

Data Analytics with Power BI

“Online delivery Applications”

“ SRI PARAMAKALYANI COLLEGE ”

NM ID	NAME
74F494D1D9D7964982F403CE1E7389CA	BALAGAMMAL P

TRAINER NAME: M.UMA MAHESHWARI

MASTER NAME: M.UMA MAHESHWARI

ABSTRACT

Delivery services are critical for businesses for the following reasons: Delivery services are an essential component of ensuring customer satisfaction. Customers expect their orders to arrive on time and in good condition.

Food delivery apps are third-party delivery services hosted on mobile applications that restaurants or retailers partner with to showcase their menu and food offerings, allowing customers to order food and get it delivered to their doorstep.

Online ordering system is a system that allows customers to order products or services online without having to visit a physical store. This allows customers to place orders and have their items delivered to their homes or offices, saving them time and money.

Who started the delivery service for the first time, and when? The first online restaurant delivery service, World Wide Waiter, launched in 1995. They had 60 restaurants in the San Francisco Bay Area. Grub Hub was ahead of the crub, launching their food delivery app in 2004.

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CHAPTER 1

INTRODUCTION

1.1 Problem statements

Different food delivery applications often provide different offers or discounts. Users are also not satisfied with their delivery time and random cancellations.

Quality: In comparison to eating out in a restaurant, the food from the delivery service is packed in plastic bags and may get cold if the distance of your restaurant is far from your delivery address.

1.2 Proposed Solution

One of the challenges that many restaurants face is managing food orders manually. Manual food order management can lead to errors, delays, and customer dissatisfaction. Food is a solution that can automate and streamline the process of food order management. Use technology: Technology can help businesses to streamline their delivery operations and improve efficiency. For example, using route planning software, real-time tracking systems, and automated dispatching tools can all help to reduce delivery times, improve accuracy, and increase customer satisfaction.

1.3 Feature

Customers prefer using the food ordering app as they will generate an order without having to elucidate it to a special person and have the food is delivered at his doorstep. Moreover, online payment makes this process easier and faster.



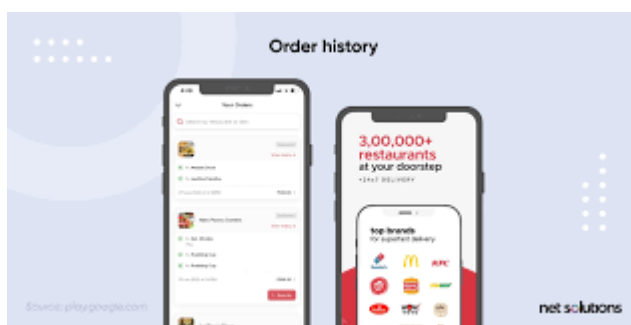
Easy payment options



Push notifications



Ratings and reviews



Order history



Loyalty programs



Customer feedback



Discounts and promotions



Social media integration



Messaging within the app



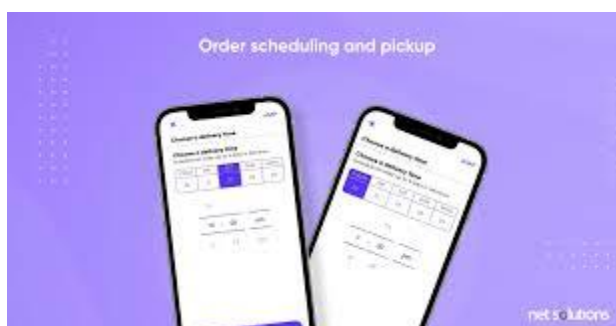
Search filters



Tracking



Data analysis



Schedule orders

1.4 Advantages

Better reach, management, Better customer idea, Great discounts, heightened brand awareness, commerce, Conclusion, analytics, highly customizable, multiple payment options, locality program.

