

MinFysio

DICON 22I

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Group 12

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Characters

23828

Prototype

https://www.figma.com/proto/ewlOmI4JrYXWz02SDISimP/MinFysio?type=design&node-id=134-775&scaling=scale-down&starting-point-node-id=134%3A1643&show-prototype-sidebar=1&fbclid=IwAR2c2peN5dda5My9s86fqaBmMWRCNmJy42qAkudNgnwaf_eptJAvchf8R6M

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Introduction

This report showcases the exploration and development of an application created explicitly for physiotherapists and their patients to encourage them to complete their recovery process, bridge communication gaps, and create appointment management, simplifying the entire process for all the included parties.

Delimitations

Moreover, as the project continued, the challenges of reaching specific target audiences were recognized, especially within the welfare technology sector.

Acknowledging the time constraints, the subject that would maximize the potential impact within the given five-day scope was sought. One important constraint is the influence of the tech radar, which limits the range of available technological options. The choice to develop a mobile application for physiotherapists provided a feasible target group and an opportunity to solve a problem in the healthcare landscape.

Reasoning behind the Change design

The Change Design approach was chosen to develop our concept further among the various design methodologies available. By leveraging this method, the team could make informed design decisions based on user feedback, address identified pain points, and add improvements that align with the target's evolving needs and expectations.

Traditional marketing should have been prioritized as the target primarily consisted of government entities and physiotherapists. While Service Design offers value in creating holistic experiences, it was not chosen for the concept due to the emphasis on digital solutions.

Problem statement

The communication method fails to provide ongoing support, clear instructions, and personalized guidance for effective rehabilitation. As a result, there is a pressing need for a comprehensive digital solution that connects the gap between physiotherapists and patients, adding seamless communication, exercise tracking, and motivation.

The traditional methods of physiotherapists delivering exercises to patients via email or verbal instructions need an interactive approach. Additionally, certain physiotherapists do not distribute guidance materials to patients, making the process more complicated. The methods mentioned previously lead to low completion of prescribed exercises and suboptimal outcomes.

Problem question

“How might we develop a digital platform that enhances motivation and simplifies rehabilitation?”

Sub questions:

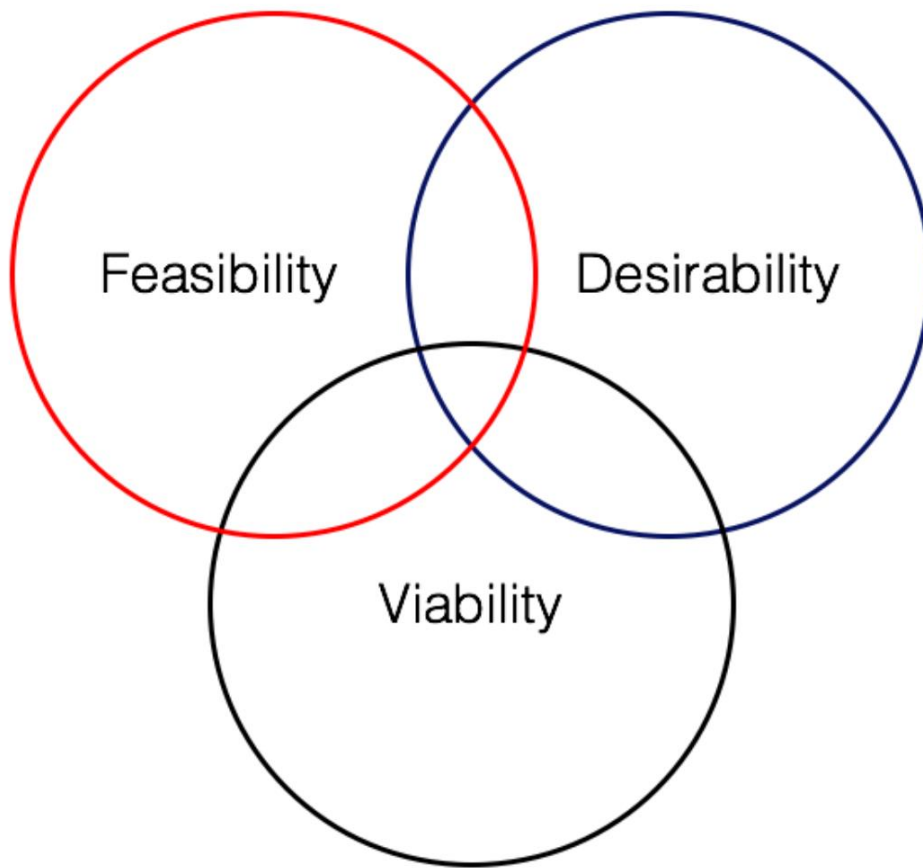
- *“How might we facilitate ongoing support during the rehabilitation process?”*
- *“How might we improve patient engagement by providing physiotherapists with an interactive and personalized exercise delivery method?”*

Design sprint

The rationale for choosing the topic

To initiate the sprint week, the team has chosen the segment of welfare and physiotherapy. The choice process was determined by various brainstorming techniques, primarily by Round Robin, which allowed the team to decide on the topic with minimal bias.

Additional ideas were generated through this process; however, because of already mentioned limitations, such as time constraints and inability to reach specific target audiences, it was decided to abandon these ideas as the ultimate deciding point was feasibility, which determined the group's path towards an application focused on physiotherapy. The proposed idea must have been researched appropriately to determine a straightforward solution and long-term goal.

