HEALTHCARE APP

IDANA

Service helps to collect patient anamnesis before visiting a doctor. Developed web progressive app is compliant with IEC 62304 standard used in software for medical devices.
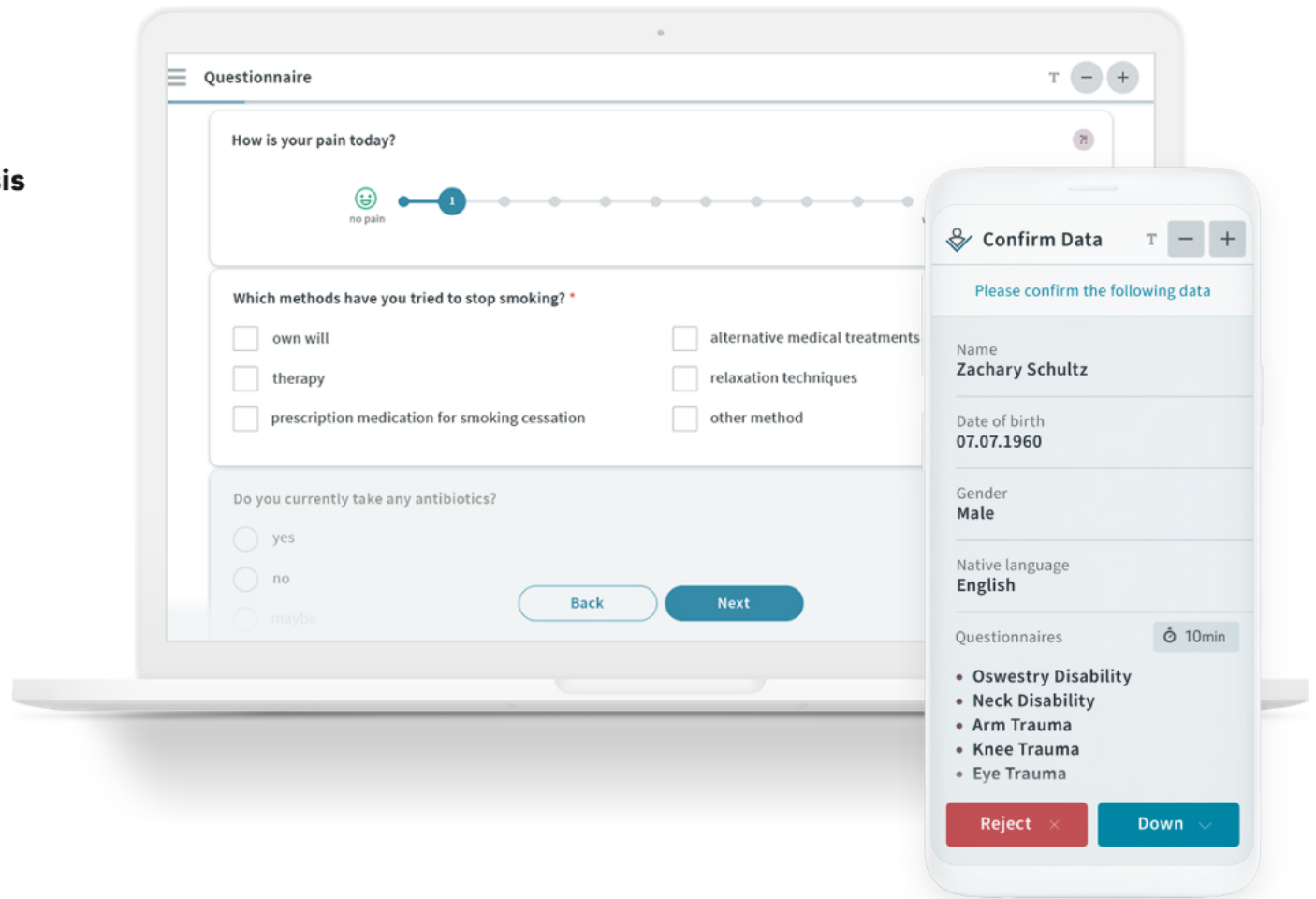
LOCATION

Freiburg, Germany

SERVICES

Design, Web, Android, QA

BUSINESS TYPE

Startup

1

AGENDA

Project summary

Idana is a medical software project from Tomes GmbH that improves the process of communication between patients and doctors in hospitals in Germany.

The medical platform helps to optimize time during visits to doctors by collecting all of the preliminary information about a patient's health conditions and symptoms before the appointment.

Idana also stores the entire medical history for each patient so that doctors can easily access the required data. Idana's main goal is innovation within the healthcare industry in Germany.

Idana: Design & Development

Clutch review

THE PROJECT

UI Design & Web Dev for Digital Health startup

📊 Web Development

🔖 $50,000 to $200.000

📅 Dec. 2017 - Aug. 2018

Project summary:

MLSDev developed a progressive web application for patients and designed its UI/UX. Their efforts included building a parser for existing data and integrating a complex navigation feature.

THE REVIEW

5.0 ★★★★★

"We made the right choice by working with them."

SEP 12, 2018

Quality:	5.0
Schedule:	5.0
Cost:	5.0
Willing to refer:	5.0

Feedback summary:

MLSDev delivered a high-quality product that consists of intricate functionalities. Internal feedback is positive as the platform's interface facilitates user engagement. They communicate effectively and are open to accomodations established processes. Their developers come up with innovative ideas.

Read Full Review ⌄

THE PROJECT

UI Design & Web Dev for Digital Health startup

Jerome Meinke

🏢 IT Services

👤 1-10 Employees

📍 Freiburg, Germany

💬 Phone Interview ?

✓ Verified

2

Initial request

To: hello@mlsdev.com

Dear MLSDev development team,

We want to develop Idana - intelligent digital anamnesis. Idana professionally gathers medical history and enables automatic follow-ups from home. Idana is a cloud-based SaaS solution for healthcare providers (doctors, practices, clinics) and researchers.

Idana gathers a patient's medical history by using digital questionnaires that can either be filled out on tablets provided by the institution in the waiting room, or by sending the patient an email with instructions so that they can fill it out at home.

Further information can be found on our website www.idana.one

We are looking for a development team that is capable of developing some features for our existing software. In order to help us decide if you are the right partner for us, please inform us about the following:

· Have you ever developed something similar to our project? (experience with medical software)
· What is your expertise with Node.js, Ruby, HTML5, JavaScript/TypeScript, Electron, React.js, Java/Kotlin, Obj-C/Swift?
· Do you speak German?
· What is your hourly wage? What are your prices?
· Do you support development according to IEC62304?

Please tell us a little about your company if you are interested in working for us. We will then send you a trial project and set up a non-disclosure contract. We are excited to hear from you soon.

Sincerely,

Theresa Eglin

IDEA

Idea of this medical software project

Automate the process of entering patient data like their health condition and symptoms

Provide a medical platform that is easy to understand and intuitive to use for patients from age 10 to 120 years

Optimize the work of the medical personnel in hospitals by reducing paperwork

Provide the transfer of digital data from patients to doctors within minutes

Automate and improve the quality of data collection in order to make doctors' work more efficient and diagnoses more accurate

Idea of this medical software project

Client's needs

Improve existing Android app by making it more intuitive and easy to use for its target audience, ages 10 to 120 years

Increase the product's coverage by means of developing a patient app for all target platforms

Improve the existing Idana Web Editor for the product's admins

Our solution

Created app design that covered the needs and requirements of the target audience, and implemented the improvements

Designed and developed a Progressive Web Application (PWA) that could be used on all major platforms (iOS, Android, web)

Refined the Idana Web Editor so that it could maximally support the functionality of the built PWA software

Provided by MLSDev

Tech consulting

We offered the most suitable technical solution for the client's case

Project management

A dedicated PM was responsible for meeting the project development deadlines

UI/UX design

We helped to make the product that delivers a flawless user experience

Web front-end development

The project's goal was to cover a wider audience, so we started the PWA development

Web back-end development

All apps have their back-end systems. IDANA couldn't be an exception

Android development

We helped our client to improve the existing MVP of the Android app

Quality assurance

Every app has to be stable and meet the initial requirements. QA & testing is a must-have

Technology stack used in Idana

Android Development

- Android SDK
- Libsodium for encryption
- Firebase services: auth, database, storage
- sdp (scalable dp)
- Hawk for key storage
- RxJava2
- Retrofit2
- Glide
- Butterknife

Front-End Development

- HTML5
- CSS3
- Angular
- Stylus
- ngrx
- Service workers
- rxjs
- jasmine
- protractor

Tools

- JIRA
- GitHub
- Sentry
- lambdatest
- travis-ci
- npm
- Google Docs
- Invision
- Dropbox

