

Transport and Freight Management

Digital logistics in thyssenkrupp with SAP Transportation management/ Project overview

Moscow, 10.10.2019

thyssenkrupp Materials Services | Supply Chain Management
Thomas Rücker | Head of Transport & Freight Management

engineering.tomorrow.together.



thyssenkrupp

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Business Area Materials Services

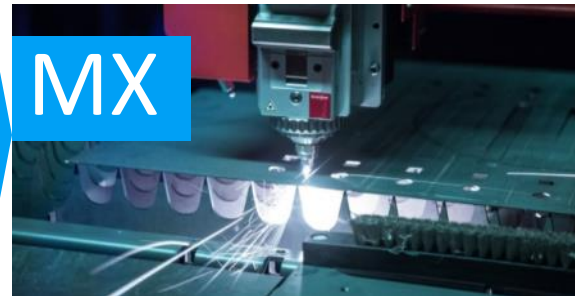
Fiscal year 2017/18 :

14 Mrd. € revenue

330 Mio € freight costs

about 40,0 Mrd. € revenue (total tk group)

about 1,7 Mrd € freight costs (total tk group)



Business model
Materials Services

Trader between production
processing and construction

Materials Services

Raw Materials

Producer

Mill Services

Our expertise:

materials, raw materials,
logistics, IT and Services

Customer
(processing industries)

Customer oriented trading- und service organisation



- Materials
- Raw Materials

- Stainless

- Materials trading
- Material prefabrication
- Warehouse Management
- Supply Chain Management
- Other services





Distribution



Logistic and IT Excellence:
Worldwide greatest SAP ERP System
deliver the Basis for efficient processes
One SAP Template für Materials Services
with 8.000 user

