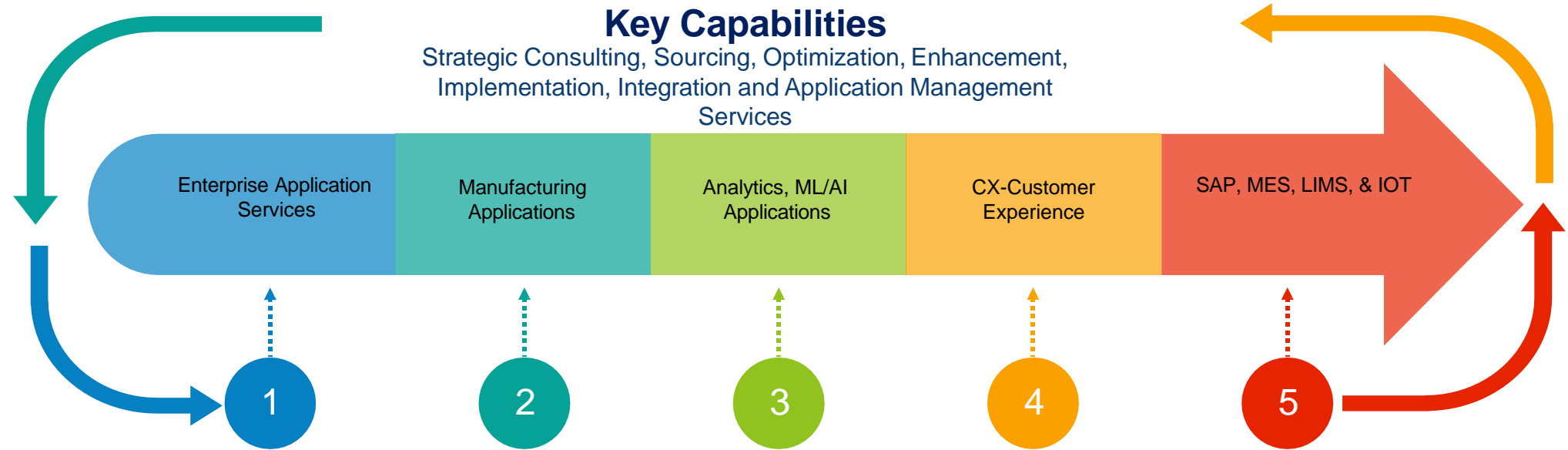




Metals Solutions

About Covalsys

Covalsys is driven by passion to build value together with its customers and partners by leveraging its domain expertise



