

Guidelines

- When composing your proposal, please follow the order given below and answer all questions. We cannot accept proposals with incomplete information.
 - Please use Times New Roman 11 in the entry field (shaded background).
 - Limit your project proposal to 6 pages (whole document/proposal, excl. attachments).
 - The proposal must include one-page CV of each project team member and a letter of endorsement from the UAS's Institute/ Department Head responsible for the employment of the applicant(s).
 - Please upload one single PDF file (including the proposal, CV and all attachments) on the [web portal](#) for the «First Ventures» program where you can submit your full application online.
 - The PDF file is part of the full application and must be uploaded no later than 31 May 2021.
 - If questions arise, please contact Marco Vencato at first-ventures@grstiftung.ch.
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BASIC INFORMATION

01 FIRST NAME, LAST NAME Adrian Demleitner **ACADEMIC TITLE** B.A. Industrial Design **DATE OF BIRTH** 29.08.1981
02 PROJECT FULL TITLE things are people too **PROJECT SHORT TITLE** things.care
03 PROJECT DURATION – *Indicate the planned start and the expected finish of your project.* 03/2022 – 03/2024
04 UAS / HOME INSTITUTE MA Design, HKB BFH

BUSINESS IDEA DESCRIPTION

05 OBJECTIVES – *Describe the problem to be solved, shortcomings of existing solutions/competitors and the business opportunity (market/customers) you want to pursue. What is the project's value proposition? Give concrete examples, names and numbers.*

I believe that there is untapped potential in voice assistant technology. I also believe that the current state of consumer technology hinders us from accessing this potential. This project's research points to two underlying problems; Closed source technologies prevent trusting them and a patronizing user experience disenfranchises the user.

This project proposes to radically rethink the interaction we have with technology and enable an internet of things ecosystem the users can trust. The goal is the development and testing of a prototype for a voice assistant for sensitive contexts and applications, like therapy settings and elderly care, by respecting privacy and giving control back to the user.

Current business models behind voice assistants favour the tracking of user data in order to refine advertisement strategies as well as produce maps of desire. These maps record and predict how, where and when customers shop and consume. As voice assistants are often brought into the innermost sanctum of privacy, the family and the home, the needs of the user and the intentions of the manufacturers are diametric opposites.

This is the first problem that needs to be solved. Technologies that enter privacy-sensitive spaces, like our homes or therapy settings, need to be based on radical openness and transparent approaches.

At best, concerns over privacy concentrate on the legal-juridical and technical aspects. From a holistic interaction and user experience design perspective trust is not something that can be earned by ticking off a terms and conditions page while on-boarding a service. Trust is earned through a practice of negotiating privacy, intimacy and consent. These acts of negotiating are embodied practices. When we communicate with another person, we don't just exchange words. When we engage each other, we add gesture and mimic, eye contact and body posture. These cues help in transporting information and meaning.

This second issue goes hand in hand with an open approach to the underlying technologies. Based on research done in this project, the user would welcome to have more control to fine tune their interaction and communication with the voice assistant. This project proposes adding layers of interaction through a thing-based design approach. Additional sensors, gesture recognition, beacon objects as well as an alternative to assistant persona design would re-enable the possibilities to negotiate issues of privacy and intimacy, while also being conceived as an open system that can learn from the user or be customized by them.

Imagine an Amazon Echo, but fully owned by you - even the data collected - and with an interaction design and user experience that holistically incorporates you as a person. Such an approach could enable the usage of voice assistant technology in privacy-sensitive context.

06 PROJECT PLAN – *Outline the timetable indicating project stages and milestones.*

4. Quarter 2021 - 1. Quarter 2022 - Proof of Concept

- Last semester of master program
- Testing possible user journeys based on research and findings
- Achieving proof of concept

2. - 4. Quarter 2022 - Device and Application Development

- Partnering up with test facilities
- Development of voice assistant device
- Prototyping and testing of applications to support therapeutic settings and elderly care

1. - 2. Quarter 2023 - Analysis and finalizing

- Device as well as software prototypes are analysed
- Definition of final product

3. Quarter 2023 - 2. Quarter 2024 - Finalizing

- Final product is produced and delivered

07 STATE OF THE ART – *What is the applied research base of your business project? Have you achieved the proof of concept in your Bachelor/Master thesis? What is your expertise brought to the project?*

The research body was built through classical ethnography, mainly observation and interviews. On top of that more recent netnography was applied, which was ethnographic research done online mainly to capture user experience reports. Besides that, the capturing of user journeys, coming from design research, was very important to paint a picture of the pain points.

