Zentrale Informatik

20.08.2019, Thomas Sutter
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Founded in the year 1833
Switzerland's largest university
with the widest range of study courses
(faculties of Theology, Law, Business/Economics and Informatics, Medicine, Vetsuisse, Arts and Social Sciences, Sciences (mathematics, physics, chemistry, biology etc.)

12 Nobel Prizes
Top 50 to 80 in international rankings
26’000 students (2019)
680 Professors
9’500 employees (6’800 FTE)
Budget CHF 1’450 Mio. (Euro 1’340 Mio.)

2015 UZH started with benchmark
Since 2016 other Swiss Universities take part as well
There is a user group sharing experiences, questions etc.
Where are we coming from?
Central IT budget vs UZH budget
Development of university numbers

**IT share (%)**

- **BM 2015**
- **BM 2016**
- **BM 2017**
- **BM 2018**
- **BM 2019**

**IT share of institution budget**

**IT share of institution personnel**
• How do we use the benchmark:
  • compare high level numbers
  • development of numbers over time are key
  • detect and understand special effects, and differences, (year to year, between universities etc.)
    → otherwise benchmarks can be misleading
  • communication

• Disclaimer: always consider ‘special effects’ with benchmarks – e.g.:
  • ERP without costs
  • IT departements with IT courses, multimedia support
  • decentralised IT numbers
  • special effects from one-time investments

• Development of university, Swiss and overall numbers
+39 FTE in 2019 «IT personnel in academic units»
→ no explanation from HR
→ plus CHF 5 Mio. decentral IT costs in 1 year with without explanation
IT-Benchmark: specific costs

- **More central (real) and decentral (reason not known) staff**
- **Growing central investments**
- **Better numbers over years of participating**

**Costs by account (1000 CHF)**

- Staff
- Unspecified
- Software
- Hardware
- Outsourcing
- Facilities

**Costs by service (1000 CHF)**

- Business applications
- Infrastructure
- Audiovisual services
- Data networks/ LAN
- Voice services
- IT Service Desk/Help...
- Workstations/ client a...
- IT management/admin...

**Costs by business applications (1000 CHF)**

- Finance
- Teaching
- Communications
- Facilities
- Human resources
- Other (BA)

**IT costs (1000 CHF)**

- Total IT costs
- Centralized IT costs
- IT costs in academic units
- Unspecified

**Large projects for student administration**

**Reason unknown**
IT-Benchmark: developments over time

- changing participants
- improvements of data
- ‘special’ effects like growing universities, one-time investments etc.
IT-Benchmark: Budget Central ITs to overall University

Gap Zentrale Informatik zu Benchmark CH:
CHF 19 Mio. p.a.

Gap Zentrale Informatik zu Benchmark Europa:
CHF 19 Mio. p.a.
IT-Benchmark: Budget Central ITs to overall University

BenchHEIT 2019 (Anteil der Summe der Hochschulen 2018)

- CHF 18'900'000
  - 1.3%

- CHF 45'200'000
  - 3.2%

- Central ITs share of institutional budget
  - 4.5%

- BenchHEIT CH
  - 4.5%

- UZH Central IT
  - 3.2%

- UZH gap to Benchmark CH
  - 0.0%

BenchHEIT 2019 (Mittelwert IT-Anteile der Hochschulen 2018)

- CHF 24'100'000
  - 1.7%

- CHF 45'200'000
  - 3.2%

- Central ITs share of institutional budget
  - 4.8%

- BenchHEIT CH
  - 5.2%

- UZH Central IT
  - 5.0%

- UZH gap to Benchmark CH
  - 0.0%
Swiss effects

Kindergarten Teacher Starting Base Salary in Switzerland

EUR 65’000.-
Swiss effects

- Cultural and legal effects: e.g.
  - price/cost level:
    absolute numbers cannot be compared with other countries due to different price/costs levels; only relative numbers usable
  - student FTE:
    not known in CH versus student headcounts (used in Switzerland)
  - VAT:
    no deduction, therefore part of relevant costs for university and IT; costs excluding VAT determinable
  - decentral culture:
    decentral IT costs large part of overall costs, but estimates very vague
Eunis Benchmark: Anteil IT Budget vs. World Ranking

2017, overall 57 Teilnehmer, Benchmark all IT budgets: 6.0%, UZH 5.0%
28 Datenpunkte, Trendlinie polynominisch (Reihenfolge 2)
Bestimmtheitsmass \( r^2 \) = 29%

\[ R^2 = 0.2895 \]
Eunis Benchmark: share of central IT budgets vs. World Ranking

2017 overall 57 Teilnehmer, Benchmark central IT budgets: 4.4%, UZH 2.7%
Trendlinie: 28 Datenpunkte, polynomisch (Reihenfolge 2), Durchschnitt 4.3%, max. 4.6%

Bestimmtheitsmass (r²) = 29%
Quadrat des Pearson'schen Korrelationskoeffizienten: Gibt an, welcher Anteil der Varianz in beiden Variablen durch gemeinsame Varianzquellen bestimmt wird. (methodenberatung.uzh.ch/de/datenanalyse/zusammenhaenge/korrelation.html)

\[ R^2 = 0.2861 \]
Eunis Benchmark: World Ranking vs. IT Budget Anteil dezentral

2017 overall 57 Teilnehmer, Benchmark decentral IT budgets: 1.6%, UZH 2.2%
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