

LIPS2015 Barcelona

Lean in Public Sector Construction Conference

Session 4*

Applying the last planner system to modernize the classification yard in Halle

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#LIPS2015
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“ZBA Halle” – Using the last planner system to ensure critical time frame while modernizing the classification yard in the city of Halle.

DB Netz

Tobias Richter, Anne-Kathrin Pöhls

LIPS Conference 17 Sept 2015, Barcelona

- Classification Yard = „transshipment station in wagonload freight“
- **Train Formation Depot (ZBA)** = trains are linked up here
- ➔ In wagonload freight, wagons have to be linked up to a train first. After the train has reached its destination station the waggons are decoupled and unloaded.
- ➔ Bundled transport units for large ranges are economical and environmentally friendly.



- Classification Yard Halle (Saale) exists since 1889
- Existing railway tracks and equipment have to be rebuilt.



Complete modernisation and enlargement of the classification yard Halle.

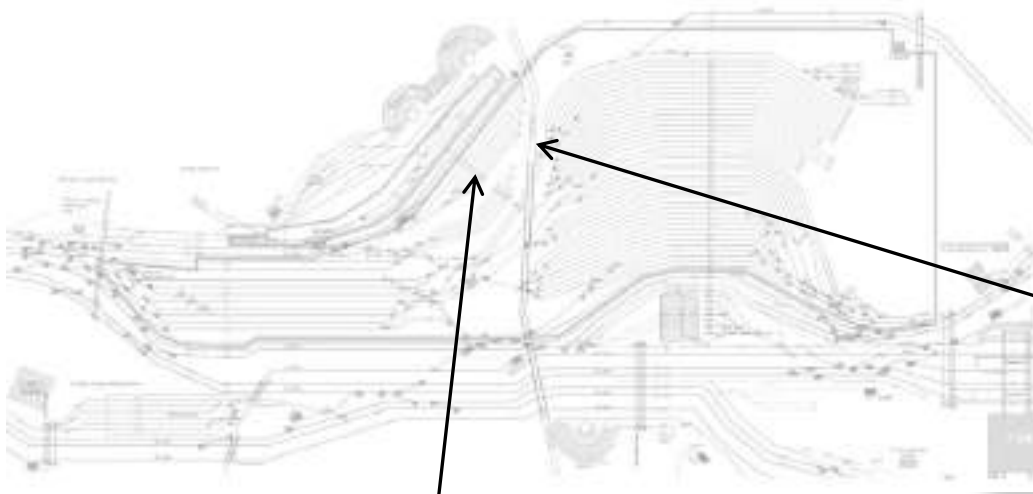
Aus- und Neubaustrecke Nürnberg–Erfurt–Leipzig/Halle–Berlin VDE 8



Knoten Halle Modernisierung und Erweiterung der Zugbildungsanlage

weitere Infos und Kontakt über www.vde8.de

Pictures of the current State of Construction

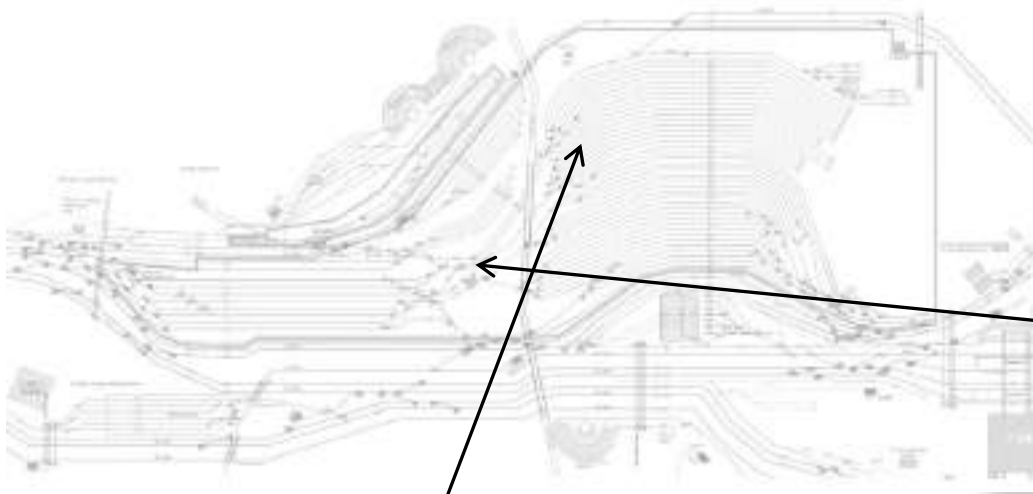


Sidings



Operator Pulpit

Pictures of the current State of Construction



Hump Yard and Arrival Tracks



Sorting Tracks

Efficiency of the hump yard: Up to 120 wagons per hour can be sorted.

