

2 0 2 5 - 2 0 2 6

ANNUAL REPORT

Aalto Design Factory

Product Development Project

THE 30-YEAR SUCCESS STORY

Workshops

DRIVING STUDENT INNOVATION

Display window for

PIONEERING PRACTICES

Public artwork adding value to

CAMPUS EXPERIENCE

Research for

IMPACT

...and

MORE!

A''

Aalto University
Design Factory



Contents

INTRODUCTION

Paving the way 04

COMMUNITY

It takes a village 06

Profile highlight:
Cornerstones of product development education 08

Display window for pioneering practices 10

Public artwork adding value to campus experience 12

SPACES

A factory in full use 14

WORKSHOPS

Workshops driving innovation & development 16

Prototyping and Validation Grant 24

Partner Plaza 24

Case highlight:
Prototyping clean energy 25

PRODUCT DEVELOPMENT PROJECT

The 30-year success story called PdP 26

Case highlight:
PdP students revolutionizing critical care
with HUS & Biodesign Finland 30

EDUCATION & TEACHING

Learning across disciplines 34

Case highlight:
Aalto Summer School courses 40

RESEARCH

Research for impact 42

Publication highlight:
May I have your attention – Designers' issue selling
processes in design integration 45

DESIGN FACTORY GLOBAL NETWORK

A network of growth & collaboration 44

PRODUCT DEVELOPMENT PATH MAKERS

Product development practices for the win 48



Learning and development are inherently intertwined – it's questionable whether learning has really happened if it does not create some kind of change, and developing something without learning anything new is a recipe for a failed experiment.

“ *Aalto Design Factory focuses on lowering the threshold for hands-on development collaboration in learning through the courses, projects, facilities, tools and support we offer.*

In a changing world, we cannot wait for students to graduate and researchers to publish before creating an impact. Hands-on learning and development collaboration not only lead to deeper insights, they offer avenues for shaping better processes and outcomes even though work might still be in progress – rather than waiting for an imaginary perfect moment when we are “ready”. Development is an all-hands-on-deck job.

Supporting such learning requires constantly tweaking what works so that it can continue to work, while at the same time recognizing where we can do better. For example, the Product Development Project course celebrated 30 years this year, while at the same time piloting new ways to connect with student startups. Our prototyping labs supported record amounts of courses and student projects, while we also streamlined our lab processes and joined forces with the Aalto Founder School and Aalto Innovation Services to create a new prototyping and validation grant for student teams. Countless new collaborations were started, ranging from small scale visiting talks to new EU projects and new institutions joining the Design Factory Global Network. All of this happened while teaching, supporting and knowledge sharing with over 6000 students, learners and visitors.

Luckily, we have a great community to make this possible. Thank you to our students, staff, and collaborators! While the tools, spaces and prototypes we have may catch the eye, it's the people that make the Design Factory what it is.

Tua Björklund

Director, Aalto Design Factory

Paving THE WAY



37

staff members

18

new staff

21

full time staff

It takes a VILLAGE

Our community highlights the cornerstones of what makes ADF special. We come from various disciplines. Students come first as both experts and learners. We work hands-on and across boundaries. We celebrate the uniqueness of individuals and encourage everyone to take ownership and leave a mark. We leave things better than they were before us. We also try to remember to tell the world about the amazing things we do as loudly and as often as possible. ADF is its community – from staff to students to Aaltoneans to externals. We all contribute and serve as a reflection of what ADF is and should be.

profile highlight:

Cornerstones of product development education

What do you need to build a pioneering hub for product development education?

Meet one of the quiet cornerstones of ADF, Vesa "Vesku" Saarijärvi, the long-time building officer and senior workshop expert. Duly earned, he received the Aalto School of Engineering 2024 Service Award for his years of work developing and operating ADF's technical facilities. For Vesku, the workshop should feel inviting and approachable, supported by friendliness and a culture of helping.

At the heart of Vesku's philosophy is lowering the threshold to experiment: "I wish new students understood how versatile the workshop is and how much help and service there is available," he says. "There are no stupid questions – the important thing is that you dare to come into the Workshops, ask, and not rush headfirst into making something you don't yet know how to handle." Failure, in his eyes, is not a problem but a badge of honour: "If something hasn't failed yet, you probably haven't really started working!"

When it comes to prototyping, Vesku encourages students to start from intent, not from materials. "Don't decide in advance that it must be made from, say, acid-proof steel before you even arrive," he points out. "First think about what you're trying to achieve, then start prototyping as early as possible – even with a quick cardboard or foam prototype – and get to know what is actually available in our spaces." Simply walking around the shelves, seeing what others have made, and exploring ADF Labs is, in his view, part of the learning process.

A central part of his role is balancing guidance with letting students discover things themselves. "You shouldn't make ready-made solutions for them," Vesku emphasises. "Prototypes shouldn't be made by staff – our job is to give hints so that students can realise things themselves, find materials and components, and avoid reinventing the wheel when something can simply be sourced and the real focus put on where that 'wheel' will actually be used."

For Vesku, reading the student's level and intention – from rough mock-ups to potentially market-ready products – is a subtle and critical skill.

Working daily with students and staff from many disciplines, Vesku sees both the challenges and strengths of a multidisciplinary workshop community. "We as staff need broad expertise and an open mind so we can give useful hints to students from different fields and create possibilities for them," he explains. The physical closeness of different specialities is key:

“It really helps when electronics, print shop specialists and others are close by – you can, with one glance, go talk to several experts and enable almost anything needed for a prototype.

"Today, after some ups and downs, education has clearly shifted towards encouraging hands-on work again across Aalto – at ADF that has always been our way of working!"



