

A black Toyota Prius is shown driving on a road at night. The car's headlights and motion blur streaks are visible against a dark background. Red diagonal stripes are positioned in the top right and bottom left corners.

# DIGITAL PLATFORM PROPOSAL TOYOTA CONNECT

SAIER (SAM) HU, BRYAN LOGAN, BRITTANY SIMS

# OUTLINE



**Executive Summary**

**Company Overview**

**Current VISOR**

**Ecosystem**

**Platform Proposal**

**New VISOR**

**Challenges**

**Conclusion**

# EXECUTIVE SUMMARY

Toyota, the No. 1 player in the automobile market representing 11.5% of global market share, is a renowned Japanese automotive manufacturer with a value proposition centered on reliability, quality, and innovation. Its primary focus is on producing fuel-efficient and environment-friendly vehicles, while maintaining affordable prices. However, in stark contrast to Toyota's commercial success, a common problem many Toyota owners experience is its dated digital user experience. Some of these include limited feedback from the car and unsatisfactory interactions with the infotainment system. In this proposal, we will introduce our innovations designed to improve the Toyota user experience using the VISOR framework, and identify potential challenges associated with these new technologies.

**WHY:** Toyota's user experience offers minimal value to its customers due to poor feedback from the car and an inadequate infotainment system. For example, in its current form, a Toyota driver has little control of the vehicle's features through the infotainment system; additionally, very often a Toyota driver might have a hard time diagnosing a mechanical problem due to the limitations of Toyota's existing digital features which, in most cases, can only prompt the user to contact their dealership for assistance.

**HOW:** This proposal seeks to help Toyota transform its infotainment system into a digital platform ecosystem that provides better customization, diagnostics, and on-demand solutions for users, by leveraging the critical properties of digital platform ecosystems

**WHAT:** We are proposing a multi-sided platform (Toyota Connect) integrated within a Toyota car that fosters a community encompassing Toyota car owners, home IoT devices, car dealerships and repair shops, local service providers, roadside assistance services, and third-party apps, thus generating positive network effects and reconfiguring value creation and consumption for all platform participants.

# COMPANY OVERVIEW

Toyota is an automotive manufacturer that has been producing cars and trucks for nearly 90 years. Founded in 1937 and based in Japan, the company built its early legacy on high-quality vehicles.

That legacy is rooted in Toyota's leadership in manufacturing and assembly, having popularized the just-in-time production methodology first developed in Japan in the 1970s.

Today, technological innovation is the priority at Toyota, through advancements in alternative fuels and battery technology — but one piece is missing: a robust, consumer-facing digital platform that ties all its products and services together.