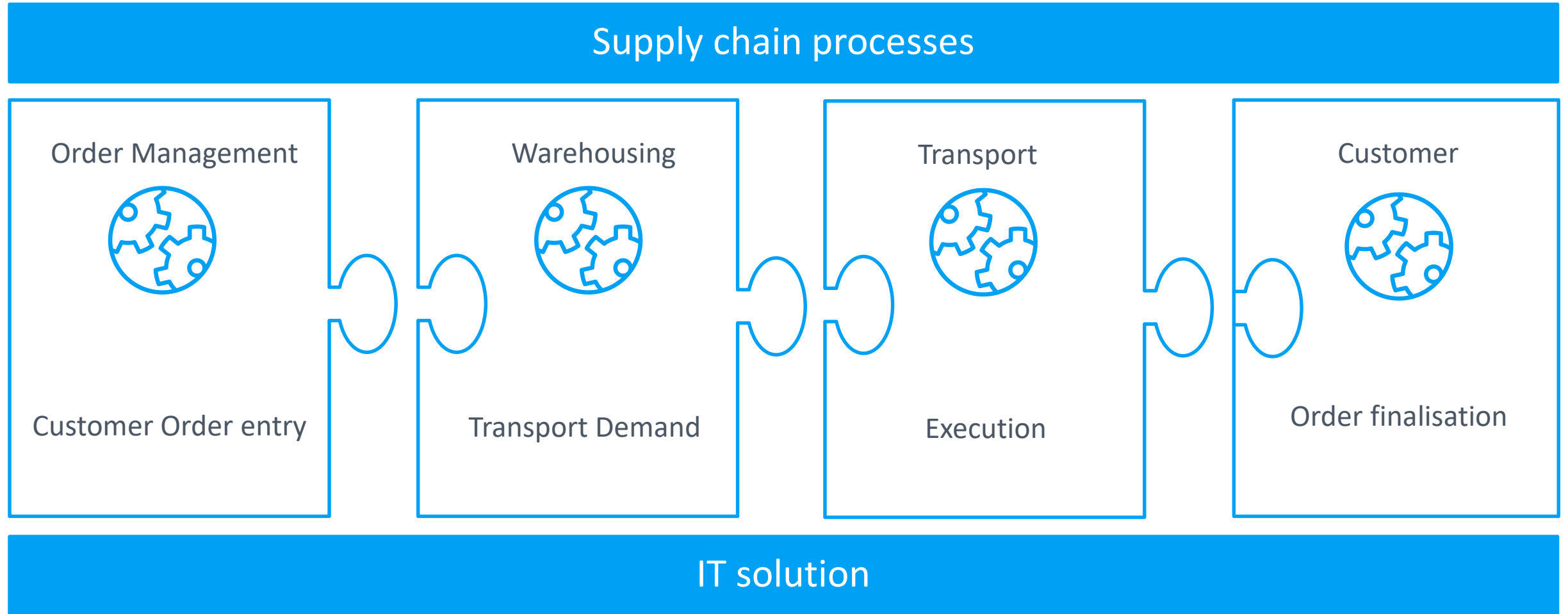


Efficient
Central
Regional
local
Warehouse, Transport and
Logistics systems



Basic supply chain processes

Transport environment



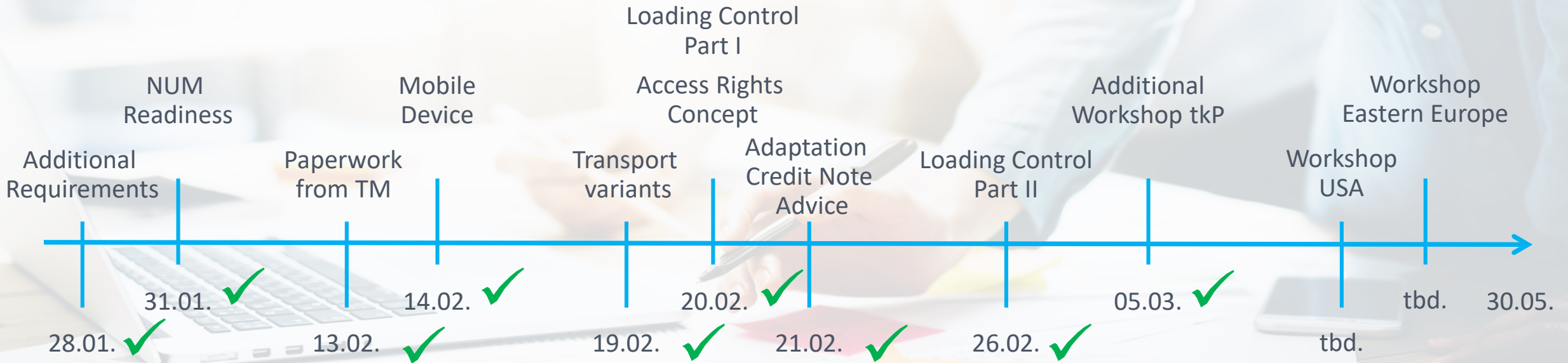
Transport Management

Carrier structure
Rail, Truck, ship



Timeline

Actual project work for Digital Transport Order Management DTOM



Motivation for Digital Transport Order Management



Cost Reduction

ONE
tool supports
TWO
strategies

as part of the overall
transport and freight
strategy

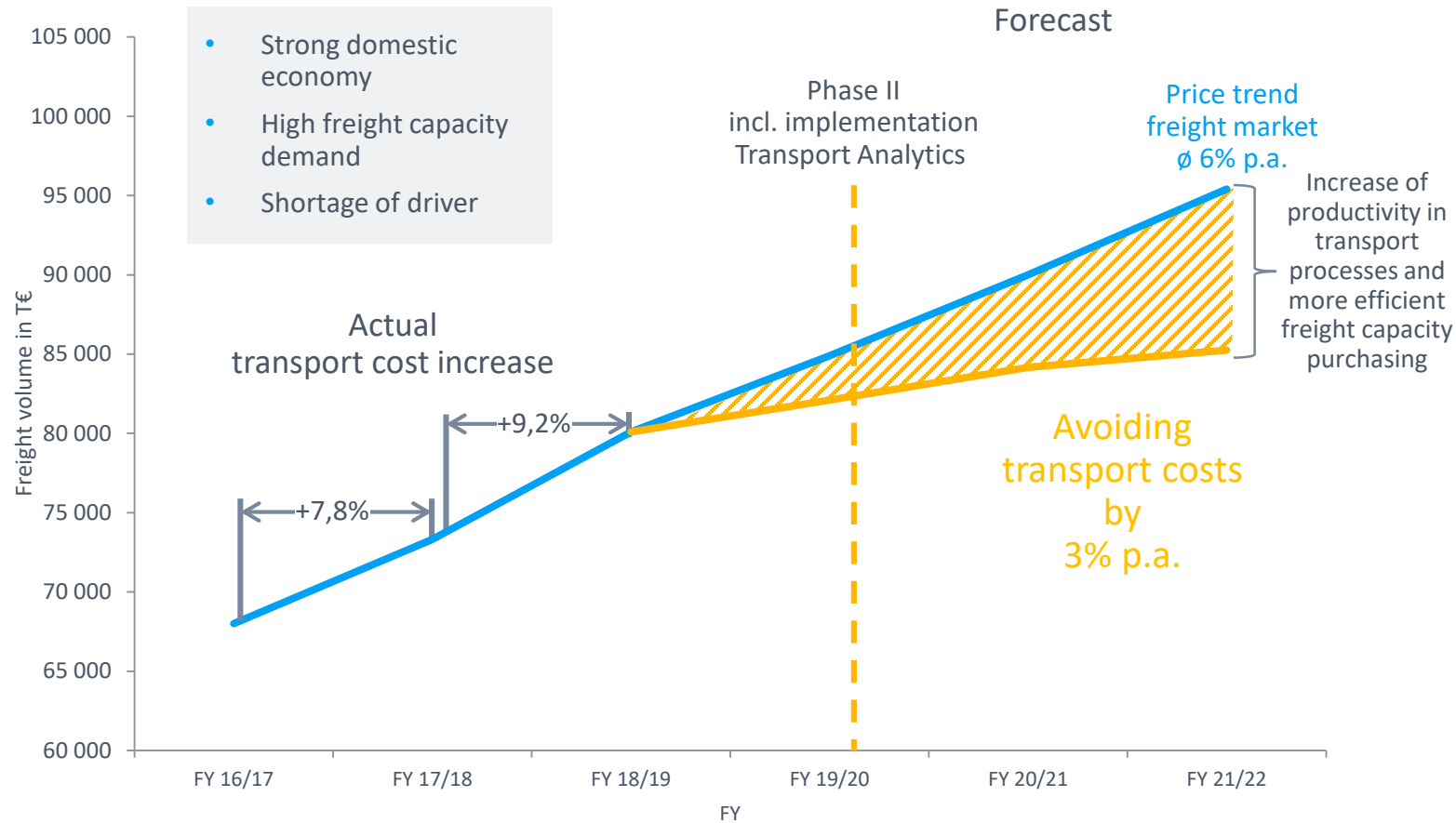


Digitalization &
Harmonization



Actual Freight Cost Increase Requires Optimization