Our amazing team

👱‍♀️📱

Lilia Udovychenko

Client relationship manager

👱‍♂️💻

Andriy Sedletskyi

Front-end developer

👱‍♂️💻

Anton Novikov

Front-end developer

👱‍♂️🔍

Sergiy Glebov

Technical researcher

👨📐

Ihor Vlasenko

System architect

👨💻

Ihor Kobka

Back-end developer

👩⏱️

Anastasia Horobets

Project manager

👩🎨

Mariana Buchkovych

Designer

👨📱

Oleksandr Stafievskyi

Android developer

👨🐞

Vladimir Melnikov

QA engineer

How the system works
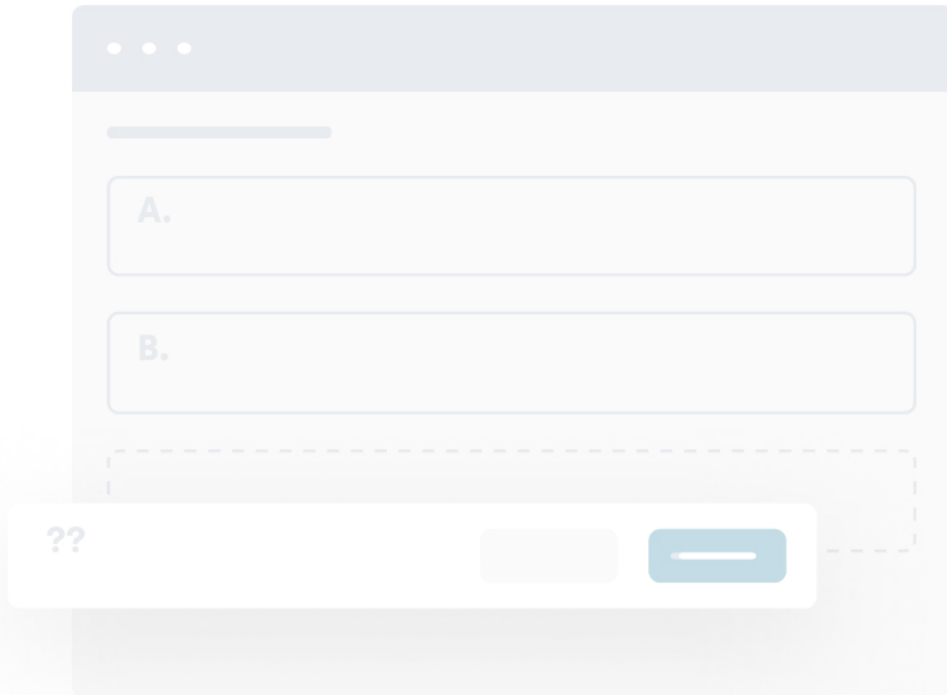
The team creates questionnaires

The Idana team and their medical consultants gather information about what data should be provided by patients before visiting a doctor, what the difference between questionnaires depending on a diagnosis is, and what common features these questionnaires have. This is preparatory paperwork of this healthcare management software.

The Idana team creates digital questionnaires via a special medical web portal - Idana Web Editor.

All questionnaires have a certain structure, hierarchy, specific parameters, and settings.

It is possible to create different sets of questionnaires for different hospitals and general practices, or to make some universal questionnaires accessible by all hospitals.

Doctors in general practices use the Idana Desktop-Client for PC & Mac

Via software for doctors, medical personnel can assign a specific questionnaire, or a set of questionnaires, to a particular patient. The app then sends a direct link to the questionnaire, or a QR code with the link, to the patient. This link contains basic information about the patient, including the recommended language. When the
link is opened, the first screen asks for confirmation of the provided data.

In the app, a doctor can also see reports about completed questionnaires and review the anamnesis before an appointment.
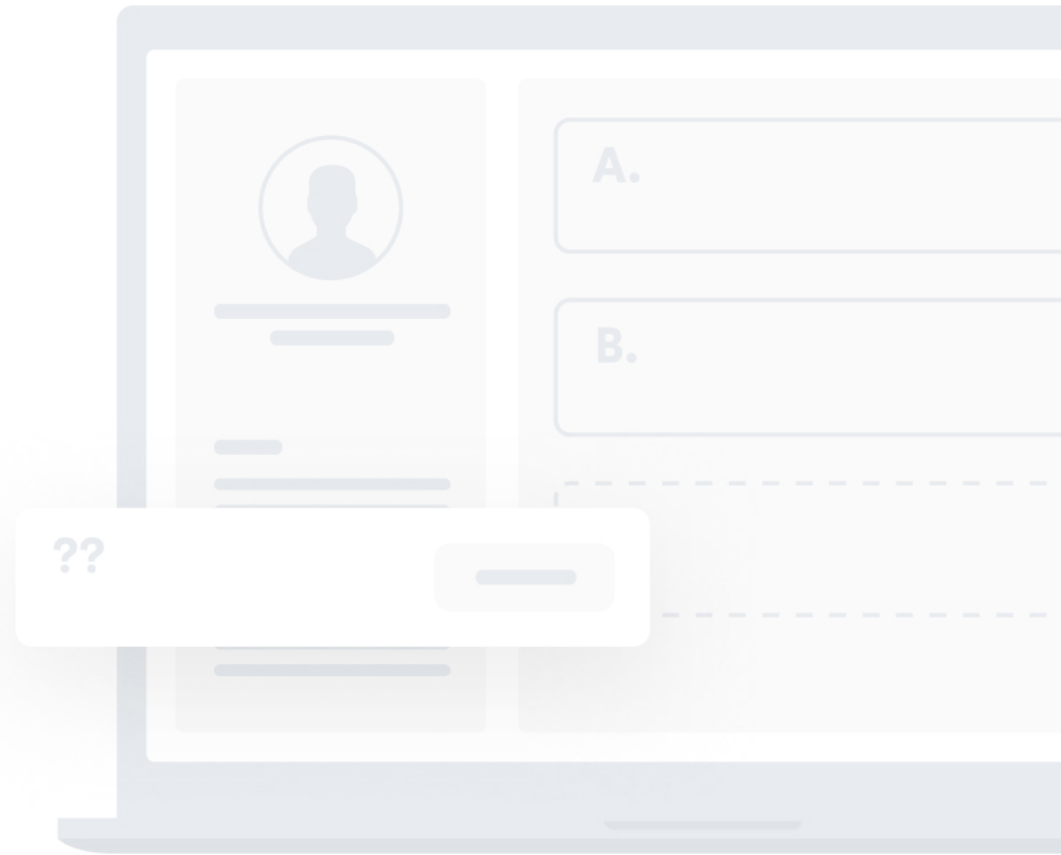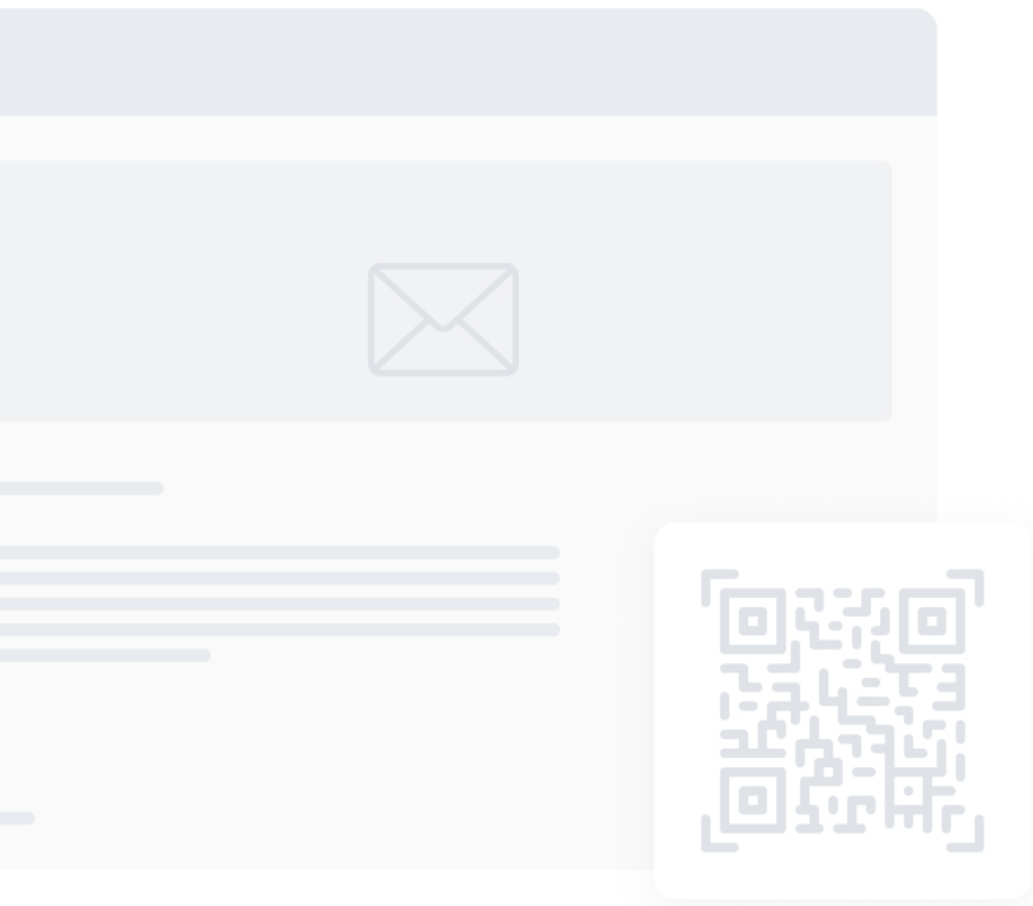
A patient receives a link or QR code via their inbox.

At the hospital, the patient receives a device with the installed app to fill in a questionnaire immediately.

It is also possible for the patient to complete a questionnaire on their own device from home.

Formerly, it was possible to download the Idana Android App from Google Play. The app was closed in summer 2018 and replaced by the improved and refined Idana Web App in September of that same year.

