

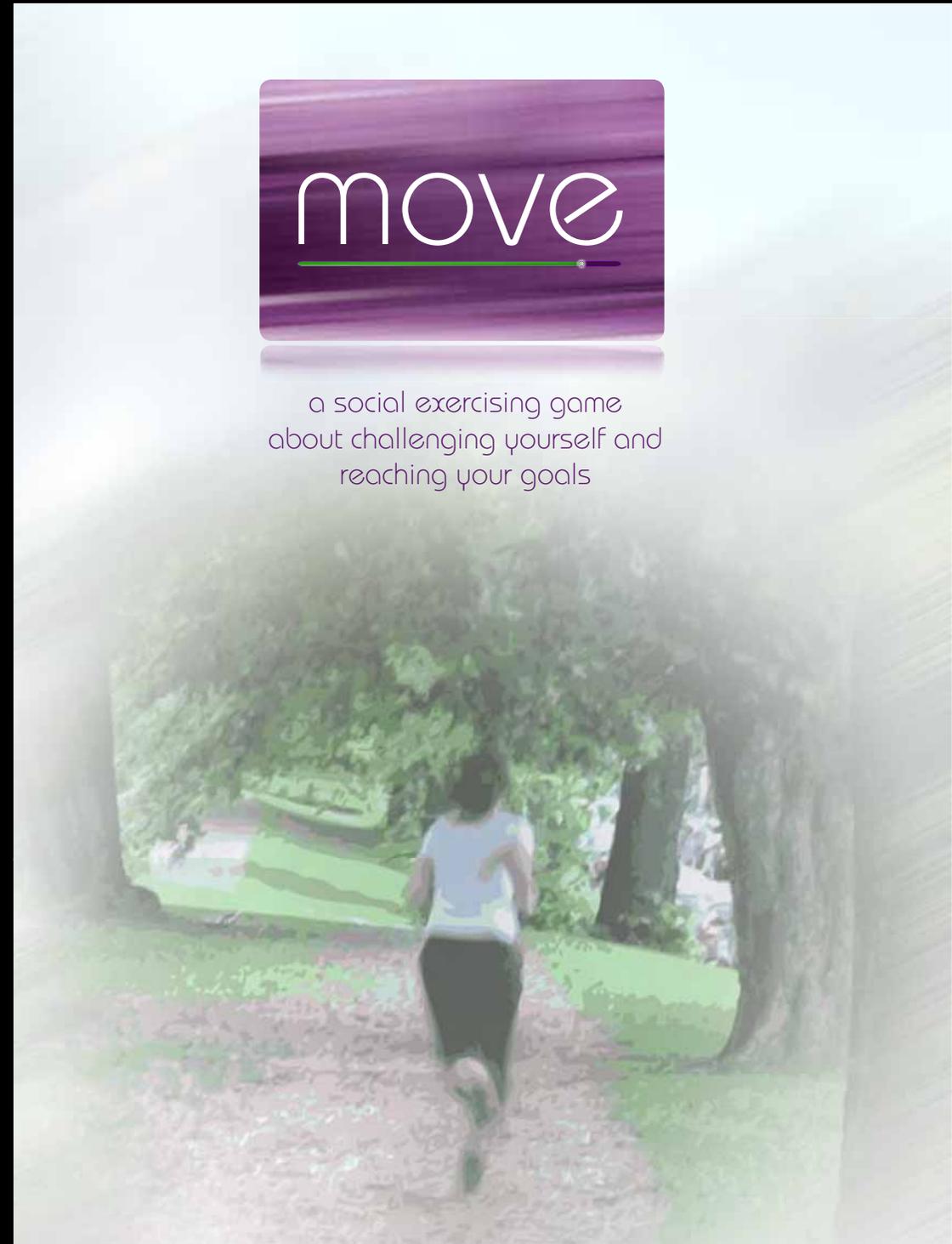
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“MOVE” SOCIAL EXERCISING GAME

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a social exercising game
about challenging yourself and
reaching your goals



Subject matter

Studies indicate that more than 50 % of adults are defined as either being overweight or obese in 10 western OECD countries¹. There is also information showing that overweight among children and adolescents in the Western part of the world are rising drastically².

Telenor R&I are developing a service called „Lifestyle Tool“ to help users change behaviour in relation to physical exercise. From the product description:

The lifestyle tool comprises mobile phone and web based modules. On the web the user describes his or hers weekly schedule and motivation regarding life style change. The mobile phone is used to communicate with the user and to gather data about the user compliance the plan.

Communication with end user is governed by an expert system that uses data from the user to tailor messages to him or her. The messages will be a mix of motivational and informational while other will remind end user about pending activities. The system enables the user to invite friends for sharing of data and competition.

In a later version input from sensors (e.g. accelerometer and weight scale) will be input automatically using a BAN connected to the mobile phone.

