Vegetable Market Analysis

Official Website- https://vegetablemarketprice.com/

OUR TIMELINE

Successful extraction of data

Web API

Json Conversion Dataframe retrival

Searching the Api of Vegetable market Transformation of Api data to Json format

Final extraction of data in CSV format

END TIMELINE

Price Analysis

Vegetable Basket formation

Case Study

Monthly price analysis in Noida and nearby market

Basket formation for various Income group

Study on Quick
Commerce Vegetable
Business in Delhi

Successful completion of project

Average monthly price of each vegetable in the Noida Vegetable Market

Row Labels	Average of Avg Retail Price
Amaranth Leaves	21.00930233
Amla	100.2848837
Ash gourd	40.93604651
Baby Corn	105.7593023
Banana Flower	29.03023256
Beetroot	64.11744186
Bitter Gourd	56.90581395
Bottle Gourd	44.94767442
Brinjal	45.56860465
Brinjal (Big)	53.43372093
Broad Beans	67.8627907
Butter Beans	115.6046512
Cabbage	40.67790698
Capsicum	68.79651163
Carrot	78.16162791
Cauliflower	53.16511628
Cluster beans	79.05465116
Coconut	52.05348837
Colocasia	45.08139535
Colocasia Leaves	23.02209302
Coriander Leaves	16.03372093
Corn	46.94418605
Cucumber	35.3
Curry Leaves	56.23488372
Dill Leaves	22.54418605
Drumsticks	145.2290698
Elephant Yam	47.89186047

Fenugreek Leaves	18.19186047
French Beans	79.61744186
Garlic	104.8372093
Ginger	72.70930233
Green Chilli	67.9127907
Green Peas	127.872093
Ivy Gourd	47.41976744
Ladies Finger	57.91395349
Lemon (Lime)	98.64186047
Mango Raw	133.4523256
Mint Leaves	10.57674419
Mushroom	146.7709302
Mustard Leaves	28.71395349
Onion Big	45.87906977
Onion Green	72.39534884
Onion Small	72.35581395
Potato	51.7372093
Pumpkin	44.03372093
Radish	44.95697674
Raw Banana (Plantain)	15.03372093
Ridge Gourd	50.43372093
Shallot (Pearl Onion)	59.13023256
Snake Gourd	47.38139535
Sorrel Leaves	21.15930233
Spinach	23.11046512
Sweet Potato	69.70581395
Tomato	48.94418605

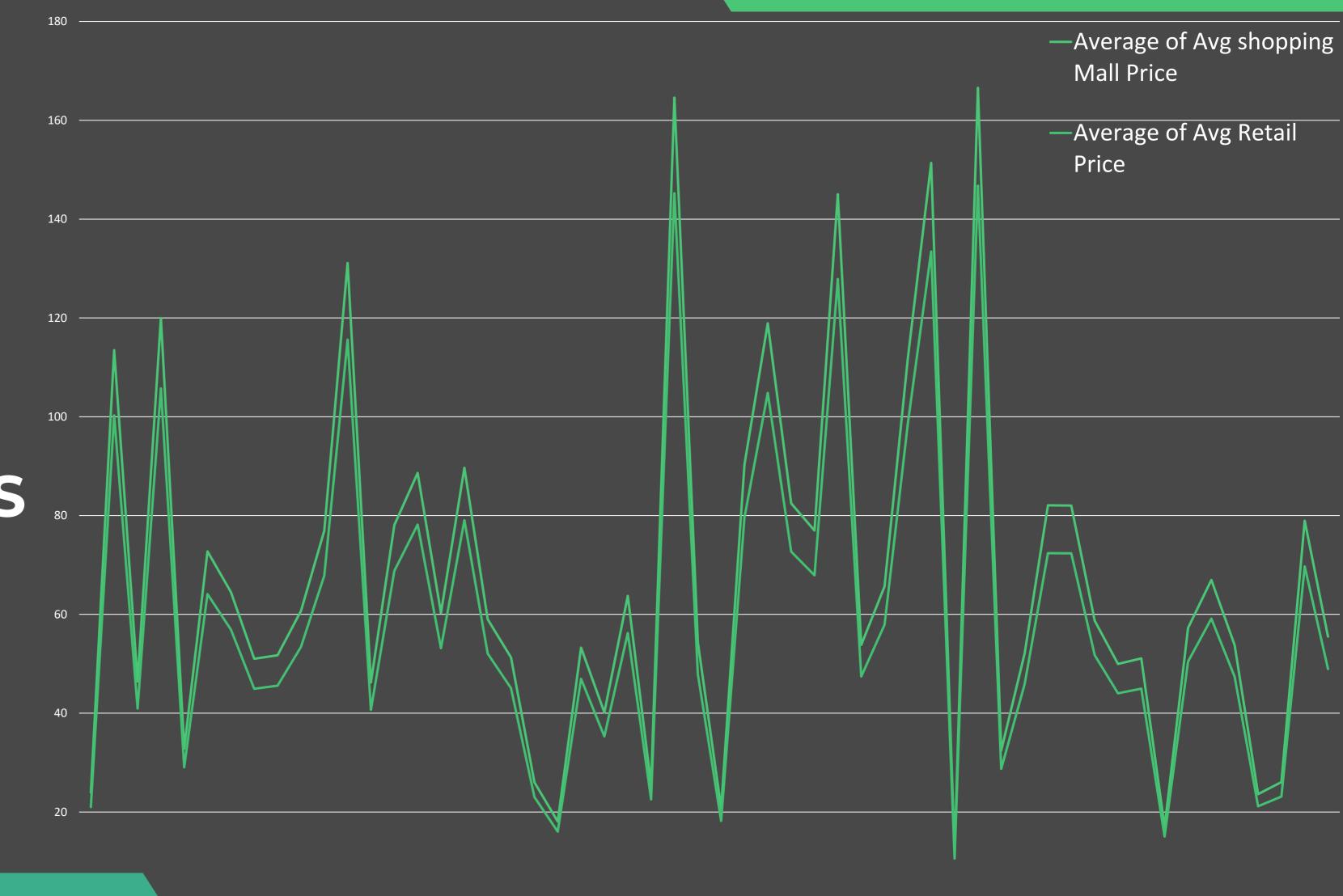
Row Labels	Average of Avg shopping Mall Price	Average of Avg Retail Price
Mint Leaves	11.85232558	10.57674419
Raw Banana		
(Plantain)	16.9755814	15.03372093
Coriander Leaves	18.06511628	16.03372093
Fenugreek Leaves	20.73372093	18.19186047
Sorrel Leaves	23.61395349	21.15930233
Amaranth Leaves	23.94534884	21.00930233
Dill Leaves	25.4755814	22.54418605
Colocasia Leaves	25.99302326	23.02209302
Spinach	26.0627907	23.11046512
Mustard Leaves	32.43604651	28.71395349
Banana Flower	32.81511628	29.03023256
Cucumber	40.13837209	35.3
Cabbage	46.21162791	40.67790698
Ash gourd	46.42906977	40.93604651
Pumpkin	49.9755814	44.03372093
Bottle Gourd	51.01744186	44.94767442
Radish	51.0872093	44.95697674
Colocasia	51.26744186	45.08139535
Brinjal	51.72674419	45.56860465
Onion Big	52.08255814	45.87906977
Corn	53.26744186	46.94418605
Snake Gourd	53.77093023	47.38139535
Ivy Gourd	53.80697674	47.41976744
Elephant Yam	54.37325581	47.89186047
Tomato	55.50348837	48.94418605