To work with the data, I opted for a thematic analysis, with a reflexive approach after Braun and Clarke. This is a rather classic qualitative data analysis approach for mixed media datasets that labels the transcribed data and then builds overarching themes out of the codes.

The last step of the research process, before going into prototyping, was an expert workshop. I wanted to have the opinion of specialists in their respective design disciplines on how to improve the emotional bond between users and their voice assistant devices. The workshop was based on the emotional durable design framework, by Jonathan Chapman, as well as the thematic analysis.

Before to doing a Masters in Design Research at the HKB in Bern, I studied Industrial Design in Basel. I have a working experience of more the 15 years as software developer, from freelancing to senior developer. Right now, I'm engaged in a 4-year research project at the University of Basel as a scientific software programmer. I had a critical engagement with technology and society since at least since 2014 where I initiated the ckster festival on contemporary hacking practices. I was able to share my love for technology in many workshops, among other at the ZHdK, the FHNW or privately organized.

08 BUSINESS MODEL – *Who will buy what, to which price and why? Describe your revenue stream and how it will sustainably finance the business activities after the end of the funding period?*

I see three possibilities for revenue streams.

Voice assistant as a service would be a consulting enterprise which, next to the development, helps implement voice assistant technologies in privacy-sensitive projects. It would, furthermore, help in conceptualizing and implementing research projects done with and through voice assistants, for example in the health sector.

Voice assistant as a research platform is a development kit which research institutions or projects could obtain on their own. The costs of the kit are lower but there is no service to be provided.

Voice assistant for the privacy-sensitive user is a spin-off that provides a polished experience of the device and its services to people who want to benefit from such an approach. These are mostly private customers who would be able and wanting to pay a premium price for the added privacy and adaptability.

09 CUSTOMERS/PARTNERS – *Indicate the main customers and partners of your business project.*

Setting off from the business model, this approach points to three customer strata.

- Private or academic research institution that are interested in doing research with voice assistant technologies in privacy-sensitive areas, like the BFH health institutes or the ZAHW psychology faculty.
- Private or academic teams that seek to incorporate voice assistant technology on their own.
- Privacy-seeking users of voice assistants.

The following partners are already committed to the project.

crisp id, <https://www.crisp-id.ch>

crisp id is an industrial design studio in Bern, Switzerland, and is specialized on innovative products in the intersection of market, technology and aesthetics. They will accompany the project in terms of brand and product development.

Better IoT, <https://betteriot.wordpress.com>

This community-led project has developed principles that are connected to the core-issues of this project, like privacy, openness, transparency and data governance. things.care will seek active counselling by the Better IoT community.

Prof. Thomas Amberg, <https://www.fhnw.ch/en/people/thomas-amberg>

Thomas Amberg is a lecturer for Internet of Things at the FHNW Institute of Mobile and Distributed Systems and will coach Adrian Demleitner as well as the project regarding the underlying technology stack.

Christoph Jenny, <https://www.linkedin.com/in/chrisjenny>

Chris Jenny is co-founder of the Impact Hub in Bern, Switzerland, and will provide mentoring and coaching for the development of the business case of this project.

10 MARKET ENTRY STRATEGY – *How do you intend to attract and acquire your first customers? Describe your scale-up strategy.*

The first customers would probably not bring any revenue but help built an applied projects portfolio. I can imagine, that we would get smaller research projects or even students projects that want to work with voice assistant technology on board and help them in their research endeavours through mentoring and technical realization. That would open up academic and research institutions pathways and help establish a steady flow of income.

In a second phase this projects portfolio could expand to include other privacy-sensitive internet of things technologies, like proximity and tracking sensor for indoor tracking. An expansion of the portfolio, built on the same principles, would help expand the set of customers to other areas.

11 NOVELTY – *To what extent is your project innovative and unique (USP)?*

The most important USP is the products focus on privacy and intimacy, which is not only tackled from a legal-juridical or technological perspective, but also from interaction design and user experience research. Instead of feeding your most private data into the tracking habits of big-tech companies, this product and all its data belongs to you. The interaction design with the product not only lets you know this, but also feel and experience it.

