Utilizing benchmarking results
Case: Technical Universities in Finland

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Background

• Technical universities in Finland have been comparing their Bencheit results for the last three rounds
  - Each year, a half-day workshop has been organized to compare and discuss the results and to agree on common actions

• The results
  - We have gradually unified our data collection methodology to make the results comparable and more relevant for IT management (e.g. a joint chart of accounts and accounting plan for IT related costs)
  - Based on the comparison, participating universities have individually selected their own priorities for the coming years

• The following slides from our Bencheit 2013 discussion show typical viewpoints that have been used
Cost and Headcount Comparison

<table>
<thead>
<tr>
<th>Institution</th>
<th>IT Share of Institution Budget (%)</th>
<th>IT Share of Institution Personnel FTE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aalto</td>
<td>6.7%</td>
<td>3.5%</td>
</tr>
<tr>
<td>TUT</td>
<td>5.1%</td>
<td>3.6%</td>
</tr>
<tr>
<td>LUT</td>
<td>4.9%</td>
<td>4.9%</td>
</tr>
<tr>
<td>NTNU</td>
<td>5.8%</td>
<td>4.1%</td>
</tr>
<tr>
<td>UH</td>
<td>5.2%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

**Graph:**
- **Y-axis:** Percentage (%)
- **X-axis:** Institutions (Aalto, TUT, LUT, NTNU, UH)
- **Legend:**
  - Yellow: IT share of institution budget €
  - Green: IT share of institution personnel FTE

**Notes:**
- The graph shows the comparison of IT share of institution budget and personnel FTE across different institutions.
- The institutions are Aalto, TUT, LUT, NTNU, and UH.
- The Y-axis represents the percentage range from 0% to 8%.
IT Costs

Ratio: IT-costs (%)

Unspecified
IT costs in academic units
IT costs in other central units
Centralized IT costs

Aalto
TUT
LUT
NTNU
UH

Aalto-yliopisto
Software comparison

Ratio: IT / Institution (%)

<table>
<thead>
<tr>
<th>Institution</th>
<th>IT share of institution budget (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aalto</td>
<td>1.0%</td>
</tr>
<tr>
<td>TUT</td>
<td>0.9%</td>
</tr>
<tr>
<td>LUT</td>
<td>0.8%</td>
</tr>
<tr>
<td>NTNU</td>
<td>0.6%</td>
</tr>
<tr>
<td>UH</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Aalto-yliopisto
Software costs (business applications)

*Cost by Business Application

<table>
<thead>
<tr>
<th>Business Application</th>
<th>Aalto</th>
<th>TUT</th>
<th>LUT</th>
<th>NTNU</th>
<th>UH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>86 t€</td>
<td>59 t€</td>
<td>139 t€</td>
<td>1 502 t€</td>
<td>255 t€</td>
</tr>
<tr>
<td>Human resources</td>
<td>5 t€</td>
<td>2 t€</td>
<td>19 t€</td>
<td>132 t€</td>
<td>17 t€</td>
</tr>
<tr>
<td>Facilities</td>
<td>22 t€</td>
<td>2 t€</td>
<td>20 t€</td>
<td>61 t€</td>
<td>67 t€</td>
</tr>
<tr>
<td>Communications</td>
<td>65 t€</td>
<td>66 t€</td>
<td>0 t€</td>
<td>154 t€</td>
<td>1 425 t€</td>
</tr>
<tr>
<td>Student administration</td>
<td>133 t€</td>
<td>472 t€</td>
<td>52 t€</td>
<td>173 t€</td>
<td>33 t€</td>
</tr>
<tr>
<td>Research administration</td>
<td>18 t€</td>
<td>1 t€</td>
<td>53 t€</td>
<td>163 t€</td>
<td>111 t€</td>
</tr>
<tr>
<td>Library</td>
<td>0 t€</td>
<td>1 t€</td>
<td>10 t€</td>
<td>0 t€</td>
<td>28 t€</td>
</tr>
<tr>
<td>Teaching</td>
<td>0 t€</td>
<td>0 t€</td>
<td>0 t€</td>
<td>343 t€</td>
<td>0 t€</td>
</tr>
<tr>
<td>Other (BA)</td>
<td>68 t€</td>
<td>149 t€</td>
<td>4 t€</td>
<td>0 t€</td>
<td>1 796 t€</td>
</tr>
<tr>
<td>Unspecified (BA)</td>
<td>21 t€</td>
<td>0 t€</td>
<td>0 t€</td>
<td>0 t€</td>
<td>99 t€</td>
</tr>
<tr>
<td>Total Business Application</td>
<td>418 t€</td>
<td>751 t€</td>
<td>297 t€</td>
<td>2 528 t€</td>
<td>3 831 t€</td>
</tr>
</tbody>
</table>

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Outsourcing comparison

Ratio: IT / Institution (%)

- Aalto: 1.1%
- TUT: 2.1%
- LUT: 0.4%
- NTNU: 0.3%
- UH: 0.7%

Aalto-yliopisto

5.12.2014

IT share of institution budget €
## Outsourcing costs (business applications)

