

# Process architecture & Advanced topics

PV207 – Business Process Management

Spring 2018

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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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  - Involves middleware (Messaging , ESBs etc)
  - Orchestration of inter-system communication
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- **Document-oriented BPM**
  - Management of document-flow
  - Often combined with Human-centric systems

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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



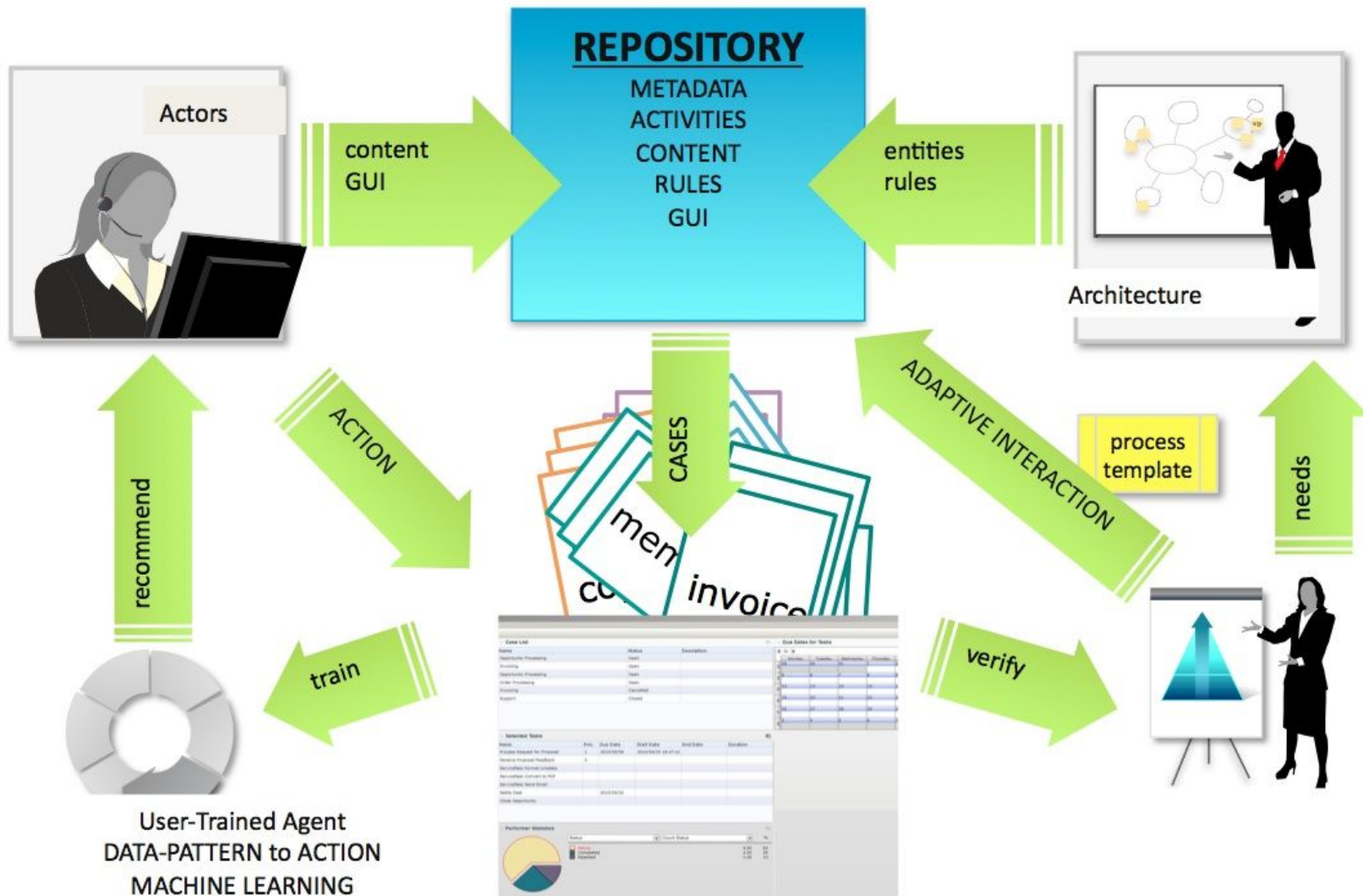
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- **Knowledge-intensive work**
  - Sequence of tasks is defined by decisions of the worker
  - Many exceptional situations possible
  - Knowledge of the worker plays key role
  - Ad-hoc process welcomed/wanted