Core Values



Leverage domain expertise to enable technology



Delivering Value to customer is the core objective



Innovation in Servicing and Solutioning



Build partnerships that add value together

Streamlining Business Processes with Software Solutions

2016

Established in US
India ODC established in 2018

2

Offshore Delivery Locations
Bangalore & Chennai

9+

Focused Industry Verticals

40+

Satisfied Customers

50+

Skilled Consultants

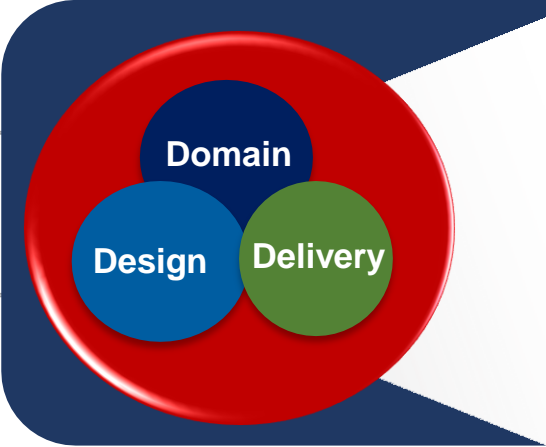


Metals & Mining

Extensive domain expertise in metals and mining across the value chain

Proven Digital Transformations Delivered

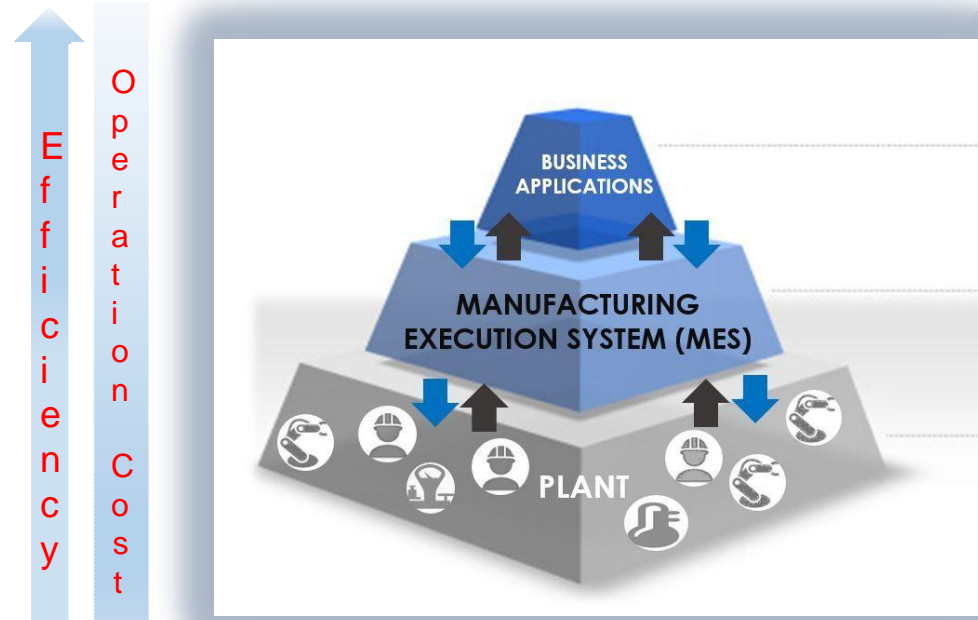
- **ISA95 based MES designed on MESA functional model**
- **Comprehensive Operations Planning and Scheduling**
- **Real time control room dashboard for steel casting**
- **IOT solution based operational analytics**
- **RFID based mining operations solution**
- **ILOG based blending optimization models**

L5 (BI, Portals, SCM, CRM)	 <ul style="list-style-type: none"> • 40+ years of exp in implementing large scale MES, LIMS , APS & other mfg systems in metals and mining • Expertise across the entire supply chain of steel industries from raw material to finishing lines • Deep expertise in ERP (SAP, Oracle) enables best alignment of mfg and business processes • Rolled out solutions for 20+ customers like JSW, Toyota Tsusho, Marubeni, Colorshine, Steelhouse, Bharat Iron, etc
L4 (ERP – SAP, Oracle, Baan, DX)	
L3 (MES, LIMS..)	



Solutions & Services

Comprehensive set of Solutions and Services across the entire metals Value Chain across IT and OT domains



- ERP: SAP S4H/ECC, SAP B1
- SCM: APO, APS
- BI: Qlik, Birst, Power BI, AI/ML
- CX/SX: SFDC, SAP C4H, VMS
- End-End Logistics (TMS)
- Industry Vertical Add-ons

- Package Implementation
- Audit & Advisory
- AMC & Managed Services
- Vertical Add-on dev
- Portals & Mobility dev
- Staff augment/remote staffing



- Custom MES (ISA95/MESA)
- Scheduling systems
- LIMS (Lab Info Mgmt Sys)
- Manufacturing Intelligence
- Process/Blend Optimization
- OPERA MES (ISV)
- Integration (L1 – L4)

- Mfg roadmap advisory
- Design & dev (MES, LIMS..)
- Optimization models dev
- Impl. package MES (OPERA)
- Mfg process audit (IT-OT)
- Integration Design (L1-L4)
- AMC & AMS



- PLC/SCADA Dev (Partner)
- Oprn data store (ODS)
- Integration with MES/ERP

- HMI design & dev (Partner)
- ODS design
- Integration dev (L1-L4)



Large Steel Plants

Customer Experience

Salesforce Solution and Services
Leading CX Platform Globally



SAP S4 HANA

Proven Metals Vertical Templ a
SAP S4 HANA SUITE



Business Intelligence

BI across enterprise functions
QLIK and Power BI



Steel Optimization Model

Cassotis Steel Industry Model
Globally Proven Model



MES (Mfg Exe Systems)

OPERA MES Platform
ISA 95 /MESA Standards Certified



IOT Automation

IOT platform with PLC SCADA HMI
technology companies is our DNA

*Unique and proven set of solutions and services across the enterprise ranging from operations technology to Intelligence systems to drive your **Industry 4.0 Digital Transformation***

MES (Mfg Exe System)



