

Hochschule Heilbronn: building up a regional entrepreneurial network

Abstract: Heilbronn University of Applied Sciences (HHN) is a relatively young higher education institution in one of Germany's economically most dynamic regions. Entrepreneurship, responsible entrepreneurship, in particular, is one of HHN's strategic objectives. In 2017, HHN founded Startklar, a central coordination unit with the mission to strengthen entrepreneurship at HHN and foster spin-offs. Since 2021, it has offered a Master in Entrepreneurship programme accredited by AACSB, an accreditation network of the best business schools worldwide. HHN and the Entrepreneurship programme are part of an entrepreneurial and innovative regional network that includes venture capitalists, consulting and mentoring offers, support from the city administration, start-ups, and established enterprises. The Master programme has already produced several promising startups. However, in an environment that offers attractive jobs for graduates, the programme manager sees a need to further develop methods to endow students better with competences and personality to start a business. According to Startklar, students benefit from learning about entrepreneurship even if they prefer a more secure career path. Some alumni return after years of employment to seek advice about how to realise a business idea.

1. Background - Overview of HHN's profile and its entrepreneurial activities

Heilbronn University of Applied Sciences (Hochschule Heilbronn, HHN) is in Heilbronn, a city in South-West Germany (State of Baden-Württemberg with almost 130,000 inhabitants). Founded in 1961 as an engineering school (Staatliche Ingenieursschule Heilbronn), HHN focuses on technology, economics and informatics. Today, HHN is made up of seven faculties: Mechanics and Electronics, Industrial and Process Engineering, Informatics, Business and Transport Management, International Business, Economics and Engineering as well as Management and Sales. HHN's over 8,000 students study at four campuses: Heilbronn Bildungscampus in the town centre, Heilbronn-Sontheim, Künzelsau and Schwäbisch-Hall.¹

Developing **entrepreneurship** is part of HHN's strategic objectives in the Structural Development Plan 2020 – 2025.² The Plan includes the implementation of a Master study programme in entrepreneurship, which began its operations in the winter semester of 2021. The Master programme is accredited by the Association to Advance Collegiate Schools of Business (AACSB), an accreditation network of best business schools worldwide. Developing the entrepreneurial spirit and self-reliance of its members is part of HHN's mission statement.³ The University lives and supports the spirit through empowerment and application-oriented activities. HHN continuously develops and implements new entrepreneurial education settings. Students experience real business situations, for example in student ventures, which for some students are their first working experiences. They can use results and experiences in their studies, supported by their educators. The HHN has dedicated facilities such as a *digilab* and a makerspace where students can explore innovative ideas and develop their own prototypes.

¹ See <https://www.hs-heilbronn.de/en> for HHN's profile.

² Hochschule Heilbronn (2020): Struktur- und Entwicklungsplan 2020 – 2025, p. 99.

³ See <https://www.hs-heilbronn.de/de/leitbild>, in German.

Greater Heilbronn, which is the Heilbronn-Franken region with more than 930,000 inhabitants, is one of the most economically dynamic areas in Germany. Above all, the Schwarz Group, which is the largest retail group in Europe,⁴ has its headquarters in the Heilbronn region. Heilbronn is the birthplace of Dieter Schwarz, the founder and head of the group as well as the head of the Schwarz Foundation (Schwarz Stiftung).⁵ For more than 20 years, the Schwarz Foundation has been investing large quantities of funds into education, research and innovation facilities in the region.⁶ Among the most ambitious current endeavours is the construction of the innovation park artificial intelligence (Ipai), which will play a leading role in Europe.⁷ Moreover, Heilbronn has a large production plant of Audi, the car manufacturer, many suppliers to the automotive industry and hidden champions, for example in the tool industry.

This case study focuses on the regional network of actors in the field of entrepreneurship and innovation of which HHN is a part and which HHN is developing together with the other network partners.

