

Process architecture & Advanced topics

PV207 – Business Process Management

Spring 2019

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Lecture overview

- **Recap**
 - Types of processes
 - Kinds of work
 - Adaptive Case Management
 - ACM vs BPM
- **Process categorization**
- **Inter-process relationships**
- **BPMN orchestration diagrams**
- **Process architecture**

Process types recap

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 - Large amount of human-tasks (forms, portlets etc.)
 - A comprehensive technology for User-interface needed
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 - Integration of WS and other interfaces of various systems together
 - Involves middleware (Messaging , ESBs etc)
 - Orchestration of inter-system communication
- **Document-oriented BPM**

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 - Integration of WS and other interfaces of various systems together
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- **Document-oriented BPM**
 - Management of document-flow
 - Often combined with Human-centric systems

Two kinds of work - recap

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 - Sequences of tasks (processes) are repeated frequently
 - Uniformity of sequences is desired
 - BPM helps to achieve the uniformity
 - Easy from process modeling perspective
 - High process rigidity desired
- Knowledge-intensive work

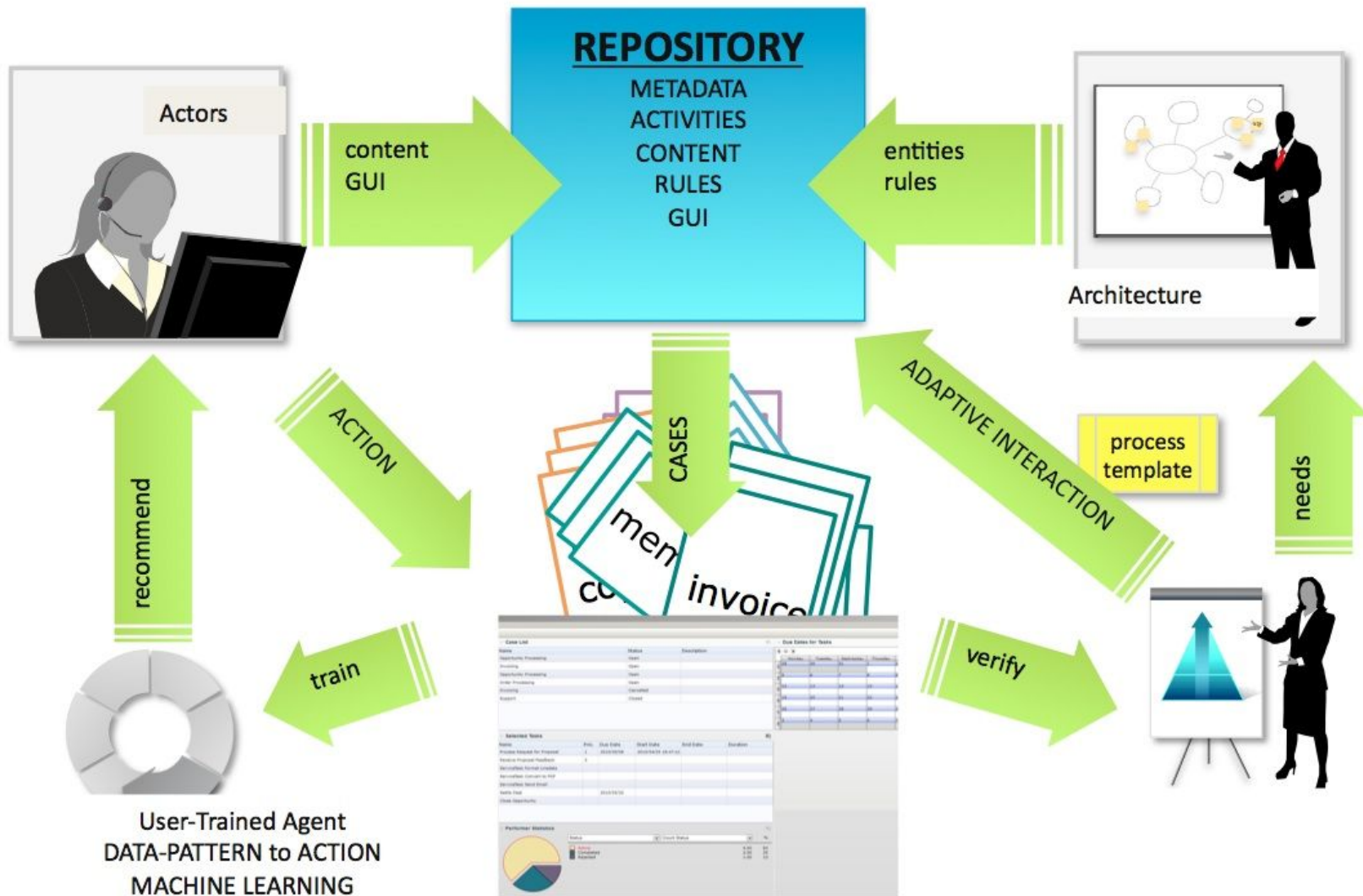
Two kinds of work - recap

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- **Knowledge-intensive work**
 - Sequence of tasks is defined by decisions of the worker
 - Many exceptional situations possible
 - Knowledge of the worker plays key role
 - Ad-hoc process welcomed/wanted

Adaptive Case Management basics

