

AIR QUALITY SOLUTIONS @BOSCH

Bosch Air Quality Solutions

Technology & Services to Improve Air Quality

- ▶ **Better Knowledge about Emission Sources**
- ▶ **Better Understanding Atmospheric Effects Chains**
- ▶ **Tailored Local Improvement Measures**
- ▶ **Validation by Maximum Transparency in Immission Monitoring**

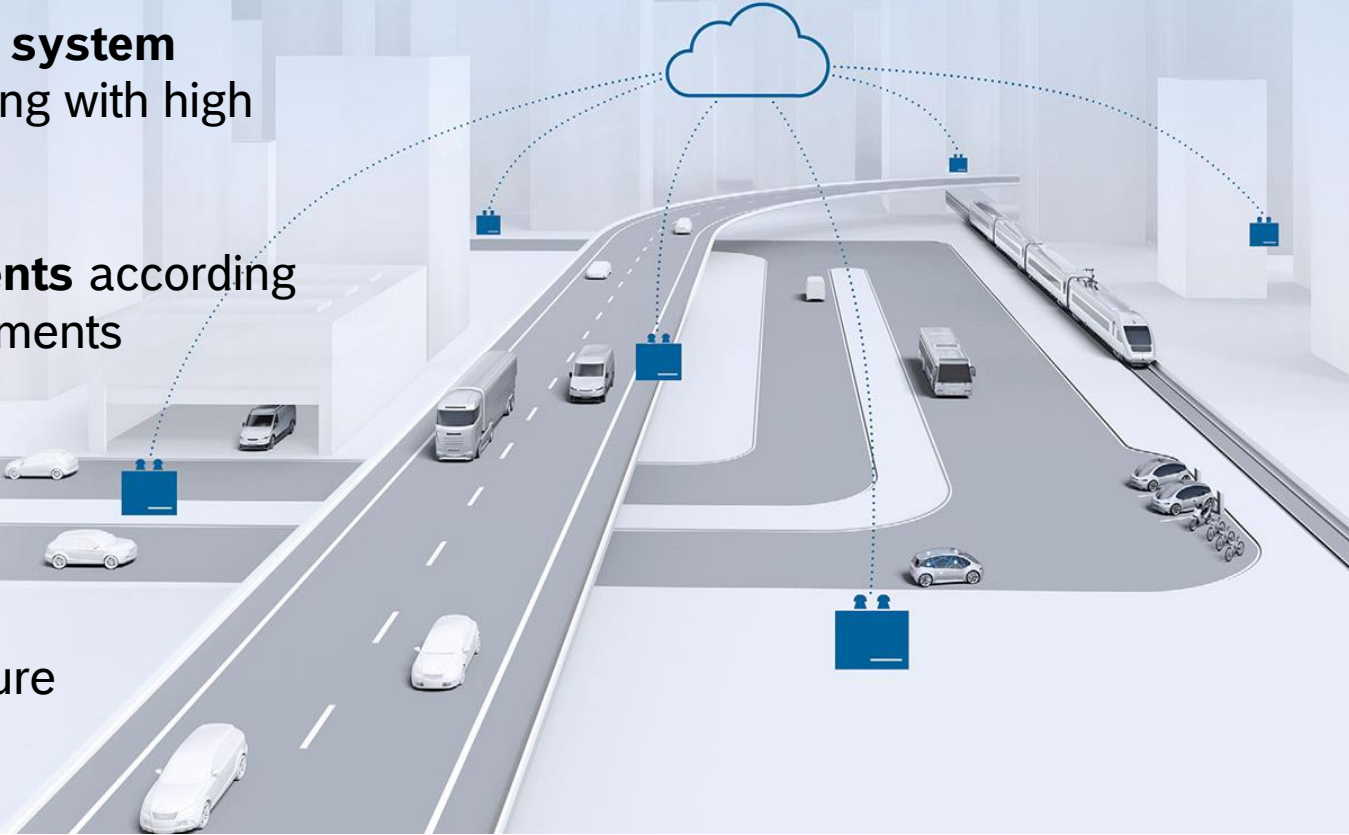


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Immission Monitoring System



