The standard in CO2 footprint optimization

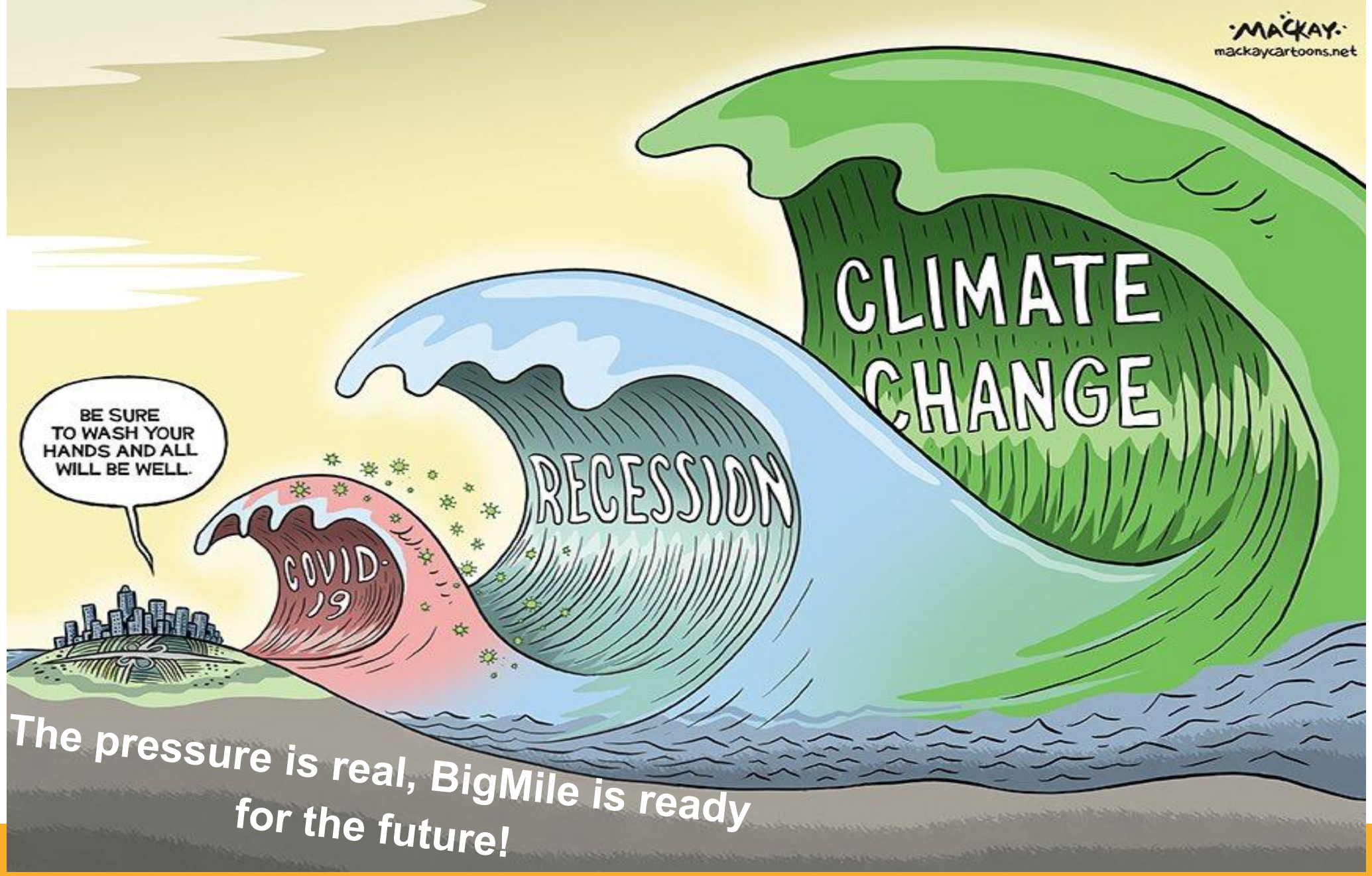
What is BigMile?

Video BigMile

Supporting supply chain & logistics professionals on their way to **zero emissions** with the help of carbon footprinting

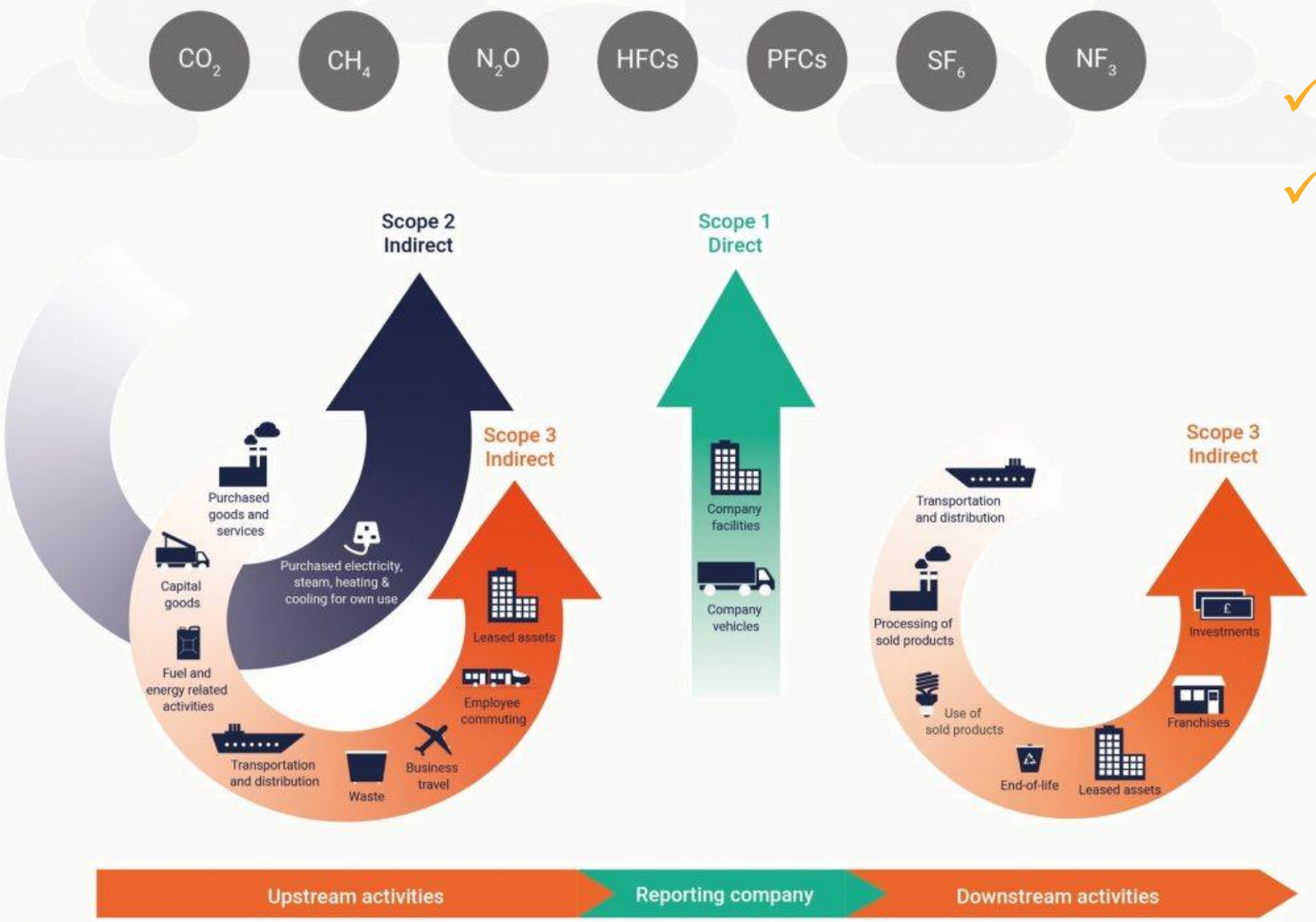
BigMile is the **standard tooling** in CO2 **calculation**, **reporting, analyzing** and **optimization**