1.5 Disadvantages

Deliverymen put themselves in danger, Food quality compromised, increased expense, Food may get cold, Delay, Juggling with your health

1.6 Scope

Online food ordering has become a popular trend among consumers, and understanding its appeal is crucial. The primary reason consumers prefer this method is convenience. With just a few clicks, you can order your favorite meal from your preferred restaurant and have it delivered to your doorstep.



We expect the food delivery app industry to grow significantly over the next five years. According to a recent report, the global food delivery market is projected to reach 365 billion by 2026, growing at a period from 2020 to 2026.

CHAPTER 2

PROCEDURE AND SOFTWARE MANAGEMENT

2.1 PROCEDURE

1. Conduct a market research.
2. Choose the business model.
3. Choose a software development partner.
4. Decide on the app features.
5. Choose the tech stack.
6. Design and development
7. Testing the app
8. Launch and marketing

2.2 SOFTWARE MANAGEMENT:

Delivery management software is mainly used to plan and schedule orders for delivery. You can also use DMS to map and optimize routes for deliveries and service calls. And many professionals use delivery management apps to dispatch and track drivers.

Using the dispatcher panel of the food delivery software, your dispatchers can register and manage food orders. It is possible to send orders automatically and manually for drivers.

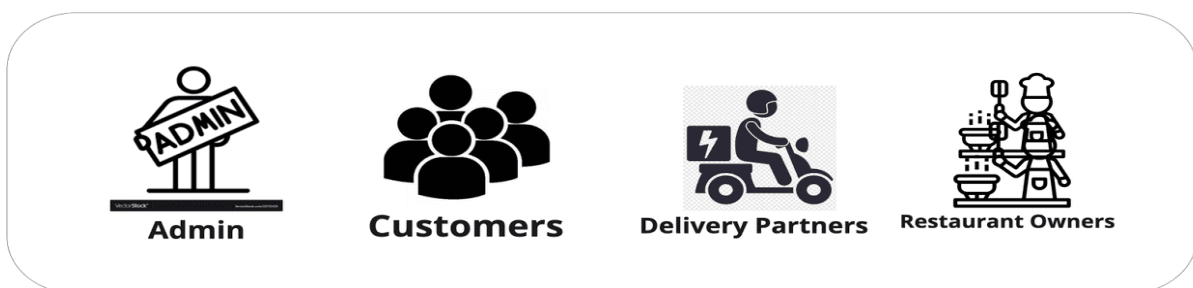
Mobile: This is a mobile application that you can use mobile phone to order your products.

CHAPTER 3

PROJECT ARCHITECTURE

3.1 ARCHITECTURE

For example , let us take a food delivery app and their orders .



