# DotsLogistics

Bringing businesses together

# Meet the Team



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# The Problem

- Lack of visibility on market demand, supply, and volatility of the supply chain.

- Other than references from peers, there are no digital marketing strategies to  attract and reach new customers [A2].

- Mainstream ERP software are not ideal for SMEs due to the costs incurred by implementation and customization [9].

- 30-40% reduction in business depreciation of assets due to the impacts of COVID-19 [6, A2].

- Current SMEs lack data analytics and have unclear digital infrastructure [8].

Note: references can be found in the additional appendices provided

# Proposed Design

**DotsLogistics**

- An open-source platform with AI capabilities that connects warehouses, logistics companies, and small businesses to find partners and complete transactions

- Dots Logistics is tailored towards supporting B2B and B2C relationships, helping improve the efficiency within the supply and logistics sector

- A low-cost solution for SMEs during and post-COVID

# Market Segment Insights

Small and medium sized enterprises who provide or need shipping and other logistics services.

## USD $16.4 Billion

Canadian revenue recorded in 2019 in the third-party logistics industry [14]

## Digitization

High demand to integrate technology to reduce costs, automate processes, and improve business performance within the supply chain [16].

## 90% SMEs

of the Canadian economy is small to medium sized enterprises [3]

## Data Analytics

Organizations expect automation in their supply chain processes to double in the next 5 years [17]

## Growing E-commerce

Dramatic increase in e-commerce due to COVID-19, with a 32.4% growth in sales in 2020 [15]

## Customer Demands

Customers are demanding faster delivery, transparency, and effective customer services [17].

# What are Industry Players Saying?

Insights from the industry professionals we interviewed [see A3]

## Social Media

One interviewee leveraged social media as an effective marketing tool for e-commerce

## COVID on e-commerce

Each interviewee noted a significant disruption from COVID-19 where retail declined and e-commerce increased

"Since the arrival of COVID, I have seen a reduction in business of just under 30%.
- Carla Kingston, small business owner in logistics

## No Market Insights

SMEs lack resources to access market insights and are left with little detail.

## COVID on shippers

Increased demand for shippers & carriers: the price is inflated 3-4 times compared to 2019

# Major Competitor
## *Uber Freight*

**What they do**
- A platform that matches truck drivers and shippers with carriers whose goods that need to be transported

**What they do not provide**
- Large carriers or manufacturing businesses tend to do business with trusted vendors.

- Shippers have no control of the quote provided to customers [12]

- Shippers look for ways to reduce costs through optimization of routes and volume of goods, which is not provided by Uber

- The platform does not expose shippers to a digital ecosystem to attract and find new customers.

- Shippers do not have an overview of the industry and market trends [12]

# Other Competitors

## *SAP, Oracle*

- SAP and Oracle are providers of enterprise resource applications and services across all industries and markets

- ERP systems are expensive, the cost of implementation range between $75 - $750,000 for large businesses. The SMEs in this industry do not have the financial and talent to acquire and  manage these systems.

- These systems do not encourage collaboration and industry insight because they are customized to a business internal process.

- They are often complex to use [4].

# Our Solution

**DotsLogistics**

Connecting the supply chain ecosystem by providing real-time market insights on supply and demand, streamlining business operations that will help SMEs overcome their challenges and optimize performance.

Our goal is to provide **real-time market insights** and **visibility** by connecting the supply chain ecosystem.

