



MAPPER

Model-based Adaptive Product and Process Engineering

Work Package 1:

CRF Use Case Scorecard

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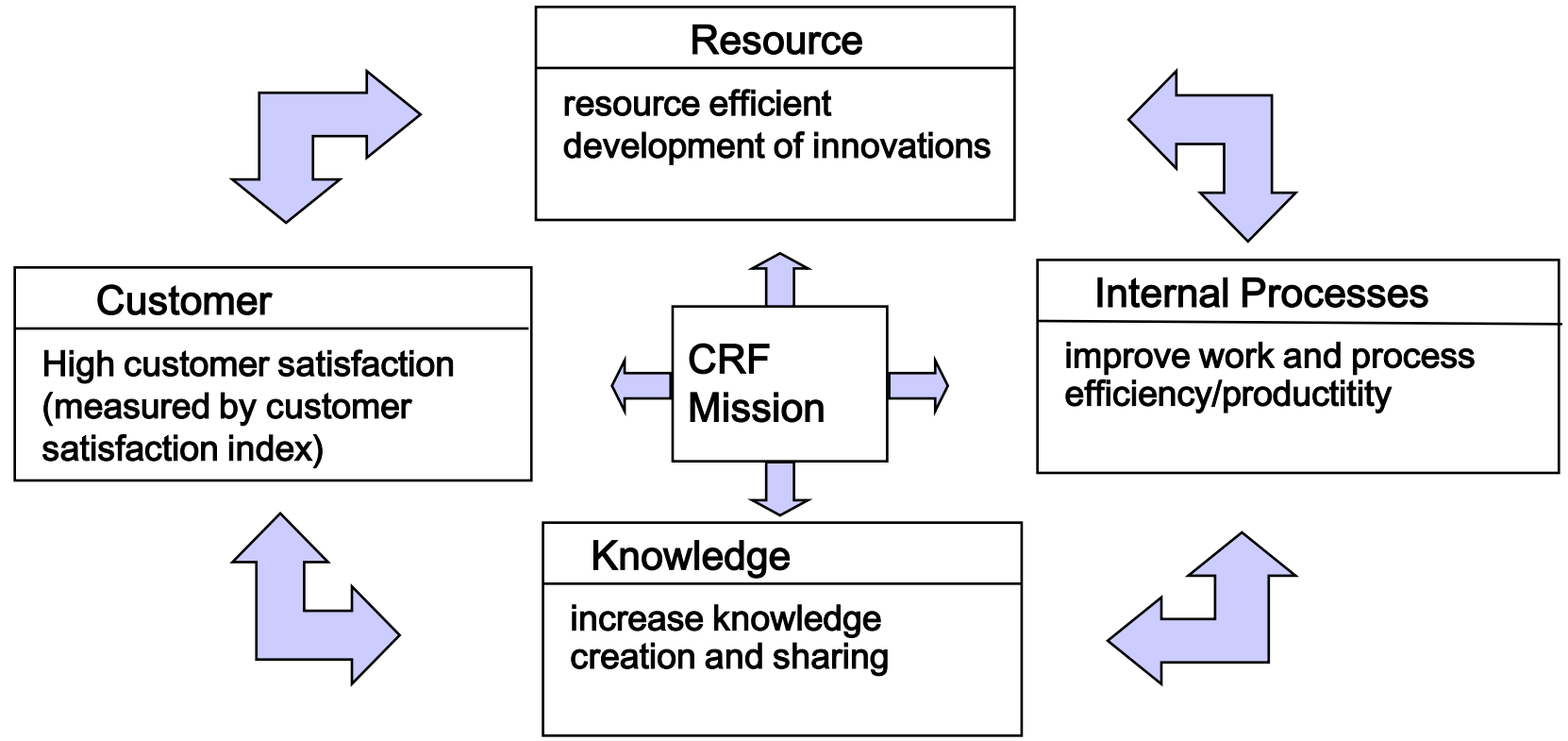




Mission and Perspectives

- Mission statement:
Clients Competiveness at Competitive Prices
 - Create and transfer innovative products, processes and methods
 - Develop and use advanced engineering techniques for product development production
 - Provide state-of-the-art facilities, equipment and laboratories
 - Maintain a top-quality workforce of highly-dedicated, well-qualified professionals
- Goal/sub-goal scope:
Keep goals and sub-goals on level of PDP and indicators on the level of target setting process

CRF Scorecard



MAPPER meeting
Vienna, June 20-21, 2006

Resource Perspective

- Goal: resource efficient development of innovations
- Sub-goals
 - To complete projects with the given budget (indicator: target setting in the planned portion of budget) in the given time
 - to improve resource use (target setting: number of change requests)
 - To reduce waste of resources in communication between stakeholders
 - to be able to explore more solutions/possibilities in the same time (e.g. in defined project runtime)

Resource Perspective

What to measure?	Motivation	Indicator(s)	How to measure? Who measures? When? How to document?	Historical Data?
Budget compliance	Collab. support should help to avoid misunderstand.	Planned vs. actual budget of TSP	Existing project documentation and review	Yes (earlier processes)
Compliance to time plan	Collab. support should help to avoid misunderstand.	Planned vs. actual time share of TSP	Existing project documentation and review	Yes (earlier processes)
Costs for Travel	Travel costs should go down	Travel Expenses	Project controlling	yes
Costs for Meetings	Meetings should be more effective, i.e. costs go down	Costs of meetings and phone conferences	Duration of meeting and conferences * average personnel costs	Yes, based on the minutes of the project
Resource use	Collab. support should help to avoid misunderstand.	Refinements of the original plan (excluding errors in the initial plan)	Process improvement and process control sheet	Yes (Earlier projects; ISO 9000 documentation)
Effort for exploring new solutions	Collab. support should help to avoid earlier mistakes and create time for new ideas	Average time for developing / assessing new solution	Estimation by designers + does the average time decrease	no
Costs of collaboration infrastructure adaptation	Changes of the model result in update of collaboration space	Time needed to integrate new partner, change role, move task Number of systems to update	MAPPER infrastructure vs. conventional working	



