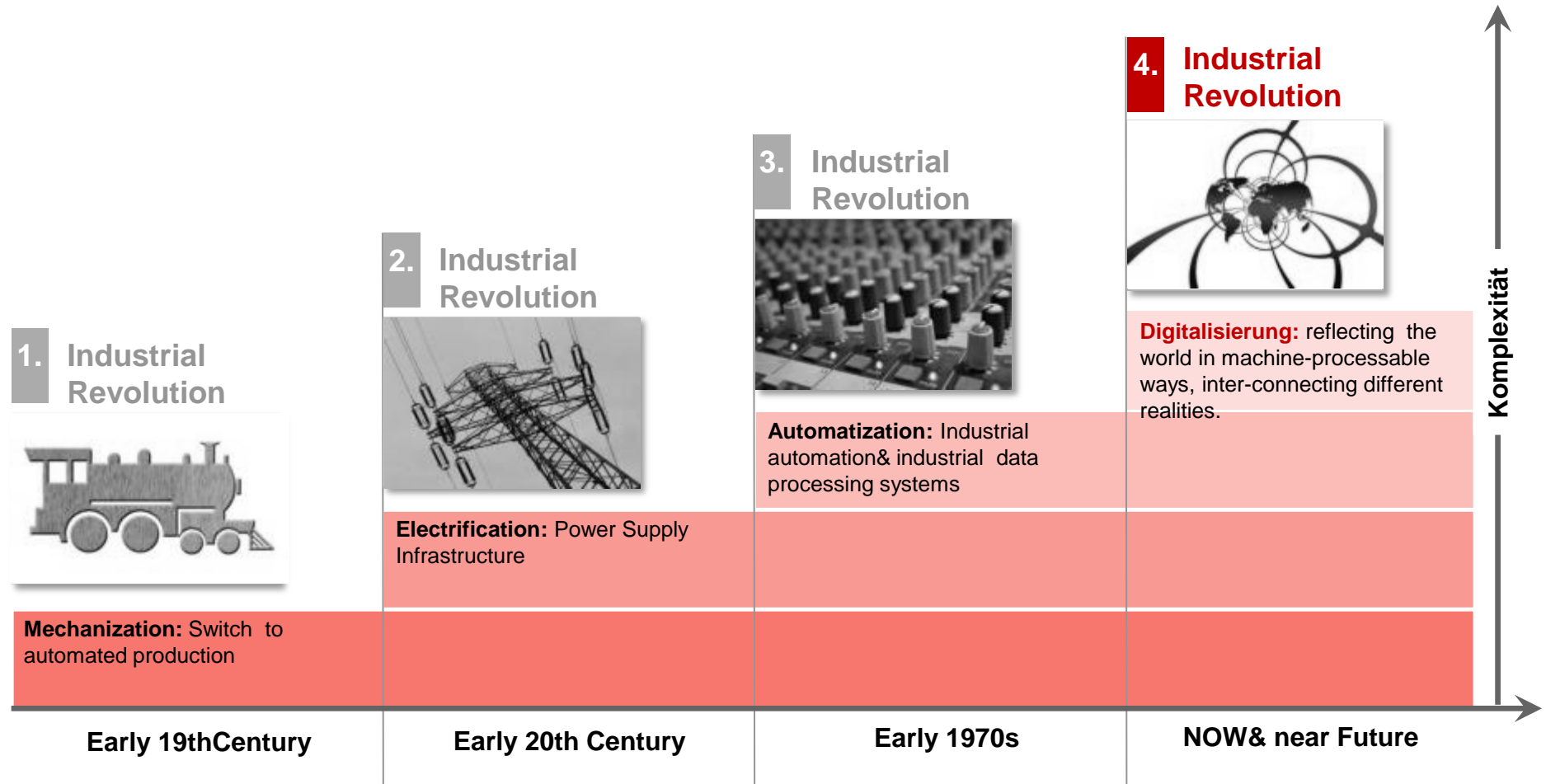


Why Digitalization? - Main benefits & customer expectations

Florence, 27.th November 2015



Industrial Revolution x 4: Smart Mobility



Why Digitalization? Seven Key-Success-Factors

- 1 Client Focus** – Deep understanding of customer to re.solve pain-points via innovation
- 2 Partnerships, Mergers, Acquisitions** – Develop new skills, through collaborations and design new assets
- 3 Speed, speed, speed** – Agile evolution and quick pilots are essential
- 4 Innovation-culture** – Winners experiment and learn from failures; others die procrastinating
- 5 Disrupt or be disrupted** –Re-Think your business model
- 6 Performance**– Process innovation through KPIs
- 7 Simplified IT** - Optimized data management