Scalable and Proven MES with integrated LIMS with global standards



ISA (MESA, GAMP, CFR)

Global standards compliance with US and EU standards



40 Yrs Steel Expertise

Strong domain expertise of implementing large MES systems



Industry 4.0 Ready

Designed keeping latest industry 4.0 standards for future ready



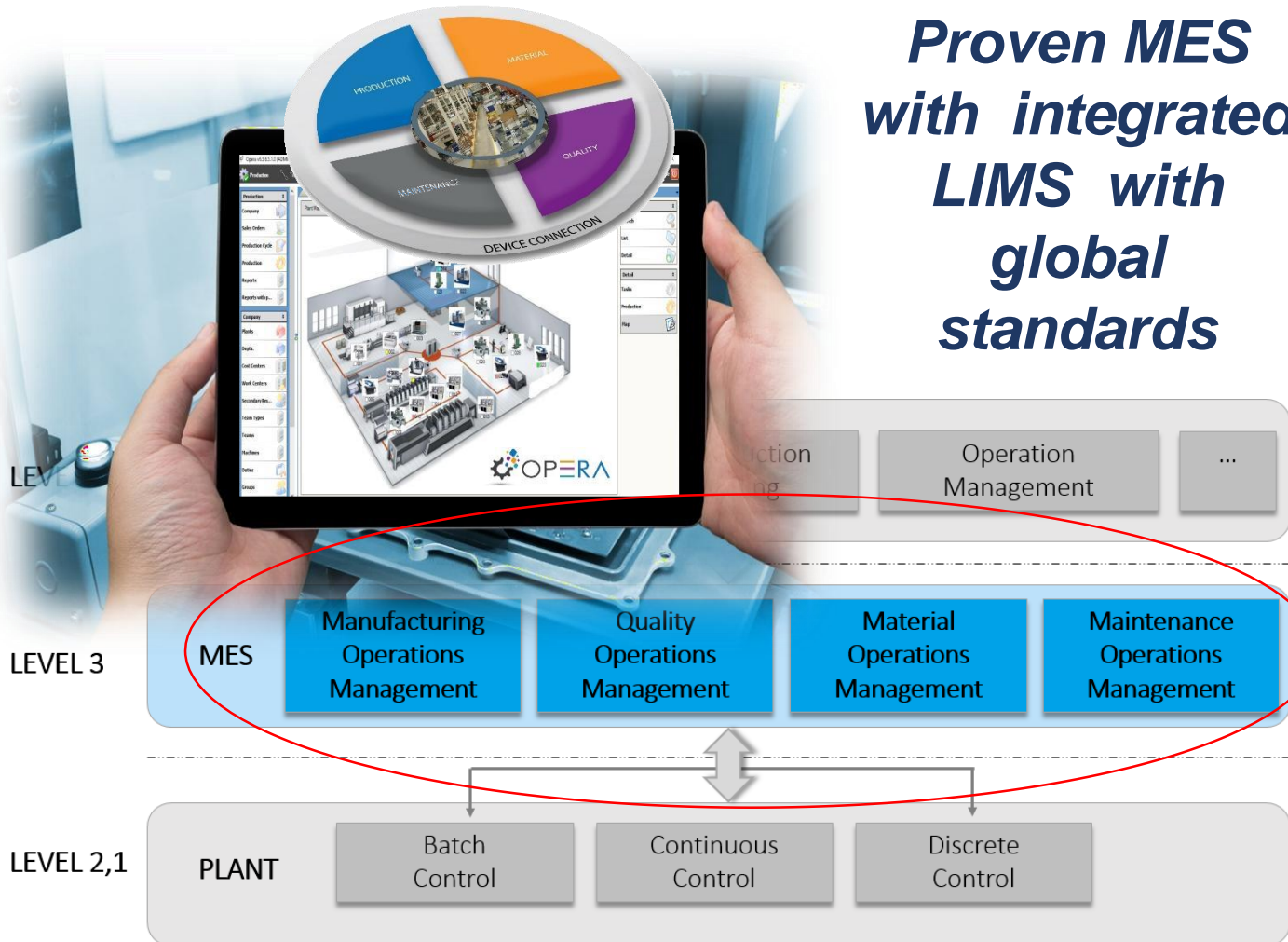
IOT Standards Ready

