ERP in Public Organisations, and OS-ERP

723G25 - Affärssystem: användning, projekt och marknad

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Overview

• Background
• ERP in public organisations
  • A macro level understanding
  • A look into the not-so-curious-case of Ivy
• Open source ERP
  • The diffusion of OS-ERP
  • A still-not-so-curious-case of Swedish municipalities
• A confusing case of AHP
Background

• History of ERP systems
  • Material requirements planning to ERP systems
  • A way of standardising the work systems in an organisation
  • Based on the rationality repertoire
  • Best of practice
  • Centralised administration (with discentralised agents)

• Filled with opposing ideas
  • Chicken or egg = organisation or ERP

• Devil is in the details, but is the ERP suite too detailed?
Background

• 1980s saw the emergence of neo-liberal discourse
  • New Public Management
    • Why not have the public sector more like the private sector?
    • Changes in nearly all public sector offices
    • Questions of accountability and efficiency

• By the end of the 1990s the big enterprise market began to become saturated.

• The solution: lets open up new markets!
  • Small and medium sized enterprises
  • Public sector

• ERP is one way that the public sector adopted the private sector mentality
ERP in public sector

• Today we can find ERP system in nearly all public sector offices
• There are multiple choices:
  • Some use the well known packages (t.ex Vingåker kommun, Röda Korset etc: Microsoft)
  • whereas some opt for less-known vendors (t.ex Stockholms dramatiska högskola, Dans- och cirkushögskolan och Operahögskolan: KMD Opus)
  • Some implement their own (New York City)
  • Some opt for open source (Regenesys Univeristy)
A Macro level understanding

- Though there are a lot of similarities between private and public sector, there are some differences

- Public sector:
  - Budget (not for profit but cost sensitive)
  - Democratic (all are equal vs some are more equal)
  - Globalisation (national vs international vs supranational)
  - Accountability (people/parliament vs agencies)
  - Presentation (individual vs group vs corporate)
A Macro level understanding

• “Beyond personal satisfaction or contentment, citizens attach value to the entitlements of others, for example, in respect of quality of healthcare, threshold standards of education, access to civil and criminal justice – the so-called distributive equity … also expect accountability and transparency in respect of service provision, and acknowledge the additional burdens that these entail. “ (Grisley & Meehan, 2007)
Some overarching discourses in public sector

- Democracy
  - E-government projects have stipulations that argue for the transformation of the society to a more democratic, actively participating society

- Sustainable development
  - IT/IS projects in the public sector have stipulations that tie them to the needs of sustainable development

Questions of security and personal data: what do you think of your emails being open to public as soon as you use the university emails? What about NSA/PRISM? What about Google?
ERP in academic setting – Ivy League

• The decision making is not a stand-alone, rational act
• We have multiple actors that play their role in the game
• These actors are not stable, and continuously re-work the setting

• Actor-network Theory
  • Both human and non-human actors are included in ANT
  • The relations among the actors have an affect that can not always predicted
  • Path dependency
  • There activity of the actors change over time, they are not stable
ERP in academic setting

• Time is an important issue

• 3 distinct temporal zones
  • The creation of the *need* for the ERP (VPs role, Y2K bug)
  • Creation of the *ordered* project (problems Ivy vs Oracle, point of no return)
  • Creation of the *adhocracy* of systems (problems with the system, shadow systems continue)

3 years of “clock time” meant different things to different actors
The project that began as success was a near failure
Nowadays at Ivy and Oracle

- These days Cornell is using Peoplesoft – bought by Oracle in 2005
- University of Indiana is using a module written by Cornell University staff
- Montclair State has sued Oracle for “extortion, lies and rigged demo” over Peoplesoft implementation, and Oracle sued back – in 2013 they settled
Open source ERP

• The difference between now and back in the days of home development is we’re not our own masters. Our code is provided by vendors who have their own agendas. [Ivy] cannot dictate how it wants to do its business by itself. [Ivy has] always been accountable to federal regulations but more and more it’s had to work with vendors providing code, vendors providing services, vendor needs … (Scott & Wagner, 2003, 302)
Open Source ERP

• Open source: universal access via free license and universal redistribution of the code

• We use open source applications frequently in daily life (Apache, VLC, Linux, even some beers and sodas)