8 Arrival Tracks

2 Leaving Tracks

36 Sorting Tracks

4 Retarders behind the Hump Yard

36 extra Retarders

12 Conveyor Systems
(Förderanlagen)

Twenty orders were placed for the construction work.

259.000m² Area

200.000m³ Earthmoving

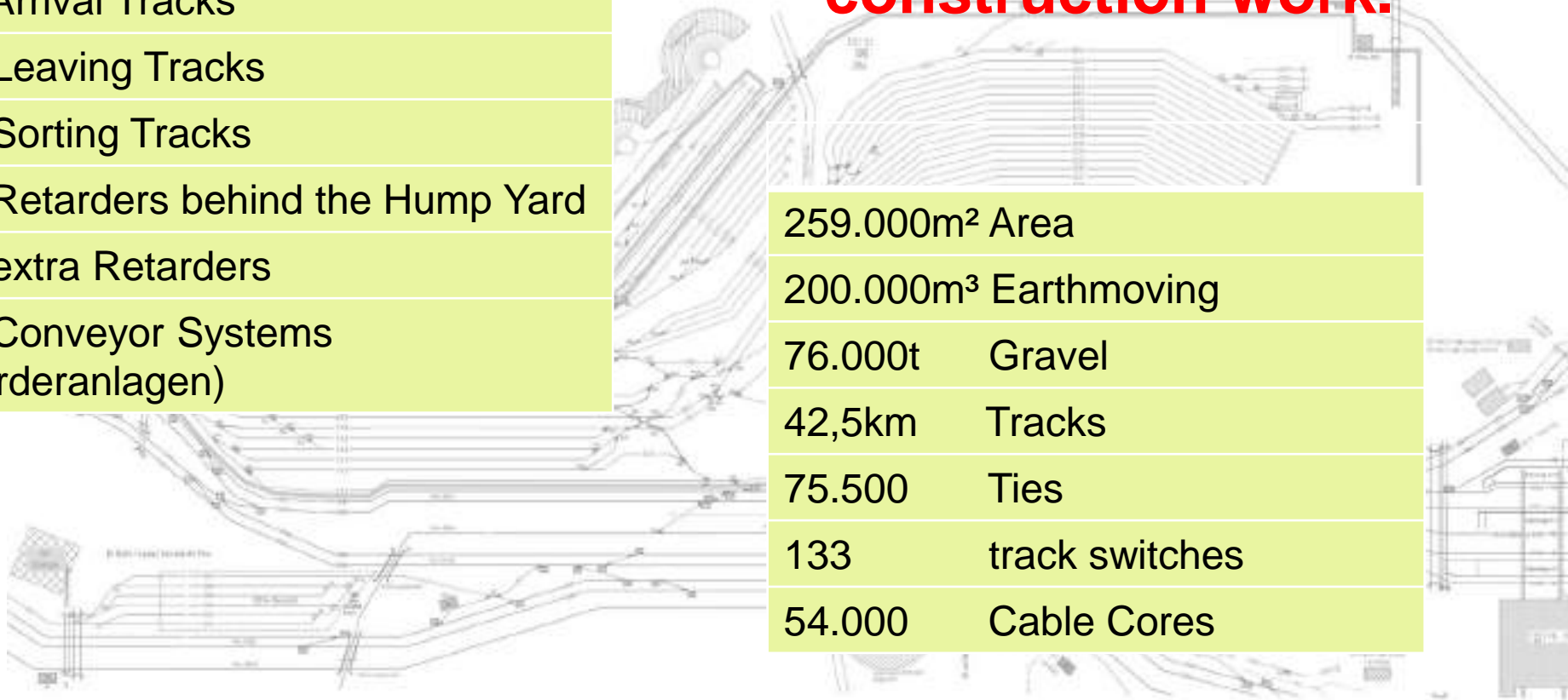
76.000t Gravel

42,5km Tracks

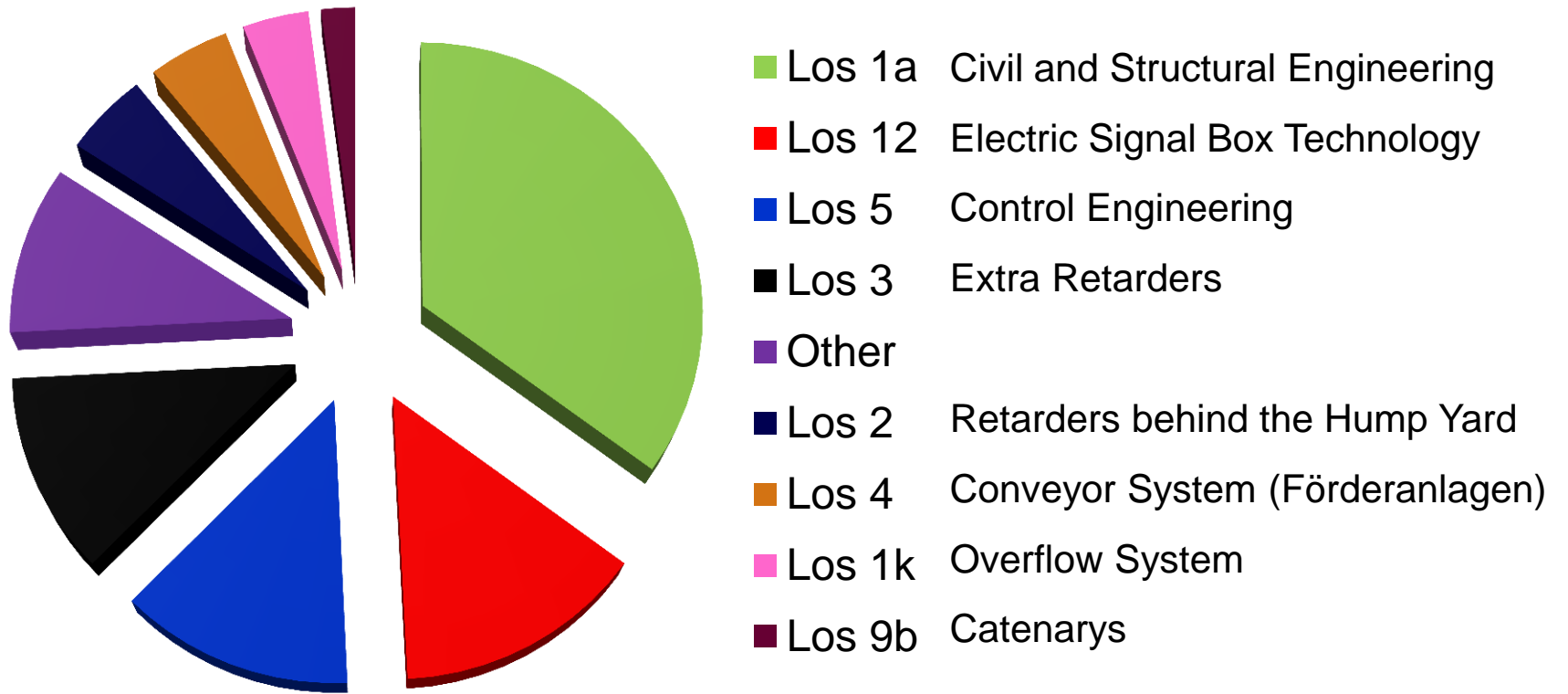
75.500 Ties

133 track switches

54.000 Cable Cores

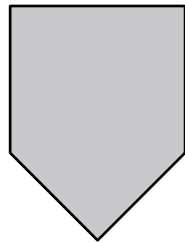


Placing – Contract Structure



Los = batch

Timeline



February 2009 Detail design is released

May 2010 Building Permit released

[...]

April 2013 Start of execution, deconstruction of old plant

2014 - 2015 Main execution work – civil works and rail system (tracks)



2015

End of 2015 Completion of rail system

Start of 2016 Installation of safety techniques

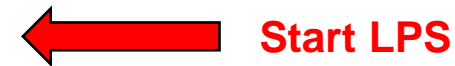
2016

Mid 2016 Approval of interf. betw. common electrical safety technique
and special comp. hard – and software for controlling hump yard