The subject matter of this project is further development of the “Lifestyle Tool”. The project did not have a specified aim, and the approach was open minded in regard to end delivery.

The project attempts to use system thinking tools to provide a better understanding on how to motivate the user, such as information visualization and a range of diagrams.

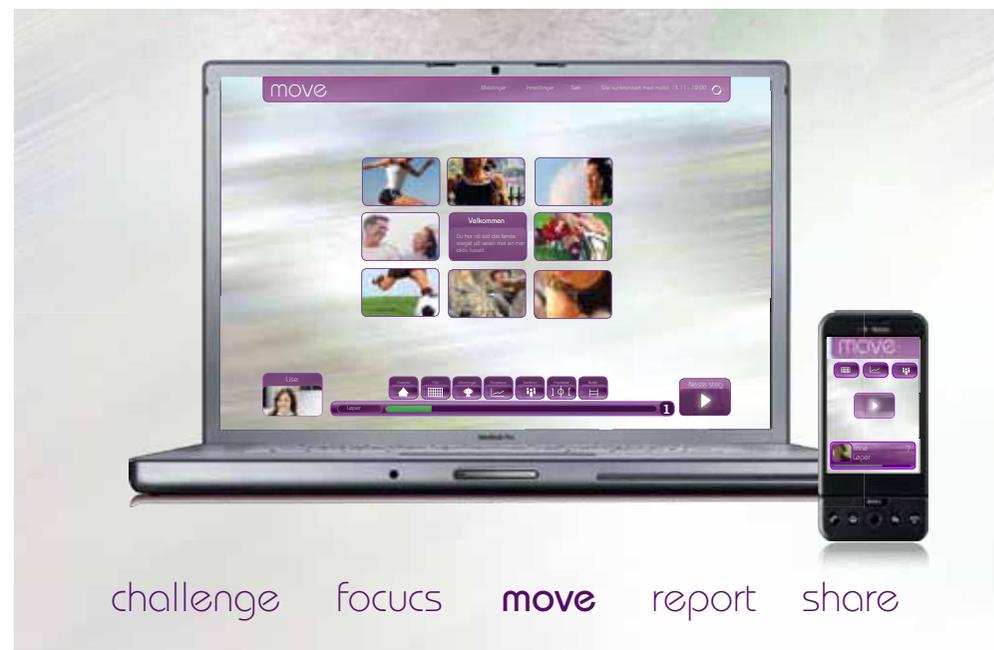
The project draws upon several fields of research, such as game design, information sharing, graphic design, service design, branding, and psychology.

Purpose

- Creating a service that motivates people to engage with physical exercise.
- The result should fit within the domain of the existing „Lifestyle Tool“ project at Telenor
- Use system thinking tools to provide a better understanding on how to motivate the user and how the service it self should be structured.

1 OECD 2007

2 Rennie & Jebb, 2005; Lissau, Overpeck, Ruan, Due, Holstein, Hediger, et.al., 2004; WHO, 2000



Move web and mobile application interface

Key concepts

The result concept advances the „Lifestyle Tool“ in several directions, but is primarily focused on the service as a social exercising game of accomplishments. The service uses a web interface, sms and a mobile application as medium and manual input on activity level to reach a personally quantified goal in order to create what game designers call meaningful play. In turn, positive reinforcement from reaching your goals, and a social platform for sharing your results in a visual manner are intended to motivate you to stay active. The key components to achieve this are;

Brand

The brand is focused on the service as a means of escape from your stressful every day by presenting itself as a game of accomplishments. Steering away from the notion of exercise as something you have to do, rather than something you want to do.

The service concept is named „Move“. The name implies change, fun and simplicity. It is meant to feel as an escape from reality. It is about determination, challenging and taking control of yourself. At the same time, „moving“ is not something that feels to extensive, complex or specialised. It is simple and understandable. It tries to communicate exercising does not need to be complicated to be effective. Move should be an alternative to the well known „up and down“ experience with exercising, and provide a comfortable experience of constant improvement. Not explosive and quick, but soothing and in balance with your life.

Challenge yourself



move is helpful for setting the right goals



the planner tool makes it easy to look ahead



she takes on a varied stay-active program



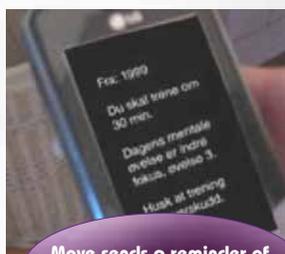
And she's ready to start her journey!

