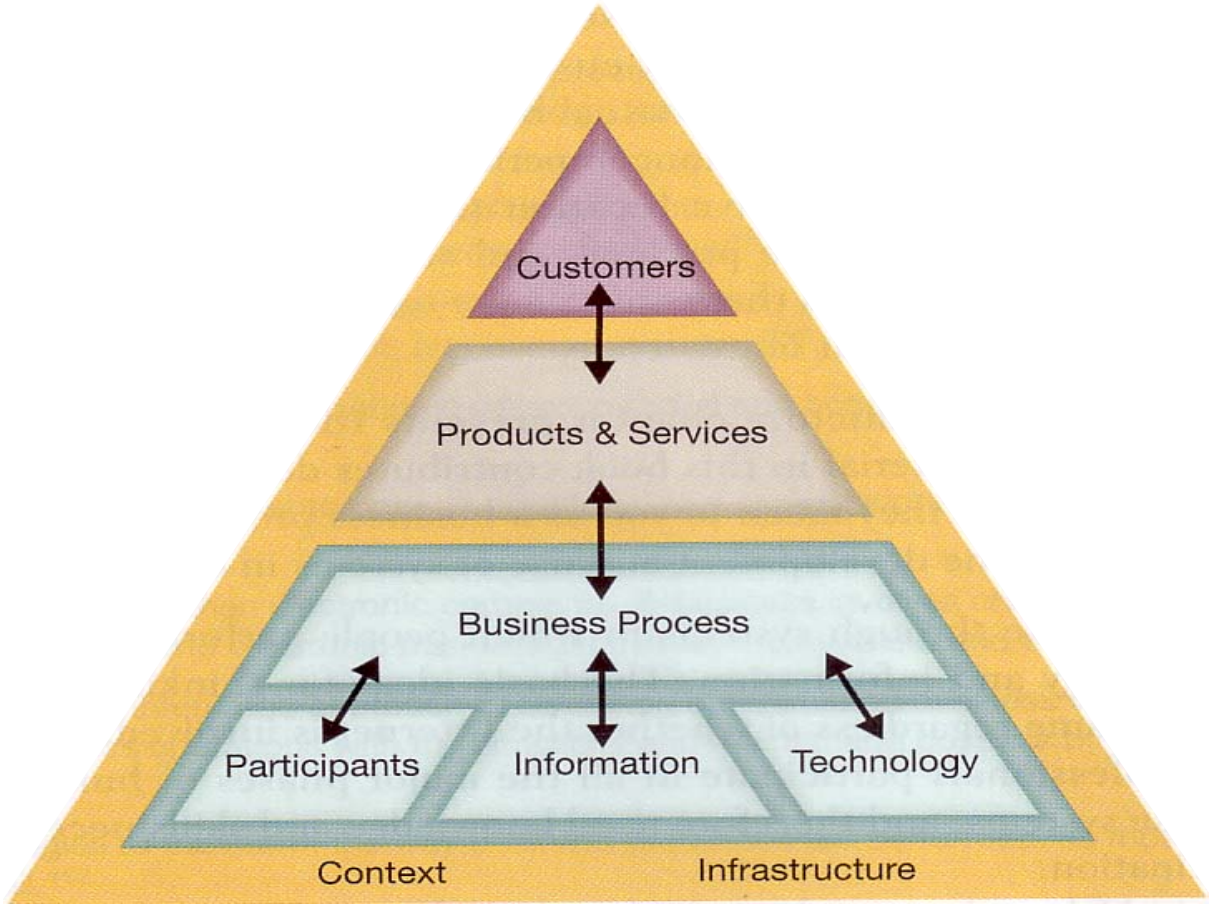
University of Applied Sciences Northwestern Switzerland
School of Business

Business Process Modelling

Process

- There are many definitions of a business process. Here are some important characteristics of a process
- A process is a systematic set of activities
  - which manipulate or transport material or information
  - in order to accomplish a specific purpose or objective
  - creating value for a customer (internal or external)
- Most processes
  - require some sort of input and
  - use and/or consume resources and
  - produce some sort of output – a service or a product

Work-Centered Analysis



Quelle: Alter, Steven: Information Systems – The Foundation of E-Business, 4. Auflage, Prentice Hall, New Jersey, 2002

