

Business Process Engineering Week # 3

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Week 3 Agenda

- Business Process Management Lifecycle
 - Process Identification in depth
 - Process Architecture

Types of BPM Systems

Human-Centric BPM

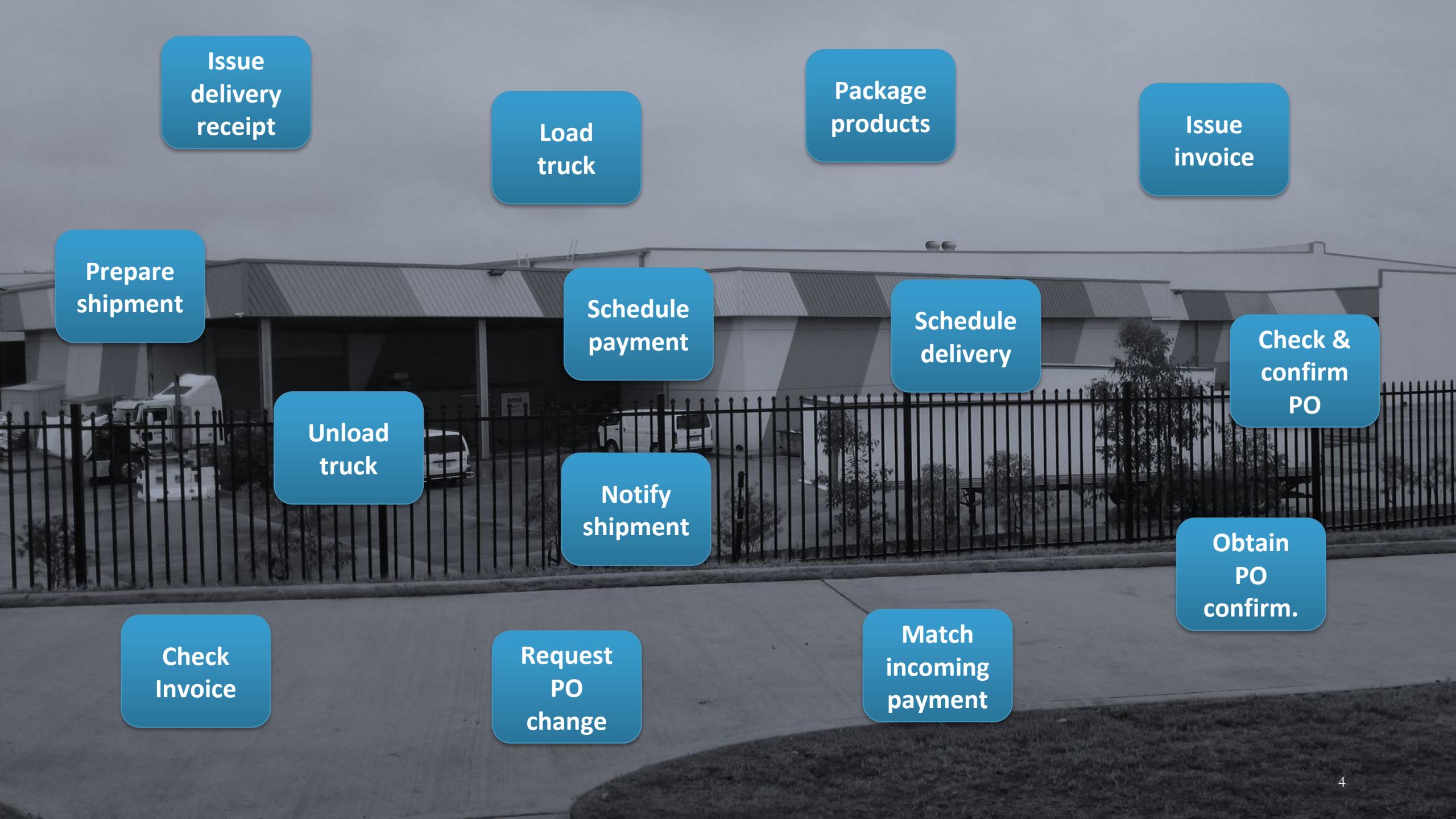
- Primarily executed by humans; have a lot of approvals and tasks performed by individuals

Document-Centric BPM

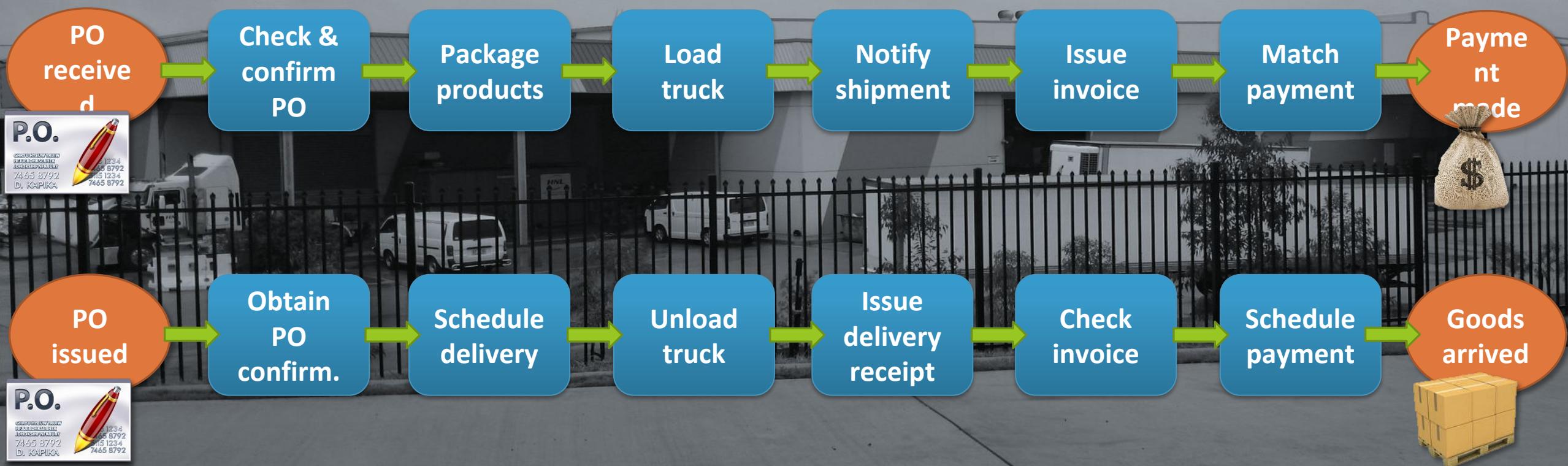
- When a document e.g., a contract or agreement is at the heart of the process. Enable routing, formatting, verifying, and getting the document signed as the tasks pass along the workflow

Integration-Centric BPM

- Handles processes that primarily jump between existing systems e.g., HRMS, CRM, ERP without much human involvement. BPM & SOA









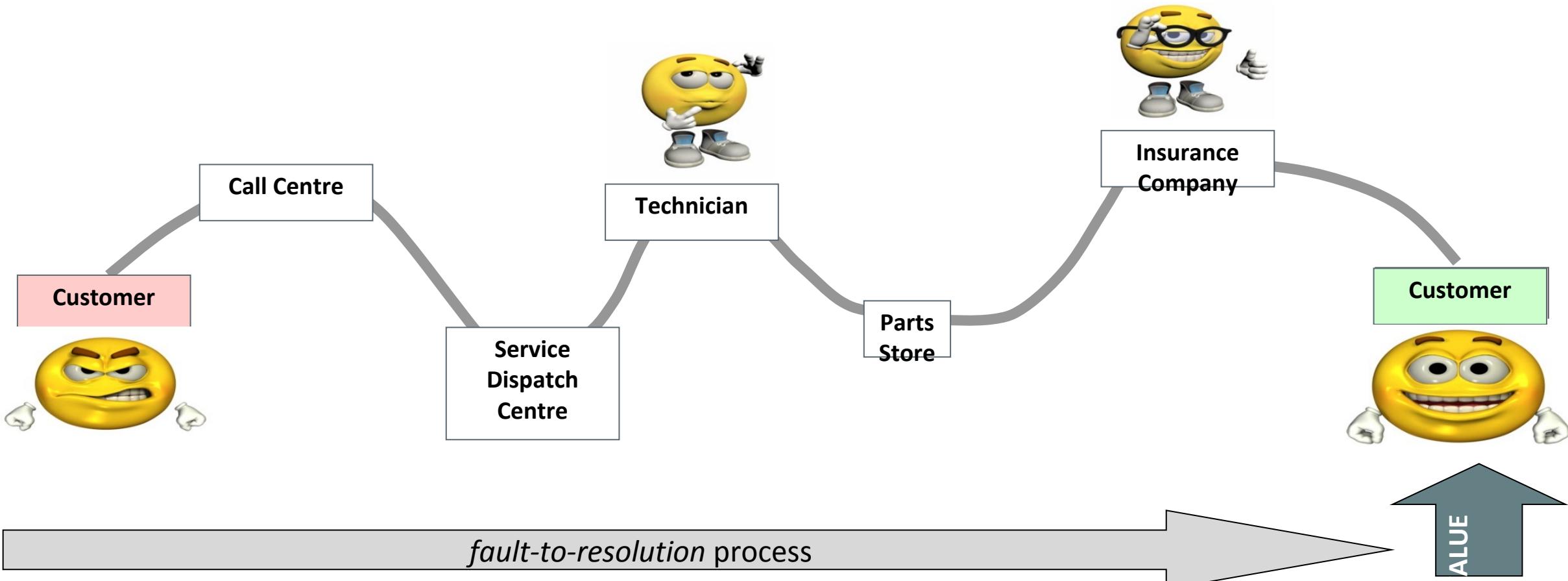
“My washing machine doesn’t work...”

Negative outcomes (value-adding)

- Fault not repaired in a timely manner
- Fault repaired but customer is dissatisfied

Positive outcomes (value-adding):

- Fault repaired immediately with minor intervention
- Fault repaired, covered by warranty



Improving process performance



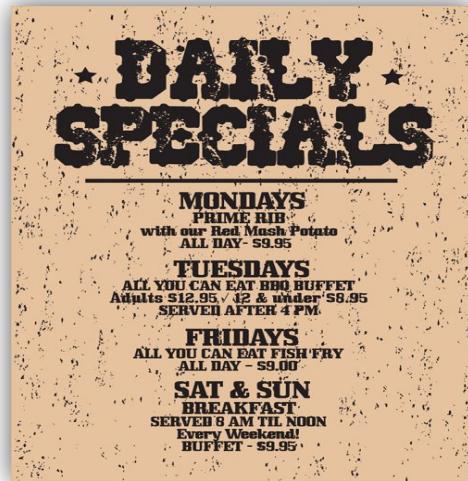
How would you improve this process?



