

MGMT 654 | May 2024

Enterprise Planning Project



DOORDASH

Presented By:

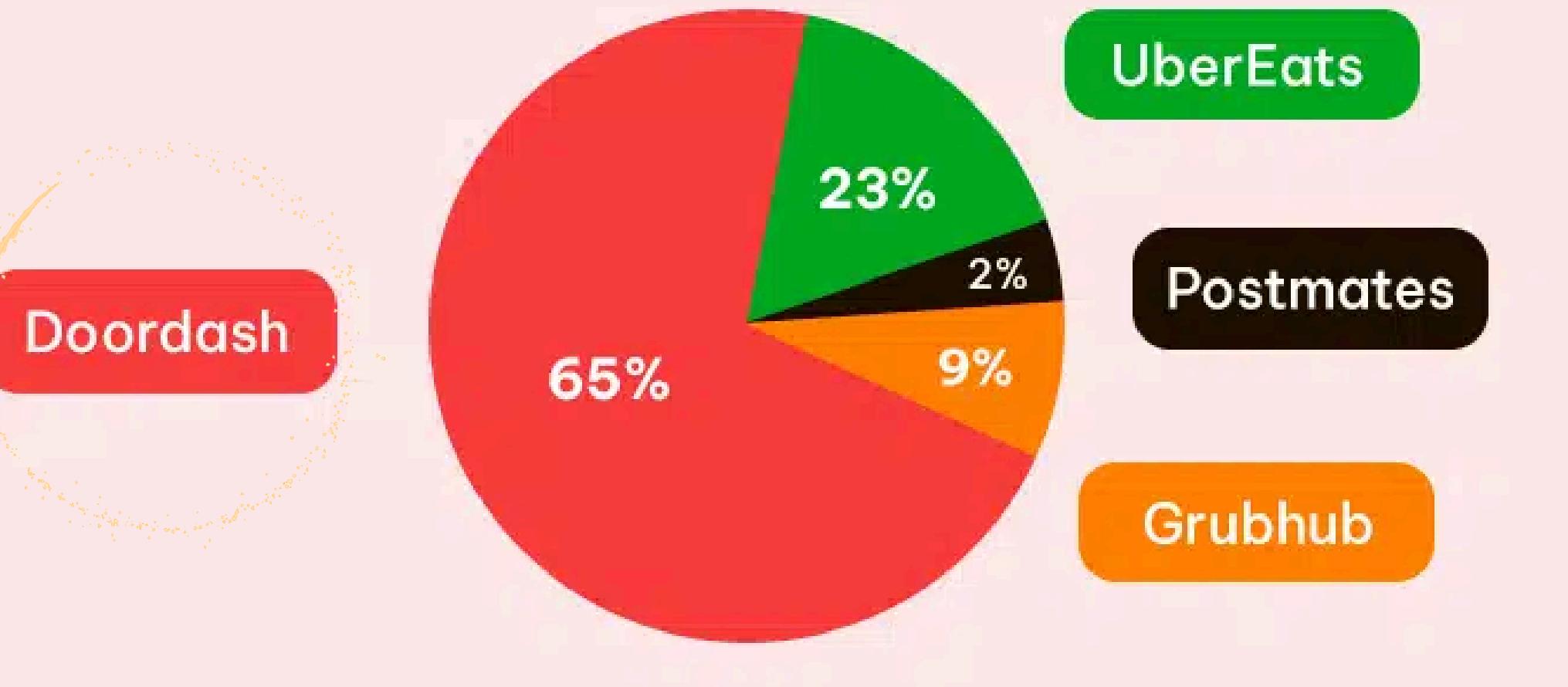
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Presented To:

Dr. Steve Peng

Agenda

USA Online Meal Delivery Market Share In 2023



Overview

Market Requirement

Service Requirement

Supplier Requirement

Value Proposition/ Business Model

Information System Architecture

Keys Functions of the system

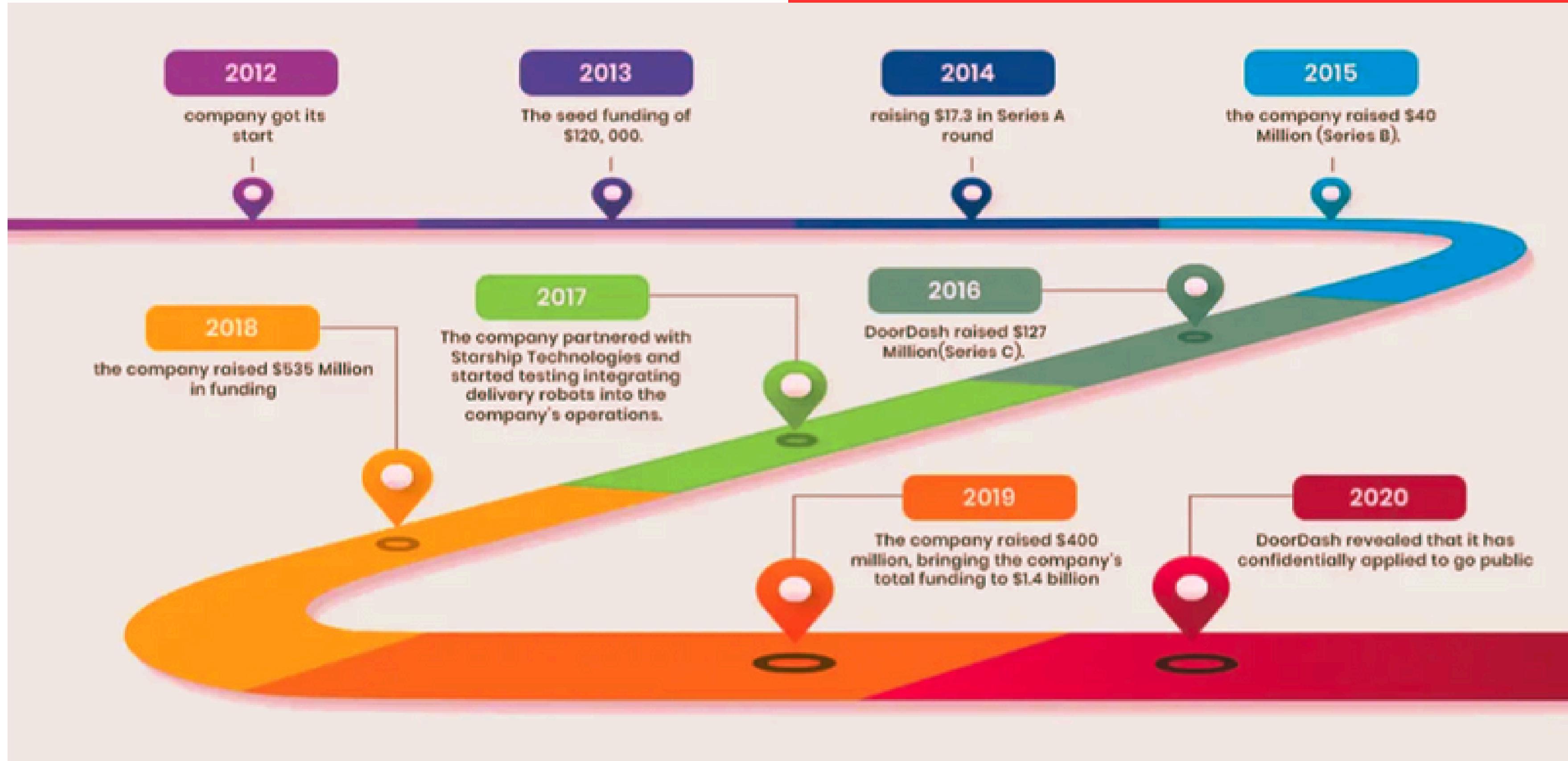
ERP Integration

Vendors of The Information System

Service blueprint

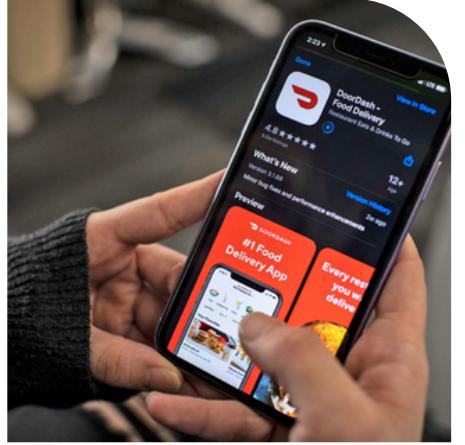
References

Overview: Tracking DoorDash: A Growth Timeline



Market Requirement

Typically revolve around meeting the needs and expectations of both customers and businesses.