Comparison between Noida Vegetable market and Local Vegetable Market

Ridge Gourd	57.24186047	50.43372093
Potato	58.71511628	51.7372093
Coconut	59.00116279	52.05348837
Cauliflower	60.29069767	53.16511628
Brinjal (Big)	60.70465116	53.43372093
Curry Leaves	63.72906977	56.23488372
Bitter Gourd	64.50116279	56.90581395
Ladies Finger	65.66046512	57.91395349
Shallot (Pearl		
Onion)	66.95581395	59.13023256
Beetroot	72.75348837	64.11744186
Broad Beans	76.94767442	67.8627907
Green Chilli	76.95813953	67.9127907
Capsicum	78.05813953	68.79651163
Sweet Potato	78.96046512	69.70581395
Onion Small	82.03372093	72.35581395
Onion Green	82.08255814	72.39534884
Ginger	82.45930233	72.70930233
Carrot	88.60930233	78.16162791
Cluster beans	89.66511628	79.05465116
French Beans	90.29767442	79.61744186
Lemon (Lime)	111.8511628	98.64186047
Amla	113.4616279	100.2848837
Garlic	118.9337209	104.8372093
Baby Corn	119.9930233	105.7593023
Butter Beans	131.1290698	115.6046512
Green Peas	145.0313953	127.872093
Mango Raw	151.405814	133.4523256
Drumsticks	164.6	145.2290698
Mushroom	166.5744186	146.7709302



- 1. From the above data we can see that the Avg Market price of Shopping malls is always more than that of the Avg Retail price.
- 2. The main reason behind the price difference is assumed to be maintenance cost, which is always higher as compared to nearby market price.
- 3. In seasonal goods we can hardly see any price difference in the above graph.
- 4. Bargaining- In the Nearby Market generally bargaining is possible where as in the Noida Market people do not generally bargain which can create a huge difference in price.





Mint Leaves	11.85232558	
Raw Banana	16.9755814	
Coriander Leaves	18.06511628	
Fenugreek Leaves	20.73372093	
Sorrel Leaves	23.61395349	
Amaranth Leaves	23.94534884	
Dill Leaves	25.4755814	
Colocasia Leaves	25.99302326	
Spinach	26.0627907	
Mustard Leaves	32.43604651	
Banana Flower	32.81511628	
Cucumber	40.13837209	
Cabbage	46.21162791 Colocasia	51.26744186
Ash gourd	46.42906977 Brinjal	51.72674419
Pumpkin	49.9755814 Onion Big	52.08255814
Bottle Gourd	51.01744186 ^{Corn}	53.26744186
Radish	51.0872093 Snake Gourd	53.77093023
	Ivy Gourd	53.80697674
	Elephant Yam	54.37325581
	Tomato	55.50348837
	Ridge Gourd	57.24186047
	Potato	58.71511628
	Coconut	59.00116279
	Cauliflower	60.29069767
	Brinjal (Big)	60.70465116
	Curry Leaves	63.72906977
	Bitter Gourd	64.50116279
	Ladies Finger	65.66046512
	Shallot	66.95581395