Features of Online Food Delivery App miro

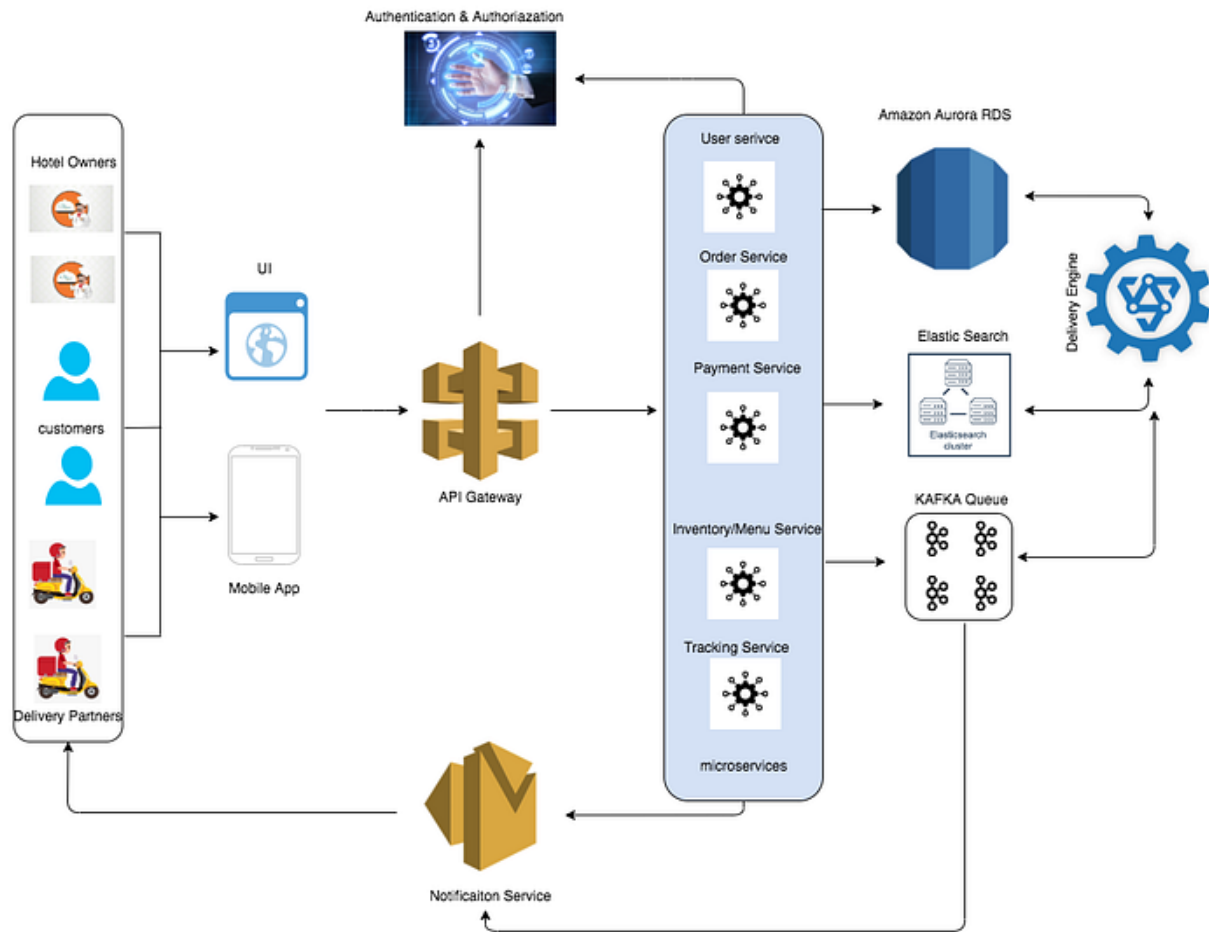
The above diagram depicts the actual requirements for an Online Food Delivery system. It comprises of:

Admin Panel: Responsible for onboarding of Restaurants Owners and Delivery Partners.

Restaurant Owners: Responsible for adding menus and managing orders and payments.

Delivery Partners: Responsible for picking an order from the Restaurant Owners and delivering them to the customers.

Customers: They are the actual client. They will be consuming the application. The customer will make an order from the system.

