

University of Pisa

MSc in Computer Engineering

Systems for Strategic Management and Support

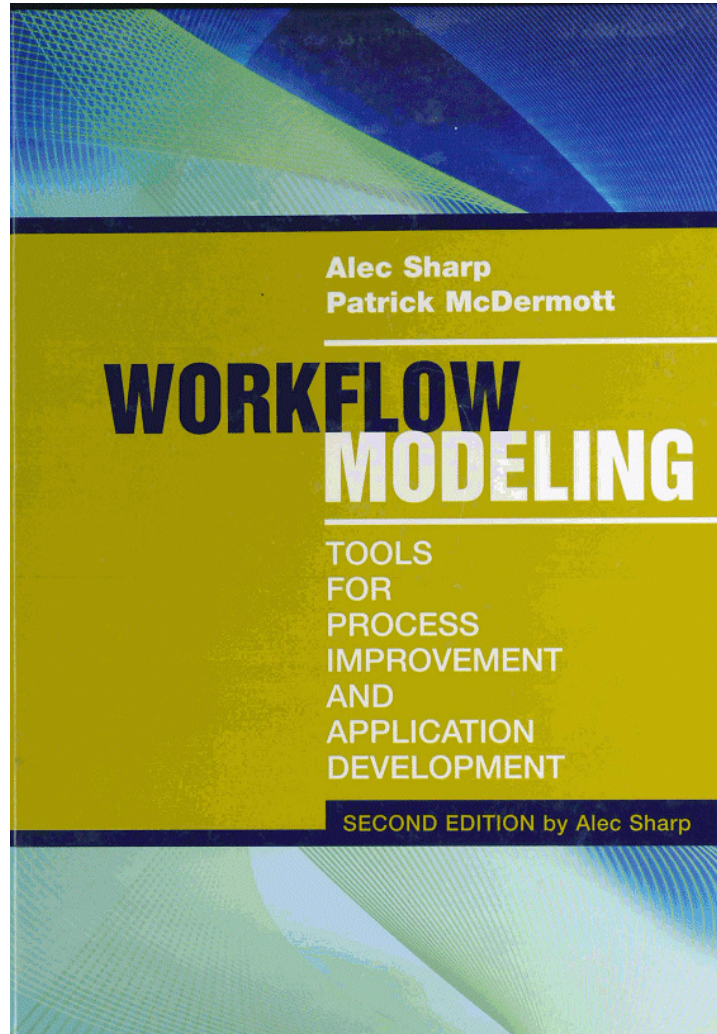
LECTURE 1

<http://www.iet.unipi.it/m.cimino/ssms/>

Mario G.C.A. Cimino

Department of Information Engineering

THE REFERENCE BOOK



THE STRATEGY HIERARCHY

The Three Hierarchical Levels of Strategy



S001

THE STRATEGY HIERARCHY

S002 **Corporate strategy:** selection of businesses in which your company should compete; → selection of portfolio of businesses

S003 **Business strategy:** battle plans, tactics used to fight the competition in the industry that your company currently participates in → selection of the scope of each business unit

S004 **Functional strategy:** the purpose for (i) marketing, (i) finance and (iii) operations

→ (i) identify target customer to serve and the products to supply

→ (ii) acquires and allocates resource need to operate

→ (iii) operation design, plans, and manages processes

BUSINESS AND OPERATIONS HIERARCHY

S005 **Business Strategy (BS):** selecting external markets and products to supply chain

S006 **Operations Strategy (OS):** designs internal processes and interfaces between the I/O markets

S007 **Examples:**

▶ *Southwest Airlines:* BS based on product cost

⇒ OS focused on efficient and lean business processes

▶ *Zara apparel retailer:* BS based on product variety

⇒ OS focused on flexible business processes

▶ *Rolls-Royce:* BS based on high-quality products

⇒ OS based on precision equipment/trained workers

STRATEGIC FIT

- S008 **A process is efficient** if operates at low cost, **is effective** if supports execution of the company strategy
- S009 **Strategic Fit** means consistency between the desired strategic position and the competencies of its processes architecture and managerial policies.
- S010 **Market-driven strategy:** a firm starts with key competitive priorities and then develops processes to support them
⇒ Commodity products
- S011 **Process-driven strategy:** a firm starts with a given set of process competencies and then identifies a market position that is best supported by those processes
⇒ Technological companies (e.g. Apple)

IS A BUSINESS PROCESS GOOD?

The importance of size and focus of a process

- S012 Problem: the process has exactly the same boundaries as the existing functionally specialized organization structure
⇒ Moral: Do not confuse process and organization. “Functional” processes yield disfunctional results
- S013 Problem: a project team attempted to model the workflow for a major area they improperly described as a single process - *supply chain management*
⇒ Moral: Do not confuse individual processes with families of processes

IS A BUSINESS PROCESS GOOD?