Outsource to Customer



Standardize



Eliminate Cooking



Automate



Invest and Build



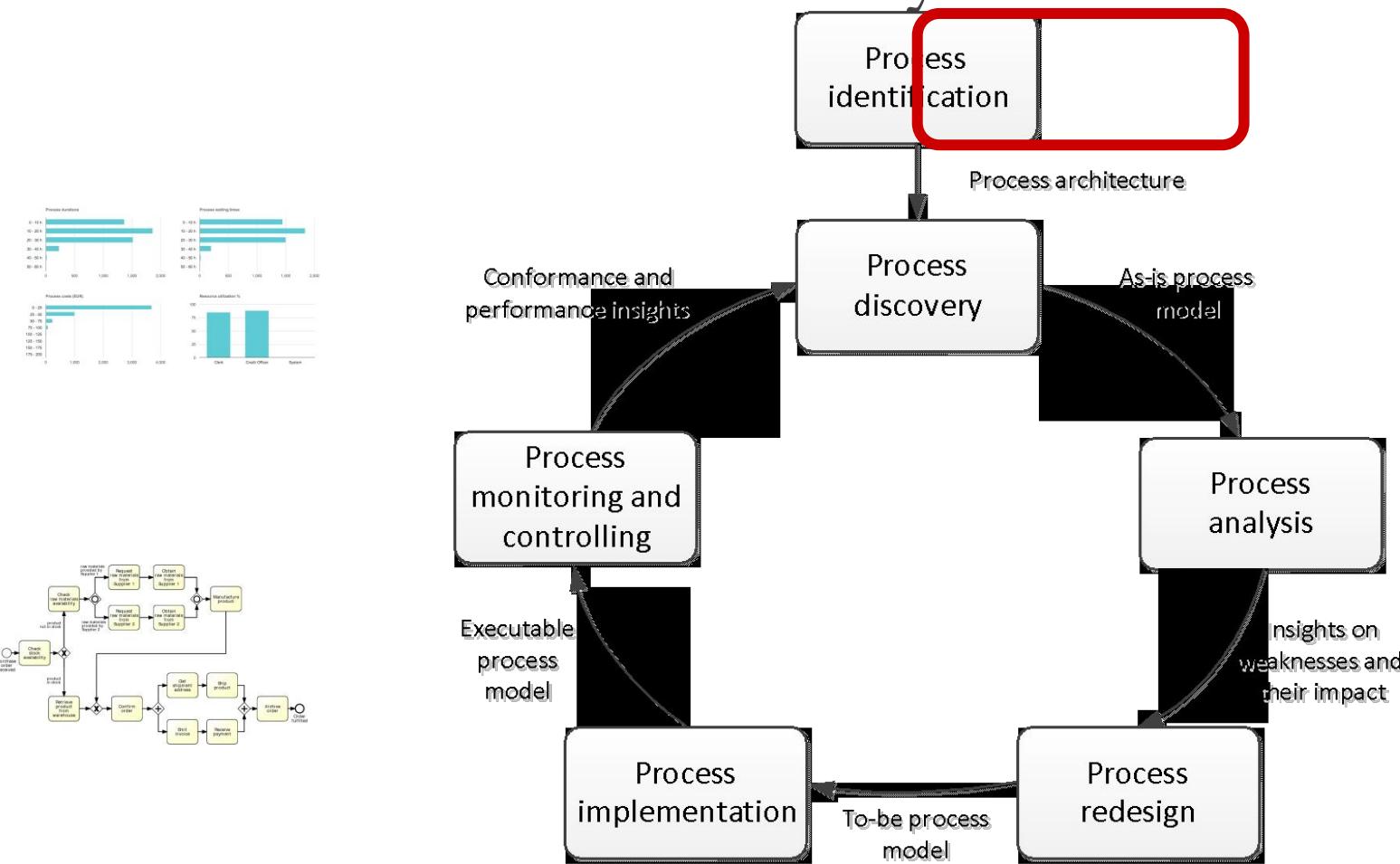
Re-sequence



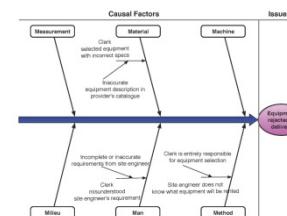
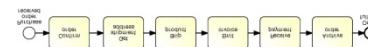
Eliminate Waiters



The BPM lifecycle



		case type			
		Sea	Road	Rail	Inland
business function					
pre-arrival	notify ETA				
	notify authorities				
	reserve tow-boat				
arrival					
trans-shipment	stacking/handling				
	payment				
departure	infrastructure info				
	notify ETD				



Process identification steps

1. Designation step

- Enumerate main processes
- Determine process scope

Process Architecture

2. Prioritization step (aka Process selection)

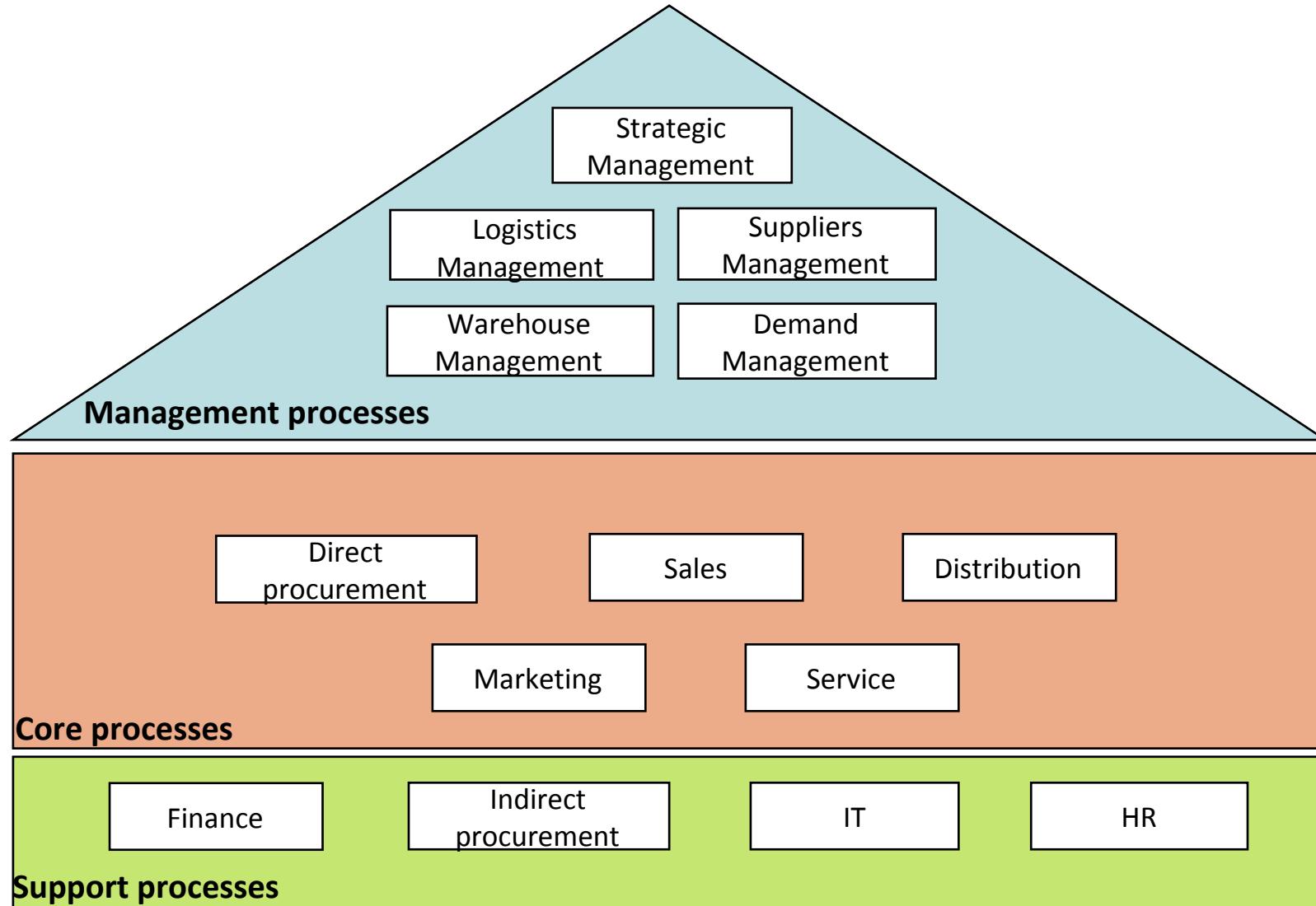
Prioritize processes based on:

- Importance
- Health
- Feasibility

Prioritized
Process
Portfolio

Example: process architecture

Wholesaler



Prioritization (aka Process Selection)

1. Importance

Which processes have greatest impact on the organization's strategic objectives?

2. Health (or Dysfunction)

Which processes are in deepest trouble?

3. Feasibility

Which processes are most susceptible to successful process management?



Prioritized process portfolio

Process Identification

In this phase:

- A business problem is posed
- Processes relevant to the problem are:
 - Identified,
 - Delimited, and
 - Related to each other

Outcome of process identification is a new or updated process architecture that provides an overall view of the processes in an organization and their relationships

Process Identification

Process identification is a set of activities aiming to systematically define the set of business processes of a company and establish clear criteria for prioritizing them.

The output of process identification is a (as-is)process architecture, which represents the business processes and their interrelations. A process architecture serves as a framework for defining the priorities and the scope of process modeling and redesign projects.

Process Identification

- ❑ Resources to model all the processes?
- ❑ Some processes need to receive priority because they are of strategic importance to an organization's survival. ?
- ❑ Other processes might show striking problems, which should be resolved for the sake of all involved stakeholders.

Which ones to solve?

organization should focus on processes found in areas where there is either **great value created or significant trouble present (or both)**.

Process Identification

Two phases of Process Identification:

□ Designation

□ The objective of the designation phase is to gain an understanding of the processes an organization is involved in as well as their interrelationships

□ Evaluation

□ The evaluation phase, based on the understanding that is established in the previous phase, intends to develop a prioritization among these for process management activities (modeling, redesign, automation, monitoring, etc.).

Process Designation

If an organization is at the very start of turning into a process-centered organization, the first difficult task it faces is to come up with a **meaningful enumeration of its existing processes**.

- ❑ Identify dependent & independent processes.
- ❑ Categorize Processes(Michael Porter's Value Chain model)
 - Core(production of goods and services - inbound logistics, operations, outbound logistics, marketing and sales, and services)
 - Support(enable the execution of these core processes-infrastructure, human resources, technology development, and procurement)
 - Management

Process Designation

Number of processes that are identified in the designation phase must represent a **trade-off between impact and manageability**.

smaller the number of the processes one wishes to identify, the bigger their individual scope is.

If only a small number of processes is identified then each of these will cover numerous operations.

The main advantage of a large process scope is that it potentially increases the **impact** one can have with actively managing such a process.

Process Designation

Large scope of a business process brings along a range of issues that make it more difficult to manage it as a process:

- ❑ The involvement of a large number of staff will make effective communication among them problematic
- ❑ It will become more difficult to keep models of a large process up-to-date
- ❑ Improvement projects that are related to a large process are more complex

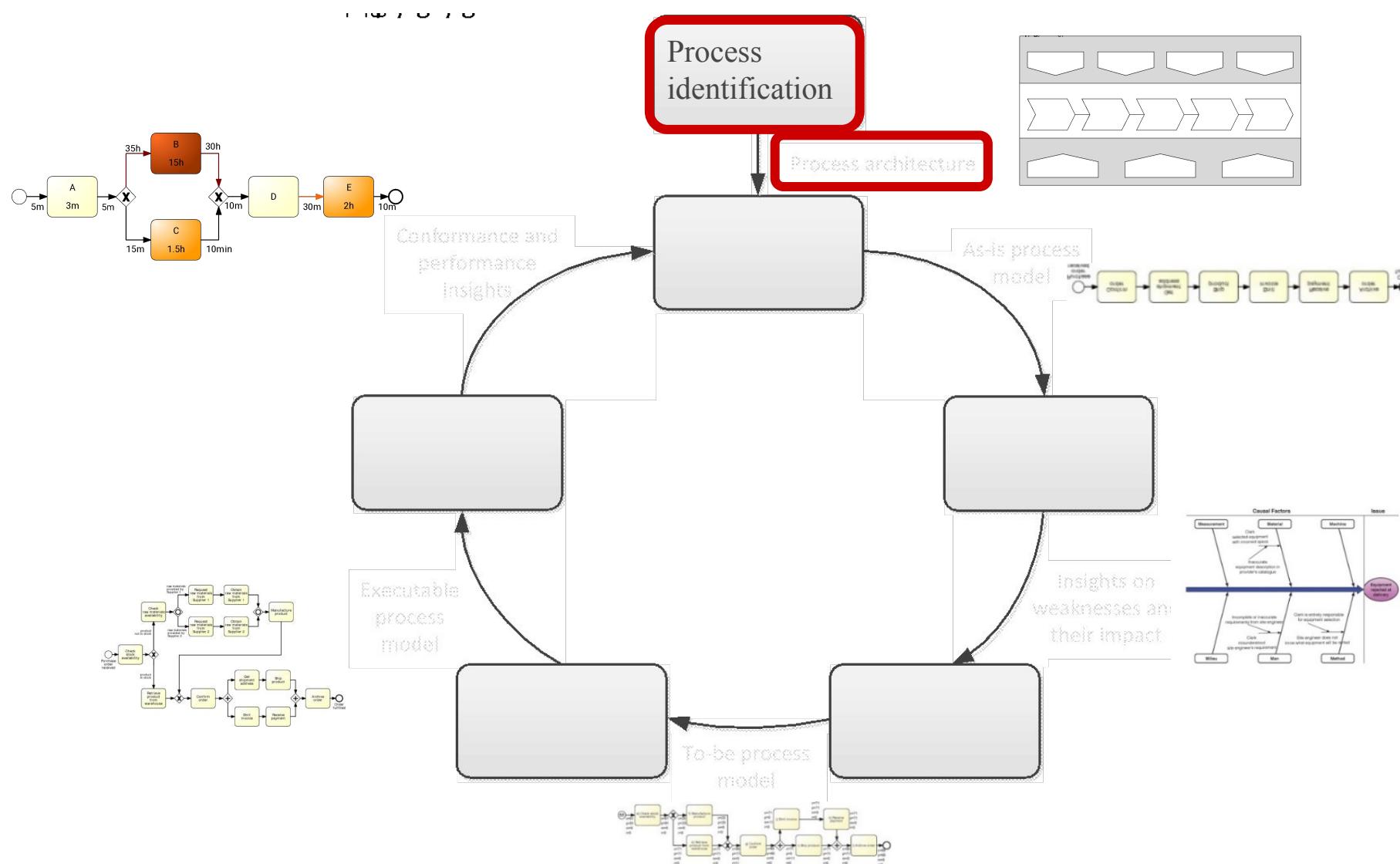
Process Designation

To balance the advantages and disadvantages of a large process scope, Davenport has suggested that it may be useful to **identify both broad and narrow processes.**

Broad processes are identified in those areas where an organization feels it is important to **completely overhaul the existing operations at some point**, for example because of fierce competitive forces. Imagine that an organization may have found that its procurement costs are overly high compared to its competitors. They select procurement as a broad process, which covers all of the services and products the company acquires from other parties.

