

Inflation in Logistics:
**Breakdown of costs &
mitigation tactics
using AI**



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Speaker Bio – MJ Schoemaker

- Head of Customer Service, Logistics and Production Planning
- Project Lead Global Demand Planning
- Global Demand Planning Director
- Global Centre of Excellence Director
- Head of Supply Chain for Sub Saharan Africa
- President of the Board of SAPICS
- Top 100 most influential women in Supply Chain in Africa 2023
- Business Excellence consultant/advisor.



RICOH
imagine. change.

janssen  PHARMACEUTICAL COMPANIES OF
Johnson & Johnson

 **Neways**
working a better way



Johnson & Johnson

 **SAPICS**

The supply chain puzzle



What are some of the current challenges for South African Supply Chain?



1

Customs and Regulatory Issues



2

Security Concerns



3

Limited Skills and Expertise



4

Inconsistent Power Supply



5

Infrastructure



6

Port Congestion



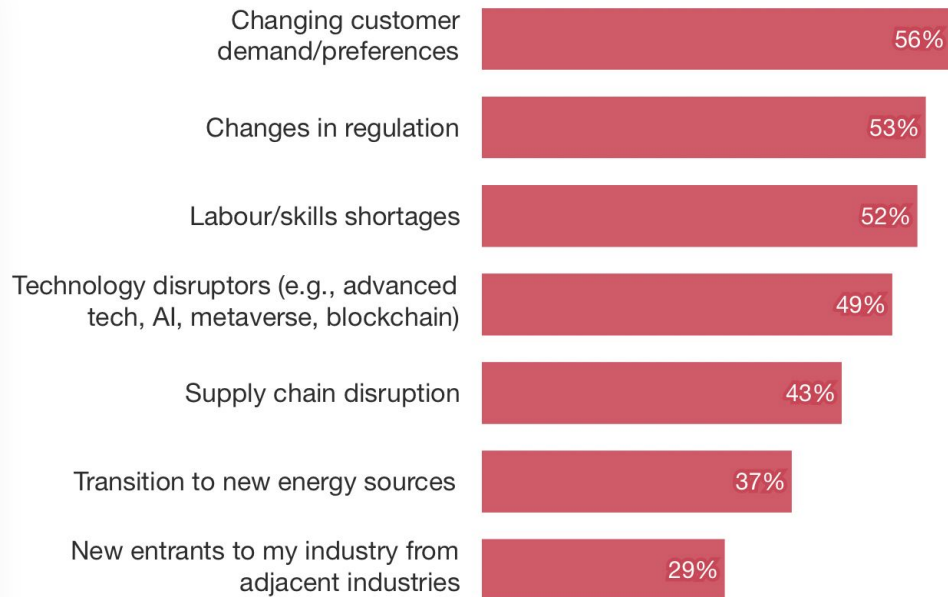
7

Labor Unrest

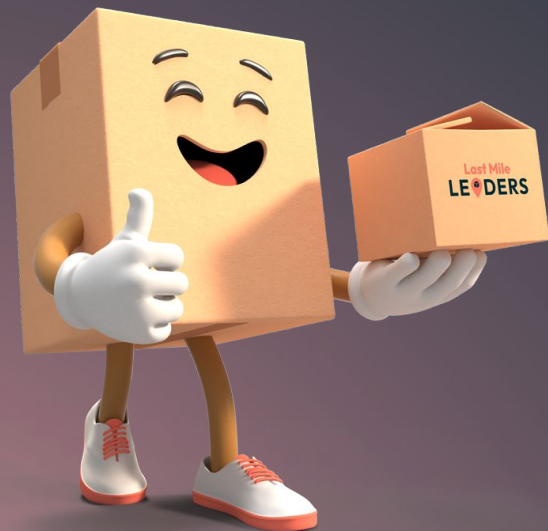


Keeping up with customer demands

Customers want real-time visibility of their shipments which requires that logistics providers invest in real-time tracking technology to provide customers with transparency on where their goods are at any point in time.