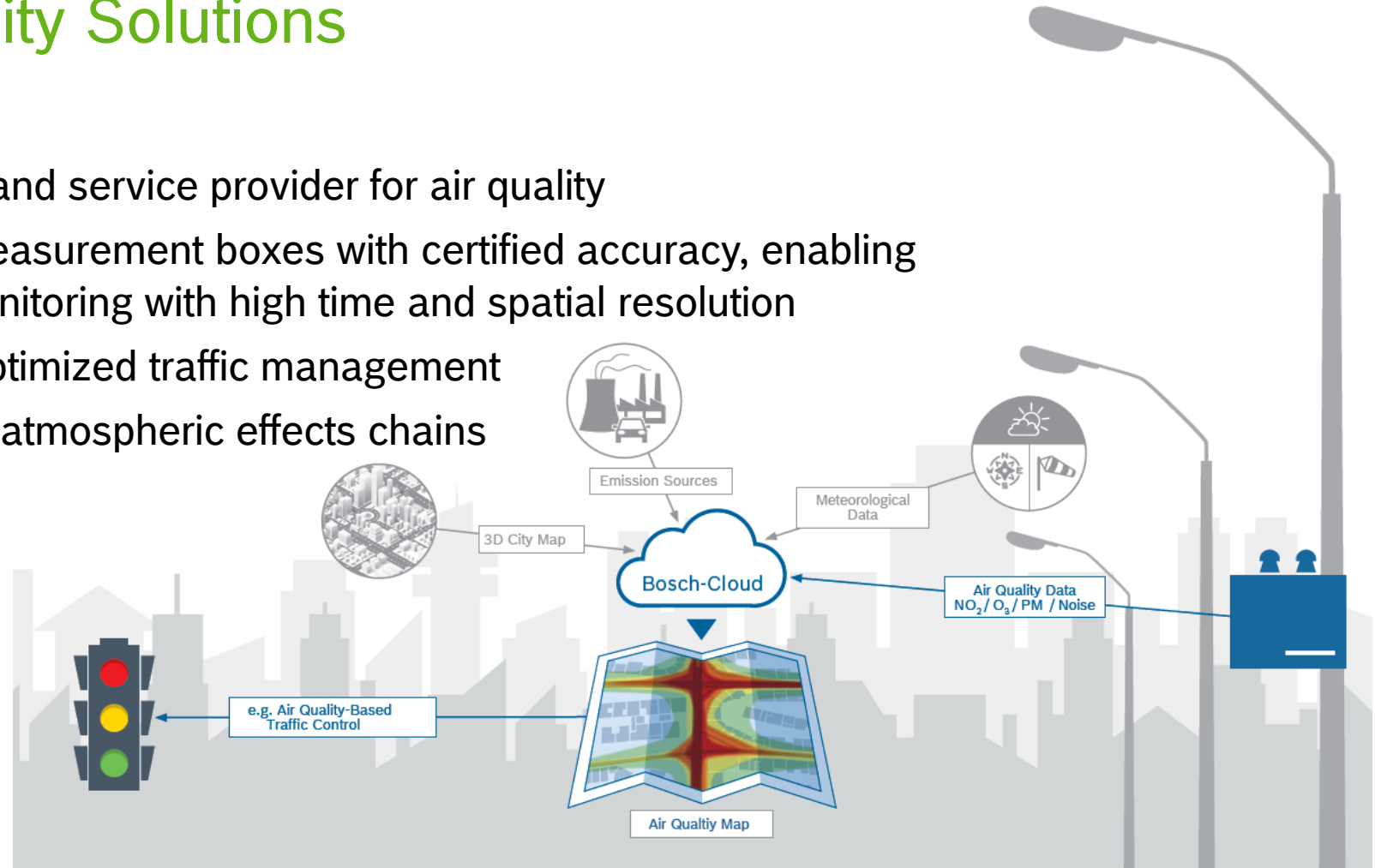
- **Middle-cost immission monitoring system** enabling accurate air quality monitoring with high time and spatial resolution.
- Designed for **indicative measurements** according to **EU guideline 2008/50/EG** requirements
- **Measurand:**
 - PM₁₀, PM_{2.5}, NO₂, O₃
 - pressure, rel. humidity, temperature
 - optional: CO, SO₂, Noise