By contrast, **narrow processes are not targeted for major overhauls**; they do need to be **actively monitored and are subjected to continuous fine-tuning and updating**. A narrow process may be, for example, how the same company deals with improvement suggestions of its own employees.

Process Identification in the BPM Lifecycle

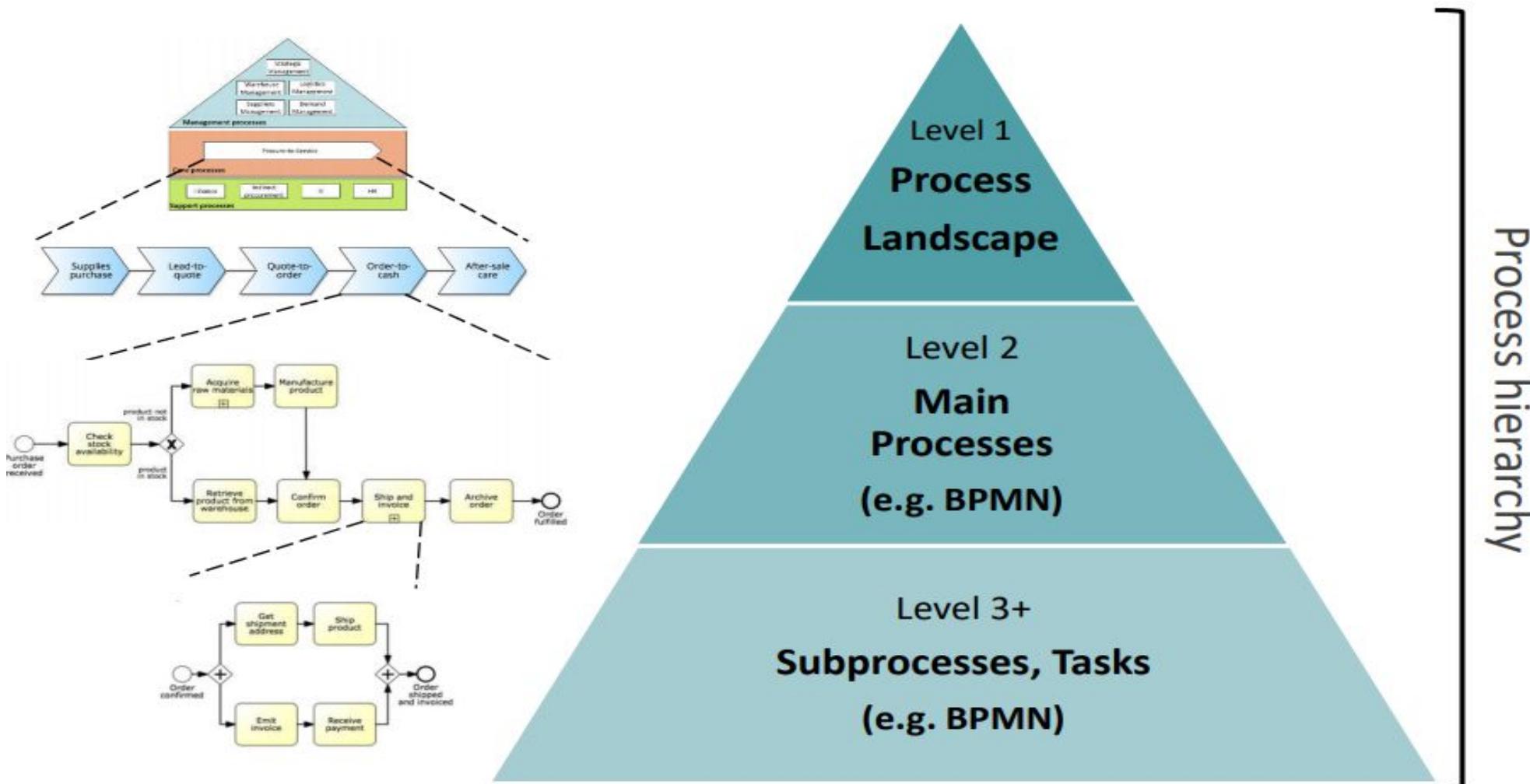


Process Architecture

A process architecture is an organized overview of the processes that exist within an organizational context, which is often accompanied with guidelines on how they should be organized. Design approaches for business process architectures use a certain logic to arrive at an identification of business processes.

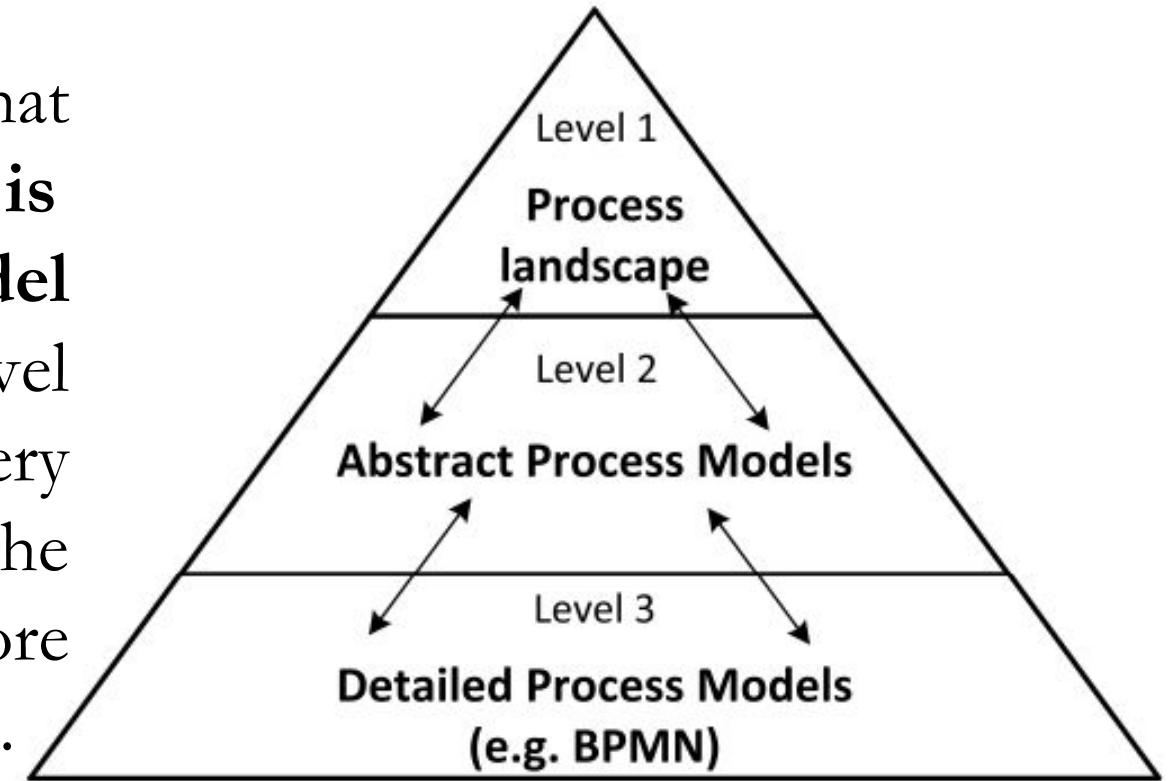
A process architecture is a conceptual model that shows the processes of a company and makes their relationships explicit.

Process Architecture: Hierarchical View



Defining a Process Architecture

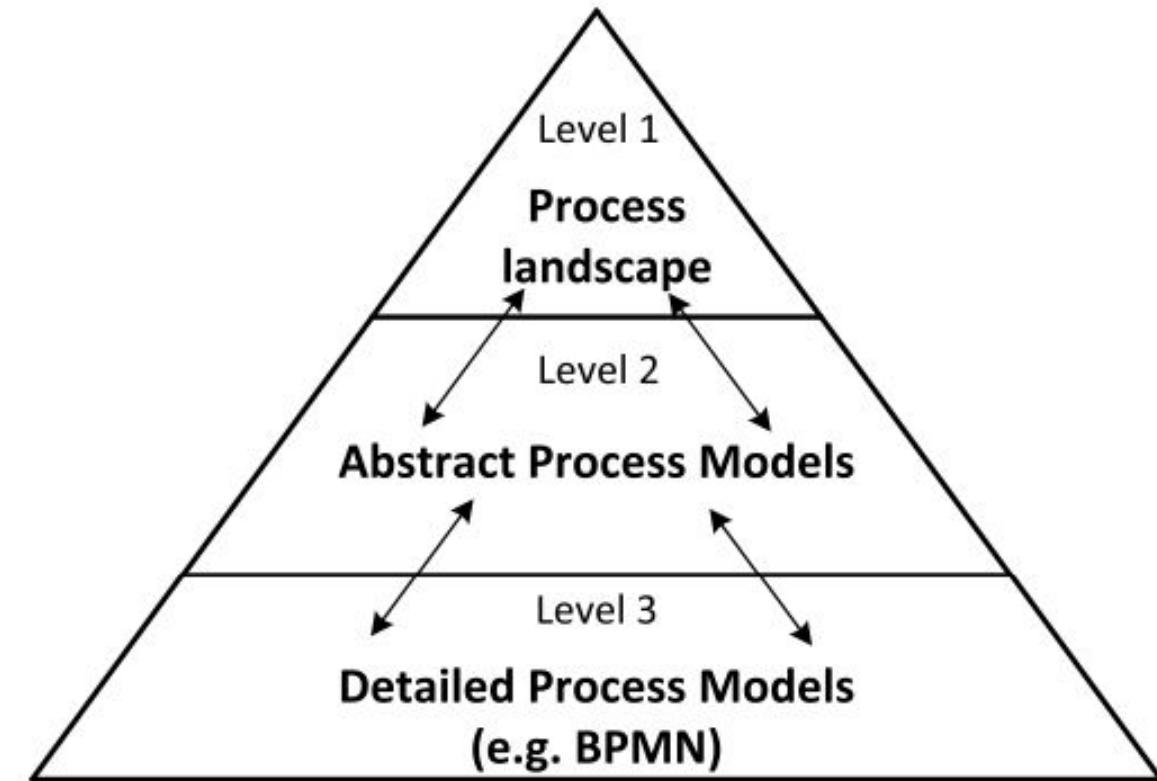
The part of the process architecture that covers the **processes on level one is known as the process landscape model** or simply the process architecture for level one. It shows the main processes on a very abstract level. Each of the elements of the process landscape model points to a more concrete business processes on level two.



Defining a Process Architecture

This **level two** shows the processes at a finer degree of granularity, but still in a quite **abstract way**. Each element on level two points further to a process model on level three.

The process models on this **third level** show the **detail of the processes** including control flow, data inputs and outputs, and assignment of participants.



Defining a Process Architecture

The most important challenge for the definition of a process architecture is the definition of the **process landscape model**, i.e. capturing the processes on level one.

The process architecture on level one has to be understandable in the first place, showing not much more than **approximately 20 business processes** of a company.

it has to be sufficiently complete such that all employees of the company can relate to it with their daily work, and accept it as a consensual description of the company.

Defining/Discovering a Process Architecture

Always start with the organizational strength in the light of mission & vision statements.