Freight cost trend of OU Materials Germany with forecast



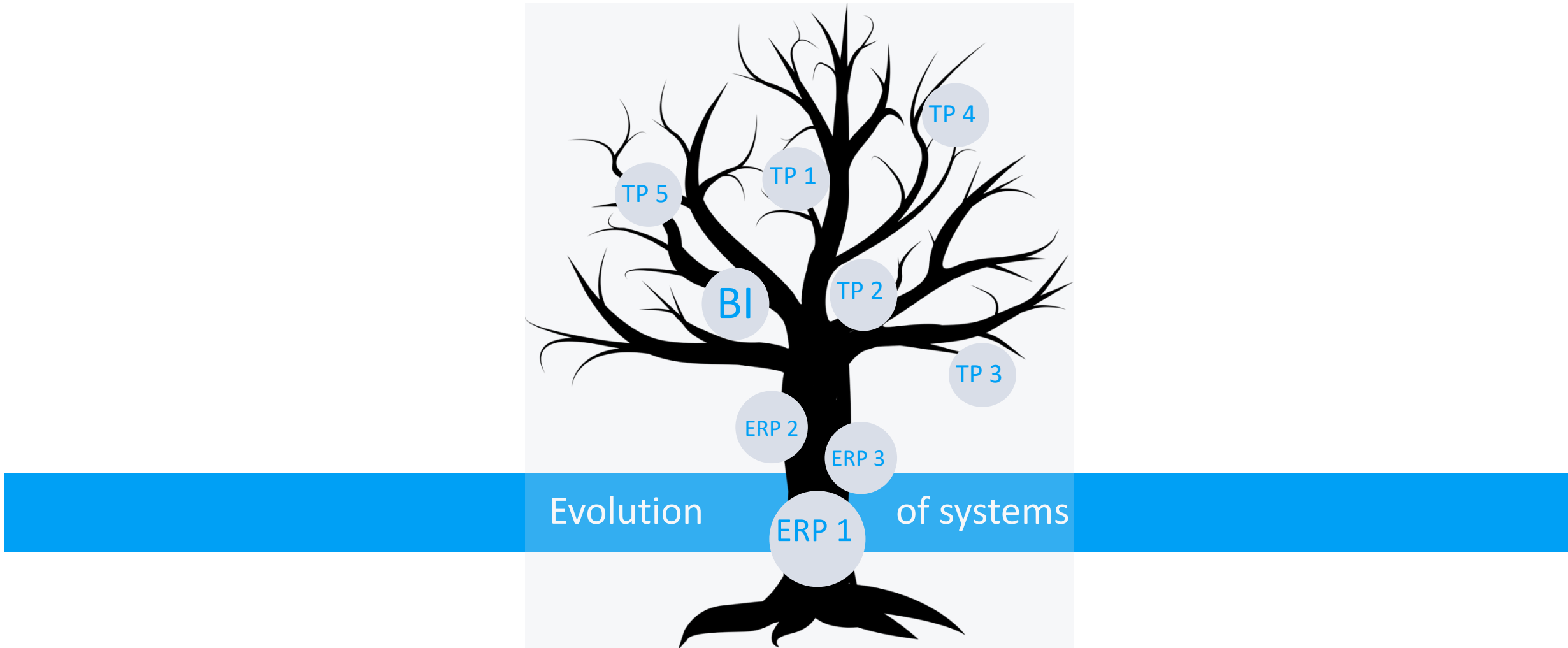
- Productivity increase in transport network
- Productivity increase in process
- More efficient freight capacity purchasing
- Continually supplier improvement like CIP

Digital Transport Order Management as “Enabler”, to counter the freight market trend.



Starting point for TM decision

Different landscape in systems



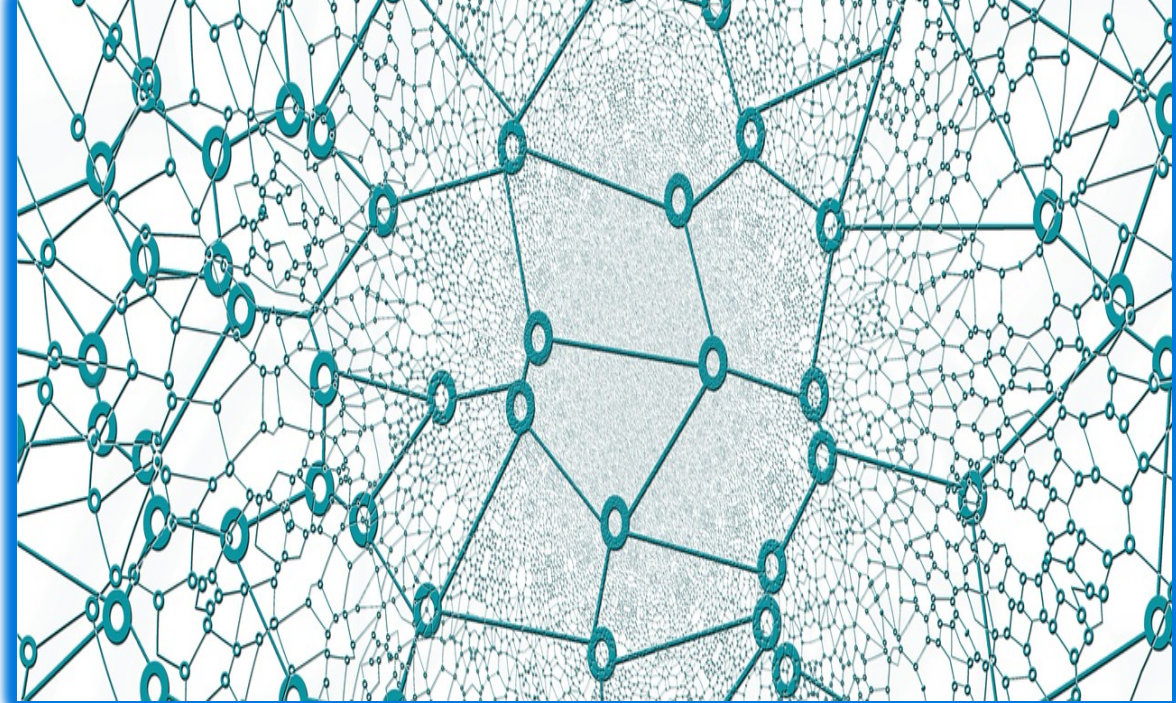
Main decision driver for SAP-TM

Managing complex IT-infrastructure and widespread physical logistic locations within supplier and customer networks

