AUTOPILOT

Emerging Need for Data and Market Places in the area of Automated Fleets

Ralf Willenbrock, Product and Portfolio Manager Connected Mobility, Digital Solutions T-Systems International GmbH

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LIFE IS FOR SHARING.



DEUTSCHE TELEKOM AND T-SYSTEMS PROFILE



T-SYSTEMS – DEUTSCHE TELEKOM'S SUBSIDIARY FOR MAJOR CORPORATIONS



Financial figures: DT's 2017 annual report

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Pioneer in **Cloud Computing**

to generate IoT benefits for our customers

NUMEROUS TRANSPORT & MOBILITY CHALLENGES IN EUROPE





SQUARING THE CIRCLE: THE MAGIC OF A TINY P&I INTERSECTION

- >70% of Products fail in their Go-to-Market Phase
- Highly automated vehicles just started to appear in the market, so there is hardly any experience of fleets running in real road conditions



Nothing is as powerful as an idea whose time has come (Blaise Pascal, 1623-1662)





THE "INTERNET OF THINGS" – **COMMUNITIES AND VALUE PROPOSITIONS BY ECOSYSTEMS**

SMART RETAIL

Generating customer insights based on behavior data

EQUIPMENT MONITORING

Localization and optimal maintenance of machines





SMART CITY

Intelligent management of street lighting or waste containers



SMART PARKING Navigates drivers to the next vacant parking spot

SMART HEALTHCARE

Remote patient monitoring, tracking of assets or cold chains



CONNECTED MOBILITY – CHALLENGES FROM THE MARKET

LINE-FIT





DAIMLER VEHICLE BACKEND development and global operations of connected car platform. Mio. of registered connected cars



M2M CONNECTIVITY. **CONSULTING AND SYSTEM INTEGRATION PROJECTS**

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AFTERMARKET





DIGITAL DRIVE OEM-independent B2B solution Bundeswehr FuhrparkService for fleet and crash management, finished car logistics

URBAN MOBILITY





IoT-based Autonomous Driving

SMART PARKING SOLUTION

Complete parking process (find-book-parkpay) in one app. Sensor fusion technology. Start in Hamburg, several cities to follow.

park and joy





FLEET / LOGISTICS / I.T.S.*

MAN TELEMATICS

and second second

Federal Ministry of Education and Research

Architecture for EU-wide logistics information exchange

SYNCHROLOG

Research project for dynamic slot booking in smart hubs

IOT CONSULTING & INTEGRATION	Business Processes, Integration, Applications	
CONNECTED THINGS MANAGEMENT	Horizontal Analytics Tools, Service Management, Device Management	E2E IOT
IOT CONNECTIVITY	Connectivity Management, Physical Connectivity	SECURITY
DEVICES	M2M Devices, Sensors	

AUTOPILOT – SERVICES AND PROJECT OBJECTIVES



- Merge automotive and IoT technologies to shift automated driving towards a new dimension
- Enhance driving environment perception with "IoT enabled" sensors
- Integrate IoT platforms in the vehicles using cloud and IoT platforms
- Deploy an eco-system of IoT sensors (pedestrians, vehicles, infrastructure ...)
- Share IoT sensor data to create new mobility services with fully automated vehicles
- Assess IoT suitability and benefits for automated driving, users and business exploitation

T-SYSTEMS CONTRIBUTION: BUSINESS MODELLING AND GO-TO-MARKET ANALYSIS





HOW DOES IT WORK?

Objects provide data to IoT platform using IoT standardized protocols

Objects are created virtually in the IoT platform

AUTOPILOT IoT platform develops applications using data from IoT sources

AUTOPILOT applications enable services that support autonomous driving

*IoT eco-system: objects of the physical world, which are capable of being identified and integrated into communication networks **IoT platform: interconnecting things based on exisiting and evolving interopeable information and communication technologies





AUTOPILOT BUSINESS CASE FOR PUBLIC TRANSPORT: AUTOMATED VALET PARKING AND CAR SHARING

PROBLEMS

CHALLENGE

THE VALUE PROPOSITION

New **mobility concepts** including comprehensive harmonized planning and implementation of adequate charging infrastructure for electric vehicles and automation ensure reduction of air pollution.

Integration of PT and non-PT shared mobility services into MaaS / LaaS platforms. Development of comprehensive integrated mobility strategies for urban, peri-urban and rural regions (boundary conditions) to increase planning security for companies

Enhancing new business models along SUMP for demand responsive and automated transport systems will lead to higher acceptance of PT and convenient shared transportation modes.



Cities suffer from traffic related congestion and pollution. Due to EC regulations now low emission zones, driving bans and restrictions caused further **political challenges**.



PT operators suffer from gaps in the comprehensive introduction of business models for shared mobility services with connected, cooperative and automated vehicles



Citizens suffer from missing interconnection between Public Transport and other transport modes (e.g. private car, taxi, bike, P&R, and shared transportation) Business models for shared mobility and public transportation must be designed to bring value for cities, PT operators and citizens and the same time.



FROM OPEN DATA MARKETS TO PROFIT-&-LOSS FORECASTS







FROM OPEN DATA MARKETS TO PROFIT-&-LOSS FORECASTS

Profit/ Loss	¥ 1	Y 2	Y 3	Y 4	Y 5	3 – 5 Y Forecast =
Revenue						
Revenue	1.728.000 €	1.814.400 €	1.905.120 €	2.000.376 €	2.205.415€	ROI "HOCKEY STICK"
Total revenue	1.728.000 €	1.814.400 €	1.905.120 €	2.000.376 €	2.205.415 €	
						Profit/ Loss
Costs	2-4 FTE	2 FTE	1 FTE	1 FTE	1 FTE	400.000 € 300.000 €
Persona	240.000 €	120.000 €	60.000 €	60.000 €	60.000 €	200.000 €
Marketing	120.000 €	120.000 €	60.000 €	60.000 €	60.000 €	
Operation	1.780.200 €	1.780.200 €	1.780.200 €	1.780.200 €	1.780.200 €	-100.000 € Y1 Y2 Y3 Y4 Y5
Total costs	2.140.200 €	2.020.200 €	1.900.200 €	1.900.200 €	1.900.200 €	-200.000 €
						-400.000 €
P&L / Brutto	-412.200 €	-205.800 €	4.920 €	100.176 €	305.215 €	-500.000 €

1. Business & Value Proposition CANVAS → 2. Stakeholder Analysis

→ 3. Initial Invest & Innovation Analysis → 4. Business Case Operation

→ 5. ROI Phase based on Pilot Site Experiences





THE MOBILITY CONCEPT OF THE FUTURE ALL TOPICS NEED TO BE MANAGED THROUGH DIGITIZATION AND INTEROPERABLE ICT PLATFORMS



FROM CORPORATE SOCIAL RESPONSIBILITY TO "CORPORATE DIGITAL RESPONSIBILITY"

HP

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Thank for your attention



Ralf Willenbrock

Product Manager Connected Mobility T-Systems International GmbH, Digital Solutions +49 711 9998208 +49 160 5365453 Ralf.Willenbrock@t-systems.com



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