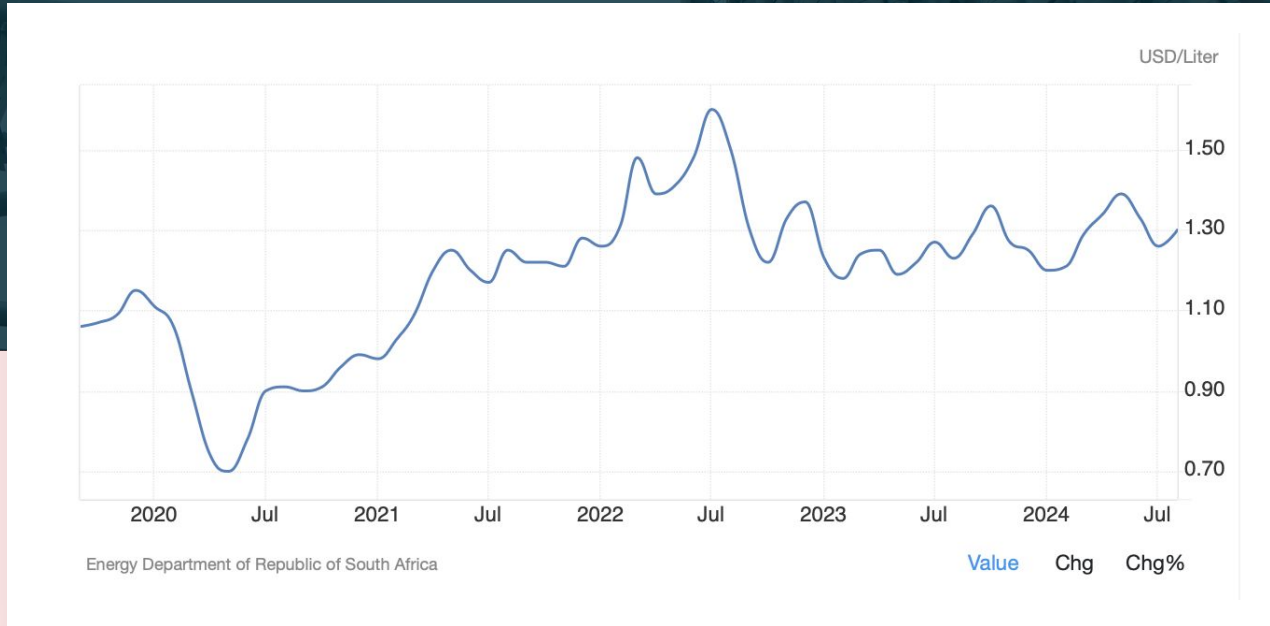


Source: PwC's 26th Annual Global CEO Survey

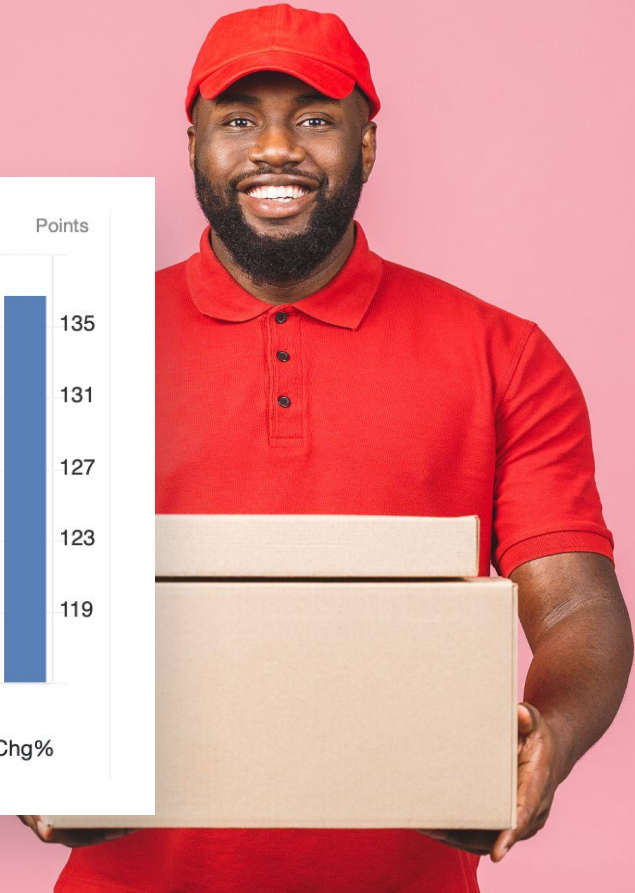
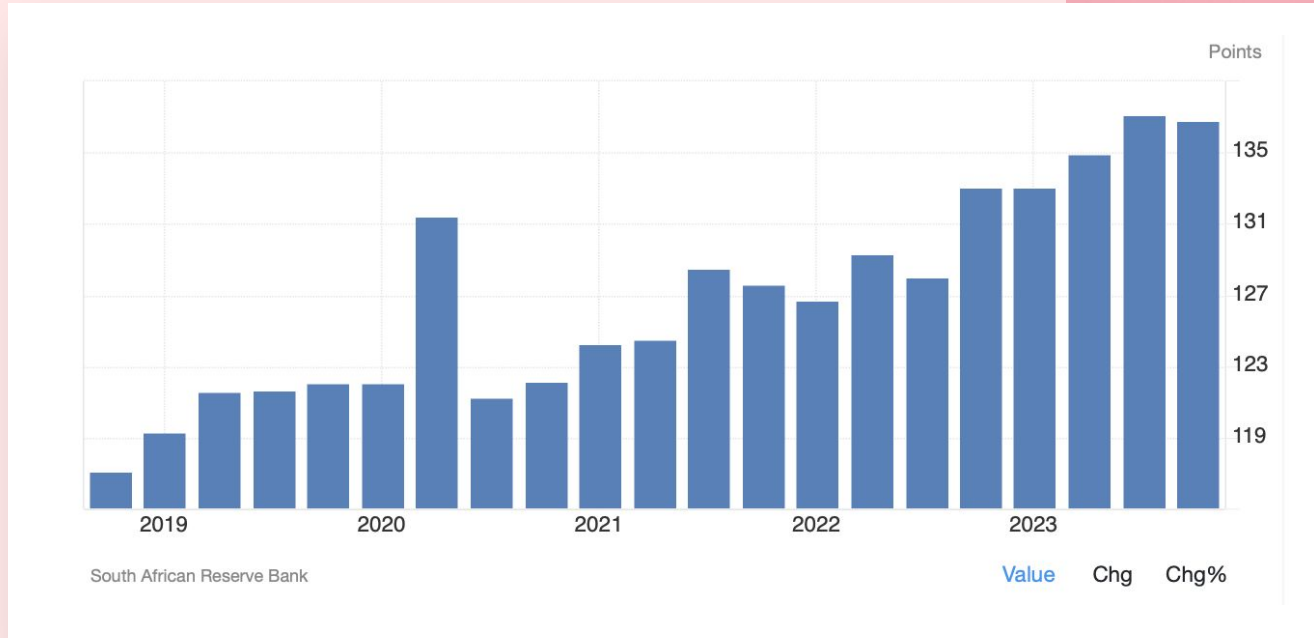