- Knowledge workers are handling larger volumes of processes with heterogenous structure = “cases”
- A “case” is a set of activities to be performed, however the order is not important = “ad-hoc process”
- Similar cases means processing similar information = “utilization of similar resources” (documents)
- There is a need for continuous definition of a best-practice walk through the process = “continuous process discovery”

ACM concepts



BPM vs ACM

- **Adaptive Case Management**
 - Processes activities performed in ad hoc order
 - Case (as an instance) is a first class citizen
 - Patterns detection and reusability
 - Document management
- **Business Process management**
 - Process activities performed in defined order
 - Process (as a definition) is first class citizen
 - Process is a pattern itself
 - Document oriented or integration oriented

Ballance process rigidity

- **Processes should:**
 - Navigate users to maintaining good practices in work process
 - Codify an efficient and goal oriented work-process
 - Keep work-process uniform and measurable
- **Processes should not:**
 - Tight hands of a worker, inhibit improvements
 - Raise work-process complexity and administrative overhead
 - Decrease work-process efficiency
 - Cause technological overkills

Questions?
Break 10mins

Process architecture - Motivation

- There can be many processes in an organisation and we need to organise them
- MUNI = more than 100 processes
 - How to identify a processes?
 - How to categorise those processes?
 - How are processes interacting with each other?
 - How to describe such interactions?
 - What happen in case of change (business focus, organisational)?
 - How to capture process dynamism?

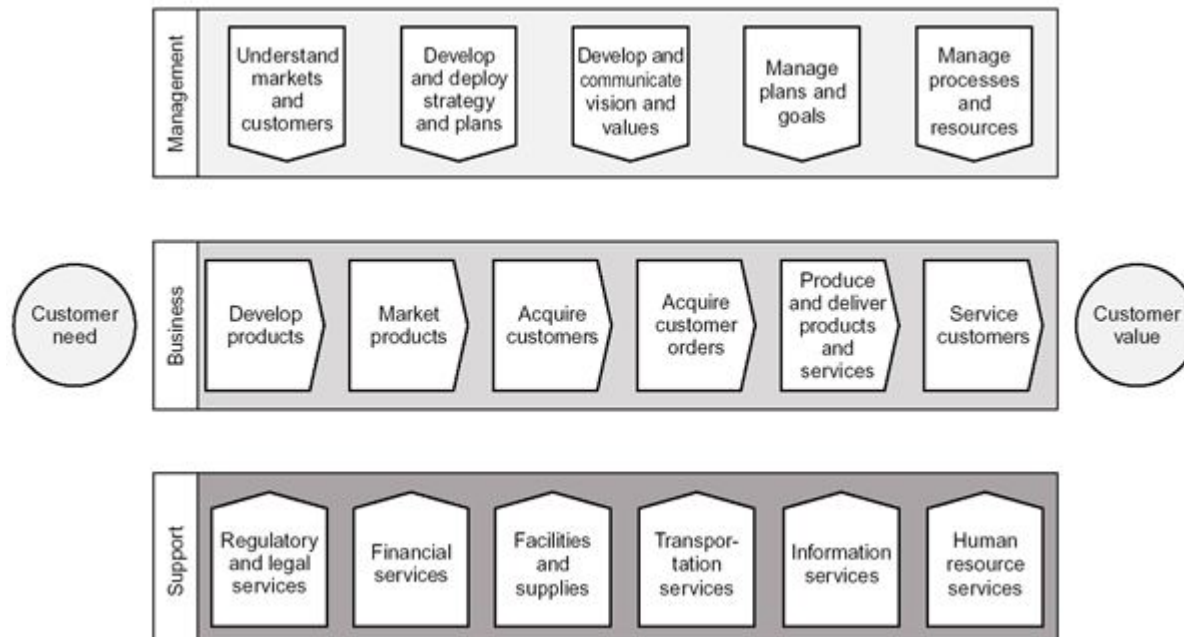
How to categorise processes?