12 IMPACT – *What lasting benefits to society is the project aiming to achieve when implemented? Give concrete examples.*

Internet of thing technologies contain immense potential. Voice assistants are wonderful computer interfaces, but we need to separate them from the data tracking practices and the imagination of the big tech companies. They cater first and foremost to clients with an interest in gadgetry and consumer electronics. This project seeks to do this step of separating concerns of interest and by that, opening up the potentials for further development. In the case of voice assistants there are two aspects which are especially valuable. As a handsfree and auditory interface, they provide computing access to people with mobility problems. As a device you talk too, voice assistants can be of supportive aid in therapeutic settings, for example as journaling tool.

13 IP PROTECTION – *Are patents available or planned? Do any third parties have claims over or interest in the targeted results?*

The technology stack as well as the custom development that will be needed to realize the project are open source or are planned to be released under open-source licenses.

BUDGET

14 DETAILED PROJECT BUDGET – *Budget for the overall project, partial budget for the project submitted to Gebert RUF Stiftung, contribution of your home institute, funding awarded or expected from third-party sources (specify sources).*

For a detailed budget, please see the attached sheet. The listed costs are rough estimates for the prototyping phase of the project. There is no funding awarded yet or expected from third-parties other than my own contribution to the project. It is planned to seek further funding from foundations interested in privacy-sensitive enterprises like the Mozilla Foundation, Ledger, and similar.

15 DETAILED PROJECT BUDGET SUBMITTED TO GEBERT RUF STIFTUNG – *How will you use the funds? Make a distinction between salaries (provide underlying cost system/structure) and material expenses.*

The attached budget is what is submitted to Gebert RUF. The funds will go mostly into salaries as the needed material are rather inexpensive.

PROJECT TEAM

16 CO-APPLICANT – *First name, last name* Entry *Academic title* Entry *Date of birth* DD/MM/YYYY *UAS/Home institute* Entry

17 THESIS SUPERVISOR/TUTOR – *First name, last name* Thomas Amberg *Academic title* Prof. *Date of birth* DD/MM/YYYY *UAS/Home institute* FHNW, Hochschule für Technik

PROJECT SETTING

18 HISTORY – *Since when has the project been underway?*

The project started as an inquiry for a MA Design thesis with a focus on the potentials to improve our relationship to consumer technology in the beginning of 2020. During a phase of narrowing down problems in the beginning of 2021 it became a relevant business case. The underlying problem with voice assistant technology will be the subject of the master thesis.

19 SUBMISSIONS, REJECTIONS AND AWARDS – *Has the project been submitted elsewhere? Has it been rejected or awarded? If so, where?*

The project has not been submitted elsewhere for funding. I was able to present and discuss the project at the following two design related conferences:

- Reclaim Futures, a tech and culture conference around the broad subjects of post-capitalist desire, utopian exploration, ecology and alternative computing – September 2020
- NERD, New Experimental Research in Design – June 2021

20 REFERENCES – *Provide two references with addresses*

- Julia Geiser, Alpeneggstrasse 7, 3012 Bern – Former project-partner and festival co-organisation
- Flavia Caviezel, Tièchestrasse 39, 8037 Zürich – Former project-leader, research project

21 COMMITMENT – *What is your motivation brought to the project?*

I'm personally driven by the believe that we can and have to do better in terms of consumer technology. There is untapped or even wasted potential hidden in the piles of electronic waste; in terms of mitigation of environmental problems as well as what technologies could do for us as people and communities, or even the society at large. I'm dedicated to bring out this potential and make it available. I also believe that the tech industry's large players grew tired of trying to do their best, and that sustainable and healthy innovation needs to come from contextual and applied research.

I always needed to use my unique skillset to the betterment of society by giving back what I learned and can do.

22 SKILL EXPANSION – *Which topics would interest you to learn about?*

I'm mainly interested in learning to develop interface technologies into applicable use cases that are actually needed. I do have the necessary base skills, especially regarding technology, but I would love to further hone and strengthen my skills in design research approaches and technical realizations. I would also love to learn and practice ethical business management, for example through steward ownership. I had my fair share of economics and project management throughout my life, but didn't had the chance to economically lead finance driven enterprises.