# 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?

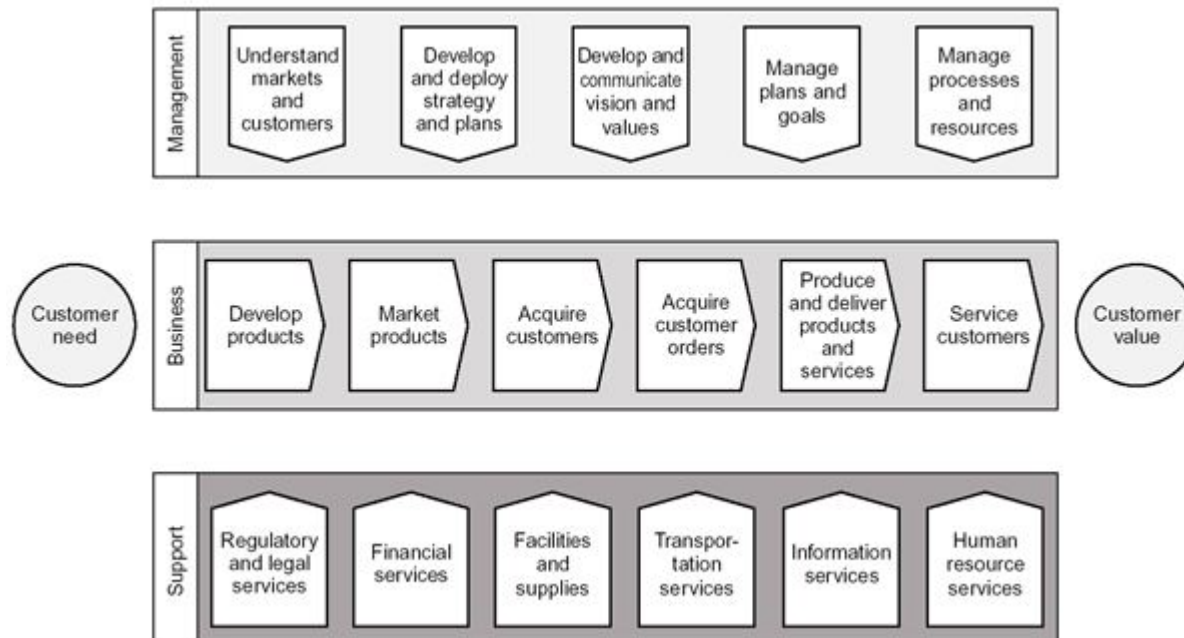
- By the purpose of the process
  - Alignment with business strategy
- **By organisation structure**
  - + Naturally easy way of categorising
  - - Does not reflect reality (Hacks needed)
  - - Fragmentation of real process = Silos are back!
- **By the “business entity” they are related to**
  - + Organisation 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