Seasonal vegetables in Noida Vegetable Market

10.57674419

15.03372093

16.03372093

18.19186047

21.15930233

21.00930233

22.54418605

23.02209302

23.11046512

28.71395349

29.03023256

40.67790698

40.93604651

44.03372093

44.94767442

44.95697674

35.3

Seasonal vegetables in nearby Vegetable Market

	Coriander Leaves
	Fenugreek Leaves
	Sorrel Leaves
	Amaranth Leaves
	Dill Leaves
	Colocasia Leaves
	Spinach
	Mustard Leaves
	Banana Flower
	Cucumber
Colocasia	45.08139535Cabbage
Brinjal	45.56860465 Ash gourd
Onion Big	45.87906977 Pumpkin
Corn	46.94418605 Bottle Gourd
Snake Gourd	47.38139535 ^{Radish}
Ivy Gourd	47.41976744
Elephant Yam	47.89186047
Tomato	48.94418605
Ridge Gourd	50.43372093
Potato	51.7372093
Coconut	52.05348837
Cauliflower	53.16511628
Brinjal (Big)	53.43372093
Curry Leaves	56.23488372
Bitter Gourd	56.90581395
Ladies Finger	57.91395349
Shallot (Pearl Onion)	59.13023256

Mint Leaves

Raw Banana



Vegetable Basket



Summers

	Low-income Group		Middle-income Group		High-Inco	High-Income Group	
	Vegetable	Price	Vegetable	Price	Vegetable	Price	
	Bottle gourd	40.93604651	Ladies Finger	57.91395349	Ladies Finger	65.66046512	
Seasonal Vegetable	Pumkin	44.03372093	Pumkin	49.9755814	Drumsticks	164.6	
Non-Seasonal Vegetable	Brinjal	45.56860465	Cabbage	46.21162791	Mushroom	166.5744186	
	Potato	51.7372093	Potato	58.71511628	Potato	58.71511628	
	Onion	72.35581395	Onion	82.03372093	Onion	82.03372093	
Others	Coriander Leaves	16.03372093	Coriander Leaves	16.03372093	Coriander Leaves	18.06511628	
	Green Chilli	67.9127907	Green Chilli	76.95813953	Green Chilli	76.95813953	
	Tomato	48.94418605	Tomato	55.50348837	Tomato	55.50348837	
	Total	387.522093	Cucumber	35.3	Cucumber	40.13837209	
			Garlic	104.8372093	Garlic	118.9337209	
			Total	583.4825581	Lemon (Lime)	111.8511628	
					Total	959.0337209	

Spring

Low-income Group			Medium-income Group		High-income Group	
	Vegetable	Price	Vegetable	Price	Vegetable	Price
	Brinjal	45.56860465	Capsicum	68.79651163	Capsicum	78.05813953
Seasonal Vegetable	Cauliflower	53.16511628	Ivy Gourd	53.80697674	French Beans	90.29767442
Non-Seasonal Vegetable	Bitter Gourd	56.90581395	Sweet Potato	69.70581395	Baby Corn	119.9930233
	Potato	51.7372093	Potato	58.71511628	Potato	58.71511628
	Onion	72.35581395	Onion	82.03372093	Onion	82.03372093
Others	Coriander Leaves	16.03372093	Coriander Leaves	16.03372093	Coriander Leaves	18.06511628
	Green Chilli	67.9127907	Green Chilli	76.95813953	Green Chilli	76.95813953
	Tomato	48.94418605	Tomato	55.50348837	Tomato	55.50348837
	Total	412.6232558	Garlic	104.8372093	Garlic	118.9337209
			Total	586.3906977	Lemon(Lime)	111.8511628
					Total	810.4093023

5 Winters

	Low-income Group			Medium-income Group			High-inco	ome Group
	Vegetable	Price		Vegetable	Price		Vegetable	Price
	Cabbage	40.67790698		Spinach	23.1104651	.2	Spinach	26.0627907
Seasonal Vegetable	Couliflower	53.16511628		Cabbage	46.2116279	1	Broad Beans	76.94767442
Non-Seasonal Vegetable	Ridge Gourd	50.43372093		Coconut	52.0534883	37	Ladies Finger	65.66046512
	Potato	51.7372093		Potato	58.7151162	28	Potato	58.71511628
	Onion	72.35581395		Onion	82.0337209)3	Onion	82.03372093
Others	Coriander Leaves	16.03372093		Coriander Leaves	16.0337209)3	Coriander Leaves	18.06511628
	Green Chilli	67.9127907		Green Chilli	76.9581395	53	Green Chilli	76.95813953
	Tomato	48.94418605		Tomato	55.5034883	37	Tomato	55.50348837
	Total	401.2604651		Green Peas	127.87209)3	Green Peas	145.0313953
				Carrot	78.1616279	1	Carrot	88.60930233
				Raddish	44.9569767	' 4	Raddish	51.0872093
				Garlic	51.087209)3	Garlic	118.9337209
				Total	712.697674	4	Amla	113.4616279
							Lemon (Lime)	111.8511628
							Total	1088.92093

Inflation Rate

Low-Income Group Avg= 400.46 Middle-Income Group= 627.52 High-Income Group= 952.78