All the mentioned apps interact with each other

Idana Web App Lib – a library for saving data with patients' answers

Idana Firestore – a module for storing the data

Other tools and libraries
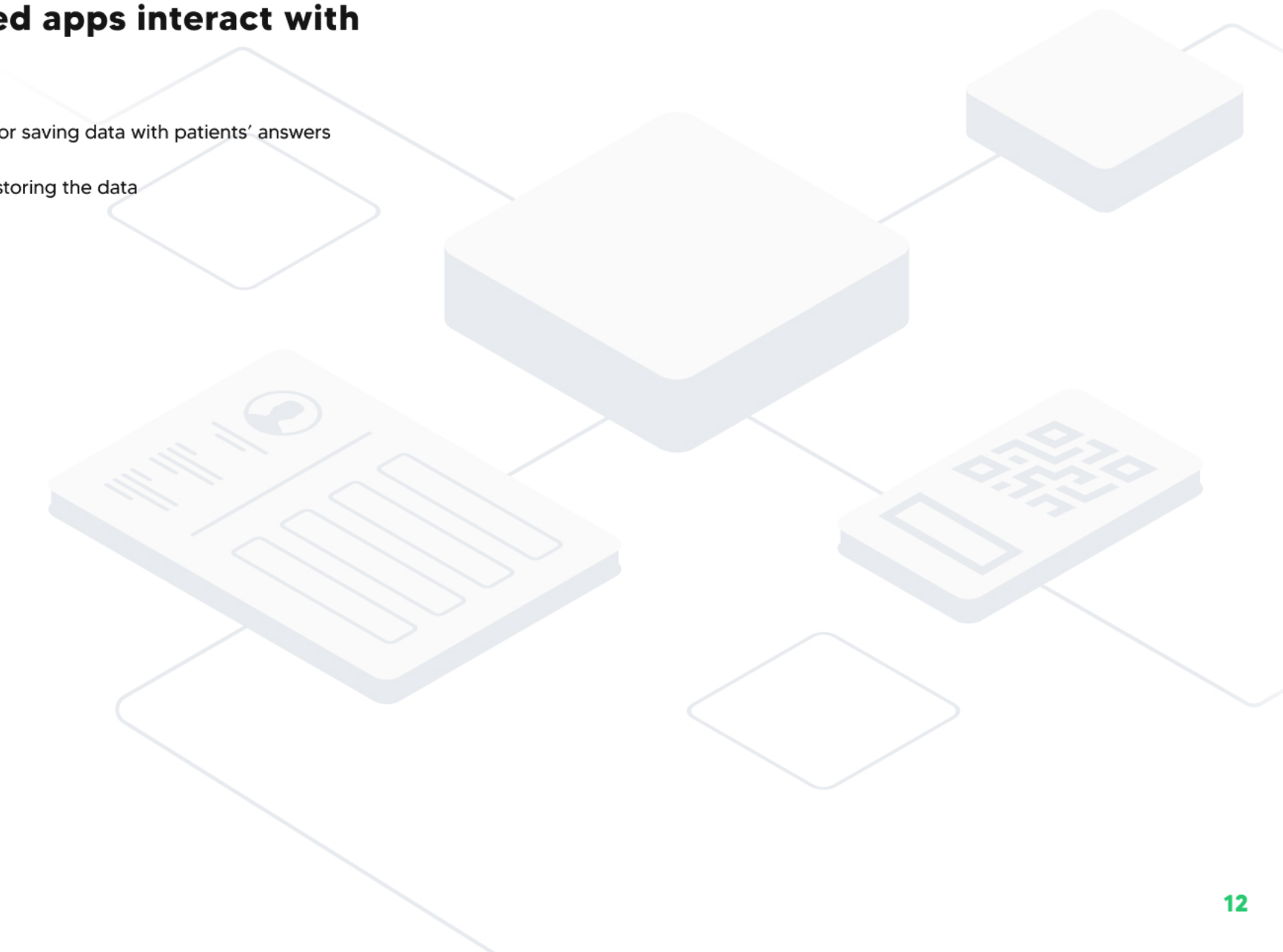
DISCOVERY PHASE

Discovery process

Initial communication	Requirement gathering	Technical research and problem analysis	Design and code review of the existing product with the following recommendation	Workshop with the client

Deliverables

Design review report

Design and development recommendations

Code review report

Design samples

Rough product backlog
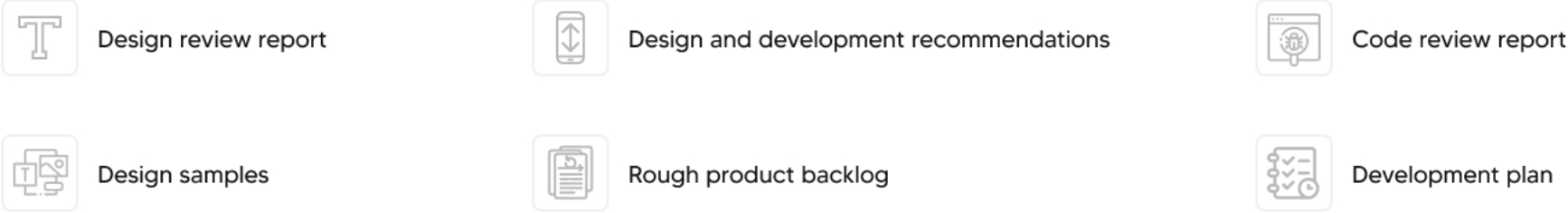
Development plan

BACKLOG

Detailed backlog estimate

#	User story	Comments	Android development (man hours)	
			Optimistic	Pessimistic
1	**Runtime text size**	Custom text view	1	2
		Migrate to new textview	4	6
2	**UI testing**	Mock data	12	16
		Test implementation	8	12
		Fix design issues	16	20
3	**Optimization**	Runtime view inflation optimization	6	8
		Set up deployment environment	4	6
		Submit to GooglePlay	1	3
		Code reviews (reviewee hours)	2	3
		Developer's time for Scrum meetings (Planning, Daily, Demo, Retrospective)	5	10
		Total development, man-hours	**59**	**86**
		Calendar weeks	**2**	**3**
		Time review	**Optimistic**	**Pessimistic**
		Code reviews (reviewer hours)	2	3
		Total team review, man-hours	**2**	**3**
		Project management	**Optimistic**	**Pessimistic**
		Cakendar weeks	**2**	**3**

Client's plans

The client had a plan to gradually cover a wider audience, not only those patients and doctors in general practices that used Android devices.

As our customer was a developer himself, he didn't consider cross-platform app development as a healthcare software solution. A possible and acceptable option was to create a progressive web application. The goal was to replace the Android app with a PWA software, but to keep all the good features of the former and add improvements to the latter.

Challenges

Design for different screen sizes

Compliance with the standards IEC/EN 62304

Big scope of work and limited budget we had to work with

DEVELOPMENT

Milestones:
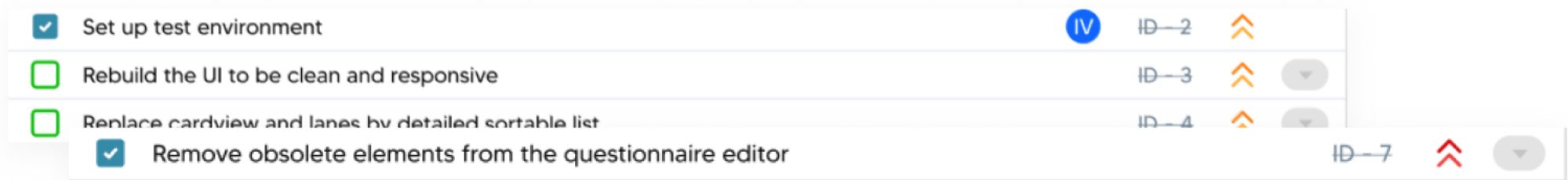
Research

Mini early planning

UX/UI design

PWA front-end development

We are happy about the results and how the process went both the design and development stages. We have nothing to complain about. We used to deal with 2 dev agencies. The first was too bad, while you were really good. It's just like 2 opposite approaches. We've been happy with your team."

Research

☑ Set up test environment	IV	ID—2	≫
☐ Rebuild the UI to be clean and responsive		ID—3	≫ ▾
☐ Replace cardview and lanes by detailed sortable list		ID—4	≫ ▾
☑ Remove obsolete elements from the questionnaire editor		ID—7	≫ ▾

We conducted research internally, therefore there were no extra charges that fell to the client, because we had no experience in building PWA software at that time. These applications have many peculiar design and development features that we were not familiar with, so it was critical to analyze them profoundly.

While gathering the technical requirements for the PWA, we understood that the new features requested applied not only to questionnaires, but also to the process of their creation. For the latter, there was an admin panel, Idana Web Editor, that was built long ago, but that the client hadn't kept up-to-date.

As it was inefficient and very difficult to update the existing medical web portal (Web Editor) and implement all the required changes and features, we offered to make a new admin panel from scratch. The client liked the idea, but their budget was limited so they couldn't agree to this without an estimate.

Once all the requirements for the PWA and new Web Editor had been documented and prioritized, we prepared a rough estimate for both versions of the healthcare software. The estimate was higher than the client's budget and thus, it was necessary to find the best possible way forward.

The plan was to gather and understand all the features already available in the Web Editor and those that the client wanted to add, and make a detailed backlog with further feature prioritization. We wanted to correctly plan the medical software project's structure and architecture.

