Transforming to a Modern, Customer Centric Digital Platform for Growth, Competitive Advantage and Profitability

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About Us

ArcelorMittal Nippon Steel India (AM/NS India) is a joint venture between ArcelorMittal and Nippon Steel – two of the world's leading steel companies

- **Capacity:** AM/NS India is an integrated flat carbon steel manufacturer - from iron ore to ready-to-market products - with an achievable crude steel capacity of 9 million tonnes per annum (MTPA) , Plans to take overall steel capacity to 40 MTPA by 2035
- **Plants:**
  - **Mining:** Sagasahi, Thakurani
  - **Pelletization:** Paradeep, Vizag (12 MTPA → 20 MTPA)
  - **Upstream:** Hazira (9 MTPA)
  - **Downstream:** Pune (1.4 MTPA), Khopoli (1+MT), Gandhidham
  - **Service Center:** 6 Across India
  - **Hypermarts:** 14 Across India
- **Growth:** Acquisition of ports, Power and CRM Lines and Expansion at Hazira taking total capacity to 15 MTPA
- **Long Term Plans:**
  - Increase capacity 5 times to by 2035
  - AM's XCarb programme and Nippon Steel's Green Transformation: target to be carbon neutral by 2070
  - Increased MSME focus

[Play Video]

Project Objectives

✓ AMNS has Migrated into S/4 HANA with clear objectives which are in line with the organization's objectives and roadmap for next 10 years

☁ Moving to a "Digital Core for an Intelligent Enterprise Journey" through S/4 HANA to support the landscape with New edge technologies for Harmonization, digitalization and automation of processes across functions.

✳ End to end integration of systems for better customer experience

📈 Improved Compliance and Governance through SAP GRC

⏱ Faster account closure and better profitability visibility

☁ Adoption of Cloud to improve the ability to digitally transform the whole ecosystem and will ensure 100% availability of system

⏱ System response for adopting real-time analytics to help business to take quicker decisions by reducing the overall turnaround time

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Strategic Challenges drive the Change

🎯 STRATEGIC CHALLENGES:

- **Expansion plan to increase capacity 5 times in next decade** needs a robust, optimized enquiry to order process
- AM/NS India today
  - Integrated Steel mill with Mines, Iron making, Steel Making, Hot and cold rolling and down stream facility
  - 30 locations; 6 service centers and 20+ Hypermart. Capacity: 9 Million Tons / year including 600+ grades, 250+ product models, 10,000+ orders/ mth

- **Increasing customer expectations** are driving us to fully transform to a modern, customer centric digital platform thereby building competitive advantage and enhancing profitability. For this growth we need:
  - Ability to interpret customer demand
  - Carry out real time checks with visibility of product range, mill capability and pricing
  - Seamless integration between new edge platforms to track enquiries, negotiation and expedite order entry process

📋 BUSINESS CHALLENGES:

- More than 4 to 5 days of lead time to confirm the order
- Real time visibility of pricing and mill capability to sales executives for offer negotiation and visibility of deviations to technical team
- Inventory Valuation and Sales order costing for Profitability by Customer – Product Grade etc.
- Access to complete range of high quality AMNS products in a single stop for the Customer
- Practical challenges faced by customer to know the fair price of products, availability and payment terms as set by the company leading to loss of credibility
- Safety comes first for us, availability of Safety Permit and certificates
- Tool to monitor and track Capex projects and WBS structures.
- 15 + year old, heavily customized landscape which resulted into High turn-around time to incorporate new Business Requirements

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SAP Solutions and Capabilities
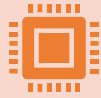
Benefits of the S/4 HANA implementation come in the form of speed of transaction with in - built memory and cloud hosted Server which ensures **data security and high availability**.

To drive financial transformation. Profitability Analysis, Regulatory Compliance and Safe Working Practices.

SAP AVC for product models building with predefined Mill capability checks, business & order dressing rules, pricing conditions and respond quickly to changing customer requirements and market trends

SAP CPQ to reuse the product configuration and real time pricing from S/4 HANA for offer negations with customers as and when required.

SAP Commerce Cloud for B2C customers enabled us to reach small customers and improve sales

SAP BTP platform enabled the secured and real time integration with SAP ERP

We have used **SAP standard best practices & architecture** which gives us an excellent capability of scalability which will help us to roll out in mergers & acquisitions and expansions.