- By the purpose of the process
 - Alignment with business strategy
- **By organisation structure**
 - + Naturally easy way of categorising
 - - Does not reflect reality (Hacks needed)
 - - Fragmentation of real process = Silos are back!
- **By the “business entity” they are related to**
 - + Organisation structure independent
 - + Reflects reality
 - - Needs more effort during analysis
 - - Harder to understand by process actors
- By the process hierarchy
 - But how do we build the hierarchy?

Categorization by process purpose

- **Core business processes (business operations)**
 - Directly contributes to a defined goal/objective
 - Providing value to customers
 - Eg. Ordering process, Manufacturing process, providing a service
- **Management processes**
 - Govern business operations
 - Value provided indirectly through managed core processes
 - Eg. Planning, defining strategy, governance
- **Support processes**
 - Supporting the core processes indirectly
 - Value provided rather indirectly , hard to measure
 - Eg. Accounting, technical support, maintenance, facilities

Categorization by process purpose



Categorization by the organization structure



Processes categorized by business entities they are related to

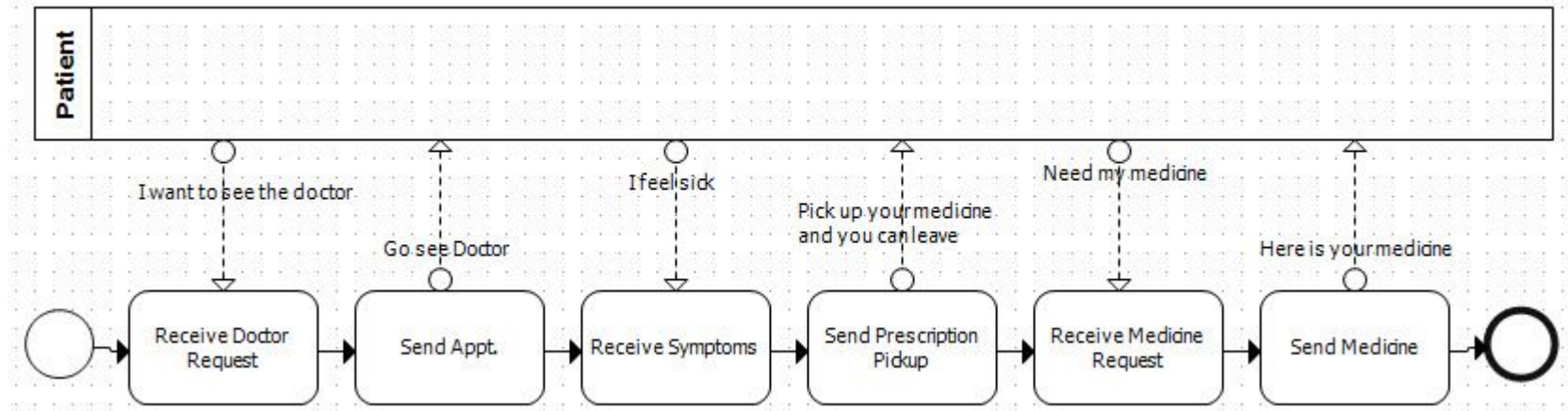
- Process is a sequences of steps that “handle” a business entity
 - We have to identify those entities first!
 - Entity examples:
 - Order
 - Product
 - Process Examples:
 - Prepare an order
 - Manufacture a product
- A Process can “handle” other process as well
 - Examples:
 - Manage a flow of orderes
 - Manage the manufacture of products

How are processes interacting ?