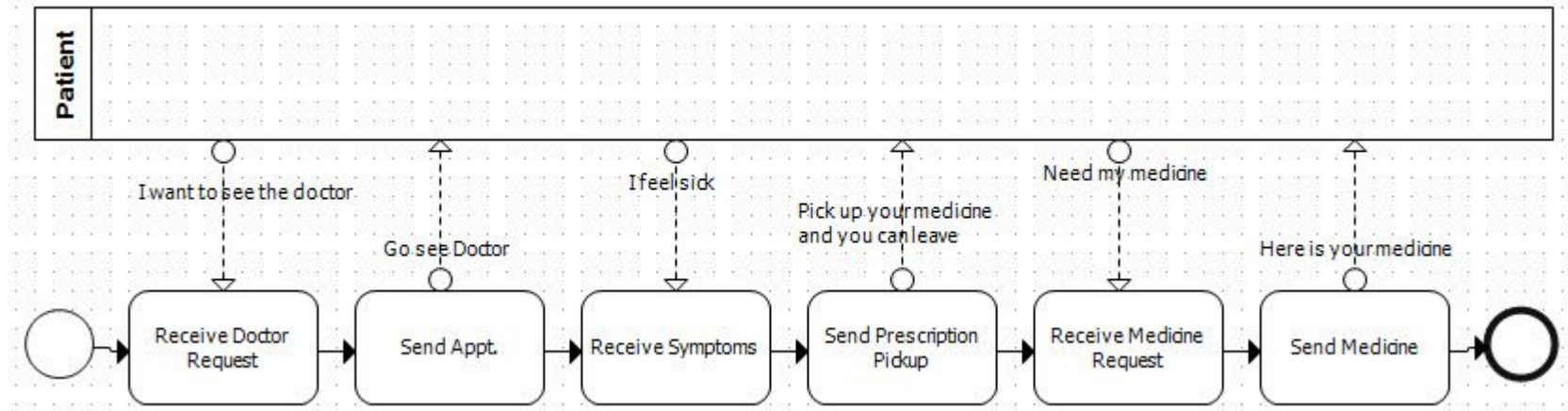
- Process is a sequences of steps that “handle” a business entity
  - We have to identify those entities first!
  - Entity examples:
    - Order
    - Product
  - Process Examples:
    - Prepare an order
    - Manufacture a product
- A Process can “handle” other process as well
  - Examples:
    - Manage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

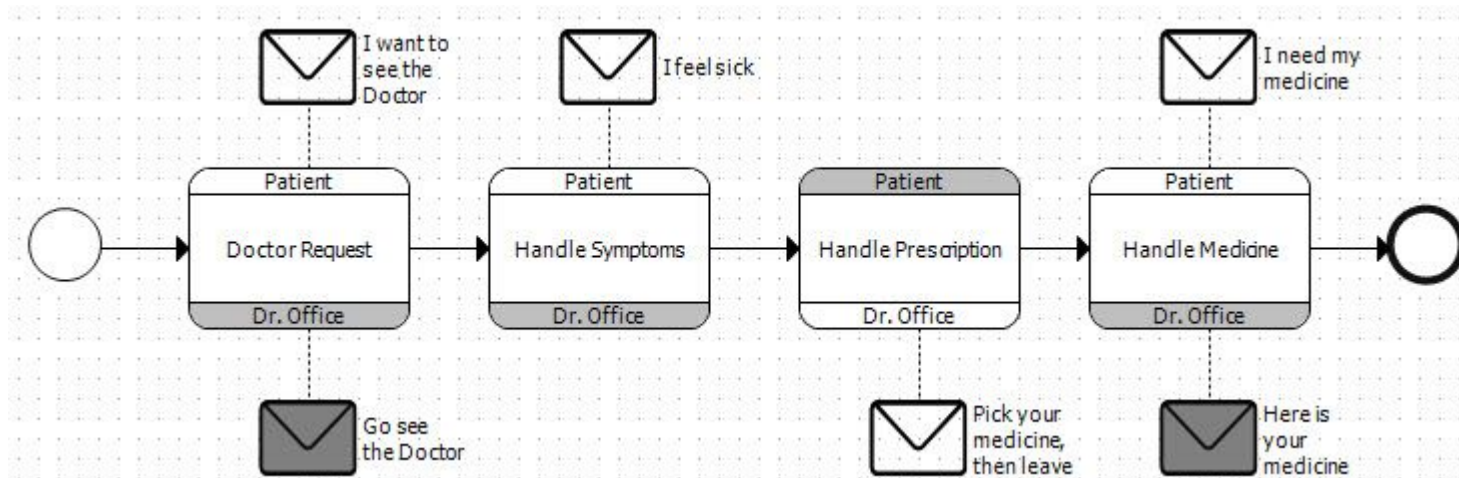
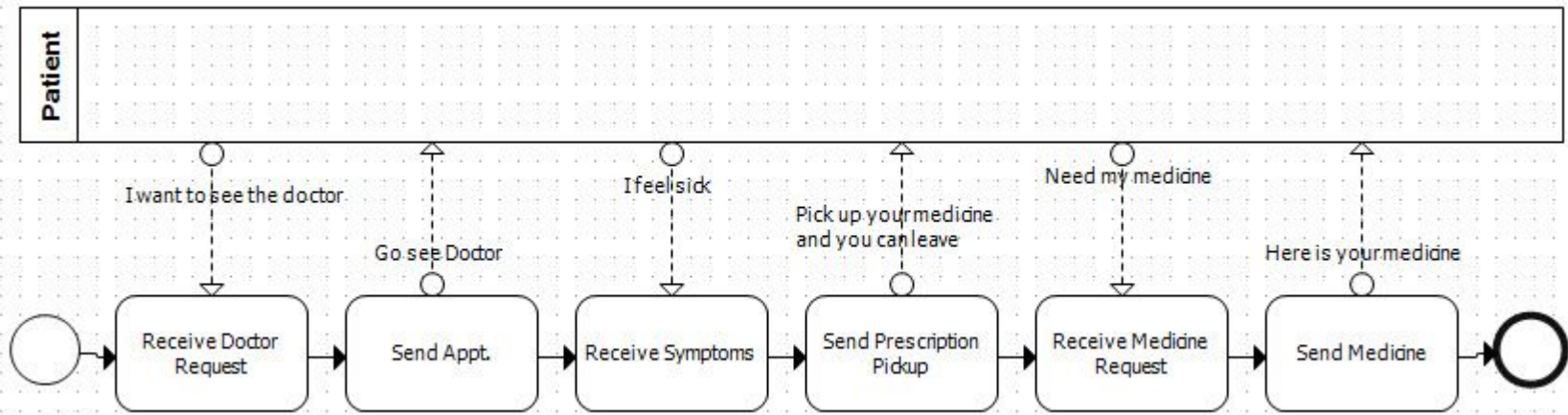
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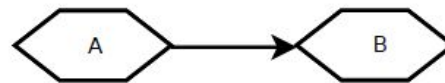


