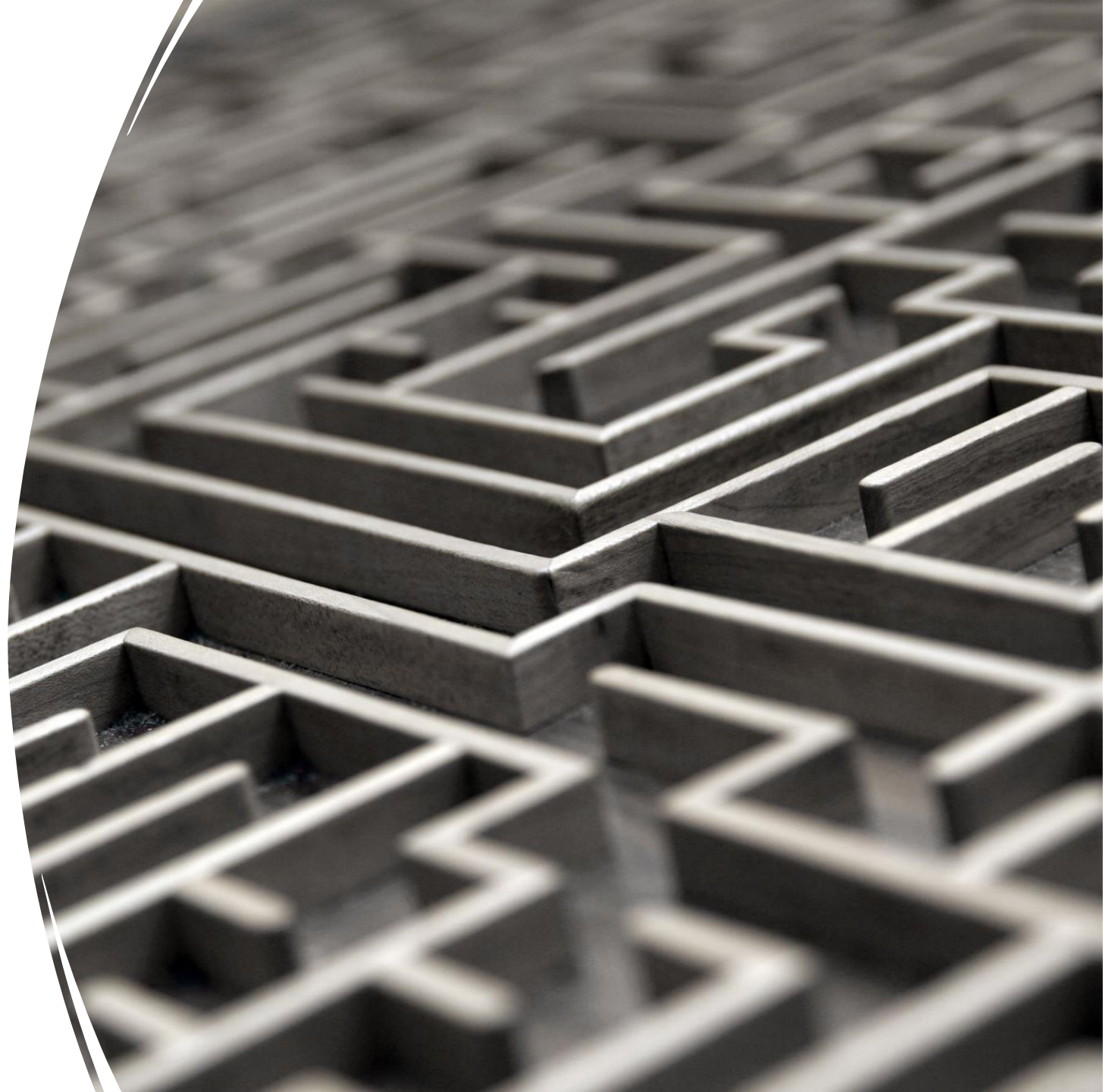# Tesla's Strategic Shift:

Harnessing Demand Forecasting for Enhanced Operational Efficiency

DISCUSSION POINTS

- Today's Tesla

- Integrate demand forecasting solutions recommendations and benefits

- Demand forecasting solutions Analysis

- Risks

- Adoption Analysis

Today's Tesla

- Tesla combines a unique sales strategy with dedicated service and expansive charging infrastructure.

- Emphasizing on both hardware and software, Tesla leads in innovation and sustainable energy solutions.