2017

Start of 2017 Approval of ASR Start testing phase

June 2017 Start of operation of the hump yard



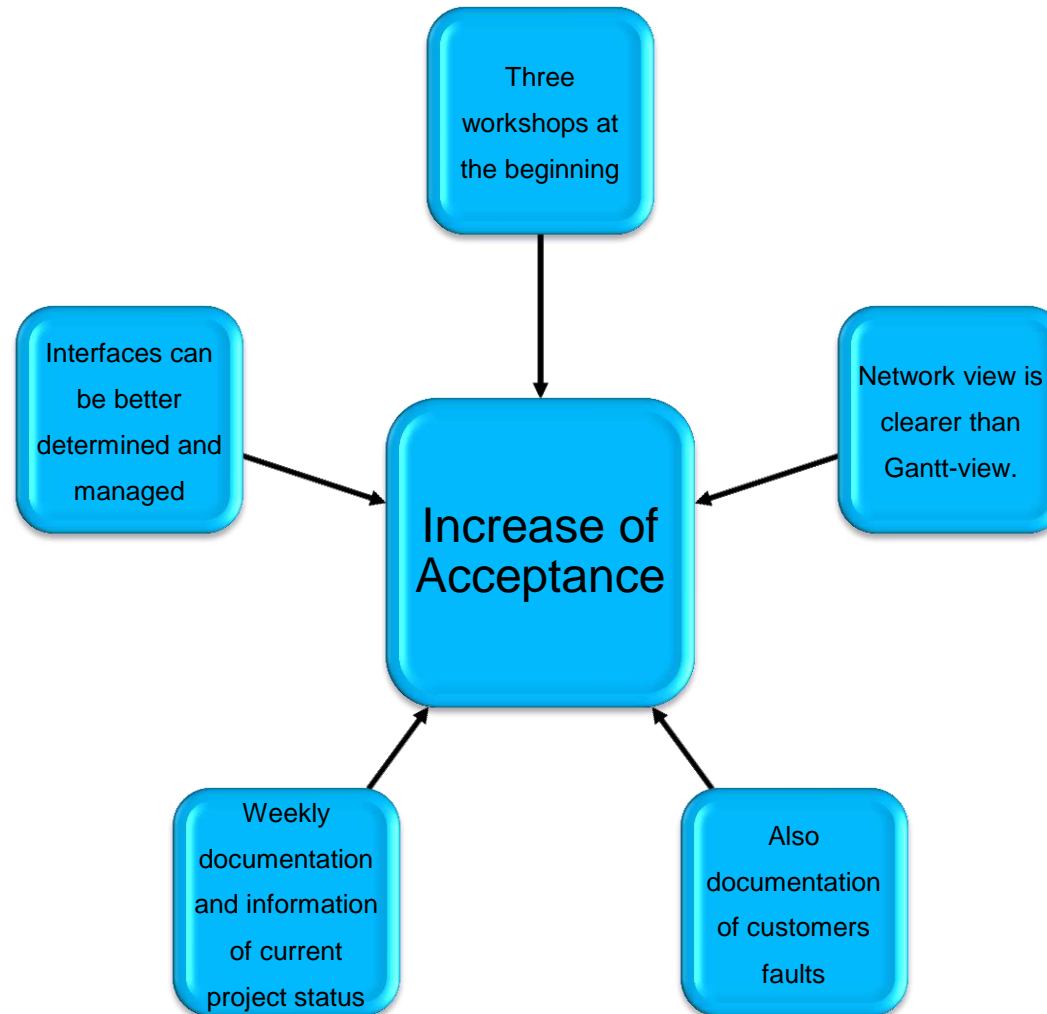
Obstacles when implementing LPS after conclusion of contracts

participation on LPS - meetings not mandatory

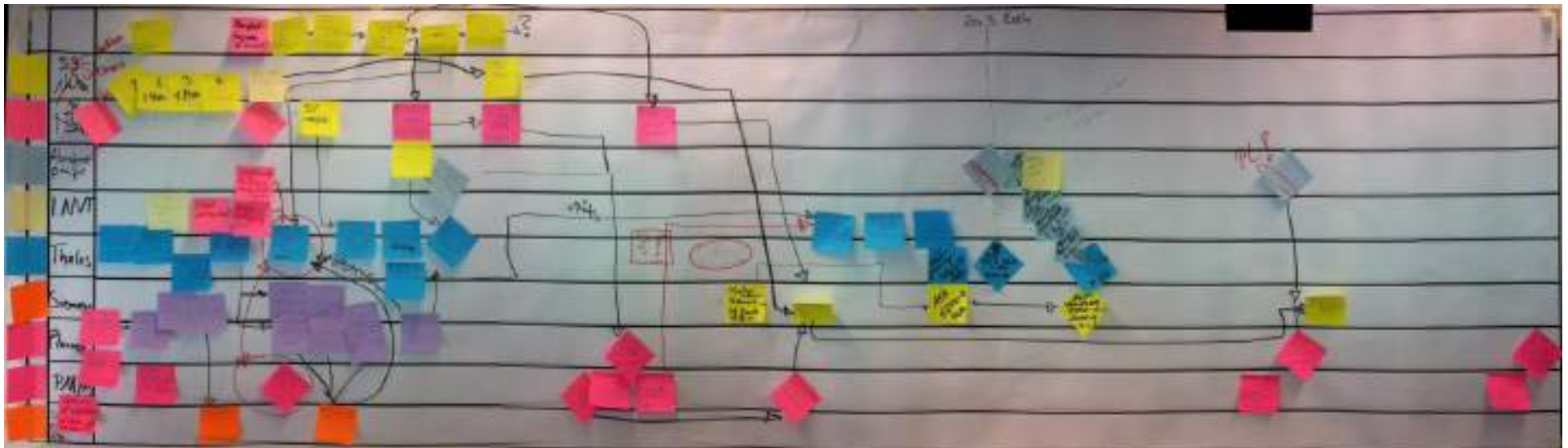
No incentives for good performance and statistics while working with LPS