To make this process more efficient, we decided to test a new format for a backlog. The entire team was involved in this preparation. Every developer worked on their part of features, and a designer made a backlog for design where all the elements were described. This new approach became an obligatory part of our healthcare mobile app development service later.

PROVIDED SERVICES

Our team offered the following options

- The client looks for ways to increase their budget and we provide medical software development services to build everything that has been estimated

- We build a simpler healthcare software solution to fit the budget

- We build a simplified version of the PWA software that is completely analogous to the Android app with its UI improvements and get back to the question of the Web Editor later when there is a more appropriate budget

Idana: Editor app & PWA

Detailed Backlog Estimate (Man hours)

Module name	Screen name	Functions	Elements	Web back-end development		Web front-end development	
				Optimistic	Pessimistic	Optimistic	Pessimistic
EDITOR APP							
Authorization	Sign In	As an admin I can login to Edit using Auth0	Logo - Email input - Password input - Login button Jeromes comment: "No need for customization here. We might take the usual Auth0 dialog with the Idana logo (as it already is configurated). We can provide you with the correct configuration. Customizing the Auth0-Login might be needed in version 2."	16	24	12	14
Interface requirement		As an admin I can change interface language whithin supported languages		-	-		
		As an admin I can see editor interface in selected or default language		-	-	8	10
		As an admin I can see questionnaire list	List if Questionnaires with such informations:	18	26	14	16
		As an admin I can make questionnaire public/private if published	- Create Questionnaire button	4	6	4	6
		As an admin I can publish/unpublish questionnaire	each Queastionnaire contains:	4	6	4	6
		As an admin I can see templates linked to questionnaire	- Questionnaire name - version of revision number	-	-	2	3
		As an admin I can languages, which questionnaire supports	- Revisions history button - Edit button	-	-	2	3
		As an admin I can see current published questionnaire version	- Delete button - Duplicate button - Assign to customer (or few customers) button	-	-	2	3
		As an admin I can see button "Assign report customer" if questionnaire is private	- Publish/unpublish button - switch public/private - assigned customers if private	-	-	2	3
		As an admin I can see button "Assign report templates"	- templates that are linked to questionnaire - languages of questionnaire	-	-	2	3
		As an admin I can create questionnaire	Filter sidebar (can be hidden/shown):	4	6	4	6
		As an admin I can edit questionnaire	- search by text	-	-	2	3
		As an admin I can copy/duplicate an existing questionnaire	- tags/tag groups/customer and other (dynamic and translatable)	8	12	4	6
		As an admin I can remove questionnaire if it is not published and assigned		4	6	3	5
		As an admin I can see warning popup if removing published and assigned questionnaire		-	-	4	6
		As an admin I can toggle visibility of sidebar with filters and search field		-	-	4	6
		As an admin I can use text search for questionnaires		-	-	8	10
		As an admin I can filter questionnaires by customer (customer list)					
		As an admin I can filter questionnaires by tags (dynamic and translatable, whithin tag groups (tag list)					

As a result, it was decided to go for the option #3

Challenges for the research:

We had no experience in creating PWAs and thus no related tried-and-tested tools, libraries, or third-party solutions	The research was done simultaneously with the grooming of technical requirements	It was necessary to figure out two solutions for the PWA: one for the old Web Editor, and a second for a new potential admin panel

Deliverables after the research:

Time and rough budget estimates for the PWA and Web Editor	Full-scale product backlog for the PWA and Web Editor	Backlog and recommendations for the MVP version of the PWA
Prototypes for the main technical parts of this healthcare software project		

Early planning before PWA development

We had a very detailed backlog according to which we made the design for the PWA. However, the client introduced some changes to the features while the design was being created, and we had to update the document.

As we decided to proceed only with PWA development, our front-end developer checked the documented requirements, changes, and design in order to synchronize them and update the estimate. Our careful approach and attention to detail helped us fit everything into the client's limited budget.

Idana: PWA

Detailed Estimate on the Early planning stage (DEEP)

| Backlog development	Optimistic	Pessimistic
Backlog update & finalization according to the design and changes in the flow		
Clarification meetings with Tomes GmbH	25	40
Potential research (if needed) & getting synched with the backend developer (review of his work, suggestions)		
Checklist for testing creation	25	40
Team review (by designer)	3	5
Total, man-hours	53	85
Calendar weeks	1	2

Development

Specific features of the process in medical software development services for Idana :

- Setting up continuous integration - the client used a different automation server for this. We had to adjust our work to their software.

- By the time development was about to start, the data structure of the app that had been described prior had changed slightly.

- Development was done on both sides: we made the PWA and the client decided to make some corresponding fixes in the Web Editor themselves. They left some questions about development for us to decide, which we did, but our solutions had to be implemented on their side as well.

- Sometimes we experienced blocks with quality assurance because the medical standards used required a lot of paperwork. Everything had to be documented. The client was actively involved in the testing process as well.

More about medical software development standards

The client wanted their product to meet the IEC/EN 62304 - standards that specify the development life cycle of medical software. According to these standards, all decisions about functionality and every update should be recorded. From protocols, it should be clear when, why, and who committed updates to any healthcare software. There should be connections between tasks and actions that all medical platform elements are well planned and controlled.
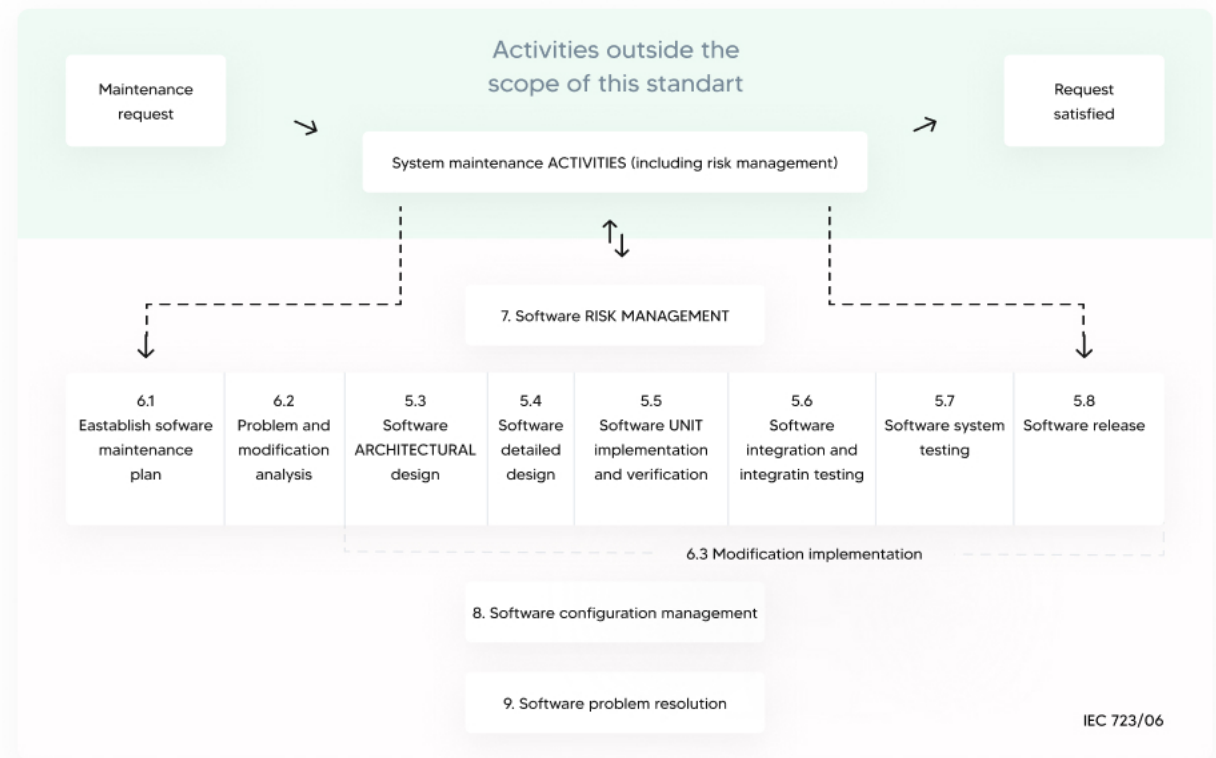
Challenges for front-end development

Work with large volumes of data

Nontypical navigation through page content (by scroll)

Interface optimization to make it maximally convenient to use on mobile devices, while taking into account the app's specific features

Work with many conditions that are required to efficiently display questions and their features

Challenge

Work with large volumes of data

When a patient authorizes, the app receives a lot of data that includes authorization information, patient data, and a set of questionnaires that are made up of a few parts and contain questions.

The most challenging aspects of the Idana healthcare management software were:

- Processing of the data received in order to display it in the best way possible

- Managing parts of data dynamically while preserving the integral general structure

To deal efficiently with the first issue, we created a prototype of the data parser in the research stage, which served as a base for further work during PWA software development. We adapted this parser to the medical software project and data structure.

To solve the second issue, we used an existing solution, State Manager, particularly ngrx. This is a library that is based on the working principles of Redux in the Angular environment and uses the rxjs approach.

Challenge

Nontypical navigation by scroll and interface optimization to mobile devices, while taking into account the app's specific features

In the medical platform, it is possible to navigate through the content in two ways: by scroll and by the next/back buttons.

