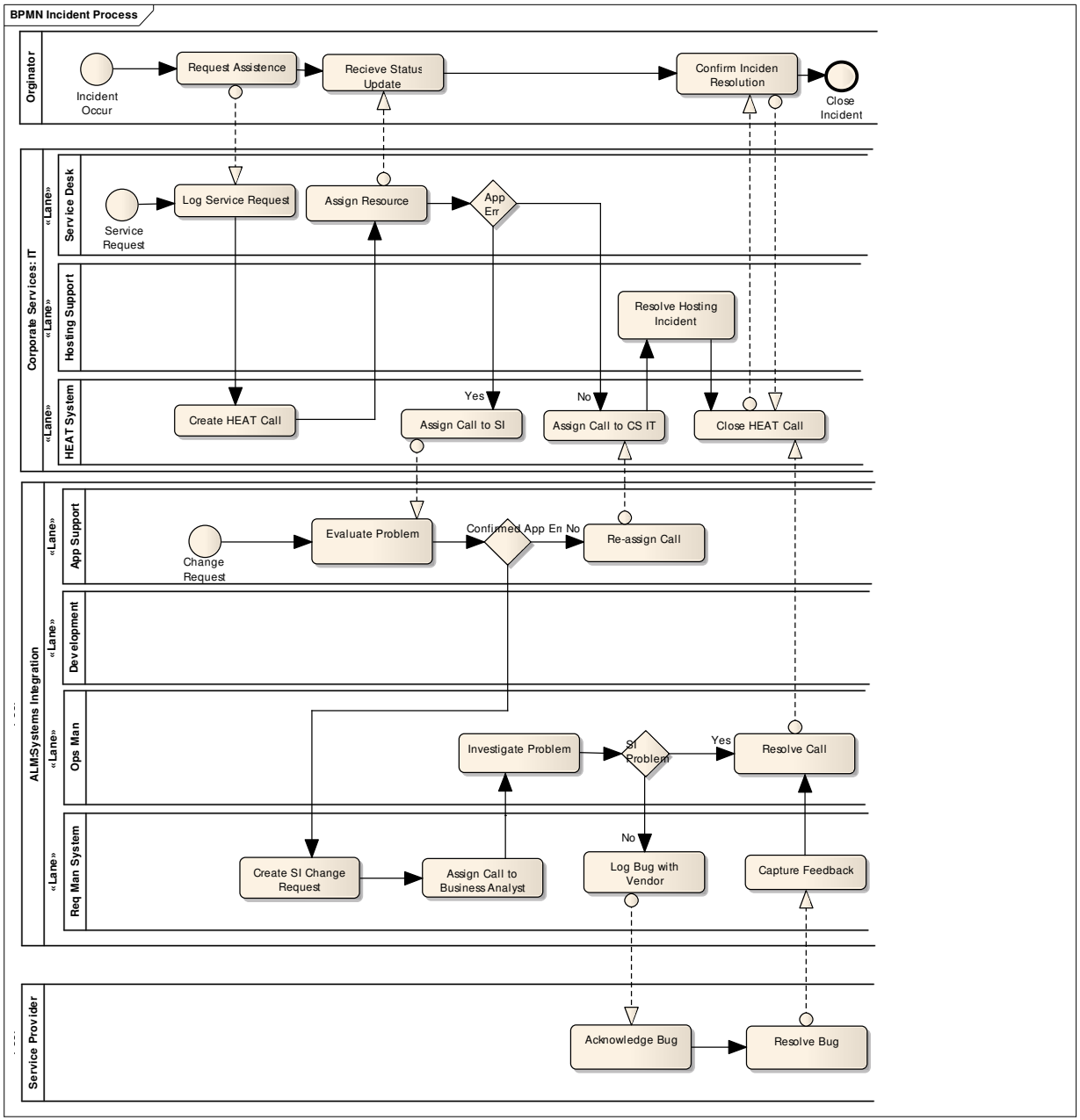
Construction

The goal of the construction phase is clarifying the remaining requirements and completing the development of the system based upon the baselined architecture. The construction phase is in some sense a manufacturing process, where emphasis is placed on managing resources and controlling operations to optimize costs, schedules, and quality. In this sense the management mindset undergoes a transition from the development of intellectual property during inception and elaboration, to the development of deployable products during construction and transition.

Transition

The focus of the Transition Phase is to ensure that software is available for its users. The Transition Phase can span several iterations, and includes testing the product in preparation for release, and making minor adjustments based on user feedback. At this point in the lifecycle, user feedback should focus mainly on fine tuning the product, configuring, installing and usability issues, all the major structural issues should have been worked out much earlier in the project lifecycle.

Change Management Process



Questions