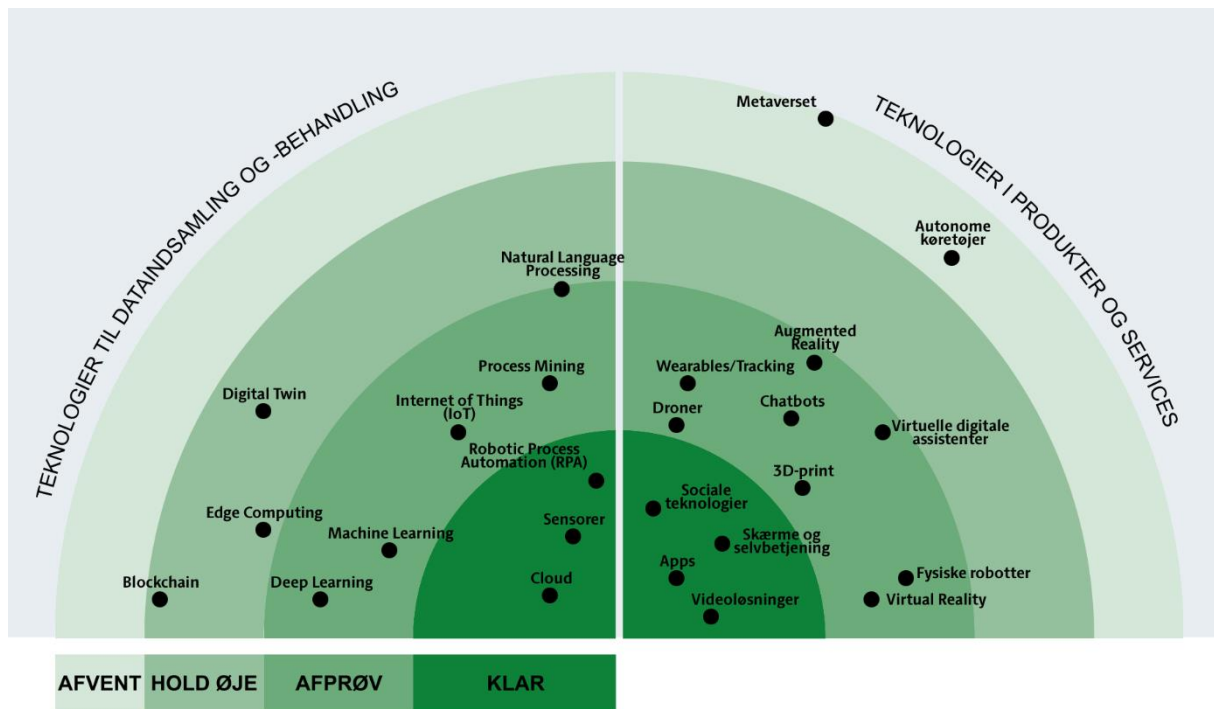


(Figure 1 – Feasibility, Desirability, Viability Diagram)

Furthermore, the experts from the field were invited for a short interview to analyze their pains in terms of physiotherapy. The key takeaway was the consistency and the problems with digital guidance for their daily exercises. The interviewees reported finishing the process when the pain vanished from the damaged areas before the prescribed period.

However, this issue is one of the biggest problems that physiotherapists regularly encounter, which prevents patients from successful recovery. The physiotherapists also need help with repetitive questions regarding exercises, and patients often need help with check-ups due to the need for more information unification.

The main pain points were identified with the information gathered from the testing. Considering them, the team looked to the technology radar to determine which tools could be used or manipulated to solve our users' mentioned pain points. It was decided to follow the most common and achievable technological solution- a mobile application. Furthermore, the available solutions from the technology radar were analyzed and identified as not feasible for the proposed idea.



(Figure 2 –Technology radar)

Therefore, the team has set a long-term goal to prevent these occurrences and further develop the solution.

Long-term goal

The members separately came up with the sprint's long term-goal and voted for the primary long-term goal:

In two years, the team is dedicated to improving the quality of life for people undergoing physiotherapy. Furthermore, aim to develop a user-friendly mobile app tailored to individuals who struggle with sticking to their exercise routines and need guidance in performing the exercises correctly. The team offers a solution that addresses these challenges, making physiotherapy more accessible and practical.

Map

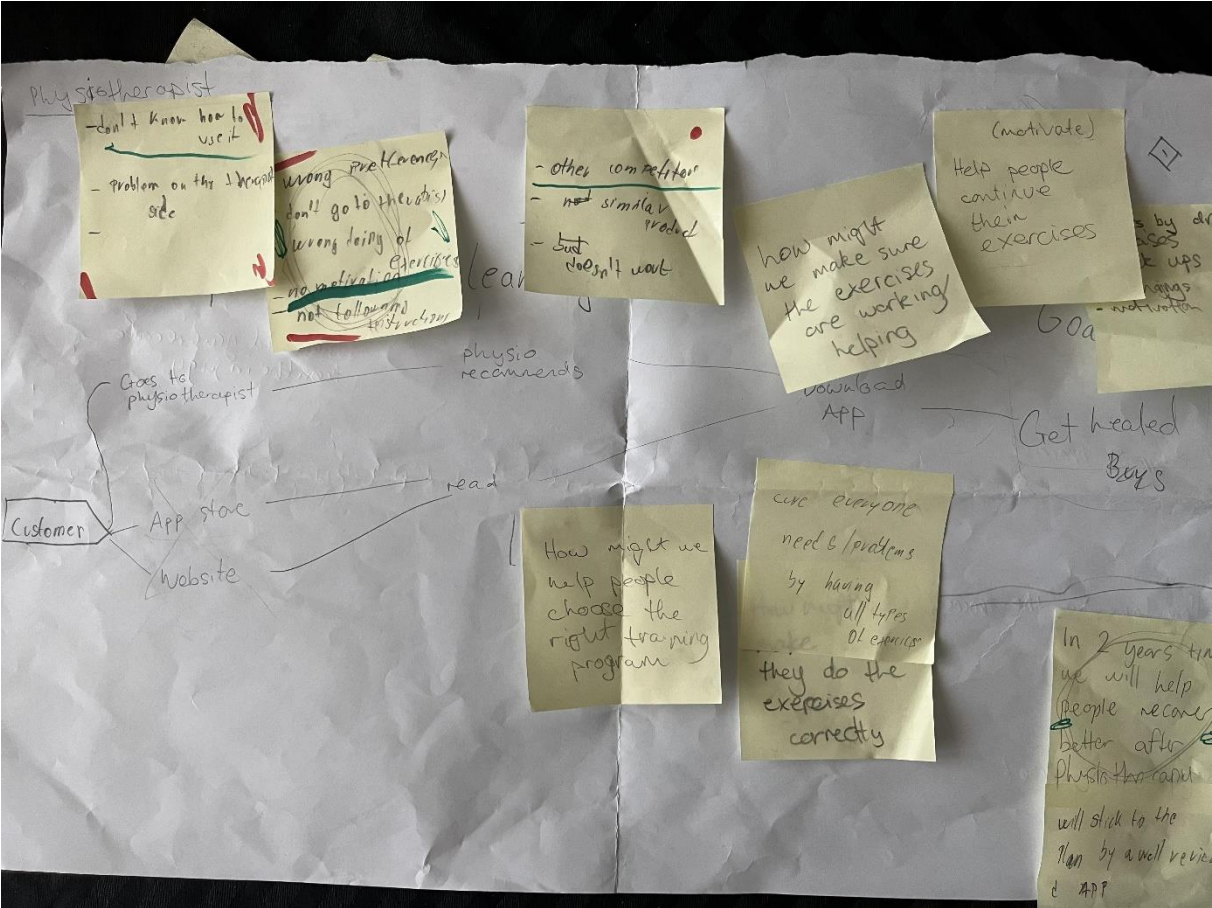
While mapping the journey with the user on one end and the goal on the other, the path of the user learning about using the solution was noted.

Considering the map, the thoughts were separated by the biggest problems that could be encountered. This made the team aware of the problem connected with allowing users to download the applications themselves from AppStore and Google Play, without the physiotherapist's recommendation.

"What if the patients would prescribe themselves the wrong exercises and prevent themselves from healing properly or worsening the injury?"

The mentioned occurrence led to removing this pathway and directing the application distribution to physiotherapists passing the solutions through a dedicated link to a hidden application on AppStore/Google Play.

Followingly, considering all the problems that appeared in the mapping, the "How might we questions" were formulated and placed on the map at the stage where they were the most relevant. With the questions on the map, it was visible where the focus should be placed in the prototype process.