23 PLACE: Biel/Bienne, **DATE** 30/05/2021, **SIGNATURE (ELECTRONIC):** a.demleitner

Adrian Demleitner

* 29. August 1981

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<https://thgie.ch>



Arbeit

Feb. 21	aktiv	<u>Wissenschaftlicher Software Programmierer</u> <i>Lead Software für Forschungsprojekt zu Participative Image Archives</i>	Universität Basel
Aug. 14	Apr. 21	<u>Senior Frontend Webdeveloper</u> <i>Planung und Konzept der Projekte Umsetzung Frontends von Webseiten und -apps</i>	cloudtec, Bern
Jan. 16	Mär. 18	<u>Junior Researcher Times of Waste</u> <i>Management digitale Sphäre and Archiv des Projektes. Entwicklung digitaler Tools for Kollaboration, Kommunikation und Kuration zur Arbeit mit digitalen Objekten.</i>	ixdm, HGK FHNW Basel
Sep. 13	Sep. 14	<u>Frontend Webdeveloper</u> <i>Planung und Konzept der Projekte Umsetzung Frontends von Webseiten</i>	4eyes, Basel
Sep. 12	Sep. 13	<u>Webdevelopment</u> <i>Planung und Konzept der Projekte Umsetzung Frontends von Webseiten</i>	Schaffner & Conzelmann, Basel

Ausbildung

Sep. 2019	März 2022	<u>Design Forschung, Master</u> Master in Design mit Vertiefung Design Forschung Fokus auf Beziehung Mensch-Maschine	MAD, HKB BFH, Bern
Sep. 11	Sep. 14	<u>B.A. Postindustrial Design</u> Interdisciplinary Studies Design, Marketing, Technology	HyperWerk FHNW, Basel

Verschiedenes

2016	2018	<u>Jurymitglied Digitale Kultur: Werkbeiträge 2016-18</u>	http://digitalbrainstorming.ch/de/program/ausschreibung-werkbeitraege16
2008	-	<u>Member at Mensa</u>	
2019	2021	<u>Mitglied Curatorial Board connected space</u>	https://connected-space.ch/
2019	-	<u>Gönnermitglied Verein zur Förderung der Kleinimkerei Biel/Bienne</u>	http://www.kleinimker.ch/

Device and Application Prototype Development

Hardware / Device

Prototype components, Sensors, alternative devices for evaluation	one-time	CHF 5'000.00
Development infrastructure like workstations	one-time	CHF 7'500.00

Software / Platform

open source frameworks are license-free
additional developments covered via salaries

Salaries

Project management	30% position for 9 months	CHF 25'000.00
Software Development for Device	75% position for 9 months	CHF 45'000.00
Software Development for Backend	25% position for 9 months	CHF 15'000.00
Hardware Development	50% position for 9 months	CHF 30'000.00
Testing and analysis	25% position for 9 months	CHF 15'000.00

<u>Total Prototype Development</u>		<u>CHF 142'500.00</u>
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Software, Platform, Backend

Running Costs	per year	CHF 2'500.00
Maintenance and Feature Development	per year	CHF 10'000.00

HKB, Fellerstrasse 11, 3027 Bern

Gebert Rüt Stiftung

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20. Mai 2021

Letter of Endorsement: Adrian Demleitner

Sehr geehrte Damen und Herren,

Adrian Demleitner studiert seit dem Herbstsemester 2019 im Master Design im Teilzeit-Modus und schliesst voraussichtlich im Januar 2022 in der Vertiefung «Entrepreneurship» ab. Der Studiengang bietet Studierenden ein individuelles Projektstudium für Design- und Designforschungsprojekte mit einer hohen gesellschaftlichen Relevanz. In der Vertiefung «Entrepreneurship» absolvieren Studierende ihr Studium mit einem Unternehmenskonzept für ein designbasiertes Produkt oder eine Dienstleistung, das oder die sie zur Grundlage einer anschliessenden Karriere machen können.

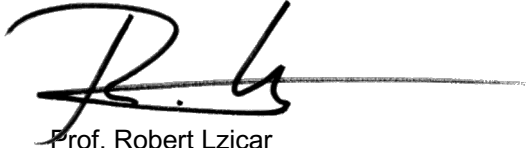
Adrian Demleitner hat eine Vorbildung als Software-Entwickler und hält einen Bachelor in Industrial Design. In seinem Masterstudium eignet er sich unter anderem folgende Kompetenzen an: ein gesellschaftlich relevantes Designproblem oder eine Forschungsfrage zu identifizieren, das Problem oder den Forschungsstand zu analysieren, innovative Lösungen zu entwickeln sowie basierend darauf ein Unternehmenskonzept zu formulieren.

