daffodil

Success Story

Modernizing a dental consultation app for a Sweden based chain of dental clinics

Client:
A Sweden based chain of dental clinics

Industry:
Healthcare

Country:
Sweden

Our Role:
Software re-engineering

About the Client

The client is a privately-owned dental care organization with a mutually beneficial network of clinics in Sweden's largest cities- Stockholm, Gothenburg, Malmö, and Uppsala. The works on a unique cluster model wherein a cluster of zones within a geographical area are acquired.

General and niche dentists, as well as hygienists within these zones, can then work closely with each other to provide customers with the best treatment options.

Services Used

Software Re-engineering

Software Consulting

Technology Stack

- Microsoft .NET
- React Native
- Azure
- twilio
- Microsoft SQL Server
- Cosmos DB

The Situation

The client already had a proprietary practice management app for scheduling and providing remote consultation to patients. The app allowed patients living in Sweden to choose emergency dental examination slots for consultation.

The app had been critical in providing exigent dental consultation amidst the limitations of COVID-19. Patients with dental issues can get diagnosed by clinicians directly from their mobile phones or tablets.

The client had the vision to transform the application into a one-stop shop for dental services by adding new features and onboarding partner dental clinics on the platform.

The client wanted Daffodil to transform the app with new modules and functionalities such as detailed scheduling and practice management facilities, support for a peripheral camera, easy onboarding of partner clinics and clinicians are to name a few.

The key requirements were as follows:

- Find a cost effective intra-oral camera to integrate with the app for remote diagnosis using a screen sharing facility.

- Seamlessly get partner firms onboarded and integrate their practice management modules into the app.

- Update the web application design, making it more user-friendly and multilingual.

- Integrate different versions and functionalities for the clinicians, patients, and organizational heads.

The Solution

Team Daffodil modernized the application with new functionalities that ensure better patient engagement, scalability, and a refined experience.

The new version of the app enables patients to pre-book consultations, which was earlier limited to emergency examinations. Additionally, the app now allows the users to register themselves with their email ID and Bank ID and hence, expanding the potential use of the app outside Sweden.

The app was in need of an infrastructure overhaul where the resources can scale up or scale down, as and when required. This was to ensure the scalability of the app while optimizing the cost and was done using serverless computing services by Azure. Also, the Visual Studio App Center by Microsoft ensured continuous integration and deployment of app builts to ascertain quick revisions, feedback, and delivery of the solution.

Moreover, the team updated the database from the existing combination of an SQL Server and Cosmos DB (for Admin) to a Role-Based Database. This gave full control to the organizational heads to grant database privileges based on roles within the organization. Dentists now have full autonomy to manage their schedules once they are onboarded onto the app. The integration of Twilio with the app lets patients message their designated clinicians and have video calls with them seamlessly.

The client's partners can purchase an add-on widget that would pop up on the patient side app. Like a chatbot, the widget has a set of medical questions put to the patient, doubling up as a lead generation tool for the partners. One of the most challenging jobs in modernizing the app was to find the right vendor who could provide the most affordable intra-oral camera and would provide the SDK as well.

After scouring the global market, a China-based vendor was acquired by team Daffodil to ensure affordability for the end-user, compatibility with the app, and compliance with the client's standards.

The camera vendor shared the device's SDK which was integrated into the app using React Native bridge with the native SDK in Android and iOS.

The patient can upload an image into the widget clicked with the Intra-Oral Camera so that a clinician can provide preliminary insights.

The patients can answer their ailment queries in the app and upload images related to dental issues to provide an overview of their problem. Based on the patient's condition, a general or specialized clinician is assigned to the patient, who further connects with the patient through an audio/video call.

The Impact

Daffodil came up with a precise, modernized version of the with new functionalities such as integration with the practice management portal and provision for an add-on chatbot-like widget. The integration with a patient-side Intra-Oral camera gives this app an edge over other dental consultation apps. Patients can share 3D images of their teeth with the respective clinician from the comfort of their homes and get an immediate diagnosis. The patient side of the app has robust functionalities for remote diagnoses amidst COVID-19 restrictions as well as 360 report generation.