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SAP Solutions generating Business Value

🎯 SAP SOLUTIONS:

- **SAP S/4 HANA private cloud edition,** integration with MES and L2 systems through SAP PI/PO
- **SAP advanced Variant Configuration (AVC), SAP CO, SAP Work Clearance Management (WCM), SAP Extended Warehouse Management (EWM), SAP Fiori, SAP Commerce Cloud, SAP Configure-Price-Quote (CPQ)** integrated with existing CRM
- **BTP platform for CPS & CPI services**

📋 BUSINESS VALUE:

- Seamless enquiry, negotiations & order management process
- The transaction volume is now 10000+ orders per month and 35000+ shipments per month
- Automated critical logistics processes & aligned with statutory requirements, handled dispatch volume of approx. 1100+ vehicles per day.
- **SAP AVC** allows for the **flexible configuration** of complex steel products with single product modelling leveraging accuracy of any configuration channel to manage complex product portfolio. Advanced VC check has **reduced inconstancy** in configuring process **up to 80%.**
- **SAP CO** with **AVC provides real-time inventory valuation and sales order & production costing at various levels. This also led to faster month end closing (from days to hours)**
- Achieved clearer **visibility to profitability at customer, order, product, grade level** etc. helping driving stronger business strategy.
- SAP CPQ integrated with S/4 provided real time visibility of mill capability, pricing etc. Approvers **have direct insight into the margin** of every particular item, with **approvals version history.**
- The end-to-end integration provides **excellent visibility of real time product catalogues, mill capability & order dressing checks, pricing**, other information required to **negotiate the offers & seamless order entry process with improved cycle time**.
- **SAP WCM** leveraged for System generated safety permits, SAP treasury module and Actual material cost through SAP CO has saved manual efforts and minimized errors
- A large portion of productivity improvements were achieved by boldly challenging accepted practices and / or operational norms. We adopted SAP best practices to improve & automate the processes across functions

➔ As a result, AMNS is now able to accelerate order processing and **address customer requirements quickly**.

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Architecture
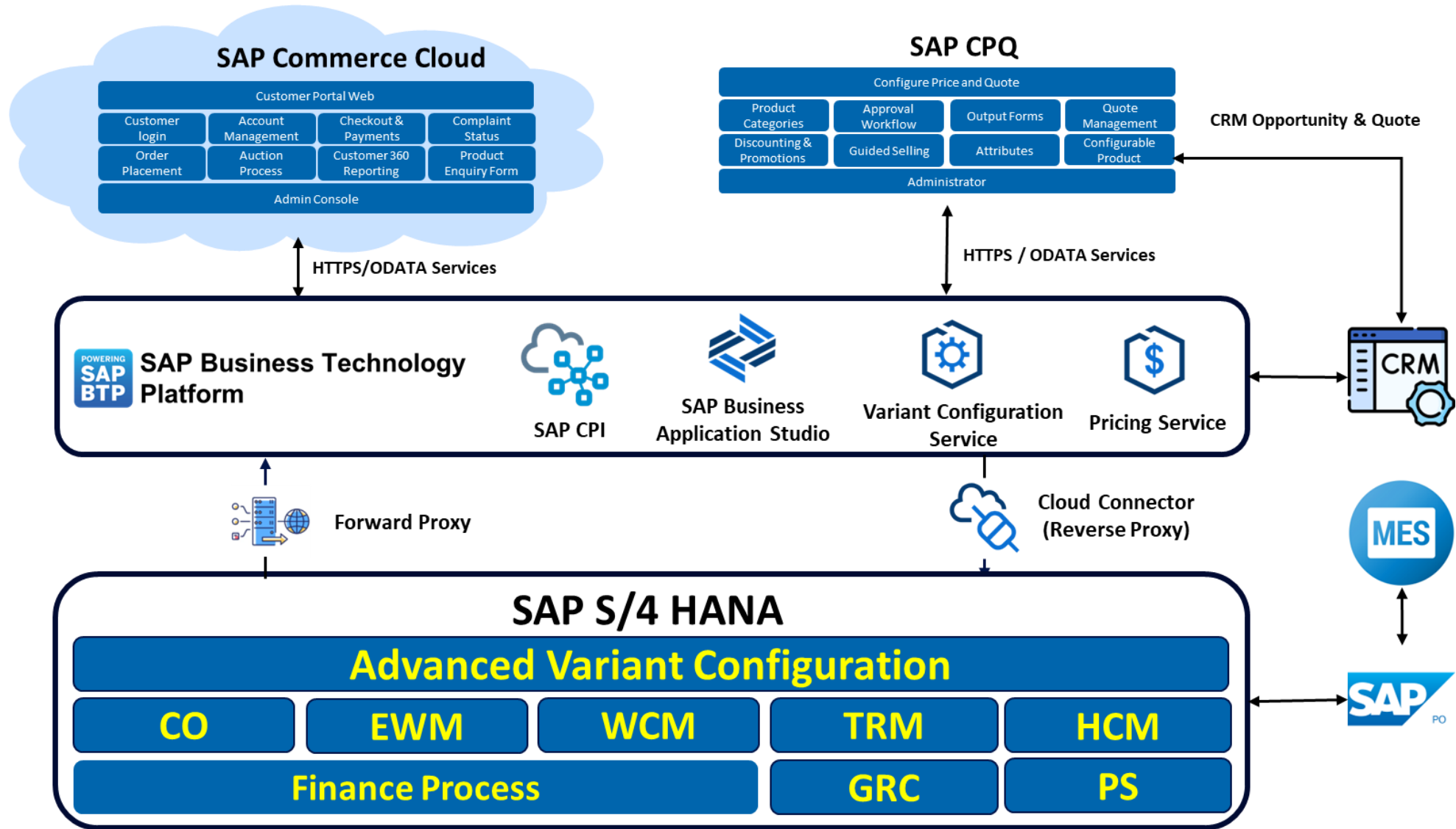
SAP Commerce Cloud & CPQ integration with SAP S/4 HANA