In seinem Studium beschäftigt sich Adrian Demleitner mit der Beziehung zwischen Menschen und digitalen Geräten im Alltag. In seinem Projekt «things.care» entwickelt er einen Sprachassistenten als offene Plattform für den datenschutz-sensitiven Einsatz. Dabei stehen aktuelle Entwicklungen in den Bereichen von Interaktion- und User Experience Design im Fokus, welche Menschen und Technologie ganzheitlich betrachten und dabei die Erfahrung des Menschen und nicht die technische Innovation ins Zentrum stellen. Nebst einem auf Privatsphäre bedachten Klientel eröffnet ein solcher Sprachassistent auch die Applikation dieser Technologie für Einsatzbereiche, in denen Datenschutz wichtig ist, wie der Altenpflege oder Therapiesettings und führt durch seinen offenen Ansatz zu einer robusteren und nachhaltigeren technischen Umsetzung.

In meiner Eigenschaft als Leiter der Master Design freue ich mich, die hohe Qualität von Adrian Demleitners Leistungen zu bezeugen und kann das Projekt zur Förderung durch Ihr Programm «First Ventures» empfehlen. Ich würde mich freuen, wenn das Projekt «things.care» mit Ihrer Unterstützung Wirklichkeit wird.

Freundliche Grüsse

Hochschule der Künste Bern
Gestaltung und Kunst

A stylized, handwritten signature in black ink, consisting of a large, flowing 'R' followed by a smaller 'L' and a horizontal line extending to the right.

Prof. Robert Lzicar
Studiengangsleiter Master Design

Gebert Rüt Stiftung
Haus der Stiftungen
St. Alban-Vorstadt 5
4052 Basel

Prof. Thomas Amberg
Fachhochschule
Nordwestschweiz FHNW
Hochschule für Technik
Bahnhofstrasse 6
5210 Windisch

18.05.2021

Letter of Endorsement: Adrian Demleitner

Guten Tag,

Ich habe Adrian Demleitner als Organisator des Ckster Festivals kennen gelernt, ein Kunst-, Kultur- und Wissenschaftsfestival in Bern, welches mir als Speaker und Teilnehmer in allerbesten Erinnerung bleibt - sowohl die perfekte Logistik und Ambiance, als auch das innovative, interdisziplinäre Programm.

Damals hat mich Hr. Demleitner als "Macher" nachhaltig beeindruckt, heute begleite ich seine Arbeit an der BFH als Coach. Es würde mich freuen, wenn sein Projekt durch Ihre Unterstützung den wohl verdienten Impact bekommt!

Mit freundlichen Grüßen,



Prof. Thomas Amberg
Dozent für IoT
FHNW, HT

PROBLEM Voice assistants are not privacy aware Privacy-concerned #Enterprises can't engage with the potentials of voice assistant technologies #Users have little to no control over data handling #Users have little to no control over interaction with voice assistants	SOLUTION Decouple voice assistant from data tracking business model Build on open source technology that can be owned Concept interaction possibilities as open and adaptable platform	UNIQUE VALUE PROPOSITION Radical openness regarding underlying technology and data governance Unique interaction possibilities that can be adapted	UNFAIR ADVANTAGE Team skillset that merges design research, mindful design and cutting edge technology From the people for the people mindset	CUSTOMER SEGMENTS #Enterprises (initiatives, projects, etc.) that want to implement voice assistants, but have privacy concerns #Users of Voice Assistants Customers considering buying a voice assistant, but hesitant because of privacy concerns
	KEY METRICS Adoption in #Enterprises and research projects #Users conversion from another IoT ecosystem New #Users Sold devices Premium subscriptions			
EXISTING ALTERNATIVES Open source software frameworks like mycroft.ai enable control and customization		HIGH-LEVEL CONCEPT Imagine an Amazon Echo, but fully owned by you - even the data collected - and with an interaction design and user experience that holistically incorporates you as a person		
COST STRUCTURE Development of voice assistant device Development of platform Infrastructure of hosting platform Salaries		CHANNELS Direct communication Tech blogs and video channels Social media presence and advertisement Word of mouth	EARLY ADOPTERS #Users of voice assistants that are in progress of changing their device	
		REVENUE STREAMS Consulting for #Enterprises medium- large-scale implementation of our approach Premium subscriptions for #Users to platform, including support as well as services Selling of devices		