



Innovative technologies to optimise and decarbonise tomorrow's mobility





# A paradigm shift | A crucial step for decision makers



30%

CO<sub>2</sub> EMISSIONS



3 % GDP

YEARLY LOSSES\*



## DECISION-MAKERS

Need to make well-informed  
fact-based decisions.



8bn€

INVESTMENT





# A limited and difficult knowledge of mobility flows



DECISION-MAKERS  
LOCAL GOVERNMENTS  
URBAN DEVELOPERS  
TRANSPORT OPERATORS



## HOW TO MANAGE COMPLEXITY?

- LIMITED GRASP ON CORE TECHNOLOGIES
- PARTIAL AND OR OUTDATED DATA
- MULTIPLICATION OF COSTS. INEFFICIENCY
- UNSATISFACTORY RESULTS



# Floware | An integrated solution to cover the whole data value chain

## DATA PRODUCTION



## DATA ANALYSIS



## DECISION ASSISTANCE

### Floware Vision



- OUR OWN IOT SENSORS
- OUR EDGE AI EMBEDDED SOFTWARE
- ADAPTABLE TO EXISTING EQUIPMENT

### Floware Core



- USE-CASE-ORIENTED CLOUD AI SERVICES
- DATA AGGREGATION AND ANALYSIS
- SIMPLIFIED MODELS AND SIMULATION

### Floware Autopilot



- LLM-BASED AI ASSISTANT
- INTERACTIVE DIGITAL TWIN
- SIMPLE AND DYNAMIC INTERFACE





# DASHBOARDS

## USE-CASE OPTIMISED

## EASILY CUSTOMISED

Floware

**Contexte de l'étude**

**Généralité**

**Analyse comptage véhicules**

**Analyse des pointes véhicules**

**Analyse comptage voyageurs**

**Analyse OD au capteur**

**Outil de comparaison**

### Comptage des véhicules Jours Ouvrés\_Satory\_EPAPS/DiRIF

Points d'implantation

Date: 01/09/2023 - 06/10/2023

Heure: Tout

Capteur: Tout

Vue du capteur sélectionné

Points d'implantation

Date: 01/09/2023 - 06/10/2023

Heure: Tout

Capteur: Tout

Vue du capteur sélectionné

**Sens de circulation**  
Tout

**Trafic total UVP**  
**1304K**

**1027K**  
Trafic voiture

**11K**  
Débit veh/h

**260 704**  
Trafic Moyen journalier

**127K**  
Trafic Camion

**1332**  
Trafic Bus

**2K**  
Trafic Vélo

**Plages de fonctionnement**

Capteur	interval
FLWR-002	01.09.23 0:15
FLWR-002	01.09.23 0:30
FLWR-002	01.09.23 0:45
FLWR-002	01.09.23 1:00
FLWR-002	01.09.23 1:15
FLWR-002	01.09.23 1:30
FLWR-002	01.09.23 1:45

**Capteur**  
FLWR-005

**Sens de circulation**  
Tout

**Heure**  
Tout

**Trafic total UVP par sens de circulation**

voie	UVP
Av. Maréchal Juin vers Satory	21K
Av. Maréchal Juin sens Satory vers N12 sens Paris	19K
Av. Maréchal Juin vers Versailles	11K
Av. Maréchal Juin vers N12 sens Paris	7K
Av. Maréchal Juin - Toume à gauche interdit Versailles	3K
N12 vers N12 sens Paris	0K

**mode**

mode	Trafic total
car	51645
person	2243
truck	2213
bus	1842
motorbike	1433
bicycle	801
Total	60177

**Trafic total journalier**

voie	UVP	pourcentage
Av. Maréchal Juin vers Satory	21K	44,61%
Av. Maréchal Juin sens Satory v...	19K	12,29%
Av. Maréchal Juin vers Versailles	11K	17,67%
Av. Maréchal Juin vers N12 sens...	7K	4,28%
Av. Maréchal Juin - Toume à ga...	3K	5,98%
N12 vers N12 sens Paris	0K	0%