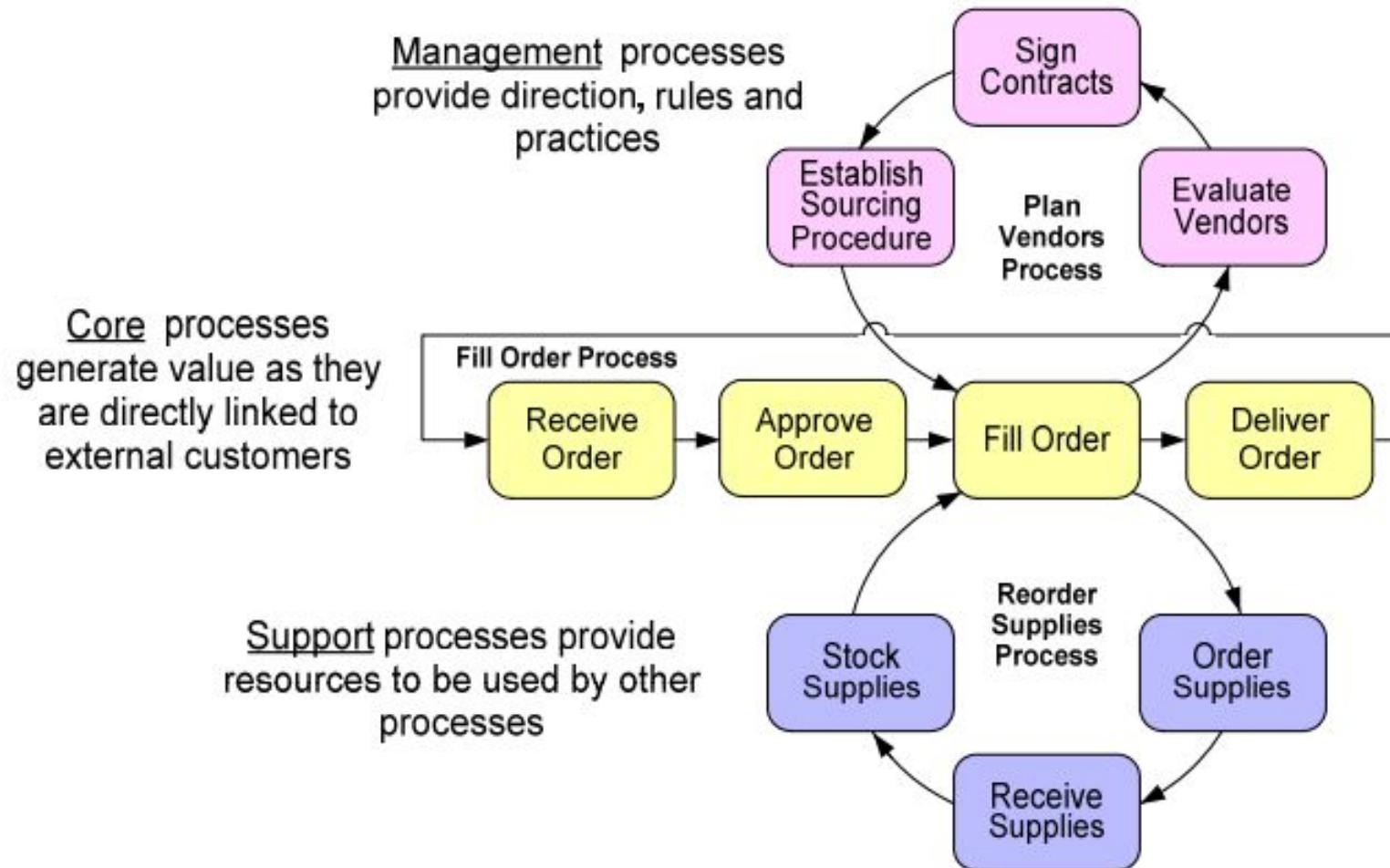
- What is the company's value proposition?
 - Pick highest level processes and form a process landscape
 - Decompose and refine to more levels for forming detailed process architecture

Repeat above mentioned process for core , management and support processes.

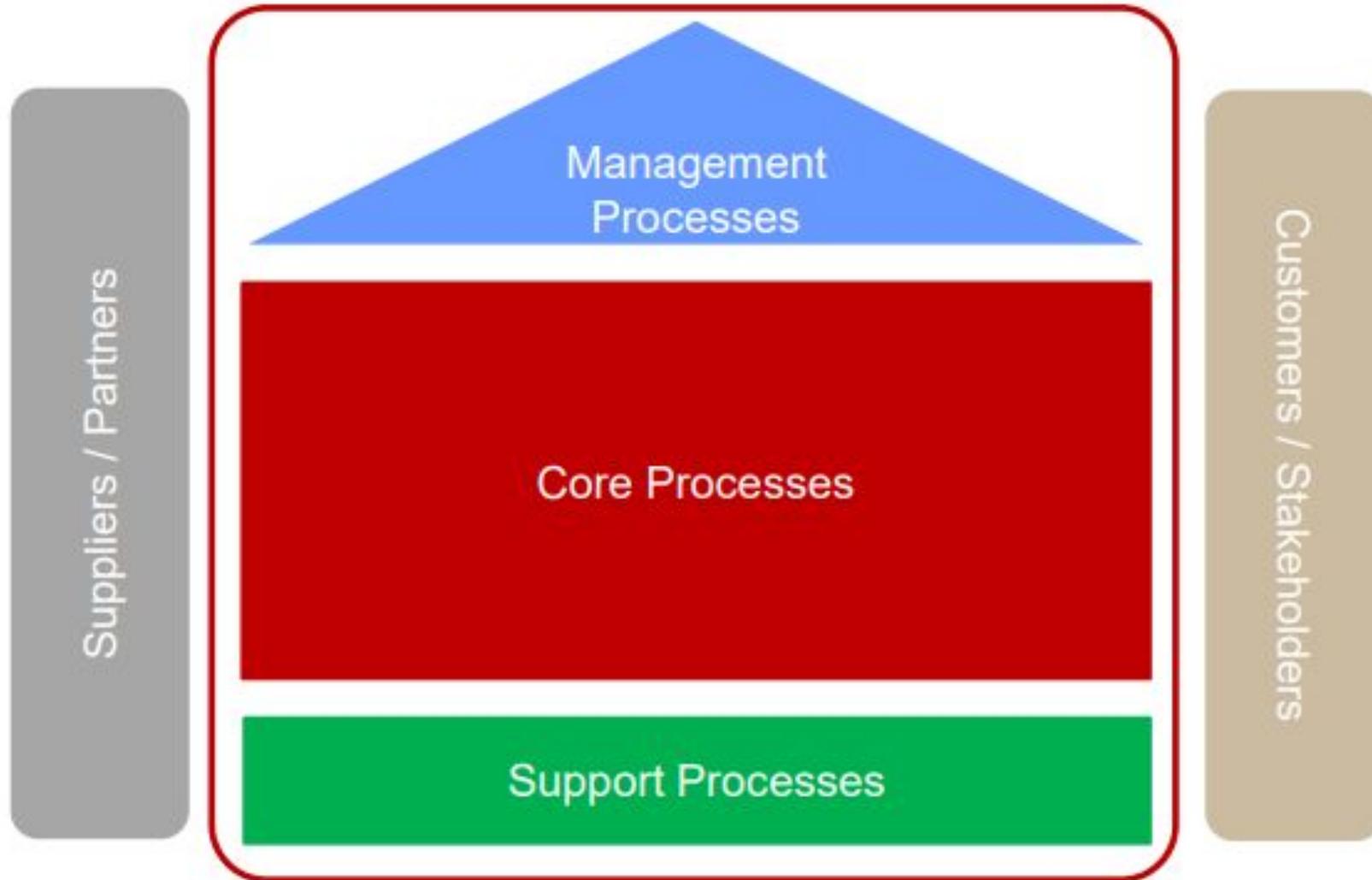
Core, support and management processes



Core, Support and Management Processes



Components of a Process Architecture



Class activity

Identify core , support and management processes for Wholesaler Business

Wholesaler – Example of Processes

Core Processes

- Sales (lead-to-quote, quote-to-order, order-to-cash)
- Direct Procurement (supplies, replenishment)

Support Processes

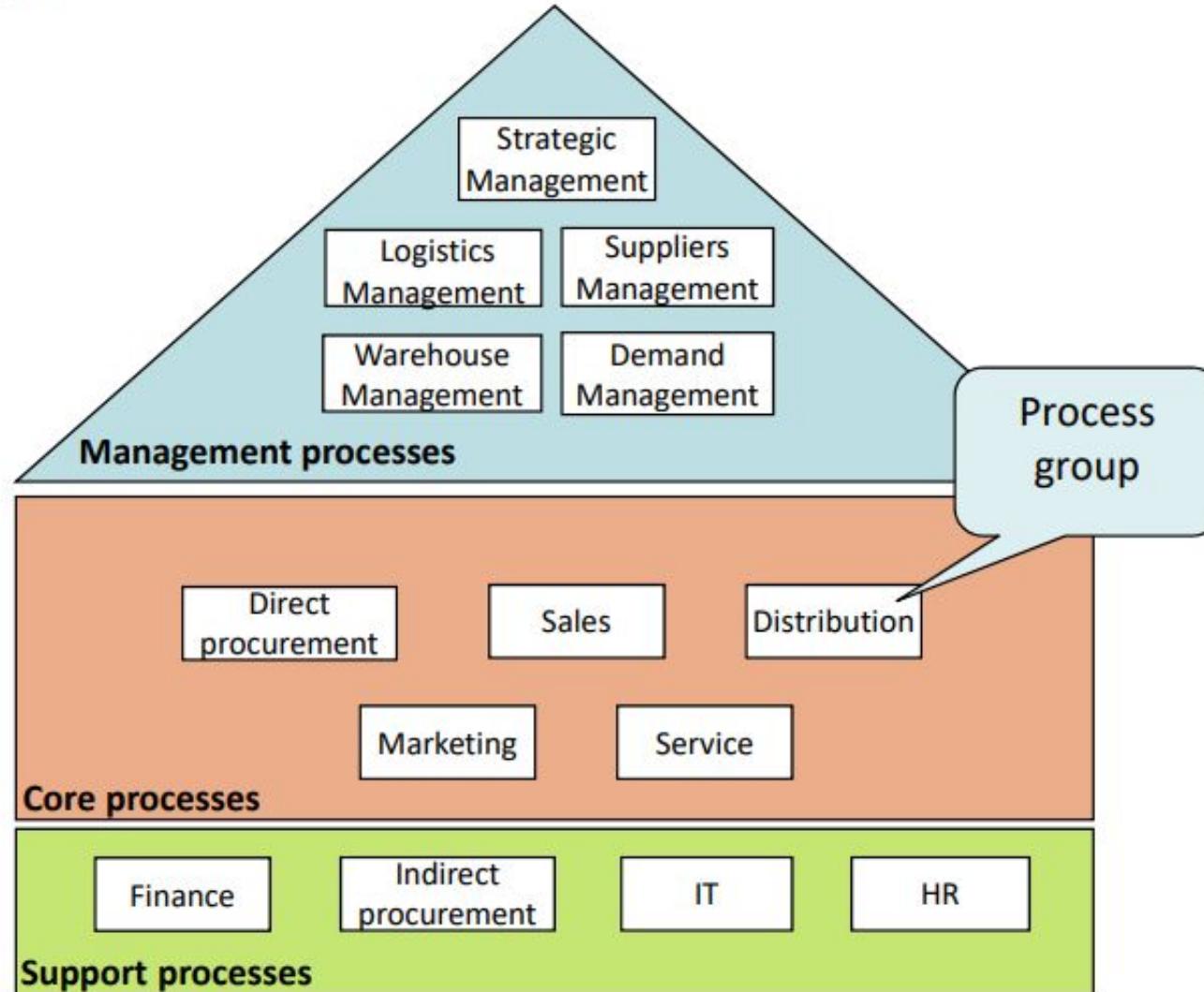
- Indirect Procurement (parts replenishment, operational resources replenishment, ...)
- HR (recruitment, induction, probation, ...)

Management Processes

- Suppliers management (suppliers planning, suppliers acquisition ...)
- Logistics management (logistics planning, logistics controlling ...)

Example: Process Architecture

Wholesaler



Process scoping

Processes are interdependent insights into interrelations required

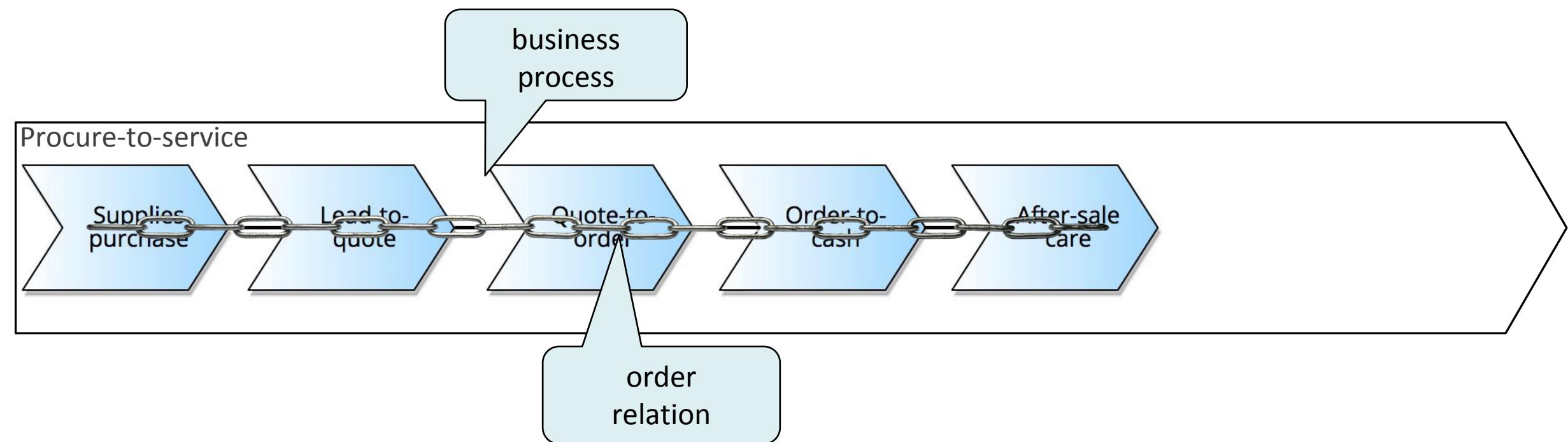
- Horizontal: upstream – downstream processes and their value chains
- Specialization: general – special product/service
- Vertical: main processes – sub-processes