2. Objectives - Rationale of building a regional entrepreneurial network

For HHN, the rationale for being part of a regional entrepreneurial network and building this network further is enhancing education, research and transfer and offering students and scientific staff the best support for their ventures. Being part of the network also strengthens the HHN's reputation as a driver of innovation in the region. As regards education, the network is important to offer students the connections they need to develop their entrepreneurial knowledge, skills, and ideas. Students can use the connections for example for project work, Master theses and internships. This applies in particular to students from the Master programme in Entrepreneurship. As regards research, connections with businesses are important to run practice-oriented research projects, including contract research. All the institution's chairs and institutes have their own research networks, and this case study can only outline the most visible actors. As regards transfer, the regional network offers jobs and opportunities to license patents, and HHN seeks to increase the number of start-ups from the institution.

3. Input - Resources for operating the network

In 2021, the HHN received EUR4million from the Foundation Innovation in Higher Education (Stiftung Innovation in der Hochschullehre).⁸ Of these, 2 million were for fostering entrepreneurial thinking within the HHN and stimulating cooperation within the University and in the local community. 1 million of the research budget is aimed at "revolutionising" entrepreneurship education, consistently focusing on the learning success of students. This project has developed an empowerment journey with a wide range of student-centred approaches that will not only fundamentally change the Master's programme in Entrepreneurship, but also potentially change higher education as a whole. The second part of the budget is dedicated to developing an online platform that improves collaboration within the University, linking the faculties and other partners outside HHN. The platform presents

⁴ See <https://www.retail-index.com/Countries.aspx>.

⁵ See <https://www.dieter-schwarz-stiftung.de>.

⁶ See the website of the Bildungscampus at Dieter Schwarz Stiftung, Our History, <https://www.dieter-schwarz-stiftung.de/foundation.html#timeline>.

⁷ See <https://ip.ai/>.

⁸ See <https://stiftung-hochschullehre.de/foerderung/hochschullehre-durch-digitalisierung-staerken/foerderentscheidung/>, in German.

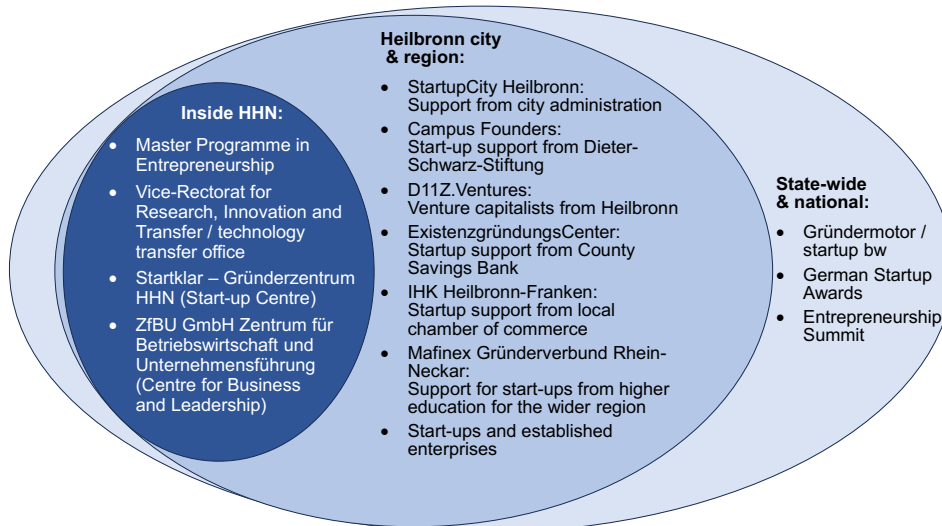
personal profiles and interests and helps find fellows for innovation projects, and starting a business.

Beyond funding from the Foundation Innovation in Higher Education, HHN receives funding for entrepreneurial activities from various other foundations and public entities. These include, for example, the Hannelore Meyer Foundation that supported innovation spaces, personnel and the initiative Youth Hacks (Jugend hackt) as well as the initiative EXIST Women by the Federal Ministry of Economic Affairs and various calls for tender from the Ministry of Economic Affairs Baden-Württemberg.