Convenience



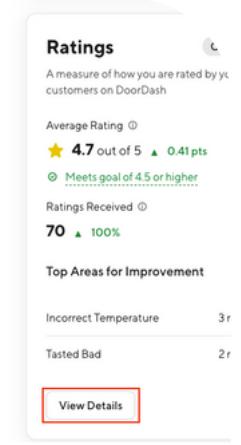
Variety



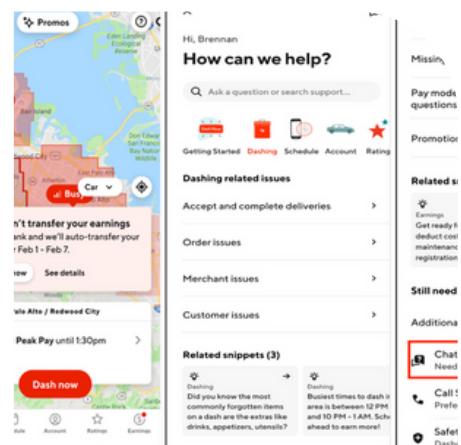
Reliability



Affordability



Quality Control



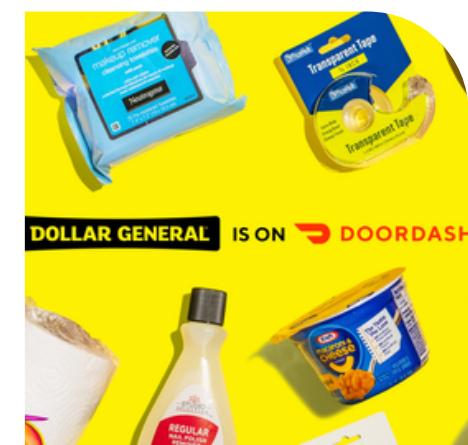
Customer Service



Safety



Technology



Partnerships



Adaptability

Service Requirements

Delivering Quality, Choice, and Convenience in Every Order



User-Friendly Interface



Diverse Restaurant Selections



Feedback Mechanisms

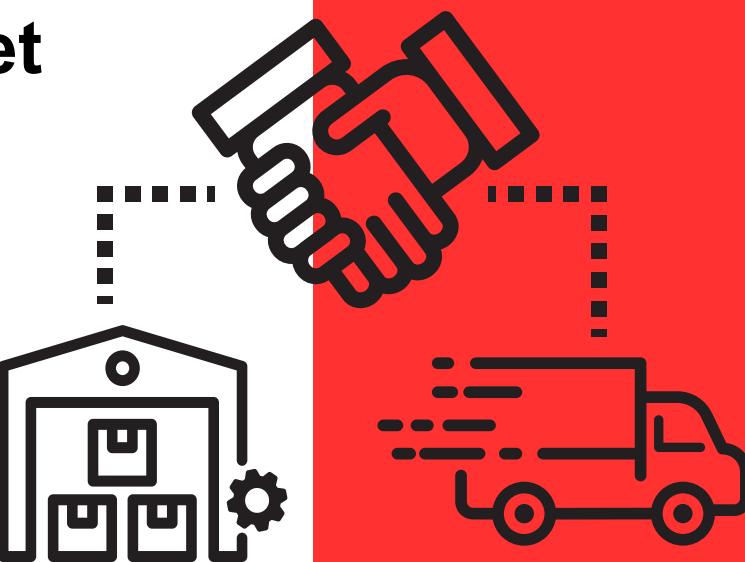
Accessibility Features



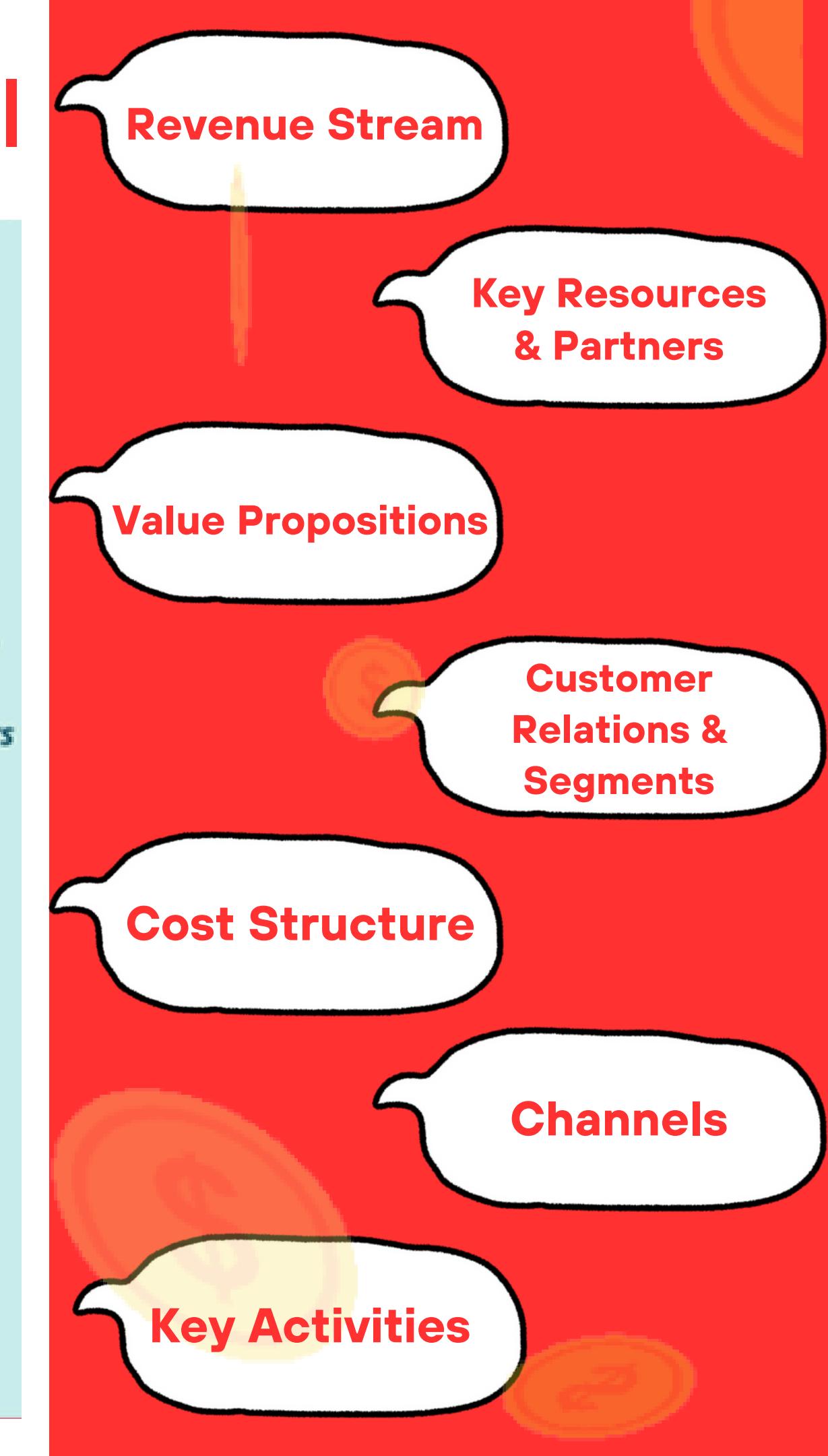
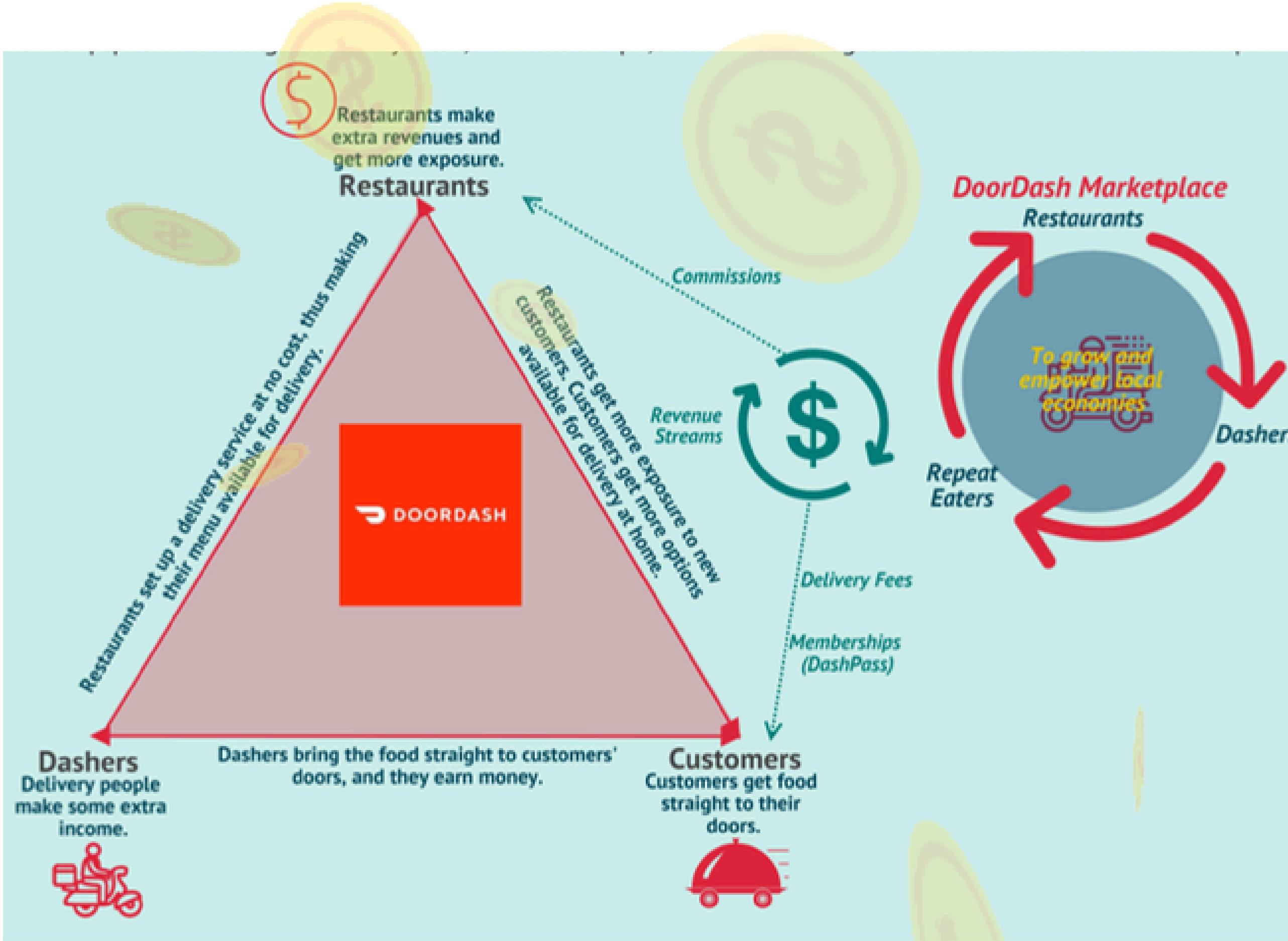
Real-Time Order Tracking

Supplier Requirements

- **Strategic Partnerships with Local Restaurants:** Collaboration with a variety of local dining establishments as key content providers.
- **Logistical Support for Delivery:** DoorDash manages the logistics of food delivery, allowing restaurants to focus on their culinary expertise.
- **Mutual Growth Opportunities:** The platform design ensures mutual benefits by increasing restaurant visibility among DoorDash users.
- **Alignment with Market Demands:** Continually adapts and aligns supplier capabilities with changing customer preferences and market trends.
- Enables a diverse menu offering that caters to the wide range of customer preferences.
- Assists restaurants that lack the resources to operate their own delivery systems, enhancing their operational efficiency.
- Extends restaurant reach to a wider customer base, which can lead to increased orders and revenue.
- Ensures that both the demands of customers and the capabilities of suppliers are in sync for optimal service delivery.



