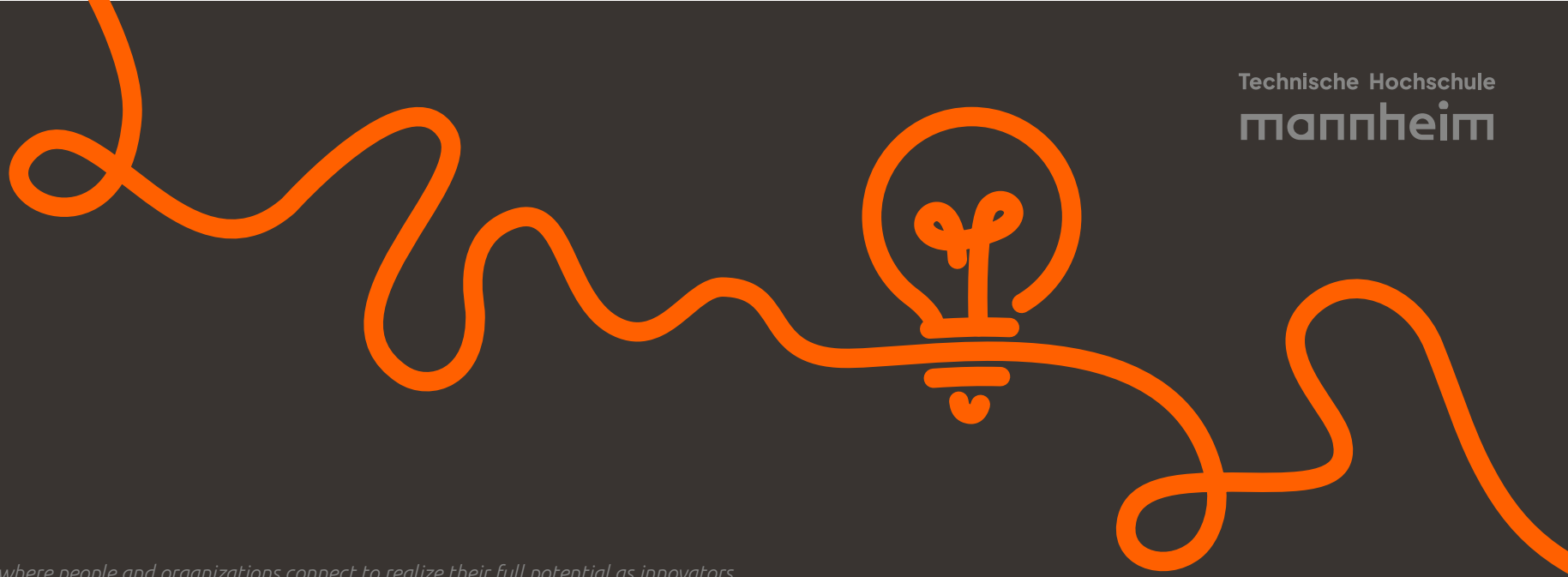
Technische Hochschule
mannheim



A place where people and organizations connect to realize their full potential as innovators and cultivate a new culture of courage and sensibility towards what is new and possible.

inno.space

DESIGN FACTORY MANNHEIM

TH·M inno space DESIGN FACTORY MANNHEIM

Partner Universities
(global)

Students
(german & international)

Research Centers

Companies
(local & global)

INNO_VATION

You can collaborate with inno.space to…

solve complex challenges

to experiment with the problem solving methodology and Design Thinking approach

find tangible solutions

through a hands-on approach and iterative prototyping

get in touch with your users

with a deep phase of qualitative research

work with young talents

to apply new perspectives and connect with the innovation leaders of the future

generate a culture of innovation in your organisation

to improve collaboration between different functions and enable creative confidence

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How might we change the way scientists manually handle liquids?

... in collaboration with Hamilton Company

How might we optimize offshore operations to increase efficiency and safety?

... in collaboration with IMA

How might we include passive systems in current dome constructions to increase their positive environmental impact?

... in collaboration with VISIONDOMES

Solve Complex Challenges

The Design Thinking approach is suitable to face very broad challenges that include many problems within them.

The challenge redefinition is one of the crucial phases of the approach, and consists in rewriting the design challenge based on the learnings that have emerged after a month and a half of research and interviews with the project stakeholders.

