



Anticipated Traffic Management

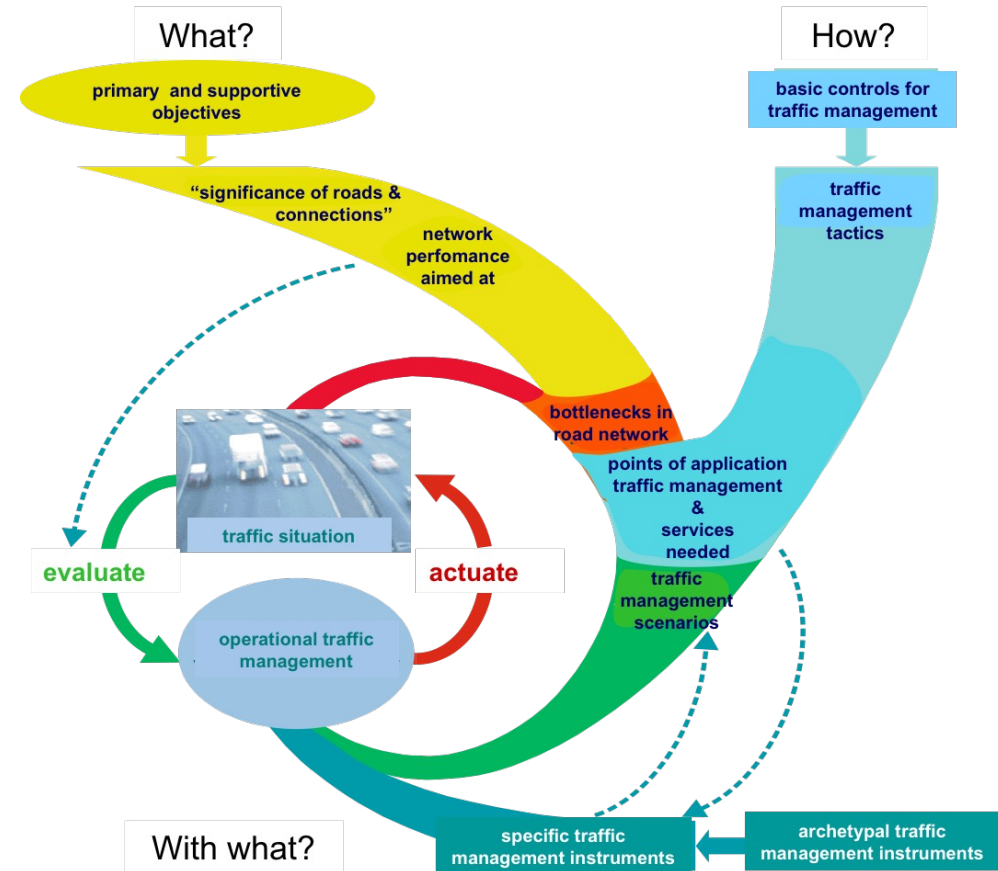
Usage of data



We are Vialis

www.vialis.nl

Traffic Management



Challenges

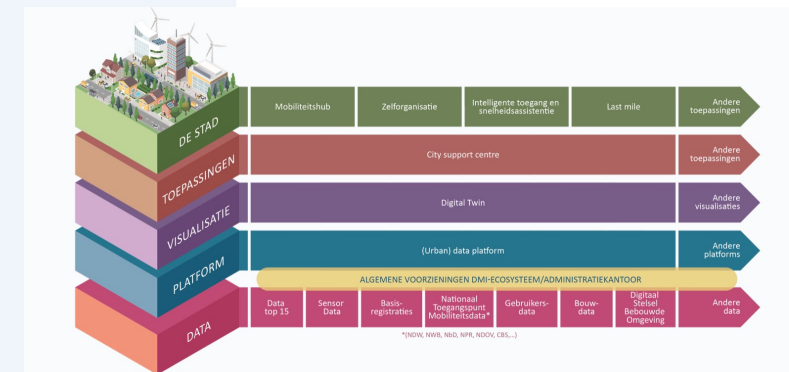
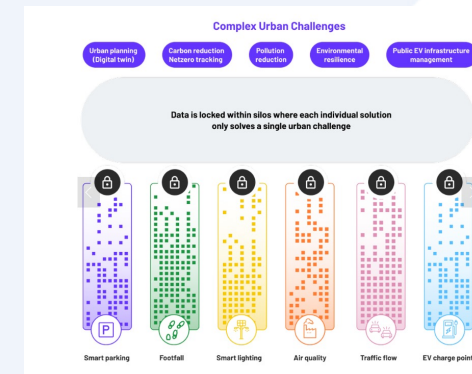
Strong focus on Urbanisation:

- Leads to scarce mobility space, we need to shift our thinking, how to manage the scarce space we have

Strong focus on Energy Transition:

- Leads to a higher demand on Electricity for EV transition
- Leads to a higher availability of renewables which the network can't accomodate

If we keep thinking in silos we will not break the status-quo we are in

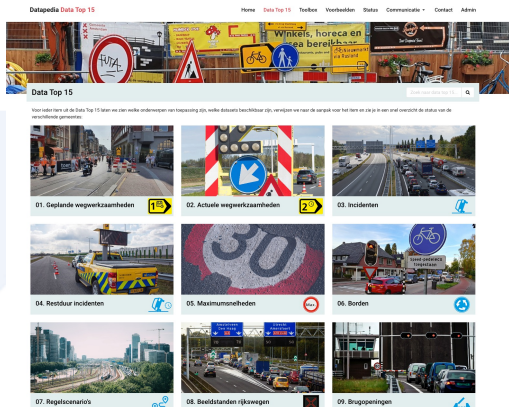


What do we already know

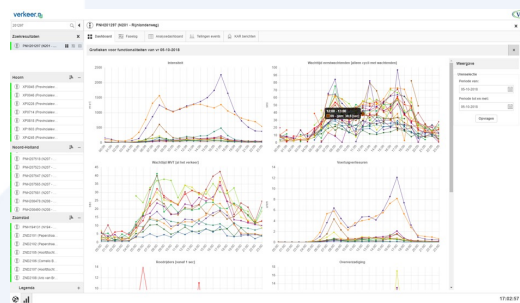
🏠 Developing a Multimodal Framework for Traffic Mangement