Inflation in Logistics: Breakdown of Costs & Mitigation Tactics

South Africa Petrol Price



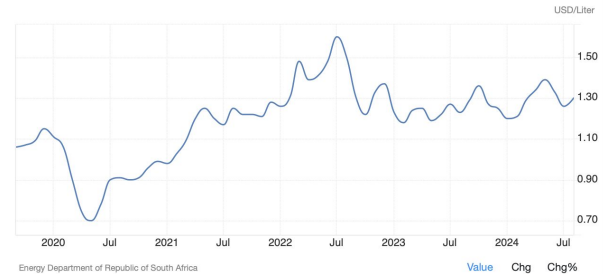
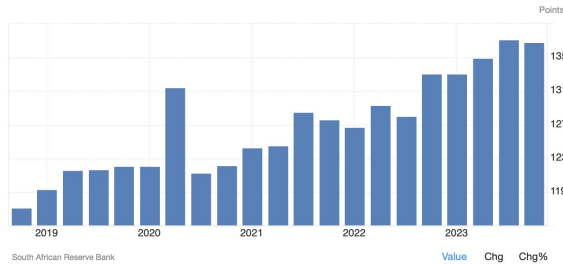
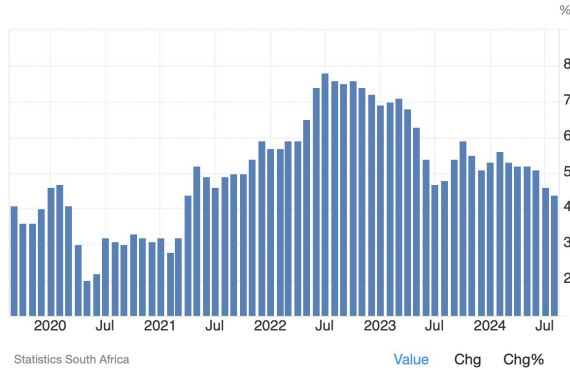
South Africa Labour Costs



South Africa CPI Transportation



Influencing factors driving cost



Cost Management in Logistics



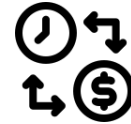
Key Cost Metrics



CTS
Cost to Serve



CPK
Cost per kilometer



SOT
Supply on time

Last Mile Delivery Cost Management

Improving Loading
Schedules

Ensuring Tyre And
Suspension
Maintenance

Correct Deliveries To
Reduce Mistakes

Health, Safety And
Training Of Drivers

New Fuel-Efficient
Trucks And Vans

Innovative Route
Management

Use Of Data And
Artificial Intelligence

Security
Management

Risk
Management

Supplier Relationship
Management

Track &
Trace

Delivery
Innovations



[The Supply Chain Keynote](#)

Innovative Last Mile delivery of medicine (Zipline Ghana)