It offers you a clear **visualization** of your **supply chain performance** and progress



The standard in CO_2 footprint optimization

- ✓ **Corporate Sustainability Report Directive (CSRD EU)**
- ✓ **Commute to work**
- ✓ **RFP’s**



Scope	Emission Type	Definition
Scope 1	Direct Emissions	GHG emissions directly from operations that are owned or controlled by the reporting company
Scope 2	Indirect Emissions	Indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company
Scope 3		All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions

The design Climate agreement 21st of December 2018

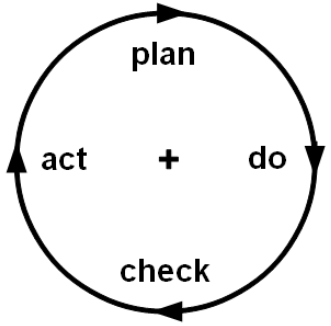
Mobility

Industry

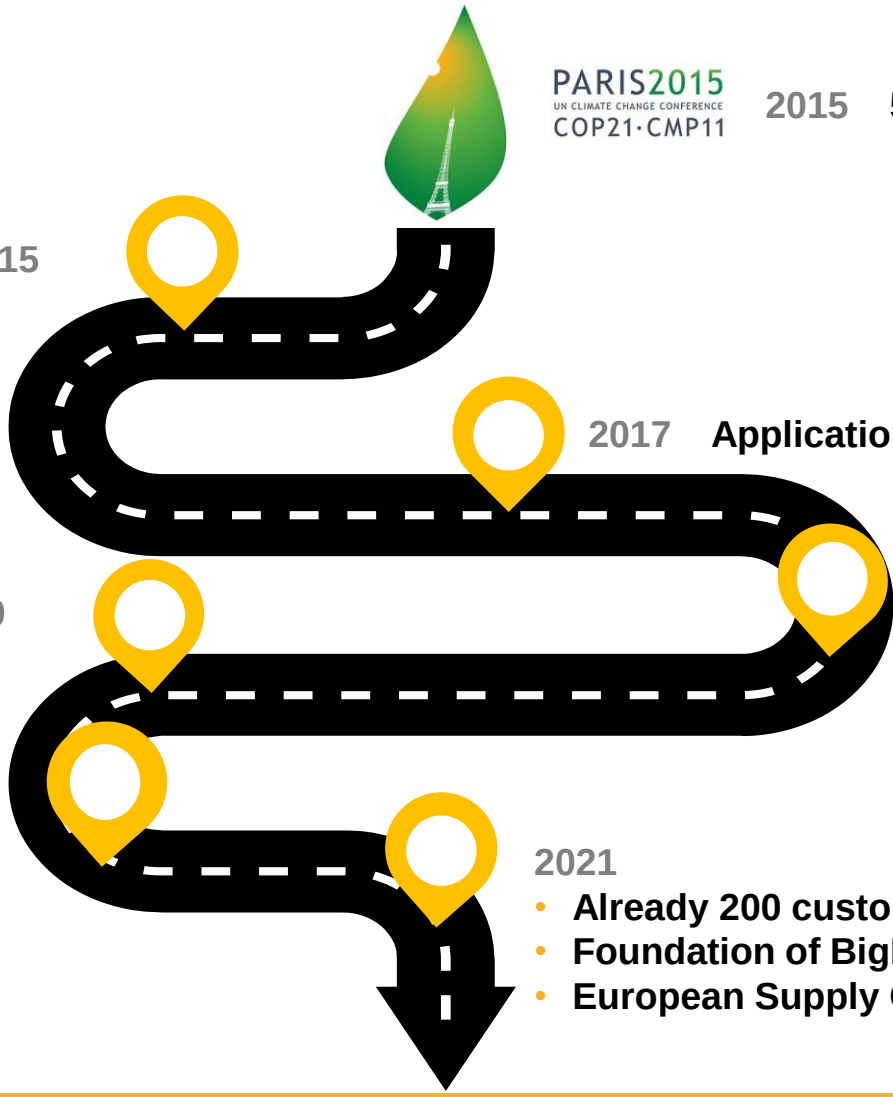
Agriculture

Electricity

- ✓**Monitoring**
- ✓**Actionplan** & **assurance**
- ✓Periodic **reporting**



History



PARIS2015 UN CLIMATE CHANGE CONFERENCE COP21·CMP11

2015 **55% CO_2 reduction by 2030**

Top Sector Logistics project **2015**
funded by Dutch Government

2017 **Application: All modalities & allocation**

2018 **Expanded EU climate targets**

Lean & Green Members **2019**
Use BigMile application

Foundation BigMile B.V. **2020**

2021

- **Already 200 customers**
- **Foundation of BigMile Germany GmbH**
- **European Supply Chain Scale-up Award**

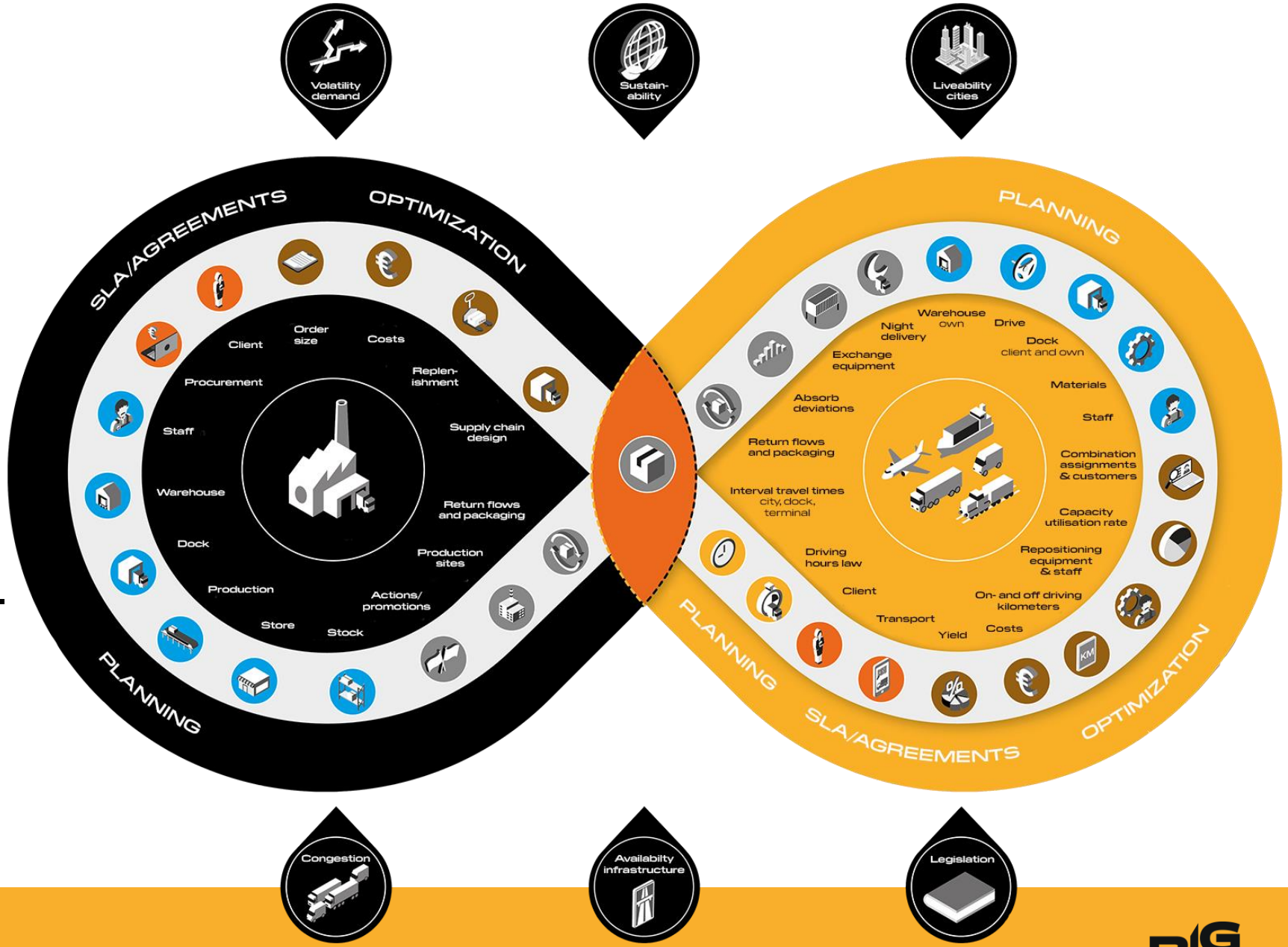
What can BigMile do for you?

