

TATA STEEL



**Digital Foundation Program
@ Tata Steel Limited (India)**

**Sept 12, 2017
SAP M & M Summit Moscow**



- **An overview of Tata Steel Group**

- IT Journey and Broad IT Application Architecture

- Digital Foundation Program
 - ❖ Objectives & Deliverables

 - ❖ Digital Themes

 - ❖ Overall Solution Landscape

 - ❖ Use Cases

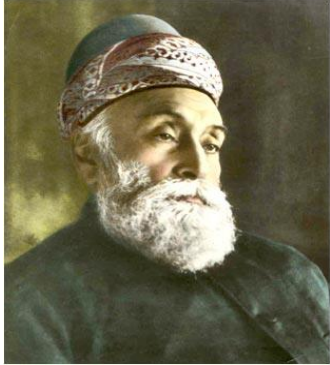
 - ❖ Roadmap

Tata Steel Group : An overview



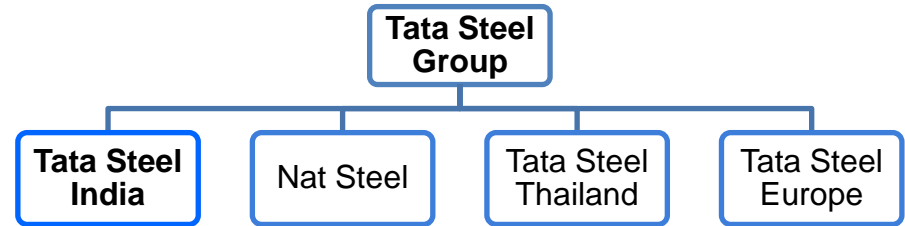
A Global Steel Company: Ranked 11th* in the World, in Global Steel Production

Founder

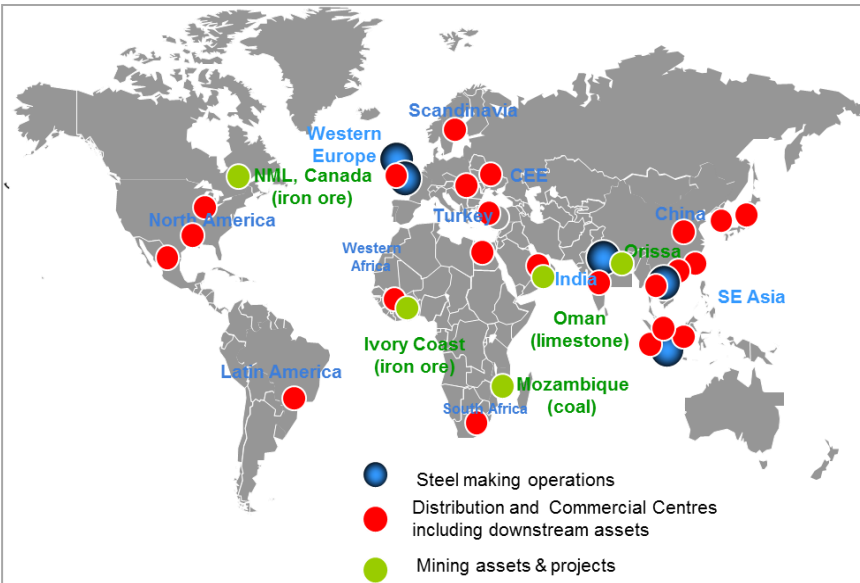


“In a free enterprise, the community is not just another stake holder in the business, but in fact the very purpose of its existence.”

Jamsetji Tata (1839 – 1904)



- 144 year old professionally managed Business Group
- Operations in more than 20 countries.
- Commercial presence in over 50 countries
- 70,000 + employees across 5 continents



Product Applications

Construction 	Automoti 	LPG 	Lifting & Exc
Auto Components 	Consumer 	Railway Wagons 	
Drums & Barrels 	Pipes 	Furnitur e 	

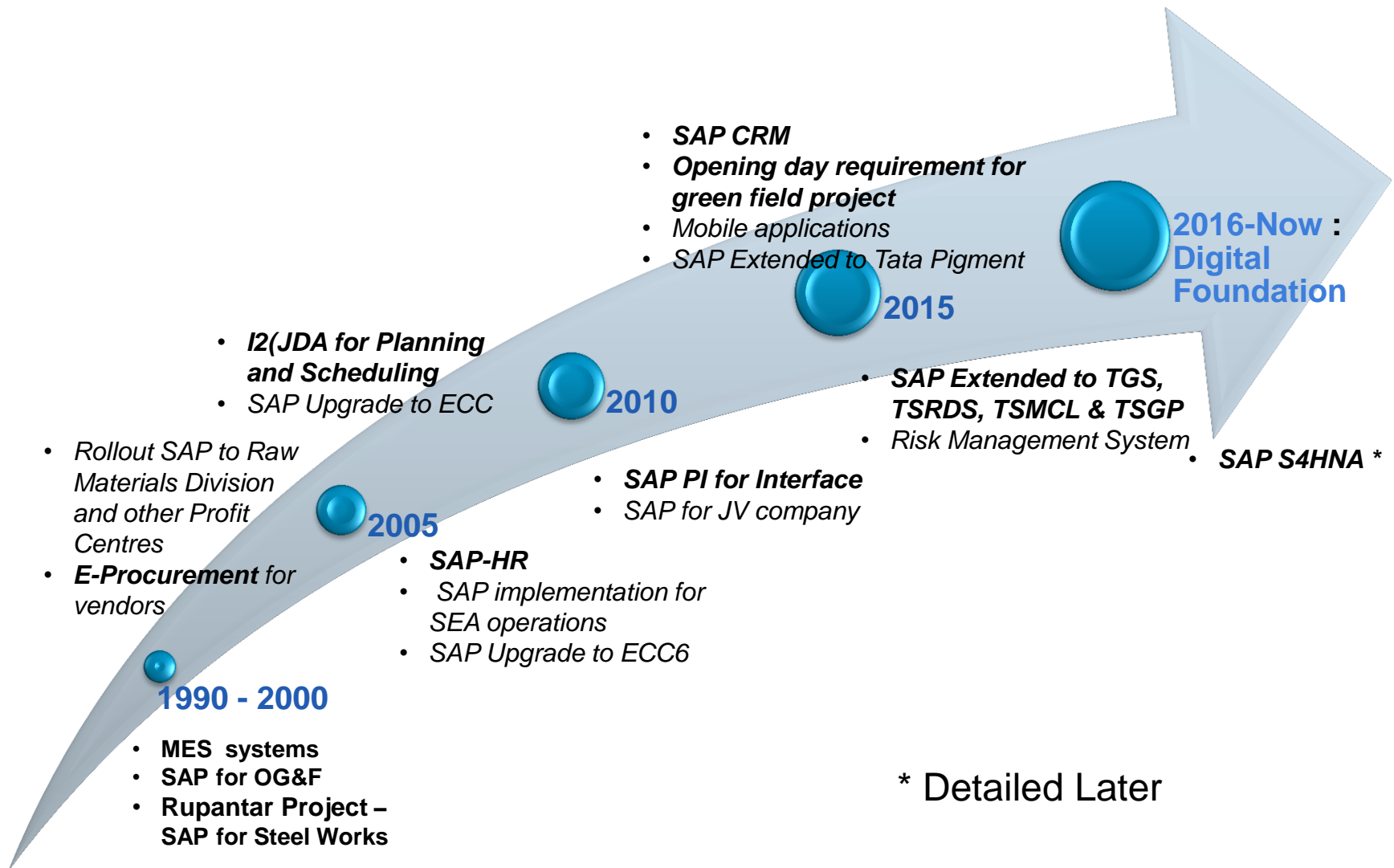
Uniquely positioned steel maker, present in developed and developing markets across a wide range of segments.

