Better Governance, Better Livelihood & Better Industry

New ICT, Creating a Smart City Nervous System
Huawei at a glance

- Employees: 180,000
- R&D employees: 80,000
- Countries: 170+
- Research Centers: 15
- In the Interbrand's Best Global Brands Report: 72nd
- In Fortune Global 500: 83rd

US$60 billion+ invested in R&D from 2007 to 2016

Sales Revenue

- 2012: 35.4
- 2013: 39.3
- 2014: 46.7
- 2015: 75.1
- 2016: 92.5
- 2017: 110.9

Countries in Fortune Global 500

- US$ billion
10 Billion USD Revenue in Europe
9,900+ Employees, 850+ of them in R&D
41 legal entities for proximity to customers
14 R&D branch offices in Europe
2 Regional headquarters: Warsaw & Dusseldorf
2 Regional Technical Assistance Centers (24x7)
46 Country-level Spare-Parts Centers

10 Training Centers
6 Centers of Expertise (COE) in 5 Cities:
5 Local Network Operation Centers
2 Logistic Centers
2 Outsourcing Factories
## Huawei Business Overview

**Consumers** — A beloved brand

**Enterprise customers** — An enabler of digital transformation

**Carriers** — A preferred strategic partner

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**Bring digital to every person, family, and organization for a fully connected, intelligent world.**

Huawei has won wide recognition across vertical industries.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart City</td>
<td>120+</td>
</tr>
<tr>
<td>Finance</td>
<td>300+</td>
</tr>
<tr>
<td>Electric power</td>
<td>170+</td>
</tr>
<tr>
<td>Oil &amp; gas</td>
<td>260+</td>
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<tr>
<td>Manufacturing</td>
<td>1000+</td>
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<tr>
<td>Education</td>
<td>600+</td>
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<tr>
<td>ISP</td>
<td>400+</td>
</tr>
<tr>
<td>Roadway &amp; railway</td>
<td>220,000+ km</td>
</tr>
</tbody>
</table>
Global Standard to Smart City 3.0

1.0 “e-Government”
   “Handle related Business on web”

2.0 “Mobile Internet”
   “Mobile Phone APPs For related affairs and Social Activities”

3.0 “IoT”
   “Core foundation Smart City to truly integrate technology and Urban governance”
We are entering an Intelligent World

All Things Sensing
Sensing the physical world, mapping it to digital signals

All Things Connected
Data goes online to power machine intelligence

All Things Intelligent
Big data and AI power new applications

ICT infrastructure will be the foundation of the intelligent world
Way to Intelligent World: City Nervous Systems
Open Ecosystem Strategy

- Joint innovation shapes the industry with new products, solutions, and business models
- Strategy alignment, shared investment, shared success with customers

Areas for innovation:
- 5G
- IoT
- Cloud

Strategy Alignment
- Exploration
- Engineering
- Development
- Verification

Innovation in Products & Solutions
Innovation in Business Models
Innovation of Industries
Huawei Actively Contributes to Global Smart City Construction and Sets Footprint in 120+ Cities in 40+ Countries.
Huawei Has Helped Seven Cities Win International Smart City Awards in Recent Two Years.

Smart City Expo World Congress 2016 and 2017

Yanbu, Shenzhen, Weifang, Dunhuang, Cameroon, First Affiliated Hospital of Zhengzhou University, and Kenya
Smart City: Transforming Yanbu (Saudi Arabia) into a City of Smart Industry

Solutions: Cloud data center, IoT, big data platform

Features
- City infrastructure: Broadband, cloud computing
- Municipal applications: Public safety, smart public services, environmental protection
- City management platforms

Strengths
- Capacity to deliver whole-system architecture: 4-step service development plan
- Huawei + partners: ICT infrastructure + application ecosystem

Customer Value
- Business investment: 16% ↑
- Road maintenance costs: 20% ↓
- Municipal lighting costs: 30% ↓
Key Success Factors for Smart City Construction

- **Top-leadership projects**: Breaking data silos and restructuring processes
- **Strong execution teams**: High-level planning, coordinated construction, and iterative evolution
- **Industry-leading digital partners**: Technology, platform, ecosystem, and experience
- **Solid investments**: Sufficient investments with reasonable ROI
# Suggested High Level Design for Duisburg Smart City

## Apps
- **Mobilität**
- **Wohnen**
- **Breitband**
- **Verwaltung**
- **Infrastruktur**
- **Wirtschaft**

## Platform
- City Management Platform
  - Big Data service support platform
  - ICT application enablement platform

## Network
- City communications network
  - City IoT

## Cloud
- Rhine Cloud Data Center

## Partners
- Joint Innovation Center
  - Universität Duisburg Essen
  - HUAWEI
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THANK YOU