It helps to calculate and allocate your CO2-emissions for:

- ✓(Future) **Rules** and **regulations**
- ✓**Accountable** CO2 **allocation** on shipment level
- ✓Keeping track of your **sustainability goals**
- ✓Your business **strategy** and **reporting**

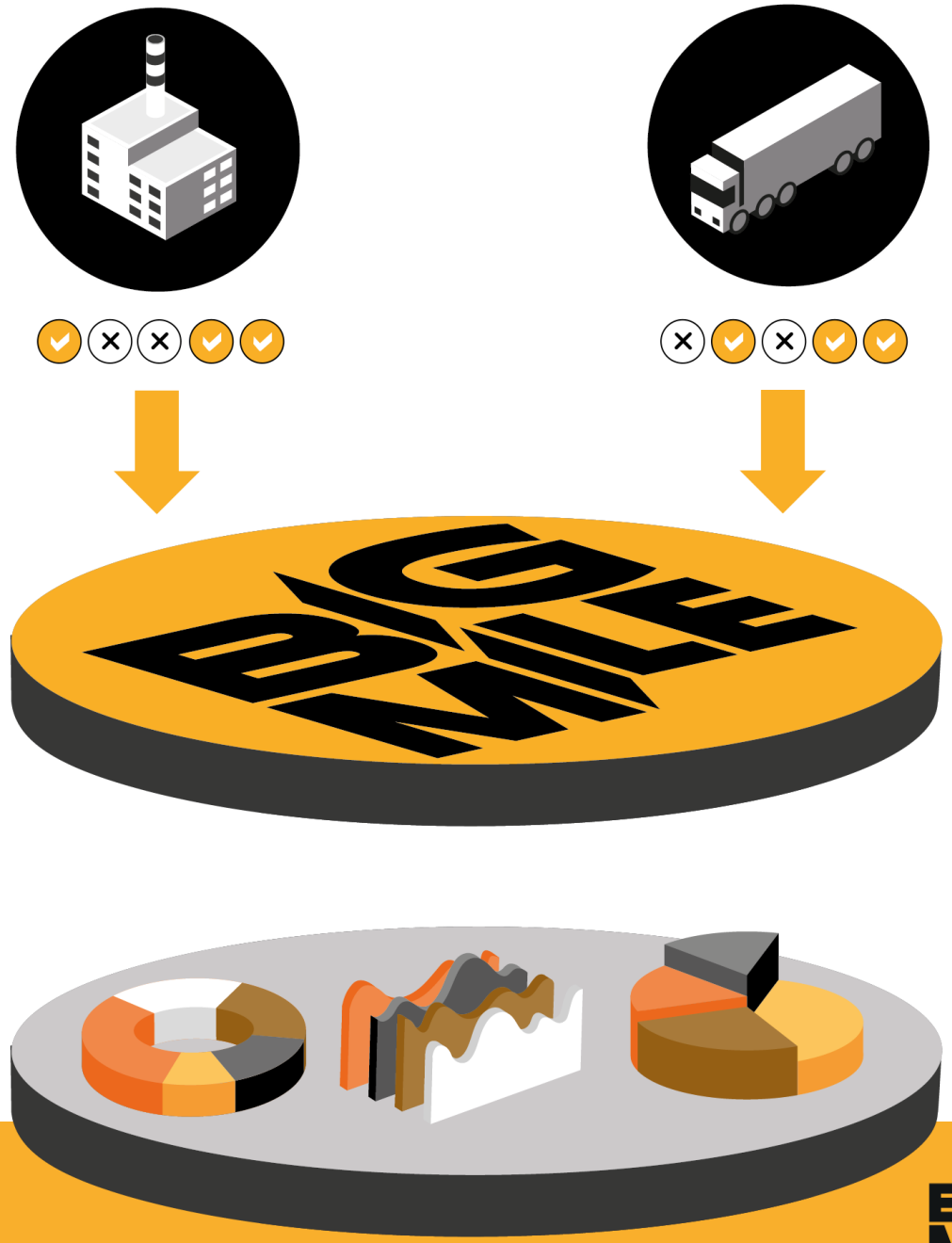
You need to **work together** in order to **optimize** your **supply chain**.

Our goal is to **visualize** the potential **improvements** you and your partners can make.