- Tesla's self-sustained ecosystem, encompassing vehicles to energy storage, sets them apart from competitors.

- In the years 2022-2023, as a significant number of competitors entered the market, Tesla's market share and profitability experienced a decline.

S

Strengths:
Impressive Hiring Strategy
Strong Brand Value and High Market Capitalization
Phenomenal Organizational Structure
Unique Brand positioning and Superb Marketing Strategy
Strong Innovative Capacity
Almost Near-total Market Dominance

W

Weaknesses:
Frequent Manufacturing Delays
Setting Overly Optimistic Targets
The Cost of Products

O

Opportunities:
Introducing Its Products to New Markets
Improving the Affordability of Their Vehicles
Improving Their Autonomous Driving Technology
In-house Battery Production
Maintaining Its Reputation as the Champion of Innovation

T

Threats:
Increasing Competition from Other Top Automakers
The Uncertainty Surrounding Rare Earth Metals
The Legal Intricacies of Self-driving Vehicles
Changing Government Policy and Public Opinion on Green Energy

Global electric car sales by key markets, 2010-2020e
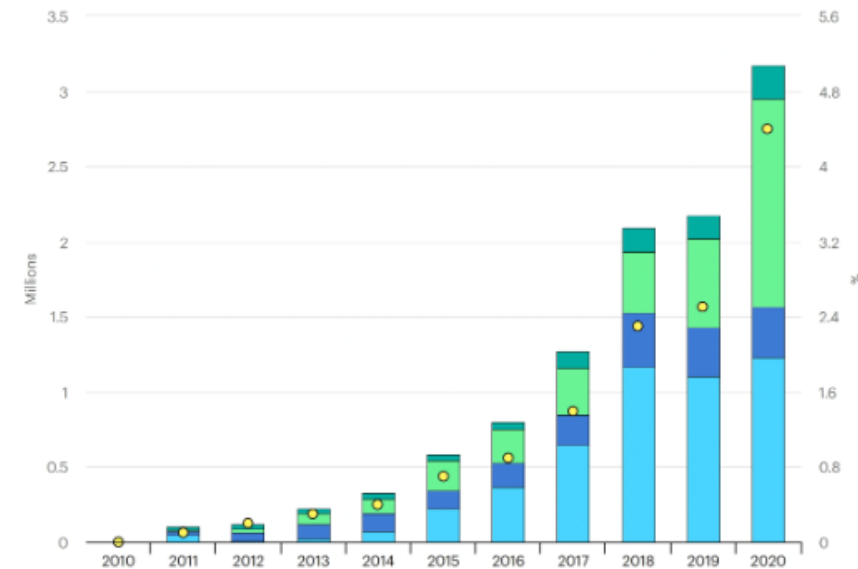
Supply Planning • Capacity Planning (CRP)
Production Planning • Transportation Planning
Production Scheduling • Recycling Planning

Supply.AI ⊕
Self-Healing Supply Chain ⊕

Supply

Inventory

• Inventory Management
• Distribution Requirements Planning (DRP)
⊕ **Inventory Optimization**

Planning One

Supply Planning •
Inventory Management •
Control Tower •
Operational Planning •
Demand Planning •
RapidStart implementation

• Supplier Collaboration
⊕ **Command & Control Center**

Control Tower

Custom Solutions

Demand Planning •
Order Fulfillment •
Advanced Statistical Forecasting •
Demand.AI ⊕