DISPLAY WINDOW for pioneering practices

2199

visitors

131

hosted tours

Over the past year, ADF hosted an extraordinary mix of guests from universities, government delegations and ministry groups across Asia, Europe, and the Americas. Visitors come to ADF tours for a range of reasons that reflect the breadth of our work. Our facilities and spaces are a prominent point of interest, especially the workshop and prototyping environments, project-based learning and the infrastructure that supports collaborative innovation. Visitors are also interested in learning about our ways of working and culture, including co-creation, interdisciplinary collaboration, learning-by-doing, and how ADF supports work health and team learning.

Another major theme is education and learning, with visitors wanting to understand how ADF connects technology, business, art, and design to create real world impact; how multidisciplinary learning is put into practice; and what students can do here for their own projects. Industry collaboration is also a strong draw, particularly examples of university-industry interfaces, company partnerships, and projects such as PdP.

Many tours touch on innovation and entrepreneurship, including the Finnish innovation mindset, new venturing, and the broader entrepreneurial ecosystem around Aalto. Other recurring interests include sustainability, the Design Factory Global Network, and the possibility of future collaboration.

Public artwork adding value to CAMPUS EXPERI- ENCE

*There's an opportunity for insight and creativity in everyday solutions. The ADF crew transformed old storage containers into captivating works of outdoor art, titled *Bitti* and *Atomi*, merging functionality with artistic vision to enhance the campus environment.*

The initiative was led by sculptor and ADF Printshop Master Erwin Laiho, who was responsible for both the artistic concept and the project's execution:

“*To bring more light and openness to the back alley, this artwork does not add, but subtracts. The mirror-polished steel panels appear almost as if they were cutouts of the containers, extending the natural scenery.*”

The project offers a new perspective on the radical creativity that drives the ADF community's work. By integrating art, design, and technical expertise, we transformed everyday objects into elements that add value to the shared campus space. It also highlights our collaborative spirit, with nearly half of our staff participating in some way during the production.

Experience the public artwork in the backyard of Viima building, Puumiehenkuja 5.

A factory IN FULL USE

One word that describes ADF's spaces: busy. The academic year 2025–2026 marked ADF's third year in the Viima building, with the overall number of users continuing to increase by approximately 25% annually. The venue has one of the highest utilisation rates on Aalto's campus. This places considerable pressure on our staff, as ADF maintains not only its own premises, but also manages and develops Viima's shared spaces and infrastructure for all residents and stakeholders.

“For scale: our spaces were booked for the equivalent of 2,642 nonstop screenings of the latest *Odyssey* film this year!

- George Atanassov, Services Manager at ADF

Coffee consumption offers another point of reference. In ADF's former premises, coffee sales amounted to just 10% of current sales at Viima. With an average consumption of 3.5 cups per day per person in Finland, we serve the equivalent of 11,963 coffee-drinking days each year.

41 872 { **+25%**
cups of coffee from machine } **increase from '24-'25**

35
Fika* networking events

*DF Fika is a community coffee break, held every other Monday in the Viima building. Inspired by the Swedish tradition of pausing together, Fika offers a relaxed, drop-in space for students, staff, researchers, and partners to meet, exchange ideas, and strengthen the everyday life of the ADF community.

Booked events

1452

events total

49%
student work
& Aalto events28%
internal &
maintenance23%
classes

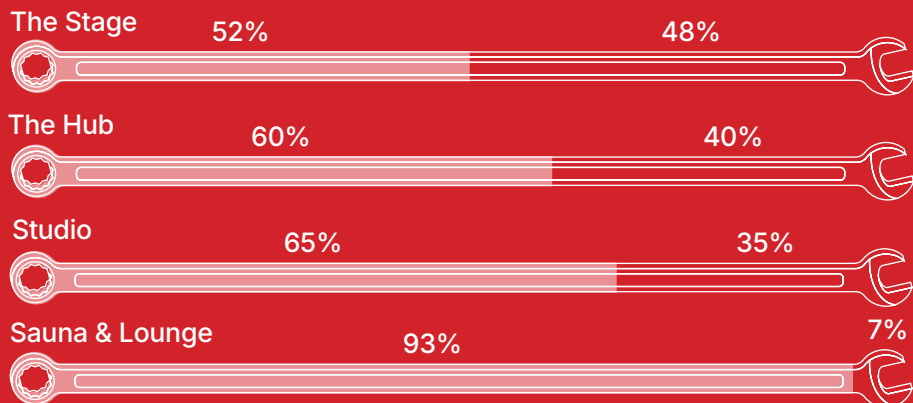
7574h

booked hours total

Space usage:

classes vs. student work & Aalto events

■ student work & Aalto events ■ classes

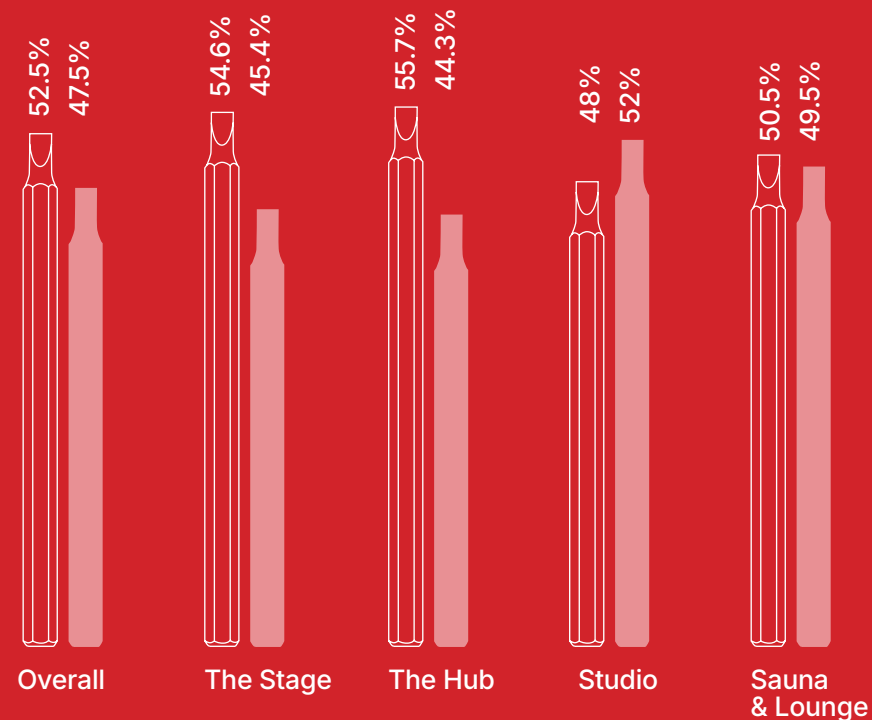


Space usage:

weekday timing & weekend share

□ weekday before 17.00

■ weekday after 17.00



Space usage:

average booked hours per calendar day

25h

total per day,
across all spaces

9.89h

The Stage

8.87h

The Hub

7.50h

Studio

8.13h

Sauna & Lounge



WORKSHOPS

driving
innovation &
development

The workshops remain the engine room of student, researcher, and startup innovation where experimentation becomes tangible. Staffed by designated workshop masters and student assistants, the ADF Labs area offers specialized workshops, including the MachineShop, ElectroShop, PrintShop, and Cut&Ink. In addition to these staffed spaces, ADF provides access to the WeldingShop, WoodShop, PaintShop, and Sewing Station with staff guidance in addition to general multipurpose prototyping spaces. After completing the necessary training, users can work independently in these facilities.

The workshops continue to support students, researchers, and startups in bringing their projects to life, drawing users from across Aalto's academic disciplines. Research projects such as SonoFog from the School of Science and AIM-Zero from the School of Engineering often require especially demanding machining tasks, where precision and accurate geometry are essential for advancing their work. This has made the shop floor an important site not only for fabrication, but also for close collaboration between researchers and workshop staff.

During the past year, several practical improvements were made to the shop floor to strengthen safety, improve daily usability, and simplify maintenance and restocking.

“ ***We had only two cases of minor fires in the Workshops this year!***
- Jasmine Xie, Electroshop Specialist at ADF

The academic year was again shaped by the School of Engineering's Mechatronics Circus and the PdP Gala, which remain the busiest and most visible milestones in the workshop calendar, generating a surge of activity in the weeks leading up to each event. Among the most heavily used machines, the waterjet cutter continued to stand out, while the growing popularity of 3D printing accelerated early-stage design work and enabled faster iteration. CNC machining remains essential, particularly in the final stages of prototype development, when precision and finish are critical.

In addition to heavy machinery, there has been a significant increase in demand for Cut&Ink services, including 2D printing and vinyl cutting. The ElectroShop has also seen increased demand for PCB milling as students refine and finalize the electronic components of their projects.

In response to the growing number of users and increased demand for workshop access, we established the access course *Prototyping Tools at the Design Factory*. The course introduces participants to the equipment and working methods behind ADF's prototyping culture. It combines online preparation with a hands-on workshop, giving participants the safety knowledge and practical familiarity needed to use the workshops responsibly and independently.

In our workshops, the PrintShop's newest addition, a 3D pellet printer, has been actively used, for example, by PdP team Sealevã, a newly established startup developing fully biodegradable alternatives to plastic composites. Sealevã combines polyethylene with seaweed waste discarded after industrial use. The startup embodies the multidisciplinary and sustainability-driven spirit characteristic of Aalto University, bringing together six members from diverse fields, including economics, materials science, engineering, industrial design, and fashion.

“ I think we utilized every single piece of equipment and machinery available at DF – it gives you the tools, but also the mindset to experiment, iterate, and not be afraid to fail.

- Coleman Piburn, Lead Designer at Sealevã startup & PdP team Sealevã

812

completions for
Prototyping Tools at the Design Factory access course

300h
course hosting

93
joint sessions
hosted

21
course
collaborations

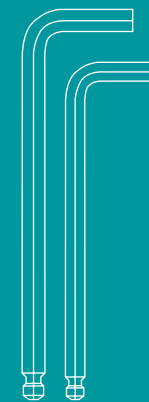
+31%
increase from '24-'25

*This year, the Workshops
were used for example:*

ELEC-E7845 Smart Wearables II lab introduction



SCI-C1002 / SCI-1002 User-centric Design



Rocket Building



Innovating through Technology

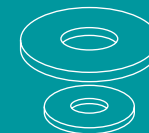


Aalto ChaiR workshops

Kintsugi - ChaiR



Shaking Up Tech



Woodworkshop



Viestintä- ja vuorovaikustustaidot



PrintShop

2

new 3D printers acquired

4 640h

3D printing with Ultimakers (3pcs)

1 320h

3D printing self service with Prusa

773

finished 3D print jobs

+99%

increase of total machine hours from '24-'25

95.3%

utilization of business hours

95%

utilization of business hours

152.6kg

total amount of printed parts

+130%

increase of material consumption from '24-'25

MachineShop

440h

tig welding

409h

mig welding

200h

water jet cutting

1 321h

CNC mill & lathe

Cut&Ink

1 500+

meters of paper printed

576*

finished print & vinyl cutting jobs

*Fun fact: one print job can include multiple prints, and is different from an individual poster.