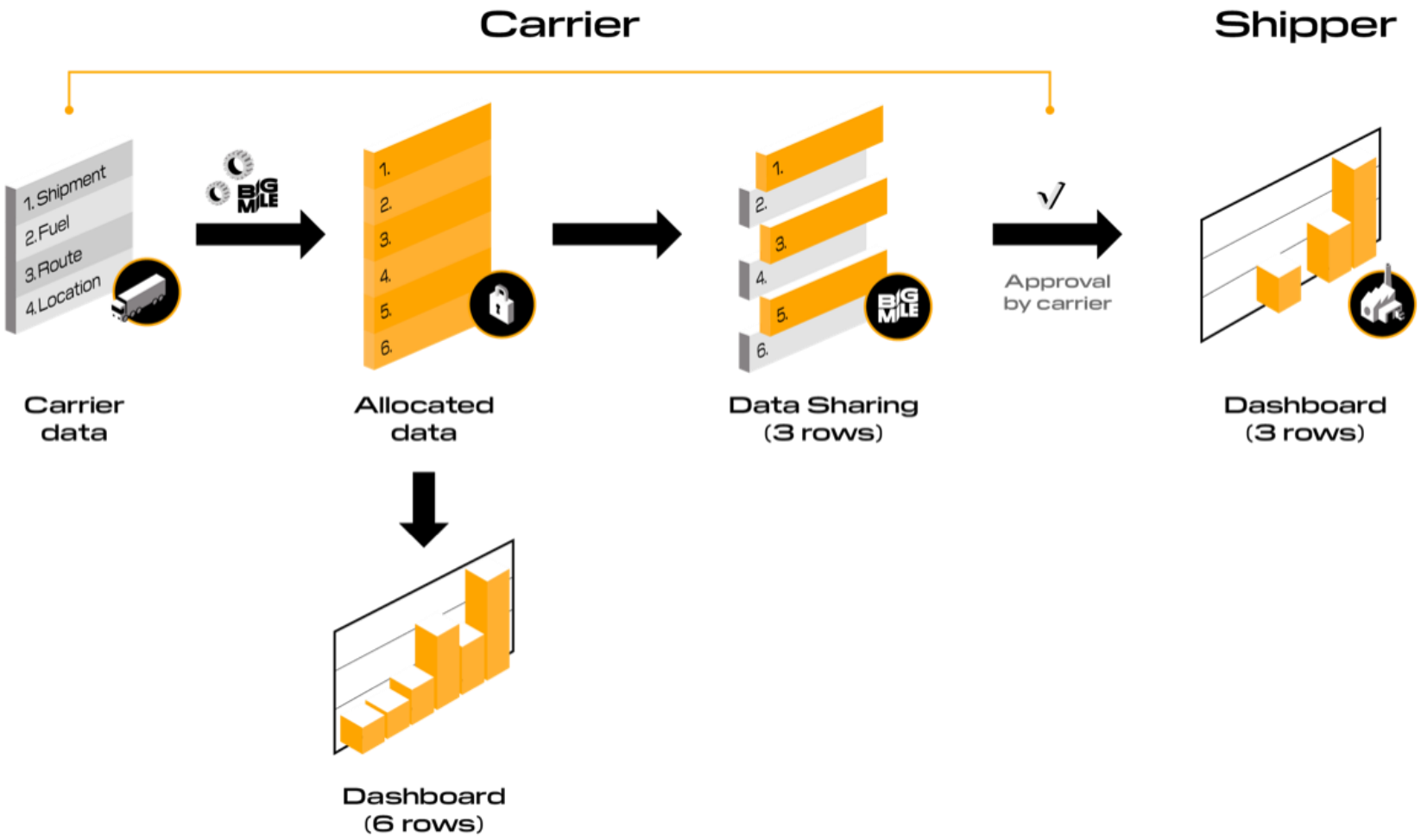
Our **insights** make it easy for you see what to **improve**, within your own **organization** or with your **partners**

‘Keep **ownership** of your data’



Data Sharing with Supply Chain partners

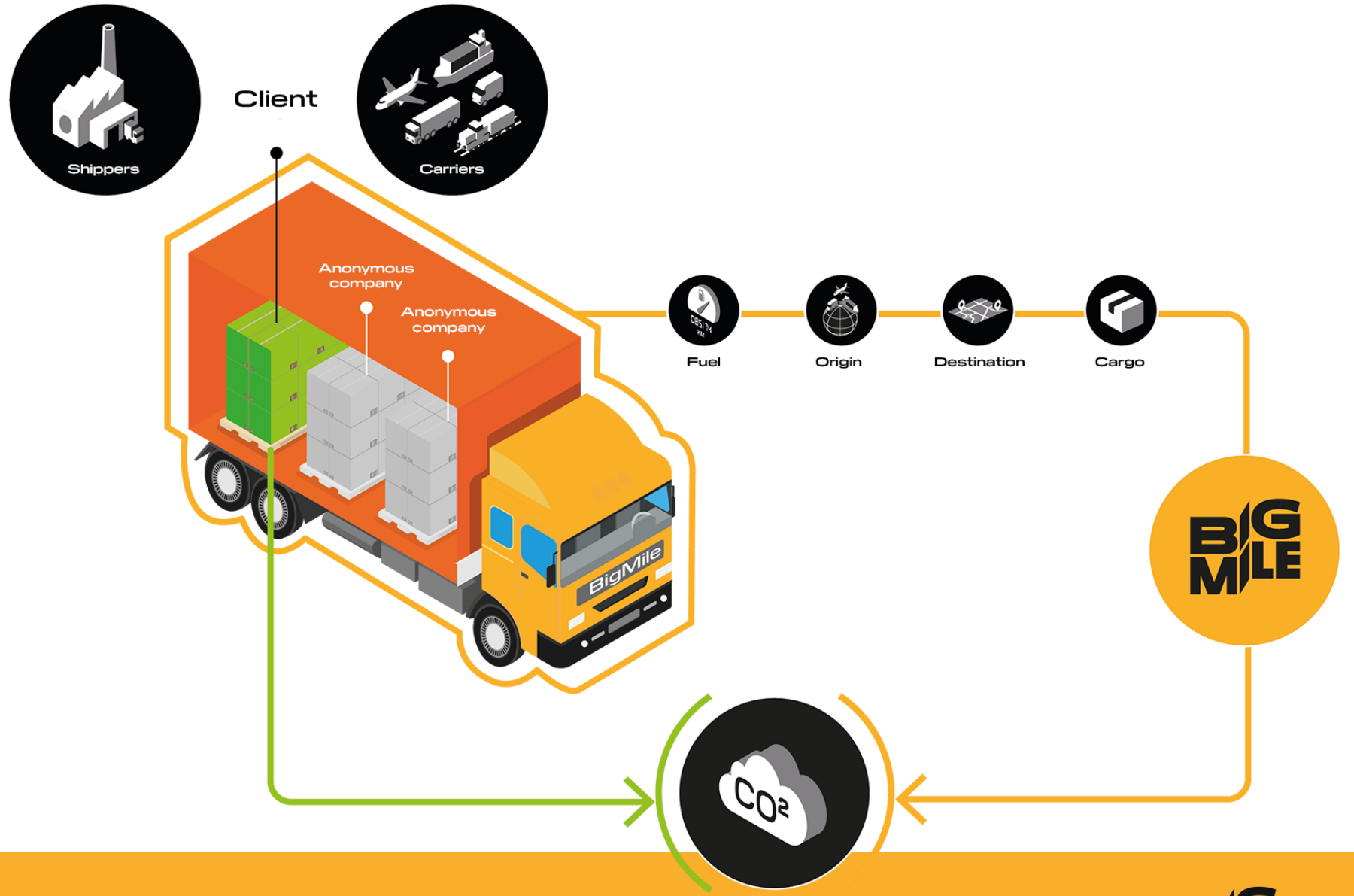
- The carrier keeps ownership of the original input data
- The carrier decides which shipments (allocated data rows) are shared
- The carrier approves before data is shared with shipper or logistic service provider



Sounds complex?

No worries!