Changing the Art of the Possible



Description					
linking of machines, products, processes and systems in real time	Computer based enhancement of status quo, used for a huge number of complex activities	Execution of programs, which are not installed on on-premise PCs or servers (Software as a Service)	Holistic analysis of multiple available data sources	Mobile linking and information exchange with others	Automated workflows with integration of data and involvement of broadband services
Multidirectional communication between linked objects	Especially for the visual depiction of information	Usage of Cloud storage for a large quantity of data in remote data center	Decisionfinding and optimisation in real time	Mobile access to information due to powerful devices and fast broadband internet	Intelligent, autonomous systems, such as autonomous engine
Example					
Railcar signals maintenance-mode	Deployment of Augmented Reality-Glasses for Maintenance	On Board Services/ (Entertainment	Creation of motion profiles for commuters	Mobility Platforms	▪ Simplified Shunting

ÖBB Digitalisation Targets are Based on Customer Expectations and User-Experience



Customer Expectations

Simple & Easy

Fast & Smooth

Intelligent & Individual

Efficient & Productive

Crosslinked & Social

Derived ÖBB Targets

Simple & Relevant
Information for our
customers

Fast & Smooth
Mobility for
passengers and
freight

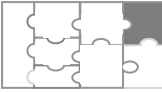
Intelligent &
Individual Partner

Efficient & Productive
Travel Time

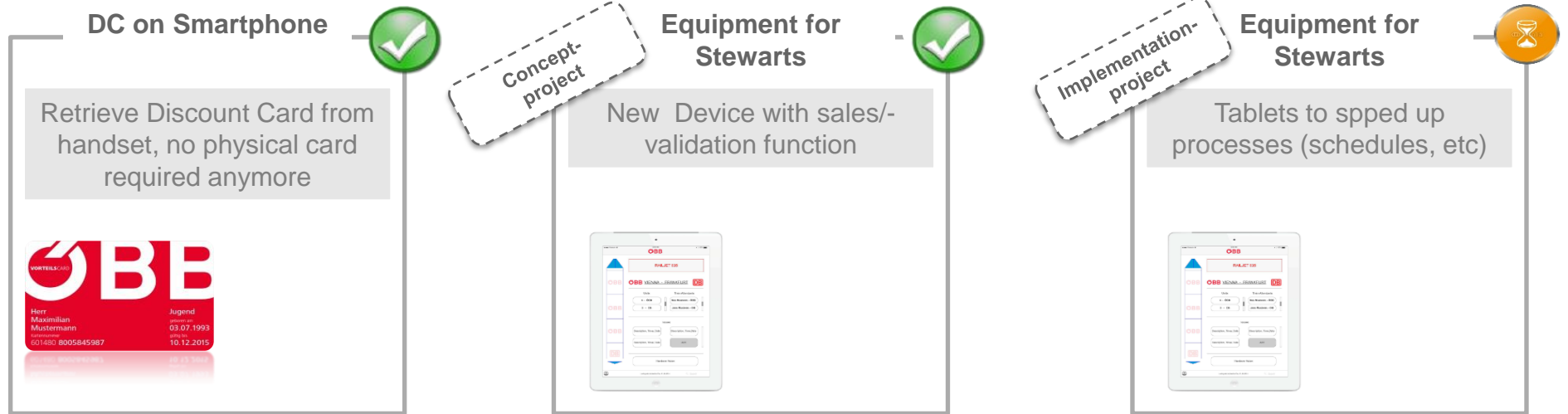
Interactive &
Communicative
Environment

Examples

- Provide just relevant information
- Minimize changeover and waiting-time
- Intelligent personal assistant 24/7
- Provide necessary infrastructure at train stations, in train and with ending of journey
- Situationbased interaction with the customer



Digital Services: Satisfying the need of customers



Digital Services- Ticketshop to WiFi

On-Board Wifi

Improved Wifi-System and new technological framework conditions enable
Focus on better connectivity and entertainment functions



Mobile Communications

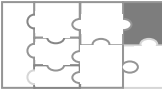
- Trackside Measures
- On-board Signal Amplifier)allow for high-speed services



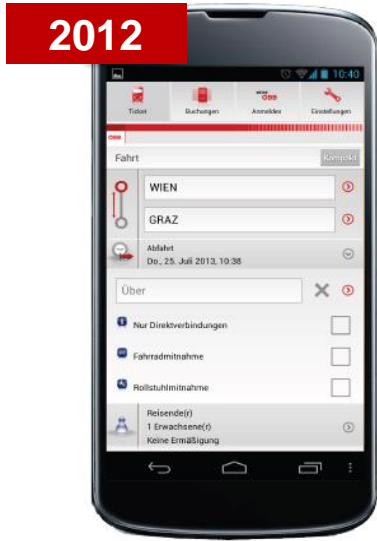
Client portal

Travel information, Content & Entertainment





Digital Services: Evolution of ÖBB-Ticketshop increases online-sales



2012

Quick.

Simple.

Relevant.

