Requirements creation instead of requirements elicitation

• Normally, stakeholders have tacit knowledge on systems requirements, allowing for requirements elicitation techniques;
• However, for e-business applications, this knowledge is an important subject of ‘design’ too caused by:
  • The novel nature of e-business;
  • Fast developing, enabling, technology;
• Therefore, e-business requirements are mostly unknown, disallowing requirements elicitation techniques;
• Consequently, the development of these requirements is much better seen as a requirements creation process;
• Our e3-value framework supports this process by:
  • Business model core concepts;
  • A practical seven-step approach.
The business case: a free ad service

- The Ad Association coordinates over 150 free ad papers (FAPs);
- FAPs are local, independent organizations;
- Most ads have a local scope, contact ads have a world-wide scope;
- Their question: how should an Internet based application for world-wide contacts ads look alike?
- No existing ‘distributed’ contact ad service yet.;
- Two variants:
  - A FAP centred business model;
  - An Ad Association centred business model.
Core concepts in a FAP centred business model

- Value activity
- Value objects
- Value port
- Value interface
- Actor

Check ad
Ad intake
Redistribute ad

Publish ad
Maintain brand

Core concepts in an Ad Association centred business model

- Value exchange
- Value offering
- Ad Association
- Ad
- Customer

Read ad
Place ad

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Early analysis of trade-offs between business models

- FAP centred:
  - FAP performs most activities;
  - FAP (stays) in control;
  - FAP adds most value;
- Ad Association centred:
  - Ad Association performs most activities;
  - Ad Association becomes in control: shift in power;
  - Ad Association adds most value.

Consequences for software architecture

- Important consequences for the software architecture can now be tracked down:

<table>
<thead>
<tr>
<th>FAP centred</th>
<th>Ad Association centred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redistribution component</td>
<td>Brand accounting component</td>
</tr>
<tr>
<td>Web server, database server, application components and high quality Internet Access for each FAP</td>
<td>Web server, database server, application components and high quality Internet Access only for Ad Association</td>
</tr>
<tr>
<td>Each FAP must be capable of handling payments</td>
<td>Only Ad Association must be capable of handling payments</td>
</tr>
</tbody>
</table>
A seven step approach

Step 1: identification of the actors/stakeholders;
Step 2: identification of business scenarios;
Step 3: identification of value activities;
Step 4: for each value activity: identification of value ports with value objects, and grouping in value interfaces;
Step 5: allocation of value activities to the actors, including sensible alternative ways to do this;
Step 6: analysis of tradeoffs occurring in alternative business models ensuing from the first five steps;
Step 7: tracking down the associated implications for requirements on the information systems architecture and business processes.

Conclusions

• Requirements engineering for e-business applications needs a first step of requirements creation;
• Our $e^3$-VALUE core concepts and seven step approach offers guidance in this creation process;
• With our approach, is is possible to:
  • Identify and analyse business model trade-offs in an early stage;
  • Identify high level software architecture implications in an early stage.