

Successful Re-engineering Projects

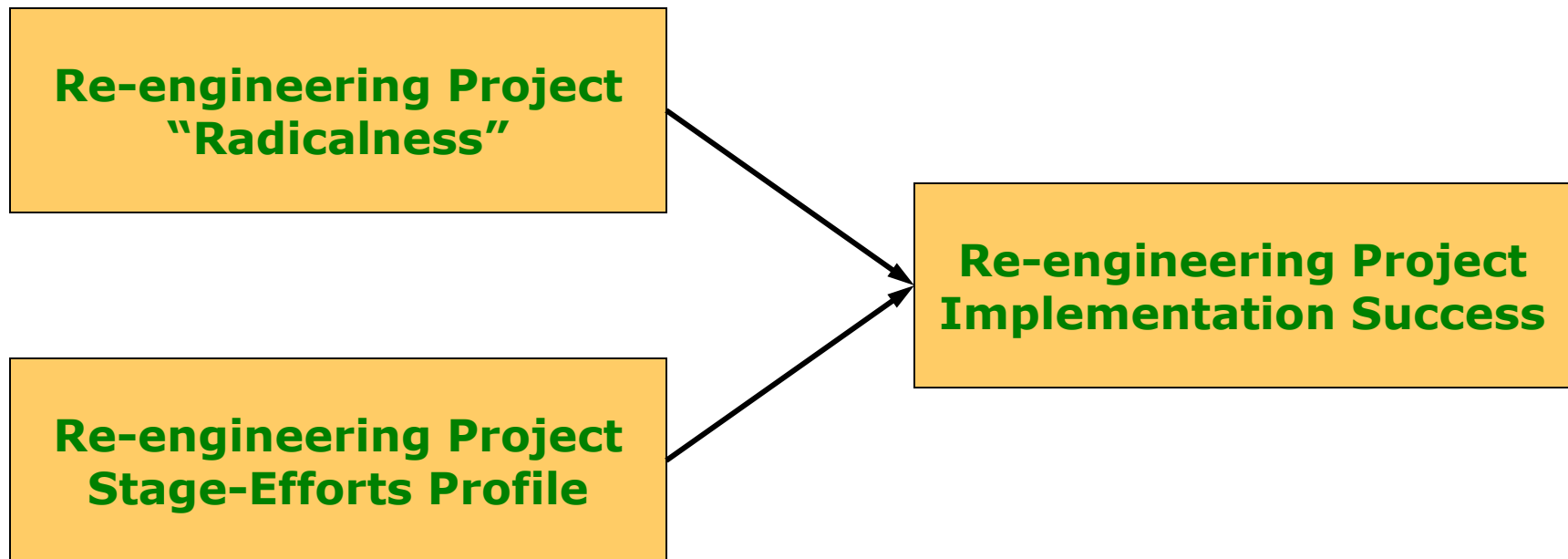
Based on: Teng, Jeong & Grover, Profiling Successful Reengineering Projects.

Communications of the ACM, Vol 41. No. 6 June 1998

The questions

- Are reengineering projects aimed at more radical change resulting in higher implementation success?
- If limited attention and resources must be allocated among the different stages of a reengineering project, which stage (or stages) should receive more emphasis in order to achieve higher implementation success?

Research Model



Comparison of variables:

- Re-engineering project radicalness
 - *Measured in seven dimensions*
- Re-engineering project stage-efforts profile
 - *Eight typical stages in a project*
- Re-engineering project implementation success
 - *Perceived level of success*
 - *Goal fulfilment.*

Project stages and tasks (see Klein)

Stage 1: Identification of BPR opportunities

- Establish a steering committee
- Secure management commitment
- Align with corporate and IT strategies
- Identify major business processes with an "business model"
- Understand customers' requirements
- Prioritise processes and select one for implementation

Stage 2: Project preparation

- Plan for organisational change
- Organise a BR team for the selected process
- Train the team members
- Plan the project

Stage 3: Analysis of existing process

- Analyse existing process structures and flows
- Identify value-adding activities
- Identify opportunities for process improvement

Stage 4: Development of a process vision

- Understand process customers requirements
- Identify process performance measures
- Set process performance goal
- Identify IT that enables process re-design
- Develop a vision for the redesigned process

Stage 5a: Solution: Technical design

- Develop and evaluate alternative process designs
- Detailed process modelling
- Design controls for process integrity
- IS analysis and design for the new process
- Prototype and refine the process design

Stage 5b: Solution: Social design

- Empower customer contact personnel
- Define jobs and incentives
- Develop and foster shared values
- Define skill requirements and career paths
- Design new organisational structure
- Design employee performance measurement
- Design change management programme

Stage 6: Process transformation

- Develop and test rollout plans
- Implement the social and technical design
- Train staff and pilot new process

Stage 7: Process evaluation

- Monitor performance
- Continuous improvement

Project Radicalness

Extent of change to:

1. Patterns of process workflow
2. Rôles and responsibilités
3. Measurements and incentives
4. Organisational structure
5. Information technology
6. Shared values
7. Skills

Success

- Perceived level of success
- Goal fulfilment
 - Cost reduction
 - Cycle-time reduction
 - Customer satisfaction level increase
 - Worker productivity increase
 - Defects reduction

Research sample

- Questionnaires sent to members of the Planning Forum, a professional association focussing on strategic management.
- 239 responses out of 853.
- 105 of the 239 had completed at least one BPR project
- 2/3 of respondents were in manufacturing, financial or service industries
- Most were large companies

Research sample

- 3 most popular processes were:
 - Customer service (13.7%)
 - Product development (13.7%)
 - Order management (10.5%)
- Others were:
 - Business planning and analysis (5.7%)
 - Financial systems (4.8%)
 - Accounting processes (3.8%)

Effort by Stage (averaged from 1 - 5!)

