

Management and implementation of enterprise information systems

Results of AsiaLink project MI-EIS

EU-China projects

- BEST project – improving project start-up
 - Better Enterprise SysTem implementation
 - 5th Framework IST project
 - 2002-2005, 12 partners
 - 24 case studies in EU
- AsiaLink project MI-EIS – master programme
 - Management and implementation of enterprise information systems
 - 2006-2008, 3 partners (UK, NL, CN (Hunan Un.))
 - 4 case studies in China (Hunan Province)

Background

- Implementation of enterprise systems difficult
- Recurring problems in Western context, e.g.,
 - Insufficient top management commitment
 - Under-estimated impact on daily processes and organisational change
 - Considered as mainly IT problem
 - Late or lacking user training
 - No budget after project ending
 - Insufficient understanding of business processes
 - Etc.

Vision

- What knowledge is needed to improve future implementation projects?
 - Existing knowledge too generic
 - Different people tell different stories
 - Situations differ between companies, between enterprise systems – ‘re-inventing the wheel’
- Our goal
 - Gather experiences from different project roles
 - Understand context differences

Approach

- In-depth case studies
- A case is an implementation project
- Case protocol
 - Demographic questionnaire
 - Project information
 - Gathering of experiences
 - Process scheme
 - Interview protocol

Gathering experiences

- Cause-event-action-outcome chain (CEAO)
 - Event – something that needed action
 - Cause – something that caused the event in the eyes of the interviewee
 - Action – to change the course of the project
 - Outcome – positive or negative result
- CEAOs are mini cases – little process descriptions
- Analysis of CEAO chains

Example CEAO chain

Cause:

The system involved many sub-systems, it was difficult to integrate the products, and

The developers varied from each other in understanding the business and the system.

Event:

Problems concerned the resources integration in the system and the effectiveness of the system.

Action:

Company experts and provider were asked to communicate with each other to make a new standard and a detailed process to ensure the quality of the products.

Outcome:

Cooperation with the software providers and the enterprise's own efforts helped solving the problems soon.

CEAO chain analysis

- Causes of CEAO chains labelled based on organisational system framework
- Organisational system
 - Strategy and goals
 - Management
 - Business process
 - Structure
 - Knowledge and skills
 - Social dynamics
- Three co-existing organisational systems
 - Daily business wrt impacted processes
 - Implementation project process
 - Enterprise system adaptation process

Reference framework

	Enterprise system	Project management	Permanent business
Strategy and goals			
Management			
Structure			
Process			
Knowledge and skills			
Social dynamics			

Chinese cases

Company No.	Selection Criteria		
	Size	System	Sector
Company A – Heavy machinery	Large	ERP	Product
Company B – Telecom	Large	CRM	Service
Company C - Hotel	Large	HIS	Service
Company D – Electric transmission technology	Large	MRP-II	Product

Chinese cases

	Business	Project Management	Enterprise System
Strategy & Goals	10	1	2
Management	15	9	2
Structure	1	3	13
Process	5	1	14
Knowledge & Skills	22	1	5
Social Dynamics	11	3	1

EU cases

	Dimension			
Aspect	Business	Enterprise System	Project Management	Total
Knowl. & Skills	24	4	11	39
Management	40	4	12	56
Process		22	19	41
Social Dynamics	32	7	17	56
Strategy & Goals	20	2	3	25
Structure	16	27	4	47
Total	132	66	66	264

Context of Chinese case studies

- Challenge to achieve commitment for interviews
- No individual interviews
- About 50% of CEO chains positive

Comparison between EU and China

- Similar problems
 - Different views between roles
 - Knowledge and skills
 - People in project (resource problem)
 - Consultancy (understanding business)
 - Management commitment important
 - In China management seems more committed
 - Resistance by end users
 - Impact on daily process
 - Training used to resolve commitment problem
 - Gap to bridge between business process and enterprise system

Comparison between EU and China

- Selection of suitable software package, provider and consultant similar
- Chinese companies more similar to EU SMEs
 - Companies at the start of enterprise system implementation
 - Larger involvement of management
- Main difference: Western software packages and providers proved not suitable for Chinese companies
- Companies have selected Chinese software packages and providers after thorough investigation

To do

- Make CEAO chains 'readable'
- Make them available as mini-cases ordered according to
 - Context (company characteristics)
 - Enterprise system
 - Role
- Suitable to train
 - Consultants
 - Students of business management and computer science