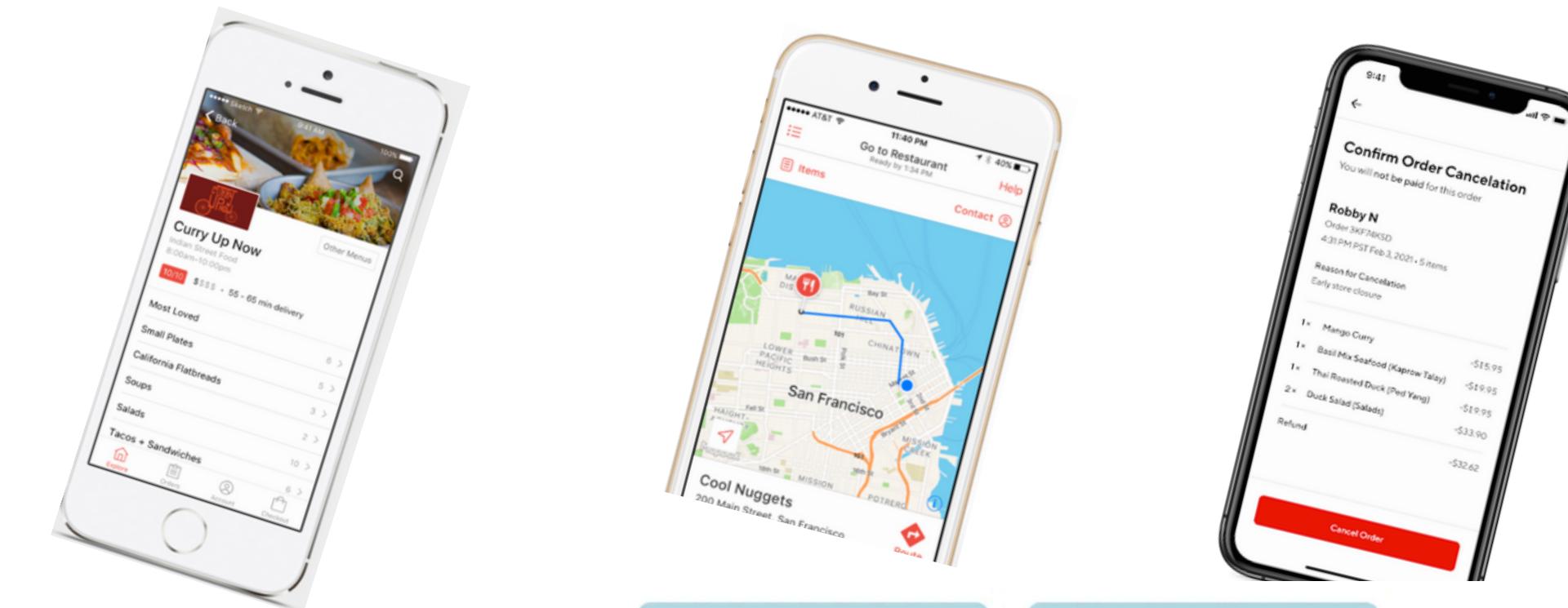
DoorDash Business Model In A Nutshell



Information System Architecture

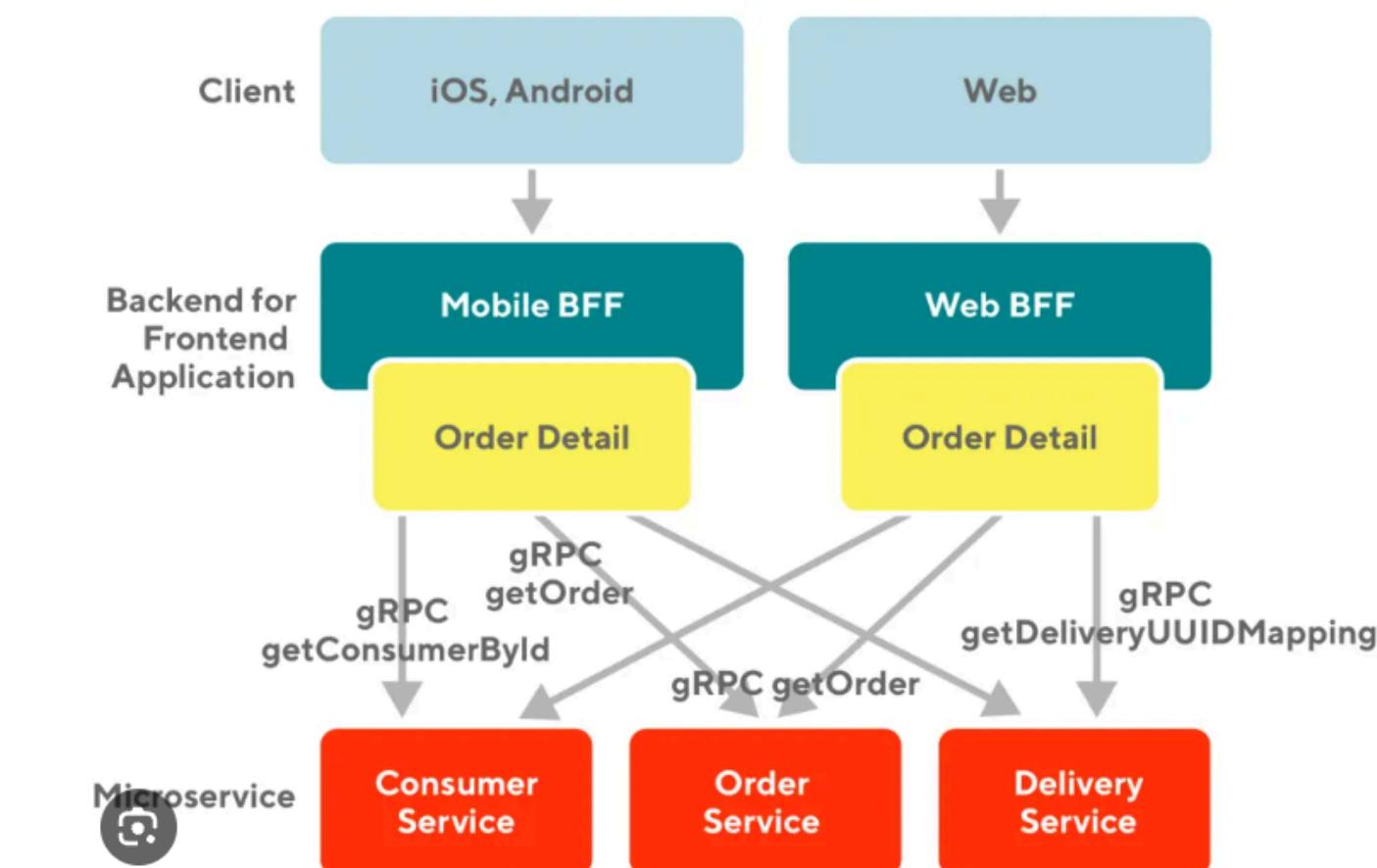
Frontend Applications

- Customer App
- Dasher App
- Merchant App



Backend Services

- Order Management System (OMS)
- Delivery Management System (DMS)
- Payment gateway
- User authentication and authorization
- Geolocation services
- Notification Service



Information System Architecture

Data Infrastructure

- Multi-DB environment
- BI and Warehouse

The screenshot displays a complex web application interface. On the left, there's a table titled 'Payment History' showing transactions for 'Nigiri Sushi' over several days. In the center, a modal window from 'DoorDash Capital' shows a loan approval for '\$30,000' with a repayment plan. On the right, a 'DoorDash Support' section shows a list of recent orders with columns for Order ID, Status, Date, Time, Customer, Dasher, and Channel.

Security and compliance

- IAM and MFA for application access / Encryption/Security
- PCI DSS/SOX/GDPR

What measures does DoorDash take to prevent fraud or misuse of the platform by dishonest entrepreneurs

Comprehensive Background Checks



Partnered Merchant Verification

Secure Payment Processing

Customer and Dasher Ratings

Real-Time Order Tracking

Fraud Detection Algorithms

Two-Factor Authentication

Third-party integrations

- Integrations with third-party services and platforms

Account Suspension and Investigation

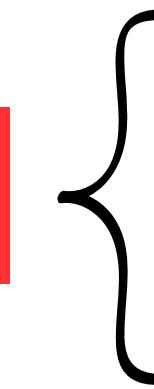


Keys Functions of the system



How these services integrated together?

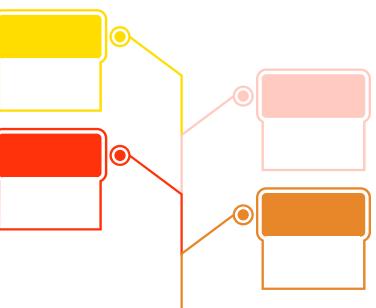
