Change Factors in Enterprise 2.0 Initiatives:
A multi-case comparison.

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Agenda

• Motivation
• Research Approach
• Coding results
• Theoretical Perspective
• Change factors in Enterprise 2.0 and ERP
• Conclusions, Limitations, Outlook
Motivation

- Increasing use of collaborative technologies and Web 2.0 applications in enterprises (McAfee, 2006; O’Reilly & Battelle, 2009)
- “Enterprise 2.0 is the use of emergent social software platforms within companies, or between companies and their partners or customers.” (McAfee, 2006)
- Demand for selection and implementation support for collaborative technologies within enterprises (EIU, 2007; Andriole, 2010)
- Focus has been rather on functional aspects in current studies (e.g. Williams & Schubert, 2011)
- “This raises a plethora of research questions with regards to applicability, implementation, usefulness, adoption and appropriation, interaction with other technologies, and impact for organizational change.” (Riemer, Seidel, & Watson-Manheim, 2011)
Research Approach

Primary Research Question
- What contextual factors influence introduction initiatives of collaborative technologies (Enterprise 2.0 initiatives)?

Research Question for Change
- What factors of change can be identified during the implementation of collaborative technologies within a business?

Figure 1: Theoretical lens - 8C-Model (Williams, 2011)
Research Approach

Phase 1: Initialization
- Research questions
- Selection of theoretical lens
- Case site selection

Phase 2: Data collection & analysis
- Classification of E2.0 factors
- Clustering of classification
- Refinement of classification

Phase 3: Interpretation
- Interpretation
- Peer feedback
- Literature review
- Discussion in context & interpretation of findings

Figure 2: Research Process
Major categories and common change topics in Enterprise 2.0 initiatives

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Management involvement &amp; support</th>
<th>54 %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(open minded) Culture</td>
<td>36 %</td>
</tr>
<tr>
<td>Measures</td>
<td>Implementation strategy</td>
<td>41 %</td>
</tr>
<tr>
<td></td>
<td>User training</td>
<td>23 %</td>
</tr>
<tr>
<td></td>
<td>Regulations</td>
<td>17 %</td>
</tr>
<tr>
<td></td>
<td>Internal promotion</td>
<td>16 %</td>
</tr>
<tr>
<td>Implications</td>
<td>User acceptance</td>
<td>48 %</td>
</tr>
<tr>
<td></td>
<td>Design of processes and access management</td>
<td>21 %</td>
</tr>
<tr>
<td></td>
<td>Innovation capabilities</td>
<td>7 %</td>
</tr>
</tbody>
</table>

Table 1: Quotation frequency of common topics in major categories
### Classification scheme

<table>
<thead>
<tr>
<th>Major categories (Grouping)</th>
<th>Inferential codes</th>
<th>Area of action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prerequisites</strong> (Culture)</td>
<td>Agile approach</td>
<td>Processes</td>
</tr>
<tr>
<td></td>
<td>Cultural change not yet achieved</td>
<td>Organization</td>
</tr>
<tr>
<td></td>
<td>Different employee behavior in social networks as within meetings</td>
<td>People</td>
</tr>
<tr>
<td></td>
<td>Different employee behavior in blogging as within meetings</td>
<td>People</td>
</tr>
<tr>
<td></td>
<td>Culture improved (more open minded)</td>
<td>Organization</td>
</tr>
<tr>
<td></td>
<td>Culture not yet open minded</td>
<td>Organization</td>
</tr>
<tr>
<td><strong>Prerequisites</strong> (Attitude / Acceptance)</td>
<td>Reduced barriers</td>
<td>People</td>
</tr>
<tr>
<td></td>
<td>Employee fears proactively addressed</td>
<td>People</td>
</tr>
<tr>
<td><strong>Prerequisites</strong> (Involvement of employees)</td>
<td>Management attention realized</td>
<td>People</td>
</tr>
<tr>
<td></td>
<td>Management as paragon</td>
<td>People</td>
</tr>
<tr>
<td></td>
<td>Management interaction with employees improved</td>
<td>People</td>
</tr>
<tr>
<td></td>
<td>Management support realized</td>
<td>Organization</td>
</tr>
</tbody>
</table>

Table 2: Excerpt from classification scheme for the area of change in Enterprise 2.0 initiatives
Theoretical Perspective

Coming from the cross-case analysis of Enterprise 2.0 case studies, findings need to be put back into context as suggested by Urquhart et al. (2010). In doing so, our objective is to contribute to understanding the following questions:

• **How do the case study findings relate to research in the IS field, specifically the issue of socio-technical change in information systems?**

• **Are the findings consistent with socio-technical change issues in enterprise resource planning (ERP) settings?**

• **What constitutes the characteristics of socio-technical change in the context of Enterprise 2.0?**
Socio-Technical Change (STC) – Socio-Technical Systems (STS)

- Change is a complex and challenging issue in IS
- STC has been a focus area of IS research, as inhibitor or enabler in the successful adoption and use of information systems (Bostrom and Heinen, 1977)
- STS were first conceptualized in the 1960s by Bamforth, Emery and Trist (Trist, 1981)
- STS evolved into an important theoretical lens in IS, and especially in context of STC (Ropohl, 1999).

