

Introduction to Business Process Management

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Objectives

- To provide an introduction to Business Process Management
- Based on the Association of Business Process Management Professionals (ABPMP) Business Process Management Common Body of Knowledge (CBOK)

Topics

1. Introduction and Context of BPM
2. Business Process Management Overview
3. Process Modelling
4. Process Analysis
5. Process Design
6. Process Performance Management
7. Process Transformation
8. Process Management Organisation
9. Enterprise Process Management
10. Business Process Management Technologies

Course Schedule

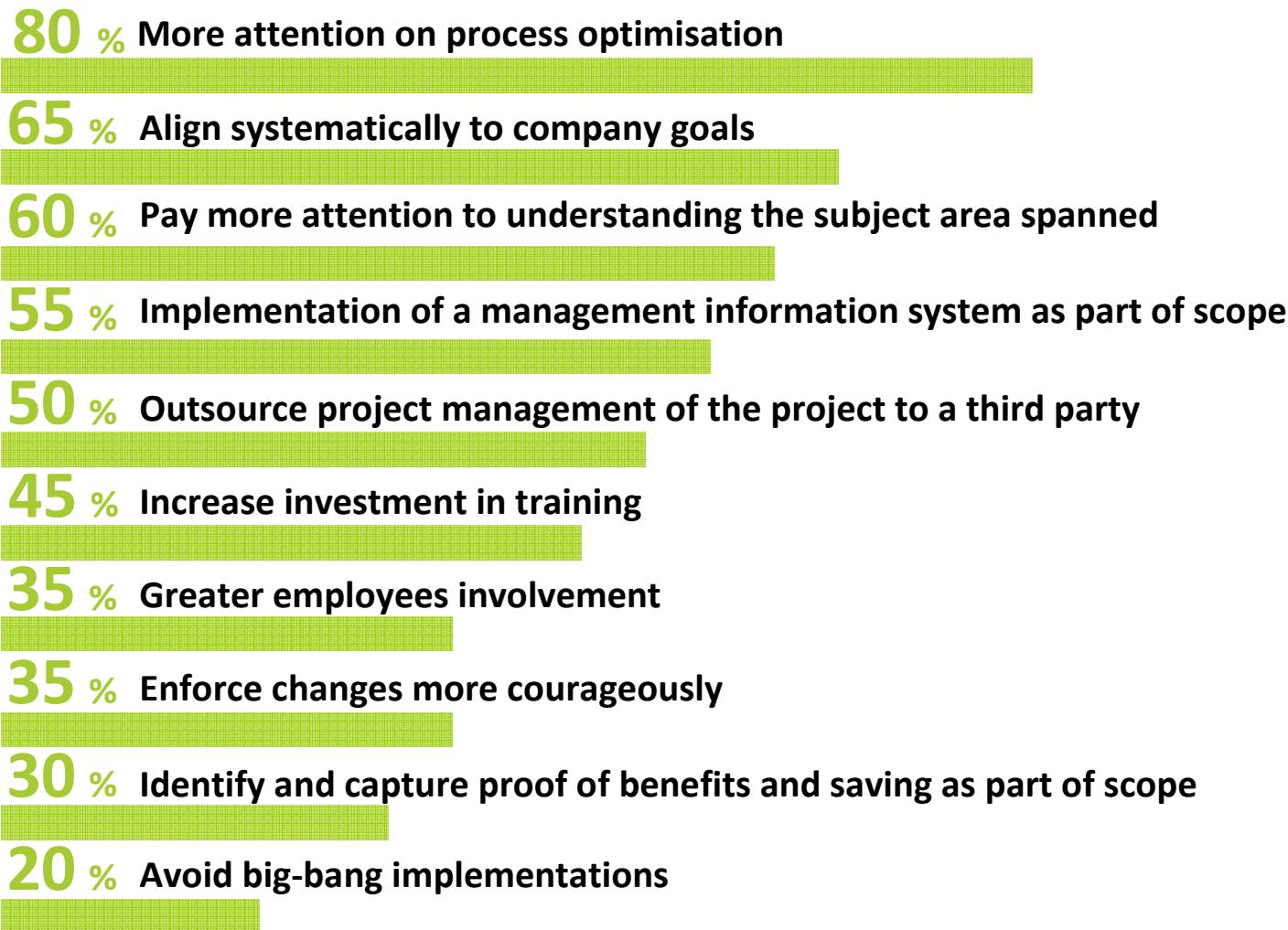
- Day 1
 - Morning
 - Introductions
 - Introduction and Context of BPM
 - Business Process Management Overview
 - Afternoon
 - Process Modelling
 - Process Analysis
- Day 2
 - Morning
 - Process Design
 - Process Performance Management
 - Afternoon
 - Process Transformation
 - Process Management Organisation
- Day 3
 - Morning
 - Enterprise Process Management
 - Business Process Management Technologies
 - Afternoon
 - Business Process Management and Business Analysis
 - Business Process Management Technology Review and Software Demonstration
 - Course Review and Feedback

Course Handouts

- Printout of handouts
- CD containing
 - BPM articles and whitepapers
 - Sample BPM software

Introduction and Context of BPM

Lessons Learned From Large Systems Implementation



Key Business Drivers for BPM

- Save money – Do things better with optimised processes
 - Build better new processes faster
 - Know what you are doing (right or wrong) through current process understanding
 - Get control of parallel processes by consolidating to core processes
 - Get non-value added work through automation of manual processes
 - Business process outsourcing
- Implement large software systems better
- Stay ahead of compliance
- Move faster through scenario building for agility and policy management

Benefits of Business Process Management



- Real benefits from BPM
- Intangible benefits also: better information quality

How do Organisations Improve?

- Major changes must start at the top
- Ultimately, everyone must be involved
- Effective change requires a goal and knowledge of the current process
- Change is continuous
- Change will not be retained without effort and periodic reinforcement
- Improvement is continuous

Why Business Process Management?

- Symptoms of Poor Business Process Management and Design
 - No standard process/method for addressing how to define business requirements and when to improve business processes
 - When automation of processes is commissioned, “Business” says that they do not always get what they think they have asked for
 - The processes used to document and communicate business processes and requirements are neither easy nor documented
 - Our business programs frequently exist in a culture of reacting to cross-functional problems/emergencies
 - IT has responsibility for creating and maintaining business process flows, business requirements and business rules

Why Business Process Management and Design - Common Problems

1. Lack of an **integrated** process for **capturing** the **business domain**
2. **Techniques** that are used are not consistently applied
3. We cannot/do not differentiate **key stakeholders'** views and different **business views**
4. We are working without a **common language** across business, IT and our other partners/vendors
5. Inadequate root cause level **business process analysis** yields inadequate business requirements and rules to facilitate process optimisation/automation

Why Business Modelling - The Problems

Techniques

integrated

capturing

business domain

business views

common language

business process analysis

Finding the Right Project

- Key characteristics of right project
 - The process or project is related to a key business issue
 - You have/can get customer input on the issue
 - Management assigns this project a high priority
 - Process owner and key stakeholders are defined
 - The problem is stated as a target or need and NOT a solution
 - The sponsor of this project can commit time and resources to this project
 - The business process(es) will not be changed by another initiative at any time in the near future
 - Focus on:
 - Which process is the most critical
 - Which process contributes the most
 - Ensure the benefits of an improvement project do not degrade over time

Critical Success Factors

- Linked to business strategies and goals
- Linked to customer value
- Ability to implement incremental value added change
- Ability to track results and measure success
- Ability to be aligned with the business

Successful Business Process Analysis, Design and Implementation Projects Have

- Understood the Business Architecture – Business Process, Metrics, Strategy and Goals
- Engaged stakeholders and defined process ownership
- Taken an iterative and incremental approach
- Tackled the right project at the right time
- Implemented internal and external standards and the right level of governance
- Understood the role of information
- Incorporated process improvement
- Achieve business results with a series of small successes

Do Not Ignore Organisational Change

- The failure to manage the human side of business changes is a major contributor to the reasons programme, projects and initiatives fail
- Organisations may not have the experience necessary to manage the speed and complexity of the large-scale changes
- Managers are all too frequently concerned with tactical, operational issues and have not had the time to consider organisational changes

Process Analysis within Service Orientation

- **Process Driven Integration**
 - Services Based Integration
 - Cut integration costs and reduce development
- **New Business Initiatives**
 - Agility, Growth – New Products and Services
 - Increased Delivery Channels
- **Process Improvement**
 - Optimising business processes
 - Straight Through Processing
- **IT Regeneration**
 - Enterprise IT Architecture – Aligning more with Business
 - Legacy Replacement
- **Extending the Enterprise**
 - Partnering, B2B

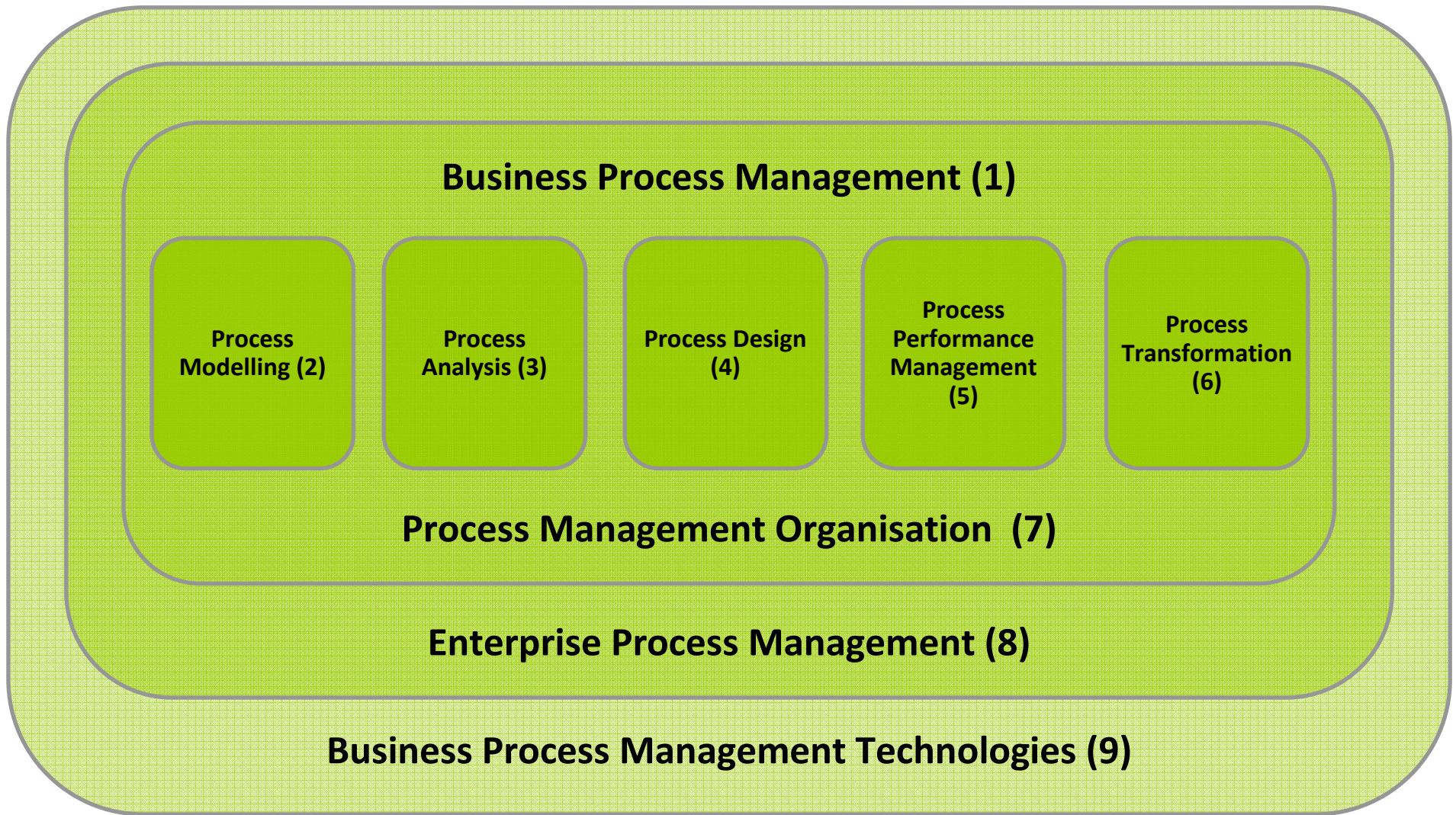
Intelligent Use of BPM

- Help prioritising intelligent cuts: via a business process architecture and a good process measurement system
- Process Optimisation: BPM teams can quickly examine processes and suggest changes to eliminate waste
 - Good BPM teams can almost always identify some quick changes that will save 10-30%

Intelligent Use of BPM

- Reorganisations
 - Changes in status also require that new processes and business rules be implemented throughout the organisation
- Additional Regulation
 - New regulations require new practices and new business rules

Business Process Management Common Body of Knowledge (CBOK) Knowledge Areas



Business Process Management Common Body of Knowledge (CBOK) Knowledge Areas

- Nine knowledge areas
 - Business Process Management (1) - core BPM concepts
 - Process Modelling (2), Process Analysis (3), Process Design (4), Process Performance Management (5) and Process Transformation (6) - BPM activities and skill sets
 - Process Management Organisation (7) and Enterprise Process Management (8) - how the practice of BPM relates to other organisational dimensions, such as governance and strategic planning
 - Business Process Management Technologies (9) – support and enable BPM practices

Business Process Management (1) Knowledge Area

- Defines BPM and provides the foundation for exploring the remaining Knowledge Areas
- Focuses on the core concepts of BPM
 - Key definitions
 - End-to-end process
 - Customer value
 - Nature of cross-functional work
 - Process types
 - Process components
 - BPM lifecycle
 - Critical skills
 - Success factors

Process Modelling (2) Knowledge Area

- Includes the set of skills and processes which enable people to understand, communicate, measure and manage the primary components of business processes
- Covers
 - Skills, activities and key definitions
 - An understanding of the purpose and
 - Benefits of process modelling
 - Discussion of the types and uses of process models
 - Tools, techniques and modelling standards

Process Analysis (3) Knowledge Area

- Involves an understanding of business processes including the efficiency and effectiveness of business processes
- Covers
 - Purpose and activities for process analysis
 - Decomposition of process components and attributes, analytical techniques and process patterns
 - Use of process models and other process documentation to validate and understand both current and future state processes
 - Process analysis types, tools and techniques

Process Design (4) Knowledge Area

- Intentional and thoughtful planning for how business processes function and are measured, governed and managed
- Involves creating the specifications for business processes within the context of business goals and process performance objectives
- Covers
 - Plans and guidelines for how work flows
 - How rules are applied
 - How business applications, technology platforms, data resources, financial and operational controls interact with other internal and external processes
 - Process design roles
 - Techniques and principles of good design
 - Common process design patterns
 - Compliance, executive leadership and strategic alignment

Process Performance Measurement (5) Knowledge Area

- Formal, planned monitoring of process execution and the tracking of results to determine the effectiveness and efficiency of the process
- Used to make decisions for improving or retiring existing processes and/or introducing new processes in order to meet the strategic objectives of the organisation
- Covers
 - Key process performance definitions
 - Importance and benefits of performance measurement
 - Monitoring and controlling operations
 - Alignment of business process and enterprise performance
 - What to measure
 - Measurement methods
 - Modelling and simulation
 - Decision support for process owners and managers
 - Considerations for success

Process Transformation (6) Knowledge Area

- Addresses process change in the context of a business process lifecycle
- Covers
 - Process improvement
 - Redesign and reengineering methodologies
 - Tasks associated with implementing process
 - Organisational change management methodologies, techniques and best practices

Process Organisation (7) Knowledge Area

- Addresses the roles, responsibilities and reporting structure to support process-driven organisations
- Covers
 - What defines a process driven enterprise
 - Cultural considerations
 - Cross-functional, team-based performance
 - Business process governance
 - Governance structures
 - BPM Centre of Expertise/Excellence (COE)

Enterprise Process Management (8) Knowledge Area

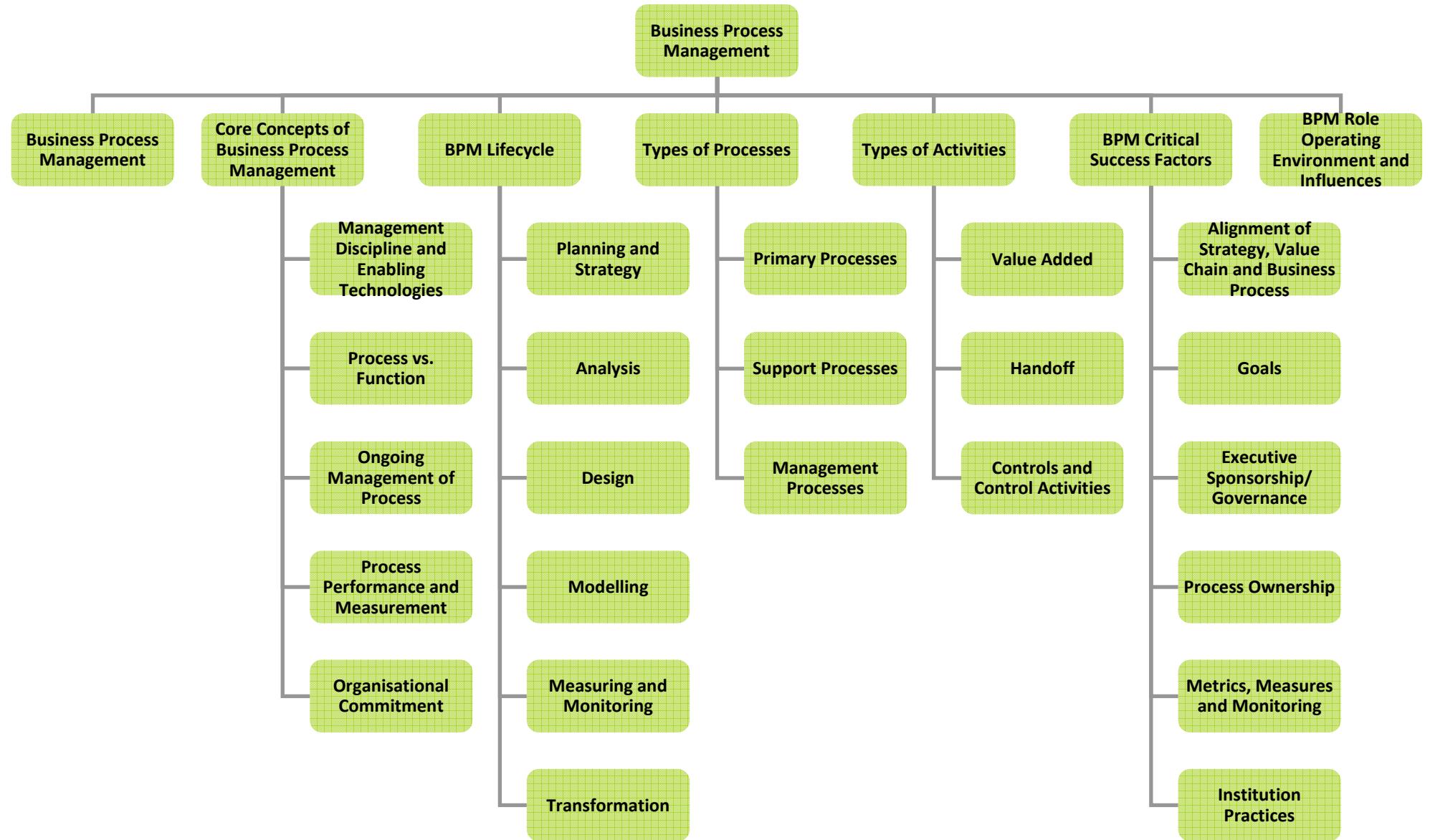
- Driven by the need to maximise the results of business processes consistent with well-defined business strategies and functional goals based on these strategies
- Process portfolio management ensures that the process portfolio supports corporate or business unit strategies and provides a method to manage and evaluate initiatives
- Covers
 - Tools and methods to assess process management maturity levels
 - Required BPM practice areas which can improve their BPM organisation state
 - Business Process Frameworks
 - Process integration - interaction of various processes with each other
 - Models which tie performance, goals, technologies, people and controls (both financial and operational) to business strategy and performance objectives
 - Process architecture and enterprise process management best practices

BPM Technology (9) Knowledge Area

- BPM is a technology enabled and supported management discipline
- Covers
 - Wide range of technologies available to support the planning, design, analysis, operation and monitoring of business processes
 - Set of application packages, development tools, infrastructure technologies and data and information stores that provide support to BPM professionals and workers in BPM related activities
 - BPM standards, methodologies and emerging trends

Business Process Management Overview

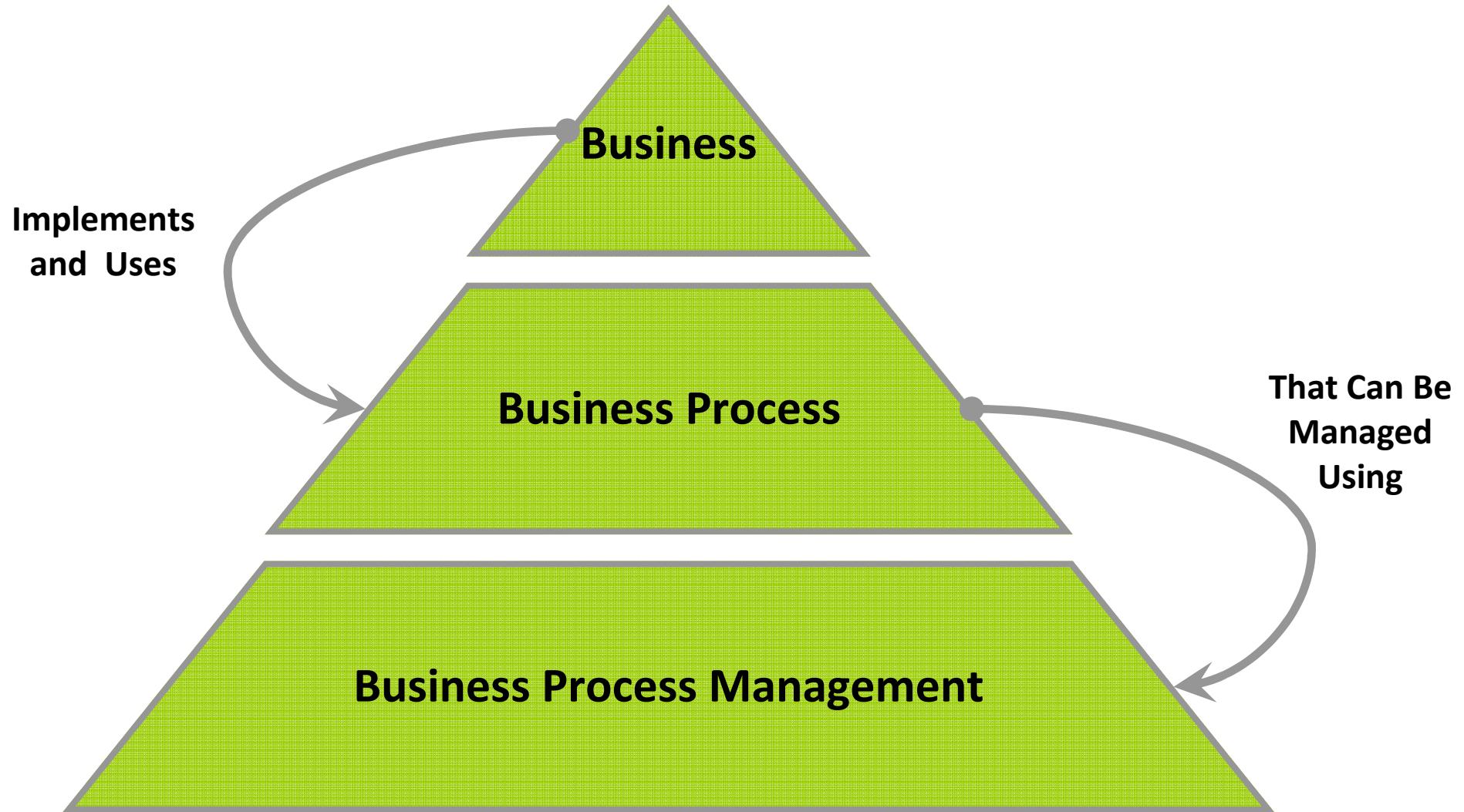
Business Process Management Topic Scope



Business Process Management - Scope

- Concepts and strategies required to successfully manage business processes from a holistic end-to-end perspective
- Foundation for exploring the remaining knowledge areas

Hierarchy of Business, Processes and BPM



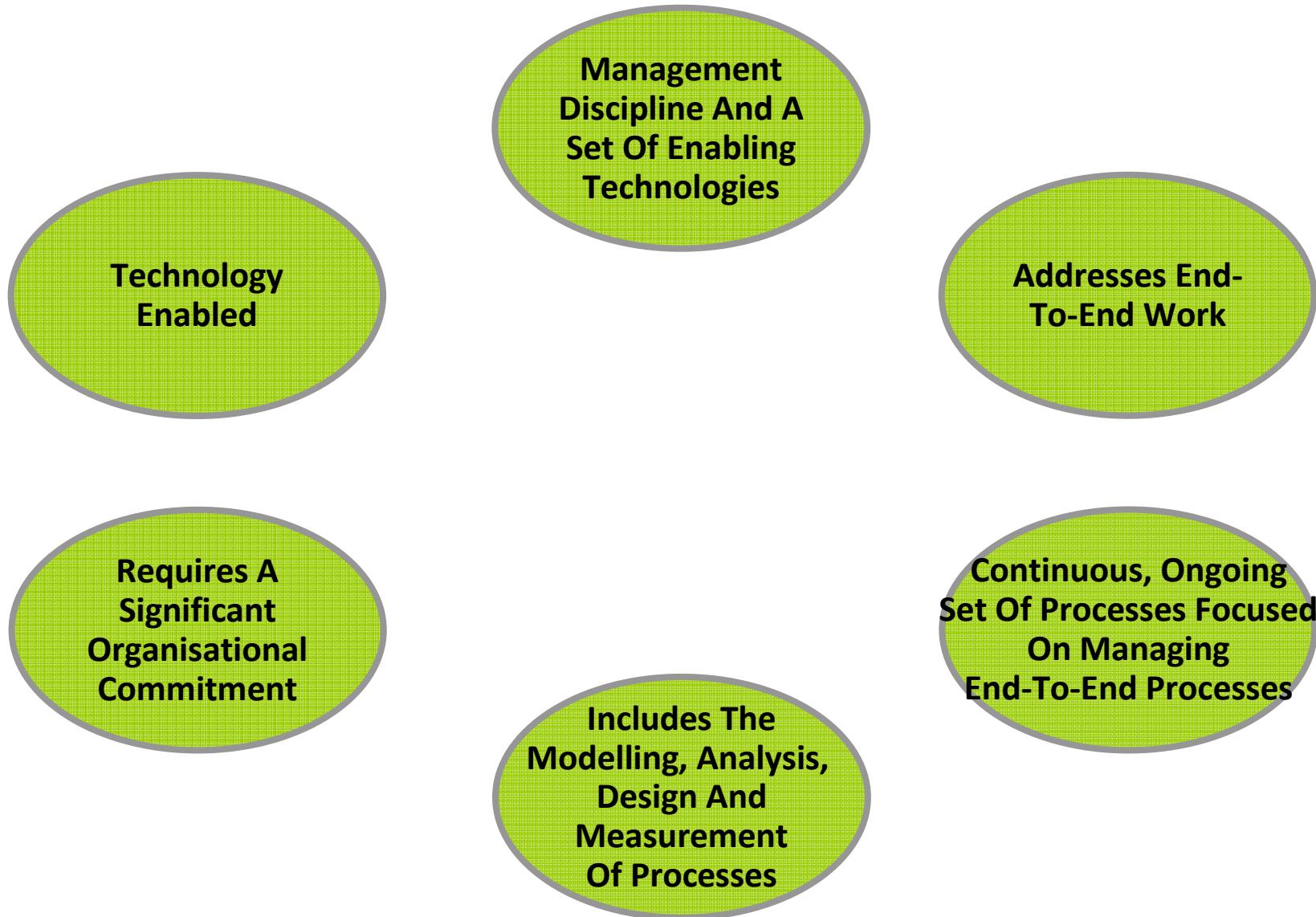
Hierarchy of Business, Processes and BPM

- **Business**
 - Refers to individuals, interacting together, to perform a set of activities to deliver value to customers and a return on investment to the stakeholders
- **Business Process**
 - Process is a defined set of activities or behaviours performed by humans or machines to achieve one or more goal
 - Triggered by specific events and have one or more outcome that may result in the termination of the process or a handoff to another process
 - Composed of a collection of interrelated tasks or activities which solve a particular issue
 - End-to-end work which delivers value to customers - end-to-end involves crossing any functional boundaries

Hierarchy of Business, Processes and BPM

- **Business Process Management**
 - Disciplined approach to identify, design, execute, document, measure, monitor and control both automated and non-automated business processes to achieve consistent, targeted results aligned with an organisation's strategic goals
 - Involves the deliberate, collaborative and increasingly technology-aided definition, improvement, innovation and management of end-to-end business processes that drive business results, create value and enable an organisation to meet its business objectives with more agility
 - Enables an enterprise to align its business processes to its business strategy, leading to effective overall company performance through improvements of specific work activities either within a specific department, across the enterprise or between organisations

BPM Core Concepts



BPM Core Concepts

- BPM is a management discipline and a set of enabling technologies
- BPM addresses end-to-end work and distinguishes between sets of subprocesses, tasks, activities and functions
- BPM is a continuous, ongoing set of processes focused on managing an organisation's end-to-end business processes
- BPM includes the modelling, analysis, design and measurement of an organisation's business processes
- BPM requires a significant organisational commitment, often introducing new roles, responsibilities and structures to traditional functionally oriented organisations
- BPM is technology enabled with tools for visual modelling, simulation, automation, integration, control and monitoring of business processes and the information systems which support these processes

Management Discipline and Enabling Technologies

- BPM acronym used loosely and its meaning varies depending upon the context
 - Software companies often refer to BPM to describe the capabilities of a particular product or technology
 - Practitioners, management consultants and academics typically discuss the process and management discipline of BPM
- Firstly BPM is a management discipline and process for managing an organisation's business processes
 - Enabling technology is meaningless without the management disciplines and processes for exploiting the technology
- BPM involves managing the end-to-end work organisations perform to create value for their customers
 - Performance of this work is essentially how organisations fulfill their mission

Management Discipline and Enabling Technologies

- Vendors have created application suites which help enable organisations to better manage their business processes
 - Tools to visually design and model business processes
 - Simulate and test business processes, automate, control and measure business processes
 - Provide feedback and reporting on process performance
 - Some vendors have combined these into integrated business process management suites
- Most large organisations have a significant investment into a number of legacy systems
 - Designed to support specific functions
 - In order to manage the end-to-end work involved in business processes, a BPMS must be able to integrate with legacy systems in order to control work, get information or measure performance
 - Common framework for how these technologies are deployed is most often referred to as a Service Oriented Architecture (SOA)
 - Standardising on a specific set of open technologies commonly referred to as web services
 - By leveraging web services in a SOA, organisations can build and manage end-to-end business processes across organisational silos and their legacy systems

Addresses End-To-End Work

- Process vs. function
 - Business functions are typically defined by a group of activities related by a particular skill or goal such as sales, finance or manufacturing
 - Functions focus on these individual tasks while business processes focus on the end-to-end work, i.e., tasks and activities, across functional boundaries to deliver customer value
 - Functions are ongoing where business processes have defined inputs and outputs
 - Business processes, however, focus on end-to-end transactions that deliver value

Ongoing Management of Processes

BPI (Business Process Improvement)

One-time exercise
Fix or design process

Vs.

BPM (Business Process Management)

Ongoing and continuous

Ongoing Management of Processes

- BPM involves a permanent ongoing organisational commitment to managing the organisations processes
- Includes
 - Modelling
- Analysis
- Process design
- Performance measurement
 - Process transformation
 - Continuous feedback loop to ensure the organisation's business processes are aligned to its strategy and performing to expectations

Modelling, Analysis, Design And Measurement Of Processes

- Practice of BPM requires the measurement and supervision of process performance
 - Setting process performance goals
 - Measuring actual performance
 - Reviewing the effectiveness of business processes
 - Providing information, insight and feedback to other primary activities such as process analysis, design and transformation
- Define and measure business process performance across two primary dimensions
 - Extent to which process goals are attained
 - Efficiency and effectiveness of process activities

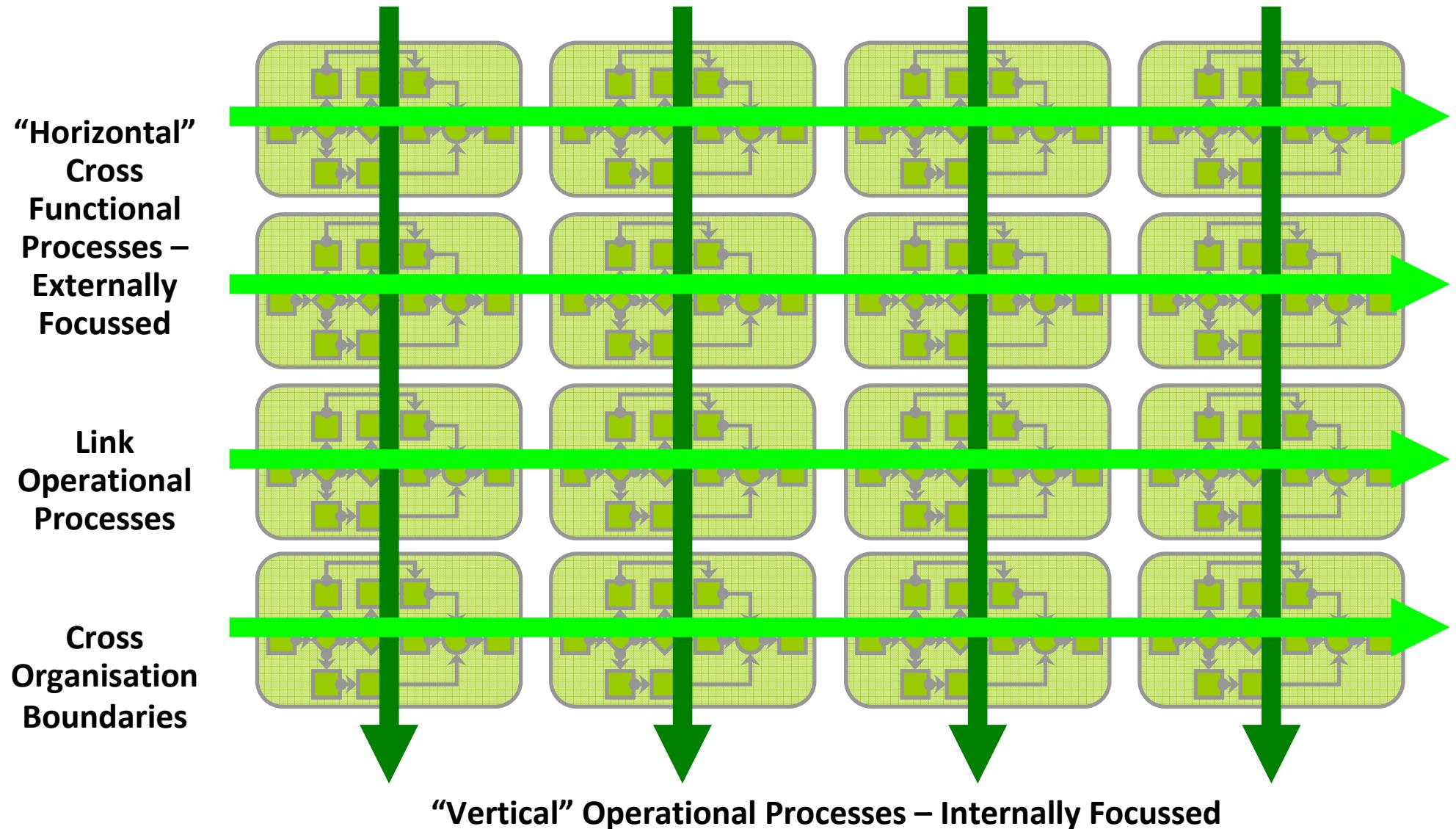
Modelling, Analysis, Design And Measurement Of Processes

- Gather information at key points in the process to support decisions
 - Cost
 - Time to completion of tasks

Organisational Commitment

- Practice of BPM requires a significant organisational commitment
- Management of end-to-end business process crosses organisational boundaries
- New roles and responsibilities are introduced, such as process owners, designers and architects
- Individuals responsible for end-to-end process design must interact with traditional functionally based managers
- New governance structures need to be introduced which may change the way organisations make decisions and allocate resources

Organisational Commitment



Organisational Commitment

- Without organisational commitment, the practice and benefits of BPM is unlikely to mature within an organisation
- Without supporting leadership, values, beliefs and culture, BPM is unlikely to successfully take hold within an organisation

BPM Technology

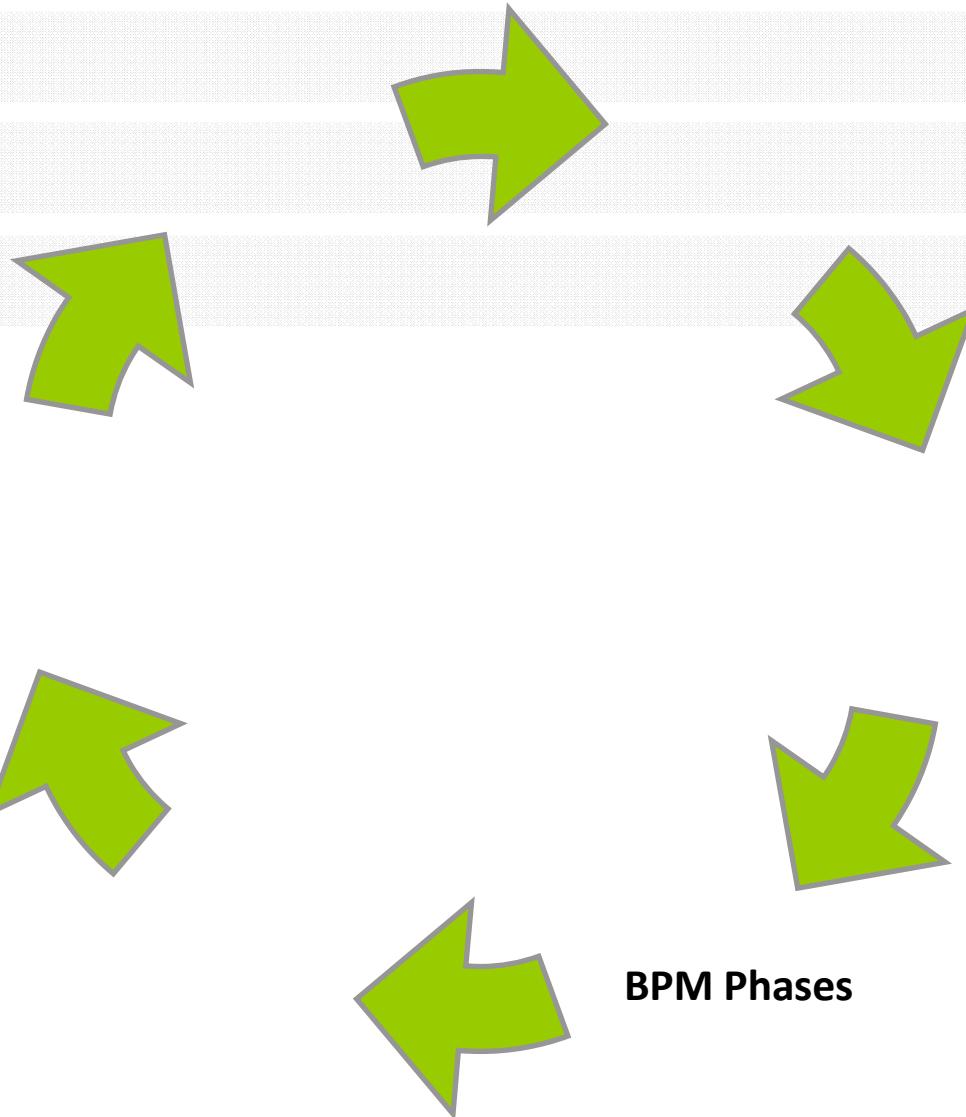
- BPM is a technology enabled and supported management discipline
- Wide range of technologies available to support the planning, design, analysis, operation and monitoring of business processes
- Application suites available which help enable organisations to better manage their business processes
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BPM Lifecycle

BPM Activities Affected by Leadership, Values, Culture and Beliefs Factors		BPM Activities					
BPM Factors	Process Planning and Strategy	Analysis of Business Processes	Design and Modelling of Business Processes	Process Implementation	Process Monitoring and Controlling	Process Refinement	
	Culture and Strategy						
	Methodology						
	Information Technology						
	Process Alignment						
	Process Awareness						
	Process Measures						
	Process Sponsorship						
	Process Responsibility						
	Process Definition						
	Organisation						

BPM Lifecycle

BPM Factors – cross all BPM phases



BPM Lifecycle

Culture and Strategy

Methodology

Information Technology

Process Alignment

Process Awareness

Process Measures

Process Sponsorship

Process Responsibility

Process Definition

Organisation

Process Refinement

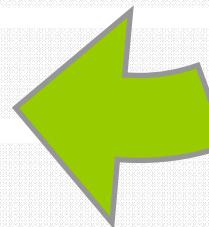
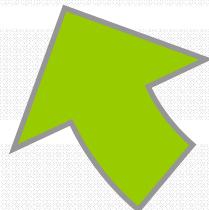
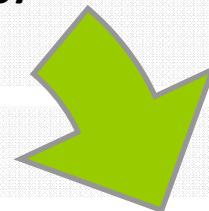
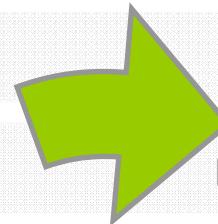
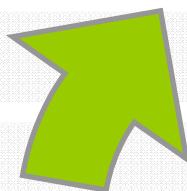
Process Monitoring
and
Controlling

Process Implementation

Process Planning and
Strategy

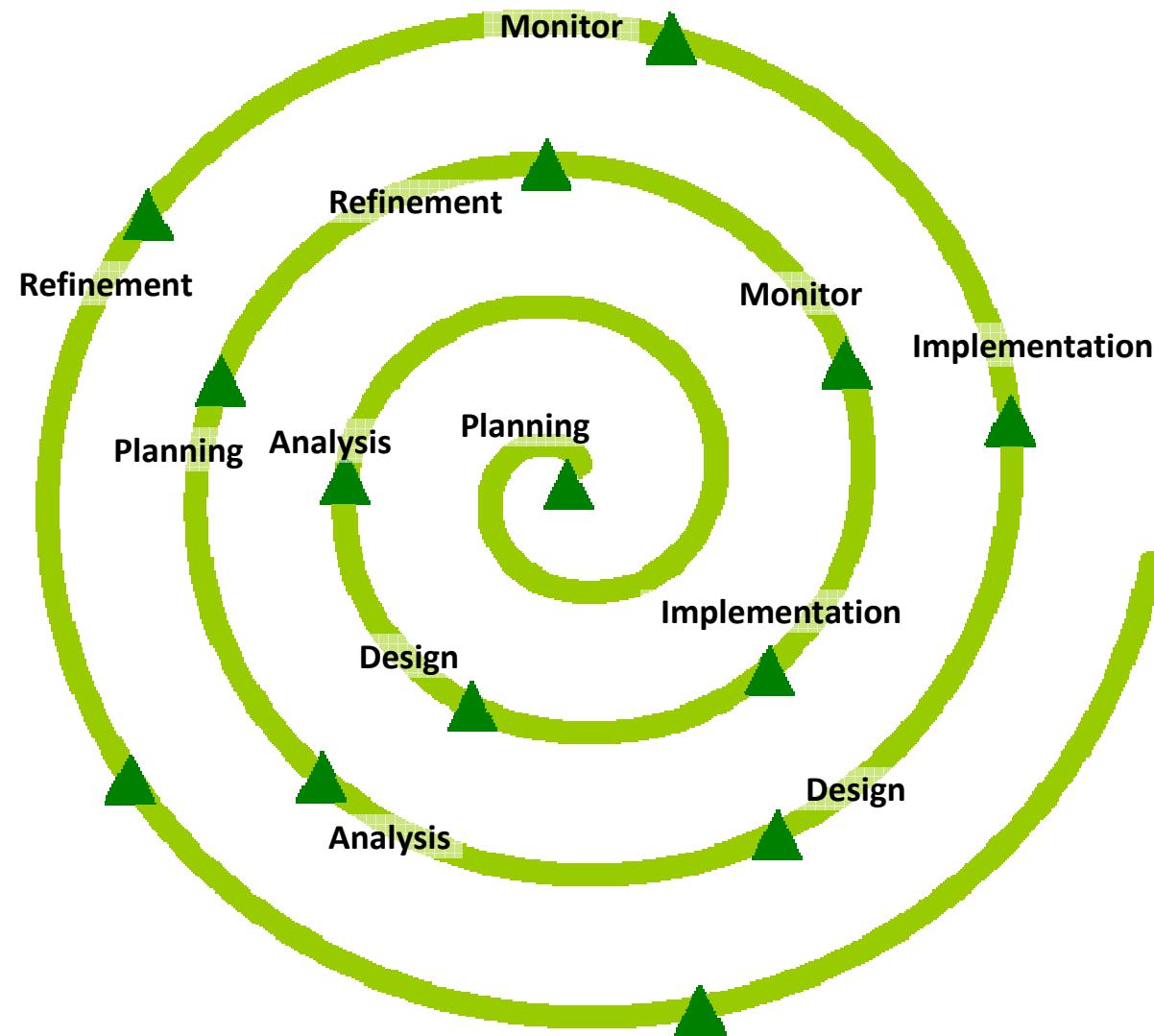
Analysis of
Business
Processes

Design and
Modelling of
Business
Processes



BPM Lifecycle

- Iterative, phased set of activities



Process Planning and Strategy

- BPM lifecycle begins with developing a process driven strategy and plan for the organisation
- Sets the strategy and direction for the BPM process
- Plan starts with an understanding of organisational strategies and goals
- Designed to ensure a compelling value proposition for customers
- Plan provides structure and direction for continued customer centric process management
- Provides a foundation for a holistic BPM approach to ensure the alignment with organisational strategy and the integration of strategy, people, processes and systems across functional boundaries
- Identifies appropriate BPM organisational roles and responsibilities, executive sponsorship, goals and expected performances measures and methodologies

Analysis of Business Processes

- Analysis incorporates methodologies with the goal of understanding the current organisational processes in the context of the desired goals and objectives
- Takes information from strategic plans, process models, performance measurements, changes in the environment and other factors in order to fully understand the business processes in the context of the overall organisation

Design and Modelling of Business Processes

- Focus on the intentional, thoughtful design of how end-to-end work occurs in order to deliver value
- Document the sequence of activities, including the design of what work is performed, at what time, in what location, by what process actors using what methodology
- Defines what the organisation wants the process to be and answers the what, when, where, who and how questions of how end-to-end work is executed
- Ensures that the proper management controls and metrics are in place for compliance and performance measurement
- Understanding the process typically involves process modelling and an assessment of the environmental factors which enable and constrain the process
 - May be the first time the entire end-to-end business process has been documented

Process Monitoring and Controlling

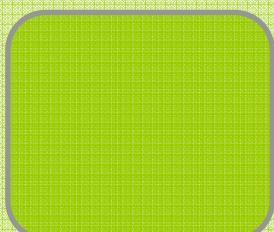
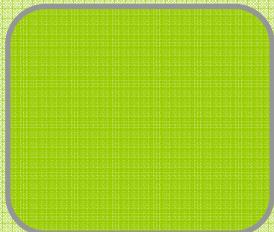
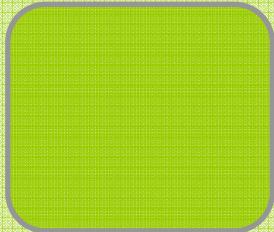
- Continuous measuring and monitoring of business processes provides the information necessary to adjust resources in order to meet process objectives
- Measuring and monitoring also provides critical process performance information through key measurements related to goals and value to the organisation
- Analysis of process performance information can result in improvement, redesign or reengineering activates

Process Refinement

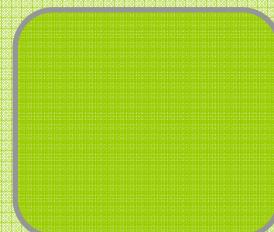
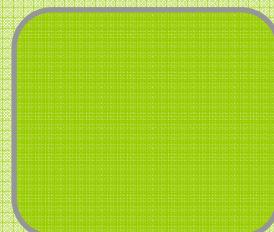
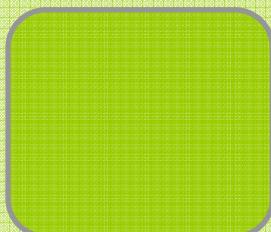
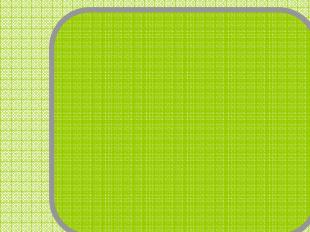
- Implements the output of the iterative analysis and design cycle
- Addresses organisational change management challenges
- Aimed at continuous improvement and process optimisation

Types of Processes

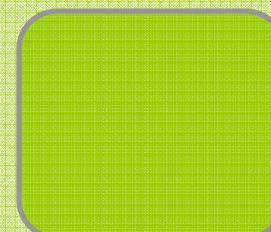
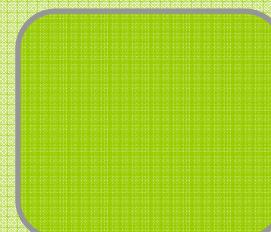
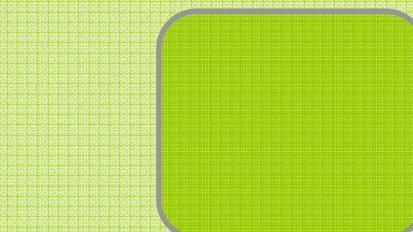
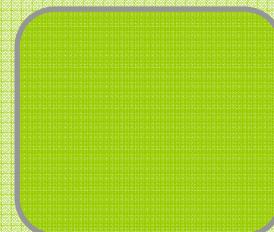
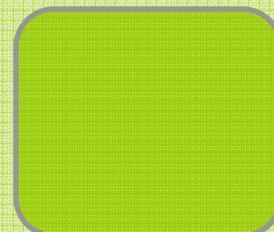
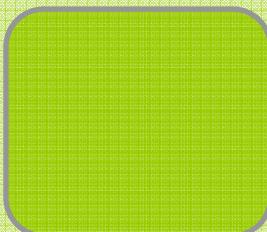
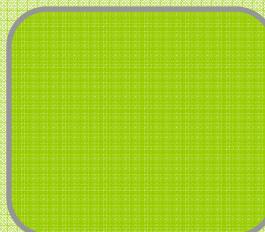
**Management
Processes**



Primary (Core) Processes



Support Processes



Primary Processes

- Primary processes are end-to-end, cross-functional processes which directly deliver value
- Represent the essential activities an organisation performs to fulfill its mission
- Make up the value chain where each step adds value to the preceding step as measured by its contribution to the creation or delivery of a product or service, ultimately delivering value
- Primary processes can move across functional organisations, across departments or even between enterprises and provide a complete end-to-end view of value creation

Support Processes

- Support primary processes, often by managing resources and/or infrastructure required by primary processes
- Differentiator is that support processes do not directly deliver value
 - Does not mean that they are unimportant to an organisation
- Examples of support processes include information technology management, facilities or capacity management and human resource management
- Support processes are generally associated with functional areas
 - Can and often do cross functional boundaries

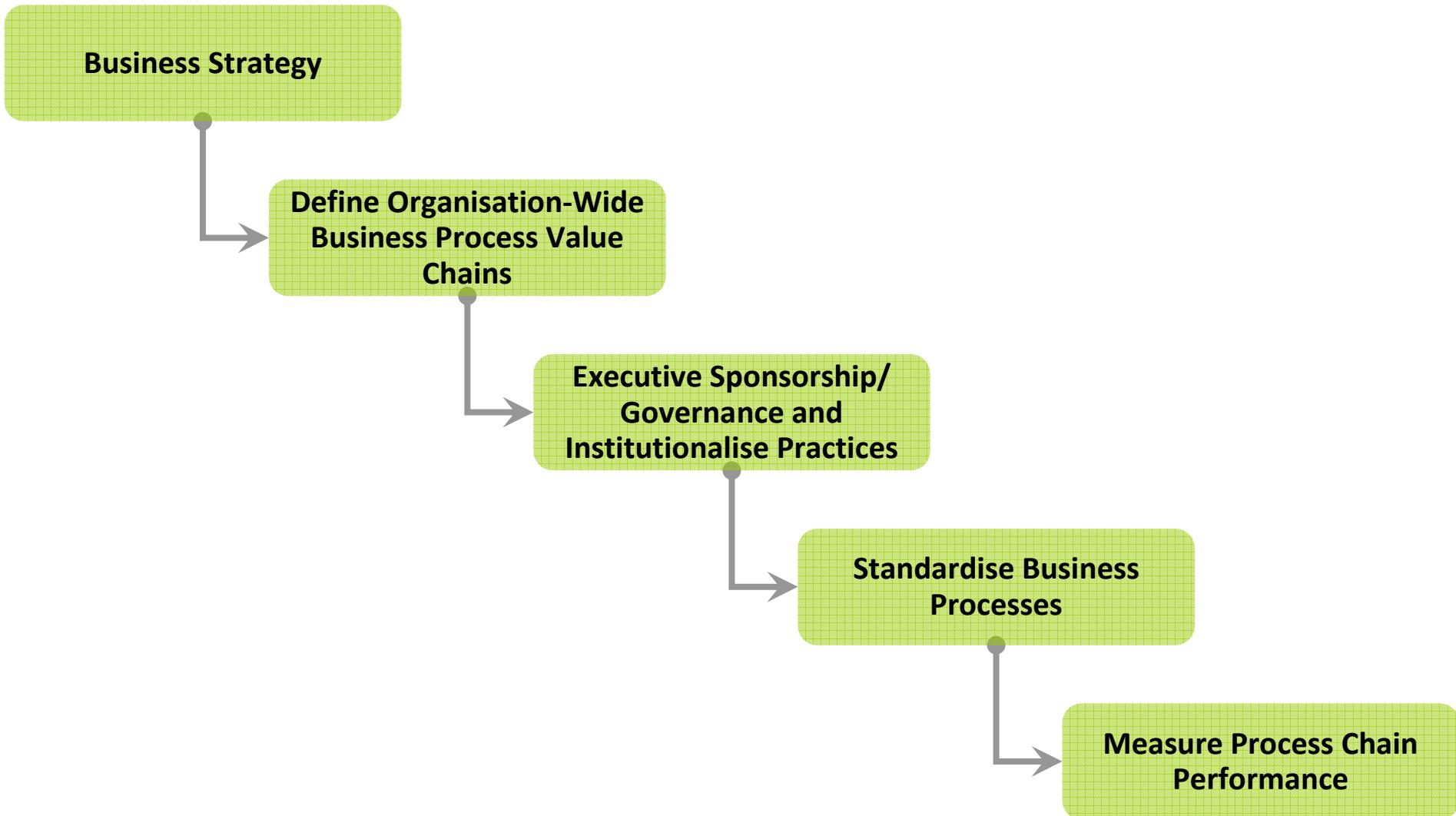
Management Processes

- Used to measure, monitor and control business activities
- Ensure that a primary or supporting process meets operational, financial, regulatory and legal goals
- Do not directly add value
- Necessary in order to ensure the organisation operates effectively and efficiently

Process Activities

- **Value Added** - contribute to the process output in a positive way
- **Handoff** - pass control of the process to another department or organisation
- **Control** - assure that the processes behave within desired tolerances or specify a validity checkpoint

BPM Critical Success Factors



BPM Critical Success Factors

- Standardise Business Processes
 - Adopt common design/re-engineering methodology
 - Document processes
 - Manage process diversity
- Executive Sponsorship/Governance and Institutionalise Practices
 - Provide continuous improvement
 - Manage process governance
 - Enable change management
 - Leverage BPM tools
- Define Organisation-Wide Business Process Value Chains
 - Map the organisation's core activities
 - Assign executive responsibility for/sponsorship of process chains
- Measure Process Chain Performance
 - Manage to process measures and chains of accountability

Alignment of Strategy, Value Chain and Business Process

- Most successful organisations implementing BPM pay attention to the alignment of business strategy, value-chain definitions and business processes
- BPM relies on key business strategies that set the primary direction of the enterprise
 - Value propositions for goods and services delivered
- Business strategy leads to enterprise and business unit goals as the basis for action plans and business tactics

Goals

- Business goals are most often an output of an organisations strategic planning efforts
 - Typically decomposed to include functional goals which align an organisations functional areas to overall strategy
- Process goals align business processes with overall organisation strategy

Executive Sponsorship/Governance

- Assigning executive leadership responsibility to oversee the performance of key processes is an indicator of maturity and seriousness
- Performance of a process is measured with accountability falling under the executive leadership and reported throughout the enterprise
- Important to have organisational discipline to utilise methodologies to document, store, manage and continuously improve the business processes, particularly those that make up the value chains
- Includes governance mechanisms to support BPM and associated tools
- Institutionalised across all functional areas in order to optimise the impact on value chain performance

Process Ownership

- Successful BPM implementations recognise that the role of a process owner is critical
- Process owner is responsible for the entire end-to-end process across functional departments
- Success of this role depends on the authority the individual has to control the budget and make decisions that effect the development, maintenance and improvement of the business process

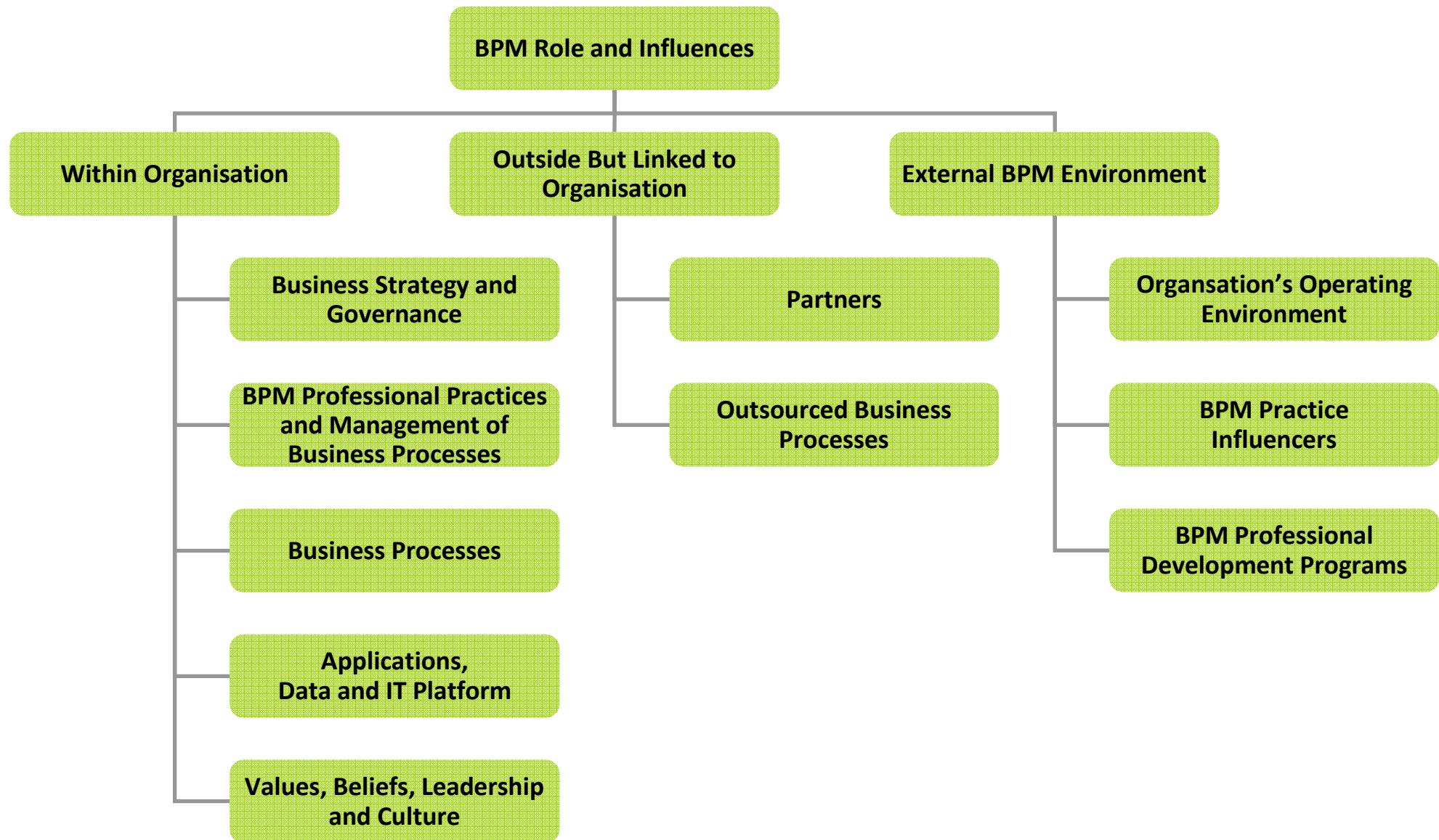
Metrics, Measures and Monitoring

- Management requires measurement
- Business process measurement and monitoring provides critical feedback on process design, performance and compliance
- Necessary to measure process performance in terms of a variety of possible metrics related to how well the process meets its stated goals

Institution Practices

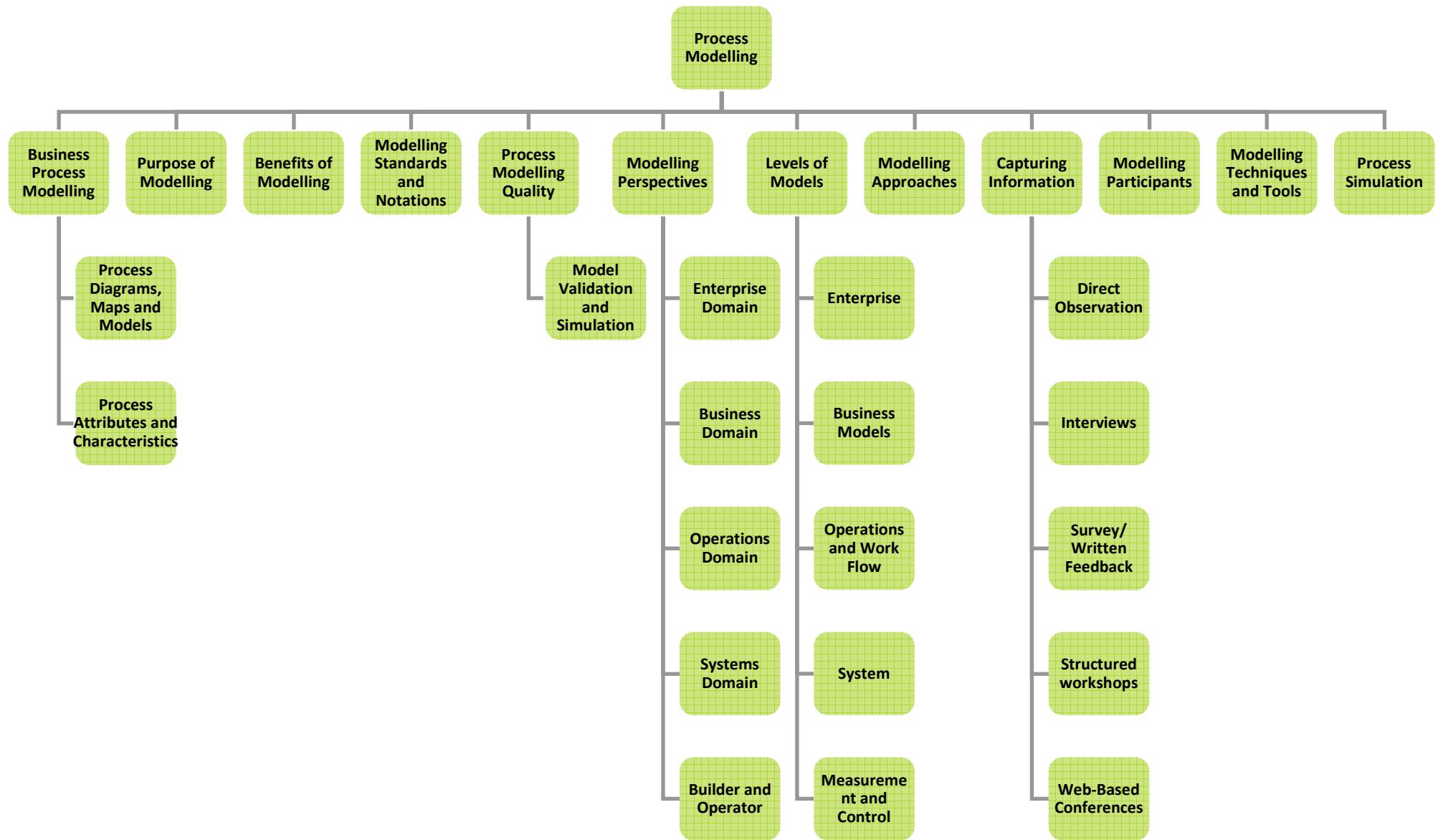
- Effective attainment of BPM success factors to create value for an organisation depends on
 - Organisational practices
 - Mastery of concepts and skills by individuals with accountability for managing business processes

