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Czech Academic and Research
Discovery Services
CARDS

Before the Spin-off: What Universities Must Get Right

David Petr

Innovation Week

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Ministry of Education,
Youth and Sports
of the Czech Republic

Who we are

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David Petr

Knowledge transfer specialist, CARDS project · NTK

- Runs the Academy of Knowledge Transfer at NTK
- Background in scaling technologies from lab to production (batteries, e-waste and specialty ch.)
- TUM Battery venture course

Jana Soukupová

Knowledge transfer specialist, CARDS project · NTK

- Started the Academy of Knowledge transfer at NTK
- Investor view of university spin-offs (Spinoffy fund)

Who is in the room?

Student · Researcher · TTO / university · Startup · Company · Investor

How many of you have research that could be useful outside the lab?

Why are we here?

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Libraries are changing – and NTK with them

From a place that keeps knowledge to a place where it gets used.

Storing books → **connecting people and knowledge**

Access to information → **tools to use it – data, patents, AI search**

Quiet reading rooms → **space for community, events and prototyping**

Serving one institution → **shared infrastructure for the whole country**

And NTK is still arguably the best place in Prague to study for exams – open 24/7.

Spin-offs per year: Munich vs. Czechia

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spin-offs incubated by the Technical University of Munich (TUM) last year

~30% of total funding in DE flows through TUM

~6

spin-offs per year on average – in the whole of Czechia

The difference is what happens before the company even exists.

And the czech plates are shifting… full force forward

Before the spin-off: three things must go right

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01

The researcher

Knows the routes to impact, talks to customers early and can explain why the work matters outside the lab.

02

The IP

Is protected before it is published. One paper, talk or post too early can end patentability.

03

The deal

Equity, royalties and time are set so that an investor can still say yes.

Commercialisation does not start with a company. It starts in the lab.

Entrepreneurship education belongs at every faculty

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Not every researcher has to become a founder. But every researcher should know the options.

- **Routes of transfer** – licence, industry partnership, spin-off, or “not yet”
- **Protecting intellectual property** – what, when and with whom
- **Validating with customers** – real conversations, market by market
- **Pitching** – explaining the value to a sceptical outsider
- **Funding** – grants, proof-of-concept money, investors

From Munich (TUM): it is useful, students need it – and they ask for it.

Just as we teach academic writing, we should teach knowledge transfer

Open science and patents: protect first, publish second

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Open Access is the right default – but it can give away something valuable for free.

- A paper, conference talk, poster or even a social media post counts as **public disclosure**
- After disclosure, the invention is usually **no longer patentable** in Europe
- **Talk to your TTO before you submit** – not after the paper is out
- Protection and publication are not enemies: **file first, then publish**

How to kill a spin-off before it starts

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The licence offer

- 15 % equity that can never be diluted
- 10 % royalty on revenue
- No end date
- Veto rights over company decisions

What happens next

- The investor walks away – the cap table is “toxic”
- No room for an employee option pool (ESOP), so no top talent
- Founders lose motivation with every round
- The technology stays a “project” on the university website

It is the **combination** that kills: high non-dilutable equity, high royalties and strong veto rights.

Usually not bad intent – rather fragmented universities and TTOs without a clear mandate.

Equity has to work

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A university stake should be a commitment, not just a number in the contract.

Working equity means active help with

- Starting money
- IP protection
- First commercial validation
- Doors to industry
- Grants and legal support
- Mentoring

Virtual shares (TUM)

- A contractual claim on part of the proceeds – at exit or from dividends
- Not in the cap table, no voting rights, no veto
- The university shares in success without blocking rounds or the ESOP

Passive equity is dead equity.

Time is the third metric

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Cambridge and TUM: predefined fast-track packages instead of case-by-case negotiation.

For deep tech, the longer the road from agreement to signature,
the smaller the chance the company is born at all.

