

# Workflow Modelling

(Sharp & McDermott)

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## Method

- Frame the Process
- Understand the current ("as-is") process
- Design the new ("to-be") process
- Develop use-case scenarios

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## Process Enablers

- Workflow design
  - Workplan for responding to an event
- Information technology
  - Focus on information systems
- Motivation and measurement
  - Explicit and implicit reward systems
  - People do what they are measured on
- Human resources
  - Knowledge, skills and experience
  - Training, organisational structure, job definitions ...
- Policies and rules
  - Internal and external
  - May be obsolete
- Facilities design
  - Workplace design and infrastructure

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## Context Framework

(aka a FW for putting analysis of Bps in context with analysis of IS Requirements)

Mission, strategy and goals

Business process

Information system

- Presentation
- Logic
- Data management

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## Modelling techniques

Business process: process workflow models ("swimlane" diagrams)

Presentation: use case scenarios

Application logic: various

Data management: various

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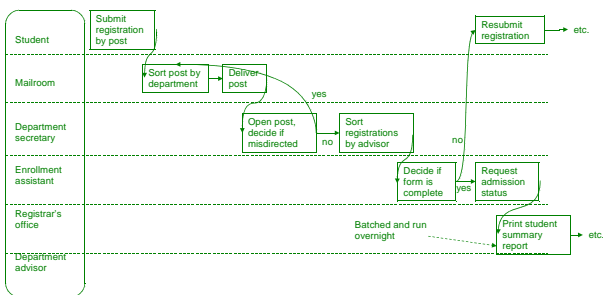
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## Process Workflow Model



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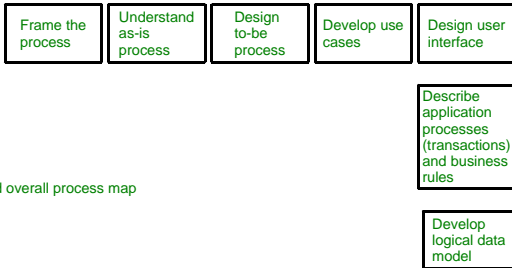
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## Workflow-driven Methodology



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WF-Driven Methodology:  
Framing (the 'What?')  
Understand As-Is  
Design To-Be  
Develop Use-Cases

## Framing the Process

- Identify a set of related processes, and develop an overall process map.
- Establish the scope of the target process.
- Review or document mission, strategy, goals.
- Initial process assessment.
- Process vision and performance objectives
- Glossary of terms and definitions.
- Observations on culture, core competences, management systems.

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WF-Driven Methodology:  
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## A business process is ...

A collection of inter-related work tasks, initiated in response to an event, that achieves a specific result for the customer of the process.

achieves a specific result  
for the customer of the process  
initiated in response to a specific event  
work tasks  
a collection of inter-related

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## Framing the Process

(document the scope of the process)

- Process name in verb-noun format
- Event that triggers the business process
- Result achieved by the process
- Customer that receives the result
- Other stakeholders and the result(s) they expect
- 5 – 7 major activities or milestones
- Actors with a rôle in the process
- Mechanisms
- Timing and frequency
- Related processes

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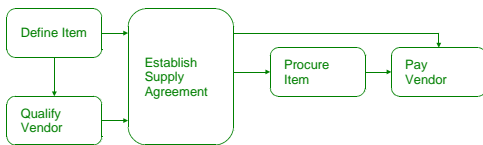
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WF-Driven Methodology:  
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## Overall process map

Simply a set of related processes:



Overall process map for Supply Management area.

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WF-Driven Methodology:  
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## Identifying processes

(bottom-up)

- Identify 'milestones' (results from processes)
- Link the milestones
- Identify cardinality (1:1), (1:m), (m:1)
- Set of (1:1)s identifies a process!
- Name the process
- Identify the triggering event
- Identify stakeholders and expected results