We have been providing extensive technical support to the client on their pre-existing app and the same will continue when the client takes the updated version live and makes it available to its partners. The modernized app can be used by dental organizational heads to onboard clinicians and clinics and choose to purchase the add-on widget for lead generation. Clinicians can manage their schedules, provide video and text-based consultations and decide their commission brackets.
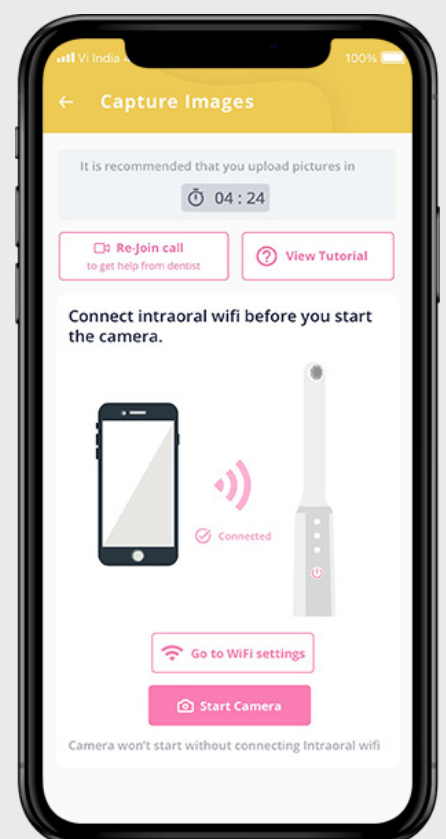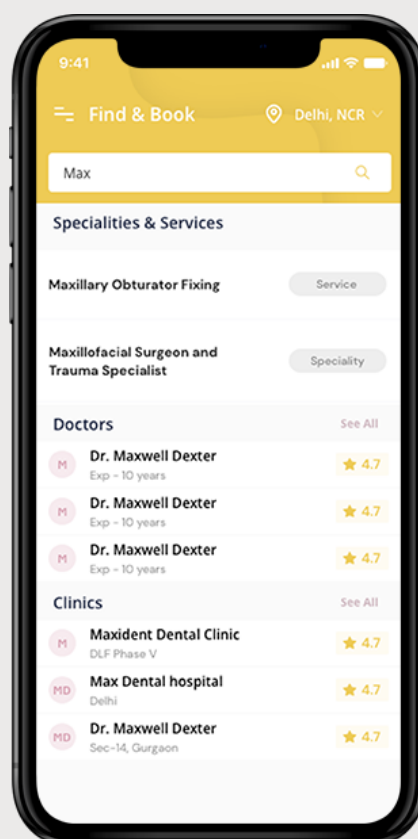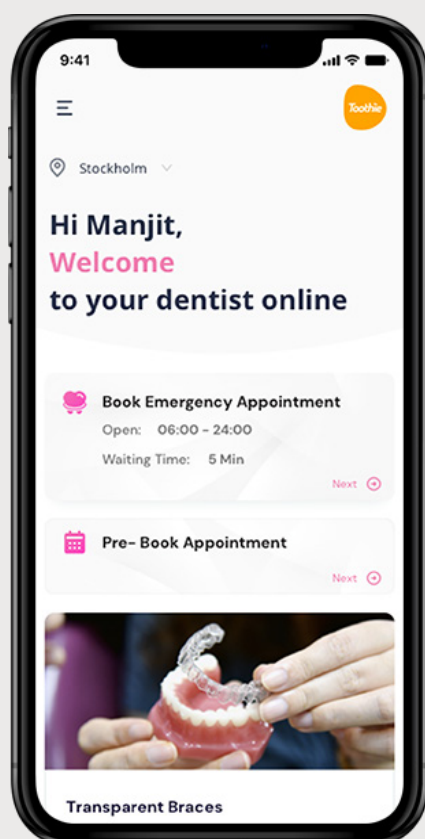
About Daffodil

For more than 20 years, Daffodil Software has been a trusted software technology partner to organizations across the globe. We take pride in our ability to look beyond technologies & deliver innovative solutions.

Daffodil is a CMMI level 3 accredited organization with innovation, tech agility & process orientation rooted deep within the core. Our team of 1000+ technologists strive to shape the tech industry and help businesses elevate their value proposition through technology.

Technology Partnerships & Certifications

Microsoft Partner Silver Application Development partner	**Google** Cloud Premier Partner	**aws** partner network
Microsoft Partner Silver Collaboration and Content	**Ui**Path Partner Robotic Process Automation	**PubNub**
CERTIFIED ISO 9001:2015 COMPANY	ISO 27001:2013	International Organization for Standardization ISO 20000

Awards & Accolades

Deloitte. Technology Fast500 APAC Winner	**IT EUROPA** EUROPEAN IT & SOFTWARE EXCELLENCE AWARDS	zinnov ZONES	Great Place To Work® Certified INDIA
mobilewebaward 2020	INDIA'S MOST ADMIRED BRAND 2020 INDIA'S CHOICE	CMMI level 3	THE ECONOMIC TIMES B Tb BEST TECH BRANDS 2021

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