Designed for auto connections to production line devices



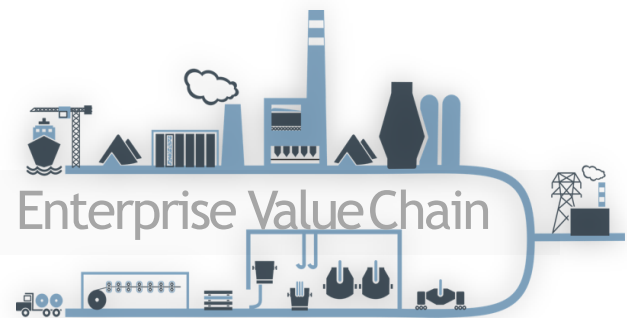
500+ Customers

Proven globally across diverse and multiple industry verticals

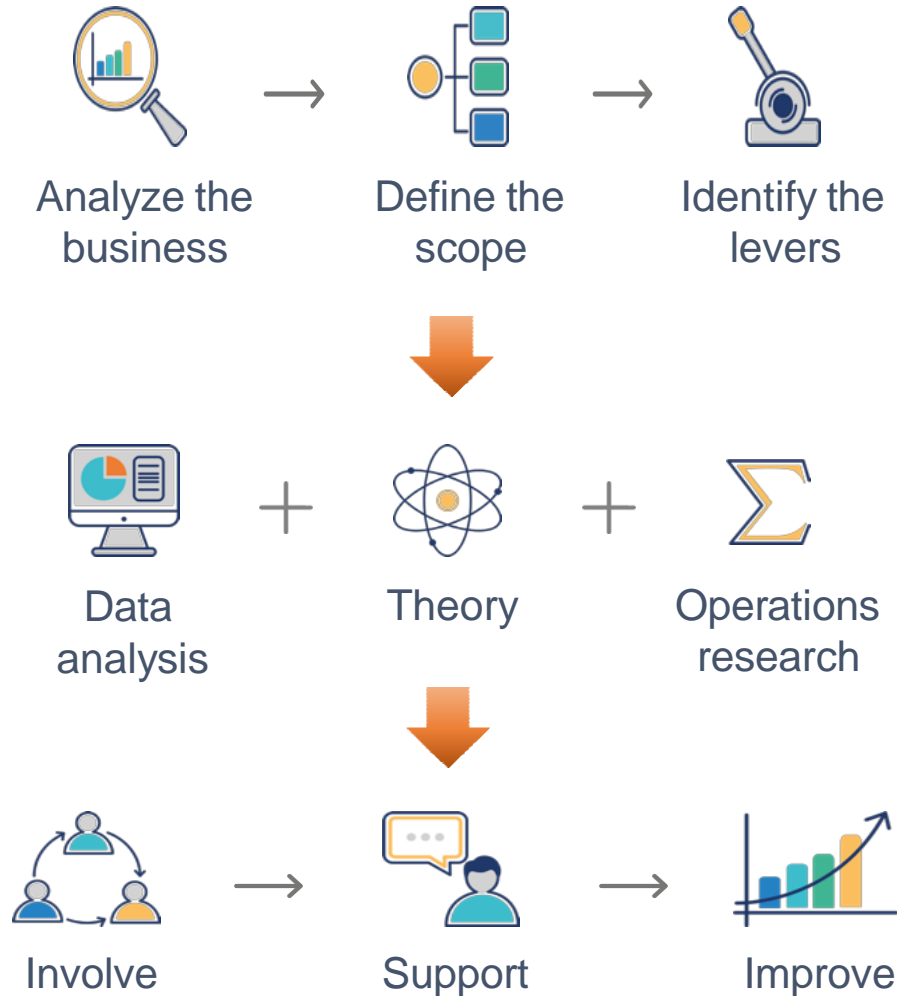


Steel Optimization Model

Operations research platform to optimize complex processes and drive efficiency across the manufacturing value chain