This is the **data** you need to collect to get started with BigMile:



BigMile, handles all available data qualities

Customers may have different data qualities, BigMile distinguishes 2 approaches;

- Fuel-based approach
  -  Gold+ - Fuel *(litres)* per trip
  -  Gold - Fuel per vehicle type per period
  -  Silver - Fuel or fuel usage *(km/l)* per period

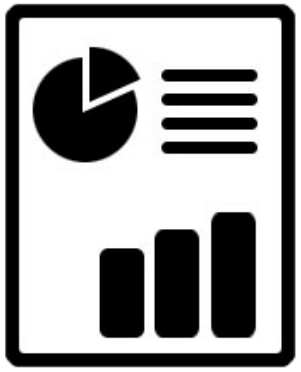
- Transport-activity-based approach
  -  Bronze - No fuel information available

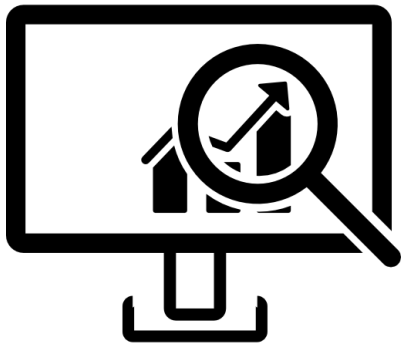
Stakeholders

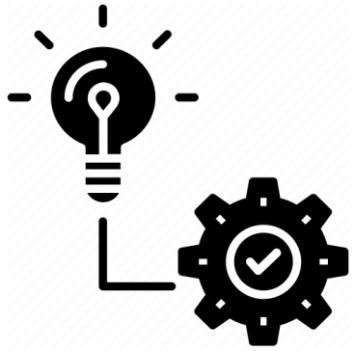
CEO

- ✓**Operations** manager / COO 
- ✓**Corporate sustainability** & **responsibility** manager / CSO 
- ✓**Sales** manager / CCO 
- ✓**Finance** controller / CFO 
- ✓**ICT** Manager / CTO 

Use cases







- ✓**CO2 reporting**
  - ✓management summary
  - ✓shipment detail level
- ✓ **CO2 accounting**
  - ✓calculate CO2 pricing in total, per group or per shipment
- ✓**Analysis & scenarios**
  - ✓measure the impact of choices (eg modality shift or deliver frequency)
  - ✓compare subcontractor performance
  - ✓‘what if’ scenarios
- ✓**Optimization**
  - ✓Biggest (CO2) costs quickly identified

Why we are the standard tooling

- ✓Multi-functional **platform**
- ✓Bulk **API** and emission **Web Services**
- ✓Conform the **COFRET & EN16258** method

And in accordance with the following:

- ✓**GLEC**
- ✓**CO2Emissiefactoren.nl**
- ✓**SmartWay**
- ✓**French Degree**
- ✓**Defra**

- ✓**ISAE3000** accountancy certification

Project – Port of Rotterdam

What is BigMile doing for PoR?

- Long-term joint development of PoR and BigMile,
- Emission Analysis of logistic processes,
- Policy and Projects

- *Sea & Inland shipping, Road, Rail, …*
- *En route, waiting, loading*
- *Vessel/vehicle and cargo related (sa climate control)*
- *Area and Supply Chain emissions*
- *CO_2, NO_x, Particles, Noise*
- *Baseline and scenario's*

Port of Rotterdam Shipping Doing business Explore the port News

Home › News Overview › Port of Rotterdam Authority and BigMile make transport emissions transparent with digital platform

Digitisation

Port of Rotterdam Authority and BigMile make transport emissions transparent with digital platform

02 February 2022

Port of Rotterdam Authority and BigMile are developing a digital platform to identify transport-related emissions in the port. Data, including from AIS, a system that registers all vessel movements, is combined with a TNO calculation model, enabling a precise calculation of transport sector emissions.

The platform also provides insight into emissions at a business location, for example, and should also provide companies with more details on carbon and other emission levels in their total transport chain. The emission platform is helping the Port Authority and business community make choices en route to a carbon-neutral port.

Showcase Carbon Analytics

Management Summary

Management summary

Total shipped (Ton)
473.832

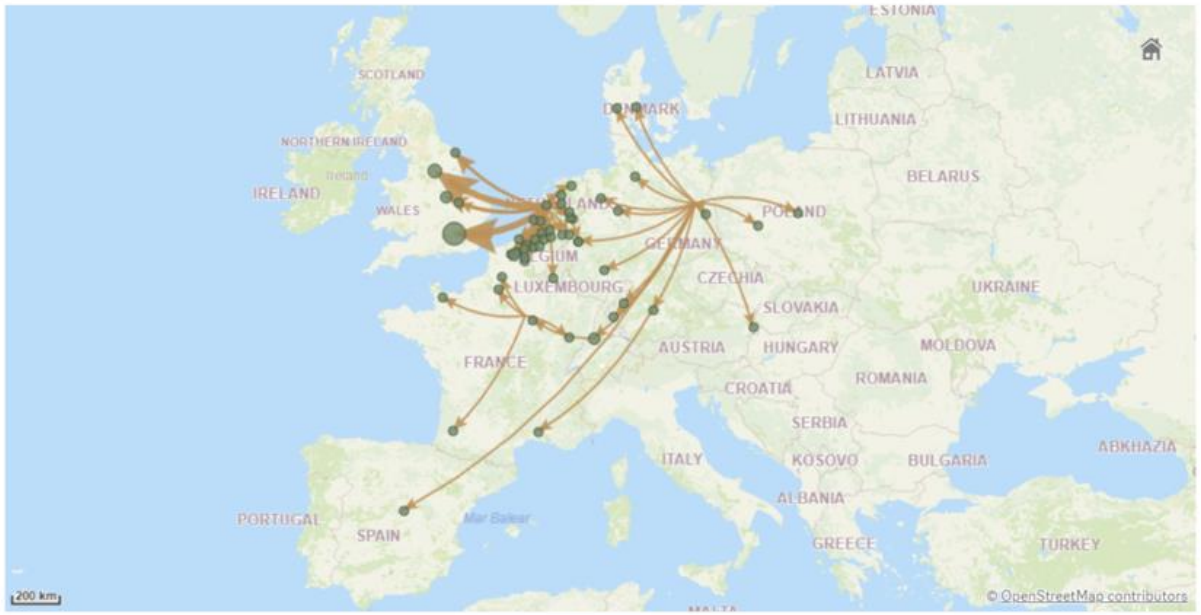
Total kg CO_2
9.380.522

Emissions (kg CO_2) per Ton
19,8

CO_2 per Ton.km (GCD)
0,0565

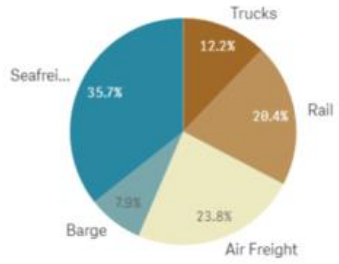
Unit
...