- There are quite some possible ways of process interaction:
 - Instantiation
 - Activation
 - Deliver to
 - Notify
 -
- Some of them create new processes?

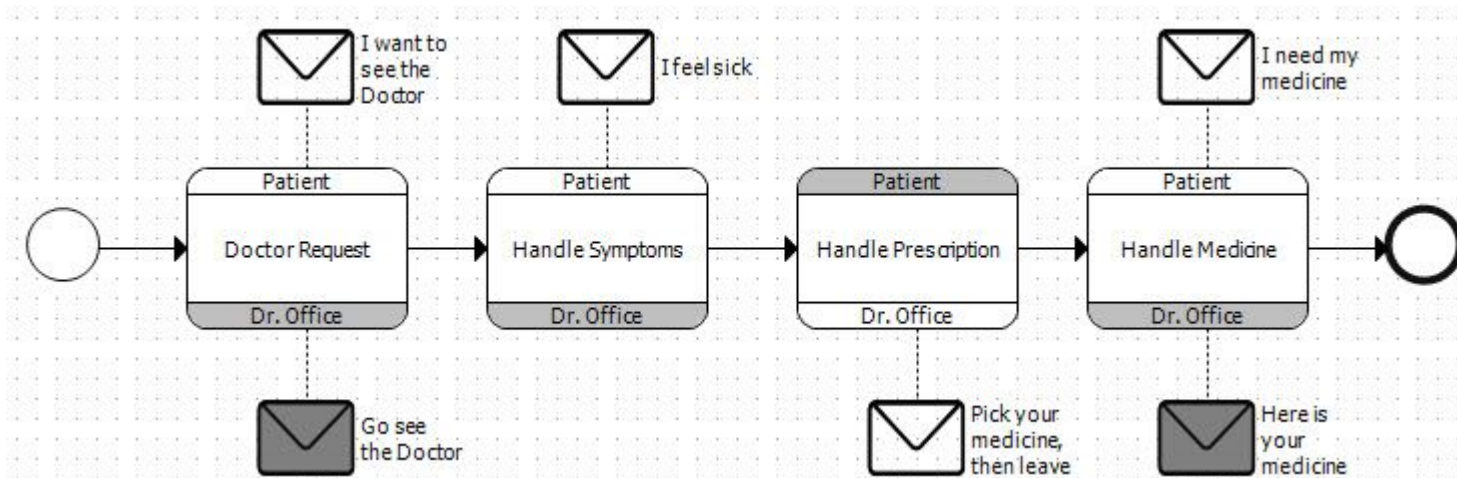
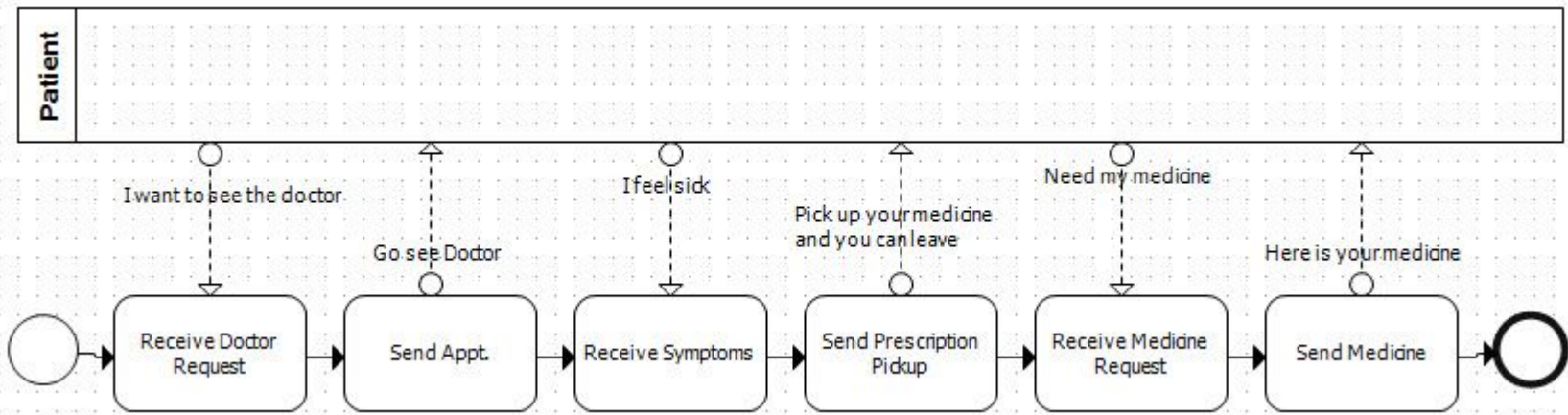
How to describe simple interactions?

