

## Bringing the NextRound punch bag into the homes of future users

project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

 start date 24 - 11 - 2021
26 - 04 - 2022 end date

### INTRODUCTION \*\*

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

This graduation project will be done in collaboration with the start-up company Sports-f(x). They are currently developing the NextRound punch bag, an intelligent tool for boxing workouts.

Sports-f(x) has over the past few years been working on creating an intelligent punch bag, the NextRound (image 1). This system measures data when used, which includes for example punch impact, speed, location, and intensity. The punch bag is accompanied by two app interfaces: the NextRound Live app and the MyNextRound app. The NextRound Live app is on a tablet, which is directly connected to the punch bag. This app measures data during a workout session, and gives guidance while working out (image 2). The MyNextRound app can be used on people's phones before or after a workout and gives feedback on their workout data.

These apps use gamification principles to provide training programs and workouts so users can train to achieve their goals, and visualise their improvement. The NextRound aims to keep people engaged, motivated, and guided to work out. They designed it as a tool to achieve the need of competence (as based on the Self-Determination Theory by Deci & Ryan, 1985).

The punch bag is going to hit the market early 2022. At first, it is mainly sold to gyms and to some early adopters of private users, who wish to have it in their homes. After that, NextRound wishes to be able to serve a larger audience of at-home users.

Sports-f(x) sees an opportunity to appeal to people who want to practice sports and exercise at home. They see a trend in people wanting to do sports at home, and wanting to do so well. They see opportunity in reaching people beyond those who already practice boxing. They think there are going to be large groups of users who don't yet know they want to practice boxing, but will find themselves interested when they find out about the product. These people however, will need convincing to get into boxing exercise. These people are not yet familiar with boxing technique, but the app programs will help them here. The NextRound Live app will include instructional material so people can practice as they learn. Who exactly these people, who the product should reach, are however, is as of yet unknown.

To be able to reach these new and unknown users, the product will need to be able to positioned at their homes. It is a big and heavy product, which will need quite a bit of space. Aside from that, there will need to be a designated spot for the tablet with the NextRound Live app somewhere close to the punch bag. There are already a number of simple products on the market which people can use to position any punch bag in their home. However, these are simple products which don't necessarily integrate well with the NextRound punch bag. Aside from that, NextRound wishes to have their own product solution, which matches their vision and which helps especially the new user group of people who might not know they would like to practice boxing yet. This is where I come in. In the following pages I will explain how I plan to create a solution for bringing the NextRound punch bag to people's homes.

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## Personal Project Brief - IDE Master Graduation