# TOYOTA TODAY

## CURRENT VISOR MODEL

**Value Proposition:** Safe, reliable, high-quality vehicles for consumers at every income level.

**Interface:** Mostly analog, with some basic digital connectivity through the in-car infotainment system.

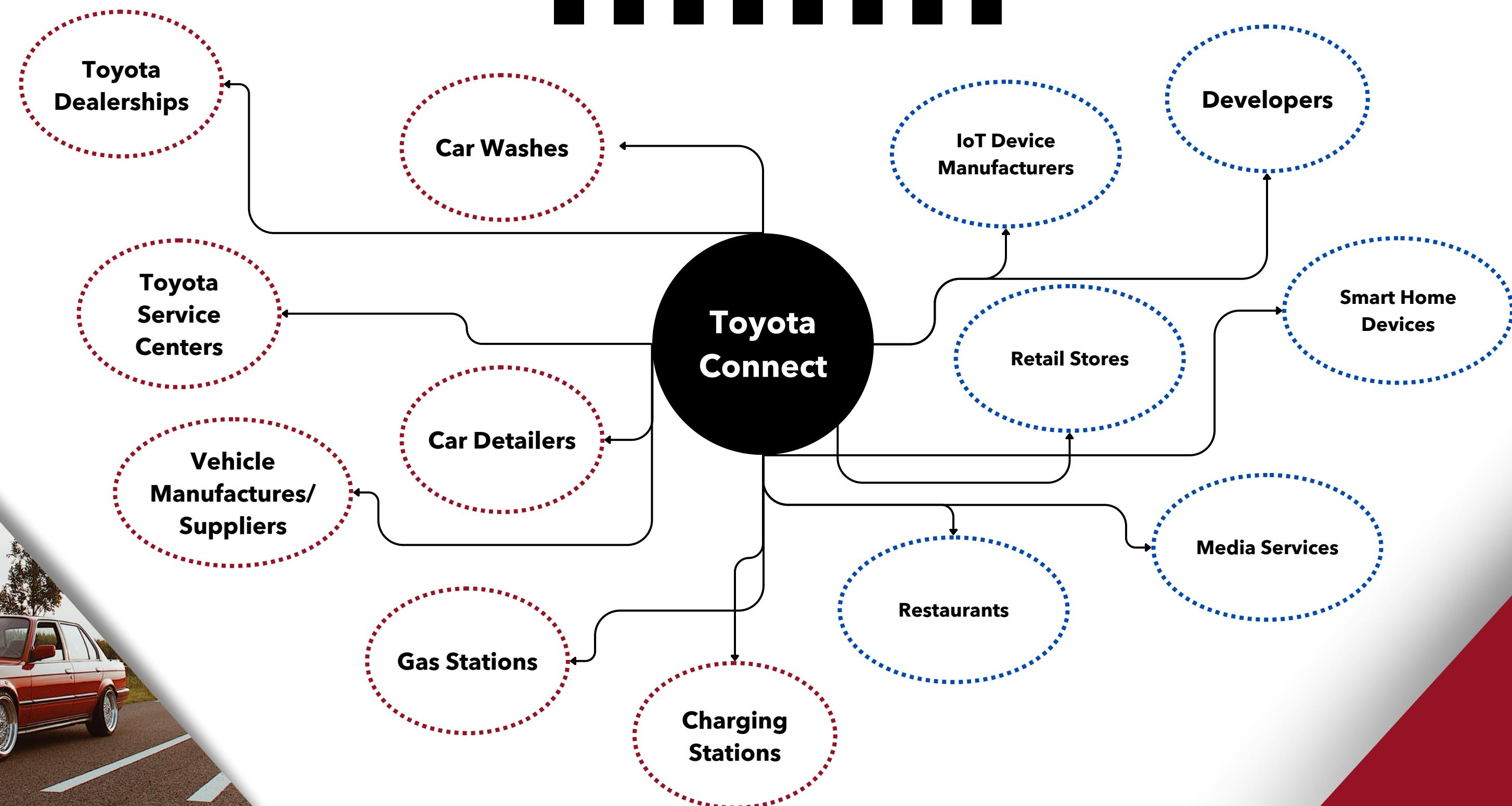
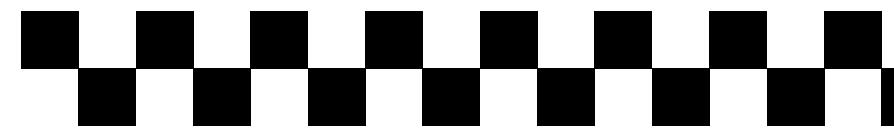
**Service Platform:** Also mostly analog, with the exception of a basic app that has minimal digital functionality.

**Organizing Model:** A digital platform that links vehicle owners to vital information about their automobile. The platform also connects users to various service providers.

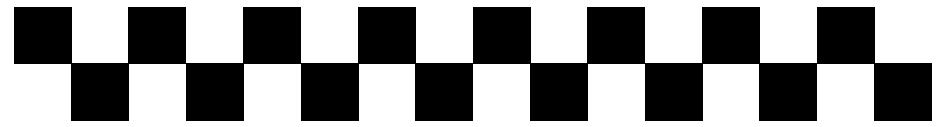
**Revenue/Rewards:** The current digital platform consists of multiple potential revenue streams — all of which are from subscription services. Those include agent-assisted navigation and on-demand emergency services.



# OUR ECOSYSTEM



# OUR PLATFORM PROPOSAL



By integrating resources from car owners, home IoT devices, local service providers, and third-party apps, the new Toyota user experience — enabled by the multi-sided platform Toyota Connect embedded within Toyota vehicles — promises to generate positive network effects and reconfigure value creation and consumption for all platform participants.