- Just by BPMN and choreography diagrams



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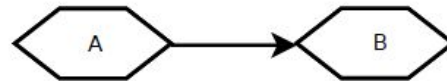


Process architecture entity approach

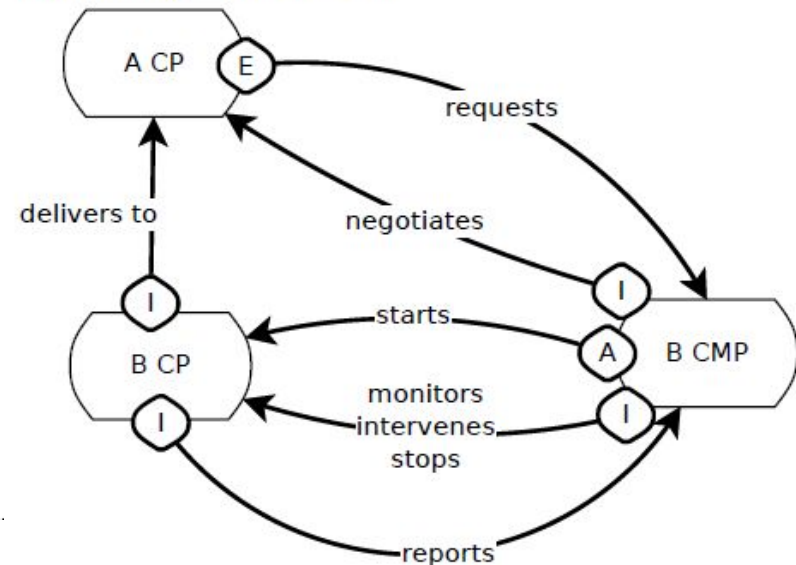
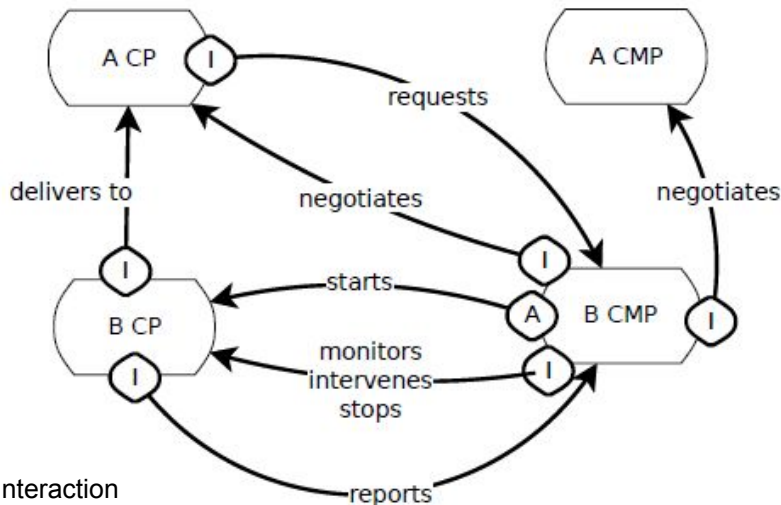
Business Entity -> Unit Of Work