🏠 Understanding the availibility of data

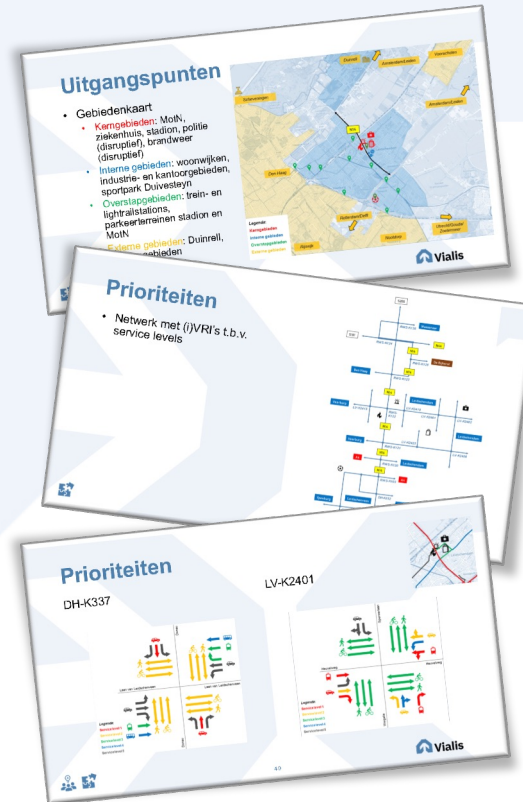
🏠 The data top 15



🏠 Actual live data

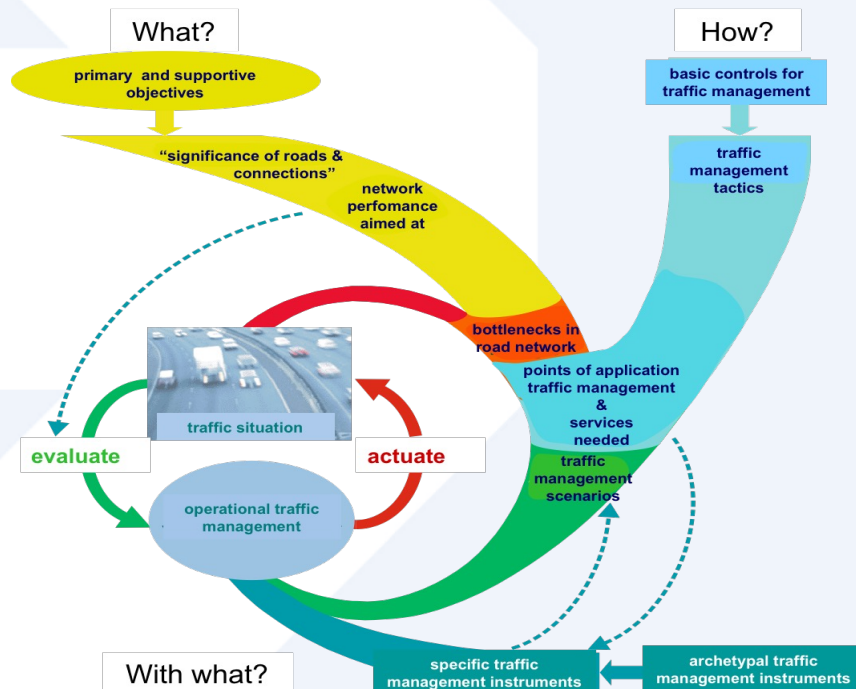


🏠 European Data



Artificial Intelligence

Can we leave the control to machines, given the abundance of data

 ChatGPT

Certainly! Below is a simplified Python code for traffic management based on traffic intensity and weather conditions. This code provides a basic framework for adjusting traffic signal timings based on real-time data. Please note that this is a conceptual example and would require integration with actual traffic monitoring systems and weather APIs for real-world application.

```
python

import time

class TrafficManagementSystem:
    def __init__(self):
        self.traffic_intensity
        self.weather_conditions
        self.green_light_duration

    def update_traffic_intensity(self):
        self.traffic_intensity

    def update_weather_conditions(self):
        self.weather_conditions

    def adjust_traffic_signals(self):
        if self.traffic_intensity:
            self.green_light_duration
        elif self.traffic_intensity:
            self.green_light_duration

    if "Rain" in self.weather_conditions:
        self.green_light_duration

    # Ensure green light duration
    self.green_light_duration

    print(f"Adjusted green

    def simulate_traffic(self):
        while True:
            # Simulate updating
            # In a real-world
```

