




Integrated Traffic Management


A direct application from Brisa Innovation Model

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Brisa Innovation



OUTLINE

1. Overview
2. Technology-based integration
3. Operations-based integration
4. Service-oriented integration
5. Conclusions



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Overview

Integrated Traffic Management

1. Leading process to optimize methods and technologies across transport systems solutions.
2. Drives for an efficient use of ITS resources: technology, information and services.
3. Integration cases
 - i. Technology
 - ii. Operations
 - iii. Services


Service-oriented Integration

Hierarchy concept of value-added services

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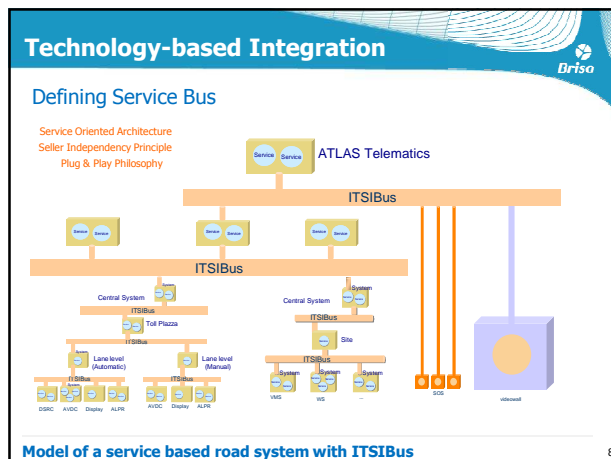
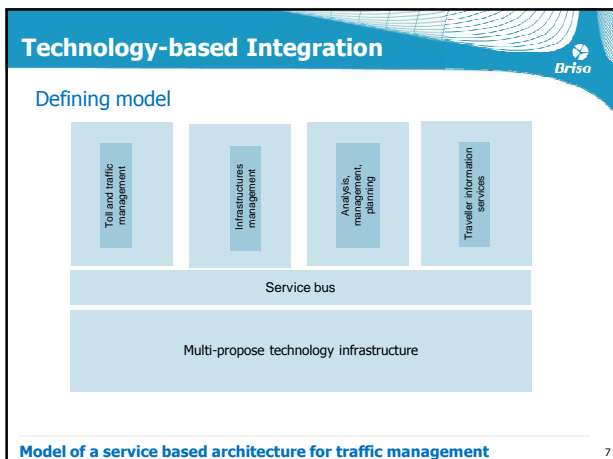
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      TO --> TOLM[Tolling management]
      TM --> M[Monitoring]
      TM --> IM[Incident Management]
      TM --> TC[Traffic Control]
      TM --> TI[Traveller Information]
      TOLM --> TCOLL[Toll Collection]
      TOLM --> EN[Enforcement]
    
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Service and business-oriented traffic management overview



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Technology-based Integration

Defining Services and Applications

Operator's workspace

Integration platform

Systems and services

Operational tools

Integration platform for collaborative services and applications

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Operations-based Integration

Surveillance, detection and control	100 assist vehic	600 CCTV	40 meteo	Sensors	Tunnels & bridges
Toll collection & enforcement	102 Toll plazas	Multi-lane free flow	Self-service	ALPR	Vehic Class
Customer support	100 assist vehic	200 VMS	1200 SOS	Hotline	Shops
Traveller information	200 VMS	Hotline	BrisaFM	Traffic on-line	

Technologies and services portpholio

Operations-based Integration

YESTERDAY!

The Business Center

Operations-based Integration

Center for Operations' Coordination

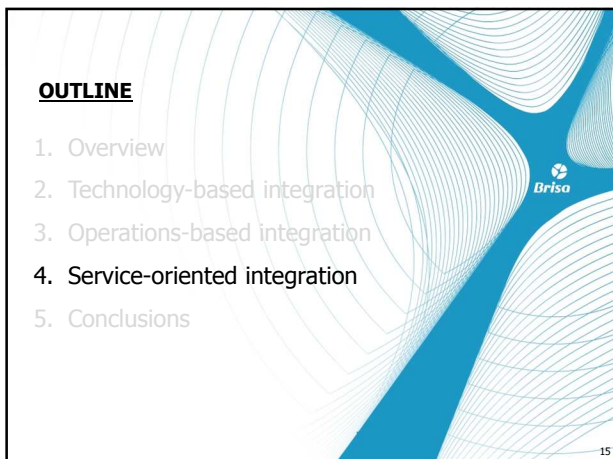
- > 7x24h operation
- > Remote tolling operation and support
- > Customer care (Assistance fleet/Hotline/SOS)
- > Remote surveillance and response plans for incidents (accidents, mechanical assistance, aid and protection, infrastructure maintenance)
- > Coordination with external bodies (traffic police, authorities, medical services, concessionaires)
- > Traveller information (hotline, radio broadcasters, Internet, VMS)