Organizing Work of enterprises

- Organisating work requires answers to questions such as
  - Which stes are *really* necessary
  - Who should do them?
  - Should they be kept in house of outsourced?
  - How should they be done?
  - What capabilities are needed?
  - What results do we expect and how will they be monitored?
- Without commonly agreed descriptions of the business process, answers to these questions are often vague

Possible uses of Process Models

Organisational Change

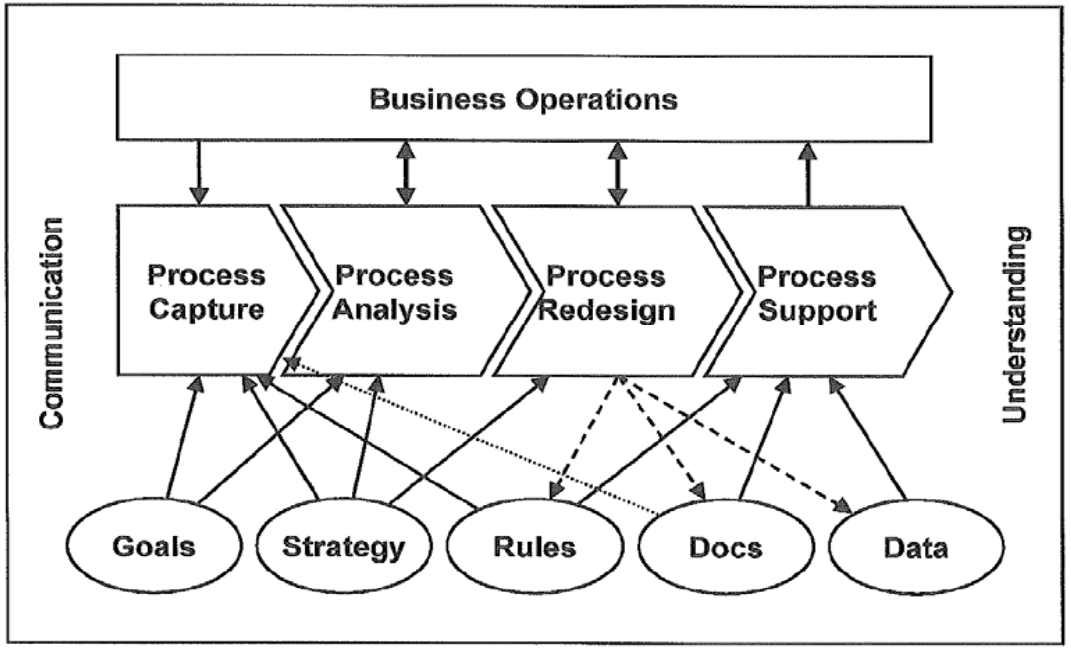
- documentation of the organisation
- re-organisation
- business re-engineering
- continuous process improvement
- quality management
- benchmarking
- knowledge management
- information management

Application Systems Design

- selecting standard software
- customizing software systems
- systems engineering
- software development
- workflow management
- simulation

