Successful Re-engineering Projects

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

Re-engineering Project “Radicalness”

Re-engineering Project Stage-Efforts Profile

Re-engineering Project Implementation Success
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 responsibilites
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 focusing 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

<table>
<thead>
<tr>
<th>Project Success</th>
<th>Patterns of process workflows</th>
<th>Rôles and responsibilities</th>
<th>Performance measurement and incentives</th>
<th>Organisational structure</th>
<th>Information technology applications</th>
<th>Shared value (culture)</th>
<th>Skill requirements</th>
<th>Overall extent of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall success level</td>
<td>.427 ***</td>
<td>.324 ***</td>
<td>.351 ***</td>
<td>.102</td>
<td>.280 ***</td>
<td>.173 *</td>
<td>.166</td>
<td>.409 ***</td>
</tr>
<tr>
<td>Cost reduction</td>
<td>.269 *</td>
<td>.159</td>
<td>.231</td>
<td>.260 *</td>
<td>.165</td>
<td>.139</td>
<td>.129</td>
<td>.291 **</td>
</tr>
<tr>
<td>Cycle time reduction</td>
<td>.191</td>
<td>.134</td>
<td>.198</td>
<td>.033</td>
<td>.033</td>
<td>.111</td>
<td>.098</td>
<td>.171</td>
</tr>
<tr>
<td>Customer satisfaction increase</td>
<td>.258</td>
<td>.187</td>
<td>.282 *</td>
<td>.180</td>
<td>-.022</td>
<td>-.019</td>
<td>-.112</td>
<td>.182</td>
</tr>
<tr>
<td>Worker productivity increase</td>
<td>.122</td>
<td>.107</td>
<td>.159</td>
<td>.131</td>
<td>.011</td>
<td>.047</td>
<td>-.043</td>
<td>.125</td>
</tr>
<tr>
<td>Defects reduction</td>
<td>-.124</td>
<td>-.041</td>
<td>.151</td>
<td>.113</td>
<td>-.091</td>
<td>.058</td>
<td>-.218</td>
<td>-.015</td>
</tr>
</tbody>
</table>

CA441 BPM - Successful Re-Engineering Projects  20 Sep 2010
Correlation of radicalness with success

<table>
<thead>
<tr>
<th>Project Success</th>
<th>Patterns of process workflows</th>
<th>Rôles and responsibilities</th>
<th>Performance measures and incentives</th>
<th>Organisational structure</th>
<th>Information technology applications</th>
<th>Shared value (culture)</th>
<th>Skill requirements</th>
<th>Overall extent of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall success level</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>*</td>
<td>*</td>
<td>**</td>
<td>***</td>
</tr>
<tr>
<td>Cost reduction</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Cycle time reduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer satisfaction increase</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worker productivity increase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>***</td>
</tr>
<tr>
<td>Defects reduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>

* indicates a positive correlation with success, while ** and *** indicate a stronger correlation.

---

CA441 BPM - Successful Re-Engineering Projects  
20 Sep 2010
Correlation of stage efforts with success

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

<table>
<thead>
<tr>
<th>Project Success</th>
<th>Identification of BPR opportunities</th>
<th>Project Preparation</th>
<th>Analysis of the existing process</th>
<th>Development of a process vision</th>
<th>Solution: technical design</th>
<th>Solution: Social design</th>
<th>Process transformation</th>
<th>Process evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall success level</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>*</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Cost reduction</td>
<td>*</td>
<td>**</td>
<td>**</td>
<td>*</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Cycle time reduction</td>
<td></td>
<td>**</td>
<td>*</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Customer satisfaction increase</td>
<td>*</td>
<td>**</td>
<td>***</td>
<td>**</td>
<td>**</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Worker productivity increase</td>
<td>*</td>
<td>***</td>
<td>*</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Defects reduction</td>
<td>*</td>
<td>**</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
</tbody>
</table>
Stage efforts vs. impact on perceived project success

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