<https://www.youtube.com/watch?v=vuJfr84IWc8>

Use of data and artificial intelligence



Customer Experience

- Customer Engagement
- EDD Prediction



Operational Efficiency

- Carrier Allocation
- Smart Suggest
- Smart Service



Process Intelligence

- Contract and Vendor Management
- Software Engineering

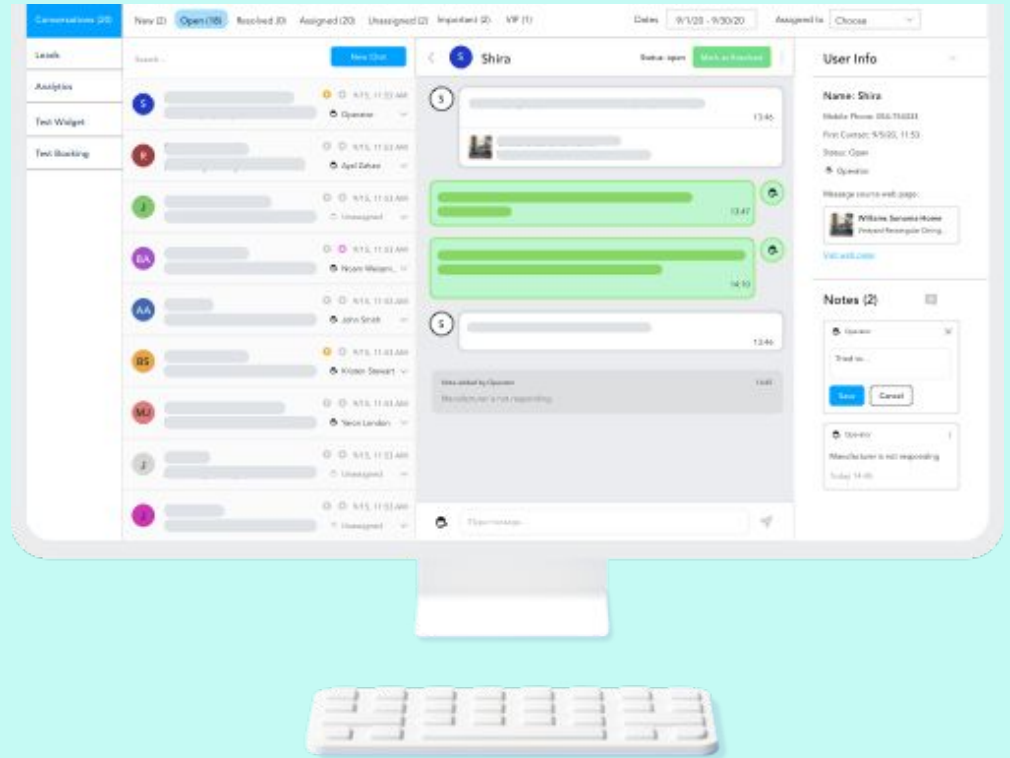
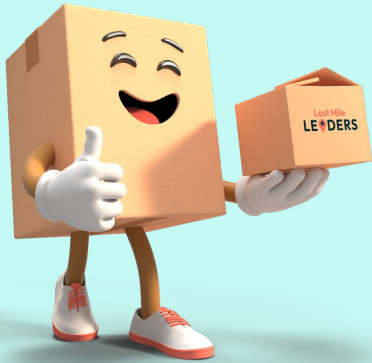


