TECH mahindra

SCM NXT.NOW

Smart | Customer-centric | Sustainable

Framework and Stories

Supply chain NXT.NOW from Tech Mahindra is a philosophy to move supply chains away from being cost and efficiency function to a value and innovation function. In order to achieve this, supply chains across industries must cross pollinate learning and capabilities, and most importantly be smart, customer centric and sustainable





SMART | CUSTOMER-CENTRIC | SUSTAINABLE



2

Plan & Execute

What is changing in the market?

- Direct to consumer and rise of the B2B digital buyer
- Supply chain disruptions beyond product quality to geopolitical, network and tech disruptions
- Purpose of supply chain is changing from demand fulfilment to demand improvement (new customers, markets, etc.) and is moving towards autonomous supply chain

What we bring?

We enable planning for an intelligent, resilient, and optimized supply chain performance. Our consulting frameworks, machine learning models and CX capabilities enable better operating models, higher forecast accuracies, optimum inventory costs and compliant supply chain which could mitigate risks quickly

Digital Stories

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GLOBAL AUTOMOTIVE COMPANY

ML-based statistical qualitative and quantitative forecasting of parts with 90% accuracy for 42% of the parts



ONE OF THE BUSIEST AIRPORTS IN THE WORLD 80% increase in sales by upsell and cross sell, with a single view across tenants that carry real-time, reliable inventory



JAPANESE FOOD PRODUCTS COMPANY

READ MORE

\$50M savings and waste reduction of perishable

goods reduced to <1% with S4 HANA transformation

Source

What is changing in the market?

- Demand-side disruptions such as reduced the product/ service introduction time, and mass personalization put newer demands on the supply chain
- Supply side-disruptions for geopolitical / compliance / ESG reasons mean lot of agility to diversify supplier base or add new suppliers

What we bring?

We redesign the sourcing process, enabling supplier diversification using proprietary methods and platforms to mitigate risk. We make the sourcing processes smarter and faster with AI/ML models for vendor selection, RPA for supplier onboarding and analytics to enable better spend visibility and optimization. We also bring in immutability and speed in sourcing process with blockchain

Digital Stories

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AMERICAN AIRCRAFT MANUFACTURER Contextual Knowledge Discovery with AI to Identify Best Vendors for the given project criteria, reducing the search from 3 days to few seconds



GLOBAL LEADER IN INDUSTRIAL TOOLING Supply chain diversification from China and Taiwan to India / Mexico / ASEAN countries to mitigate supply chain risk for ~\$1.5B spend covering 30k SKU'S across 5 product categories



MULTINATIONAL OIL AND GAS (

READ MORE

Process consulting and CoE for RPA enabling reduction in cost per invoice by 45% and enhanced visibility for availing early payment discounts

Contract

What is changing in the market?

- Newer product, production methods (engineer to order, build to order), sustainability and regulatory compliances create a multi stakeholder environment in contracts
- Lot of contract processing systems are getting migrated to modern platform

What we bring?

We enable a new age contracting with redesigning the contract process, modernizing the contract systems, and automating the processes. Most importantly, we enable a multi-stakeholder collaboration with common workflows and user-centric data visualization. Leveraging AI/ML and blockchain technologies we bring in compliance, speed, and efficient contract management. Contract audits and governance ensure the client organization is always adapting to changing regulatory landscape

Digital Stories

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READ MORE COMPANY Reduced the contract cycle time by 50% with single source of truth across the contract lifecycle



LARGE TELCO IN SINGAPORE AND AUSTRALIA

US-BASED HEALTHCARE

READ MORE

80% improvement in contract compliance with cloud-

based sourcing and contract management

GLOBAL AUTOMOTIVE COMPANY





Smart contracts for parts procurement across borders into the South African manufacturing plant, reduces invoice/PO price mismatch by 40%

Deliver

What is changing in the market?

- Rise in D2C, omnichannel fulfilment, configurability in fulfilment centre for enabling online channel
- Carbon footprint reduction a key priority
- Tracing, condition monitoring of shipment, sensing the environment variables to dynamically plan for alternative routes and feeding this data back to the SC planning is gaining importance

What we bring?