**What makes us better?**
- Free marketplace
- Analytics dashboard
- Improved efficiency of interactions with partners
- Visibility through data
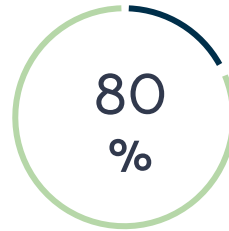- Business partners have control over invoicing and services rendered on the platform
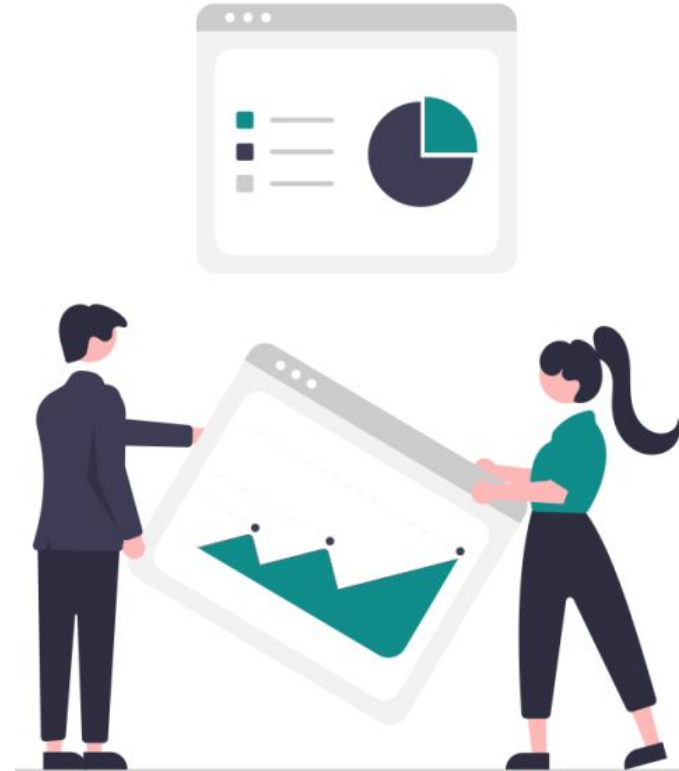
# Target Audience

## Small and medium sized enterprises involved in the supply chain industry
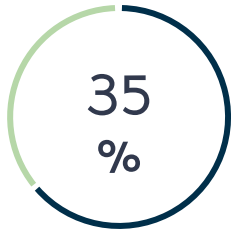
**90%** — **SMEs**
SMEs contribution to the Canadian economy [3]
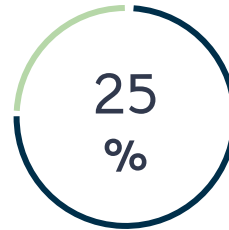
**80%** — **Industry before COVID**
Of businesses thought it necessary to act more strategically about their supply chain managements [1]

**35%** — **SMEs in COVID**
Of small businesses reported disruptions due to supply chain challenges [6]

**25%** — **Supply Chain during COVID**
Companies were slowing processing lines by 20–30% by March 2020 [2]

# How it Works – Software

- Using React as front-end and client side framework, handling UI and getting data through requests to the Flask back-end
- Integration with Microsoft tools
  - **Azure Artificial Intelligence and ML Studio**
  - **Azure App Services, Virtual Machines, and Database for PostGreSQL**
  - **Azure Power BI Embedded for analytics displays**
- Data stored in a secure PostGreSQL DBMS
- Data can be manually inputted by customers or uploaded through a csv file with appropriate attributes
- Seamless integration of Azure with our Flask backend
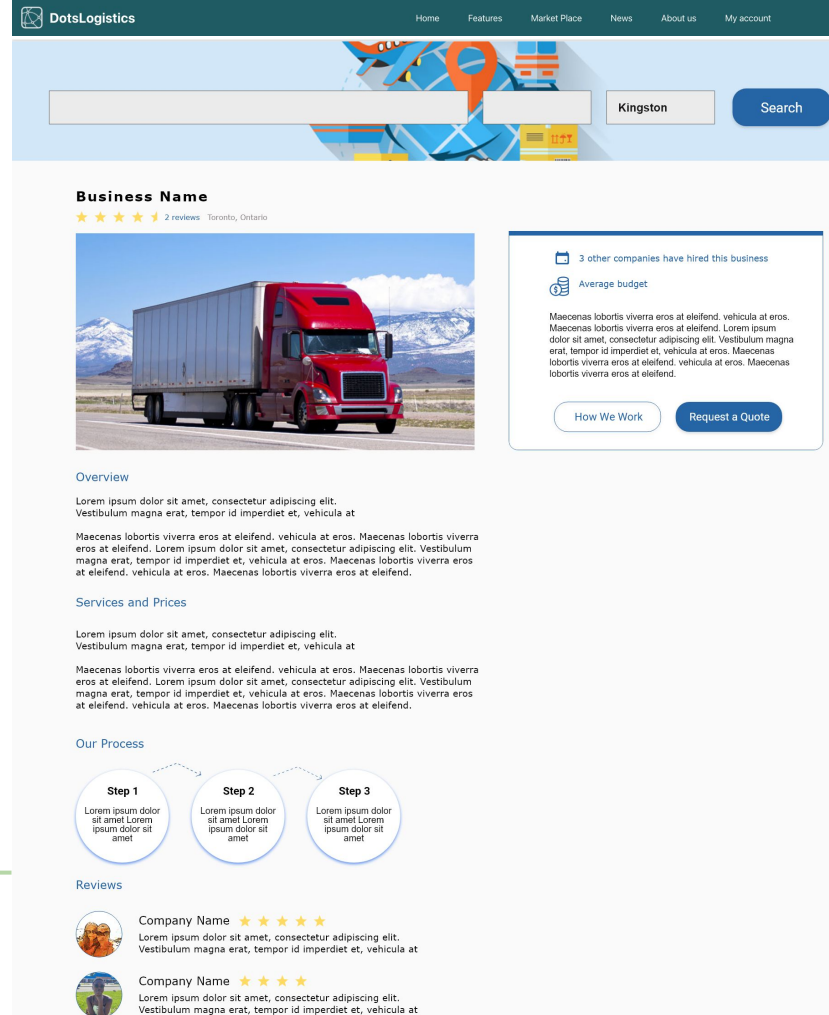
# How it Works – Marketplace