Total ton shipped (arrows) & Total emissions (kg CO_2) (bubble)

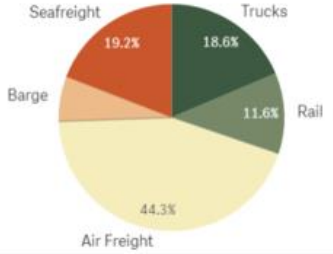


Data quality

Total shipped per modality (Ton)



Total kg CO_2 per modality



Data completeness
95,4%

Modalities
5

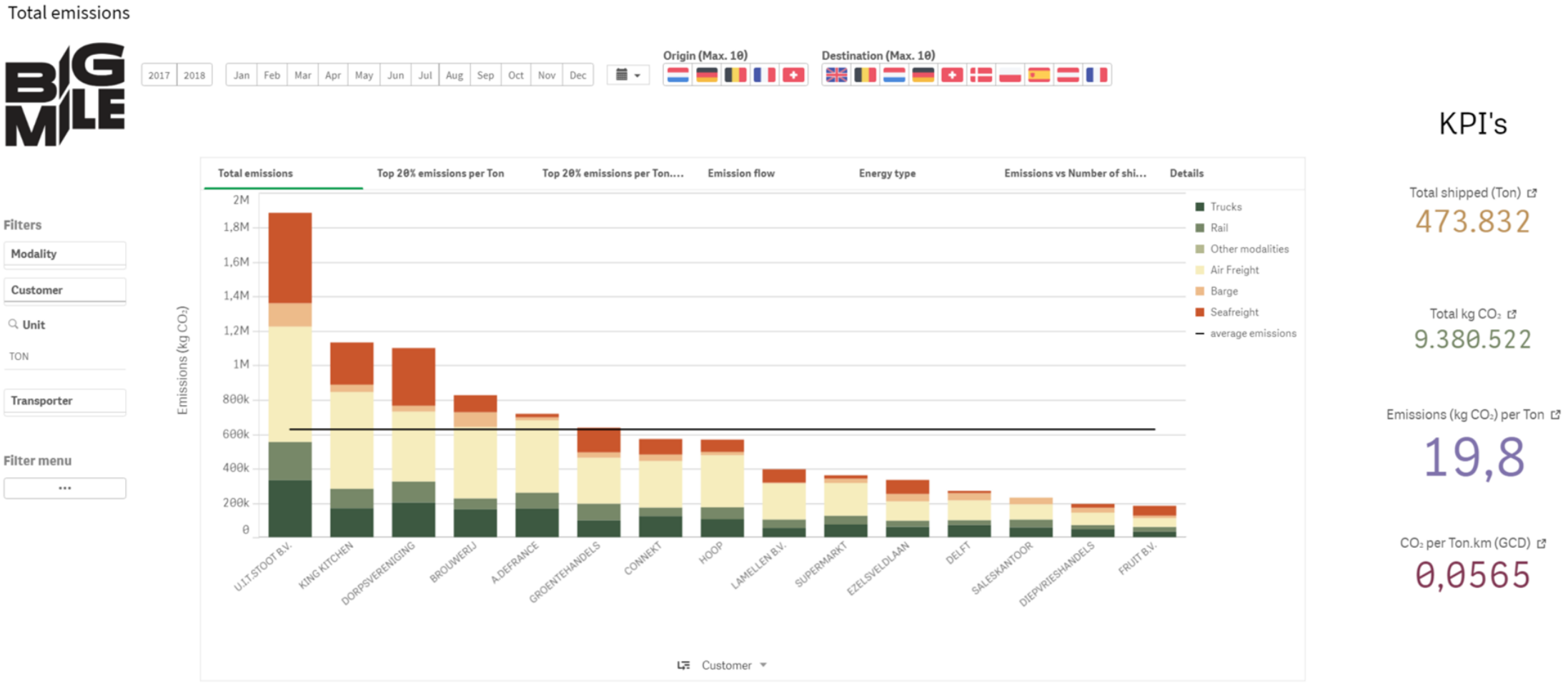
Shipments
2.471

Countries of origin
4

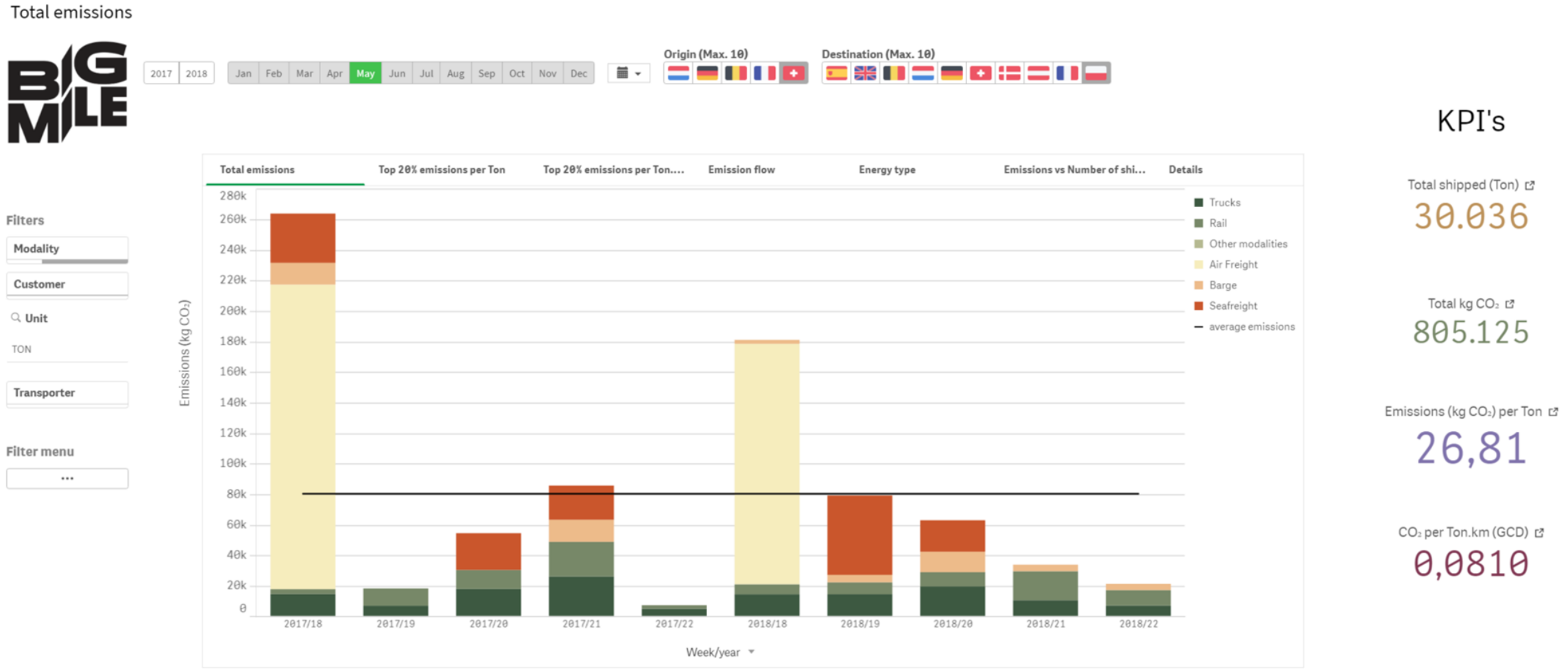
Destination countries
10

Customers
15

Total emission



Filter & compare on many dimensions



Emissions vs number of shipments

KPI's

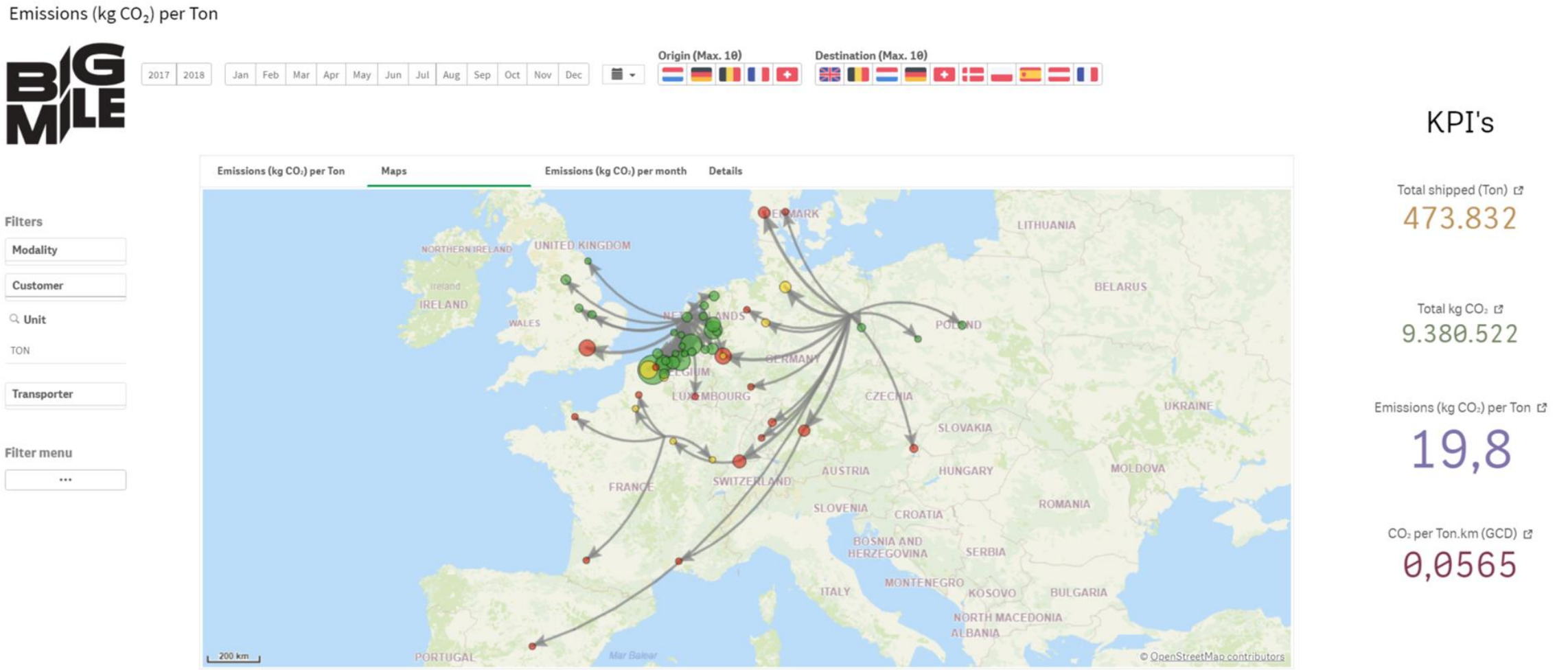
Total shipped (Ton)
30.036

Total kg CO_2
805.125

Emissions (kg CO_2) per Ton
26,81

CO_2 per Ton.km (GCD)
0,0810

Mapping: emissions (kg CO2) per Ton



CO2 pricing


CO₂ pricing
2017
2018
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Origin (Max. 10)
Destination (Max. 10)
Filters
Modality
Customer
Unit
TON
Transporter
Filter menu
CO₂ pricing per Customer
CO₂ pricing: Most expensiv...
CO₂ pricing Details
CO₂ pricing per customer