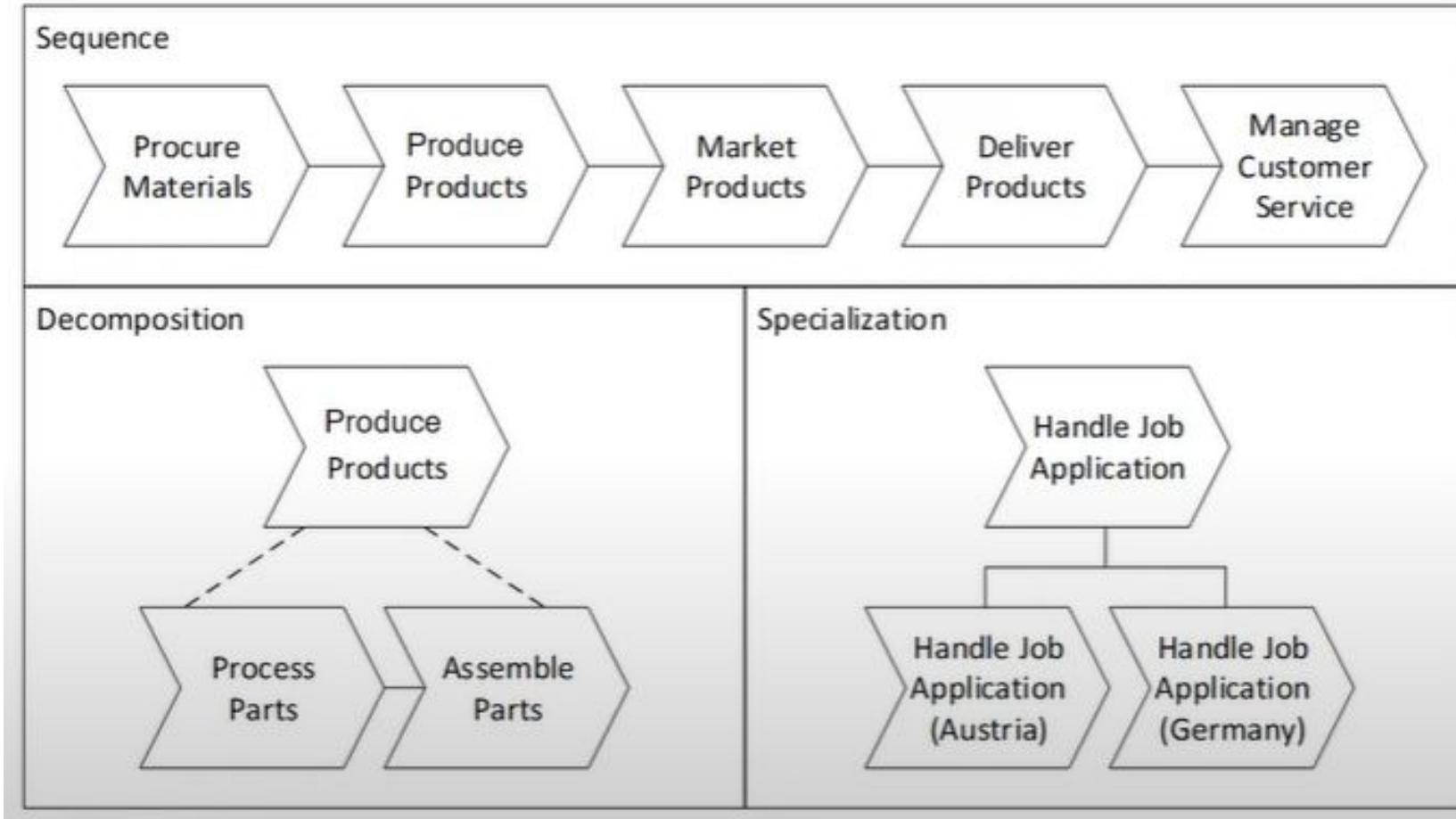
Process architecture

Value chain modeling

- Chain of *processes* an organization performs to deliver value to customers and stakeholders
- More generally, a mechanism to group high-level business processes according to an order relation (can be applied to core, support and management processes)



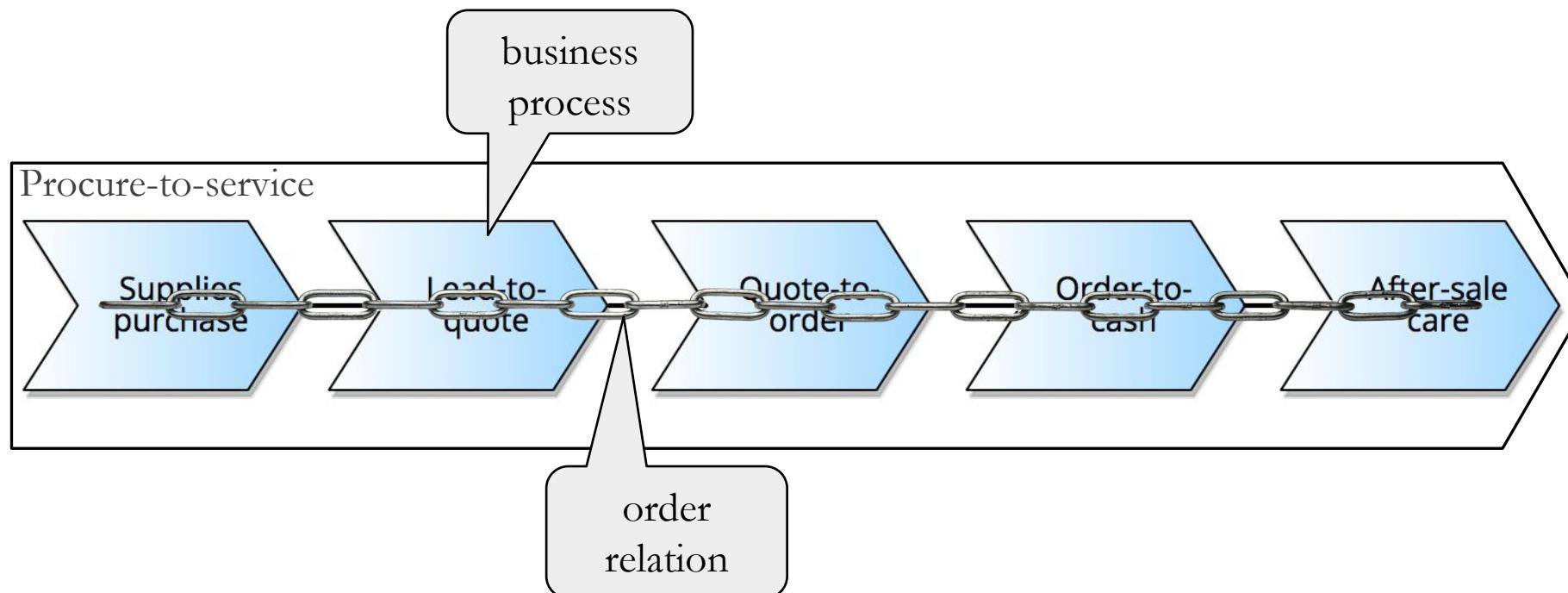
Relationships between Processes



Value chain modeling

Chain of *processes* an organization performs to deliver value to customers and stakeholders

More generally, a mechanism to group high-level business processes according to an order relation (can be applied to core, support and management processes)



Guidelines to identify horizontal boundaries in value chains

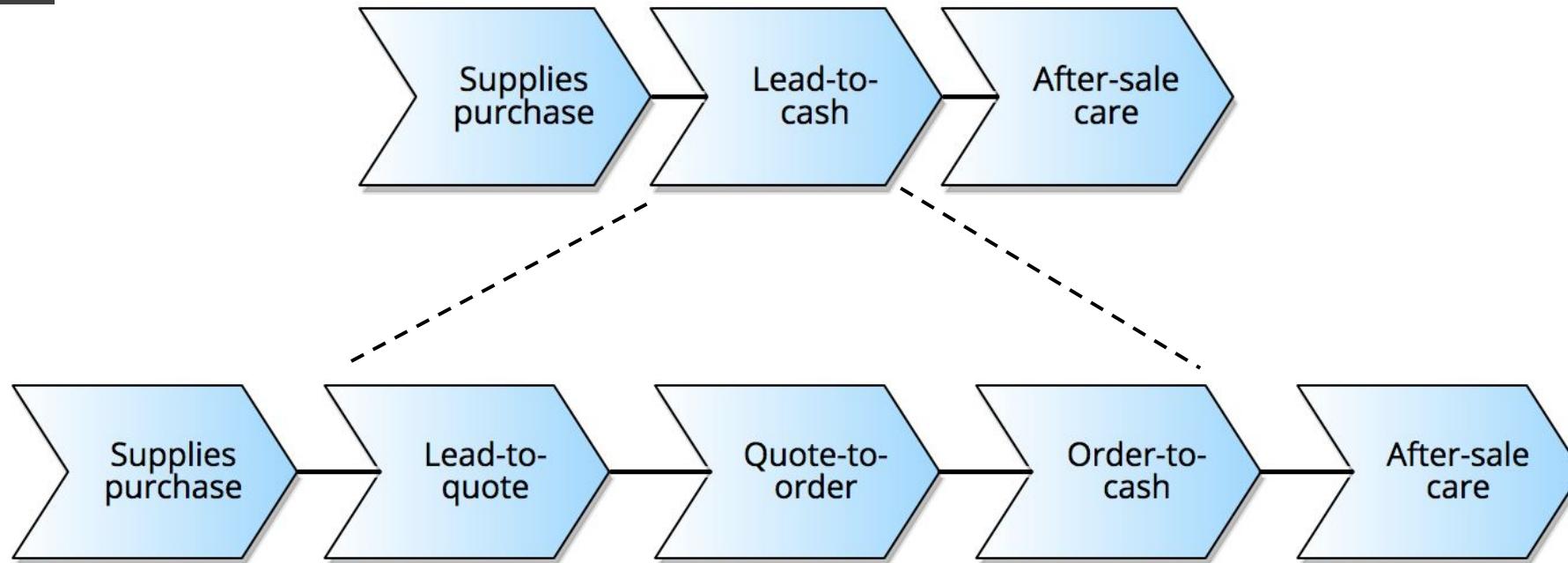
1. Change of key business object in the process
2. Change of granularity of main business object
3. Change in frequency/time
4. Change in intermediate outcome/resolution/objective



Example: value chain

Wholesaler

Core processes



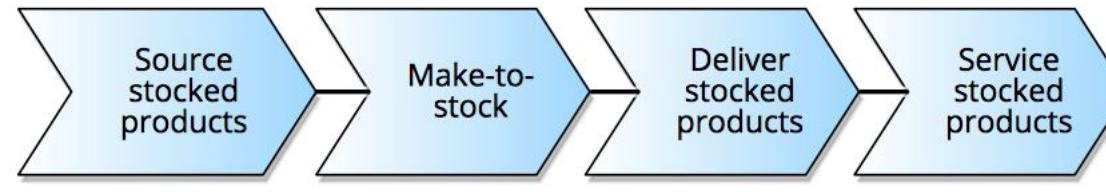
Typical value chains for core processes

Think around three main steps:

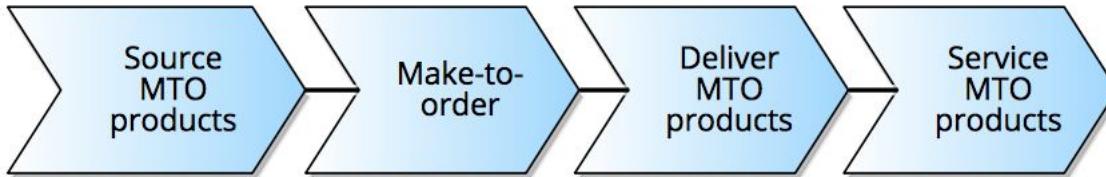
- Imagine it (design new product/service)
- Build it (source, assemble, deliver product/service)
- Sell it (market, sell, service product/service)

Example: Producer

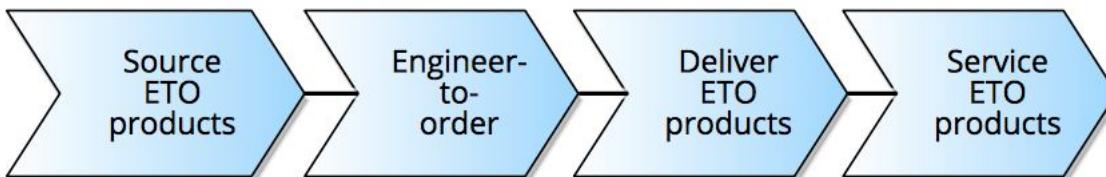
Stocked
products:



MTO
products:



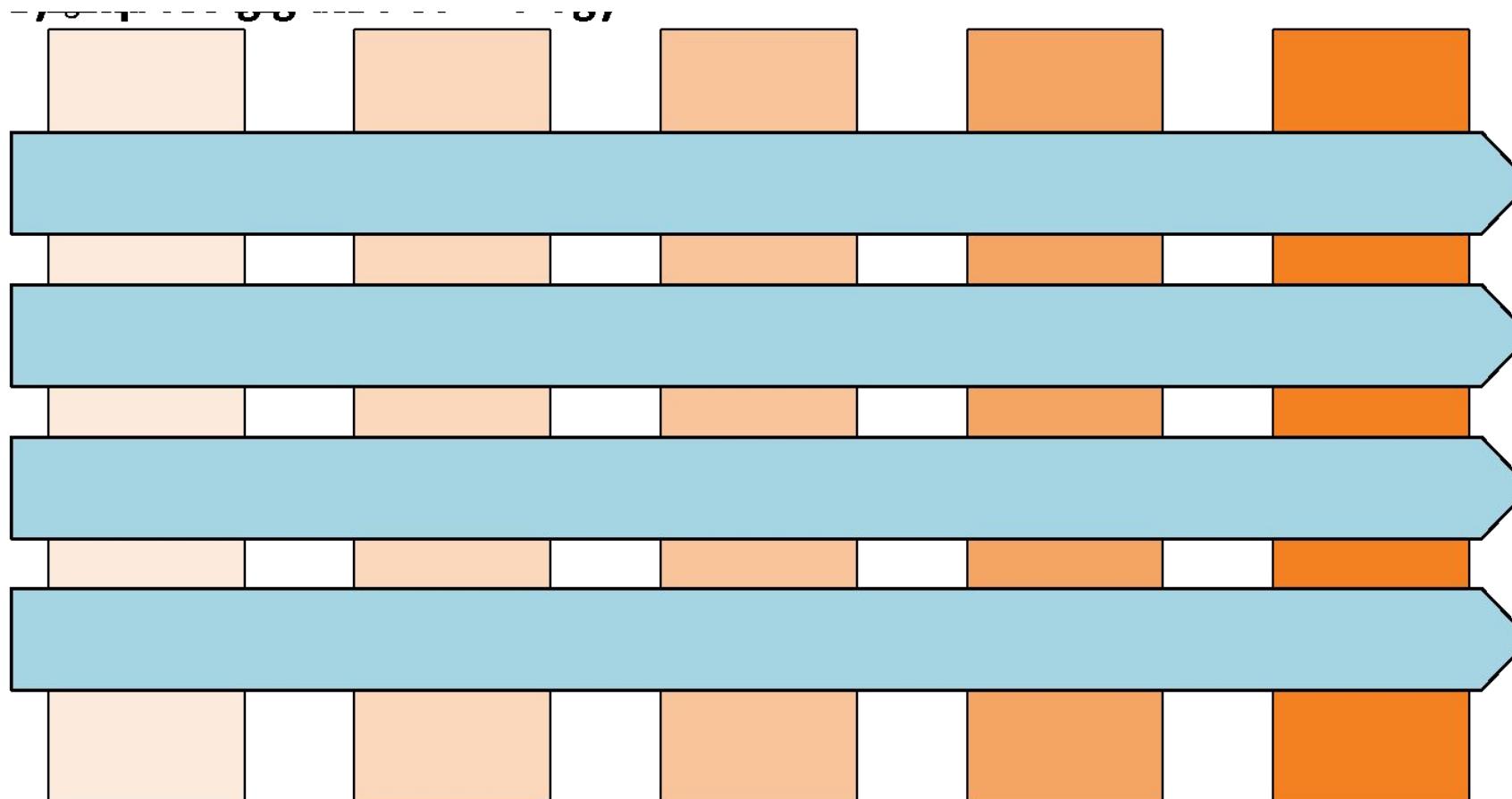
ETO
products:



Specializations

Example: value chains for service provider

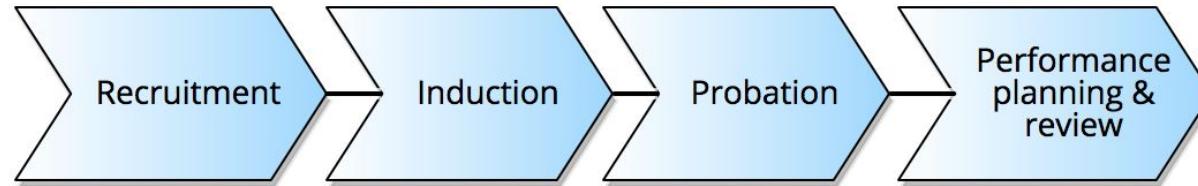
IT service provider



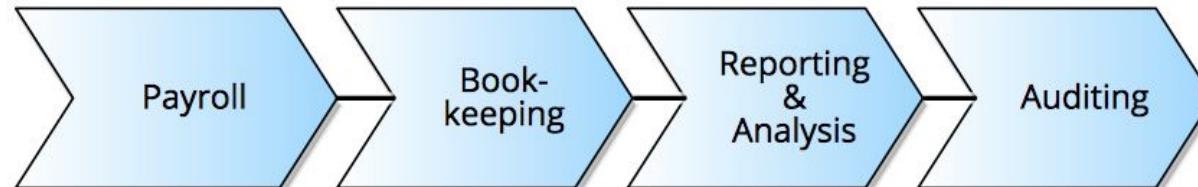
Example: value chain of non-core processes

Support processes

HR:

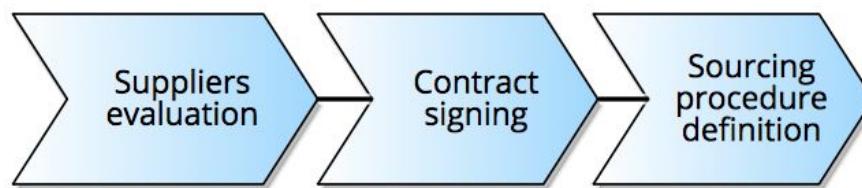


Accounting:



Management processes

Suppliers management:

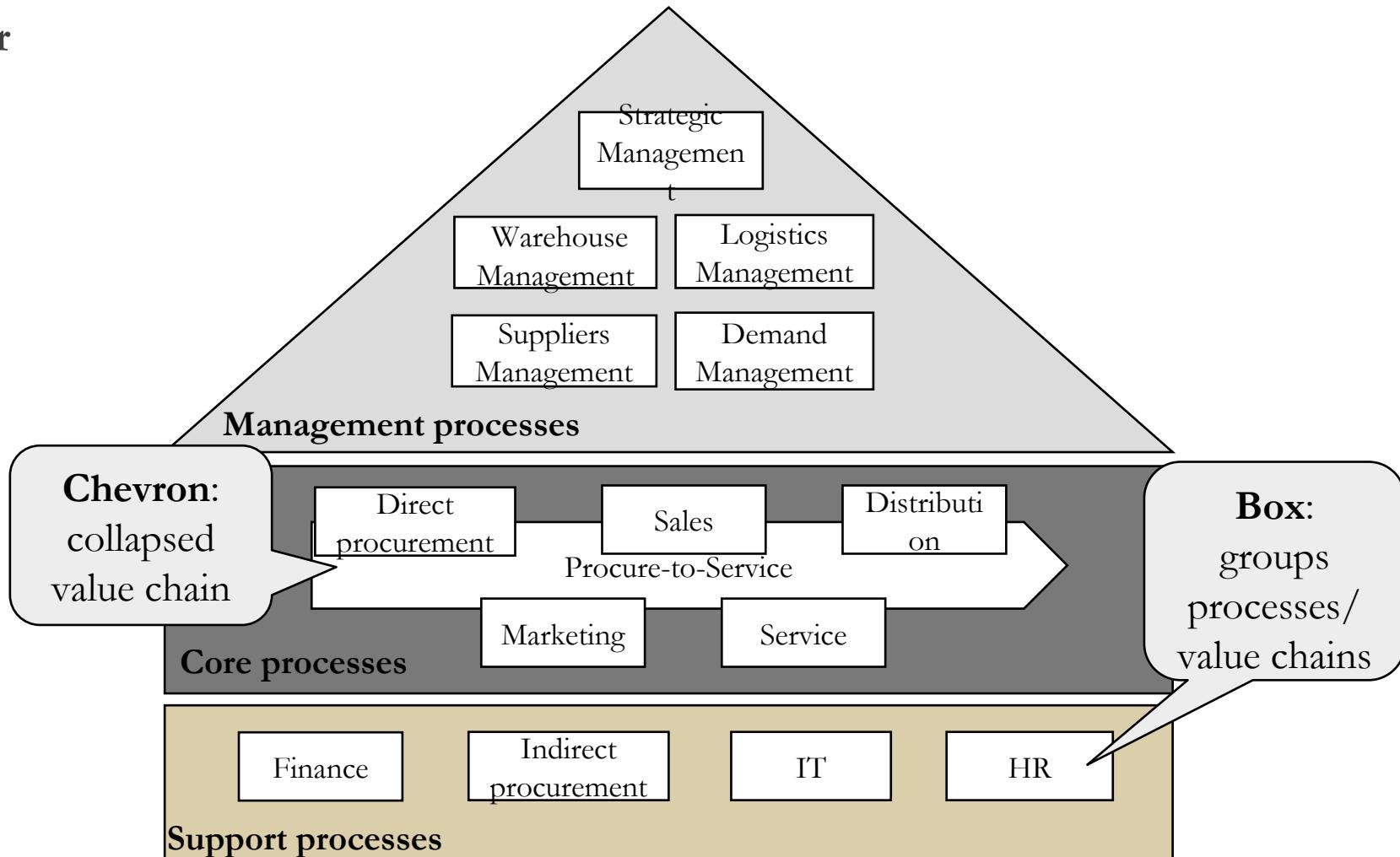


Risk management:



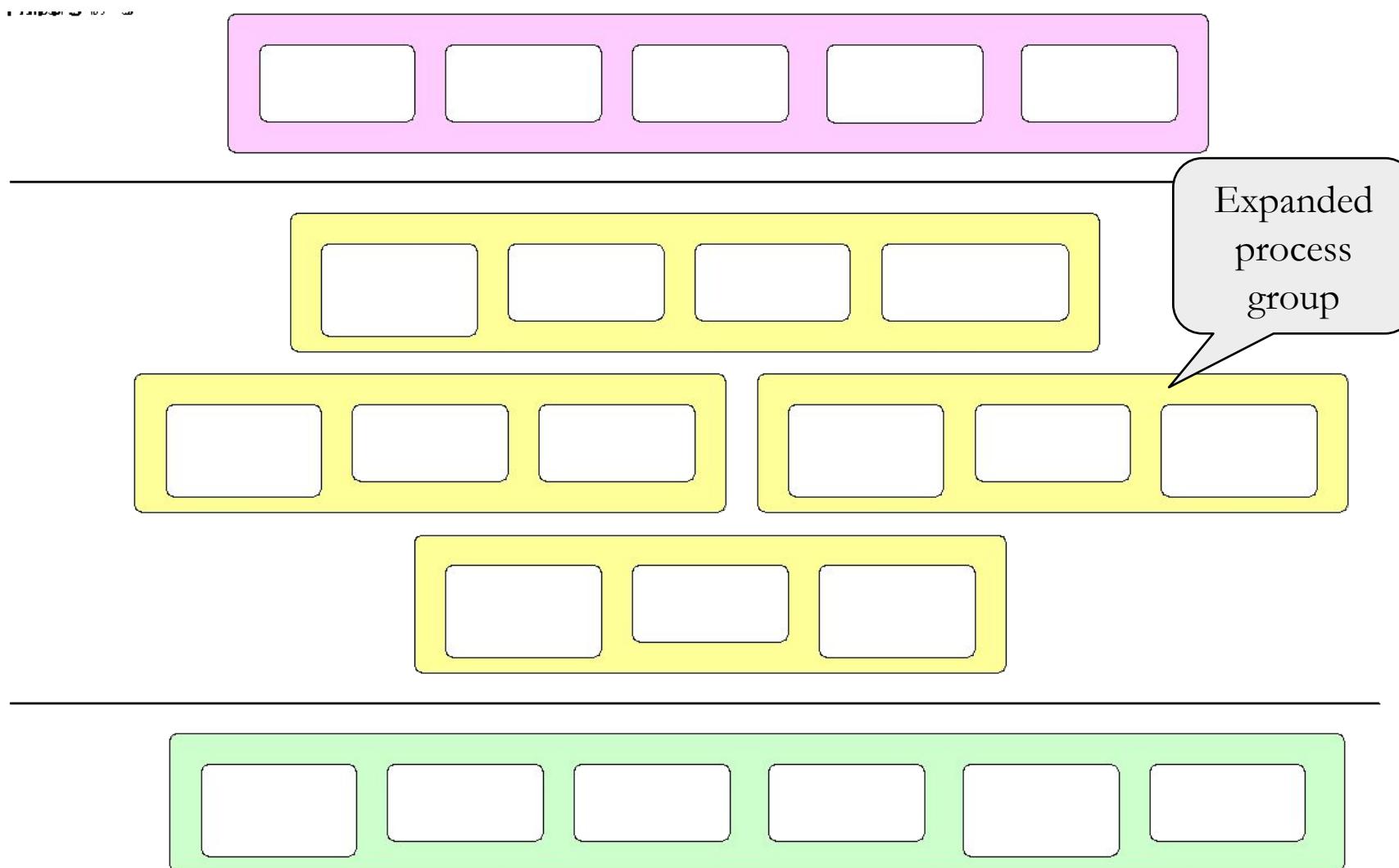
Example: process architecture & value chains