introduction (continued): space for images

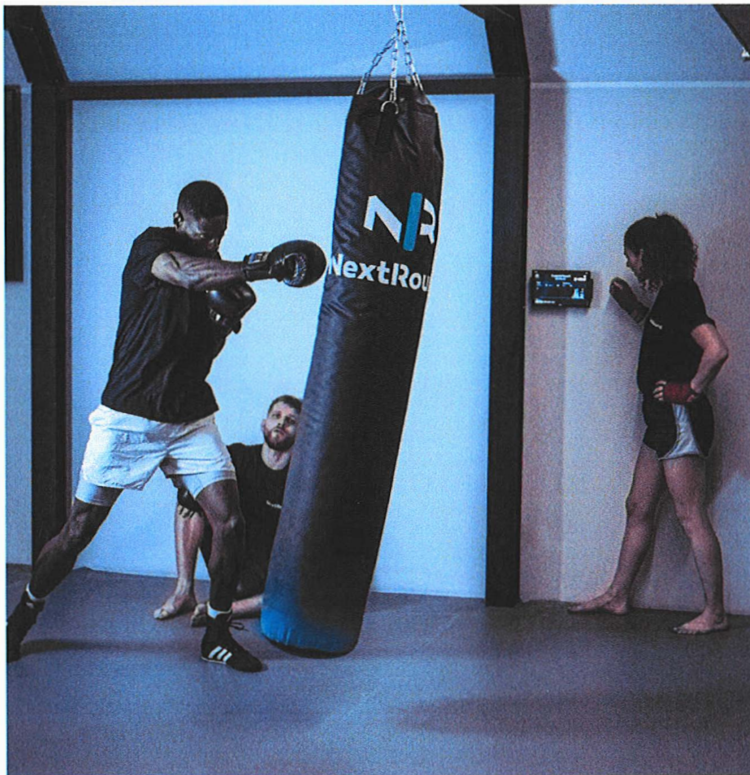


image / figure 1: The NextRound punch bag in use. The tablet with the NextRound Live app hangs on the wall.

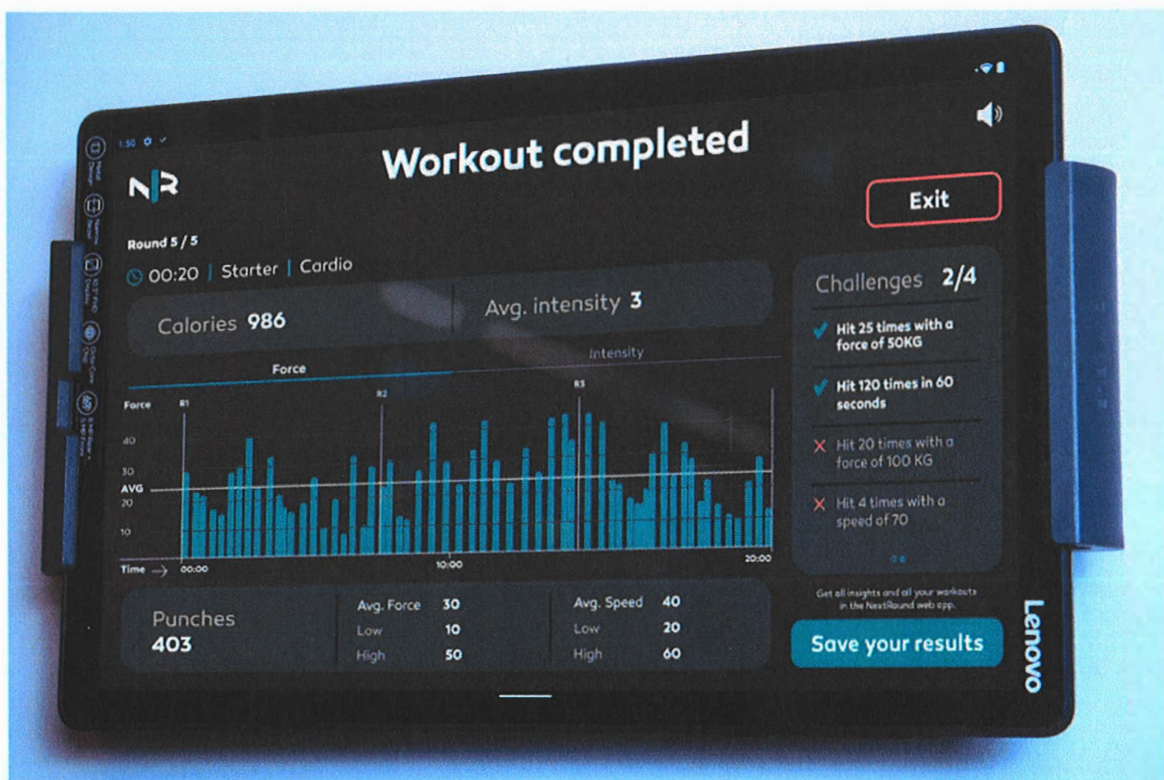


image / figure 2: The NextRound Live app displays data about the workout during, and directly after the workout.