What the leaders do

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	Equity	Royalties	Process
KTH Stockholm	None – “professor’s privilege”: the IP belongs to the researcher	None by default	Strong support: advice, incubation, seed funding, investors
ETH Zürich	2 % baseline, always dilutable (+1–2 % for lower royalties)	~2 %, or 0.5–1 % with more equity – only above a revenue threshold	Standard ~3 months, express < 1 month
TUM Munich	Virtual shares 1–7 %, dilutable, outside the cap table	Usually none outside life sciences; one-off fee ~€10k	FastTrack models: predefined packages
Cambridge	5–10 %, therapeutics up to 15–20 %, always dilutable	Set so they do not block later rounds	Fast-track: predefined equity bands

Small, dilutable stake · low or no royalties · real support · predefined, fast paths

From a knot to a network: the CARDS model

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Technology transfer does not work as a set of isolated services. It needs an ecosystem.

01

Entrepreneurship should be part of every university.

02

Researchers need to understand not only how to create knowledge, but also **how to turn it into impact**.

03

Technology transfer offices cannot do this alone.

Project CARDS therefore connects:

- **entrepreneurship education**
- **professional tools and data**
- **technology transfer expertise**
- **community and peer learning**
- **connections to industry, investors and other universities**

We are not trying to build another isolated programme. We are building the infrastructure around people who want to move research into practice.

Technology transfer at NTK: entrepreneurship first

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Entrepreneurship is not only about creating start-ups.

It is a way of thinking about research impact.

Academy of Knowledge Transfer

01

entrepreneurship and technology transfer skills

02

from research idea to **value proposition and validation**

03

IP, market, business models, pitching and negotiation

04

practical work on participants' own projects

05

international experts, mentors and peer learning

Connecting industry and academia: build the community

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Tools
give you information.

Entrepreneurship
gives you skills.

Community
gives you opportunities.

Who meets here

- researchers
- technology transfer professionals
- entrepreneurs and founders
- companies
- investors
- students
- experts and mentors

How we support it:

- **Vector Space** – physical meeting point for innovation and technology transfer
- **Polytechnic Workshop** – prototyping and experimentation
- **Founder Evenings and other events** – informal exchange and networking
- **Grand Finale / pitching** – connecting projects with the wider ecosystem
- **cross-university community** – sharing experience instead of repeatedly reinventing solutions

The Academy of Knowledge Transfer: a lab for tech transfer education

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We use the Academy to test what works – and to share it.

- **Neutral and project-agnostic** – NTK holds no IP and takes no equity
- **Every outcome is valid** – licence, partnership, spin-off or “not yet”
- **Inspired by Munich** – TUM venture courses and the Lean Launchpad method
- **Year 1:** researchers only → **Year 2:** open to TTO staff, business developers, economists and students
- **TTO participants take the methods home** to their own universities

Why NTK and not just universities?

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Because innovation needs a neutral place where different worlds meet.

In the middle of a university campus

– surrounded by universities, researchers and students.

Neutral ground

– NTK is not tied to one university, faculty or discipline.

A mix of people and opportunities

– researchers, students, entrepreneurs, companies, investors and technology-transfer professionals can meet here.

Shared tools and expertise

– expensive professional tools, IP services and know-how do not need to be built independently at every institution.

One place, multiple opportunities

– education, IP expertise, AI and analytical tools, prototyping, events and networking.

Cross-university community

– NTK can connect existing university ecosystems and create opportunities between institutions.

Experience with national-scale collaboration:

- **CzechELib** – NTK operates the national centre for electronic information resources, providing shared access and negotiating licences for Czech research and education institutions.
- **PNG – Next Generation Platform** – NTK coordinates a shared library-services platform connecting research and academic libraries and building common digital infrastructure.

CARDS builds on the same principle for technology transfer

share what makes sense to share, while universities keep and develop their own expertise.

Future unicorn loading…

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NTK (National Library of Technology) is much more than a library.

We already build and operate shared infrastructure for Czech universities and research institutions - CzechELib for electronic resources and PNG for next-generation library services.

Now we are bringing the same approach to technology transfer.

We see NTK as a place where knowledge should not only be stored or accessed, but used.

For us, this is the future of NTK: not only providing access to knowledge, but helping people turn knowledge into impact.

Jana Soukupová, David Petr, Petra Kubálková

Last spots: join the Academy

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Applications are closed.