little acceptance for the new method

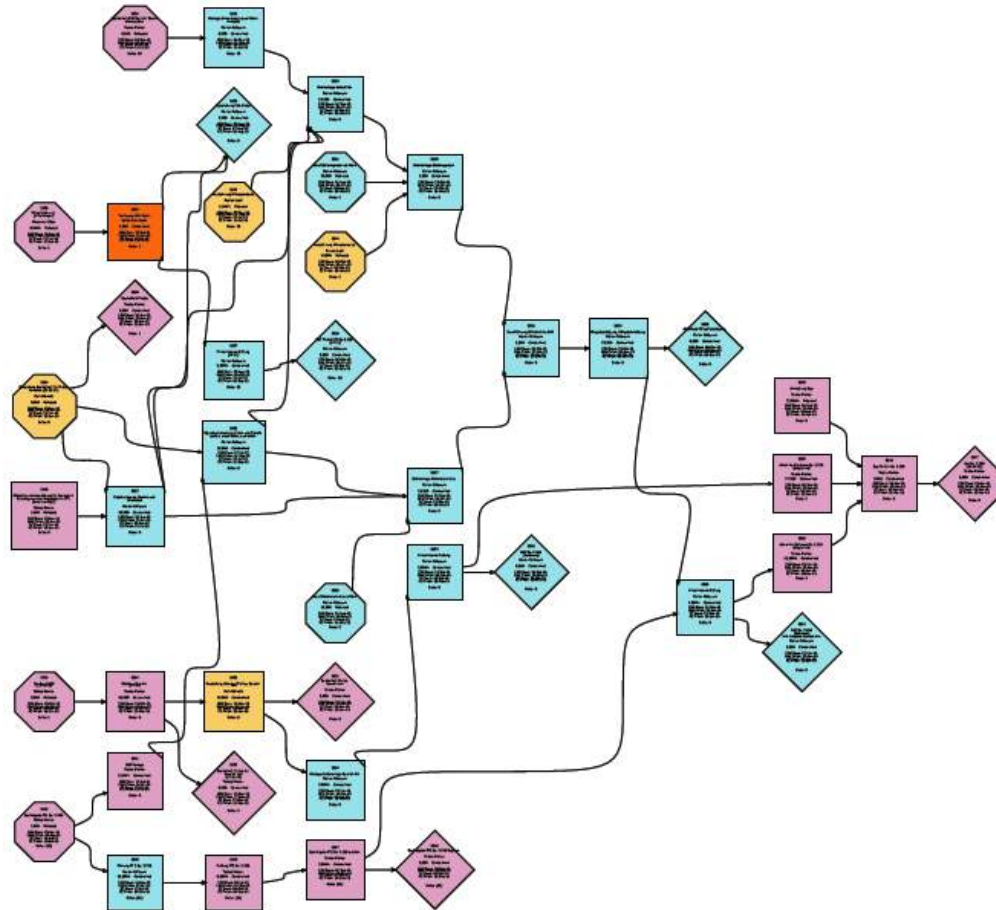
Increase of acceptance through workshops and regular explanation and information about project progress