## PROBLEM DEFINITION \*\*

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

There is a need from people to exercise at home, and to do so in a motivating and engaging way. A product that could help them do so is the NextRound punch bag. There is a big problem however, as it is going to be hard for people to position one of these punch bags at home.

Another product will be needed to install the punch bag. There are already a multitude of products that can be used to have a punch bag at home, but these come with a multitude of problems when trying to use them for a NextRound punch bag specifically. Existing solutions are not integrated with a tablet, which will be needed for NextRound users, since otherwise they won't be able to use the NextRound Live app. Without this app, the NextRound punch bag is not usable in the way it should be.

Aside from functionally not being able to support the NextRound system, there are other problems here. Existing solutions tend to either be big, hefty, and loud products, or be products that require a user to drill hooks into their walls or ceilings. Not all houses, and not all users, are going to be able to use these kinds of products, which would make them unable to use the NextRound punch bag. This in turn would mean that their personal needs of wanting to do motivating exercise at home cannot be fulfilled.

Lastly, existing solutions are generally "dumb" products. They don't make the interaction with the NextRound punch bag any clearer, and do not support the potential functionalities that it might have. Therefore, the installed NextRound punch bag will not be able to offer as much potential valuable interactions as it could.

## ASSIGNMENT \*\*

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... . In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

Design a product to bring the NextRound punch bag to consumers at home. This positioning-solution product will be integrated with the punch bag, and the NextRound Live app. The product should fit to the punch bag visually, and in use. The bag and the newly designed product should become a whole, and the new product should add a new functionality to the already existing functionalities of the punch bag.

Design a product which can help users install and position the NextRound product in their homes. This product should be compatible and integrated with the NextRound punch bag.

Research who the users might wish to have a product like the NextRound punch bag installed in their home, but who don't know they do yet. These people will be called the potential users. Then do research with said potential users in the forms of co-design and user testing.

Create prototypes and test said prototypes with the earlier defined potential users.

Aim to design a product which adds a functionality to the interaction of the NextRound punch bag. This functionality should enhance the interaction a user would have with the NextRound punch bag if it didn't have this product solution. It should bring the interaction from mainly revolving around punching a bag, to also incorporating a part of what boxing is that a punch bag alone couldn't help somebody train with. It should help give people an aspect of the interaction that one would only have when boxing with a human opponent to boxing with a product.