4. Stakeholders and their activities - Entrepreneurial network actors and their main activities

The HHN cooperates with a wide network of organisations and experts with entrepreneurial expertise. The following focuses on network partners of the Entrepreneurship Master programme and the HHN's startup centre. The most important actors of the HHN's regional entrepreneurial network include the ones in the diagram.⁹

Diagram: The HHN's entrepreneurial network partners



Source: Compilation by empirica

The following text box shows the HHN's most important entrepreneurial network partners in more detail. Overall, the HHN encourages networking in the local start-up ecosystem as well as networking with other entrepreneurially oriented higher education institutions in the region. The network partners bring in their specific expertise and resources to strengthen each other. The HHN runs many entrepreneurial activities together with the network, or the activities have positive effects on the network. Examples include the start-up festival Slush'D¹⁰, the Corporate Campus Challenge organised by Campus Founders¹¹, and students' internships in partner organisations. The partners contribute what they can, depending on their aims, priorities and current developments. For example, Startklar often offers venues, equipment and guest

⁹ See <https://www.hs-heilbronn.de/de/me>, section "Netzwerk" at the bottom. Page only available in German.

¹⁰ See <https://heilbronnslushd.com/>.

¹¹ See <https://campusfounders.de/de/talent/corporate-campus-challenge/>.

lectures. In early 2024, HHN worked on a tender for a Federal call on “Startup Factories”, fostering regional HEI clusters.

Inside HHN

Entrepreneurship Master Programme

The HHN's Master of Science Programme in Entrepreneurship¹² takes three semesters and comprises study achievements of 90 ECTS¹³. Its objective is combining the acquisition of knowledge with developing students' personalities and business ideas. It seeks to combine learning and founding a business in parallel through sophisticatedly designed real-life experiences. Study content is as follows:

First semester: entrepreneurial mindset, future value creation, social entrepreneurship, market research methods and innovation management, including the identification of those subjects that drive the students.

Second semester: Entrepreneurial marketing, finance, strategic management and leadership as compulsory courses, plus electives that can be from other HHN study programmes.

Third semester: Thesis as well as developing personality and team competence. Optionally, students can take a semester abroad or an internship in the third semester and do their thesis in the fourth.

In addition, the programme offers excursions to conferences or other countries – for example to the EXPO 2020 in Dubai, to Silicon Valley and to the Berlin Start Up Summit. The teaching staff consists mainly of successful founders who pass on their experience and serve as role models for the students.

Career perspectives are starting an own company or working in innovation management, business development or strategic management of established enterprises. The programme's events take place in the Bildungscampus Heilbronn¹⁴, which is only a few years old, where students can enjoy modern seminar rooms, a creative space for developing ideas, a large library and working space. Students regularly meet founders and company leaders from different sectors. Networking with entrepreneurial institutions and people in the region is a key part of the programme.

The programme offers 15 places to study per year.

Vice-Rectorate for Research, Innovation and Transfer

The Vice-Rectorate for Research, Innovation and Transfer as well as the HHN's technology transfer office, which is an entity of the Vice-Rectorate, are in charge of consulting HHN members about invention disclosures and patents.¹⁵ HHN registers four patents per year on average. The HHN perceives that public calls for tenders and proposals for research projects require ever more concrete technology transfer plans, also by way of spin-offs. Hence, the Vice-Rectorate seeks to extend its knowledge about patenting and licensing through cooperations with superordinate institutions such as the Bundesagentur für Sprunginnovationen (Federal Agency for Disruptive Innovation)¹⁶ and others.

