OPPORTUNITIES OF IOT FOR AUTOMOTIVE

VOLVO CARS

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IN THOSE DAYS...

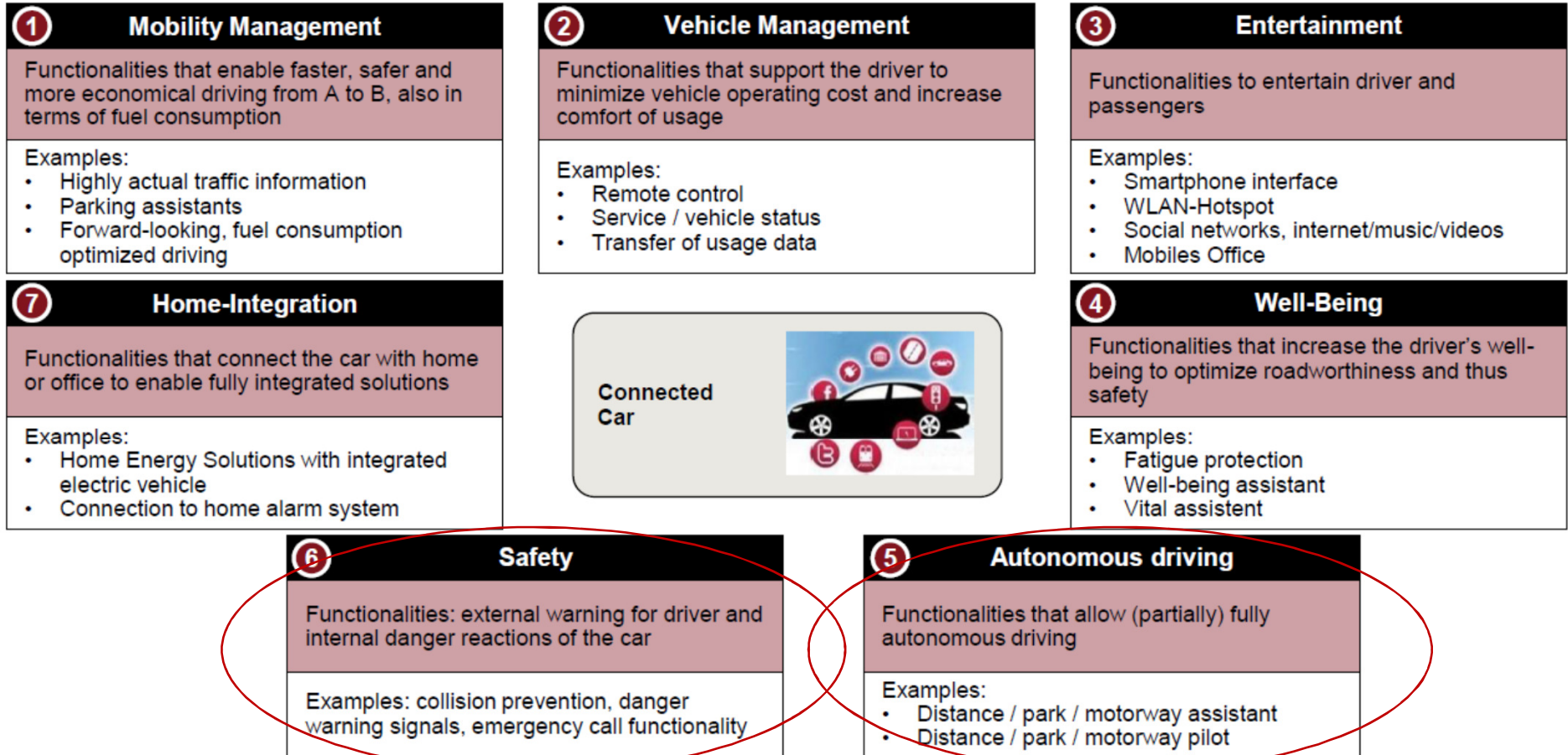# A LOT HAS HAPPEND...