Demand

S&OP

• S&OP Foundation
• Financial Planning
• Live Lens Insights

Developer Studio

App Warehouse

Cognitive Network Graph

Intuitive visualization

Augmented intelligence

Concurrent planning
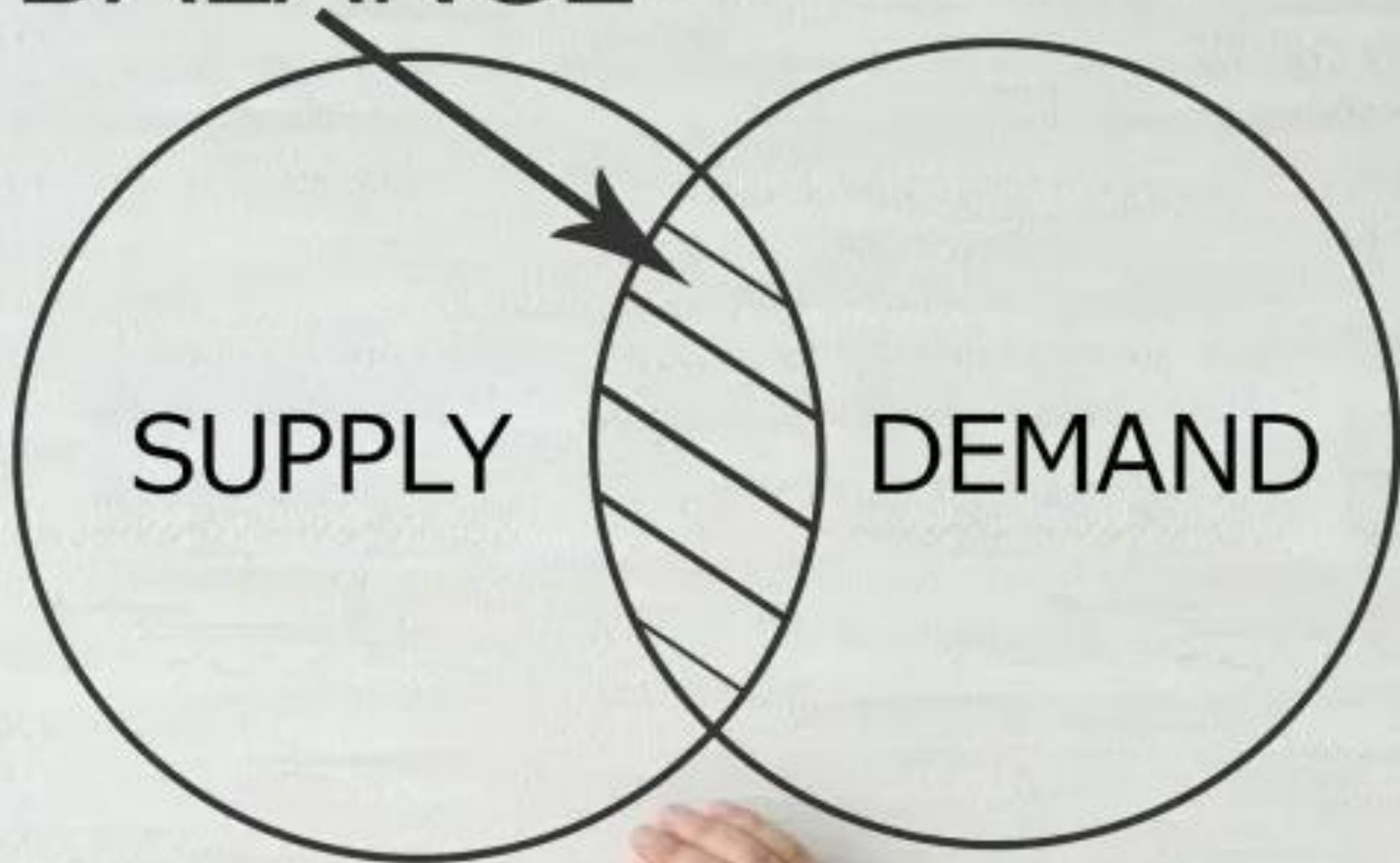
Planning.AI / advanced analytics

Cognitive automation

Real-time integration

LOGISTICS ROUTE

Competitive Uses and Benefits:

- Implementing Demand Forecasting Solutions strengthens Tesla's image of innovation and customer focus.

- Accurate demand forecasting sets Tesla apart from competitors in the fast-evolving electric vehicle industry.

- Tesla's reputation for reliability is enhanced by meeting market demand accurately.

- Better demand understanding enables Tesla to seize new opportunities, including product expansion or market entry.

- The technology's value transcends mere operational efficiency; it offers strategic insights.

- Tesla's use of this technology reaffirms its position not just as a car maker, but as an industry-forward thinker.

