



Industry 4.0. Digital Transformation leveraging SAP S/4HANA as a foundation.
Metalloinvest. Yuriy Gavrilov, Strategy, Development and Transformation Director

Metalloinvest Company Profile

Metalloinvest is a leading global producer and supplier of HBI and iron ore products, and a regional producer of high quality steel. The Company is a global producer of HBI and processes a large proportion of its iron ore into high added value products, such as pellets and HBI/DRI.



	СОДЕРЖАНИЕ ЖЕЛЕЗА	ПРОИЗВОДСТВО 2018, МЛН Т	ОТГРУЗКА 2018, МЛН Т	
IRON ORE ЛГОК, МГОК	До 70% (Fe)	40.4	7.6	ЖЕЛЕЗОРУДНОЕ СЫРЬЕ
PELLETS ЛГОК, МГОК, ОЭМК	До 67% (Fe)	27.7	14.0	
ГБЖ/ПВЖ ЛГОК, ОЭМК	~ 91%	7.8	4.2	МЕТАЛЛИЗОВАННЫЙ ПРОДУКТ
ЧУГУН УРАЛЬСКАЯ СТАЛЬ	~ 95%	3.0	2.2	
СТАЛЬ ОЭМК, УРАЛЬСКАЯ СТАЛЬ	> 98%	5.1	4.6	СТАЛЬ

Metalloinvest is implementing a complex programme of **digital transformation based on Industry 4.0**, with the main objectives being to improve business-process efficiency, enter a new level of business management and achieve long-term leadership in the industry

More than **48 thousands** employees
Revenue 2018 - 7.2 billion dollars
EBITDA 2018 – 2.9 billion dollars

Industry 4.0 Program Overview

2015

2016

2017

2018

2019

Industry 4.0

SAP
Implementation

Business
Transformation

Efficiency
improvement

Duration of the Program is **5 years**

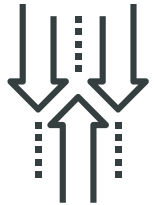
Scope of the project includes 2 waves:

1. **Mining Segment** (Lebedinsky GOK, Mikhailovsky GOK)
2. **Steel Segment** (OEMK (Oskol Electrometallurgical Plant), Ural Steel, Metalloinvest Trading AG)

Goals:

- Improving the efficiency and manageability of the company
- Business processes and organization structure unification
- Organize Shared Service Center (MKS)
- SAP S/4 HANA Implementation as unified company platform

Transformation based on



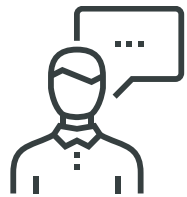
Key Prerequisites:

- Board of Directors request
- The inability to move to a new maturity level with the legacy management and information system