Cutout of the service storyboard

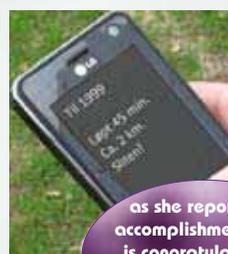
Focus Move Report



a message ticks in an hour before the planned exercise



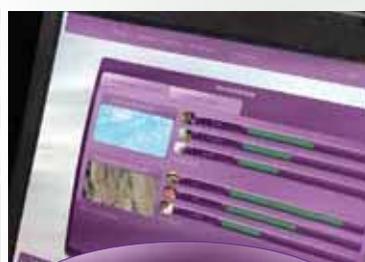
Move sends a reminder of the immediate benefits of exercising



as she reports her accomplishments, she is congratulated on passing her friend on the rankings



Share your results



The results are compared on a ranking between friends



and she's #1

The service concept was originally named „Flow“, to emphasise the focus on a gradual forwards flow, always on a „high of accomplishment“, clear goals in mind and the feeling of flow people can experience when fully immersed in what they are doing (introduced by [Mihály Csíkszentmihályi](#)). The name was dropped due to it being used by other products, but the idea of „flow“ is still present in the „Move“ concept. Another name that was dropped was the norwegian „Mester“, or „master“ in english, further emphasising the accomplishments as the central part of the service.

Core mechanics

To create meaningful play in a game, the goal needs to be defined with quantifiable outcome (Katie Salen, Eric Zimmerman, 2003.). The service is all about setting and accomplishing goals, and helps the user in defining the first goal when registering. This could be winning a contest, improving you performance in an activity, losing weight, gaining weight, etc. Afterwards, the service will assist you in setting up a plan to achieve your goal.

Several parameters of input are suggested, but not decided on. Given no sort of sensory input, the service could initially track your progress in regard to compliance, time spent exercising on each activity, satisfaction level and the reaching of goals. Input is done manually through sms or web interface. Improvement towards the long term goal and compliance to plan will result in advancing the game. Every action that shows determinations to change results in advancing the game. Larger leaps forward requires change over time.

Goal

A problem for most amateur exercisers is a lack of proper goal setting. It is my belief that one of the most powerful motivational factors is the feeling of accomplishing your goal. A registration process will help you determine your long term goal and then breaking it down into smaller, reachable goals. This procedure is central to framing „the game“. Your end goal and the progress on accomplishing the smaller ones will be visualised and shared.

Games such as world of warcraft are dependent on constant positive reinforcement to give an addictive effect. By providing the user with reachable goals the service can provide you with a similar structure and hopefully an equally addictive effect.

The user can either create their own goals, or choose a program from the database of user generated content. Some of these will include more detailed instructions and tips in addition to the sub goal.

Planner

The service provides you with a tool to keep a structured plan. The planner draws on data from other users (especially friends) to recommend activities, but is fully customizable. As the user sets up activities, the planner gives feedback on how the plan adds up and compares to what is recommended by health officials. The planner also gives tips on overcoming problems with little time. The planner includes every little activity to show how easy it is to become more active (such as walking to school/work, cleaning your house, etc.).

Visualization, feedback, rewards

Motivating the user requires good visual representation of the work and progress that is put down and the progress that is made. A wide range of visualizations are proposed. This includes time spent on each activity and how this changes over time, satisfaction over time, distance to next goal, comparisons between your data and other users. The intended experience is providing a feeling of empowerment. The

player should feel that she has an overview of how she is doing, and knowledge of what to do to change. The visualizations are reduced in complexity, prioritizing understandability over accuracy. A general understanding is more important than exact numbers (the input is to vague anyway).

Evolution

Initially, the service description from Telenor was „tailor made“. Pulling this value to the extreme results in a evolutionary service. As you use the service over time, it adapts to you and your preferences. This affects the interface, prioritized functions, ads, colors, narrative, suggestions and method of motivation.

Narrative

It is vital to create something that pulls you back to the game. The introduction of a narrative element could help in sparking curiosity as to what comes next, and resulting in the user keeping in the game. As of now, the narrative element simply consist of a prominent button labeled „the next step“. The button provides you with tips and suggestions on what to do next. This could be specific activities, the setting of new goals or learning new theory. In the future however, I believe this point could be further explored to make a more game-like experience

Move

Move is a service dedicated to help the user build motivation. It is intended to keep you on a flow of accomplishments, from the smallest step to the monumental long term goal. The key points to achieve this is a guide to help you set the right goals, and several types of feedback and rewards on each step towards it.

Brand

- Move is aimed at people who feel they should change their behaviour, but uncertain of how.
- Move is primarily aimed at young women
- Move is visible on social networking services such as facebook and twitter, as well as on your cellphone and computer.
- Move emphasizes fun factor and perceived usefulness.

Easy registration

- Registration is easy. Enter your cellphone number, and a password will be sent to you phone. Your cellphone is your link to the service. The service can be stopped, confirmed and payed through your cellphone.

Survey

- At registration, Move asks you to answer a substantial survey to identify your state of mind and body.
- The survey is laid out in a enjoyable manner, and the results are used to tailor the service to your needs.

Goal guide

- Perhaps the most important feature of Move is the relationship between goals and accomplishments. Therefore, it features a comprehensive guide to help you set personal goals.
- The service aims to keep you on a constant high of accomplishment.