AI Powered Customer Experience

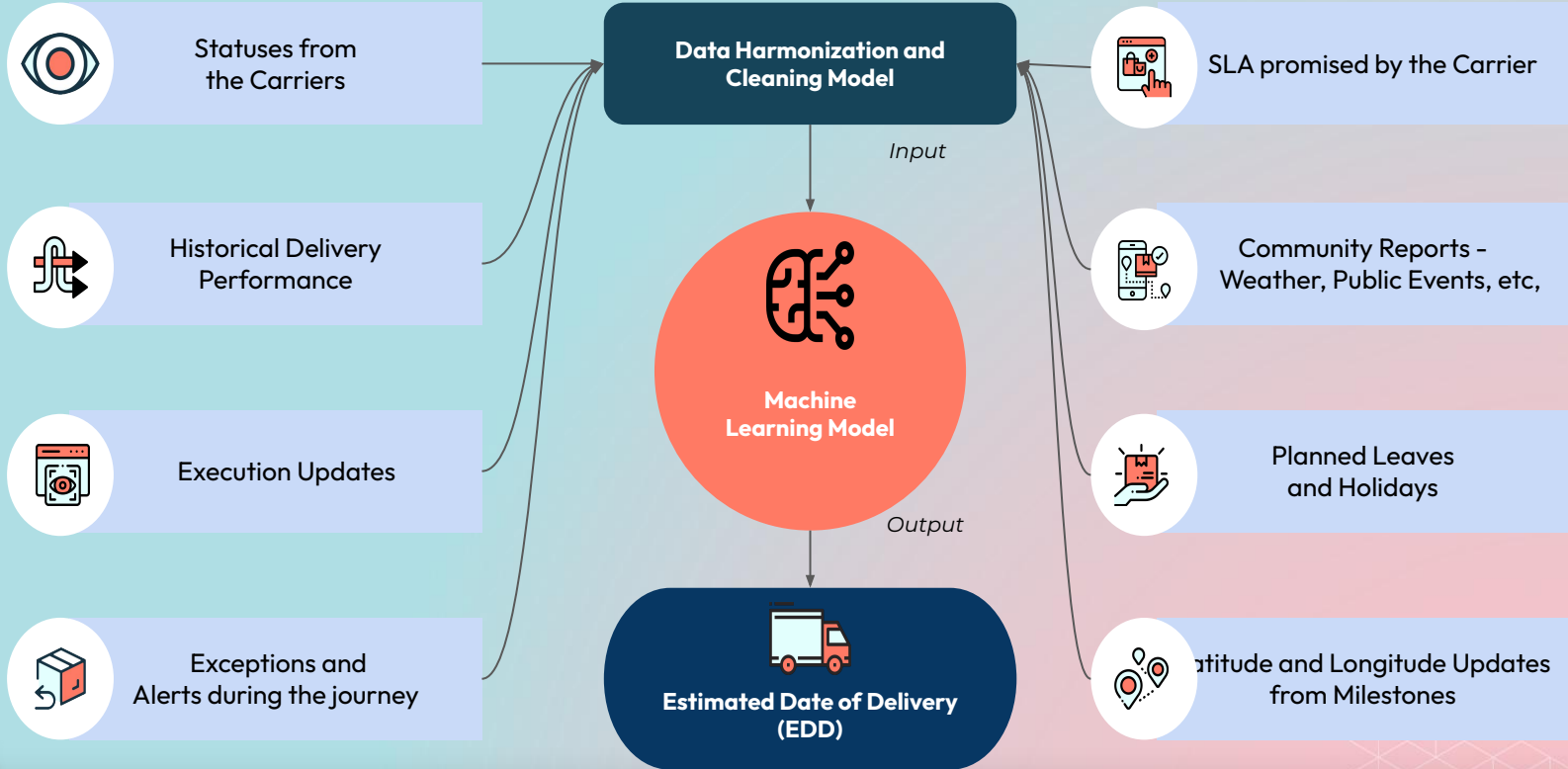
Zero Touch

Customer Engagement

Interactive and automated scheduling, routing and delivery operations that place your customer in the center, while cutting operational costs

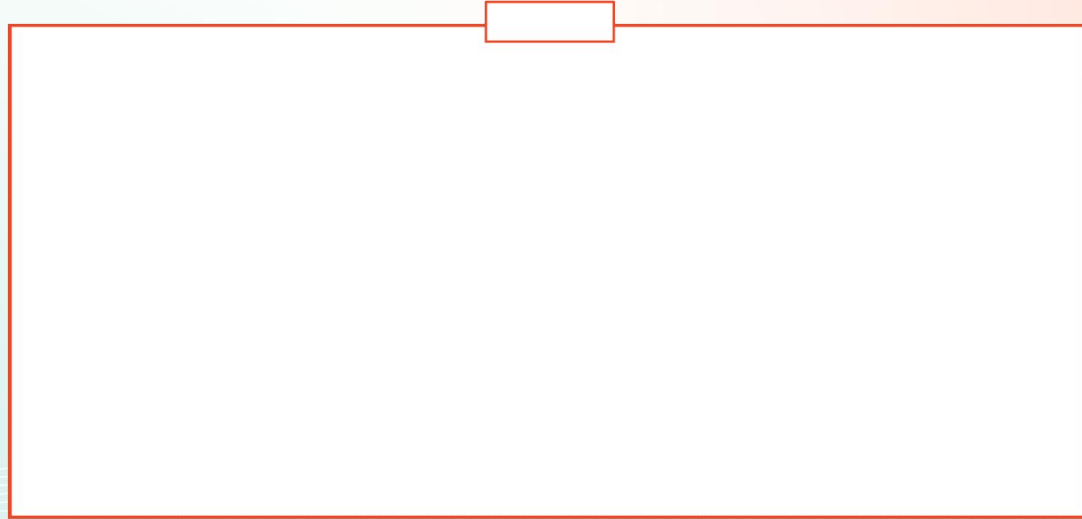


AI-Driven EDD for Streamlining Logistic Costs and Performance



Operational Efficiency

On-Time, Every Time: AI-Powered Carrier Selection for Seamless Delivery



Route Optimization - "Smart Suggests"



