



**OCA e.V.**

Open Traffic Systems City Association

**The experiences, benefits and challenges  
of adopting OCIT/OTS2**

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# City of Frankfurt a. M.

## Figures and Numbers (1)

- Number of inhabitants: 700,000
- Inhabitants per km<sup>2</sup>: 2,820
- Passenger cars per 1000 inhabitants: 550
- Number of vehicles commuting into the city per day: 200,000
- Road network (in km): 1,400
- Public transport travellers per year: 219 m
  - Underground: 116 m
  - Tram: 50 m
  - Bus: 53 m
- Air passengers (incl. transit): 53 m



# City of Frankfurt a. M.

## Figures and Numbers (2)

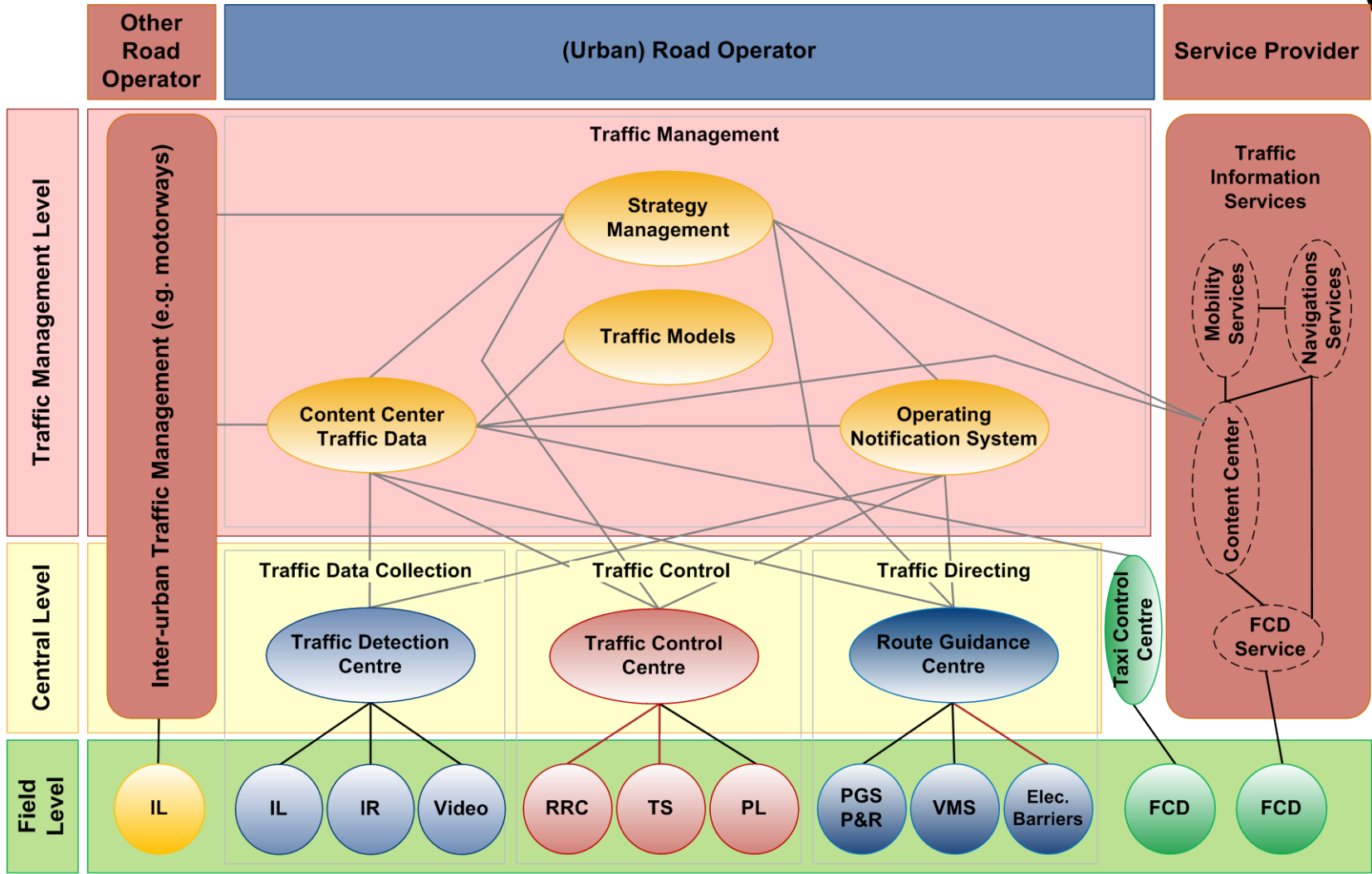
- Total Number of Traffic Lights: 861
  - Connected to Central Traffic Computer: 562
  - Connected with open standard (OCIT) 180
  - Local Operation: 299
  
- Signal Controllers with Public Transport (PT): 573
  - With PT Priority: 370
  
- Traffic Adaptive Signal Controllers: 497



# City of Frankfurt a. M.

## Motivation

- Avoid vendor-lock-in
  - More competition in the procurement and operation of intelligent transport systems (ITS)
  - Cost savings
- Improve efficiency through open interfaces and technologies
- Simplify tendering procedures
- Enable the direct and standardised exchange of information with other road operators and service providers



OCIT®-Instations/OTS	—	IL	Induction Loop	TS	Traffic Signal	P&R	Park&Ride
OCIT®-Outstations	—	IR	Infra-red	PL	Permanent Light	VMS	Variable Message Sign
No Standard	—	RRC	Rail Road Crossing	PGS	Parking Guidance System	FCD	Floating Car Data



# City of Frankfurt a. M.

## Benefits

- Substantial savings in procurement and infrastructure operation, especially significant cost reduction of procurement for signal controllers
- Long term protection of infrastructure investment
- More innovation in traffic engineering und traffic management technologies
- More self-control in system handling and their workflows



# City of Frankfurt a. M.

## Challenges or difficulties during implementation

- More responsibilities for system architecture
- Training and guidance of staff
- Status quo of proprietary interfaces and OCIT
- Approval of new components / interoperability



# City of Frankfurt a. M.

## Current challenges: Implementation OTS 2

- Research project sim<sup>TD</sup>  
„Safe and Intelligent Mobility – Test Field Germany“
  - Research and field operational tests of Car to X communication
  - Development of a OTS 2 connection between Integrated Overall Traffic Control Center (IGLZ) and sim<sup>TD</sup> ITS Central Station (ICS)
- Connection to the „Mobility Data Market Place (MDM)“
  - Connects data suppliers (public and private owners of dynamic traffic data and data clients (mobility service providers, broadcasters, authorities and logistics companies)
  - Frankfurt's role: data supplier
  - Development of a OTS 2 connection between IGLZ and MDM
  - More Information: [www.mdm-portal.de](http://www.mdm-portal.de)





**Thank you for your attention!**

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