BPM Role Operating Environment and Influences



Process Modelling

Process Modelling Topic Scope



Business Process Modelling

- Set of activities involved in creating representations of an existing (as-is) or proposed (to-be) business process
- Provides an end-to-end perspective of an organisations primary, supporting and management processes
- Modelling is a means to an end and not an end in itself
 - You model to get results and reach conclusions

Process Diagrams, Maps and Models

- Diagrams
 - Process diagram often depicts simple notation of the basic workflow of a process
 - Depicts the major elements of a process flow, but omits the minor details which are not necessary for understanding the overall flow of work
- Maps
 - More precision than a diagram
 - More detail about process and important relationships to other elements such as performers (actors), events, results
 - Provide a comprehensive view of all of the major components of the process
- Models
 - Represents the performance of what is being modelled
 - Needs greater precision, data about the process and about the factors that affect its performance
 - Often done using tools that provide simulation and reporting capability to analyse and understand the process

Process Attributes and Characteristics

- Attributes and characteristics that describe the properties, behaviour, purpose and other elements of the process
- Process attributes are captured in a tool in order to organise, analyse and manage an organisation's portfolio of processes
- Inputs/Outputs
- Events/Results)
- Value Add
- Roles/Organisations
- Data/Information
- Probabilities
- Queuing
- Transmission Time
- Wait Time
- Arrival Patterns/Distributions
- Costs (indirect and direct
- Entry Rules
- Exit Rules
- Branching Rules
- Join Rules
- Work/Handling Time
- Batching
- Servers (number of people available to perform tasks)

Purpose of Process Modelling

- A model is rarely a complete and full representation of the actual process
 - Focus on representing those attributes of the process that support continued analysis from one or more perspectives
- Objective is to create a representation of the process that describes it accurately and sufficiently for the task at hand
 - Understanding the business process through the creation of the model
 - Creating a visible representation and establishing a commonly shared perspective
 - Analysing process performance and defining and validating changes
- To be model is an expression of the target process state and specifies the requirements for the supporting resources that enable effective business operations

Purpose of Process Modelling

- Models are simplified representations that facilitate understanding of that which is being studied and making decisions about it
- Mechanism for understanding, documenting, analysing, designing, automating and measuring business activity as well as measuring the resources that support the activity and the interactions between the business activity and its environment
- For process managed business, process models are the primary means for
 - Measuring performance against standards
 - Determining opportunities for change
 - Expressing the desired end state preceding a change effort

Reasons for Process Modelling

- To document an existing process clearly
- To use as a training aide
- To use as an assessment against standards and compliance requirements
- To understand how a process will perform under varying loads or in response to some anticipated change
- As the basis for analysis in identifying opportunities for improvement
- To design a new process or new approach for an existing process
- To provide a basis for communication and discussion
- To describe requirements for a new business operation

Benefits of Modelling

- Models are relatively fast, easy and inexpensive to complete
- Models are easy to understand (when compared to other forms of documentation)
- Models provide a baseline for measurement
- Models facilitate process simulation and impact analysis
- Models leverage various standards and a common set of techniques

Modelling Standards and Notations

- Range of number of modelling and notational standards and techniques
- Models provide a language for describing and communicating as-is and to-be process information
 - Like all new languages must be learned
- Benefits of using a standards based approach
 - A common symbology, language and technique which facilitate communication and understanding
 - Standards-based models provide common and consistently defined processes definitions which eases the process of design, analysis and measurement and facilitates model reuse
 - An ability to leverage modelling tools based on common standards and notations
 - An ability to import and export models created in various tools for reuse in other tools
 - Some tool vendors are leveraging standards and notations for developing the ability to be exported from a modelling notation to an execution language (for example BPMN to BPEL)

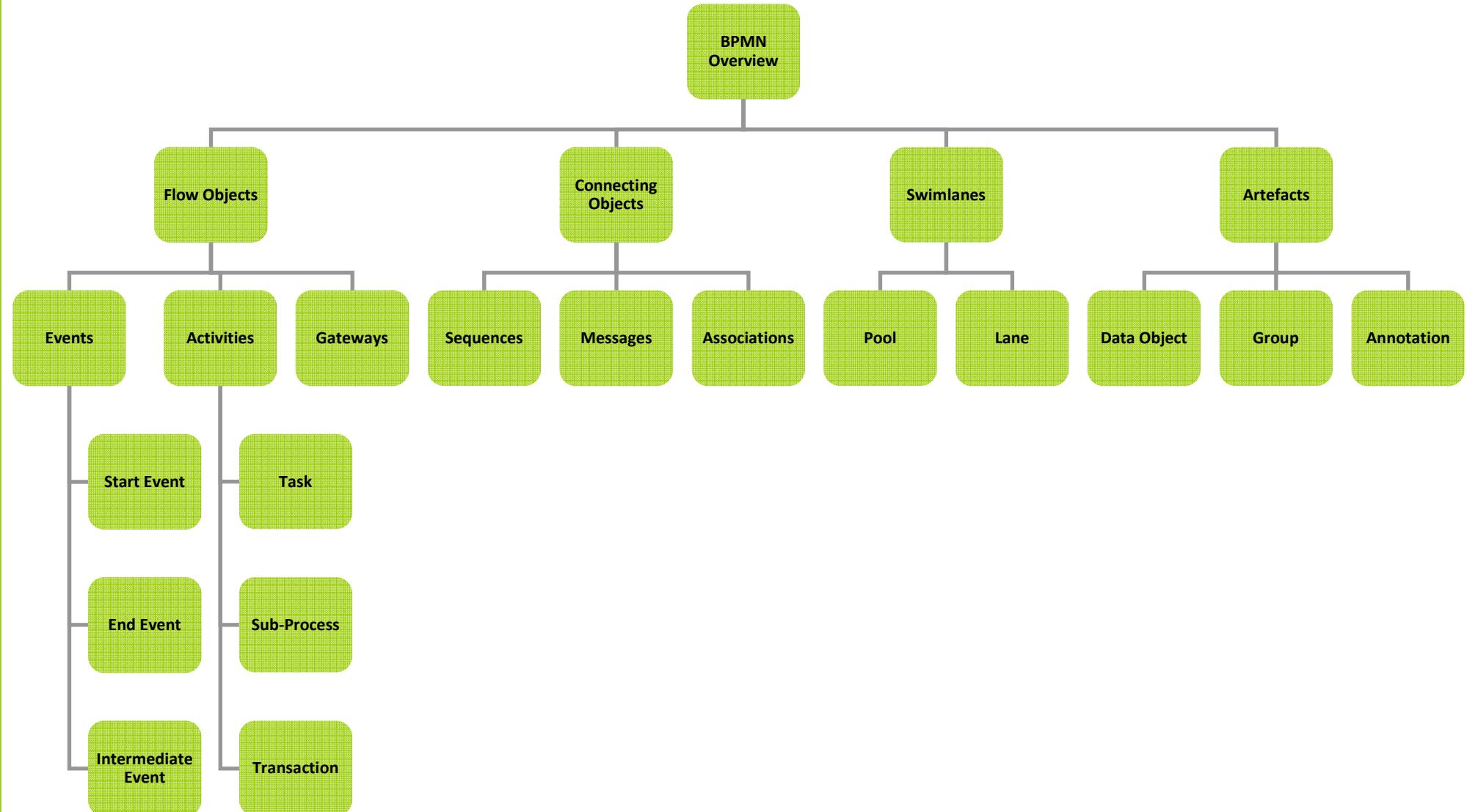
Modelling Standards and Notations

- Commonly used standards (not complete)
 - Business Process Modelling Notation (BPMN)
 - Flow Charting
 - Swim Lanes
 - Event Process Chain (EPC)
 - Value Chain
 - Unified Modelling Language (UML)
 - IDEF-0
 - LOVEM-E
 - SIPOC
 - Systems Dynamics
 - Value Stream Mapping

Business Process Modelling Notation (BPMN)

- Widely used and supported standard for business process modelling
- Provides a graphical notation for specifying business processes in a Business Process Diagram (BPD)
- Uses a flowcharting technique similar to activity diagrams from Unified Modelling Language (UML)
- Can output BPMN to Business Process Execution Language (BPEL)
 - Standard executable language for specifying interactions with Web Services
- Emerging standard

Business Process Modelling Notation (BPMN) – Simplified Structure



BPMN - Events

- Event denotes something that happens
- Classifications
 - **Catching** – triggered by external event
 - **Throwing** – generating an output
- Types
 - **Start Event** - acts as a trigger for the process
 - **End Event** - represents the result of a process
 - **Intermediate Event** - represents something that happens between the start and end events

BPMN - Activities

- Activity describes the kind of work that must be done
- Types
 - **Task** - represents a single unit of work that is not or cannot be broken down to a further level of business process detail
 - **Sub-Process** - used to hide or reveal additional levels of business process detail
 - **Transaction** - a form of sub-process in which all contained activities must be treated as a whole

BPMN - Gateway

- A Gateway determines forking and merging of paths depending on the conditions expressed

BPMN - Connecting Objects

- Flow objects are connected to each other using connecting objects
- Types
 - **Sequence Flow** - shows in which order the activities will be performed
 - **Message Flow** - shows what messages flow across organisational boundaries
 - **Association** - associate an Artefact to a Flow Object and can indicate directionality

BPMN - Swim Lanes

- Visual mechanism of organising and categorising activities, based on cross functional flowcharting
- Types
 - **Pool** - represents major participants in a process and contains one or more lanes
 - **Lane** - used to organise and categorise activities within a pool according to function or role

BPMN - Artefacts

- Used to bring some more information into the model/diagram
- Types
 - **Data Objects** - show the data is required or produced in an activity
 - **Group** - used to group different activities but does not affect the flow in the diagram
 - **Annotation** - used to provide the model/diagram with understandable details

Flow Charting

- Simple type of diagram that represents a process, showing the steps as boxes of various kinds and their order by connecting these with arrows
- Widely used

Swim Lanes

- Swim lanes are an addition to the boxes and arrows process flow view of flow-charting that show how the work flows across organisational units or is handed-off from one role to another
- Overall process is divided into lanes, with one lane for each person, group or subprocess
- Processes and decisions are grouped by placing them in lanes
- Arranged horizontally or vertically and are used for grouping the sub-processes according to the responsibilities of those swim lanes

Event Process Chain (EPC)

- An EPC is an ordered graph of events and functions
- Provides various connectors that allow alternative and parallel execution of processes
- Tasks (activities) are followed by outcomes (events) of the task, developing a process model
- EPC method was developed within the framework of ARIS (BPM toolset)
- EPC elements
 - **Event** - describe under what circumstances a function or a process works or which state a function or a process results in
 - **Function** - model the tasks or activities
 - **Organisation Unit** - determine which person or organisation within the structure of an enterprise is responsible for a specific function
 - **Information, Material or Resource Object** - portray objects in the real world
 - **Logical Connector** - logical relationships between elements in the control flow
 - **Logical Relationships** - Branch/Merge, Fork/Join and OR
 - **Control Flow** - connects events with functions, process paths or logical connectors creating chronological sequence and logical interdependencies between them
 - **Information Flow** - show the connection between functions and input or output data
 - **Organisation Unit Assignment** - show the connection between an organisation unit and the function it is responsible for
 - **Process Path** - show the connection from or to other processes

Value Chain

- Value chain notation is used to demonstrate a single continuous flow from left to right of the sub-processes that directly contribute to producing value for the organisation's customers (clients/constituents)
- Value chain is a chain of activities for a firm operating in a specific industry
- Chain of activities gives the products more added value than the sum of added values of all activities

Unified Modelling Language (UML)

- UML provides a standard set of 14 diagramming techniques and notations primarily for describing information systems requirements
- Primarily used for systems analysis and design
- Can use UML activity diagrams for business process modelling
- UML can be very verbose

IDEF-0 (Integration Definition for Function Modelling)

- Function modelling methodology for describing manufacturing functions
- Federal Information Processing Standard (FIPS) that was developed by the US Air Force for documenting manufacturing processes
- Part of the IDEF family of modelling languages in software engineering
 - IDEF0 produces a function model that is structured representation of the functions, activities or processes
 - IDEF1 produces an information model that represents structure and semantics of information
 - IDEF2 produces a dynamics model that represents time-varying behavioural characteristics

LOVEM-E (Line of Visibility Engineering Method - Enhanced)

- Notation set and a modelling technique that was developed as part of IBM's Business Process Reengineering Methodology
- Based on the process path management concept
- Introduces concepts of the customer encounter and the collaborative nature of work between external and internal parties and the supporting information systems
- Not widely used

SIPOC (Supplier, Input, Process, Output and Customer)

- Style of process documentation used in Six Sigma

Systems Dynamics

- Approach to understanding the behaviour of complex systems over time
- Deals with internal feedback loops and time delays that affect the behaviour of the entire system
- Systems Dynamics models are “activity on arrow” diagrams rather than “activity on node” diagrams
- Useful in developing dynamic lifecycle type models that focus on the overall business system’s performance and the impact of changing the key variables that affect overall performance

Value Stream Mapping

- Technique used in Lean Manufacturing
- Expresses the physical environment and flow of materials and products in a manufacturing environment
- Used to analyse the flow of materials and information currently required to bring a product or service

Process Modelling Quality

- Most process analysis and design efforts require the use of models to describe what is happening during the process
- Useful to have some standards and measures of quality as it relates to process modelling
- Quality of model defined by its accuracy, amount of detail and completeness
- Can have multiple versions or iterations of models are created over time to capture more detail and improve the quality of the model
- During the modelling of a process, several disconnections, restrictions and/or barriers may become apparent
- Items should also be noted on the model as well as any other information discovered that will help create a common understanding of the current state

Requirements of a Process Model

- The business environment including the customers, suppliers, external events or market pressures that effect or interact with the process
- The organisational structure which includes the hierarchical or functional view of the organisation and how the people work together (this information helps understand who the key decision makers are within the process)
- The functional or departmental structure of the organisation which explains how the functions or departments work together in the process
- The business rules which control the decisions that are made during the process and workflow
- The activities or actions that take place within the process and who does those actions

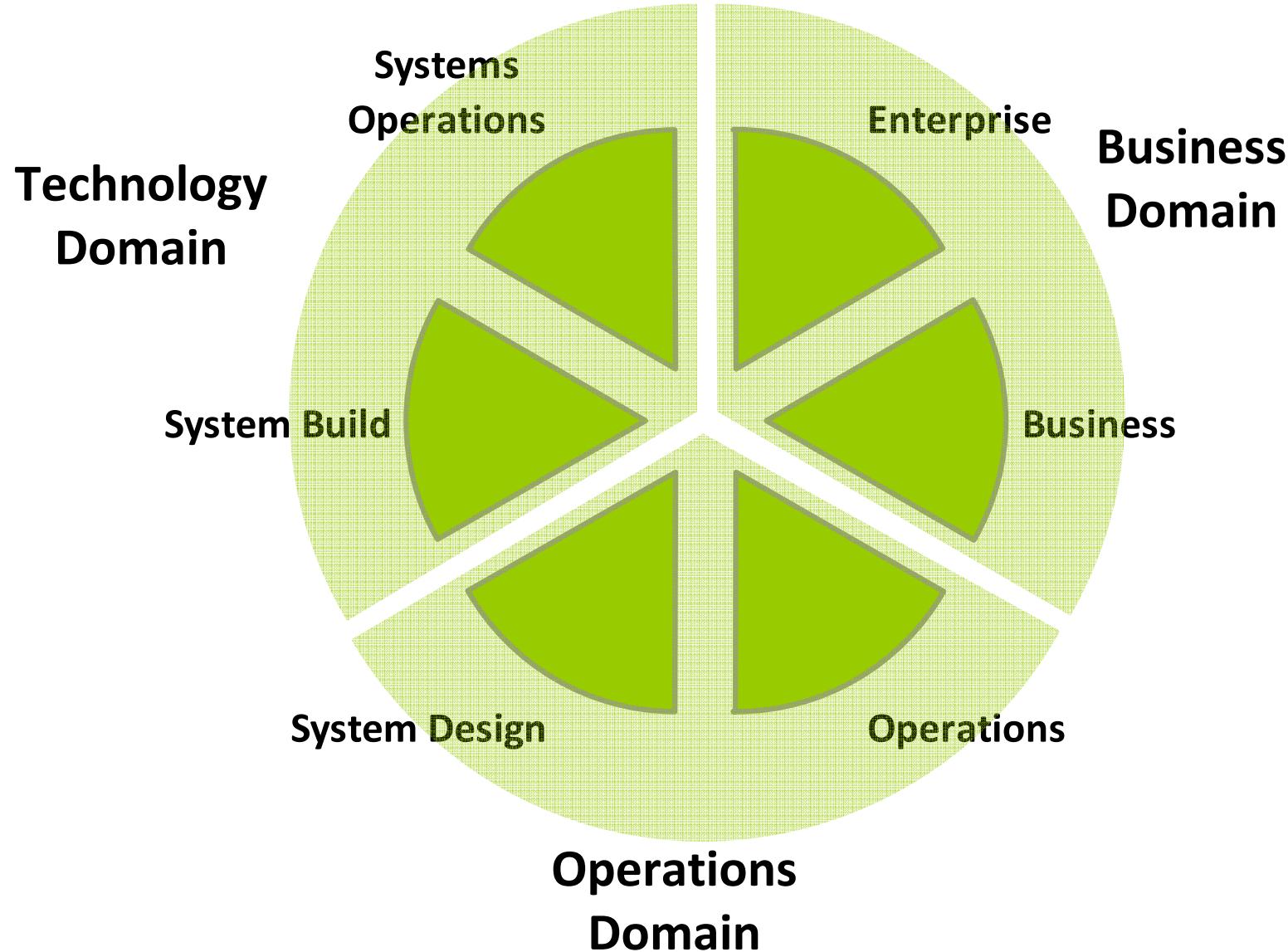
Model Validation and Simulation

- Useful or necessary to validate the model through simulation before finalising the analysis
- Validate the model through simulation is to compare simulated outputs to real-world results
- Significant differences should be understood and corrected before the model is used for detailed analysis
- Assemble a group of people who work in the process and simulate the process by having one person in the group describe each activity and its product(s)
 - Real-world participants should be able to tell if the model is accurate

Modelling Perspectives

- Processes can be modelled from many perspectives
- In a BPM environment an organisation's strategy is enacted through process performance, which is linked to the operations model that must be supported by the information technology platform
- To keep these aligned, there needs to be a line of visibility from one perspective to the other in a coherent framework, typically maintained in a process repository

Modelling Perspectives



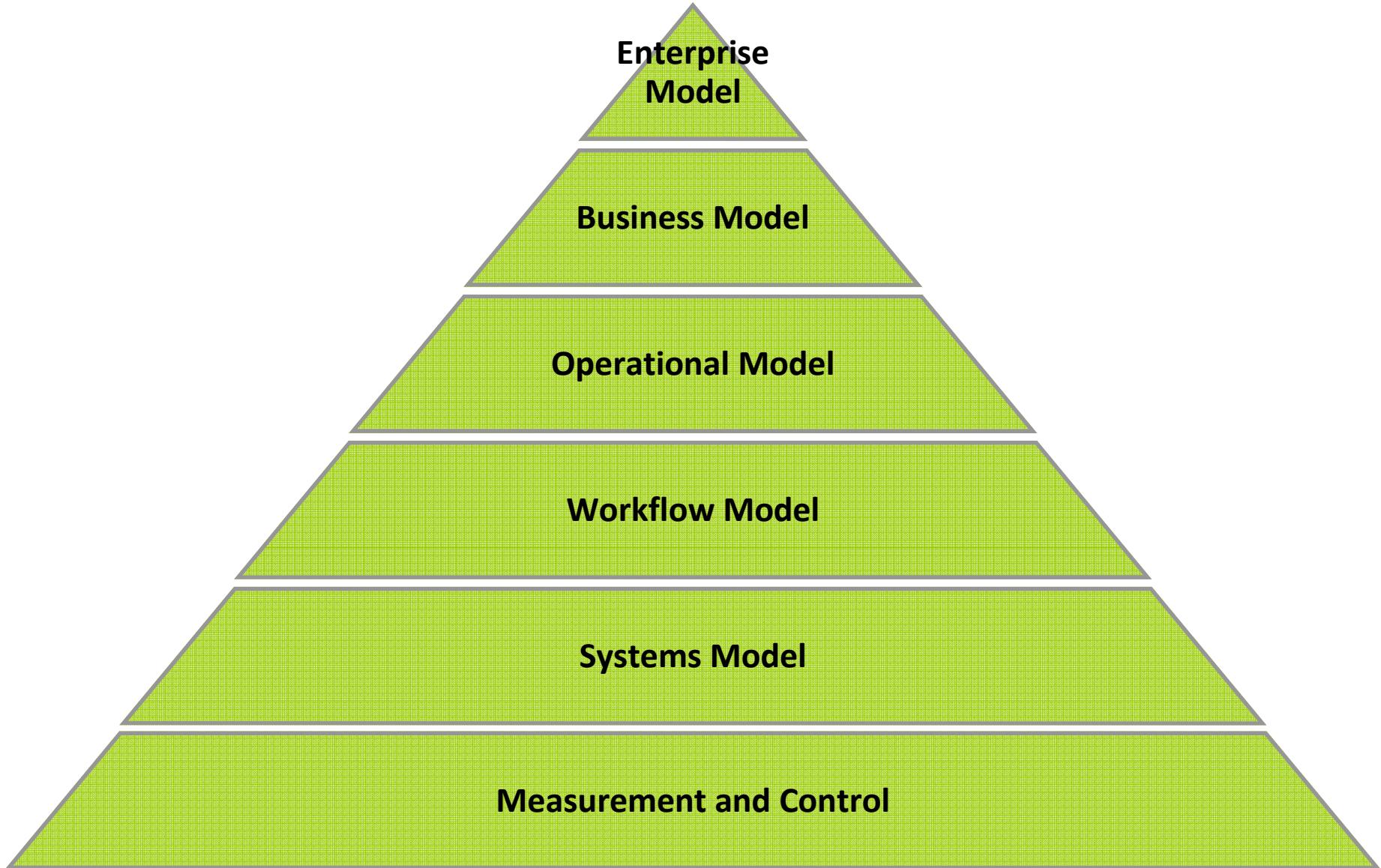
Modelling Perspectives

- Enterprise Perspective
 - See how the enterprise operates overall and that the primary processes are arranged in some category that gives a sense of their interaction
 - View supports those who must align overall enterprise strategy with aggregated process performance
- Business Perspective
 - Supports each of the process owners who is accountable for and has the authority to address overall process performance
 - Required as the business context that describes each major business process and defines the scope and reach of major transformation efforts
- Operations Perspective
 - More detailed models support the perspectives of those managers who are responsible for monitoring performance and look for ways to continuously improve operational performance

Modelling Perspectives

- System Design Perspective
 - Identifies how work gets done and how the systems support that work is the systems perspective
 - Describes requirements for systems support and performance in support of tasks and procedures
- System Build Perspective
 - Support the individuals who have to build the system
- Systems Operations Perspective
 - Support the individuals who have to build all of the support systems to enable work and to operate the systems that are required to continue to perform that work

Levels of Models



Enterprise Models

- Typically a highly abstracted business classification model that is used to describe the focus of the organisation and to organise the business processes in an overall business architecture
- Each of the high level business processes are then described in more detail by their major components (sub-processes)
- An enterprise model will typically have two or more levels of detail and serve as a high level business blueprint or business architecture
 - May or may not include support and management processes
- Processes may be mapped to Key Performance Indicators (KPIs) and strategic goals in a process portfolio and used to prioritise resources and project efforts
- Can be mapped to formulate strategies for alternate future scenarios or to develop high level estimates and forecasts

Business Models

- Business models depict the major events, activities and results that describe each of the major end-to-end processes, their sub-processes and their interactions with their environment
- Business models also typically describe the support and management processes as well and how they interact with or support the primary processes

Operations and Work Flow Models

- Describe how the business model is carried out
- Detailed models mapped down to activity, task and procedural level details
- Describe the physical implementation details of the operating processes

Systems Models

- Depict the triggering events, software processes, data flows and system outputs required to support business operations

Measurement and Control Models

- Indicate points in the operation where key performance measure and control points are monitored

Modelling Approaches

- Approaches to process modelling: top-down, middle-out and bottom-up
- Iterative process approach where several successive passes are used to develop the model
- Approach used varies depending on the purpose and the scope of the effort
- Bottom-up approaches, centered on very detailed activity and task oriented work flows, work best for projects aimed at improving narrowly focused functions within a single department or operation
- Top-down methods work well for projects aimed at improving and innovating large scale, end-to-end, cross-functional business processes and as a means to manage performance of these business processes
 - Develop a new business model first and then determine what needs to be done to be capable of its implementation
 - Align business processes with business strategies

Capturing Information

- Techniques for capturing information for process modelling
 - Direct Observation
 - Interviews
 - Survey/Written Feedback
 - Structured Workshops
 - Web-Based Conferencing

Direct Observation

- Good way to document current procedural detail
- May uncover activities and tasks that might not be otherwise recognised
- Can be effective in identifying variations and deviations that occur in day-to-day work
- However limited to a relatively small sample size
 - May not capture the range of variations across groups and locations
- Direct observation also entails the risk of the performers doing what they think you want to see rather than what they normally do (Hawthorne effect)

Interviews

- Can create a sense of ownership and participation in the process of modelling and documenting business processes
- Requires minimal time and disruption of normal duties from the participants
- May take more overall elapsed time to schedule and conduct the interviews than other methods
- May be difficult afterward to build a cohesive process flow and to map the different views into a single view
 - Generally requires follow up
- Sometimes does not uncover all of the activities to completely describe the process

Survey/Written Feedback

- Written feedback requires minimal time and disruption of duties
- Liable to the same problems as are encountered with one-on-one interviews such as
 - Taking more time
 - Missing some information
 - Time spent reconciling differences of opinion
 - Where the same work has just been described differently by different people, it may require follow up

Structured Workshops

- Focused, facilitated meetings where enough subject matter experts and stakeholders are brought together to create the model interactively
- Offers the advantage of shortening the elapsed calendar time required to develop the models and gives a stronger sense of ownership to the workshop participants than other techniques
- Workshops may be more costly than other methods
- Models produced in workshops require less follow up and generate a commonly agreed upon description of a process faster and with higher quality than other techniques

Web-Based Conferencing

- Gain similar benefits to face-to-face workshops, but work best with smaller groups
- Workshops done this way can be more difficult to monitor and manage individual participation in the group work

Modelling Participants

- Number of roles involved in developing process models due to the wide range of applicability
- Models can be created by individuals expressing their personal knowledge
- Models can be created by groups outlining the scope and depth of the business they are addressing
 - Development of process models may involve many people to create a set of models that fully represent the process
 - Business strategists
 - Business managers
 - Financial analysts
 - Auditors
 - Compliance analysts
 - Process performance analysts
 - Requirements analysts
 - Systems analysts
 - Business analysts
- Subject matter experts depend on modelling approach
 - Executives expressing high level business dynamics
 - Mid-level managers defining monitoring and control mechanisms
 - Workers who actually perform the work being modelled

Modelling Techniques and Tools

- Many modelling tools and techniques available from paper to specialised BPM tools
 - White Boarding and Flip Charts
 - Paper and Post-Its
 - Drawing Tools and Reports
 - Electronic Modelling and Projection
- Process analysis can be done effectively and efficiently using **any type of tool**
 - **Focus of the analysis or design should be on the process and not on the tool itself**

White Boarding and Flip Charts

- Draw the process flows and flip charts to capture other information
- Later transcribe the results into drawing or modelling and reporting tools
- Common method used in workshops, interviews or structured/facilitated modelling sessions

Paper and Post-Its

- Cover the walls of a room with taped up paper
- Have workshop participants put removable sticky-notes on the paper until they have arranged the activities into the sequence on which they agree
- Done either the participants directing the facilitator in the placement of these activities or the participants place the notes depicting activities
- Resulting model must then be transcribed into a drawing or modelling and reporting tool later

Drawing Tools and Reports

- During or after interviews and workshops, participants capture the process flows and notes using inexpensive drawing tools, such as Visio, PowerPoint or any other electronic drawing tool

Electronic Modelling and Projection

- Use electronic drawing or modelling tools and projecting the images to large screens to capture and view the developing models
- Model is visible and can be modified during the workshop
- No transfer to another toolset required
- Repository-based tools allow the reuse of objects or patterns that have already been defined in previous efforts

Capturing Information and Modelling Techniques and Tools

		Modelling Techniques and Tools			
		White Boarding and Flip Charts	Paper and Post-Its	Drawing Tools and Reports	Electronic Modelling and Projection
Techniques for Capturing Information	Direct Observation				
	Interviews				
	Survey/Written Feedback				
	Structured Workshops				
	Web-Based Conferencing				

Process Simulation

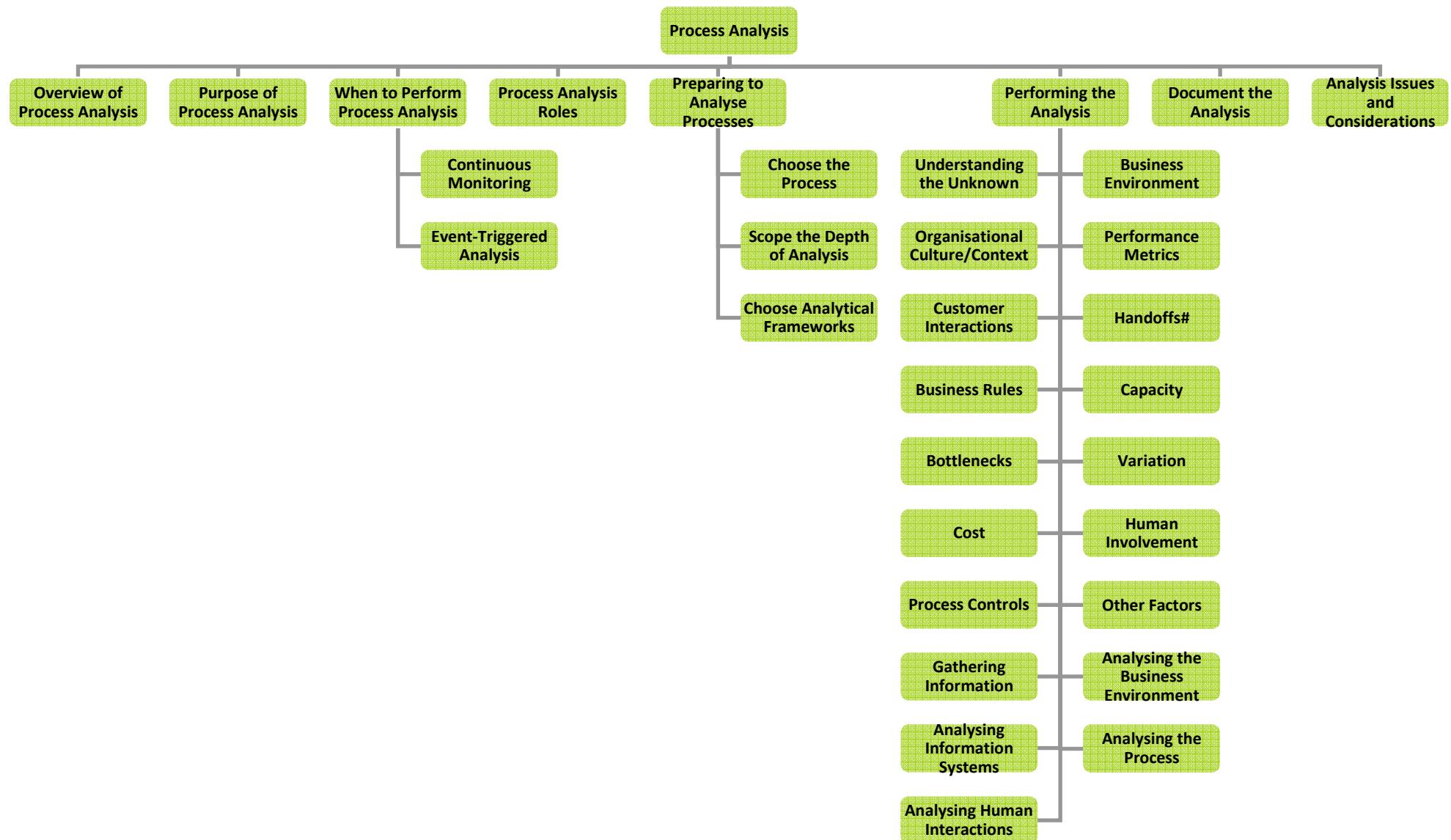
- Form of models which provide valuable insight to process dynamics
- Simulations require sufficient data which typically allows the process to be mathematically simulated under various scenarios, loads, etc.
- Simulations can be manual or electronic using process simulation tools
- Identify exceptions and handoffs while providing important insights on existing and required communication between tasks, functional areas, teams and systems
- Benefits
 - Validate a model by demonstrating that real transaction sets, when run through the model exhibit, produce the same performance characteristics as those in the actual process
 - Predict the process design's performance under differing scenarios (vary the number of transactions over time, the number of workers, etc.)
 - Determine which variables have the greatest affect on process performance
 - Compare performance of different process designs under the same sets of circumstances

Modelling Summary

- Process models are simplified representations of some business activity
- A process model serves as a means to communicate several different aspects of a business process
- Process models are used to document, analyse or design a business model
- Process models are useful as documentation, a means for communication and alignment, design and requirements or a means to analyse aspects of the process, training and explanation
- Different levels or perspectives of business processes are expressed by models showing different scopes and levels of detail for different audiences and purposes
- There are many different styles of process modelling notation and ways to develop process models

Process Analysis

Process Analysis Topic Scope



Process Analysis

- Process analysis is the first step in establishing a new process or updating an existing process is creating a common understanding of the current state of the process and its alignment with the business objectives
 - Process is a defined set of sequential or parallel activities or behaviours to achieve a goal
 - Process analysis is creating an understanding of the activities of the process and measures the success of those activities in meeting the goals
- Accomplished through various techniques including mapping, interviewing, simulations and various other analytical techniques and methodologies
- May include a study of the business environment and factors that contribute to or interact with the environment such as government or industry regulations, market pressures and competition

Process Analysis

- Other factors to be considered
 - The context of the business
 - Business strategy
 - Supply chain (the inputs and outputs of the process),
 - Customer needs
 - Organisational culture
 - Business values
 - How the process will perform to achieve business goals
- Information gained through the analysis should be agreed upon by all those that interact with the process
- Should represent what is actually happening and not what is thought or wished to be happening
- Unbiased view without placing blame for existing inefficiencies

Purpose of Process Analysis

- Analysis generates the information necessary for the organisation to make informed decisions assessing the activities of the business
 - Without it, decisions are made based on opinion or intuition rather than documented, validated facts
- Due to business change the processes of an organisation can quickly become inconsistent to their original design and no longer meet the needs of the business
- Process analysis is an essential tool to show how well the business is meeting its objectives
- Creates an understanding of how work (the transformation of inputs to outputs) happens in the organisation

Purpose of Process Analysis

- Analysis generates an understanding and measurement of process effectiveness and its efficiency
 - Effectiveness of a process is a measurement of achieving the purpose or need for the process whether the process
 - Meets the needs of the customer
 - Satisfies the objectives of the business
 - Is the right process for the current business environment or context
- Measuring the efficiency of the process indicates the degree of resources utilised in performing the activities of the process
- Measures whether the process is costly, slow, wasteful or has other deficiencies and is a measurement of the performance of the process
 - Uncovers important facts about how work flows in the organisation
 - Helps in the design and/or redesign of processes to better meet the goals of the business

Purpose of Process Analysis

- Information generated from analysis includes
 - Strategy, culture and environment of the organisation that uses the process (why the process exists)
 - Inputs and outputs of the process
 - Stakeholders, both internal and external, including suppliers, customers and their needs and expectations
 - Inefficiencies within the current process
 - Scalability of the process to meet customer demands
 - Business rules that control the process and why they must exist
 - What performance metrics should monitor the process, who is interested in those metrics and what they mean
 - What activities make up the process and their dependencies across departments and business functions
 - Improved resource utilisation
 - Opportunities to reduce constraints and increase capacity
- Information becomes a valuable resource to management and leadership to understand how the business is functioning
- Help them to make informed decisions on how to adapt to a changing environment
- Ensure that the processes running the business are optimal for attaining business objectives

When to Perform Process Analysis

- Can be the result of continuous monitoring of processes or can be triggered by specific events
 - Continuous Monitoring
 - Event-Triggered Analysis
 - Strategic Planning
 - Performance Issues
 - New Technologies
 - Startup Venture
 - Merger/Acquisition
 - Regulatory Requirements

Continuous Monitoring

- Business Process Management is a long-term commitment as part of the business strategy rather than a single activity that is completed and then forgotten
- Managing the business by process implies that there are regular and consistent performance metrics that monitor the processes of the organisation
- These metrics are routinely reviewed and steps are taken to ensure process performance meets the predetermined goals of the organisation
- Eventual goal should be the ability to continuously analyse processes as they are performed through the use of monitoring tools and techniques

Continuous Monitoring

- Benefits of continuous analysis
 - Alerts management to potential poor performance of the process
 - Help point to the cause of the poor performance such as system deviations, competition, environmental factors, etc.
 - If the process is not performing, immediate action can be taken to resolve the cause
 - Real-time feedback through continuous analysis provides a measurement for the human performance and reward systems
 - Reduces the number of process improvement projects performed, thus saving time and cost associated with those efforts

Event-Triggered Analysis

- Strategic Planning
 - Regular review and update of strategic plans
 - Survey the market and competitive landscape for new opportunities and establish new goals
 - Process analysis may need to occur following an update to the strategic plan to re-align the processes to meet the new organisation's objectives
- Performance Issues
 - Current performance may be declared inadequate for a variety of reasons
 - Process analysis can assist in determining the reasons for the inadequacies and identify changes that may improve performance
- New Technologies
 - Advancing technologies can improve process performance
 - Analysis will help create an understanding of how they should be adopted
 - Process analysis will help the organisation understand how and where new technologies should be applied to gain the maximum benefit to the organisation

Event-Triggered Analysis

- Startup Venture
 - When new ventures or businesses are anticipated need to identify the processes that will be required to successfully deliver the new products and services
- Merger/Acquisition
 - Mergers and acquisitions result in the joining of production and service processes
 - Process analysis should be performed before the merging of processes to ensure that the combined outcome meets the combined business objectives
- Regulatory Requirements
 - New or changes to existing regulations require the business to modify its processes
 - Process analysis as part of meeting these requirements will ensure the business is able to meet the requirement change with as little impact to the business as possible

Process Analysis Roles

- Process analysis can be performed by a single individual
- For larger organisations may require a cross-functional team
 - Provide a variety of experiences and views of the current state of the process
 - Result in a better understanding of both the process and the organisation
- Important to make sure that enough time has been allocation for the analysis resources to function properly in the assignment
- Communicate to the team their responsibilities according to the role that each will play in the process
- Have a thorough understanding of the expectations of each member
- Agree to commit the time and effort required to make the project a success

Process Analysis Roles

- Analyst
 - Decide the depth and scope of the analysis
 - How it is analysed
 - Perform the analysis
 - Provide documentation and final reports to the stakeholders and executive leadership
- Facilitator
 - Lead process analysis teams with an unbiased view
 - Objectivity is important to ensure the analysis truly represents the current state
 - Let the group discover the path through the analytical techniques chosen and through proper management of group dynamics
- Subject Matter Experts
 - Individuals closest to the process with knowledge and expertise
 - Familiar with both the business and technical infrastructure that supports the process

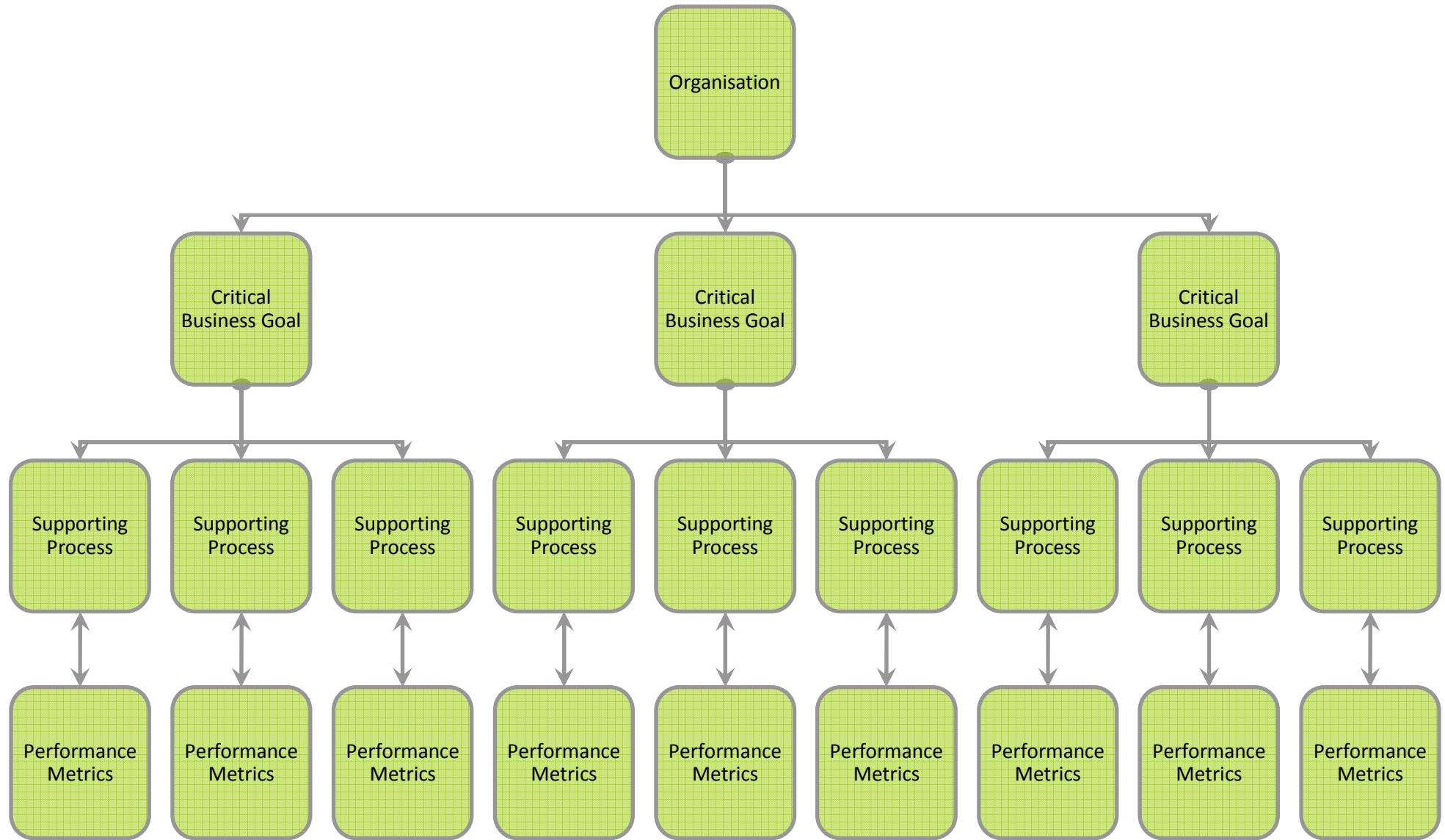
Preparing to Analyse Processes

- Steps
 - Choose the process
 - Determine the scope of the depth of analysis
 - Choose analytical frameworks

Choose the Process

- May be competing priorities and several processes that need to be analysed
- Agree priority through examining the critical business goals of the organisation
 - A critical business goal defines why the organisation exists and what controls the success of the organisation
 - An organisation may have one or more critical business goals
- Identify critical business goals
- Identify processes supporting those goals
- Process performance metrics

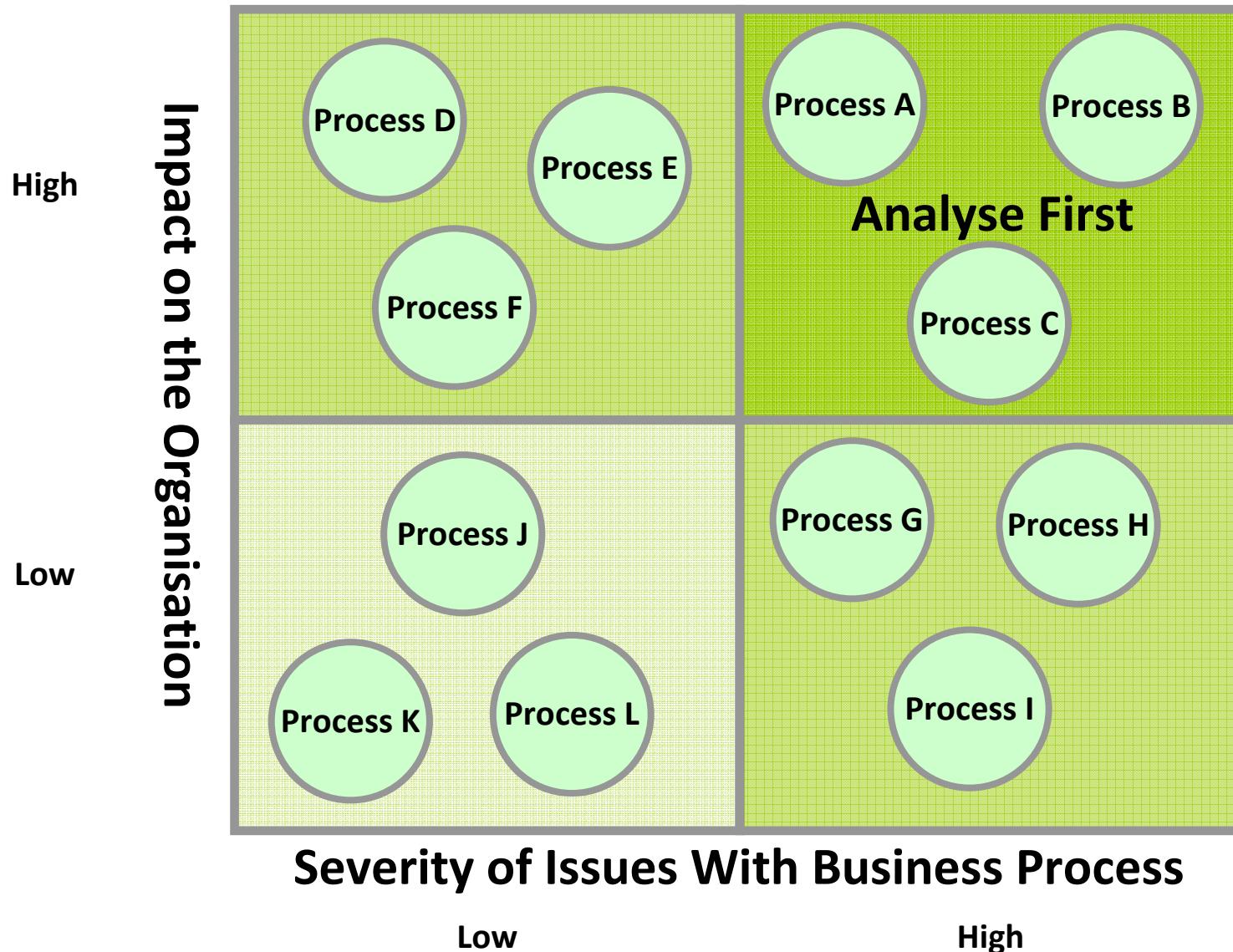
Choose the Process



Choose the Process

- Process performance can then be analysed and ranked to understand where the effort for process analysis should be placed
- Processes that scored high in both importance to the organisation and severity of current issues are the processes that need the most attention first

Choose the Process



Determine the Scope of the Depth of Analysis

- Scoping the depth of the process that is to be analysed is one of the first actions of the analyst or analysis team
- Scoping is critical to
 - Decide how far the project will reach
 - How much of the organisation it will involve
 - The impact any changes will have upstream and downstream of the process analysed
- May be necessary to interview a variety of individuals in various business functions before making scoping decision
- The more business functions and activities included in the analysis project, the more complicated the analysis and the longer it is likely to take
- Could break down larger processes and analyse sub-processes in order to optimise time but before doing so must consider the impact of future process improvement projects

Choose Analytical Frameworks

- No single right way to perform a business process analysis
- Topics to be studied, methods for studying them, tools to be used, etc. are all dependent on the nature of the process and the information available at the time the analysis begins
 - Some projects may start with a completed, verified model that can be used for analysis
- Review and decide which of the methodologies, frameworks or tools should be used
- Decide what techniques and tools to use in addition to or as part of the framework
- Too much analysis can also hinder the process of creating or re-designing a new process

Performing the Analysis

- Understanding the Unknown
- Business Environment
- Organisational Culture/Context
- Performance Metrics
- Customer Interactions
- Handoffs
- Business Rules
- Capacity
- Bottlenecks
- Variation
- Cost
- Human Involvement
- Process Controls
- Other Factors
- Gathering Information
 - Interviewing
 - Observing
 - Researching
- Analysing the Business Environment
 - Value Chain Analysis
 - S.W.O.T.
- Analysing Information Systems
 - Information Flow Analysis
 - Discrete Event Simulation
- Analysing the Process
 - Creating Models
 - Cost Analysis
 - Transaction Cost Analysis
 - Cycle-Time Analysis
 - Pattern Analysis
 - Decision Analysis
 - Distribution Analysis
 - Root-cause Analysis
 - Sensitivity Analysis
 - Risk Analysis
- Analysing Human Interactions
 - Direct Observation
 - Apprentice Learning
 - Participatory Video Analysis
 - Activity Simulation
 - Workplace Layout Analysis
 - Resource Allocation Analysis
 - Motivation and Reward Analysis

Understanding the Unknown

- Process of analysis is a process of discovery involving finding answers to a series of questions about the process
- Generate data to ensure that any conclusions are based on facts extrapolated from the data and not on hearsay or generalisations

Business Environment

- Obtain general understanding of the reason for the process to exist within the business environment
 - What is the process trying to accomplish?
 - Why has it been created?
 - What triggered the analysis?
 - What are the systems required to support or enable the process and how sustainable are those systems?
 - Where does it fit into the value chain of the organisation?
 - Is the process in alignment with the strategic objectives of the organisation?
 - Does it provide value to the organisation and how critical is it?
 - How well does it function in the current business environment and how well could it adapt if the environment were to change?
 - What are the risks to the process (external, environmental or internal) and can the process adapt to survive those risks?

Organisational Culture/Context

- Every organisation has a culture that impacts and is impacted by the internal and external processes of that organisation
 - How work is performed
 - What motivates the members of the organisation to do the work
 - By changing the process by which they work, the culture may also change
 - May lead to unintended consequences as new processes are put into place
- Part of the analysis process is to ask questions that will help understand the culture of the organisation and those unwritten rules that determine how and by who work is really accomplished

Organisational Culture/Context

- Leadership
 - Who in the organisation are the influencers and leaders?
 - Are they in positions of authority?
 - If they do not agree with the process improvements, will the improvement be successful?
- Social Networks
 - What kind of social networks exist in the organisation?
 - How will any changes affect those social networks?
 - If individuals will be displaced as a result of a process change, what would be the anticipated result of these networks?
- Personnel Change
 - Will individuals voluntarily leave the company as a result of the process change?
 - If so, how will this disrupt the process?

Organisational Culture/Context

- Motivation
 - What is the motivating factor for production?
 - If the workers are not self-motivated
 - how does work get done?
 - What are the incentives that reward work output?
 - If the success of a process has been measured on quantity as opposed to quality, what will happen if the measurement is shifted to quality?
 - Will the organisation stop producing to ensure quality?
- Change
 - How will the change affect the leadership training in the organisation?
 - What is the motivating factor for promotion?
 - Will the goals for measuring leadership change?
 - How will the reason for the process change be interpreted by the individuals effected or responsible for the process?
 - Is it a sign of weakness in the organisation or strategy?

Performance Metrics

- Performance issues can be defined as gaps between how a process is currently performing in relation to how it should be performing
- A methodical analysis can help to understand the nature of the gaps, why they exist and how the situation can be rectified
- Key element of this understanding is the identification of actionable and auditable metrics that accurately indicate process performance
 - Metrics will provide indicators as to where and how a process should be adjusted

Performance Metrics

- Is the process meeting its performance goals?
- Does the process take too long and if so, why and what is the measurement of “too long”?
- What could happen to make it worse?
- How would we know if the process has improved, i.e., if time is the measurement of the process, can cost be ignored or if cost is the measurement of the process, can time be ignored?
- How is data reported about the process, who views this data and what do they do with it?
- Where should performance points be recorded so the process is accurately measured and monitored?
- Would entering these performance points affect the performance of the process?

Customer Interactions

- Understanding the customer interactions with the process is critical to understanding whether the process is a positive factor in the success of the organisation's value chain
- The fewer the number of required interactions between the customer and a given service, the more satisfied the customer

Customer Interactions

- Who is the customer, what is his need, why does he choose to participate in the process and could he go elsewhere instead of using this process?
- Do customers complain about the process?
- How many times does a customer interact with the process? Is it too many? Are there redundancies in the interactions?
- How do we know if they are satisfied?
- What is the customer's expectation or objective with the process and why does he need the process?
- How does the customer want to interact with the process?
- If the process supports internal activities, what is the impact or indirect effects to the customer?

Handoffs

- Any point in a process where work or information passes from one system, person or group to another is a handoff for that process
- Handoffs are very vulnerable to process disconnections and should be analysed closely
- Typically, the fewer number of handoffs, the more successful the process
- Which of the handoffs are most likely to break down the process?
- Questions to ask of each handoff:
 - Are there any bottlenecks of information or services as a result of handoffs happening too quickly?
 - Can any handoff be eliminated?
 - Where do streams of information come together and is the timing accurate?

Business Rules

- Business rules create constraints that impact the nature and performance of the process
- Help define the performance expectations
- Create clear guidelines around these expectations
- Often business rules are created without an understanding of why they exist or are so outdated that they no longer apply but because of organisational culture they still are being followed

Business Rules

- Do the current business rules cause obstacles by requiring unnecessary approvals, steps or other constraints that should be eliminated?
- Are the business rules in alignment with the objectives of the organisation?
- Who created the business rules and upon what were they based?
- When were the rules created and does their need exist?
- If the rules were eliminated, what would be the result?
- How flexible is the process to accommodate changes in the business rules?

Capacity

- Analysing the capacity of the process tests upper and lower limits and determines whether the resources (machine or human) can appropriately scale to meet the demands
 - Is the process scalable and if inputs were increased, at what point will the process break down?
 - What would happen if the process slowed down and what is the cost of the idle time of the process? If idle, can those resources be put to work on other processes?
 - What happens when the process cannot get supplies and materials quickly enough to meet demand?
 - If the process speeds up can the consumer of the process handle the increase in production?

Bottlenecks

- A bottleneck is a constraint in the process that creates a backlog of work to be done
 - What is being constrained: information, product, service?
 - Why does the bottleneck exist, what are the factors contributing to the bottleneck and are these factors people, systems or organisational?
 - Is it the bottleneck the result of handoffs or lack of information?
 - Is the bottleneck the result of a resource constraint and what type of resource: human, system or machinery?
 - Are there unnecessary check points that create the bottleneck that can be eliminated?
 - If multiple streams are processing information in parallel, do the streams come together at the same time or is one waiting for the other?
 - Does the process create a backlog upstream or downstream from the process?

Variation

- Variation in the process may not be good
- Variation slows down the process and requires more resources to properly scale
- If the nature of the business requires variation as its core business strategy then look for places where some of the variation can be reduced which could save on the overall cycle time of the process
- How much variation is tolerable for the process?
 - Is variation necessary or desirable?
 - Where are the points where variation is most likely to occur? Can they be eliminated and if so, what are some recommendations?
 - Can automation help eliminate variation

Cost

- Understanding the cost of the process helps the team understand the value of the process in real money to the organisation
 - What is the total cost of the process?
 - Can the process be broken up into small cost allocations?
 - Is the cost in line with industry best practices?
 - Is the cost absorbed by the customer directly or is it a cost of business?
 - Can the cost be reduced through automation or technology improvements? If so, how and by what extent?

Human Involvement

- Processes involve either automated activities or activities performed by people
- Automated activities generally run consistently and when they do not it is possible to find and correct the situation that is causing the problem
- Activities performed by people are more complex as they involve judgment and skill that cannot be automated
 - People do not always do the same task in the same way

Human Involvement

- How much variability is introduced by the human element? Is the variability tolerable?
- Can the action be automated? What would be the result to the process? What would be the result to the human element and to the culture of the organisation?
- How complex is the task? What are the skill sets required? How are performers trained for the task?
- How do the performers of the task respond to external events during the task?
- How does the performer know when the task is done well? What feedback systems are in place to guide the performer? What can the performer do with this feed back – what can he or she change with this knowledge?
- Does the performer know where the task lies in the process and what the results of the actions are downstream? Does he /she know what happens before the task? What does the performer do with variations in the inputs for the task?
- Can the performer identify variations before the task is completed?
- What is the motivation for performing the task or performing the task well?
- How much knowledge is available to the performer to accomplish this task? Is it sufficient?

Process Controls

- Process controls are put in place to ensure adherence to legal, regulatory or financial constraints or obligations
- Process controls are different from control processes
 - Process controls defines the control
 - Control processes defines the steps to achieve that control
- Questions to assist in understanding what process controls are in place
 - What are the environmental impacts of the process and do those impacts need to be controlled?
 - Who are the regulatory or governing agencies that will regulate the process and do they need to be informed of the process change?

Other Factors

- Purpose of the discussion topics is to initiate and encourage discussion about the process
- Other discussion topics not mentioned will naturally arise during the process analysis and should be explored
- Some of the topics noted above might not apply to the process being analysed
- The analysis must encompass a variety of techniques and topics to achieve a complete and well rounded understanding of the process

Gathering Information

- Next step in the analysis is for the analyst or team to gather as much relevant information about the process and business environment as possible
- Types of information gathered depend on the business and process being analysed
 - The strategic information about the company such as long term strategy, markets, threats, opportunities, etc.
 - A company's performance in comparison to its peers or benchmarked to other related industries
 - The rationale for the process analysis and at who's request
 - The fit of the process into the organisation
 - The people who should be involved in the process analysis project
- Sources of information
 - Interviews with individuals involved in the process
 - Performance records/transaction reviews on the process and walkthroughs of the process
 - Audit reports

Interviewing

- Interviews those who are involved in or are associated with the process are an important method of gathering information and preparing for the process analysis
 - Process owners, internal or external stakeholders (vendors, customers or partners), those who work the process and those who pass inputs to or receive outputs from the process
- Face-to-face setting is more productive as they allow for greater dialog and discussion about what is or was actually happening
- Group interview performed by a facilitator can also be effective in generating discussion about processes

Observing

- Direct observation of the process is an important method of gathering information
 - Directly observing the systems or observing the human interactions with the process, observing the process will help create an understanding of what the process is actually doing
- During an analytical observation of a process, further questions and interviews need to be conducted to better understand a certain point
- Interviews and fact finding should take place throughout the analysis process

Researching

- Research any documentation or notes regarding the existing process
 - Written documentation created when the process was created, transaction or audit logs, process diagrams, etc.