(Figure 3 – Map)

Risk analysis

Based on the long-term goal, all the risks that could potentially harm the project and should be prevented were analyzed. The most critical factors were issues with usability, substitute products, decreased profit for physiotherapists and persistency problems.



(Figure 4 – Risk Analysis)

Measuring success

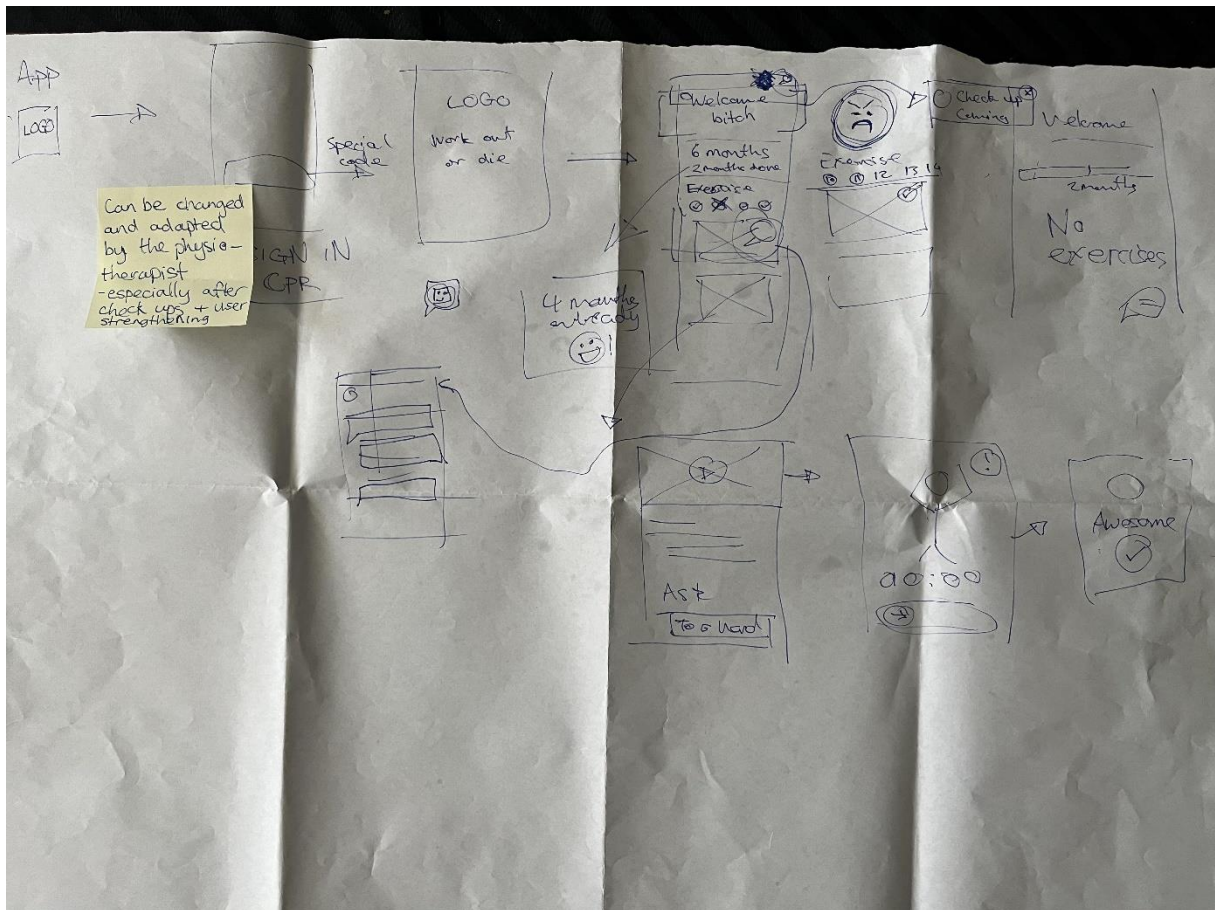
The platform is considered successful if the recovery rate and reoccurring issues are at least the same as currently used methods. The solution is proposed to be sufficient even if the patient's recovery rate would not increase, as the solution offers numerous additional benefits that improve the physiotherapist's workflow and unify the patient's information to one platform.

Lightning demos

Through research, various apps that inspired the team were explored, including Duolingo's gamification approach, payment systems with convenient features like slide-to-confirm functionality and researched fitness apps like CrossFit Games, which enable tracking their improvement. These findings highlighted the importance of gamification, user convenience, and efficient communication in app design.

Swarm

During the collective teamwork on a sketch, it was aimed to leverage collective creativity to develop ideas with a shared understanding of the concept.



(Figure 5 – Swarm Sketch)

The four-step sketch

By utilizing the described method, the team has rapidly generated and refined ideas, accompanied by visual representations highlighting the essential aspects of the concept. Information gathering and solution sketching through Crazy 8's led to identifying three primary aspects: user motivation, communication with the physiotherapist, and the availability of exercises regardless of the patient's location.

The first aspect entails concentrating on user motivation, incorporating gamification elements and appealing features like pop-ups displayed upon completing a daily exercise or during app loading. This approach stimulates active user engagement and sustained commitment to the prescribed routines, ultimately improving outcomes.

The second aspect involves the integration of intuitive communication channels and features, such as messaging and check-up appointments, to simplify patient-physiotherapist communication. Leveraging push notifications enhances the user experience and provides support to enhance patient consistency.

Lastly, creating a comprehensive exercise list showcases a diverse array of tailored exercises the therapist curates. The primary focus is addressing each patient's needs, establishing a versatile and adaptable concept.

Screeener survey

To define all the included stakeholders, a screener survey was conducted. The non-bias questions were formulated to ensure that the respondents were unaware of the goal. It was observed that people who have undergone physiotherapy have almost always stopped their course before the tailored period, and their problems have reoccurred to a certain extent. Patients' close ones are aware of them undergoing physiotherapy and are unaware if they have sufficiently finished the therapy process.

The analyzed stakeholders were patients undergoing physiotherapy, their close ones and the government combined with physiotherapists observed through interviews with professionals.

Combined with the questions in the survey, it was possible to connect specific pains with the different target groups.

Target Group

B2C

All individuals undergoing physiotherapy struggle to stick to the schedule and motivation or find it difficult to remember the exercises.

The patients' close ones were discarded for the time being, as their impact on the patient's recovery and consistency would be minimal to be considered necessary to focus on.