Mapping of all trades in construction meetings



Digitalized solution – time schedule

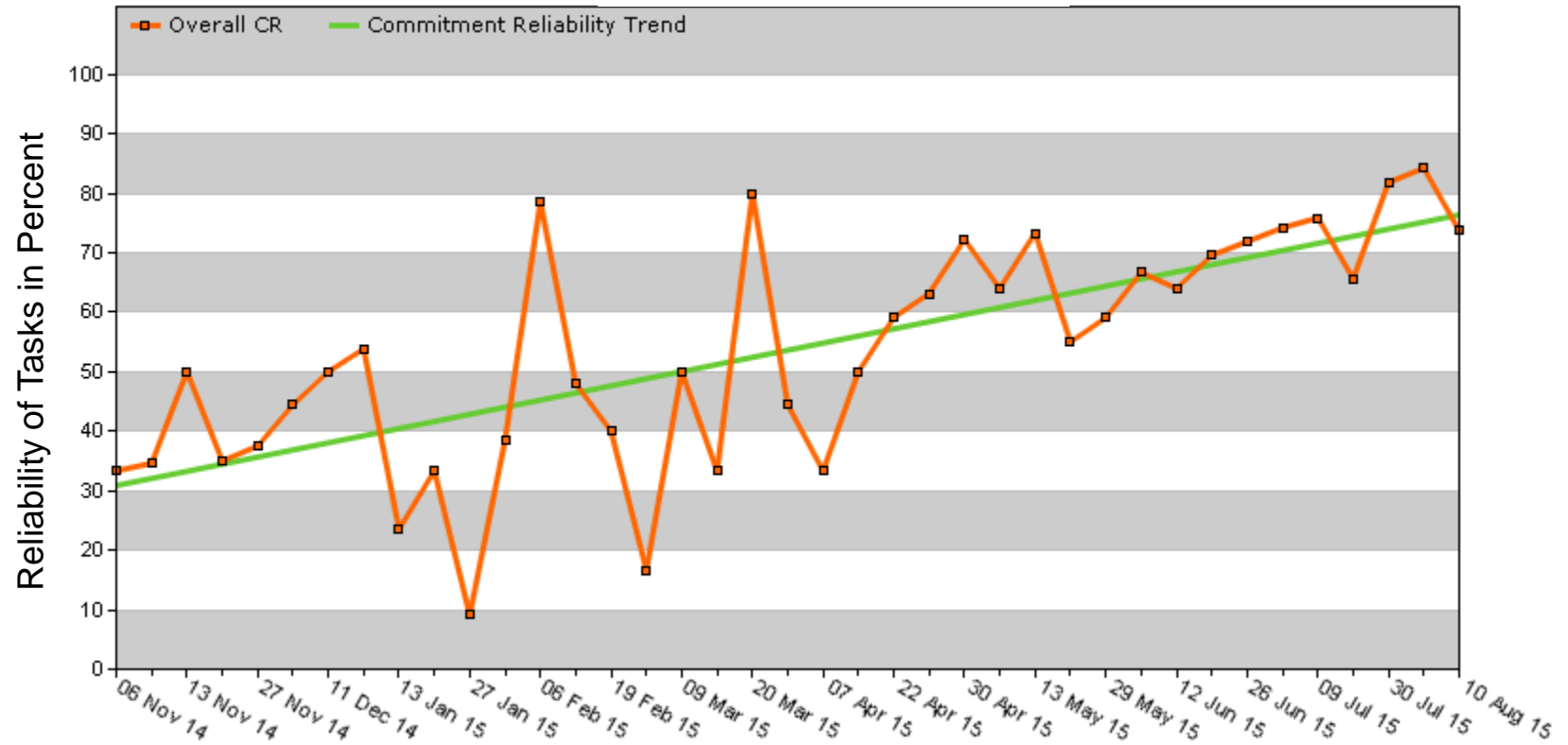


Weekly control of tasks in production plans

ID	Bezeichnung	Benutzer	Stand	Standardrate	Kategorie	Losk. Ende	W	Werk. Datum	WET 5 (Date)	WET 12 (Date)
Busfeld Am - HgB / - / - / - / - / -										
2209	Herstellung STW 1 (PUNKTAL OF TASK 2914) (Reinigung Durofen: 30.000)	Alex Hirtz	undefind			4 Aug 15	(11)			
2700	Herstellung T9 an Bereich STW 0	Matthias Krc	undefind			14 Aug 15	(2)		17 Aug 15	7 Aug 15
2699	Herstellung T9 am 109,1 - 159,7	Matthias Krc	undefind			14 Aug 15	(2)		17 Aug 15	7 Aug 15
2218	Herstellung 08T, T9 in Richtung 60 Anstehweg (PARTIAL OF TASK 2698) (Reinigung Durofen: 3.000)	Matthias Krc	undefind			21 Aug 15	2	X (2000, 2700)		
2249	Einbau 08T, 011 - 018	Alex Hirtz	undefind			19 Aug 15	2		18 Aug 15	7 Aug 15
2207	Trennen für Kaufkraft WPS beenden	Alex Hirtz	undefind			18 Sep 15	24			
Brennprobefolge / - / - / - / - / -										
2698	Ausführung Druckaufbereitung	Harald Seitz	undefind			20 Jul 15	(22)		18 Aug 15	21 Aug 15
2295	Kaufkraft für Los 1a herstellen	Harald Seitz	undefind			20 Jul 15	(22)	X (2.600)	21 Aug 15	2 Sep 15
Bus / Werk / 028 und HgB 02 / - / - / - / - / -										
2213	Maßliche Kupfer des Betriebes abfordern	Thomas Kotte	undefind			9 Jul 15	(30)		20 Aug 15	7 Aug 15
2219	Montage WPS/WPS (02 STW 04 + 011 21 (Los 02) (PARTIAL OF TASK 2723) (Reinigung Durofen: 11.00000)	Thomas Kotte	undefind			18 Sep 15	23			
2192	Abtrennung 08T, Los 1a zur Herstellung 08T und stellen Hydroxygebäude	Hanns Heuthe	undefind			20 Oct 15	35		10 Aug 15	