Total tonnes transported
€ 40.000
€ 30.000
€ 20.000
€ 10.000
€ 0
150k
100k
50k
0
Emissions
CO₂ pricing per customer
Total tonnes transported
U.I.T.STOOT B.V.
KING KITCHEN
DORPSVERENIGING
BROUWERIJ
A.DEFRANCE
GROENTEHANDELS
CONNEKT
HOOP
LAMELLEN B.V.
SUPERMARKT
EZELSVELDLAAN
DELFT
SALESKANTOOR
DIEPVRIESHANDELS
FRUIT B.V.
Customer
Set price €/Tonnes CO₂
20
CO₂ pricing: €/Tonnes CO₂
€ 20
CO₂ pricing
€ 187.610
CO₂ pricing: €/Tonnes freight
€ 0,40
KPI's
Total shipped (Ton)
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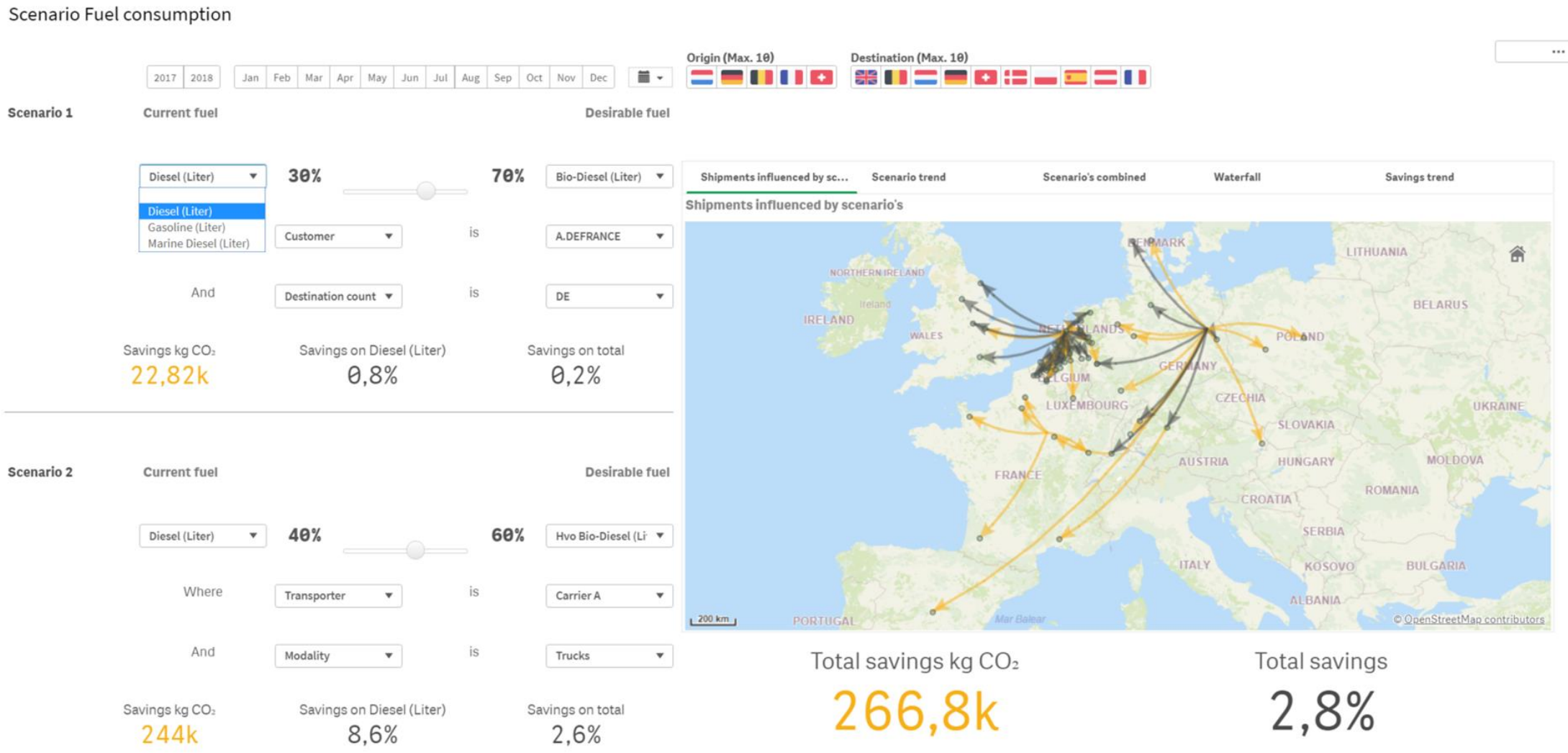
Emissions (kg CO₂) per Ton
19,8
CO₂ per Ton.km (GCD)
0,0565

What if scenario: Fuel type



Emission API

Integrating BigMile with other applications

Integrate with TMS, WMS, ERP, APS, financial systems, …

To **build automated workflows** and get rid of manual reporting

And **use** it for invoicing, e-CMR, financial reporting (carbon accounting), customer reporting, …

What is BigMile Emission API?