Wholesaler

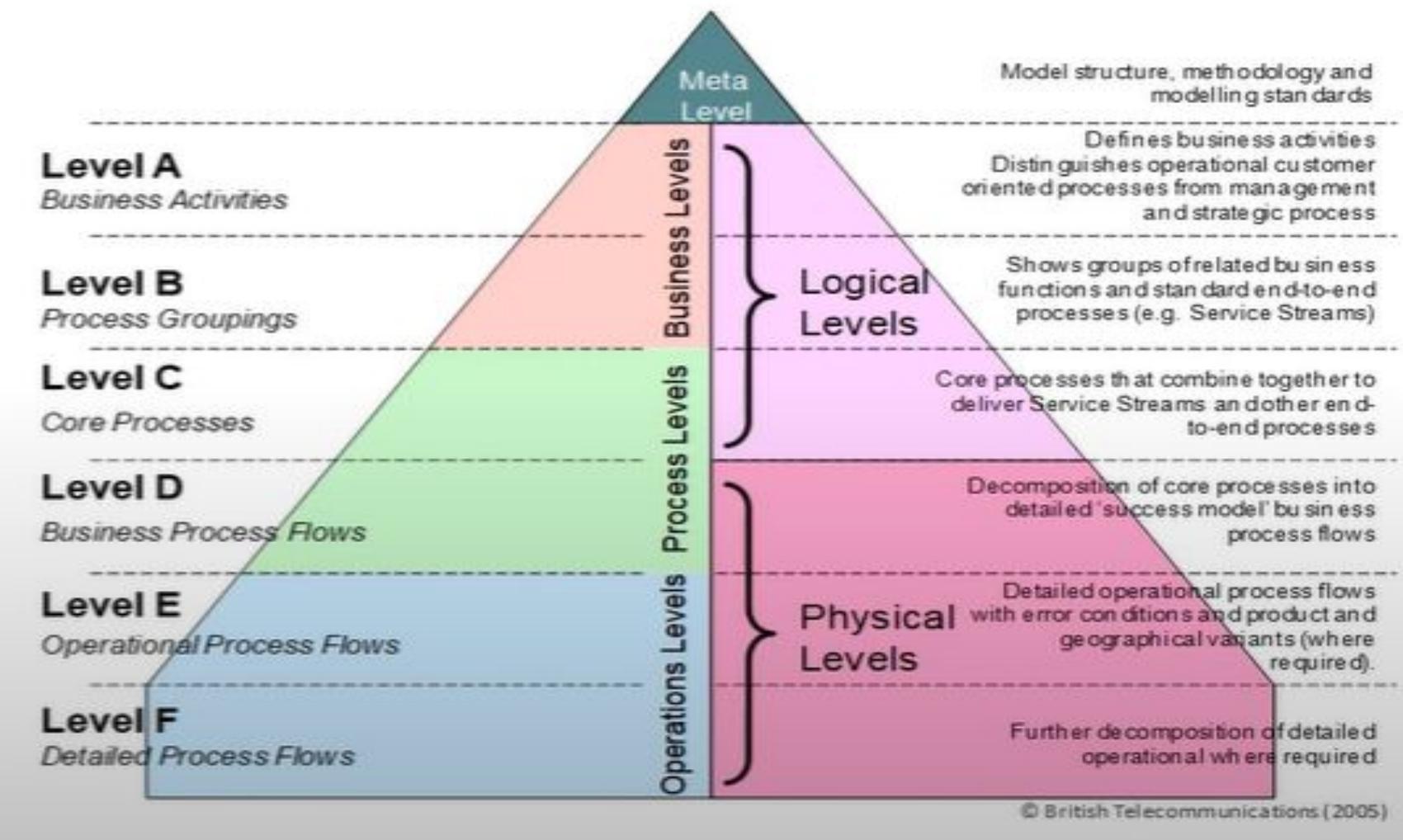


Alternative: process architecture – groups

Consultancy Firm

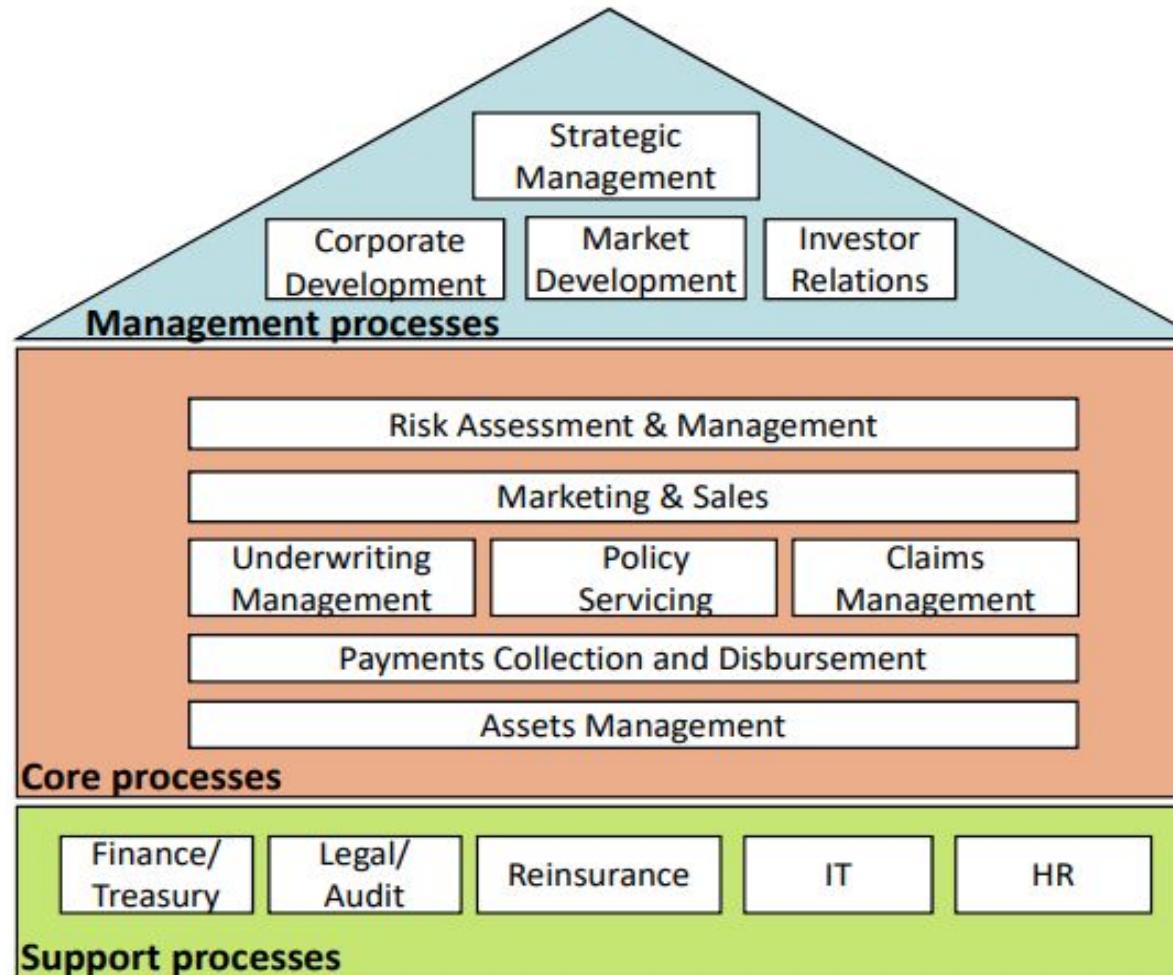


British Telecom



Example: Process Architecture

Insurance Company



Exercise: Identify Process Types in a University Environment

Exercise: Identify Process Types in a University Environment

Support Services

HR

Indirect Procurement

Strategic Management

Teaching Award Courses

IP Management

Marketing

Course Management

Additional Services Management

Language Training

Admission

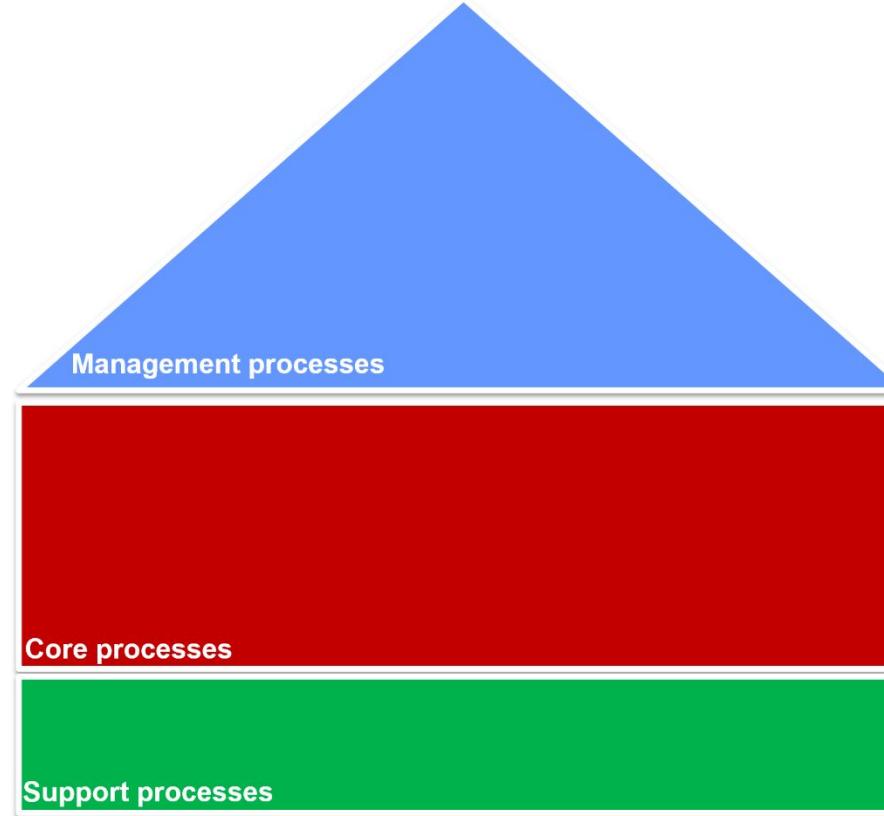
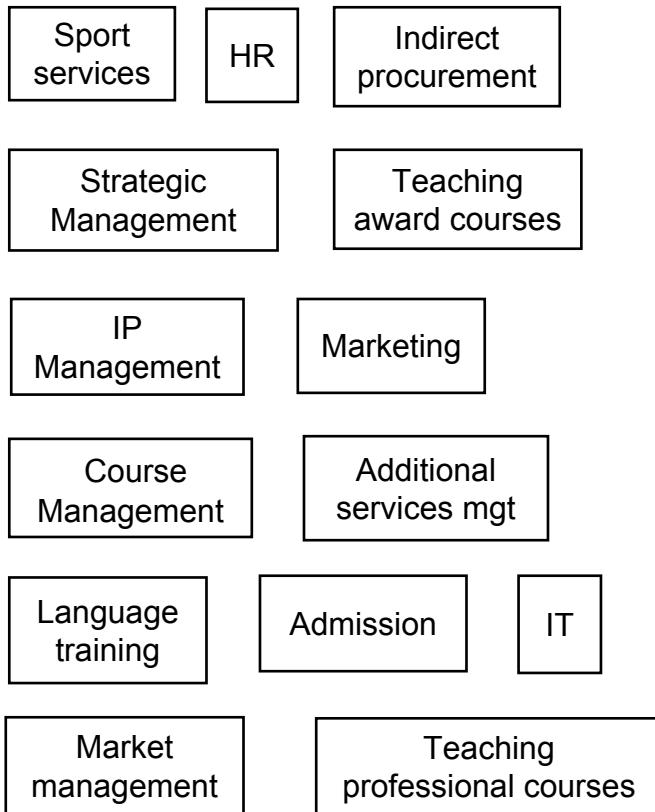
IT