Formierfolge / - / - / - / - / -										
2294	Benennung Trenn für Kabelverlagarbeiten	Udo Dornbusch	undefind			23 Oct 15	89		20 Aug 15	
Stellenfolge / - / - / - / - / -										
2293	Überstellung AP	Dominik Hennigshof	undefind			23 Mar 15	(102)		10 Aug 15	
Leistung / - / - / - / - / -										
2296	Beantwortung Mail Anthon	Sirone Wachtel	undefind			17 Dec 14	(173)		10 Aug 15	
WV Kabel im HgB, Kabelnetz / - / - / - / - / -										
2725	Auffahrt ins Busfeld Schwerlasten (über Halle 1 und 2)	Alex Hirtz	undefind			9 Mar 15	142		17 Aug 15	17 Aug 15
2724	Herstellung Strohfuhrkabelnetz	Udo Dornbusch	undefind			11 Mar 15	143	X (2725)	17 Aug 15	17 Aug 15
2625	Stellen 02H Kabinen	Udo Dornbusch	undefind			14 Mar 15	143	X (2724)	19 Aug 15	19 Aug 15
TRT 01 und 02 Hg / - / - / - / - / -										
2146	Vorgabe für Einstellung Reaktionspöde an Los 5 übergeben und stellen, wenn Reaktionspöde übergeben werden müssen	Udo Dornbusch	undefind			28 Jul 15	(14)		10 Aug 15	7 Aug 15
2213	Benennung Trenn für Strichaufbereitung	Hanns Heuthe	undefind			2 Sep 15	11		10 Aug 15	
Werkstoffherstellung / - / - / - / - / -										
2214	Vorgabe für Kaufkraft an Los 1a übergeben	Norma Thie	undefind			8 Mar 15	(114)			
2147	Registrierung W 22.11.15 (preisgebunden) durch Los 1a	Norma Thie	undefind			13 Mar 15	(109)		20 Aug 15	20 Aug 15
2213	Prüfung, ob es Kaufkraft die Reaktionspöde der W02 und elektrischen 08T gibt	Alex Hirtz	undefind			18 Mar 15	(108)	X (2147)		
2213	W22 : Lieferung Material, Montage und Ausführung	Norma Thie	undefind			20 Mar 15	(108)	X (2147)		