- S014 Problem: Each of the “processes” has been “improved” independently. These mini-processes are more efficient. However, the true business process behaves even more poorly than they had before.
- ⇒ Moral: do not confuse subprocesses or activities with business processes. Local optimization causes global suboptimization.
- S015 Let us focus on:
- Some examples of what can be considered a business process
 - What is a well-formed process, in general and in particular
 - How big is a true business process
- S016 A process is a defined method to achieve **result**, and that **result** is far more important to the definition of a business process than the work that goes into it.

DEFINING “PROCESS” IN GENERAL

Examples of Potential Processes

<i>Suggested Process</i>	<i>What We Call It</i>	<i>If Not a Process, Why Not?</i>
Customer Relationship Management	Process area	Doesn't deliver a single, specific result; a set of related business processes meeting an overall objective.
Acquire New Customer	Business process	Delivers a single, specific result, and meets all other criteria in this section. An “end-to-end business process.”
Assess Prospect Financial Status or Set Up Customer	Subprocess	Too small—both deliver specific results, but are intermediate results in an end-to-end business process.
Calculate Customer Credit Limit or Create Customer Account	Activity, step, task, ... (no specific term)	Much too small—a part of a subprocess. Possibly described in a procedure, or use case and service.
Determine Customer Credit Limit or Set Customer Account Type	Activity, step, task, ... (no specific term)	Much, much too small—a single step or instruction. Possibly one line in a procedure, or step in a use case.
“The Inside Sales process”	Function	Doesn't deliver a single, specific result; an organizational unit that participates in multiple business processes.
“Our Oracle CRM process”	System	Doesn't deliver a single, specific result; a system that supports multiple business processes.
“Our e-business process”	Technology	Doesn't deliver a single, specific result; a technology employed by multiple business processes.

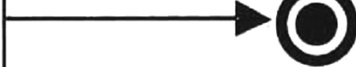
HOW TO NAME A PROCESS

- S017 The process name must be in the form *verb-noun*
e.g. *Assign Inspector*
- S018 It might be in the form *verb-qualifier-noun* or *verb-noun-noun*
e.g. *Assign Backup Inspector*, *Assign inspector to route*
- S019 Processes are almost always defined in the **singular**
e.g. ~~*Handle Orders*~~ → *Fill Order*, i.e. an (a specific) order.
- S020 The verb-noun name must indicate the **result** of the process.
⇒ **Guideline: if you flip the terms around into ‘*noun is verbed*’ form, the phrase should indicate the result of the process**
e.g. *Assign Inspector* → *Inspector is Assigned*

HOW TO NAME A PROCESS

Process naming—singular, customer perspective.

Process naming—
name indicates process result.



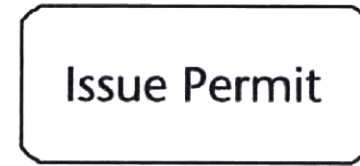
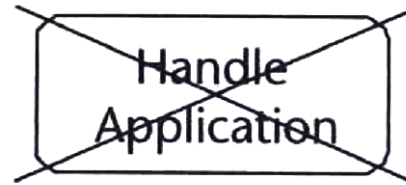
Process:

Acquire New Customer
(action verb – noun)

Result:

New Customer is Acquired
(noun is verbed)

- discrete
- countable
- essential



A PROCESS DELIVERS A SPECIFIC, ESSENTIAL RESULT

S021 The process result in ‘noun is verbed’ form must meet 3 criteria:

S022 ⇒ **The result is discrete and identifiable:** you can differentiate individual instances of the result, and it makes sense to talk about ‘one of them’

e.g. *Inspector is Assigned* → it makes sense in a business context to talk about *when was Joe assigned to the midtown route*

S023 ⇒ **The result is countable:** you can count how many of that result you have produced in an hour, a day, a week, etc.

e.g. *How many inspector assignments were completed this week*

S024 ⇒ **The result is essential:** it is fundamentally necessary to the operation of the enterprise, not just a consequence of the current implementation

e.g. *Fax Inspector Assignment* → the essence of the process has not been reached by the means of notification → *Notify Inspector of Assignment* is ok(‘what, not who or how’)

RESULTS VS. OBJECTIVES

S025 A process should be defined in terms of the essence of what it does, i.e., the result it delivers (what), not the technologies used to support it (how) or the organizations and roles that carry it out (who)

A result is the output of a single execution of a process

e.g. ‘employee is hired from the process Hire Employee’

S026 An *objective* is some desired state or performance target, generally over many instances

e.g. ‘Hired employees will go on to have an average tenure of greater than five years’

e.g. ‘Fewer than 10% of newly hired employees will leave the company within the first year’

NAME WITH ACTION VERBS, NOT MUSHY VERBS

- S027 An *action* verb indicates a single activity that happens at a particular point in time, for which it is easy to visualize a result.
e.g. *count, evaluate, print, attach, return, prioritize, sort, provide*
Allocate Service Rep, Calculate Stock Index, Retrieve Sample, Issue Refund, Translate Document
- S028 A *mushy* verb tends to indicate an activity or multiple activities that happen *over time*. While they might indicate some overall objective, they do not help us visualize a single, specific result.
e.g. *Maintain Inventory, Administer Refunds, Monitor Prices, Handle Request*
- S029 *Mushy verbs* are also called ‘360 verbs’, as they sound good but often say little about what was actually accomplished.