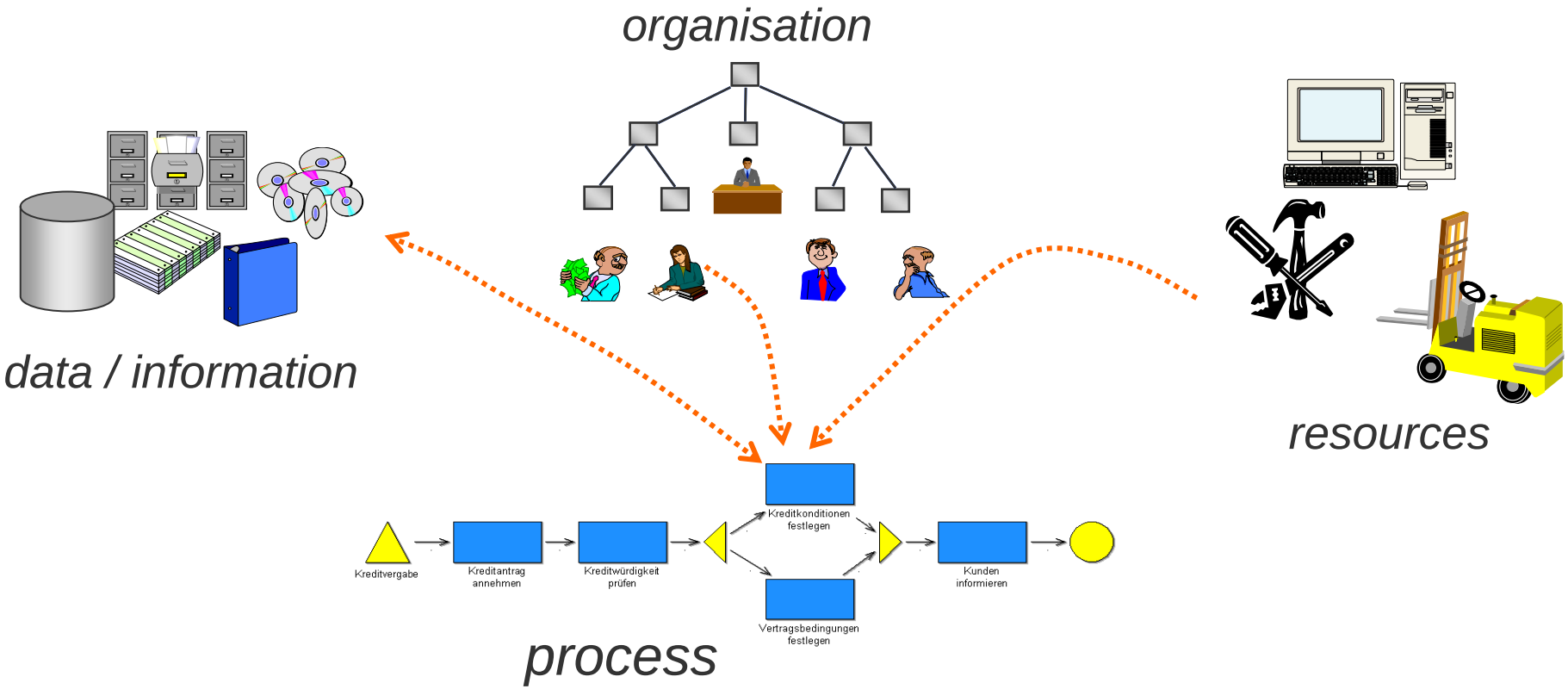
Process Models and Phases of Organisational Change

- People generally use process models to underpin their conversations, supporting communication and understanding
- Process models are usally created (discovered or captured) by looking into the business operations
- Potential inputs are goals, strategy and rules
- Some sort of analysis takes place before (re-)design.