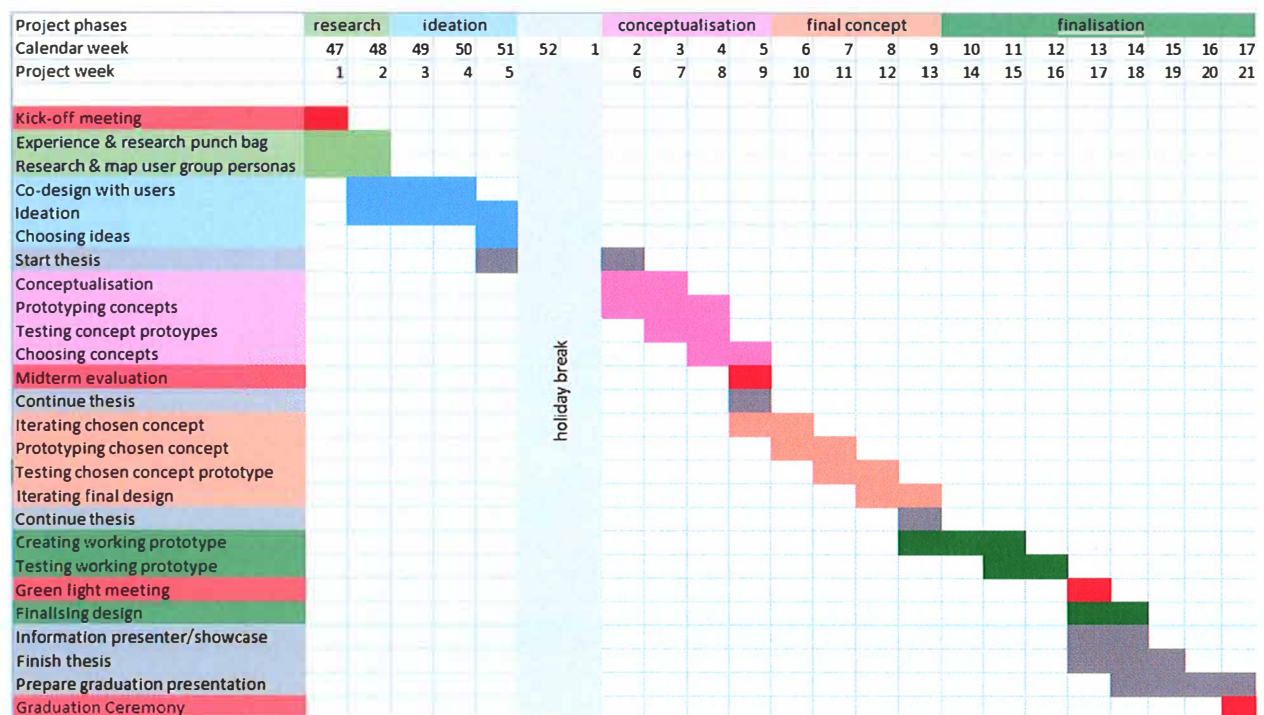
## PLANNING AND APPROACH \*\*

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 24 - 11 - 2021

26 - 4 - 2022

end date



Dates with important meetings and/or deadlines (these are marked red in the Gantt chart):

wednesday 24-11-'21: Kick off meeting

wednesday 2-2-'22: Midterm evaluation

wednesday 30-3-'22: Green Light meeting

tuesday 12-4-'22: Deadline graduation report and information presenter/showcase

tuesday 26-4-'22: Graduation ceremony & public presentation

I will not be working on this project during the holidays, which is monday 27-12-'21 through friday 7-1-'22.

## MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... . Stick to no more than five ambitions.

The main reason why this project motivates me as a graduation project, is because I want my project to be two things: physical and user-centered.

By physical I mean that I want to create a hands-on design process, which involves many prototypes and builds. I want to touch what I think up, and will write/draw any idea that pops into my brain. I will keep a collection of all my design work in a binder, instead of some intangible online solution, because doing so gives me a clearer overview.

By user-centered I mean that I want to involve users/possible users/other people in my design process. I want to try out some co-design methods to get ideas from these people. I also want to use this method, as well as interviews and observations, to get a better understanding of who these people are and what their wishes are.

With that in mind, these are my ambitions of activities I want to do during this project:

### PROTOTYPING

I want to make multiple prototypes during the design process. During the earlier steps these should be a bit low-fidelity, and should serve the function of exploring the design. In later stages, they should be of a higher fidelity, and serve the function of being tested. I want to train myself in being faster (in the early stages), and be more thorough (during the later stages) with prototyping.

### CO-DESIGN

I want to learn better to use the rich knowledge and ideas of possible users. I want to try and train myself at some co-design techniques, to learn from people who might use the product. I have in the past had courses about the theory of co-design, but I don't feel like I've got any hands-on experience putting it to practice (partially due to the pandemic). To do so, I will research co-design techniques and try to find ways to make these work in the design process.

### USER-TESTING

Combining the previous two ambitions, I want to use the prototypes to test with and learn from users on how to improve/adjust the design. I have done some user testing before, but I want to train myself to do so more methodically. I really hope that the regulations will allow me to do this user testing physically, as that would be closest to an actual use scenario.

### COMPANY WORK

This is going to be the first time I'll be working with a start-up company, so this experience is bound to be insightful for me. The design project I'm going to be doing is supposed to be a product that they intend to put into the market. That is new for me as well! This will very likely influence the form of the final product, and I'm eager to see where it'll go.

## FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.