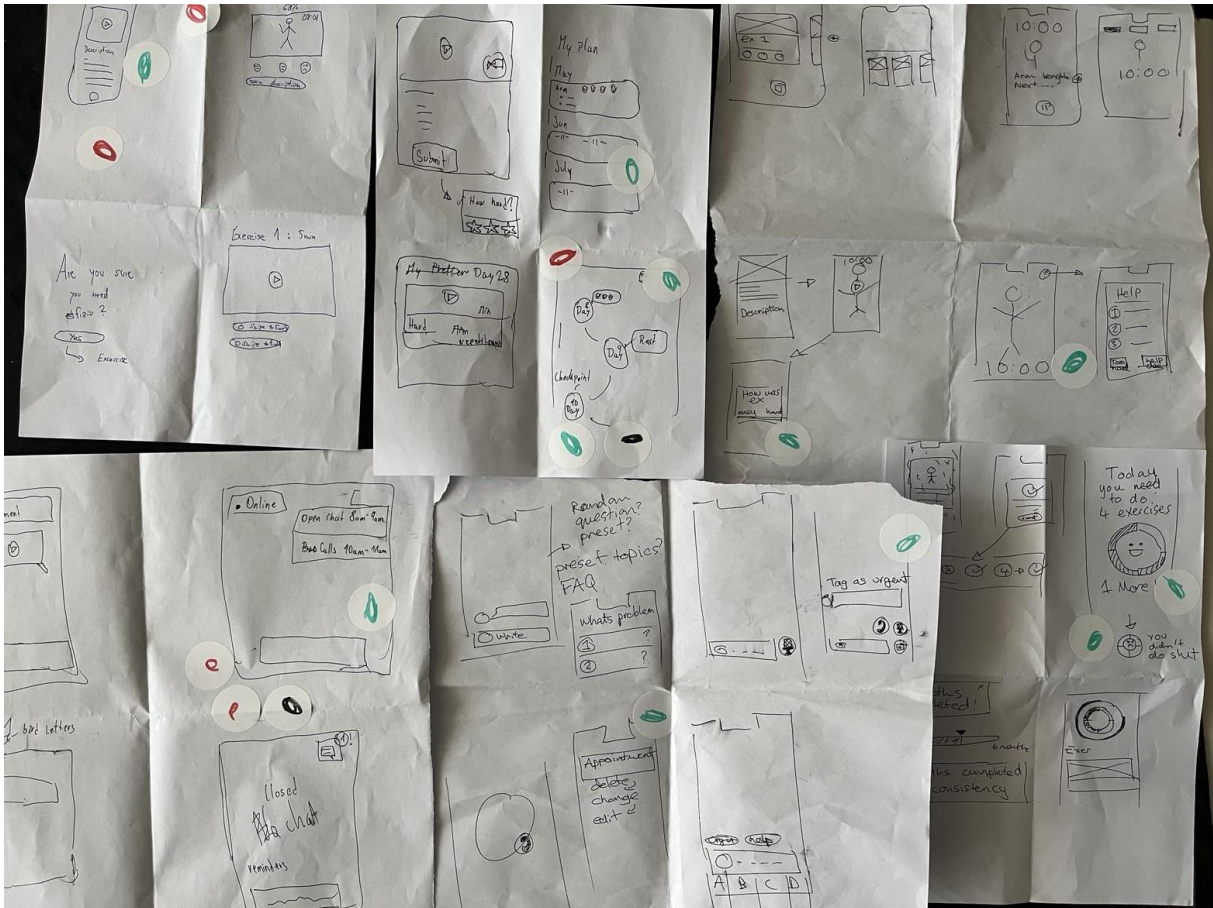
B2B

Physiotherapists struggle with patients' repetitive questions and deal with repeating exercise confusion. Physiotherapists' assistants/nurses, who schedule patients' appointments

Finalizing the concept

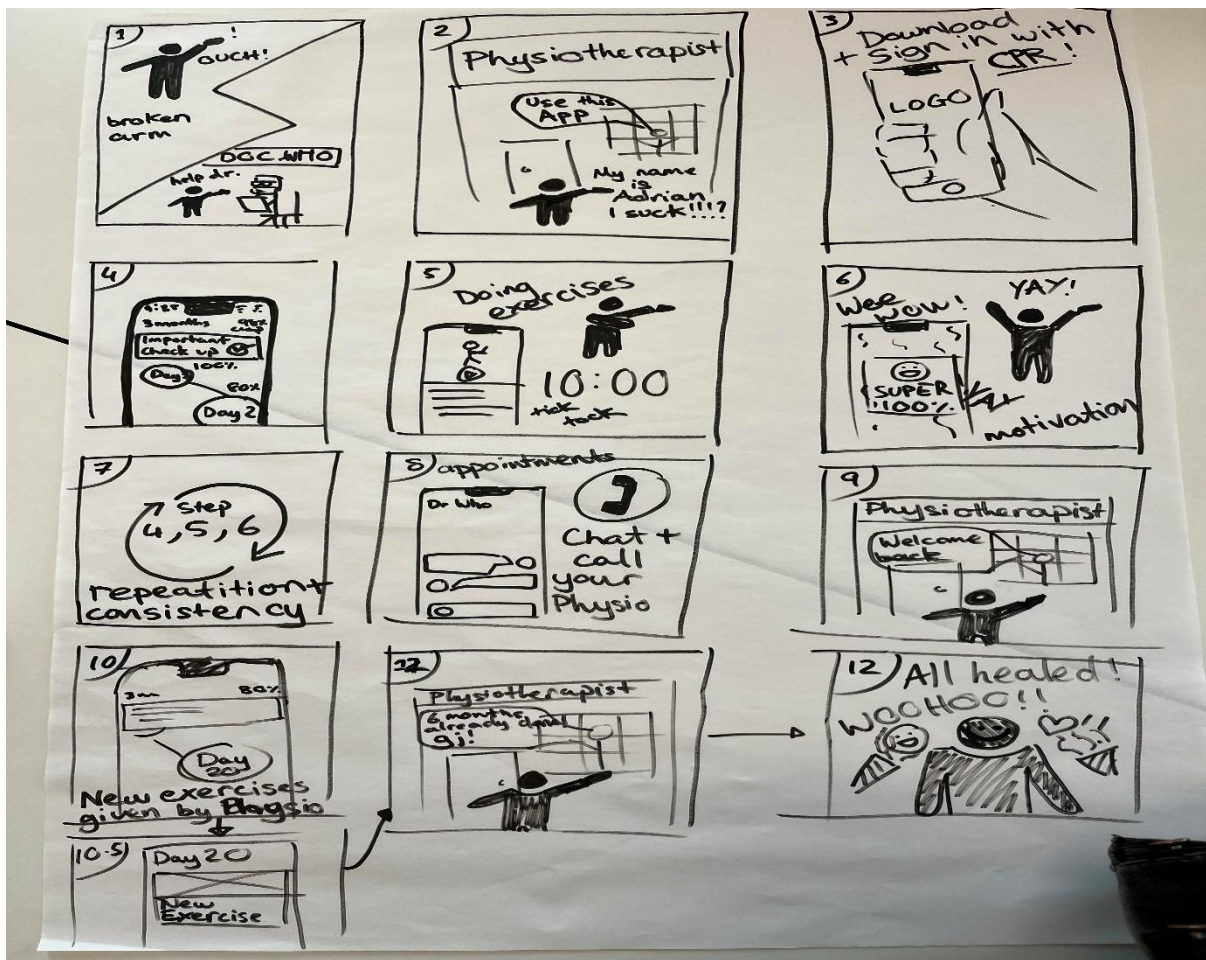
Created heat map method narrowed the thinking process into a chronological line that would be the simplest for all the stakeholders.