• They can be community provided (totally free), or vendor supported (free license, fees for extras, Software as a Service)
OS-ERP

- ERP Challenges (Johansson, 2008)
  - Requirements gathering (ERP = money and time)
  - ERP implementation (ERP vs standard products from time perspective)
  - Customization vs Configuration (does the system enable these)
  - Architecture (Scalability and flexibility)
  - Support of business processes (Organisation vs ERP)
  - Variations in requirements (one size does not fit all)
Some questions to think about

• Would these hold true for the OS-ERP?
• What are the differences?
• What are the barriers to the OS-ERP adoption?
An OS Swedish non-case

- Magnusson (2011) talks about 4 Swedish municipalities that thought about not going with the OS-ERP
- The OS-ERP is presented as the perfect solution, but none of the municipalities chose an OS-ERP
- She argues that one can group the factors effecting ERP adoption under 3 categories:
  - Environmental
  - Organisational
  - Innovation
Factors and effects

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<thead>
<tr>
<th>Contexts &amp; factors</th>
<th>Impact</th>
<th>Explanation</th>
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<tbody>
<tr>
<td><strong>Environment</strong></td>
<td></td>
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<tr>
<td>Closed data standards in proprietary software</td>
<td>-</td>
<td>Impede integration with OSS</td>
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<td>Lack of external OSS expertise</td>
<td>-</td>
<td>Low product visibility, lack of support for business critical system</td>
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<td>Inter-municipal collaboration</td>
<td>+/-</td>
<td>Possibility of sharing resources</td>
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<td><strong>Organization</strong></td>
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<tr>
<td>Satisfaction with current ERP system</td>
<td>-</td>
<td>Lowering the motivation to adopt</td>
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<tr>
<td>Negative experiences</td>
<td>-</td>
<td>Lowering the motivation to adopt</td>
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<tr>
<td>Lack of resources</td>
<td>-</td>
<td>Lack of IS expertise and time impedes OSS customization</td>
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<td><strong>Innovation</strong></td>
<td></td>
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<tr>
<td>Change effort required</td>
<td>-</td>
<td>Resource demanding, lowering the motivation to adopt</td>
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<tr>
<td>Immature product</td>
<td>-</td>
<td>Missing functionality</td>
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<td>Complex systems integration</td>
<td>-</td>
<td>Standardized software environment preferred</td>
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<td>Absence of license fees</td>
<td>+</td>
<td>Possible reduction in costs</td>
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<td>Freedom from vendors</td>
<td>+</td>
<td>Reduces lock-in effects</td>
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AHP – an evaluation tool

• Owing to the complexity of the business environment, the limitations in available resources, and the diversity of ERP alternatives, ERP system selection is tedious and time consuming. However, given the considerable financial investment and potential risks and benefits, the importance of a pertinent ERP system selection cannot be over-emphasized (Wei et al. 2003)

• ERP is not just another IT project, it is major re-structuring

• Aside from the earlier papers, Wei et al (2003) argue for a more positivistic approach to ERP selection
An AHP model

- It is a multi-criteria decision making model,
- and it provides a hierarchy – you know which is the most important
- It begins from identification of the strategic objective (ERP selection)
- Through various methods it goes down to operational level objectives and ranks them to create the hierarchy
- The attributes are paired and weighed
- Seems straightforward, but the data gathering and calculations can take time
An AHP model

- AHP is better than nothing, but there is no best in evaluating an ERP

- Did Ivy, or the Swedish municipalities not evaluate their ERP selections?
  - They probably opted for an interpretative method for evaluation
To sum up

• Choices mean trade-offs:
  • Proprietary ERP systems argue that they are secure, reliable, reputable (but we have seen the case of Cornell)
  • OS-ERP says they cost less and provide the ERP functionalities (but none of the Municipalities chose them)

• Public sector, for better or worse, is moving towards private sector practices

• There are methods to evaluate the ERP system, like AHP, but other methods use different understanding of what evaluation is (t.ex Arbetsförmedlingen)
To sum up

• The actors within the evaluation and implementation game change as time passes, new alliances are created to have stable instances

• There are still problems about the organisational processes and how to map them to the ERP, or vice versa