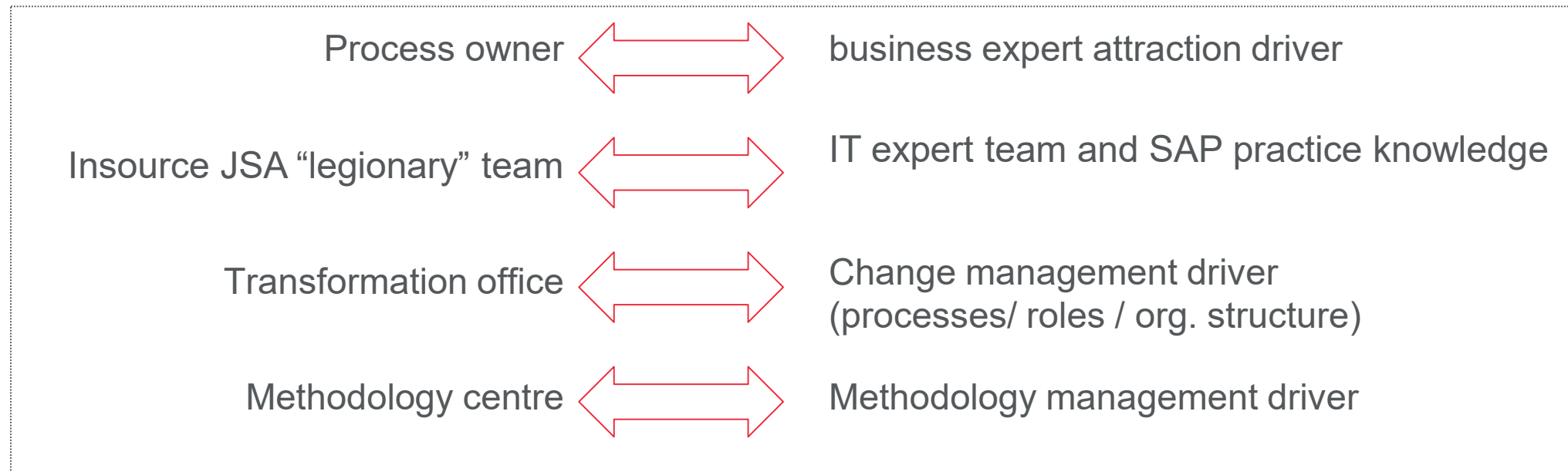


Key participants from each functional area:

- middle management from headquarter
- middle management from production sites



Change drivers:



Industry 4.0 Program in Figures

100 legacy system were replaced to SAP S/4 HANA as unified company platform

18 line of business were changed main processes during complexity implementation



20 related transformation projects

7K.
Active SAP-users



45K.
Employee moved to optimized structure

with **several thousands** org. changes

incl. **2,4K.**
Maintenance users

6

General Business Unit:

- 2 mining plants
- 2 metallurgical plants
- trader
- Logistic company



SAP Value Award 2018
Digital Transformation
Leader

Related transformation projects

Plant Maintenance

Level of management
13 =>

6

Process model changed
Staff specialized
New Organizational structure for Plant Maintenance
Centralization maintenance labor

Implementation KPI system for Maintenance process
Implementation Reliability function
Risk prioritization and strategy selection
Mobile EAM
Unified PM Master Data

Procurement

New operational procurement model (FMB pilot launched)
Centralized model to manage service procurement
Implement category management
Vendors consolidation. Long-term contracting
Consolidated procurement
Procurement Dashboard on SAP Analytics Cloud
Single portal to communicate and analyze
Warehouse logistic

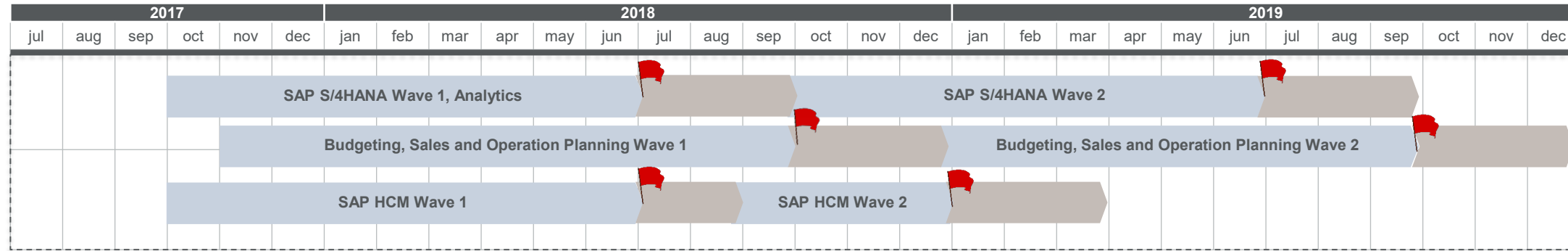
Finance

Fast closing
Tax monitoring
EDI
«1C»-template for branches
Robotization

Human Capital

HR-self services:
SAP ESS portal
Viber-bot for employee without laptop
HR Dashboard on SAP Analytics Cloud
Talent Management
Robotization