Based on the dots, the ideas were discussed, and each member placed one final dot to the best idea. According to the discussion and the dots, the decider has chosen the final idea/ideas that will be prototyped and tested. This supervote has defined the path of our product and prevented us from elaborating on additional features that would create a chaotical workflow.



(Figure 6 – Crazy 8s')

As the idea was defined, the development team moved to create the storyboard, where the grid and a storyboard were drawn, which enabled an understanding of the stakeholders, and how they approach and use the product.



(Figure 7 – Storyboard)

In order to name the solution, the Note-and-Vote was utilized to gather various brand names and the MinFysio was voted as the most desirable. The name was chosen to align with Danish digital solutions.

Prototype

All the information from the sprint week about the solution was gathered to prototype the solution based on the storyboard and research. Initially, the team's asset collector gathered the pictures and fonts to create a design guide to simplify the process. Additionally, the team of three utilized all its members to three makers, where the members worked on specific features of the solution to increase work efficiency. Ultimately, the team's stitcher put all the inputs into the output design and finalized the product.

Product solution

Utilizing the Figma platform, the MinFysio mobile application was created. It is heavily focused on a clean design, using mainly big buttons for a native user experience. Additionally, the text-heaviness was eliminated to the maximum extent as the audio-visual experience is more appealing to the end users.

Features and Benefits

The base application works as a platform with videos on the home page, where the patient can directly access their physiotherapy session on a prescribed basis. A physiotherapist previously described each exercise, but if desired, the help button can be clicked, and an additional description is visible. Moreover, the platform offers a chat with doctors in the most necessary cases, and check-up booking is available.

Gamification, facts and motivational messages are tailored to boost patients' engagement levels and persistence in their recovery. Visualized progress tracking resembles a sense of journey to boost patient engagement. The facts are meant to be shown in a negative tone as patients respond to bad news with higher care. However, these messages are not misleading as they resemble pure facts such as:

"Approximately 61% of people, who finish their physiotherapy process before the designed period tend to feel reoccurring problems after certain period."

Physiotherapists advised these messages, as patients tend to forget about these facts and end their process earlier, as mentioned before.

Testing

Goal of testing

In order to evaluate the effectiveness of the concept, the test was conducted, and the following testing goals were established:

Usability Evaluation

The primary objective was to assess the usability and user-friendliness of our concept interface and interactions. It aimed to determine if users could navigate the app without confusion or frustration.

User Engagement Measurement

Evaluates the level of engagement and motivation facilitated by our concept. Focusing on effectively understanding the implemented features and messages to track participants' progress and motivation level to the greatest possible extent that can be analyzed in short testing.

Communication Effectiveness Assessment

To determine if users found the contact options convenient and if the communication flow met their expectations.

Overall Experience Feedback Gathering

To gain comprehensive insights, feedback from users regarding their overall experience with our concept was gathered.

5-Act Interview

This method was used for its structured framework to explore user experience in depth. This approach provided user-centric evaluations and storytelling, enabling us to analyze responses effectively and make informed decisions for concept improvement.

Testing takeaways

1. Ease of use: Users find the concept easy to use, with modifications from the doctor's side and convenient tracking features.
2. Tracking progress and contracting the doctor: Their ability to track the progress and the convenience of contacting the doctors. These aspects were considered user-friendly.
3. Impact of motivation messages: Users rated the motivation messages as a sense of participation, providing a goal-oriented and progressive experience. It contributed to positive emotional responses and increased motivation. The motivational messages in the app were off-putting and had a negative impact on users, making them feel bad
4. Frequency of daily messages: Users shared mixed opinions regarding the frequency of daily messages. Some found them excessive, and others appreciated the value added to the app. These loading messages were considered a valuable use of waiting time.
5. Users of the app found it quite hard to navigate the navigation bar, resulting in difficulties in accessing different features or sections of the app.

Conclusion

In conclusion, the concept showcased ease of use, effective progress tracking, and convenient communication with the doctor's side. The motivational messages created a sense of participation and journey-like progress. These insights from user feedback provide valuable guidance to improve the solution to ensure a more engaging and user-friendly experience.

Change management

Change design is a methodology that focuses on transforming work processes and systems to drive meaningful and sustainable change within an organization/project.

Importance in Change Design

In change design, it is crucial to understand the needs and perspectives of stakeholders, engage them in the change process, and foster a culture of collaboration and adaptability. By embracing change design, we can effectively address challenges, drive innovation, and achieve successful outcomes for our solution.

The change was analyzed as the most relevant since the changing work process affects not only the clients but the physiotherapists and the government.

Listed stakeholders

Patients: The primary users of the app seek effective rehabilitation and exercise support.

Physiotherapists (public/ private): Healthcare professionals responsible for prescribing exercises and monitoring patient progress.

Government/Kommune: Entities responsible for healthcare policies, regulations, and potential distribution of the app.

The Government sector was essential to focus on because of the potential to reach a significant number of public physiotherapists, maximizing the impact of our app, as well as funding our solution. Communes and the government, who fund the entire platform, gather the data for statistical purposes and aim to improve healthcare in Denmark. After researching how to reach the government with the sales pitch, it was found that it has to be done in 3 ways:

- Through a Politician
- Through the Kommune
- Through “Doctors Group”

The process was initiated by creating a value proposition - so that awareness about what value each stakeholder had and how they can be helped to be adjusted to the change.

Listed potential challenges

User/ patients

- Adoption and Behavioral Change
- Technological Barrie
- Motivation and Engagement

Physiotherapists

- Workflow Integration.
- User Training and Support
- Time and Resource Constraints

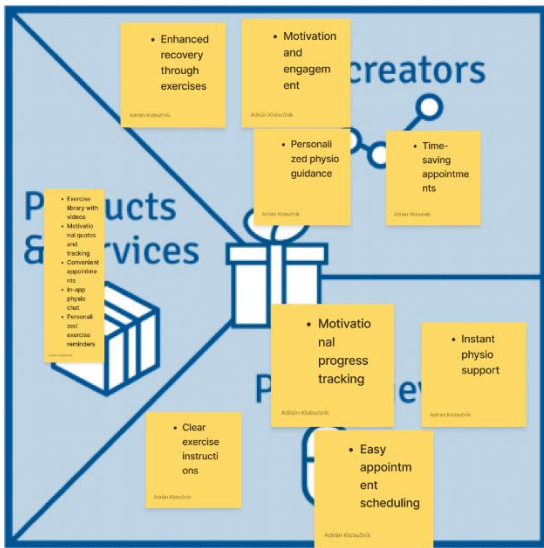
Government

- Policy and Regulatory Compliance
- Implementation and Adoption
- Financial Considerations

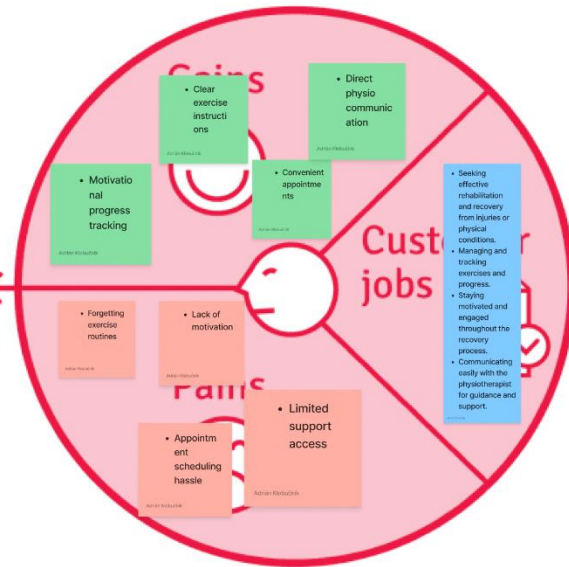
Value Proposition Canvas

Before starting with the change design, the above-listed stakeholders were taken, and the Value Proposition Canvas tool was used to determine what values were important to each stakeholder. This allowed the team to remember their core values while designing their change plan.