- Tesla leverages technology to advance its mission of transitioning the world to sustainable energy.
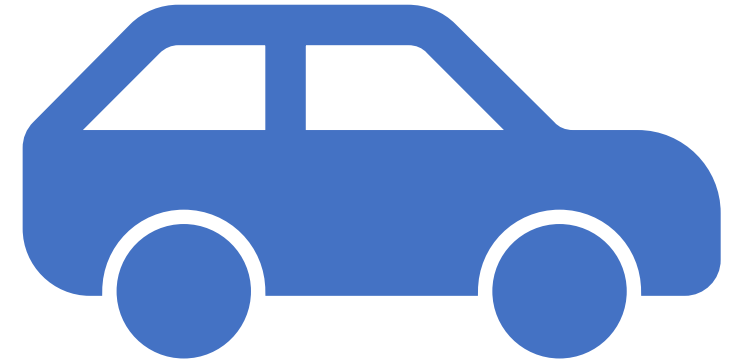
Why Demand Forecasting Solutions

Demand Forecasting Solutions
- Integrates diverse data sources
- Employs predictive analytics
- Offers high accuracy
- Suitable for Tesla's growth
- Provides consistent & reliable results
- Displaces legacy systems efficiently
- Enhances production & delivery timelines

Legacy Demand Prediction
- Limited data source integration
- Relies on historical data
- Moderate accuracy
- May not scale with Tesla's expansion
- Prone to manual errors
- Requires manual processes
- No guarantee of reducing inefficiencies

Y-axis (left): Number of Forecasts — 100,000 / 1 Million / 100 Million / 1 Billion / 10 Billion

Y-axis (right): Forecast Accuracy at SKU — 45% / 55% / 70% / 80% / 90%

X-axis: Value

Simple / Naive Forecasting
- Assumes Last Month's Or Year's Number
- Simple Moving Average
- Product & Customer Aggregates
- Created by sales in Excel

Statistical Forecasting
- Shipments
- Statistical, Incorporates Seasonality & Trend
- Product or Customer Single Number
- Created by Logistics in Excel/ERP

Demand Planning
- Orders, Sales/Partner Collaboration
- Causal, PLC, Attribute Based, Analytics
- Product and/or Customer Hierarchy
- Forecasting Group / Dedicated Solution

Demand Modeling
- Downstream Data (POS, DSR, IRI, etc.)
- Demand Sensing & Shaping
- Ship To & Channel
- DP Group using SCP SOI

Demand Optimization
- Market / Big Data / Social Media Sentiment
- Machine Learning / Automation / Multi-Variate Demand Mgt.
- Continuous Planning, Customer & Ship to / Device
- COE, Cross-Functional, Best of Breed SCP SOD

IMPACTS

Systemic Transformation: Tesla will undergo a large-scale migration to a new data management system.

Data Sharing and Security: AI-driven forecasting requires enhanced data sharing, necessitating strict metadata locks for privacy.

Standardization Challenges: The advanced nature of the solution might limit Tesla's options due to a lack of industry standards.
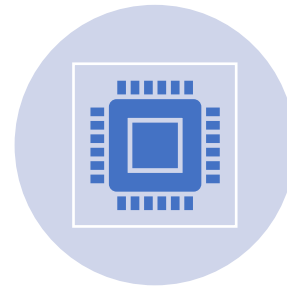
Computational Costs: Increased reliance on active machine learning will demand greater computational power, leading to higher costs.

RISKS

- Organizational Readiness and Adaptability: Tesla's growth could pose challenges in staff adaptability and cultural alignment with the new Demand Forecasting Solutions.

- External Relationship Dynamics: The new technology might strain Tesla's relationships with suppliers and dealers due to increased third-party data dependencies.