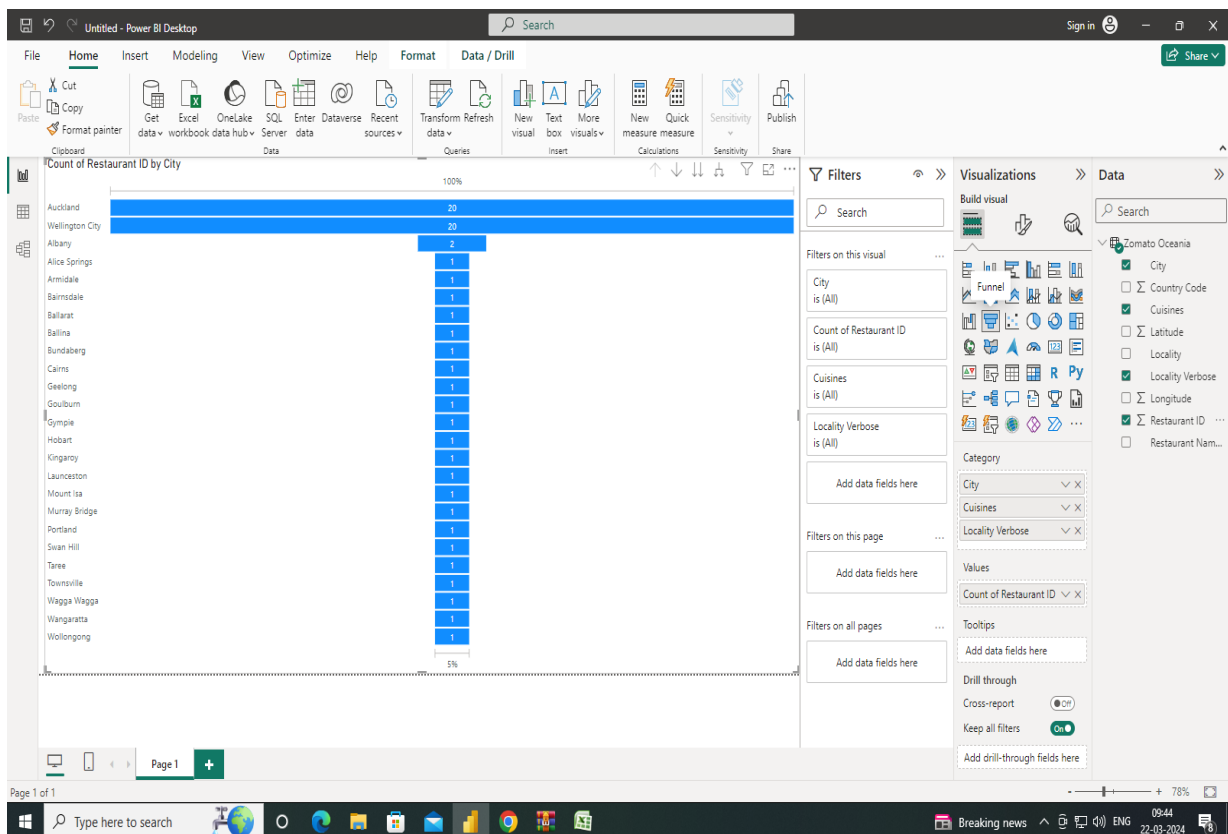


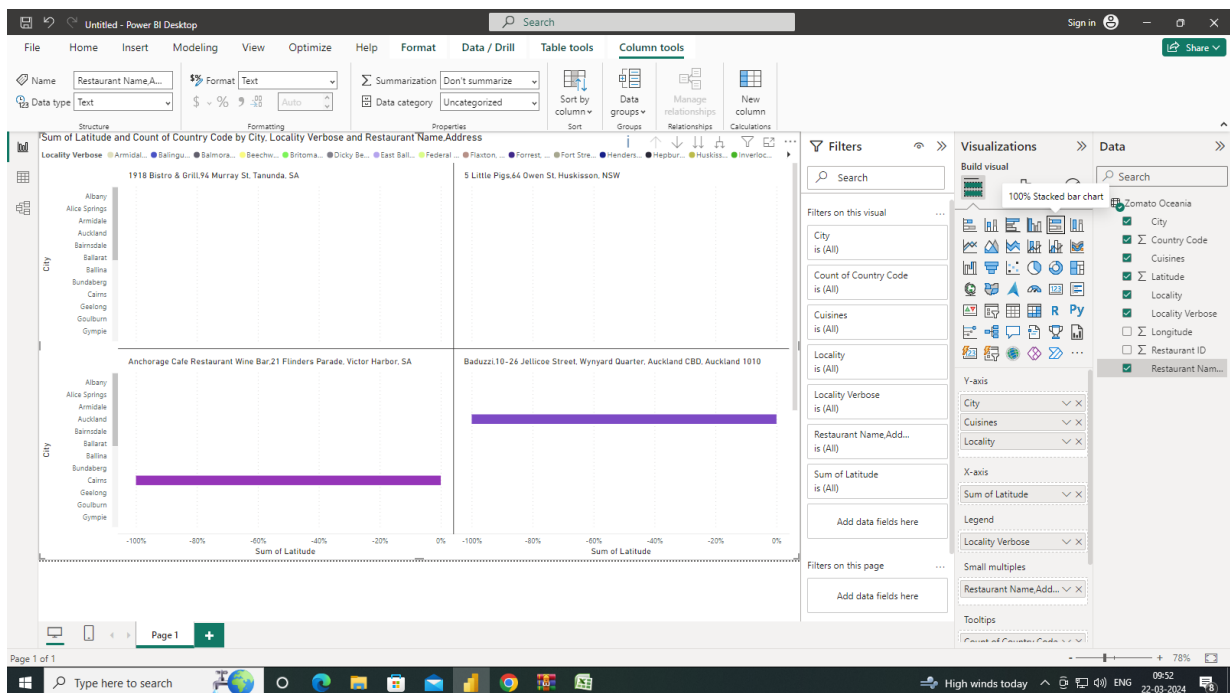