Prototyping and Validation Grant

Too many promising ideas remain stuck at the stage of “thinking about it”. To help student teams move from ambition to action, ADF, Aalto Founder School, and Aalto Innovation Services jointly piloted a new *Prototyping and Validation Grant* in April 2026.

The grant provides Aalto student teams with €500–€5,000 to build a prototype or demo, test whether a genuine customer problem exists, validate their target segment, and reach a concrete milestone within weeks. Rather than focusing on pitch decks or theory alone, the grant supports clear plans, practical experimentation, and tangible outcomes.

So far, grants have been awarded to 11 student teams working on solutions ranging from textile surplus markets and local weather prediction to vein visualisation. The initiative gives aspiring entrepreneurs the resources to test their ideas in practice and take meaningful steps towards developing viable ventures.

17 applications 11 teams granted 27 000€ total worth of grants given

Partner Plaza

Partner Plaza reflects ADF's broader mission of connecting education, research, and industry in a practical and hands-on way. It features selected companies and startups that work close to the DF environment and makes use of its prototyping-oriented culture. Partner Plaza offers partners access to space, facilities, and a collaborative setting where ideas can be developed alongside students, staff, and other innovators.

The model is designed to support early-stage development in particular, with an emphasis on prototyping, experimentation, and community exchange. Some partners use the space as a base for day-to-day work, while others benefit from access to workshops, testing environments, and the wider Design Factory network.

13 companies

Aiedu Oy
Amertat Energy Oy
Catchbox Oy
EpiHeart Oy
Frozenmed Oy

Halide Energy Oy
Ideanet Oy
Isaware Oy
Kuva Space Oy
Reng Oy

Surgify Medical Oy
Without Energy Oy
Urban Mill

case highlight:

Prototyping clean energy

Amertat Energy Oy is one of the Partner Plaza companies developing its technology at ADF, where access to prototyping spaces and a collaborative environment supports its product development. The company is working on patented hybrid wind turbine technology designed for locations where traditional turbines are less practical, such as residential areas, ports, and commercial buildings.

Its turbines are built for low wind speeds, quiet operation, and efficient on-site energy generation, making them suitable for urban and other space-constrained settings.

“Developing hardware is naturally a demanding and resource-intensive process. DF brings facilities, equipment, expertise, and a supportive community together in one place, helping us turn technical ideas into prototypes faster and more efficiently.

- Javad Hosseininia, CEO at Amertat Energy Oy

THE 30-YEAR SUCCESS STORY called PdP

For 30 years, Product Development Project (PdP) course has challenged multi-disciplinary student teams to solve real industry problems. Each year, students from engineering, business, and design spend the whole academic year working in teams with a €10,000 budget to develop solutions for challenges presented by sponsoring industry partners such as KONE, HUS, ABB, Wärtsilä, Saab, City of Espoo, and many others. Ideas are brought to life as functional prototypes showcased in the public Product Development Gala in May.

As a course, PdP embodies the hands-on, interdisciplinary development collaboration philosophy of the Design Factory. Nowadays, any Aalto third-year bachelor's or master's student can take the course as an elective, the course is included in multiple Aalto minors and majors, and PdP also welcomes students from Design Factory Global Network partners and other international universities.

“ PdP is without a doubt the best course a first-year master's student at Aalto can take. It does not just prepare you for engineering work. It prepares you for the messiness, the collaboration, and the joy of real product development.

- Abdul, mechatronics engineering master's student at PdP team Lumo Analytics

While the core elements – real challenges, real budgets and real outcomes – have remained the same throughout the years, the course is always developing better ways to scaffold development collaboration. Not all lessons learned at PdP are easy – development projects and collaboration are, after all, messy and uncertain. But these are the lessons needed to navigate the realities of bringing about change in the world. We are particularly proud when we get alumni of the course as the industry sponsors of new challenges!

“ These projects help bridge the gap between education and real product development, and that's valuable both for students and for companies.

- Johan Haltia, Chief Technology Officer at Finndent & PdP alum

“ It benefits everyone involved. Students gain experience, companies gain new perspectives, and the whole ecosystem grows stronger.

- Juha Vuorenalho, Innovation & Collaboration Coordinator at Saab, a recurring industry partner



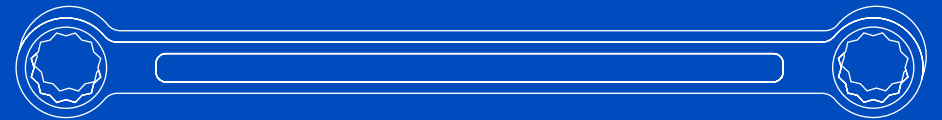
PdP 1996-2026

356

projects in total

165

industry partners



PdP 2025-2026

22

projects

59%

recurring industry partners

+29%

increase of projects from '24-'25

174

students



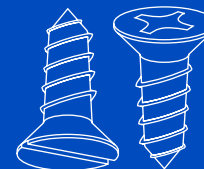
76% students
from Aalto



24% students
from partnering universities

18

invention
disclosures



8

patent
applications

170%

increase from
'24-'25



“

PdP is one of the most hands-on courses, and you get to work on professional level with industry. It's a great challenge, and you get a lot of growth as a project manager.

- Umberto, project manager at PdP team Gosta Labs '25-'26

“

If I'm thinking about starting my own company in the future, PdP has given me a great simulation on how to build a product for a market.

- Adamay, student at PdP team Isaware '25-'26

“

In order to create a successful project, the key difference is that you're taking key information from customers and not just designing what you think they need. The skills gained during PdP will be incredibly useful in my future career, especially if I'm going for leader positions.