Information processing



Logistic network

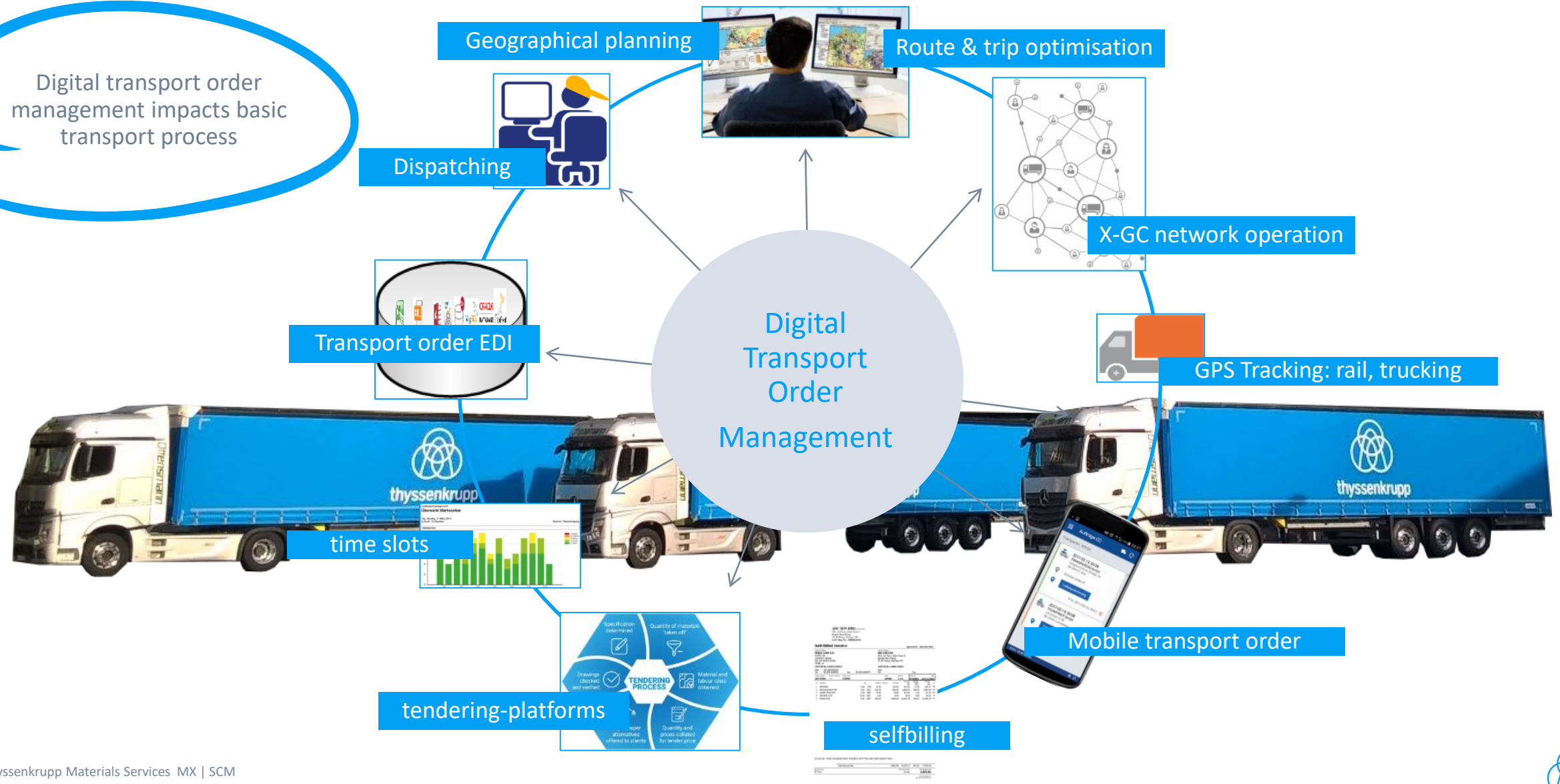


Standardization in IT, physical processes and future technologies

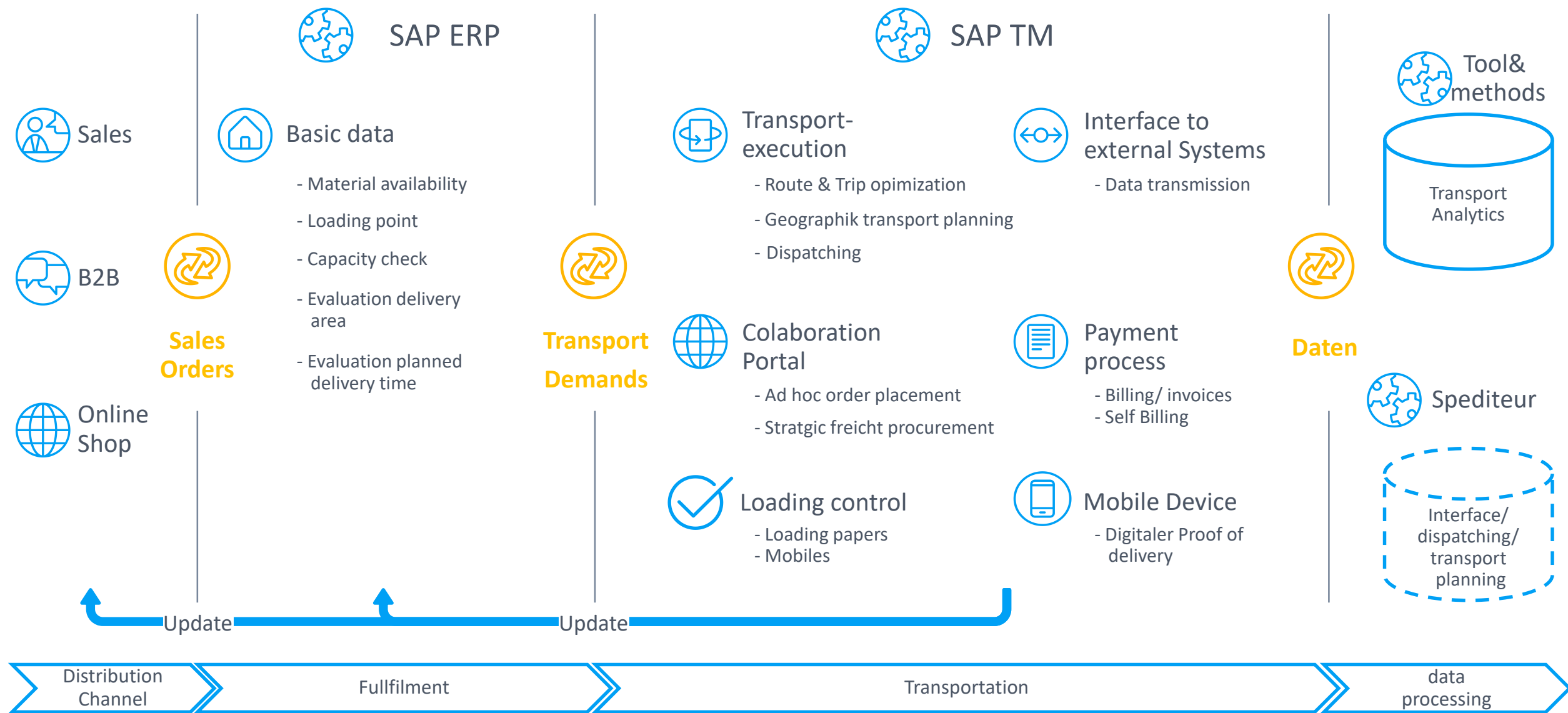


thyssenkrupp SAP-TM entry: Digital Transport Order Management to optimize business process

What does it mean in general? Where are the/ your business needs?



tk first solution set up



View on TM

Mobile application, visual transport planning and trailer yard management

Tour-Einheiten (610000478)

64 / 96
km gefahren

5 / 12
t geliefert

Nächste Lieferung

Admiralstrasse 1, 78901 Bremen

Smith, John Mr

A → B 32 km
Voraussichtliche Strecke

A ⊕ B 22 min
Voraussichtliche Fahrtzeit

Delivery Arrival

Stops (2)

ID: 4100000308

Zürich Bau GmbH / CH-8040 Zürich

08.02.2016
08:47:52

YL Control Tower v.003a

Parking trucks waiting: 15
current situation

Expected trucks: 7
next hour

Delayed trucks: 2
next hour

Shunting trucks availability: 1
of 5

Yard operation: Inbound 85, Outbound 93

Yard operation status: Planned 85, Active 45

3D Yard Diagram

Checkin trucks

Time	Carrier
15:11	UPS
15:02	FedEx
14:37	DHL
14:33	DHL
13:59	UPS

Yard exceptions

Time	Description	Status
15:15	Truck AB 12-3343	Solved
	Truck HG 12-3343	Delayed
	Truck HG 12-3343	Delayed

Doors

Door	Status
01	Free
02	Occupied
03	Occupied
04	Occupied
05	Open
06	Occupied
07	Occupied
08	Free

Transportation Cockpit: LDG_DEMO

Freight Unit Stages (44)

Freight Unit	Act	Color	Req	Pl	Ex	Loc	Unloading Location	Distance	Dis	Net Durt
410012849			2100007233			LDG_D_FRANKFURT	LDG_C_KELSTERBACH	22.000	KM	
410012848			2100007234			LDG_D_FRANKFURT	LDG_C_KELSTERBACH	22.000	KM	
410012847			2100007232			LDG_D_FRANKFURT	LDG_C_KELSTERBACH	19.000	KM	
410012848			2100007251			LDG_D_FRANKFURT	LDG_C_OFFENBACH	11.000	KM	