Transforming Business to be ready for the future

New business models

- New digital commerce platform enables selling to small customer segments and offers multiple new value-added services like visibility on products, inquiry generation, financing, e-document easy return & refund process, claim settlement etc
- This is empowered with a seamless integration of front & back office at product model level
- The target is to run entire retail business on this digital platform by 2025

Real Time

- Empower sales team for better negotiation by providing real-time product configuration and pricing guidelines
- Visibility of real time order status, ledger balance, dispatch tracking, e-document to customer

Up to 85%

- Reduction from up to 7 days down to 1 day to analyze, confirm & process profitable orders, leading to competitive advantage in speed to quoting & winning customer orders

50%

- Reduction in order creation process time through E2E integration between digital platforms.
- This is enabled by seamless integration in enquire to quote, quote to order & order to cash application.

60%

- Of overall net new retail customer registration & sales conversion came with implementation of this new digital platform.
- This has enhanced our reach & provided customers with seamless online experience.

Zero

- Lead time for delivery confirmation online.
- Customers order centrally in SAP. The system reviews location and inventory, assigning delivery from the nearest site, reducing lead time and transportation costs while improving on-time, in-full delivery.

Reduced complexity

- Of handling master data – Currently we have around 600 discrete SKUs in commerce mapped to 30 product models in AVC and this help with flexibility & scalability in the growing product portfolio.

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Value Creation

Value Creation through S/4 HANA

Built Robust platform to support growth (Business & digital)

Quick Rollouts for Mergers & Acquistions
12+ Rollouts Completed

Improved Data security and response by cloud hosting

Process
90% Harmonization of Processes

Harmonization of processes across locations of AM/NS India achieved and templates ready for roll out of future acquisitions and digitalization

People
25 % increase in end user productivity

Improved UI/ UX through Fiori, Faster speed of transactions, Automation of processes
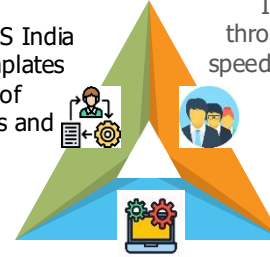
System
50 % Improvement in response & process time
with S/4 HANA and cloud migration + Data Security and HA

Total 7 Influence requested to SAP for features in CPQ which are acknowled by SAP and 3 are part of CPQ 2402 release

Released
- Dynamic value help(from variant table) for characteristic required in CPQ
- Trace functionality for AVC Forwarding (from CPS/CPQ)
- All Variant pricing key should be visible in CPQ Configurator