SAP S/4HANA version selection



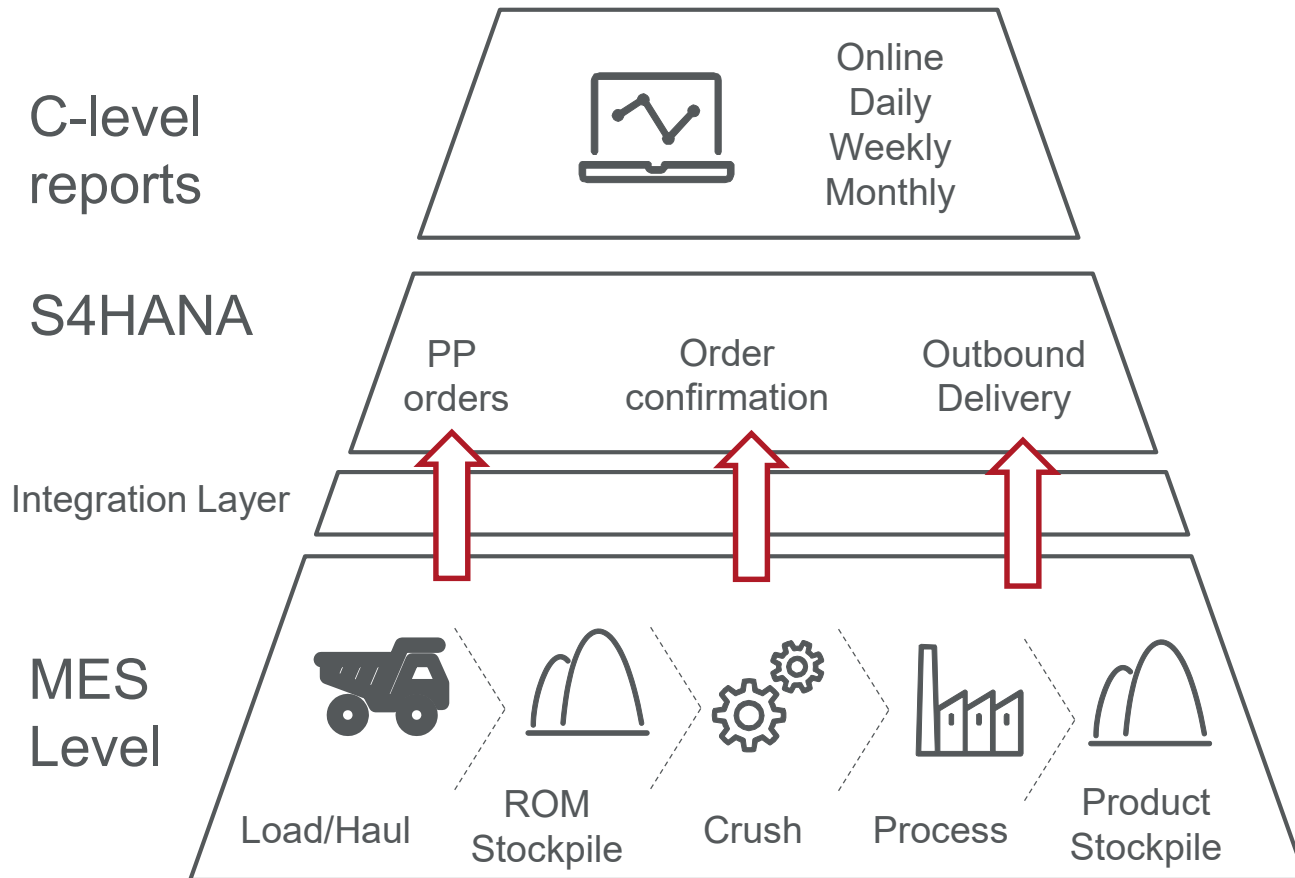
WHY S/4HANA 1709?

Technological platform

SAP S/4HANA 1709
 SAP HANA 2.0
 SAP MDG for S/4HANA 9.0
 SAP HCM
 SAP Access control for S/4HANA
 SAP S/4HANA Finance
 SAP BW
 SAP Process Orchestration 7.5
 SAP Solution Manager 7.2