„The right problem first, then the right solution follows."

Find Tangible Solutions

The Design Thinking approach encourages a strong focus on tangibility and experimentation. Throughout the process, students engange in multiple iterative cycles where ideas are continuously built, tested and refined.
Prototyping plays a central role in this phase: from quick, low-fidelity mockups to more elaborate models, each prototype helps to explore different aspects of a potential solution.

By materializing their ideas, students are able to observe how concepts behave in real contexts, collect feedback from users, and uncover new insights that would remain hidden in purely abstract discussions.
This hands-on exploration transforms complex ideas into concrete experiences, allowing students to make their solutions visible, testable and ultimately more meaningful.

„A great opportunity to work with young, creative minds and come into contact with new and perhaps unusual ideas.“

Dr. Anke Neuhaus - TECHNOSEUM - Landesmuseum für Technik und Arbeit in Mannheim

„The InnoTEAm has uncovered exciting new insights into possible uses for FRENVI.“

Dr. Markus Götz - Head of Research and Development FRENVI GmbH

„The cooperation with committed students and exchange with experienced supervisors has exceeded all of our expectations.“

Philipp Jungk - Founder and head of VisionDomes

Redesign the experience of people with diabetes on insulin therapy to improve outcomes, optimize the patient pathway and communication within the health care team in a hospital setting. (Roche Challenge)

... To respond to the challenge posed by Roche, the students went to interview dozens of doctors, patients, dietary experts and parents of young patients to understand which aspects of the patient pathway influenced the improvements of the outcomes.

Get in Touch with your Users

Innovating that starts from the needs of its users rather than from solution ideas can help to obtain resilient competitive advantages.
The solutions are, by definition, done. On one hand, they have the enormous advantage of being oriented towards the implementation and grounding of the project, on the other hand, they are less flexible that the enormous mutability of the context, eventually becoming obsolete.

It is therefore essential to enhance the research that is the basis of a solution concept in order to constitute a flexible basis to be adapted to a new solution.

„A lot of the things I learned will pay off in my future. It was a very exhausting time but also it was the masters course program that I learned the most in.“

Max Becker, Master in Computer Science - DTP 2016/2017

„The CBI programme has been a game-changer for me as a tech student, […] which has helped me to develop my creativity and problem-solving skills beyond what I thought was possible.“

Maren Isabella Leidner, Masters in Computer Science - CBI 2022/2023

Collaborate with young Talents

The involvement of students allows the creation of a safe zone within which it is possible, even for the most experienced business professionals, to question and discuss new ideas.

The core-team is made up of a multidisciplinary group of students selected by us, specifically for the challenge, based on the skills necessary to tackle the project issue and including members with different backgrounds to encourage the generation of divergent points of view.

„The ME310 program really taught me a lot about myself, team work and project management.“

Lia Habben, Masters in Communication Design - DTP 2021/2022

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Generate a Culture of Innovation in your Organisation

Open Innovation projects include the presence of a Design Thinking coach, whose task is to support the team of designers in applying the approach.

The role of our coaches is twofold:

1 – facilitate the activities and communication dynamics of the teams by creating an ideal space in which all participants can contribute with their ideas and energies. Without going into the merits of the contents, the coach accompanies the group by supporting a working method which helps to achieve the objectives and ensuring maximum participation by all.

2 – support the learning of people and teams in order to develop creative design skills, teamwork and a sense of the possible.

Our Approach

Design Thinking is a design approach born in the Standford Design School, which has fueled much of the entrepreneurial culture of Silicon Valley. This approach is human centered because it is based on the concept that real and lasting innovation requires a deep understanding of the context and the needs of the people for whom it is designed.

Our process consists of three main stages: Discover (Research), Design, Develop.

DISCOVER (what is)

explore context and people

Mindset

Problem Solving
Naive & Curious
Exploratory
Observe & Listen
Empathize

DESIGN (what if)

identify & build opportunities

Mindset

Problem Solving
Envisioning
Solutionize
Imagination
Iterate

DEVELOP (what works)

bring the solution to life

Mindset

Decision-Making
Strategic
Realistic
Pragmatic
Evaluate

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Program Overview

SUGAR
Network for Design Innovation

... if you want to collaborate with **universities around the world** to innnovate in an **international scenario**

PDP

... if you want to collaborate with students to develop innovative **product solutions**

The Innovation Program in a Global Context

SUGAR is a global network that brings together **28 international universities**.