- **AI/ML** based recommendations based on past performance and artificial intelligence
- Recommendations are based on performance vs. prior week
 - Monday to Monday, Tuesday to Tuesday etc

North Delhi - 95 addresses 3 vehicles 12:30 - 15:30

Smart Suggest

You may not be able to deliver 5 High Priority and 12 Low Priority Orders with present constraints, select one of the following option

[Increase work hours by 40 mins to deliver all High Priority Orders](#) [Add a Van with 240mins Undertime](#)

[Increase work hours by 90 mins to deliver all orders](#) [Don't deliver 17 orders](#)

Route Start Location: Same as Start location at Hub Settings

Order Slot Time: As per order slot

Break: Include Break

Service Time: min

Vehicle Mode: Driving Bicycle Walk

| TYPE | NO. OF VEHICLE | TAGS | CAPACITY | AVAILABILITY |
|----------|--------------------------------|--------|------------------|---------------|
| VAN | <input type="text" value="1"/> | Narrow | 300 - 10 pallets | 08:00 - 14:30 |
| Mini-Van | <input type="text" value="2"/> | | 250 | 09:00 - 12:30 |

Central Delhi - 48 addresses 4 vehicles 12:30 - 15:30

Smart Suggest

You may not be able to deliver 6 Orders with present constraints, select one of the following option

[Increase work hours by 20 mins to deliver all orders](#) [Don't deliver 6 orders](#)

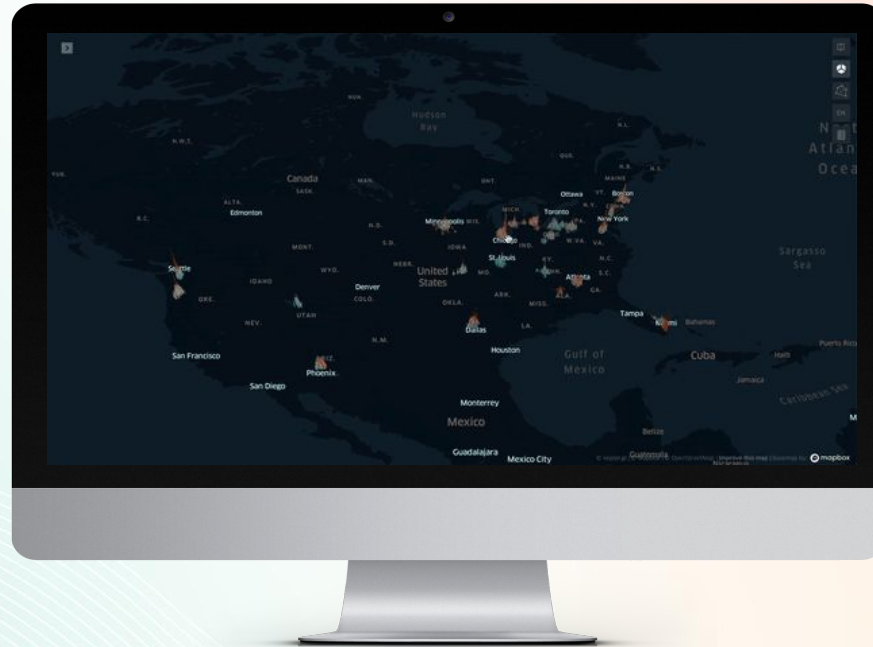
Route Start Location: Same as Start location at Hub Settings