Stage 3:	Analysis of existing process	3.94
Stage 1:	Identification of BPR opportunities	3.80
Stage 4:	Development of a process vision	3.63
Stage 2:	Project preparation	3.46
Stage 6:	Process transformation	3.39
Stage 5a:	Solution: Technical design	3.37
Stage 7:	Process evaluation	3.21
Stage 5b:	Solution: Social design	3.09

Correlation of radicalness with success

Project Success	Patterns of process workflows	Rôles and responsibilities	Performance measurements and incentives	Organizational structure	Information technology applications	Shared value (culture)	Skill requirements	Overall extent of change
Overall success level	.427 ***	.324 ***	.351 ***	.102	.280 ***	.173 *	.166	.409 ***
Cost reduction	.269 * .092	.159 .194	.231 .093	.260 * .030	.165 -.000	.139 .058	.129 .022	.291 ** .110
Cycle time reduction	.191 .127	.134 .050	.198 .194	.033 -.157	.033 -.021	.111 .029	.098 .008	.171 .052
Customer satisfaction increase	.258 .242	.187 .129	.282 * .366 *	.180 -.242	-.022 .039	-.019 .024	-.112 -.168	.182 .098
Worker productivity increase	.122 .061	.107 .197	.159 .431 ***	.131 .069	.011 -.187	.047 .053	-.043 -.132	.125 .134
Defects reduction	-.124 -.073	-.041 .109	.151 .044	.113 .011	-.091 -.380 *	.058 -.133	-.218 -.272	-.015 -.173

Correlation of radicalness with success

Project Success	Patterns of process workflows	Rôles and responsibilities	Performance measurements and incentives	Organizational structure	Information technology applications	Shared value (culture)	Skill requirements	Overall extent of change
Overall success level	***	***	***		***	*		***
Cost reduction	*			*				**
Cycle time reduction								
Customer satisfaction increase			*					
Worker productivity increase			***					
Defects reduction					*			

Correlation of stage efforts with success

Project Success	Identification of BPR opportunities	Project Preparation	Analysis of the existing process	Development of a process vision	Solution: technical design	Solution: Social design	Process transformation	Process evaluation
Overall success level	.247 **	.244 **	.139	.242 **	.199 *	.390 ***	.432 ***	.547 ***
Cost reduction	.134 -.116	.103 .205	.013 .269 *	.095 .188	.165 -.000	.314 ** .203	.220 .339 **	.386 *** .577 ***
Cycle time reduction	.039 -.126	.042 .122	.072 .196	.219 .225	.033 -.021	.274 ** .108	.267 * .222	.342 ** .455 ***
Customer satisfaction increase	.248 .122	-.064 .147	.156 .280 *	.232 .392 **	-.022 .039	.354 ** .360 ***	.211 .310 **	.374 ** .404 **
Worker productivity increase	.092 .000	.080 .115	.038 .261 *	.214 .193	.011 -.187	.294 ** .470 ***	.213 .299 *	.314 ** .619 ***
Defects reduction	.184 -.025	-.171 .154	.020 .285	.172 -.064	-.091 -.380 *	.399 ** .071	.257 .275	.351 * .551 ***

Correlation of stage efforts with success

Project Success	Identification of BPR opportunities	Project Preparation	Analysis of the existing process	Development of a process vision	Solution: technical design	Solution: Social design	Process transformation	Process evaluation
Overall success level	**	**		**	*	***	***	***
Cost reduction			*			**	**	***
Cycle time reduction						**	*	***
Customer satisfaction increase			*	**		***	**	**
Worker productivity increase			*			***	*	***
Defects reduction					*	**		***

Stage efforts vs. impact on perceived project success

Stage	Avge effort	Correlation with perceived success
Stage 3: Analysis of existing process	3.94	.139 (8)
Stage 1: Identification of BPR opportunities	3.80	.247 ** (4)
Stage 4: Development of a process vision	3.63	.242 ** (6)
Stage 2: Project preparation	3.46	.244 ** (5)
Stage 6: Process transformation	3.39	.432 *** (2)
Stage 5a: Solution: Technical design	3.37	.199 * (7)
Stage 7: Process evaluation	3.21	.547 *** (1)
Stage 5b: Solution: Social design	3.09	.390 *** (3)

References

- Teng, J.T.C., Jeong, S.R., Grover, V., *Profiling Successful Reengineering Projects*. Communications of the ACM, Vol 41. No. 6 June 1998
- Davenport, T. & Short, J., *The New Industrial Engineering: Information Technology and Business Process Redesign*. Sloan Management Review 31,4 (1990) 11-27
- Kettinger, W.J., Guha, S. and Teng, J.T.C., *Business Process Reengineering: Building the Foundation for a Comprehensive Methodology*, J. Info. Sys. Manage., (Summer 1993), 13-22
- Klein, M.M., *Reengineering Methodologies & Tools*, Info. Sys. Manage., 11, 2 (1994),30-35