For people in this room, we keep a few extra places.

Free · part-time · in English · monthly sessions, October to spring

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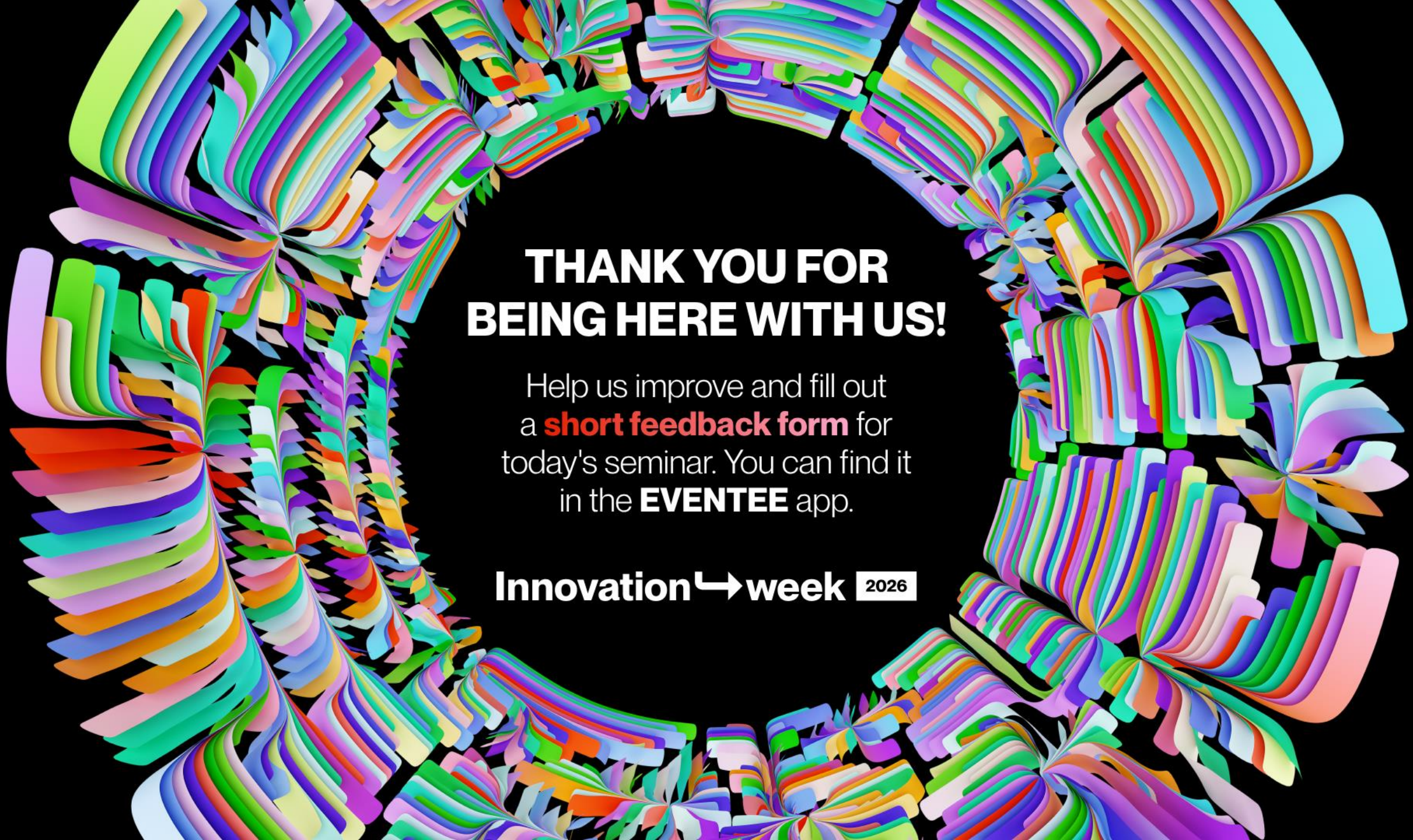
We are also looking for new experts and mentors

IP, investment, industry, product, business development – come and talk to us after the session.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