- An overview of Tata Steel Group

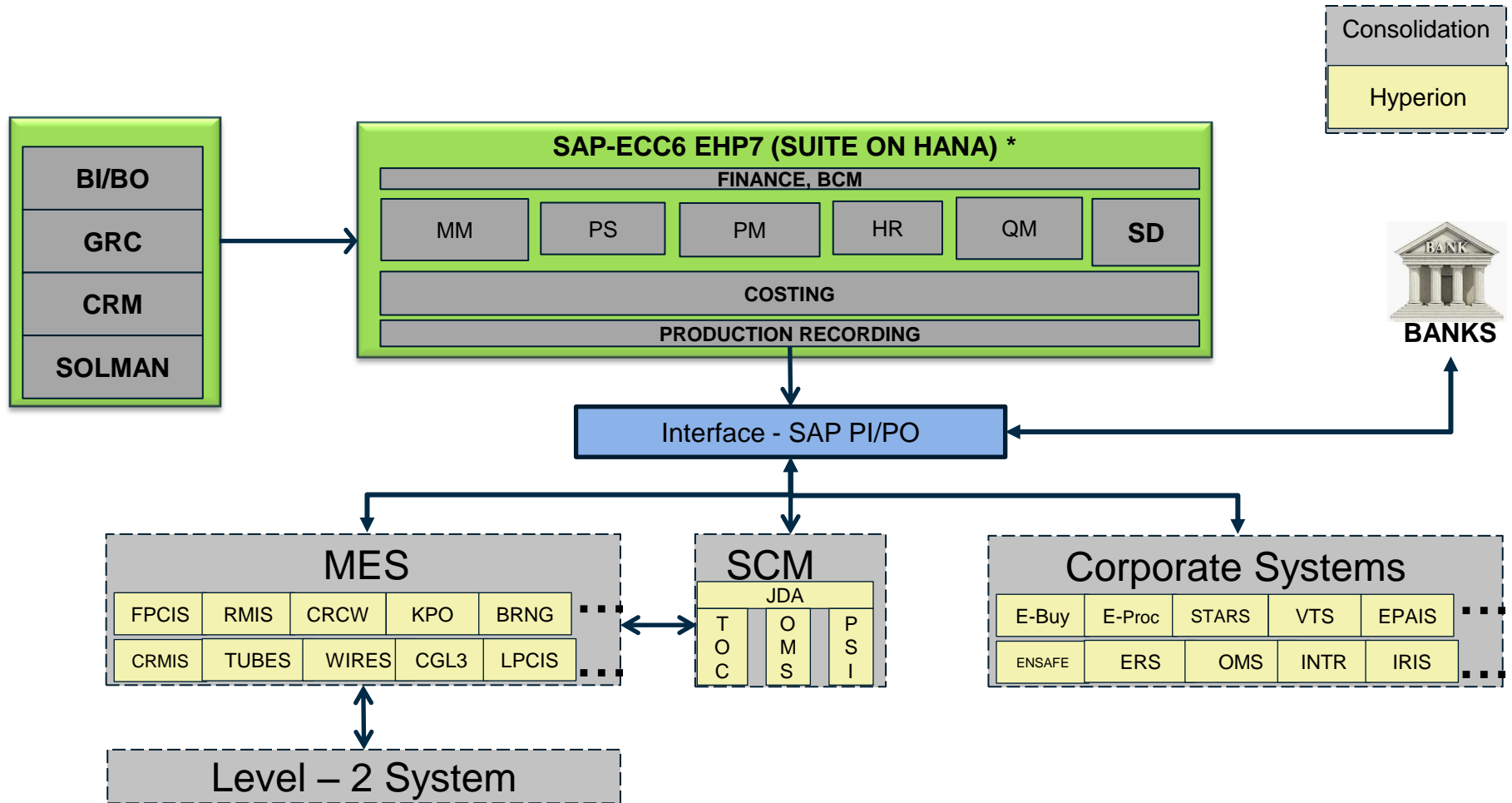
- **IT Journey and Broad IT Application Architecture**

- Digital Foundation Program
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IT Journey @ Tata Steel, India – Key Milestones



Broad IT application Architecture.....for Tata Steel India



*Conversion to S4HANA underway

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Key Program Objectives & Deliverables



- Establish the digital foundation with **HANA** database at the core (in-memory computing and serving as a platform for next-generation "smart" applications)
- Enrich user transational experience which includes delivering contemporary UI capable of running on multiple devices & mobility enabled
- Generate insights and timely decision making by building near real-time reporting & analytical capability
- Simplified underlying data structures
- Improve business process efficiency through adoption of cutting edge solutions
- Empower end users with a suite of self-service enablers