# Process architecture entity approach

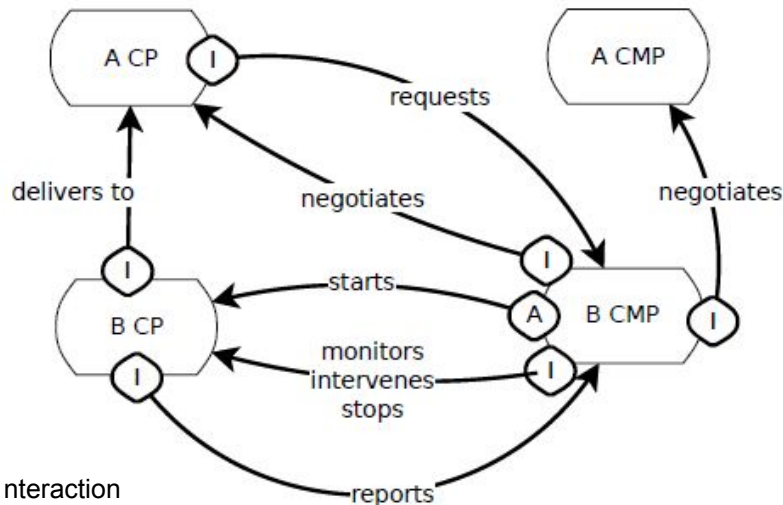
Business Entity -> Unit Of Work

Case Process, Case Management Process

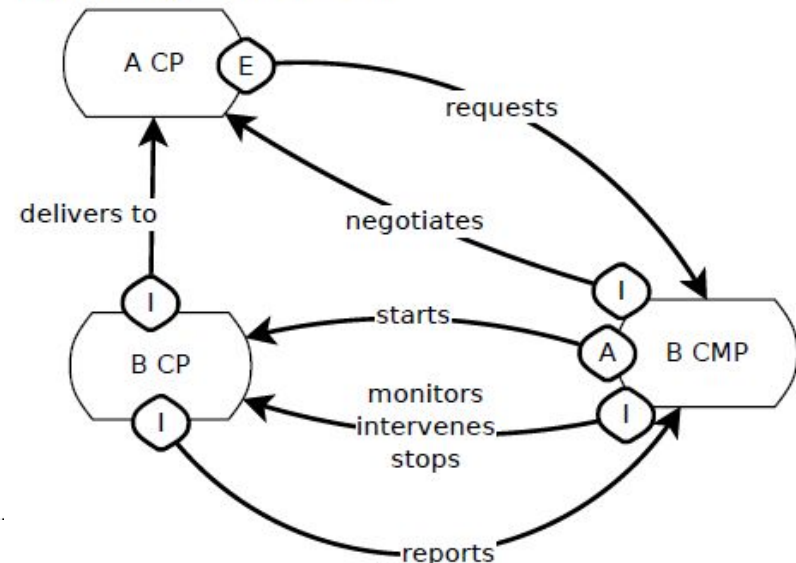
Generates (1:n)