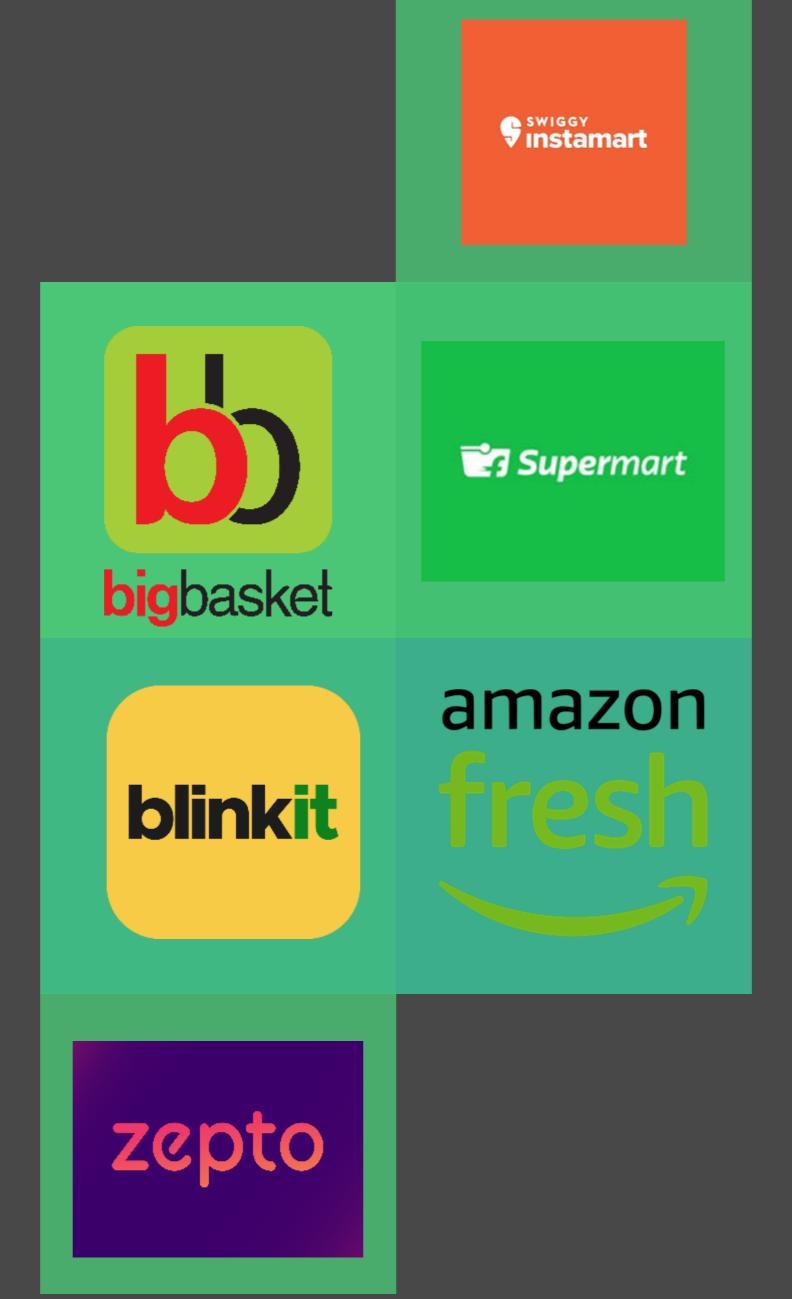
Inflation for Low-Income Group=(627.52-400.46)/627.52 X 100= 36.18% Inflation for Middle-Income Group= (952.78-627.52)/952.78 X 100= 34.13% Inflation for High-Income Group= (952.78-660.25)/660.25 X 100= 44.30%

The market size & potential for the quick commerce vegetable business in Delhi is significantly high, Considering the population of Delhi to be over 18 million. In addition to it, the government is also acting as a helping hand to these start-ups by introducing initiatives such as Digital India and Start-Up India have created a favourable environment for the growth of the business itself as well as the Nation. With the steep increase in smartphone penetration, seamless internet connectivity and ease of lifestyle more and more people in Delhi are turning to online quick commerce vegetable business for their convenience and quality products. As a result, there is a tremendous opportunity for entrepreneurs to enter this space and capture a significant share of the market.

CASE STUDY

The market size and potential for the quick commerce vegetable business in Delhi





Big basket

Blinkit

Amazon fresh

Swiggy Instamart

Flipkart Supermarket

Zepto

Competitive landscape

What is the competitive landscape for the quick commerce vegetable business in Delhi?

There are big giants like BigBasket, Amazon Fresh, Flipkart Supermarket, BlinkIt, Zepto, and SwiggyInstamart. To compete in this crowded market and such big giants, quick commerce vegetable businesses need to differentiate themselves from each other through their pricing, customer service and product offerings. The competition who will offer high-quality products, excellent customer service, competitive pricing and fast delivery are likely to gain a large market share and succeed rapidly in this space. Additionally, businesses can leverage technology to improve their operations, such as using data analytics to optimise inventory management and delivery routes

3) KEY CHALLENGES

Competition

The quick commerce vegetable
businesses in Delhi is highly
competitive, with several giants
trying to take over the market.
Businesses need to differentiate
themselves through their product
offerings, pricing and customer
satisfaction

Sourcing high-quality vegetables

One of the main challenges faced by the quick commerce vegetable businesses is of sourcing high-quality vegetables. The quality of the vegetables can significantly impact customer satisfaction, the business must ensure that they are sourcing fresh and high-quality products

Sourcing high-quality vegetables

One of the main challenges faced by the quick commerce vegetable businesses is of sourcing high-quality vegetables. The quality of the vegetables can significantly impact customer satisfaction, the business must ensure that they are sourcing fresh and high-quality products.