We enable a common view of workflow, data and traceability between transport and warehouse functions to ensure multi stakeholder collaboration. With industrialized automation required to modernize warehouse, we bring in capabilities for building warehouses which are smarter, more efficient and sustainable. We improve visibility fleets and provenance of shipments leveraging IoT, blockchain and analytics to make the deliver function customer centric

Digital Stories

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CUSTOMS DEPARTMENT

READ MORE

Secure cross border ecommerce customs brokerage on blockchain, enables automatic approval and clearance of about 97% of no risk consignment transactions in 2 minutes with zero touch



US FREIGHT CARRIER

(READ MORE)

AI-based freight matching engine improves

conversion rate of matches by 20%



LEADING EUROPEAN PHARMA COMPANY

READ MORE



Service

What is changing in the market?

- New consumption models place newer demands on supply chain forecast, fulfilment and most importantly the customer experience
- Aftersales / aftermarket are having potential to enable new revenue streams, reduce carbon footprint and improve customer perception

What we bring?

Keeping customer centricity at the center, we apply design principles for service processes and put the customers in more control of consumption models We enable better transparency to customers in areas of parts provenance, warranty cost optimization, customer experience, predictive maintenance etc. Further with the usage of analytics and AI, we optimize the service process/ field service to make it much more efficient

Digital Stories

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READ MORE

LEADING TELCO IN NORTH AMERICA

End to end traceability in reverse logistics saving \$100M days in inventory costs and reducing TCO by 30%



AMERICAN HEAVY-DUTY TRUCK MANUACTURER

READ MORE

Enable newer revenue streams and reduce time to

request service with telematics platform



GLOBAL AUTOMOTIVE COMPANY READ MORE

\$4M savings in warranty costs and 0% fraudulent

claims

Control Tower

What is changing in the market?

- Increased supply chain dynamics and disruptions are requiring a shift towards autonomous supply chain
- Control tower beyond just data visualization to drive actions
- Clients need function specific control tower compared to a generic control tower for driving Rol (example: control tower for field services).

What we bring?

Tech Mahindra brings single truth view with capabilities in digital thread, audit trail traceability, and user-centric and personalized dashboards. We enable faster and better actionability with data, analytics and AI across product production, operations, and field services.

Digital Stories

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EUROPEAN AEROSPACE



Digital thread reduces new product introduction time by 30% and scrap and reword by 15%



LEADING TELCO IN AUSTRALIA

READ MORE

Enable newer revenue streams and reduce time to request service with telematics platform



AUTOMOTIVE SEATING & E-SYSTEMS COMPANY



Cloud-based operations control tower reduces mean

tie to respond to alerts by 50% and improves

operational efficiency by ~10%

Global Automotive Company Machine learning-based demand forecast of parts

PROBLEM: The client wanted to enhance the forecast required inventory at part/spare part level. They also required inventory classification to identify fast/slow moving parts. However, they were challenged with data quality with junk data and missing values

SOLUTION: Tech Mahindra looked at the data set consisting of demand, spare part cost, frequency of order, item dimension, spurt in demand and lead time. for qualitative forecasting. We then did the data preparation to fix the data quality issues and reclassified the inventory into fast- and slow-moving levels. Built various ML based forecasting models for quantitative forecasting using Holt, Arima, Auto Arima models and fine-tuned then with time series modelling

HIGHLIGHTS: Each model was trained and validated against forecast and actual data, and the model with the lowest weightage average forecasted error was used to forecast the period of lead time required to procure the part



Accuracy in demand forecasting for 42% of the parts Copyright © 2022 Tech Mahindra. All rights reserved.



Accuracy in demand forecasting for 64% of the parts 10-15%

Enhanced accuracy for forecast at part level growth



Plan and Execute



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World's Leading Airport

80% increase in sales with a single view across tenants that carry real-time, reliable inventory

PROBLEM: The client operates over 100 brands, ranging from luxury to daily needs products, creating some of the most exquisite experiences for the visitors and travelers. The stores within the airport operate with a lean inventory across in-store and online purchases

SOLUTION: Built a next generation omnichannel e-commerce marketplace to onboard and manage tenant products and services. Fluent commerce OMS provides the capability for reliable, real-time inventory across stores and warehouses and provides omni-channel order orchestration. A robust ecommerce engine stitches all these solution layers and supports the millions of transactions that flow through the solution.