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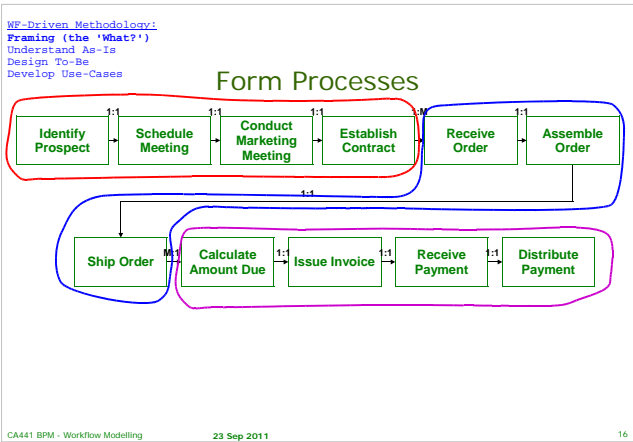
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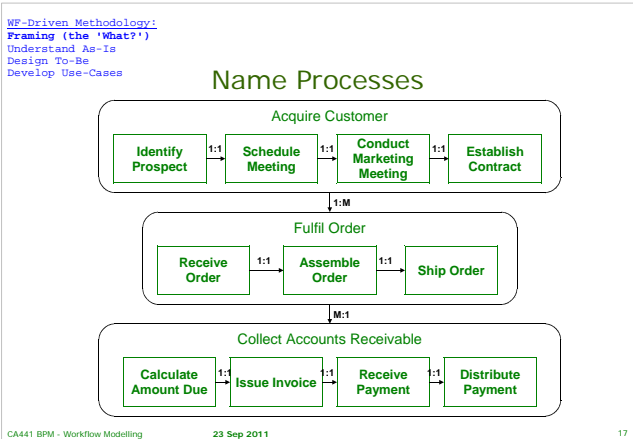
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### Identify stakeholders and expected results

Customer may not be the only stakeholder  
 Results must satisfy customer, but also the organisation  
 e.g. Customer order is satisfied (customer receives) and paid for (other criteria met)

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## Initial Assessment

### 2 Questions:

- What's wrong with the process anyway?
- What will be better when we're done?

### Perspectives:

- Stakeholders
- Enablers
- Metrics

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## Metrics

- Give a guide of where to focus efforts - no point in optimising a process that occurs infrequently, or uses few resources.
- Allow us to evaluate success.
- Collect all the metrics available:
  - Volumes
  - Frequencies
  - Effort
  - Exceptions
- Need to be appropriate for the process , not the function

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## What metrics

- How many?
- How long?
- How much effort?
- Who's involved?
- Efficiency
- Cost

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## Assessment by stakeholder

3 essential groups:

- Customers
- Performers
- Owners

May also consider:

- Suppliers
- Government & other regulatory agencies
- General public
- Industry bodies

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WF-Driven Methodology: Assessments by SH:  
Framing (the 'Why?')  
Understand As-Is  
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## Assessment 1 - Customer

- Has the product or service got the right characteristics?
- How much effort is required of the customer?
- Does the process require too many interactions?
- Is the customer the only one monitoring the process?
- Are the rules & requirements reasonable?

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WF-Driven Methodology: Assessments by SH:  
Framing (the 'Why?')  
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## Assessment 2 - Performers

- "Is this how you'd do it if you had a choice?"
- "Does this process help you meet your goals?"
  
- Remember that the performers are not the customers!

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### Assessment 3 - Managers & Owners

- Process must be efficient and profitable.
- In a not-for-profit setting, it must be fiscally responsible.
- Consider opportunity cost as well as actual cost.

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### Assessment 4 - Suppliers

“How easy is it to do business with us as compared to other customers?”

“What errors or actions on our part cause difficulties for you?”

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### Assessment 5 - Other groups

- General public – ethics, safety, environment.
- Local community – involvement in local initiatives.
- Regulators.

Don't assume - ask!

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[WF-Driven Methodology:](#)  
[Framing \(the 'Why?'\)](#)  
[Understand As-Is](#)  
[Design To-Be](#)  
[Develop Use-Cases](#)

## Process Enablers (review)

- Workflow design
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- Information technology
  - Focus on information systems
- Motivation and measurement
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  - People do what they are measured on
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[WF-Driven Methodology:](#)    [Enabler Perspective:](#)  
[Framing \(the 'Why?'\)](#)    [Workflow design](#)  
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[Develop Use-Cases](#)    [Human resources](#)  
                           [Policies and rules](#)  
                           [Facilities design](#)

## Enabler perspective

Workflow design:

- Examine
  - + steps
  - + precedence
  - + flow
  - + handoffs
  - + decision points
- What is the one thing you would do to improve this process?
- What aspect of this process causes you the most problems?

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                           [Facilities design](#)

## Information Technology

- Primarily manifested as systems. In many cases the system *is* the business process.
  - What's old and doesn't work?
  - What's new and might work? ... or has become a necessity?
- Not only need to do things right – need to do the right thing. Many application development projects automate the root cause of the problem.
- Work from the bottom up in the framework:
  - + Are the right data being maintained, and is the right information being presented to each step?
  - + Are the right activities being automated?
  - + Are the user interfaces appropriate for the task and the person using them?
  - + Is the flow of work automated wherever possible and appropriate?

