



PNT for Mobility technologies, opportunities, challenges

March 5, 2025

PNT – the backbone for modern mobility solutions



1. Positioning - a universal coordination system

- Lane-accurate localization for ADAS
- cm-accurate localization for ADS
- Accurate billing of shared mobility solutions



2. Navigation – a universal mapping system

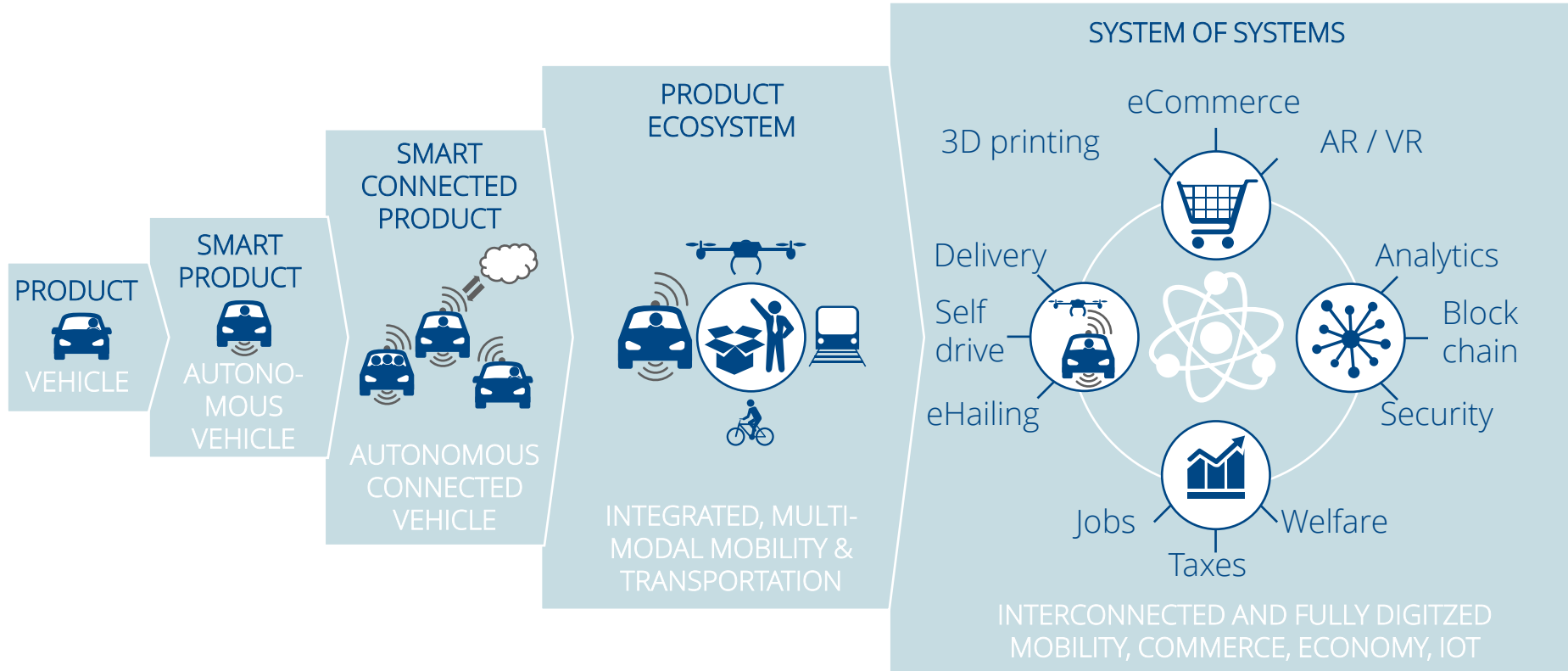
- Point-to-point routing for any kind of mobility
- Vehicle and goods tracking for logistics
- High-definition maps in ADAS / ADS



3. Timing – a universal time

- Time synchronization across all mobility modes
- Time stamp for messages in V2X communication
- Backup for internet-based time standards

What we are about to do here: a system of systems



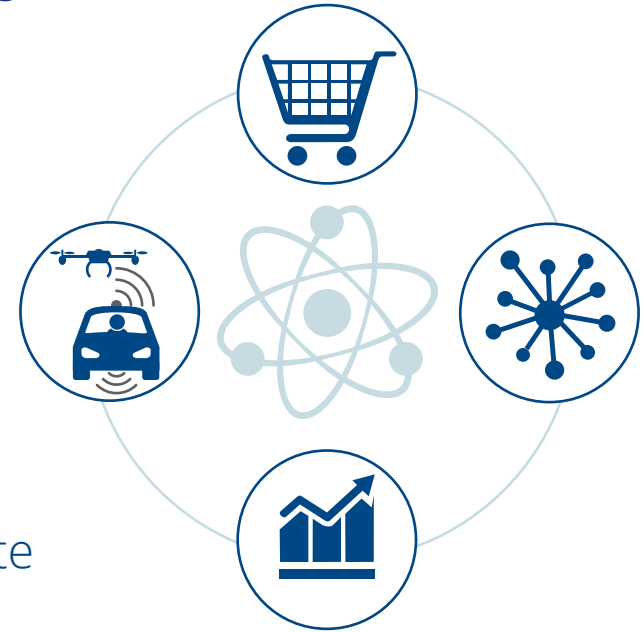
How do we get to this system of systems, what lies ahead?



A call to action

Strategy-making is to find answers to five interlinked questions:

1. What are our **broad aspirations** & the **concrete goals** against which we can measure our progress?
2. Across the potential field available to us, **where will we choose to play and not play?**
3. In our chosen place to play, how will we **choose to win against the competitors?**
4. What **capabilities are necessary** to build and maintain to win in our chosen manner?
5. What **management systems are necessary** to operate to build and maintain the key capabilities?



Let's get started!

Thank you!