-Mircea, project manager at PdP team Isaware '25-'26

“

The most rewarding thing is to get the ideas off the paper, even if they're crude or ugly – just to test them out as prototypes!

- Rosa, project manager at PdP team Lappset '25-'26

case highlight:

PdP students revolutionizing critical care with HUS & Biodesign Finland

From idea to functional prototype in one academic year! In Finland's intensive care units, one of the most basic vital signs, urine output, is still measured by hand. Nurses check urine bags, note the numbers, and enter them manually into hospital systems. "Most vital-sign monitoring is already automatic, but we still use human workforce to measure things that devices could do," says HUS ER Nurse Susan Laine.

To bring urine monitoring into the 21st century, HUS, Biodesign Finland, and DF joined forces in this year's PdP. Together, an interdisciplinary student team built an automated, affordable, and hospital-integrated device to save nurses' time, improve data accuracy, and enable real-time clinical decisions.

The impact is clear: in a 50-bed ICU, nurses spend around 40 hours every day just measuring and recording urine output. "By automating this, we can free nurses' time for other significant tasks and direct patient care."

For HUS, the PdP project is a new way to innovate. Laine explains:

“This started from a user-driven need and building a completely new medical device from zero.”

Unlike commercial R&D constrained by feasibility, the students began from 'everything is possible'. Development Manager Salla Keränen highlights their mindset: "They haven't been contaminated by the usual regulatory hurdles. They started from, 'What's the best solution?' That lets us move much more agilely and get to a functional solution faster."

In just one academic year, the team has gone from zero knowledge of medical-device regulation to fluent discussions with clinicians and engineers. "They started knowing nothing about this, and now they're experts," says Keränen. Otto Olavinen from Biodesign Finland adds: "This isn't a project that drags for years. We started here, and we'll end here – clear start, clear finish."

The project is more than an innovative device; piloted as a part of the EIT HEI CODEUNITED project and identified through the Bio-design Finland needs platform, it is a template for how public-sector agencies, design thinkers, and engineering students can co-create solutions that truly co-create real impact.

With the support of Aalto Innovation Services, the student team filed two patent applications, and were also awarded PdP's Team of the Year. The project is turning into a startup as team members Paavo Miettinen, Clemens Marx and Joonas Lindahl continue the work to bring the device to the market. Currently, they are applying for Business Finland R2B-funding to reach clinical approval and certification, collaborating with experienced med-tech founders, and seeking business development expertise to join the team to bring the device to hospital use by 2030.



Learning ACROSS DISCIPLINES

As educators at ADF, our pedagogical practice continues to center on creating an environment where interdisciplinary collaboration thrives. Through our active learning pedagogies, we focussed on challenge-grounded learning and empowering students to learn through hands-on practice and iteration. We embed sustainability into many of our courses to address urgent environmental and social concerns. Above all, we maintained a low-threshold sandbox for students, offering space where students are encouraged to take creative risks, test bold ideas, and translate complex concepts into tangible, viable solutions for industry and society.

ADF's interdisciplinary product development courses

MEC-E3001 — Product Development Project
 MEC-E3900 — Prototyping Tools at the Design Factory
 MEC-E3005 — Prototyping for Innovation
 MEC-E3007 — Product Sustainability
 MEC-E3020 — Methods in Early Product Development
 AAN-C2060 — Product Development in Startups
 MEC-E3080 — Global Innovation Practices
 JOIN-E3920 — Ideation and Creative Collaboration
 JOIN-E3910 — Design Thinking for Innovation
 JOIN-L3000 — Designing impact
 MEC-E1001 — Mechanical Engineering in Society
 AAN-C2009 — Designing An Electronic Device for Business and Production
 AAN-C2012 — ADD Basics: Additive manufacturing: from idea to business
 AAN-C2013 — User Research in Product Design

Courses hosted at ADF

ARTS-A0631 — Art, Life and Entrepreneurship 1
 ELEC-E9900 — Networked Partnering and Product Innovation - NEPPI
 JOIN-E7007 — IDBM Capstone: Industry Project
 MEC-E3004 — Safety Management in Complex Sociotechnical Systems D
 MNGT-E3005 — Foundations of Entrepreneurship
 SCI-C1002 — User-centered Product Development Project
 TU-E4040 — Opportunity Prototyping D
 TU-E4060 — Design & Innovation in Context D
 TU-E4101 — Entrepreneurship Lab D
 Nordic Design Futures, Aalto University Summer School
 Human-Centered UX Design, Aalto University Summer School