Three step systemic regression analysis process



Industry best and proven globally

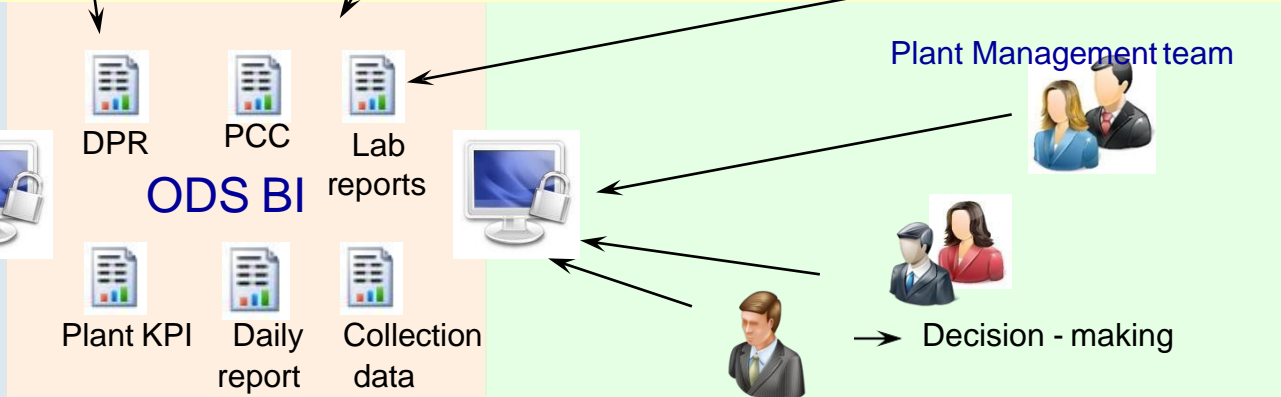
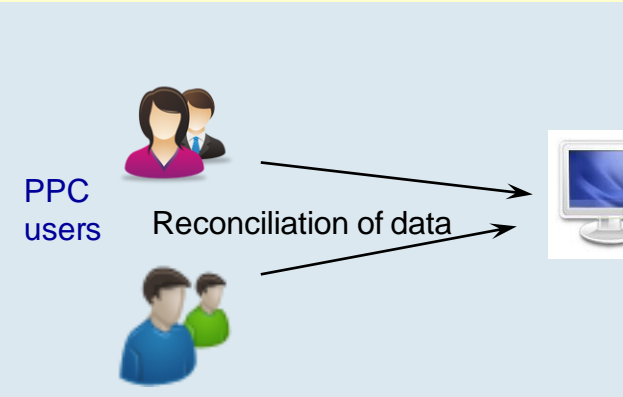
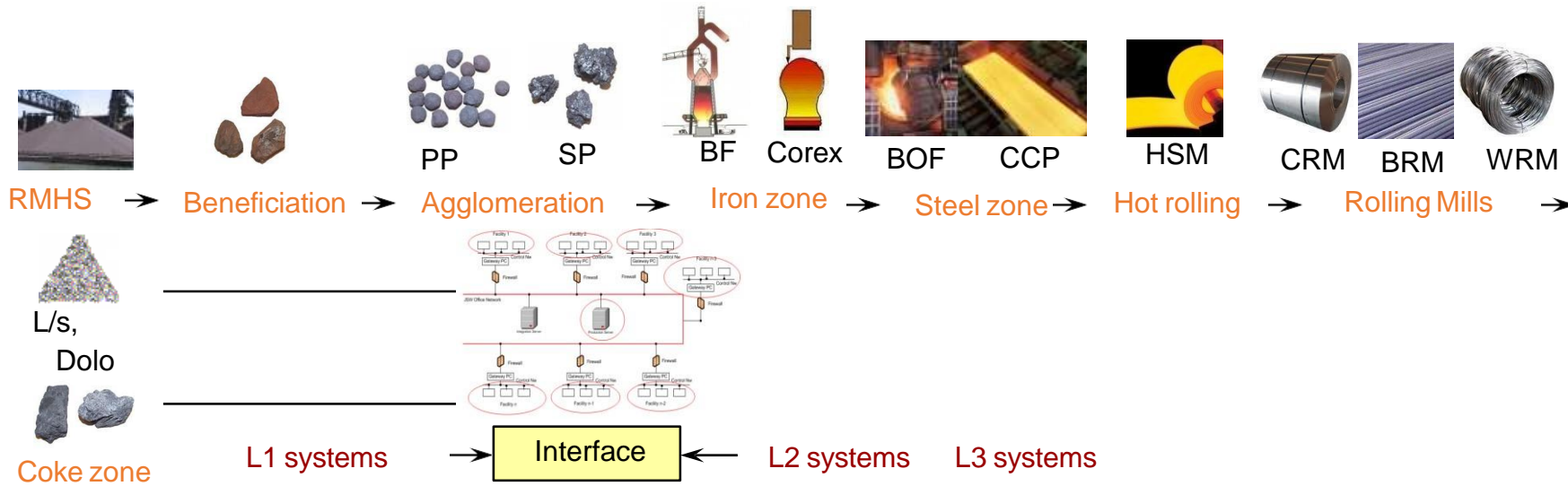
RESULTS