HIGHLIGHTS:



Increased sales due to cross sell and upsell



Higher conversions



Lesser Fallouts



Plan and Execute

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Japanese Food Products Company

Holistic supply chain transformation

PROBLEM: The client wanted to understand and fulfill customer demands for food products based on seasons and festivals. Disorganized inventory, and improper cost management, made it difficult to manage cash flow and accounts receivables, etc and was leading to a loss of 2% in sales

SOLUTION: Tech Mahindra enabled real time insights for the stakeholders building Global Template for common core business processes with a next-gen cloud-based ERP business suite as a base. We implemented analytics cloud-BI, cloud platform, along with the ERP suite's core functional modules, such as materials management, sales and distribution, financial accounting, controlling, product planning, and cash management.

HIGHLIGHTS: TechM has developed custom programs that determine the stock among the FMCG/perishable goods, move them to the subcontracting process, which transforms the raw perishable into packaged goods and sells them at higher profits. The entire retail and wholesale business functionality has been placed on one single tenant edition S4 1909



Savings realized with rollout in Japan



Wastage of goods







American Aircraft Manufacturer

Al-driven vendor selection

PROBLEM: The client was looking at a contextual assessment of suppliers from a large corpus of 100s of vendors. Manual supplier assessment meant sifting through unstructured data of 10b s of supplier assessment documentation which was 3-4 days of effort with a risk of selecting the wrong supplier too

SOLUTION: Identified and defined the data processing, management and exploration systems using artificial intelligence (AI). Deep knowledge discovery and text engineering techniques were used to extract targeted parameters from unstructured data corpus. Domain specific entity models were built using open-source tools like Tensor Flow, keras and LSTM. Prediction models were built using CNN to predict some of the targeted meta details. Advanced cognitive search engine was built along with other data exploration modules to explore the captured supplier assessment-based data in detail.

HIGHLIGHTS: The model displays best match across 5 recommended suppliers, with a scoring of 0-10 for each supplier (0-weakest, 10-strongest)

Faster decision making from

3 days to few seconds







Global Leader in Industrial Tooling

Cloud-based supplier diversification solution

PROBLEM: The client wanted to mitigate a supply chain risk of \$1.5B spend, due to created due to geopolitical situations, competition, monopolistic suppliers, cost competitiveness reasons from suppliers in China and Taiwan to India, Mexico and ASEAN countries

SOLUTION: Tech Mahindra conducted a risk mitigation by developing new specifications over supplier designed products and conducted value engineering to specifications and test the requirements for the client's products. We conducted should cost analysis to evaluate right commercial negotiations and recommended the top scored suppliers to the sourcing council

HIGHLIGHTS: Leveraged Tech Mahindra platform for insights on sourcing strategy, a cloud-based tool that generates actionable insights from client's supply chain data and influence business outcomes.

25%

Cost savings through diversification



Anti Dumping Duty / Counter Vailing Duty savings on certain products











Improved visibility in invoicing and payments

PROBLEM: The client was spending high amount of time on manual and repetitive activities and had issues such as non synchronization between various systems too. They were processing huge volume of the invoices and wanted to provide transparency and visibility

SOLUTION: Tech Mahindra carried out a workshop and thorough process assessment and identified 3 business processes to be automated (automation propensity of >70%). A proof of concept was first conducted, and then full-scale RPA was done. Established an RPA center of excellence to allow all areas of the company to automate their individual processes

HIGHLIGHTS: Increase in visibility for availing early payment discounts



Reduction in cost per

invoice

48h to 24h

Reduction in invoice processing time









US-Based Healthcare Company

50% reduction in contract cycle time

PROBLEM: The client wanted to consolidate multiple IT systems & different purchasing processes with a target to achieve 20% reduction in cycle time to execute a contract and compliance, with a better control and track on contract status.

SOLUTION: Tech Mahindra built contract management system(CMS), contract decision management (CDM), CIS analytics (real time reporting), manage care activity management(MCAM). This gave a better control on the contract lifecycle with Single Source of truth for contract decision information, documentation and approval

HIGHLIGHTS: The solution eliminates document management issues of workload trackers that result from people movement.









reduction of time in searching contract strategies



For contract signing and execution

<2 days

For contract approvals



Leading Telco in Singapore and Australia

Cloud-based contracting for common view of spend

PROBLEM: The client had a decentralized procurement organization with three business units, across 20000 suppliers, 3000 contracts. They lacked a homogenous view of spend

SOLUTION: Tech Mahindra automated the source-2 contract process and integrated cloud-based spend management suite leveraging process integration. Converted paper-based contracts into digital contracts

HIGHLIGHTS: Delivery automation through adopting best practices in voice based e learning, and contract migration (extract, transform and load) with a cloud-based utility





Improvement in contract compliance



Common visibility of spend

North American Automotive Company

Blockchain-based digital supply chain transformation

PROBLEM: Manual documentation shipping and traceability, multiple systems leading to data discrepancy was leading to increased inventory buffer stock by 10 days and more price variances

SOLUTION: Tech Mahindra established a private permissioned blockchain network for asset tracking among OEMs ecosystem (global suppliers and logistics providers). This enabled a single source of truth on distributed supply chain ledger. We then created smart contract-based automation to reconcile supplier and logistics providers invoices with minimal to no manual intervention from the business users.