1758

students in ADF taught & hosted courses

+17%

increase from '24-'25

6756

credits

+1,5%

increase from '24-'25

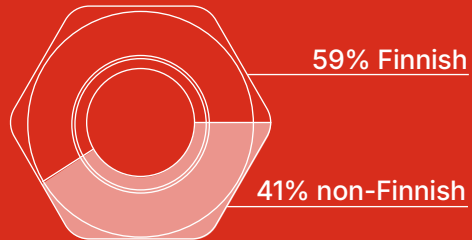
2500

learners in ADF workshops & talks

1601

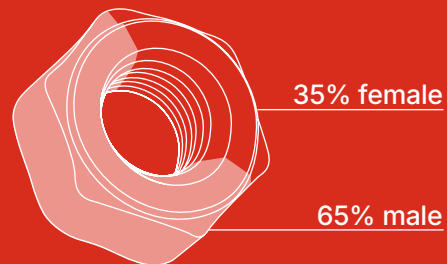
attainments

Nationality

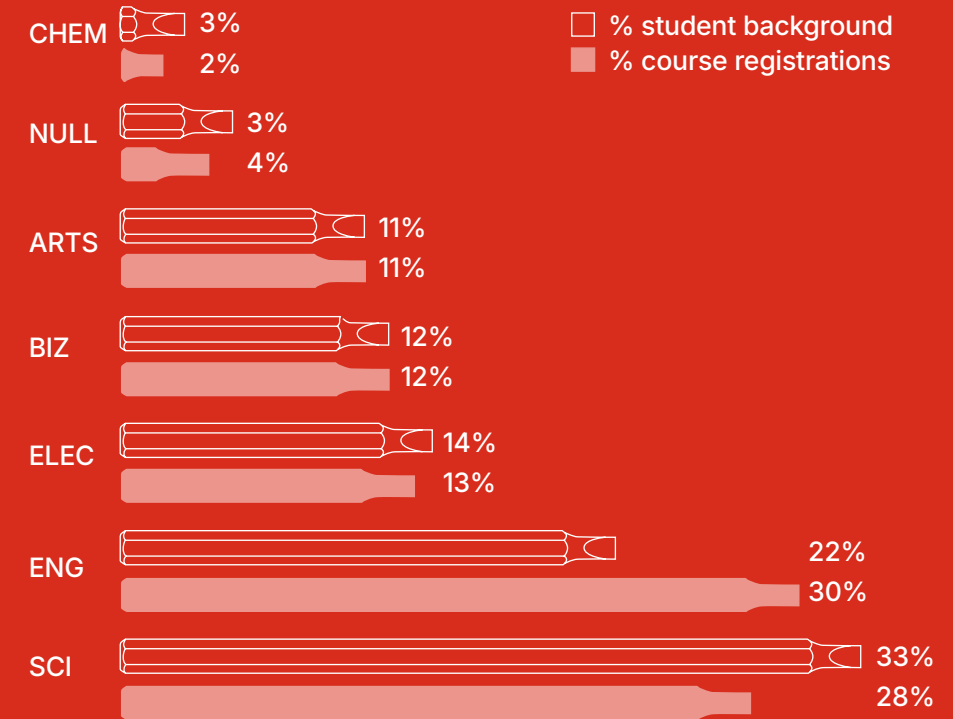


Gender

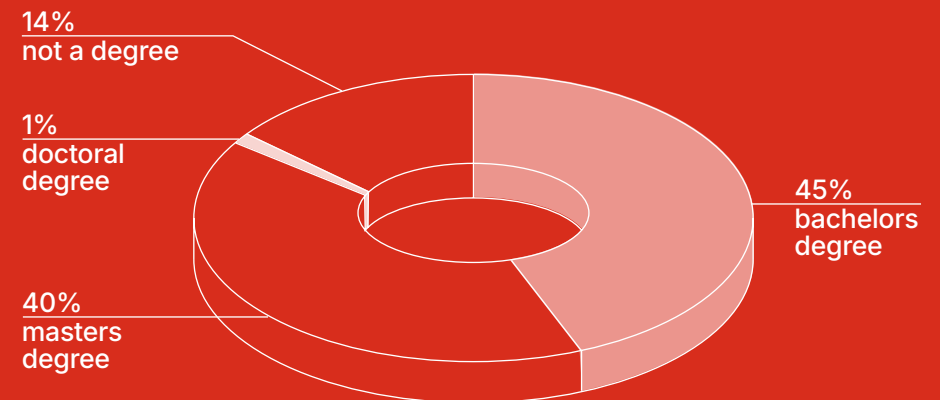
*graph excluding 'Not declared' students



Students & course registrations per school



Student level distribution





Scaling product sustainability learning

Sustainability has become a popular theme among ADF students in recent years, reflecting growing interest in how products can be designed more responsibly. To respond to this demand and create more opportunities for in-depth learning, ADF will introduce a new course structure during the coming academic year. The current joint BSc and MSc course, *Product Sustainability*, will be developed into two more focused learning experiences.

The first course, *Green Product Design Principles*, will focus on practical methods and frameworks for environmentally conscious product development, including material selection, energy efficiency, design for disassembly, and biodegradability. Working in multidisciplinary teams, students will apply these principles through hands-on projects. The second course, *Product Sustainability*, will be offered at the master's level and guide students in analysing and redesigning everyday products. By examining materials, environmental impacts, and design decisions, students will identify opportunities for more sustainable solutions. Together, the two courses will provide a deeper and more comprehensive learning pathway while responding to growing student interest in sustainability-focused design education.

Implementing creative development practices to Aalto

ADF teacher and researcher Senni Kirjavainen worked with Aalto HR to develop a co-creation process aimed at strengthening development practices across the university through a parallel pilot in a selected school. Following the establishment of the initial project structure, the pilot will be carried out at the Aalto University School of Science, where it will focus on developing the onboarding process.

Aalto's onboarding materials emphasise the importance of a structured and supportive introduction to the university. The pilot offers a timely contribution to ongoing development work by providing a practical example of how collaborative development methods can be adapted to different parts of the university.

“The co-creation workshops gave us clear, evidence-based insight into the pain points of faculty onboarding from both service staff and new faculty. Based on this, we created a service promise and concrete process changes – clarified roles, meaningful additions to the process, and new tool – which SCI is now piloting from August.

- Katja Vuorialho, HR Manager at SCI



case highlight:

Aalto Summer School courses

Nordic Design Futures Summer School

The 2-week immersive course explores the trajectories, materials, and mindsets shaping contemporary Nordic design. Led by ADF's Specialist Sushant Passi, the course combines critical design, hands-on experimentation, and foresight-driven thinking, inviting students to develop design approaches grounded in place, culture, and future possibilities.

The course begins with a theoretical foundation in the socio-cultural context of the Nordic countries, with a particular focus on Finland. Through visual materials, films, site-based references, and dialogue, students examine how design is shaped by regional perspectives and conditions. This then leads into a more practical phase, where workshops, site visits, and material experiments support both collaborative and individual exploration.

