How cities are getting smarter

Yael Shatzky, Head of Product & Solutions Marketing
Amdocs Optima & Intelligent Operations
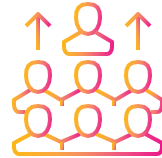
August 2018

amdocs
OPTIMA

"Managing urban areas has become one of the most important development challenges of the 21st century."

John Wilmoth
Director of UN DESA's
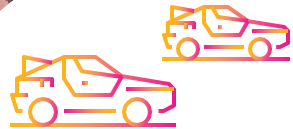*Population Division, 2014*

City challenges

Growing & aging population

Increase in number of trips

Growing work force

Quality of air impacts health

Huge market & costs

amdocs OPTIMA

1

Urban populations growing massively

50% growth in 50 years '00 -'50

68% of world population by '50

90% of growth comes from ASIA

41 cities >10m. ppl by '30

Delhi, Mumbai, Bangalore

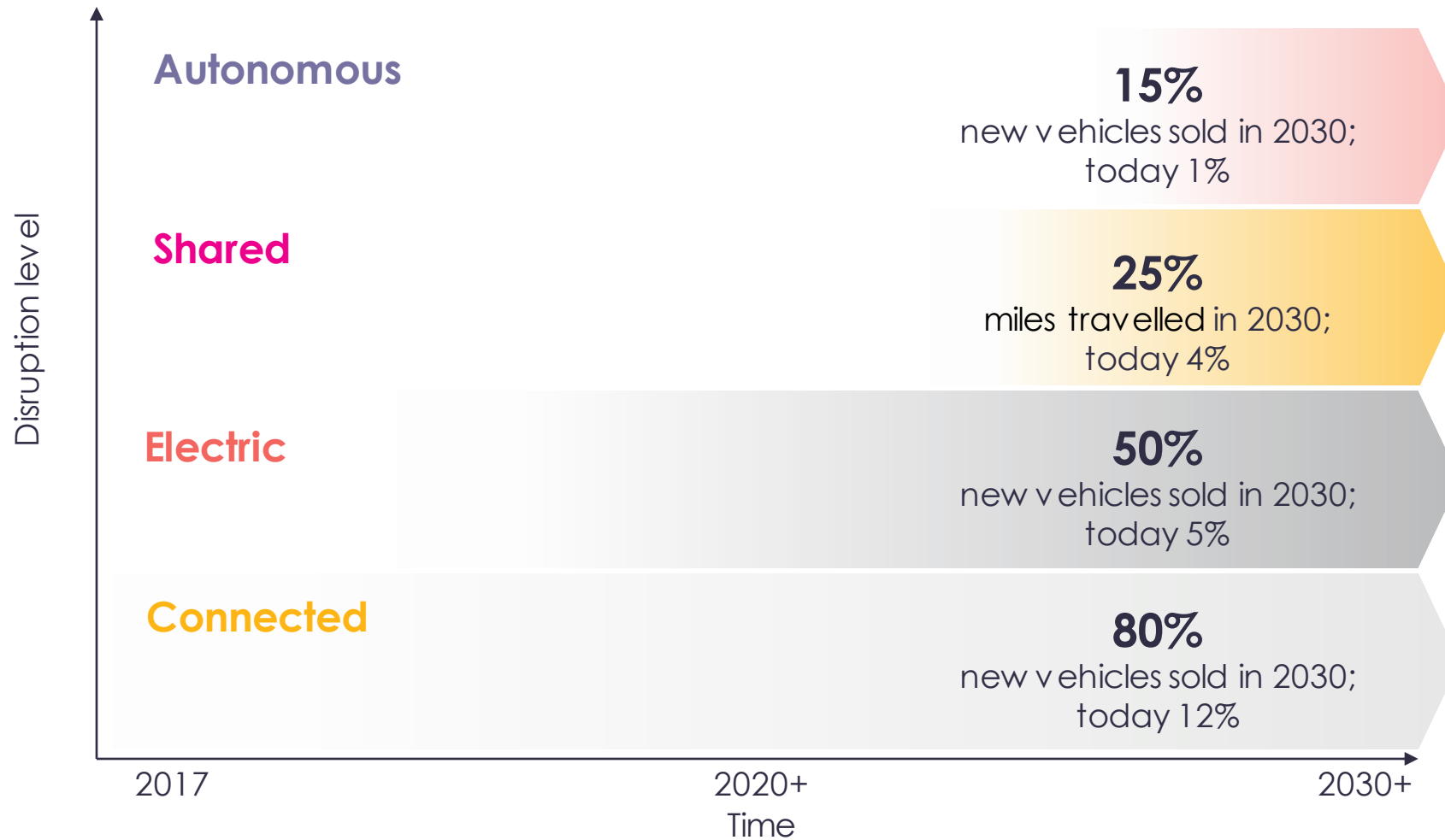**500** cities now with >1m. ppl

38 are in India

amdocs OPTIMA

2

Mobility is a progressive, civil "right" that **can't scale**

73% commute > 90 mins/day

amdocs OPTIMA

Four disrupting innovations

Disruption level (y-axis)