Payment Collection

Collecting timely payments from customers can be challenging, especially where cash-on-delivery is prevalent. Businesses need to have a robust payment collection system in place to ensure timely payment collection and prevent payment defaults.

Infrastructure Challenges

Delhi faces several infrastructure challenges such as traffic congestion and poor road condition in places, which can impact the delivery times and logistics of the quick commerce vegetable business

Managing Inventory

Managing Inventory can be another challenge that can be faced by the quick commerce vegetable business. They need to ensure that they have sufficient stock of all vegetables, while also managing that they don't have excess stock that may go to waste

Ensuring Timely Delivery

Timely Delivery plays a very important role in the success of quick commerce vegetable businesses. Customers expect their orders to be delivered promptly, and any delays can lead to dissatisfaction and loss of customers.

Success Factors

- High-quality products
- Competitive pricing
- Efficient logistics and delivery
- Innovative technology
- Customer service
- Brand image

High-quality products

Quick commerce vegetable businesses need to source and deliver high-quality vegetables to their customers consistently.

Competitive pricing

Need to offer competitive prices to attract and retain customers, while also ensuring that their profit margins are healthy.

Efficient logistics and delivery

Need to ensure that they can deliver products promptly and reliably, while also managing inventory and minimizing wastage.

Innovative technology

Quick commerce vegetable businesses can leverage innovative technology to streamline their operations and improve efficiency.

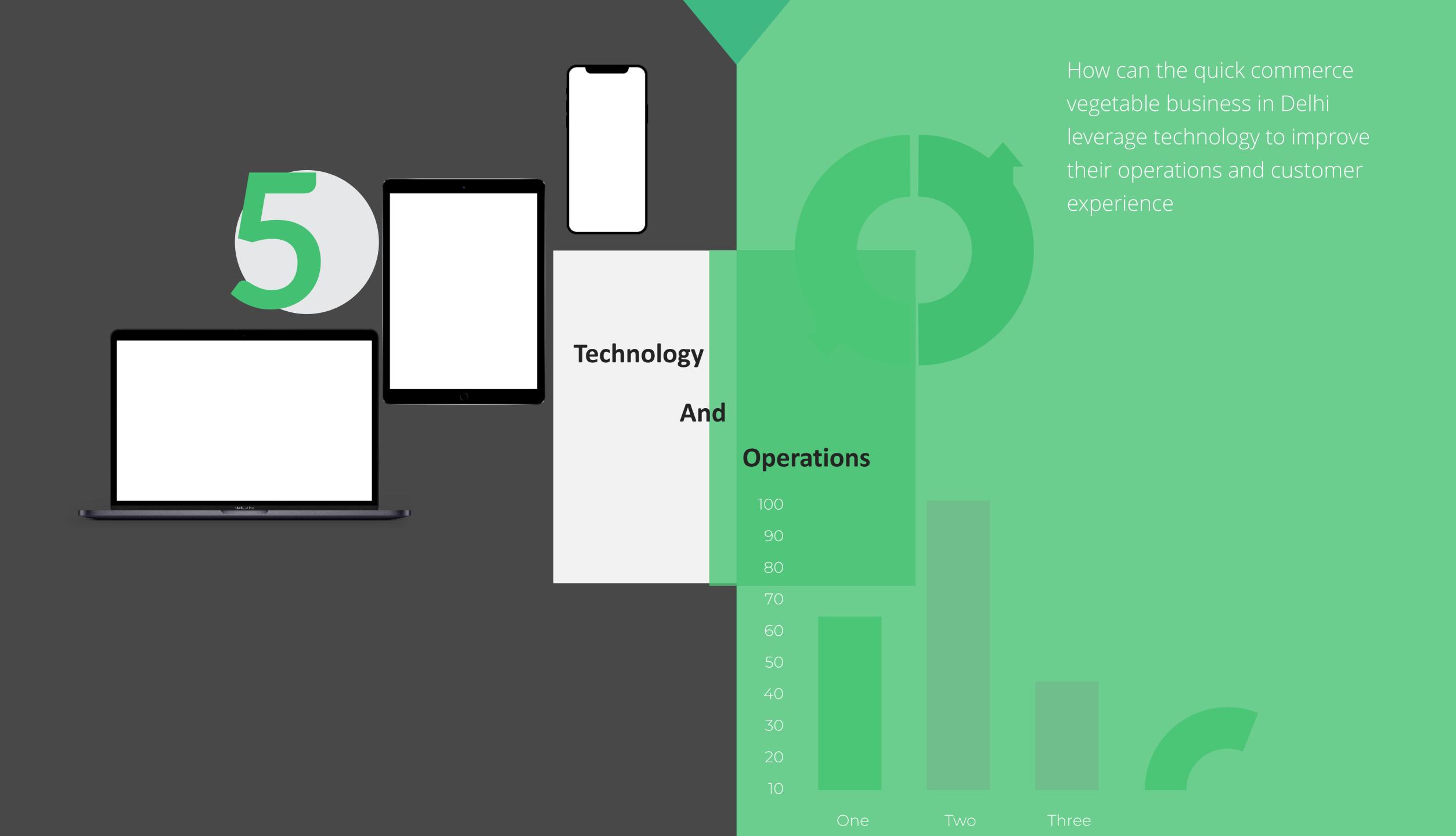
Customer service

Need to provide excellent customer service to ensure customer satisfaction and loyalty. This includes timely resolution of customer queries and complaints, as well as efficient handling of returns and refunds.