The first type of navigation required a complex solution. Our healthcare software company had to consider the following factors:

- One page should display questions from only one section of the questionnaire

- Switching between sections is possible only when one section has been completely scrolled through and the user sees the end of the page

- There are questions that cannot be left unanswered, so further navigation should be blocked until the user leaves an answer

- There is the possibility that a question may not fit into the screen of a user's mobile device and it is necessary to display it in such a way that the user can see the entire question and not skip it

- The same navigation principle is applied to mobile devices and desktops, so it is necessary to predict all possible situations

- In case there is an unanswered question, it is necessary to notify the user about it

To solve this challenge, we created our own solution. This solution includes calculations of content size on one side and interaction with data on the other.

Later, this implementation was changed and optimized. For this, we used a new API that is supported by the majority of modern browsers, and utilized a new approach that is based on reactive programming with rxjs.

Challenge

Work with many conditions that are required to efficiently display questions and their features

The healthcare software supports a few question types:

- Radio buttons with the possibility to enter your own answer in a text field in some cases

- Checkboxes with the possibility to enter your own answers in a text field in some cases

- Sliders where it is required to choose a range of numeric values

- Text fields

- Selectors for numbers where it is possible to change values +1, +10, -1, -10

- Images with the possibility to draw on them

We provided special conditions for entering and editing answers to some questions on mobile devices (e.g. text fields for answers opened in a separate screen). The solution that this task provided was partially delivered in the design stage where the user experience was planned, and then implemented during the development stage.
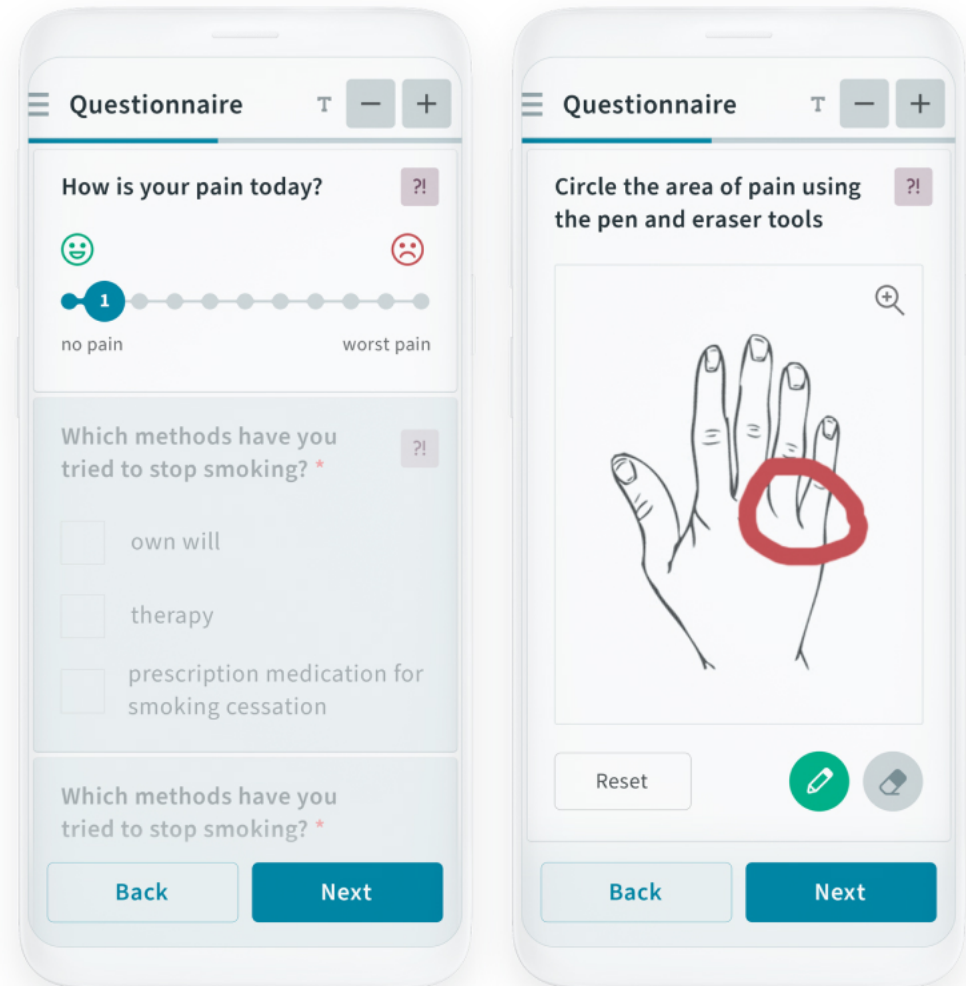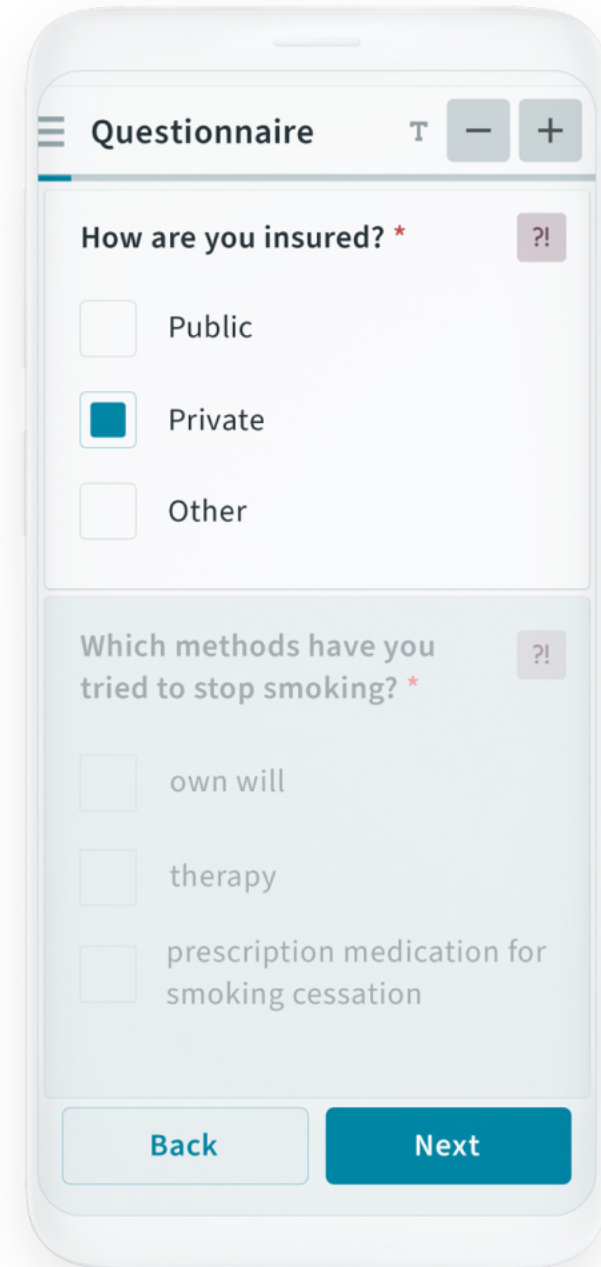
PWA

An important aspect is that some questions should open only when the previous question has been answered with one of the predefined options. The solution was implemented in the data parser prototype and fine-tuned during development when all possible conditions were formed.

Jerome Meinke
CTO at Tomes GmbH

We are happy about the results and how the process went both the design and development stages. We have nothing to complain about. We used to deal with 2 dev agencies. The first was too bad, while you were really good. It's just like 2 opposite approaches. We've been happy with your team."

☰ **Questionnaire** T − +

How are you insured? * ?!

☐ Public

☑ Private

☐ Other

Which methods have you tried to stop smoking? * ?!

☐ own will

☐ therapy

☐ prescription medication for smoking cessation

Back Next

Web editor development

As already mentioned, the client considered the opportunity to redevelop the existing Web Editor from scratch along with the progressive web application. Due to some budget matters, it was decided to continue only with PWA development.
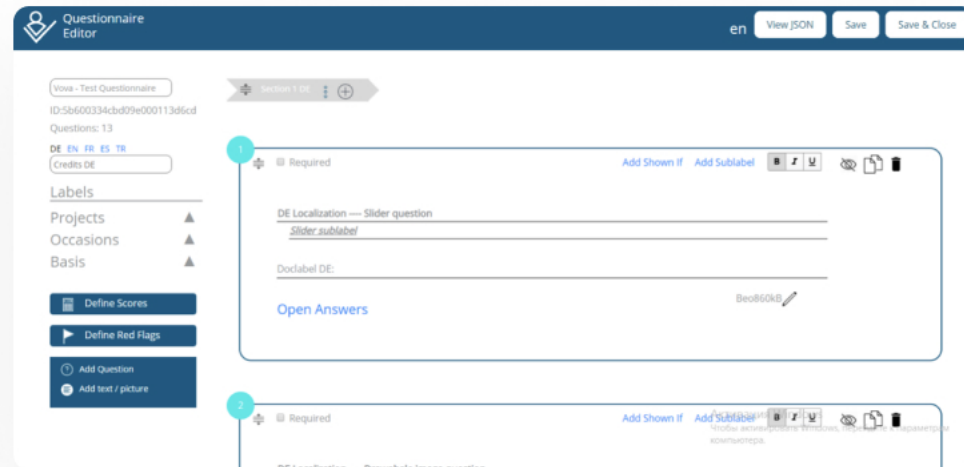
Nevertheless, the Editor required at least minimum optimization to adjust it to the new PWA. The client made some small improvements without changing the app too much before the release of the PWA.

