

# USE CASE

TELEMAINTENANCE – REMOTE  
DELIVERY OF ‘FIRST AID’

# TELEMAINTENANCE

## REMOTE DELIVERY OF 'FIRST AID'

- 46% of total cost of ownership (TCO) for plant and equipment due to maintenance and unplanned repairs
- Remote support for maintenance, repairs and preventive action
- Real-time access to centrally managed information enables rapid and highly professional 'first aid'
- 10-50 % reduction in plant and equipment downtime

TELEMAINTENANCE DELIVERS INFORMATION TO SPECIALISTS, AND DELIVERS THEIR EXPERTISE TO CUSTOMERS WORLD-WIDE:  
**ZERO DISTANCE!**

# TELEMAINTENANCE - THE KEY MESSAGES

## MARKET TRENDS & NEW COMPETITION

- The Internet of Things
- Geolocation
- Powerful sensor technology
- Increasing complexity and global deployment of plant and equipment
- Improved equipment connectivity through M2M technology

## BUSINESS PAIN POINTS

- Shortage of specialist skills
- Equipment deployed worldwide – long distances to travel
- Time and cost pressures for MRO (37% of cost due to maintenance, plus 9% for unplanned repairs<sup>1</sup>)
- Need for high availability of systems and services
- Diverse proprietary OEM solutions create problems for equipment operators

## IT PAIN POINTS

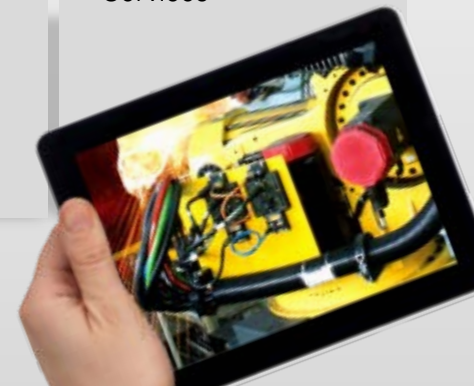
- Integration of diverse sensors for end-to-end visibility
- Rapid, reliable diagnosis of root cause in the event of an emergency
- Targeted on-site deployment of engineers based on accurate information
- Provision of right information to engineers in the field
- Secure data transmission

## ICT SOLUTIONS

- Real-time monitoring of plant and equipment, capture of reference values via sensors and M2M
- Mobile data capture and transmission via Mobile Workforce Management System
- Real-time access to distributed expertise and database information
- Application of augmented reality to plant and equipment

## PORTFOLIO

- Metering Services
- Cloud Services
- Defense Solutions
- Rail and Transport Management
- Telematic Health Services
- Security Services
- Systems Integration
- Mobile Workplace Services