410012849			2100007250			LDG_D_FRANKFURT	LDG_C_HANAU	19.000	KM	
410012849			2100007229			LDG_D_FRANKFURT	LDG_C_GERAU	30.000	KM	
410012849			2100007228			LDG_D_FRANKFURT	LDG_C_MANN	43.000	KM	
410012842			2100007227			LDG_D_FRANKFURT	LDG_C_DARMSTADT	41.000	KM	
410012843			2100007228			LDG_D_FRANKFURT	LDG_C_HOFHEIM	34.000	KM	
410012844			2100007225			LDG_D_FRANKFURT	LDG_C_HATERSHEIM	25.000	KM	
410012845			2100007224			LDG_D_FRANKFURT	LDG_C_HATERSHEIM	20.000	KM	
410012846			2100007223			LDG_D_FRANKFURT	LDG_C_GRIEBSHEIM	7.000	KM	
410012847			2100007222			LDG_D_FRANKFURT	LDG_C_HANAU	20.000	KM	
410012848			2100007221			LDG_D_FRANKFURT	LDG_C_KARLSRUHE	40.000	KM	
410012849			2100007220			LDG_D_FRANKFURT	LDG_C_ASCHAFENBURG	44.000	KM	
410012850			2100007219			LDG_D_FRANKFURT	LDG_C_ISENBURG	8.000	KM	
410012851			2100007218			LDG_D_FRANKFURT	LDG_C_DREIEICH	13.000	KM	
410012852			2100007217			LDG_D_FRANKFURT	LDG_C_BIEBER	20.000	KM	
410012853			2100007216			LDG_D_FRANKFURT	LDG_C_LANDEN	19.000	KM	
410012854			2100007215			LDG_D_FRANKFURT	LDG_C_KARLSRUHE	27.000	KM	
410012855			2100007214			LDG_D_FRANKFURT	LDG_C_WEITERSTADT	30.000	KM	
410012856			2100007213			LDG_D_FRANKFURT	LDG_C_RÖSSLERHEIM	26.000	KM	
410012857			2100007212			LDG_D_FRANKFURT	LDG_C_MADDEPFLDEN	22.000	KM	
410012858			2100007205			LDG_D_FRANKFURT	LDG_C_HOFHEIM	31.000	KM	
410012859			2100007254			LDG_D_FRANKFURT	LDG_C_FRIEDTSTADT	22.000	KM	
410012810			2100007253			LDG_D_FRANKFURT	LDG_C_NAHEIM	31.000	KM	

Trucks (4)

M	Resource	Ac	Max	Yes	Max	Vol	Depot Location	Means of	Multiresource	Number of Individual Resour
	LDG_OWN_BIG	28	TO	74	M3		LDG_D_FRANKFURT	LDG_MTR	✓	0
	LDG_OWN_MED	7.500	TO	42	M3		LDG_D_FRANKFURT	LDG_MTR	✓	0
	LDG_EXT_BIG	12	TO	48.500	M3		LDG_MTR	✓	0	
	LDG_EXT_MED	19	TO	46	M3		LDG_MTR	✓	0	