- Free marketplace for users to search for partners, users can filter by:
  - **type of commodity**
  - **business category**
  - **initial location by ZIP code and radius**
  - **type of service**
  - **destination location**
- Users can request a quote, send RFPs and messages to partners.
- Email notifications to never miss an opportunity.
- AI recommendation engine to find partners easier through optimization of shipping routes and using client criteria.



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# How it Works – AI

- Using Azure Artificial Intelligence, the platform will match and recommend partners to services available at competitive prices based on criteria and previous transactions.
  - Partner recommendations will also include AI optimization of routes to reduce costs
- To perform market analysis and insights from aggregated data and transactions on DotsLogistics
  - Using Azure Machine Learning Studio to deploy a regression model allowing analysis of augmented data and training of models using predictive analytics.
- Analytics dashboards detailing transactions and statistics for potential partners and customers own business using Azure Power BI Embedded
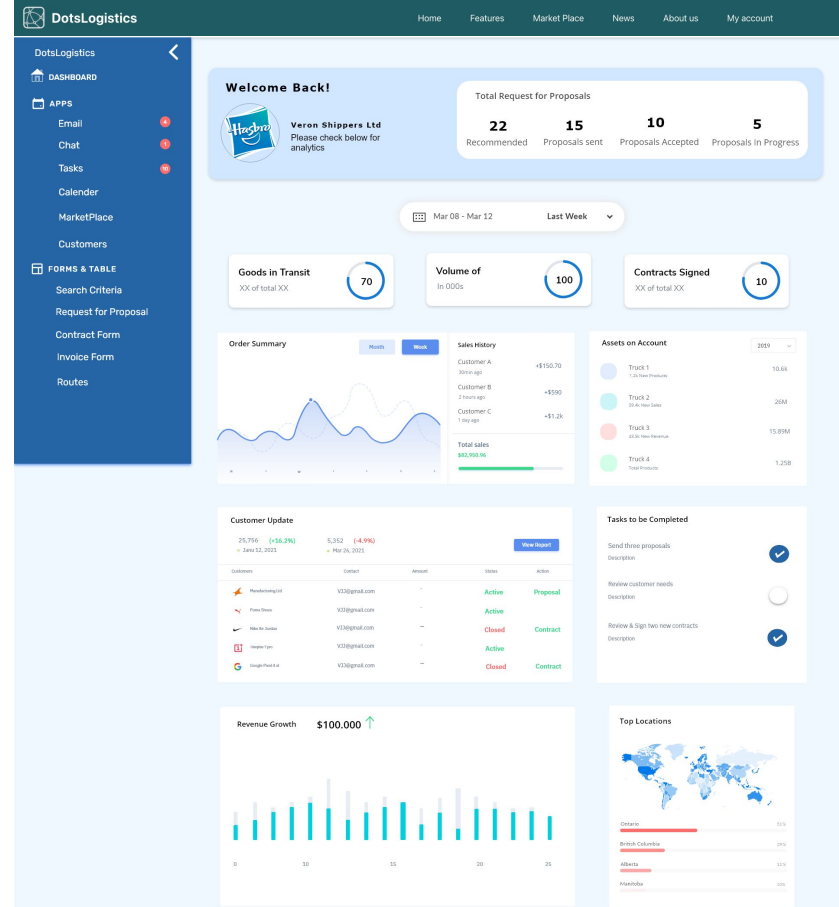
# Solution Architecture

- Supporting SMEs through a free marketplace to find trusted partners.
- An analytics dashboard for customers.