Startklar Gründerzentrum

Startklar (“ready to take off”) is the HHN's start-up support centre, a formal part of the Vice-Rectorate for Research, Innovation and Transfer. Founded in 2017, Startklar works very closely with the Master Programme in Entrepreneurship and other HHN study programmes, supporting students in concrete entrepreneurial issues with hints to funding opportunities, advice and facilities. This also includes consultation about funding and support opportunities of the long-standing federal support programme for entrepreneurial students, EXIST.¹⁷ Startklar offers events and competitions such as #PrototypeHero, an ideas competition where students can submit innovative ideas with up to 500 characters. Another format is the Gründungskolleg (Entrepreneurship College), where students receive answers to their questions about entrepreneurial activities. Students from all departments participate actively in these events. While some HHN professors run an own business, there is as yet no high-growth technology start-up. Most professors see themselves rather as idea providers, educators and researchers.

¹² See <https://www.hs-heilbronn.de/de/me> (only in German).

¹³ Credit points in study programmes according to the European Credit Transfer and Accumulation System (ECTS).

¹⁴ See <https://bildungscampus.hn>.

¹⁵ See <https://www.hs-heilbronn.de/de/forschung-technologietransfer>.

¹⁶ See <https://www.sprind.org/en/>.

¹⁷ See <https://www.exist.de/EXIST/Navigation/EN/Home/home.html>.

ZfBU GmbH¹⁸

Die zfbu GmbH is an institute at the HHN and a joint undertaking of the Steinbeis-Hochschule Berlin as well as business and leadership professors from HHN. It is part of the Steinbeis group, originating in Baden-Württemberg, that comprises more than 1,100 technology transfer enterprises. ZfBU offers students to do internships and to drive their business idea.

In Heilbronn city and region**StartupCity Heilbronn**

StartupCity Heilbronn¹⁹ is a body of the City of Heilbronn that informs aspiring founders and start-ups located in town about what is on offer for entrepreneurs in the city and the region. For this purpose, StartupCity Heilbronn offers events jointly with other actors of the region, online and in presence. For example, they arranged a joint visit to the HHN's digilab and makerspace.

Campus Founders

Campus Founders²⁰ is a start-up support factory sponsored by the Dieter Schwarz Stiftung, located in the Bildungscampus Heilbronn. It offers practical support in all matters that business founders face, for example negotiating, contracting and pitching. Campus Founders also run events where founders can meet successful entrepreneurs, with a focus on artificial intelligence. The HHN's Entrepreneurship Master programme cooperates directly with Campus Founders. For example, entrepreneurship students participate in the Corporate Campus Challenge, a programme in which students solve entrepreneurial challenges offered by local companies or institutions in international teams. Other students take the opportunity to do an internship with Campus Founders, offering them the possibility to drive their own ventures forward.

D11Z.Ventures

D11Z.Ventures²¹ is privately funded and was established in December 2023 through merging the former ZFHN Zukunftsfonds Heilbronn²² and Born2Grow²³. The fund is based in Heilbronn and focuses on investments in artificial intelligence ventures, operating beyond the region. The Entrepreneurship Master programme and D11Z.Ventures are in regular exchange. D11Z.Ventures sponsors a prize for the best student of the semester, and they hold lectures at HHN.

ExistengründungsCenter (StartupCentre)

The Kreissparkasse Heilbronn (County Savings Bank) has a unit to support local business startups.²⁴ Once per semester, an expert from them joins a lecture of the Entrepreneurship Master programme to talk about finance.

IHK Heilbronn-Franken (Chamber of Commerce)

Experts from the Chamber of Commerce Heilbronn²⁵ regularly join lectures of the Entrepreneurship Master programme to explain how to start a business. The IHK also carries out the regional "Elevator Pitch", an entrepreneurial idea contest for students. The winner of the competition is admitted to the Baden-Württemberg finals of start-up BW, the state's entrepreneurship support programme, giving them access to state-wide investors, accelerators, incubators and the public. Students of the Master programme participate in the Elevator Pitch to learn about successful pitching practices.

Mafinex

Mafinex Gründerverbund Rhein-Neckar²⁶ is the HHN's entrepreneurship network link to the wider region Heilbronn-Franken. Mafinex offers consulting and mentoring for finance and business planning to entrepreneurial students and staff from higher education institutions in the region. The institutions share good practice examples and discuss further collaboration in the field of entrepreneurial education and support for start-ups.