Value Proposition

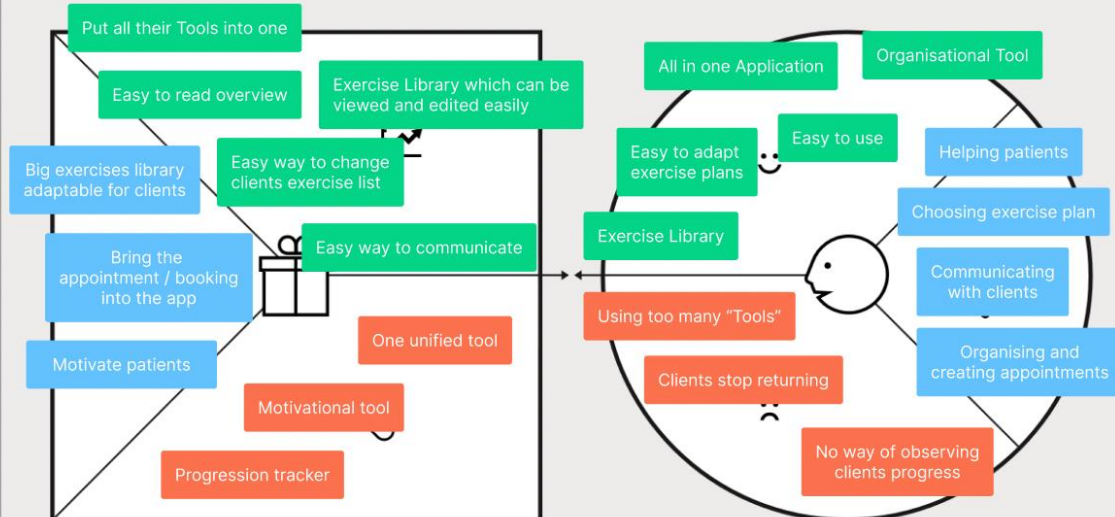


Customer Profile



(Figure 8 – B2C Value Proposition Canvas)

The Value Proposition Canvas



Strategyzer

(Figure 9 – B2B Value Proposition Canvas)

KOTTER'S Theory of Change

After looking into the various methods for Change Design, Kotter's theory was utilized to coach people through change. This approach was the most insightful as the change is directed from top to bottom of the hierarchy.

Being aware that using a top-down focus could leave stakeholders down the line resistant to the change, it was decided to use the ADKAR model to ensure all stakeholders' needs are included.

ADKAR Model

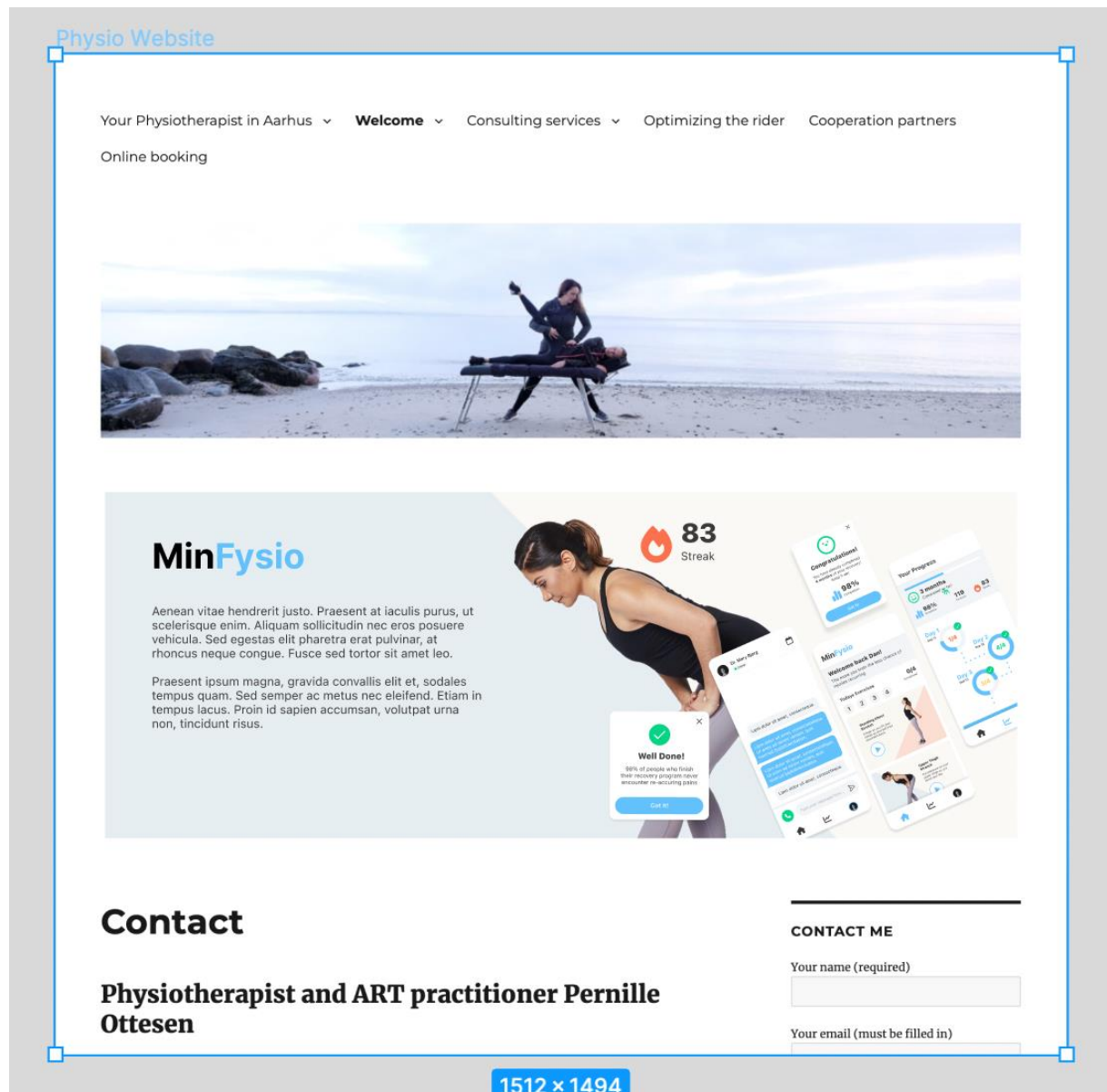
The team decided to apply the ADKAR model in our context to guide the implementation and adoption of the solution for patients, physiotherapists, and government officials. By following this model, we can effectively address the specific needs and challenges at each stage of the change process or each specific stakeholder. The goal is to improve communication, streamline processes, and enhance outcomes in physiotherapy.