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Service-Oriented Architecture



Microservices Architecture



Communication Patterns



REST API, Kafka, gRPC...

Event-Driven Architecture

Key Functions of the system

Example: DoorDash Inventory Management



- Need: handling write-heavy workloads, ensuring real-time data processing, and analytics.
- Goal: optimize inventory management and decision-making processes.
- Approach: microservices architecture.
- Tools: relational databases, data warehousing, and data security measures.



Real-time tracking and management of inventory levels.



Reducing stockouts and ensuring timely replenishment.



Automation streamlines order and supplier management for faster turnaround times.

ERP Integration

- Being a globally recognized brand and having a 24x7x365 operation, DoorDash has a complex ERP system that integrates with multiple technologies across the platform.
- These technology stacks allow DoorDash to seamlessly run their operations from anywhere in the world.
- The ERP system is based in the cloud to avoid major downtime and their systems are reserved in **AWS, AZURE, and Google Cloud** (including some smaller cloud platforms as well).
- The ERP System allows the company to integrate internal systems and external systems (vendors) to allow for authentication, permissions, and transactions.
- The main platform to develop their proprietary code and process is done via Kotlin that integrates into SAP and other Databases.
- The DB then works across multiple platforms using API and other authentication to ensure a seamless integration to record transactions in real time.