Web interface screenshots

Interface

The interface is delightful and full of visual prizes. It is focused on displaying gameplay elements such as progress, players, your current objective, your options, your resources and the results of previous choices.

Social module

To motivate the user, it is vital that the user is able to share his or her accomplishments. A social exposure creates both pressure and an opportunity to show off and compare yourself to others. The social module should also open up for making teams and competitions, more competition and performance based than Facebook's alternative (e.g. rankings, class (runner, strongman, teamplayer), title-holders, groupings, professions, skills, records, times, dates, weight, minutes spent, activity level, preferences, plans, status etc)

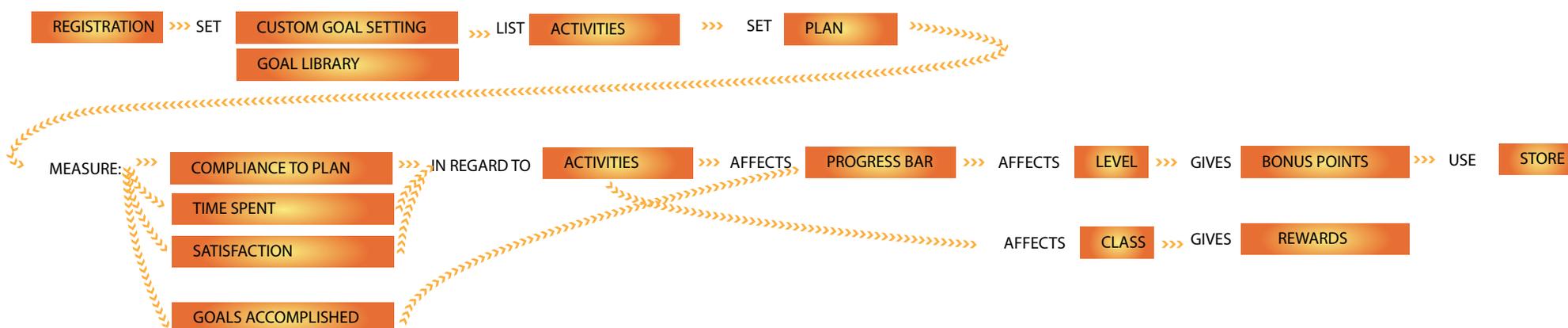
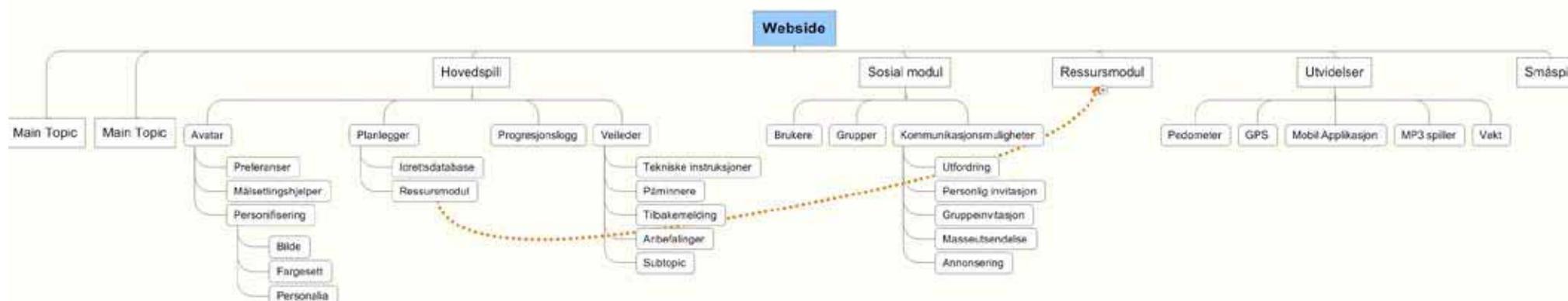
Input and progress

To create meaningful play, the matter of input is vital. Ideally, every user should be equipped with an all-measuring sensor, and in truth, this reality is coming closer. For now, however, to maintain a low enough bar both in terms of price and complexity, the service needs a more realistic input method. The project proposes a combination of several factors in calculating progress.

- Compliance to plan.
- Time spent
- Satisfaction
- Reaching goals

If one checks compliance for a planned exercising session of one hour, the time and activity type is logged. After the exercise, the user answers a question of satisfaction, and finally checks of reaching a set goal. To control that user input is not abused, the system uses a combination of social control, and a focus on change over time. The assumption is that if the user can immediately input an extremely long and satisfactory session, this will not matter as much as the compliance over time data. The effort required to effectively cheat will therefore be high, and it is less likely someone will put that much time into cheating at something which does not

System architecture diagram



produce a meaningful prize.. In the future, the service should support sensor input such as gps, pedometer, accelerometer etc.