Brand image

Building a strong brand image is critical for the success of quick commerce vegetable businesses.

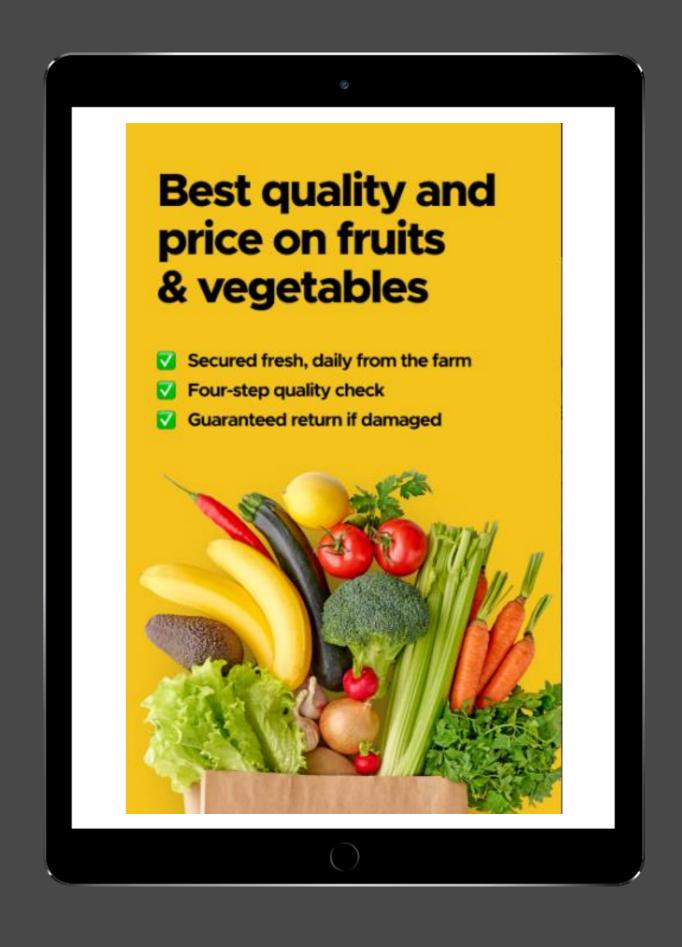
They need to establish themselves as a reliable and trustworthy brand that offers high-quality products, competitive prices, and excellent customer service.