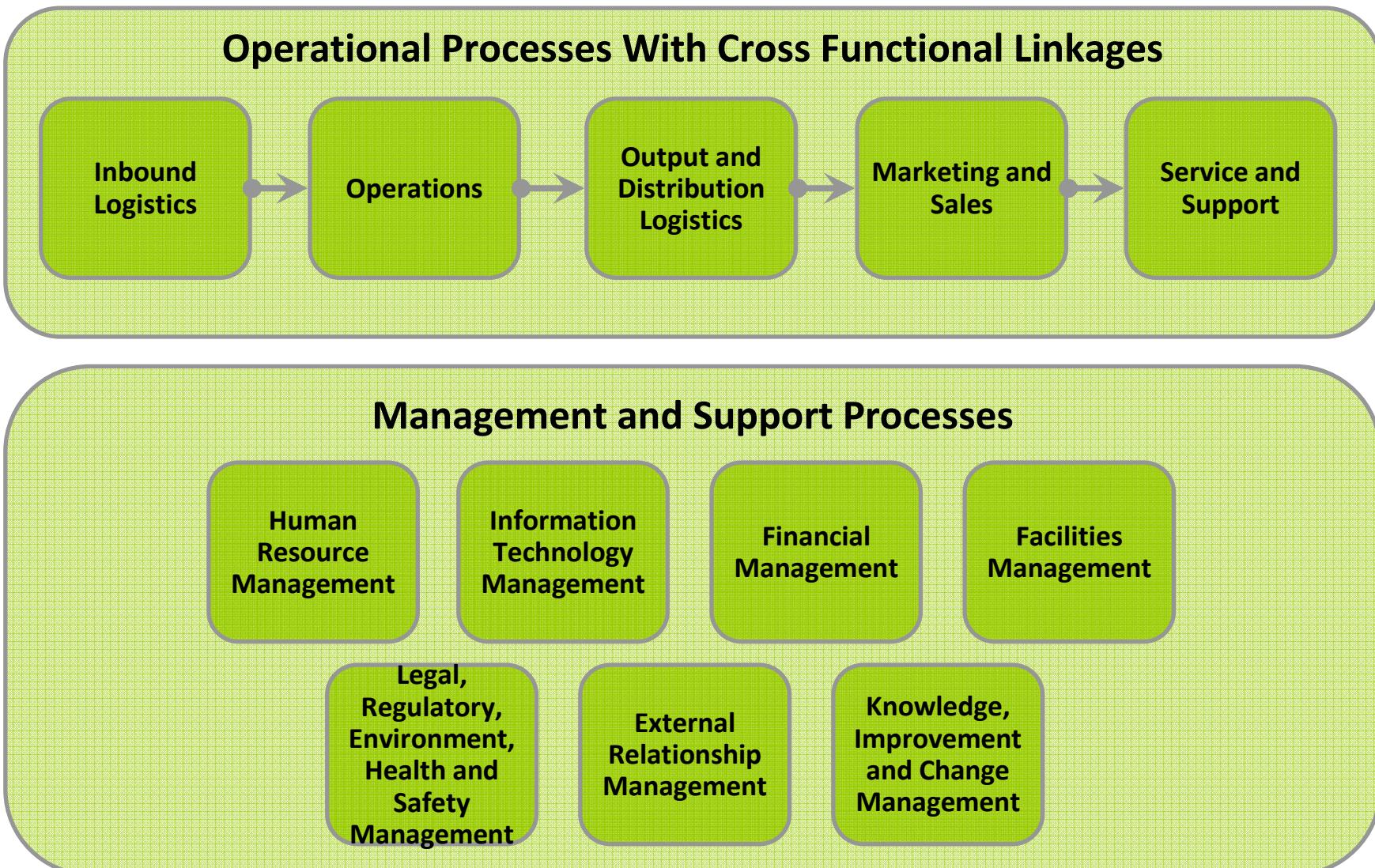
Analysing the Business Environment

- Before understanding a business process, must also understand how the business and the business environment interact
 - Includes understanding the market, the external factors affecting that market, the customer's demographics and needs, business strategy, the suppliers and how work transforms to meet the needs of the customers
- As the business environment changes over time, so must the organisation's processes
- The business analysis helps understand those environmental changes that took place since the process was first created and can help explain the reasons for poor performance of a process
 - Understanding these relationships is important to understand how processes might need to change
- Business environment analysis methods
 - Value Chain Analysis
 - SWOT

Value Chain Analysis

- Generic value chain model that introduced a sequence of five primary and several support activities that are fairly common through most organisations
- Easy to see the relationship of the value chain to standard process management principles:
 - Inbound logistics (inputs)
 - Operations (acting on inputs to create value)
 - Output and distribution logistics (outputs)
 - Sales, marketing, etc.
 - Service and support

Value Chain Analysis



Value Chain Analysis

- A value chain analysis enables the process analyst to look at the process from a macro view that includes suppliers, vendors, customers, etc.
- Identify weaknesses in the process that might occur upstream or downstream from the actual process itself

SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis

- SWOT analysis can assist the analyst in understanding the customer or their target market and what tolerances for process inefficiencies exist for the customer within their market
- Most markets, however, do not have a high degree of tolerance for process inefficiency and, therefore, should be considered volatile and highly effected by the process of the organisation
- SWOT analysis headings provide a good framework for reviewing strategy, position and direction of a company or business proposition or any idea

Analysing Information Systems

- Information systems analysis is possibly the easiest type of analysis to perform as it requires fewer individuals and is easier to base upon fact and not opinion
 - Information Flow Analysis
 - Discrete Event Simulation

Information Flow Analysis

- Information flow analysis/data flow analysis) seeks to understand how data flows through a system and to understand how those points interact with that data through the process
- Data or information followed can be from any number of sources
- Interactions with that data, be it system or human, are charted from the beginning point to the end point
- Helps uncover bottlenecks, unneeded queues or batches and non-value-added interactions to the data
- Assists in uncovering business rules that should or should not be applied based on the data
 - Include how long the data should be in a valid state before it is archived or destroyed, who is able to see the data, how secure data should be or the reporting processes that need to interact with the data

Discrete Event Simulation

- Used to record the time of an event or a change in the state of an event
- Event can include the time a customer order was received and when the order was actually shipped
- Data derived from this analysis can assist the analyst in discovering bottlenecks and isolating event or activity specific breakdowns
- Discrete event simulation can be used when simulating new processes during the design stage of the process improvement project

Analysing the Process

- Various analytical tools/approaches are often used to extract information about a process such as how long the process takes, the quantity of product through the process, the cost of the process, etc.
- Select and use the most appropriate tools/approaches
 - Creating Models
 - Cost Analysis
 - Transaction Cost Analysis
 - Cycle-Time Analysis
 - Pattern Analysis
 - Decision Analysis
 - Distribution Analysis
 - Root-Cause Analysis
 - Sensitivity Analysis
 - Risk Analysis

Analysing the Process

- Creating Models
 - Process models are often used to show processes and the various interactions with the process
- Cost Analysis
 - Also known as activity based costing
 - Analysis is a list of the cost per activity totaled to comprise the cost of the process
 - Used to gain an understanding and appreciation of the true cost associated with a product or service
 - Understand the real cost spent on the process so it can be compared to the value in the new process, the goal being decreased costs or if increased efficiency, than the value of the increase in production compared against the cost
- Transaction Cost Analysis
 - Analyse how much time and resources are used for each transaction processed by the application
 - Can quickly uncover bottlenecks in the application as well as bottlenecks in business processes as they interact with the system
 - As most processes are dependent on some sort of automated system, the interaction and cost per transaction of the system is critical to understanding the system

Analysing the Process

- Cycle-Time Analysis
 - Looks at the time each activity takes within the process
 - Each activity is measured from the time the input begins the activity until the activity creates the desired output including the time any subsequent activity begins
 - Analyse the process in terms of the time the process takes to complete with the goal of reducing that time
 - Uncover bottlenecks and potential bottlenecks within the process that prevent the process from performing correctly
 - Assists in discovering non value added activities that do not contribute to the process output
- Pattern Analysis
 - Looks for patterns within the process that can be streamlined into a single sub-process to obtain efficiencies
 - Systems and activities within organisations tend to mimic themselves within the same organisation
 - By recognising these patterns in the organisation it is possible to find duplications
- Decision Analysis
 - Examine the relationship between a decision and its outcome
 - Discover why a process has taken shape over time and assist in creating a new process

Analysing the Process

- Distribution Analysis
 - Comparison of attribute-based data
 - Plotted on a chart to show the comparisons of the data points
 - shape of the distribution curve helps to identify the biggest population of data affected by a particular attribute in the data
 - Assist in predicting the probability of an outcome
 - Assist in understanding the degree of variation that exists within the data
- Root-Cause Analysis
 - After the event analysis used to discover what truly caused a given outcome
 - Finding the root cause for an outcome is not always as easy as it may seem as there may be many contributing factors
 - Process of finding the root cause includes data gathering, investigation and cause and effect relationship diagramming to eliminate outcomes

Analysing the Process

- Sensitivity Analysis
 - A “what if” analysis that tries to determine the outcome of changes to the parameters or to the activities in a process
 - Helps understand the quality of the process
 - Responsiveness
 - Measurement of how well the process will handle changes to the various parameters of the process such as an increase or decrease of certain inputs, increasing or decreasing the arrival time of certain inputs
 - Know how quickly the process will flow
 - How much work the process can handle
 - Where the bottlenecks will occur given any set of parameters
 - Variability
 - Measurement of how the output of the process changes through the varying of parameters in the process
 - Often, one of the goals in performance improvement is to eliminate variability in the outcome
 - Knowing how variability in the parameters affects the outcome is an important step to understanding the process

Analysing the Process

- Risk Analysis
 - Examines the effects of the process under external pressures such as factors affecting the supply chain, thereby having an adverse effect
 - Aims to consider what would happen to the process should any of these scenarios happen and ultimately what the outcome would be

Analysing Human Interactions

- Many processes require some type of direct human involvement to ensure progression of the process
- These processes usually require the most analysis to attain an understanding of the process
- Various techniques can be used to assist in creating that understanding
 - Direct Observation
 - Apprentice Learning
 - Participatory Video Analysis
 - Activity Simulation
 - Workplace Layout Analysis
 - Resource Allocation Analysis
 - Motivation and Reward Analysis

Analysing Human Interactions

- Direct Observation
 - Much can be learned by just watching process performers in action
 - They are the experts and generally have found efficient ways to do what they have been asked to do within the constraints that have been imposed on them
 - Primary advantage of direct observation is that the analyst can see the current process firsthand
 - As a worker may work seamlessly from “transactional based” to “knowledge based” work it may be difficult to observe and document all of the actions and knowledge required for the human interaction
 - Observation can be a disadvantage causing a slightly altered behaviour by the performer
 - Does the performer know how what he does impacts the results of the overall process and customer of that process?
 - Does the performer know what happens in the overall process or is he simply working in a black box
 - What criteria does he use to know whether at the end of each performance cycle he has done a good job? Could he change anything with that knowledge? Would he want to?

Analysing Human Interactions

- Apprentice Learning
 - The performer teaches the analyst the job which can yield additional detail about the process
 - By teaching, the performer has cause to think about aspects of the process that might occur subconsciously
 - By performing the process, the analyst has a greater appreciation for the physical aspects of the activity and can better assess the details of the operation
- Participatory Video Analysis
 - Record with video the actions of the performer
 - Note that there may be liability and personal intrusion issues with taping the actions of anyone
 - Performer can be asked at a later time to narrate the recording, providing additional information about the actions

Analysing Human Interactions

- Activity Simulation
 - Simulation of the activities involved in a process
 - Step through each activity, observing its inputs, outputs and the business rules that govern its behaviour
 - Group of process participants each take the role of a process participant and talk through the process
 - Handoffs from one performer to the next can be observed to ensure all needed inputs are available for the next activity and from what source
- Workplace Layout Analysis
 - Physical analysis of a work place, assembly line or manufacturing floor space
 - Quickly uncover queuing or batch related bottlenecks, disconnections and duplicated efforts as work items are transferred from one physical location to another
 - Useful for any process that involves a physical space where activities are performed and handed off between individuals, groups, machines, etc.

Analysing Human Interactions

- Resource Allocation Analysis
 - Study of the resources required to complete each task
 - Takes into perspective the skills of the resources and abilities of tools or other automated systems in meeting the needs that a process demands
 - Aims to discover if it is not the process but the resources that are inefficient in working through the process
 - Seeks to determine why an activity takes a given amount of time
 - Consider what the resource is capable of accomplishing and asks whether the skills and training are sufficient to perform the activity adequately
 - Examines whether the resource is constrained
 - Can uncover bottlenecks that can be improved with little cost or change in infrastructure given the organisation's ability to manage human resource issues
- Motivation and Reward Analysis
 - Examination of the human motivational and reward systems in place for the process
 - Understanding those motivations and rewards as a process is analysed will help uncover unseen disconnects and bottlenecks in the process
 - Motivation and reward analysis should also consider what rewards should be in place to positively affect any new process or activity that is introduced

Document the Analysis

- Final step in an analysis is the generation of the reports and other documentation
- Should clearly present an understanding of the current state but does not and should not need to do more than that
- Acts as a formal agreement among those that participated as to the accuracy of the analysis
- Forms the basis to present the results of the analysis to management
- Contents
 - Overview of the business environment wherein the process lives
 - Purpose of the process (why it exists)
 - Process model (what it does) including inputs to the process and outputs
 - Gaps in performance of the process (why it needs to be re-engineered)
 - Reasons and causes for the gaps in the process performance
 - Redundancies in the process that could be eliminated and the expected savings as a result
 - Recommended solutions

Analysis Issues and Considerations

- Analysis critical success factors, possible practices and some of the pitfalls that should be avoided during a process analysis
 - Executive Leadership
 - Organisational Process Maturity
 - Avoid Designing Solutions
 - Paralysis from Analysis
 - Analyse with Metrics
 - Proper Time and Resource Allocation
 - Customer Interaction
 - Benchmarking
 - Understanding Organisation Culture
 - Avoiding Blame
 - Potential Threat
 - Threat of Obsolescence

Analysis Issues and Considerations

- Executive Leadership
 - Important factor to ensure success during any stage in a process improvement project is the support and direct encouragement of the executive leadership team
 - Otherwise getting proper funding and necessary resources for the duration of the project will be difficult
 - Ideally should be the primary driver behind the process improvement project
 - Should be made aware of and provide full support to the process engineering or improvement project
 - May be necessary to convince the leadership team of the benefits of a process improvement project through the completion of a few small projects that show the gains in real money to the organisation through effective process reengineering
- Organisational Process Maturity
 - Important to understand the business process maturity of the organisation
 - Helps define the level of analysis preparation needed
 - An organisation that is relatively new to the idea of process management will need, first, to be briefed on the concepts of process management
 - Need to understand the purpose of process management and the benefits it will provide the organisation

Analysis Issues and Considerations

- Avoid Designing Solutions
 - During the analysis process possible solutions to process problems will arise
 - Members of the analysis team will want to explore these solutions and sometimes begin work immediately on designing that solution
 - Unwise to create a solution design before completing the analysis
 - Do not discourage suggestions for solving process problems that are uncovered during the analysis process but park them for later review
- Paralysis from Analysis
 - Possible to do too much analysis
 - May be a tendency to want to document each minor detail about each activity that happens in a process
 - Detail can quickly become tedious and those involved in the process improvement team can lose interest
 - If the analysis is prolonged, members assigned to the project may not have the time necessary to remain dedicated to the project due to other commitments
 - If it happens it is time for the team to step back and take another look at the goals of the project and to simplify the analysis

Analysis Issues and Considerations

- Analyse with Metrics
 - Use of metrics throughout the analysis is critical to receiving the validation of the analysis from the leadership or sponsors of the analysis
 - Validate the results of the analysis with appropriate metrics, such as cost, time, etc, related back to the objective of the process
- Proper Time and Resource Allocation
 - Resources assigned to improvement projects may also have mission-critical responsibilities in the organisation
 - Wise to get the most knowledgeable individuals on the process improvement team but it is usually those same individuals who are critical to running the business
 - Important that those who are assigning the resources allow those resources appropriate time away from daily responsibilities to complete the project

Analysis Issues and Considerations

- Customer Interaction
 - Important factors leading to a successful analysis is the consideration of the customer within the process
 - If a process appears to work within the context of the organisation it may not necessarily work for the customer
 - Without considering the customer in the process, customer satisfaction will be sacrificed and the process will not result in the increased performance as expected
- Benchmarking
- Good practice to compare the performance of a process to similar processes in the same or similar industries or even different industries
 - Investigate direct competitors and analyse how processes compare to competitor processes and considers competitive advantages
 - Analyse organisations in the same industry that are not direct competitors – may be willing to assist in providing detailed information and in discussing design features of their processes
 - Identify processes that are similar to the process being analysed but exist as best practices in other industries - escape the “group think” syndrome that often exists when organisations only look within their own company or industry
- Understanding and analysing these benchmarks in relation to the processes being analysed will help the analyst team understand the performance potential of the process and its weaknesses in achieving that performance

Analysis Issues and Considerations

- Understanding Organisation Culture
 - Understanding the culture of an organisation is important to the success of the analysis and ultimately the design and implementation of the new process
 - Ensure that the analysis presented not only represents the true organisation but is accepted by the organisation as such
- Avoiding Blame
 - If any change to a new process is to be successful, it is vital that the analysis avoids any accusation of problems that exist in processes toward any individual or group
 - By simply stating the facts, the analysis will more likely be accepted as a correct understanding of the current state and avoid any finger pointing that can result

Analysis Issues and Considerations

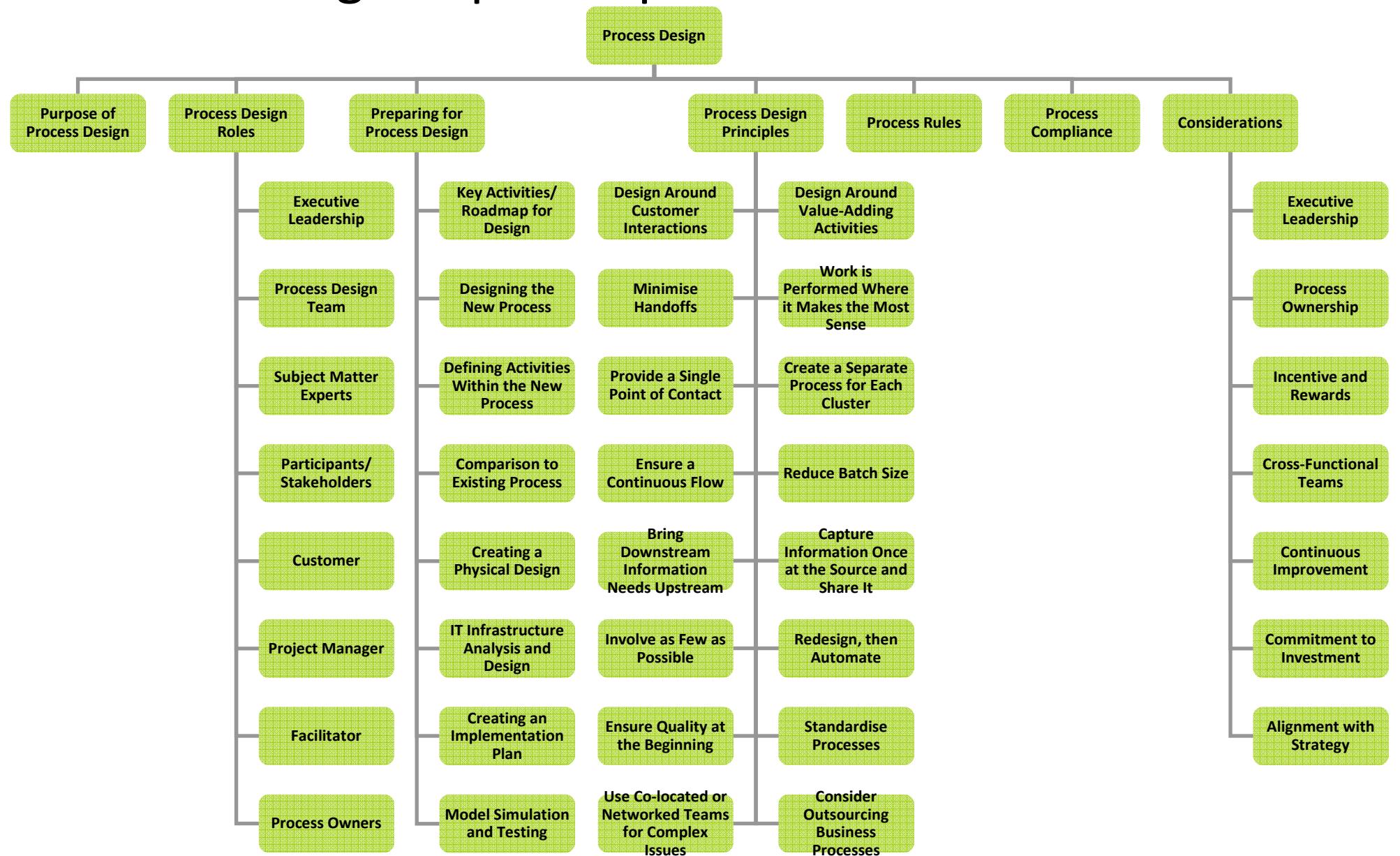
- Potential Threat
 - Process analysis could be considered as a threat by the owner of that process
 - Process owner can potentially misinterpret the analysis as a criticism about the way the process has been managed
 - Important for the leadership team to negotiate the situation and insist that the project is not a threat but a necessary part of doing business
- Threat of Obsolescence
 - Mistrust of terms like process improvement
 - Employees who are interviewed could resent the fact that a process improvement project is beginning as they could associate that with a pending layoff as their job disappears through outsourcing, technology or any number of different reasons
 - Critical for the executive leadership and the analyst to manage this situation and any rumors that may result to prevent any explosive situation from occurring

Analysis Summary

- Process analysis serves to create a common understanding of the current state of a process and whether it is meeting the goals of the organisation within the current business environment
- Process analysis can occur at any time the organisation considers it necessary but the organisation should have a goal to continuously monitor processes as opposed to waiting for single events to trigger a process analysis
- The various individuals that assist with process analysis include executive leadership and a cross-functional team including stakeholders and subject matter experts and process analysis professionals
- The analysis should find an explanation of the interaction of the process within the business and find any of the following disconnections:
 - Performance goals not being reached
 - Failing customer interactions
 - Handoffs that create disconnections
 - Process variations
 - Bottlenecks
- Many analysis techniques can be used during the process analysis to obtain the type of information necessary for the process being analysed
 - Techniques used should consider human performance systems, technology, modelling tools, business environment and strategy assessments
- Process methodologies and frameworks help guide the process analysis down a commonly accepted path to achieve best results
- Critical success factors for a successful process analysis include: executive leadership, considering metrics, benchmarks, customer interactions and cultural considerations as they relate to the process

Process Design

Process Design Topic Scope



Process Design

- Creation of specifications for new and modified business processes within the context of:
 - Business goals
 - Process performance objectives
 - Workflows
 - Business applications
 - Technology platforms
 - Data resources
 - Financial and operational controls
 - Integration with other internal and external processes
- Should include both:
 - Logical design - what activities are performed
 - Physical design - how the activities are performed

Purpose of Process Design

- The purpose of business process management is to ensure that an organisation's processes are effective, agile and efficient
- Develop plan for the desired state whether it is for a process redesign or the development of a new process
- Bypassing process design and moving directly into implementation with preconceived assumptions will inevitably lead to problems with the process and force future re-design efforts
- Building a process must likewise start by creating a design blueprint

Process Design Roles

- Roles that play an important part in the definition of process design
 - Executive Leadership
 - Process Design Team
 - Subject Matter Experts
 - Participants/Stakeholders
 - Customer
 - Project Manager
 - Facilitator
 - Process Owners
- Level of involvement of each depends on the scope of the process and the degree of the change
- Transformational process changes that affect the entire enterprise must have a top-down approach involving everyone within the company and be led by the executive management team
- Departmental or process specific improvements require more of a bottom-up approach to process improvement and involve only those individuals and groups necessary to effect the change within the scope of that process

Process Design Roles

- Executive Leadership
 - Support and agree to the design changes before they are implemented
 - Ensure that the process designed will correctly meet the needs of the organisation
- Process Design Team
 - Cross-functional team of individuals that represent the stakeholders, participants, subject matter experts and (possibly) customers that interact within the process
 - Validate the design with stakeholders, participants and customers
- Subject Matter Experts
 - Individuals that are closest to the process and have the expertise necessary to ensure the process is a success
 - Individuals from every business function that touches the process should be part of the design team
 - Since technology is used most often to manage the processes and interact with existing systems, the IT organisation must also be engaged early in the initiative to ensure that any processes (or systems to monitor and control those processes) can be achieved through the available technology in the organisation

Process Design Roles

- Participants/Stakeholders
 - Anyone who participates in or has activities that affect the process
 - Play a critical role in defining the business process through outlining the activities that comprise the new process
 - Play a critical part in the design process and they work closely with the process owner to ensure their interests in the performance of the new process are sufficiently met
- Customer
 - Process improvement revolves around customer expectations
 - Customer should be allowed to test the process and comment on its effectiveness
 - Involving the customer during the design stage increases the chances that the goals of the process and the customer's expected outcome are properly addressed
- Project Manager
 - Assign a project manager to manage the process improvement initiative
 - Responsible for the schedule and steps involved in achieving the stated goals of the initiative
 - Manages project plan, communication plan, managing scope and mitigating risk

Process Design Roles

- Facilitator
 - Leads the team through the development of the future design of the processes
 - Should be a process professional with knowledge in both business processes and the needs of the organisation
- Process Owners
 - Help ensure that the new design meets the required objectives while remaining within the assigned budget

Preparing for Process Design

- Before beginning any process design review those deliverables from the analysis stage
 - Processes in the organisation are listed, weighted and prioritised
 - Reveals a clear picture of the weaknesses of the current process or processes
 - Helps decide which are to be redesigned and in what order
- Should include current state documentation, a clear scope statement for the design and a list of constraints
- Select the methodology and modelling tools that best fit the organisation and the desired goal in the process design
- Degree of the change can be assessed to make either incremental or large scale systemic changes
- Making frequent, small changes can have an equally significant effect on process performance as large radical changes, provided there is a clear and accepted vision of the future state

Preparing for Process Design

- Key Activities/Roadmap for Design
 - Designing the New Process
 - Defining Activities within the New Process
 - Defining rules that control the activities
 - Defining handoffs of process between functional groups
 - Defining desired metrics in the new process
 - Comparison to Existing Process
 - Creating a Physical Design
 - IT Infrastructure Analysis and Design
 - Model Simulation and Testing
 - Creating an Implementation Plan
- General set of activities
 - Do not necessarily always occur in that order
 - Activities can occur simultaneously

Designing the New Process

- Many ways to design the new process from using simple white boards through sophisticated software modelling tools that allow the storage and retrieval of processes
- Many different informational gathering activities that can be used to facilitate the creation of the model
- Process modelling provides a discipline to ensure that the model created matches the expected outcome
- Serves as written documentation of the process and detailed activity descriptions, customer interactions, business rules and outputs
- Important to involve as many people from the different functions that interact with the process as possible, thus utilising the breadth of experience and knowledge of those closest to the process
- Ensures that the process truly reflects what the organisation can accomplish
- Simplest designs are most often the best designs

Defining Activities within the New Process

- Activities are a series of steps that are performed to execute a process
 - Order fulfillment process
 - Entering the order
 - Packing the order
 - Shipping the order
 - Billing for the order
 - Each one must be performed for the order process to be complete and often the steps depend on one another and so must be completed in sequence
- Any method the organisation chooses is valid as long as the activities can be placed in order and can represent the final process design when completed
- Key to a successful outcome is to focus on the activities, not the actors
- Keep the process as simple as possible
 - More simple a process the more likely it will be completed without error
- Activities that can be completed in parallel with other activities help move a process along faster

Comparison to Existing Process

- New process should also be compared to the existing state
- Comparison allows a gap analysis to be performed which will show the level and scope of the change
 - Provides information that can demonstrate the savings that can be generated by the new process once the process is implemented
 - Helps build the case for the new process which will assist in managing resistance to change
 - Also allows the process design team to revisit the existing state and ensures that the new design does, in fact, meet the expected goals and resolve the issues discovered in the analysis stage
- Existing process analysis event or transaction history provides information about conditions that created variation in process execution and performance
- Evaluation of this history may suggest critical factors, e.g., event frequency, event workload or event complexity that, in turn, could offer a set of event-action scenarios that the proposed process must accommodate
 - Scenarios must be tested to assess the robustness of the proposed design
- Through the documentation of the gap between the old and new process, the information provides weight to the need for the organisation to manage by process
 - Can also show the degree of the savings that can be achieved via process improvements in other areas of the organisation

Creating a Physical Design

- Previous steps focussed on generating a logical design containing a coherent description of WHAT activities are to be included and their order of execution
 - Expected business value
 - Relevant performance metrics
 - Delineation of the appropriate activities and tasks
 - Linkages to other internal and external business processes
- Physical design determines HOW each activity or task is to be performed, manual or automated, means or a combination of each
- Degree of detail to be planned, documented and evaluated for a physical design is dependent upon the magnitude of the business process change
- Contains
 - Indicative budget that includes more detailed development and operating costs is evaluated for financial feasibility
 - Acceptance by organisational stakeholders
 - Timeline for implementation

IT Infrastructure Analysis and Design

- IT generally plays a key roles throughout the process design stage
 - Most processes involve a degree of automation in information flow
 - Technology can be the vehicle to enhance process performance
- Involving IT in the design stage ensures that the process can be automated and that data can flow seamlessly between systems and activities within the process
 - What software or systems best match the needs of the process?
 - Are there limitations in the current infrastructure that limit the design?
 - Can the design be implemented quickly?
 - What will be the impact to the organisation?
 - Can a staged approach be employed?
 - What will the new implementation cost (including training, technology, etc.)?
 - Are there vendors that can assist in the implementation?

Creating an Implementation Plan

- Create an understanding of implementation concerns at all stages of the process improvement initiative, especially during the design stage
- Documented and referenced concerns as they are discovered
 - Define change management techniques that ensure employee support of the new process
 - Identifying which existing systems will be affected including how change to these systems should be accomplished (incremental shift or immediate change)
 - Whether the new process will be piloted or tested
- Create implementation plan to appropriately address these concerns

Model Simulation and Testing

- New process should be tested to ensure that it will work as intended and that the expected results are achieved
- Number of approaches to test a new process: role-play, practice run or run a simulation of the new design
- Role-playing
 - Assigning relevant process roles to people
 - Walk through process
- Practice run
 - Real inputs are used and the people who will actually be working in the process participate
- Simulation
- Use software new to test process flow and key performance metrics under various scenarios to find bottlenecks and other problems

Model Simulation and Testing

- Always a good to try and break the new design during these test runs
- New process can be debugged without any negative consequences
- Increase the volume that goes through the process or add complexity to the inputs thereby challenging the process to identify weak spots, bottlenecks, quality and coordination issues
- Problems can be addressed and solved safely without harming customer relationships or creating negative consequences associated with actual process operation
- Can demonstrate the dependability of the new design
- See the new process working and have questions and concerns addressed

Model Simulation and Testing

- Test the design in a pilot - new design is run for real but the scope of the process is constrained
- Involves real products, customers and services so problems can have negative consequences
 - Risk is constrained
 - Closely monitored so if a problem does occur, it can be fixed immediately
 - People working in the pilot can become trainers as it is introduced to the rest of the organisation
 - Provides information as to the effectiveness of the process
 - Creates organisational acceptance and enthusiasm for the change

Process Design Principles

- Process design principles represent the major concepts involved in most process redesign projects
 - Design around Customer Interactions
 - Design around Value-Adding Activities
 - Minimise Handoffs
 - Work is Performed Where it Makes the Most Sense
 - Provide a Single Point of Contact
 - Create a Separate Process for Each Cluster
 - Ensure a Continuous Flow
 - Reduce Batch Size
 - Bring Downstream Information Needs Upstream
 - Capture Information Once at the Source and Share It
 - Involve as Few as Possible
 - Redesign, then Automate
 - Ensure Quality at the Beginning
 - Standardise Processes
 - Use Co-located or Networked Teams for Complex Issues
 - Consider Outsourcing Business Processes
- Not every design principle applies to every process
- Use as a checklist when reviewing a process design
- Always use common sense when applying them

Design around Customer Interactions

- Customer interactions represent a point of contact into the organisation
 - Represent opportunities to show the success or failure in meeting the needs of the customer
 - Opportunity to enhance the reputation of the organisation
 - Customer experience is the sum of the quality of each customer contact point
- When considering customer interactions during the design stage of process improvement, consider all the different opportunities where the customer could contact the organisation
- Customer experience is dependent on
 - The primary business processes that directly interact with the customer
 - The internal support processes that indirectly influence customer experience quality

Design around Value-Adding Activities

- Requires a clear understanding of what the customer of the process needs
- Transforming information or material to meet customer requirements creates value-adding activities
- Any step the customer is willing to pay for, such as a service, is also value-adding
- Study the as-is process and determine exactly where the value-adding activities are performed
- Extract the activities from the as-is process and explore a means to enable the value-adding activities efficiently and effectively
- Seeking to eliminate non-value-adding activities can create hostile relationships with people involved in the work

Minimise Handoffs

- When ownership of an activity or information is passed from one individual to another
- Handoffs between individuals or functional groups present an opportunity for a breakdown in the process
 - Data can be lost or misinterpreted
- Simplify and limit handoffs when possible
- Automating handoffs through technology will also assist in reducing errors and speed up the activity between individuals and groups

Work is Performed Where it Makes the Most Sense

- Task assignment occurs after an effective process flow is designed
- Create the roles necessary to enable the process flow to operate with the greatest efficiency and effectiveness
- Application of this design principle may negate some existing work, create new work and/or may move work from one location to another

Provide a Single Point of Contact

- A common symptom of not having a single point of contact is multiple transfers of customers' contact
- A single point of contact can be a person such as a project manager, process consultant, customer service representative or a data repository

Create a Separate Process for Each Cluster

- Frequently a single process attempts to handle every variation
- Process inputs and outputs can often vary by complexity, type, size and so on
- If inputs naturally cluster from significant differences then create a sub-process that is most appropriate for this cluster
- Additional resources and costs could be introduced, but efficiency of throughput and greater client satisfaction should occur
- Input cluster is then routed to the appropriate process

Ensure a Continuous Flow

- Steps that directly add value to the customer such as delivering supplies, building the product and shipping it, represent the main sequence or value stream
- Customer receives/pays for the output of the value stream
- Nothing should impede or slow down the value stream

Reduce Batch Size

- Batching causes wait time for items at the end of the batch
- Batching causes work to build as it moves through your process
- Cutting batch sizes creates a smoother flow through the process
- A batch size of one or processing transactions in real-time is ideal

Bring Downstream Information Needs Upstream

- Explore, at each step of the process, what may cause frustration/problems/issues
- Two ways of implementing
 - If the process is routine and not complex, the upstream person should be trained or given a template or check sheet to capture what the downstream person needs
 - For complex processes, the downstream person must be brought upstream during a redesign to receive information directly from the source

Capture Information Once at the Source and Share It

- Identify and eliminate data redundancy, re-keying and reconciliation

Involve as Few as Possible

- Handoff of work or information offers the potential for error
- Eliminating handoffs removes this potential
- Accomplished by expanding the job scope upstream and downstream so that a person “runs” with the work longer
- Requires cross training and often a change in compensation to reward knowledge or pay for new skills
- Work often does not arrive at an organisation in a steady, even flow
 - spikes and bottlenecks in the workload
 - With more cross-trained workers, bottlenecks can be broken as more workers are qualified to manage them
 - Person can see his or her major contribution to the whole – can increases the desire to produce a quality product or service

Redesign, then Automate

- Taking the as-is process design and lay information technology on top of it
 - Despite the investment, the problem might not be solved and automating it could magnify the issue
 - A faster but much more expensive and still ineffective process may result
- First employ process design principles, benchmarking, best practices and lean thinking before automating an as-is"process
- Process improvement envisions a new process after benchmarking best practices and using design principles

Ensure Quality at the Beginning

- Quality problems encountered in the first several steps of a process will create exponentially negative effects downstream
 - Time spent to fix inefficiencies by the downstream people can be excessive
- Effort spent initially to ensure quality pays for itself in preventing reviews and rework later

Standardise Processes

- When there is no standardisation there cannot be process control
 - Significant variation in process output can be caused by performing the process different ways
- Easier to find the root cause of a problem when people standardise their work
- Less structured processes might be decomposed into more and less structured components that could be standardised

Use Co-located or Networked Teams for Complex Issues

- Complex problems require people to review information in real time
- If complex problems occur regularly, consider co-locating team members
- If co-location does not make sense, then network the team so information can smoothly flow

Consider Outsourcing Business Processes

- Best course of action may be to outsource one or more processes to companies that specialise in the performance of that process
- Outsourcing certain processes can free to focus on other more strategic processes that add greater value to the organisation
- Compare to the costs of designing the process in-house as well as compared to the risks associated with outsourcing
- Many organisations find that outsourcing some business processes is a viable strategic model and helps the business become more agile and focus on those key activities that add the greatest value

Process Rules

- Business rules define how or when a particular activity can be performed and help control the flow of the activity
 - As activities are defined, the need for certain business rules will become apparent
- When defining business rules, the tendency for most organisations is to make them complex in order to eliminate confusion and emphasise control
 - Complexity in a set of business rules that govern an activity creates complexity in the process
 - The more complex the process is, the more opportunities for the process to fail
- As a best practice, business rules should be applied when necessary, e.g., to enforce organisation policies or external regulations, reduce process errors and expedite process execution

Process Compliance

- Most industries have standards and guidelines relating to the execution of their business processes
- Ensure compliance

Process Design Considerations

- Factors to consider when creating a successful process design
- Attention to the details of these success factors should be observed throughout the design stage
 - Executive Leadership
 - Process Ownership
 - Incentive and Rewards
 - Cross-Functional Teams
 - Continuous Improvement
 - Commitment to Investment
 - Alignment with Strategy

Process Design Considerations

- Executive Leadership
 - Direct involvement and leadership of the executive team
 - BPM initiative can have far reaching and lasting effects throughout the organisation
 - Vital that the executive leadership not only agree to the change but is visibly seen as the promoter, leader and champion of such change
- Process Ownership
 - All too often organisations assign ownership of the process change initiative to an individual such as a project manager who has little or no authority over the actual process
 - Process ownership can take the form of a single individual responsible for the process, a cross-functional team of department directors or other type of management
- Incentive and Rewards
 - Successful process management system will have incentive programs built into place and encourage the adoption of the new process and changed roles and behaviours
 - Incentives should be based on the goals established in the analysis
 - Most effective when aligned with the customer's expectations and corporate strategy

Process Design Considerations

- Cross-Functional Teams
 - Success in BPM lies in the ability to tie together seamlessly all of the functions to meet the needs of the customer
 - Success depends on the degree of participation from all the functional groups that touch the process
 - During the design stage, key decisions makers must be present and agree on the new design
- Continuous Improvement
 - Continuous improvement implies that small changes that happen frequently can have a powerful cumulative effect
 - Necessary to act quickly in the process initiative
 - Benefits of a BPM system is the agility it brings to the organisation and that agility should be demonstrated within the BPM change process itself
 - Longer the initiative takes, the more likely those involved could be siphoned off to run other projects, lose interest or focus or leave the organisation all together
 - By quickly implementing a few small changes, the positive effects of those changes can be communicated to the organisation and will serve as a catalyst for the larger organisational changes

Process Design Considerations

- Commitment to Investment
 - Although one of the goals of business process management is to reduce cost, there are often initial financial investments that must be made before that reduction is realised
 - The organisation's leadership must be committed to make the necessary investment to ensure the process improvement is successful before the return on the investment is achieved
- Alignment with Strategy
 - Understanding the business strategy and its relationship to the customer is key in the design of the new process
 - A successful business strategy is one that is designed around the needs of the customer
 - Careful design considerations should be made to ensure that all activities in the process work toward the end goal of meeting that customer need and realising the business strategy
 - Any activity that does not meet the needs of the customer should be considered extraneous and should be seriously considered before being included in the process

Process Design Summary

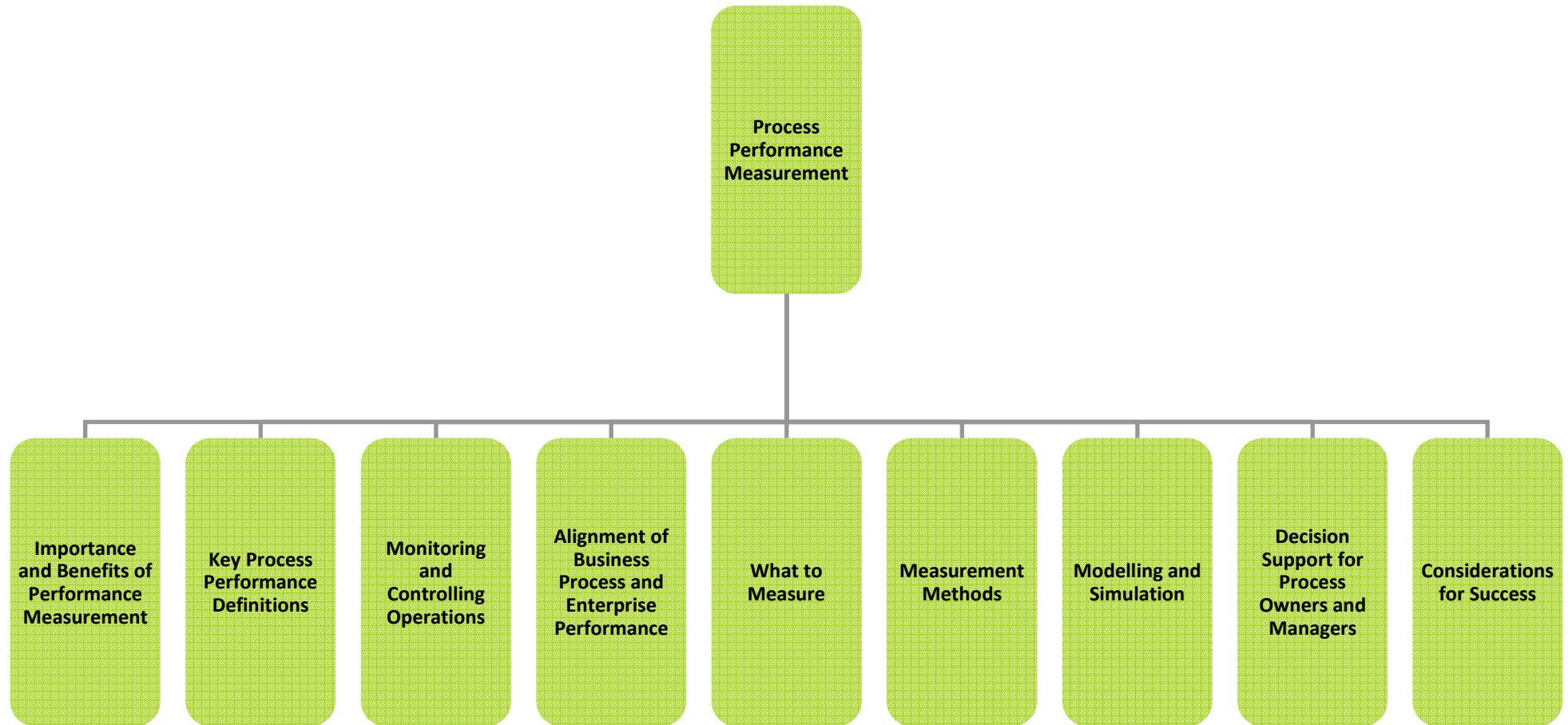
- Process design is the creation of a new process that aligns the business around the business strategy
- Process design involves the executive leadership, process owners and stakeholders in the creation of the new process
- The process design team should include subject matter experts, stakeholders, participants and customers
- While designing a new process, consideration should include the following best practices:
 - Design around value-added activities
 - Perform work where it makes the most sense
 - Create a single point of contact for the customer
 - Combine processes around clusters
 - Reduce handoffs
 - Reduce batch sizes
 - Put access to information where it is needed the most
 - Capture information once and share it with everyone
 - Redesign the process before considering automation
 - Design for desired performance metrics
 - Standardise processes
 - Consider co-located networked teams and outsourcing

Process Design Summary

- The activities associated with process design include the following:
 - Design the process with modelling and other tools
 - Define the activities of the new process
 - Define the rules of the new process
 - Define the handoffs between activities
 - Define the metrics
 - Perform comparisons and benchmarking
 - Perform simulation and testing
 - Create the implementation plan
- Critical success factors include the involvement of executive leadership, process owners and cross-functional teams
- Process design must be for continuous improvement as opposed to a one time event
- Businesses must commit to invest in process management to benefit from process efficiency
- All processes should be aligned to the business strategy and customer needs

Process Performance Measurement

Process Performance Measurement Topic Scope

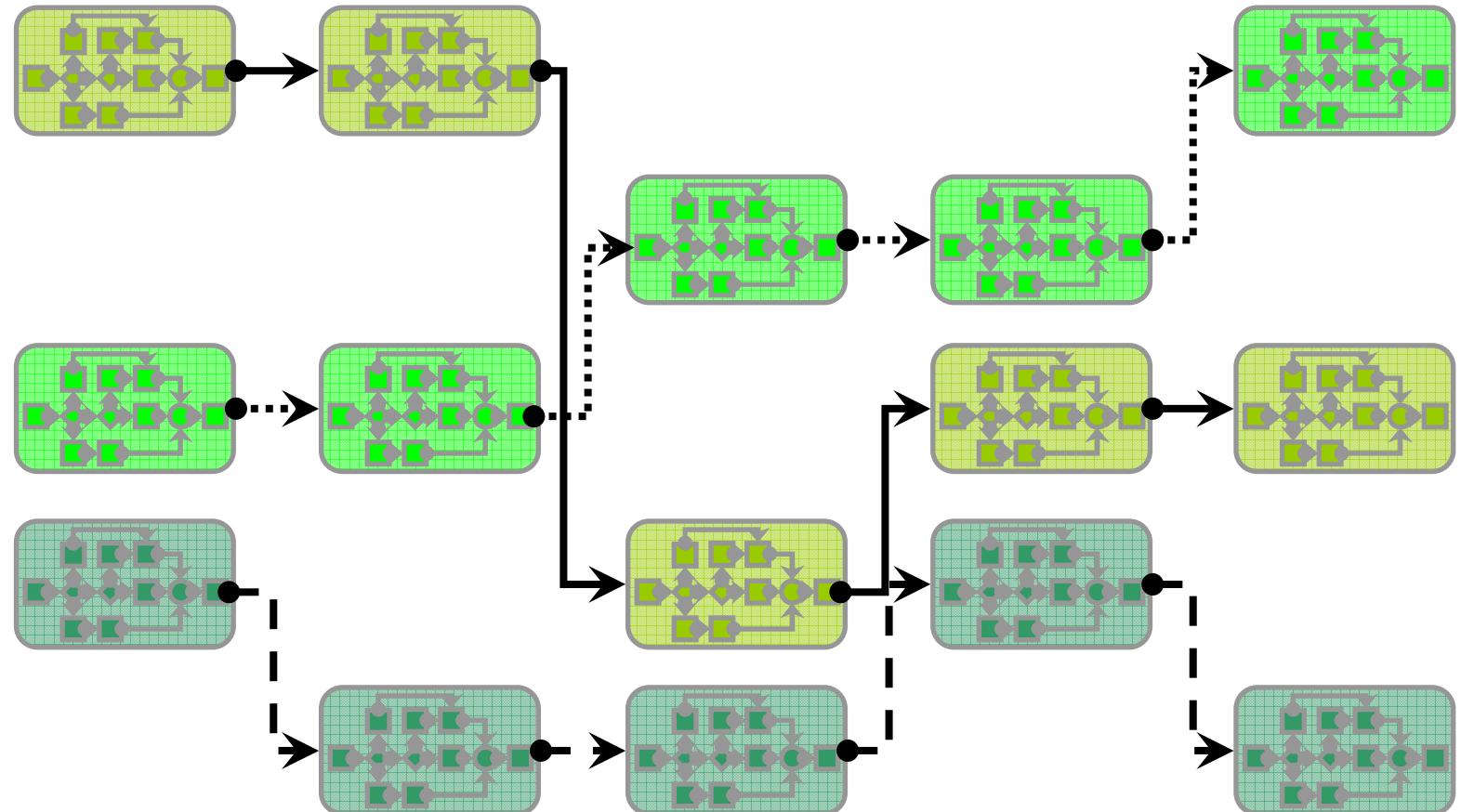


Importance and Benefits of Performance Measurement

- Aligning process performance to organisational goals is the primary reason for undertaking process management practices
- If you cannot measure it, you cannot manage it
- No business should invest time and resources to improve a process if they do not know what they had to measure to improve
- Many process improvement efforts tend to focus on one functional area without consideration for the enterprise context
 - Nothing wrong with focusing efforts on functional process improvement and management provided that it can be linked to the overall cross functional process performance that drives enterprise level performance metrics

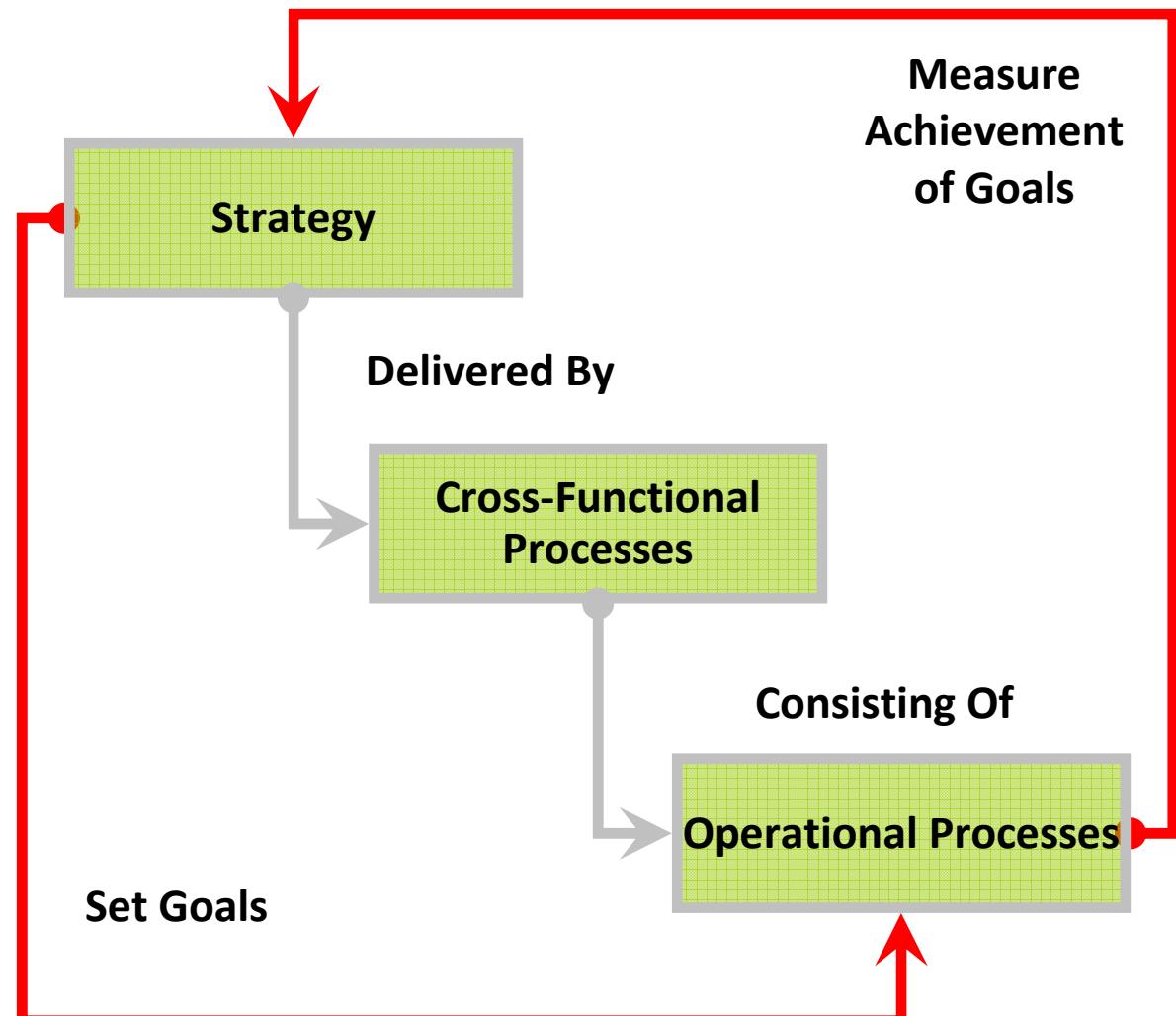
Cross Functional Processes Link Operational Processes

- Need a clear understanding of the organisation's operational processes
- Need to ensure that the operational processes are optimised
- Cross-functional processes involve collaboration between operational processes



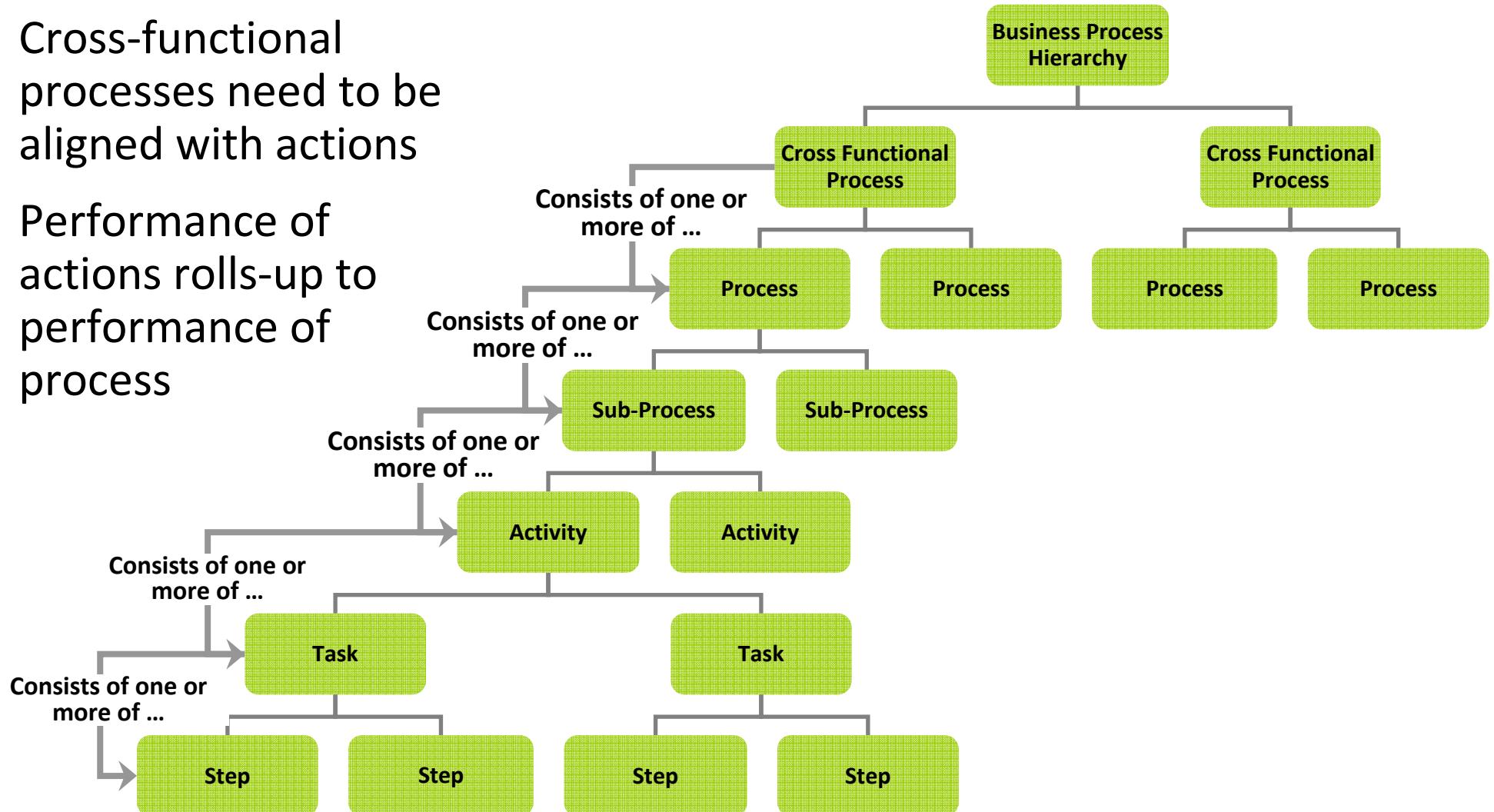
Cross Functional Processes and Strategy

- Effective cross-functional processes deliver on the organisation's strategy
- Cannot divorce the organisation's strategy from operational processes and their execution
- Collecting information on the performance of cross-functional processes will allow the execution of strategy to be effectively measured
- Linkage between strategy, cross-functional processes and operational processes means individual process measurements can be linked to overall performance
- Allows goals to be connected to operational processes

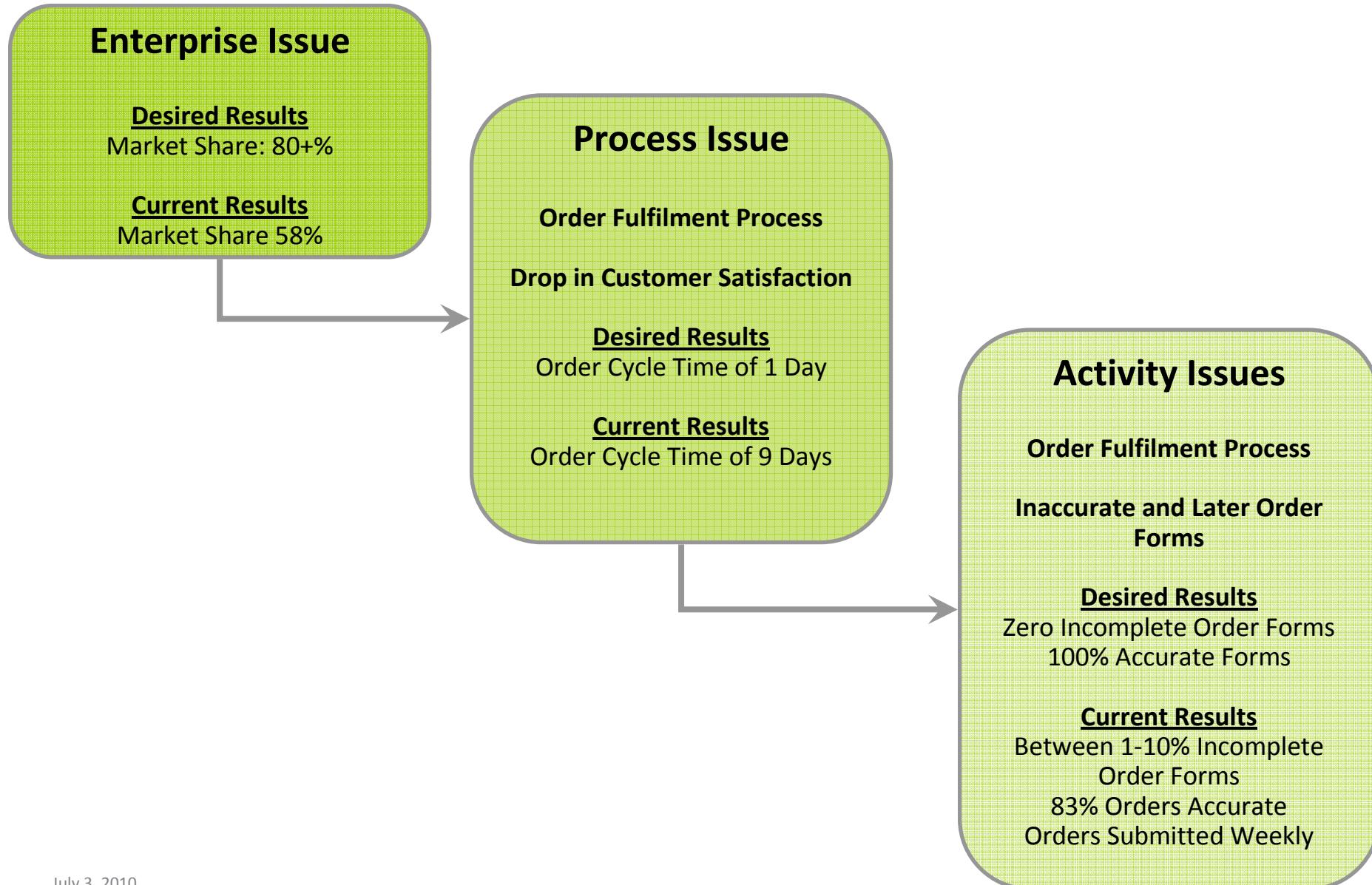


Business Process Action Hierarchy

- Cross-functional processes need to be aligned with actions
- Performance of actions rolls-up to performance of process



Process Hierarchy Example

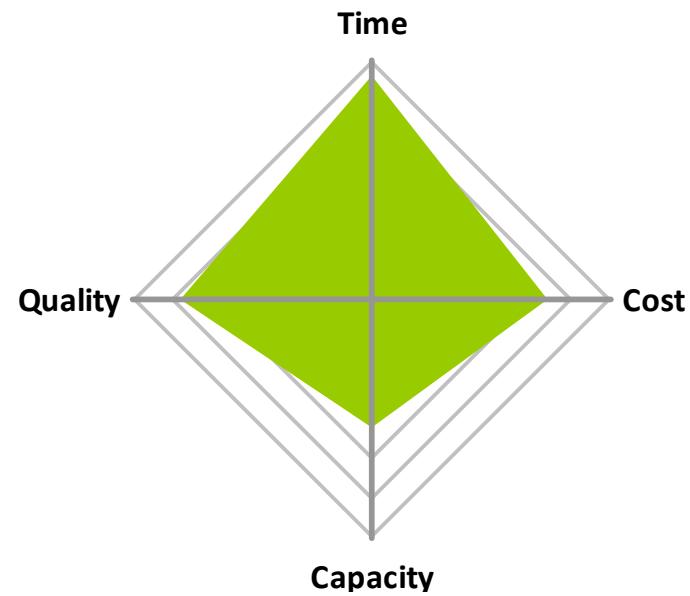


Process Hierarchy Example

- Not everyone has the complete picture of what is happening
 - **Marketing** - views issue as a market share problem
 - **Supply Chain** - views issue as an order cycle time problem
 - **Sales** - views issue with the accuracy and timeliness of the sales order forms
- No one understands the others' perspectives
- Each unit may or may not have a metric that they are accountable to, but more importantly, they more than likely do not have an understanding of the extent of the cross functional process that links them all together from a process performance perspective
- Process focused means that they will attack the symptoms independently and most likely make things worse

Key Process Performance Definitions

- First review the definitions of process performance
 - All processes have a metric or measurement associated with the work or output of the process that is performed
 - Metrics are based on the following fundamental metric dimensions
 - **Time** - is a measurement of process duration
 - **Cost** - is a measurement of the monetary value associated with a process
 - **Capacity** - this is an amount or volume of a feasible output associated with a process
 - **Quality** - is usually expressed as a percentage of actual to optimal or maximum in process terms



Key Process Performance Definitions

- **Time** - is a measurement of process duration
 - **Cycle Time** – measures the time it takes from the start of a process to the completion of that process in terms of the output

Key Process Performance Definitions

- **Cost** - is a measurement of the monetary value associated with a process
 - **Resource Cost** - is a measurement of the monetary value associated with the resources (human or non-human) required to complete a process
 - **Opportunity Cost** - It is the value that is lost from the process by not getting the resultant output of the process

Key Process Performance Definitions

- **Capacity** - this is an amount or volume of a feasible output associated with a process
 - **Number of Transactions** - transactions performed by process
 - **Rate of Transactions** - yield of process
 - **Capacity** – number of transactions the process is capable of

Key Process Performance Definitions

- **Quality** - is usually expressed as a percentage of actual to optimal or maximum in process terms
 - **Satisfaction** - is a measurement of customer satisfaction, which is usually associated with a service level expectation on the part of the customer
 - **Variation** - this is a measurement of the amount, extent, rate or degree of change and is generally expressed as the difference between the actual and target or expected result
 - **Error or Defect Rate** - is an example of variation in the measurement of errors associated with the output of a process

Key Process Performance Definitions

- Other measures exist such as efficiency and effectiveness
- Functions of one or more of the four fundamental metrics
- The overall purpose of understanding process metrics is so that a manager can attribute a value to improving or changing a process as part of process performance management

Key Process Performance Definitions

- Value added versus non-value added
- Process is value added
 - When it is required to generate the output required by the customer of the process
 - When the customer is willing to pay for the process (or activity) that generates the output
 - When it is required to maintain quality and consistency of the component resources or output
 - When it provides continuity
 - When it enhances customer experience even when it does not contribute directly to the specific service
- Does something that is perceived as having added value to the customer
- Understanding whether a process is value added or non-value added is important when it comes time to decide whether to eliminate a step or activity of a process when doing improvements

Key Process Performance Definitions - Key Performance Indicators (KPIs)

Metric	Characteristic
Alignment	Key performance indicators (KPIs) are always aligned with organisation strategies and objectives
Accountability	Every KPI is owned by an individual or group on the business side who is accountable for its outcome
Predictive	KPIs measure drivers of business value and are leading indicators of desired performance
Actionable	KPIs are populated with timely, actionable data so users can intervene to improve performance before it is too late
Few in Number	KPIs should focus users on a few high value activities or on the overall effectiveness of the process
Easy to Understand	KPIs should be straightforward, not based on complex indexes that managers don't know how to influence directly
Balanced and Linked	KPIs should balance and reinforce each other, not compete and confuse. Otherwise, you will degrade process performance
Transformative	A KPI should trigger a chain reaction of positive changes in the organisation, especially when it is monitored by the process manager or officer
Standardised	KPIs are generally more effective when based on standard definitions, rules and calculations so they can be integrated across dashboards, throughout the organisation and used for benchmarking within and across industries
Context-Driven	KPIs put performance in context by applying targets and thresholds so users can gauge their progress over time
Reinforced	The impact of KPIs may be enhanced by attaching compensation or incentives to them
Relevant	KPIs gradually lose their impact over time, so they must be reviewed and refreshed periodically

Monitoring and Controlling Operations

- Important to continually measure, monitor and control the process in order to achieve the desired results
- Performance management is more of a journey and not a destination
- Importance of understanding the process cannot be emphasised enough
- Monitoring and controlling performance of the process is what makes the difference
- As circumstances changes, so will the desired performance of the process
 - Process itself will have to change in order to achieve the new desired performance
 - This cannot be determined unless the process and the performance of the process are monitored and controlled to the needs to the customer requirements