 ChatGPT

Sure, here's a simplified example of an AI-driven application for advanced traffic management for Electric Vehicles (EVs) based on the availability of charging infrastructure and traffic performance:

```
python  Copy code
```

```
import requests
import json
import time

class EVTrafficManagement:
    def __init__(self):
        self.base_url = "https://api.example.com"
        self.api_key = "YOUR_API_KEY"
        self.update_interval = 300 # Update interval in seconds (5 minutes)
        self.traffic_data = {}
        self.charging_stations = {}

    def fetch_traffic_data(self):
        try:
            url = f"{self.base_url}/traffic"
            headers = {"Authorization": f"Bearer {self.api_key}"}
            response = requests.get(url, headers=headers)
            if response.status_code == 200:
                self.traffic_data = json.loads(response.text)
                print("Traffic data updated successfully.")
            else:
                print("Failed to fetch traffic data:", response.text)
        except Exception as e:
            print("Error fetching traffic data:", e)

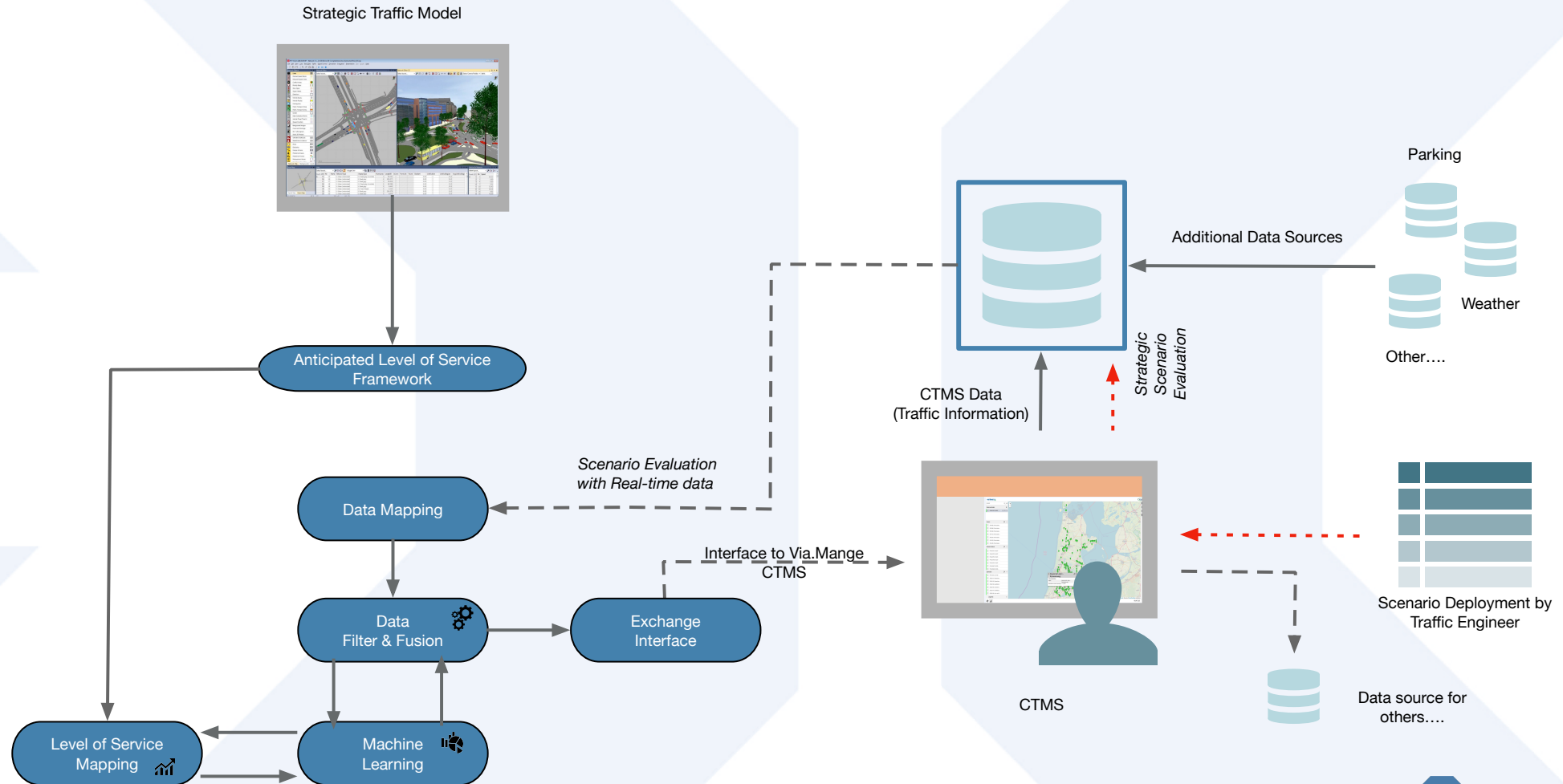
    def fetch_charging_stations(self):
        try:
            url = f"{self.base_url}/charging_stations"
            headers = {"Authorization": f"Bearer {self.api_key}"}
            response = requests.get(url, headers=headers)
            if response.status_code == 200:
                self.charging_stations = json.loads(response.text)
```


Nothing new....