When the first version of the PWA software was released, the client asked us for some help with the Editor to fix a few important bugs and issues.

In this regard, the team had to face the following challenges:

- Legacy code that used deprecated technology

- The main "question-answer" element had a free data structure that complicated its work

- Security issues

- No guarantee that some of the issues could be fixed in those conditions

Our team helped to support this new functionality, once this was requested from the client, and at the same time conducted bug fixing. Later on, the client decided to keep complete control and support of the Editor module on his side.

The Web Editor has been redeveloped by Idana team in 2019. Once the urgent need arises, they will try to raise funding to do the work.

Jerome Meinke
CTO at Tomes GmbH

"We are happy with the team as always. Andrey, Anastasia, and the rest of the team have been brilliant and responsive as always. Love working with them."

ANDROID APP

Improvements

The client had an MVP Android app that they wanted to improve by implementing the following 3 things:

Ability to change text size of the questionnaires at runtime

Improve user experience and fix bugs

Change the page-by-page navigation through questionnaires into vertical scroll

Project milestones

1 WEEK	2 WEEK	3 WEEK	4 WEEK	5 WEEK	6 WEEK

Project discovery

Design

Android development

Risks of Android development that MLSDev took on

Work with the legacy code

Need to introduce serious changes to the app without completely knowing its fundamentals

Need to change the main process the app is based on

A very limited budget for a much larger number of required features
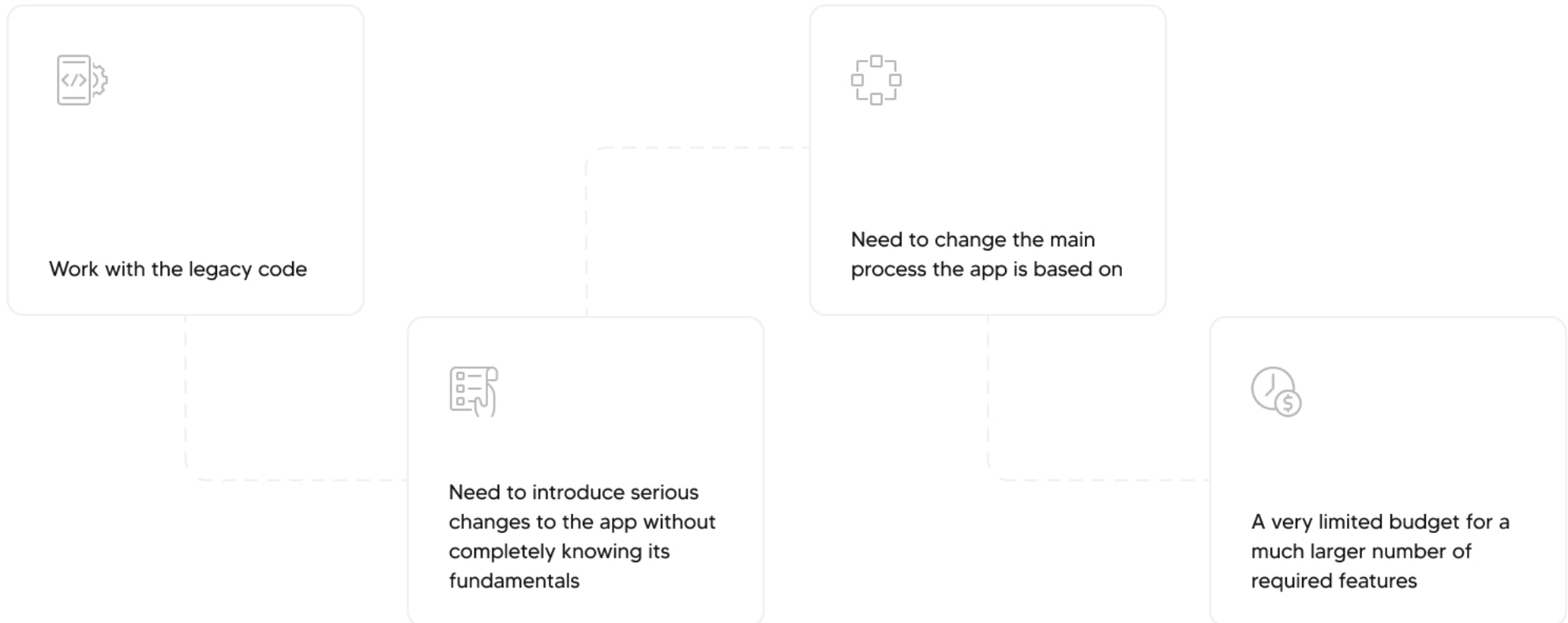
Risks minimization

- Cooperative client who was always in touch with the team, replied quickly, provided all of the required information, and tested the app to make sure all the new fixes hadn't affected the rest of the functionality

- Quite simple MVP app, despite its logic and legacy code

- Strict prioritization of features and a step-by-step approach to implementing the client's needs in the healthcare software solution

Priority ▼

2017-12-28 QA Feedback
☑ ID-21

Feedback from 2017-12-18
☑ ID-14

Optimization: Investigate migrating from pages to one vertical scroll Form screen
☑ ID-12

Optimization: Implement smart scroll functionality (down/up buttons)
☑ ID-11

Optimization: Create Vertical form fragment and Vertical form activivy

☑ ID-11

Optimization: Implement smart scroll functionality (down/up buttons)

Description
Add a description... NEED DESCRIPTION

Design
https://www.figma.com/file/fWQ8SSL8e234jFV2G4FDo4

Comments

JM   Jerome Meinke December 12, 2017, 11:54 AM
Oleksandr Srafievskyi Please baer in mind, that there might also exist questionnaries with more than 110 elements.

Example questionnaire: https://editor.tomes.gmbh/api/v1/forms/565cf185db5850001ee51

OS   Oleksandr Stafiievskyi December 12, 2017, 12:41 PM
Jerome Meinke Well, I'll take it into consideration.

Outcomes

The app was successfully released with all the required updates. The audience that tested the app quickly realized that the usual page-by-page navigation was more convenient for them.

Hence, adding navigation by buttons back into the app was the first update after the release. To enhance the user experience in healthcare software for all patients, we provided a screen at the beginning of a questionnaire where they could choose to apply the vertical scroll or not.

This positive result of our cooperation was possible because the client was very responsive and relied on the team. In its turn, our team found the best approach to this medical software project and figured out the best process of work that was maximally beneficial for our client. Overall, the healthcare mobile app development services on Android lasted 3 weeks.

|	ID	Task	
☑	ID—1	Runtime Text Size: Custom text view	≫
☑	ID—2	Runtime Text Size: Migrate to new textview	≫
☑	ID—3	Set up deployment environment	≫
☑	ID—4	UI testing: Mock data	≫
☑	ID—5	Developers time for Scrum meetings (Planning, Daily, Demo, Retrospective)	≫
☑	ID—10	Optimization: Create VerticalFormFragment and VerticalFormActiviry	≫
☑	ID—11	Optimization: Implement smart scroll functionality (down/up buttons)	≫
☑	ID—12	Optimization: Investigate migrating from pages to one vertical scroll Form screen	≫
☑	ID—14	Feedback from 18/12/2017	≫
☑	ID—15	Section labels as additional boxes	≫
☑	ID—16	Slower scroll	≫
☑	ID—17	Redesign of previous and next buttons	≫
☑	ID—18	Grey-out and/or Fade-out of questions which are only partly shown	≫
☑	ID—19	Single and multiple choice option boxes	≫
☑	ID—21	2017-12-28 QA-Feedback	≫