State-of-the-art Traffic Control Center




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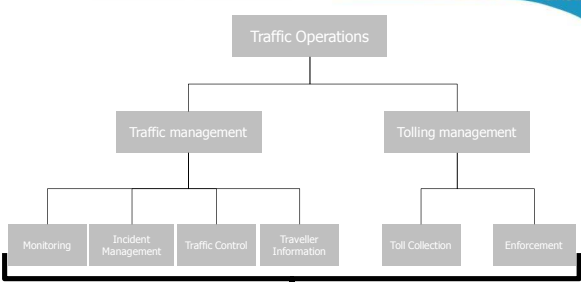
Service-oriented Integration

Aims and Goals

1. Integration based on value-added services.
2. Regarding efficiency, mobility, safety, comfort and environmental protection.
3. Infrastructures, technologies and applications are changing pieces.



Service-oriented Integration

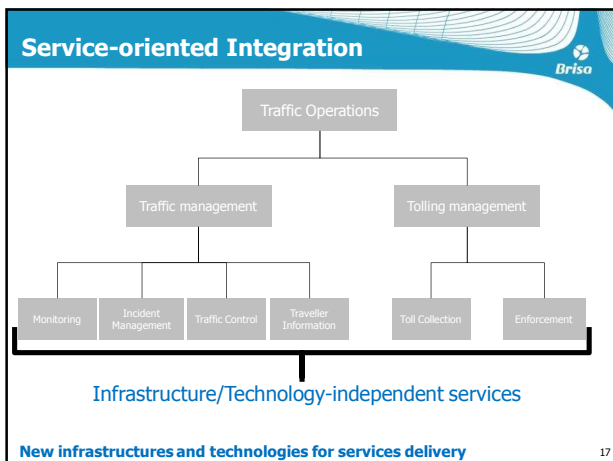


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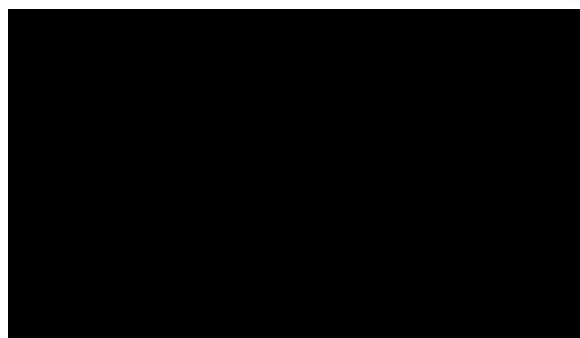
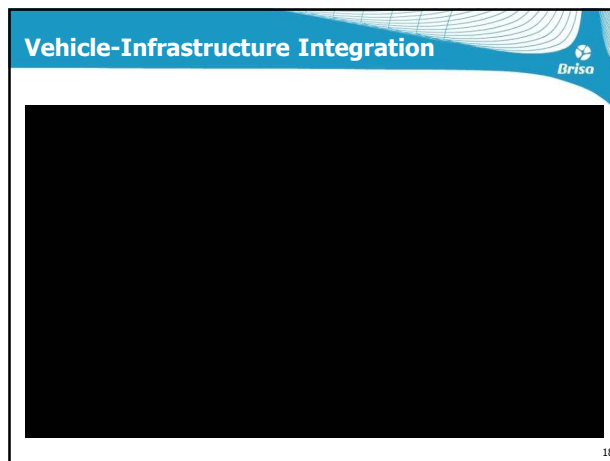
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Infrastructure/Technology-independent services

New infrastructures and technologies for services delivery




Vehicle-Infrastructure Integration

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Conclusions

- ❑ Integration traffic management leads to optimize processes, methods and technologies across transport systems solutions.
- ❑ Integration based on open technology, operations and services drove to an unprecedented economic throughput while improving traffic services efficiency, mobility, safety, comfort and environmental protection.
- ❑ Road infrastructures, technologies and applications are changing pieces in this world.



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Integrated Traffic Management

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