The course emphasizes a holistic creative process from ideation to tangible artefacts, while strengthening students' ability to think critically, build scenarios, and communicate their process and outcomes. DF supports this work by providing expert guidance, workspaces, and labs where students can test and realize their ideas.

“Coming from studying business, everything was completely different, all new information for me. Being able to use different facilities and having the freedom to explore was something I really enjoyed. It was very hands-on, and honestly a really meaningful experience for me.

- A student from Haaga-Helia on Nordic Design Futures course

Innovating Through Technology - ODOS

This spring, Aalto University Summer School welcomed 50 students from Thailand's One District One Scholarship Program for a 6-week study period at Aalto. It was the second programme created in collaboration with ODOS, following the first group's visit in autumn 2025.

The customised programme brought together engineering, business, human-centered design, innovation, artificial intelligence, and data analysis. Alongside lectures, students worked on a project exploring how technologies such as digital systems, AI, and robotics could help address pressures in healthcare while keeping human needs and ethical considerations at the centre.

The collaboration reflects ODOS's goal of expanding opportunities for outstanding Thai students through international education and supports Aalto Summer School's focus on practical, interdisciplinary learning.

Research for IMPACT

Research at ADF focused on both advancing development and design knowledge and exploring our own pedagogical developments. The SEFI conference provided an opportunity to discuss and develop our understanding of the future of product development and engineering education, while our journal publications explored strategy and issue-selling. Our involvement across several research projects allowed us to engage with broader academic circles and industry, which helped us contextualize our understanding within the realms of research and practice.

AINA

In AINA, coordinated by Aalto University, NH₃ utilization in energy applications is considered from technological and social acceptance viewpoints. The first challenge in NH₃ usage is the potentially forming greenhouse gas (N₂O) and NO_x emissions. The second challenge is the energy efficiency of NH₃ manufacturing and cracking processes as part of energy conversion systems as well as various techno-economical barriers. Third, NH₃ utilization involves various social acceptance questions and prejudices.

ATTRACT Expand

ATTRACT EXPAND is a 48-month initiative to accelerate technology maturation in line with their Strategic Research and Technology Agendas. Its objectives are to: advance breakthrough concepts in detection, imaging, and computing, to strengthen research infrastructure, industry, academia collaboration, and finally to generate deployable solutions addressing EU ERI scientific & industrial needs, and transition priorities. A student programme, directly connected to the funded projects, is included to expand future deep-tech entrepreneurial capacity.

CODEUNITED

CODEUNITED is a European collaboration aimed at strengthening university-based innovation ecosystems by embedding interdisciplinary entrepreneurship education across five higher education institutions, with Aalto as one of the key partners. During Phase 1, Aalto contributed to ecosystem mapping, student activities, staff training, and startup support, while also helping identify areas where collaboration structures and engagement could be further strengthened. The project continues into the next phase with a strong focus on training, mentoring, venture support, and building practices that can scale beyond the project itself.

Erasmus DT4AI

Design Thinking for Artificial Intelligence (DT4AI) is an Erasmus+ project developing a human-centred approach to integrating AI into higher education. Through an international partnership including Aalto University, the project combines design thinking with AI development to help educators and students address real-world challenges through user research, creative problem-solving, and prototyping. It also provides shared teaching materials, case studies, and practical guidance to support AI-focused innovation education across disciplines.

Publications

Björklund, T., van der Marel, F., Rekonen, S. & Keipi, T. (2026). May I have your attention – Designers' issue selling processes in design integration. *Technovation*, 153, 103534.

Edström, K., de Andrade, M., Bernhard, J., Chance, S., Björklund, T., Male, S., Thompson, G., Broadbent, R., May, D., Mitchell, J., Saunders, F., & Ventura-Medina, E. (2025). Reviewing manuscripts in engineering education journals - Reflections and advice. In SEFI 53rd European Society for Engineering Education (SEFI) Annual Conference, Tampere, Finland.

Eriksson, V. & Björklund, T. (2025). Engineering as a creative activity: Mediating rules, tools, communities and objects as perceived by engineering students. In SEFI 53rd European Society for Engineering Education (SEFI) Annual Conference, Tampere, Finland.

Eriksson, V., Figueiredo, S., Björklund, T., Kirjavainen, S. (2025). Fostering meaningful relationships: Managing academia and industry interactions in project-based learning. 27th International Conference on Engineering and Product Design Education, E&PDE2025.

Figueiredo, S., Kirjavainen, S., Kuikka, M., Ocampo, C. C., Devia, G., Gárate, F., Marín, S. M., Packalén, A., & Riveros, D. (2025). International perspectives on educational tool design: A user testing toolkit case. In SEFI 53rd European Society for Engineering Education (SEFI) Annual Conference, Tampere, Finland.

Keipi T. & Celik S. (2025). The power of networks: How innovation ecosystems foster social capital. In Semczuk, B.-E., Dosi, C., Gorni, E., Vignoli, M., Cau, S., Presti, G., Utermann, S., Gastrow, M., Jungstand, A., Schmoch, U., Romasanta, A. K., Keipi, T., Celik, S., Feenstra, M., Hopp, C., Pruschak, G., Werker, C., Yen, T. Q., Fric, U., Blankesteijn, M. L. (2025). From Breakthroughs to Public Value – The Socio-Economic Contribution of ATTRACT. (pp. 29-36). DOI: 10.5281/zenodo.17367468

Lavrsen, J.C. (2026) Design methods as cognitive tools: Understanding method usage through cognitive theories. In Simeone, L., Gray, C. M., Verhoeven, A., de Götzen, A., Bakırloğlu, Y., Zohar, H., Stead, M., and Buwert, P. (eds.), DRS2026: Edinburgh, 8–12 June, Edinburgh, United Kingdom.