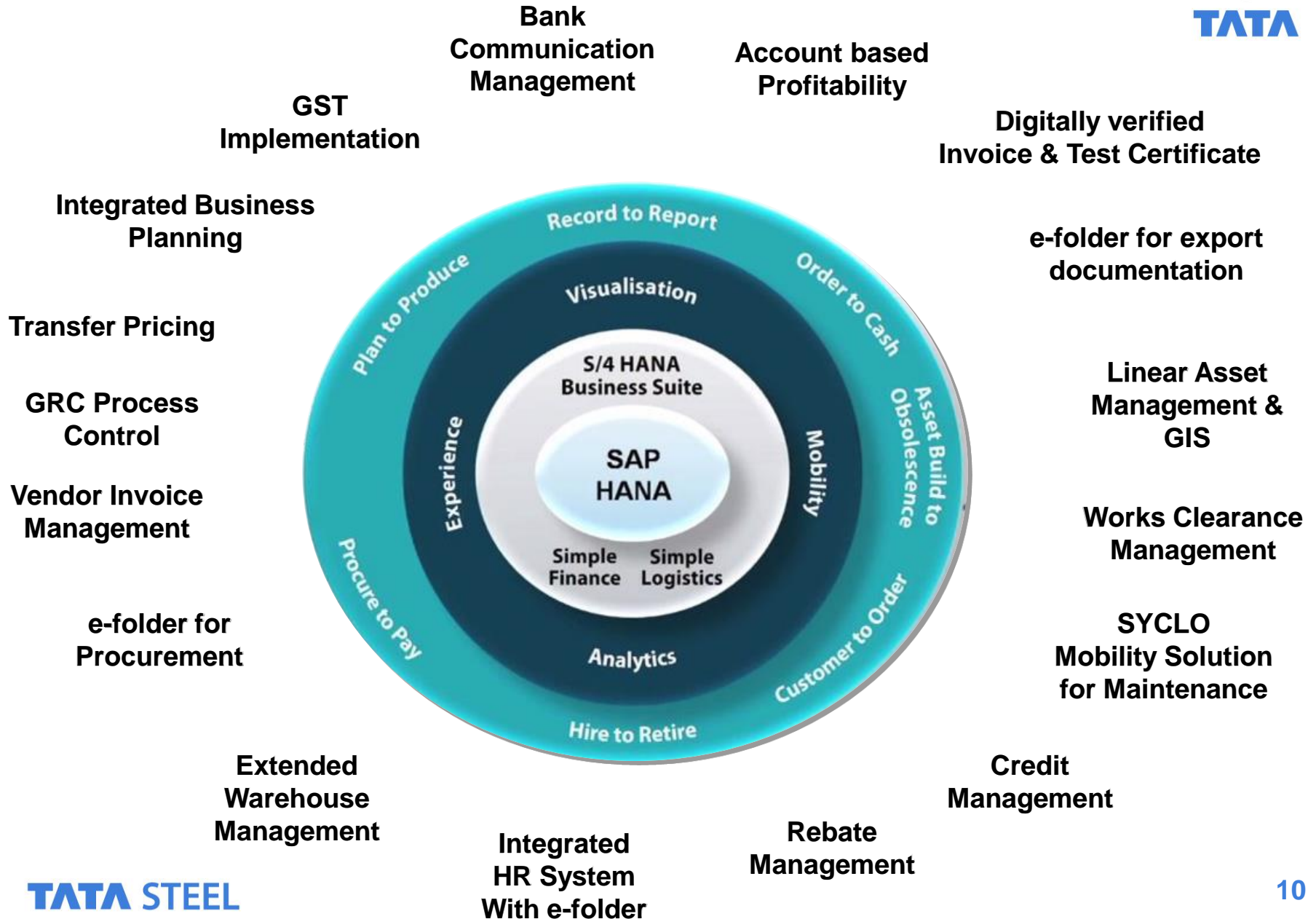
.....build new business models and enhance business process agility, leveraging advancements in Information / Digital Technologies

Key Digital Themes

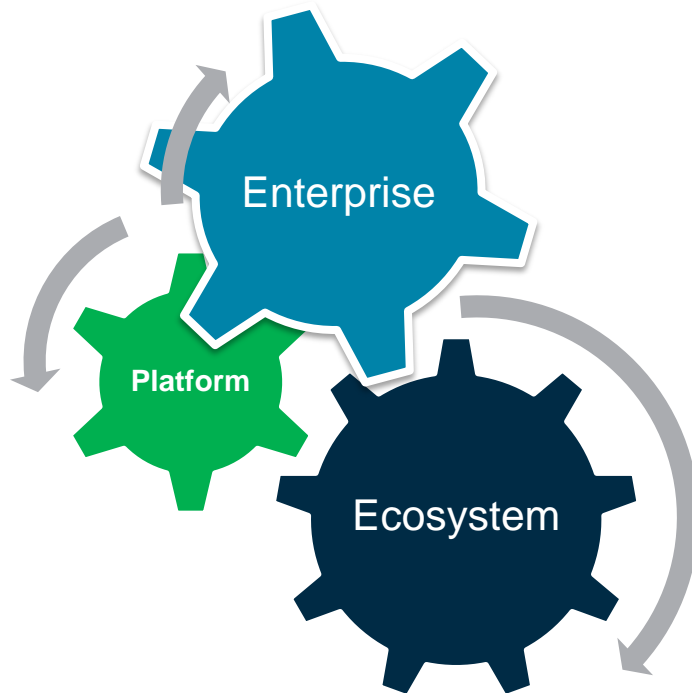


- Integrated enterprise systems
- Smart Factory
- Data Visualization and Analytics

Overall Solution Landscape for Digital Foundation program



Integrated enterprise systems

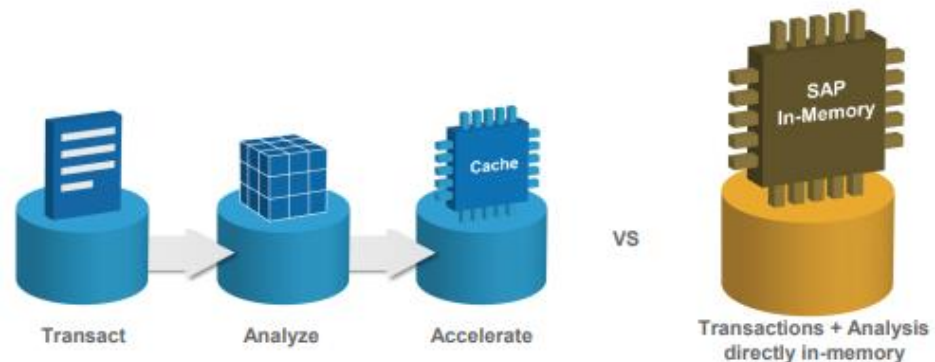
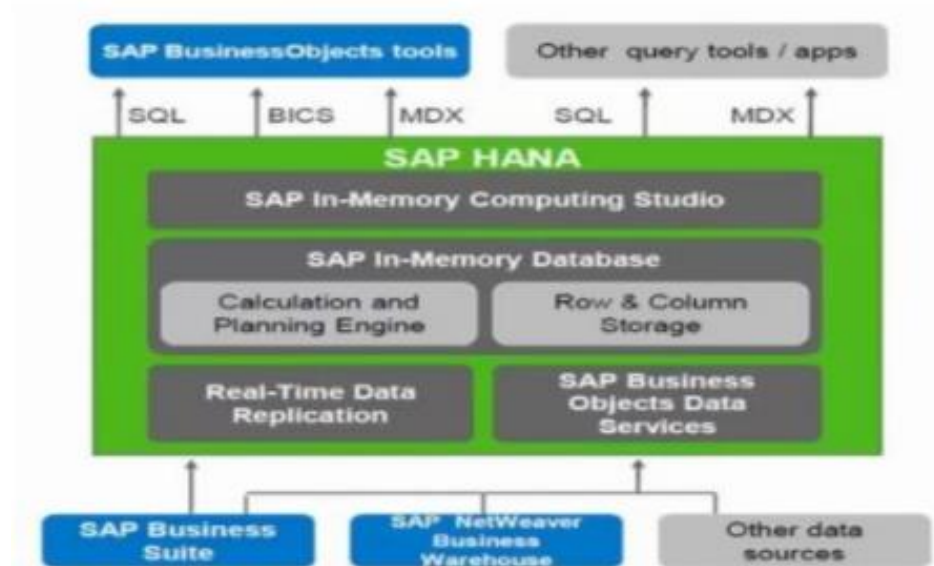


