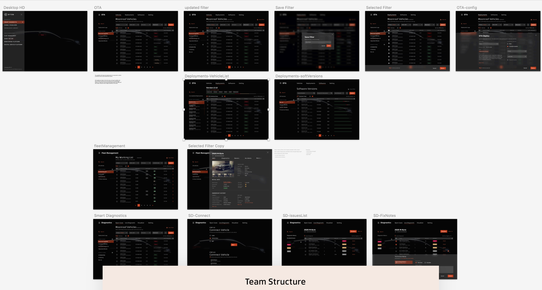
BYTON Internal Platform

An integrated tool for vehicle related services management.

BYTON
2018 Apr - 2019 Apr

Overview:

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



Team Structure

Business Stakeholders	Designer	Engineers	Applications
10	1+3	5	5

Background Story

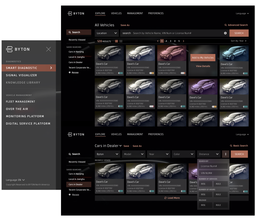
Nowadays consumers' expectations have radically changed. Vendors and service companies that cannot meet those expectations are held back by outdated processes and legacy technologies.

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

My Role:

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

Later, I handled the front-end code to help implement designs, delivered sketch based design system and published an online Asset Library.



DESIGN CHALLENGES

Limited Development Resource and Headcount

Tight Project Timeline for 2019 Delivery

Making Scalable and Reusable Design

Market Analysis

What's out there?

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."

Affinity Mapping

What do we want?

To better understand the current experience of vehicle maintenance and repair process, I conducted interviews with all **10** stakeholders across **4** departments in the company:

Intelligent Car Experience
Marketing
After-Sales
DT & PowerTrain

collected product requirements and further understand context of usage according to stakeholders' professional knowledge in the industry.

Synthesized our notes using affinity mapping and insight to individual features on our product.

Notify latest software updates on vehicle.

Notify time to schedule next service"

Find Nearby Charging Stations

Personas

What to build?

After research and analyze on business objectives, we start to elucidate observations from stakeholder interviews and market research by grouping and organizing the notes tracked during those sessions.

This process led us identified 4 user groups on the higher level: customer, dealer, technician and engineers.

The next step is building up Personas **highlighting core tasks and goals of each role** that representing the ground work of platform experience. .

JENNIFER
Customer

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

"Send me notice to schedule my next service"

ROBERT
Dealership

"Keep track of my vehicles in stock"

"Monitor vehicle parameters such as status, location as customer takes to test drive"

MATT
Technician

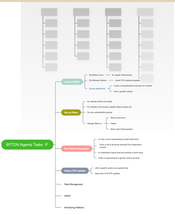
"I want to be able to connect to vehicle to run diagnostics through cable, bluetooth or vehicle network."

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

RYAN
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."



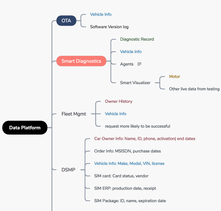
What can be done?

Information Architecture

Desseminate Personas among product teams to orient the project and come up with detailed user stories.

According to the project missions defined, using **card sorting,** an evaluative approach by asking project leads (engineers) to categorizing feature concepts under each project scope.

- Clarify project scope
- Prioritize Features
- Create trackable user stories
- Understand potential connection between systems



Interesting Finding

Some features are picked multiple times, showing under several projects' cateogry, they are:

Entity Views

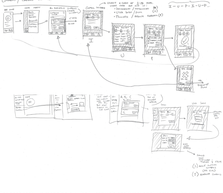
Profiles

Vehicles

Records

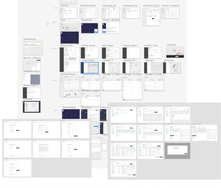
Design Process

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.