- Reduce production costs by **5-10 US\$/t**
- **5-10%** profit increase
- Promote **discussions** between departments
- ➔ **Aggregate** knowledge
- Boost **responsiveness**

Proven @

CSN (Compañía Siderúrgica Nacional) - Project finished in 2016
USIMINAS - Project started in 2018
GERDAU - Project finished in 2017
Ternium - Project started in 2018
Ternium (DIRECT REDUCTION) - Project started in 2019

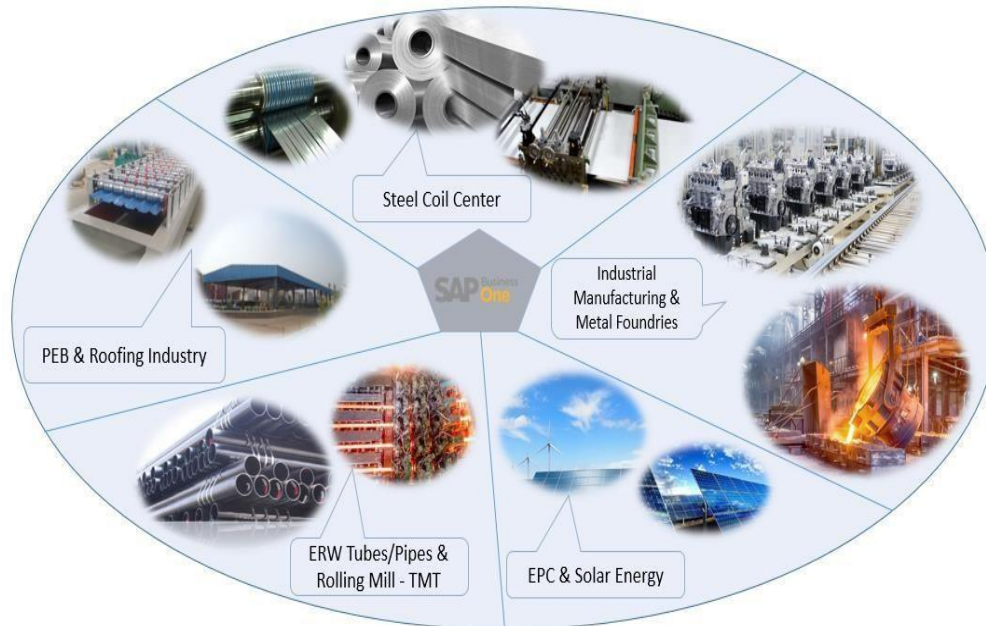
IOT Data Platform



- Key Solution Highlights**
- **Integrated solution across 160 PLC/SCADA systems**
 - **OPC standard protocol based integration**
 - **Secure multi-gateway secure framework for high operational data security**
 - **Tag data contextualization and dimensional model**
 - **Data transformation and governance process**

Metal Processing Centres

Metal Centre One (MCO) is an unique integrated ERP application developed by **Covalsys** on SAP Business One platform for all secondary metal processing industries



Tailor designed for key industry challenges

- Product proliferation with endless customer needs
- Optimization of mother material (Coil, Sheet, Plate, Bars..)
- Complex multi step and iterative scheduling process
- Traceability of material to ensure quality compliance
- Complex business models job work, trading, sub contracting

MCO advantages for your business

- Inventory visibility in metals nomenclature thick, grade, dia..
- Maximize yield by optimization of mother material
- Granular costing visibility to control cost leakages
- Traceability of material to ensure quality compliance
- Out of the box mobility and analytics

Designed for **Steel Coil Centres, Rolling Mills, TMT, PEB, ERW Tubes & Pipes, Metal Fabrication**

MCO Overview



Key Functional Scope of MCO

- Technology**
- Integration with mill systems
 - Built in mobility enabled
 - Built in Analytics /Dashboard

- Manufacturing**
- Customer spec driven mfg
 - Engg/process scrap mgmt
 - Downgrade, diversion, swap

- Finance**
- Metals specific batch costing
 - Yield and profit analysis
 - Product realization analysis



- Inventory**
- Configurable metal products
 - Commingling Own and OSP
 - Traceability and Genealogy

- Sales and Distribution**
- Attribute driven sales process
 - Track trade, Jobwork, Subcon
 - Customer spec driven

- Scheduling**
- Multi-step process scheduling
 - MTO and MTS scenarios
 - Multi-orders, multi-inputs

Coils, Tubes & Pipes



Uniquely designed to handle Slitting, Tubes/Pipe Forming, GI Pipe, Tubes/Pipe CTL, Powder Coat, Pierce & Pilger, Push Bench Process, Draw Process & Tube Extraction process.