- ❖ Migration to Suite on HANA
- ❖ Migration to S/4HANA 1610
- ❖ Integrated Business & Financial Planning

Suite on HANA: Migration Complete



- Provided real-time platform for enterprise applications
- Common database approach for OLTP and OLAP using an in-Memory Column Database
- Created foundation for next-generation "smart" applications
- Improved the run-time of most of Standard and customized reports of SAP



Results of Performance in ERP in Shared Services Area (Illustrative)

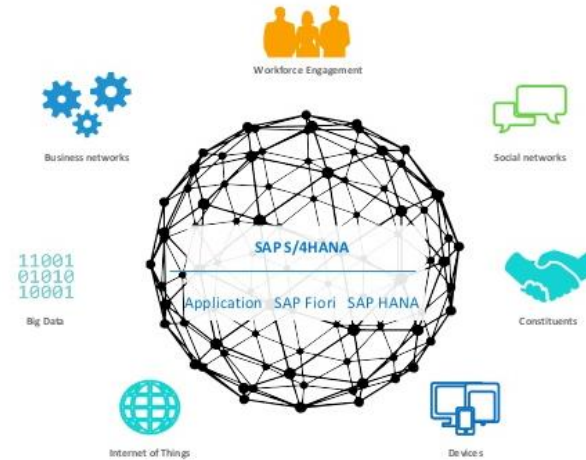


Report	SAP Oracle (sec)	SAP HANA (sec)	Times Faster (X)
List Maintenance Orders	28	10	3
Change Notifications	20	3	7
Material where used list	210	8	27
OEE report	20	1	20
Cost Drill down	1620	0.188	8618
Unabsorbed cost report	Never ran	50	NA
Equipment history	Never ran	2	NA
Measurement document	Never ran	61	NA

Migration to S/4HANA 1610 (Planned Go-Live Nov 2017)



- An intelligent ERP suite designed specifically for in-memory computing
- Offers a personalised user experience with SAP Fiori
- Has the power to significantly accelerate the speed of both transactional and analytics performance and radically reduce an organization's data footprint
- Simplified thus reducing issues related to reconciliation and promotes one source of truth.



Existing & enhanced innovations
New innovations

What S4HANA Promises (Planned Go-Live Nov 2017)

Simplified Processes



- Ease of navigation and optimized transactions
- 360* view of business processes – dashboarding

Optimized Data Structures



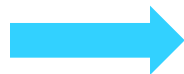
- Transition from isolated reports to end-to-end visibility
- Consistency of reports
- Lesser reconciliations

Enhanced User Interface
Now – Mar'18



- Graduate from transaction codes to **Fiori** tiles
- Support mobility
- Initiate transactions directly from KPIs
- Integrated workflows

Transactional & Analytical
Processing in one platform
Now – Mar'18

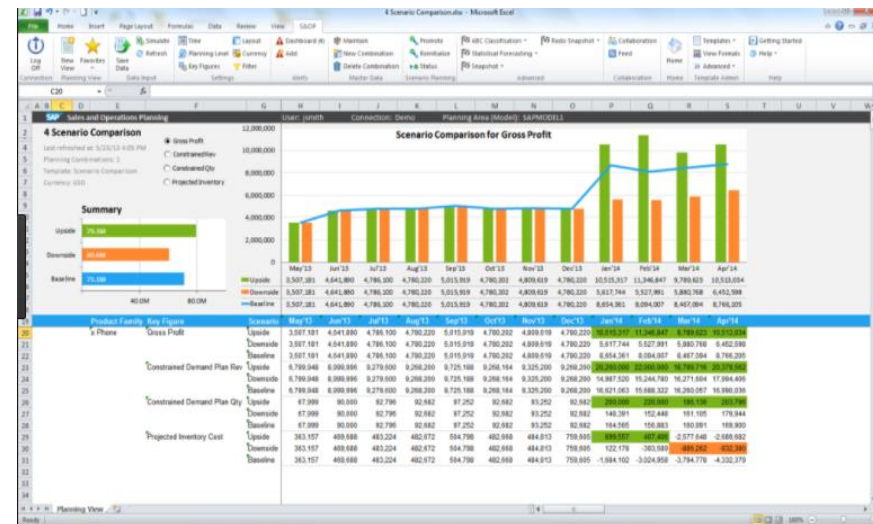
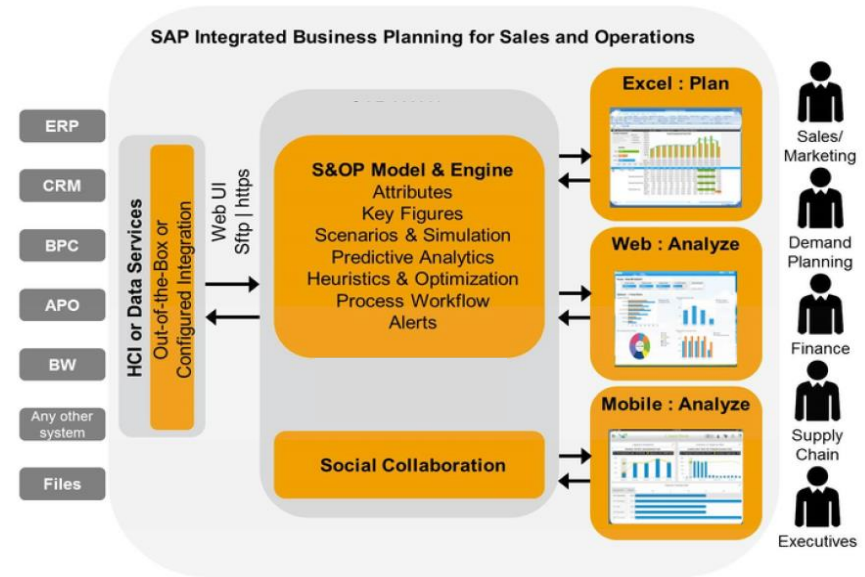