Vendors of The Information System



Google Analytics



Amazon
Relational
Database
Service

Vendors of The Information System



Kotlin

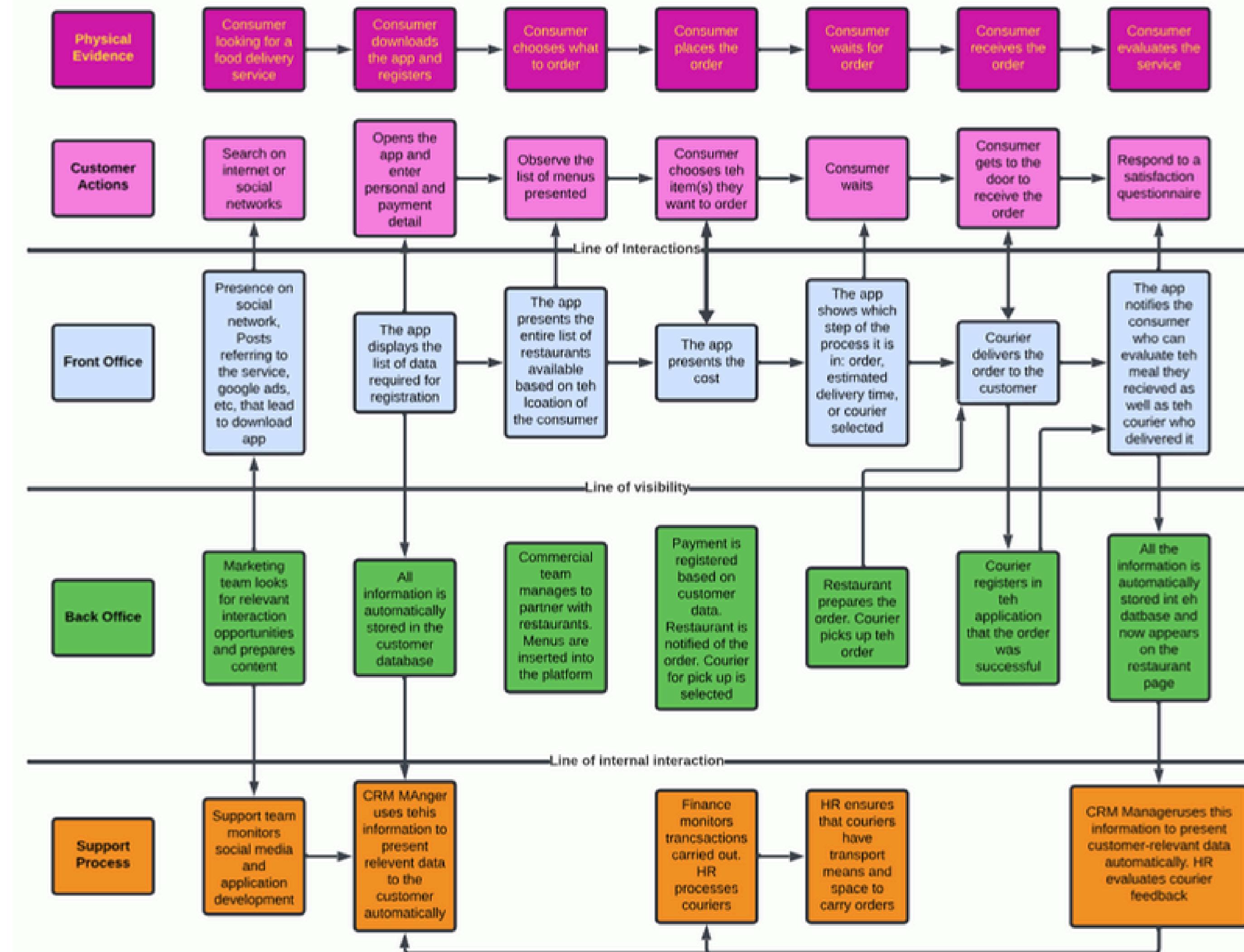
SAP Concur The SAP Concur logo features the company name in a bold, black, sans-serif font next to a yellow square containing a white lowercase 'c'.