Map

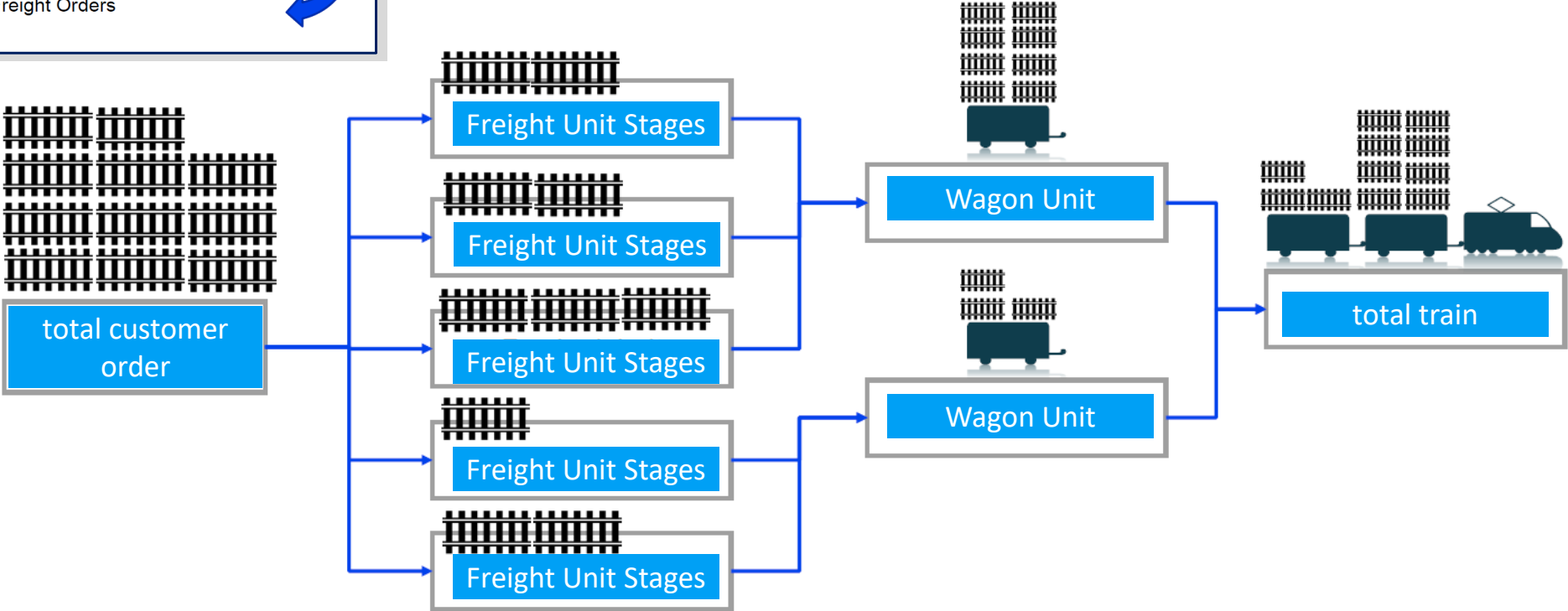
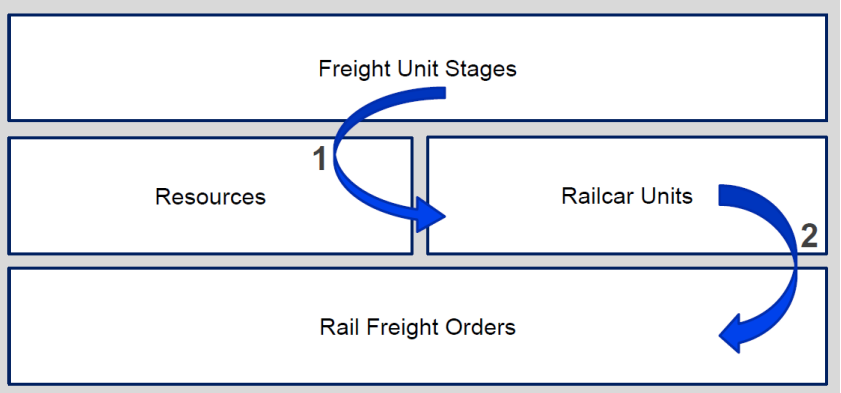
Map of Central Germany showing transport routes and locations.