- Analytical reports & data visualization through **Lumira**
- Enable insight to action
- Minimize manual compilation of analytical reports
- Empower champion users for self service analytics

Integrated Business Planning *

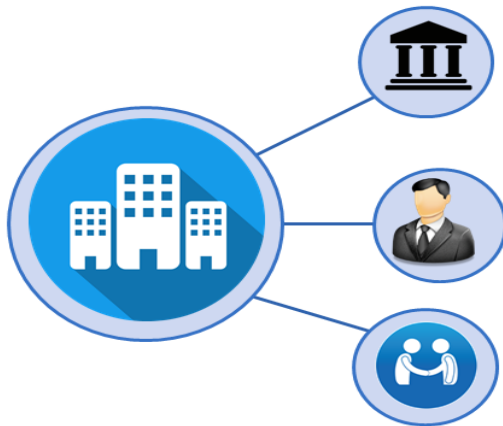


- Integrated platform for planning using a unified model of demand, supply chain and financial data
- Analyze massive volumes of complex data instantly at any level of granularity, aggregation, and dimension
- Rapidly run “what-if” simulations of demand, supply and financial changes
- Compare planning scenarios and their impact on key performance indicators in real- time
- Faster planning cycles



* Planned go-live Dec'17 and Mar'18

Smart Factory



- ❖ Mobility Solution in Maintenance – SYCLO
- ❖ Extended Warehouse Management

SYCLO - Mobility Solution for Asset Maintenance



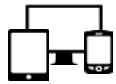
- Mobile work management solution that allows to access and manage tasks which includes viewing the list of inspection orders along with checklist, creation of notifications, maintenance orders & its processing
- Eliminates end-of-shift data entry into SAP system and in-turn, terminate paperwork backlogs, handwriting guesswork, increases workforce productivity
- Improves data quality and timeliness for superior compliance reporting



Highlights



Maintenance Users can work offline or online



Through Android based Mobile / Tab



Equipment for which Maintenance Order is raised, can be seen on Google maps



Can read QR code if available on equipment while creating Notification



Maintenance Work (Maintenance Order) progress update from shop floor



Log abnormality (Notifications) from shop floor. Click and attach picture to Notification

Extended Warehouse Management



- Managing the movements of goods in the warehouse
- Flexible and automated support for managing the stocks
- Accurate insight of the warehouse operation and provides stock and process transparency
- Supports in planning, monitoring, and optimizing work processes



Data Visualization and Analytics



- ❖ FIORI
- ❖ LUMIRA

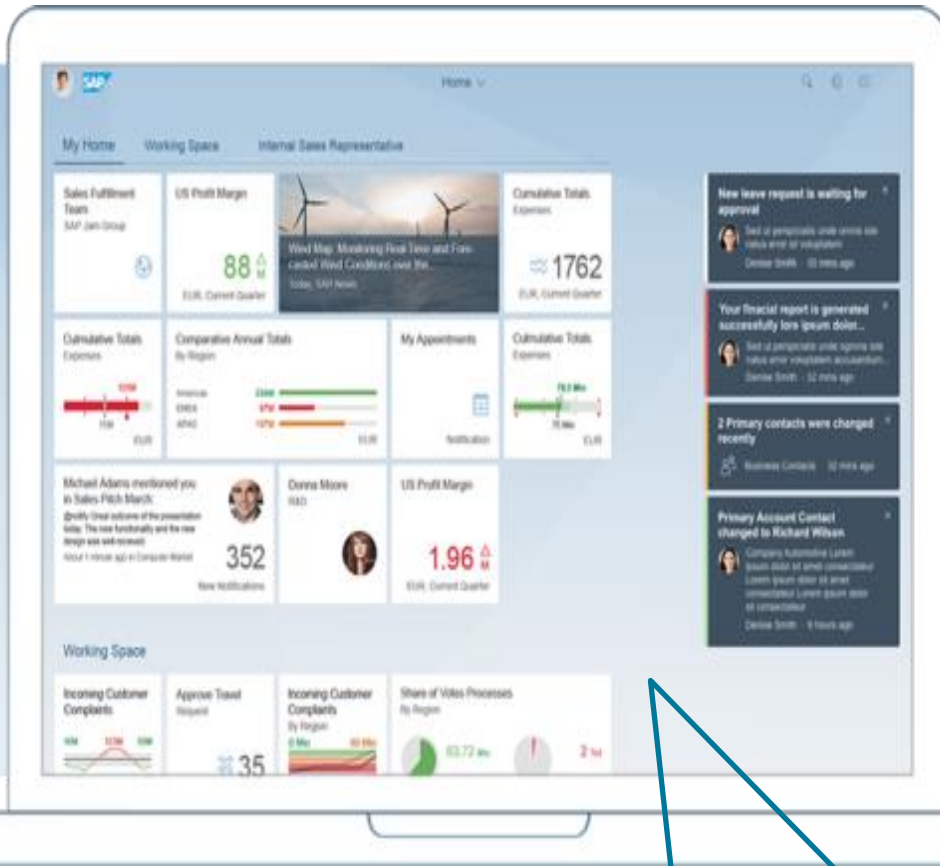
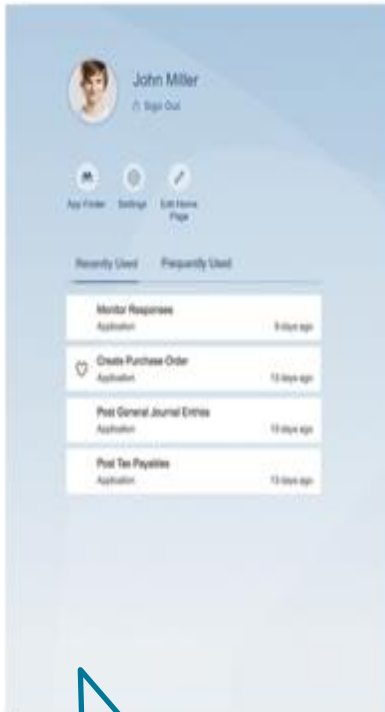
Enhancing User Experience FIORI Apps