Square

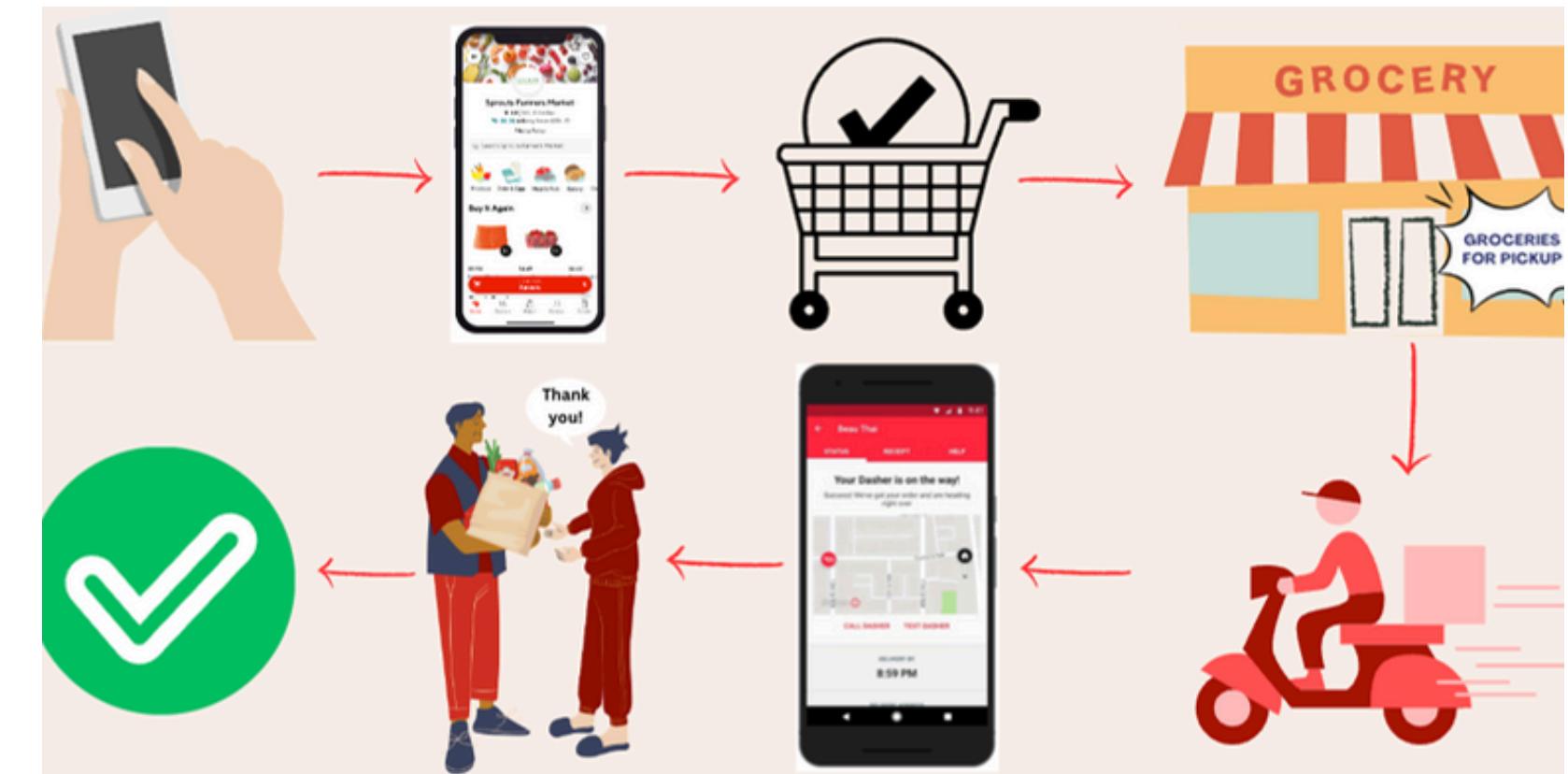
DoorDash

Service Bluechart

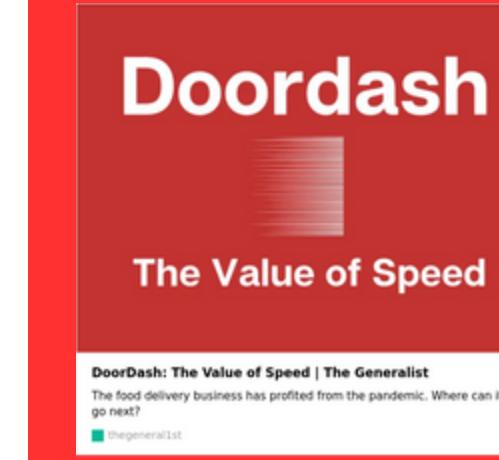
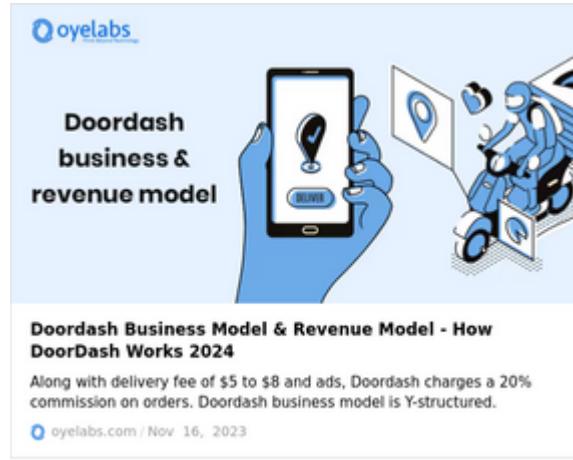


Conclusions

- DoorDash's information system design prioritizes user experience, operational efficiency and scalability
- Robust platform that connects customers, restaurants and delivery drivers
- Real-time data processing, seamless integration of multiple stakeholders
- Area for potential enhancement include continuous monitoring for increasing transaction volumes and robust data security measures
- Future opportunities for innovation its systems and differentiate itself in competitive market landscape.
- DoorDash has established itself as a leader in the food delivery industry



References:



- <https://fastercapital.com/topics/what-measures-does-doordash-take-to-protect-the-privacy-and-security-of-entrepreneurs%27-data-on-their-platform.html>
- <https://medium.com/partha-pratim-sanyal/system-design-doordash-a-prepared-food-delivery-service-bf44093388e2>
- <https://get.doordash.com/en-us/blog/how-does-doordash-work-for-restaurants>
- [YouTube. \(2023, November 21\). Service blueprint report doordash. YouTube. https://www.youtube.com/watch?v=j7Vm1yOGD4M](https://www.youtube.com/watch?v=j7Vm1yOGD4M)

Service Blueprint