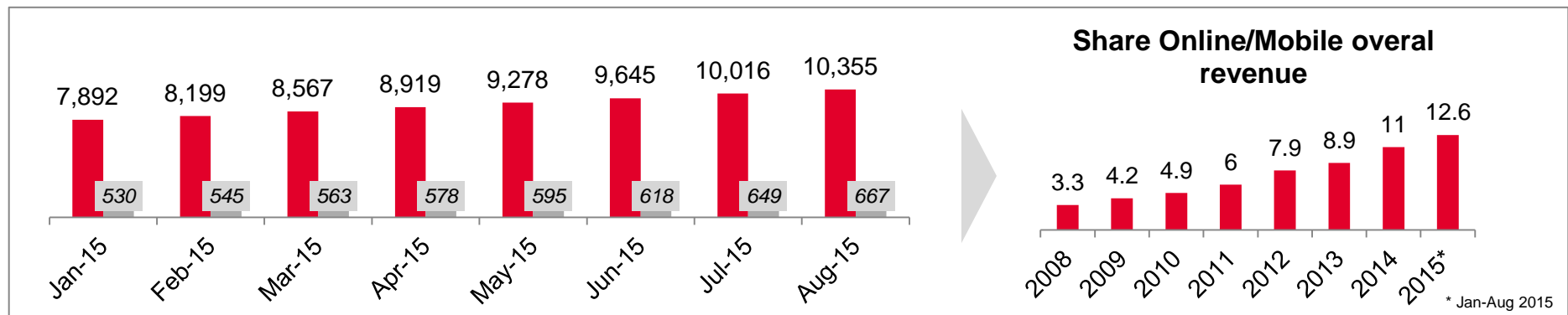
- New innovative ticketing system
- Forward-looking and easy-to-expand, flexible system-architecture
- Active client use

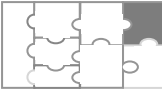
- Real-time infos on disruption & info
- Digitale Travel Compagnion
- On-screen departure monitor
- Increased Usability
- Expanded product Portfolio incl. Sale of products of alliance partners



2016

Work in Progress

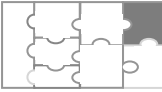




Digitalizing the Cargo Business- Focus Areas

	Short-to-medium term (2016) :	Medium-to-long term (2018)
Customer	<ul style="list-style-type: none"> Customer relationship management Rail-solution configurator 	<ul style="list-style-type: none"> Cargo tracking and analysis (location/ conditions)
Efficiency	<ul style="list-style-type: none"> Introduction of capacity planning Transport Management System Trip Preparation System Wagon proof 	<ul style="list-style-type: none"> Preventive risk management Anticipative logistics Forecasts of load factors Preventive Maintenance
Responsibility	<ul style="list-style-type: none"> Fraud management system „Know-your-business-partner“ - System 	<ul style="list-style-type: none"> Transactional monitoring





Digital Infrastructure- Focus Areas

Customer

Short-to-medium term (2016) :

- Information and deviation management
- Quality check at the railway station
- Google Indoor for railway stations



Medium-to-long term (2018)

- Expansion of mobile network



Efficiency

- Implementation of asset management system
- Digitalization/ harmonization of asset servicing processes
- Acquisition of operational status data



- Autonomous shunting
- Preventive Maintenance
- Validation of operation of drones to monitor tracks

Responsibility

- Rail ML for standardized interoperability



- Digital System Integrator (interconnection of public transportation, Park& Ride,...)

If we don't do it - somebody else will!



Simply&Easy



Siri

Google now

Intelligent&
Individual



Efficient&
Productive



Fast&Smoothe

2025+

Crosslinked &
Social



Our conclusion & recommendations towards the Commission

- Digitalisation can help railway companies to become more attractive for their customers and more efficient in their operations
- But: Thin line between making life easier and overburdening the sector
- Thus, avoid a „one size fits all approach“ – particularly in those fields where interoperability is not of major relevance. Beware of the Digital Bubble!
- Regulation that could stifle innovation should be avoided.
- No rule without exception: regulations at interfaces are helpful (or where interoperability is relevant)
- Give preference to market- or company-driven initiatives: Healthy competition leads to innovation
- Additional funding of digitalization projects would be beneficial, including the support of low-cost, agile, start-up-like „trial & error“ approaches

Digitalization and ÖBB

Day-to- Day



Progress of the www and the mobile acces thereof changes work&leisure for customers as well as employes

- Increasing use of touchpoints to book journey and get travel information

Transport



Trucks, Trains, Cars and Airplanes as interlinked, „smart“ and efficient mobility compagnons

- Car industry more advanced and a serious contender für future customers
- Predictive Analytics to lower cost structures

Solutions



Customers demanding multimodal transport solutions along a networked logistics chain and order posiibilities

- Integration of real time cargo tracking and analysis (locations/conditions)
- Ancipatory logistics optmizies supply chain management

Customer Needs



Digitalization creates new customer needs and market opportunities

- Multinationals and Start-ups set new rules of the game and substitute traditional products with new services