Problems - Solutions

• Problem PULL

• Solution PUSH
# Tipping Points

<table>
<thead>
<tr>
<th>Technology</th>
<th>Time</th>
<th>Value</th>
<th>Tipping Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Databases</td>
<td>‘80s (RDBMSs)</td>
<td>Data management</td>
<td>Beat other DBMSs</td>
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<tr>
<td>Client-Server</td>
<td>‘90s (servers)</td>
<td>Cost, flexibility</td>
<td>Beat M/F</td>
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<tr>
<td>Services</td>
<td>20th C (economics); 90s (Biz), 00s (IT)</td>
<td>Module-object-service</td>
<td>simplicity</td>
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<tr>
<td>Web</td>
<td>80-90s; 90s+</td>
<td>Universal Information access and sharing</td>
<td>Mosaic</td>
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<td>Cloud</td>
<td>80’s; 2004+</td>
<td>Compression: hardware; labor</td>
<td>Big players savings: Amazon</td>
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<tr>
<td>Semantic Tech</td>
<td>50’s; 70-80’s; 90’s+</td>
<td>Higher order + productivity</td>
<td>AI Winter; now what?</td>
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<tr>
<td>Semantic Web</td>
<td>2001 (Sci Am); 2005 (LOD)+</td>
<td>Connectivity: people &amp; machines</td>
<td>10 years; now what?</td>
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Semantic Web Value & Tipping Point

• Deliver value
• Dirty details of a specific application (domain)
• Dieter’s Examples
  – Documents
  – Data
  – Mobile
  – Social
  – Sensors
  – Energy grids
  – Etc.
Big Data

- Problem: Scale
- Solutions
  - Data-driven methods (supplant scientific method?)
  - Multi-disciplinary (will the semantic web be in the mix?)

- Data Integration Solution
  - Search / discover candidates
  - ETL: get candidate data elements in required form
  - Entity resolution
  - Computation

- Critical / Central Challenge
  - Meaningfully
Thank you for being here!