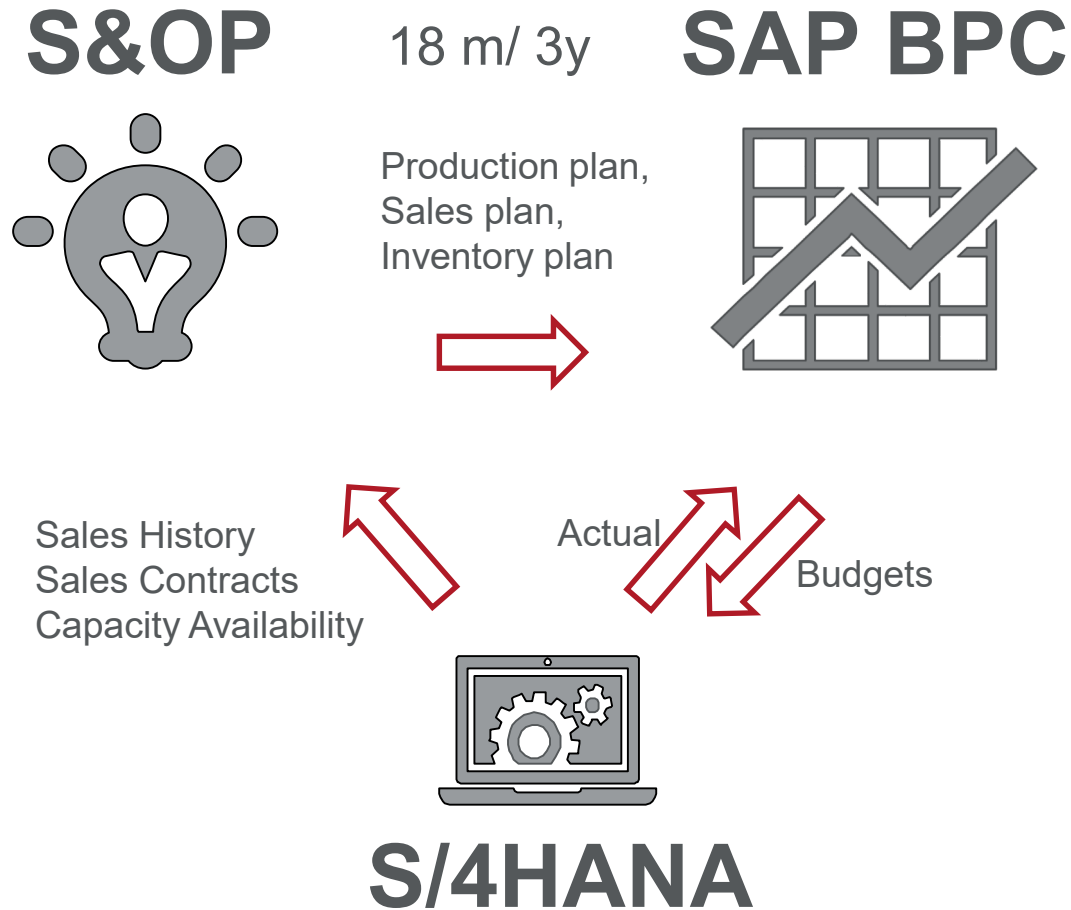
- Take into account program timeline, periods of implementation (**July 2018, July 2019**), periods of stabilization, and related initiatives implementation, the nearest opportunity for version update will be in autumn 2021
- Actual **releases** includes service packs, that decrease smoke-testes if we will select update by separate service notes in implementation period
- Actual SAP S/4HANA version has several built-in Digital scenarios, like, **SAP Predict Arrival of Stock in Transit**

Daily update of operations



- Reporting for each line of business: Production, Sales, EAM, Procurement, HCM, Treasury forms in analytical platform (SAP BW, CDS).
- SAP S/4HANA provide SD-order and ensure data sending to MES. S/4 mirrored manufacturing fact and deliveries.
- MES send actual data from execution level daily. Key production forms are created in MES

Integration BPC + S&OP



- Sales and operation planning model (S&OP) included all plans like sales, production, goods movements, inventories for each store points from Process sites to final destination (DC or customer)
- Planning period is 18 months/3 years.
- Budgeting model consist 8 general forms (budgets), overall forms quantity – 180
- SAP S/4HANA as a Single Corporate Data Model for finance and manufacturing planning

Next Steps

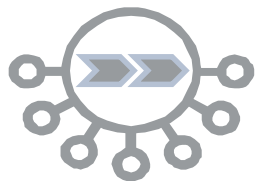


Business
Process
Optimization

- Get more business value through usage of S/4HANA digital components for Procurement and Accounting
- Fine tuning of Business Process
- Keep Infrastructure TCO balanced while allowing business get access to data
- SAP Analytical Cloud and SAP Cloud Platform for digital pilots



Infrastructure
Cost
Optimization



SAP
Process
Mining



SAP Quantity
contract
consumption



SAP Predict
Arrival of Stock in
Transit



SAP
Cash
Application



DATA
Aging



SAP
Cloud
Platform