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<u>WF-Driven Methodology:</u>	<u>Enabler Perspective:</u>
Framing (the 'Why?')	Workflow design
<b>Understand As-Is</b>	Information technology
Design To-Be	<b>Motivation &amp; measurement</b>
Develop Use-Cases	Human resources
	Policies and rules
	Facilities design

## Motivation and Measurement

- People don't pay much attention to what management says; they pay attention to what management measures.
- Do the measures of performers support or impede process goals?
- NHS example – waiting lists!

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Develop Use-Cases	<b>Human resources</b>
	Policies and rules
	Facilities design

## Human Resources

- How do organisational structures, job definition and skills impact the process?
- Will the workforce need to change?
- Will new staff skills and training be required?
- Keep the unions involved.

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	<b>Policies and rules</b>
	Facilities design

## Policies and Rules

Rules reflect the organisation's bias. e.g. two possible policies on refunds could be:

- "refunds up to a certain amount can be handled by a sales person on the retail floor, at their discretion, whether or not the customer has a receipt."
- "all refund requests must be accompanied by a sales receipt and a completed refund reason form; they will be processed by the Customer Service and Accounts departments, and a cheque will be posted."

The process will be different in each case.

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<u>WF-Driven Methodology:</u>	<u>The Environment</u>
<b>Framing</b>	<b>Mission and strategy.</b>
<b>Understand As-Is</b>	Organisational culture.
<b>Design To-Be</b>	Core competences.
Develop Use-Cases	Business context & focus.

## Some process improvement goals...

- Flexible in meeting the needs of individual customers
- Easier for an entry-level workforce to adopt with relatively little training and support
- Fewer customer interactions
- Absolute auditability and adherence to applicable regulations
- Accessible anytime, anywhere, via any medium
- Easier to standardise and maintain at international locations
- Less time and effort to integrate new suppliers or customers into the process
- More suitable for support by commercial off-the-shelf (COTS) software

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## Beliefs and Culture

- Organisational behaviour stems from a few basic beliefs:
  - "There's always a better way"
  - "We have a bias towards informed action"
  - "Decision-making should be close to the action"
  - "Our clients are trying to cheat us, the public misunderstands us and the media are out to get us. (and our employees couldn't care less)"

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Develop Use-Cases	Business context & focus.

## Identifying Culture

1. Are there stories or corporate legends that provide examples?
2. What factors continually get in the way?
3. What factors are seen as expediting progress?
4. How are decisions made?
5. Are all employees free to offer opinions or challenge decisions?
6. Is the orientation towards the individual or the group?
7. Whose opinion is valued?
8. Are there any identifiable behaviours that are rewarded or punished?
9. Is there a high tolerance for ambiguity?
10. Does the organisation favour results or following procedure?
11. Is the organisation cautious or will it take risks?
12. Is the emphasis on relationships and social interactions, or on tasks and getting on with the job?

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<p><u>WF-Driven Methodology:</u>  <b>Framing</b>          Understand As-Is          Design To-Be          Develop Use-Cases</p>	<p><u>The Environment</u>          Mission and strategy.          Organisational culture.          Core competences.          Business context &amp; focus.</p>
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## Core Competences

- What are we really good at?
- World-class organisations have up to five or six core competences that their core products or services are based on.
  - "Core competence is the collective learning of the organisation, especially the capacity to coordinate diverse production skills and integrate streams of technologies. It is also a commitment to working across organisational boundaries."
  - "organising around strategic business units is problematic because they under-invest in core competences, imprison resources and bind innovation" (Prahalad & Hamel)
- We can scale down the idea of a Core Competence to the process level - design processes that play to the strengths of the performers.

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## Scoping questions - 1

- 1.What is the primary business objective driving this project?
- 2.What is the current situation?
- 3.Is this essentially a business process improvement project?
- 4.What is the technical or project objective?
- 5.Which business data will or will not be involved?
- 6.Organisationally who will be impacted by this?
- 7.What areas outside the process will be impacted, or will require interfaces?

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## Scoping questions - 2

- 8.Are there other initiatives we should be aware of?
- 9.What could go wrong?
- 10.What could go right?
- 11.Have any significant issues or difficulties arisen?
- 12.Are there any constraints we need to take into account?
- 13.Have any important decisions already been made?
- 14.Have project structure and personnel been identified?
- 15.Are you really the sponsor?

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## References

Sharp, A. & McDermott, P. (2001), *Workflow Modelling*, Artech House, Boston & London.

Sharp, A. & McDermott, P. (2008), *Workflow Modelling*, Artech House, Boston & London, Second Edition.

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