COVID-19 Lifeline
Digital Aalto

Hannes Päivänsalo, Head of IT Operations, Aalto University
EUNIS 2020
June 12\textsuperscript{th}, 2020

Online: Aalto Information Technology and Infrastructure Vision
Aalto Digital Infrastructure LinkedIn article
The Decade of Aalto University
An amalgam of three leading Finnish universities

1849
Helsinki University of Technology

1871
University of Art & Design Helsinki

1911
Helsinki School of Economics

Aalto University
2010
Aalto University - trailblazer in digitalization

Strong research competence
- big data, machine learning, algorithms, software, cybersecurity
- communication networks, wireless technologies, micro- and nanotechnologies, mechatronics
- games, graphics, audio, user interfaces
- tight collaboration with University of Helsinki (Helsinki Institute of Information Technology)

Multi-disciplinary applications in focus
- industrial internet, new process technologies, service economy, gaming industry, health and wellbeing technologies, built environment, energy efficiency

Tight collaboration with industry
Active startup community
Digital Aalto must-do and differentiation v. 2.5

**Teaching & Learning**
- Blended learning environments; student friendly digital services; student engagement & collaboration; continuous learning

**Research & Innovations**
- State-of-the-art research IT infrastructures; open data and publishing tools; fluent research project process; research data mgmt services

**Infrastructures & Campus**
- Open and digital research infrastructures; smart and sustainable campus

**Partnerships**
- Partnership management and analytics; donor management and analytics; multichannel alumni services; collaboration and event platforms

**Services**
- On-demand assets and services for research, education, innovation and creative activities
Examples of what we have done
Digitalisation for students

Instant course feedback

Electronic and automatic assessments

Virtual Reality Hub for studies
Digitalisation for researchers

Research support services online


Partner CRM analytics

Digitization of university records
Digitalisation for staff and Campus users

New communication & collaboration platforms

New HR platform

Virtualisation of IT infrastructure, software and service
What we have learned about university digitalisation
#1 Objectives aligned with resources

<table>
<thead>
<tr>
<th>Creating new digital services and offerings</th>
<th>University transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>€€€€</td>
<td>€€€€€€€€€</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process digitization</th>
<th>Bringing services online</th>
</tr>
</thead>
<tbody>
<tr>
<td>€</td>
<td>€</td>
</tr>
</tbody>
</table>
#2 Process roadmap leading
#3 Enterprise Architecture, Data, Tech
#4 User-centricity

![Pie chart showing time use and digitalization: 35% funding, 37% researching, 28% publishing.](chart.png)

- **Researcher’s time use and digitalization:**
  - 35% Funding
  - 37% Researching
  - 28% Publishing

**More efficient**

**Minimize time use and maximize impact**

*Source: TSARPO research 2016*
#5 Governance driving ownership

Ownership framework

**IT Solution Owner**
Defines and operates the overall IT solution and its structure

**Application Owner**
Defines and operates the implementation and its details

**Technology Owner**
Defines the technologies used in IT Solutions

- **Business Owner**
  Sets business priorities

- **Process Owner**
  Defines how the process works

- **Concept Owner**
  Maps the process into the IT Solution

Aalto University

14.8.2019
#6 Partners and ecosystems
#7 Portfolio and projects

Tokyo Institute of Technology 1959
Francis Bacon 1620
#8 Training and support

![Aalto IT Help](image)

**Most read instructions**
1. Resetting the password, and a forgotten password
2. Deploying of Mac Mail on Aalto University’s computers
3. Booking meeting rooms at Aalto (Outlook and Webmail)
4. Exchange mailing lists - adding and removing recipients (Outlook and Webmail)
5. Mailman mailing lists - moderating messages
6. Webmail: adding an attachment (Windows 10 and Edge)

**News**
- 15.6.2018 - Breaks in between 5-7 pm
- 13.6.2018 - Chat channel shut down
- 18.4.2018 - NGFW changes
- 13.4.2018 - Status and availability
- 1.3.2018 - Users found multiple bugs in the webmail

---

*Image 0x0 to 156x69*

*Image 156x117 to 626x316*

*Aalto-yliopisto*

*Aalto-universitetet*

*Aalto University*
#9 Change management

- Do we need these papers/signatures/devices…?
- Could we do this online?
- Does someone need this data later on?
- Could we do this remotely?
- What does end user need?
- Is this data/process/device safe?
- Isn’t NN already using this?
- Aren’t n students already using this?
- Should we hate all copy-paste?
- Should we hate all email forward?
- Why do I have to ask for this?
- Could users do this on their own?
- Do we really have to have instructions for this?
- Could somebody else do this?
- …. 

Assoc Prof. Arttu Polojärvi, Aalto University
#10 ...and then you start again
All you need is:

- resources
- roadmaps
- architecture, data & technology
- user-centricity
- governance
- partners
- projects
- training
- change management
- continuous renewal
Sustainability

Digitalisation

Aalto University
Sustainability loves digitalisation

Ways of working going digital

IT infrastructure going green

Sustainability engagement going online
COVID-19
State of emergency declared

• March 16th, 2020 it started for real: the Finnish Government, jointly with the President of Finland, declared a state of emergency due to COVID-19. Schools and universities, excluding early education, stopped all on-site education and crash jumped to virtual reality.

• Suddenly everything at Aalto University, from learning to research, relies solely on our digital infrastructure.