The values of each stakeholder from Value Proposition Canvas were considered and elaborated on to create the specific change plan for every stakeholder.

Awareness:

B2C

- Patients become aware of the app's purpose and availability during their visits to physiotherapists and through online channels.
- Word of mouth



(Figure 10 – Online resources for B2C)

B2B

- Direct outreach through emails and calls to raise awareness.
- Credible sources, including commune, spread the word.

B2G

- The board of physiotherapists spreads awareness about the solution's benefits to the government.
- Emphasizes how the solution simplifies work processes and improves data management.
- Highlights the potential for improved public health outcomes.
- Conducts sales pitches to commune and doctors to promote the solution.
- Emphasizes how the solution reduces the workload for the statistic institute.

Desired:

B2C

- Patients recognize the app's benefits for streamlined communication, convenient appointment scheduling, exercise guidance, and progress tracking.
- They desire to use the app to support their recovery journey.

B2B

- Communication with established contacts to maintain interest.
- Tools like webinars, discussion boards, and application tests to deepen understanding and involvement.

B2G

- The government recognizes app benefits for physiotherapists and patients.
- Success stories showcase positive outcomes.
- App walkthrough generates desire.
- Data utilization highlights effectiveness.
- Graphs show healthcare improvements.

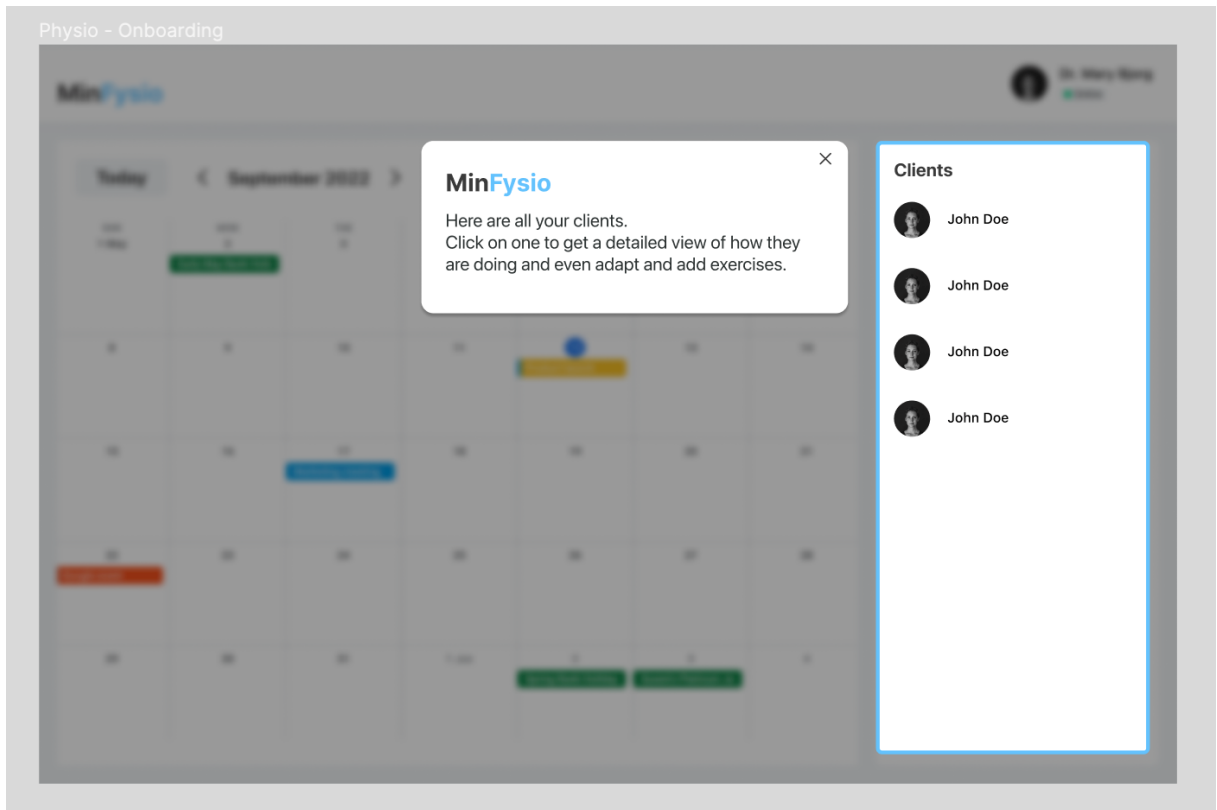
Knowledge:

B2C

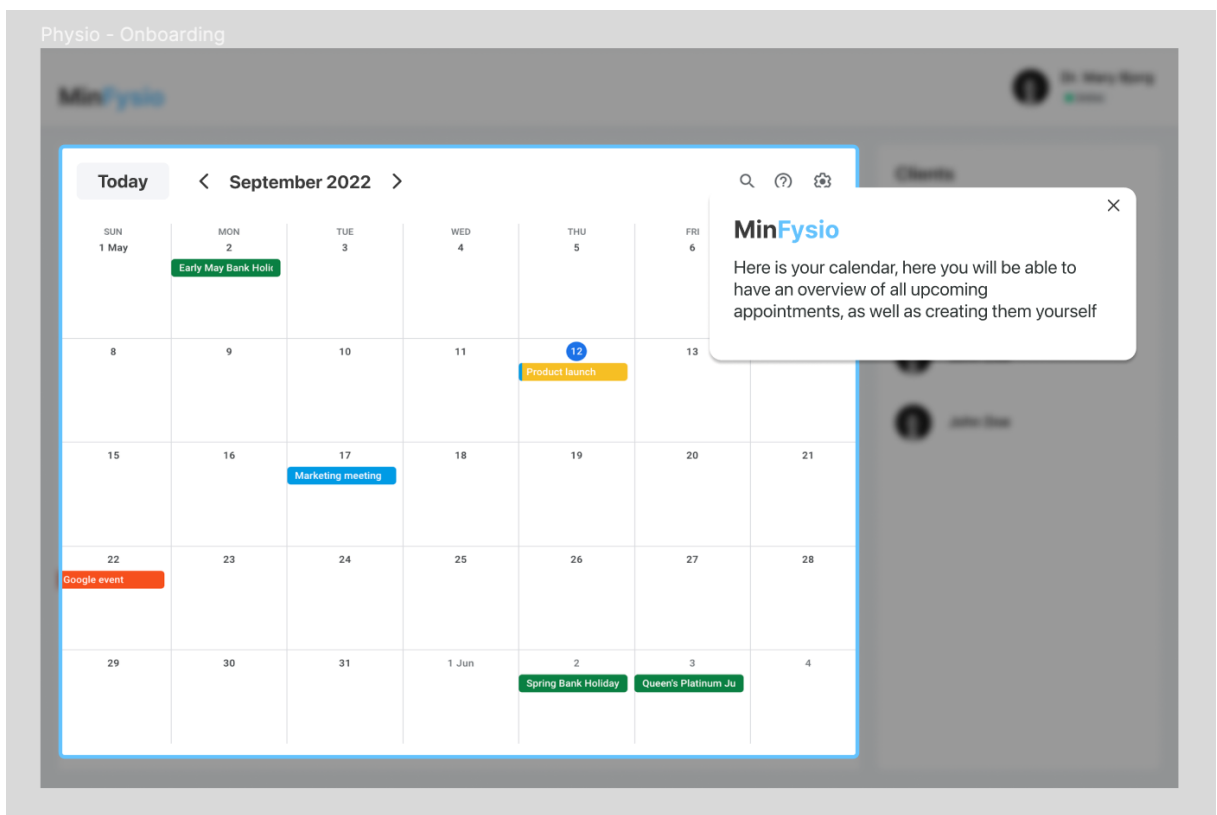
- Patients receive information and guidance from their physiotherapist and within the app on how to navigate and use its features.

