MTAT.03.231 Business Process Management

Lecture 2
Process Identification

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Course structure

- **Week 2**: Process identification
- **Weeks 3-4**: Process discovery
- **Weeks 5-7**: Process analysis
- **Week 8-9**: Process redesign
- **Weeks 10-11**: Process implementation
- **Weeks 12-14**: Process monitoring and controlling

- Strategy
- Governance
- Culture
Process identification

What?

1. Identify an organization’s business processes
2. Prioritize their management based on certain criteria

Why?

1. Understand the organization
2. Maximize value of BPM projects
Process identification steps

1. Designation step
   - Enumerate main processes
   - Determine process scope

2. Prioritization step (aka Process selection)
   Prioritize processes based on:
   - Importance
   - Health
   - Feasibility

After Davenport (1993)
Process Enumeration

“Most businesses have just three core processes:

1. Sell stuff
2. Deliver stuff
3. Making sure you have stuff to sell and deliver”

Geary Rummler
Porter: Types of processes

- **Core Processes**
- **Management Processes**
- **Support Processes**

After Michael Porter (1985)
Example: core, support and management processes

**Grocery Wholesaler**

**Core processes**
- Sales (lead-to-quote, quote-to-order, order-to-cash)
- Purchase-to-Pay (direct procurement, e.g. supplies replenishment)
- ...

**Support processes**
- Purchase-to-pay (indirect procurement, e.g. parts replenishment, operational resources replenishment...)
- HR (policies update, recruitment, induction, probation...)
- ...

**Management processes**
- Suppliers management (suppliers planning, suppliers acquisition...)
- Logistics management (logistics planning, logistics controlling...)
- ...
Core processes generate value as they are directly linked to external customers.

Management processes provide direction, rules, and practices.

Support processes provide resources to be used by other processes.

Relations between core, support, mgt processes
Example: process architecture

Wholesaler

Management processes:
- Strategic Management
- Logistics Management
- Suppliers Management
- Warehouse Management
- Demand Management

Core processes:
- Direct procurement
- Sales
- Distribution
- Marketing
- Service

Support processes:
- Finance
- Indirect procurement
- IT
- HR

Process group
Example: process architecture

Insurance company

Management processes
- Strategic Management
- Corporate Development
- Market Development
- Investor Relations

Core processes
- Risk Assessment & Management
- Marketing & Sales
- Underwriting Management
- Policy Servicing
- Claims Management
- Payments Collection and Disbursement
- Assets Management

Support processes
- Finance/Treasury
- Legal/Audit
- Reinsurance
- IT
- HR
Exercise: classify by process type

These groups of processes are typically performed at a university. Categorize each process group as core, support or manage.
Solution: identify process types
Process scoping

Processes are interdependent → insights into interrelations required

- **Specialization**: general – special product/service
- **Horizontal**: upstream – downstream processes and their value chains
- **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)
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
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:**
  - Source stocked products
  - Make-to-stock
  - Deliver stocked products
  - Service stocked products

- **MTO products:**
  - Source MTO products
  - Make-to-order
  - Deliver MTO products
  - Service MTO products

- **ETO products:**
  - Source ETO products
  - Engineer-to-order
  - Deliver ETO products
  - Service ETO products
Example: value chain of non-core processes

Support processes

HR:
- Recruitment
- Induction
- Probation
- Performance planning & review

Accounting:
- Payroll
- Book-keeping
- Reporting & Analysis
- Auditing

Management processes

Suppliers management:
- Suppliers evaluation
- Contract signing
- Sourcing procedure definition

Risk management:
- Risk identification
- Risk analysis
- Risk evaluation
- Risk treatment
Example: process architecture & value chains

Wholesaler

Management processes

Core processes

Support processes

Chevron: collapsed value chain

Box: groups processes/value chains

Finance

Indirect procurement

IT

HR
Alternative: process architecture – groups

Consultancy Firm

Management processes

1.1 Plan the Business
1.2 Govern the Business
1.3 (Re)design Processes
1.4 Develop Methods & Standards
1.5 Change the Business

Core processes

2.1 Optimize Stakeholder Relationships
2.2 Develop Service Offerings
2.3 Raise Awareness of Services
2.4 Plan Delivery of Service to Service Corp.
2.5 Gain Initiative Commitment
2.6 Deliver Infrastructure Solutions
2.7 Deliver Business System Solutions
2.8 Provide Professional Services
2.9 Operate Infrastructure & Business Systems
2.10 Retire Solutions
2.11 Support Users
2.12 Evaluate Client Solution Delivery

Support processes

3.1 Provide Expert Advice & Knowledge
3.2 Provide HR Capabilities
3.3 Acquire IT Tools
3.4 Acquire Goods & Services
3.5 Obtain Financial Services
3.6 Provide Working Facilities

Relate to Clients

Optimize Portfolio

Optimize Solutions

Manage Firm

Expanded process group
Typical artifacts for vertical scoping

**Value chains**
- Chains of processes. Stay at a high level. Rule of thumb: 3-7 processes
  - *Procure-to-service, Risk management*

**(Root/Main) Processes**
- Build up value chains and affect each other. They are abstract
  - *Lead-to-quote, Quote-to-order, Order-to-cash*

**Subprocesses**
- These are detailed, involve multiple activities and can be layered on different levels.
  - *Order shipment, invoicing*

**Tasks**
- These are atomic and performed by human resources, IT systems or equipment
  - *E.g. Approve invoice*
Process architecture: hierarchical view

Level 1
Process Landscape

Level 2
Main Processes (e.g. BPMN)

Level 3+
Subprocesses, Tasks (e.g. BPMN)

Process hierarchy
How many levels in the process architecture?
Example: hierarchical process architecture