The SUGAR program is an international collaboration program aimed at addressing an innovation challenge proposed by a partner company, through the collaboration between two universities in the network.

SUGAR program is therefore ideal for addressing **complex challenges** through the Design Thinking approach in an **international and multidisciplinary** context.

SUGAR is for you if you want to…

… **get in contact with an international network of universities and companies**

during network events, hosted in the most active geographical locations in innovation

… **map skills and opportunities in a specific foreign context**

through the partnership with a foreign university

How might we enhance the mobility experience of drivers in smart cities?

Valeo chose to address a megatrend suitable to their organization and vision in order to evaluate future business opportunities in the domain.

Safe Space is a virtual zone surrounding every traffic participant, granting them the physical space on the street they need to feel and be safe.
Safe Space is a system in which both vulnerable users (such as bikes and e-scooters) and heavy traffic participants (such as buses) can equip themselves with a device out of the Safe Space product family.

Project Summary

English

2 international events

2 Design Thinking expert coaches

Access to a network of professionals and skills of the SUGAR Network and the partner university

1 international university partner

An international multidisciplinary team composed by 6-8 part-time students

8 months

Price: from 60.000€ to 100.000€ - according to the partner university selected

200+
Past collaborations with companies and enterprises

250+
Multicultural multidisciplinary students

20
Global Partner Universities

15
Different Countries

26
Sponsor companies/projects

50+
Professors and coaches

Global Network

SUGAR Program includes 2 network events, an initial k**ickoff** at the University of Science and Technology of China in Hefei, and **"SUGAR Expo"**, a closing event in San Francisco, in the heart of Silicon Valley.

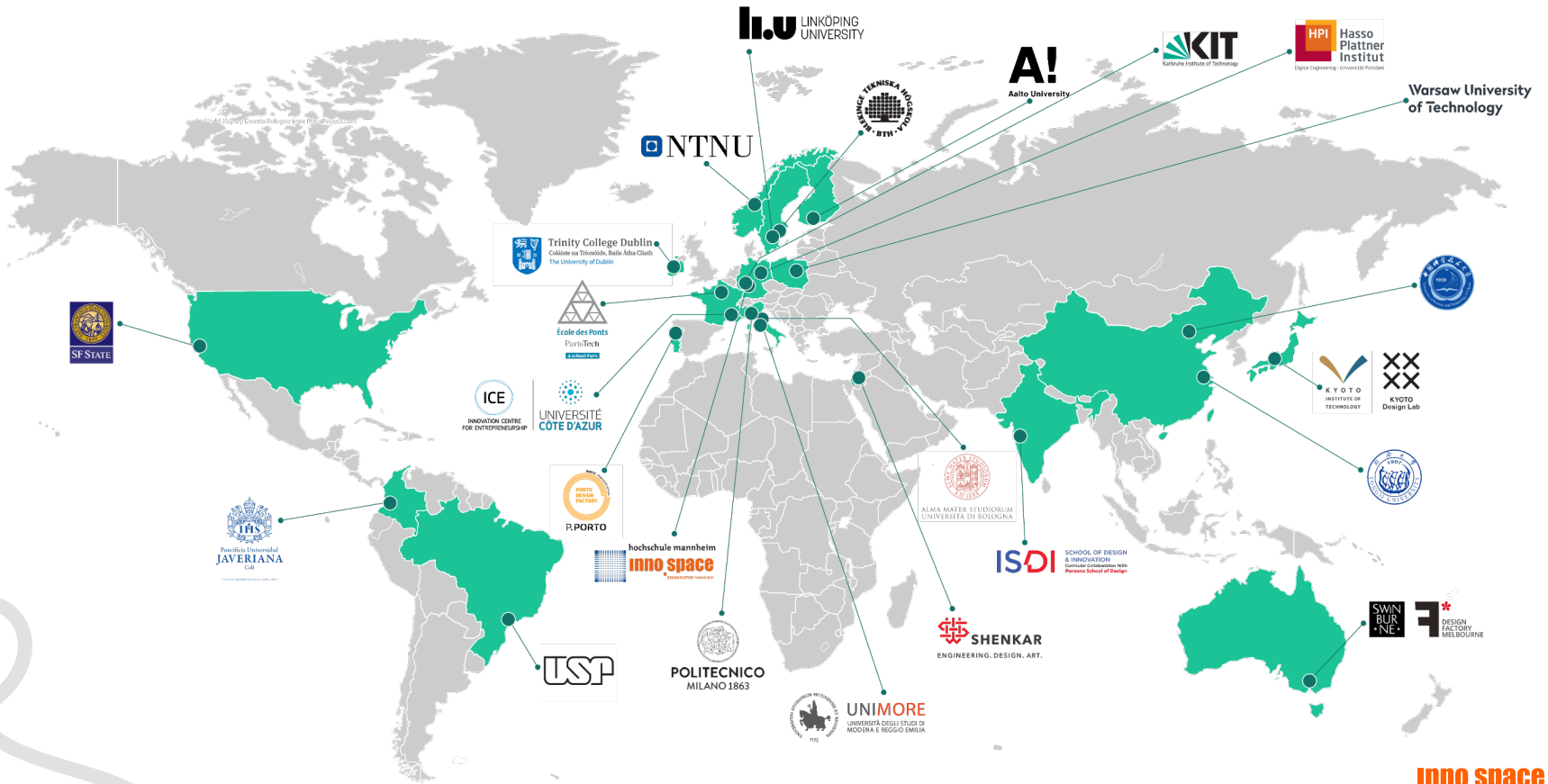
Both events include:

- networking activities
- keynotes on innovation
- guided activities
- visits to companies in the area

Collaborating with a partner university means being able to access a new innovation management methodology, as well as the local network of companies and institutions in contact with the partner university.

It also means having an active team on site to conduct qualitative research with users.
The inno.space student team carries out (at least) one mission to the partner university to meet the other team who, in turn, will travel to Mannheim.

SUGAR



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Program Output

- *A prototyped and tested solution concept*
- *Identification and testing of potentially applicable technologies*
- *A final report*
  containing the research carried out and the description of the process (including research with users)
- *Identified skills necessary for highly specialized groups to carry out the product development*
- *A roadmap*
  to guide the first strategic steps for the launch of the project after the end of the program

Price: from 8.000€ to 10.000€ - according to the student number

English

4 Design Thinking expert coaches

8 months

2 events

An international multidisciplinary team composed by 4-6 students (2 days a week)

The Product Development Project

In the Product Development Project (PDP), interdisciplinary teams of senior bachelor and master students **work on real-world challenges** provided by companies or organizational partners.

Over the course of four months, the teams use Design Thinking and agile methods to develop innovative product or service concepts – leading to a **functional prototype**.

Each team is guided by experienced coaches and benefits from a structured, iterative process designed to unlock creativity, foster collaboration, and ensure practical relevance.

For our partners, this results in fresh perspectives, concrete innovation impulses, and the opportunity to **engage with top-tier emerging talent**.

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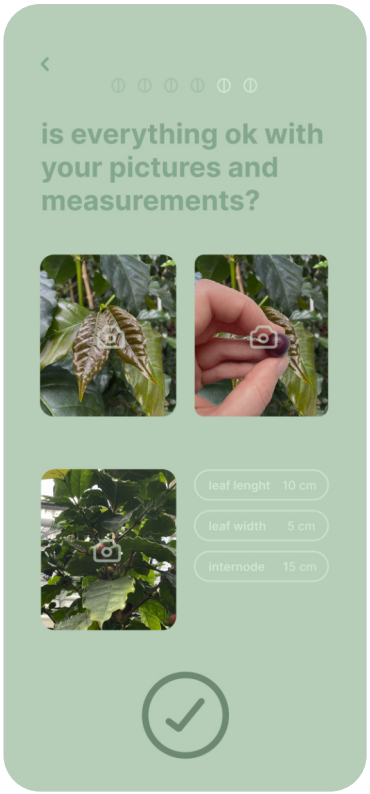


How might we collect, provide & maintain globally available data about coffee varieties?

...with the goal of enabling local farmers to learn about their varieties, or to help them decide which coffees to plant.