- Competitive Landscape Alteration: Tesla's adoption of the technology could standardize demand forecasting in the industry, potentially commoditizing this aspect of the electric vehicle sector.
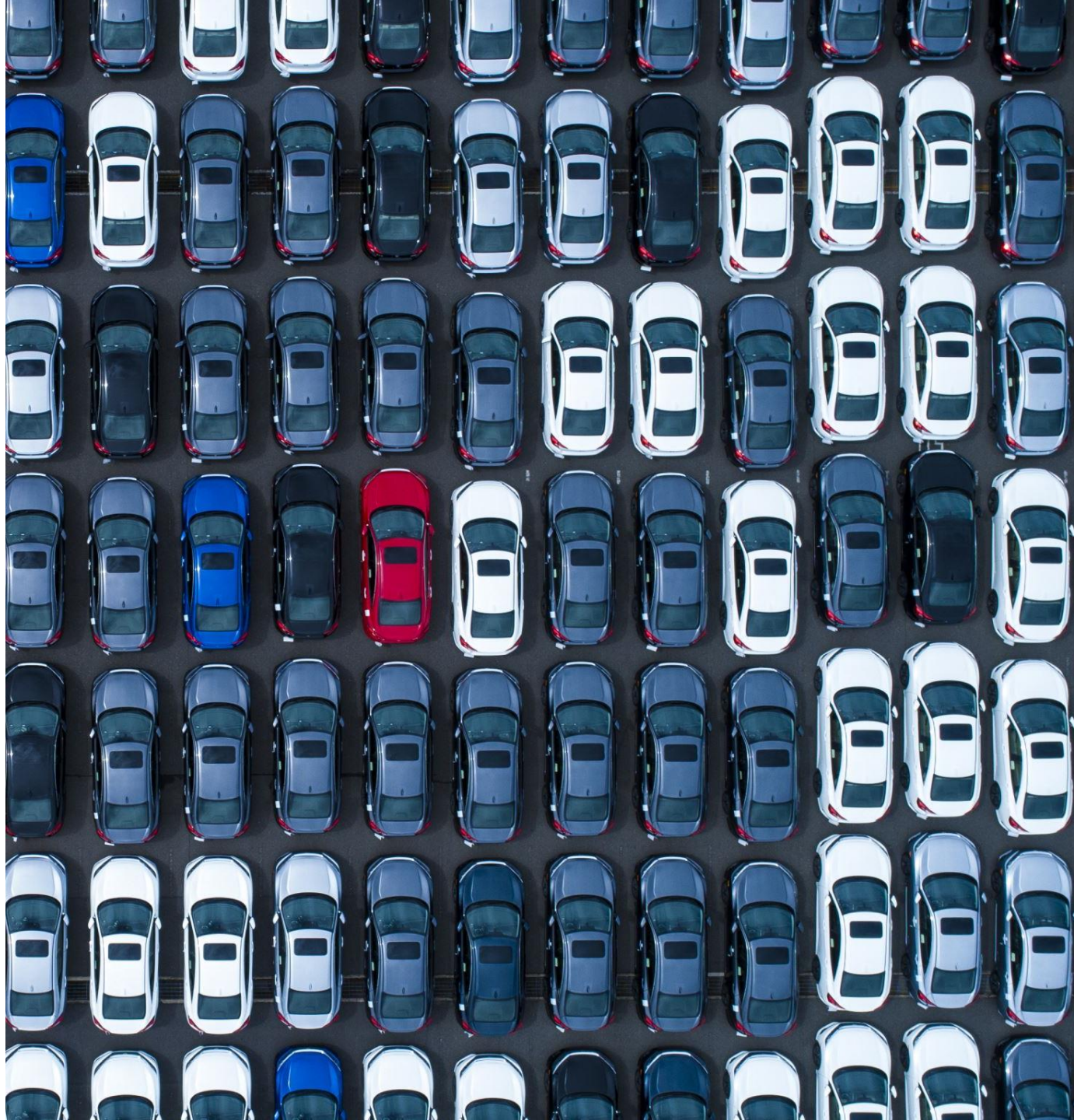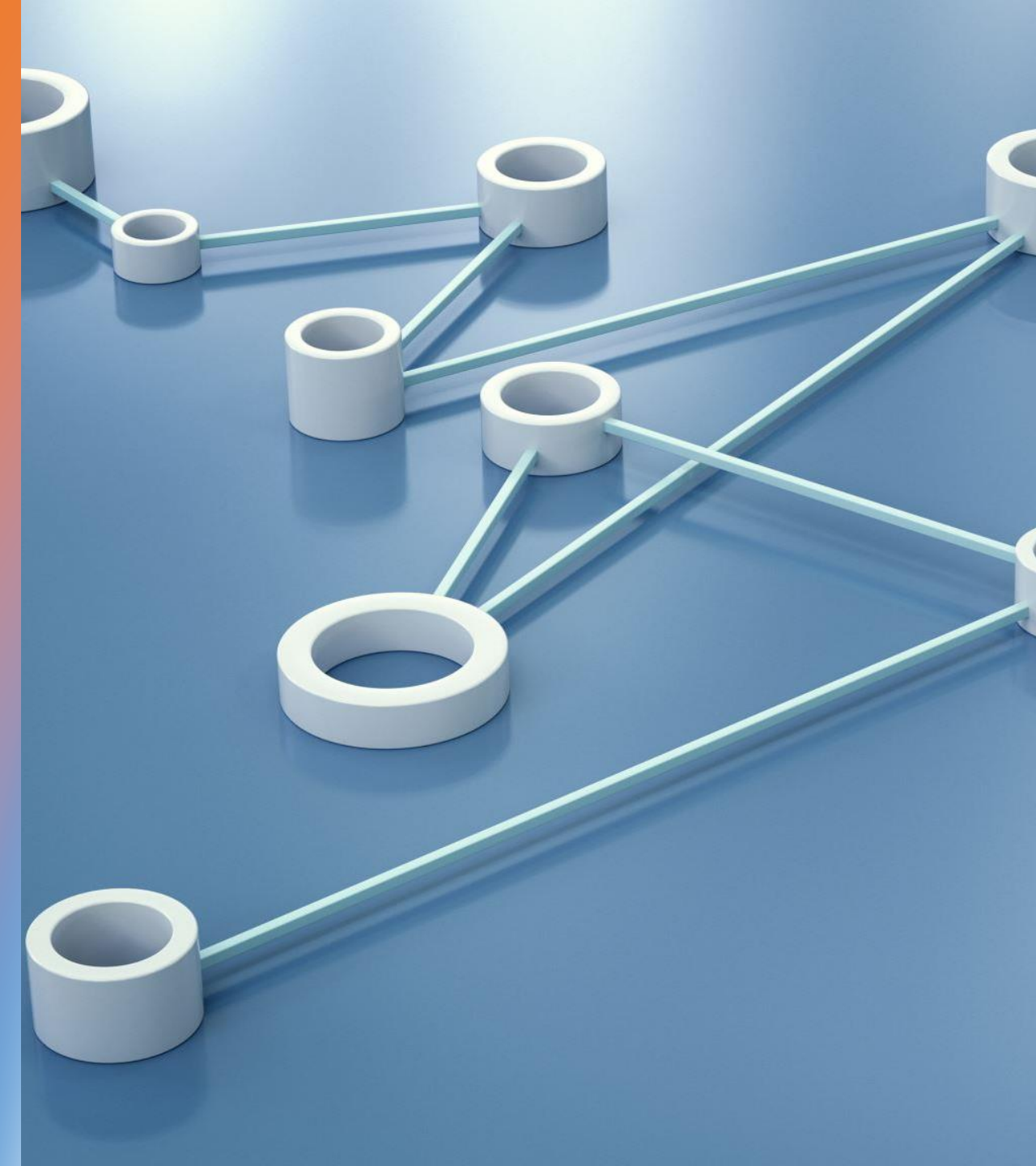
IMITIGATION