¹⁸ See https://www.steinbeis.de/de/verbund/suche-im-steinbeis-verbund/detail.html?tx_z7suprofiles_detail%5Bprofile%5D=1027&cHash=3daf4235bba41c1ede44838a43e60e24.

¹⁹ See <https://startupcity-heilbronn.de>.

²⁰ See <https://campusfounders.de/>.

²¹ See <https://d11z.com/>.

²² See <https://zf-hn.de/>.

²³ See <https://born2grow.de/>.

²⁴ See <https://www.sparkasse-heilbronn.de/fi/home/branchen-und-berufe/gruendung-und-nachfolge.html?n=true>.

²⁵ See <https://www.ihk.de/heilbronn-franken/produktmarken/existenzgruendung/existenzgruendung2>.

²⁶ See <https://www.gruenderverbund.info/>.

Regional start-ups and established enterprises

HHN has brought forward several spin-offs and start-ups. While HHN does not have a complete overview of them, HHN seeks to establish and sustain contact with them. They provide important examples for HHN's students. Moreover, the entrepreneurial network includes innovative established companies where students may do internships or find subjects for their thesis papers.

State-wide and national

Gründermotor

Gründermotor²⁷ ("Start-up Engine") is an initiative to deepen the entrepreneurial network and link actors in business and science in the State of Baden-Württemberg. It is part of startup BW²⁸. The Entrepreneurship Master programme cooperates closely with them, attending their events and taking lecturers from startup bw. Lecturers of the Master's programme participate in research activities of the Gründermotor, giving access to a state-wide network of entrepreneurship lecturers. The Gründermotor also provides hints how to fund startup activities in a chronically underfunded higher education institution.

German Start-up Award

The German Start-up Award is an initiative of the Bundesverband Deutsche Startups e.V. (Federal Association German Startups) that offers a network of venture capital investors. Representatives from the Award regularly join lectures of the Entrepreneurship Master programme.

5. Influencing factors - Drivers and barriers of the entrepreneurial network

The entrepreneurial network of Heilbronn has existed since 2013. Since 2020, the network has met regularly online, also as a consequence of the Covid-19 pandemic. The City of Heilbronn initiated these regular meetings. Members of the city administration had received an increasing number of inquiries from people with entrepreneurial ambitions, for example from students and enterprise managers, and the city representatives realised that they did not know to whom they could refer. Hence, the city representatives approached other actors such as the Campus Founders to cooperate more closely. The city administration considers this as an important activity to foster Heilbronn as a business location, and they see themselves as in a good position to moderate the network as a neutral, public actor.

The HHN seeks to be an innovation driver and be perceived as such a driver. It is important to for those in the entrepreneurial network to be aware of one another in order to be able to refer inquiring students to the best expert around. To this end, the HHN sees a need to coordinate events in the region's entrepreneurial network to avoid a collision of offers. Moreover, the HHN encourages joint events so that organisers can share costs. The HHN also sees a need to coordinate the network more deliberately as the number of actors is increasing.

The HHN introduced the Master's programme out of the desire to provide students interested in entrepreneurship with an in-depth and high-quality educational opportunity that supports them in developing their start-up aspirations. The programme was designed under the direction of Bettina Merlin, the programme director, in collaboration with the Start-up network Heilbronn, Startklar and colleagues from various faculties. This ensured an interdisciplinary design from the outset, which is particularly evident in the fact that Bachelor's graduates from all fields of study are accepted for the programme. Due to its highly interdisciplinary nature, the programme was named one of the 100 most innovative educational projects by the German Stifterverband (Wirkung hoch 100). Heilbronn's start-up network is very active, and the partners support each other. Thanks to the regular meetings, the partners are very well informed and new ideas for

²⁷ See <https://gruendermotor.io/>.

²⁸ See <https://www.startupbw.de/the-start-up-laend-english>.

further development are quickly taken up and developed further together, which benefits everyone involved.