Jerome Meinke
CTO at Tomes GmbH

You always respond fast. Compared to the other agencies we used to communicate with, you are the fastest. You've inspired us to start working on our response time and we are trying to improve that on our side. You've provided a lot of details and that helped us see the points we didn't think about before or didn't notice."
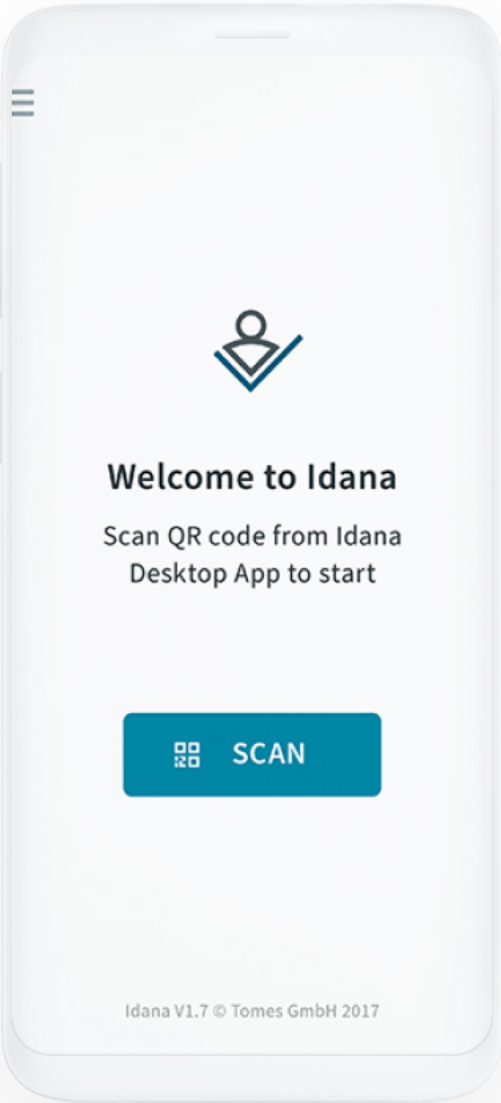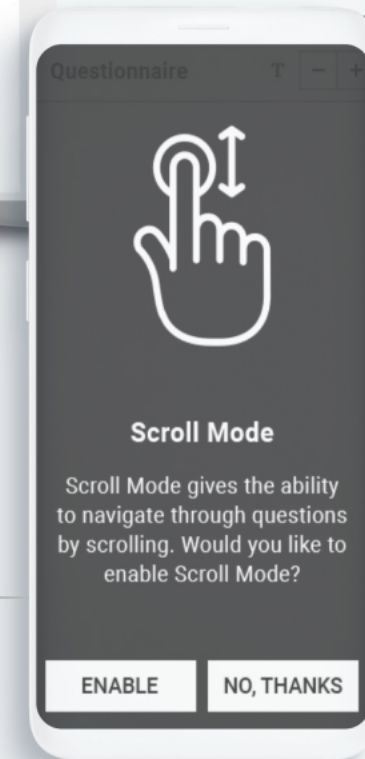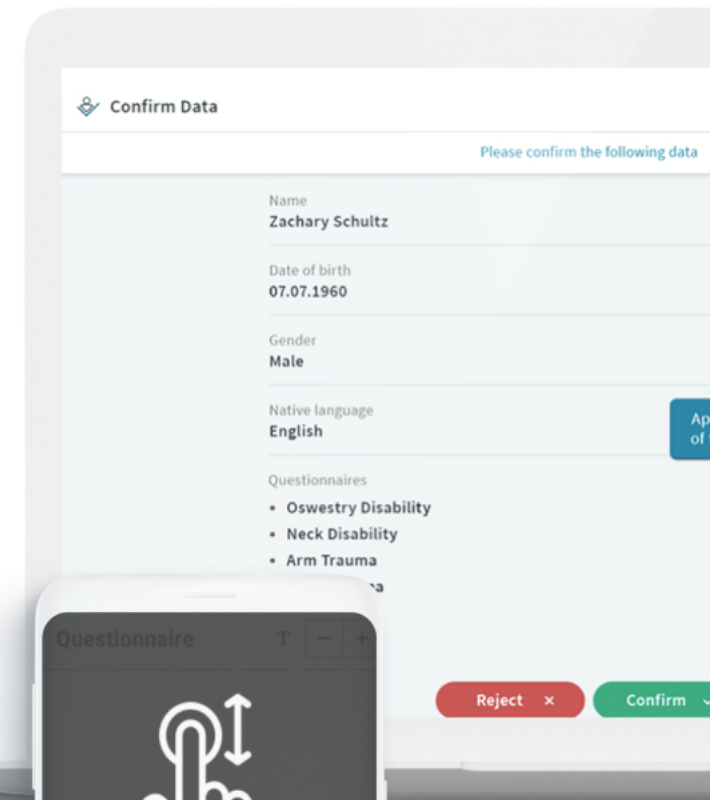
Challenges

1

For this medical software project, designs had to be created for different screen sizes (mobile and desktop). We had to find a way to scale the design from mobile to desktop and not have to make two separate design versions. We decided to start from the smallest screen resolution, 320 px, because this was an easier option than adjusting a design for bigger screens to smaller ones.

2

Design the navigation by scroll and buttons. We tried to agree on a smaller width of questionnaires to avoid issues with the navigation performance.
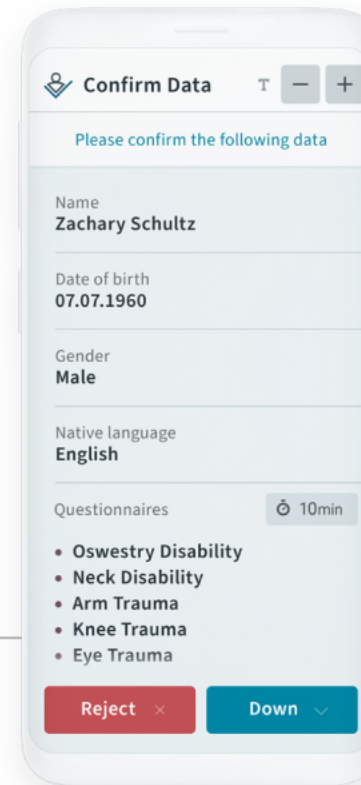
Challenges

3

Give users the possibility to change the font size while answering questions. A user had to be able to choose a font size at the beginning of a questionnaire, but if that turned out to not be enough, there had to be a possibility to increase the font size later. The button for this had to be well placed. As well, it had to update the fields accordingly, and the navigation had to calculate the updated page length when a user tapped on the "next" button.

This logic required very close cooperation between the designer and developer. The design had to be clear and intuitive, and a questionnaire page had to look equally good on different screens and with different font sizes.
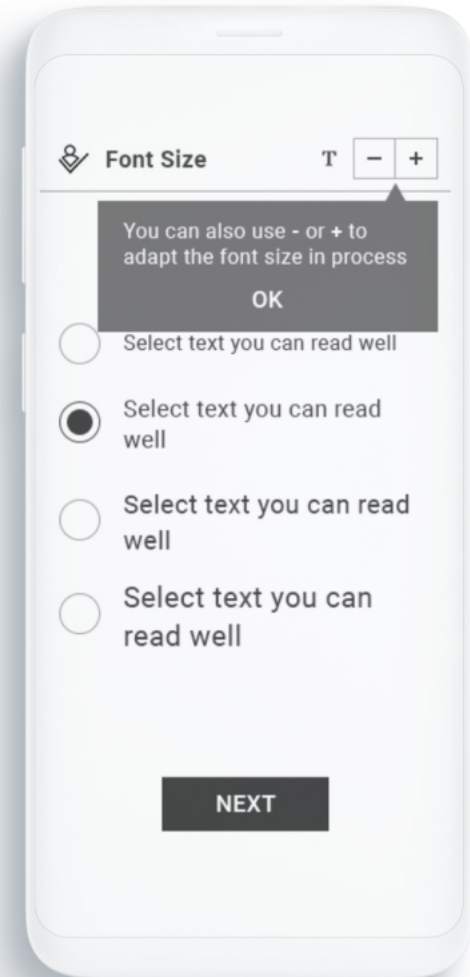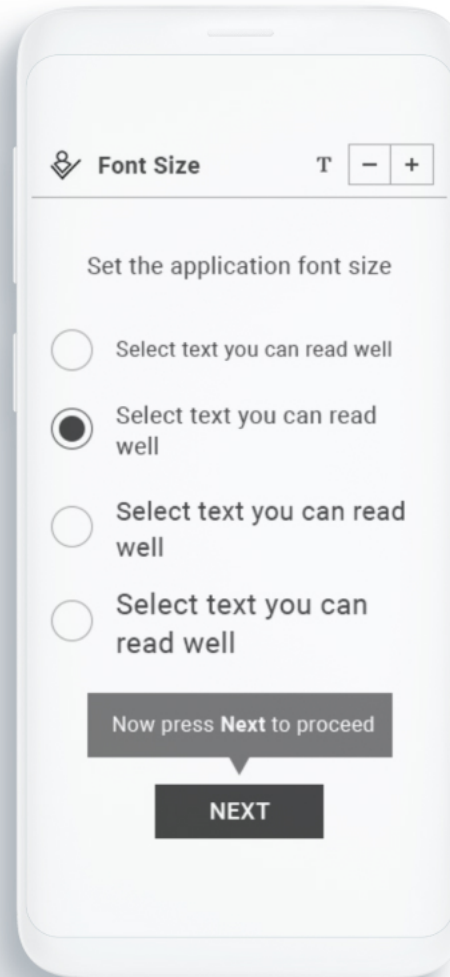
DESIGN

Challenges

4

Older people were the main target audience for Idana, but the app had to be user friendly and well designed for younger generations too.

5

Arranging questions based on the answers of patients (conditional logic of a questionnaire) and compulsory/non-compulsory questions

6

Changes in design from the client during the medical platform development process that were based on the feedback of users who tested the prototype or on his own assumptions.