## Example

## FLOW SPATIALISATION

# IDENTIFYING ACTUAL USED PATHS PATHS AND BEHAVIOURS



## Example use cases

# URBAN AND CONSTRUCTION SITE LOGISTICS

### CUSTOMERS

- CONSTRUCTION COMPANIES
- PUBLIC WORKS COMPANIES
- LOGISTICS OPERATORS: STORAGE AND DISTRIBUTION

### OUR COMPETITIVE ADVANTAGES

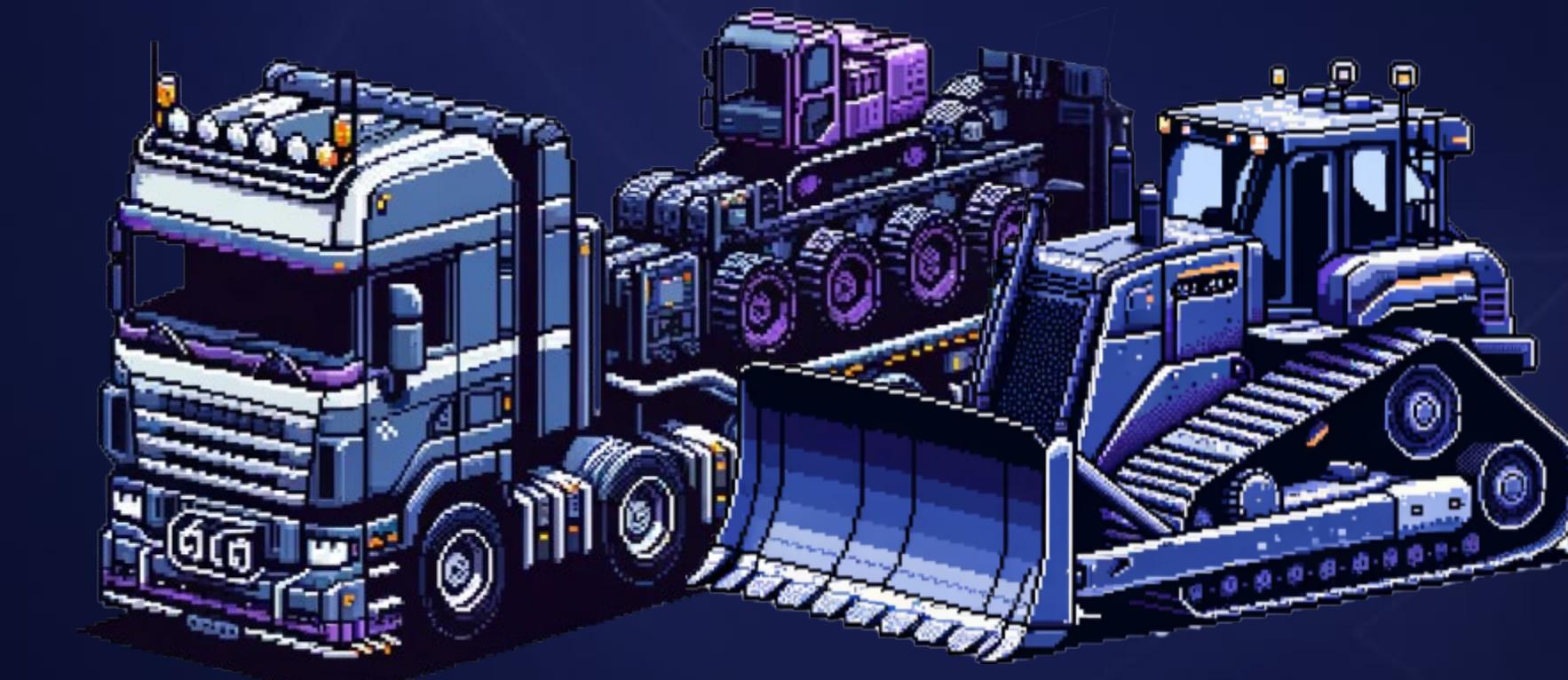
- 1.5M TRUCK IMAGE DATASET
- HIGHLY RELIABLE COMPUTER VISION MODEL

### APPLICATIONS

- OPTIMISATION AND ACCEPTABILITY OF URBAN AND URBAN AND SITE LOGISTICS
- SETTING UP WORKSITE BASES
- MONITORING LOGISTICS FLEETS

1M IMAGE TRAINING DATASET  
BUILT IN COOPERATION WITH

PARIS-SACLAY





## Example use cases

### SMART PARKING

#### CUSTOMERS

- LOCAL AUTHORITIES
- DEVELOPERS
- SOLUTION INTEGRATORS
- PARKING POOLING MARKET

#### OUR COMPETITIVE ADVANTAGES

- USE-CASE ORIENTED DATA ANALYSIS PLATFORM (SAAS)
- EASILY DEPLOYABLE AND ADAPTABLE SENSORS

#### APPLICATIONS

- DYNAMIC ANALYSIS OF OCCUPANCY METRICS
- CAPACITY USAGE ANALYSIS FOR PARKING POOLING IMPLEMENTATION

#### TRUSTED BY

**EpaMarne**  
l'âme dans l'aménagement





## Example use cases

# AIR QUALITY IMPROVEMENT

### CUSTOMERS

- STATES
- LOCAL AUTHORITIES
- 42 FRENCH CITIES LOW EMISSION ZONES

### PARTNERSHIP WITH



### OUR COMPETITIVE ADVANTAGES

- PARTNERSHIP WITH ECOMESURE FOR A COMMON HYPERVISOR (MOBILITY+AIR QUALITY)
- ONGOING POC AT NOISY-LE-GRAND
- FIRST OFFER OF THIS KIND IN THE MARKET

### APPLICATIONS

- REDUCING TRAFFIC IN CITY CENTERS AND IMPROVING AIR QUALITY
- LEZ (LOW-EMISSION ZONES)
- PEDESTRIANIZATION AND TRAFFIC CALMING





## Example use cases

# EV CHARGING INFRASTRUCTURE LOCATION

### CUSTOMERS

- ENERGY OPERATORS (EDF, VINCI, TOTAL, ETC.)

### OUR COMPETITIVE ADVANTAGES

- ENERGY POC BEING DESIGNED WITH EDF
- ABILITY TO RECOGNISE A LARGE NUMBER OF VEHICLES, INCLUDING LCVS AND OTHER URBAN LOGISTICS VEHICLES.
- FUTURE MODEL TO IDENTIFY EV VS. ICE

### APPLICATIONS

- LOCATION OPTIMIZATION OF EV CHARGING STATIONS FOR A VIABLE BUSINESS MODEL
- ARBITRATION BETWEEN PRIVATE AND PUBLIC ACTORS FOR JOINT DEPLOYMENTS

POC BEING PREPARED WITH





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