Accepted
- Request for AVC change log history in SAP CPQ Project
- SAP CPQ Configurator product consistency status
- Line-Item No. visibility in CPQ Configurator
- Bulk validation of attribute values in CPQ configurator

Person days Savings
Approx. **10107 per year**

Business Activity /Process	Before	After
Month closing	15~20 days	1 day
Depreciation as per Income tax for asset	15~20 days	Online
Improved product definition through AVC across the platforms	Manual	Real-time
Backups and restoration, daily monitoring, compliance	2 FTE	1 FTE
Treasury Processes Implementation	Manual	Online
Automation of Credit / Debit Notes	15~20 days	1 day
Harmonized processes and seamless integrations of MES	1 FTE	Auto

Data Cleansing
Master Data – 50%
Transaction Data -25%

Integrated SAP Hybris (eCommerce) and Advance Variant Configuration with automated order entry and Payment process. Configure to Quote and Advanced Variant Configuration with real time pricing and product master configuration

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Productivity Improvements

Procurement
- Auto header text determination in PO based on plant & vendor ➔ 15 to 5 mins
- Manufacturer Part Number ➔ Manufacturer wise inventory tracking ➔ 3 - 4 Days to 1 Day
- Scheduling agreement creation ➔180 to 15 mins
- Budget Control for Funds
- Semi automation of release strategy ➔ 30 Days to 10 Days
- Semi Automation of Mass creation of RFQ & SA
  ➔ 80% process efficiency increased
- Fiori Apps – Gatespass, PR/PO release

Sales
- Automation of debit/credit note ➔ 20 Days to 1 Day
- System Based NSR report
- System based Rebate process
- Fiori Apps – ATP, Order Releasing & Customer FA, Price Correction
- Semi automation of Sales Order Entry

Finance & Controlling
- CO Month End closing
- Depreciation as per Income tax for asset ➔ 20 Days to 1 Day
- Actual Costing ➔ Real-time Inventory Valuation
- Live balance and Fund Transfer ro Axis and HSBC banks
- Bloomberg for trades
- Improved liquidity position with access to unsercured working capital limits.

Others
- End User Productivity due to overall system transaction performance improvement
- Backups and restoration, daily monitoring, compliance ➔ 10 Hours to 0.5 Hours

Audit and compliance

Shopfloor
- Auto UD for Last WIP in Plate Mill ➔ 9 hrs to 1 hrs
- Elimination of manual entry in Test Certificate Plate Mill ➔ 10 mins to 1 mins
- Semi Automation for Rework UD ➔ 60 mins to 15 mins
- System generated Test Certificate for Export for Pune facility ➔ 60 mins to 2 mins
- Usage Decision for paint and Zinc for Pune facility ➔ 10 mins to 1 mins
- Visiblitliy of Testing & TPI clearance while result recording for HSM, CSP to shift engineers ➔ 60 mins to 0 Mins
- EHS ➔ WCM
- Actual Cost of Maintenance ➔ MTTR and MTBR reports
- Fiori Apps - HRC Dashboard, FG Production Report, Material stock display, Stock overview, Production order information system, Scheduling system

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SAP S/4HANA used across Business Units
## Service Centre Example

Sourcing & Procurement

- Automated GRN and Heat chemistry transfer

- Unified Material Master

- Integrated RFQ/Tender with S/4 HANA

- Reverse Auction

- Centralized NFA Portal

- Automated alerts for procurement statuses

Finance Project System

- Uniformity of Charts of Accounts- Preparation of Financial reporting in line with AMNS Charts of accounts

- Single profit center – 1 Business

- Actual cost of production

- Single Tax cum GST invoice with Digital Signature

- Indirect Taxation Seamless GST Return filing
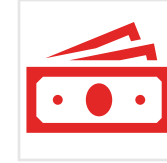
Operations and Plant Maintenance

- Production execution with automated GI/ GR and batch attributes

- Tracking of Mother coil and linkage to child batches (Cutting plan is outside of the system)

- Full Electronic Process Framework for Work Permits and Task Lists

- Supports Authorization for Lock out –Tag Out

- Plant Maintenance along with PM mobile Apps for notifications

General

- Unified ITGC and Audit controls

- Simplified system landscape and processes

- Cleansed master and Transactional data

- Harmonized Finance and procurement Processes

SAP CPQ

SAP CPQ (CONFIGURE, PRICE, QUOTE) WORKFLOW IS NOW LIVE.