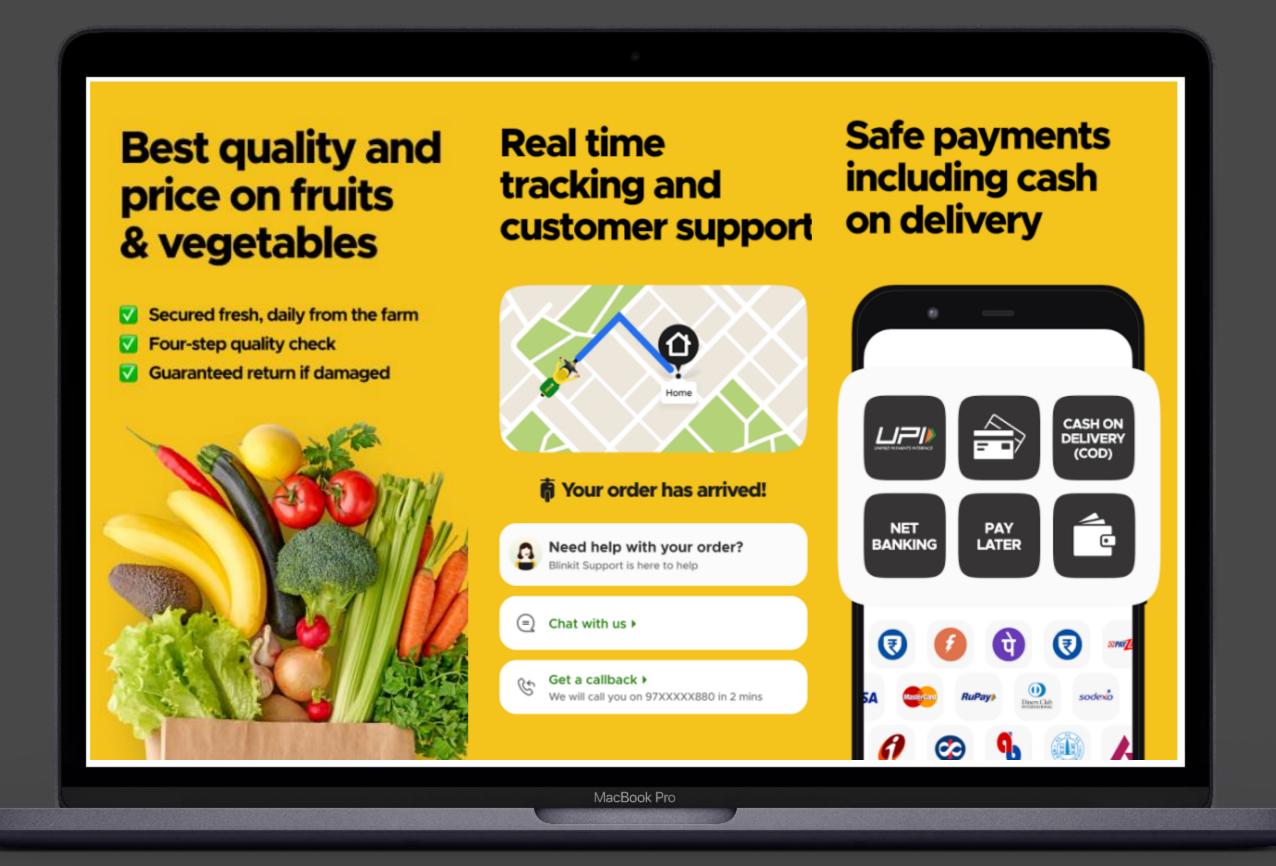
PHONE PREVIEW SAMPLE



Quick commerce vegetable businesses can develop mobile, tablet and laptop applications that allow customers to browse products, place orders, and track deliveries. This can improve the customer experience by making it more convenient for customers to shop and receive their orders.



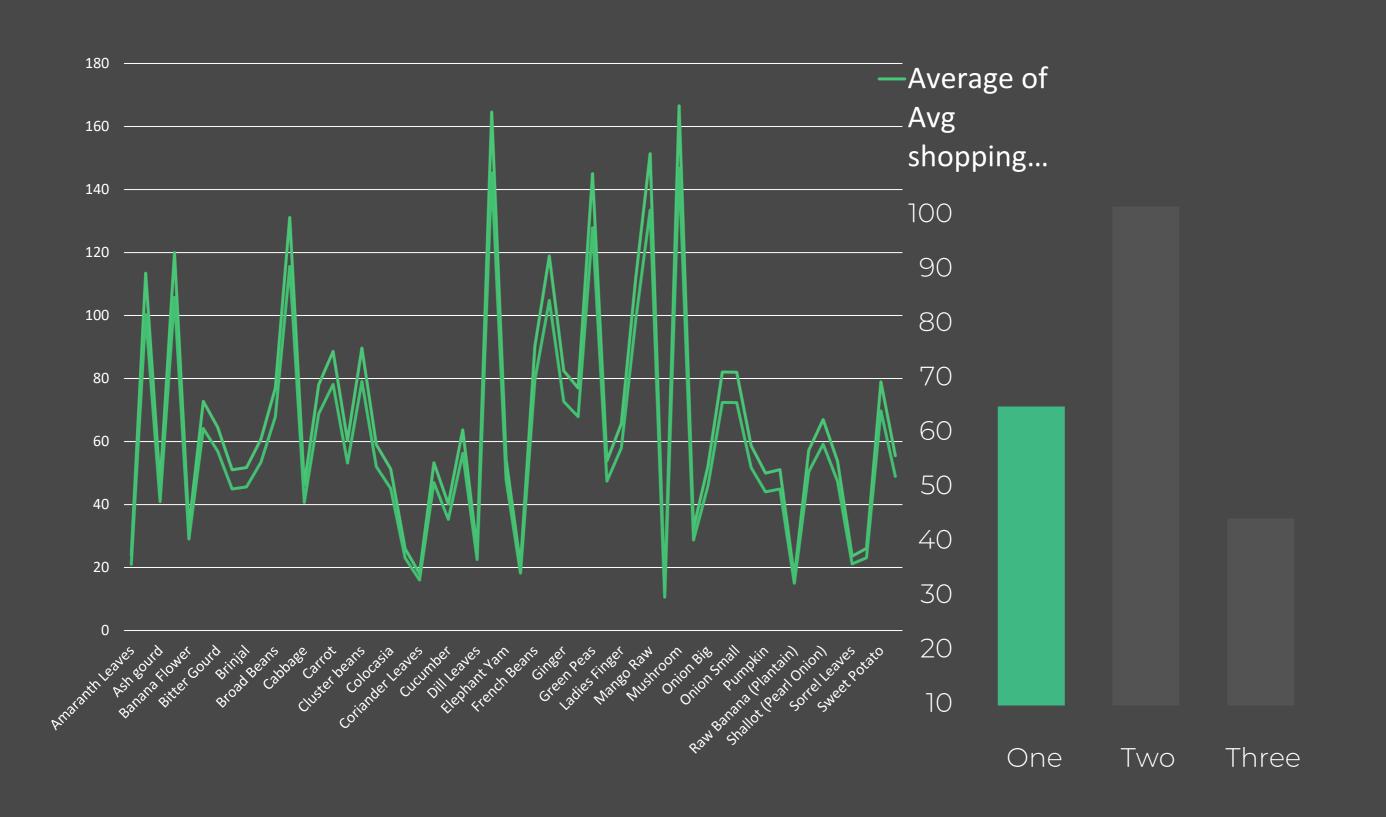
TABLET PREVIEW SAMPLE



LAPTOP PREVIEW SAMPLE

Data analysis

Quick commerce vegetable businesses can use data analytics to optimize their operations. For example, they can analyze data on customer preferences and buying patterns to optimize their inventory management and supply chain.





