How to Shape a Sustainable Future for Winter Sports?

GXC challenge with the German Ski Federation (DSV)

Overview

The challenge for this project was proposed by the German Ski Federation e.V. (DSV). It is the national umbrella organization of German ski clubs and ski associations and includes 20 ski associations at a national level (regular members) as well as three associate member organizations. Overall, about 650,000 skiers are organized in the DSV. The posed challenge is relevant for the DSV because it matches the goal of their sustainability strategy to target and measure the economic, environmental, and social impact of their activities, guided by international frameworks.

Problem

It is not possible to reach most sky resorts by trains. The emissions of cars and buses draw a big environmental problem. Therefore, the German Ski Federation wants to make their events more sustainable and greener in the regional society, also affordable and practical for the 12 local committees. The goal is to organize the daily business of the community, like the upcoming weekend trips, in a digital way and make it more sustainable, while adding value to all stakeholders. The solution should aim to optimize and reduce waste and CO_2 emissions of the cars and the buses. It should also offer motivation for people of all ages and with different kinds of needs and satisfy their needs. Ultimately, contributing to the development of a sustainability strategy for the DSV.

The challenge for the student teams was therefore: **How can we make use of digital technologies to shape a sustainable future for winter sports?**

Approach

Video lectures and weekly live sessions for content input as well as individual team coaching sessions with experts accompanied the students during their project work for ten weeks. The four student teams followed an innovation process applied in the action-learning course format "Real Projects" from HM's entrepreneurship center SCE, starting by understanding the problem through general research about the DSV, sponsors, ski resorts and winter sports events. During a first meeting with the DSV team, the students were able to discuss the challenge in person and ask questions. Interviewing stakeholders also helped to better define the problem and collect rough ideas.

In the fourth week, students started to concretize first approaches of their problem solutions, through brainstorming exercises to enable them to come up with different kinds of initial ideas, which they then tried to structure. The assignments had a customer-centric focus, which led teams to consider the needs and wishes of the potential end-users, as well as those of the DSV. During the following six weeks, a solution was elaborated with the help of storyboard, empathy map, business model canvas and, ultimately, digital prototypes. To get an idea of how to prototype using digital technologies, the students were provided with detailed information about three different tools during one of the weekly live sessions: Figma, Bubble and Glideapp.

In a second online meeting with the challenge giver, the ideas and drafts of the prototypes were presented to the DSV for the first time. Valuable feedback helped the teams to further develop the prototypes and finalize them for the final presentation.
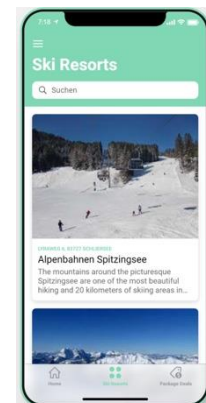
Prototypes

The team *Reeb* developed an app for carsharing and dating. Their *CarDa* app, prototyped with Figma, is an app for people looking for a companion near them to go skiing with. The concept is, that the user offering a ride is searching for friends or a date and inserts his ride into CarDa, with all the information needed. The users who are asking for a ride then can see the offered rides and can "match" with the person offering it. In the ideal case, the driver will pick up the other person and they will share the ride. In the end both will have saved CO_2, because they only used one instead of two cars. Besides offering a free ride and the option to find the great love or great friendships, CarDa partners with local businesses to offer users benefits like a free parking lot or discount on food or drinks in the skiing area. It also collects certain data of the users, which will enable the DSV, to analyze the data and draw conclusions for their next steps and events.
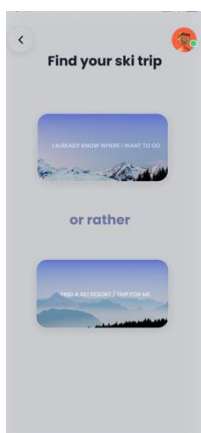
The second team *wintech* developed a prototype for an app, also using the tool Figma. Their app enables people find, create, and discover a community for daily ski and hiking activities. After doing research and conducting interviews, the students became aware that one potential issue that comes with skiing, is about the travelling to the ski resort with private cars. The key idea of the problem came from an issue arisen during an interview with a part-professional, daily active, winter-sports fan who is struggling with this problem. *wintech* helps the skiers travel more flexibly and sustainably by allowing drivers to rent their empty seats to passengers going the same way and even back. It also has a community's feature where users can connect with fellow skier, share, or join rides with specific groups they are part of and connect with others by sharing pictures and thoughts within the group, which the DSV can use for their professional teams by planning their team-rides more sustainably and getting the teams together in a more flexible way.

The third idea was created the team *Alpine ECOnomics*. Their mobile app *ECOskiers* makes it easier for winter sport enthusiasts to make sustainable choices. *ECOskiers* lets the user have a quick and easy overview of different ski resorts and evaluates them based on different sustainablility factors such as: water usage, energy consumption and use of snow canons. The purpose of the app is not only to show which ski resorts are more sustainable, but the user can also book your ski resort directly through *ECOskier*. Besides the sustainability rating, the user can also see information such as live weather conditions, address, contact details and lenghts of the slopes. Another advantage for the user comes by booking the package deals, which are themselves all different, but can include accommodation, transportation and ski pass all in one. *ECOskier* also give the ski resorts incentives to improve their facilities and policies to take better care of nature.

The fourth team *Green Shapers* developed a prototype for an app, also using the tool Figma. Their idea is about a carpooling app that is planting trees according to a bonus point collecting system. Their app *Snow Rider* provides a platform where people can offer rides and become passengers in such rides to reduce the number of cars that drive to winter sport resorts. This platform connects winter sports enthusiasts, drivers, passengers, and bus companies. The app is free and the rides have individual prices, including a small brokerage fee, that are cheaper than driving alone. The team implemented a CO_2-calculator, that shows the user how much CO_2 they prevented from being produced. *Snow Rider* will exchange CO_2 for trees, by letting the DSV planting 1 tree for every 50 kg of CO_2 reduction. If in a given area there are a lot of people traveling to the same destination, in the same time frame, the DSV could provide a bus to even further reduce CO_2 output.

Next Steps

The final presentation to the DSV teams took place on May 26, 2021. Following the presentation, the four student teams shared their presentations as well as a link to their prototypes with the DSV who will use the ideas as insights in the development of their future sustainability strategy.

Documents

The final documentation and prototypes developed by the four teams are available open access:

- [CarDA - a car-ride sharing dating app!](#)
- [Wintech | Keep Shredding!](#)
- [ECOskiers | Alpine ECOnomics](#)
- [Snow Rider - Exchange CO2 for Trees](#)

About GXC

This case was one of two challenges of the **GXC International Virtual Innovation Challenge** in the summer semester 2021. This is a special edition of the [Real Projects](#) course format, which was offered for the first time in the winter semester 20/21, as part of the "GlobalXChanges/Challenges (GXC)" project. In this virtual online course, public governmental and non-governmental organizations propose innovation challenges that can be solved through digital technologies. Next, students from HM Hochschule München University of Applied Sciences (HM) and its four strategic partner institutions dive into an international virtual action-learning course. The students are divided into international interdisciplinary teams and follow an innovation process to tackle the proposed challenges and prototype solutions. The course includes video lectures and dynamic weekly live sessions with a professor for content input and additional tutoring and team coaching sessions with industry experts to advise on prototyping and mentor students in the challenges of remote international teamwork.

The GlobalXChanges/Challenges project is funded by the German Academic Exchange Service (DAAD) from funds of the Federal Ministry of Education and Research (BMBF). For more information on the GXC measures and the International Virtual Innovation Challenge visit [hm.edu/gxc](#).