However, the economic strength of the Heilbronn region, home to many world market leaders, is ambiguous. While it makes the network very powerful, it sometimes is an obstacle to entrepreneurship, as well-educated young people find it very easy to find attractive employment.

6. Output, outcomes, impact and lessons learned

6.1. Outputs and outcomes

The most notable output from the Master Programme in Entrepreneurship and support from the regional entrepreneurial network are new businesses. Since 2019, Startklar has supported 49 start-up endeavours and eleven concrete start-ups. A prominent example is Occasii²⁹, supported by Startklar, a company that enables barrier-free and cross-generational video communication. Current start-up projects related to the Entrepreneurship Master Programme include the following very diverse examples:

- Ziegelei Akademie: music academy with a singer from Heilbronn³⁰
- FizzGo: alcoholic instant drinks³¹
- Bubble Tent: overnight adventure stays under the open sky³²
- Nucadera: paste for the preparation of almond and nuts milk
- Dine Up: software for restaurant businesses
- Grandlove: present boxes for grandchildren full of activities to do with the grandparents
- VersaBra: adaptable modularised bras

Moreover, Startklar has run 36 lectures and workshops about entrepreneurship since 2019.

However, Heilbronn has many attractive employers that offer a high level of remuneration. Only a minority of students of the Entrepreneurship Master programme seek to start a new business directly after graduation. Many consider becoming an entrepreneur later, after gaining experience and raising their own capital. Some graduates take positions in the entrepreneurial network, such as Porsche Ventures or the Campus Founders.

6.2. Impacts on students

Bettina Merlin, the professor who leads the Entrepreneurship Master programme, reports that many students are surprised about the programme's practice-oriented approach. Students commonly attend very passive Bachelor programmes. Many students join the programme euphorically, believing that they can launch a startup after two years. The study keeps their feet on the ground and pushes them through practice, which makes some "get scared stiff", as Merlin says. "Starting a business is the royal road", Merlin states, "and you don't become a king that easily." However, some students prepare promising startups.

Startklar perceives aspiring founders similarly: They are usually very open, interested, and keen to stay in touch. However, starting a business remains a challenge. It needs absolute willingness,

²⁹ See <https://www.occasii.com/>.

³⁰ See <https://cherilyn-music.com/contact/>.

³¹ See <https://fizzgo.de>.

³² See <https://www.bubble-tent-deutschland.de>.

resilience and everything must fit – team performance, business idea and business model, time, and funding.

6.3. Lessons learned

One of the main lessons learned so far from the Entrepreneurship Master programme is that there is a need to think about students' empowerment. How can a study programme strengthen students in the best possible way, so that they dare to start a business? Bettina Merlin perceives the German culture as very risk-averse, envious of success, having little margin for error, and due to a continuous lack of professionals, there is an abundance of attractive jobs. Examples from the family play a role: Many students of the Entrepreneurship Master programme originate from self-employed parents. However, Merlin finds that if a study programme provides the competence on how to do it and empowers their personal development, students may lose their fear, leave their reservations behind, and become ready to launch a business.

According to Startklar, most students are not open to the start-up journey. They prefer a more secure career path. Still, they benefit from learning to communicate, learning new things and developing ideas. Many students shift to a new perspective of being able to tackle and accomplish tasks and train required skills deliberately. It may take time: After years of work experience, some alumni come back with a business idea and ask for support.

7. Source

This case study was prepared by Dr. Stefan Lilischkis from empirica Gesellschaft für Kommunikations- und Technologieforschung mbH, Bonn, Germany, through collection and analysis of broad documentation about HHN and interviews with key representatives from the HEI.

The status of information provided in this case study is March 2024.

8. Contacts

Martin Vural, HHN Vice-Rectorate for Research, Transfer, Innovation

Bettina Merlin, Head of HHN Master in Entrepreneurship Programme

9. Links

HHN Master in Entrepreneurship – page with network partners: <https://www.hs-heilbronn.de/de/me>