Resources and information sharing

The service should in time become a portal for all kinds of exercise related activity, or share information with external resources. This is a huge project in itself, but the trend on the web is towards information sharing between services. Telenor should be at the edge of this. Examples of resources that could be shared information with are:

- Facebook: A plugin could post achievements on facebook to create a sense of being seen, as well as to create publicity for the service.
- Turistforeningen: Turistforeningen holds information on hiking routes, cabins, maps and other outdoor activity information.
- Commercial: Companies wanting to hit more specific target audience. Information gathered by the service could be sold to third parties. A active jogger could get ads promoting shoes.
- Exercising facilities such as football fields, swimming halls, golf courts etc.
- Organisations
- Private and public sports teams
- Database of user generated content

Key assumptions

It is assumed that part of the problem with lack of exercising is motivation. Other criteria such as knowledge (how to exercise), food (eating correctly), time (between work, school, family etc), money (affording exercise resources), availability (distance to facilities), disabilities (reduces motor skills etc) are not very evident in Norway. Motivation, or lack of it, is what separates athletes from home sitters. In a stressful daily life, it is hard both in terms of time and knowledge to achieve the proper

Mind mapping diagram

amount of exercise. A service that can provide motivation and to some degree knowledge could solve a lot of these problems.

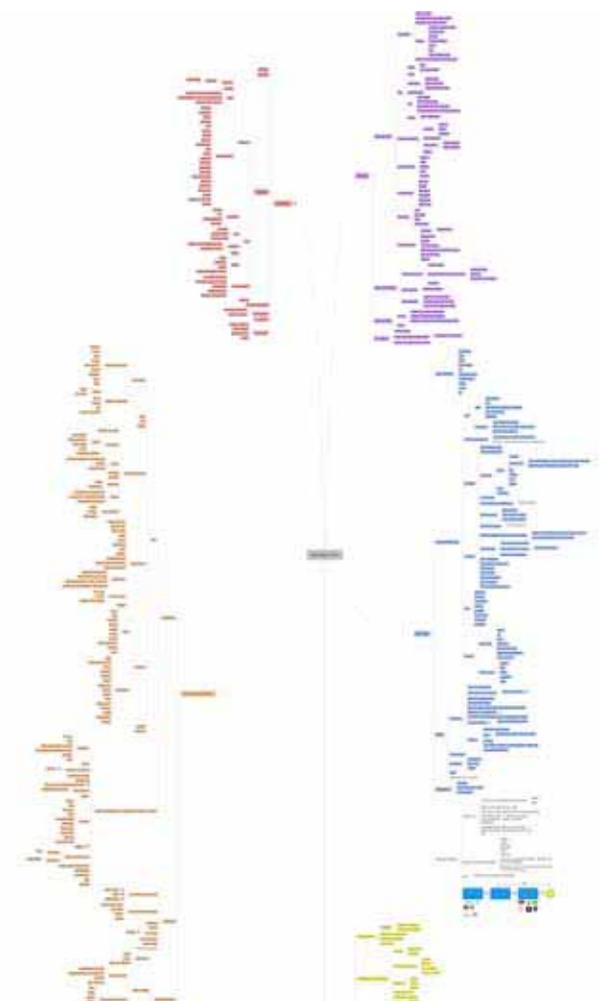
Many assumptions has been made on describing the user. Time did not allow for user studies, and casual questioning, personal experience, moodboards and fictional scenarios have replaces them.

Key questions

The biggest question is what motivates people, and how can one produce motivation through a service. In extension, what kind of rewards can the service provide in addition to the biological benefits of exercising.

One of the major influences were computer games (such as World of Warcraft), where constant positive reinforcement is important for the addictive effect. A question is how to provide this reinforcement while exercising, and not afterwards. In other words, bridging the gap between the online experience and the exercising. The service aims at engraving these A possibility is utilizing the users music player (if available) to provide sound effects.

Another question is how one can create a service that is attractive for a large spectrum of users. A possible answer is that maby you shouldn't. The resulting concept is primarily aimed at „casual“ users that are assumed to be more concerned with the fun, social aspect and a certain degree of progress. If the service tries to incorporate more professional and high end users, it might loose it's casual and fun



focus.

Methods of research

Moodboards and design maps

Moodboards for different directions of the visual profile were used to give a sense of what the service should look like. The visual profile is inspired by computer games, mixed with a fresh, feminine and dynamic color palette and crisp, inspiring photos.

Designmaps were used to map the competitors and inspirations on the market today, attempting to find holes and opportunities. The final concept takes inspiration from services such as Nike+ and Facebook, but adds a twist by putting the accomplishment of reaching goals in the center stage.