Autonomous
15%
new vehicles sold in 2030;
today 1%

Shared
25%
miles travelled in 2030;
today 4%

Electric
50%
new vehicles sold in 2030;
today 5%

Connected
80%
new vehicles sold in 2030;
today 12%

2017 2020+ 2030+
Time

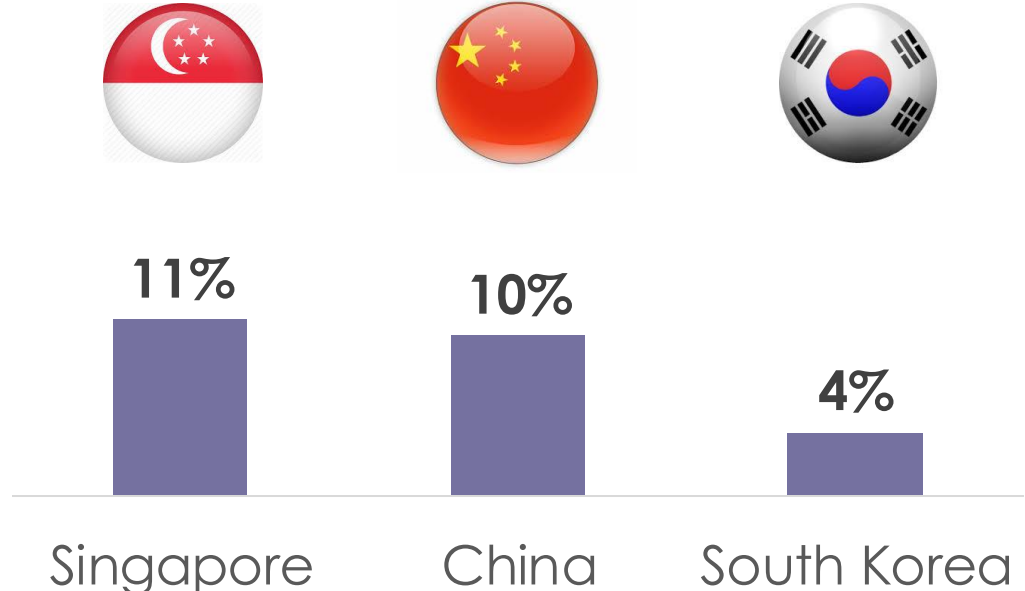Source: McKinsey, BCG, Tech Crunch, Strategy&, public sources, team analysis

amdocs
OPTIMA

Accelerating adoption of "Mobility-as-a-Service"

Share of on-road passenger miles, Mobility-as-a-Service (2017-2030)

- 4% — 2017
- 12% — 2025
- 25% — 2030
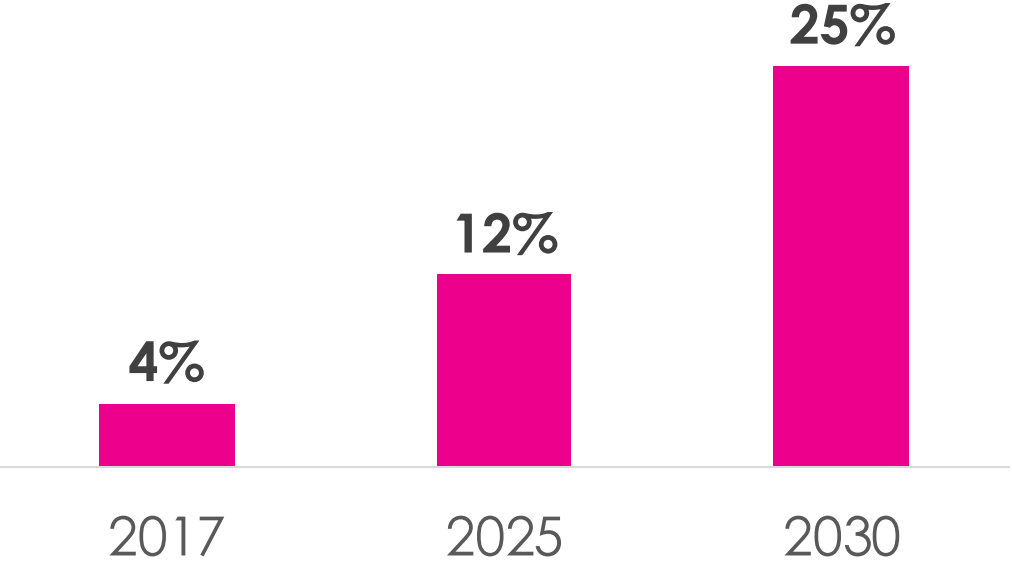
Leading countries in Mobility-aaS adoption (by % of vehicles on car parc, 2015)

- 11% — Singapore
- 10% — China
- 4% — South Korea

Source: **McKinsey, Morgan Stanley, Roland Berger BCG**, Tech Crunch, Strategy&, public sources, team analysis

amdocs OPTIMA

3

Multiple participants in **multiple modes of** transport, competing for **limited free resources**

people

goods

amdocs OPTIMA

4

$285B

Transport
tech mkt (2025),
most - in urban
mobility

€300B EU transport subsidies

5

Quality of air impacts health

7 million deaths a year due to pollution

amdocs OPTIMA

What can cities do?

amdocs
OPTIMA

Technology: meet/beat future
leveraging digital across key urban domains

Municipal operation

- Intelligent **street lighting**
- **Smart water** distribution
- **Waste collection** logistics
- Smart electric grid

Mobility

- **Public transport** optimization
- **Traffic** awareness & optimization
- **Parking** availability & charging
- Bike\car hourly **rental**

Citizens digital services

- **Online services**
- Tourists information **kiosks**
- Citizens' **special offers**

Safety and Security

- **CCTV** monitoring & analytics
- **Emergency response**

Connectivity

- City-wide **Wi-Fi** connectivity
- **LPWA** networks for IoT devices

Environment

- **Air quality** monitoring
- **Water quality** monitoring

amdocs optima

a digital customer management & commerce platform, to rapidly & securely monetize any product or service.

| Innovative communications challengers **1** | MVNx **2** | Beyond telco **3** | Smaller cable/ PayTV **4** |

amdocs OPTIMA

Yael Shatzky
Head of Product & Solutions Marketing
Amdocs Optima & Intelligent Operations
Yael.Shatzky@Amdocs.com
@Yael Shatzky

Thank you