OUR JOURNEY TOWARDS AUTOMATION, STREAMLINED PROCESSES AND ENRICHED CUSTOMER EXPERIENCES.

Key benefits of using SAP CPQ/Offer Tool:

- Accurate Quotes
- Seamless and quick Order Booking journeys
- Valuable Business Insights
- Automated sequential approval process
- Data Retention for Audits

- Smoother systems raise our efficiency, productivity and customer delight.

- AM/NS India introduces the integrated CPQ solution (With S/4 HANA, SAP Commerce, SAP AVC) that enables Sales & Order Booking Teams to seamlessly complete the journey from Opportunity Creation to Order Booking.

- The new SAP CPQ workflow not only created value for the firm but also increased the efficiency of the sales team and enriched customer experiences.

- Its single version of truth with harmonized systems.

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SAP CPQ – Process Flow

Contract to Lead	Lead to Opportunity	Opportunity to Lead	Quote to Order	Order to Cash

Contract to Lead
- Campaign on new offer is created
- Customer registers, gives consent and views information
- Interaction is captured and lead is created

Lead to Opportunity
- Lead is qualified, forwarded to sales and converted to opportunity

Opportunity to Lead
- Customer builds shopping cart online and requests quote
- Salesperson creates quote

Quote to Order
- Customer views, negotiates over and accepts the quote - order is generated.
- Customer is prompted for feedback on the overall shopping experience.

Order to Cash
- Order is dispatched from back end. Customer sees real-time Status.
- Customer confirms product delivery and installation and starts to use service.
- Customer views invoice and makes payment.

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SAP Commerce Cloud

- Simple Registration Process
- Faster Product Search
- FOR Delivery Option
- Multi Payment Option
- Channel Finance Option
- Auto Sales Order Creation
- Auto AR Check & Order Creation

- Automatic Price update from SAP
- Customer Class wise Pricing
- Delivery Commitment
- Order Status Update
- Simplified Order Cancellation
- Chatbot Facility on Portal
- Notify Me Facility on Portal
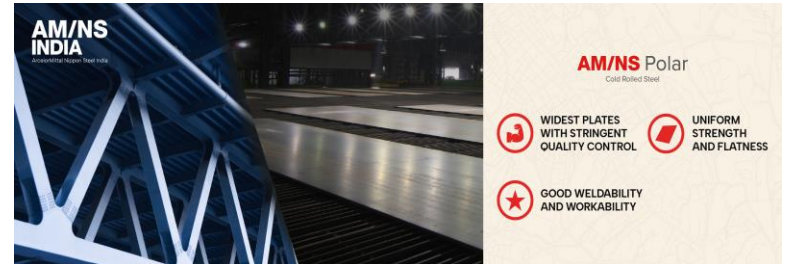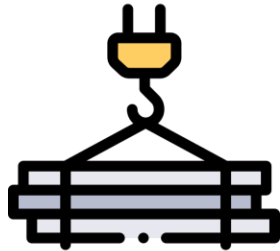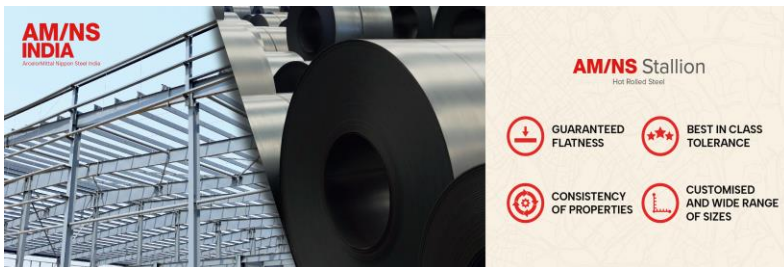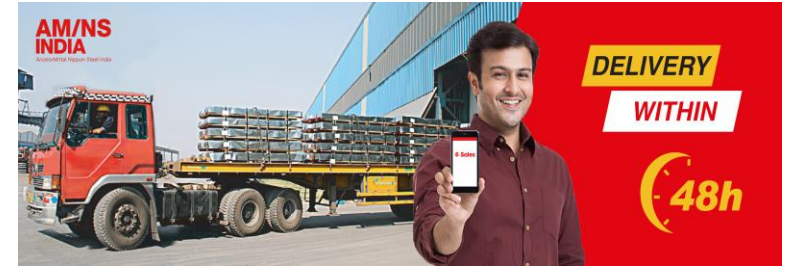
Scale at which the program was executed