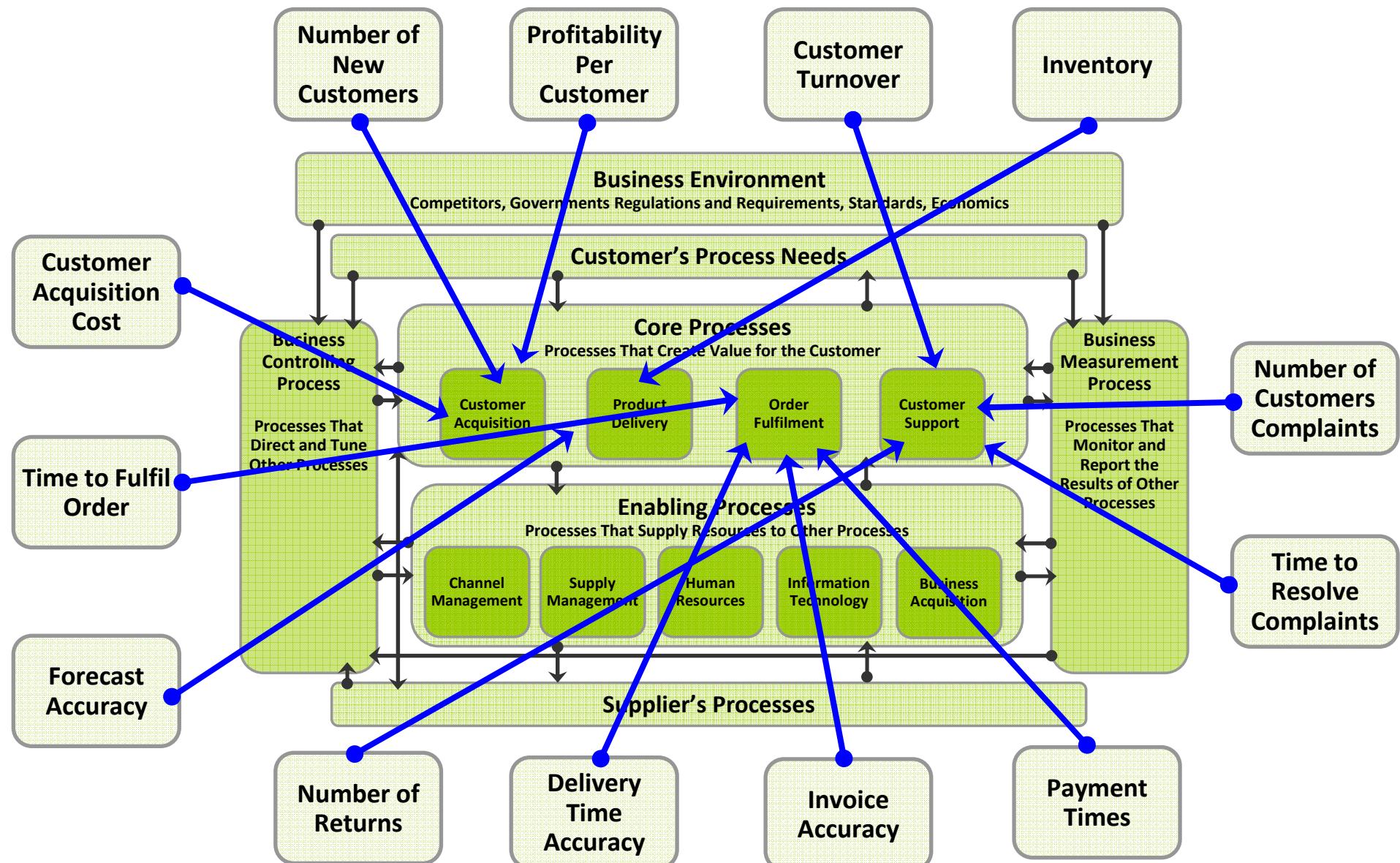
Alignment of Business Process and Enterprise Performance

- Enterprise performance and corresponding metrics are best expressed with respect to satisfying the needs of the customer
- Extrapolations of the Time, Cost, Capacity and Quality foundations
 - Time
 - Delivery Performance, Request Date
 - Order Fulfillment Lead Time
 - Product Development Lead Time
 - Quality
 - Product Launch Variance
 - Forecast Accuracy
 - Cost
 - Sales Cost
 - Manufacturing Cost
 - Logistics Cost
 - Inventory Days of Supply
 - Capacity
 - Customer Amount per Order (Wallet Share)
 - Customer Growth Rate
 - Market Share

Alignment of Business Process and Enterprise Performance

- Enterprise level metrics have cross functional processes associated with them
- Examples of cross functional processes that drive enterprise level metrics
 - Order to Cash
 - Procure to Pay
 - Campaign to Quote
 - Plan to Fulfill
 - Manufacture to Distribution
 - Issue to Resolution

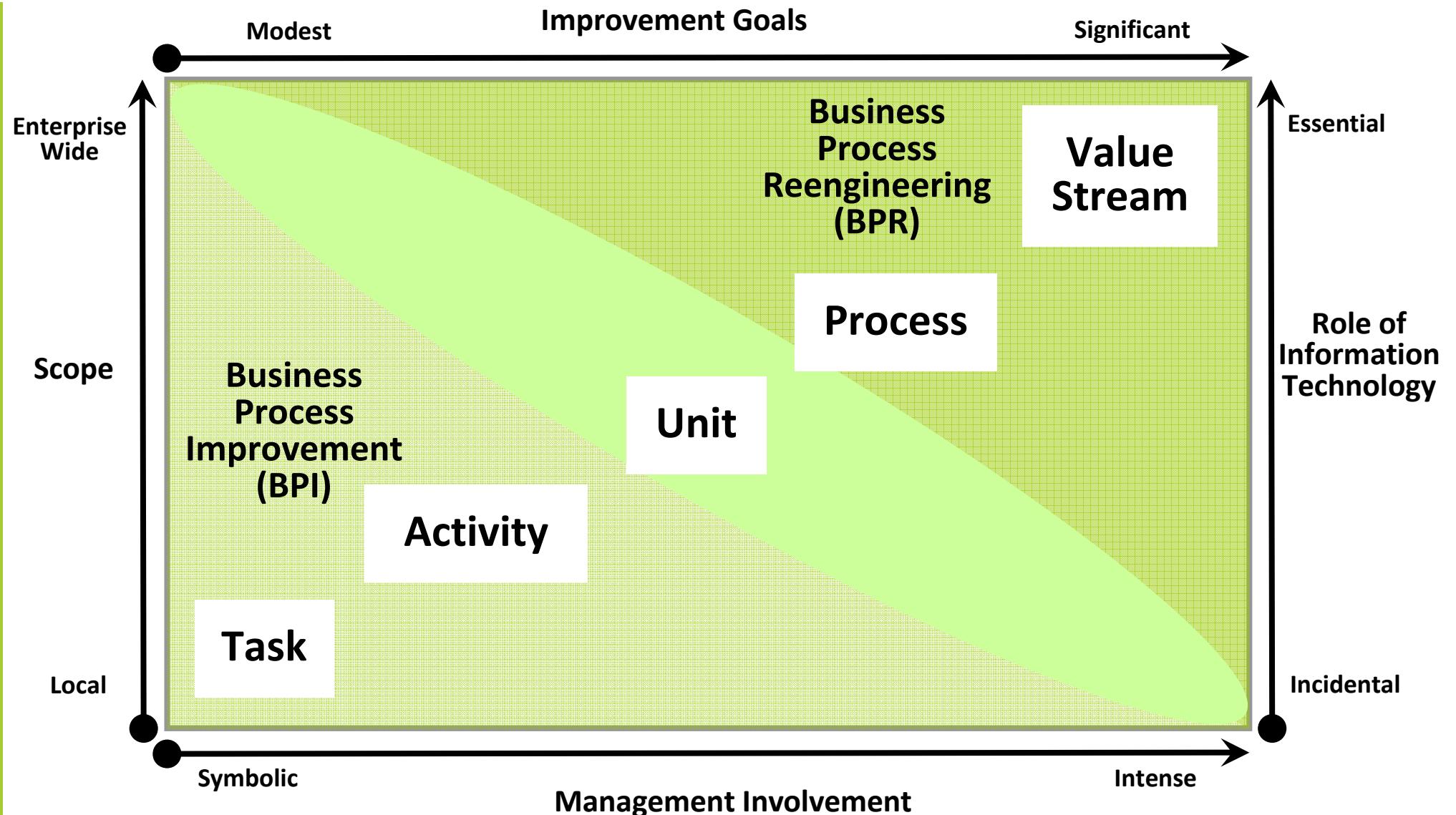
Define Measures Linked to Key Processes



Alignment of Business Process and Enterprise Performance

- Cross-functional processes will impact more than just one enterprise level metric
- For example Plan to Fulfill will impact Delivery Performance, Request Date and Order Fulfillment Lead Time
 - Lots of process transformation methods
 - Important to understand whether that methodology will address the cross functional process or just a sub process within the cross functional process or even an activity within a sub process

Linking the Process to the Enterprise Level Desired Performance Metric



What to Measure

- Best way to understand what to measure in a process is to first understand the desired result
- Information required for measuring the quality dimensions of a process can be obtained at
 - The input and output of the process
 - The overall process when it comes to service level satisfaction
- Four fundamental metric dimensions
 - **Quality** - Metrics such as error and defect rates are examples of quality based metrics based on input and output information garnered from a process
 - **Cost** - Information required for measuring the cost dimension is usually based on the resources needed to perform the process itself, although the opportunity cost can also come from the output information
 - **Capacity** - Capacity information comes from the output information of the process
 - **Time** - Time based dimensional metric information is obtained from the entire process, from supplier to customer, but can also be broken down between supplier and input and output and customer

Measurement Methods

- Two methods for measuring a process
 - Manual, that is collecting data by hand and either drawing it on paper or entering it into a spreadsheet or modelling tool
 - Automated method enabled by sophisticated software such as business process management suites or enterprise software modelling tools
- Several common measurement methodologies used in BPM implementations
 - Value Stream Mapping
 - Activity Based Costing
 - Statistical Methods

Value Stream Mapping

- Value Stream Definition
 - By locating the value creating processes next to one another and by processing one unit at a time, work flows smoothly from one step to another and finally to the customer
 - Chain of value-creating processes is called a value stream
 - Value stream is simply all the things done to create value for the customer
- Value Stream Mapping
 - Planning tool used to visualise the value stream of a process, department or organisation
 - Follow a product's production path from beginning to end and draw a visual representation of every process in the material and information flows
 - Draw a future state map of how value should flow

Value Stream Mapping

- **Value Adding Activity** - Those activities that, in the eyes of the end customer, make a product more valuable. A value adding activity is simple to define; it results in something the customer would pay for
- **Non-Value Adding Activity** -Those activities that, in the eyes of the end customer, do not make a product more valuable and are not necessary, even under present circumstances. These activities are clearly waste and should therefore be the target of immediate or short-term removal
- **Necessary Non-Value Adding Activity** -Those activities that, in the eyes of the end customer, do not make a product more valuable, but are necessary unless the existing supply process is radically changed. This type of waste is more difficult to remove in the short term and should be a target for longer term radical change

Value Stream Mapping

- Seven types of waste
in a process



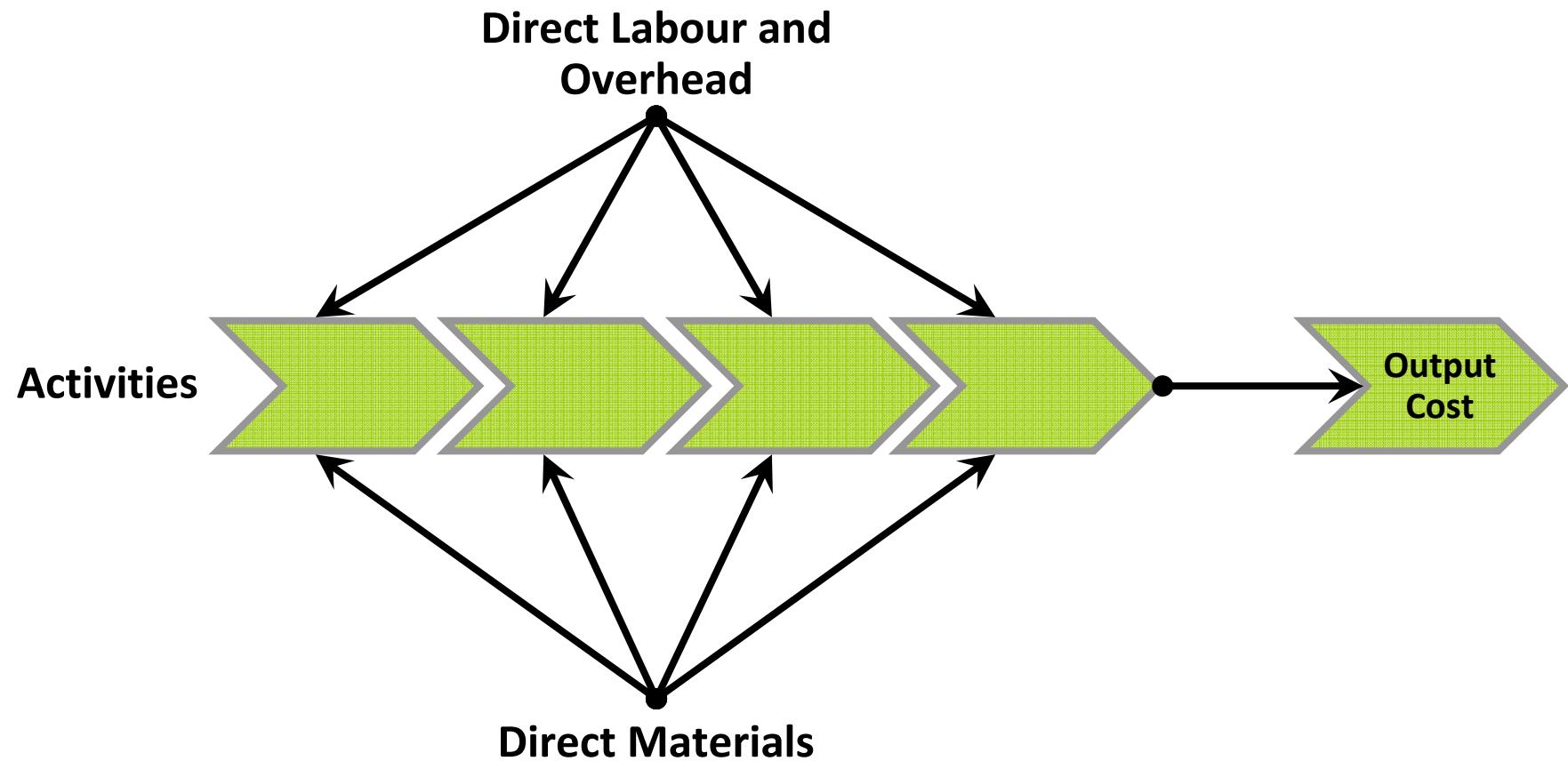
Value Stream Mapping

- **Defects** - Repair and rework
- **Motion** - Any time wasted to gather resources such as documents or requirements in multiple systems
- **Overproduction** - Producing more than is needed before it is needed, working on non-priority items early
- **Transportation** - Wasted time to move resources between processes
- **Inventory** - Maintaining excess output
- **Processing** - Doing more work than is necessary, work not in scope
- **Waiting** - Any non-work time waiting for approval, resources, information, queueing time

Activity Based Costing

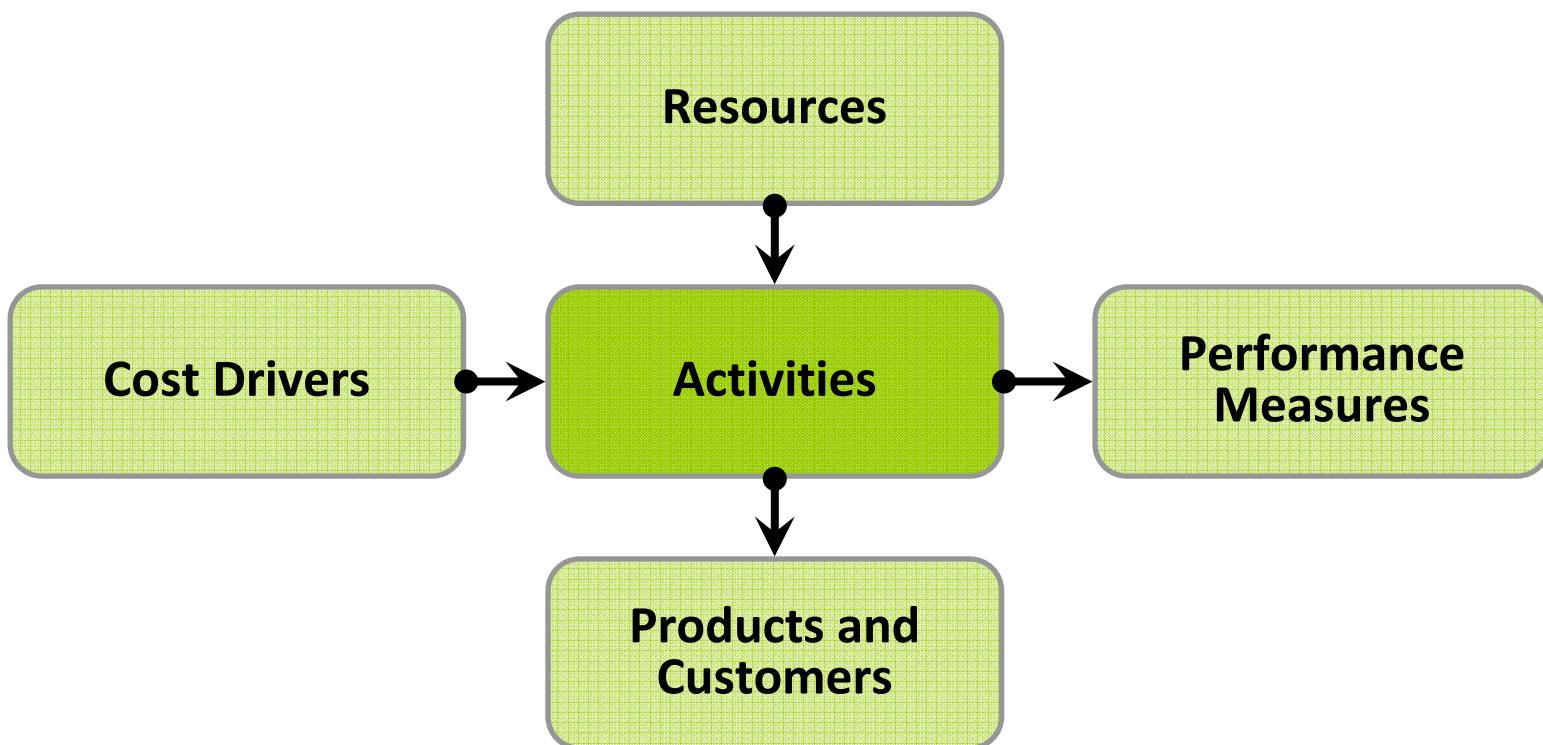
- An accounting methodology that assigns costs to activities rather than products or services
- ABC does not eliminate or change costs
- It provides data about how costs are actually consumed in a process
 - Activities consume resources
 - This consumption is what drives cost or inefficiency
 - Understanding this relationship is critical to managing overhead
- Used to discover opportunities for cost or efficiency improvement
- Focuses on overhead, traces rather than allocates each expense to a particular cost object
- Makes indirect expenses direct

Activity Based Costing



Activity Based Costing

- Establishing a cross-functional view of your organisation and understanding what drives your costs
- Pulling apart indirect or hidden costs and attributing them correctly to products and services



Activity Based Costing

- An ABC approach will account for
 - Activities / processes (comparing before and after the re-engineering project)
 - The frequency and cost of the activity/process (comparing before and after the re-engineering project)
 - The do-nothing scenario (what would happen if we do not do the project)
 - Which processes provide value (i.e. are needed to attract and retain customers, result in operational savings)

Activity Based Costing

- Use ABC when
 - Overheads are high
 - Cost of errors is high
 - Inefficiency
 - Competition is stiff

Statistical Methods

- Science of collecting, analysing, presenting and interpreting data
 - All work occurs in a system of interconnected processes
 - Variation exists in all processes
 - Variation may occur in at least two forms:
 - Random—natural variation due to the nature of the process; may be reduced, but not eliminated
 - Systemic—variation due to some consistent cause that can be addressed and eliminated
 - Variability is what drives error rates or inefficiency
 - Understanding what reduces the variability will help improve the process

Statistical Methods

- Used to understand and then reduce or eliminate variability in processes for improvement
- Focuses on data (the X's [inputs] which drive the Y [output])
- Determines which processes are primarily responsible for driving the X's, then focus on those processes for improvement
- Use when:
 - High rate of errors
 - Inconsistency of outputs

Modelling and Simulation

- After measurement, modelling and simulation are the next step in terms
- Measuring the current state process performance
- Developing desired future states of process performance
- Identifying the gaps in the current process preventing transition to the desired future state
- Simulation is the enactment or representation of the behaviour or characteristics of one system through the use of another system
- For business processes, simulation is enacting the behaviour of a process
- Process is modelled in the software with parameters associated with a process entered

Modelling and Simulation

- Cycle time parameters for each activity
 - In-queue time (before work begins)
 - Work delay time (from start of resource involvement until start of work)
 - Work time (from beginning of work to production of output)
 - Out-queue time (from output production to release of output)
- Cost parameters
 - Labour (total staffing costs allocated by headcount)
 - The resources associated with each activity
 - The cost of each resource
 - Material
 - Direct costs - material consumed each time an activity is performed
 - Overhead (administrative costs allocated as a percent of labor)
 - Indirect costs - allocated to activities requiring resources that are incurred over an interval of time
- Other parameters
 - How many times the process runs per interval time (N times/hour/day)
 - Decision points in process (for example - 60/40 split between path A and path B)

Modelling and Simulation

- Simulation output typically show each activity with all of the time metric dimensions summarised per activity along with the cost metric dimensions summarised by activity
- Allows for quick identification of process performance problem areas that are supported by extensive data from the simulation
- Once the current state performance is analysed and validated the desired future state process can then be modelled
- Saves time because it is all done using software before it is implemented in the organisation
- Provide an experimental lab to do the process reengineering efforts before actual implementation
- Not a substitute for the actual field work, nor is it a perfect method for determining the future state process
- Calculates the benefits of the process improvement via the Time, Cost, Capacity and Quality dimensions to help build a data driven business case for process improvement/reengineering

Decision Support for Process Owners and Managers

- Decision support for process owners and managers is essential for continuously monitoring the actual process performance
- Poor information about business processes can lead to poor decisions about where to invest in and how to improve company performance
- Many organisations use a Balanced Scorecard framework
 - Strategic planning and management system used to
 - Align business activities to the vision and strategy of the organisation
 - Improve internal and external communications
 - Monitor organisational performance against strategic goals
 - Dashboard to measure performance of the organisation
- Dashboards are a form of decision support and have been referred to as business intelligence and analytics

Decision Support for Process Owners and Managers

- Business intelligence generally deals with addressing process performance management and control within an enterprise context
- When business intelligence is instituted at an enterprise level, it mines information about specific cross functional processes and the performance of those processes in real-time, displaying the information in a dashboard format
- Decision support actually begins with the planning of the when, what and how process performance will be measured, managed and controlled
- Process performance management begins with a plan for
 - What processes will be measured
 - How often the processes will be measured
 - How decisions about process performance will be addressed when encountered
- Decision support frameworks, like a balanced scorecard, are useful in the planning for monitoring and controlling of business processes

Decision Support for Process Owners and Managers

- Once a process performance plan is in place business intelligence and analytics technology will provide the insights into the performance of the business processes
 - Business intelligence technology is an enabler and powerful mechanism in the hands of a process manager
 - Effective decision support can save the process manager a lot of time in detecting process performance issues

Considerations for Success

- Important part of any BPM effort is the skills needed to manage the people impacted by the business process change
- Always underestimated and is usually in the top three culprits when the effort fails
- Process designs which change organisational culture and human behaviour need to be aligned to the desired outcomes and working methods of the future business process
- Not as easy as it sounds

Considerations for Success

- **Competency Matching** - making sure that the people who will be performing the actual work in the new process actually have the competencies and skill sets to do the work effectively to achieve the desired outcomes
- **Roles and Responsibilities** - making sure that these are clear to people, otherwise there will be tremendous confusion accompanied by process deterioration
- **Organisational Structure** - structure the new organisation to take advantage of the new process, but also to manage it effectively
- **Empowerment with Accountability** - this goes double for the process managers who will own the enterprise level process performance
- **Performance Measures and Objectives** — these should be tied to roles along with the corresponding compensation and incentives to drive the desired behaviours
- **Personal Growth Opportunities** - people don't want to feel like they've been pigeon-holed into one role with the new process but want to see how they can grow within the new roles

Considerations for Success

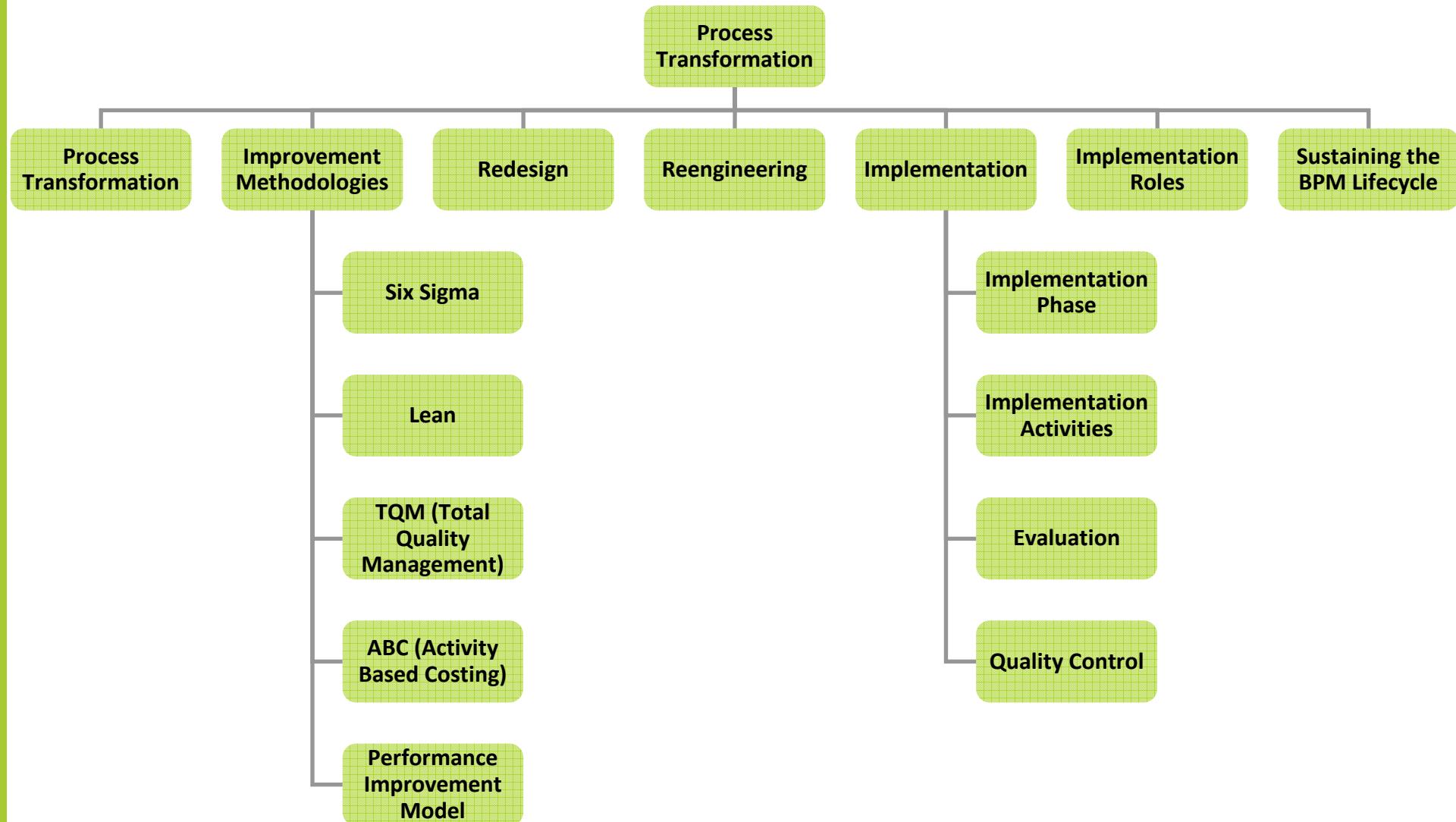
- Some critical success factors
 - Focus on people as much as the process
 - Education – make sure everyone knows the entire process and not just their part of it
 - Everyone has the same understanding of what a process is
 - Everyone understands why process is important – tie it to operational performance metrics for the company and align compensation to it
 - People who design and approve the activities are the same people who do the activities
 - Attempt to over communicate the goals and objectives (performance metrics) of the process

Considerations for Success

- Important to assign a Process Manager who
 - Manages process performance
 - Ensures the process is documented and reflects actual practice
 - Defines performance measures and targets
 - Monitors process performance
 - Takes action to address process performance
- Process Manager is an individual with accountability and authority for the end-to-end performance of a process
- Never-ending responsibility and the Process Manager helps create the new process and lives with the results

Process Transformation

Process Transformation Topic Scope



Process Transformation

- Planned evolution of a business process using a clearly defined methodology and disciplined approach to ensure that the business process continues to meet business objectives
- Business processes are affected by many factors both in and out of the organisation's control
- Process transformation is enabled by Business Process Management principles and governances adopted by the organisation
- Depending on the process maturity level of the organisation, it will adopt various methods to monitor and respond to these factors in the appropriate manner and timeline to meet each individual situation
- May be achieved through a strategy of continuous improvement or by initiating projects as needed

Process Transformation - Improvement Methodologies

- Improvement Methodologies
 - Six Sigma
 - Lean
 - TQM (Total Quality Management)
 - ABC (Activity Based Costing)
 - Performance Improvement Model

Six Sigma

- Originated in Motorola in the mid-1980's
- Popularised by GE in the mid-1990's when Jack Welch praised the cost savings that the company was able to achieve
- Measure of quality that strives for near perfection
- Disciplined, data-driven approach and methodology for eliminating defects based on statistical data in any process from manufacturing to transactional and from product to service
- To achieve Six Sigma, a process must not produce more than 3.4 defects per million opportunities - six standard deviations between the mean
- Six Sigma does not represent a means of realigning enterprise processes for market differentiation as much as a proven means of driving out costs from existing processes

Lean

- Originated by Toyota - Toyota Production System
- Popularised by Daniel Jones and James Womack
- Management philosophy focusing on reduction of seven wastes
 - Over-production
 - Waiting time
 - Transportation
 - Processing
 - Inventory
 - Motion
 - Scrap
- Set of disciplines which can be very powerful in the realm of operations analysis
- More an operations process improvement instrument rather than a means of reengineering or designing new processes
- Develop and review checklists to review product designs
- About getting the right things, to the right place, at the right time, in the right quantity while minimising waste and being flexible and open to change

Lean

- Lean principles
 - Perfect first-time quality - quest for zero defects, revealing & solving problems at the source
 - Waste minimisation - eliminating all activities that do not add value and safety nets, maximise use of scarce resources (capital, people and land)
 - Continuous improvement - reducing costs, improving quality, increasing productivity and information sharing
 - Pull processing - products/services are pulled from the consumer end, not pushed from the production end
 - Flexibility - producing different mixes or greater diversity of products quickly, without sacrificing efficiency at lower volumes of production
 - Building and maintaining a long term relationship with suppliers through collaborative risk sharing, cost sharing and information sharing arrangements

TQM (Total Quality Management)

- Set of management practices throughout the organisation geared to ensure the organisation consistently meets or exceeds customer requirements
- Focus on process measurement and controls as a means of continuous improvement
- Statistical analysis is used to monitor process behaviour and identify defects and opportunities for improvement
- Forerunner of Six Sigma

ABC (Activity Based Costing)

- Methodology that measures the cost and performance of cost objects, activities and resources
- Cost objects consume activities and activities consume resources
- Resource costs are assigned to activities based on their use of those resources
- Activity costs are reassigned to cost objects (outputs) based on the cost objects proportional use of those activities
- Incorporates causal relationships between cost objects and activities and between activities and resources

Performance Improvement Model

- Developed by Geary Rummler and Alan Brache in the early 1990s
- Framework aligns processes at three distinct three levels of performance:
 - Organisational level
 - Process level
 - Job or performer level
- Seeks to align the processes behind the strategy of the organisation and the customer's requirements
- Can be used to understand the alignment of the human resources central to the performance of one or more value chains

Performance Improvement Model

- Matrix to provide the means of alignment within the enterprise
- Matrix addresses the nine concerns that anyone trying to change processes in an organisation must consider

	Goals and Measures	Design and Implementation	Management
Organisational Level	Organisational goals and measures of organisational success	Organisational design and implementation	Organisational management
Process Level	Process goals and measures of process success	Process design and implementation	Process management
Activity or Performance Level	Activity goals and measures of activity success	Activity design and implementation	Activity management

Redesign

- End-to-end rethinking of what the process is currently doing
- Different from process improvement because it takes a holistic approach to the process rather than identifying and implementing incremental changes
- Although it may lead to significant changes, these changes continue to be based on the fundamental concepts of the existing process
- Different from process reengineering which begins with a “blank slate” and is based on radical change to the process

Reengineering

- Mike Hammer's 1993 book Reengineering the Corporation
- Premise is one of radical change of process throughout the organisation to bring about performance improvements
 - Fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed

Reengineering

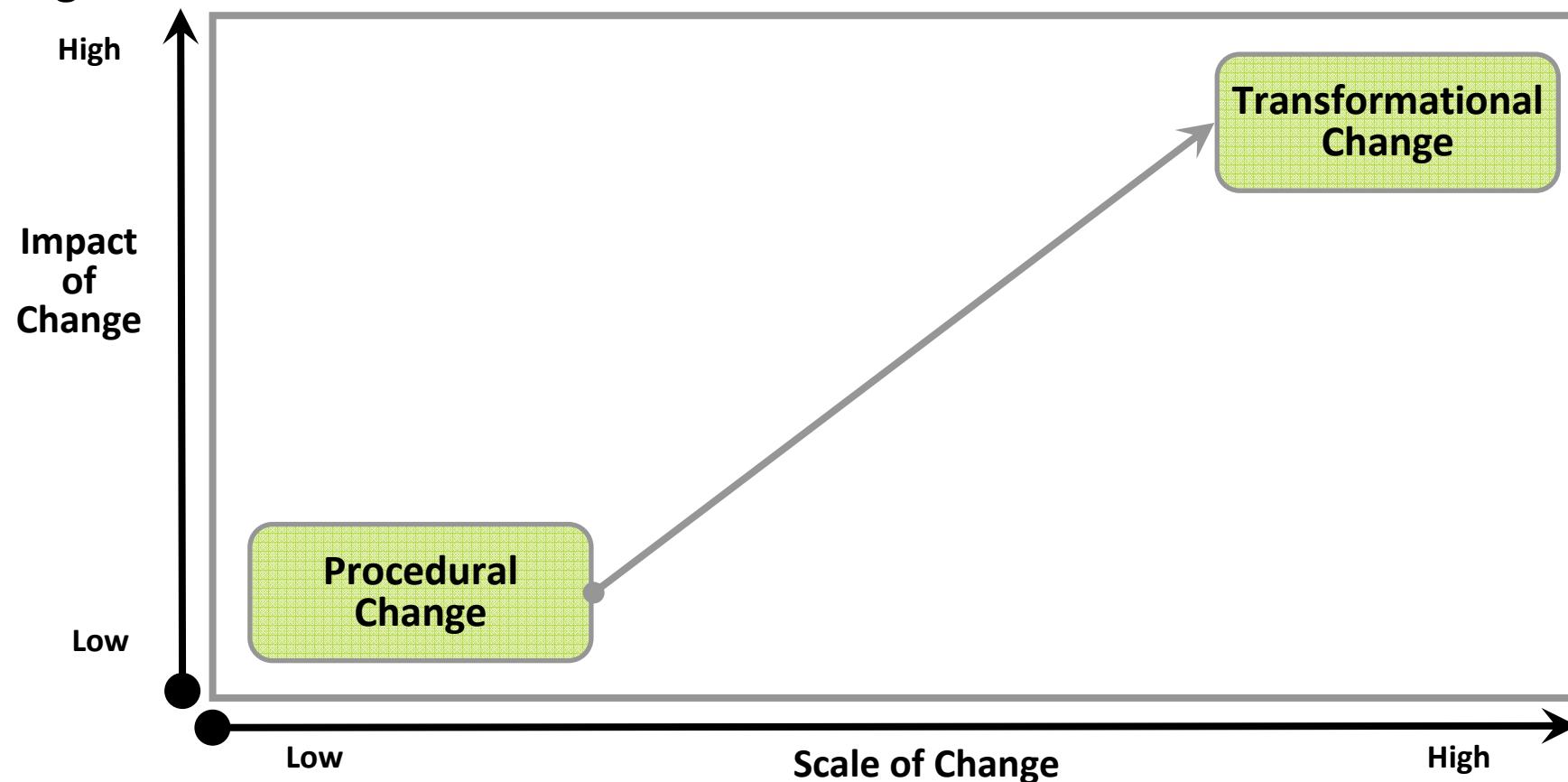
- Seven rules or principles of reengineering
 - **Organise around outcomes not tasks** - helps eliminate the need for handoffs and provides a single point of contact for the customer
 - **Have those who use the output of the process perform the process** - those who are closest to the work should do the work
 - **Merge information - processing work into the real work that produces the information** - People collecting the work should be responsible for processing the work instead of handing over to some other individual or system
 - **Treat geographically dispersed resources as though they were centralised** - technology advancements make this a reality through combining dispersed systems and teams as though they were a single team
 - **Link parallel activities instead of integration their results** - helps reduce errors at the end of the process
 - **Put the decision point where the work is performed and build control into the process** - empowers the performer of the work to get the resources he needs to get the job done most efficiently
 - **Capture information once - at the source** - eliminates costly mistakes of information not being passed effectively from one handoff to another

Implementation

- Realisation of an approved business process design into documented, tested and operational procedures and workflows
- Includes new and revised business process policies and procedures
- Assumed that the analysis, modelling and design stages have created an approved, comprehensive set of specifications so only minor adjustments should occur during implementation
- Scope of implementation activities
 - Executable primary and support processes
 - Oversight management processes
 - Business rules related to all three types of processes
 - Relevant and controllable Business Process Management components in the organisation's internal environment, e.g., policies, incentives, governance and leadership style

Scale of Change in Implementation

- Scale of implementation varies from limited procedural changes in business processes, business rules and process management to the transformation of entire enterprise business processes and its BPM governance



Scale of Change in Implementation

- Procedural Type Changes
 - **BPM scenario:** a business manager may not retain the role of the same process ownership for more than two years, rather than three years. This is a change to how the business process is managed
 - **Process scenario:** a market research study launch requires authorisation by both the Marketing Manager and also now the Sales Manager for that market territory. This is a change to the business process
- Transformational Type Changes
 - **BPM scenario:** an Enterprise Business Process Council comprised of all process owners, the Chief Operating Officer and the Chief Financial Officer will be created and meet quarterly to evaluate the Business Process Portfolio performance and proposed major business process improvement projects
 - **Process scenario:** the current evaluation of life insurance applications by a fixed sequence of professional staff groups will be replaced by an application coordinator who will select which professional staff groups need to be involved with a particular application

Scale of Change in Implementation

- Procedural changes may need less formal (project) management controls
- Need the approval of small number of personnel depending upon the nature and scope of the change
- Transformational changes might require senior management or Process Council approval and a formal program or project management team
- Criteria for determining what type of approval and oversight are necessary are part of the BPM governance policy

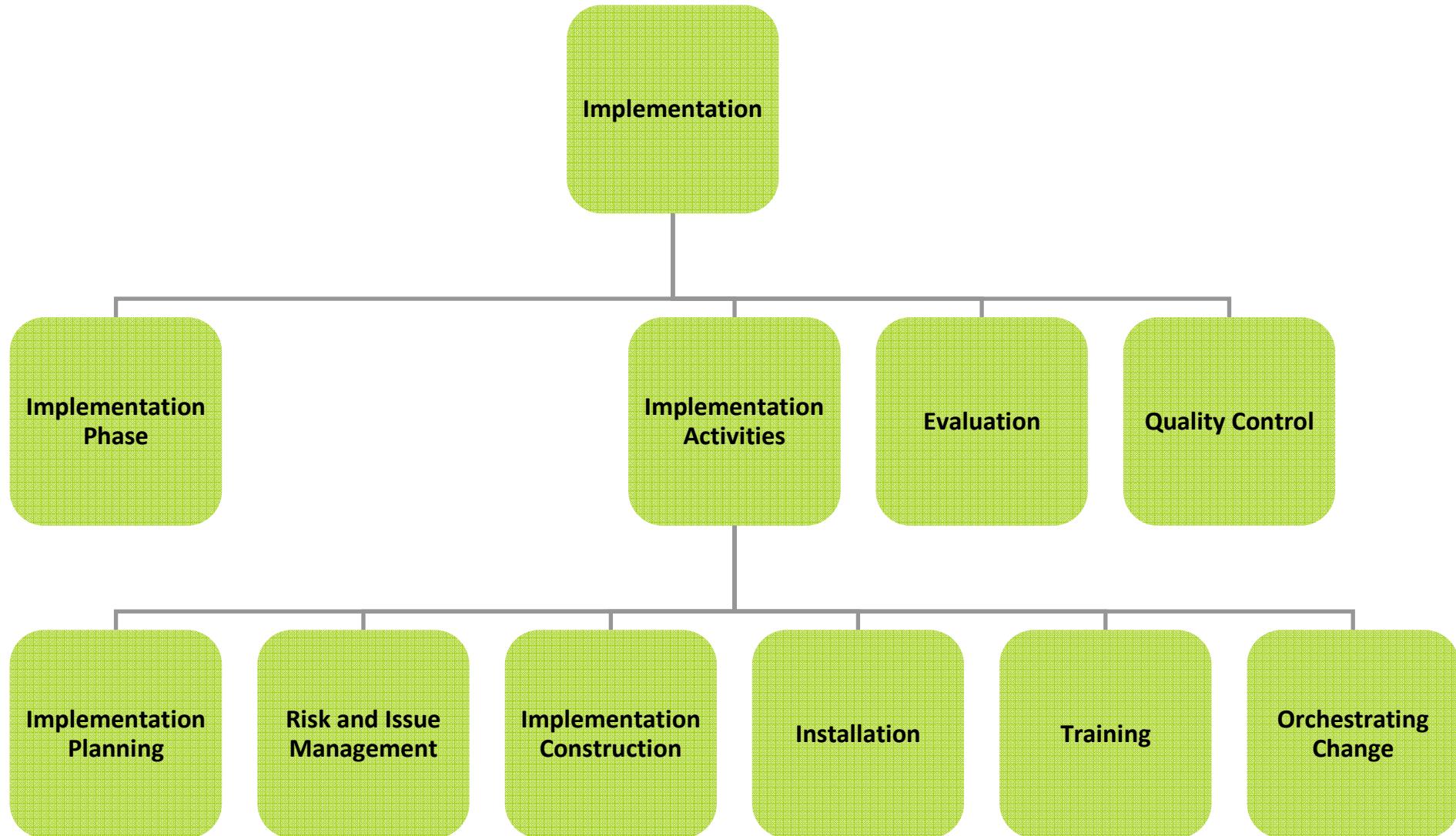
Implementation

- Difference between implementing a business process and implementing BPM
- Implementation of BPM involves
 - Setting up the infrastructure for an organisation to manage their business processes
 - Defining how they will be managed
 - Governance
 - Tools to develop, maintain and monitor business processes
 - Methodology to determine when new processes are required and when
 - changes to existing processes are needed
 - Identifying when a process should be retired
 - Detailing the steps involved in achieving each scenario

Business Process Implementation

- Focus primarily on Business Process implementation rather than Business Process Management implementation

Business Process Implementation Topic Scope



Implementation Phase

- Business Process Implementation is transforming an approved business process design into operational enterprise (or lesser scope) processes and revised BPM policies and procedures that are accepted by the appropriately trained stakeholders
- Success of the implementation effort is dependent significantly on the buy-in and continued visible support by senior management sponsors, process owners, process champions and process performers (who are responsible for the most critical tasks)

Implementation Phase

- Deliverables
 - Manual and automated new or revised executable business processes decomposed into detailed workflow scripts including associated business rules and management controls
 - BPM metrics and tools to evaluate the performance of the new or revised business processes
 - A new or revised Process Management organisation and set of processes for monitoring, controlling, tracking and assessing process performance and a means to align process performance to strategic goals
 - Complete and accurate business process and business rules documentation integrated into a business process rules repository
 - As appropriate, installed and tested BPM software and manual activities with related business applications, data sources and hardware
 - Trained workflow performers and process management support staff
 - Users' acceptance of new or revised business tasks through successful change management
 - A plan for the evaluation of the implemented new or modified business processes and continued assessment for improvement

Implementation Phase

- As the scale and complexity of new or revised workflows, tasks, procedures, business rules and policies increases, more formal project management and change management oversight will be required
- Metrics needed for business process performers, managers and support staff to evaluate the development progress and the post-implementation benefits related to these deliverables
- No universal set of metrics

Suggested Metrics

	Description	Metrics
1	Compare activities to be constructed or modified from the Design Phase with the most recent requirements specification. Are all the requested features addressed? Assessed before Implementation activities are planned.	Number of matched activities Number of activities specified
2	Obtain a measure of the magnitude of the scope of process changes. Review previous phase metric or develop	Number of (sub)processes to alter Number of (sub)processes in relevant domain
3	Assessment of readiness to begin near-term implementation activities	Number of resources committed Number of resources needed
4	RFP/Q progress by RFP/Q domain, if applicable	Number of RFP/Q returned Number of RFP/Q issued
5	Testing Progress (manual and automated components)	Number of tests passed Number of tests executed and Number of remediations done Number of tests failed
6	Completion progress by stage or cumulative: items	Number of components finished Number of components to be built

Suggested Metrics

	Description	Metrics
7	Completion progress by stage or cumulative: budget	Amount expended Amount budgeted
8	Completion progress by stage or cumulative: time	# of hours incurred # of hours budgeted
9	Completion progress by stage or cumulative: on time	# of activities done on time # of activities
10	Training performance	Average, median and range of training test scores compared to benchmark
11	Business process effectiveness improvement (by sub process)	Actual outcome improvement Expected improvement
12	Business process efficiency improvement (by sub process)	Actual cycle time reduction Expected cycle time reduction

Implementation Phase

- Business Process Implementation is the link between planned process performance, process execution and business benefit realisation
- Activities may vary from a simple, straightforward process-rules change to a major, complex process transformation
- Technological, behavioural, policy and workflow implementation tasks must be managed carefully
- Human and software process components must execute within acceptable tolerances to achieve performance targets
- A well-designed process that is poorly implemented will be a failure with both short-term and longer-term consequences
- Process redesign or improvement effort, regardless of scale, that is well executed will generate expected benefits and sustain the trust of decision makers related to future business process improvement proposals
- Implementation effort includes risk management and consensus-building tasks that could impact the Business Process implementation success or failure

Implementation Activities

- Business Process Implementation tasks in the approximate sequence of execution
- Review project objectives, deliverables, metrics and timeline
- BPM and Senior Business Management decide whether or not to outsource this business process
- If outsourcing is selected, a set of RFP's are prepared and issued, responses evaluated and a vendor selected (assuming at least one qualifying response)
 - The contract is negotiated and a transfer of assets occurs
 - A Business Process Outsourcing (BPO) Relationship Manager reviews installation; test results and evaluates security at the business process site (including communications channels)
- A decision to purchase or build BPM software is made by the Process Owner, BPM Project Manager and Application Development Manager
- An implementation project plan and leadership group

Implementation Plan and Leadership Group

- Tasks in sequence with milestones
- Assessing and managing project risk
- Staff resource time and cost requirements estimated
- Obtaining necessary staff resources—perhaps modifying schedule
- Revisiting project costs, if revision from Master Budget is required
- Specify all the relevant BPM components impacted
- Prepare all the Change Requests for work to be performed and obtain approval
- Develop, send and evaluate all RFP's and RFQ's for appropriate items identified in the prior step
- Develop the test plans listed in the prior section
- Develop the preliminary Business Process documentation and training material
- Continue Change Management activities to maintain Business Process owners and performers' buy-in
- Install any scheduled software and hardware; complete any data conversion. Maintain versioning logs
- Perform tests of the Business Process and any related new software and hardware as noted the prior section. Resolve exceptions quickly
- If outsourcing is selected, perform Acceptance Tests for outsourced business processes; remediate problems
- Provide training to Business Process owners, performers and support staff
- Launch the new or revised Business Processes as executable processes
- Evaluate performance metrics expected v. actual results (assuming performer learning curve has been satisfied)

Implementation Planning

- Prior to performing any of the Implementation tasks of larger-scale efforts, the Business Process project manager should re-confirm the commitments from the project sponsors and process owners
- Review with the BPM Implementation team leaders the previous progress, updated plans and prepare or review the Implementation Schedule and required resources

Implementation Planning – Project Review

- Review project requirements and history
 - Business Process project objectives, scope, benefits and related performance metrics
 - BPM project timeline, rationale for major changes and deviations and expectations for this Implementation phase
 - Business process outsourcing considerations
 - BPM project budget history and financial targets for the Implementation phase
 - BPM project risks: past, current and anticipated; how these were or could be addressed
 - BPM project change management progress including past successes, failures and next challenges
 - BPM introduction/modification rollout scenarios by (1) project objectives' priority and (2) early, visible benefits

Implementation Planning – Activity Specification

- After review, a complete set of BPM Implementation activities can be specified
- Activities may have been done during initial business process project planning, but should be reviewed and potentially modified due to actual changes during prior project phases
- Each implementation activity specification should include:
 - Objectives, performance metrics and list of deliverables—all related to delivering improved customer value
 - Risks for completion and how to be minimised
 - Accountability for completion
 - Financial, personnel, any IT support and other resources required
 - Length of time for completion
 - Any implementation task cross-functional interdependencies

Implementation Planning - Staffing

- Specification, review and possible revision of personnel needs (e.g., BPM, IT, business process performers and any outside consultants) to complete the defined tasks may require revision of the implementation schedule
- Internal staff availability and commitments need to be negotiated within the business process group and other relevant company groups
- Gaps in availability and expertise may require contracting with external parties

Implementation Planning – Budgeting

- Review the most recent version of the BPM Implementation budget for consistency with revised planned activities and their related costs
- Requests for additional funds may require the development and presentation of a well documented justification
- Depending upon the amount of funding received, the BPM Implementation plan may require modification

Implementation Planning – Risk Analysis and Management

- Throughout the Business Process Project, risk analysis and management are performed to improve the chance for a successful outcome
- Concerns focus on project cost, schedule and performance
- Risks
 - Requirements scope creep can occur if Project Change Requests are not scrutinised carefully (some may be deferred to post-implementation)
 - Completion of scheduled activities can be delayed without interim reviews of activity progress and actions to reduce further delay—possibly accelerate appropriate remaining activities
 - Intended project outcomes may not fulfill process owner's and performers' expectations if the developed BPM components deviate from the design requirements—incrementally compare requirements to developed manual and automated procedures
 - Test procedures may not be consistent with test requirements creating an opportunity for unrecognised defects in manual and automated process activities

Implementation Planning – Risk Analysis and Management

- Risks
 - Modifications to Business Process procedures are not updated in the business process and rules repositories
 - Cross-functional business process performer harmony may not be stressed during training
 - Training programs may not be reinforced with appropriate changes in incentives, culture and leadership style
 - RFP/Q may not have balanced team composition from the performer and supporter/technical groups that could result in purchasing quality BPM technology that does not align with the business objectives
 - Contingency plans and walkthroughs for business or IT interruption have not been documented and tested completely
 - Incomplete stress testing of manual and automated business processes may result in an inability to meet increasing business process workflow intensity
 - Inadequately prepared Business Process and IT Help Centre staff can result in process outcome defects and loss of customer satisfaction, loyalty and revenue

Implementation Planning – Risk Analysis and Management

- For any identified risks that have quantifiable threat probabilities and consequences (financial and operational), perform quantitative risk analysis with accompanying sensitivity analysis
- For identified risks that have insufficient quantifiable threat probabilities and consequences, qualitative scenario analyses can be performed to produce some useful insights and risk-reduction planning
- Risk analysis is equally important for efforts that address primary and support (operational) processes as well as management processes
- Generation of value to the organisation is dependent upon all three of these business process classes to be performing appropriately

Risk and Issue Management

Risk Factor	Problem	Business Process Implementation Relevance
Unwilling user	No commitment to change	Obtain successful Business Process performer and owner buy-in
Multiple users	Creating a common appeal to create buy-in	Need strong leadership to overcome individual differences, especially cross-functional
Unclear objective(s)	Over promising expected results to users	Create a clear statement of Business Process project objectives and benefits
Unclear link between task change and benefits	Less commitment to adopt change	Communicate an explicit link between Business Process change, benefits and rewards
Loss of budget support	Adoption fails; benefits unrealised	Deliver early benefits to sustain BPM project support
Unfamiliarity with proposed changes	Unrealised expected benefits; loss of support	Obtain consultative help to assure Business Process success

Risk and Issue Management

- Factors for successful implementation of larger-scale efforts
 - Develop a clear stakeholder cross-functional consensus re: BPM effort objectives and success metrics
 - Obtain senior business management visible support initially and continuously throughout the program or project
 - Obtain and maintain BPM cross-functional stakeholder support to improve successful adoption and performance enhancement
 - Identify and manage BPM project risks
 - Protect against project scope creep
 - Manage Business Process owners', managers' and performer' expectations carefully to assure that delivered Business Process modifications align with promised deliverables

Risk and Issue Management

- Factors for successful implementation of larger-scale efforts
 - Assure that BPM changes are consistent with organisation culture, rewards' expectations and leadership values
 - If not, seek appropriate resources to modify these elements to maintain BPM-enterprise management alignment
 - Conform to project budget and schedule. Alterations require stakeholder buy-in
 - Deliver demonstrated staged BPM benefits quickly to sustain BPM stakeholder buy-in
 - Provide adequate process performer training and assistance during initial experience with BPM modifications
 - Completion of the BPM effort is not the end - just continuing the journey for continuous BPM improvement

Implementation Construction

- After preparing the scheduled activities and securing required resources, the construction phase may include both external-oriented and internal activities
- External-oriented activities address procurement of third party resources using Requests for Proposals (RFP's) and Requests for Quotes (RFQ's)
- IT support resources, e.g., application and system software, hardware, operations personnel may need procurement, upgrading or reconfiguring depending upon the type and extent of the business process changes
- Typically, those components of business processes that are well defined, structured and repetitive can be performed more efficiently by automated means
- Internal activities include the operational documentation of business processes, business rules, BPM governance and policies and, as appropriate, interfaces with IT applications, data resources and networks

Implementation Construction

- Business Process creation or modification includes
 - Specification of activities' procedures
 - Activity task sequence
 - Decisions with criteria
 - Input content and sources,
 - Output content and destinations
 - Activity performer (human or IT application)
 - Time for completion
 - Frequency
 - Triggering event for initiation
 - Manual document
 - Entry in the business process repository
 - Input to a BPM suite tool component
- Decision to automate any of the business processes or any components is based upon task complexity, degree of structure and repetitiveness

Implementation Construction

- Business Rule creation or modification includes
 - Specification of the related business process activity
 - Triggering event
 - Rule content
 - Decision criteria
 - Outcome alternatives,
 - Source of the rule
 - Reference to any enterprise legal or regulatory requirements

Installation

- Conversion and installation of the new or revised business process tasks, BPM activities (including performance sensors) and changes to the business process repository and related business rules may be completed all at once or in stages
- Greater resistance to change, project scope and project complexity all suggest a phased approach
- If manual BPM tasks have been automated, both manual and automated components may be executed in parallel for a specified time to check for consistent results
- Applications, middleware and database software plus any relevant hardware are placed into production
- If the business process is outsourced, all the appropriate digital and physical assets should be transferred to the business process outsourcer per the contract

Training

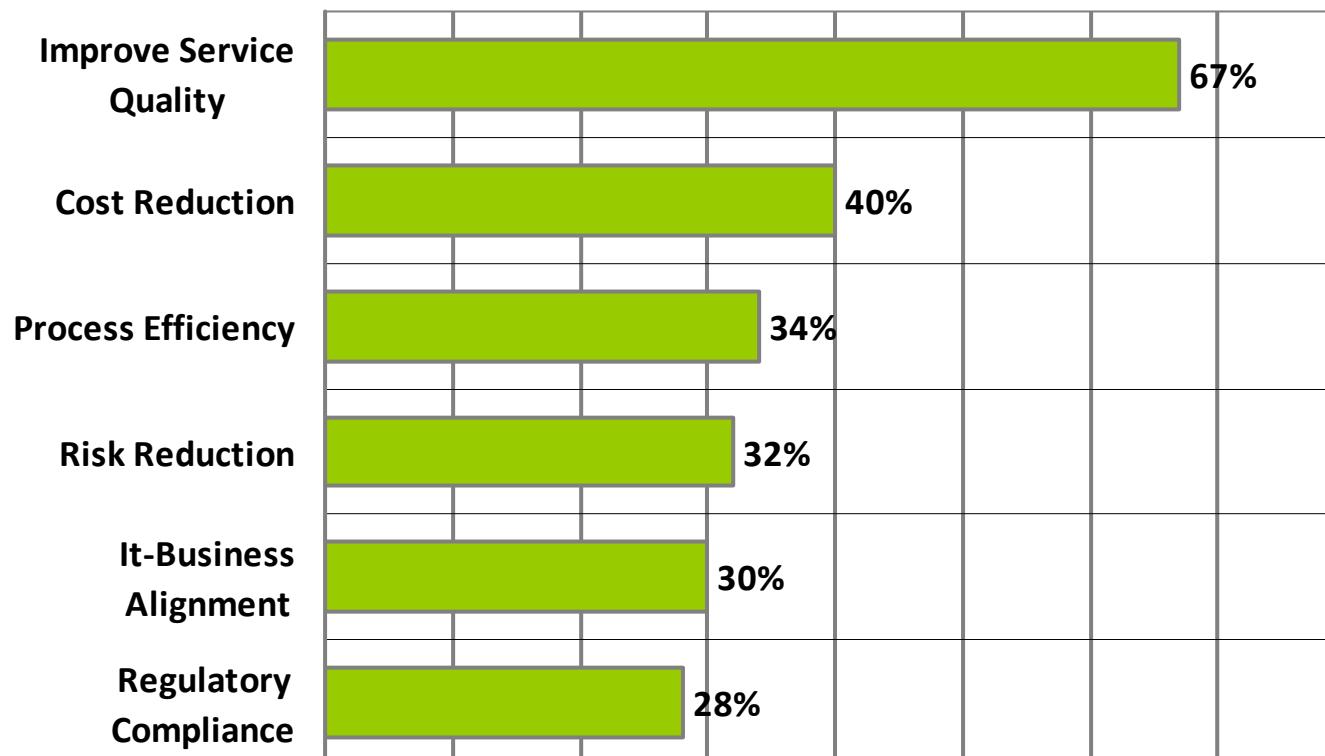
- Business process training program content, schedule and facilities must be planned
- Trainers should observe the usability tests for guidance in training material preparation
- Process performers should experience the relevant task walkthroughs with training to a defined performance criterion
- Process owners also should complete much of the training to understand the tasks being performed and measured within each process

Orchestrating Change

- Typically the most challenging aspect to a Business Process Implementation is reinforcing and finalising business process performer and process owner buy-in or acceptance of the changes
- Major challenge within a BPM project is motivating relevant BPM participants to adopt new behaviours
- Intensity of a Change Management activity is dependent upon the complexity and extent of the new or revised business processes
- Change Management of BPM participants' behaviour is one of the most critical and difficult challenges for achieving BPM project success

Orchestrating Change

- Business drivers for change management
- Dominance of Improve Service Quality is consistent with the major objective of BPM to facilitate an organisation's quest to provide superior products and services to customers



Orchestrating Change

- Effective change management activities begin with the project launch and are sustained throughout a project
- To be successful, change management needs to address a group of interrelated organisational factors
 - **Strategy** - assure business processes contribute to customer value
 - **Structure** - enables cross-functionality
 - **Systems** - formal processes and procedures including: planning, budgeting, resource allocation, controls and rewards, information and distribution systems
 - **Leadership style** - promotes a collaborative culture
 - **Staffing** - team oriented, open to change
 - **Personnel skills** - cross-activity trained
 - **Shared values** - promoted through culture and performance incentives

Orchestrating Change

- Change management for BPM should directly address these aligned with organisation strategy, structure and environment
- To improve organisation performance, trained BPM performers and managers must adopt modified tasks in new or revised business processes within shared values nurtured by the leadership
- Approach should produce intended, functional consequences and minimise unintended, dysfunctional consequences

Framework for Change Management

- Three-stage approach
 - Activate the process owners and performers for change
 - Provide clear training for new behaviour
 - Support the new behaviour until it becomes learned or habitual

Stage	Name	Content
1	Unfreezing	<p>Creating motivation and readiness to change (or unlearning current task behaviour) by:</p> <ol style="list-style-type: none">1. Communication and acceptance of disconfirming information - admission that something is not working properly—a “burning bridge”2. Connecting disconfirming information with a committed personal goal to reduce anxiety or guilt3. Create a feeling of “psychological safety” to minimise loss of face or self-esteem
2	Change	<p>Through cognitive restructuring and training, perceive things, judge things, feel things and do things differently based upon a new perspective by:</p> <ol style="list-style-type: none">1. identification with a role model, boss, mentor, trainer or consultant to see things from another’s perspective2. Scanning one’s personal environment for information that validates the proposed change(s)
3	Refreezing	<p>Helping to integrate the new point of view and behaviours by:</p> <ol style="list-style-type: none">1. New perspective and behaviour fits with an individual’s self-concept and incentives2. Consistency with relevant others’ new behaviour and potentially new organisation culture

Orchestrating Change

- Specific tactics and guidelines for consideration
 - Instill a sense of urgency for change
 - Select a good change management team
 - Leadership communicates an enterprise vision of change outcome
 - Leadership communicates frequently to as many relevant people as possible to sustain change momentum
 - Remove obstacles to change
 - Plan for early benefits
 - Sustain a benefit stream to maintain commitment to change
 - Institutionalise changes within the organisation culture and rewards

Orchestrating Change

- Change management is not episodic
- Agile organisation reacts quickly to changes originating from customer demands, competitor strategies and regulatory agencies
- Some changes are transformational
- Some changes are of lesser magnitude, but nonetheless provide additional value to customers
- Change management should be viewed as a portfolio of tools to be used flexibly for efforts of varying degree

Change Management

- During the Implementation Phase, change requests for business process and business process management activity specifications (e.g.; personnel, IT and financial resources; as well as BPM and Rules repositories) may arise
- These should be prepared, reviewed and approved/denied consistent with the organisation's standard Project Change Management policy and procedures
- Sufficient justification for the change request must be included
- Even smaller-scale efforts should submit a short-form request for review to gain some level of oversight for undertaking any changes to business processes

Evaluation

- Business process post-installation realised benefits (contrasted to expected benefits) are evaluated from
 - Assessing the financial and operational performance statistics collected by the BPM performance systems data collection (manual or automated)
 - Business Process performer interviews
- Analysis should include a time series of statistics that has allowed Business Process performers to have mastered the task learning curve
- Evaluate the financial and operational performance of the Business Process Implementation phase and the entire Business Process development or improvement project

Quality Control

- Quality Control or test plans for new and revised business process components are executed to evaluate the completeness, correctness, consistency, robustness and usability of both manual and automated tasks
- First set of tests addresses workflow function – each manual and automated related new or revised task is independently evaluated
 - Do the outputs satisfy the requirements?
 - Is expected cycle-time achieved?
- Next integration tests evaluate interoperability between related BPM, especially cross-functional processes' components
 - Internal automated and manual business process modules
 - External components