Talks

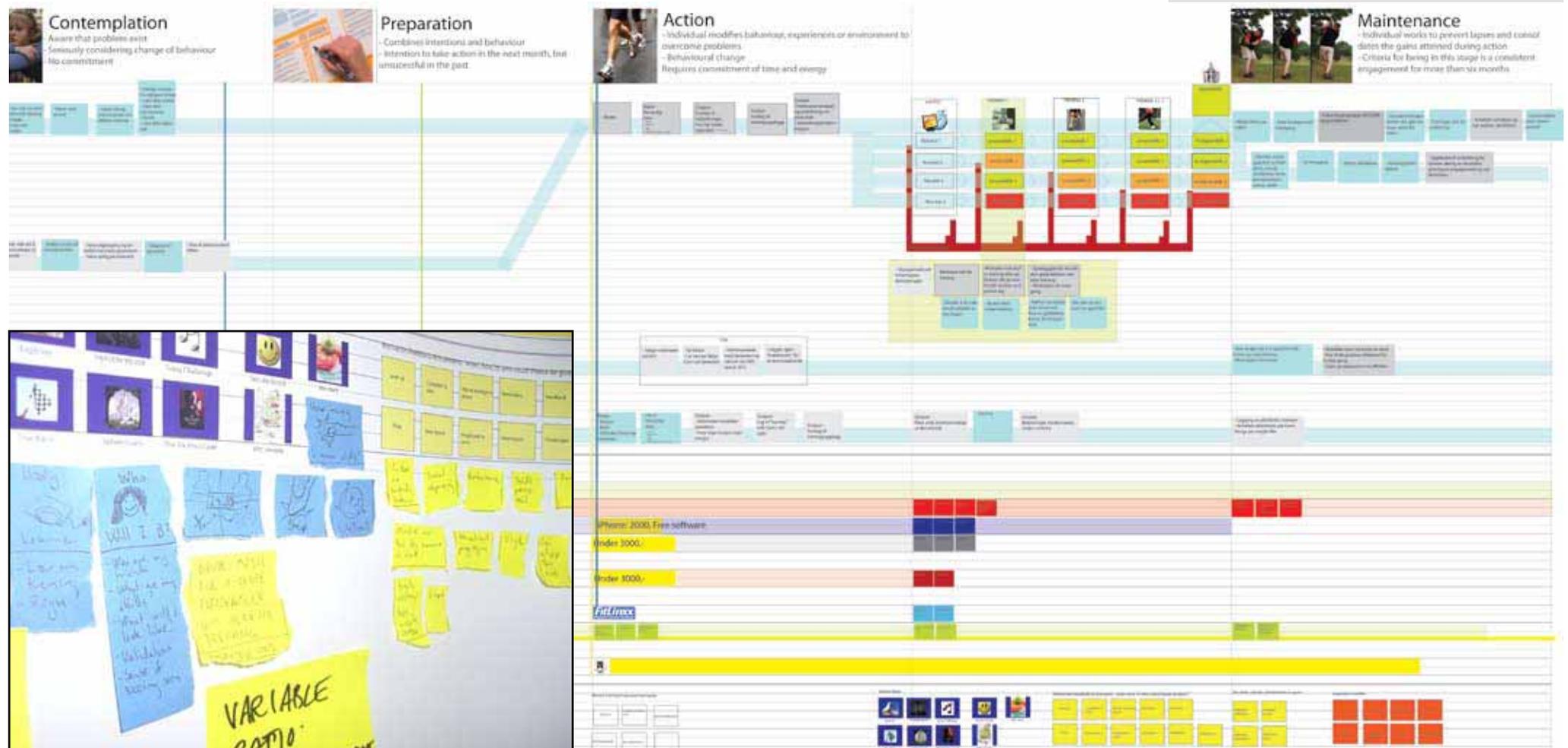
Discussion with Tord Nordbotten, a friend who has a bachelor in coaching was helpful on identifying the lack of goals in casual users exercising habits. Casual discussion with female student was helpful to assess the appeal of the visual profile. Computer engineer students and the project leaders at Telenor R&I in Tromsø played a central role on evaluation the uniqueness and strength of the service, as well as what was „doable“ in the given time frame.

System thinking

System thinking tools were used to better understand the subject matter in several ways. The most basic tool was the use of mind maps. This was useful for simply exploring the subject matter, grouping the information and looking for relations. Mind maps were created in several iterations while narrowing down the subject.

Looking at an exercise as an isolated happening is not enough. The project aimed to understand the relationship between the chaotic life of a user, exercising and a service. A person experiences desires, needs, complications, physical implications, time shortage, stress, sickness, change of priorities etc when attempting to change behaviour. For a service to be successful, it is vital to understand how these things affect the relations with the service. The flowchart/timeline was used to better understand this. Creating a fictional user journey through the service and map every possible occurrence or problem. Every problem was then met with an intervention. This kind of thinking helped produce a series of ideas and features. I was then able to look for patterns to bundle the features together to one service

The image shows a part of the timeline diagram, the centerpiece of the project process.



During the process, this diagram became the centerpiece for gathering all information and ideas. One finding was the lack of interesting happenings on the imagined timeline/flowchart of a „casual“ user through the system. The finding was seen as the user not having a motivation for using the service. The service needed to offer something for people without a preset goal or problem. The perceived fun factor needed to be heightened.