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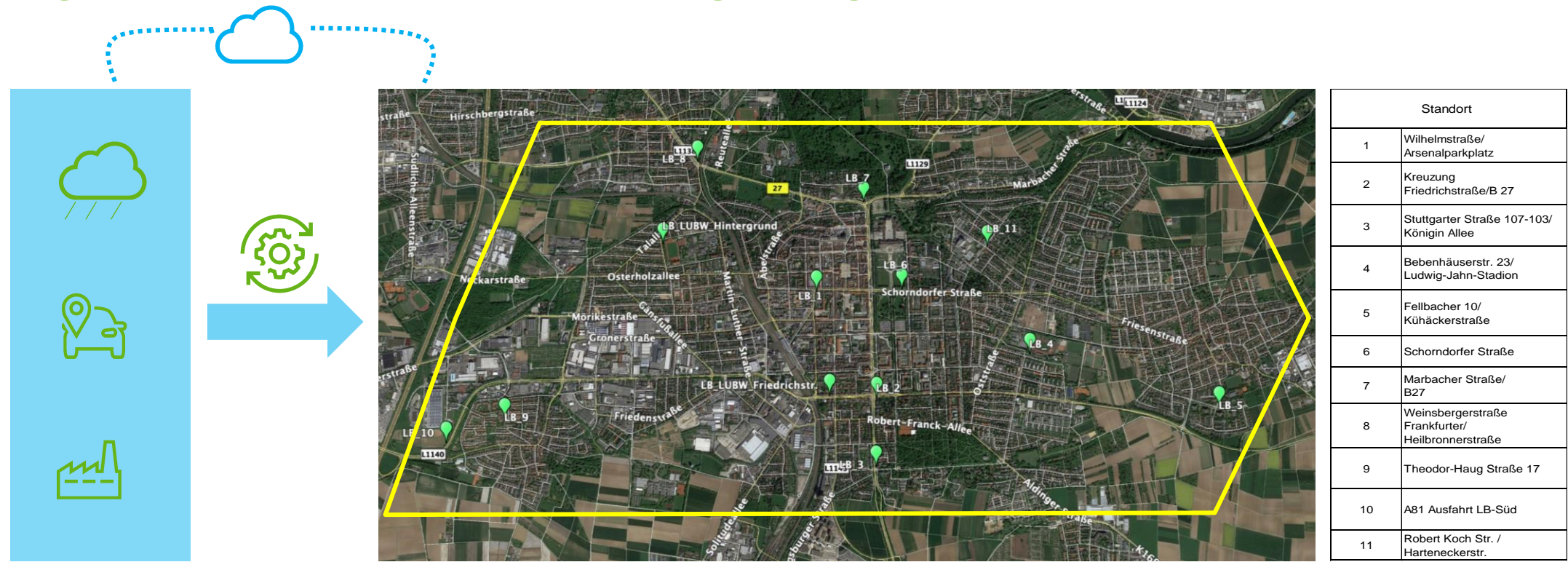
Vision for Air Quality Solutions

- RB - technology, data and service provider for air quality
- Low cost immission measurement boxes with certified accuracy, enabling accurate air quality monitoring with high time and spatial resolution
- Models for emission optimized traffic management
- High-level expertise in atmospheric effects chains



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Digital immission map- Ludwigsburg (1/2)



An estimation of IMB number is performed via simulation by using specific city data
(e.g: weather, traffic*, building structure)

* Resolution emission model: >300m road segments

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Possible Fields of Activity @PAQ

- ▶ Implementation of new measurands (e.g. SO₂, CO, PM1/Ultrafine, noise, etc.)
- ▶ Development of calibration concepts/field maintenance
- ▶ Development and Implementation of testing concepts
 - ▶ EoL-System-Tests
 - ▶ Single-component-test
- ▶ Enhancements of
 - ▶ robustness, accuracy and availability
 - ▶ Design parameters (e.g. power consumption, weight, etc.)
- ▶ AI topics:
 - ▶ Error detection
 - ▶ Plausibility checks
 - ▶ Self-learning functions
- ▶ Commissioning of measurement networks