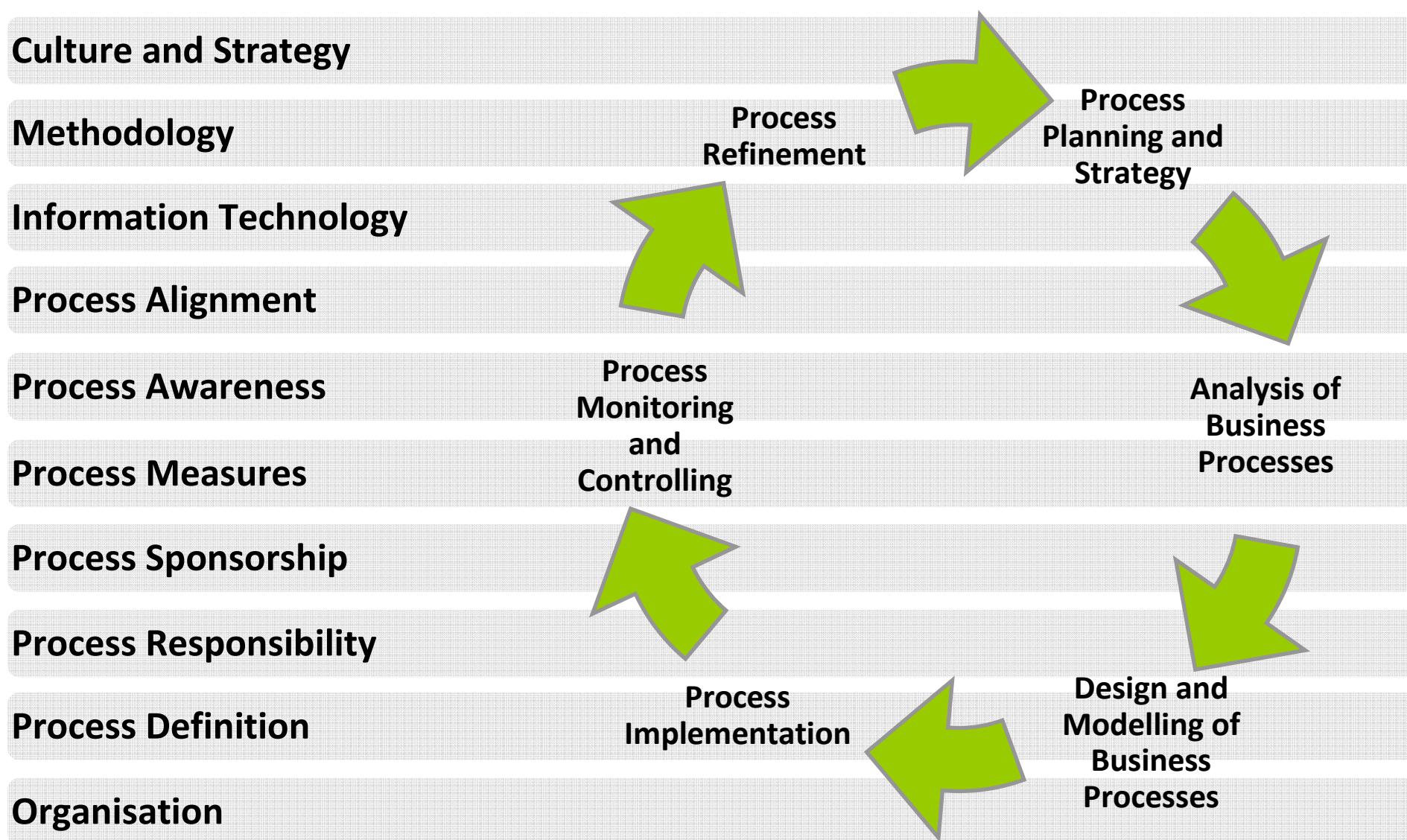
Quality Control

- Stress Tests are run to assess either persons' or the software's and hardware's ability to complete "transactions" under high volume demands with a typical mix of concurrently executing tasks
- Usability tests are completed by a sample of representative Business Process performers to identify improvements prioritised for the current release and a next release
- Acceptance test evaluates the operation of all the manual and automated components with typical Business Process user participation
- If this business process is outsourced, some representative from the Business Process Implementation team should observe these tests run at the outsourcer's site

Implementation Roles

- Business Process (possibly IT) Test Specialists to design, execute and assess various testing protocols, e.g., process walkthroughs, simulations and controls, software verification as appropriate and acceptance testing
- BPM Trainers who develop and provide training to business process owners, managers, performers and support staff for both manual and automated components
- For business processes that include automated components, Application Maintenance, Database, Data Centre and Networking management to assure end-to-end Business Process interoperability
- Organisation Development (internal) consultants to continue and accelerate Change Management tasks
- Business Process Repository Manager to implement required business process and business rules modifications
- Technical writers to create or modify user, Business Process and IT manuals

Sustaining the BPM Lifecycle



Sustaining the BPM Lifecycle

- BPM Lifecycle is applicable to projects of varying scale from limited procedural changes to large-scale process transformation
 - Some Life Cycle phases will have more detail and some less - depending upon project complexity and scale
- Ongoing monitoring of new or revised Business Processes continues to identify
 - problems to be resolved
 - further process improvement opportunities to be evaluated
- BPM help desk personnel also may uncover or learn about additional Business Process problems and opportunities

Process Maintenance Activities

- Business Process enhancements provide new functionality to deliver additional value to business process owners and enterprise customers
- Business Process project implementation may have requested changes that had to be postponed until post-implementation stability was achieved
- Current performers and process owners also may suggest changes for consideration
- Potential changes may include:
 - Modification Business Process functionality
 - Adding or modifying business process and rule elements or meta-data
 - Modifying the composition of the BPM Governance Council

Process Maintenance Activities

- Experience with Business Process execution may suggest efficiency or productivity opportunities to reduce manual and automated process cycle time as well as operating costs
- In turn, this should increase customer satisfaction, loyalty and revenue
- In contrast to discretionary changes, regulations and legislation may mandate Business Process changes
- Other changes in the external environment may also drive business process modifications

Summary

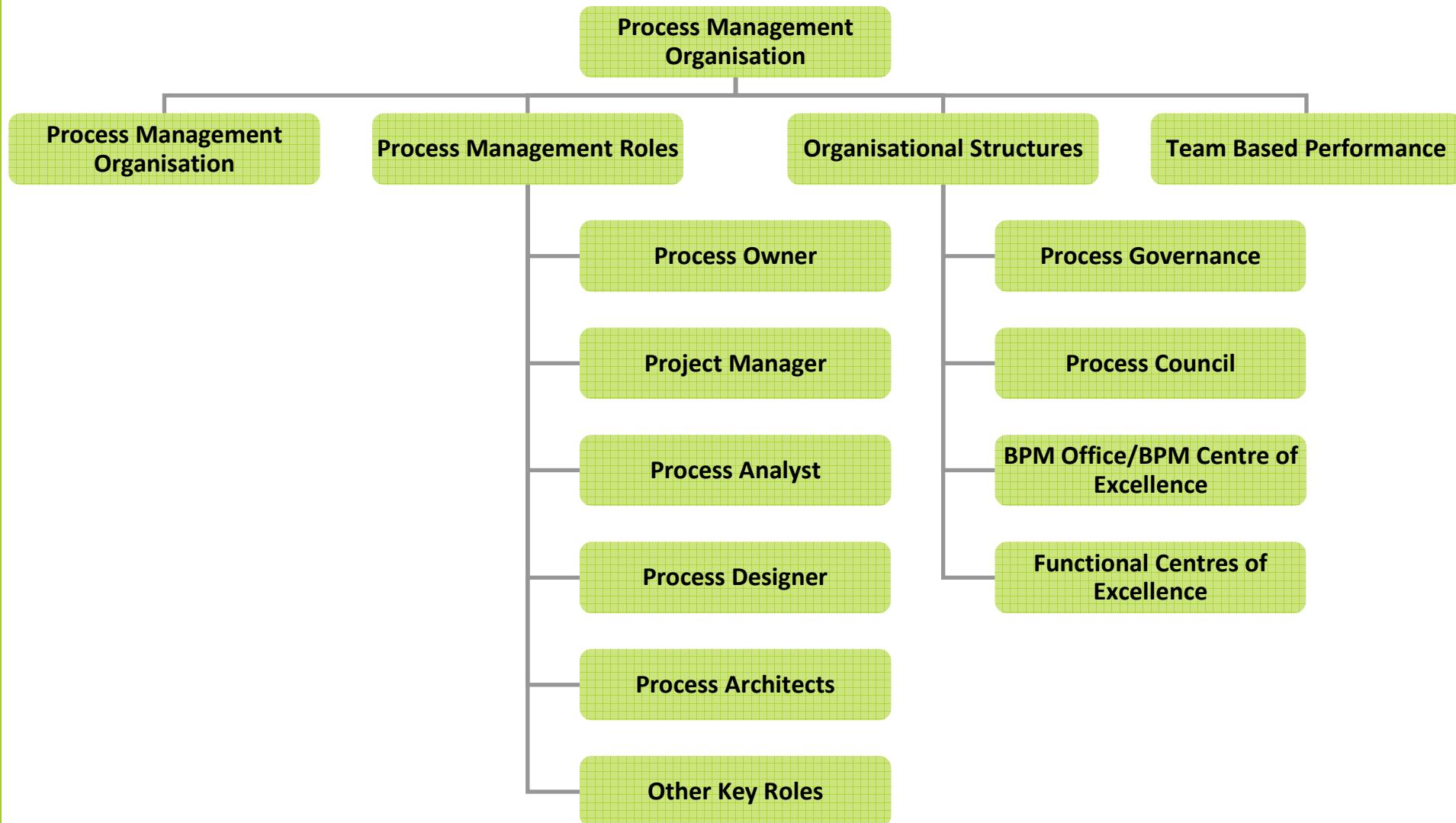
- Business Process implementation must be considered as a critical set of activities even though all the analysis and design has been completed
 - Execution is the key to successful strategy
- Perform risk analysis and management to reduce unpleasant surprises and provide business executives and process owners some degree of comfort
- Continue vigorous change management activities—people, in cross-functional relations, are the weakest link in People, Process and Technology
 - Use multiple channels to communicate frequently with senior management, process owners and process performers
 - Reinforce process/management changes with appropriate modifications to incentives and organisational culture
- Business process outsourcing is a challenging process to manage
 - Appoint trained relationship managers to improve the chance for success
- Business Process design changes must be minimised during implementation
 - Business environmental factors merit continued scanning for changes that could impact the current Business Process implementation actions

Summary

- Senior management and business process owners and business process management must remain active and visible to lead successful change
- Business Process conversion is meticulous, but an easy trap for implementation failure
- The scope and rate of Business Process change should not exceed the capacity of business process owners and performers to absorb change
- Evaluate realised vs. expected benefits
 - Share the wins
 - Learn from the losses
- Inadequate training will lead to business process/management loss of productivity and probable project failure
- Choose Business Process implementation techniques to match the scope and complexity of the project requirements

Process Management Organisation

Process Management Organisation Topic Scope



Process Management Organisation

- Organisational changes to consider as businesses introduce and mature in the discipline of managing their business processes
- Changes may be challenging
 - Include changes in work performance processes, organisational structure, roles and responsibilities, performance measures, values and culture
- As institutions reach new levels of process maturity, new skills, management structures and ways to align, motivate and reward employees may be introduced
- Anticipate, plan, prepare and guide the business through the transition to a process enterprise

The Process Enterprise

- A process centric organisation is structured, organised, managed and measured around its primary business processes
- Companies discover that to be effective in managing their primary business processes, they must assign clearly defined accountability for the design, documentation, maintenance, upkeep and long term health of these processes
- New roles, responsibilities, relationships and organisational structures may be contemplated
- Often results in a significant change in management focus and the way work is performed, evolving from
 - A more traditional structure, focused on a particular resource or business function
 - To the cross-functional performance of the end-to-end process which delivers value to customers

The Process Enterprise

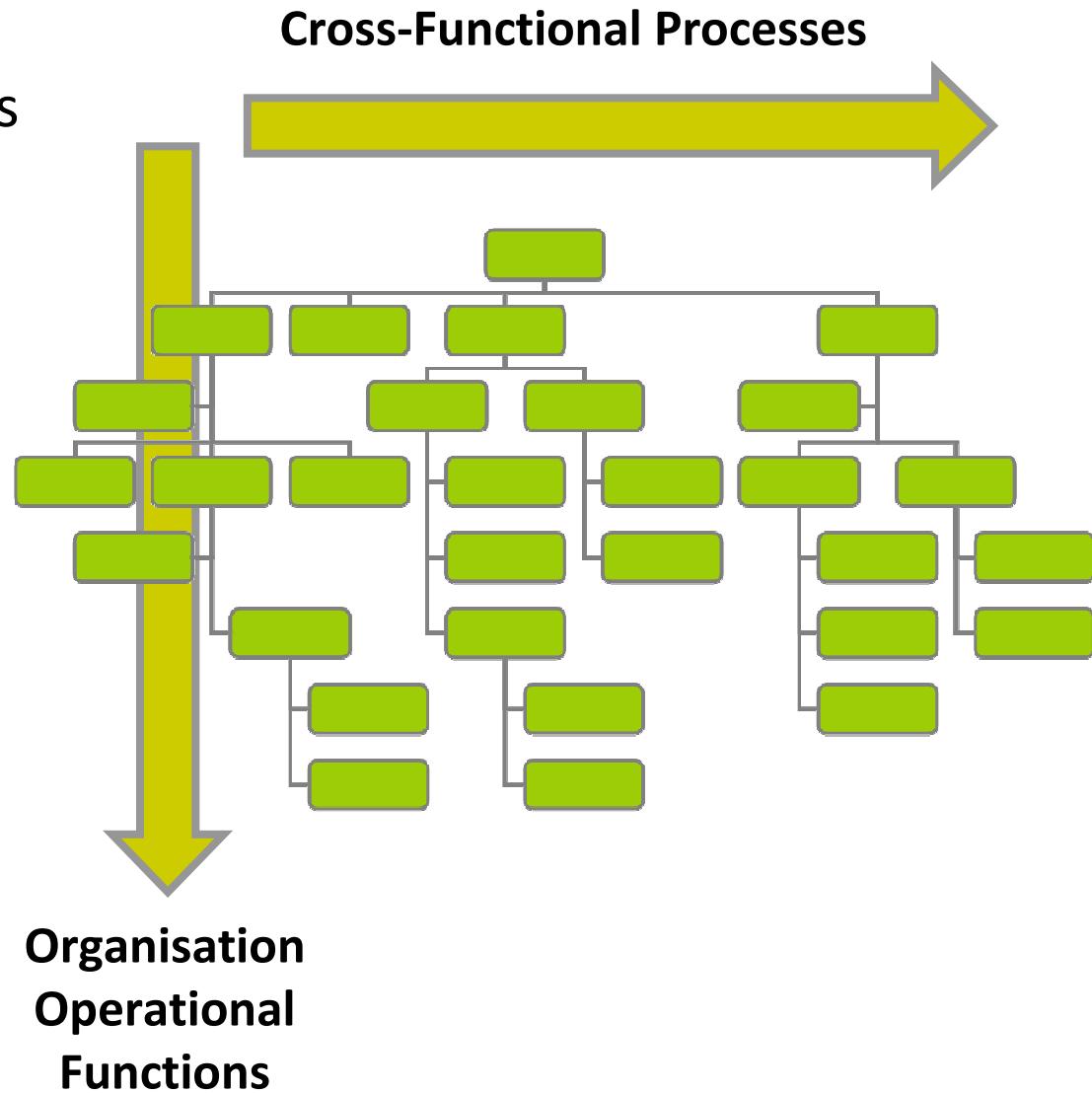
- Traditional management structures involve hierarchical delegation of responsibility, from one level of management to the next, with ultimate accountability to the organisation's shareholders
- Delegation is expressed as downward managerial focus on command and control of individual workers with responsibility for a specific set of tasks
- Process organisations include horizontal accountability to the customer for delivery of value across all functions
- Process focus involves process design, documentation, measurement and improvement
- Process centric enterprise does not mean that process is the only dimension of management, performance measurement or organisational structure
 - Financial, market and other performance measures remain important, as do functional and product skills

Process Culture

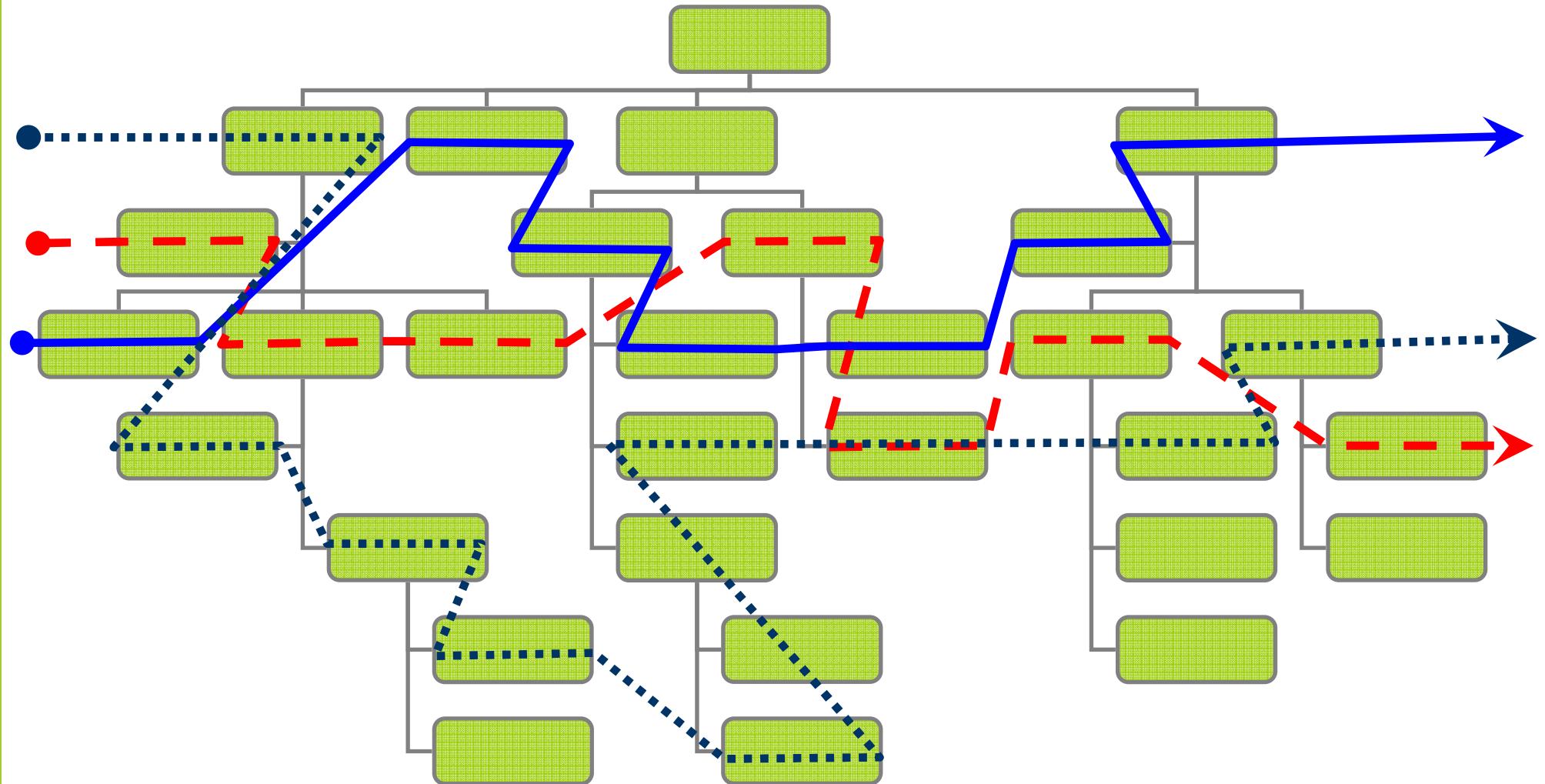
- A process culture is a concept in which the business' processes are known, agreed on, communicated and visible to all employees
- Characteristics of a process culture include
 - General agreement on what are the business processes
 - Understanding how business processes interact and affect each other
 - Clear definition of what value each process produces
 - Documentation of how each process produces its results
 - Understanding of what skills are required for each process
 - Understanding of how well each process performs
 - Ongoing measurement of process performance
 - Management decisions based on process performance knowledge
 - Owners of each process having responsibility and accountability for process performance

The Process Enterprise

- The organisation chart by its nature emphasises vertical functions, seniority, vertical reporting lines
- Creates local domains of influence and vested interests
- An organisation chart view inhibits cross-functional process view
- Everyone is partially responsible so no-one has overall responsibility

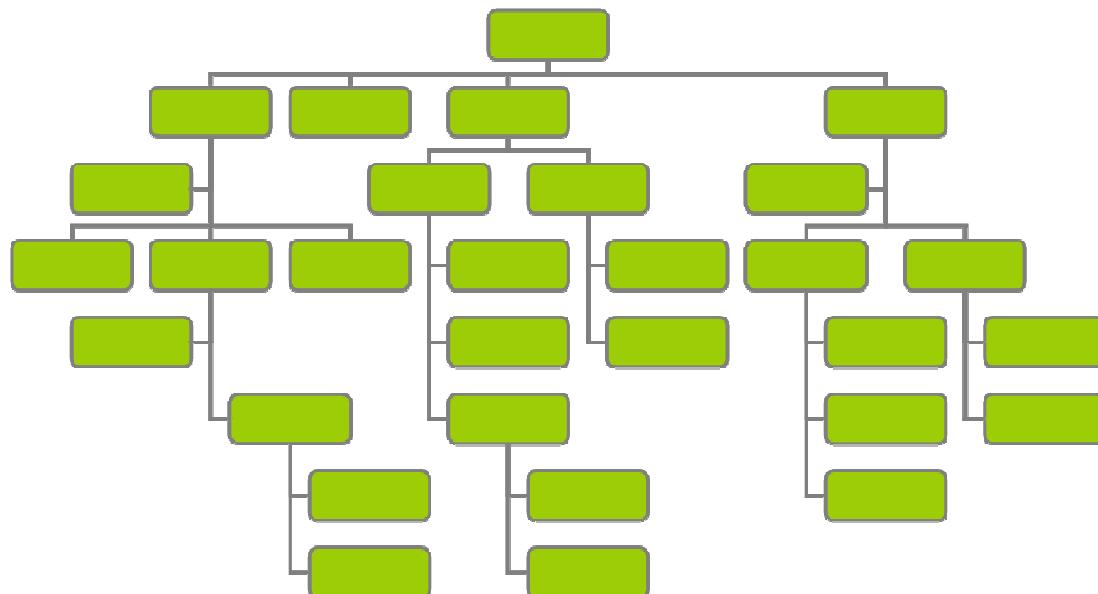


Cross Functional Processes – Crossing “Vertical” Operational Organisational Units



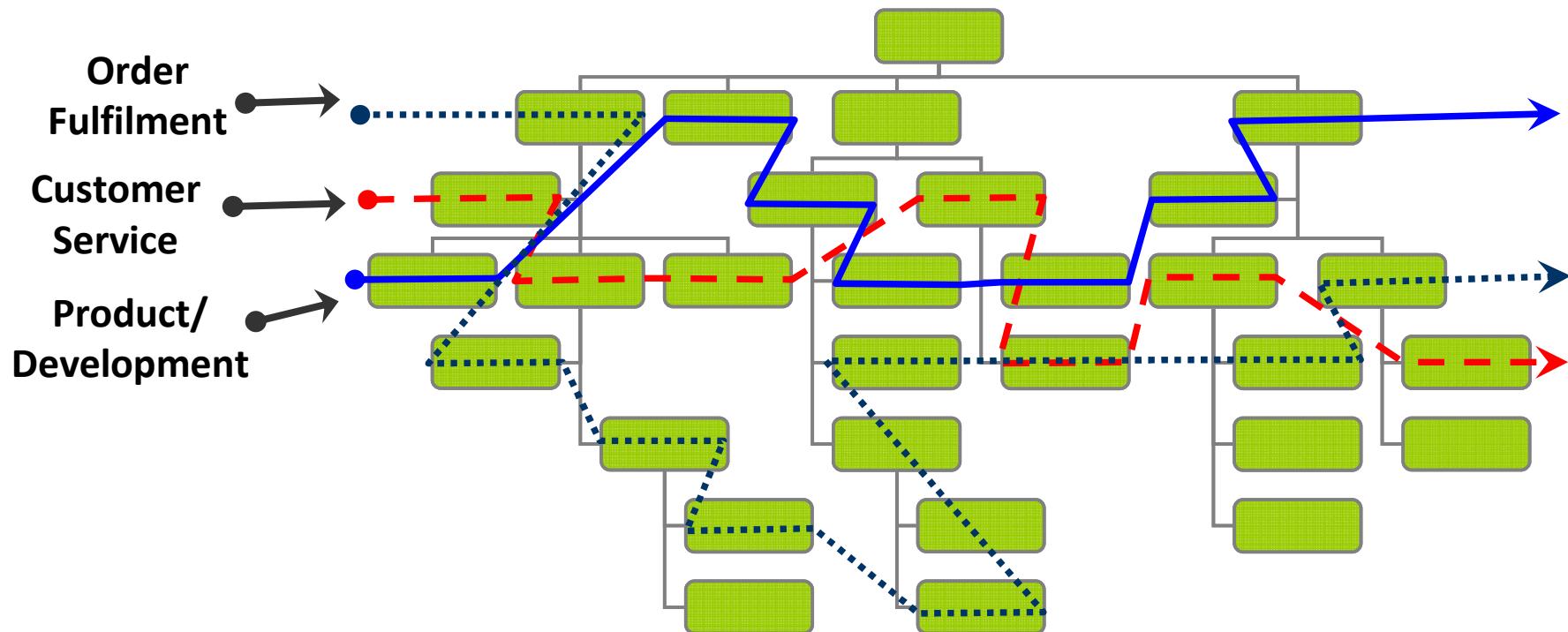
Process Management Roles

- Managerial structure in a functionally oriented company is typically based on a departmental hierarchy, where managers are responsible for workers performing tasks related to a particular resource or function
- Personnel are combined into divisions or departments, each adding additional layers of management and control



The Process Enterprise

- Management of a company's core business processes is likely to involve a new, horizontal dimension to the organisation structure



Key Roles for The Process Enterprise

- Process Owner
- Process Project Manager
- Process Analyst
- Process Designer
- Process Architects
- Business Analyst
- Subject Matter Experts
- Executive Management and Leadership
- IT Organisation

Process Owner

- An individual or group of individuals with an ongoing responsibility and accountability for the successful design, development, execution and performance of a complete end-to-end business process
- Titles such as process leader, process coordinator, process manager and process steward are often used
- Scope of responsibility may vary
 - May have direct or indirect authority over strategy, budgets and resources
 - May be business process owners, i.e., those concerned with end-to-end business processes which directly deliver value to the customers of the organisation
 - May be support process owners who may be concerned with those processes which support the organisation's business processes such as human resources, financial or information technology processes

Process Owner

- May involve other duties such as
 - Chairing transformation efforts
 - Integrating process results with those of other process owners
 - Advocating for process priorities
 - Benchmarking process performance
 - Coaching process performers

Process Owner

- Responsibility for process design
 - Accountable for the overall integrity and integration of the process design
 - May share decision rights relating to the process design with other managers or participants
- Accountability for process performance
 - May manage the process, i.e., how work gets done, but not necessarily the people who perform the work
 - Managing process performance involves developing a strategy for the process, setting performance goals and objectives
 - Includes insuring that resources and skills are in place, measuring and communicating actual performance against targets and using this feedback to continuously reset goals and objectives
 - Initiate process transformation efforts and define incentives which insure that the process continues to deliver value to its customers
- Advocacy and support
 - Need to manage communications and advocate for the processes under their care with executive management, customers, suppliers, participants and other internal and external stakeholders
 - Process managers continuously monitor results so they must also investigate and resolve problems

Process Project Manager

- Often, the first version of a process owner is a project manager responsible for a process improvement effort
- Typically have responsibility for a project outcome, i.e., improvement to a business process, but lack direct control over resources, policies, budgets, etc.
- Project manager is responsible for
 - Conjoining many disparate groups within the organisation
 - Adhering to the definition of project delivery methodology
 - Designing and implementing the processes
 - Managing change in order to achieve an overall process improvement
- Throughout the project delivery process, project managers may monitor and control process operations in order to ensure that the scope of the project confirms to the project objectives

Process Analyst

- Manage process transformation projects, lead process discovery and design workshops, coach process owners and measure and report on process performance
- Typically have a great deal of skill in documenting and understanding process design and performance patterns
- Provide analysis and assessment of current processes, evaluate alternate process design options and make recommendations for change based on various frameworks

Process Designer

- Significant process knowledge who design new business processes, transform existing business processes and implement plans
- Possess analytical and creative skills
- Use visual and mathematical models to describe each step in a process and the organisation of work
- Ensures that the process design is in alignment and compliance with the overall business' goals and policies

Process Architects

- May function in a business or technology role
- May be focused on managing business performance or on mapping technology to business operations
- Responsible for developing and maintaining a repository of reference models and standards with regard to a company's products and services, business processes, performance measures and organisation
- Engaged in business process analysis and transformation initiatives
- Involvement may be from a standards and compliance perspective or as they may serve as subject matter experts to advise the team on the company's process methodology
- Through the analysis of business process architecture, companies identify opportunities for market advantage, business integration and various internal process initiatives

Business Analyst

- Responsible for analysing the information and technology needs of their business clients to help propose information and technology solutions
- Facilitate meetings to assist the project team in analysing current technology mapping
- Involved with business operations and designing new information and technology functions
- Performs a liaison function between the business side of an enterprise and the information technology department or external service providers

Subject Matter Experts

- Deep understanding of the certain business functions or operations, often possessing years of experience as a participant in business operations
- Provide input on the current process and assist in designing new processes
- May have institutional knowledge about the rules governing the organisation's processes, customer requirements or the organisation's culture
- Validate models and assumptions and are members of implementation teams providing change leadership as trusted stakeholders

Executive Management and Leadership

- Role of executive leadership is critical to business process management
- Set the vision, tone and pace of business process improvement
- Determine the direction and strategy of business process management, focusing the enterprise on its larger objectives
- Allocate resources and reward success
- Unify the various missions and groups throughout the enterprise and appoint and empower process owners or other individuals playing key roles in the management of business processes
- Act as champions inspiring the enterprise to change, sometimes by creating a sense of urgency to overcome skepticism and resistance
- Communicate the case for process management and remove obstacles which may impede progress toward the goal
- Responsible for creating the environment for success, sometimes through influence and persuasion, other times by resolving conflict and removing roadblocks

IT Organisation

- roles within Information Technology groups who may play an important part in business process management including
 - Solution architects
 - System analysts
 - BPMS configuration specialists
 - Developers
 - Database administrators
- Experts help define supporting technology solutions and may assist in defining new capabilities for business processes based on enabling technology
- Assist in process transformation initiatives through the implementation of new technology while ensuring that the company's technical standards are enforced

Organisational Structures

- Organisations have identified the need for new mechanisms for planning, budgeting and allocating resources in order to ensure that their processes are properly resourced, integrated and aligned with their strategic objectives
- Important that organisations have a clear governance structure to provide leadership and clarify decision rights to enable cross-functional and departmental process improvement or management programs to succeed
- Changes in the organisational governance structure that can be the root of resistance to business process management initiatives, sometimes causing them to fail
- Individuals who may have had a great deal of power and control over resources based upon organisational functions, product lines or geographic boundaries may find that their performance measures, authority and span of control must change in order to successfully implement business process management

Organisational Structures

- Business process management provides an end-to-end perspective of how work is done
- End-to-end perspective crosses traditional organisational boundaries and requires that the mechanisms by which decisions are made and resources are allocated must also be aligned with the end-to-end business process
- Sound governance provides a structure of authority and a framework for collaboration
- Structure and framework enable proper allocation of resources and efficient coordination of activity control throughout the organisation

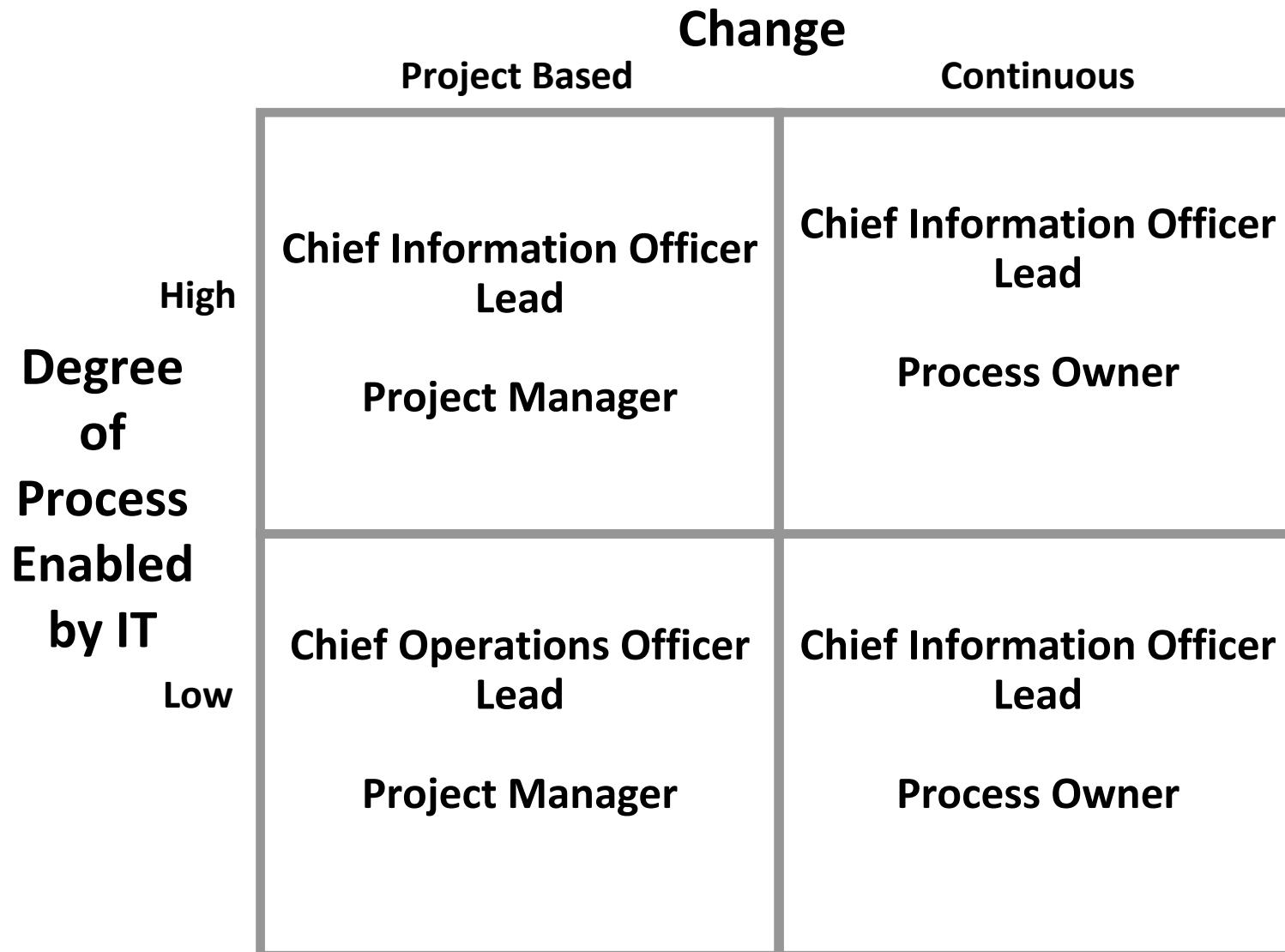
Organisational Structures

- Process Governance
- Process Council
- BPM Office/BPM Centre of Excellence
- Functional Centres of Excellence

Process Governance

- No single standard governance structure which is widely in use
- Issues such as organisational strategy, culture and process maturity, business process outsourcing and even the nature of individual leaders can cause a significant deviation from any given governance framework

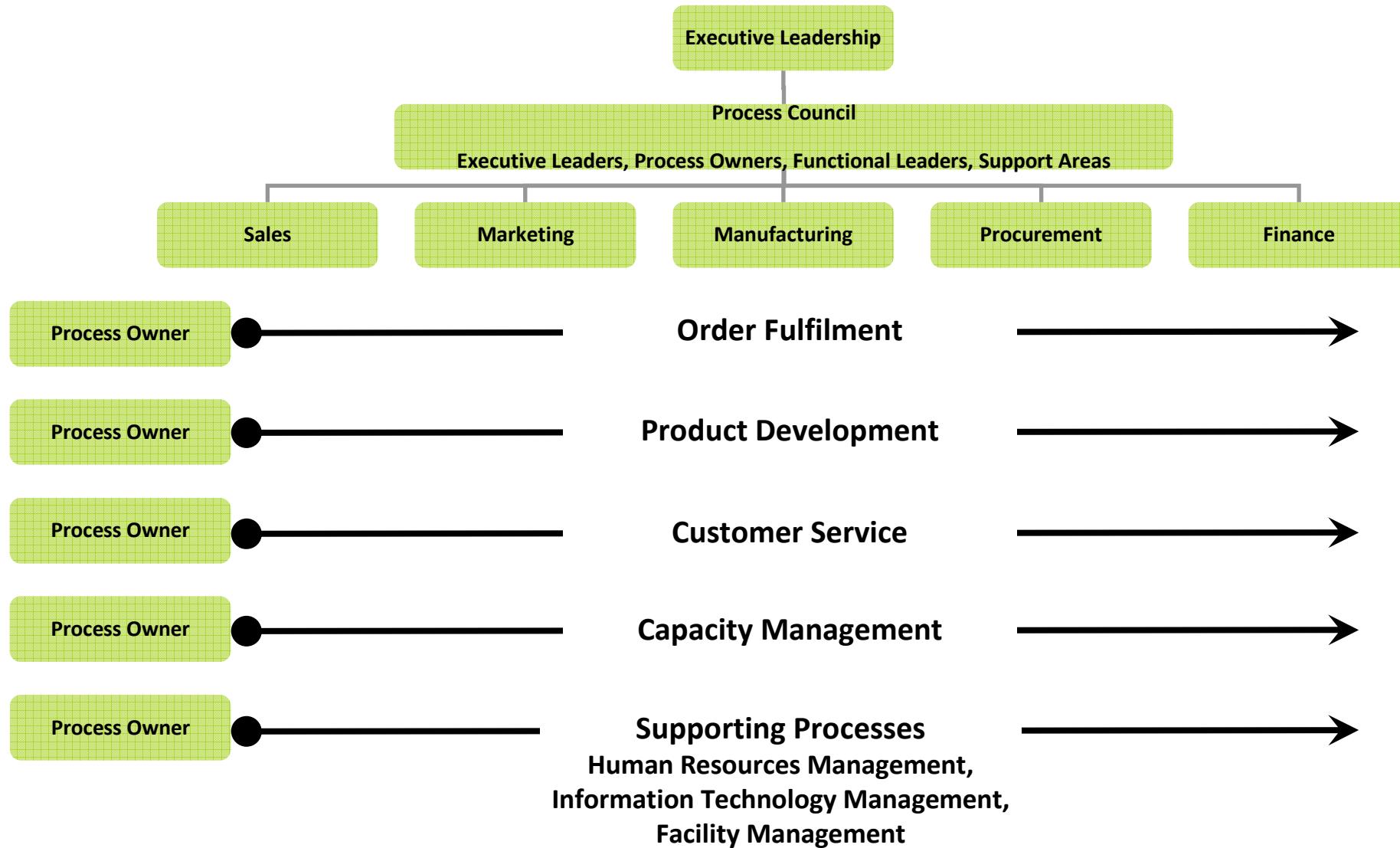
Process Governance Options



Process Council

- Organisations undertaking the process journey may want to consider instituting a process council to address these issues
- Process council may be made up of a combination of executive leaders, functional or departmental heads and the process owners of the core cross-functional enterprise processes
- Mission may include
 - The identification and resolution of any cross-process integration issues, conflicts between process and functional (or departmental) ownership
 - Resource allocation
 - The development and alignment of the organisation's business objectives, goals and strategy

Process Council



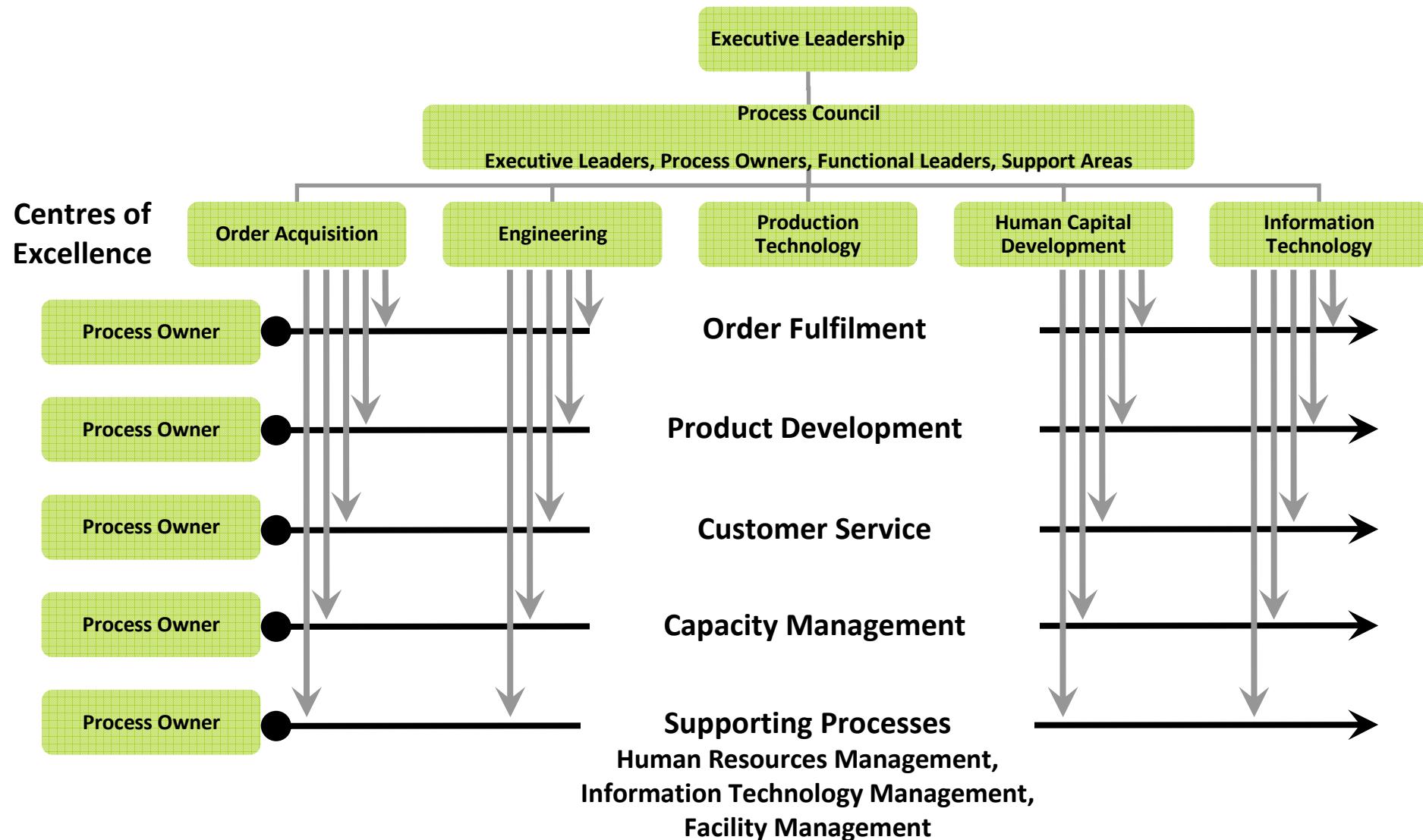
BPM Office/BPM Centre of Excellence

- Business Process Management Office (BPMO) / BPM Centre of Excellence (BPMCOE)
- BPMO acts in a manner similar to that of a project management office, identifying, consolidating and reporting status on various process improvement projects across the enterprise
- BPMCOE charters include setting standards, providing common tool and methods, training and education on business process management principles and practices, providing governance on overall process design and integrating business processes at the enterprise level
- Play an integral role in prioritising and allocating scarce resources to business process improvement efforts, as well as tracking and reporting process performance metrics to the respective process owners and executive management
- Responsible for maintaining the repository of process models, identifying opportunities for improvement and working with various stakeholders in the development of business cases for process improvement and transformation efforts

Functional Centres of Excellence

- Rather than command and control the performance of individual tasks, process owners find that they need to be supported by cross-functional teams who are also focused on the performance of the overall process
- Instead of command and control oversight, these teams may work relatively independently with guidance and support from management
- Encounter a need for change in the required skills and culture of their organisation as they gain experience in process management
- Need to maintain and integrate new skills and professional expertise across all business processes
- Specialised skills may have previously resided in a functional group of the enterprise
- Best practices groups, sometimes called centres of excellence, provide knowledge, standards, best practices, training and education
- Responsible for ensuring the proper resources with proper skills are placed and allocated properly throughout the company's business processes

Functional Centres of Excellence



Functional Centres of Excellence

- Centres of excellence may be virtual organisations (known as a Community of Interest or COIN)
- Many centres of excellence are organised around a particular skill or profession: sales, marketing, finance, information technology, etc.
- Coaches may be assigned to business processes from the centres of excellence with a responsibility for supporting and developing members in order to ensure that the caliber of localised skills are maintained and enhanced
- Centres offer training and education programs as well as professional networking for sharing experiences

Team Based Performance

- Organisations that manage by business processes recognise that changes must be made in the way performance is measured and how employee performance is recognised and rewarded
- Consideration may be given to connecting employee compensation to the performance of the process, to the results of the workgroup and to their individual performance within that group
- Measures may be associated more closely to customer satisfaction and the process results such as cycle time, service levels, quality and value delivered
- Changes may also result in a change in culture, with increased individual accountability to the outcome of a process and ultimately the customer

Process Management Organisation

- Every enterprise is unique, with its own unique culture, values, incentive systems, business processes and structure
- Today many companies are still structured around a functional hierarchy, with little or no accountability for the end-to-end business processes which deliver customer value across functional silos
- As the power and benefit of managing business process becomes more prevalent, organisational focus and structure is likely to evolve to include a process dimension
- Evolution may lead to significant change in how work is performed and managed
- Process ownership is critical to the successful management of their core business processes

Summary

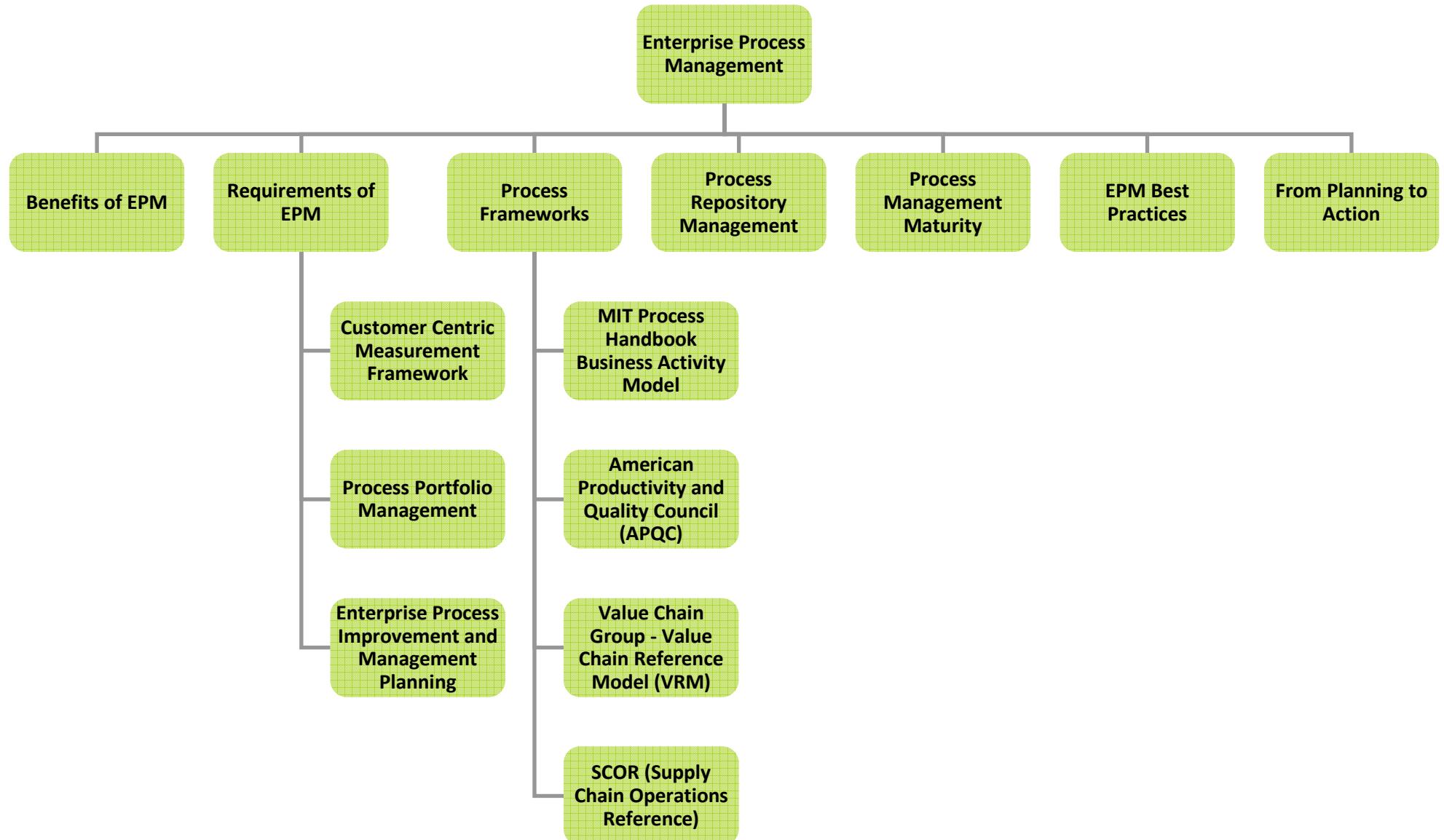
- An enterprise fosters a process culture when the business' processes are known, agreed upon, communicated and visible to all employees
- As an enterprise matures in managing their business processes, their organisational structure will naturally tend toward change which comprehends a process dimension
 - Management of work from a downward managerial command and control approach adapts to include a horizontal dimension reflective of end-to-end processes, driving accountability to the customer for delivery of value across functions
- An individual or group is assigned the role of process owner for a complete end-to-end business process
 - Process owner has an ongoing responsibility and accountability for the successful design, development, execution and performance of this process
- Successful process management within an enterprise will involve numerous roles in addition to process owner
 - Some individuals will have responsibility for more than one role
 - More common roles include process manager, process analyst, process designer and process architect, along with business analyst, subject matter expert and executive management and leadership
 - Several supporting roles which play an important

Summary

- It is critical that organisations have a clear governance structure to provide leadership and clarify decision rights to enable cross-functional and departmental process improvement or management programs to succeed
- While there are many governance structures being proposed and implemented, there is currently no single standard for comprehending an organisational focus on process within an organisational structure
- A process council, made up of executive leaders, functional or department heads and process owners, is one common approach to governance
 - Ensures alignment of business processes with enterprise strategies, goals and objectives and may have responsibility to identify and resolve cross-process integration issues, conflicts between process and functional ownership
 - May have responsibility for the allocation of business process management resources
- Other organisational approaches to process management include the establishment of a Business Process Management Office (BPMO), a BPM Centre of Excellence (BPMCOE) or a functional centre of excellence (often known as a Community of Interest or COIN)
- The Business Process Management professional must understand the myriad of potential organisational changes which may be brought about through increasing process maturity, so that they can guide the enterprise through the transition

Enterprise Process Management

Enterprise Process Management Topic Scope



Enterprise Process Management

- Process management involves the transition from expressing strategy in general terms or in financial terms to expressing strategy in terms of observable cross-functional activity
- Requires both careful thought, a shift in mindset and a new set of leadership behaviours
- Shift in mindset involves a deep appreciation that the financial goals are simply the cumulative outcomes of the activities that the organisation executes
 - A shared understanding of the definition of each enterprise level business process, including details on where the process starts, where it ends, the key steps and the departments involved
 - Clarity and agreement on the critical few measures of performance for each process
 - Acceptance of the estimates of current performance for each process
 - Agreement on the size of the performance gap that needs to be bridged
 - Agreement on the top priorities for improvement, allocation of resources and deep dedication to taking action
 - A shared understanding of accountability assignments

Enterprise Process Management

- Plans cannot be translated into action without a clear, shared understanding of the accountability for improving and managing the firm's major enterprise level business processes
- In most organisations, no one person has authority or control over the entire set of activities in an end-to-end business process
 - Process management does not dominate or replace a business unit focus or the need for a functional focus
 - Instead, it represents an additional and valuable management practice that emphasises the way in which a company creates value for customers
- Establishment of process governance is important to drive customer centricity and collaboration at all management levels
- Final component in this planning stage is a solid communication plan that clearly communicates the enterprise process view, key accountability assignments and the high level goals and so engages people in the organisation

Enterprise Process Management

- Assures alignment of the portfolio of end-to-end business processes and process architecture with the organisation's business strategy and resource allocation
- Provides a governance model for the management and evaluation of initiatives
- Involves the deliberate, collaborative and increasingly technology-aided definition, improvement, innovation and management of end-to-end business processes that drives business agility

Benefits of Enterprise Process Management

- An organisation creates value for its customers via the performance of its large cross-functional business processes
- These processes determine the way in which a firm designs, makes, sells, delivers, services its products and performs its services
- Enterprise Process Management is the means for the firm's leaders to consciously and collaboratively improve and manage the flow of work in performing for customers
- EPM is an essential management practice for the leaders of those firms who wish to satisfy customers and improve performance
- Provides the means for a firm to better engage its people, shift the organisation culture towards more of a performance based model, enables leadership and facilitates growth

Enterprise Process Management and Operational Processes

- You have to have them, manage them, monitor them, update them
- You cannot ignore them or do without them
- They define day-to-day specific activities and associated controls
- But you need to ensure that operational processes exist with a larger enterprise ecosystem
- Process management does not dominate or replace a business unit focus or the need for a functional focus
 - It represents an additional and valuable management practice that emphasises the way in which a company creates value for customers

Benefits of Enterprise Process Management

- EPM involves a high level, strategic assessment of the organisational process view and a high level process analysis and performance evaluation
- Should not be confused with more detailed process analysis and modelling
- Essence of EPM is customer centricity and accountability for the performance of the organisations critical cross-functional processes
- EPM offers benefits in terms of managing the organisation's value chain
 - Other benefits in terms of engagement, leadership and growth

Benefits of Enterprise Process Management

- Process thinking can provide the needed context to engage the entire organisation in executing on strategy
- By articulating strategic objectives in terms of the specific improvement needed for these cross-functional activities, organisations can better engage and even inspire employees to action

Enterprise Process Management and Leadership Behaviours

- Knowing the business involves understanding in detail the work and the roles of key departments and key people across the whole workflow as it crosses traditional organisational boundaries
 - Only then can executives have sufficient knowledge to deliver best value to customers and shareholders
 - Many executives do not appreciate the workflow at a sufficient level of detail
 - Lack of understanding can detract from how value is created for customers
- Insist on realism
- Set clear and realistic goals and priorities
- Reward the doers

Benefits of Enterprise Process Management

- Process thinking is also essential to growth
- Firms often lack the tools and management disciplines to tackle growth in a structured, systematic way
- Rapid, sustainable growth requires not just a systematic approach but also a systemic view and broad cross-functional collaboration
- A process focus on items such as flawless delivery and “first time right” responsiveness are essential in providing existing products or services to either existing or new markets
- In order to achieve flawless delivery and service, organisations must measure and manage the performance of the large cross-functional processes that deliver value to customers
 - Involves the definition, improvement and management of the product or service fulfillment process

Requirements of Enterprise Process Management

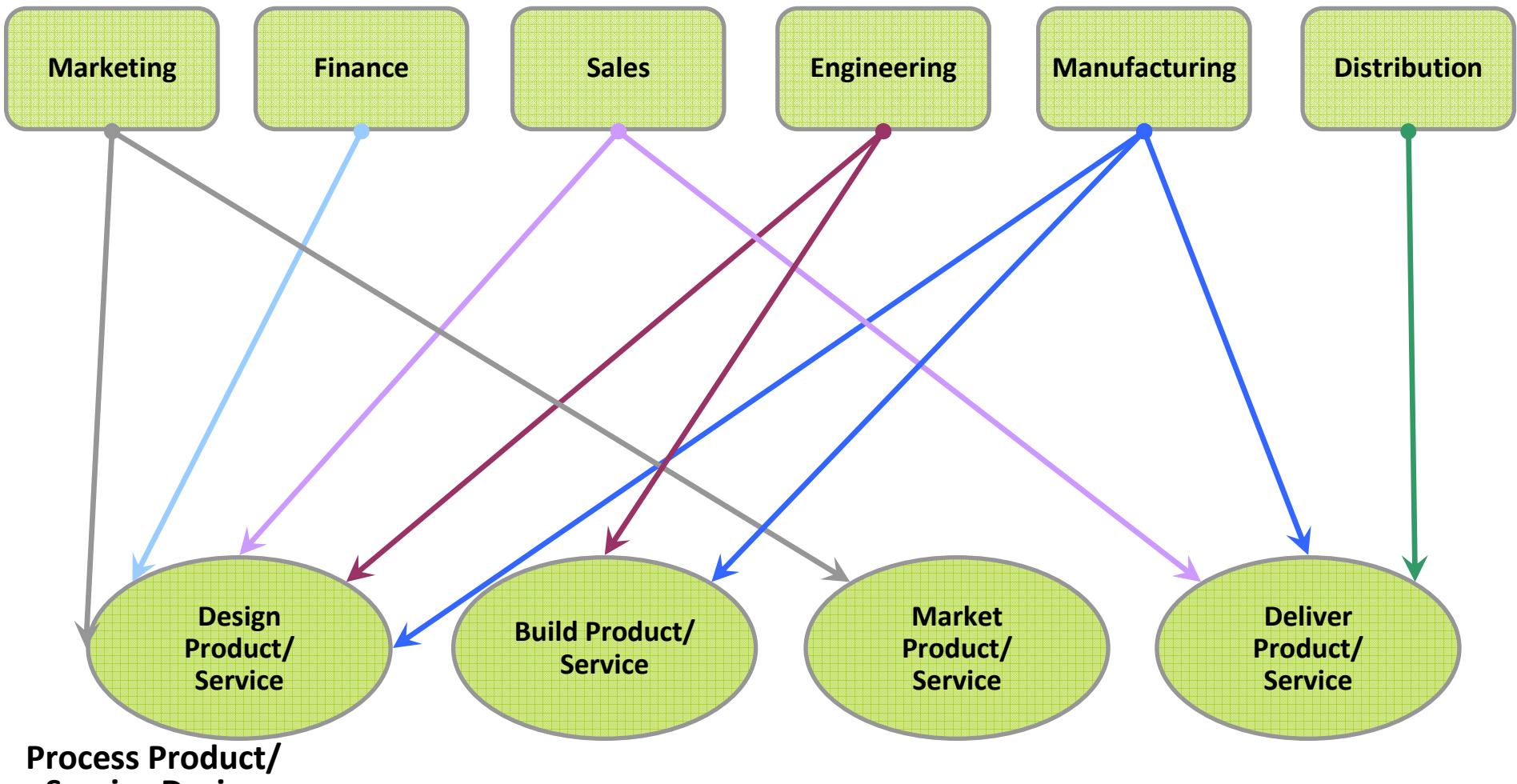
- EPM requires that the entire value chain involved in providing customers with products and services be defined, improved and managed in an integrated way
- Requires a shift in the traditional functional mindset which dominates management thinking in many organisations and the so-called “silo effect” in which each functional unit is only concerned with its processes and coordination is lacking

Requirements of Enterprise Process Management

- Role of measurement is indispensable to maintaining a customer centric focus and assuring accountability for the performance of the organisation's large cross functional business processes
- In EPM the focus is on measuring what counts to customers - from the customers' point of view
- For most organisations this will include metrics of quality, timeliness, completeness, accuracy and responsiveness for the product and services provided
 - For example, the Supply Chain Council has defined the concept of 'perfect orders' as performance
 - "in delivering: the correct product, to the correct place, at the correct time, in the correct condition and packaging, in the correct quantity, with the correct documentation, to the correct customer."