- Stakeholder Involvement: Engage all stakeholders through communication and feedback sessions to ensure seamless adoption.

- Change Management: Implement a tailored change management plan, with training and pilot programs, addressing Tesla's unique needs.

- Resource and Capability Management: Utilize Azure collaborations and consider outsourcing to bolster IT capabilities and support during the transition.

- Pace of Deployment: Opt for a phased deployment to identify and address challenges early on.

- Governance Structure: Form a governance body to guide the integration in line with Tesla's goals.

Adoption Analysis: Goals

Enhanced Operational Efficiency: By accurately forecasting demand, Tesla can optimize production and reduce delivery delays, resulting in increased customer satisfaction.

Strategic Competitive Advantage: As electric vehicle market competition intensifies, having an edge in demand prediction can keep Tesla ahead of its competitors, ensuring that the company can meet market demand efficiently.

Future Business Evolution: The technology aligns with Tesla's goals of innovation, making it easier for the company to adapt to changing market dynamics, evolving customer preferences, and potential business model shifts.

Adoption Analysis: Costs

Initial Integration Cost: Estimated at $3 million, covering the licensing of the technology, initial setup, and integration into Tesla's current IT infrastructure.

Training and Support: Roughly $1 million for continuous training programs, workshops, and support during the initial phase.

ROI: By reducing overproduction and ensuring consistent delivery timelines, Tesla can potentially save an estimated $10 million annually. Further, enhancing customer trust through reliability can result in increased sales, leading to a ROI in less than two years.

Risks of Adoption: Allocated $500,000 for pilot programs, phased rollouts, and dedicated teams to address potential issues. If risks materialize, additional costs might be incurred in terms of PR management and operational adjustments.

Other Approaches: Manual Forecasting: While traditional methods exist, they lack the accuracy, efficiency, and data integration capabilities of the proposed solution. Given Tesla's data volume and market dynamics, Demand Forecasting Solutions offers the best balance of cost and benefit.

Relative Value: Adopting this technology is of high importance, especially when juxtaposed with other IT activities. It directly addresses a current operational gap, and its integration will reinforce Tesla's position in the market.

THANK YOU! Do You Have Any Questions?

WORK CITY

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