Case Process, Case Management Process

Generates (1:n)



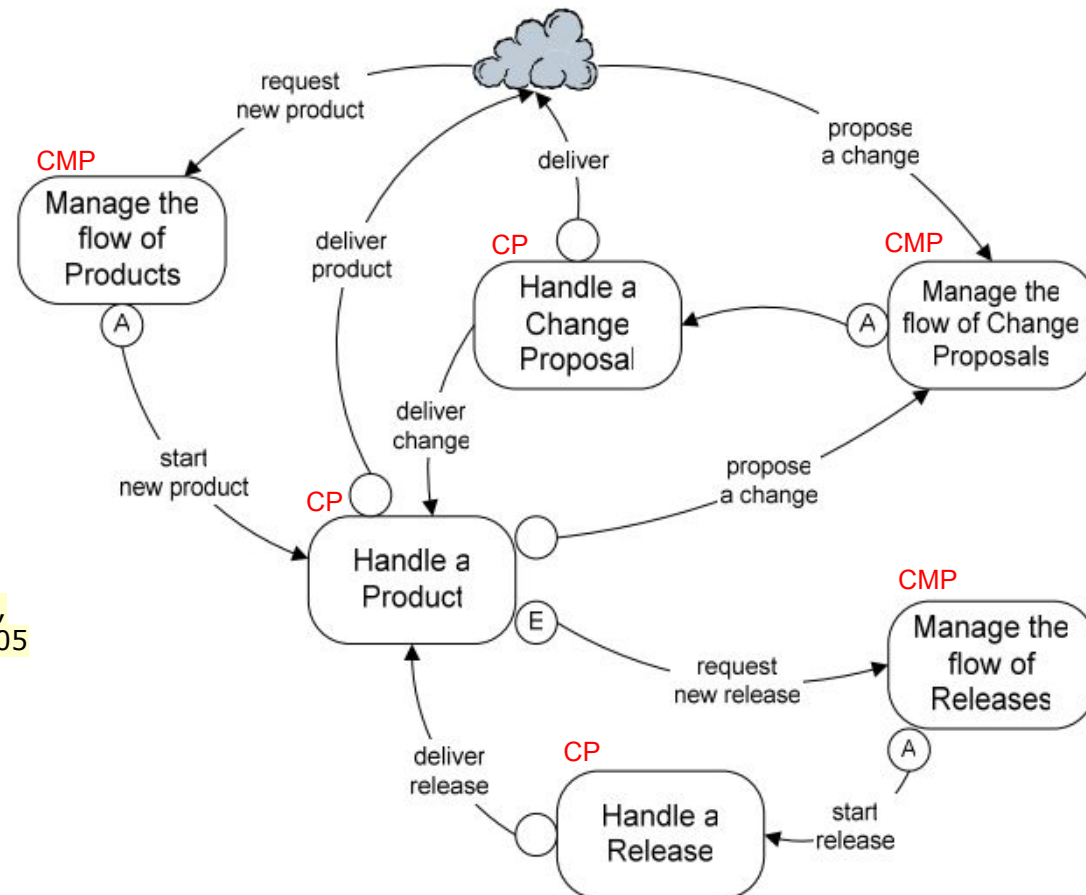
- **Service relationship** – a case where *UOW B* is provided as a Service and its *CMP* operates independently from *CP A*
- **A task force** – a case where *UOW B* is provided as a Task Force and its *CPM* is encapsulated in *CP A*



I nteraction
A ctivation
E ncapsulation

How to describe complex interactions?