Functional and Process Product/ Service Design

Functional Product/ Service Design



Process Product/ Service Design

Objectives of Enterprise Process Management

- Fundamental objectives of developing an enterprise view of process management
 - Define the large cross-functional business processes which deliver customer value
 - Articulate the organisation's strategy in terms of its cross-functional business processes
 - Assign accountability for the improvement and management of the organisation's cross-functional processes
 - Define the performance measures which matter to customers
 - Define the organisation's level of performance in terms of these customer centric measures
- In order to implement the above there are three essential deliverables
 - A customer centric measurement framework
 - An enterprise level process schematic
 - An enterprise level process improvement and management plan

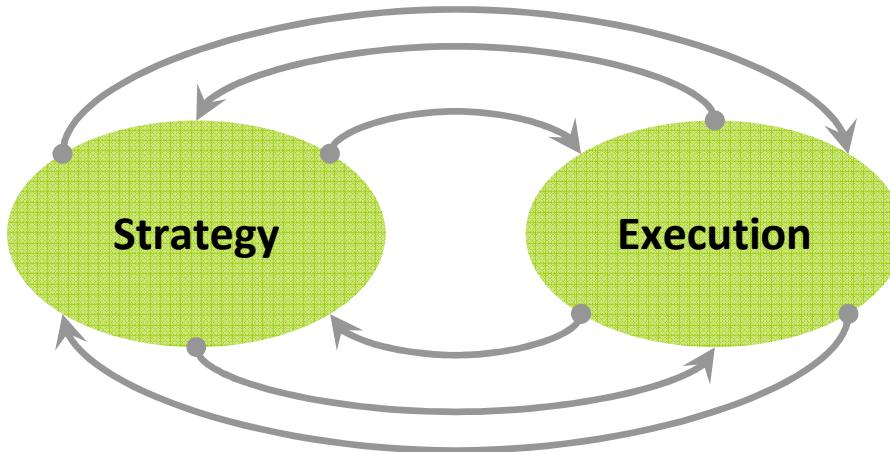
Customer Centric Measurement Framework

Process	Output	Metrics	Indicators
Develop New Product or Service	Product or service introduction	Time to market Variance to promise date	
Deliver Product or Service	Product or service to customer	The correct product/service, to the correct place, at the correct time, in the correct condition and packaging, in the correct quantity, with the correct documentation, to the correct customer	Indicators that contain measures of specified metrics
Respond to Customer Inquiry	Response with correct solution	First time right Responsiveness Variance to promise date	

Process Portfolio Management

- Important component of governance
- Recognises that the establishment of improvement priorities needs to be viewed on a portfolio basis
- Ties the enterprise together from a funding priority and integration perspective
- Provides a method to evaluate and manage all enterprise processes in a consolidated view
- Provides the framework for process governance with respect to the management and evaluation of initiatives

Enterprise Process Improvement and Management Planning



- Which is more important: strategy or execution?
- You cannot execute flawlessly in the absence of clear strategy
- Also need a process view of the business on an end-to-end basis
- The creation of process governance at the enterprise level view of business processes is therefore vital

Enterprise Process Improvement and Management Planning

- Define and executing strategy in a process context
- It is the set of enterprise business processes which defines how work is done and creates value for customers and shareholders
- Combination of
 - A customer centric enterprise level measurement framework
 - An enterprise level process schematic
- Permits the leadership of organisations to define the size of the gap between current performance and desired performance for its large cross functional processes
- Then it is possible to answer the question “Which of our core processes need to be improved by how much in order to achieve strategic goals?”
- It is the answer to this question that pays significant dividends in terms of linking strategy to execution

Enterprise Process Improvement and Management Planning

- Aligning processes with business strategies implies that adequate definitions of the organisation's strategies have been developed
 - Not always the case
- For an organisation to take action on the improvement and management of its enterprise level processes it is essential to assign accountability for the performance of these processes
- common methods of establishing process governance via the assignment of accountability for process ownership
 - Assigning accountability for the ownership of the process as an additional responsibility to a senior functional manager
 - Creating a staff position as a process owner or process steward

Enterprise Process Improvement and Management Planning

- Role of the process owner is to monitor the performance of the enterprise level process and lead efforts in improving and managing the process to deliver value to customers
- Key cross-functional processes may be so large that no one executive can have control over all the resources involved in delivering value to customers
- Establishment of a process governance structure, often involving a panel or council of executive process owners, tasked with the measurement, improvement and management of the organisation's processes is an effective approach

Assessment of a Process

Step	Activity Description
1	Define the critical few measures of performance from a customer's point of view
2	Define the triggering events, inputs, key steps, results and critical metrics for the process
3	Assess the firm's current performance for the process which directly creates value for customers
4	Determine the level of desired performance for the process by expressing strategic and operating goals in process terms
5	Assess the size of the performance gap between the firm's current and desired performance for this large cross-functional business process
6	Develop an improvement and management plan which clearly indicates the desired scope of process improvement, the relative priority and accountability for action
7	Communicate the plan, engage and inspire people to take action and conduct training on a common approach

Enterprise Process Improvement and Management Planning

- Process owners or stewards require some leverage in order to carry out their assignments
- Some organisations have assigned the IT budget for the introduction of new technology to the process owner as one means of providing this leverage
- In other instances, the discretionary component of executives' and managers' bonuses has been modified in order to allocate 20-30% of that bonus to measurable success in improving the company's business processes

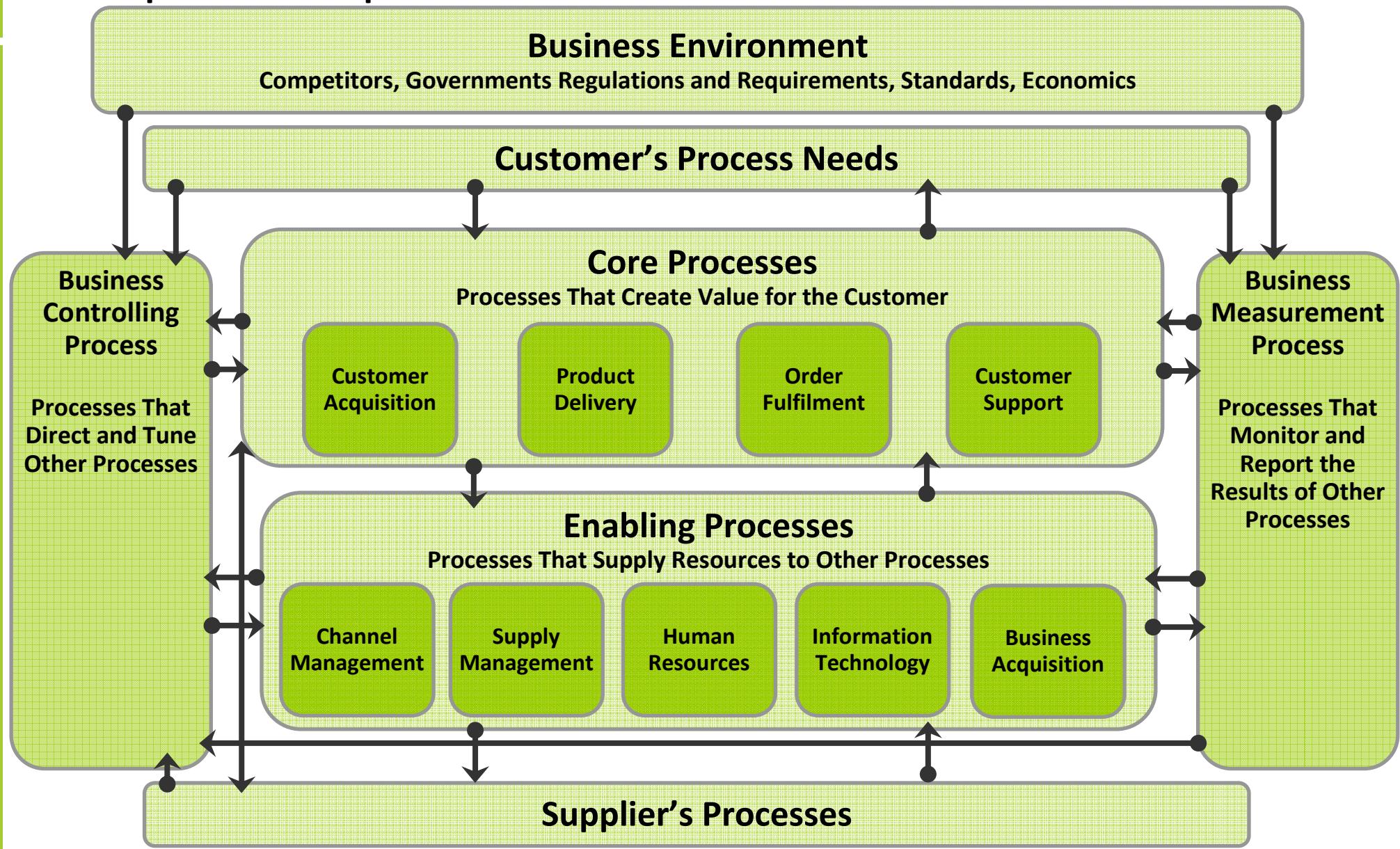
Enterprise Process Improvement and Management Planning

- One of the impacts of globalisation has been an increase in the incidence of outsourcing
- In some instances, organisations may decide to outsource or offshore an entire business process
- In other cases, a set of activities or a group of people might be outsourced or taken offshore

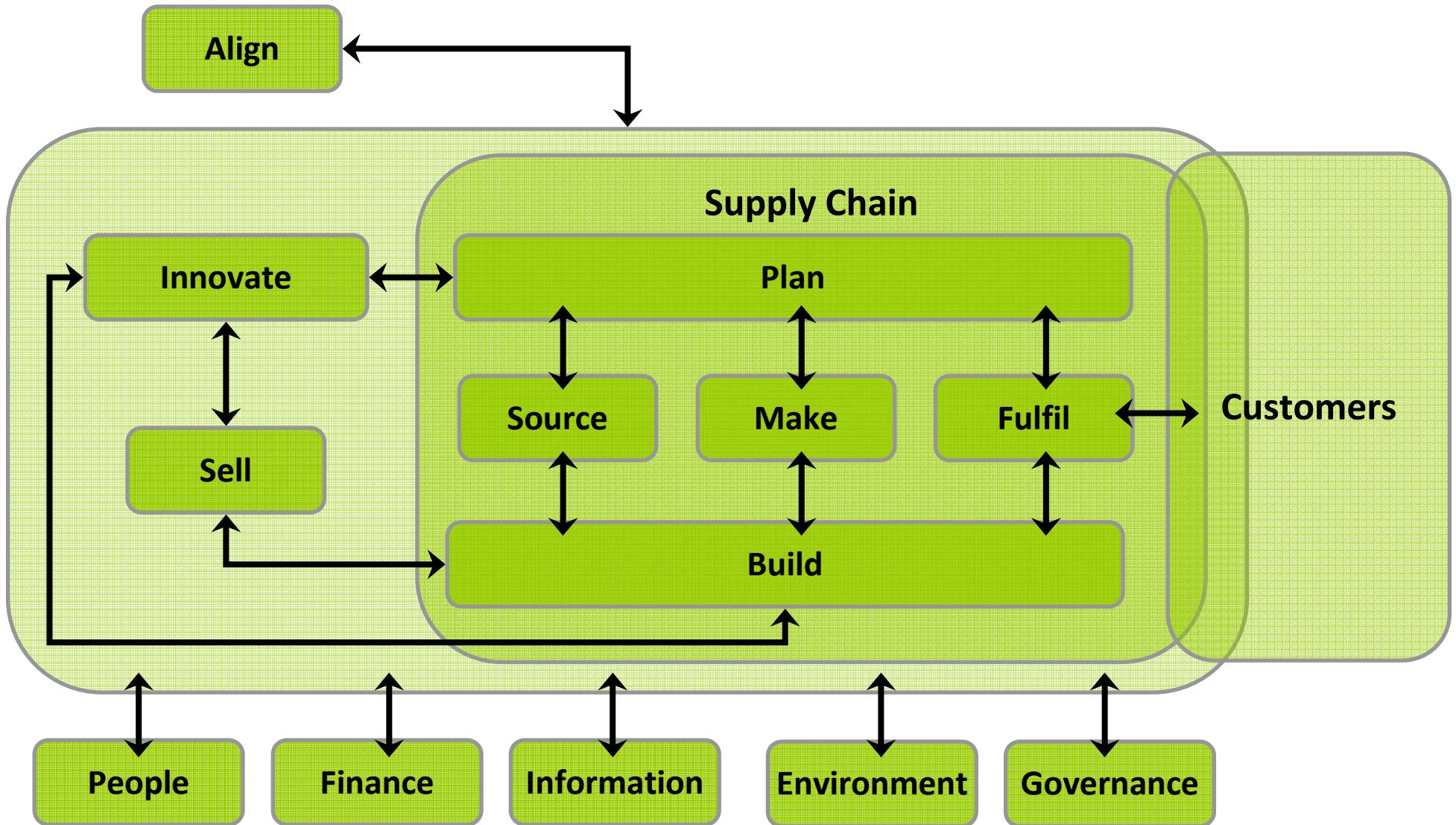
Sample Enterprise Business Process Models

- The following sample organisational models illustrate implementations of aligned cross-functional business processes and have the following core characteristics:
 - Enterprise-level process definition
 - Focus on end-to-end cross-functional business processes that deliver value to customers
 - Designed for simplified communication
 - Common understanding of processes among process owners and users
 - Simple structures and frameworks
 - Appropriate use of external reference models and standards

Sample Enterprise Business Process Models - 1

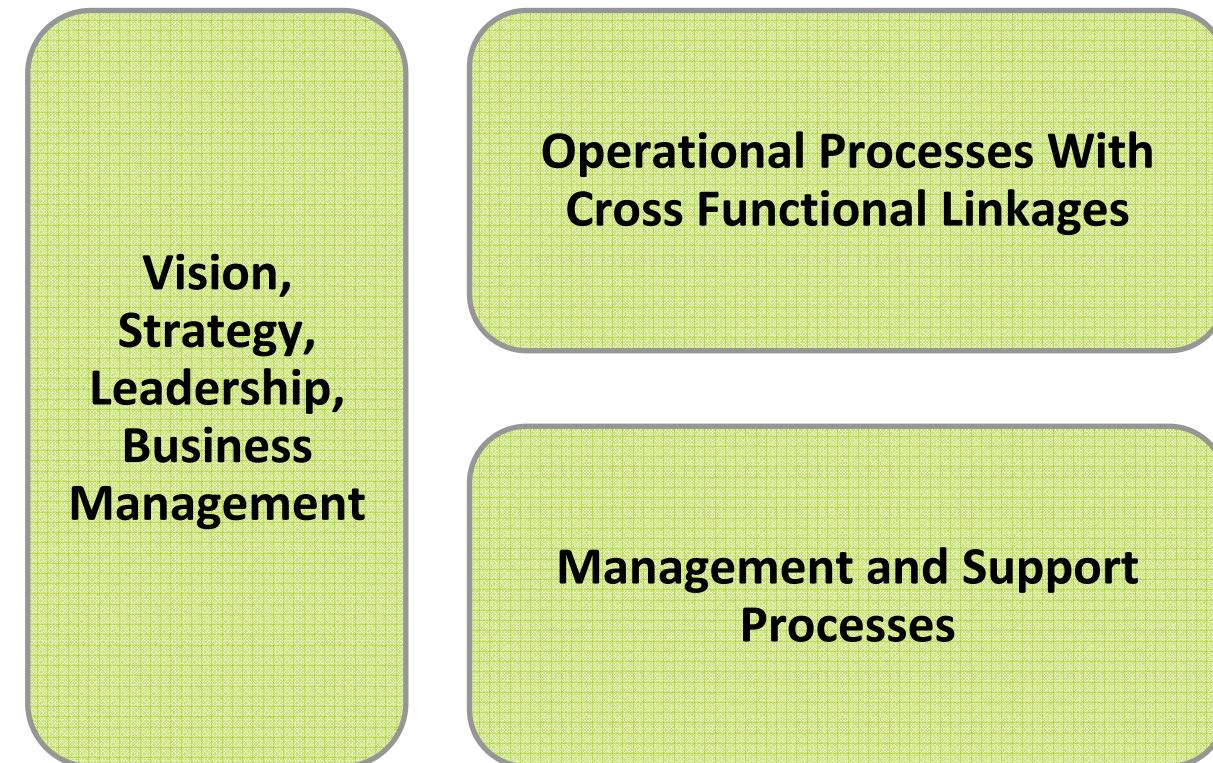


Sample Enterprise Business Process Models - 2

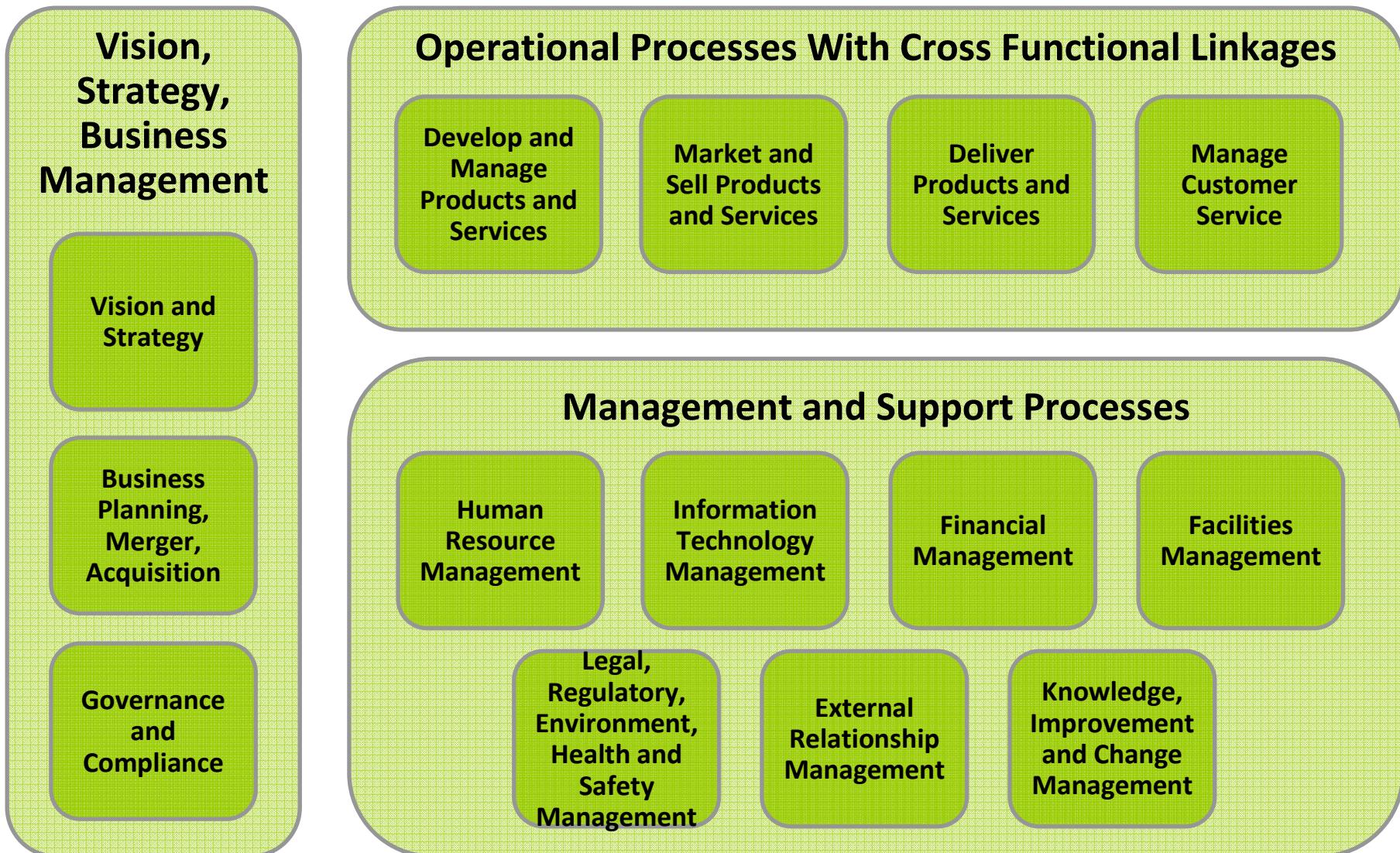


Sample Enterprise Business Process Models – Common Structure

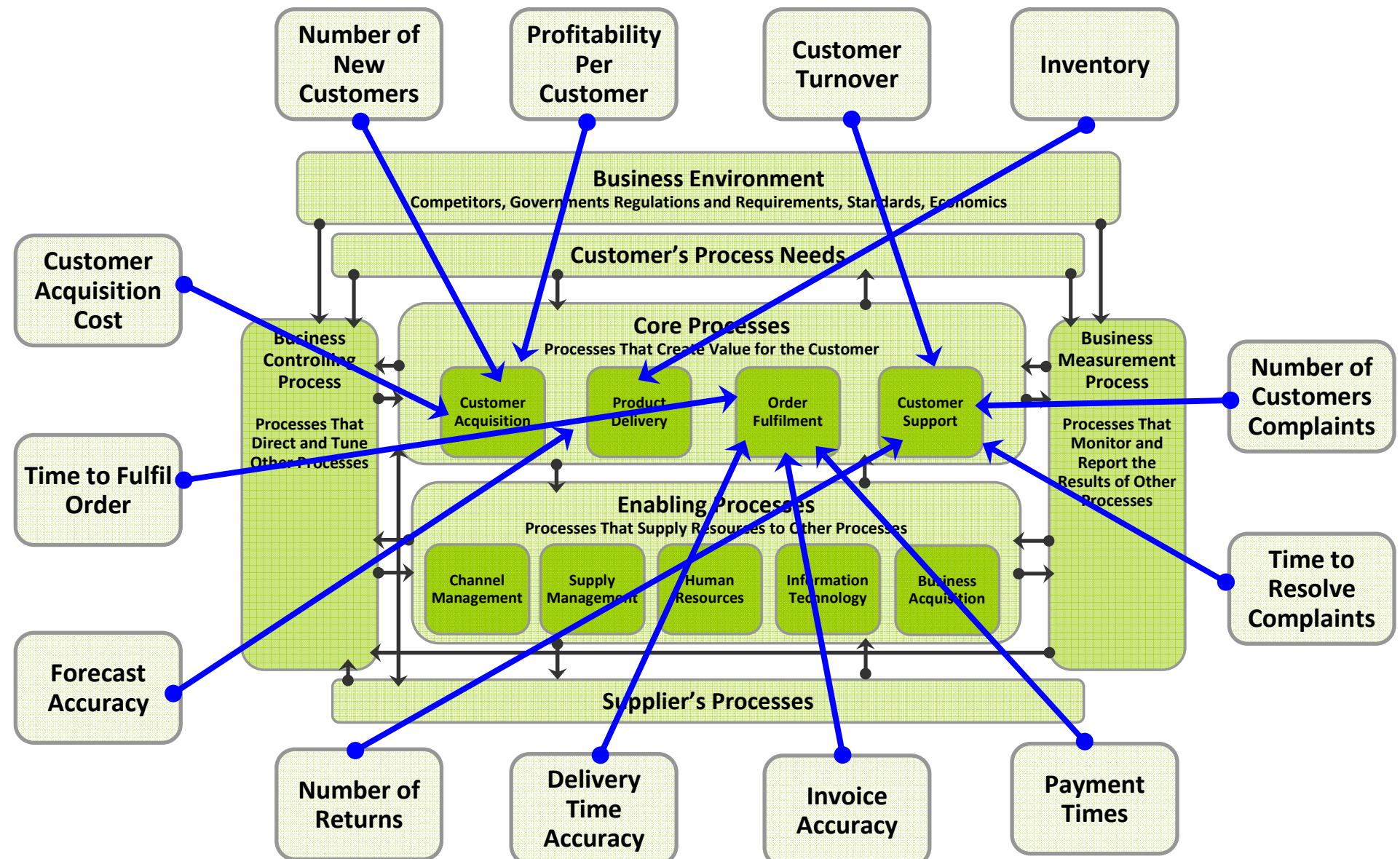
- Sample business process models have a common structure
- Generic structure that forms a template for specific actualisations



Sample Enterprise Business Process Models – Common Structure



Define Measures Linked to Key Processes



Actions to Achieve Enterprise Business Process Approach

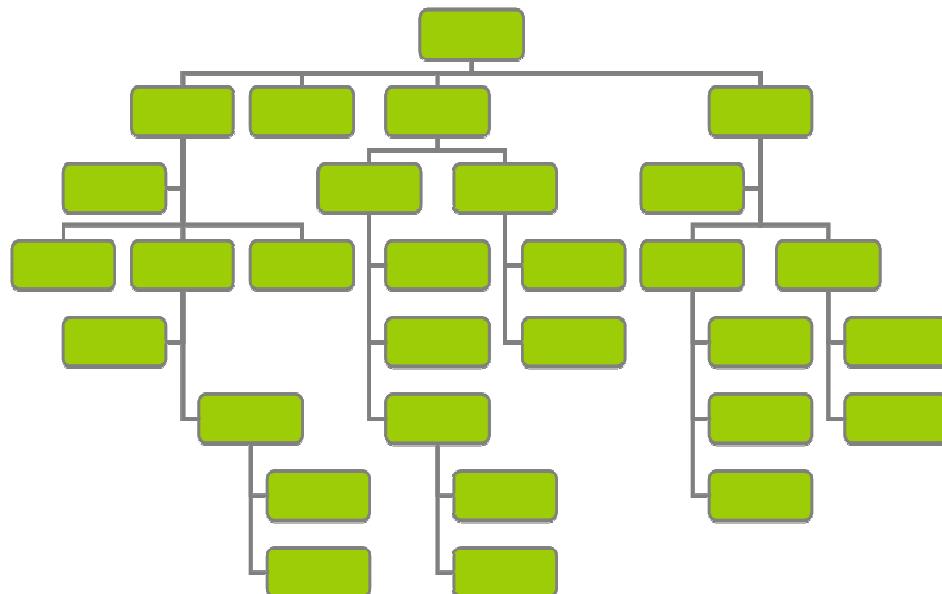
- Identify and understand the cross-functional, enterprise-level business process that create and add value
- Understand and define the metrics that measure cross-functional, enterprise-level business process performance
- Define a plan for managing and improving cross-functional, enterprise-level business processes identifying priorities and resources
- Ensure there is sponsorship, ownership, accountability for results and recognition of achievements
- Communicate the vision to the organisation

Enterprise Business Process Models vs. Organisation Chart

- How do the two compare?

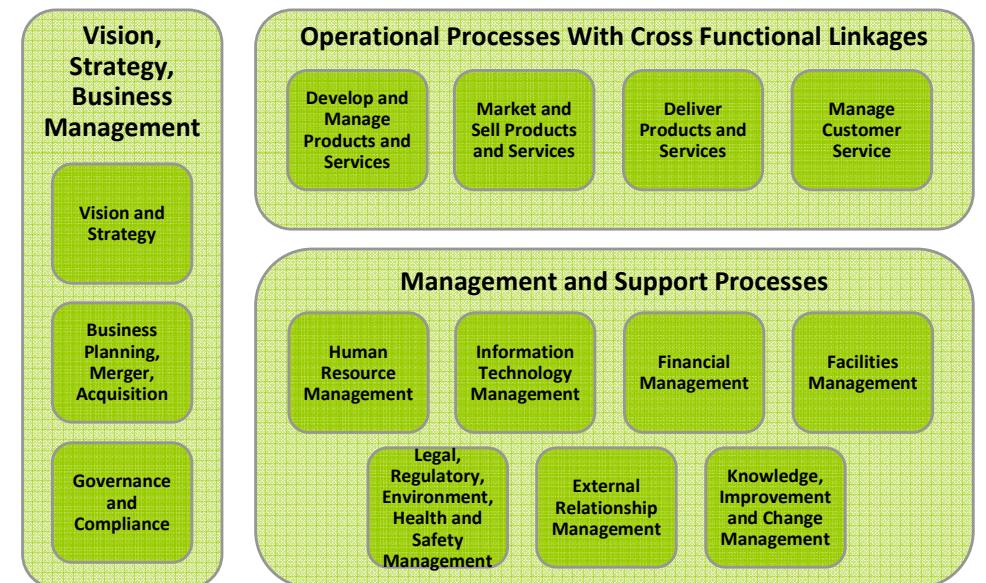
- **Organisation Chart**

- Top-down structure focussing on operational areas
- Focussed on internal organisation and structure
- Compartmentalised



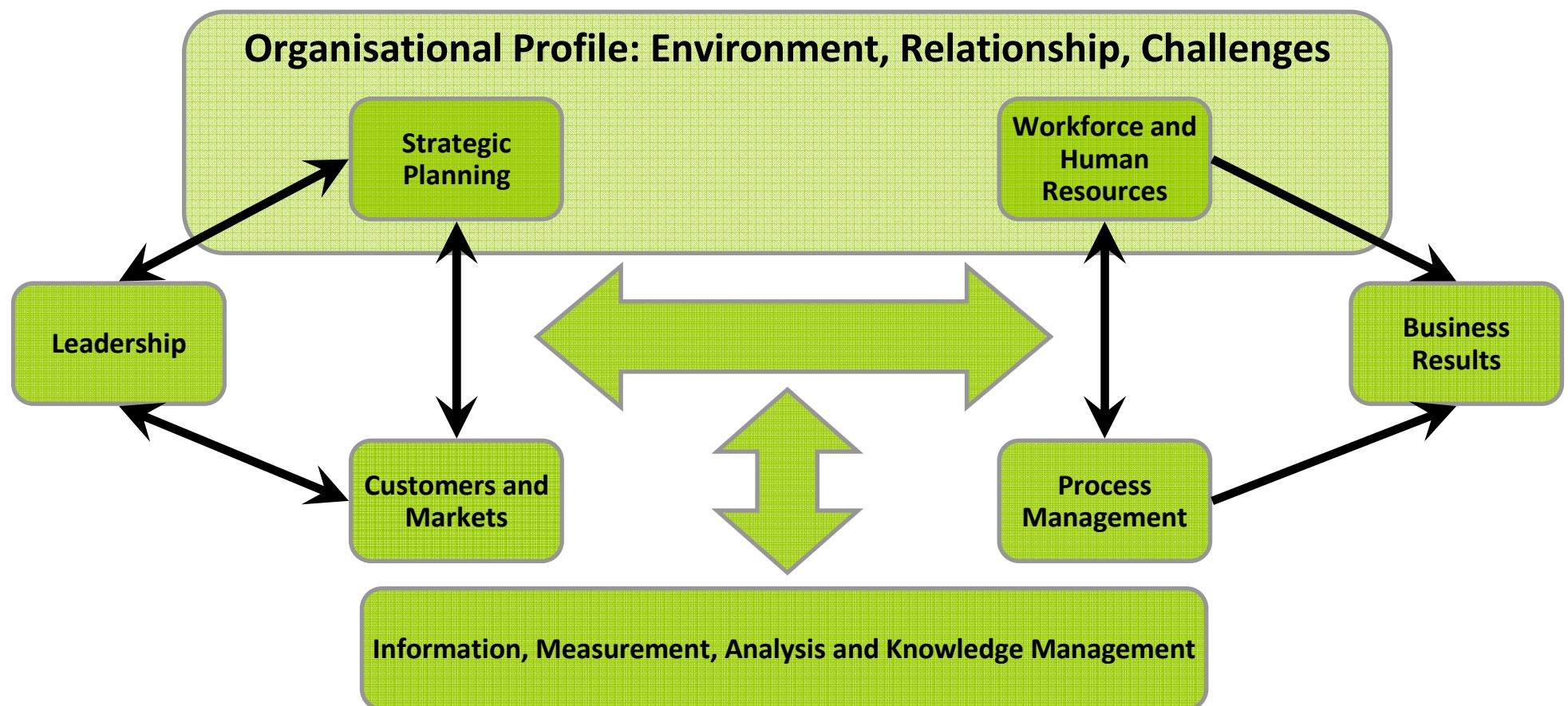
- **Enterprise Business Process Models**

- Functional areas that traverse operational boundaries
- Focussed on end-to-end accomplishments
- Joined-up



Baldridge Criteria Framework

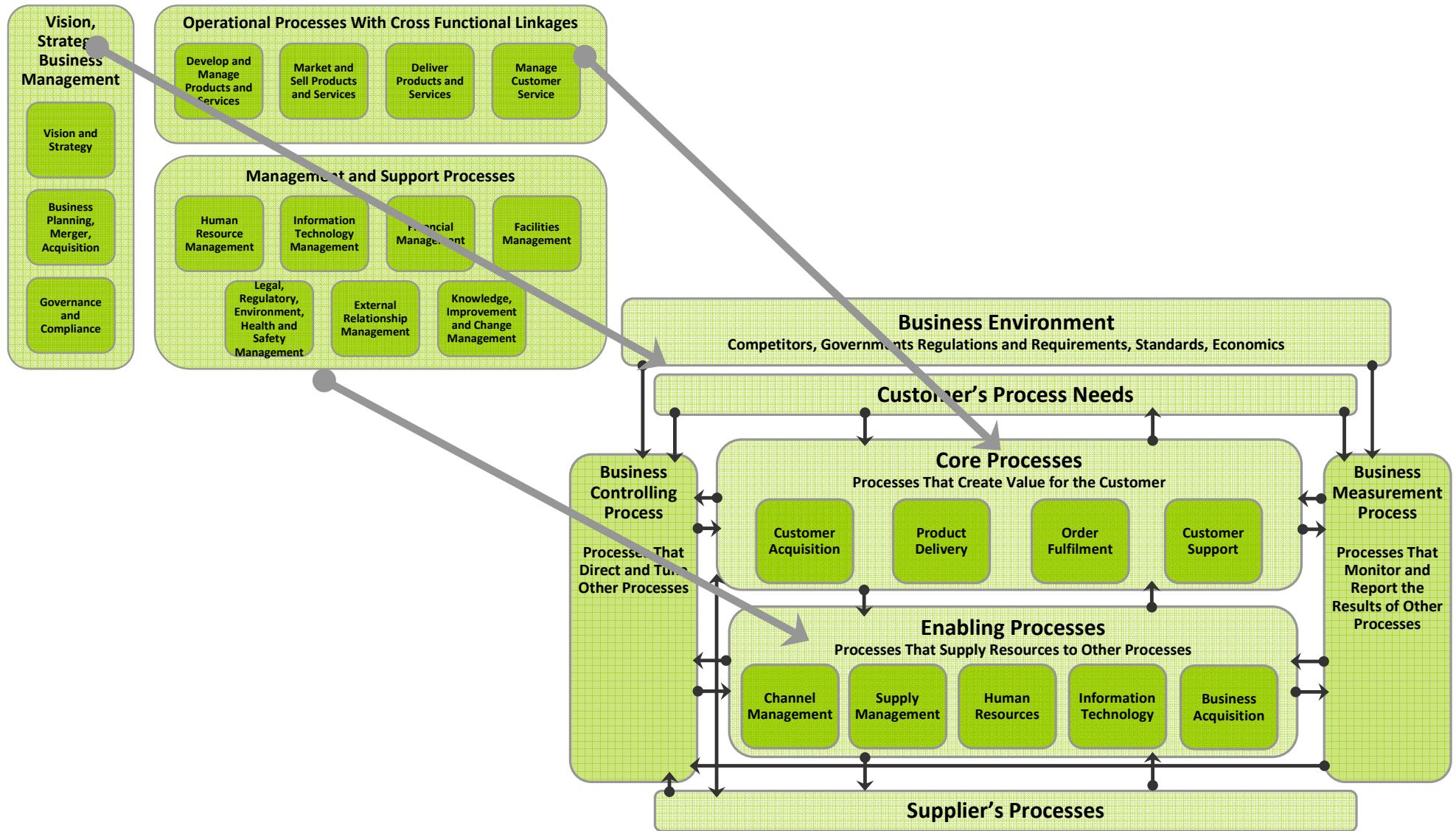
- The Baldridge criteria framework focuses on continuous improvement that is concentrated on the customer, led by management, based on facts and data and directed toward results



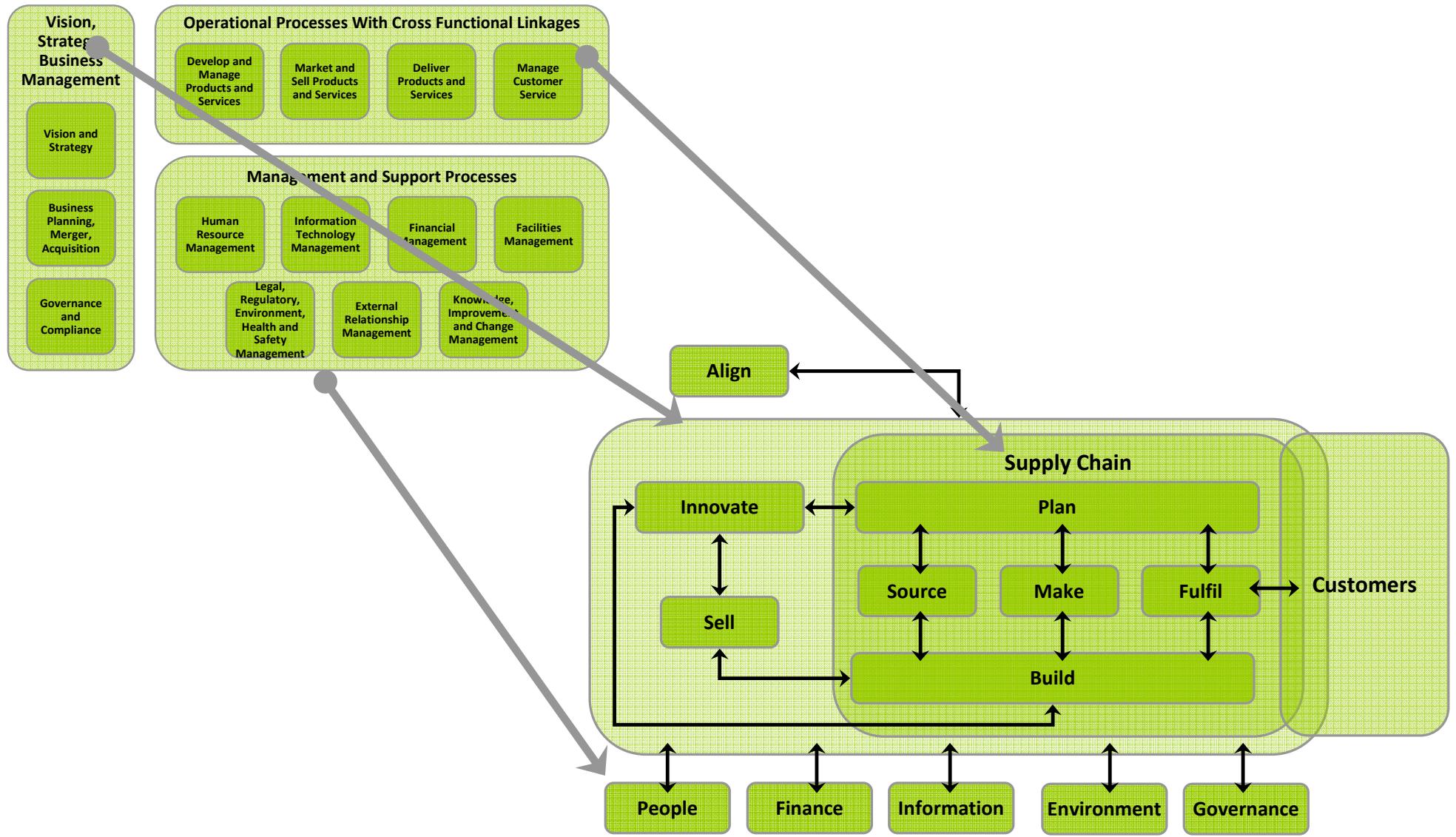
Baldridge Criteria Framework

- Baldridge criteria framework is a superset of the cross-functional business process management view of an organisation in order to deliver improved customer satisfaction
- Included here for the sake of completeness
- We are concerned specifically with cross-functional business processes relating to customer service and customer relationship management
- Baldridge criteria framework can provide a proven framework for this

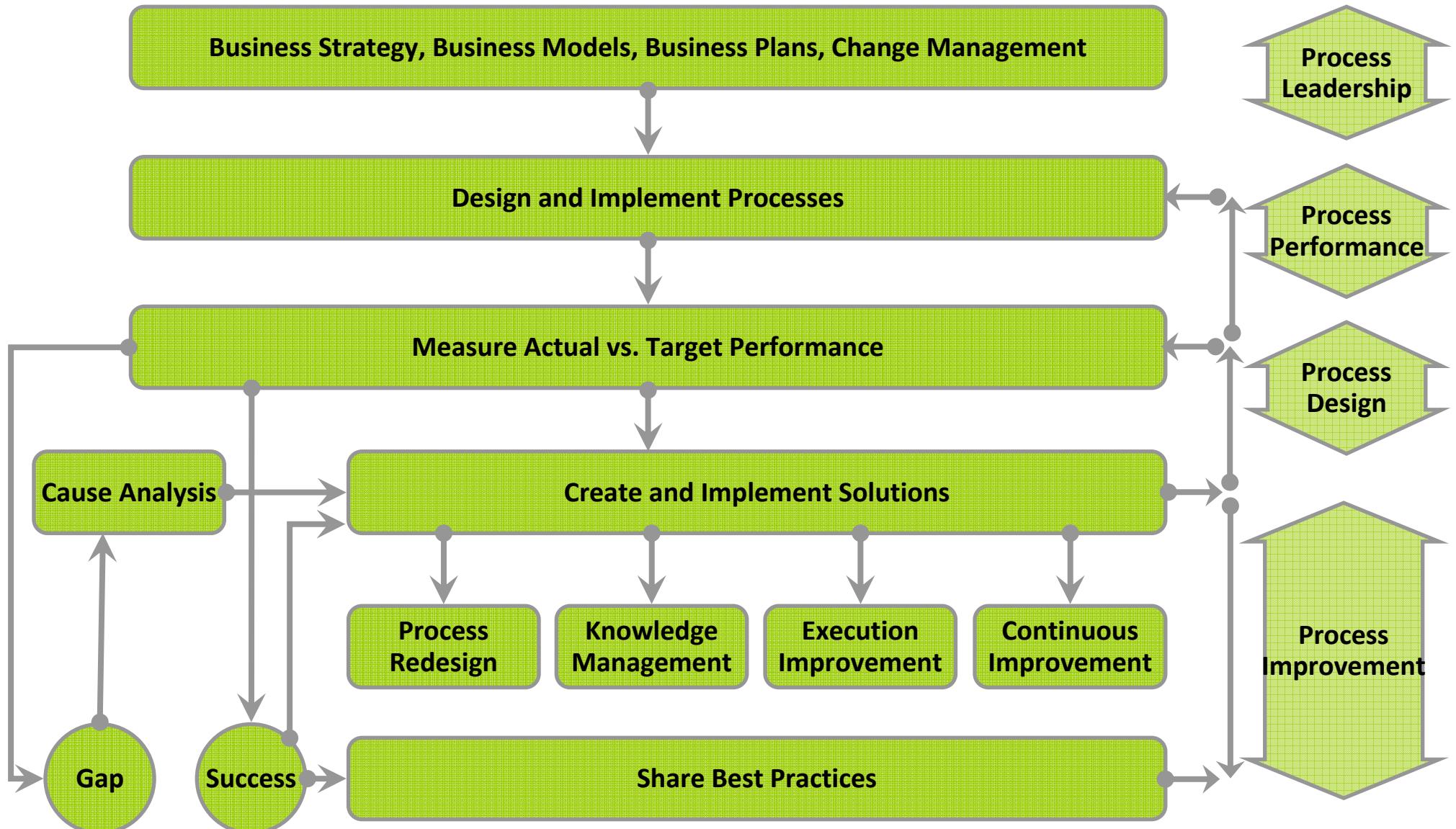
Mapping Sample Business Process Model - 1



Mapping Sample Business Process Model - 2



Process Management Model

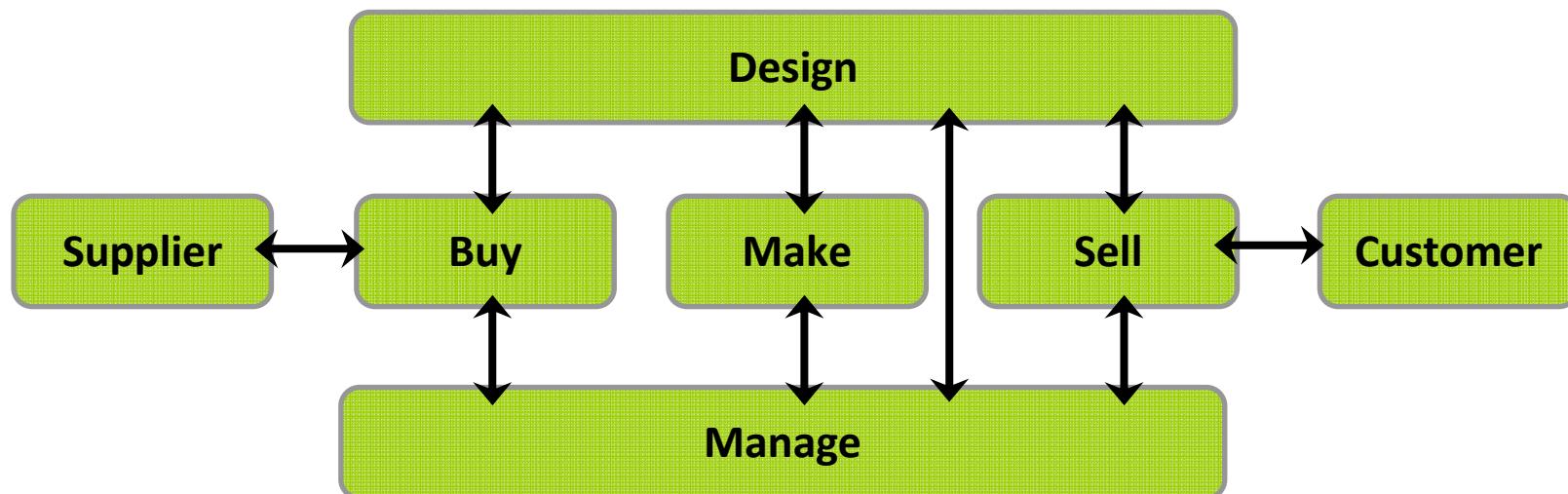


Process Frameworks

- Standards based frameworks used to facilitate process analysis
- Generally used to provide a “best practice how-to” view
- Frameworks can be adapted by a number of vertical industries
 - MIT Process Handbook
 - American Productivity and Quality Council’s (APQC) process classification framework (PCF)
 - Value Chain Group’s Value Chain Reference Model (VRM)
 - Supply Chain Operations Reference (SCOR)
- Others
 - ACORD - Insurance
 - eTOM (Enhanced Telecom Operations Map) – Telecommunications
 - HL7 – Clinical data
 - Microsoft Customer Care Framework
 - Baldrige Criteria Framework
- Models are an good source of information to stimulate thought, most organisations will find it necessary to customise such models to their own organisation for optimum use and relevance

MIT Process Handbook Business Activity Model (BAM)

- Generic business model included in the Process Handbook
- Attempts to represent a high-level model of everything that goes on in a business
- Top level of the model includes five basic activities that occur - in some form - in most businesses: Buy, Make, Sell, Design and Manage



MIT Process Handbook Business Activity Model (BAM)

- Further breaks down each of these top-level activities, as subparts
 - Buy
 - Identify own needs
 - Identify potential sources
 - Select supplier
 - Place order
 - Receive
 - Pay
 - Manage suppliers

American Productivity and Quality Council (APQC)

- APQC Process Classification Framework (PCF)
- High-level, industry-neutral enterprise model that allows organisations to see their activities from a cross-industry process viewpoint
- PCF is meant to represent a series of interrelated processes that are considered to be business critical
- Used to enable organisations to understand their inner workings from a horizontal process viewpoint, rather than a vertical functional viewpoint
- APQC is an international benchmarking clearinghouse who has collaborated with 80 organisations in developing framework for process evaluation
- The purpose of the model is to provide a framework for identifying “high-level, generic enterprise model that encourages businesses and other organisations to see their activities from a cross-industry process viewpoint instead of from a narrow functional viewpoint”

American Productivity and Quality Council (APQC)

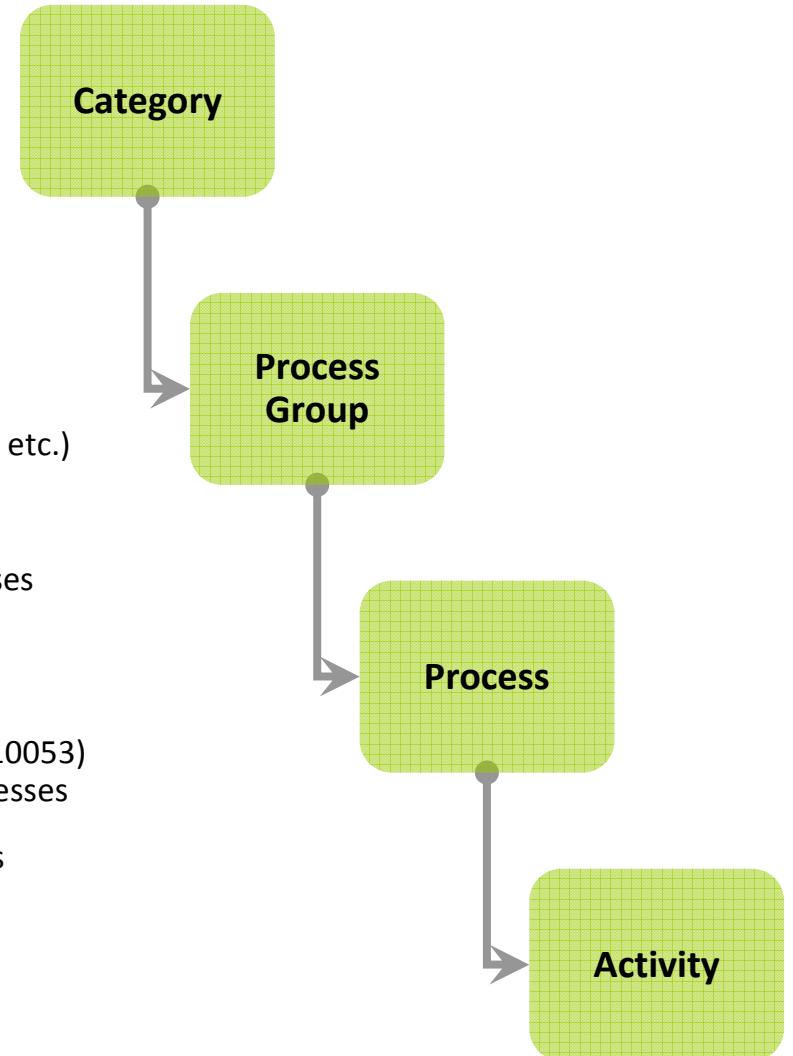


American Productivity and Quality Council (APQC) PCF

- The Process Classification Framework provides four phases: Prepare, Plan, Implement and Transition
- Prepare
 - Comprehensive assessment that focuses on the core processes
 - During this phase, a business case is identified with opportunities and determines the expected business results
- Plan
 - A time-phased approach to implement the changes identified during the assessment is developed
 - The process analyst and the analysis team refines, redesigns or reengineers core business processes
- Implement
 - Changes are implemented
- Transition
 - Both tactical and strategic
 - Tactically, employee teams develop process operating procedures and oversee the transition to the new process
 - Strategically, the organisation will repeat the model with other processes based on their business needs and priorities

American Productivity and Quality Council (APQC) PCF

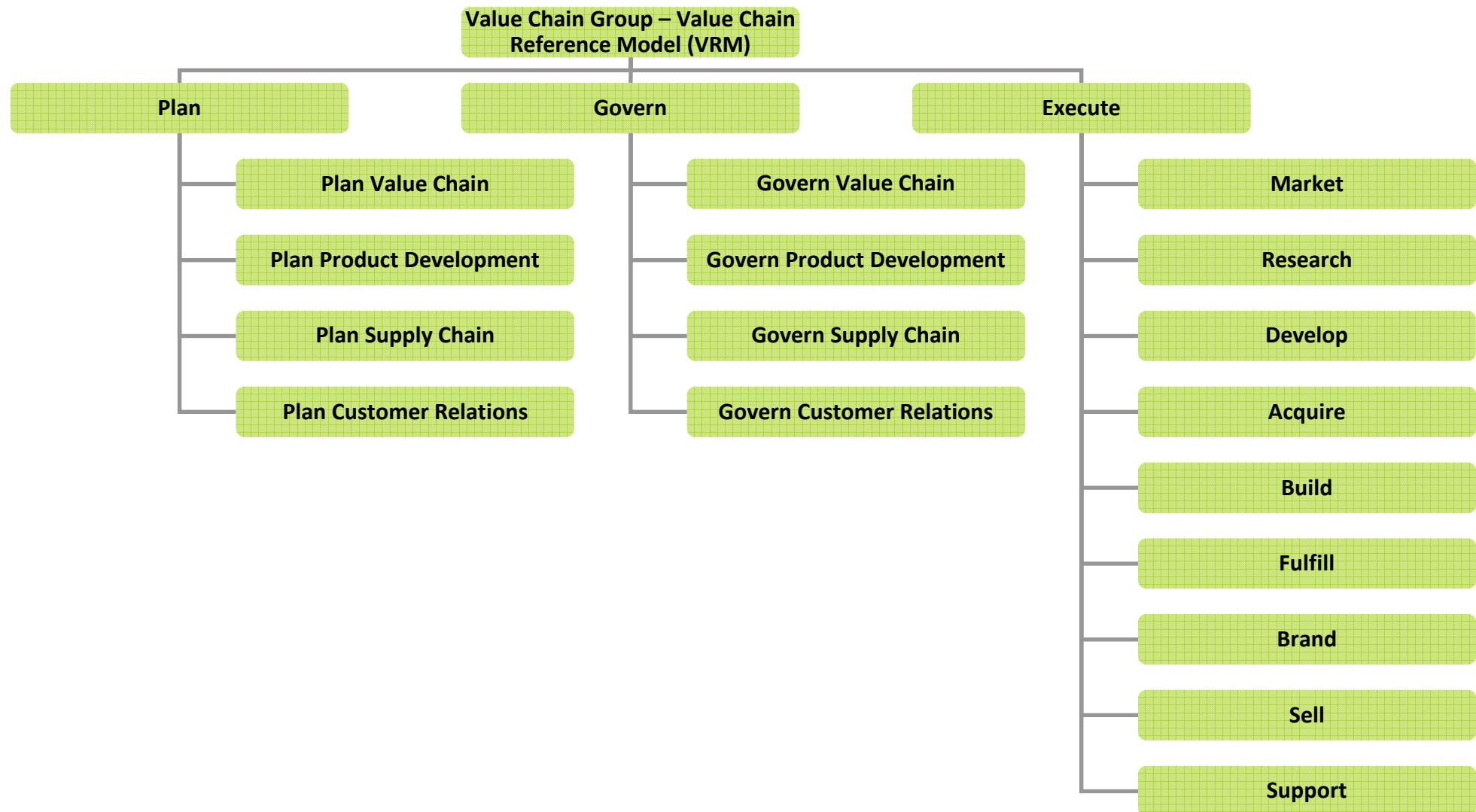
- 1.0 Develop Vision and Strategy (10002)
 - 1.2 Develop business strategy (10015)
 - 1.2.1 Develop overall mission statement (10037)
 - 1.2.1.1 Define current business (10044)
 - 1.2.1.2 Formulate mission (10045)
 - 1.2.1.3 Communicate mission (10046)
 - 1.2.2 Evaluate strategic options to achieve the objectives (10038)
 - 1.2.2.1 Define strategic options (10047)
 - 1.2.2.2 Assess and analyse impact of each option (10048)
 - 1.2.3 Select long-term business strategy (10039)
 - 1.2.4 Coordinate and align functional and process strategies (10040)
 - 1.2.5 Create organisational design (structure, governance, reporting, etc.) (10041)
 - 1.2.5.1 Evaluate breadth and depth of organisational structure (10049)
 - 1.2.5.2 Perform job specific roles mapping and value add analyses (10050)
 - 1.2.5.3 Develop role activity diagrams to assess handoff activity (10051)
 - 1.2.5.4 Perform organisation redesign workshops (10052)
 - 1.2.5.5 Design the relationships between organisational units (10053)
 - 1.2.5.6 Develop role analysis and activity diagrams for key processes (10054)
 - 1.2.5.7 Assess organisational implication of feasible alternatives (10055)
 - 1.2.5.8 Migrate to new organisation (10056)
 - 1.2.6 Develop and set organisational goals (10042)
 - 1.2.7 Formulate business unit strategies (10043)



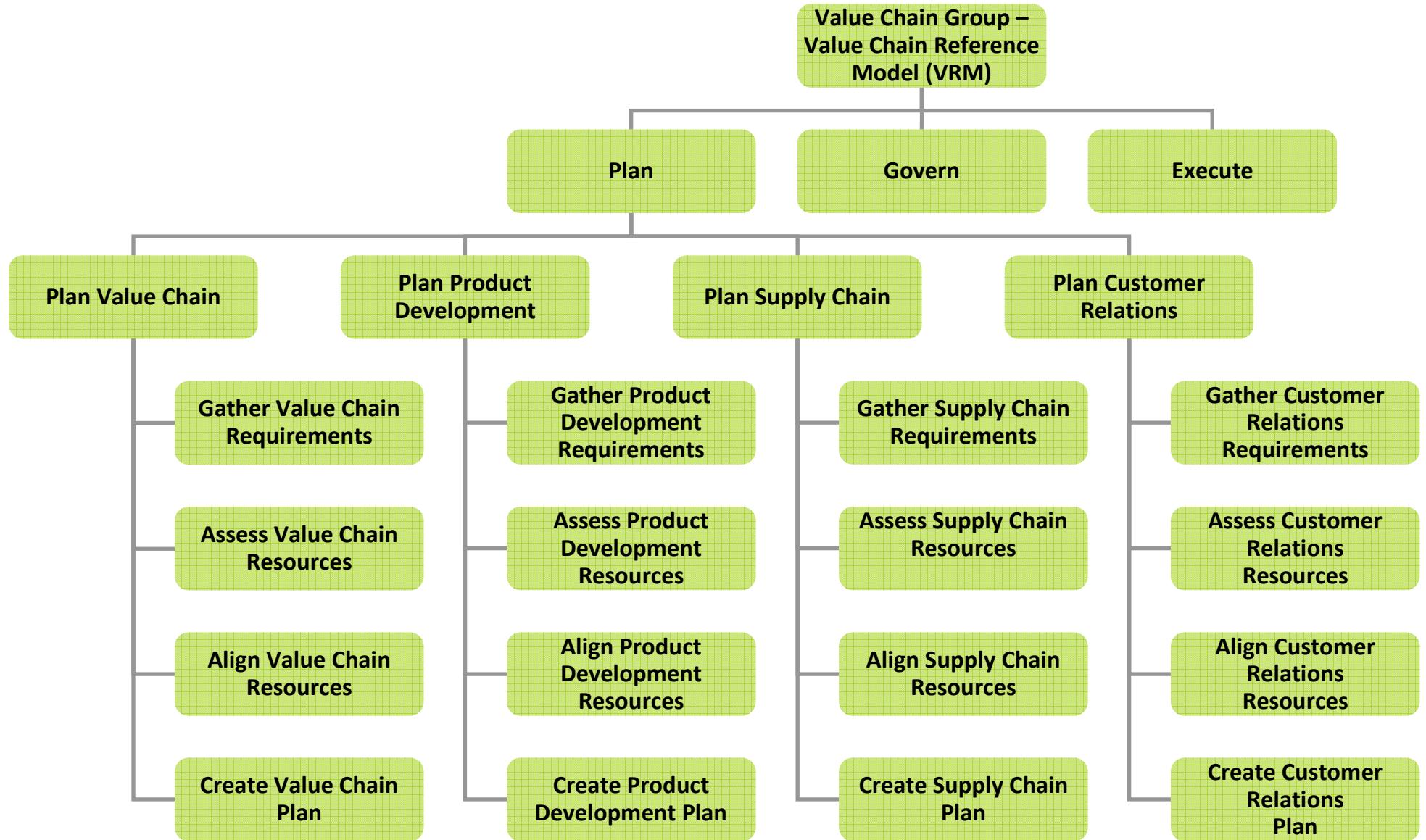
Value Chain Group – Value Chain Reference Model (VRM)

- VRM attempts to integrate the three domains of a Value Chain; product, operations and customer Value Chain Group describes VRM: as a model that provides “a common terminology and standard process descriptions to order and understand the activities that make up the value chain.”
- VRM model supports the key issues and the meshing of processes within and between the units of chains (networks) for the benefit of Planning, Governing and Execution (information, financial, physical flows)
- Objective to increase the performance of the total chain and support the continuous evolution

Value Chain Group – Value Chain Reference Model (VRM)



Value Chain Group – Value Chain Reference Model (VRM)



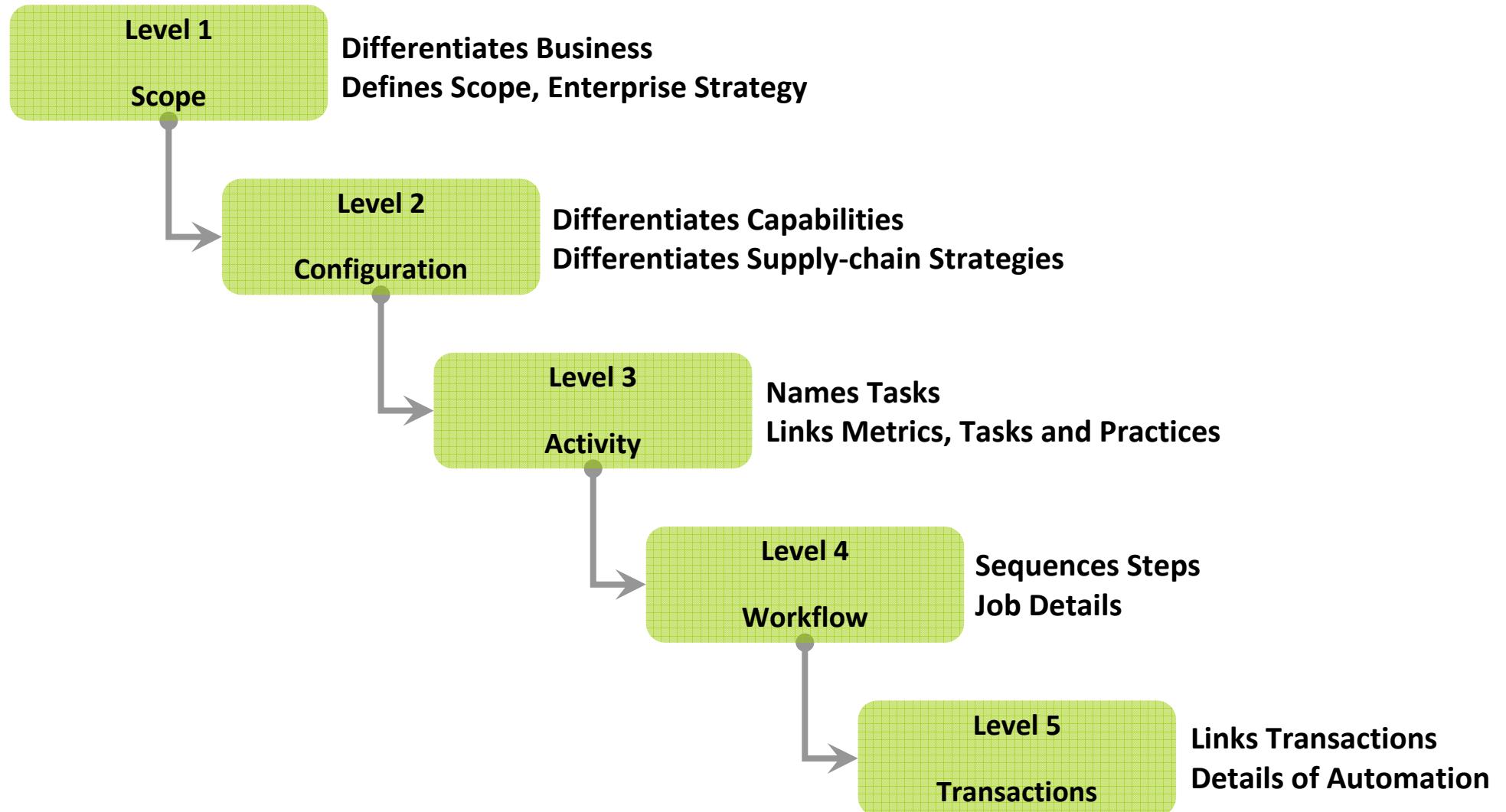
Value Chain Group – Value Chain Reference Model (VRM)

- VRM framework organises processes through five levels representing the various layers of the organisation
- As the processes work their way from the bottom (actions) through the top to the strategic processes they become more complex and are closer to the realisation of the strategic goals
 - **Strategic Processes**
 - Strategic processes are the top level processes in the value chain
 - Specifically designed around the customer needs and the business strategy
 - **Tactical Processes**
 - Decomposed from strategic processes, tactical processes outline how the goals of the strategic processes will be met
 - **Operational Processes**
 - Tactical processes are made up from operational processes which are where the work gets done
 - **Activities**
 - Activities are groups of actions that make up the operational processes
 - **Actions**
 - Actions are the last group of processes and represent individual items of work that cannot be broken down further

Supply Chain Operations Reference (SCOR)

- SCOR Model represents a framework which offers a means of facilitating the identification of process models for nearly any and all types of enterprises
 - End-to-end process inclusive of the supply chain ecosystem
 - Valuable for enhancing enterprise and stakeholder (internal and external) communication for building and sustaining process-centricity into the enterprise
- Process reference model containing over 200 process elements, 550 metrics and 500 best practices including risk and environmental management
 - Five levels of decomposition
- Organised around the five primary management processes of Plan, Source, Make, Deliver and Return
- Developed by the industry for use as an industry open standard

Supply Chain Operations Reference (SCOR)



Process Repository Management

- Central location for storing information about how an enterprise operates
- Information may be contained in various media including paper, film or electronic form with a storage mechanism appropriate to the medium
- Electronic repositories range from passive containers which store process artifacts (also referred to as process objects) to sophisticated tools that serve as active participants in monitoring, executing, managing and reporting on business processes
 - In the form of Document Management Systems, Process Modelling Tools and Business Process Management Systems
- Process Repository administration activities includes storing, managing and changing process knowledge (objects, relationships, enablers, attributes, business rules, performance measures and models) for an enterprise

Process Repository Management and Enterprise Process Management

- Common repository of business processes provides a central reference location to ensure consistent communication of
 - What the process is
 - How it should be applied
 - Who is responsible for its successful execution
 - A clear understanding of the inputs or triggers and expected results upon process completion
- Maintains information needed to adequately define measure, analyse, improve and control business processes
- Helps to promote and support the understanding and acceptance of the cross-functional nature of many of the enterprise's business processes
- Facilitates collaboration across functional business units by enabling and enforcing a methodology that focuses on the end-to-end process

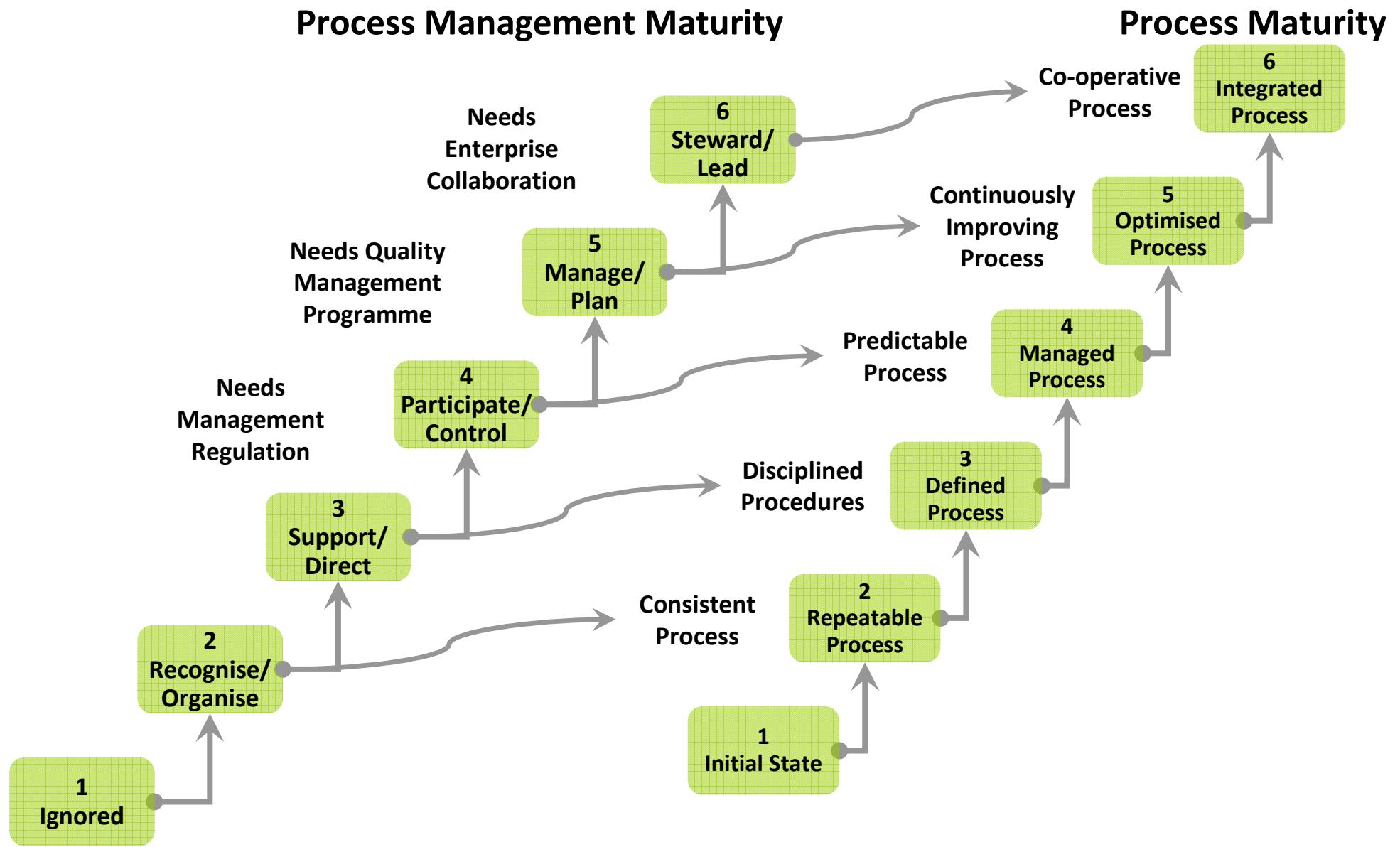
Process Repository Management and Enterprise Process Management

- Central process repository contributes to the success of the enterprise's business process strategy by providing a blueprint to manage and control how process change is introduced and implemented into the enterprise
- Becomes the system of record for information on process ownership, technological enablers, business rules and controls, both financial and operational
- May serve primarily as documentation about the enterprise's business processes or may be used to simulate various scenarios to
 - Evaluate process improvements
 - Detect and analyse problems
- Used to identify and validate the appropriate solution
- Sophisticated repositories can be interfaced with the enterprise's applications to enforce defined business rules

Process Management Maturity Levels

- Process Maturity Models define levels of awareness for business process best practices and automation with some assessing the management of operational processes
- In addition to optimising operational processes, BPM needs to be aligned with the management and stewardship of the process
 - Results in distinct but integrated process maturity and process management maturity
 - Where management maturity must precede process operational maturity at each level in order to be successful and sustainable

Process Management Maturity



Process Management Maturity Models

- Hammer's Process and Enterprise Maturity Model
- Object Management Group Business Process Maturity Model (BPMM)
- The Deming Prize of the Union of Japanese Scientists and Engineers
- The Malcolm Baldrige National Quality Award from the U.S. National Institute of Standards and Technology
- The European Foundation for Quality Management Excellence Model
- The International Organisation for Standardisation 9000 family of standards
- The Process Based Management Assessment Framework of the Consortium for Advanced Management - International (CAM-I)
- The 8 Omega Framework of the BPM Group
- The Business Process Management Maturity and Adoption Model of the Gartner Group
- The Capability Maturity Model Integration from the Carnegie Mellon Software Engineering Institute
- The Business Process Management Maturity Model of John Alden and Bill Curtis
- Gartner Group BPM maturity model
- ARIS/IDS Scheer/Software AG
- SAP
- ...