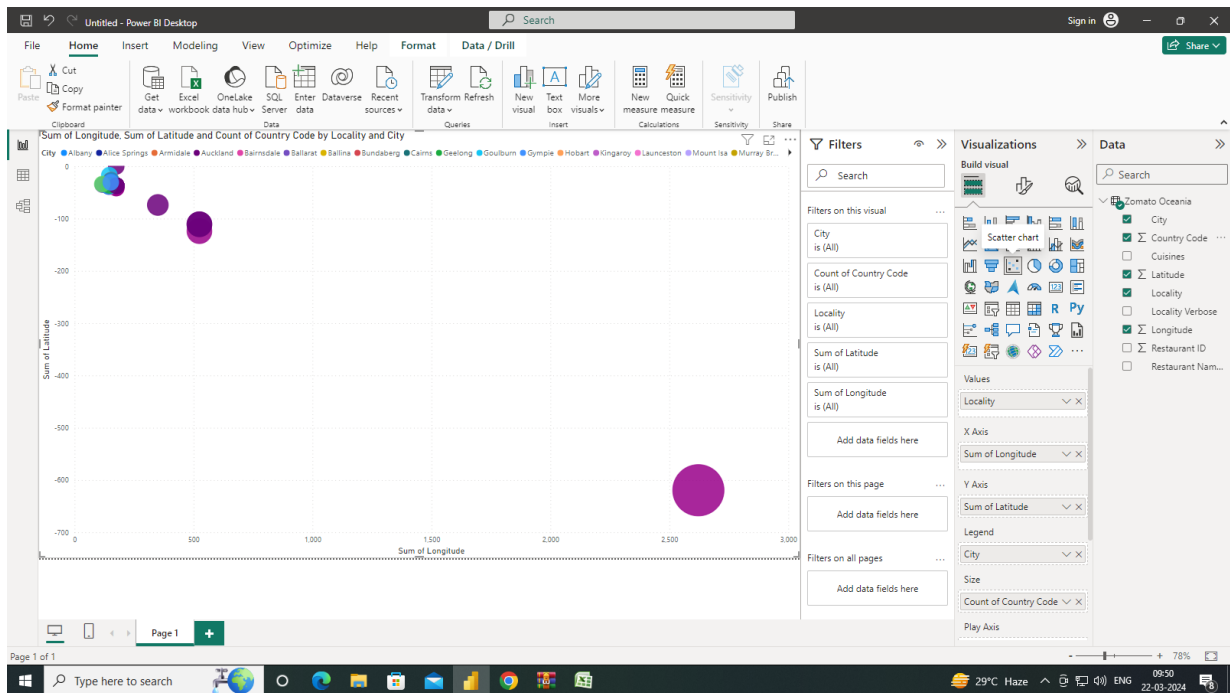
POSSIBLE TECH STACK:

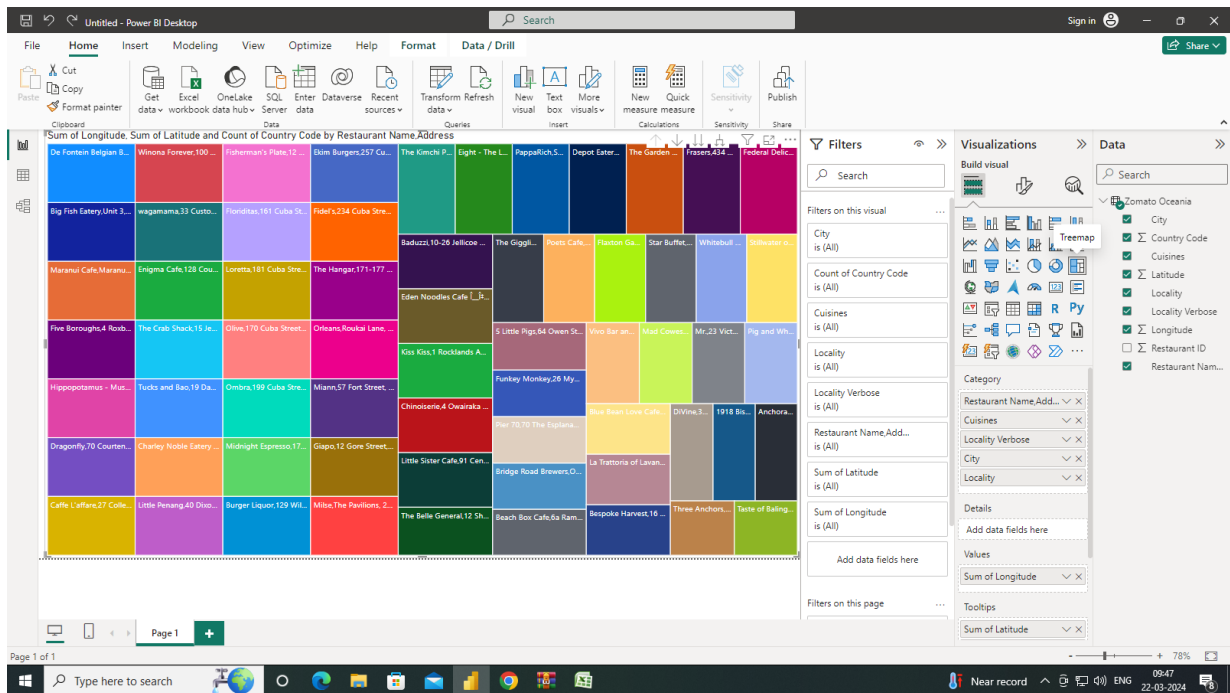
Module Name	Possible options	Recommendation	Comments/Reasons
Backend Services	Building our own services using one of these languages (Java, Node.js, Python)	SpringBoot/ Python Django	It is preferred to use a common language across product. Spring Boot java based API can be used as it provides many options to provide secure API layer
Message Broker/Queue	Kafka, Google pub sub, RabbitMQ, Amazon Kinesis, ActiveMQ	kafka	Highly scalable and open source
Authentication/Authorization	Own Service, Amazon Cognito service or Radius single sign on service	SpringBoot/ Python Django	It is preferred to use a common language across product. Spring Boot java based API can be used as it provides many options to provide secure API layer
Database SQL	MySQL, PostgreSQL, Amazon RDS, Amazon Aurora	Amazon Aurora	Highly scalable transactional DB, can be used for all transactional details like user, order management, payment etc
Database NoSQL	Cassandra, ElasticSearch, Mongo DB, Hbase	Elastic Search	Easy to Search foods/menu and restaurants, offers
UI	React JS, Angular JS	React JS	Painless way to create interactive UI
Mobile App	Android, iOS, Hybrid, native apps	Hybrid	
Notification Service	build your own service, Amazon SES	Amazon SES	easy to scale and manage