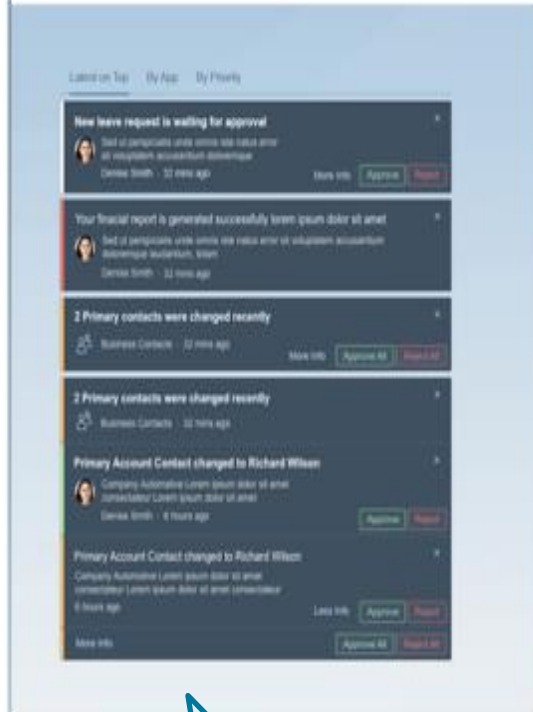
- Personalized and simplified user experience (UX) for SAP applications
- Delivers a role-based user experience across all lines of business, tasks, and devices
- Customizable Dashboard for tracking
- Multi level drill down for analysis
- Notifications

Workspace/Launchpad

My Area



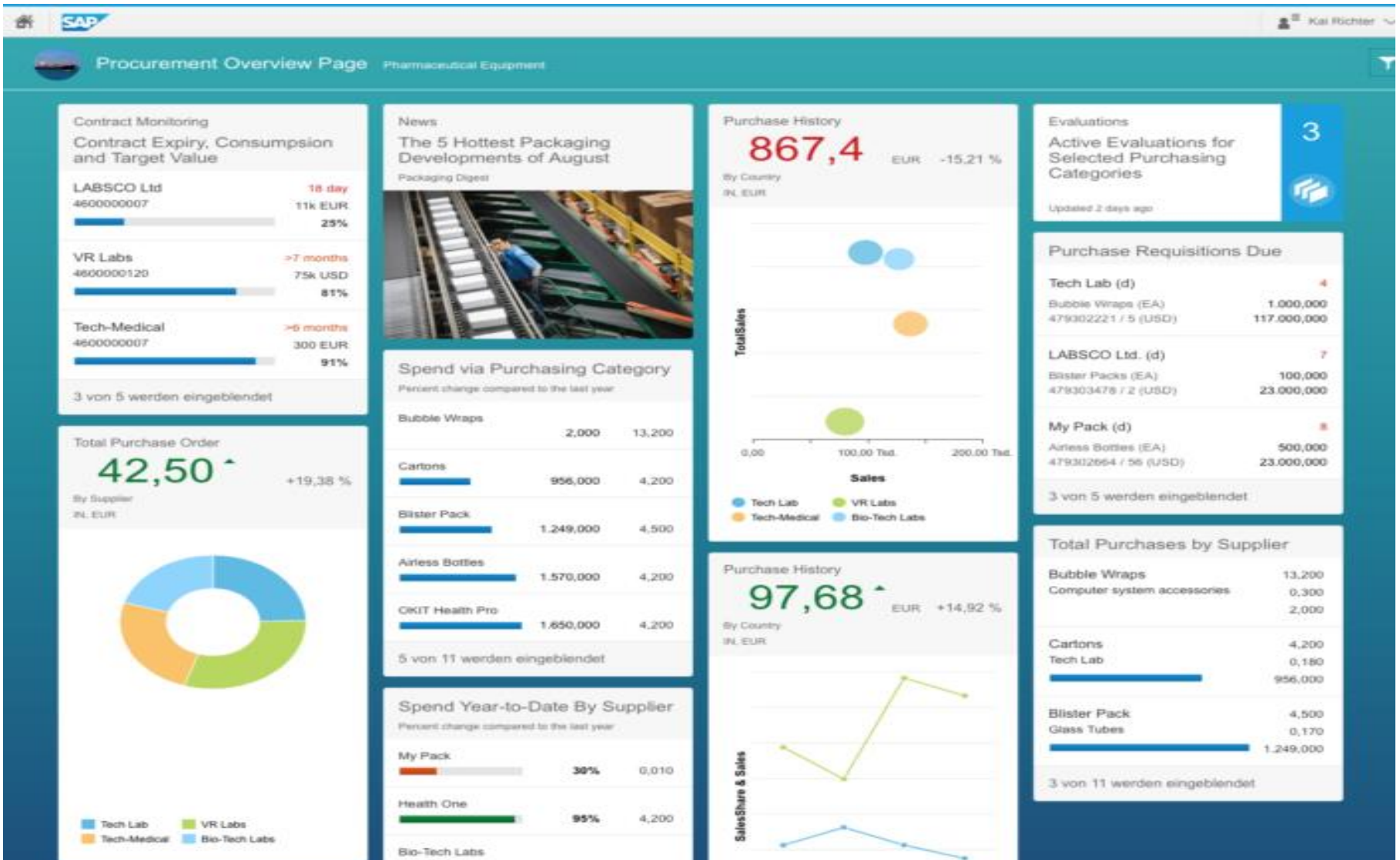
Notification Area



- My Profile
- Settings
- Add Available Apps

- Customizable Dashboard for tracking
- Personalize Launchpad content
- User Specific Apps
- Multi level drill down for analysis

- Notifications
- Take actions right away



Reporting & Analytics....key features of LUMIRA



- Bringing **Business Intelligence** directly to the **End User**
- Allow business users to interact with data in a **governed** way, any time using any device, and get **insight immediately**
- Stunning **infoGraphics** in few clicks
- Support for **GEO Maps**
- Data from **any source**