HIGHLIGHTS: Disintermediated and democratized the business operations, increasing transparency and visibility and enabled near real time processing of transactions,



reduction in invoice/PO price mismatch



days early visibility into invoices



Improved operational efficiency









Customs Department in the Middle East

Secure cross border ecommerce customs brokerage on blockchain

PROBLEM: The client wanted to reduce the cost of ecommerce operations, provide 100% visibility across the ecommerce supply chain and reduce physical document submissions for imports from the bonded zones

SOLUTION: Tech Mahindra conducted multiple design thinking workshops with the client and 3PL partners and other organization to ensure everyone in the ecosystem had alignment on goals. We built and e2e platform using opensource Hyperledger Fabric and leveraged chain-code (smart contracts) to automate the multi-party conditions that touches all party core systems . We also enabled a no-code/ low code platform of a partner company to build workflows relevant for ecommerce customers

HIGHLIGHTS: Enables automatic approval and clearance of about 97% of no-risk consignment transactions in 2 minutes without any human intervention



Reduction in cost of ecommerce operations



Jump in YoY ecommerce transactions



Visibility and traceability to all stakeholders in the eCommerce Supply Chain











Freight and Carrier Company in the US

ML-based matching improves conversion rates & profitability

PROBLEM: Their customer sales representatives spent a lot of time and manual effort to match a load with 20000 carriers, using a rule-based system which accessed data from various systems. They wanted to improve the quality of the shipment matches

SOLUTION: Tech Mahindra designed a Machine Learning-based recommendation engine for freight matching based on a variables like match-pair history, success ratio (for same customer, for same route), seasonality and weather data, shipment budget limits of the carrier etc. The solution could rank the carrier with highest chances of accepting the load and reduce the time taken to make calls to multiple carriers

HIGHLIGHTS: The automated freight matching solution could forecast the demand and more efficiently optimize container capacity, reduce costs, optimize routes and enabled better negotiations and higher profits



Improvement in conversion rate of matches



Reduced time to forecast the demand and optimize available capacity



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Global Pharma Company in Europe

AI/ML based offer for commercial trade channel

PROBLEM: Sales of the client's drugs at pharmacies were not reflecting the prescriptions by HCPs despite quality and customer preferences. They wanted to offer appropriate offers as part of their price proposals to pharmacies in order to maximize sales and reduce the probability of lost revenue due to inadequate offers.

SOLUTION: Tech Mahindra analyzed various data like market growth and market share of the client at the region level and prescription share at SKU level. We also ran ARIMA model on the historical secondary sales data to get the sales baseline. This showed an estimated 30% gap of potential to prevent revenue leakage and switch to competition. Using predictive analytics and machine learning, we built a decision support model for the commercial trade channels, to propose right commercial offer to each pharmacy and brand based on -a) Gap analysis, b) KPI analysis, c) Retailer segment, d) Profitability target of pharma commercials

HIGHLIGHTS: Enabled better (Limit-on-Close) LOC governance on giving away discounts and ensuring full LOC compliance with the commercial policy. The solution is capable of processing 16,000 ML models/min, and 141 Million records across 5 layers of data and business processing logic

1()~

Increase in revenue

3 days to 3.5 hours

Reduction in time to generate offers across 10,000 pharmacies









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Leading Telco in North America

Retail inventory serialization reduces \$100M costs in days in inventory

PROBLEM: The client was trying to address reduced shrinkage in its retail business but was struggling with its existing supply chain high operational cost, issues with inventory visibility and asset traceability, and lost sales due to lack of availability.

SOLUTION: Tech Mahindra conducted a benchmarking though the Tech Mahindra Needle analysis framework (business performance benchmarking tool), that revealed higher days in inventory (DII) cost. We transformed the supply chain digitally, and radically simplify operations with retail inventory serialization platform, enabled by microservices and takes an API-first approach.