GPS tracking

GPS tracking technology can be used to track delivery vehicles and optimize delivery routes. This can improve delivery times and reduce transportation costs.

Automated Inventory Management

Automated inventory management systems can help quick commerce vegetable businesses manage their inventory more efficiently. These systems can track inventory levels, predict demand, and generate alerts when inventory levels fall below a certain threshold.

Inventory Management Process

1 Goods are Delivered 2 Goods are reviwed, sorted and stored

3 Inventory levels are monitored

4 Stoock orders are placed







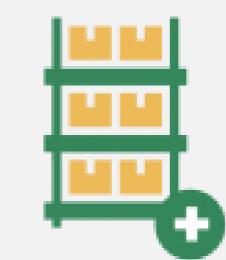


5 Sock orders are approved



6

Goods are taken from stock



Inventory levels

are updated

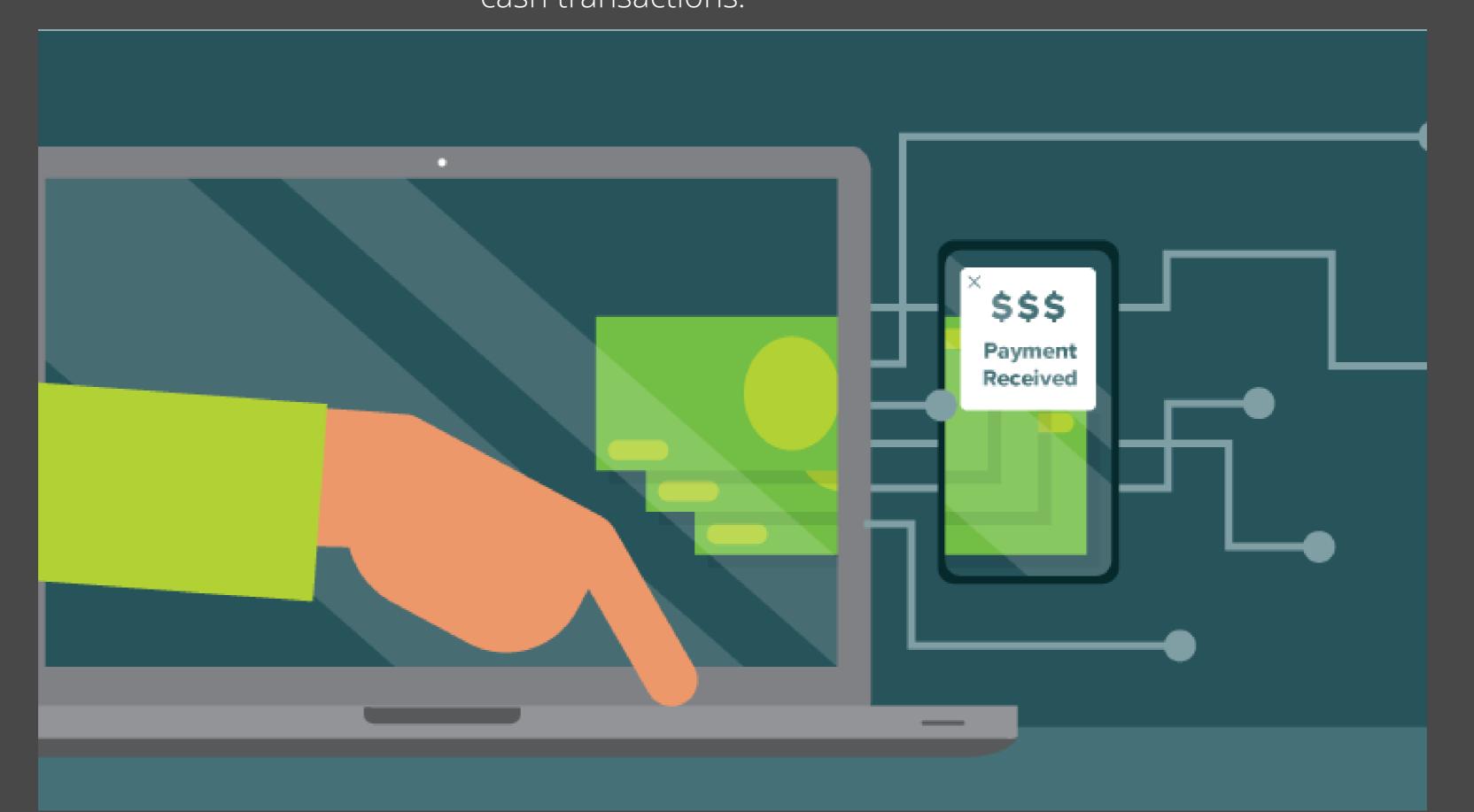
8 Low stock levels trigger purchasing



Electronic payment systems

Electronic payment systems, such as mobile wallets and online payment gateways, can make it easier for customers to pay for their orders.

This can improve the customer experience by reducing the need for cash transactions.



Challenges Faced and our Learnings

Web Scrapping
Time Management
Extraction of Insights
Comparative analysis with nearby market

THANK YOU