The new user experience empowered by the “omnipotent” platform ecosystem will make Toyota owners’ life much easier by providing one-stop services including better customizations, diagnostics, and on-demand solutions for Toyota users.



# VALUE PROPOSITION

## VISOR MODEL

**Peace of Mind on the Road:** With Toyota Connect, you'll be a confident and responsible car owner. Our cutting-edge VR dashboards will provide a personalized experience, connecting you directly with dealership technicians. Meet Tommy, your virtual assistant, who will enhance your driving experience by offering safety adjustments and optimizing fuel usage. Drive with peace of mind, knowing that Toyota Connect has your back on the road.

**Growth for Auto-Industry Partners:** We believe in fostering a thriving automotive ecosystem. Toyota Connect will offer you the convenience of booking and paying for on-demand services from local auto-industry providers. Not only will you benefit from an extended range of services, but our platform will also provide these service providers access to a vast pool of potential customers, thanks to Toyota's market presence.

**Seamless Entertainment Experience:** Entertainment should never be interrupted. Toyota Connect takes your in-car infotainment to the next level by integrating your media subscription services into the platform. Whether it's a movie, podcast, audiobook, or song, you can seamlessly continue right where you left off as soon as you step into your car. Moreover, managing your 3rd party media subscriptions through our platform ensures uninterrupted enjoyment on your journey.

**IoT Interconnectivity - Your Car, Your Home:** Toyota Connect is not just about driving; it's about making your entire life easier. With us, your car becomes a seamless extension of your home. Control IoT devices from your car, partner with 3rd party retail stores and restaurants to make errands a breeze, and instruct Tommy Toyota to send your car to a destination and back home with two-way control. Our platform bridges the gap between your car and your daily life.

# INTERFACE VISOR MODEL

## Functionality

The interface of Toyota Connect is designed to provide customers with a wide range of service platforms and support multiplicity of tasks, aligning perfectly with the value proposition. It offers a comprehensive set of features accessible through a user-friendly and intuitive interface. Customers can access various functionalities, such as Drive, Media, Home, and Services

## Form Factor

The aesthetics of Toyota Connect's interface are carefully crafted to create a positive perception among customers. The interface follows modern design principles, featuring a clean and visually appealing layout. The use of high-quality graphics, intuitive icons, and a consistent color scheme enhances the overall user experience, making it visually pleasing and engaging.

## Fluidity

Toyota Connect's interface boasts a high level of fluidity, making it easy for customers to customize their experience according to their preferences. The platform offers personalized settings, allowing users to tailor the interface to their specific needs. Users can prioritize certain features, rearrange elements, and adjust settings, ensuring a seamless and highly adaptable interface.

## Forgiveness

The interface of Toyota Connect exhibits a considerable level of error correction and adaptiveness, mitigating potential frustrations for users. The platform incorporates intelligent algorithms to interpret user commands accurately, minimizing misunderstandings and errors. In situations where users encounter difficulties or errors, Toyota Connect's interface responds with helpful prompts and clear instructions, guiding them towards the correct actions.

# SERVICE PLATFORM

## VISOR MODEL

### Architecture

Toyota Connect is built on a robust and scalable architecture that seamlessly integrates hardware and software components to provide a comprehensive driving experience. The hardware includes in-car devices, sensors, VR dashboards, and IoT connectivity modules. The software architecture consists of multiple layers, including the virtual assistant "Tommy" AI, infotainment system integration, and user data management.

### Agnosticity

The Toyota Connect platform is designed to be agnostic to operating systems, enabling broad compatibility with various devices. Toyota Connect operates through a mobile app support on Android and iOS operating systems. This agnostic ensures that all Toyota users can benefit from the platform's features.

### Acquisition

Toyota Connect combines building and leveraging existing technology infrastructures. Toyota has invested in research and development to create cutting-edge hardware and software components that form the core of the platform.

Simultaneously, Toyota Connect also piggy-backs on existing technology infrastructures for certain services. For instance, for the entertainment aspect, the platform partners with established media subscription services to seamlessly integrate user accounts and content.

### Access

The platform is designed to be accessible to a diverse community of car owners and drivers. All Toyota vehicle owners have the opportunity to join Toyota Connect and participate in its features and services.