Deliverables

Functional specification

UX wireframes and UI mockups

Design specifications and description of the UI kit
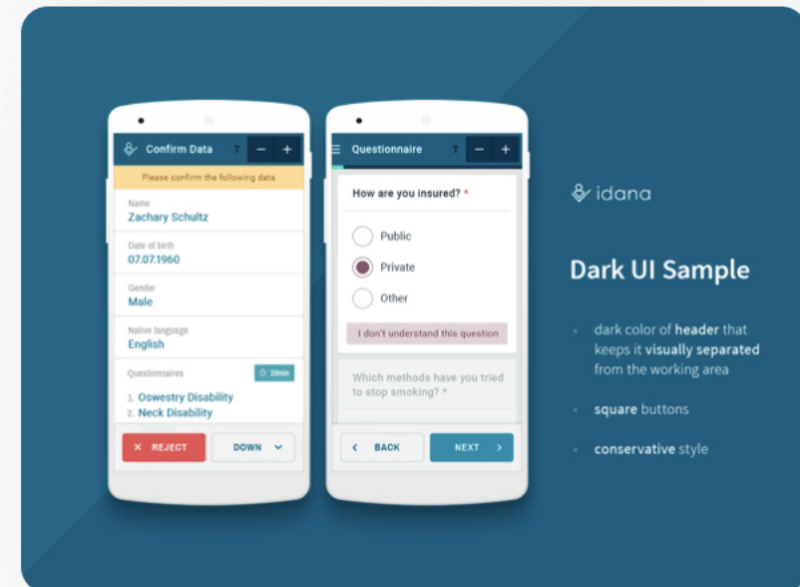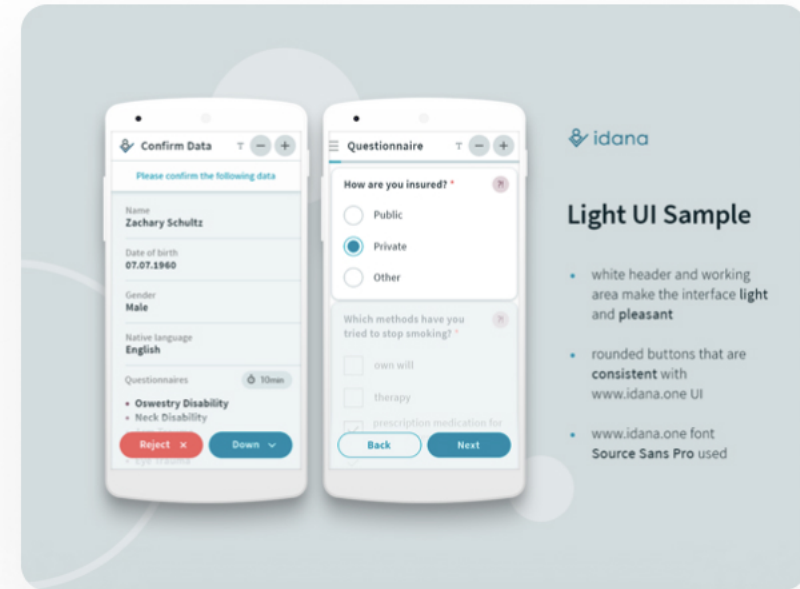
Jerome Meinke
CTO at Tomes GmbH

"We feel good and satisfied about our collaboration. We are even surprised that the first UI sample provided by Mariana was so good and she met our expectations from the first try. We had only a few minor things to change. We are very happy. Surprised that it went so good."

DESIGN

First, we approved the style with the client. Our designer did not work on the logo because it was already available.

We thought through the UX in detail. Taking into account the existing Android app, backlog, and stylistics, we elaborated on the pages. UX was done for a resolution of 320 px and then adapted to bigger screens in UI.

We deliberately combined the UX and UI stages to save time and money for the client, which worked well. This approach was later introduced into our general medical software development services and process.

Light UI Sample

- white header and working area make the interface **light** and **pleasant**
- rounded buttons that are **consistent** with www.idana.one UI
- www.idana.one font **Source Sans Pro** used

Dark UI Sample

- dark color of **header** that keeps it **visually separated** from the working area
- **square** buttons
- **conservative** style

DESIGN

Documentation

This way, we covered all the necessary cases in healthcare management and prepared a good UI kit. There was a legend to it where we described all the fonts, their sizes, etc. It was very important for the client to stick to medical software development standards, so we documented everything.

Idana: Design

Detailed Estimate on the UX Design stage (DEUX)

Idana PWA				
Analyze input data		Checking specs and sketches, tech requirements, research if needed	6	8
	Authorization screen	Login screen, explanation, scroll mode, welcom screen, data confirm	9	14
	Qestionnaire filling	Single choice, Multiple choice, Yes/No, Upload picture/photo, Drawable picture, Slider, Number picker, Static, text/image/video content	27	41
UX Wireframes - Web 320px	Qestionnaire finalizing	Preview answers, Receives email cope, Sharing data, Submit answers, Success	9	16
Style creation	1-2 style sample made based on test task https://projects.invisionapp.com/d/main#/console/12667660/265471183/preview		8	12
UI Kit	UI Kit		14	18
	Samples of the most comlicated screens (login, explanation, scroll mode, questionnaire, data confirm) for every resolution (320px, 640px, 960px, 1280px)		52	80
Time to process minor requests from the developtr			8	16
Interactive guidelines for developers in Avocode			5	7
UX/UI designer's time for daily meetings			14	22
Team review:				
Periodic review by UX/UI designer			3	5
Periodic review by Web frontend developer			6	9
		Total, man-hours	161	248
		Calendar weeks	5	8

DESIGN

Documentation

UI Kit Description

Font map

	Font Size 1	Font Size 2	Font Size 3	Font Size 4
Header 1				
	Source Sans Semibold 24pt #313a3f	Source Sans Semibold 26pt #313a3f	Source Sans Semibold 28pt #313a3f	Source Sans Semibold 30pt #313a3f
Header 2				
	Source Sans Semibold 20pt #313a3f	Source Sans Semibold 22pt #313a3f	Source Sans Semibold 24pt #313a3f	Source Sans Semibold 26pt #313a3f
Subheader				
	Source Sans Regular 16pt #707273	Source Sans Regular 18pt #707273	Source Sans Regular 20pt #707273	Source Sans Regular 22pt #707273
Question				
	Source Sans Semibold 18pt default: #313a3f mandatory indicator: #ba5d5d disabled: #adb2b5 disabled mandatory indicator: #ebb0b1	Source Sans Semibold 20pt default: #313a3f mandatory indicator: #ba5d5d disabled: #adb2b5 disabled mandatory indicator: #ebb0b1	Source Sans Semibold 22pt default: #313a3f mandatory indicator: #ba5d5d disabled: #adb2b5 disabled mandatory indicator: #ebb0b1	Source Sans Semibold 24pt default: #313a3f mandatory indicator: #ba5d5d disabled: #adb2b5 disabled mandatory indicator: #ebb0b1

320px

User Interface Specification

Module name	Screen name	Functions	Elements
Authorization module	Welcome URL screen	As a user I can login by using a preconfigured URL	- Info icon to open menu for legal information Use, Privacy Policy Protection, License? - Logo - Welcome text - "Press next to start" - Next button - Version and Copyright
	Explanation	As a user I will be provided with an explanation on how to change the font size	- Info icon to open menu for legal information Use, Privacy Policy Protection, License) - text: "Welcome to Idana" - text (big font size): "Please use - or + to a the text below" - decrease font size button (-) - increase font size button (+) - demo text "if you can read this well, plea - next button -clear introduction on how "nex button" w scroll is disabled). So maybe: *Arrow pointing to the button * Explanations "Press this to continue to the see additional answers" *highlighting (or blink etc.)
	Welcome screen	As a user I can see global welcome introduction text and a picture (loaded from database) and button continue	- Info icon to open menu for legal information Use, Privacy Policy Protection, License) - Text (loaded from database or default) - Image (if available in database) - Next button
	Data confirm	As a user I can see page with data and confirmations	- Info icon to open menu for legal information Use, Privacy Policy Protection, License) - text "please confirm the following data" - patient first name and lastname - patient date of birth - patient gender - native language - questionnaire titles - reject - confirm

pp.com/sna re/5FGTIMU 86JZ#/scre ens/286096 131

FEEDBACK

Results

As of 2018, Idana had a running progressive web application that is used in doctor's practices across Germany. Nevertheless, the client has ongoing plans and works on marketing strategy and promotion of a medical platform.

These days, the Idana team has begun to orient the healthcare software product on distinct features that have gained the biggest interest among potential customers rather than the product as a whole.

Our team created a PWA and improved the previously existing Android app and web editor for the Idana project. Our team is not building the product actively, but receives some tasks occasionally to improve the medical platform's function. For example, our team has thus far worked on code refactoring, functionality support and extension, redevelopment of separate modules like navigation, and other minor changes.

At the moment, we continue to support the project.

MLSDev doesn't just develop software in the healthcare industry; we care about every project and build trusting and friendly relationships with our customers. Idana is a great example of this kind of comfortable and trustworthy cooperation between our healthcare software company and the team in Germany.

> "As always, we are satisfied with the results and the service you have provided. There is nothing bad to say."

💻 Web Development   SEP 12, 2018

UI Design & Web Dev for Digital Health Startup

"We made the right choice by working with them."

5.0 ★★★★★

| Quality: | 5.0 | Schedule: | 5.0 |
| Cost: | 5.0 | Willing to refer: | 5.0 |

THE PROJECT

💰 $50,000 to $199,999   📅 Dec. 2017 - Aug. 2018

Very professional company for web development

★★★★★ Reviewed 10 months ago by Jerome Meinke
Role: Cofounder & head of development at Tomes GmbH

We've asked MLSDev to create a progressive web app for us. Everyone we worked with (designers, quality assurance, front-end developer, project manajer) was an expert in their field, providing invaluable feedback and ideas and helped keep our project on schedule. From wireframes through creative design and super professional web development they are a fantastic company - one we will definitely continue working with!

Rating breakedown

★★★★★ Quality
★★★★★ Reliability
★★★★★ Ability
★★★★★ Overall

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your business objectives?

https://mlsdev.com   **hello@mlsdev.com**   **+1 (303) 317 6054**   **+380 (98) 886 45 42**