Website

Analytics

Exchange of Information

- Run analytics with data from the website.
- Analyze customer needs and provide the best recommendation.
- Track Transactions

Market Trends

Shared Information

Market Place

Supply Chain

Logistics

- Review other market policies and its impacts on the industry in Canada. Eg: A change in trade policy in China

- Keep industry players updated on the

Data

Dots Logistics

- Post request for service or proposal
- Find businesses or client based on the best competitive volume & route
- Stay updated on industry news
- Search for opportunities by region
- Send quote and close a deal

Warehouses

Manufacturing

- Delivery estimates
- Geographical Volume of transaction
- Market trend analysis

Reporting

Analytics

Dashboard

Power BI

- Automatic indication of hotspot for businesses.
- Transactions ongoing
- Completed transactions
- Network- Customer Relationship management

- Seamless Integration
- Predictive analytics
- Augmented analytics
- Holistic visibility on industry

See Appendix 1 for better quality of this solution architecture diagram

# Value Proposition

## Redefined Collaboration

Using AI to connect optimal partners, increasing collaboration between industry players and improving visibility in business processes

## Premium Analytics

Leveraging aggregated data and data from Marketplace, the platform will offer real-time market insights and company analytics

## Low Cost

Improved experiences in attracting new customers through our free marketplace and low cost analytics and consulting services

# Subscription-based Tiered Pricing

## FREE

### Bronze

Access to marketplace to find and connect with potential partners, request quotes, we take 3% commission on all transactions and 10% commission from discounts by promotions received.

**1 month free trial** then

## $57.99

/ mo

### Silver

Bronze + access to company analytics, market insights, business partner recommendations, route optimization

6 mo for **$330** = **$55 /mo**
1 year for **$555** = **$46 /mo**

**1st hour free** then

## $74.99

/ hr

### Gold

Bronze + our consulting service offered by industry professionals

Prepaid:
  **$284.99** for **4h**
  **$649.99** for **10h**
  **$1199.99** for **20h**

Find pricing justification and explanation in Appendix A2

# Revenue Streams

- Carriers can find discounted shipper prices and promotions on our website. We receive 10% of the *total discount* from any promotions
- Subscription-based service

- Shippers gain a marketplace to advertise their capabilities and offer quotes, increasing their business prospects
- Shippers can find trusted clients and are encouraged to include site-only promotions
- Same subscription-based service

# Customer Retention

**Carrier SMEs**

**Shippers**

- DotsLogistics is ideal for SMEs who constantly seek business partners by streamlining
- Incentives to invest in premium features through increased visibility and efficiency using our analytics and recommendation systems
  - More usage leads to better personalization through AI recommendations.
- For one-time users:
  - we earn profit through 10% of the discounts received
  - customers will remember us next time they need similar services

**Increased efficiency in carrier-shipper communication compared to direct contact at a lower price allows DotsLogistics to maintain SCA.**

# Market Adoption Strategies

## Email & Digital Marketing

Social media blog posts to attract shippers, email subscription service on market insights, advertisements on relevant sites

## Free Marketplace Promotion

Leverage position as a low cost provider supporting SMEs to translate into incentive to invest in analytics and consulting services.

## Good User Experience

A streamlined UX designed for efficiency by automatically saving information, using AI to power suggestions, and offering an application tour.

# DotsLogistics Future

### Now
The platform will provide a marketplace that matched shippers criteria with business needs and provide augmented market insights.

### Future
The future of the platform will expand to predictive analytics on market opportunities based on augmented data that will be gathered on the platform after two years at least

# Project Risk

### Building relationships
To encourage partners to begin and close business relationships, the platform will continue to engage partners via email, provide seamless support and a great user experience.
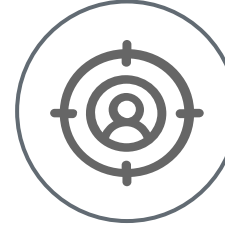
### Customer Demands
Customers are demanding faster delivery, transparency and great customer service. We aim to address by providing efficient communication compared to directly contacting partners.

# Milestones

**1**

**1st Quarter (Current)**

Development of website and key features, establish partnerships

**2nd Quarter**

Creation and training of AI and ML algorithms, attract shippers and partners

**2**

**3**

**3rd Quarter**

Application beta deployment and testing, focus on marketing

**4th Quarter**

Application launch and deployment

**4**