Action Research on Process Analysis Maps. What does an arrow mean?

Paola Mauri
Senior Consultant in System Management
ICMCI Certified Management Consultant
Star srl  Italy
STPIS19
About me

• Reliability Method and Data Analyst in a microelectronics company
• Practitioner on (Quality) Management System for companies with different characteristics
‘The story of socio-technical design is closely allied with action research’

E. Mumford
Summary

- **Action Research approach**
  - Framework of ideas and Methodology
  - Real word situation: Process Analysis in Large Sized Companies
  - Reflection: Process Taxonomies and Notations
  - Research themes: Methods, Tools and Notations
  - *Findings*
Action Research

• The researcher is actively involved
• The knowledge obtained can be immediately applied
• The research is a cyclical process linking theory and practice
Checkland Model

Real word situation

Framework of ideas. Methodology

Research Themes

Reflection based on framework of ideas and methodology

Action

Findings
Framework of ideas. Methodology

Management Systems
Process Analysis
Socio-technical Design
Ethnographic Approach
Role of Maps
Real word situation. Large sized companies

- Governance: Board of Directors, Business Model and Strategies
- Worldwide distribution of sites and markets
- Organizational structures: complex and subject to change
- ICT management: developers and end-users
Projects and actions

• Contractual commitment and objective: producing maps to describe processes
• Method: involvement of all the functions
• Mapping tools
Process Description

• Taxonomies and levels
  – Roughly structured: Order Handling, Production, Delivery, ...
  – ISO/TS 22163 (Railway): Project Management, Configuration Management, Obsolescence Management, ...
  – APQC Process Classification Framework: Develop Vision and Strategy, Market and Sell Product, Acquire, ...
  – ERP Processes: Order Handling, ...

• Mapping: notations and tools
Experience
An example

Requirement of ISO 9001: Operation

- Customer related processes
- Design
- Provision of product and services
- Production
- Delivery
- Control
Order Handling

Customer Service
A. Customer order receipt formalized with the Internal order form (A).

Accounting
B. Fill in of customer order in ERP system as Draft Order (B) according to the price list defined by Sales (C).

Production Planning
C. Check of the customer credit position.
D. If credit limit exceeding the order become "blocked" and cannot be confirmed to the customer.

Check of credit position with the Over credit limit report (D)
E. Order confirmed to the customer according to the delivery date (E)

Logistic

Delivery

Check of order confirmation consistency
The order acknowledgment to the customer
Results

• Refinement of the design method
  – Planning of meetings
  – Involvement of top management and ‘process deputies’

• Relationships with other process analysts
  – Controlling Area
  – Information System Area

• Mapping
  – Effective way of communication
  – Choice and meaning of the notation
Reflections

• Any type of graph is better than a table

• Drilling down the processes
  – Several layers
  – Different points of view to describe the same process
  – No relationships, even with the same notation

• Meaning of the graphical symbols
  – Arrows relate to time, goal, entity
Outlook

• (Action) Research theme
  – Defining a method
  – Proposing a socio-technical project to my customers
  – Sharing methods and tools with IT function
Outlook

• Research theme
  – Reflecting on maps and graphical symbols: ontological dependence
  – Ontology versus Epistemology. How the model corresponds to the observed reality
  – Exploring other maps and graphical symbols
Thank you