…from 1927…

…until today

GLOBAL MEGATRENDS

- Continued urbanisation
- Growing number of megacities
- Air quality major health issue
- Traffic accidents huge global health problem
- Desire for constant connectivity
- Desire for individual mobility
- Transition to sustainable fuels/energy
- All things are connected (IoT)

Seven usage-based clusters of functionalities are defined in the area of Connected Cars

Customer-specific product packages

① Mobility Management

Functionalities that enable faster, safer and more economical driving from A to B, also in terms of fuel consumption

Examples:
- Highly actual traffic information
- Parking assistants
- Forward-looking, fuel consumption optimized driving

② Vehicle Management

Functionalities that support the driver to minimize vehicle operating cost and increase comfort of usage

Examples:
- Remote control
- Service / vehicle status
- Transfer of usage data

③ Entertainment

Functionalities to entertain driver and passengers

Examples:
- Smartphone interface
- WLAN-Hotspot
- Social networks, internet/music/videos
- Mobiles Office

⑦ Home-Integration

Functionalities that connect the car with home or office to enable fully integrated solutions

Examples:
- Home Energy Solutions with integrated electric vehicle
- Connection to home alarm system

Connected Car

④ Well-Being

Functionalities that increase the driver's well-being to optimize roadworthiness and thus safety

Examples:
- Fatigue protection
- Well-being assistant
- Vital assistent

⑥ Safety

Functionalities: external warning for driver and internal danger reactions of the car

Examples: collision prevention, danger warning signals, emergency call functionality

⑤ Autonomous driving

Functionalities that allow (partially) fully autonomous driving

Examples:
- Distance / park / motorway assistant
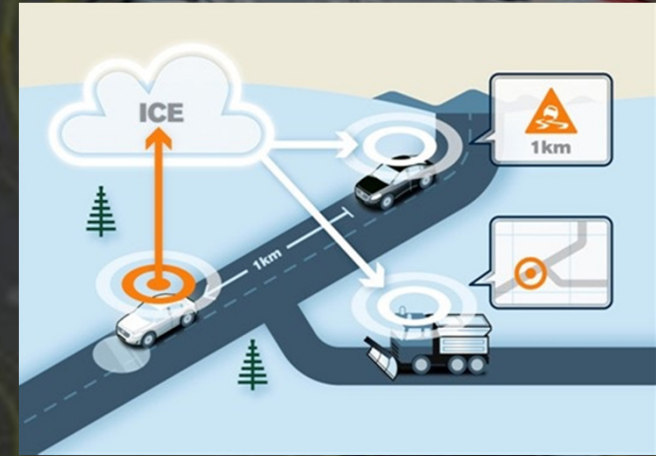- Distance / park / motorway pilot

# AUTONOUMOUS DRIVE

AUTONOMOUS DRIVE: ICE

What

- World-first concept in cloud-based road condition safety technology: *Sending RFI to connected street-lights*

- Physical set-up at booth: frozen padge under wheel triggers street-light

Messages

- Volvo is an innovation-leader and explores technology to improve peoples lives
  (societal focus at MWC vs. individual focus at CES) Volvo is a leader in safety and takes it to next level (*cloud-based safety*)

- Volvo uses smart partnerships to create new value
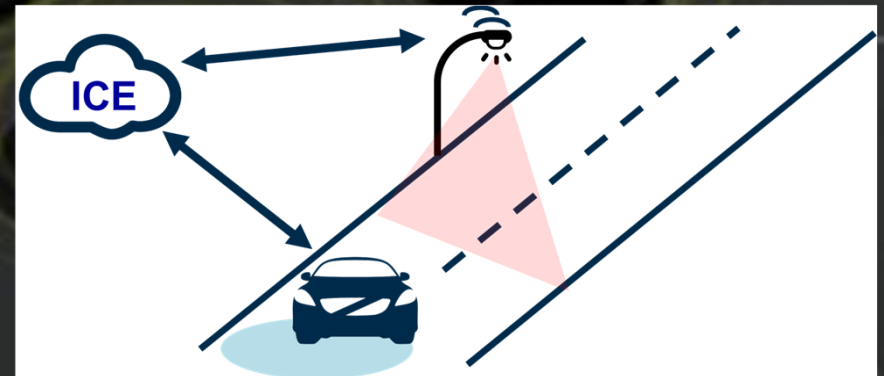
CONNECTED SAFETY

CONNECTING CYCLISTS AND CARS

CONCLUSIONS

- OEM's are adding additional levels of connectivity to their business, less focus on infotainment related connectivity and more focus on the networked society and automomous cars

- OEM's will require, on one hand big data to secure improved "in car services", and on the other hand, safe, reliable and quality assured networks to launch next gen services

- The importance of personal data and how OEM's manage privacy of the customers

- Focus on integration of services giving customer spare time to spend with family and friends rather that sitting in ques from work