A particularly interesting part of this diagram is the visualization of mental training theory. The model was created to provide a visual reference for later work. During the process, the similarity to the structure of a „leveling“ game was noticed and later explored upon.

The service itself can also be seen as a complex system of sub- and super systems. Upon attempting to structure the entire service as a series of interconnected systems, the problems quickly arose. The most prominent question being how the points/leveling system should work. The options turned out to be whether the point system should be a super system, including input from all sub systems, or if every challenge or activity should have their own point system. A lot of these questions remain unanswered, but I believe system thinking is vital for further work on the subject.

It was attempted to pair the two diagrams to better understand the flow of information between the user and the service over time. Exploring the service through this diagram revealed the need for a user database at very early stages in the relationship building with the service. A user database can provide future predictions based on your survey input and the results of previous users, as well as

suggestions for activities and planning.

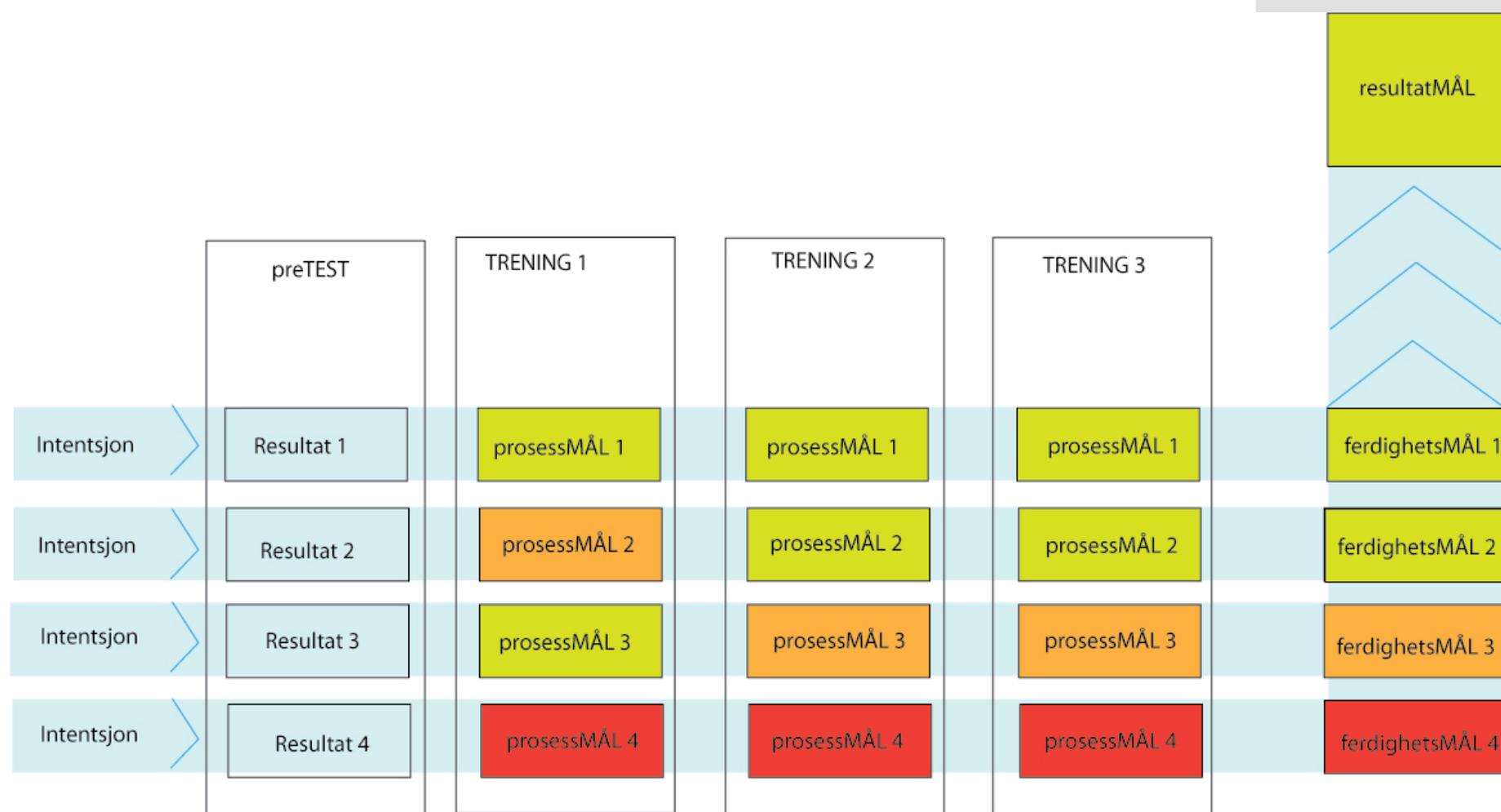
Evaluation and conclusion

The project was explorative in nature, and there was no initial hypothesis, ergo no conclusion. However, some points emerged as more prominent than others.