Market Management

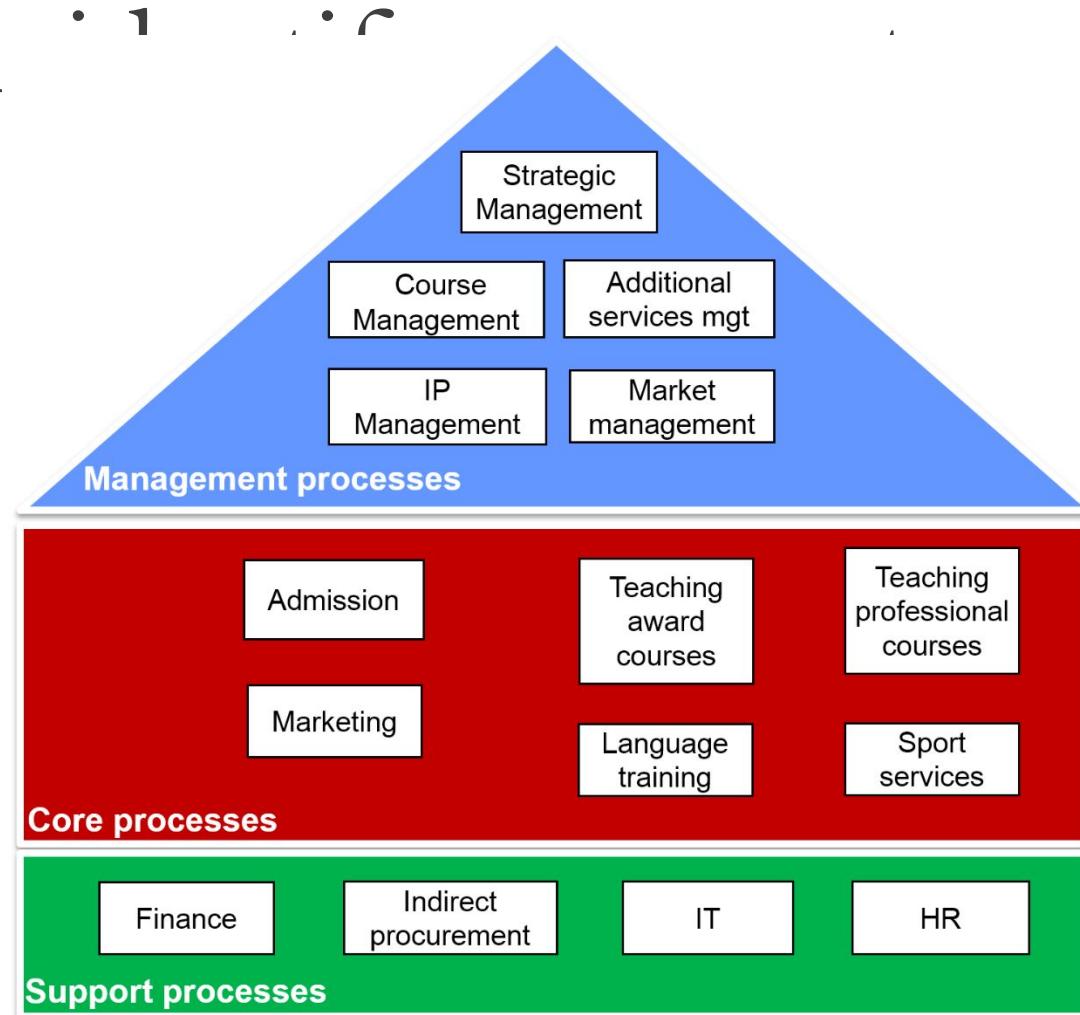
Teaching Professional Courses

Exercise: classify by process type

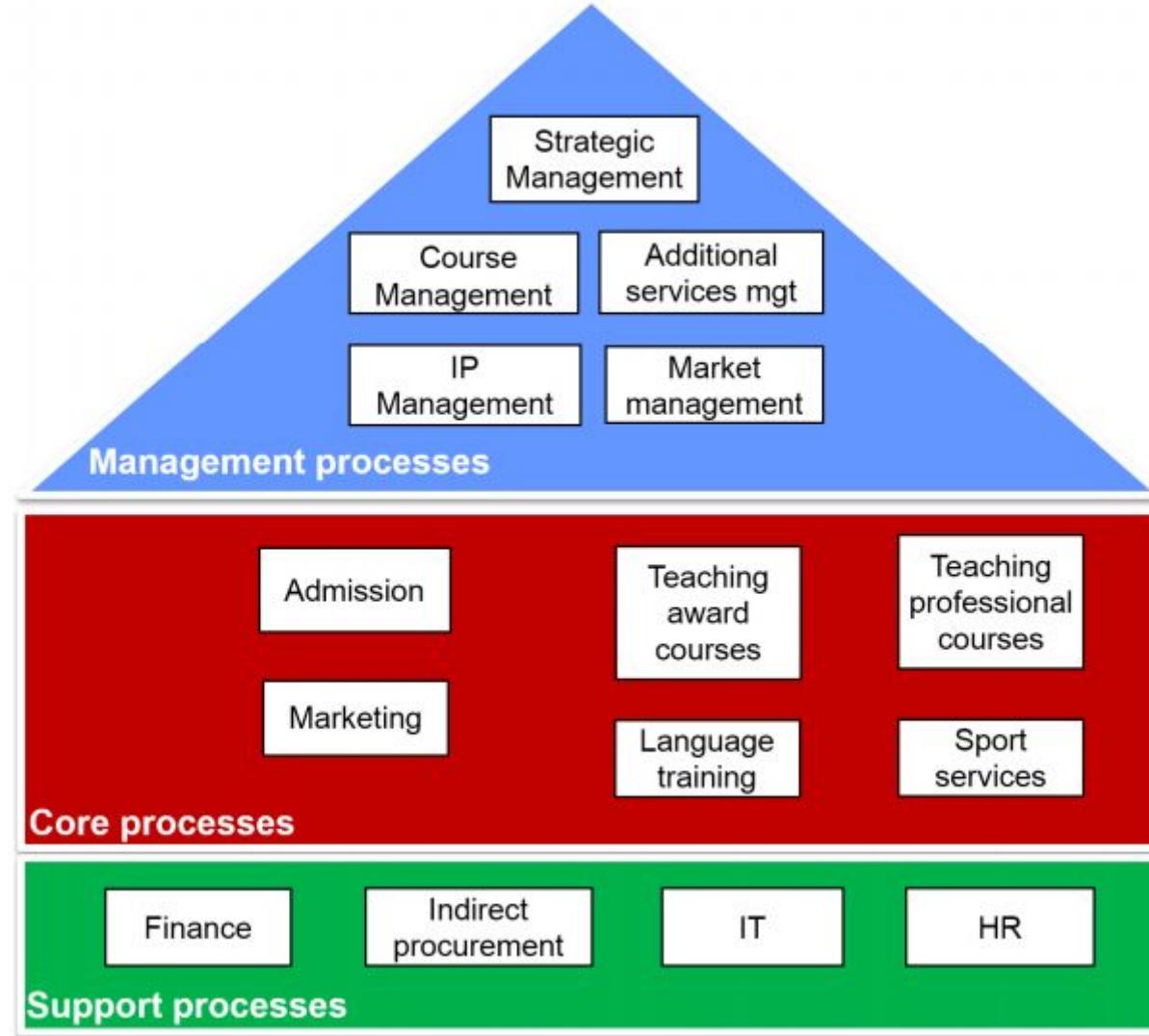
These groups of processes are typically performed at a university. Categorize each process group as core, support or management



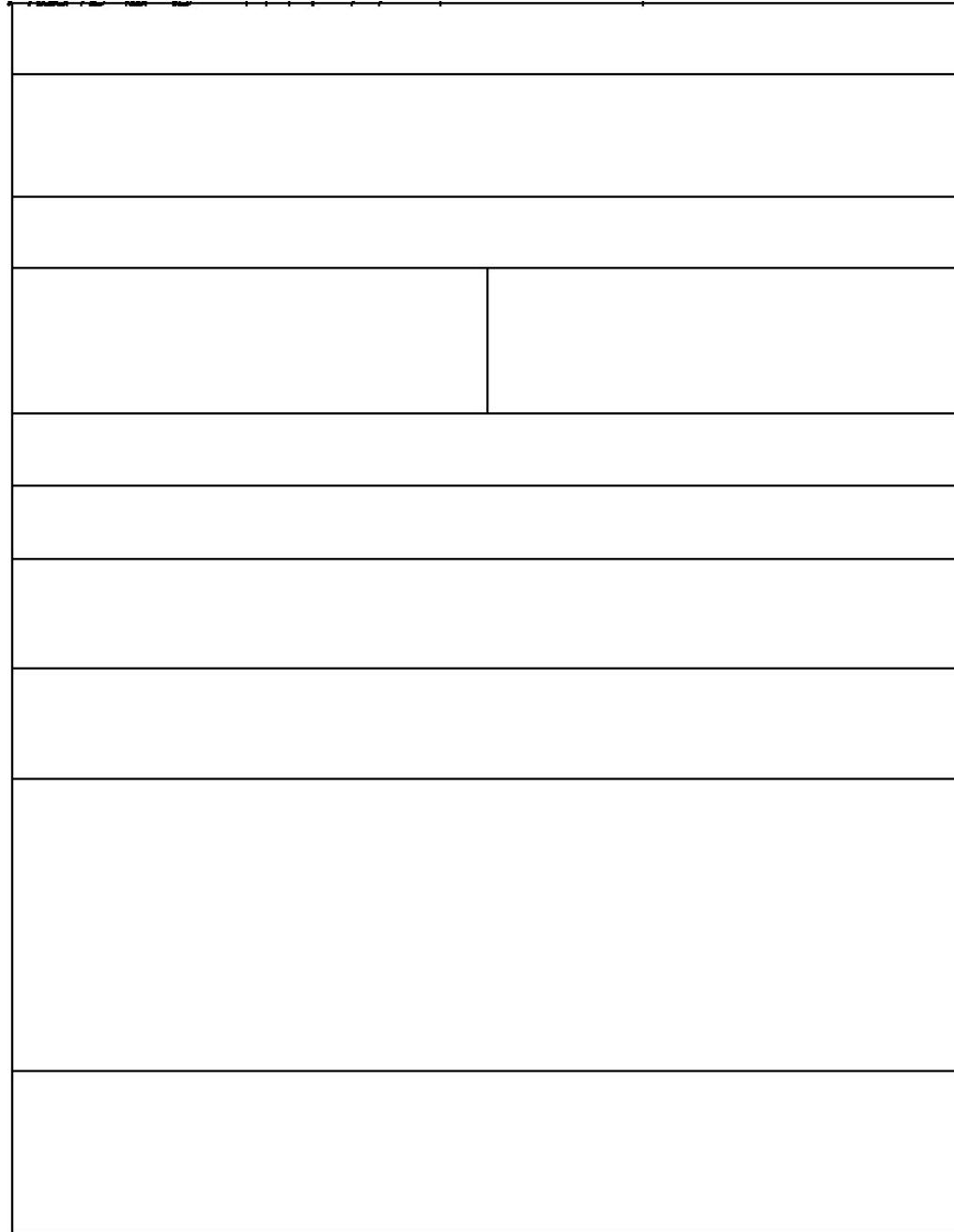
Solution



Solution



Process profile of BuildIT's procure-to-pay process



Process Evaluation

Not all processes are equally important and not all processes can receive the same amount of attention.

Process management involves commitment, ownership, investment in performance enhancement, and optimization. Therefore, processes that create loss or risk demand for consolidation, decommissioning, or outright elimination. Various criteria have been proposed to steer this evaluation. The most commonly used ones are the following:

- ❑ Importance
- ❑ Dysfunction/Health
- ❑ Feasibility

Selection Criteria

Strategic Importance:

- Find out which processes have the greatest impact on the strategic goals.
- Consider profitability, uniqueness, or contribution to competitive advantages.
- Select those processes for process management that relate to strategy.

Health:

- Determine which processes are in deepest trouble.
- These processes may profit the most from BPM initiatives.

Feasibility:

- Determine how susceptible process is to BPM initiatives, incidentally or continuously.
- Culture and politics may be obstacles.
- BPM should focus on those processes where it is reasonable to achieve benefits.

Process Performance Measures

Performance Measures

Time

Cost

Quality

Flexibility

Performance Objectives

Formulate *performance objectives* of the process at a high level, in the form of a desirable state that the process should ideally reach, e.g., customers should be served in less than 30 minutes.

For each performance objective, identify the relevant *performance dimension(s)* and aggregation function(s), and from there, define one or more *performance measures* for the objective in question, e.g., the percentage of customers served in less than 30 minutes. Let us call this measure ST(30).

Define a more refined objective based on this performance measure, such as $ST(30) > 99\%$.

Example 2.3: Restaurant

A restaurant has recently lost many customers due to poor customer service. The management team has decided to address this issue first of all by focusing on the delivery of meals.

The team gathered data by asking customers about how quickly they liked to receive their meals and what they considered as an acceptable wait.

The data suggested that half of the customers would prefer their meals to be served in 15 min or less. All customers agreed that a waiting time of 30 min or more is unacceptable

In this scenario, most relevant performance dimension is serving time.

One objective is to completely avoid waiting times above 30 min.

Percentage of customers served in less than 30 min should be close to 100%.

Thus, the percentage of customers served in less than 30 minutes is relevant performance measure.

Threshold mentioned in scenario is 15 min.

Choice between two performance measures: average meal delivery time or percentage of customers served in 15 min.

Process Portfolio