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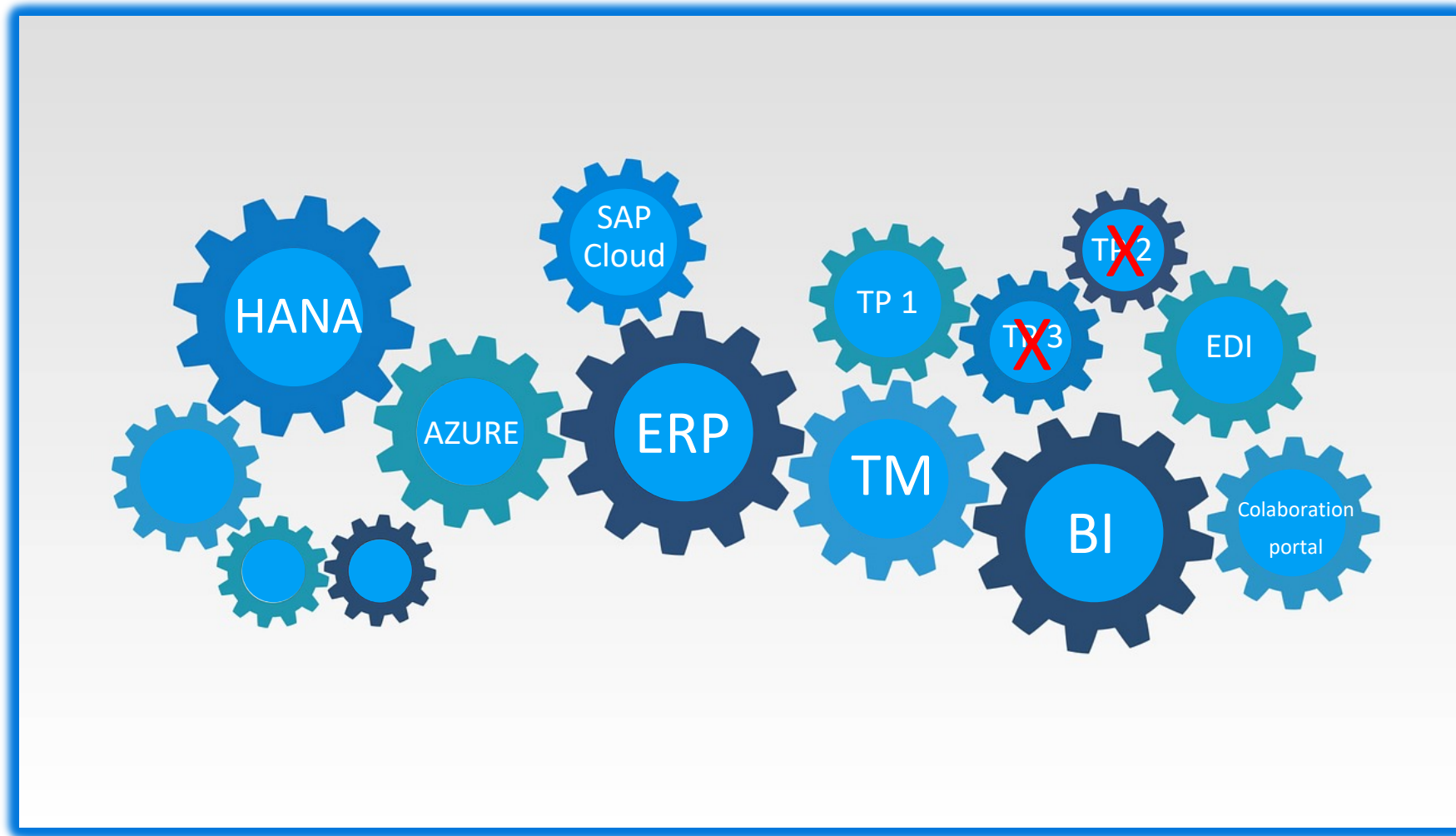
View on TM