- **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*

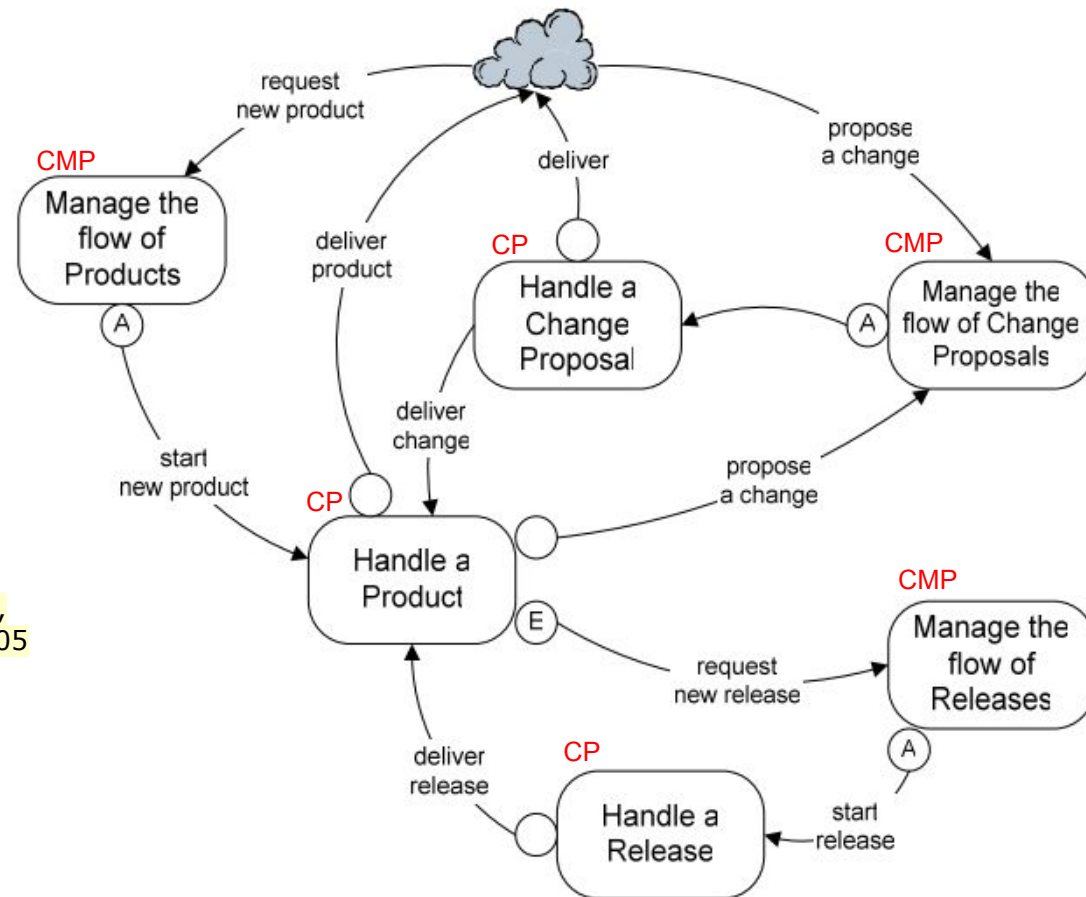


I nteraction  
A ctivation  
E ncapsulation



# How to describe complex interactions?

- Process architecture diagrams

