Integrating Knowledge Management with Business Process Support

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Lecture based on the Inka research project

- Integration of business process support with knowledge management:
  http://processplatsen.ibissoft.se/node/39

- Questions to answer:

  1. What business processes have to do with eGovernment?

  2. What business processes have to do with knowledge management?
Government – 90% bureaucracy, 10% - politics

• Bureaucracy does nothing else than run business processes (in Swedish there is a difference between affärsprocesser and verksamhetsprocesser)

• Examples:
  - processing an application for building permit (office of architecture)
  - processing an application for financial help (social services)
  - processing application for child adoption (social services)
  - preparing a decision to be taken in a committee (administrative office)

Example: Preparing a decision to be taken in a committee

One of our first BP analysis projects
Goals with eGovernment – achieve better governance

• For example:
  – Better service to citizens/residents
  – More transparency and accountability
  – More democracy

• These goals cannot be achieved without having better order inside the government, i.e. more efficient business processes based on the latest achievements in:
  – Technology
  – Theory and practice of BPM

Working definition of Knowledge

• Practical knowledge - information used by a person to perform action in a real-world situation (context).

• Operational knowledge – Knowledge needed to carry out routine daily operations in a work place/office
  – Knowledge on operational goals, policies, and procedures (routines)
  – Knowledge on current state of affairs in the organization
  – Knowledge on past experience
Two types of practical/operational knowledge

• Experience-based knowledge (EBK) - info on actions undertaken in the past together with description of contexts and outcomes

• Generalized knowledge (GK) - laws and/or rules relevant in a context. Laws establish limitations on what actions can be valid/successful in a given context; rules prescribe/prohibit/recommend actions for a given context

Working definition: Knowledge Management System (KMS)

• A system for gathering, storing and giving access to operational knowledge

• Goals:
  – make knowledge a property of an organization rather than individuals
  – make organization less vulnerable to absence of staff members
  – make effective use of knowledge independent of who have acquired it
Why it is difficult to introduce KMS in practice?

• Extra burden for staff members

• Solutions:
  – Free people from other assignments, or
  – Introduce computer-based KMS

What should computer-based KMS provide?

• Automatic gathering of experience-based knowledge
• An active generalized knowledge base

• What is needed for the above: access to the context in which knowledge is used/should be used

• This cannot be obtained unless KMS is integrated with a system that support business activities, i.e. routine everyday activities
Which system to integrate with?

- What operational knowledge is structured around? – Business Processes
- Context of knowledge application – business process instance/case I am currently working with
- EBK - histories of finished process instances supplied with rating of outcomes
- GK – rules of how to handle process type

Required – integration of KMS with BPS
How?

Business Process Support System

Multi-case/desk/worker environment
In which

Desks are arrange in a proper way

Documents Logbook To do list

Time Machine Call panel

Example of how it could look like

Call panel Executing task in context
Adding Knowledge Management

- Automated identification where and when some person is needed
- Automated decision on whom to move to this place
- Automated provision with right tools to complete the task
  - books and manuals
  - histories of similar process instances from the past

Activating GK via rules of planning

- Automated identification where and when some person is needed
- Automated decision on whom to move to this place
- Types of rules
  - Obligations
  - Recommendations
  - Prohibitions
  - Negative recommendations

Two step planning how it works?
Rules of planning: example

Summary

- Effective KMS for operational knowledge require computerization and integration with BPS
- BPS automatically accumulate EBK
- Permit activation of GK via rules of planning
- Automated use of EBK requires metrics on similarity of process instances/cases
Literature from Inka project


Thank you for your attention!

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