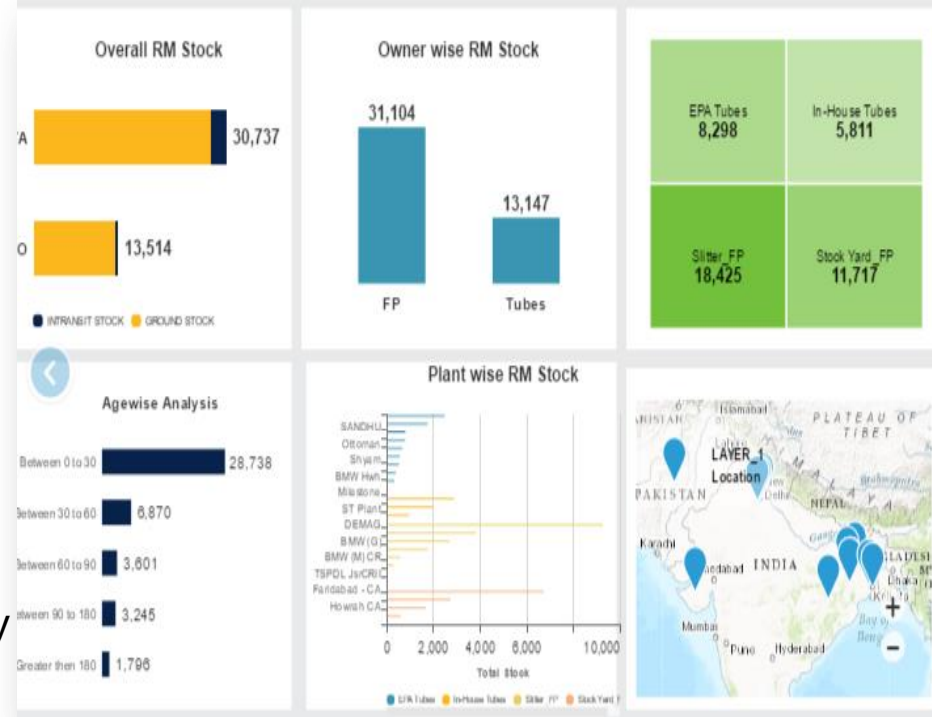
Supply Chain Tower



- Measure supply chain metrics and drill down
 - ❖ Inventory Analysis
 - ❖ FG Inventory
 - ❖ RM Inventory

- Service Level Analysis
 - ❖ OTIF
 - ❖ Stockout

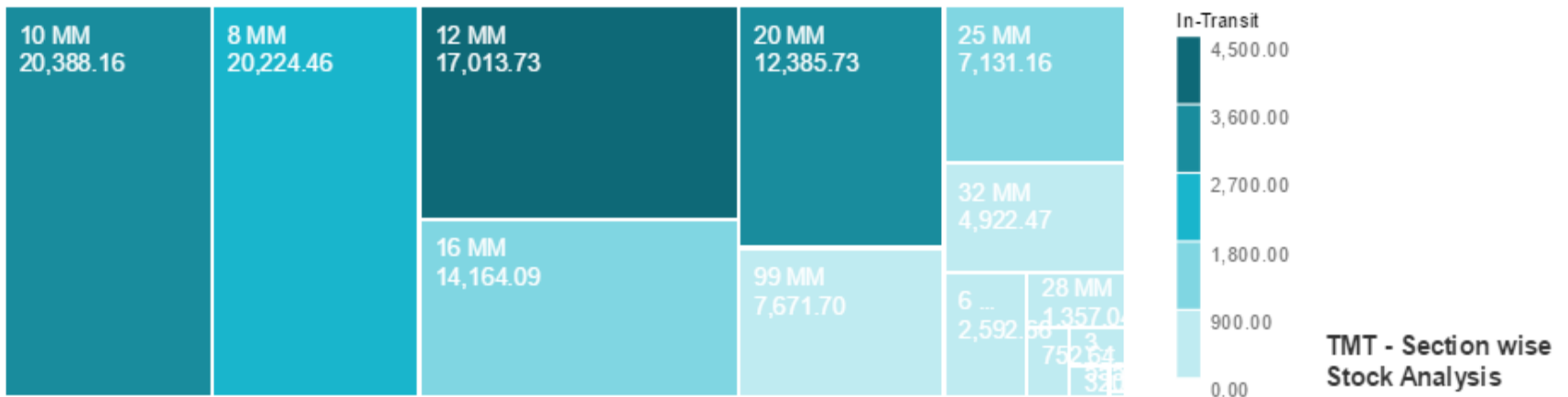
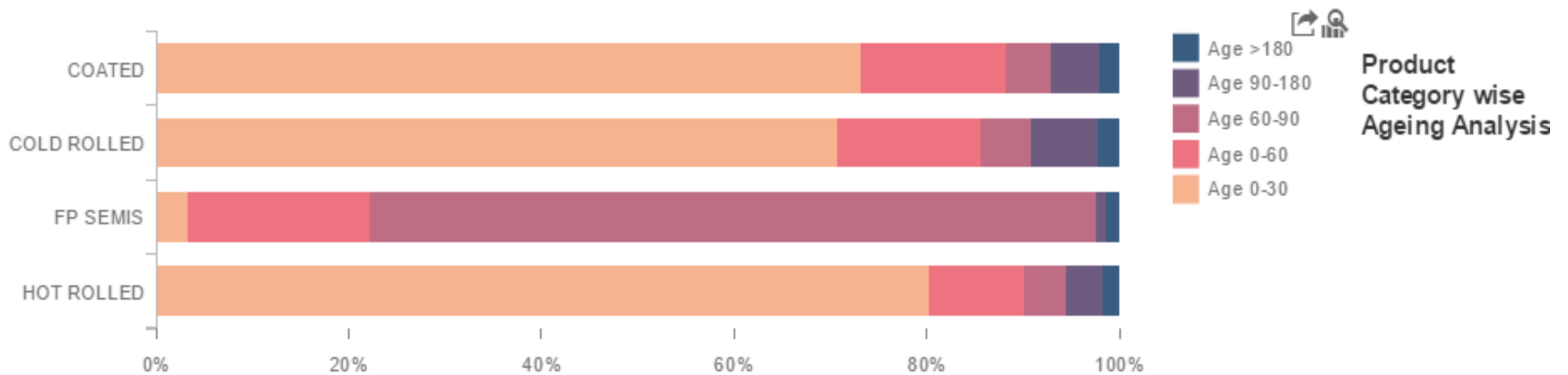
- Supply chain insights for improved decision making
 - ❖ Consolidated RM visibility across supply chain for improved campaign planning
 - ❖ Mill load balancing