HIGHLIGHTS: Backend cloud platform has been built co-innovating with a leading ERP vendor. The platform is highly secure (separates organization data and customer data, and has access controls)



Savings due to reduced days in Inventory 50%

Reduction in TCO



Stores have an enhanced customer experience with the solution









American Heavy Truck Manufacturer

Quicker aftermarket services with telematics platform

PROBLEM: While the client had an existing web platform for monitoring vehicle telematics data, it was quite overwhelming for small business users. They wanted to real-time telematics information captured from on-vehicle IoT devices for small business users on iOS and Android devices.

SOLUTION: Built a telematics platform which keeps the back office informed about all aspects of the vehicle, driver, route and maintenance of the vehicle. It provides comprehensive vehicle health reports, Interactive fault code action plans that identify most likely needed parts and service, dealer on hand inventory of needed parts, and GPS mapping with nearby service centers, hotels, and emergency facilities.

HIGHLIGHTS: Drive service revenue by routing customers to their or partner service providers. Leverages Tech Mahindra IP for telematics platform



In service request time



Through referral, upsell commissions









Japanese Auto OEM

Intelligent and predictive after-sales service at the right time and at reduced costs.

PROBLEM: The client had little or no visibility on the after-market servicing of their cars and was incurring exponentially increasing costs on their repetitive warranty claims (usually for the same components). They were also facing a growing rate of consumer buy backs (CBBs).

SOLUTION: Tech Mahindra solution intercepts repair orders as and when they are entered in the dealers' systems, capturing details such as vehicle information, warranty status, repair history and issue diagnosis. The warranty analytics framework used a statistical model that intercepts claims and runs them past pre-set criteria before they are adjudicated.

HIGHLIGHTS: The solution helps users provide intelligent and predictive after-sales service at the right time and at reduced costs. Leverages Tech Mahindra Warrant management solution built on PEGA technology



Savings in warranty costs



Fraudulent claims









European Aero OEM

Digital thread for reduction in new product introduction time

PROBLEM: The customer was experiencing siloed product development, manufacturing, and aftermarket services activities, which resulted in higher time and effort for new product introduction.

SOLUTION: Tech Mahindra conceptualized a multi-tower transformative strategy that may lower total cost of ownership (TCO) by 30% while remaining compliant with ITAR, EAR, DFAR, and GDPR. Developed a digital thread solution that connects the product-production-performance value chain, along with IT and OT integration.

HIGHLIGHTS: Implemented six techniques to achieve the transformation: IT as a product organization, application portfolio optimization, hybrid cloud adoption, telemetry IoT for business, analytics-based command centers, and DevOps, SRE

30%

Reduction in New Product Introduction Time



Lesser rework and scrap



Control tower

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Leading Telco in Australia

Optimized field technician utilization with ML-based control tower

PROBLEM: The client wanted to maximize technician productivity and optimal commercial performance, while maintaining total volume requirements, thus enabling field services to become a model driven, cognitive enterprise

SOLUTION: Built a fieldd operations control tower leveraging Machine Learning models. The models took job tickets from different business units, and the number of available technicians (internal and external vendors) as an input. It predicted the runs using Random boost, neural network and XG boost methods and then optimized them using bayesian genetic algorithm.

HIGHLIGHTS: The model factored in constraints such as skill capacity, penalty for missing a demand, travel, cost of workforce etc and allocated the most optimal workforce for the issue



Savings in operational costs



Worth reduction in unmet demand



Control tower

тесн mahindra



Automotive Seating & E-Systems Company

E2e integrated industry 4.0 command center

PROBLEM: The client wanted to identify leading and trailing plants for critical manufacturing KPIs, identify gap to greatness, and trigger alerts for deviations in near-real-time. Hence, they required an integrated view of operations across factory, supply chain, and support functions

SOLUTION: Built and the enterprise command center solution on cloud and developed interactive reports and dashboards to help users benefit from monitoring critical kpis visualization. Cloud-based data management solution is used for data processing, data management, and cloud-based visualization tool is used to explore unstructured data. Qlik data integration was utilized for near real-time replication of data, and python is used for real-time alerts.

HIGHLIGHTS: Includes views such as world map with plant locations (hover, click, interactive showing KPI charts/details), plant shop floor diagrams with drill-downs into details for each plant included threshold alerts in near-real-time, etc



Reduction in Mean Time to Respond to alerts 50+

KPIs monitored



Reduction in maintenance costs



Control tower

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Thank You

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