Order Slot Time: As per order slot

Remark | Vehicle utilisation for merged fences 28/32

Smart Service & Parking

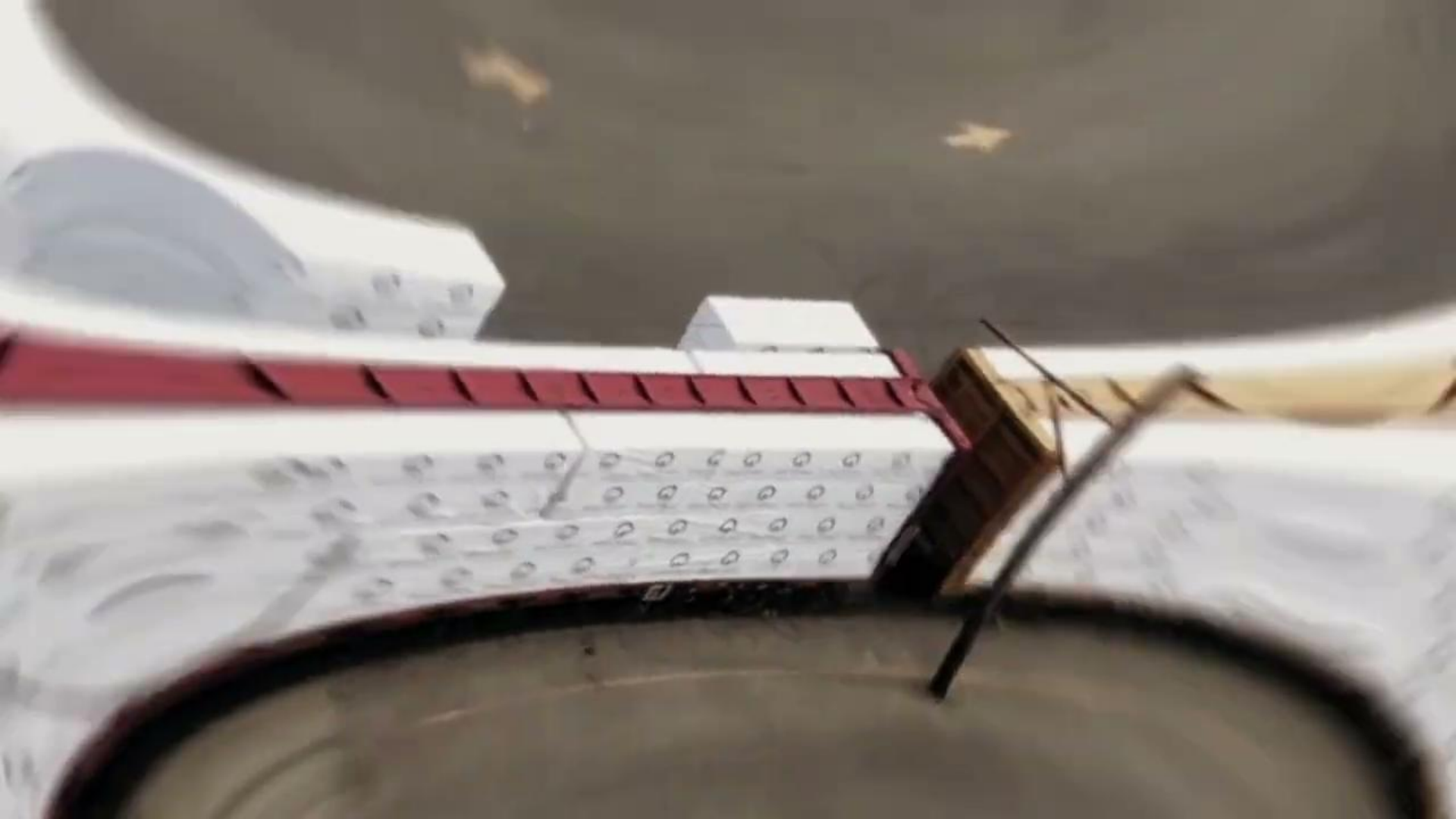
Improve planning accuracy and delivery service time



Increase SPORH and learn where and how many minutes drivers are spending on delivering at a stop



Improve Planning accuracy with machine learning (ML) driven delivery service time specific to a zone and driver



Intelligent Process Optimization

AI-Driven Contract and Vendor Management



Billing Zones

Origin - Destination -

+ Add Billing Zone Bulk Update Download 1-8 of 8

| BILLING ZONE CODE | BILLING ZONE NAME | ORIGIN CODE | DESTINATION CODE | Product Type | Delivery Type | SAME CITY(Y/N) | WEIG |
|-------------------------------------|-------------------------------------|-------------|------------------|--------------|---------------|----------------|------|
| CINCINNATI_MADRID_NORMAL_FORWARD | CINCINNATI_MADRID_NORMAL_FORWARD | CINCINNATI | MADRID | NORMAL | FORWARD | Yes | kg |
| CINCINNATI_MANHATTAN_NORMAL_FORWARD | CINCINNATI_MANHATTAN_NORMAL_FORWARD | CINCINNATI | MANHATTAN | NORMAL | FORWARD | Yes | kg |
| CINCINNATI_WARWICK_NORMAL_FORWARD | CINCINNATI_WARWICK_NORMAL_FORWARD | CINCINNATI | WARWICK | NORMAL | FORWARD | Yes | kg |
| CYPRUS_MADRID_NORMAL_FORWARD | CYPRUS_MADRID_NORMAL_FORWARD | CYPRUS | MADRID | NORMAL | FORWARD | Yes | kg |
| DELHI_DELHI_NORMAL_FORWARD | DELHI_DELHI_NORMAL_FORWARD | DELHI | DELHI | NORMAL | FORWARD | Yes | kg |
| MADRID_MADRID_NORMAL_FORWARD | MADRID_MADRID_NORMAL_FORWARD | MADRID | MADRID | NORMAL | FORWARD | Yes | kg |
| MANHATTAN_MANHATTAN_NORMAL_FORWARD | MANHATTAN_MANHATTAN_NORMAL_FORWARD | MANHATTAN | MANHATTAN | NORMAL | FORWARD | Yes | kg |
| WARWICK_WARWICK_NORMAL_FORWARD | WARWICK_WARWICK_NORMAL_FORWARD | WARWICK | WARWICK | NORMAL | FORWARD | Yes | kg |

OpenAI driven Software Engineering



Incubating OpenAI in to software engineering for a game-changing quality and productivity.