Insurance company

Level 1

Management processes

- Strategic Management
- Corporate Development
- Market Development
- Investor Relations

Core processes

- Risk Assessment & Management
- Marketing & Sales
- Underwriting Management
- Policy Servicing
- Claims Management
- Payments Collection and Disbursement
- Assets Management

Support processes

- Finance/Treasury
- Legal/Audit
- Reinsurance
- IT
- HR
Example: hierarchical process architecture

Insurance company

Level 2

- **Strategic Management**
  - Define business concept & long-term vision
  - Develop business strategy
  - Manage strategic initiatives

- **Corporate development**
  - Design & manage corporate policies
  - Manage knowledge
  - Manage change & improvement

- **Marketing development**
  - Define offering and customer value proposition
  - Define pricing strategy
  - Define and manage channel strategy

- **Investor relations**
  - Plan investor relations
  - Build investor relations
  - Manage investor relations
  - Communicate with stakeholders

Management processes
Example: process architecture

Insurance company

Level 3

- Develop business strategy
- Develop overall mission statement
- Evaluate strategic options
- Select long-term business strategy
- Coordinate functional and operational strategies
- Align functional and operational strategies
- Create organisational design
- Develop organisational goals
- Formulate business unit strategies
- Define offering and customer value proposition
- Define offering and positioning
- Develop value proposition
- Validate value proposition
- Develop new branding

Process subgroup
Main process
Management processes
Example: hierarchical process architecture

Insurance company

Management processes

Level 4

- Develop overall mission statement
- Define current business
  - Formulate mission
  - Communicate mission

Main process
Subprocess

Example: hierarchical process architecture
Designation via reference models

A reference model is used as a template to design the process architecture.

**Examples:**

- Information Technology Infrastructure Library (ITIL)
- Supply Chain Operations Reference Model (SCOR)
- Process Classification Framework (PCF)
- Control Objectives for Information Technology (COBIT)
- Value Reference Model (VRM)
- Voluntary Interindustry Commerce Solutions (VICS)
- eTOM Business Process Framework
Example: APQC Process Classification Framework (PCF)

- Industry-neutral enterprise model
- Open standard for benchmarking
- Four levels
  - Categories
  - Process group
  - Process
  - Activity
**APQC Classification Framework**

**Group**

4.1.8.4 Identify performance trends (10273)
4.1.8.5 Analyze performance benchmark gaps (10274)
4.1.8.6 Prepare appropriate reports (10275)
4.1.8.7 Develop performance improvement plan (10276)
4.1.9 Develop quality standards and procedures (10368)
4.1.9.1 Establish quality targets (10371)
4.1.9.2 Develop standard testing procedures (10372)
4.1.9.3 Communicate quality specifications (10373)

4.2 **Procure materials and services (10216)**

4.2.1 Develop sourcing strategies (10277)
4.2.1.1 Develop procurement plan (10281)
4.2.1.2 Clarify purchasing requirements (10282)
4.2.1.3 Develop inventory strategy (10283)
4.2.1.4 Match needs to supply capabilities (10284)
4.2.1.5 Analyze company’s spend profile (10285)
4.2.1.6 Seek opportunities to improve efficiency and value (10286)
4.2.1.7 Collaborate with suppliers to identify sourcing opportunities (10287)
4.2.2 Select suppliers and develop/maintain contracts

4.3.1.4 Release production orders and create lots (10309)
4.3.2 Produce product (10304)
4.3.2.1 Manage raw material inventory (10310)
4.3.2.2 Execute detailed line schedule (10311)
4.3.2.3 Rerun defective items (10313)
4.3.2.4 Assess production performance (10314)
4.3.3 Schedule and perform maintenance (10305)
4.3.3.1 Determine process for preventive (planned) maintenance (Preventive Maintenance Orders) (10315)
4.3.3.2 Determine process for requested (unplanned) maintenance (Work Order Cycle) (10316)
4.3.3.3 Execute maintenance (10317)
4.3.3.4 Calibrate test equipment (10318)
4.3.3.5 Report maintenance issues (10319)
4.3.4 Perform quality testing (10369)
4.3.4.1 Perform testing using the standard testing procedure (10374)
4.3.4.2 Record test results (10375)
4.3.5 Maintain production records and manage lot traceability (10379)
4.3.5.1 Determine lot numbering system (10376)
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

Hammer, Champy (1993)
Example: prioritized process portfolio

Financial institution

Short-term action

Rating

Contract preparation

Loan market evaluation

Loan decision

Loan controlling

Handling of payments

Loan application

Feasibility

Low

Medium

High

Possible

Strategic fit?
Prioritization

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

Hammer, Champy (1993)
Example: prioritized process PICK chart

Financial institution

Short-term action

- Loan controlling
- Loan decision
- Handling of payments
- Loan application
- Contract preparation
- Loan market evaluation
- Rating

Feasibility
- Low
- Medium
- High

Possible

Strategic fit?
Further Readings & Resources

• Fundamentals of Business Process Management
  • Chapter 2 – Process Identification
Next Week

Process Modeling

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<thead>
<tr>
<th>Finance Department</th>
<th>ERP</th>
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<tbody>
<tr>
<td>Invoice received</td>
<td>Invoice</td>
</tr>
<tr>
<td>Enter Invoice Details</td>
<td>Check Invoice Mismatches</td>
</tr>
<tr>
<td>Invoice DB</td>
<td>Post Invoice</td>
</tr>
<tr>
<td>no mismatches</td>
<td>Invoice posted</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Finance Officer</th>
</tr>
</thead>
<tbody>
<tr>
<td>mismatch exists</td>
</tr>
<tr>
<td>Block Invoice</td>
</tr>
<tr>
<td>Invoice blocked</td>
</tr>
</tbody>
</table>

Invoice Report
Invoice Invoice DB