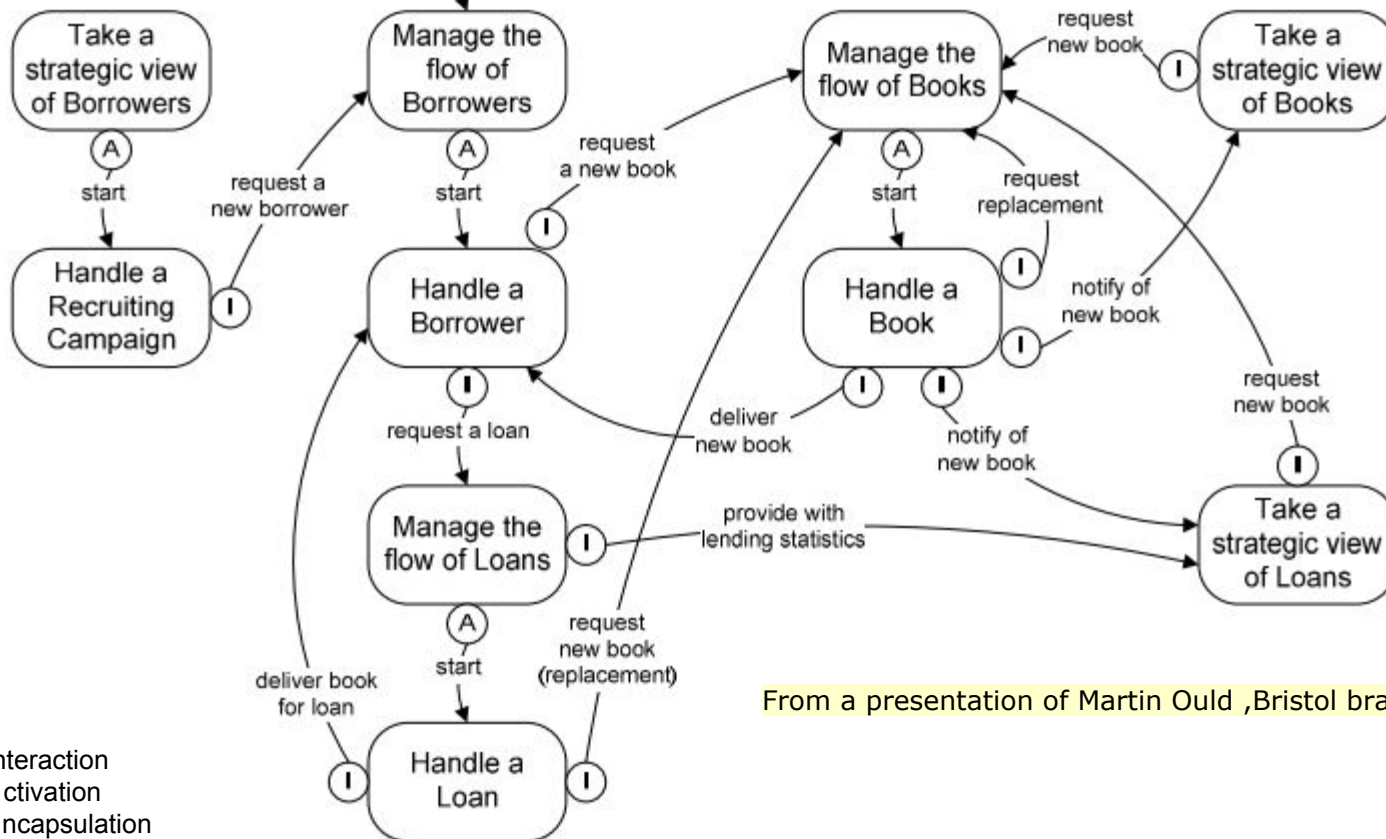


From a presentation of Martin Ould ,  
Bristol branch of the BCS in May 2005

# 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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