➢ Socio-technical change as context for our findings
The Nature of Socio-Technical Change in IS

Figure 3: Framework of punctuated socio-technical change: PSIC model
(adapted from Lyytinen and Newman, 2008)
## Change Factors in Enterprise 2.0 vs. ERP

<table>
<thead>
<tr>
<th>Factor</th>
<th>ERP</th>
<th>Enterprise 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top management support</td>
<td>Setting objectives, communicating strategy, IT's potential and limitations</td>
<td>Lean project teams, users as project team, lower degree of specialization</td>
</tr>
<tr>
<td>Project team competence</td>
<td>Skill-level, technological and business requirements</td>
<td>Lean project teams, users as project team, lower degree of specialization</td>
</tr>
<tr>
<td>Interdepartmental communication and cooperation</td>
<td>Cross-departmental, cross-company alignment</td>
<td>Promotion-focused, use-inspiring</td>
</tr>
<tr>
<td>Clear goals and objectives</td>
<td>Constraints management, measurability, meta-level</td>
<td>Implementation-focused, set of rules</td>
</tr>
<tr>
<td>Project management</td>
<td>Large-scale, complex project organization</td>
<td>Lean project teams</td>
</tr>
<tr>
<td>Education on new businessproceses</td>
<td>Alleviate fears, gain support, training programs</td>
<td>Inspire to use, lean training or learning-by-doing</td>
</tr>
</tbody>
</table>

Table 3: Factors in ERP context compared to Enterprise 2.0
(see Somers & Nelson, 2001)
Change in IS is Diverse in Nature: Enterprise 2.0 Context Differs Significantly from ERP

<table>
<thead>
<tr>
<th>Traditional (ERP) Context</th>
<th>Enterprise 2.0 Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revolutionary change</td>
<td>Evolutionary change</td>
</tr>
<tr>
<td>Large-scale projects</td>
<td>Small-scale projects</td>
</tr>
<tr>
<td>Cross-departmental business processes</td>
<td>Often project-team focused</td>
</tr>
<tr>
<td>High degree of planning and foresight</td>
<td>Flexibility and adhocracy</td>
</tr>
<tr>
<td>Mandatory use</td>
<td>Often voluntary use</td>
</tr>
</tbody>
</table>

Table 4: Nature of socio-technical change in Enterprise 2.0 vs. ERP
Conclusions, Limitations, Outlook

Conclusions
• Findings contribute to the understanding of STC in the E2 context
• Identified common patterns of pre-requisites, measures and implications
• Similarities and differences between change in ERP & E2
• Identified common change factors
• Difference in revolutionary (ERP) and evolutionary (E2) change
• Practitioners can benefit from caution when applying traditional change concepts
• Starting point for researchers to further examine characteristics of E2 change

Limitations
• Small sample, qualitative study
• Investigation on broader empirical basis should be carried out

Outlook
• Integration of E2 specifics into STC framework
References


Thank you for your attention.

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Backup
Research Approach

Data: 16 Enterprise 2.0 case studies of customer firms

- Size: 10 to 120,000 employees
- Background: Differing industries (IT, building industry, automotive, …)
- Systems (IBM Connections, MS Sharepoint, Atlassian Confluence, salesforce.com, …)

Applied techniques

- Case studies based on the eXperince method (Schubert & Wölfle, 2007)
- Cross-Case comparison of independent sources (Fereday and Muir-Cochrane, 2006)
- Qualitative, interpretive textual analysis - Coding process (Strauss & Corbin, 1998)
- Application of the „Open Coding“ approach (Miles & Huberman, 1994)
- Computer Assisted Qualitative Data Analysis using ATLAS.ti (e.g. Mayring, 2000)
Change

Wilson (1992) stresses changes multi-faceted nature and conceptualizes a change matrix, which characterizes change as either *planned* or *emergent*, and distinguishes between change as a *process*, and change as part of a strategy of *implementation*. 