- 🏠 We use models already
- 🏠 Information and using other data sources is needed
- 🏠 Smart algorithms are needed to do a bit more predictive, a bit more adaptive



Working towards Adaptive Traffic Management

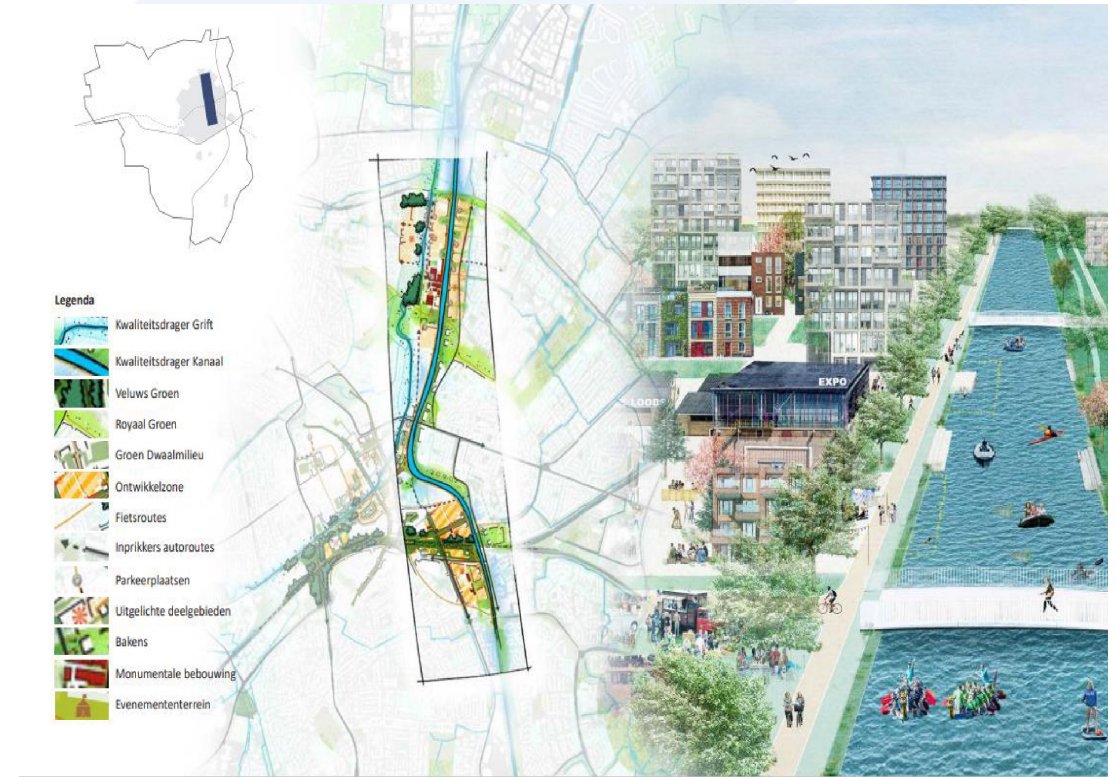


Yes we can, and maybe must....

- 🏠 create liveable cities
- 🏠 guide our mobility system
- 🏠 contribute to the climate goals
- 🏠 manage our scarce public space

🏠 *adapt our traffic management based on the vaste amount of data that is available to us, the challenge remains however, who will take the first step the AI specialist, the traffic engineer or*

.....



Your partner

We are your partner for the development of your smart city strategy by understanding the mobility challenges and creating solutions that fit within the existing eco-system.

We are more than happy to engage in discussions to see how we can be of service to you, scan the QR and contact me.