3 Countries (India, Indonesia & the UAE)

39 Plants, Several Company Codes

30+ Office Locations, Mines, Hypermart & Service Centers

Project Structures – 1500+ WBS Elements – 2500+

Cutover Data
- **Sales Order – 126000-line items**
- **Maintenance Orders – 4231**
- **Master Data Objects – 106**
- **Inventory Material – 113814**
- **Inventory Production – 73775**

Total 80+ AVC models, with variations 250 + models

360+ Business Processes

400+ Test Cases

5500+ User Trainings

3000+ Person Months Effort

1800+ Custom Programs 40+ peripheral system 290+ interfaces

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Other Deployment Details- SAP Product & Services

Sr. #	SAP SERVICE	CONTRIBUTION TO PROJECT
1	**SAP MaxAttention, Enterprise Support and Expert on Demand**	• Very strong collaboration with SAP product engineering, development & services team during deployment of SAP AVC & CPQ for the Steel Industry. This tailoring & finetuning helped to meet the unique needs of AM/NS & across industry. Many quality inputs & influence requests were shared with SAP team. • SAP Max Attention team diligently identified all risks and cautiously provided a mitigation plan resolving all the critical issues in a timely fashion and aided Go Live on schedule. • MAX Attention team was involved right from start of the project where they validated the scalability of the system followed by Business process review in which they have provided many recommendations which has reduced the custom build and TCI. They also performed the post configuration checks to validate the readiness of the process. They involved the AVC product team and helped resolve critical showstoppers issues. • From Technical side recommendations were provided to optimize the Business down time. • Dedicated MAX Attention team was deployed during downtime, Go live and hyper care milestones and ensured smooth Go Live of the project.
2	**SAP S/4 HANA, SAP CPQ, SAP Fiori, Commerce Cloud, PO, Concur**	• Simplification: Centralizes resources with HANA database for streamlined processes. • Ease Of Use: Intuitive Fiori UI for easy, device-independent access. • Cost Effectiveness: Consolidates analytics and transactions, boosting cost efficiency. • Innovation: Drives innovation with faster, data-driven applications. • Improved performance and speed: Enhances performance with real-time data use and predictive abilities.
3	**SAP CPI, CPS and CPI services**	• CPS for pricing and Configuration Service and CPI for AVC forwarding and real time integration with SAP S/4 HANA

Benchmarking

World's one of the 1st Integrated Steel Mill to Implement all new-age Solutions, like S/4 HANA with Advanced VC, CPQ, SAP Commerce, Treasury, GRC and EWM Solutions. This has positioned organization **as a leader in digital transformation within industry**.

Material ledger, CO-PA along with AVC product structure one of the first in Industry. On finance side, refined closing process & Improved **closing time considerably**.

System generated certificates and work permits for operational safety through Work Clearance Management (SAP WCM)

Lowest blackout period of 14 hrs. For a Company of our size and complexity, it took 17-18 days for competitors of size ranging 6 – 13 MTPA.

Zero Business Disruption All 19 production lines were operational from "0 hour" without any Production Loss. Real-time Disaster Recovery and Business Continuity Mechanism
Record Stabilization time – within 1 week

Future Impact and Plans

- Through the SAP S/4 HANA implementation, we have created **digital backbone for future initiatives**

- Scalability for handling future data growth and evolving needs through Cloud migration

- **Smooth integration with Up Stream and Down Stream** has improved standard adoptability for scale up

- **Harmonisation and standardization** of processes across PAN India, Indonesia and Dubai has created the global templates for us , which can be **easily rolled out.**

- With this implementation now, we are ready for **organization wide Analytics roadmap** for such a size.

- SAP Concur integration S/4 HANA , Further digitalization in Retail Sales

- Roadmap for CY 24 -25
  - SAP RISE,
  - SAP Integration Suite
  - SAP BTP & AI
  - SAP Green Ledger & sustainability solutions

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Internal / External Recognition

SAP Ace Awards 2022 – Special Recognition
Customer Experience Transformation

SAP Ace Awards 2023 – The Game Changer
S/4 HANA Implementation

AM/NS India CEO Awards 2023
S/4 HANA Implementation

Finalist SAP Innovation Awards 2024

Thank You