# LONG DISTANCES AND THE NEED FOR LEAN MAINTENANCE REQUIRE THE EFFICIENT DEPLOYMENT OF LIMITED SPECIALISTS

## WEST EUROPEAN AUTO-MAKER



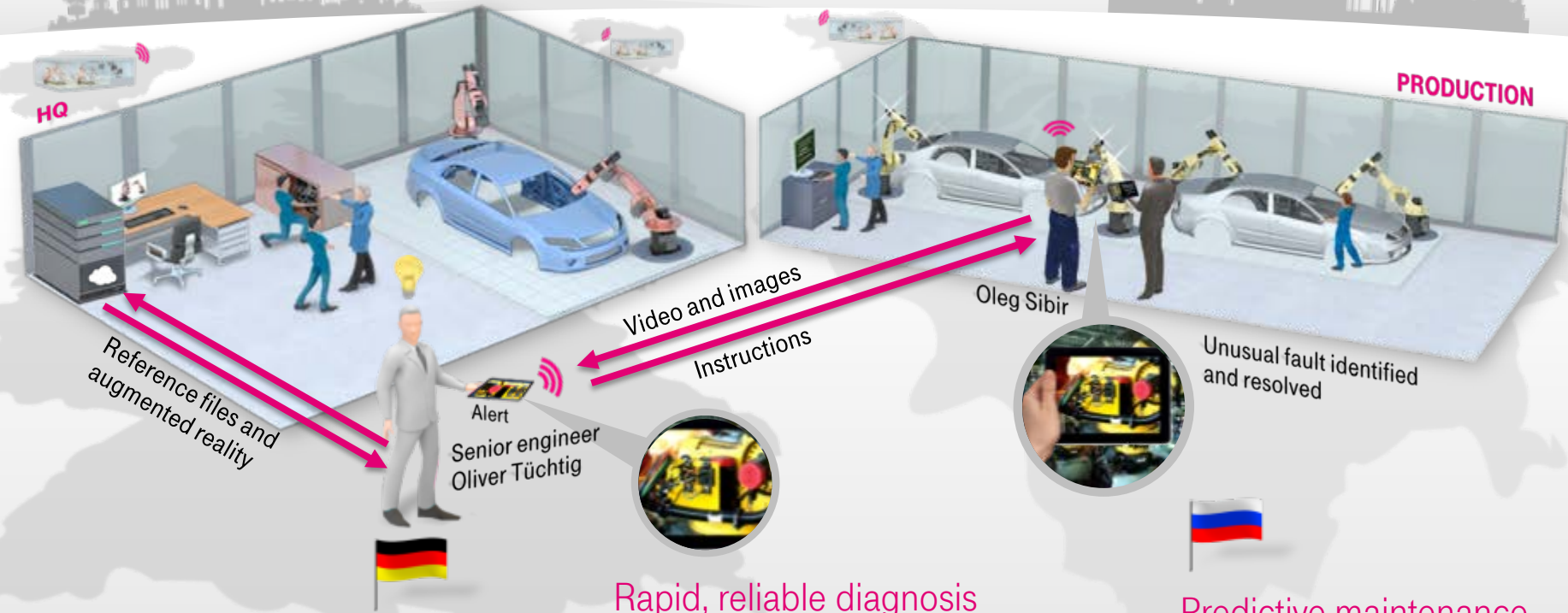
## THE CURRENT SITUATION FOR PLANT AND EQUIPMENT OPERATION

- The need for continuous production minimizes time windows for conventional inspection and maintenance
- In the event of a problem, the local staff needs immediate access to relevant information, expertise, decision support and documents
- Geographically dispersed equipment, such as combined heat and power (CHP) plants and wind turbines, is often operated locally by non-experts
- Remote specialists lack the information and tools to deliver support to on-site staff
- Increasing complexity of plant and equipment is creating obstacles to efficient operation, maintenance and repair
- Lack of visibility into entire MRO process

# TELEMAINTENANCE DELIVERS EXPERTISE ON THE SPOT

## PROFESSIONAL ASSISTANCE AVAILABLE ACROSS ANY DISTANCE

WEST EUROPEAN AUTO-MAKER



10-50% less machine downtime  
as a result of telemaintenance<sup>1)</sup>

### Maintenance skills

can be consolidated at one or just a few sites;  
and be available to units anywhere in the world

Rapid, reliable diagnosis  
of root cause in the event of an  
emergency

Predictive maintenance  
nips problems in the bud

## ZERO DISTANCE

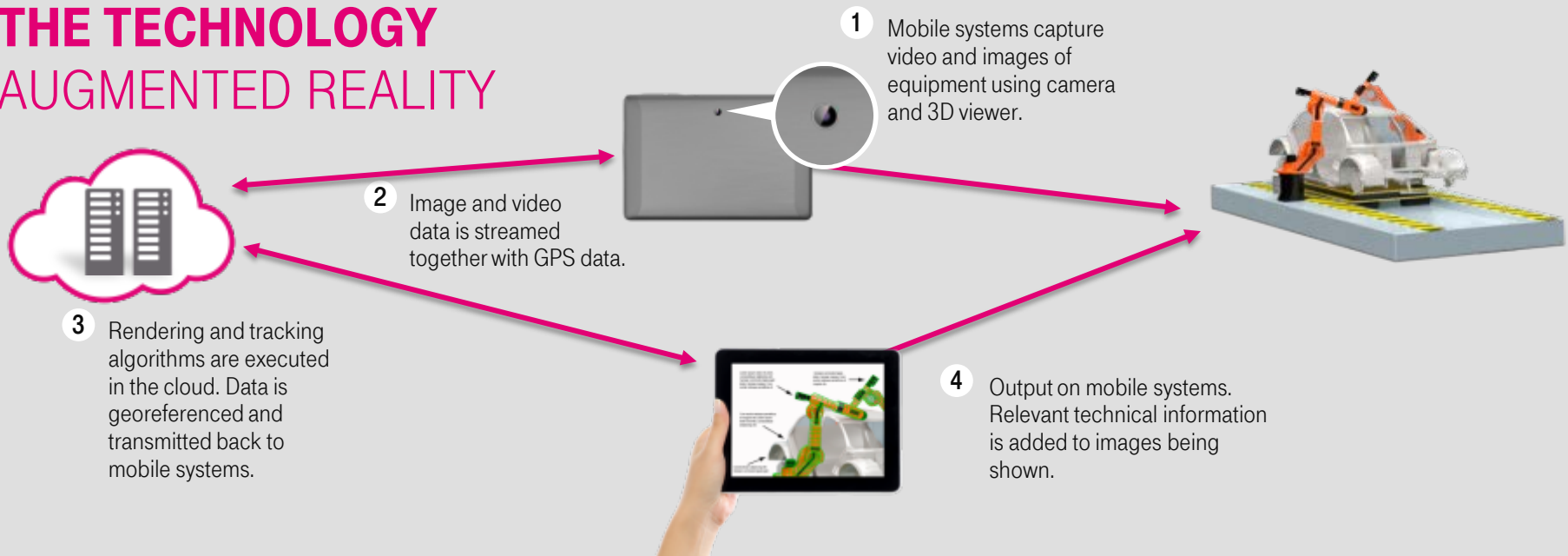
Information - Customers - Employees

Increased productivity  
thanks to 24/7 plant operation

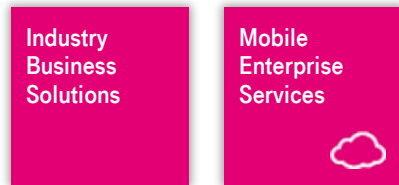
End-to-end documentation  
of maintenance and repair activities

Lower TCO  
for complex systems

# THE TECHNOLOGY AUGMENTED REALITY



# T-SYSTEMS PORTFOLIO



- Metering Services
- Grid Management Services
- Defense Solutions
- Rail and Transport Management
- Telematic Health Services
- Telco Operations Support Systems
- Mobile Workplace Services
- Security Services
- Systems Integration
- IP/VPN
- Sensor technology
- Cloud Solutions