Using Generative AI,

- Generate code
- Get the explanation of the code
- Build code comment
- Do Style, Security and Performance Check
- Perform code review
- Generate Unit tests

A screenshot of a web-based code editor interface. The top bar shows a "Home" tab and a "History" button. The main area displays a code snippet in JavaScript using Express.js and Axios. Below the code, there is a text block explaining the code's functionality. At the bottom, there is a search bar for technical questions and a menu of AI-powered actions.

```
// Send the weather details as the response
res.json(weatherData);
} catch (error) {
  // Handle any errors that occur during the API request
  res.status(500).json({ error: 'Failed to fetch weather data' });
}
});

// Start the server
app.listen(PORT, () => {
  console.log(`Server is running on port ${PORT}`);
});
```

In this example, we use the Express.js framework to create a server and define a route for the `/weather` endpoint. When a GET request is made to this endpoint with a `city` query parameter, we make a request to the weather API using the Axios library.

The weather API response is then processed to extract the required weather details (Please fill in this field, condition). Finally, we send the weather details as the JSON response.

Ask any technical question...

- Explain Code
- Security Check
- Clean Code
- Generate Comment
- Style Check
- Generate Unit Tests
- Performance Check
- Improve Readability
- New Template

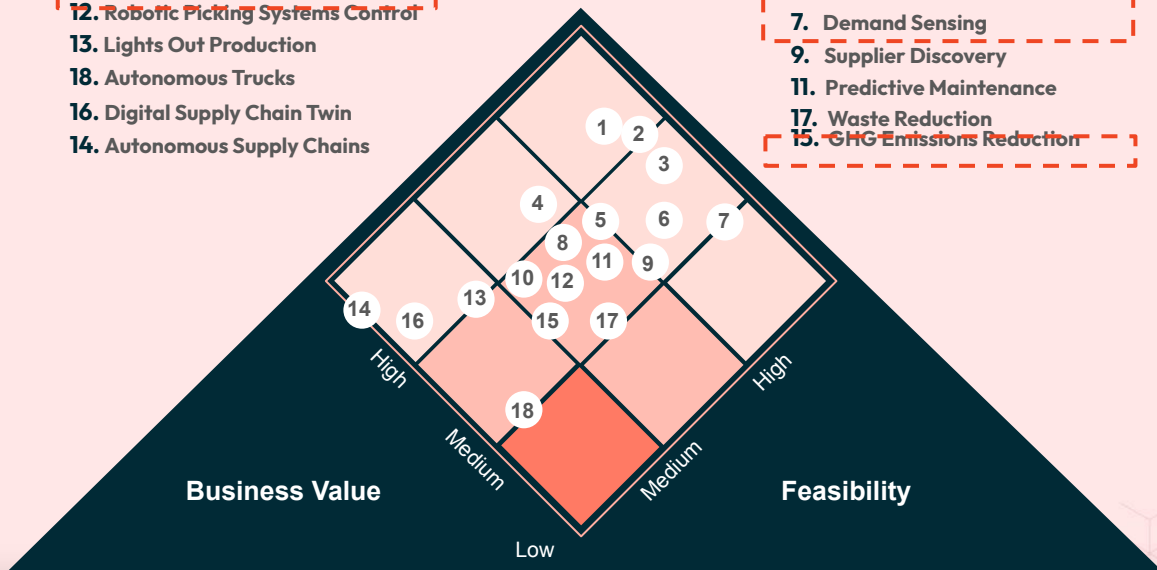
AI Use-case Prism for Supply Chain

How Gartner quadrants align with FE-AI initiatives

Initiatives spread across **all quadrants of the Prism**, along high to low business value and high to low feasibility


- 5. Connected Factory Worker
- 4. Auto Defect Detection
- 8. Supplier Risk Management
- ~~10. Customer Journey Analytics~~
- ~~12. Robotic Picking Systems Control~~
- 13. Lights Out Production
- 18. Autonomous Trucks
- 16. Digital Supply Chain Twin
- 14. Autonomous Supply Chains

- 1. Inventory Optimization
- ~~2. Predictive ETA~~
- ~~3. Data Cleaning~~
- 6. Mobile Robot Control
- 7. Demand Sensing
- 9. Supplier Discovery
- 11. Predictive Maintenance
- 17. Waste Reduction
- ~~15. GHG Emissions Reduction~~



Last Mile
LEADERS

Thank You

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