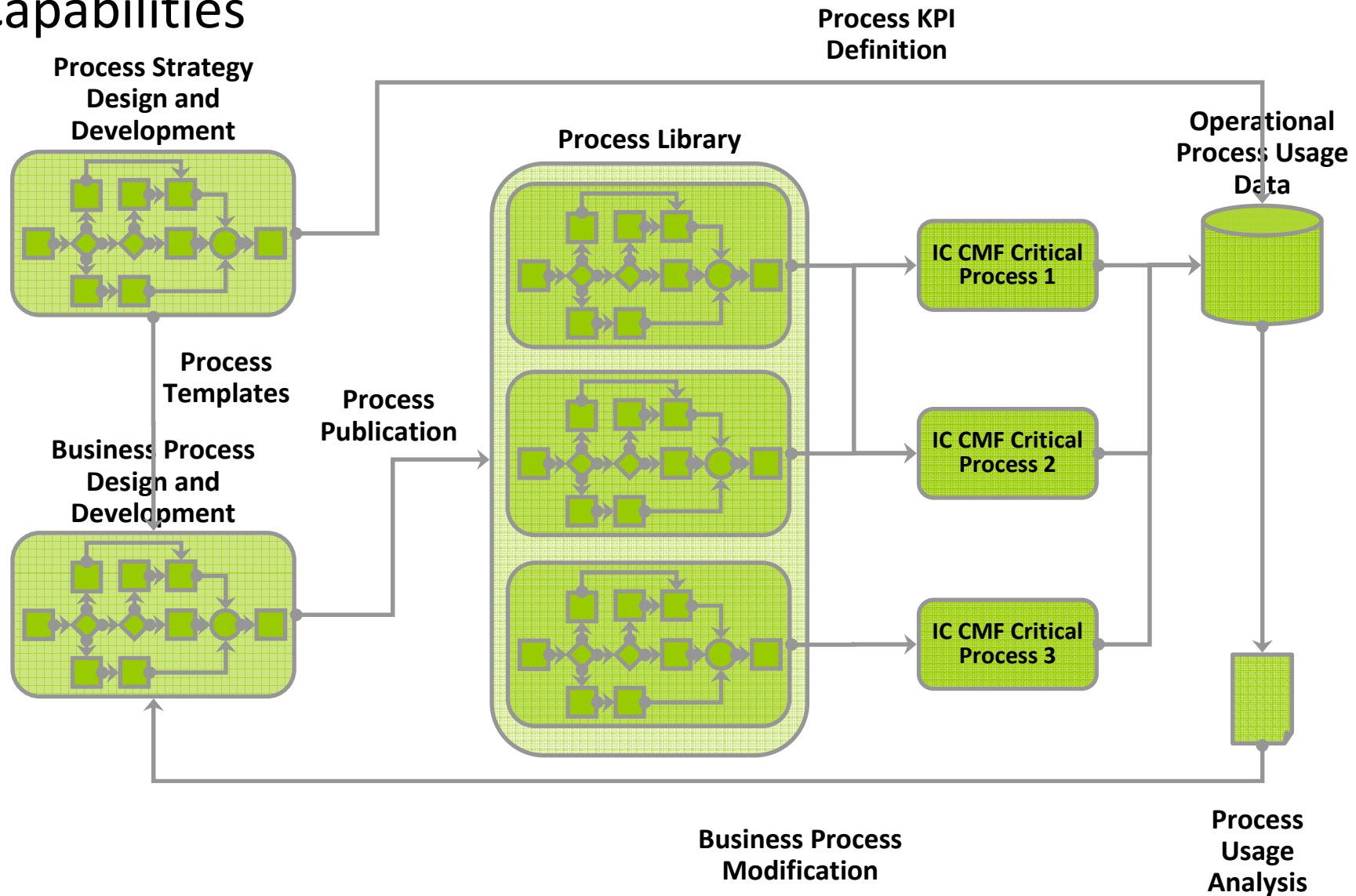
BPM Maturity Model (BPMMM) – Some Key Issues

- What is the value of increasing BPM maturity?
- BPM is a capability and not a program or project or an end state
- How many maturity measurement dimensions should be used: single dimension, multiple dimensions such as BPM implementation/reach, BPM process maturity, BPM goal achievement?
- Provides a capability model with maturity levels for any organisation to achieve desired level of organisational maturity and its associated value
- Increasing maturity involves broadening reach of BPM and improving constituent business processes
- What are realistic examples of key BPM practices (and possibly case studies) at each level of maturity?
- What actions are required to increase maturity?
- How much can BPM technology be separated from BPM implementation: from content management tools such as SharePoint to BPM suites such as ARIS from IDS Scheer?

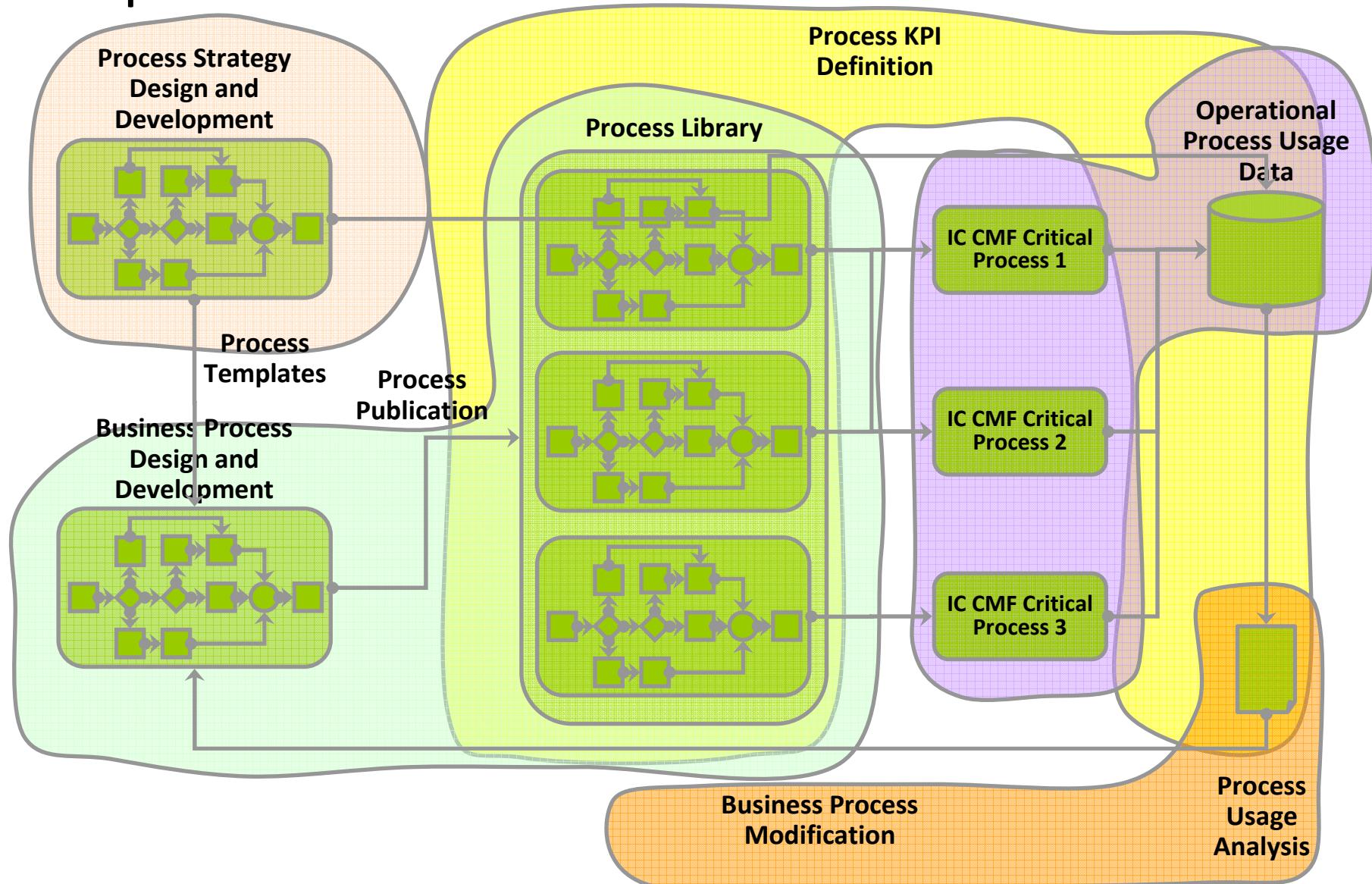
BPMMM – High Level Capabilities

- Link BPMMM High Level Capabilities to BPM implementation and operation framework:
 - Strategy, Management and Governance
 - Design and Implementation
 - Operation and Measurement
 - Optimisation
 - Technology Infrastructure

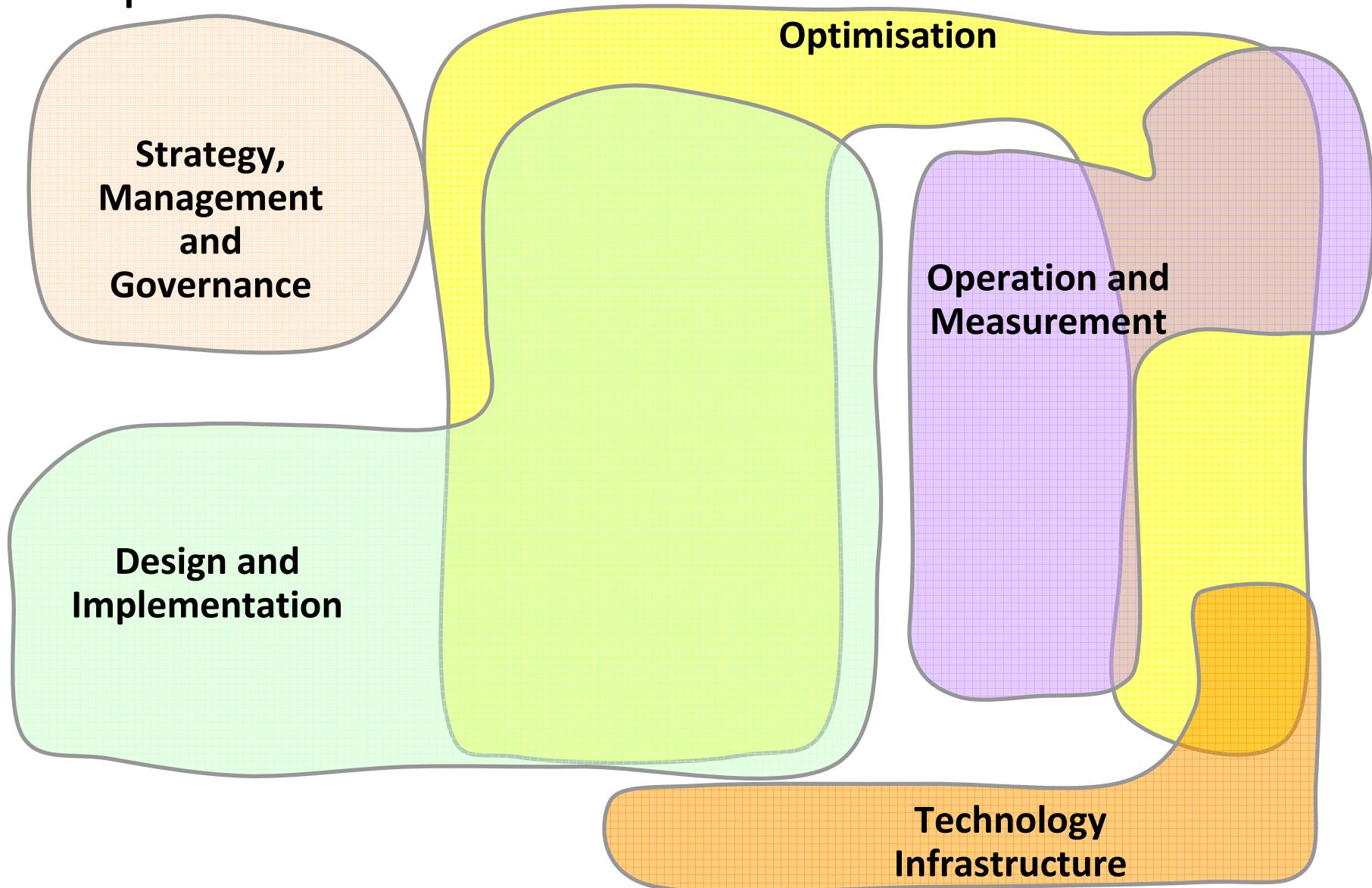
BPM Management, Governance, Implementation and Operational Framework and BPMM – High Level Capabilities



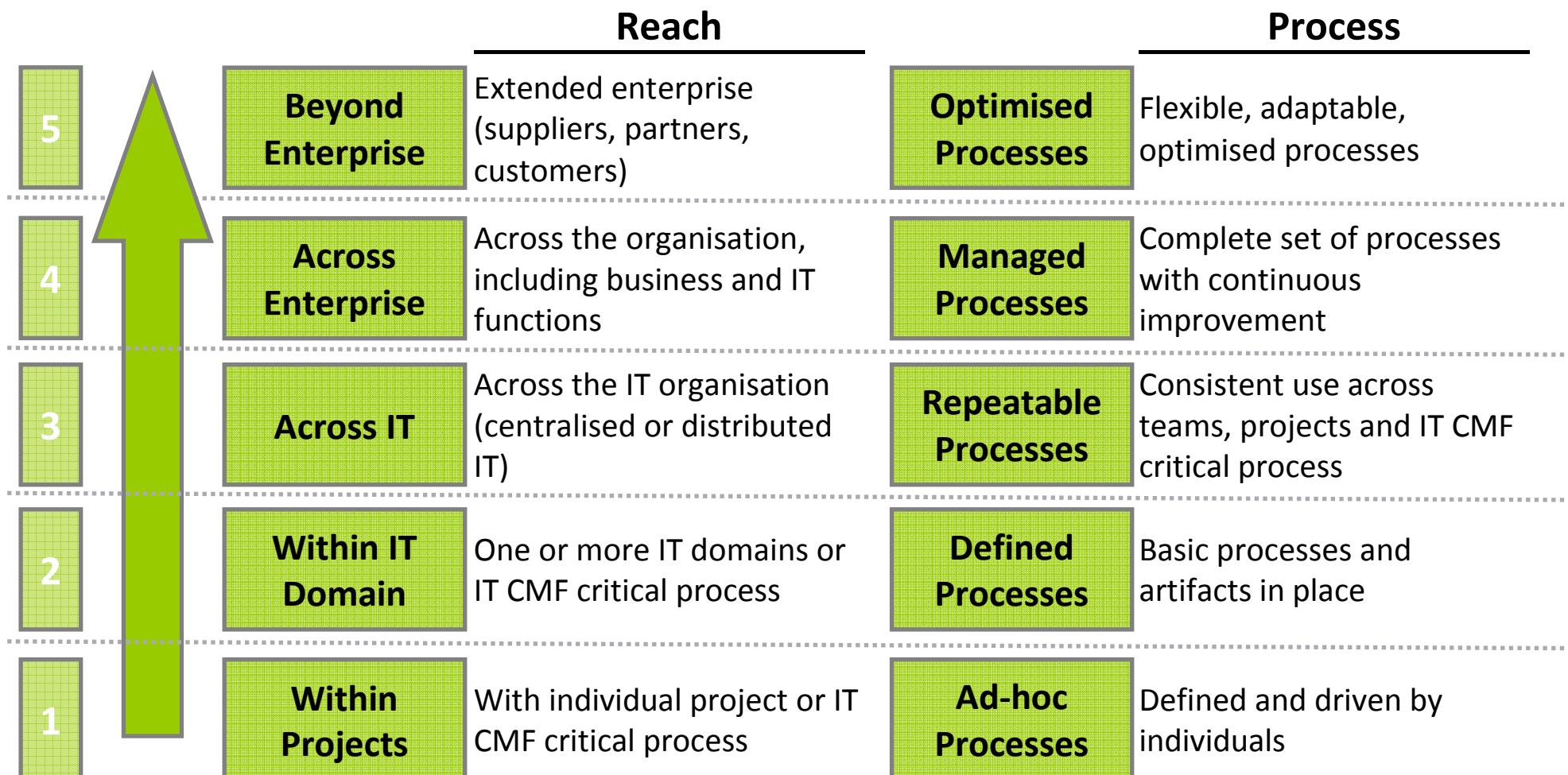
BPM Management, Governance, Implementation and Operational Framework

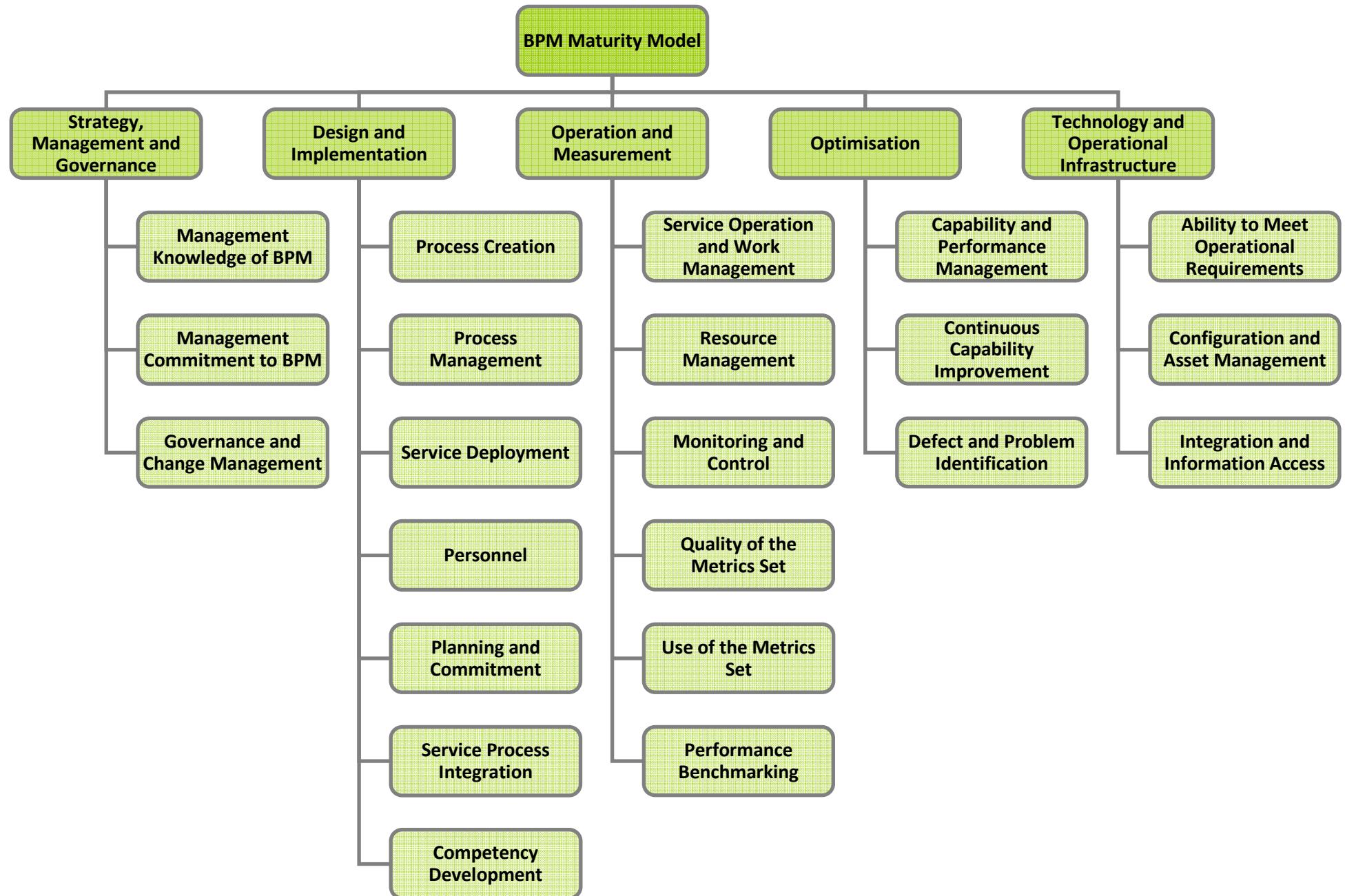


BPM Management, Governance, Implementation and Operational Framework



BPMMM Maturity Dimensions





Process Management Maturity

- Examination of maturity levels in these models includes the identification of a number of known success factors
- Within each of these factors are suggested questions organisations should examine in order to assess their level of business process management maturity
- Sample set of questions organisations may use to begin assessing their business process management maturity
- Answers to these questions (and those similar to them) provide some guidance on an organisation's BPM maturity level
- Provides the organisation the knowledge of their current business process management maturity and in addition helps in assessing which factors may need improvement or which factors can be leveraged, helping them advance to a higher business process management maturity level

Process Management Maturity Questions

- **Organisation**
 - Does your organisation have a Process-Centric Approach? Is it customer focused?
 - What is the level of process awareness and emphasis; among management?; among stakeholders?; among staff/employees?
 - What is your level of process management success?
- **Process Definition (Organisational Scope)**
 - Are processes defined? Documented? To what extent?
 - Is process success dependent on individuals or teams?
 - Are defined processes standardised across the organisation?
- **Process Responsibility (Accountability)**
 - Have process responsibilities been defined? Who is accountable?
- **Process Sponsorship**
 - Who is (are) the primary sponsors of defined processes? Top Management?
 - Middle management? Departmental? IT?
- **Process Measures**
 - Have process measures been defined? Used? Planned?

Process Management Maturity Questions

- **Process Awareness (People Involvement)**
 - Do your employees, management think in processes?
 - What is the level of people involvement in process definition? Analysis? Process improvement?
 - What level of change management methods has been deployed?
 - Has continuous training been aligned with processes?
- **Process Alignment**
 - Are process goals aligned with defined business strategies?
 - Are processes aligned with organisational goals?
 - Are job descriptions aligned with process definitions?
 - Are employee evaluations linked to processes?
- **Information Technology**
 - Does IT management use BPM for its processes?
 - Are BPM support applications defined and employed in key processes?
 - Does management use BPM applications to support performance monitoring?
- **Methodology**
 - Are BPM tools, process methodologies or process frameworks used? Successful?

EPM Best Practices

- Look at the business from the customer's point of view
 - Help change the typical inside-out view of the business that the traditional, functional paradigm promotes
 - Seeing from the customer's point of view will help you identify the critical measures of performance that reflect the customer's particular requirements
- Try not to call the end-to-end processes by the same name that you use in describing internal departments
 - Will assist in shifting the mindset to a process oriented view - new names for seeing things in new ways
- Be clear on the definition of each end-to-end process
 - Clarify where the process starts, the key steps in the process, the departments involved, the output and the major measures of process performance
 - Assign a group of internal experts to prepare a “draft” schematic for review and refinement by the top team
 - Assure a high degree of buy-in and ownership at the top team level
- Do it quickly
 - Don't take weeks or months, hoping to get it perfect - will never be perfect
 - A few weeks of data gathering and a couple of days off-site is all that is needed to develop a workable model that will serve as a basis for next steps

EPM Best Practices

- Once the top team has reached a shared understanding on the components of its own enterprise level process model, the next step is to do the same for the firm's current level of performance on a few critical metrics
 - Typically involves getting real data on a set of measures around the timeliness, quality and cost of product or service delivery and other key aspects of the firm, such as developing new products or services
 - Can be quite problematic
 - Data on qualitative factors such as on-time delivery, accuracy, responsiveness and completeness are sometimes difficult to assemble
- Value in assembling and assessing this type of current performance data
 - Facilitates an objective and shared view of how the firm is performing when set against customer requirements
 - Sets the baseline for the subsequent assessment of the size of the gap between current level of performance and desired level of performance

EPM Best Practices

- Several major pitfalls to avoid in reaching a shared understanding of how the firm is performing against customer requirements
 - Lack of candor in measuring what customers really want
 - Subtler and, therefore, more problematic issue - often starts when one or several members of the leadership team vehemently challenge the validity of the data on current performance
 - Lack of buy-in is difficult to assess and even more complex to address
 - To mitigate this, it is useful for the leader to ask each member of the top team to articulate his or her acceptance of the data on current performance
 - Working at the wrong level of detail
 - Can occur when some leaders wish to dive into discussion of the as-is conditions vs. optimised/improved processes
 - Can deter and defer the high level strategic discussions which are vital at this stage

EPM Best Practices

- Once a shared understanding of the definition of the firm's enterprise level business processes and its current performance has been achieved, management team can then proceed to build a plan that will improve and manage the organisation's large, cross-functional business processes
- Such a plan needs to answer two fundamental questions
 - Which business processes need to be improved and by how much, in order to achieve strategic objectives?
 - Who will be held accountable for this planned improvement and management?

From Planning to Action

- Role of process owners or stewards extends far beyond the simple monitoring of business process performance
- To convert plans into action, process owners need to collaborate on critical process improvement projects
- close collaboration of the members of the process council or panel is a critical success factor in the success of large, cross-functional process improvement efforts

From Planning to Action - Principal Leadership Behaviours

Definition	Analysis	Design	Implementation
Agree on process boundaries	Understand the flow of work in a cross functional context	Probe to test the vision for the new design	Process owners chair meetings with process management teams throughout implementation
Set clear improvement goals	Agree on the size of the performance gap	Understand the cross-functional Implications of how business should be conducted in the future	There is increasing conversation and awareness of cross-process dependencies
Appoint the best people	Gain clarity on key issues, disconnects, opportunities	Gain clarity on the matrix of performance measures	People begin to assign their loyalty as much to process as to function or business
Identify realistic constraints	Insist on the prioritisation of issues based on impact	Constructively challenge the recommendations for change	People are aware of the progress in closing the gap between current and desired performance
Set a clear schedule	Refine working team membership if needed	Assess the business Case Inspect the high level implementation plan	There is a visible improvement in cross-department collaboration
Charter to implement, not just to design			

Challenges and Lessons Learned from Cross-Functional BPM Implementation

Aligned Processes

Aligned Measures

Resources, Skills and Enabling Technology

Knowledge Sharing

Credibility and Simplicity in Communication

Process Improvement Tools

Aligned Processes

- Understanding, defining and aligning business processes are key to success
- Aligned processes increase return
- Individual operational processes need to be connected to larger cross-functional processes

Aligned Measures

- Appropriate performance measurement available to all is important
- Need to measure results of cross-functional processes and constituent operational processes
- Ensures focus is maintained on what is important

Resources, Skills and Enabling Technology

- Dedicated, trained and skilled resources are important
- Need usable, functional technology providing process design, mapping features
- Ensure full-time responsibility

Knowledge Sharing

- Acquire and share internal and external expert knowledge
- Implement knowledge sharing technology
- Learn from others' mistakes
- Use appropriate external expertise

Credibility and Simplicity in Communication

- Need to communicate the need to operate in a business process oriented manner
- Need to sell the concept to personnel
- Showing results is necessary to get buy-in and sustain BPM initiatives

Process Improvement Tools

- Process improvement is core to BPM
- Toolset is important

Summary

- Enterprise Process Management [EPM] assures alignment of the portfolio of end-to-end business processes and process architecture with the organisation's business strategy and resource allocation
 - Provides a governance model for the management and evaluation of initiatives
- EPM is an essential management practice that provides the means for a company to create value for its customers
- The role of measurement is indispensable to maintaining a customer centric focus and assuring accountability for the performance of the firm's large cross functional business processes
- EPM has three essential requirements: a customer centric measurement framework, an enterprise level process schematic and an enterprise level process improvement and management plan
- Business processes must be associated to a clear strategy
- Successful process governance requires clear ownership and accountability assigned for each process
- The role of the Process Owner is to monitor performance and lead the improvement and management of the processes

Summary

- Process Owners must be given the means necessary to successfully manage the process
- EPM can engage the entire organisation in executing on strategy by clearly defining and communicating the means to accomplish it
- Process principles and practices positively influence leadership behaviours such as knowing the business, insisting on realism, setting clear and realistic goals and priorities and rewarding the doers
- Process thinking is essential to business growth
- Each end to end process must be clearly and uniquely defined
- Avoid these three pitfalls:
 - A lack of candor in measuring what customers really want
 - Members of the leadership team challenging the validity of the data on current performance
 - Working at the wrong level of detail
- Enterprise Process Management involves the transition from expressing strategy in general terms or in financial terms to expressing strategy in terms of observable cross-functional activity and requires a shift in mindset and a new set of leadership behaviours

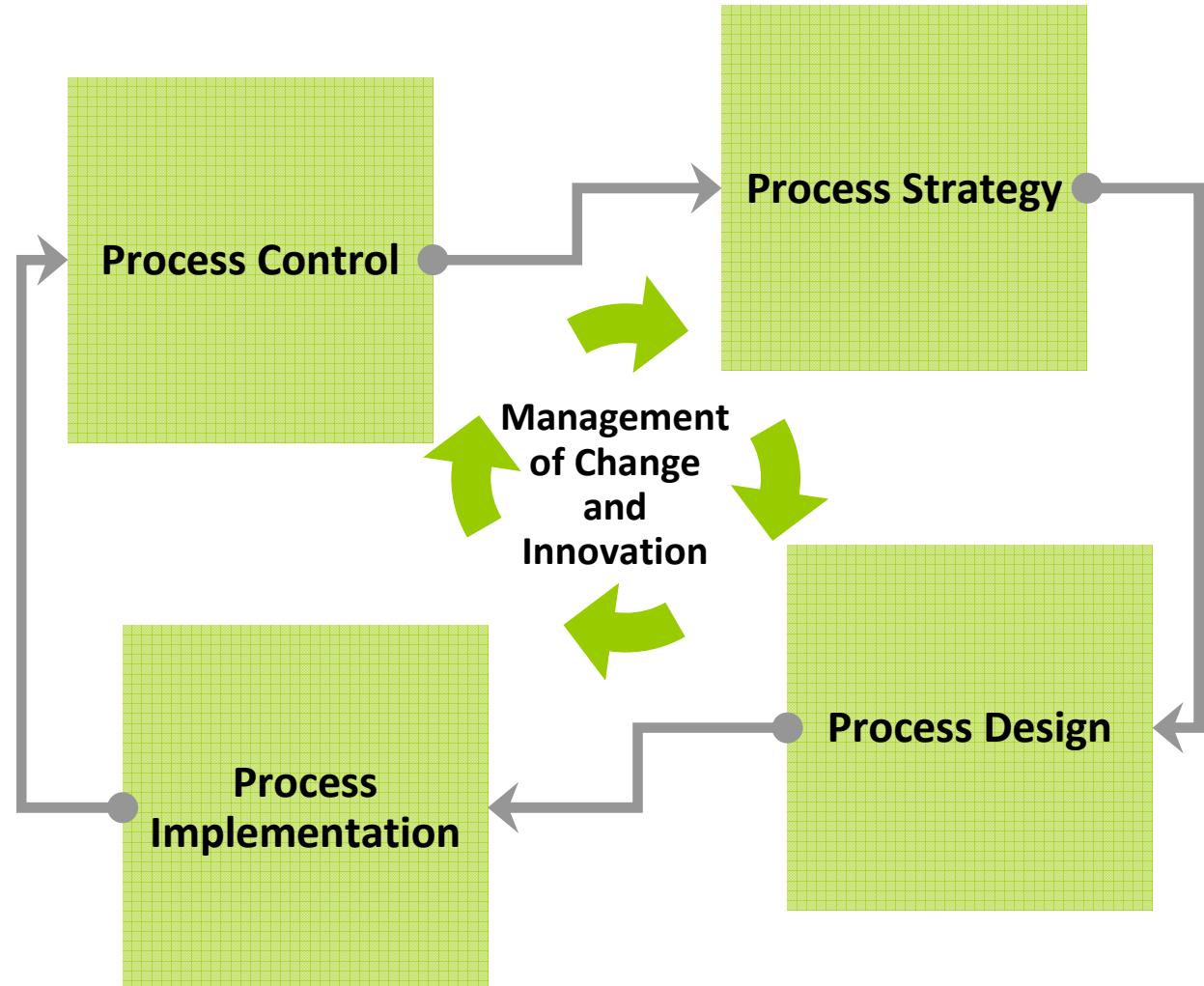
BPM Technology

BPM Technology

- Increasing use of computer applications to assist with the analysis, design, implementation, execution, management and monitoring of business processes
- Business Process Management Systems (BPMS) include a large number of computer applications that continue to evolve as our understanding of business processes matures and requirements for handling complex issues and large volumes of information increase
- The life cycle of developing, implementing, measuring and monitoring processes can
- involve a number of complicated activities
- Computer systems to support these activities have matured in sophistication
- All studies of successful BPM programs have found that BPM Systems are important and necessary components of any BPM effort

BPM Technology

- BPM technology can encompass some or all of BPM lifecycle
 - Process modelling and design
 - Simulation
 - Implementation – publish designed processes to controlling platform
 - Management and control – operational process platform
- Very wide range of software



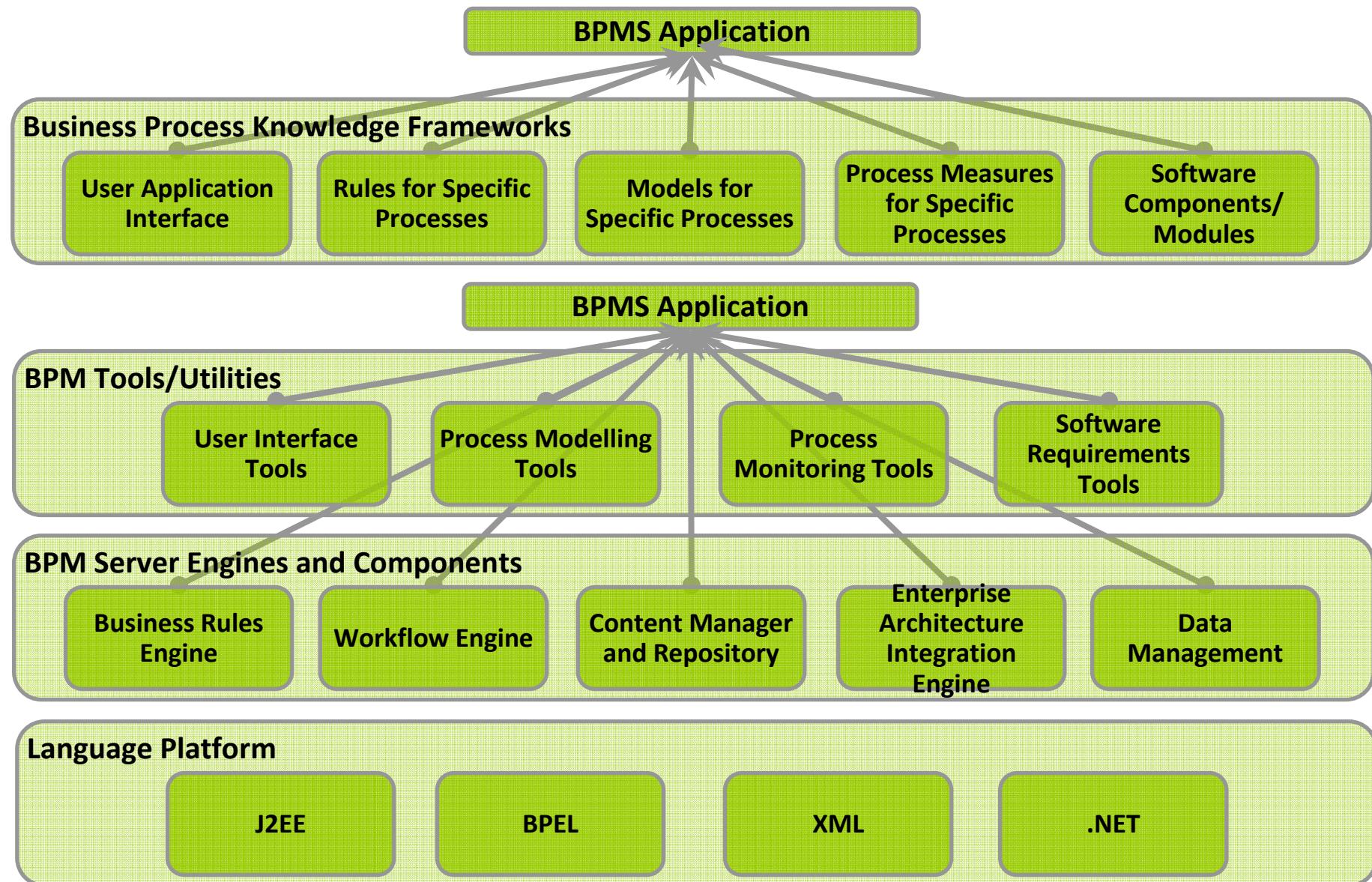
BPM Technology

- Experience shows that the application of technology is effective when the complexity of the process or the amount of information to be processed is too great to manage with manual methods
- Automation of processes is increasingly important for medium to large- scale enterprises, especially in attempts to coordinate efforts among members of geographically disperse work groups
- Automation of workflow can create remarkable increases in efficiency by reducing the time and costs associated with process activities and the lag times involved between the steps in a process, particularly when compared to paper based methods
- As an assistant to human efforts, technology can help people become more efficient by providing memory aids, balancing work loads and making more information available in decision processes
- Can establish performance measures to help us optimise the value of processes and we can access data from process results that support management decisions
- When these business performance measures grow in complexity and rely on large amounts of information from a number of sources, then computer support systems are essential
- Technologies applied to the tasks performed by business process management professionals make their efforts more efficient and effective

Elements of BPM Technology

- BPM tools support or automate all or part of
 - Modelling, analysis and design of processes
 - Implementation and execution of processes
 - Management decisions, business performance measures and administrative activities
- Software applications may address specific tasks supporting BPM or software vendors may offer a set of applications covering a number of BPM activities

Software Components Supporting BPM Activities



Modelling, Analysis, Design

- Business Process Modelling and Analysis (BPMA) starts with the initial conception and description of a process
- Models of processes are created and various scenarios or alternate processes are constructed in order to analyse the behaviour of processes and optimise performance
- Technologies available for BPMA start with applications that support graphical representations of the process and detailed descriptions of the goals and requirements for the process
- Drawing a flowchart or map of the activities involved in a process based on the requirements for the process is one of the early steps in process development
- Mapping of business processes is an extremely important stage necessary for designing and communicating processes that meet business requirements and are realistic in terms of their use in detailing implementation requirements

Modelling, Analysis, Design

- Efforts to standardise methods for describing processes have resulted in a standard graphical notation called Business Process Management Notation (BPMN)
- BPMN is particularly useful as a formal system for the precise description of classes, methods and properties of process activities
- BPMN is important for the technical design, coding and implementation of business processes using BPMS
- Once the process is adequately described, other useful technologies for BPMA may involve process modelling and simulations
- Simulation programs will simulate the behaviours of people (or machines) carrying out the activities of a process
- Simulators will simulate the actions taken at each step,
- Simulate the flow of data and other information through the process and execute rules that may change the process flow and dictate additional processes to be initiated such as a process of approvals by a manager when the invoice amount exceeds a certain value

Modelling, Analysis, Design

- Metrics developed to measure performance such as the time required to complete a step, the lag time between actions and the cost of resources used will be included in a simulation exercise to measure the effectiveness of the process
- Simulations and modelling are iterative activities in that a simulation of a number of incidents will be run by a software program based on a set of assumptions about how the tasks in steps are carried out
- During the simulation measures such as total time for completion and costs are recorded to determine points for improvements
- Assumptions may be changed and another set of incidents will be simulated to compare the results

Modelling, Analysis, Design

- Features of a typical modelling and simulation application are:
 - The ability to graphically represent the process as a map of the steps to be taken
 - Methods to define the flow of information between steps and conditions under which the flow may change
 - If the flow of the process can be changed based on events, simulators provide the ability to define the probability distribution of the likelihood of one or more routes through the process
 - Methods to state assumptions about measurable behaviours in process steps such as the time to complete a task
 - Such behaviours may be based on a probability distribution
 - For example, the distribution of task completion times may be defined and each simulation of an incident will use a completion time from that distribution

Technologies that Support Implementation

- Once a process has been designed, putting that process into operation may involve a number of information technology support applications
- Some of the most important applications may be considered in the following categories
 - Electronic Document Management Systems that capture, organise and provide information required for the execution of steps in a process
 - Electronic forms for information capture and distribution
 - Workflow routing and management
 - Workgroup collaboration

Electronic Document Management

- Virtually all business processes involve the use of information in documents and data repositories
- Fundamental computer support systems are those applications that help us collect and manage this information in electronic formats
- Electronic information in support of processes may be used by people by “pushing” or “pulling” information to support the tasks that are part of the process
 - “Push” methods involve sending information to a person for initiating and/or accomplishing a task
 - A very basic form of an information push is sending an email to a person with information for attention
 - “Pull” methods rely on people finding and pulling information from an information repository in order to accomplish a task

Electronic Forms

- A great deal of information useful for a business process will be gathered through the use of forms
- Electronic forms provide a structured method for capturing and presenting information
- Most computer applications use forms in one way or another
- A significant trend in the development of electronic forms that has a great impact on BPM is the standardisation of the format of forms and embedded information fields

Workflow Automation

- Once the information involved in a process is captured and stored electronically, the opportunity is presented for using the information with other applications such as workflow automation
- Workflow automation involves systems that provide necessary information to each activity in a process and manage the flow of actions and information based on a set of rules
- Many workflow automation applications have been built on top of or are embedded in content and document management systems as a means to push information organised by these systems to workers involved in implementing the actions in a process
- Some of the available BPM systems allow users to graphically map out a process, define the flow and simulate the process, define the metrics and rules that will be used to control the flow at the design phase
 - Once the process definition is finalised, the design can be implemented as the production workflow by assigning user roles, responsibilities and authorities
- Workflow Management Coalition (WFMC - www.wfmc.org) has developed a framework for the establishment of workflow standards

Business Process Execution Language (BPEL)

- Technical trend is the use of the Business Process Execution Language (BPEL), a programming language optimised for executing process activities
- Using BPEL, a programmer formally describes a business process, executes the steps in the process and coordinates information from a variety of sources
- BPEL fits into the framework of service oriented architectures and optimises the use of Web services

Workgroup Collaboration

- Experience gained from BPM successes and failures shows that one of the most important success factors is the involvement and interaction of management, process designers, people who perform the tasks within processes and representatives of information technology in the analysis, design and implementation of BPM initiatives
- Applying BPM systems to poorly designed processes is a sure formula for disappointing results
- Efforts to analyse and improve complex and sometimes cross-functional processes will often involve the cooperation and collaboration of groups of individuals starting with the analysis, design and modelling of processes and continuing with the implementation and management of process executions

Advantages and Risks of Process Automation

- BPMS can produce significant increases in efficiency through support of activities such as
 - Managing large amounts of documents and data
 - The geographic distribution of information to workgroup members
 - Reducing the lag time in taking critical actions through workflow and reallocating repetitive, manual processes from people to machines
 - Many of the efficiency gains provided by BPMS will also reduce operating costs
- Help in the assurance of compliance for policies necessary for critical legal and regulatory compliance
 - Track and audit actions that indicate compliance with controls designed to insure quality in production processes and the veracity of information supplied to regulatory bodies
- Supply timely information needed for management to measure the performance of business processes and look for areas to improve
 - Management can develop and access reports summarising data from many sources to gain new conceptual understanding of interrelated processes across the enterprise
 - Can provide critical points of control to insure that processes are working as intended and exceptions or even dangerous conditions are detected and addressed through intervention

Advantages and Risks of Process Automation

- Most significant risk is that we develop a false sense of security that just because we can automate a process
 - Automating poor processes will not gain better business practices
- Take care to ensure that automated processes work properly
 - Sophistication of some BPMS applications may mask process errors or inefficiencies and careful, detailed understanding of implementations is important
 - Use of BPMS can increase exposures to information security risks
 - Important to understand the technical working of BPMS to ensure that vital data is not exposed to individuals that should not see it

BPM Standards

- Number of technology trends emerging in BPM that suggest standard methods and practices
 - To claim that there are true standards for BPM technologies is premature
 - However, methods to design, automate, coordinate and simplify the execution of BPM activities have involved common practices and frameworks for a number of BPM activities and related technologies
- Some of these emerging methods include technologies such as
 - Business Process Modelling Notation (BPMN) used for graphical design of processes
 - Business Process Execution Language (BPEL) for coding executable process activities
 - eXtensible Markup Language (XML) for sharing data and documents
 - eXtensible Process Definition Language (XPDL) is a file format specification compatible with BPMN notation standards and provides a common format for sharing process models between tools

Trends and Convergence of Systems

- History of the development of systems that support BPM activities started with applications designed to handle specific tasks
 - Need to convert large amounts of paper documents into electronic forms spawned scanning and imaging applications
- Requirements to track financial transactions led to the development of accounting and ERP systems
- Efforts to gather information from disparate sources for the purpose of analysing business performance launched EAI systems
- Problems associated with managing large repositories of documents led to the development of document management systems
- As the concepts of BPM emerged with the emphasis on analysing, improving and managing processes, existing application sets were employed and new applications such as workflow, rules engines and design and simulation tools were added to the systems options
- With a growing recognition of the important elements of the BPM lifecycle from analysis and design to implementation and management, there has been a significant movement among systems vendors to create sets of tools (applications) that address the most important BPM requirements and interoperate with each other

Trends and Convergence of Systems

- A family of applications or tools whose goal is to achieve loose coupling among interacting software agents is an architectural style known as a Service Oriented Architecture (SOA)
- Each application in the family of applications is viewed as a specific service that may be implemented within a common hardware and software architecture
- A full suite of applications following a SOA for BPM may include
 - Process mapping, analysis and design tools
 - Content management applications
 - Workflow execution
 - EAI services
 - Business Intelligence
 - Rules description and execution capabilities
 - Process monitoring and control
 - Performance management

Implications of BPM Technology

- Information systems are an integral part of business processes
- Development and deployment of most systems has been based on meeting specific operational requirements and have been deployed by technical IT experts
- Typical problem in many organisations that has been recognised for years is the lack of adequate communication and planning between executive management responsible for the strategic and tactical direction of the organisation and the IT management
- BPM professionals need to understand existing information systems and their functions within business processes
- Enhanced ease of use of BPMS means that BPM professionals will become more involved in configuring these systems to support business needs
- With systems that support the design and automation of execution code, the business analyst and BP designer is less dependent on IT technical professionals
- The role of IT professionals is also changing because the technical requirements for application development coding are decreasing
- The implication is that IT professionals need to become more involved in understanding business strategies and supporting business processes as a part of the BPM team

Implications of BPM Technology

- Legal and regulatory requirements are forcing executives to pay more attention to internal processes and competitive pressures add to the motivation of executives and board members to understand and improve important processes
- Advantages that may accrue from process improvement activities can be substantial and BPM professionals will be at the centre of critical changes

Summary

- Information systems are an integral part of business processes
 - BPM professionals need to understand existing information systems and their functions within business processes
- BPM Technologies address the full process management life cycle: process modelling and design, process implementation and execution, process monitoring and control, process performance analysis and assessment
- BPM systems and suites (BPMS) may include several of the capabilities of technologies previously designed for specific capabilities such as: imaging, document and content management, collaboration, workflow, work routing and assignment, rules management and execution, metadata management, data warehousing, business intelligence, application integration, communications management and more
- Process Repositories are essential components of a full BPMS solution
 - Central Process Repository helps to ensure consistent communication about a process including what it is, how it should be applied, who is responsible for its successful execution and expected results upon process completion
- Effective and sustainable business process management cannot be achieved without the integration and deployment of appropriate technologies to support operations and management decision making

Business Process Management and Business Analysis

Business Process Management and Business Analysis

- Significant overlap between Business Process Management and Business Analysis
- Business Analysts often perform Business Process Management analysis and design
- Business analysis skills of requirements elicitation and process documentation are important to effective Business Process Management implementation

Business Analysis

- Business Analysis
 - Set of tasks, knowledge and techniques required to identify business needs and determine solutions to business problems
 - Business analysis is the connecting layer between strategy and systems/technology
- Solutions
 - Include a systems development component, but may also consist of process development or improvement or organisational change
- Business Analyst
 - Works as a liaison among stakeholders in order to elicit, analyse, communicate and validate requirements for changes to business processes, policies and information systems
 - Understands business problems and opportunities in the context of the requirements and recommends solutions that enable the organisation to achieve its goals

Business Analysis Skills

- Ability to develop a clear and detailed understanding of:
 - The requirements to solve a business problem, often with a system implementation/solution selection
 - How the proposed system or solution will interoperate or integrate with the existing systems and technology in which the new system will operate
 - How the proposed system or solution fits the existing enterprise architecture and business strategy
 - The business problem from multiple perspectives: business, user, functional, quality of service, implementation, etc.

Roles of the Business Analyst

- Gather requirements
- Document processes
- Identify improvement opportunities
- Document business requirements
- Act as the liaison between users and system/solution/technical architects

Roles of the Business Analyst

- Gathers data that is unstructured –
comments/information/discussions/interviews from/with users)
- Converts that data into information in a structured format
- Converts that information into knowledge that is structured and usable
- Develop requirements for change to:
 - Business processes
 - Information systems
- Understand business problems and opportunities
- Provide recommendations for solutions
- Be an advocate for the business user
- Work as a liaison among stakeholders

Importance of Business Analysis

- A factor present in every successful project and absent in every unsuccessful project is sufficient attention to requirements
- Half of all bugs can be traced to requirement errors
- Fixing these errors consumes 75% of project rework costs
- 25%- 40% percent of all spending on projects is wasted as a result of re-work
- 66% of software projects do not finish on time or on budget
- 56% of project defects originate in the requirements phase of the project
- Completed projects have only 52% of proposed functionality
- 75-80% of IT project failures are the result of requirements problems
- The average project exceeds its planned schedule by 120%
- 53% of projects will cost 189% of their original estimate
- 30% of projects are cancelled before completion
- 50% of projects are rolled back out of production
- The typical project expends least effort on analysis where most errors originate and whose errors cost most to fix
- Requirements errors cost the most and that poor requirements are the main cause of software failure

Factors for Project Success

- Effective and targeted project management and systems engineering processes, tools and techniques
- Appropriate executive decision making
- Effective project leadership
- High-performing teams
- Collaboration and respect between the business and IT communities
- Business analysis processes that ensure the development team will have a clear understanding of the customer's overall business and information needs

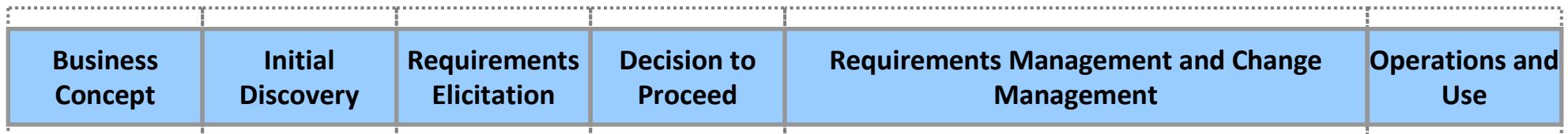
IT and Business Analysis

- IT need to possess expertise in multiple domains
- IT must prove it can understand business realities- industry, core processes, customer bases, regulatory environment
- Contribute real business value to their enterprise

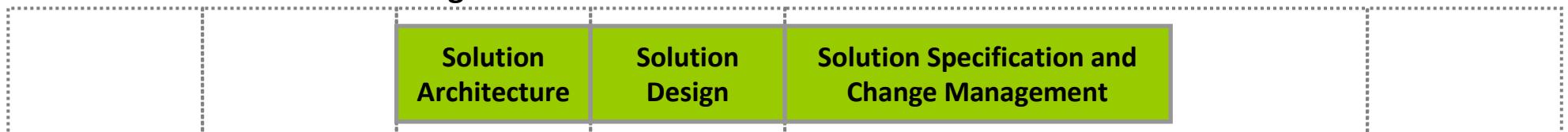
Align Business Analysis to Solution Lifecycles

- Business Analysis exists in wider context

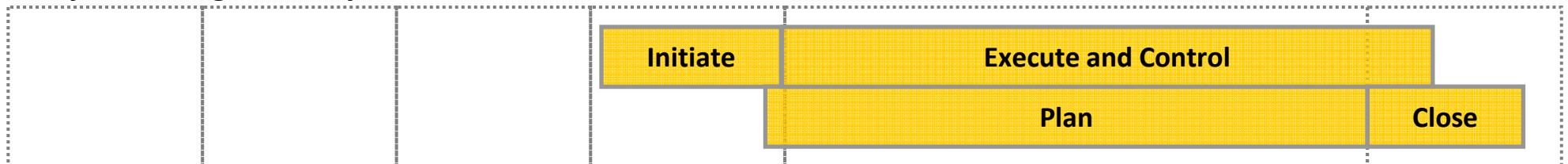
Strategy, Business Planning and Business Analysis



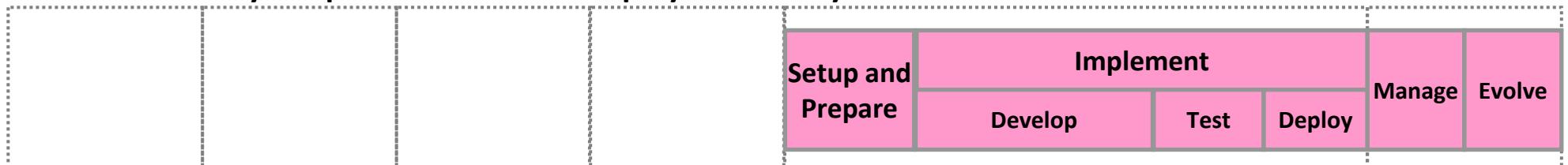
Solution Architecture and Design



Project Management Cycle



Solution Delivery - Implementation and Deployment Lifecycle



Business Analysis Challenges

- Lack of advance planning for projects and initiatives
- Lack of formal training for Business Analysts
- Inconsistent approach to business analysis
- Outsourcing and relying on external contractors to perform major roles in system development
- Impatience with the analysis/design/planning process
- Gap between what Business Analysts are assigned to do and what they should be assigned to do

Why Projects Fail

- Very significant Business/IT pain point
 - All too frequent implementation of IT solutions that fail to meet business requirements
- Look at the general causes of those failures
 - Look for solutions whose implementation will address those causes
- Projects fail to deliver solutions that meet requirements because of some combination of some or all of the following conditions
 - Poor understanding of the business need or problem
 - Poorly defined and/or stated requirements
 - Inadequately explored solution options
 - Poor solution design
 - Misalignment between requirements and project scope
 - Poor project planning/execution
 - Poor change management
- Many of these are related to business analysis and related activities
- Cannot separate project management, project portfolio management, business analysis and solution architecture

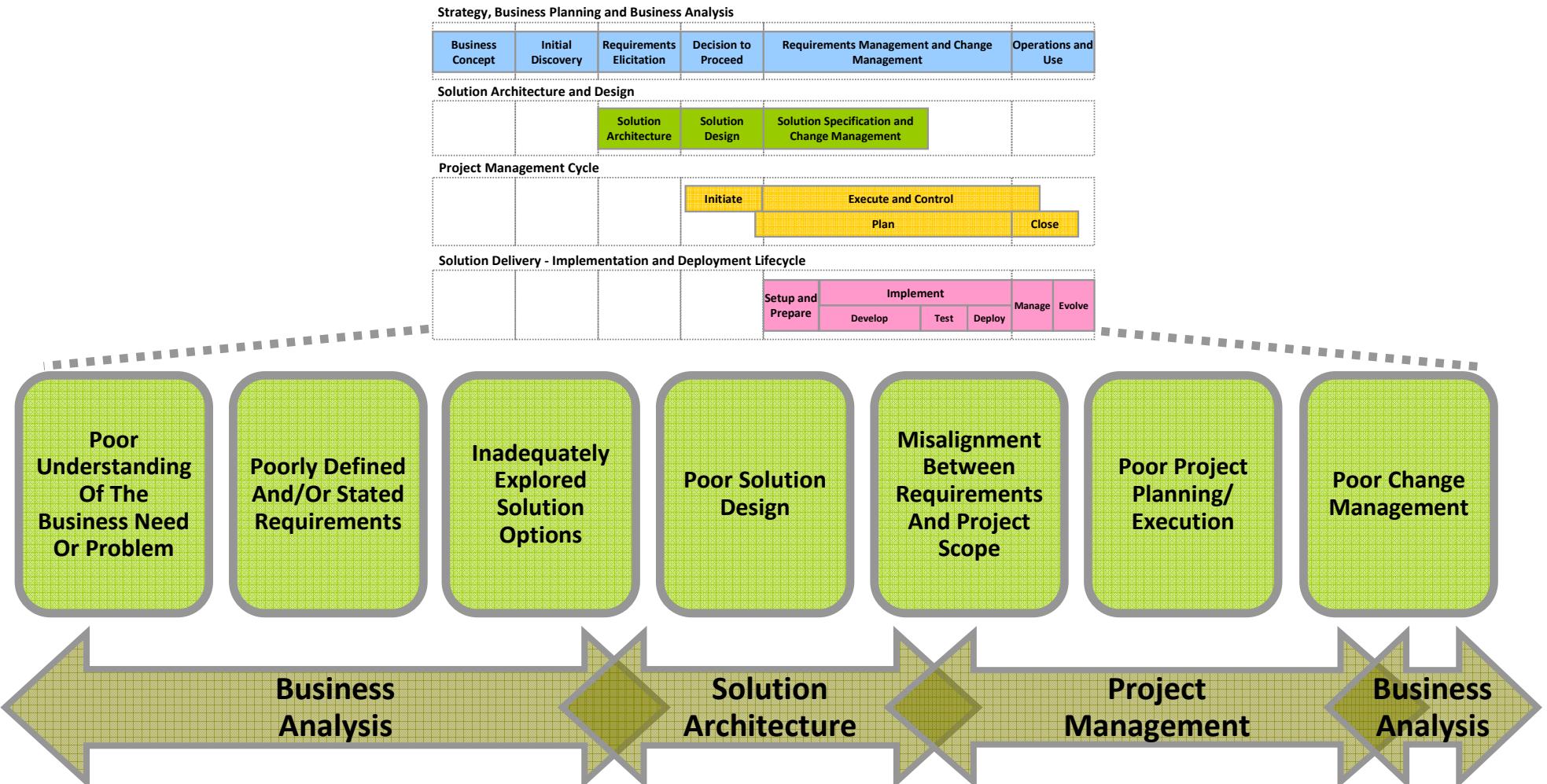
Avoiding Project Failures

- Poor understanding of the business need or problem
 - Implement effective requirements elicitation processes
 - Implement business analysis processes and governance
- Poorly defined and/or stated requirements
 - Gather requirements effectively
 - Communicate requirements clearly to stakeholders
 - Involve all relevant stakeholders appropriately
- Inadequately explored solution options
 - Implement solution architecture standards and governance
 - Conduct formal cost/benefit analyses
 - Reuse existing components
- Poor solution design
 - Translate requirements into design
 - Validate design
 - Implement solution design standards and governance

Avoiding Project Failures

- Misalignment between requirements and project scope
 - Requirements drive scope of project, transition and operational aspects of the proposed solution
 - Translate requirements into IT language
- Poor project planning/execution
 - Monitor deliverables
 - Ensure quality
 - Implement effective project management and governance
- Poor change management
 - Implement effective change management and governance
 - Effective change analysis
 - Communicate to the solution team of changes in business requirements
 - Communication to the business stakeholders of variations from the project charter, reflected in an updated business case

Avoiding Project Failures



- Ensure adequate and appropriate resources and involvement during project lifecycle

Requirements

- A condition or capability needed by a stakeholder to solve a problem or achieve an objective
- A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification or other formally imposed documents
- A documented representation of a condition or capability
- Focus on a particular business process or processes
- Describe the business need or problem and address all the functions associated with their delivery
- In project terms, requirements are the detailed items necessary to achieve the goals of the project
- Requirements analysis is key to successful project