Rail planning options over stage planning



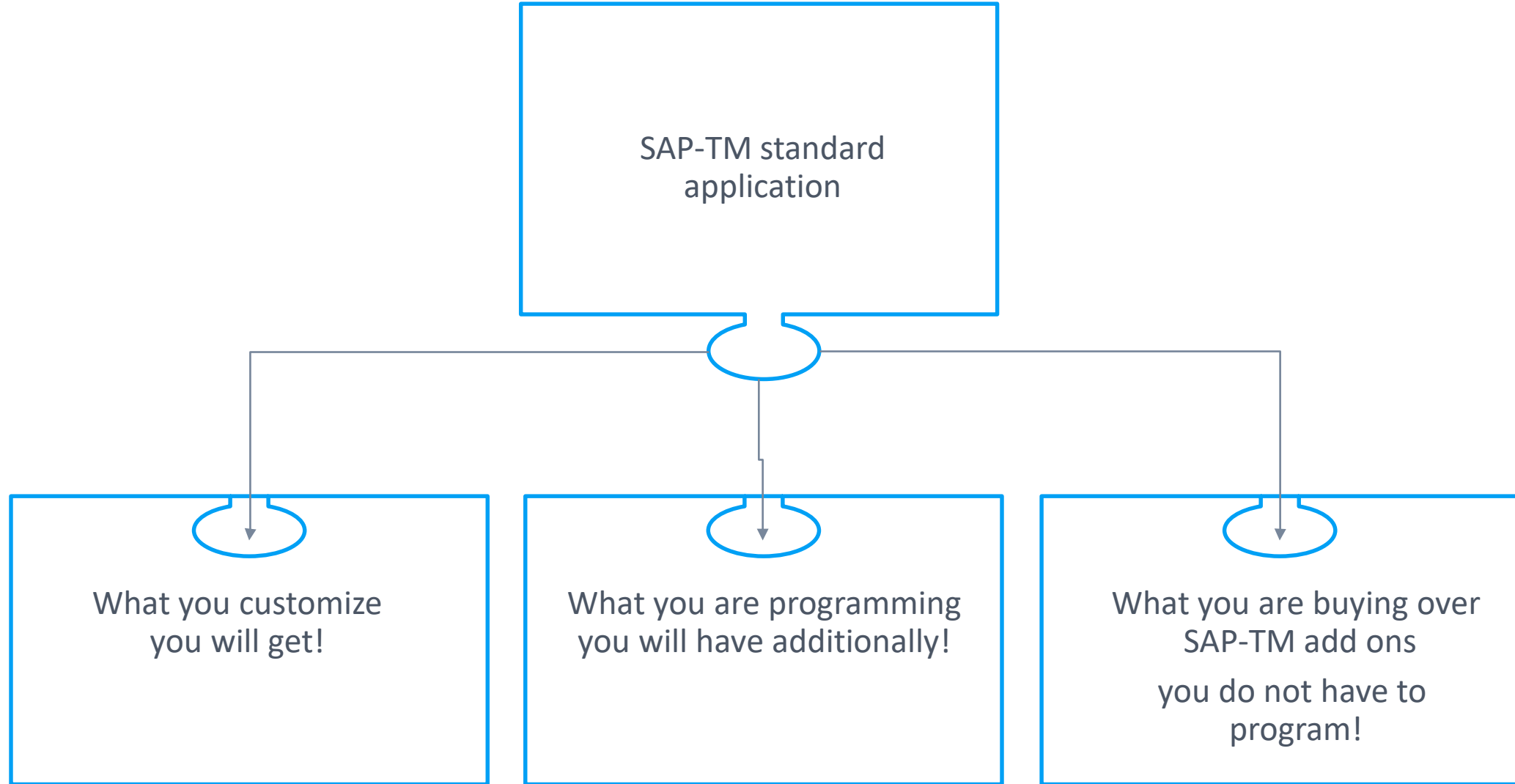
Target environment

Simplify complex environment and having one integrated TMS



Lesson learned TM

Cost, budget and targets

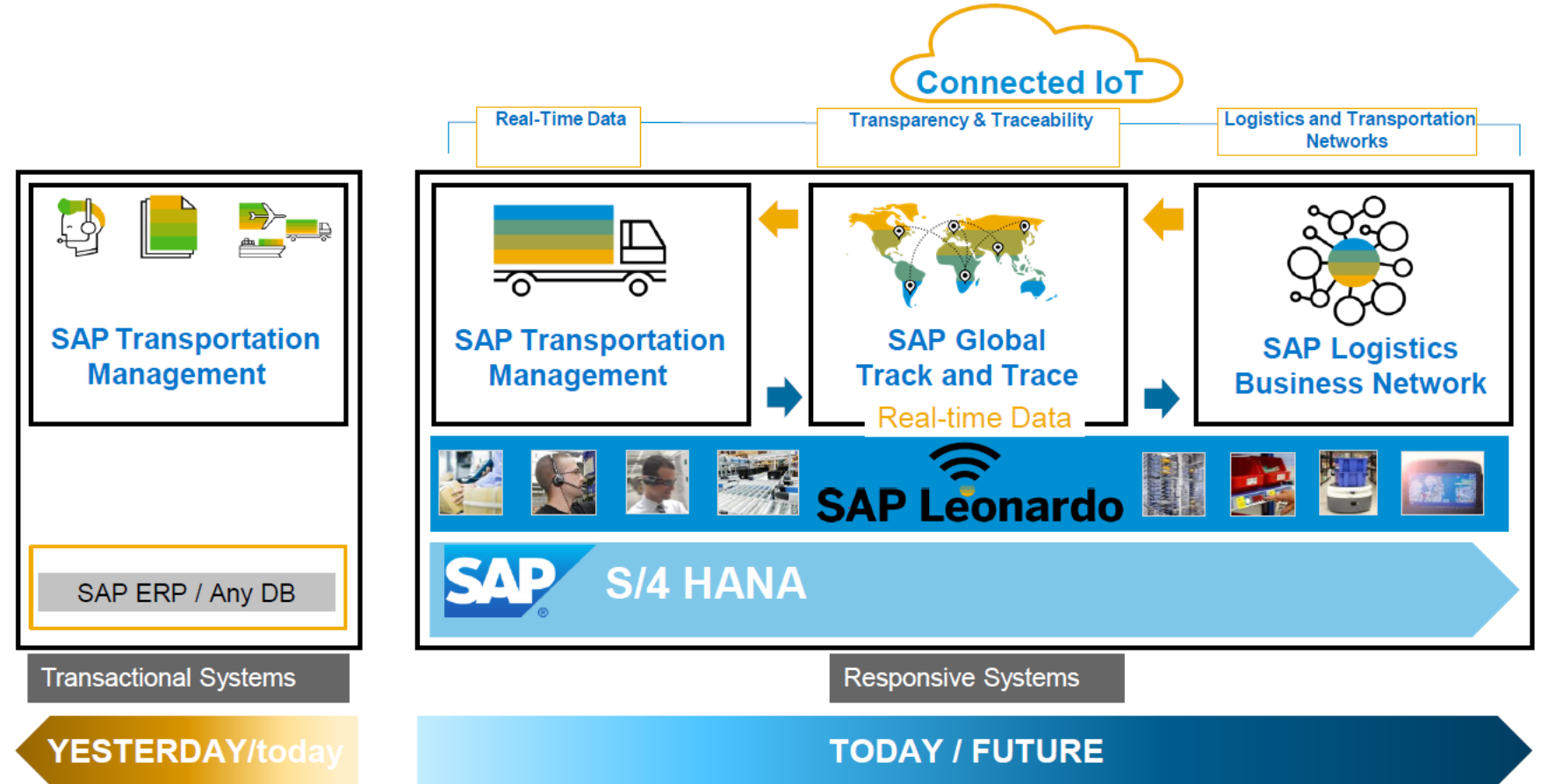


Outlook

technical strategic development

Having a highly integrated transport solution within logistics and supply chain based on state of the art IT technics and future developments

Digital Core: from Transactional Systems to Responsive Systems



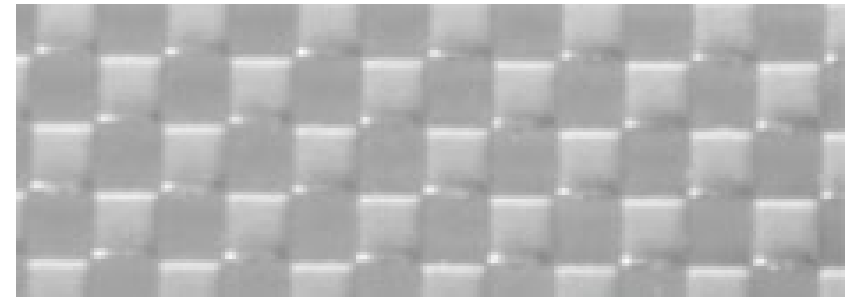
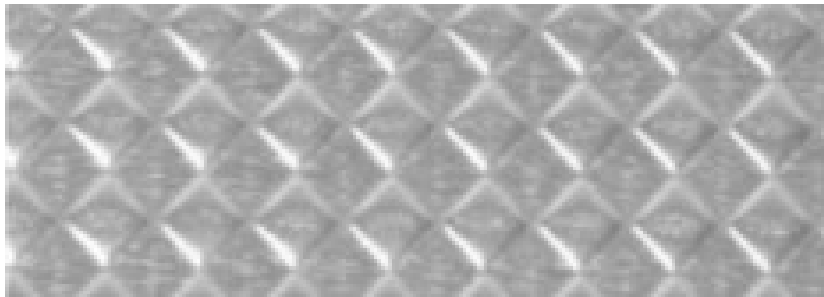
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thyssenkrupp

MX stainless
plant, Italy

AST



thank you
for attention