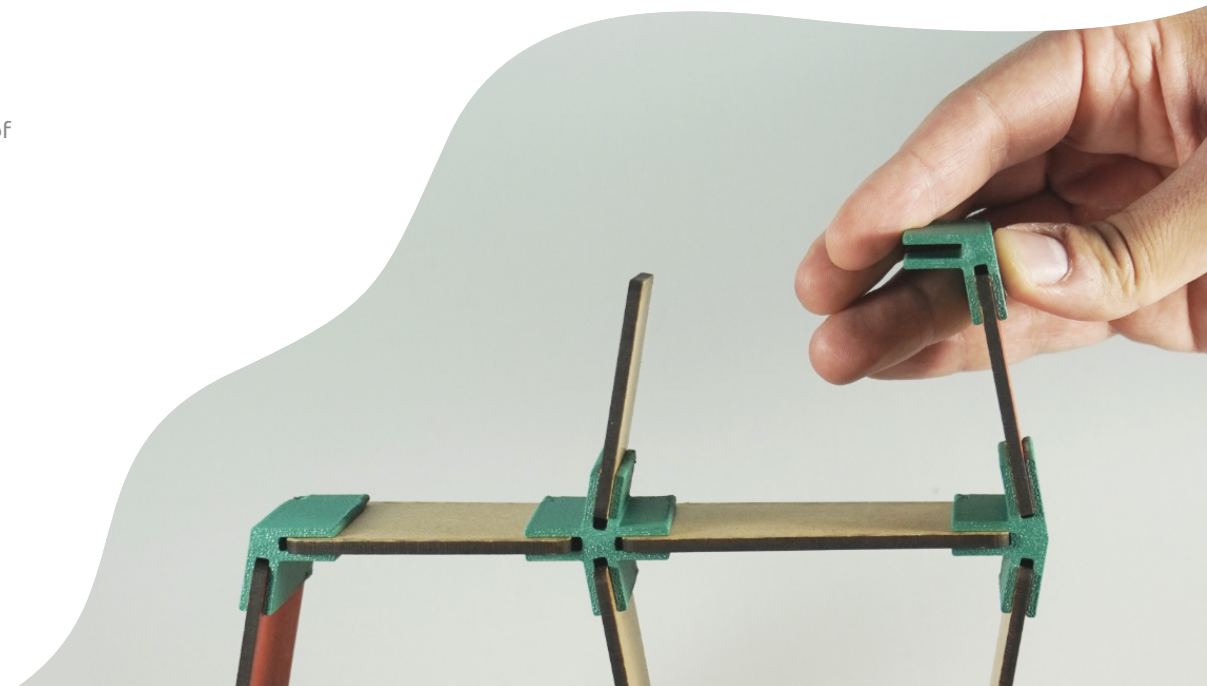
The „**Coffee Atlas**“ app is designed to assist coffee farmers in identifying their coffee plants and assessing their health through a simple scanning process. By leveraging advanced AI technology and a comprehensive database, the app provides precise and valuable information about the plants.

Expert support is integrated to enhance data analysis and assist in the collection of additional image data. The app features a user-friendly interface, covering the entire process from image capture to the delivery of results.

Program Output

- *A prototyped and tested solution concept*
- *Identification and testing of potential users and user journeys*
- *A final report*

  containing the research carried out and the description of the process (including research with users)



Program Duration and Output

PDP

5 months
2 days a week

9 months
2 days a week

SUGAR
Network for Design Innovation

Action Level

Meta Level

Organizational Level

Discover

Prototypes – They are the main vehicle of innovation in Design Thinking, from the roughest protypes of the first steps to the better refined ones. Throughout the project, the team creates numerous prototypes to articulate its vision and test its design assumptions.

Through iterative prototyping, broad project statements are refined into concrete concepts, which are demonstrated through the final, fully functional proof-of-concept prototype.

Learn

Documentation – The team pours significant effort into documenting its discoveries and learnings along the way. For each prototype created and tested to failure, there are significant learnings.

This learning influences the final solution the team creates, and also provides the corporate partners with a valuable body of knowledge from which to extend the team efforts into new innovation projects.

Bridge

Presentations – One of the largest challenges in driving innovation is effectively sharing the team's vision of the future. Three times during the project, the team delivers presentations that are open to the whole company. Through these presentations, the team communicates the highlights of their innovation efforts and demonstrate the best pf their prototyping.

The company and its management are engaged in a co-design session to ensure that the project accounts for all the interests and perspectives.

Partners who have Innovated with Us

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