CHAPTER 4

MODELING AND RESULT







Cuisines	City	Locality	Sum of Longitude
European	Auckland	Mission Bay	174.83
Asian, Sushi, Seafood	Auckland	Penrose	174.81
Cafe, Kiwi	Wellington City	Lyall Bay	174.79
American	Wellington City	Mt Victoria	174.78
French, Kiwi	Wellington City	Te Aro	174.78
Asian	Wellington City	Te Aro	174.78
Cafe	Auckland	Paritahi	174.78
Central, Wellington City 6011	Wellington City	Wellington Central	174.78
Cafe, Kiwi, Ice Cream, Desserts	Wellington City	Te Aro	174.78
Seafood, Kiwi	Wellington City	Wellington Central	174.78
Asian Fusion, Pub Food, Fusion, Asian, Filipino, Malaysian, Thai	Auckland	Neermarket	174.78
European	Wellington City	Wellington Central	174.78
Malaysian	Wellington City	Te Aro	174.78
Vietnamese, Fish and Chips	Wellington City	Te Aro	174.78
Italian, Cafe	Wellington City	Te Aro	174.78
European, Cafe	Wellington City	Te Aro	174.78
Mediterranean, Cafe, European	Wellington City	Te Aro	174.78
Italian	Wellington City	Te Aro	174.78
Cafe	Wellington City	Te Aro	174.77
American	Wellington City	Te Aro	174.77
Fast Food	Wellington City	Te Aro	174.77
Cafe, European, Mexican	Wellington City	Te Aro	174.77
Cafe	Wellington City	Te Aro	174.77
American	Auckland	Britomart	174.77
Desserts	Auckland	Fort Street	174.77
Ice Cream, Desserts	Auckland	Britomart	174.77
Desserts	Auckland	Britomart	174.77
Asian Fusion, Cafe	Auckland	Lorne Street	174.77
European	Auckland	The Langham Hotel, Auckland CBD	174.76
Malaysian	Auckland	City City View, Auckland CBD	174.76
Seafood, Kiwi	Auckland	Federal Street	174.76
Kiwi, European	Auckland	Mt Eden	174.76
			10,461.24

The online delivery market is evolving and expanding at a drastic scale. The unprecedented growth of the food delivery industry extends a plethora of opportunities for businesses to start an online food delivery marketplace.

The delivery market is expected to grow 10% a year to be worth \$25bn in Europe by 2023. Technological advancements have turbocharged the adoption of online food delivery services among customers and this has been the major reason for several entrepreneurs to flee towards the online food delivery market.

Strategizing the business model is one of the initial requirements for starting a new business. It is highly advisable for businesses to analyse the market, define the target audience, set business goals, and accordingly choose the business model for their online food delivery business.

Entrepreneurs should be familiar with various online food delivery business models existing in the market to make a well-informed decision. In this blog, we will discuss different business models for online food delivery business and guide you to choose the right one for your venture.

CONCLUSION

As we can see, online shopping may or may not be greener than traditional shopping. There are simply way too many factors that we have to consider in such a model. As we focus on the costs of online shopping, it seems that online shopping is really detrimental for the environment. Online shopping brings us great convenience, but it also encourages irresponsible consumption habits like exploiting the advantages of free returns and expedited shipping. These add on to the existing pool of environmental problems that we are dealing with – global warming, wastes and pollution. Therefore, we should change our attitude towards e-commerce – to be more responsible, less exploitative and more thoughtful for the environment.

Consume responsibly before we are left with nothing.

FUTURE SCOPE

Online delivery refers to the process of ordering and receiving food or products through digital platforms such as mobile apps or websites. Customers can place their orders through these platforms, and the restaurants or sellers deliver the requested items to the customers' specified locations. Online delivery offers several advantages, including convenience, a wide range of options, and the ability to order from anywhere. However, there are also challenges associated with online delivery, such as issues with order accuracy, delivery delays, and payment security.

The COVID-19 pandemic has further highlighted the importance of online delivery as it allows people to access food and essential items while minimizing physical contact. Various studies have been conducted to improve the efficiency and safety of online delivery, including the development of hierarchical delivery frameworks and algorithms to optimize delivery routes.

REFERENCES

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