Toyota Connect ensures that even entry-level Toyota models can access essential features and functionalities. While some advanced services may require specific vehicle models with compatible hardware, the platform aims to make core features accessible to the majority of Toyota drivers.

# OPERATING MODEL

## VISOR MODEL

### Business Process

- Provide an integrated platform for Toyota drivers to request on-demand services via the AR / VR dashboards and virtual assistants in their cars
- Attract users, service providers, and third-party apps to the platform by leveraging the existing Toyota user base (network effects) and remunerative incentives (reconfiguration of value creation & consumption)

### Partnerships

#### Consumers

- Users provide feedback to the services they request on the apps, which help the new Toyota platform curate content and ensure the quality of on-demand services available

#### Local Service Providers

- The platform will help local service providers (including car wash, car dealerships, service centers, gas stations, roadside assistance, and restaurants) be more visible to customers. Meanwhile, these local service providers will be an additive force to the Toyota ownership experience

#### 3rd-Party Apps

- The platform will help third-party subscription-based apps (including online streaming services like Netflix and Amazon Prime) and IoT device companies with user retention by seamlessly tying together the apps into the unified Toyota digital ecosystem. At the same time, these apps will enable users to better manage their lives at home and on the road through the new Toyota platform

#### External Companies

- Toyota's success in utilizing AI in their transition into a platform will enable partnerships with companies that add value and utility to the user experience.

# REVENUE / REWARDS

## VISOR MODEL

### Short-Term Goals

**Free access:** In the short run, the new Toyota platform might want to get as many participants on board as possible. Therefore, the short term revenue and rewards goals for the platform should be building a large user base and identifying trusted service providers that can become long-term partners on the platform. This will ensure that the platform can take advantage of positive network effects

### Long-Term Goals

**Advertising fees:** The new Toyota platform can enable local service providers to run their business on the platform and charge advertising fees for promotions and higher ranking in search results; also, subscription-based third-party apps can pay a premium to be featured on the platform

**Commission fees:** Toyota can charge transaction fees when transactions (including on-demand technical support, car wash and cleaning, maintenance services, repairs, food pick-ups, and etc.) are made on the Toyota platform

**Subscription fees:** Toyota can use a freemium model that offers free access to Toyota Connect for users who only need basic functionalities, while charging a subscription fee on users who demand advanced features

# RISKS + CHALLENGES OF IMPLEMENTABILITY

## RISKS

- Data privacy can be compromised under certain circumstances.
- Poorly designed UI/UX can lead to negative network effects.
- ROI may not meet expectations, depending on length of time to execution vs. quality of final product.

## CHALLENGES

- Users may prefer other platforms like Apple CarPlay and Android Auto and bypass the Toyota platform.
- Not all Toyota vehicles are technologically equipped to deliver the processing power needed for improved digital platform.
- Size of investment for the new initiative may be larger than initially anticipated.

# **CONCLUSION**

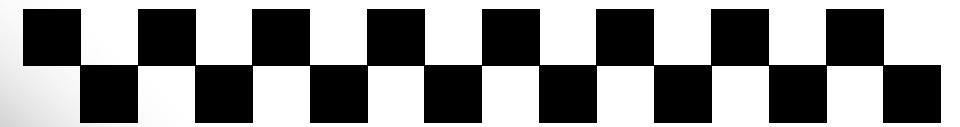
## **TOYOTA CONNECT**

As we have outlined in this presentation, there are a multitude of opportunities for Toyota to add value to the ownership experience through the implementation of these new technologies.

The digital platform ecosystem we have proposed in this presentation is robust and forward-thinking, offering users an immersive digital experience and providing an improved service experience.

This is a comprehensive overhaul of Toyota's digital platform that will redefine how the company engages with its customers at every stage – from the purchase to full breadth of the ownership experience.

# OUR REFERENCES



<https://www.statista.com/statistics/316786/global-market-share-of-the-leading-automakers/>

<https://pressroom.toyota.com/toyota-research-institute-unveils-new-generative-ai-technique-for-vehicle-design/>

<https://www.forbes.com/sites/simonmainwaring/2018/11/13/purpose-in-action-how-toyota-is-driving-growth-innovation-and-impact/?sh=3a85e0a047fb>