BYTON Internal Platform

BYTON
2018 Apr - 2019 Apr

An integrated tool for vehicle services management.

Overview:

Providing intelligent technology to modernize vehicle management including OTA, fleet operations, smart diagnostics, vehicle monitoring and SIM card management. The goal of this project is to improve the performance of overseas operating capability, to achieve a comprehensive overview of the current vehicle status and provide timely notification on vehicle

My Role:

I was the product designer responsible for user research, information architect and conceptual design, and further completed interaction and visual design for some sub platforms.

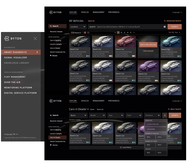
Background Story

Nowadays consumers' expectations have radically changed. Vendors and service companies that cannot meet those expectations are held back by outdated processes and legacy technologies.

The platform is necessary to minimize operation risks, reduce management and staff costs, improve diagnostic efficiency and enhance service quality. It will ultimately optimize company's vehicle management process.

Design Challenge

From design perspective, it is a critical challenge to architect a scalable system to convey consistent voice and tone through various platforms that perform drastically different tasks, and allow users to freely switch between platforms according to their role permissions.



Market Analysis

Before starting, we picked and studied several products amongst global market that provide similar services to serve as our design benchmark.

Traveled to China to conducted field studies at service locations and interview active users to learn their goals and experiences to determine their context of use and collect their feedback on existing app services.

> *"When do they use these apps"*
>
> *"In what contexts do they use"*
>
> *"How do they rate their experience in usage."*

Data Hierarchy

After research and analysis on business objectives, we identified following user groups:

- Customer
- Dealership
- Technician (Platform Specific)
- Engineer

Grouping and mapping out detailed granular data collected from various sources such as powertrain, central gateway and partner vendors to each user group with corresponding access level.

Similar UI presentation is applied across platforms.

Matt
Manager for Diagnostics

"I want to be able to connect to vehicle to run diagnostics through cable, Bluetooth or vehicle network."

"For this new EV model, it would be ideal to learn suggested fixes from manual book."

Ryan
Senior Technician / Engineer

"My responsibility is to set up the diagnostic map for technicians to follow."

"It would be great to see the previous maintenance work performed on this vehicle."

James
Customer

"I want to be informed of the latest updates on my vehicle."

"Send me notice to schedule my next service"

Proto-Persona

Elucidate observations from user research, we set out the ground work of platform experience.

Building up Personas **highlighting core tasks and goals of each role**.

Determinate them among product team to orient the project and come up with detailed user stories.

Conceptual Model

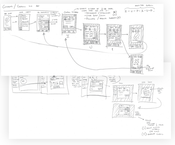
For example, we firstly carrying out conceptual model on the process flow regarding how the customers check diagnostic result and schedule service with dealership to provide high-level understanding, then brought into UI design.

Breaking this goal down into individual sub-tasks.

Further conduct the analysis on task basis to examine the user actions and system process. Individual use cases and UI tasks are created based on shared understanding on this conceptual map.

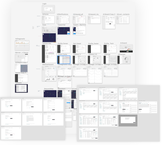
Design Process

Ideation



For each task, we mapping out the UI controls and functional items on the screen through parallel design with each designer coming up with their ideal flow. Then we grouped together to have a discussion session review through all proposed processes.

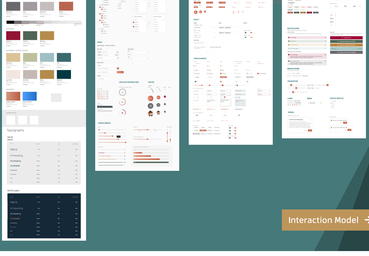
Wireframing



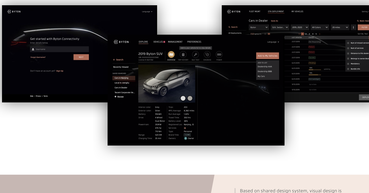
Document process in wireframes using Adobe XD, and built a low fidelity prototype, so we could conduct task analysis to validate our concepts and check for consistency within the team.

Pattern Library

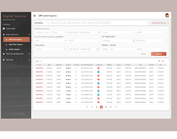
As we puzzle pieces of stories together, the big picture of a holistic service platform reveals. We start onboarding new designers to collaborate globally to help out the design process, and ensuring design consistency along with expansion of project scope is necessary.



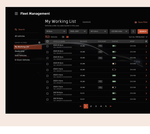
Visual Deliverables



Theming



Based on shared design system, visual design is created with both dark and light theme. Depending on the situation and user preference, they can adjust freely between modes.



My Contribution

- Setting up design system and sketch style library for upcoming designers to follow as a reference point.
- Initiate discussion sessions to iterate through design ideas and host design critics.
- Coordinate design resources and work closely with project teams to sync up on design progress.
- Divide up user stories and assign design ownership for sub-platforms.
- Supported visual and UI design tasks for partial internal platform, such as DSMP, OTA, and fleet management.
- Developed pure CSS UI library for dark theme for developer to follow.

Components Library
https://hardinqf.com/portfolio/byton/#/Style/Byton%20Light?n=1

BYTON-X Sigma Prototype
https://vuula.be/P9D9VWgnwA

OTA Deployment Flow Prototype
https://vuula.be/wPK4_eE7N_q

Consumer Dashboard Wireframe
https://vuula.be/BVQ5Qbu6ED

Pattern Library
https://sketch.cloud/s/abzx0

Smart Diagnostic Prototype
https://sketch.cloud/s/c3bx3

DSMP Case Management
https://dribbble.com/shots/6337079-Sim-Card-Management

Dealership Filtering UI concept
https://hardinqf.github.io/per/Dribbl/Bassets/img/gabe/v2_storeFilter.gif