Nicoletti Dziobczanski, P.R., and Björklund, T. (2026) Strategic design in practice: Mapping strategy formulation and implementation in Nordic design job advertisements. In Simeone, L., Gray, C. M., Verhoeven, A., de Götzen, A., Bakırloğlu, Y., Zohar, H., Stead, M., and Buwert, P. (eds.), DRS2026: Edinburgh, 8–12 June, Edinburgh, United Kingdom.

publication highlight:

May I have your attention – Designers' issue selling processes in design integration

Integrating design into technology-driven companies is often recognized as valuable, but making that integration happen in practice can be challenging. In a published article in *Technovation*, ADF researchers examine how designers work to build internal support for design across a large international technology company.

The study identifies three interconnected issue-selling strategies: *seeding*, *involving*, and *funneling*. Seeding helps familiarize non-designers with the value of design through relationship-building, visible examples, and first-hand experiences. Involving turns awareness into commitment by bringing people into the process and creating communities around design-related questions. Funneling then translates attention into action through tools such as guidelines, process depictions, and other practical ways of focusing decision-making.

“We saw designers leveraging their professional practices, such as visualizing diverse viewpoints and prototyping, to get the benefits of design noticed across the company.

– Satu Rekonen, University Lecturer, co-author

The article shows that successful design integration is not driven by one-off advocacy, but by a sequence of actions that unfold over time and across different parts of the organization. The researchers also note that many of the observed strategies targeted engineers and product managers, underscoring the importance of building support beyond design teams alone. As the study suggests, cross-disciplinary collaboration is essential when design is to become part of everyday organizational practice.

Network & collaboration of GROWTH

This year marks the 15th anniversary of the Design Factory Global Network. DFGN officially began in 2011 when the Sino-Finnish Centre at Tongji University in Shanghai established the second Design Factory after Aalto. Over the years, a total of 45 DFs have been part of the network, with 38 currently active. The most recent addition, Babson Design Factory, joined on Christmas Day in 2025.

Each year, the network gathers in person at one of the DFs to exchange the latest teaching practices and tools, and to develop new collaborative initiatives. In 2025, *International Deasign Factory Week 25 (IDFW)* and *UnBoxed25* conference were hosted by NYC Design Factory at Pace University. During the week, participants also had the opportunity to visit St. John's Design Factory, also located in New York City.

During the 2025–2026 academic year, the DFGN team revived several initiatives. *DF Y?* was rebranded as *DF BootCamp* and organised in December 2025, with participants from Hannam and Forge Design Factories. *World Design Factory Day (WDFD)* was also reintroduced and celebrated on May 12th as a second annual moment to bring the network together. This year's programme included discussions on network-wide topics, insights from DFBog's Lucas on experiences in Antarctica, exploration of transforming PD6 into company consultancy, and a new series of *DF Deepdive* reports, among other themes.

The DFGN *Deepdive* concept offers focused insights into selected topics across the network and its members. The first report, centred on Circular Economy, included contributions from fifteen Design Factories. In addition to *Deepdives*, many initiatives originate during *IDFW*. The *DFGN Co-Ed book*, which compiles teaching methods from across the network, is progressing with an expected publication in the first half of 2027. The *Tech2x* project, involving at least five Design Factories, has focused on educating students, academics, and staff on transforming deep tech into consumer products and viable companies. Meanwhile, the *Open World Education* project explores ways to share teaching across institutions, with participating Design Factories contributing research and experimental approaches.

These initiatives represent only a selection of the ongoing work within the network. In addition, the DFGN team has been engaging with over ten '*Epic Wannabes*' institutions developing their own Design Factories and aspiring to join the network. The team has also delivered tailored training sessions for two institutions, focusing on establishing a design factory and implementing the educational approach developed at ADF.

“ I wish I could participate in more ADF workshops! ”
– a visitor from RMIT University Vietnam

PATH MAKERS TULEVAISUUDEN TIENNÄYTTÄJÄT 2025

A"
Aalto University

TT
Säätiö

Technology Industries
of Finland

ESPOO

TEK

KEMIAN ALIYHTIÖ

Finnish Forest

Product development practices for THE WIN

“

The PDPM award was a really big deal for us to get that visibility and external recognition – it tells us that we’ve done something right.

- Topi Koskinen, Business Director at Entteri Oy
winner of PDPM & The Ekman Award 2025

Product development continues to be a key driver of growth, resilience, and competitiveness at both organizational and national levels. The second year of the Product Development Path Makers Award highlighted inspiring examples of how product development practices can open new pathways beyond traditional educational and research settings. Together with the sponsors Academic Engineers and Architects in Finland (TEK), the City of Espoo, Technology Industries of Finland, the Chemical Industry Federation of Finland, Finnish Forest Industries, and TT-Säätiö, ADF celebrated four winners: Entteri, for overcoming adoption barriers with its AI-powered dental X-ray analysis software; Saab, for bringing a more product-driven and agile innovation model to the defence industry; Betolar, for reimagining sustainable concrete production through data-driven, low-carbon material development; and Uute Scientific, for advancing customer-driven iteration in microbial extract development across industries.

40 000€

awards total, €8 000 - €16 000 granted per winning nomination



Follow us!

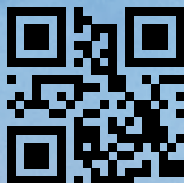
INSTAGRAM

@aaltodf



TELEGRAM

AaltoDF



LINKEDIN

Aalto Design Factory