### Cost by Business Application

<table>
<thead>
<tr>
<th>Category</th>
<th>Aalto</th>
<th>TUT</th>
<th>LUT</th>
<th>NTNU</th>
<th>UH</th>
<th>Total Business Application costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>712 €</td>
<td>282 €</td>
<td>129 €</td>
<td>133 €</td>
<td>414 €</td>
<td>2 225 t €</td>
</tr>
<tr>
<td>Human resources</td>
<td>340 t €</td>
<td>222 t €</td>
<td>144 t €</td>
<td>10 t €</td>
<td>29 t €</td>
<td>1 792 t €</td>
</tr>
<tr>
<td>Facilities</td>
<td>77 t €</td>
<td>51 t €</td>
<td>0 t €</td>
<td>0 t €</td>
<td>369 t €</td>
<td>279 t €</td>
</tr>
<tr>
<td>Communications</td>
<td>120 t €</td>
<td>196 t €</td>
<td>0 t €</td>
<td>0 t €</td>
<td>240 t €</td>
<td>748 t €</td>
</tr>
<tr>
<td>Student administration systems</td>
<td>334 t €</td>
<td>624 t €</td>
<td>6 t €</td>
<td>0 t €</td>
<td>537 t €</td>
<td>5 003 t €</td>
</tr>
<tr>
<td>Research administration</td>
<td>105 t €</td>
<td>201 t €</td>
<td>0 t €</td>
<td>0 t €</td>
<td>131 t €</td>
<td></td>
</tr>
<tr>
<td>Library</td>
<td>131 t €</td>
<td>18 t €</td>
<td>0 t €</td>
<td>61 t €</td>
<td>1 003 t €</td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>33 t €</td>
<td>4 t €</td>
<td>0 t €</td>
<td>545 t €</td>
<td>0 t €</td>
<td></td>
</tr>
<tr>
<td>Other (BA)</td>
<td>344 t €</td>
<td>194 t €</td>
<td>0 t €</td>
<td>0 t €</td>
<td>58 t €</td>
<td></td>
</tr>
<tr>
<td>Unspecified (BA)</td>
<td>29 t €</td>
<td>0 t €</td>
<td>0 t €</td>
<td>0 t €</td>
<td>115 t €</td>
<td></td>
</tr>
<tr>
<td>Total Business Application costs</td>
<td>2 225 t €</td>
<td>1 792 t €</td>
<td>279 t €</td>
<td>748 t €</td>
<td>2 897 t €</td>
<td></td>
</tr>
</tbody>
</table>

### Cost by Business Application

- **Unspecified (BA)**
- **Other (BA)**
- **Teaching**
- **Library**
- **Research administration**
- **Student administration systems**
- **Communications**
- **Facilities**
- **Human resources**
- **Finance**
IT Costs by Service

<table>
<thead>
<tr>
<th>Service</th>
<th>Aalto</th>
<th>TUT</th>
<th>LUT</th>
<th>NTNU</th>
<th>UH</th>
<th>Unspecified</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT management, administration</td>
<td>15%</td>
<td>3%</td>
<td>9%</td>
<td>19%</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>Audiovisual services</td>
<td>33%</td>
<td>4%</td>
<td>7%</td>
<td>6%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Business applications</td>
<td>18%</td>
<td>6%</td>
<td>5%</td>
<td>4%</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>Voice services</td>
<td>6%</td>
<td>4%</td>
<td>2%</td>
<td>11%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Data networks: LAN &amp; WAN</td>
<td>7%</td>
<td>4%</td>
<td>3%</td>
<td>1%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>IT Service Desk / Helpdesk (in Workstations, client and perip)</td>
<td>17%</td>
<td>21%</td>
<td>30%</td>
<td>30%</td>
<td>29%</td>
<td>9%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>20%</td>
<td>22%</td>
<td>20%</td>
<td>26%</td>
<td>26%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Legend:
- Unspecified
- Audiovisual services
- IT management, administration
- Business applications
- Voice services
- Data networks: LAN & WAN
- IT Service Desk / Helpdesk (in Workstations, client and perip)
- Infrastructure
Cost by Services
Centralized vs other centralized and decentralized

Aalto
Aalto-yliopisto

Centralized

Decentralized + Other Centralized

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Workstations and printers

Number of Workstations Per type(%)

- Aalto
  - Other: 53%
  - Tablets: 51%
  - Laptops: 48%
  - Workstations: 51%

- Other institutions
  - Aalto: 9%
  - TUT: 7%
  - LUT: 6%
  - NTNU: 5%
  - UH: 2%

Costs / (Staff+Student FTE)

- Aalto
  - Workstation: €307
  - Printing: €152

- Other institutions
  - Aalto: €698
  - TUT: €299
  - LUT: €251
  - NTNU: €325
  - UH: €240
Classrooms

Classroom computers / Student FTE

IT classroom space / Student FTE

Aalto

TUT

LUT

NTNU

UH
Efficiency Numbers 2012

Aalto  LUT  TUT  UH  NTNU

IT Costs/Completed degree  IT Costs/Completed credit (ECTS)  IT Costs/Student (FTE)  IT Costs/Staff (FTE)

Aalto

0,00 €  54,88 €  35,80 €  36,34 €  46,53 €

2 000,00 €  4 000,00 €  6 000,00 €  8 000,00 €  10 000,00 €

6 199,64 €  4 938,60 €  5 180,69 €  5 389,53 €  5 770,29 €

2 321,64 €  1 433,79 €  1 267,98 €  1 387,80 €  2 043,16 €

8 492,77 €

11 412,45 €
Summary

• Comparing results with similar institutions is much more useful than using averages only

• Regular meetings with peers
  - Increase understanding of the figures and where they come from
  - Indicate potential improvement actions that are relevant for your own institution
  - Improve the way to collect the results and their accuracy

• In the comparisons, it is always useful to use include institutions outside the discussion to validate underlying assumptions and to get a yardstick

• The real benefit from benchmarking is in the actions based on the results
Thank you