B2B

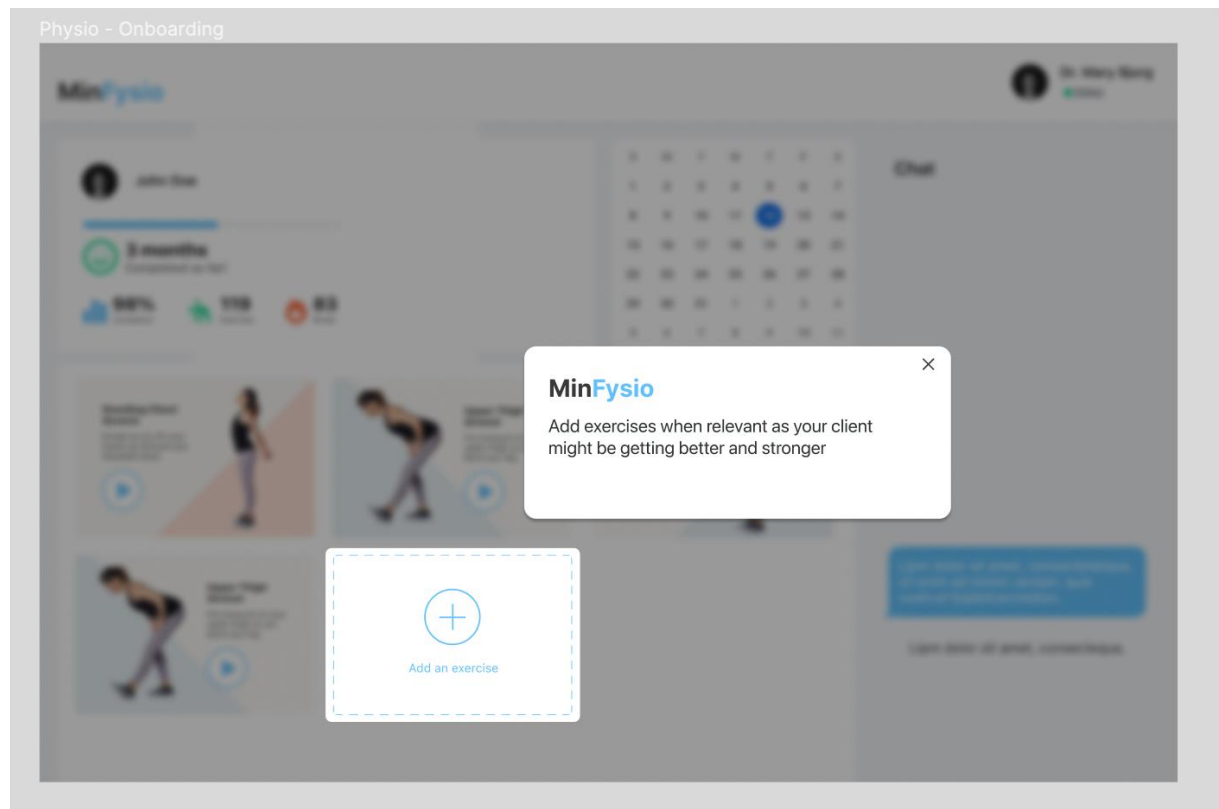
- Workshops, video walkthroughs, in-app guidance, online resources, and a PDF guide to provide comprehensive information.



(Figure 11 – B2B Onboarding 1)



(Figure 12 – B2B Onboarding 2)



(Figure 13 – B2B Onboarding 3)

B2G

- Government officials learn about the app's functionality and analyze data through provided resources.
- Online FAQs and guides offer insights on using the app effectively.
- Government representatives understand how to utilize the app's data for improved decision-making.

Ability:

B2C

- Patients successfully download and install the app and effectively use it to communicate with their physiotherapist, schedule appointments, access exercise guidance, and track their progress.

B2B

- Open support channels, in-app help button, and accessible FAQs to ensure users can easily navigate and utilize the app.

B2G

- Government officials can provide feedback on the app's features and receive guidance throughout the adaptation process.

- Support channels allow government representatives to interact with the creators for assistance and support.
- A dedicated creator team supervisor oversees the implementation and addresses any concerns or questions.
- In-house training and practice sessions are conducted to familiarize government staff with effectively utilizing the app's data.

Reinforcement:

B2C

- The app improves communication with the physiotherapist, saves time scheduling appointments, and provides motivation through exercise guidance and progress tracking.

B2B

- Ongoing support channels and showcasing client progress to reinforce the value and benefits of the app.

B2G

- Continuous access to feedback from creators for ongoing support and funding.
- Time-bound reports from doctors assess the usability and functionality of the solution.
- Gather data on patients' actual improvement compared to previous methods used by physiotherapists.
- Sustained support to ensure the reliability and validity of the solution.

Plan of Change

Step 1

Using Kotter's theory, we would start by creating urgency around our vision, goal, and solution. We would begin by reaching out to the three main stakeholders and pitch them our vision. We would then bring them into contact with each other, and with their backing, we would push our solution towards the government and the public physiotherapists.

Step 2

We would then communicate the vision to the organization by using methods from the awareness stage of the ADKAR model portraying the values specific to each stakeholder.

Step 3

We then would identify any barriers to the change design using the outcome from the desire and knowledge stage of the ADKAR model.

Step 4

Our plan would include several layers; we would begin focusing on each Kommune and the public physiotherapists acquainted there. We would also give the physiotherapists their side of the application beforehand and slowly open up to the clients and then to the data side for the government.

Project reflections

The team demonstrated finalized execution of the Design Sprint methodology and change design, effectively completing all stages.

The problem statement and thoughtfully crafted problem questions guided the team to ensure a focused approach to problem-solving. The app was designed to address the identified problem and meet the needs of its target users.

The team's commitment to the methodology's principles resulted in a seamlessly implemented app that has created positive user feedback and achieved its intended objectives.

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