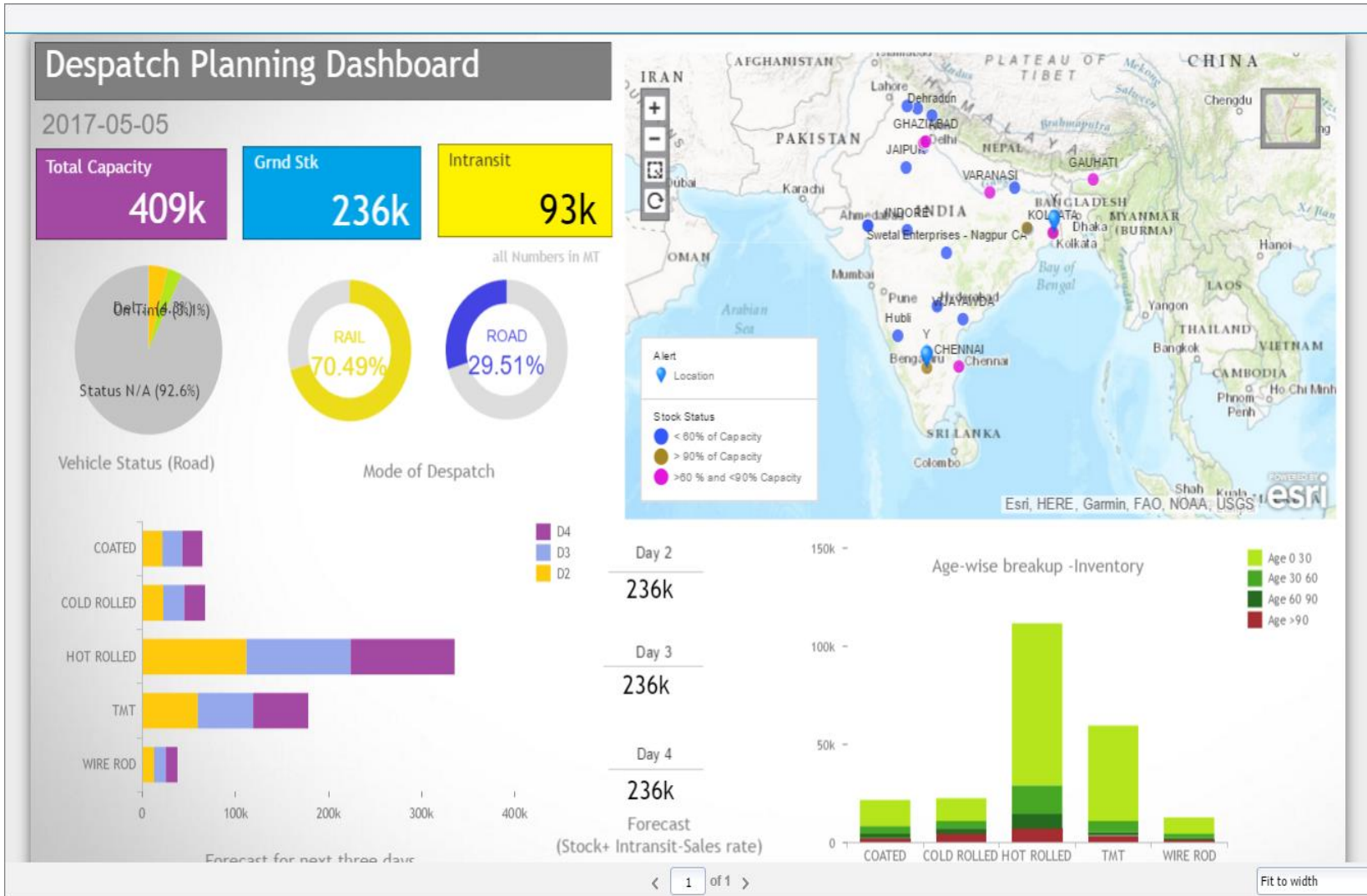
Sample Storyboards



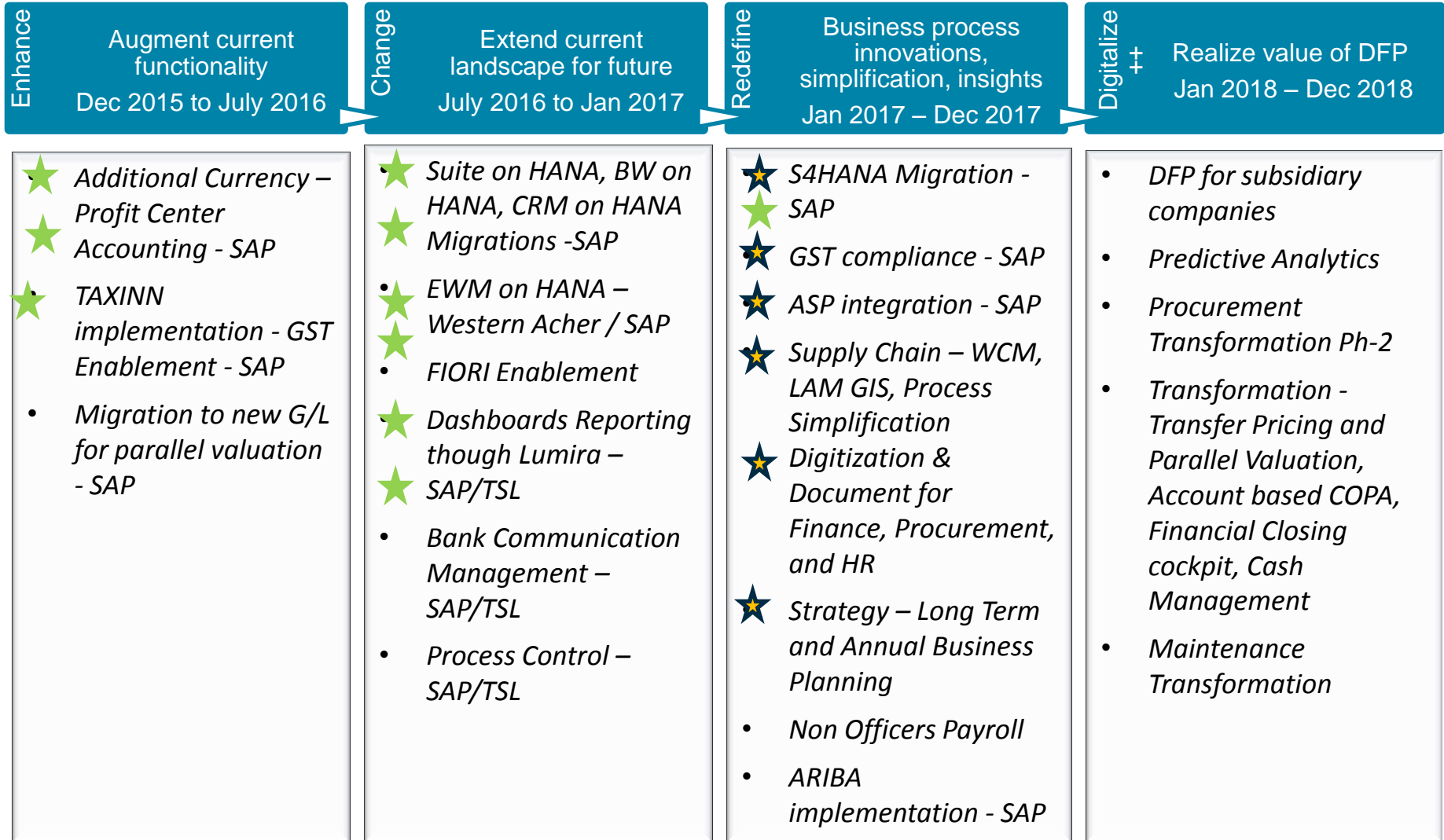
Steel Inventory Dashboard



Sample Storyboards



Digital Foundation Program: Roadmap



Live



In Progress

THANK YOU