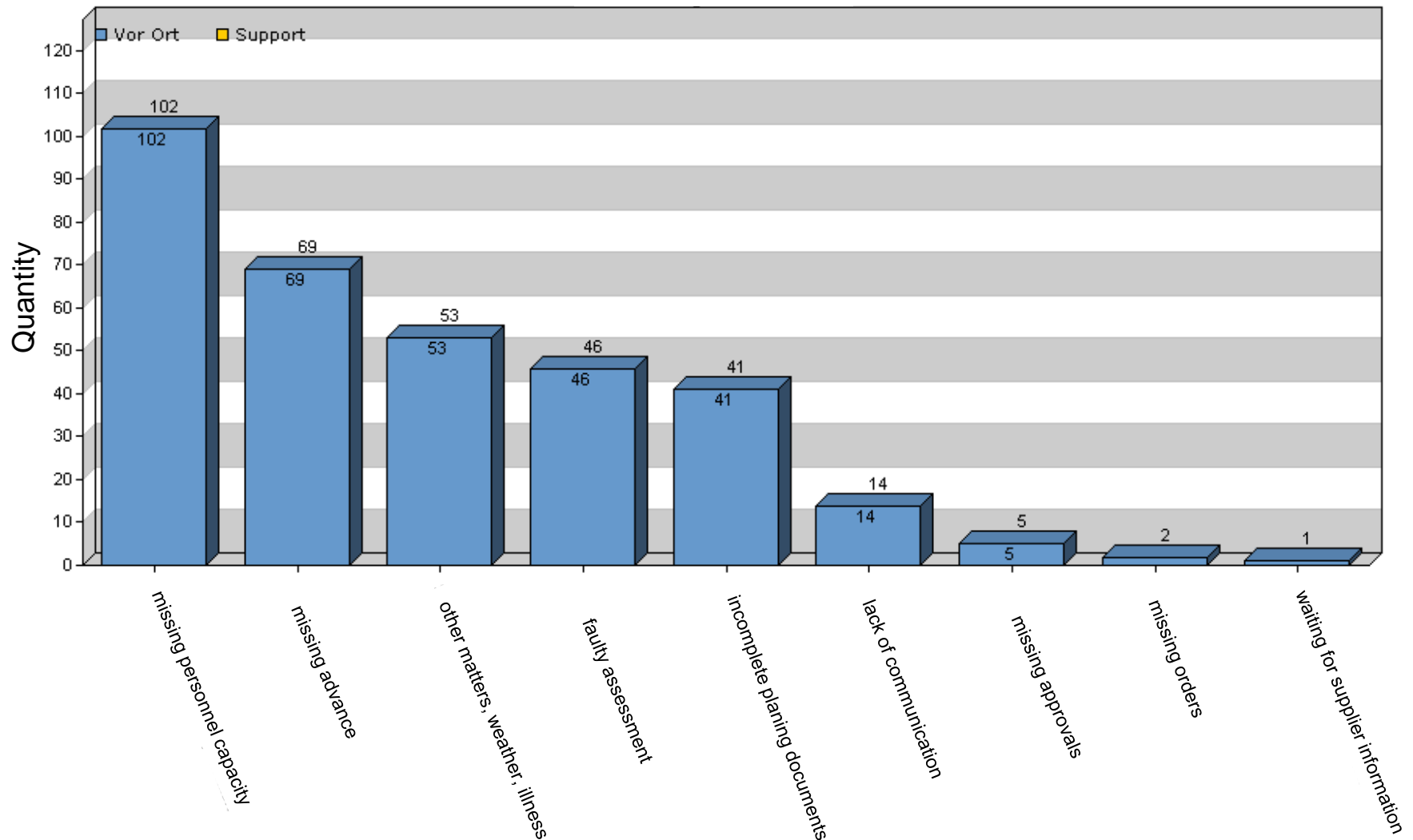
Samstag 01, 02, 03, 04, 05, 06, 07 haben.