NAME WITH ACTION VERBS, NOT MUSHY VERBS

Manage
Customer
Relationship

Process:

Manage
Customer Relationship
(mushy verb – noun)

Result:

Customer Relationship
is Managed
(noun is verbed)

- *not discrete*
- *not countable*
- *not an essential result
(an objective)*

Process naming—no mushy verbs.

S030 *Mushy verbs* can be used to discuss a collection of processes (a process area) or an organization’s responsibility (‘We manage risk’)

A WELL-FORMED PROCESS IS INITIATED BY A SPECIFIC EVENT

S031 When describing a process it is necessary to be able to identify the *triggering* or *initiating* event.

Event categories:

S032 *Action event*: it happens when a person or an organization decides to do something, for any reason. You cannot predict exactly when
e.g. a customer deciding to place an order, a manager deciding the company needs a new employee, a regulator deciding to issue a new guideline

S033 *Temporal event*: it happens when some predetermined date or time is reached at which some activity must begin. You always know exactly when it will next happens.

e.g. time to run the payroll, time to close the books, time to take inventory

A WELL-FORMED PROCESS IS INITIATED BY A SPECIFIC EVENT

S034 *Condition or rule event*: it happens when a monitoring activity detects some exception condition. You cannot predict it in advance
e.g. a smoke alarm being set off, a stock price hitting a predetermined limit.

S035 Do not confuse triggering events and preconditions: the former is what happens to make the process/activity start, the latter is a rule that must be enforced after the process/activity starts to proceed.

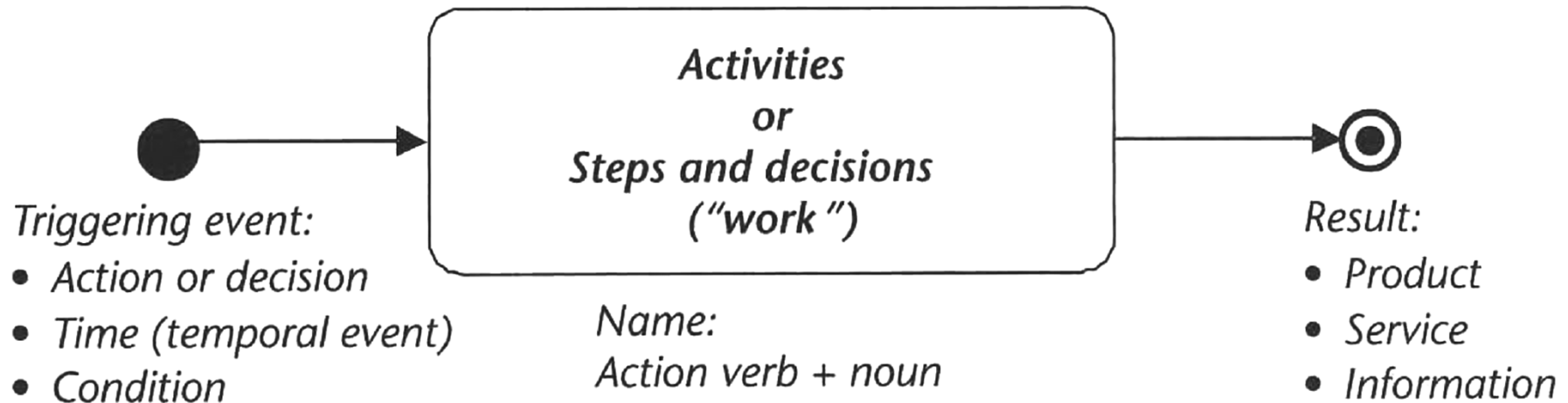
e.g.

customer initiates contact to report service difficulty (triggering event)

customer is in active status (precondition)

SUMMARIZE THE ESSENTIAL COMPONENTS OF A PROCESS

S036



*Workflow models will show
the flow of work, from trigger to result:
who, does what, when*

S037 It is called trigger-activities-result conceptual framework.

S038 It is in contrast with input-process-output (which sounds mechanical), and with inputs-guides-outputs-enablers (e.g. IDEF0, confusing)

SUMMARIZE THE ESSENTIAL COMPONENTS OF A PROCESS

- S039 The process comprises an identified body of work that can be characterized as a set of related activities or a defined sequence of steps and decisions.
- S040 The process name is (essentially) in action verb-noun format, although it might have a qualifier or another noun.
- S041 The name is in the singular.
- S042 The name, if put in "noun is verbed" format, will indicate the intended result (output) of the process.
- S043 The result must be discrete and countable. If a mushy verb is used, these criteria will not be met.
- S044 The result is what the customer of the process wants.
- S045 The process is initiated by a triggering event that could be action, time, or condition.
- S046 **NO RESULT → NO PROCESS**