

Bridging the Gap

Uppsala University's Collaborative Design for a Sustainable Future

Uppsala University

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- Jenny Nordquist



How can we increase much-needed knowledge transfer from the confines of academia into the world-at-large? How can we leverage innovative thinking to secure a sustainable future for all? Sweden's first university, Uppsala University, takes a proactive stance. Founded in 1477 and consistently ranked among the top 100 universities in the world, Uppsala University aims to elevate the impact of its innovative capital in both the marketplace and wider societal contexts with its specialized department, UU Innovation.

For the past decade, UU Innovation has worked to bridge the gap between academic research, industry, and social application. The department supports researchers and students in the commercialization of their ideas, while simultaneously inviting businesses and other non-academic organizations to collaborate with university researchers and troubleshoot complex issues. The true task of UU Innovation is acade-

mic knowledge transfer—or knowledge exchange as we consider it (knowledge goes both ways).

Recent government policies demonstrate that this type of exchange is regarded as a top priority in Sweden. To address issues in the transition toward a more inclusive, climate-friendly society, Sweden's government recently passed five strategic collaboration pro-

grams. The program categories indicate the breadth of issues at hand: Next Generation Travel and Transport, Smart Cities, Circular and Bio-based Economy, Life Science, and Online Industry and New Materials.

In Sweden, such bold programs are no novelty. A small, but highly developed country dominated by an innovation-laden export industry, Sweden has a long

history of utilizing societal coordination to create and safeguard economic growth. "All programs correspond to Swedish strengths, which can achieve their full potential through collaboration between public actors, industry, and academia," says Jenny Nordquist, Acting Director of UU Innovation.

Embracing and building on the tradition of this collaborative spirit, UU Innovation is well positioned to support the use of innovation in societal transformation. By providing advice and funding that support initial stages of both business creation (verification of technology, market surveys, IP issues) as well as collaboration (matchmaking, workshops, pilot studies, assistance in applying for external funding), it works to improve the ability of research-based innovations from Uppsala University to make real-world impact.

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But how can innovation drive capital in a way that is sustainable? "It is increasingly clear that using innovation, investment, and trade, for environmental and climate goals also has the potential to contribute to job creation and competitiveness," concludes Nordquist. "They are the keys to both economic growth and a sustainable future—in Sweden and globally."

Besides a long tradition of collaboration, the innovative capacity of Swedish universities also benefit from specific regulations of IP tied to academic innovation. In Sweden, university researchers, and not universities, own the results of their research. This model encourages universities to support innovation in the spirit of both societal development and marketplace impact. It is an environment that creates ample incentives for researchers to try out innovative ideas, keeping UU Innovation quite busy in supporting their efforts.

"Interaction between academic research, industry, and other societal actors in Sweden can create true win-win situations," says Nordquist. UU Innovation's *Academic Industry Meeting Day*, or AIMday was designed to foster exactly this sort of collaboration between diffe-

rent sectors. AIMday is an opportunity for industry and other non-academic organizations to present specific challenges to academic researchers and spend the day in roundtable format, brainstorming solutions—a multidisciplinary think-tank of sorts.

The model is surprisingly effective in its simplicity. Directly linking leaders of non-academic organizations with a given field's best researchers cuts through the bogged-down bureaucracy and formality in traditional channels of product and idea development. Pioneered by Uppsala University in 2008, the AIMday model for collaboration is used to support major innovations in many fields of knowledge, for example medicine, security, communications, technology, materials, and social welfare.

Whether an organization or individual's ambition is to form a company, sell licenses, or collaborate with others, UU Innovation assists these efforts by providing networks, funding, and complementary expertise that facilitates all these aspects of the innovative process. Two interesting cases that serve to illustrate how support from Uppsala University has aided in the creation of new, innovative businesses are Rolling Optics and OssDesign.

Considered one of the most disruptive technologies in brand security, Rolling Optics micro-printed 3D foils were developed at Uppsala's Ångström Lab. The 3D-foil stickers are an airtight certification of authenticity that prevents brand counterfeit. The technology is utilized to verify electronics, cosmetics, pharmaceuticals, spirits, tobacco, and more. Other cutting-edge developments to emerge from Uppsala University include OssDesign's customized cranial implants, which promote bone in-growth and healing in patients recovering from major head trauma. Utilizing specially formulated ceramic tiles attached to a titanium mesh, OssDesign has introduced a completely new approach to correcting large cranial defects.

Looking at projects with a stronger collaborative angle, UU Innovation has supported the successful adoption of so-called legal clinics in law teaching. By providing financial support and help in securing external financing for a cooperative venture between the De-

partment of Law and Civil Rights Defenders, a Swedish-based but internationally active human rights group, UU Innovation has helped in strengthening awareness about and legal expertise in human rights.

Another hot-topic project coming out of UU Innovation is "News Examiner," a collaboration grown from a joint research project between researchers at Uppsala University and Stanford University. By designing and distributing an app to be used by thousands of Swedish high school students that evaluates the trustworthiness of news in their social media feeds, the project helps researchers gain insight into how young people perceive news and facts.

In the end, big data garnered from the trials will give educators insight into how to best teach students a more critical perception of news and facts. This particular project has received much attention in Swedish media, in major papers as well as coverage on TV shows, reflecting the ability of Uppsala University to create valuable and necessary innovations with strong social impact.



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