Reliability of Tasks



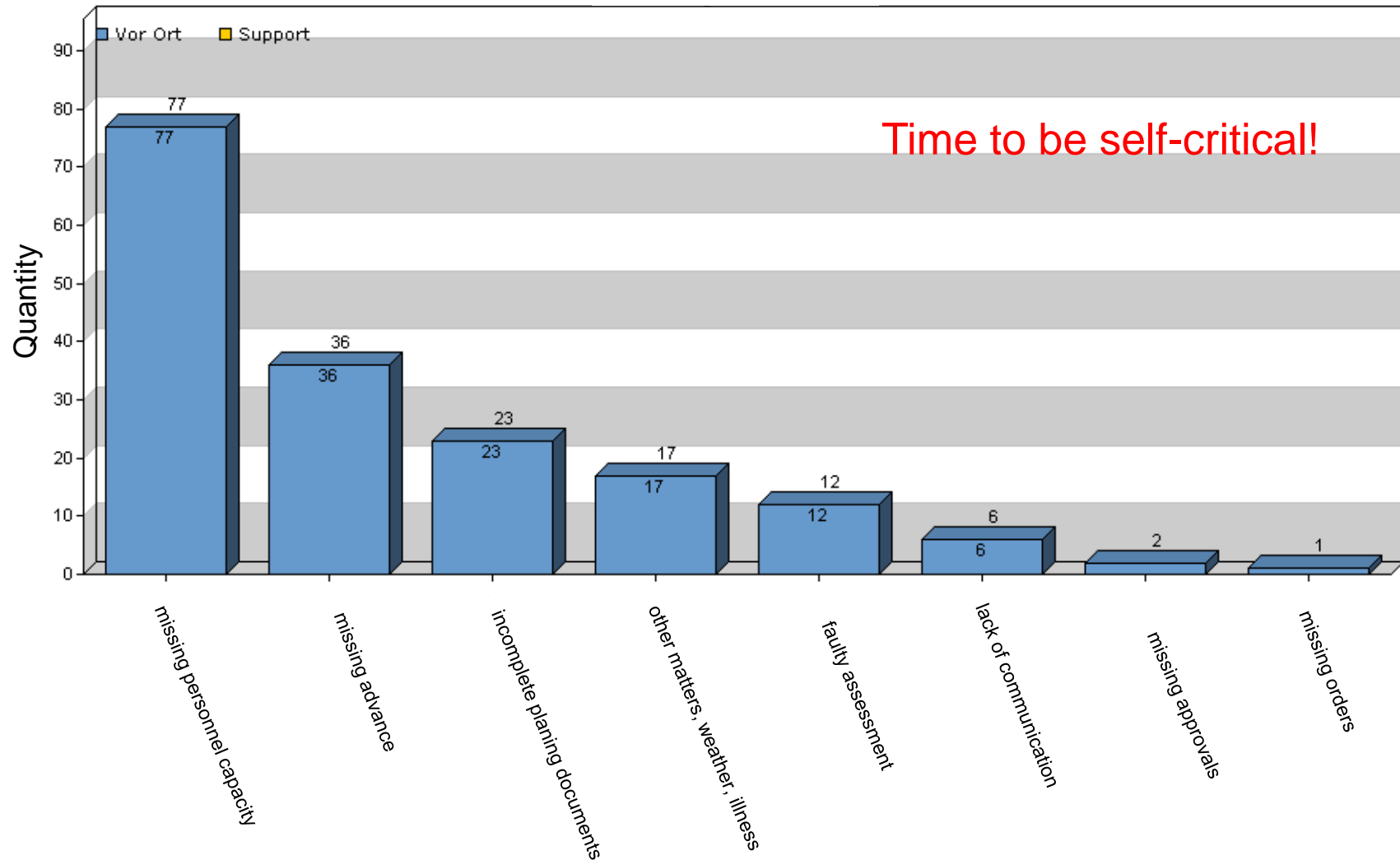
Analysis of Reasons for Non-Completion (all Units)

Listing of Reasons



Analysis of Reasons for Non-Completion (Project Management)

Listing of Reasons



**Thank you for your attention –
Questions ?**