On the question of whether it is possible to motivate the user to engage with physical activity through a service, I believe it is possible to create meaningful play, even without proper sensory input. I believe a combination of „social control“ by friends and other users and genuine delight of actually accomplishing something will be enough to immerse the user in the service.

Upon evaluating the resulting interface concept, I believe some goals have been met. I believe the project has produced some promising interface elements that give a feeling of the service being more of a game than a static information page. The

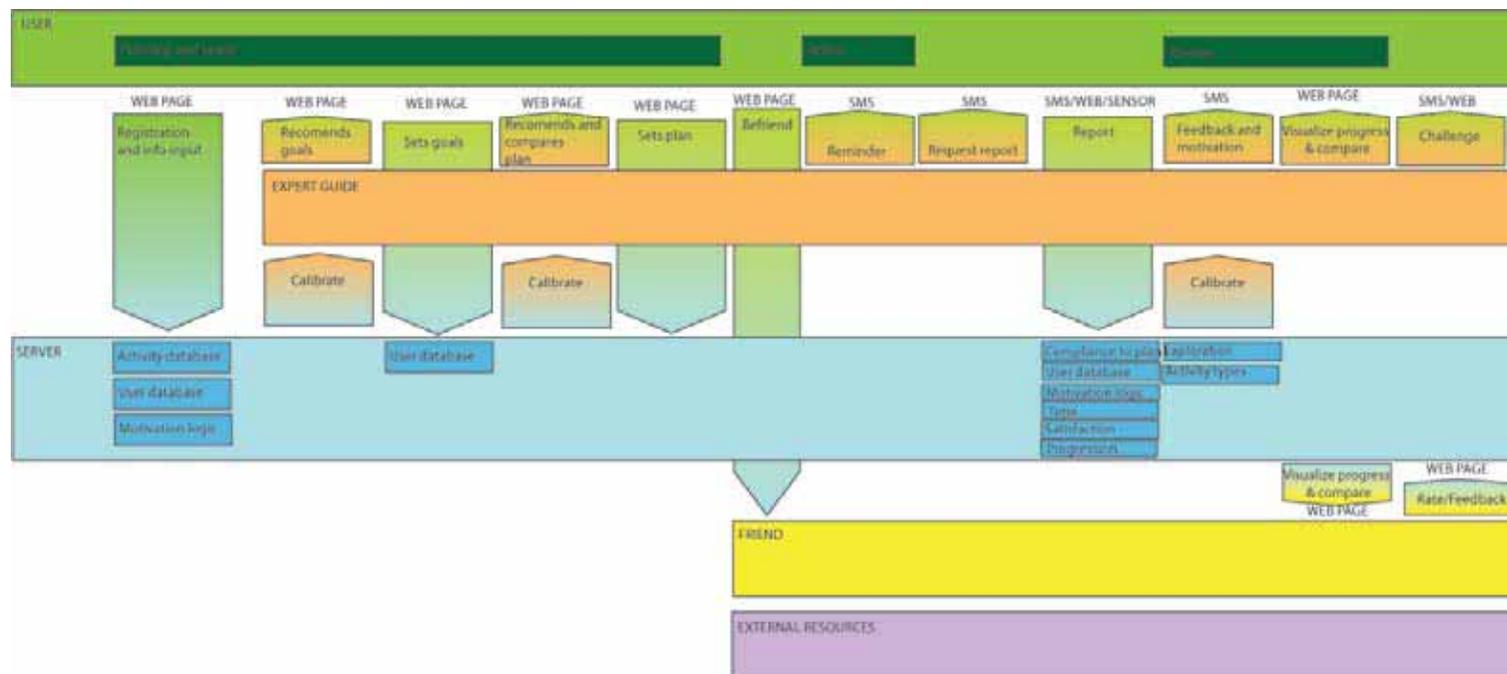
The image shows a part of the timeline diagram, the centerpiece of the project process.



progressbar, „next step“ button, the „here and now“-feed, competition visualizations and main menu buttons all contribute to a dynamic, interesting interface. The visual profile is crisp, fun looking and full of visual „gems“. There are elements that (from is given by telenor, decisions made on lower level) What made be choose a particular kind of interface, and exclude another

Evaluating the influence of system thinking on the project is difficult. While there are some points where system thinking tools produced ideas, it is unknown what kind of results would have been produced without them.

There are however some system thinking tools I feel I did not get ut utelize properly, such as actual observation of real life systems as described by Donella Meadows in „Dancing with systems“. Most of the information in the flowchart/timeline are assumptions or own experience and not based on observing actual users. An in depth analysis of the timeline of occurrences, mental and physical, that take place before, during and after exercising in an actual user could have provided interesting findings and patterns.



Information flow diagram

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