- Process architecture diagrams



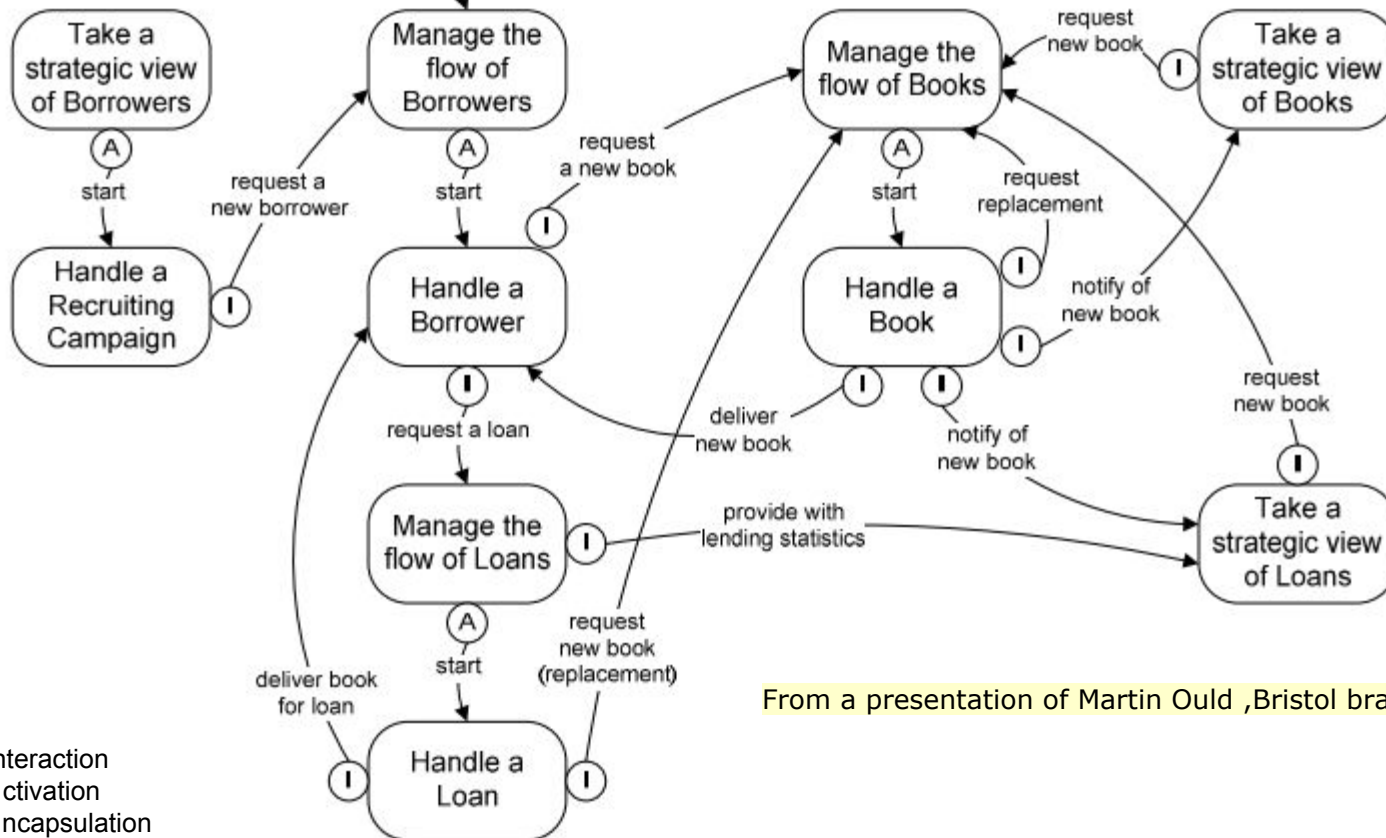
From a presentation of Martin Ould ,
Bristol branch of the BCS in May 2005

I nteraction
A ctivation
E ncapsulation

How to capture process dynamism?



With precise process architecture



From a presentation of Martin Ould, Bristol branch of the BCS in May 2005

I Interaction
A Activation
E Encapsulation

What happens in case of change?

- Changes in organisation structure
 - Processes aligned with organisation structure
 - Significant rework
 - Structural-independent process architecture
 - No changes in ideal case
- Changes in Business focus
 - Processes aligned with organisation structure
 - Not much, update of some processes
 - Structural-independent process architecture
 - Complete rework

FIN

Questions?

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