• We had done our homework by maintaining a sound enterprise architecture, distributing our essential IT infrastructure, and designing our capabilities to scale with the right partners. When VPN usage skyrocketed – our infrastructure could handle it, and the business case for our VDI solution was realized almost overnight. Not to mention our new crisis messaging system that went live at the start of the state of emergency – talk about production testing.
Situation in Aalto core activities

Research
• The use of laboratories and other research facilities is now possible. Major external funding organizations flexible with deadlines. Aalto helps-campaign will most likely lead into new research projects in the future.

Education
• Works surprisingly well in remote mode but the situation varies across disciplines somewhat with biggest challenges in art and design, entrance exams with special arrangements, increased education offering during the summer.

Impact
• Industrial partners contacted to ensure cooperation, start-ups offered special support, special fundraising.

Finance
• University balance sheet, cash & order backlog position is solid.
• Financial impact of the corona pandemic probably in at least two waves, i.e. immediate impact on 2020 and longer term impact 2021 onwards.
Happened in IT so far

• Very smooth transition to remote teaching and working mode thanks to earlier digitalization projects.
• End user support: great feedback from users.
• Many digital solutions +100-200% usage (MyCourses, Zoom, Panopto, Teams, Workday, Aalto.fi)
• Infra has kept business running & safe: servers, networks, VDI, identity management, VPN, MFA.
• Quick new solutions taken into use: Crisis Messaging System, remote public defenses, ordering devices and equipment to home.
• Aalto Startup Center digital community support quickly ramped-up; Several digital communities blooming.
• Most of digitalization development projects have continued in good remote collaboration – some functions can now focus more on development, editing content, trainings, publishing datasets etc.
Generally good feedback on situational communication, IT support and teachers’ adaptation

- Missing applications/licenses (Adobe, Aspen, MS Visio, Stata, M1 Plus, Rhinoceros, Revit)
- Missing laptops, screens, webcams, GPU devices, VR devices, printing opportunities
- Quality of individual course materials vary - wishes for more online lectures
- Concerns on how to organize effectively project, team and lab/workshop works
- Uncertainty about schedules, exams, workload and support processes going forward
Aalto teacher feedback on remote studies
First results on teacher survey

• Generally smooth transition to remote teaching - but eagerly waiting to get back to contact teaching
• Most important new tool has been Zoom, more support and training needed
• Usability of applications and user skills have caused issues in the beginning - student basic IT skills have not always been adequate
• Concerns on how to execute reliable evaluations and exams (fraud etc)
• Concerns on unequal situation with equipment, connections and remote working spaces (both teachers and students)
• Most important support channels have been Aalto level instructions and colleagues. 25% have asked help from IT Service Desk, satisfied with service. More support wanted from own department.
Aalto employee feedback on remote work
Based on informal feedback and aalto.fi news discussion 14.5.2020

GOOD

• Empowering experience that shift to remote mode has been so successful - fast digital competence uplift
• IT tools have generally worked well
• Online meetings have been surprisingly productive
• Digital communities and events bring large audiences and more equal interaction
• General wish to continue more flexible blended working culture in the future - mix of campus and remote preferred

BAD

• Connectivity, application speed and AV equipment issues at home
• Teams and Zoom technical tips and best practices needed
• Good online meeting practices and facilitation needed
• Working practice and time management challenges: too many/long meetings, too little brakes, too long days, interruptions, combining family & working life
• Maintaining energy and spirit when lacking social contacts and informal information – need to redesign social structures to maintain community
Our challenge now:
Remote work fatigue

Relieve remote work fatigue

Turns out that "remote fatigue" is actually a thing and it might be that you are feeling it too.
https://www.forbes.com/sites/harrysedican/2020/06/15/working-from-home-is-so-exhausting-and-how-to-reinvigorate/

We have now been working remotely quite a while and we have noticed that there is some exhaustion showing up. It is natural, continuous video calls, and new technologies and methods make us tired in a very different way and there is actually an explanation for that. The article tells why we feel exhausted "as if" we’re sitting at home and what we can do about it. Here are some of the solutions:

1. This situation wasn’t our choice and we didn’t feel that we were in control. To fix this, set control over your meetings, tasks and projects as much as possible.

2. All the things are not as automatic as they used to be, for example, connecting to meetings and sitting down some thought to a whiteboard and might not be that much of a tire some anymore. To fix this, make sure you learn to use those new technologies you need.

3. We all miss our colleagues. To fix this, keep in contact with them. Call and text regularly and have some unofficial chats with them.

Please share what you think as this is such an important topic and relevant in our everyday lives.

Why Working From Home Is So Exhausting—And How To Reinvigorate
Working from home is challenging and exhausting. Here’s why, and how to re-energize and thrive.
www.forbes.com

Aalto University
Aalto-yliopisto
Aalto-universitetet

Start a new conversation. Type @ to mention someone.
Remote work fatigue – why and what to do

Not your choice
- Remember your and our mission
- Retain control of your tasks, schedule and breaks

Tech kills you
- Learn new remote tips and tricks
- Learn something else new

You miss people
- Reach out and connect in new ways – show also your face
- Get and give feedback

Too many issues
- Plan and prioritize
- Focus on positives

Your back hurts
- Get up and move
- Walking meetings

Tech kills you
- Tech kills you
- Learn new remote tips and tricks
- Learn something else new

You miss people
- You miss people
- Reach out and connect in new ways – show also your face
- Get and give feedback

Too many issues
- Too many issues
- Plan and prioritize
- Focus on positives

Your back hurts
- Your back hurts
- Get up and move
- Walking meetings
Towards a better world.

aalto.fi