Process Perspective

- Goal: improve work and process efficiency/productivity
- Sub-goals
 - To improve cooperation process between project group, customer and other partners by supporting transparency in knowledge sharing, status of work, work flow, ad hoc collaboration
 - To improve support for project management in task management (e.g. by supporting meeting organisation, open issue lists, task list, etc.)
 - Improve visualisation of process, responsibilities and systems for different stakeholders
 - Improve understandability and level of detail of the processes
 - Achieve repeatable and manageable work flows (quality procedure)
 - process support for fast and efficient feasibility studies for innovative solutions
 - To achieve efficient communication processes between all stakeholders (reduce number of iterations)
 - Possibility to easily update the collaboration network

MAPPER meeting

Vienna, June 20-21, 2006

Process Perspective

What to measure?	Motivation	Indicator(s)	How to measure? Who measures? When? How to document?	Historical Data?
Number of task patterns for cooperation incl. their quality and intensity of use	Improve cooperation is an objective	Number of cooperation task patterns Quality of patterns Use of the task patterns	Number: template in MAPPER infrastructure Use and quality of the patterns: interview designers	no
Existence/quality of task patterns for project management	Support task management in project management	Number of existing task patterns Use of these patterns	Use and quality: interview the project managers	no
Quality of Design Process documentation	Good process documentation supports understandibility, visualisation and reflects work practices	Time for updating process description How good do reality and description match? Level of detail Perception of Users	Quality of Model approach (e.g. NIMSAD och Krogstie)	The current design procedure
model for feasibility studies	Support feasibility studies is objective	Existence of Model Use of Model	Use of model is measured by interviewing involved designers	no
Easyness of model adaptation	changes of the model result in update of collaboration space	Time needed to integrate new partner, change role, move task Number of systems to update manually	MAPPER infrastructure vs. conventional working	
Communication traffic between partners	Work results published in the repository instead of using mail	No. of e-mails with attachment	Interview the designers involved in order to get their perception (e-mails in personal mailboxes)	Yes (personal mailboxes)



Customer Perspective

- Goal:
High customer satisfaction (measured by CSI customer satisfaction index)
- Sub-goals:
Improve the satisfaction of the customer with respect to
 - how well the customer requirements were understood by the project team and captured in the specification
 - quality of documentation for the customer (MAPPER can provide templates of documents/standards; Indicator: compliance with standards)
 - How well the results of the project satisfy the initial specification
 - Keeping time and costs

Customer Perspective

What to measure?	Motivation	Indicator(s)	How to measure? Who measures? When? How to document?	Historical Data?
adequate documentation of results	Interlinking of artefacts from different perspectives should lead to a better documentation quality	Number of entries/ documents in the repository Number of accesses to the repository / distribution on different roles Expected documents vs. Existing documents Perceived quality of documentation	Measured by the repository system Measured by the repository system Interviews with people involved	no
Understanding of customer requirements	Collab. support should improve communication	CSI indicator of understanding customer requirements	Customer satisfaction index form	Yes
Conformance of specification and result	Collab. support should improve communication	CSI indicator of conformance specification and result	Customer satisfaction index form	Yes
Keeping time in projects	Collab. support should help to avoid misunderstandings	CSI indicator of customer satisfaction with keeping time	Customer satisfaction index form	Yes
Keeping budget in projects	Collab. support should help to avoid misunderstandings	CSI indicator of customer satisfaction with keeping budget	Customer satisfaction index form	Yes



Knowledge Perspective

- Goal: increase knowledge creation and sharing
- Sub-goals
 - to decrease the lead time for receiving relevant information for all stakeholders involved in the project
 - To reduce the number of unnecessary interactions between the people in the project: are we wasting time in asking people (by phone or email) to provide information that is available online?
 - To provide the customer with personnel with right competences (MAPPER: include the required competences to roles and existing competences to personnel; check assignment)
 - To stimulate the creation of innovative solutions (MAPPER: assess new solutions on the fly by using MAPPER and check feasibility or manufacturability; indicator: patents, number of alternatives that have been assessed (process will be faster))

Knowledge Perspective

What to measure?	Motivation	Indicator(s)	How to measure? Who measures? When? How to document?	Historical Data?
Easiness of information supply	In MAPPER model generated workspaces provide support role-specific information access	Time needed to access information from new partner, in a changed role, or for a new task, etc. Number of systems to update manually	MAPPER infrastructure vs. conventional working	Situation of conventional system
Unecessary e-mail exchange	Reduction of e-mail sent or received should be reduced because people access the platform	No. of e-mail exchanged Perception of users: do we get less unnecessary messages	Team members check their own mailboxes	Yes, in individual mailboxes
Existence/quality of competence information		Level of detail of competence information for roles, for persons and for tasks	Comparison of level of detail of ISO 9000 and model competence information easiness of matching competence information (compare ISO 9000 and MAPPER)	no
Innovative solutions	Increased collaboration should support innovative solutions	No of alternatives for technical solutions for customer requests Time needed for assessing technical alternatives (e.g. by involving a supplier No. of patents	To be derived from interviews with project managers or team managers	(maybe by collecting the impression of the project managers)