MTP Solution Enablers

- Multi-level scheduling for both MTO/MTS
- Customer specification driven production
- Detailed Attribute driven inventory analysis
- Handle actual and theoretical Weights
- Order status visibility across stages with metals specific ATP of RM, SFG and FG
- Quality tracking for Inbound, Processing and Outbound materials
- Downgrading, Diversion and Swapping
- Jumbo Bundling, Splitting into packets, Re-working functionality
- Weight adjustments with Mother-coil mass balancing (Full & Partial)
- Quantify Engineering Scrap, Process Loss and Process Scrap Management
- Finished Goods product costing and realization analysis based on actual input batch, scrap valuation including process loss
- Fully Integrated with Barcode, Weigh bridge and Weigh scale equipments



Key Industry Challenges

- Competitive market demands maximize utilization of mother coil and min scrap
- Accurate and real time inventory visibility across multiple sizes and shapes
- Respond to changing customer demands
- Manage complex business models of job work, subcontract, trading



Customer Benefits

- Maximize yield, minimize scrap and realize better profit margins
- Minimize NCO, downgrading & diversions
- Take your business on mobile and improve efficiency and speed
- Manage complex business models of job work, subcontract, trading

PEB Roofing Industry



Uniquely designed to handle Coil profiler end to end process including C-Z purling and full project management



MRS Solution Enablers

- End-to-End Turnkey Project Management with sub-projects & outsource tasks tracking
- Bid Management to Work Breakdown System (WBS) definition till project won
- Detailed Attribute driven inventory analysis
- Project Wise-Subcontracting, Tracking & Handling automated workflows
- Material Resource Planning to support accurate Production and meet Customer Delivery Schedule defined Project margins
- Project Costing and realization analysis based on actual material expenses, Other Expenses & Net Revenue
- Quality tracking for Inbound, Processing and Outbound materials
- PEB manufacturing, quantify engineering scrap, process loss and process scrap
- Fully Integrated with Barcode, Weigh bridge and Weigh scale equipments



Key Industry Challenges

- Complex end-end project management to meet the customer demand at least cost
- Accurate inventory visibility across multiple profiles, colours and specs
- Customer project wise status visibility
- Manage complex business models of job work, subcontract, trading



Customer Benefits

- Customer project wise costing and revenue control to ensure project profitability
- Meet complex customer delivery needs
- Take your business on mobile and improve efficiency and speed
- Manage complex business models of job work, subcontract, trading

Melting – TMT



Uniquely designed to handle Scrap, Melting (Furnace & CCM), Billets to Rolling Mill Operation process



MRM Solution Enablers

- Maximize utilization of slab, plate and bars
- Built in tracking from scrap to TMT
- Multi-step scheduling for both MTO/MTS
- Detailed Attribute driven inventory analysis
- Inventory control by multiple UOM and Pc
- Order status visibility across stages with metals specific MRP ,ATP of RM,SFG and FG
- Quality tracking for Inbound, Processing and Outbound materials
- Downgrading, Diversion and Swapping
- Quantify Engineering Scrap, Process Loss and Process Scrap Management
- Finished Goods product costing and realization analysis based on actual input batch, scrap valuation including process loss
- Profit centre & Cost centre wise accounting and reporting
- Fully Integrated with Barcode, Weigh bridge and Weigh scale equipments



Key Industry Challenges

- Competitive market demands maximize utilization of input material with min loss
- Accurate and real time inventory visibility and traceability across operations
- Handling multiple unit of measures and lots
- Manage complex business models of job work, subcontract, trading



Customer Benefits

- Maximize yield, minimize scrap and realize better profit margins
- Minimize NCO, downgrading & diversions
- Take your business on mobile and improve efficiency and speed
- Manage complex business models of job work, subcontract, trading