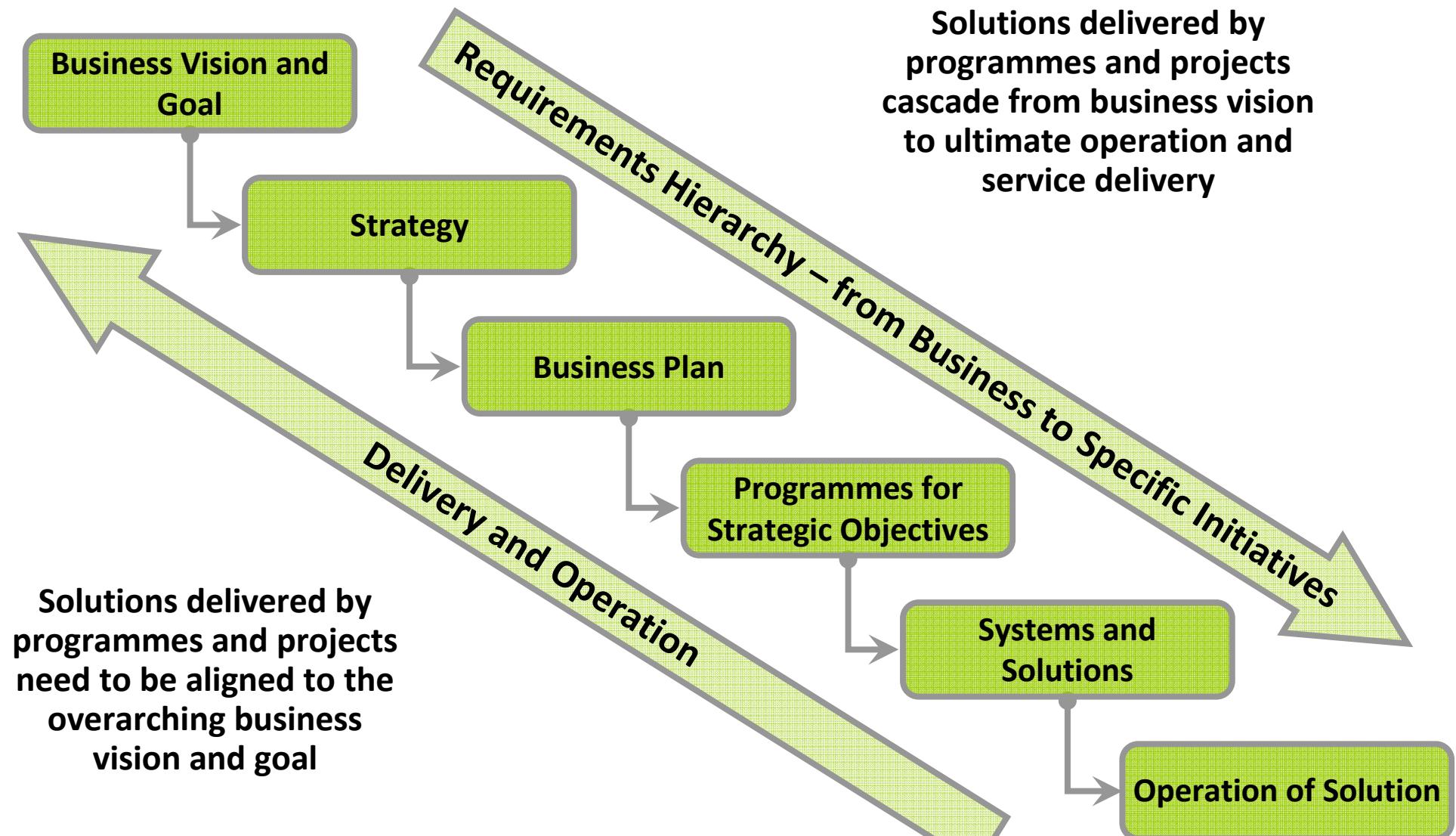
Requirements

- Objective is to define and describe the characteristics of an acceptable solution to a business problem, so that the project team has a clear understanding of how to design and implement it
- It is all about requirements

Requirements Planning and Management

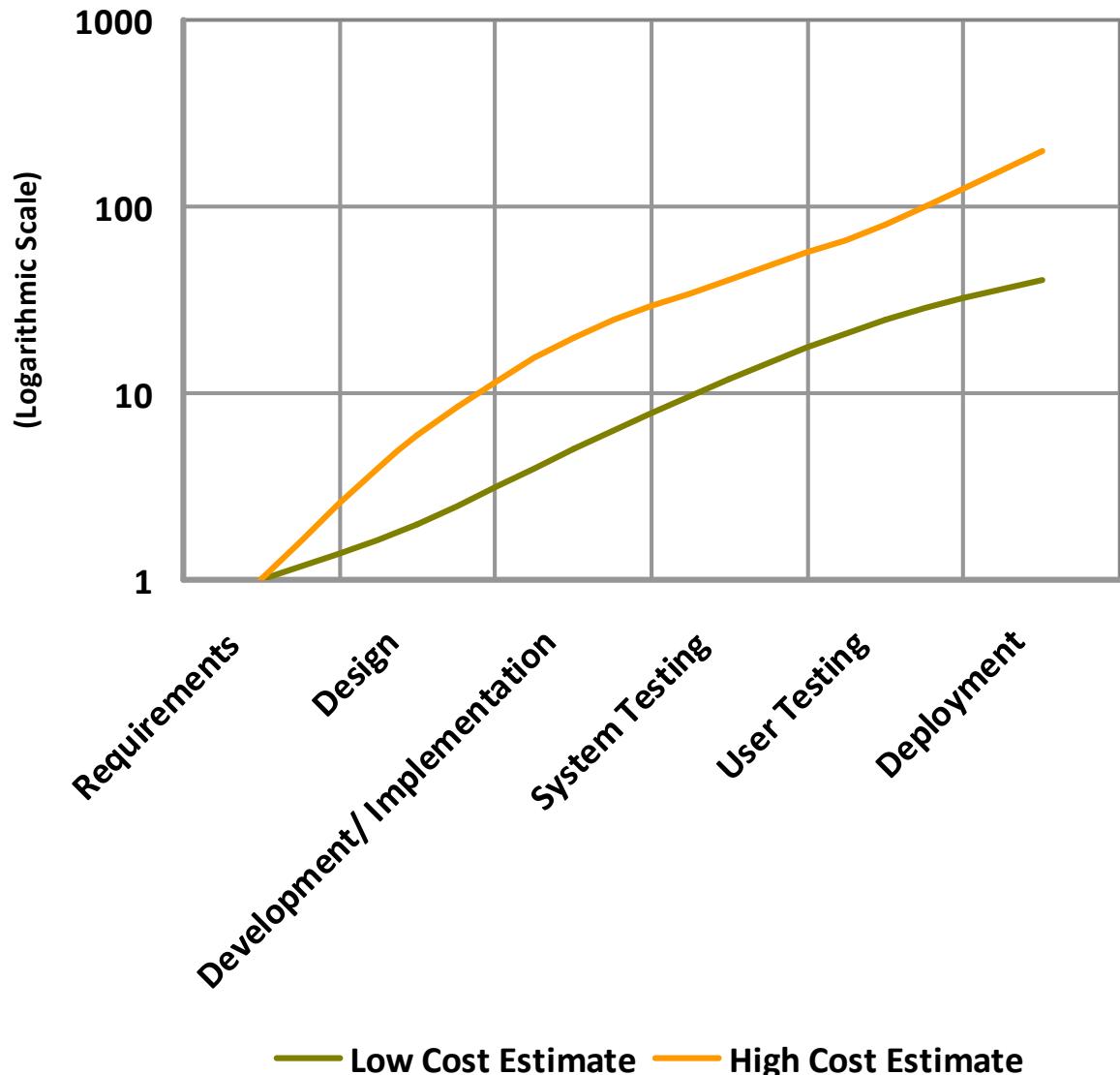
- Identify team roles: project manager, business analysts, developers, quality assurance analysts, trainers, application architects, data modeler, database analyst, infrastructure analyst, information architect, subject matter (functional) experts, etc.
- Identify stakeholders (who will provide requirements information): executive sponsor, solution owner (client), end users, functional managers, investors, etc.
- Distribute responsibilities amongst business analysts and other team members and define coordination, team communication and knowledge sharing mechanisms and processes
- Define risk monitoring and management approach for each identified risk
- Define the requirements and system development method
- Define the requirements and system development process
- Manage requirements change and scope: requirements creep is a big problem
- Define and collect project metrics and reporting mechanisms
- Other project planning and project management activities

Hierarchy of Requirements – from Enterprise to Project/Initiative

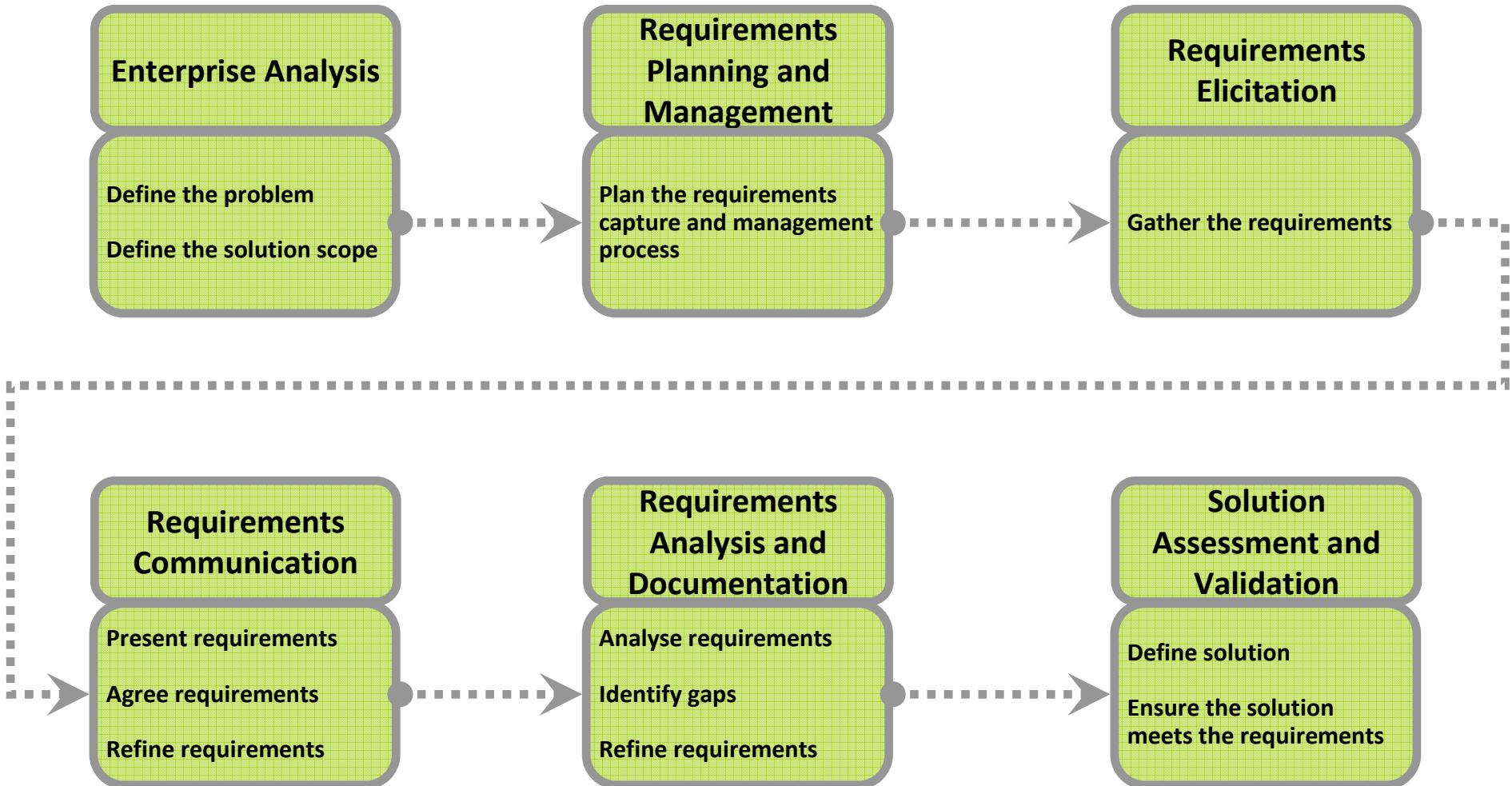


Relative Cost of Fixing Errors During Project Lifecycle

- Errors/gaps/omissions become significantly more expensive to fix at later stages of project lifecycle



Complete View of Requirements Process



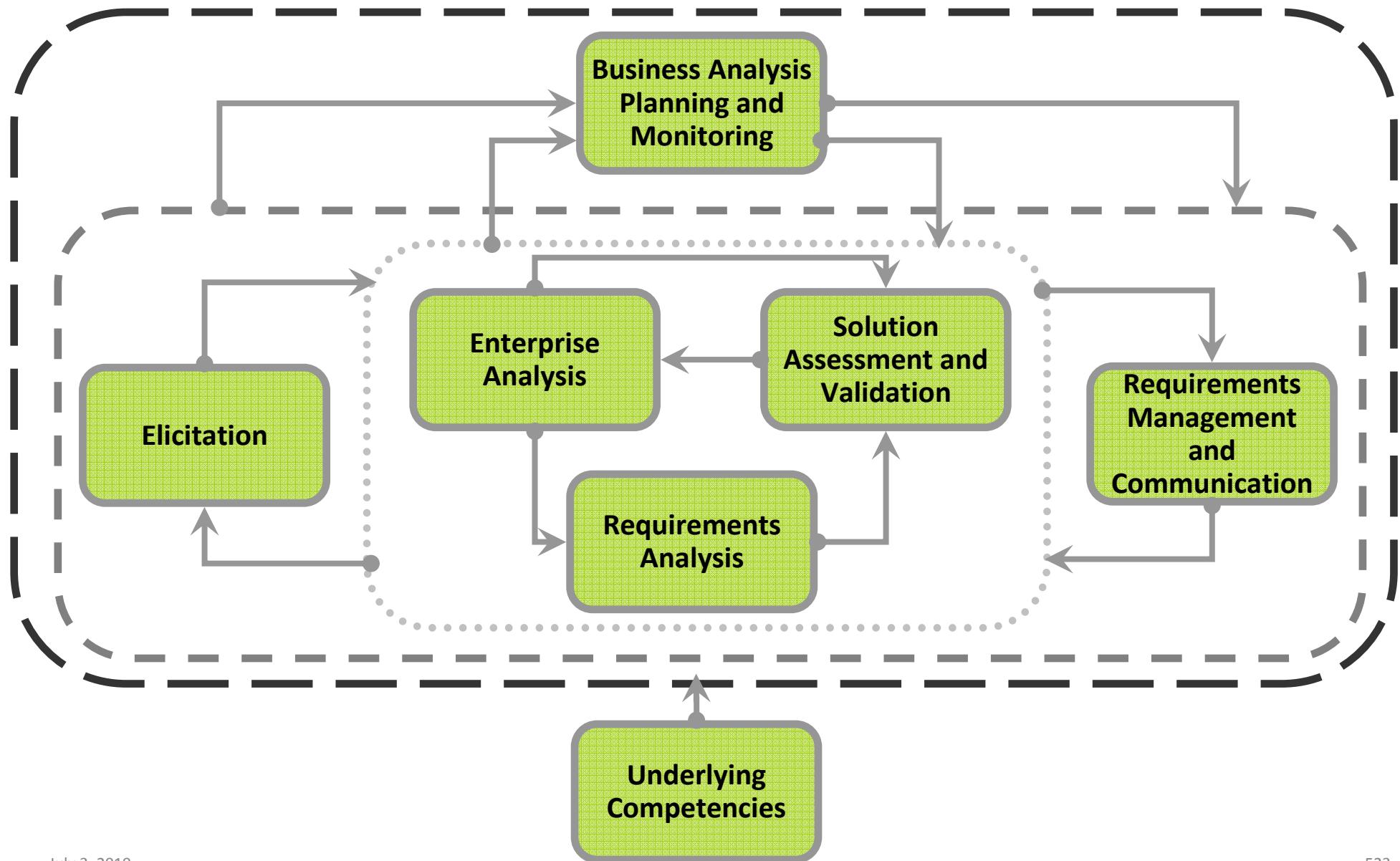
Business Analysis Body of Knowledge (BABOK)

- Developed by the IIBA (International Institute of Business Analysis) - <http://www.theiiba.org/>
- BABOK is the collection of knowledge within the profession of Business Analysis and reflects generally accepted practice
- Describes business analysis areas of knowledge, their associated activities and tasks and the skills necessary to be effective in their execution
- Identifies currently accepted practices
- Recognises business analysis is not the same as software requirements
- Defined and enhanced by the professionals who apply it
- Captures the knowledge required for the practice of business analysis as a profession

Business Analysis Body of Knowledge (BABOK)

- Describes an idealised approach to performing the complete range of business analysis activities
- Can be customised to suit the needs of an organisation and initiative

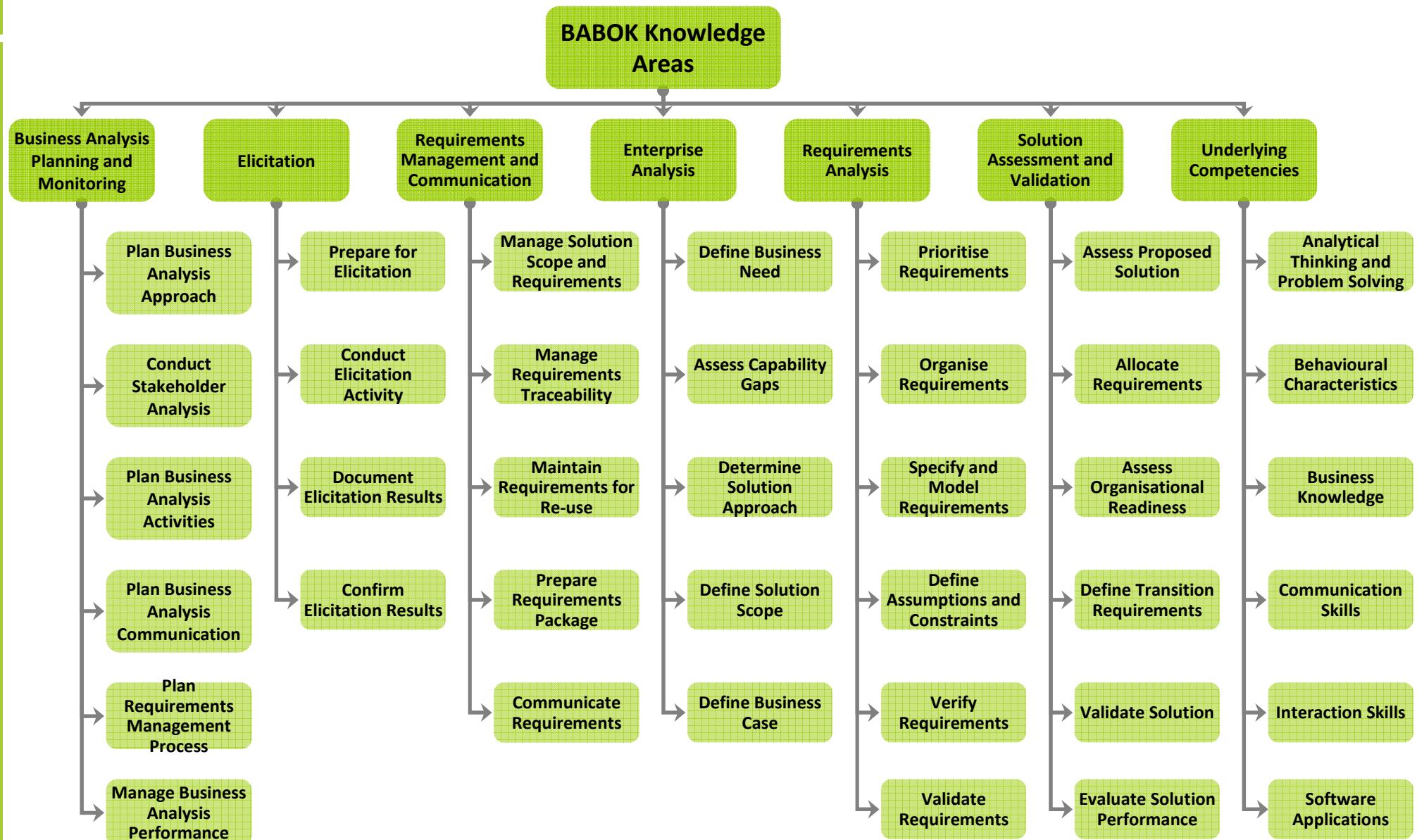
BABOK Knowledge Areas and Activity Flow



BABOK Knowledge Areas

- **Business Analysis Planning and Monitoring**
 - Determine which activities are necessary in order to complete a business analysis effort
 - Identification of stakeholders, selection of business analysis techniques, the process that will be used to manage requirements and how to assess the progress of the work
- **Elicitation**
 - Work with stakeholders to identify and understand their needs and concerns and the environment in which they work
 - Ensure that a stakeholder's actual underlying needs are understood
- **Requirements Management and Communication**
 - Manage conflicts, issues and changes in order to ensure that stakeholders and the project team remain in agreement on the solution scope
 - Communicate requirements to stakeholders
 - Knowledge gained by the business analyst is maintained for future use
- **Enterprise Analysis**
 - Identify a business need, refine and clarify the definition of that need and define a solution scope that can feasibly be implemented by the business
- **Requirements Analysis**
 - Prioritise and progressively elaborate stakeholder and solution requirements in order to enable the project team to implement a solution that will meet the needs of the sponsoring organisation and stakeholders

BABOK Knowledge Areas and Constituent Tasks



Business Process Management Technology Review

Business Process Management Technology Review

- Very wide range of business process software tools available
- Purposes of this section are:
 - Provide information on range of products available
 - Provide details on ratings of software by analyst organisations
 - Provide details on some free BPM software tools

BPA/BPM Vendors

ActionBase	http://www.actionbase.com/
ActiveVos	http://www.activevos.com/
Adobe Livecycle ES2 Suite	http://www.adobe.com/products/livecycle/
Agilepoint	http://www.agilepoint.com/
Appian	http://www.appian.com/
Appway	http://www.numcom.com/
AuraPortal	http://www.auraportal.com/
BizAgi	http://www.bizagi.com/
BOC	http://www.boc-group.com/
Bonitasoft	http://www.bonitasoft.com/
BP Logix	http://www.bplex.com/
Business Genetics	http://www.businessgenetics.com/
BusinessPort	http://www.businessport.net/
Casewise	http://www.casewise.com/
Comarch SA	http://bpm.comarch.com/
Cordys	http://www.cordys.com/
Corporate Modelling	http://www.corporatemodelling.com/
Cryo Technologies	http://www.cryo.com.br/Inicio.aspx
eKuar	http://www.ekuar.com/
EMC Documentum	http://www.emc.com/products/category/subcategory/business-process-management.htm
Exomin	http://www.exomin.com/

BPA/BPM Vendors

Flexite	http://flexite.com/start/start.asp
FlowCentric	http://www.flowcentric.com/
Fujitsu Interstage	http://www.fujitsu.com/global/services/software/interstage/
GBTEC AG	http://www.gbtec.de/
GetIceberg	http://www.geticeberg.com/
Global 360	http://www.global360.com/
HandySoft	http://www.handysoft.com/
IBM Websphere Modeler	http://www.ibm.com/
ARIS	http://www.ids-scheer.com/
ARIS Express	http://www.ariscommunity.com/arис-express
iGrafx	http://www.igrafx.com/
Intalio	http://www.intalioworks.com
Integrify	http://www.integrify.com/
Interfacing	http://www.interfacing.com/
Interneer	http://www.interneer.com/
ISIS Papyrus	http://www.isis-papyrus.com/
jBPM	http://www.jboss.org/jbpm
Karomi	http://www.karomi.com/
K2	http://www.k2.com/
Lombardi	http://www.lombardisoftware.com/
Mega	http://www.mega.com/

BPA/BPM Vendors

Metastorm	http://www.metastorm.com/
Method Park	http://www.methodpark.com/en/home/
Microsoft Visio 2010 Beta	http://www.microsoft.com/office/2010/en/visio/default.aspx
NGC e-POWER	http://www.is.northropgrumman.com/products/epower/index.html
Nimbus Partners	http://www.nimbuspartners.com/
Oracle	http://www.oracle.com/us/technologies/bpm/index.htm
Orbis Software	http://www.orbis-software.com/
Orbus	http://www.orbussoftware.com/home
Orchestra	http://orchestra.ow2.org/xwiki/bin/view/Main/WebHome
Outsystems	http://www.outsystems.com/
Pallas Athena	http://www.pallas-athena.com/
Panviva	http://www.panviva.com/
Pega	http://www.pega.com/
Pnmsoft	http://www.pnmsoft.com/
Polymita	http://www.polymita.com/
Process Maker	http://www.processmaker.com/
Process Master	http://www.processmaster.com/
proKosha	http://www.prokosha.com/
QPR	http://www.qpr.com/
Questetra	http://www.questetra.com/en/about.html

BPA/BPM Vendors

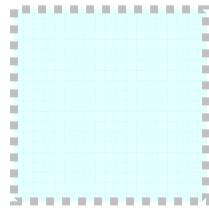
RunMyProcess	http://www.runmyprocess.com/
Salamander	http://www.mood.co.uk/index.htm
Salesforce.com	http://www.salesforce.com/platform/process/
Visual Process Manager	
SAP Netweaver	http://www.sap.com/platform/netweaver/index.epx
Savvion	http://www.savvion.com/
Serena	http://www.serena.com/
Skelta	http://www.skelta.com/
Signavio	http://www.signavio.com/en.html
Singularity	http://www.singularity.co.uk/
Software AG	http://www.softwareag.com/corporate/default.asp
Tibco	http://www.tibco.com/
Triaster	http://www.triaster.com/
uEngine	http://www.uengine.org/web/guest/home
Ultimus	http://www.ultimus.com/
Vicon	http://www.vicon.biz/
Vitria	http://www.vitria.com/
W4	http://www.w4.eu/indexen.html
Workpoint	http://www.workpoint.com/
XSOL	http://www.xsol.com/

BPM Product Reviews by Analysts

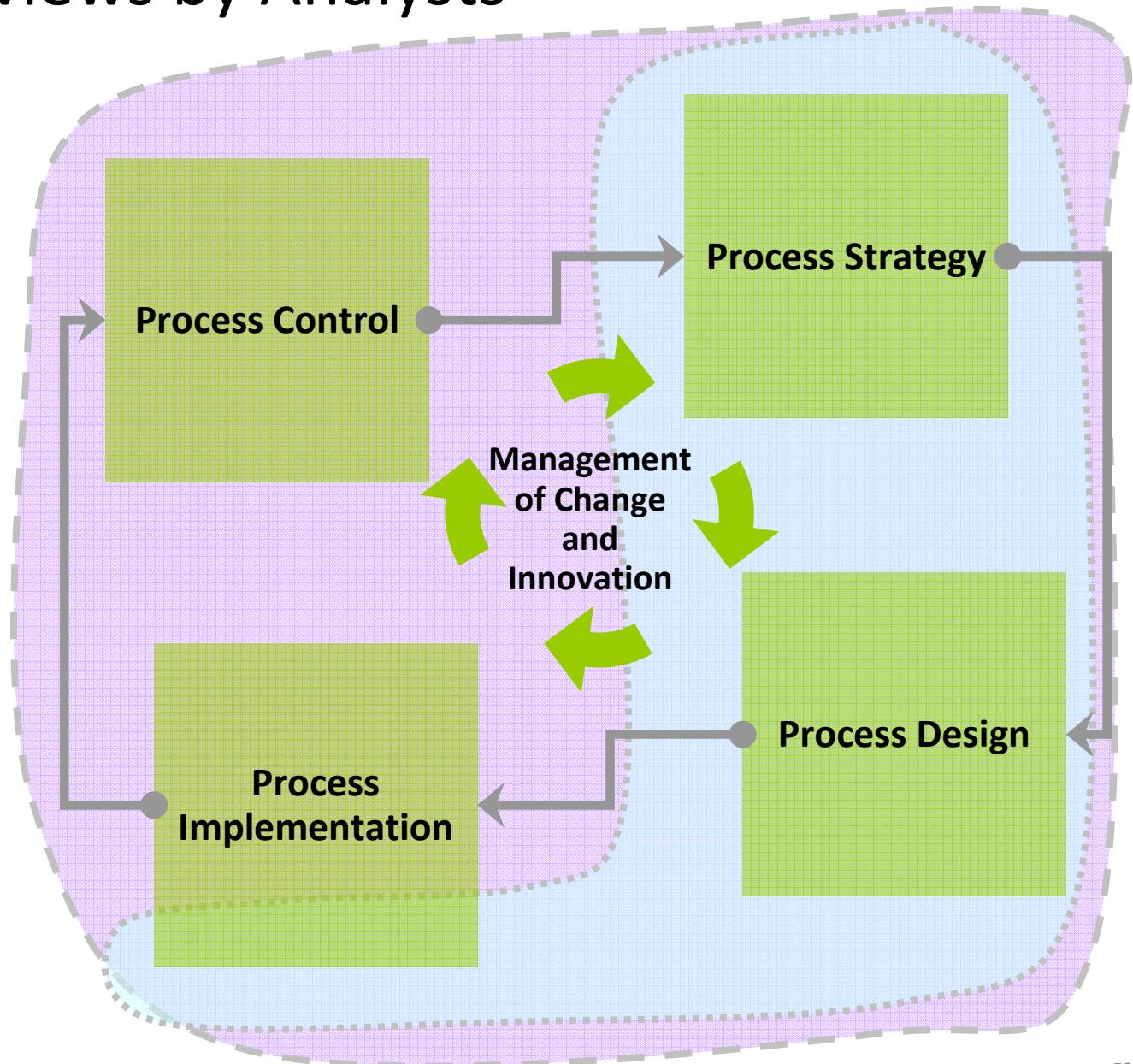
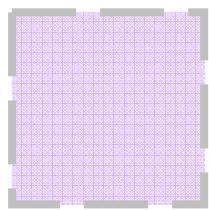
- Two sets of product reviews
- Business Process Analysis (BPA) tools
 - Business architects, who require robust solutions aligned with enterprise architecture
 - Business process (BP) architects, who redesign BPs at a conceptual level, regardless of whether there would be a business process management suite (BPMS) implementation
 - BP analysts, who redesign processes at a more detailed level, often using a BPMS
- Business Process Management Suites (BPMS)
 - Support BPM throughout the business process life cycle
 - Optimizing the performance of end-to-end business processes that span functions, as well as processes that might extend beyond the enterprise to include partners, suppliers and customers
 - Making the business process visible (and thus explicit) to business and IT constituents through business process modeling, monitoring and optimization
 - Keeping the business process model synchronised with process execution
 - Empowering business users and analysts to manipulate a business process model to modify instances of the process
 - Enabling rapid iteration of processes and underlying systems for continuous process improvement and optimization

BPM Product Reviews by Analysts

- BPA tools encompass

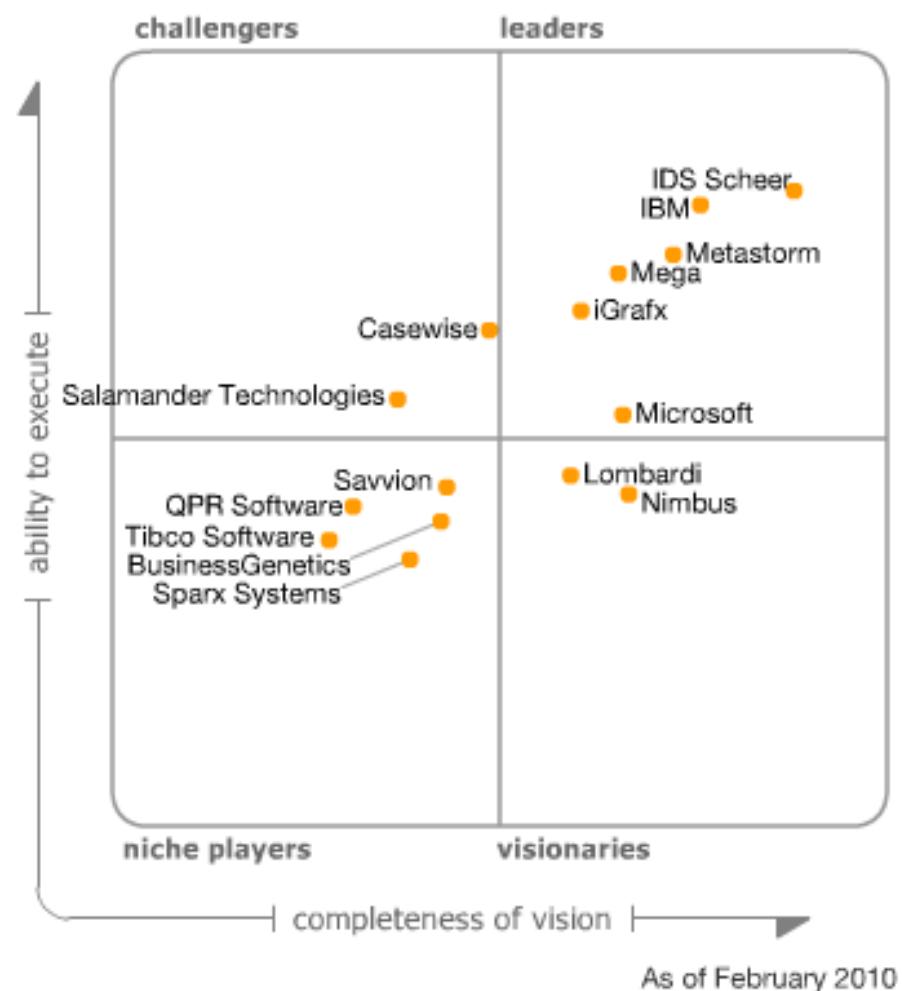


- BPMS tools encompass



Gartner Magic Quadrant for Business Process Analysis Tools – Feb 2010

- Ability to Execute Evaluation Criteria
 - Product/Service
 - Overall Viability (Business Unit, Financial, Strategy, Organization)
 - Sales Execution/Pricing
 - Market Responsiveness and Track Record
 - Marketing Execution
 - Customer Experience
 - Operations
- Completeness of Vision Evaluation Criteria
 - Market Understanding
 - Marketing Strategy
 - Sales Strategy
 - Offering (Product) Strategy
 - Business Model
 - Vertical/Industry Strategy
 - Innovation
 - Geographic

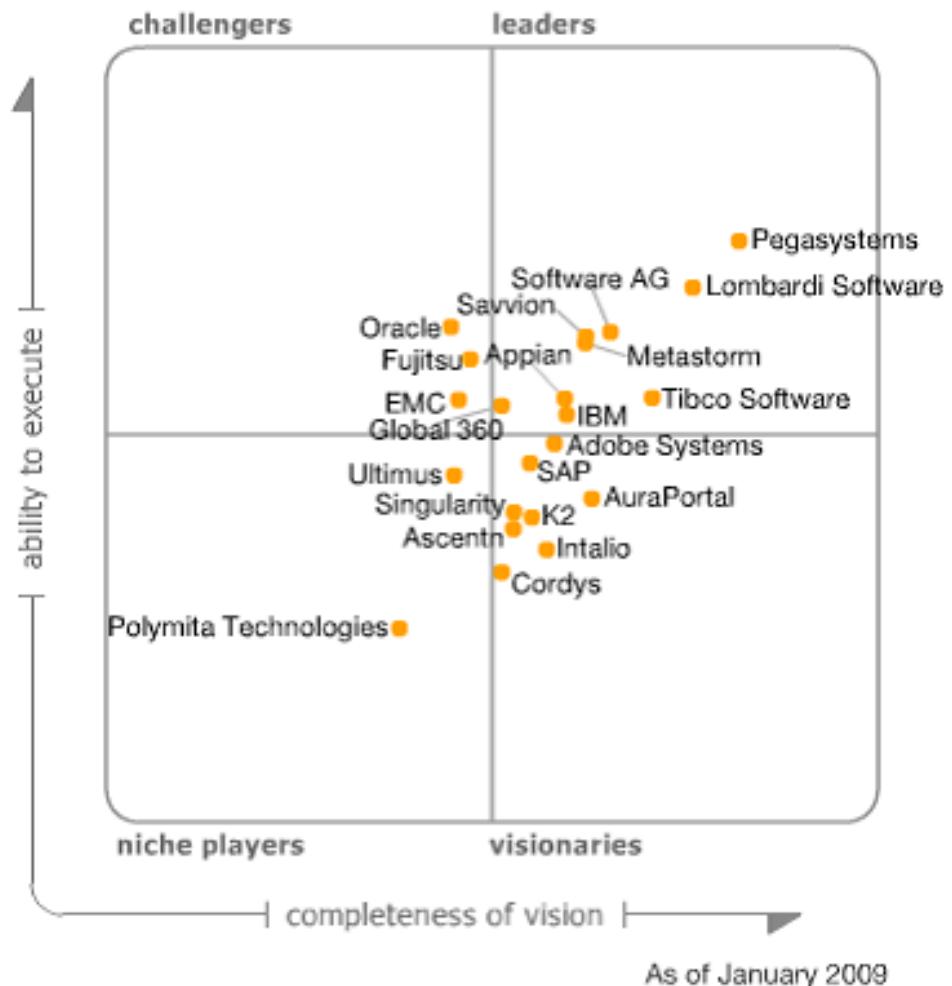


Sample Review - IDS Scheer/ARIS (Software AG)

- **Strengths**
 - IDS Scheer has a Gartner-estimated 18% revenue share of the BPA tools market.
 - Gartner customers report that ARIS has robust reporting and dashboard features across strategic, tactical and operational levels.
 - ARIS is one of the most comprehensive enterprise and BP architecture toolsets on the market, with strong support for a wide variety of standards, methods and frameworks.
 - ARIS is OEMed as Oracle's EA and BPA modeling tool of choice for its development environment, packages and BPMS.
 - IDS Scheer has enhanced the process discovery features to allow dynamic analysis of current physical process, roles and tasks.
 - ARIS is also OEMed as SAP's EA and BPA modeling tool of choice for its development environment and packages.
 - The new ARIS Express product is a free, lightweight BPA product for low maturity or occasional use. It can be used for commercial use and has an upgrade path to ARIS professional products.
 - ARIS includes features such as ABC, balanced scorecard, key indicator management and business rule design, while BAM capabilities are offered in IDS Scheer's Process Performance Manager, and simulation in ARIS Business Simulator.
 - Buyers focused on the BP analyst and BPMS category of tools will find that ARIS provides added value to them in the form of extensive, predefined, industry-specific content and horizontal reference models to jump-start BP modeling efforts.
 - ARIS includes bridges to the leading BPMSSs.
 - IDS Scheer has a workflow solution (engine) to automate its own governance process, which can be extended to third-party products.
- **Cautions**
 - Those with a business process analysis focus who are not interested in architecture or methodological rigor tend to find ARIS overly sophisticated for their needs — although it is possible to deploy ARIS in a manner where less-sophisticated modelers can be productive.
 - Those with a BPMS focus should consider augmenting the modeling tools of their BPM vendors with ARIS for the architects in their organizations.
 - IDS Scheer's acquisition by Software AG will introduce a period of organization and product integration. Current and potential ARIS users need to monitor the situation carefully

Gartner Magic Quadrant for Business Process Management Suites – Feb 2009

- Ability to Execute Evaluation Criteria
 - Product/Service
 - Overall Viability (Business Unit, Financial, Strategy, Organization)
 - Sales Execution/Pricing
 - Market Responsiveness and Track Record
 - Marketing Execution
 - Customer Experience
 - Operations
- Completeness of Vision Evaluation Criteria
 - Market Understanding
 - Marketing Strategy
 - Sales Strategy
 - Offering (Product) Strategy
 - Business Model
 - Vertical/Industry Strategy
 - Innovation
 - Geographic Strategy



As of January 2009

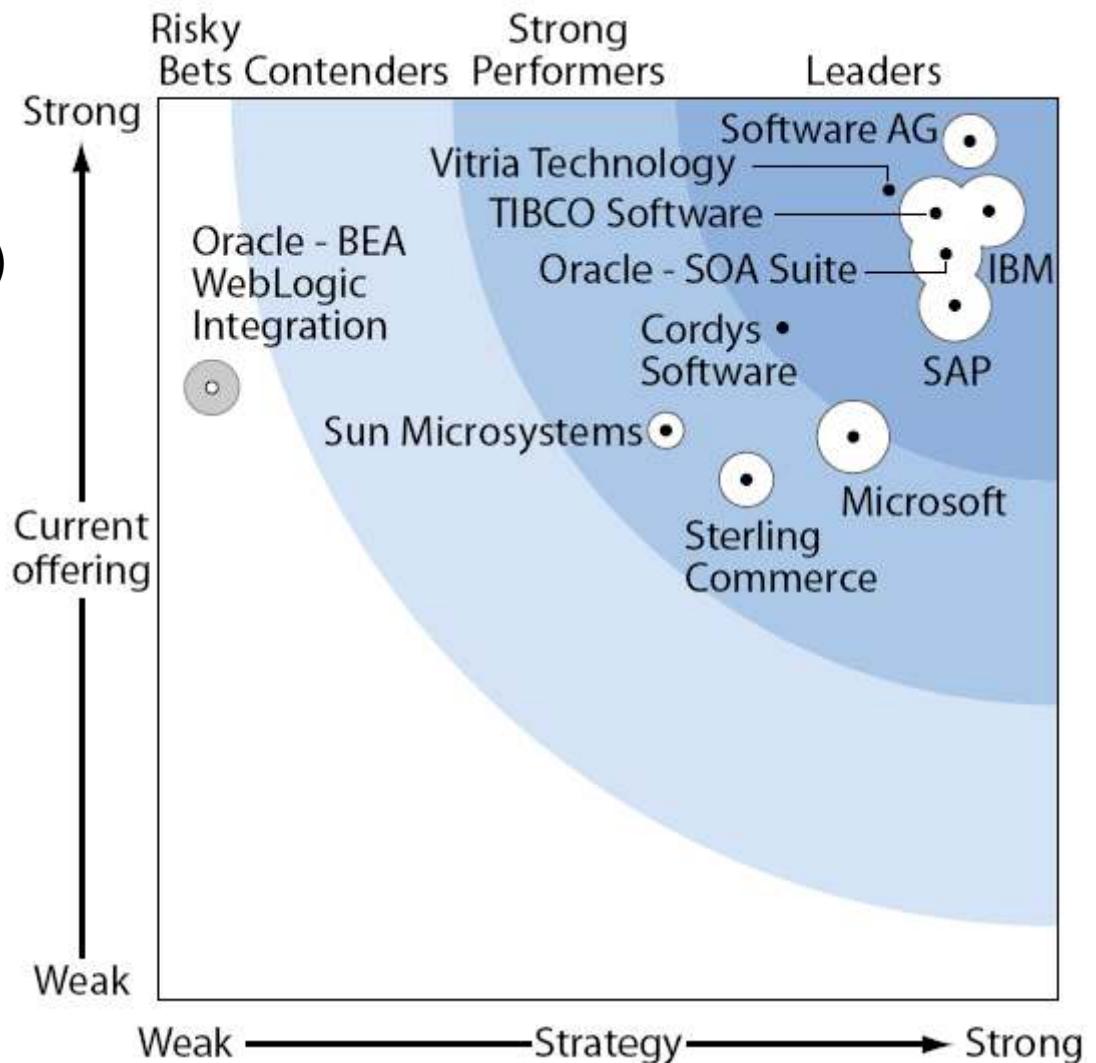
Forrester Business Process Analysis, EA Tools, And IT Planning 2009

- Current Offering
 - Modeling
 - Analysis and simulation
 - Life-cycle management
 - Publishing and reporting
 - Templates
 - Product architecture
- Strategy
 - Product strategy
 - Solution cost
 - Strategic alliances
 - Corporate strategy
- Market Presence
 - Installed base
 - Customer references
 - Revenues
 - License versus service
 - Revenue growth
 - Delivery footprint



Forrester Integration-Centric Business Process Management Suites 2008

- Current Offering
 - Integration
 - Business-to-business (B2B)
 - Business process management (BPM)
 - Service-oriented architecture (SOA)
- Strategy
 - Product strategy
 - Solution cost
 - Strategic alliances
 - Customer references
- Market Presence
 - Installed base
 - New customers
 - Delivery footprint



Free BPM Software

- Review of limited range of BPM software to demonstrate facilities available
 - ARIS Express
 - BonitaSoft
 - BizAgi
 - Intalio
 - ProcessMaker

ARIS Express

- Available from <http://www.ariscommunity.com/aris-express>
- Free software developed by IDS Scheer to promote interest in and sales of their full ARIS software
- Registration required
- Software run directly from the Web site – cannot be installed locally
- Really just a diagramming tool



ARIS Express

- Can generate a number of chart types:
 - Organisation
 - Process landscape – overview
 - Business process – EPC format
 - Data model – ERD
 - IT infrastructure
 - System landscape
 - BPMN process
 - Whiteboard
 - General diagram

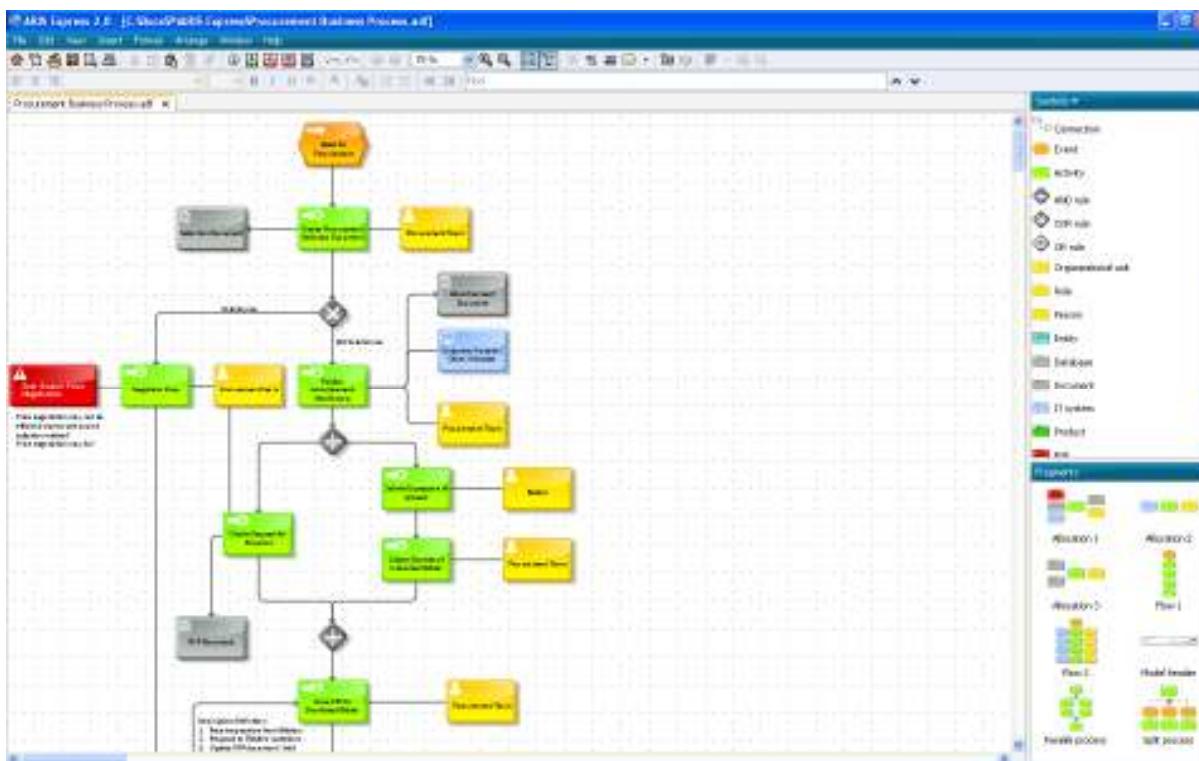
ARIS Express

- Main screen
- Select a model type
- Open an existing model



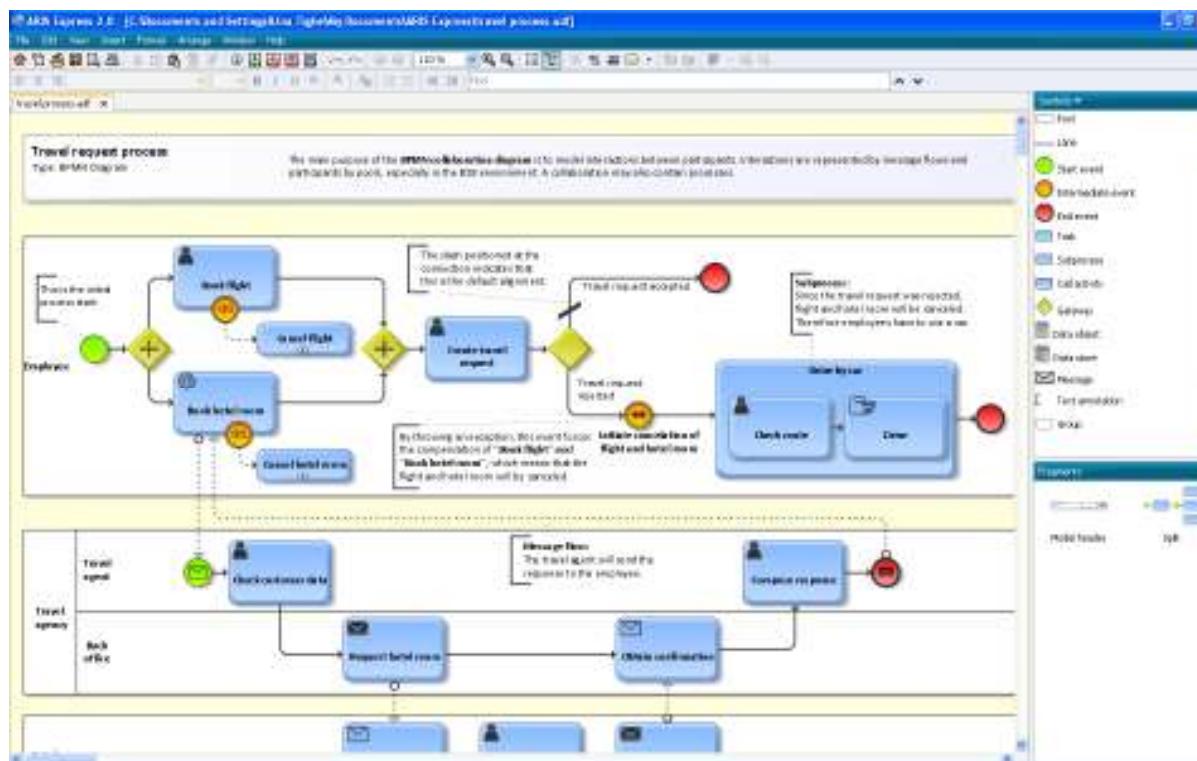
ARIS Express

- Sample process – EPC format



ARIS Express

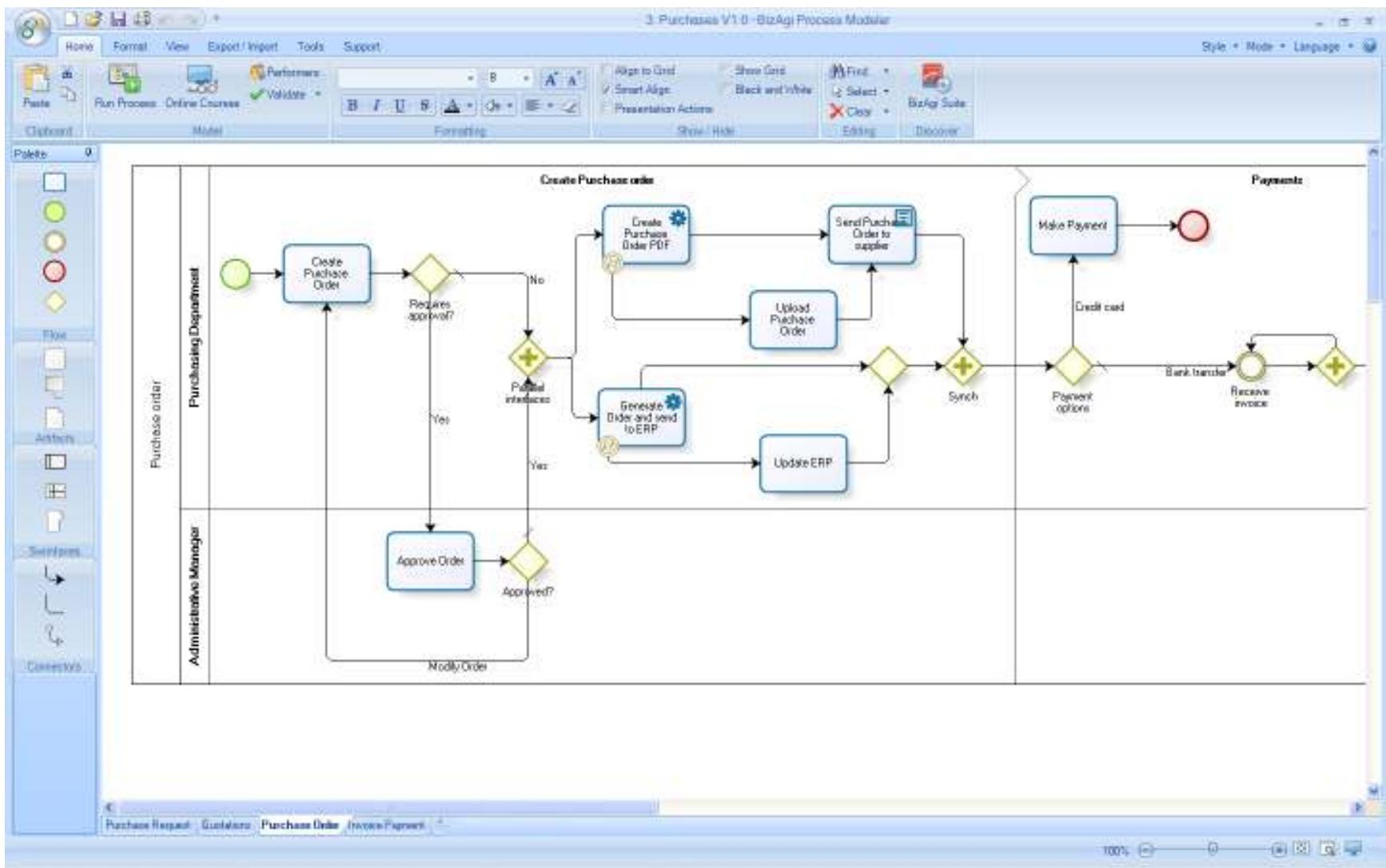
- Sample process – BPMN



BizAgi

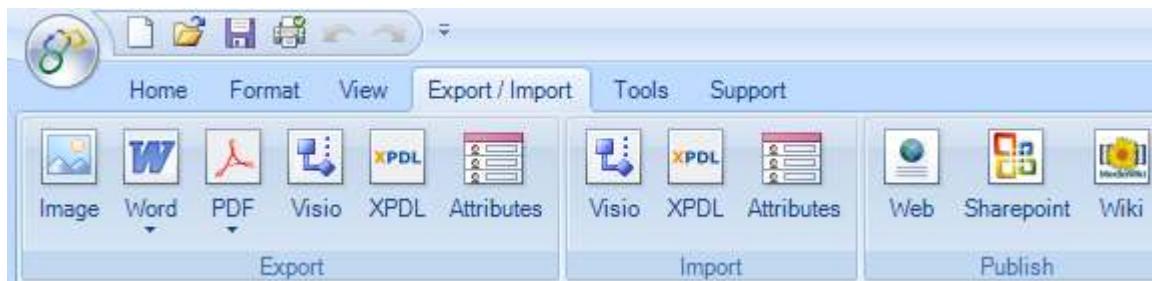
- Free fully-functional BPMN compliant process modeller and simulation suite
- Three editions
 - Xpress - .NET/SQL – Free edition
 - Standard - .NET/SQL or Oracle
 - Enterprise – J2EE/SQL or Oracle
- Very sophisticated and easy to use
- Model documentation can be published to SharePoint or exported to Word or Visio or XPDL (XML)
- Can import from Visio or XPDL (XML)
- Good product to start your BPM activities

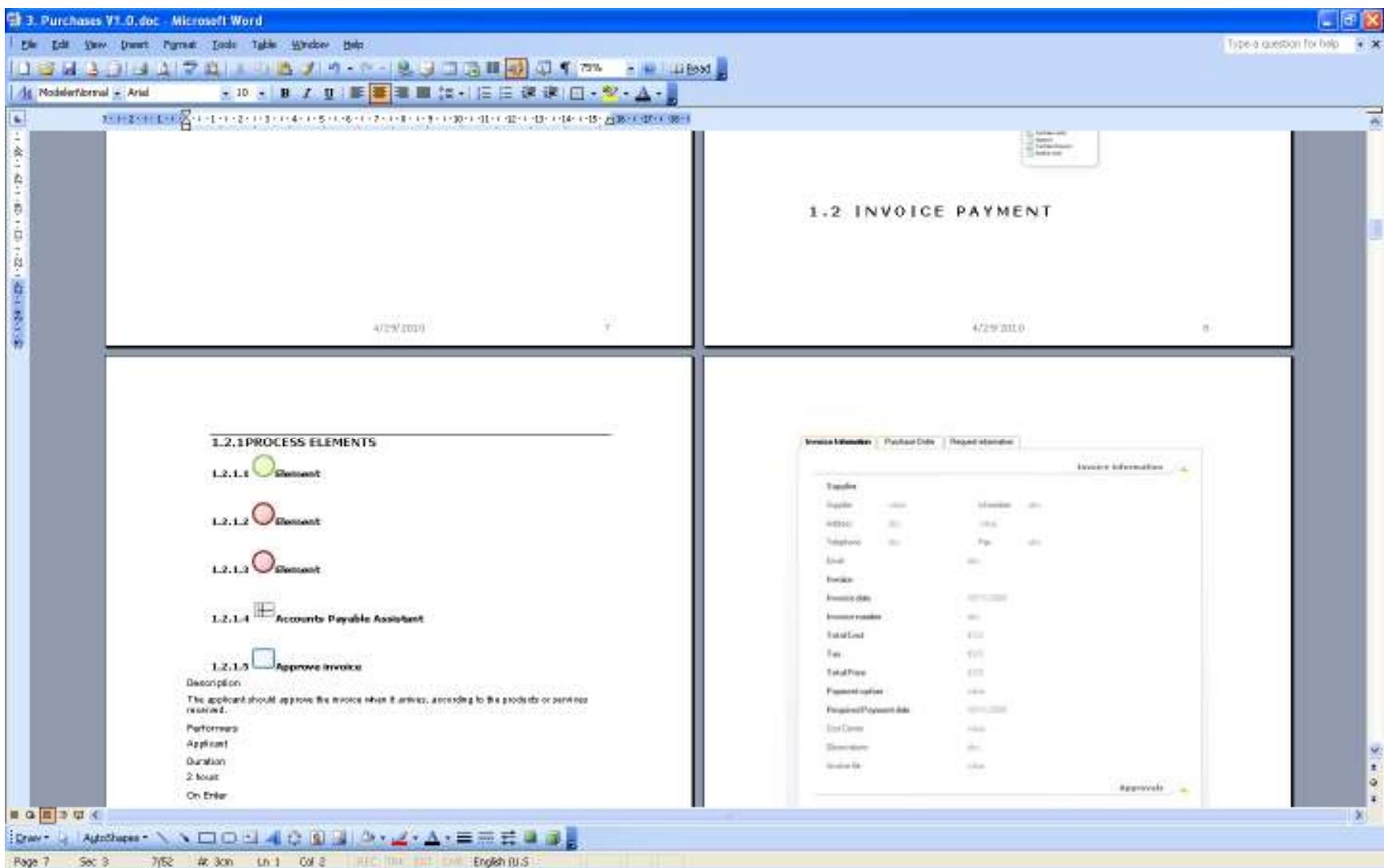
BizAgi



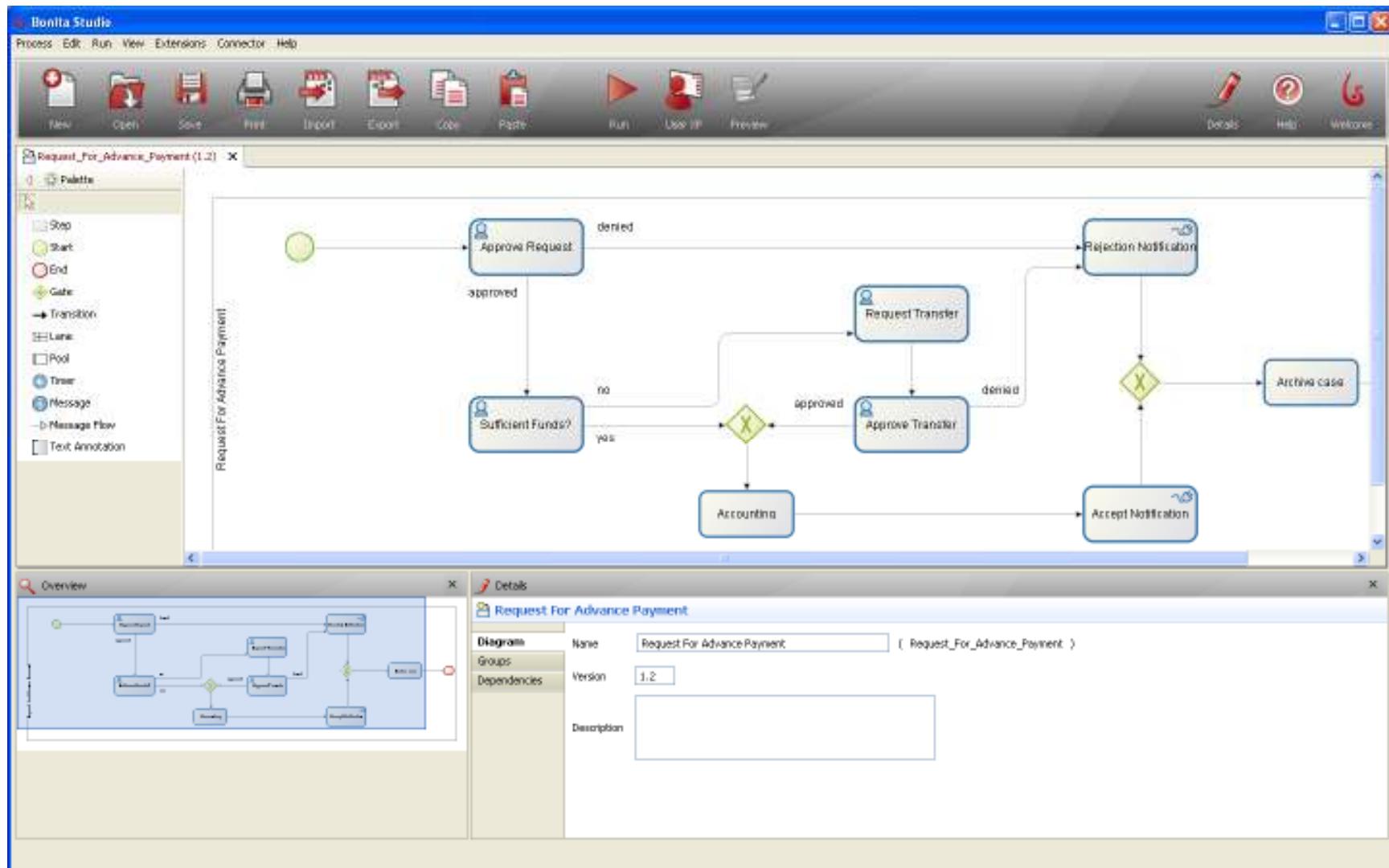
BizAgi

- Export functionality





BonitaSoft



Summary

- Free tools are a good place to start with BPM
- You need to move yourself up the maturity level hierarchy
- You will not achieve this in one go
- Start with simple objectives such as formally documenting processes, storing the information in a shared repository and publishing the information to a commonly accessible facility (such as SharePoint)
- Look to perform process simulation as an aid to process design and optimisation
- Then look at full BPMS implementation and process automation

More Information

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