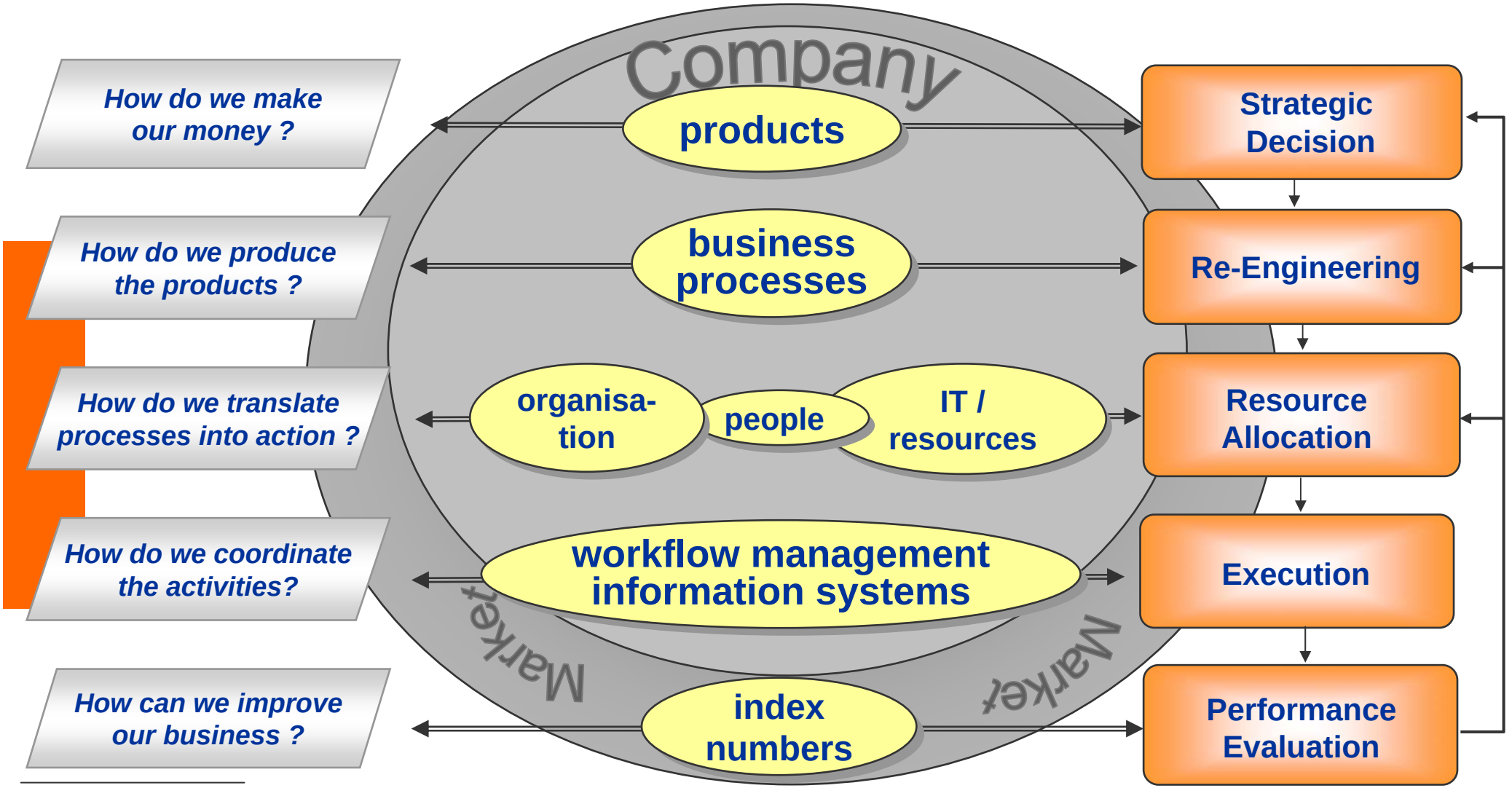


Process Models and their Relations

- Processes are related to other aspects of business
- Process Models must represent these relations, too.



The BPMS*) - Paradigm



*) BPMS - Business Process Management Systems - developed by Prof. Karagiannis, University of Vienna, BOC GmbH

Modeling Issues

- The modeler is always making modeling decisions about the purpose of the model and the intended audience
- level of detail depends on the audience and the purpose
  - communication require less detail
  - for executable processes or simulation signification detail is required
- Content of the model
  - Organising work: → process structure
  - process improvement: → performance measures
  - process execution: → data structures, application interfaces, …

Possible Purposes of Process Models

- Structure: Process Models drive communication
  - inside an organisation, helping to form a shared understanding
  - with suppliers, customer and/or partners up and down the value chain to agree on cooperation
- Performance: Process models provide a framework within which metrics have meaning, e.g. end-to-end cycle time and activity costs
- Execution: Interpreted by sophisticated software systems, executable process models carry the instruction for how work should happen, who should do it, links to information systems etc.

Principles of Proper Modelling

- Correctnes
- Relevance
- Economics
- Understandability
- Comparability
- systematic construction

The principles can be clarified by explicit modelling conventions

Good Models

Some Criteria for good models

- Salient – selectively represent those things that are most relevant to the task at hand
- Accurate – The model should precisely encode the actual state of affairs and not an erroneous or biased view
- Completeness vs. parsimonious – THe model should be as simple as possible , but no simpler
- Understandable – The audience must be able to make sense of the model; it should not be too complicated or unfamiliar
- Coherent – Models do not exist in isolation but in interlocking systems, thus any particular model should be coherent with other related models.

Source. M. Clemens, http://www.idiagram.com/ideas/models.html