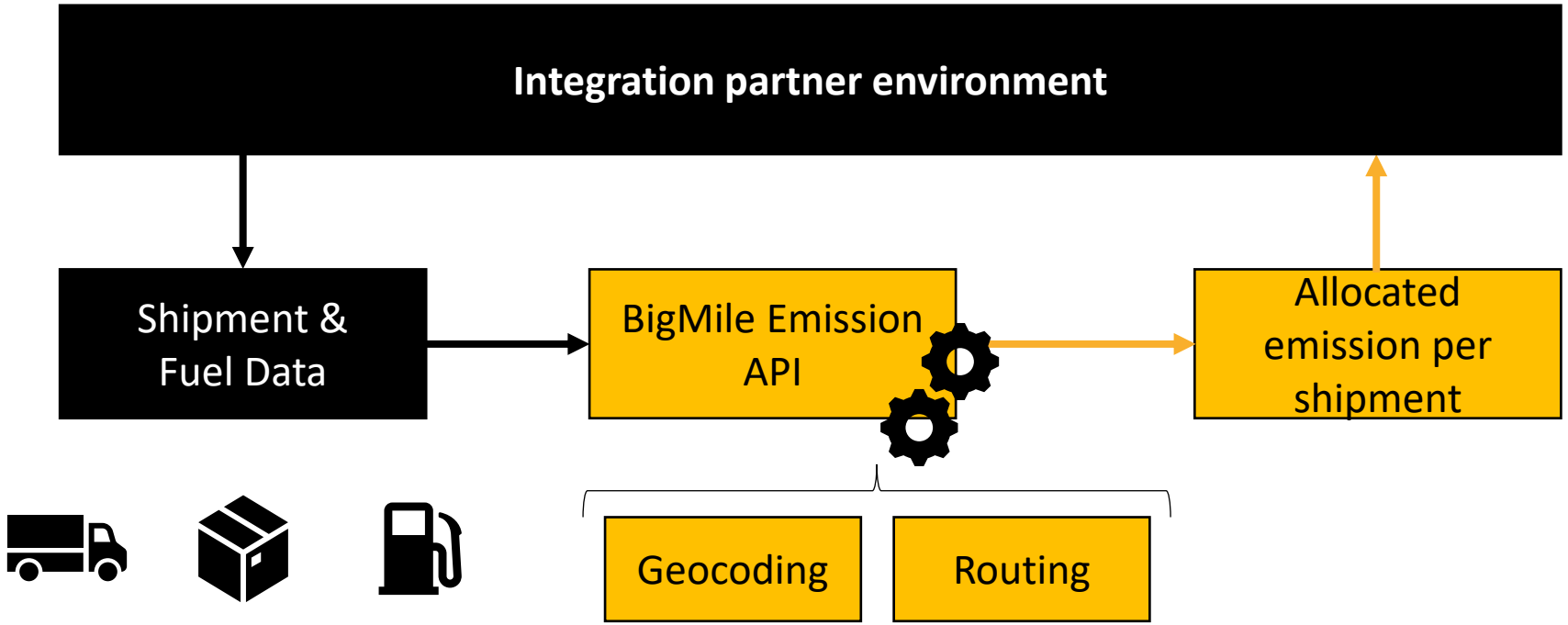
Developed to exchange data in real-time

Enriches business applications and platforms with resilient CO_2e calculation to measure and report accurate and trusted values

- BigMile provides live usage reports by contract/token to measure traffic and user behavior
- Lean REST API for CO_2e calculation
- Allocation as a service (Azure Cloud)

Data process

- Based on your data, BigMile will calculate and allocate emission
- Use it directly in your system for; planning, reporting, or invoicing

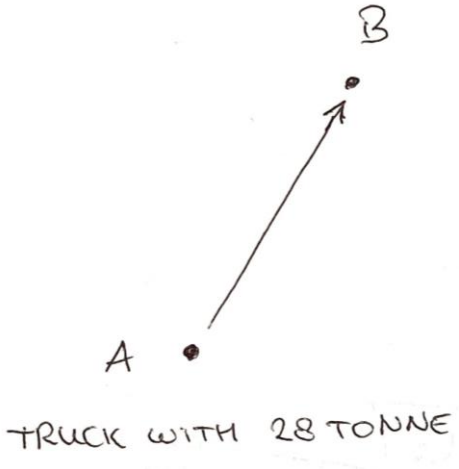


Choose your desired method

Your supply chain network determines your method

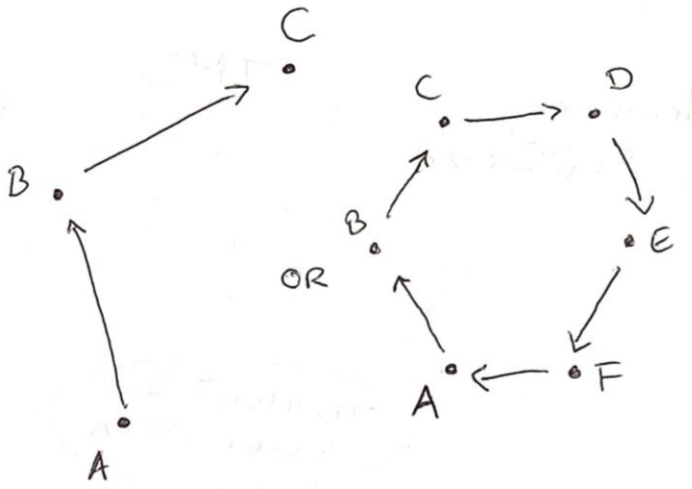
Calculate

- Full Truck Load (FTL), single drop



Allocate

- Less-than-truckload (LTL)
- Delivery network



DeliveryMatch – BigMile integration Partner

Output for customer

- Pre-calculation and post-calculation carbon emissions
- Intermodal calculation possible
- Integrated reporting tools
- Bulk API – direct interface to BigMile carbon Analytics

Ixolution

IXOLUTION
INTELLIGENT EXECUTION

Output for customer

- Pre-calculation and post-calculation carbon emissions
- Road calculation carbon emissions
- Intermodal calculation (rail/ferry/barge)
- Gap analysis road vs. intermodal transportation
- Integrated reporting tools

Integration IXSuite (TMS) with BigMile

powered by BIG MILE

Yellowstar

Yellowstar
IT FOR SOCIAL SUPPLY CHAINS

Output for customer

- Pre-calculation and post-calculation carbon emissions
- Road calculation carbon emissions
- Intermodal calculation (rail/ferry/barge)
- Gap analysis road vs. intermodal transportation
- Integrated reporting tools
- Realtime status overview

Integration TMS & Control Tower

powered by BIG MILE

Easy and quick set up

Get Access

- BigMile platform access to generate credentials and manage contracts
- Multiple tokens/contracts are available to manage separation of end-customers, business units, use cases, etc.

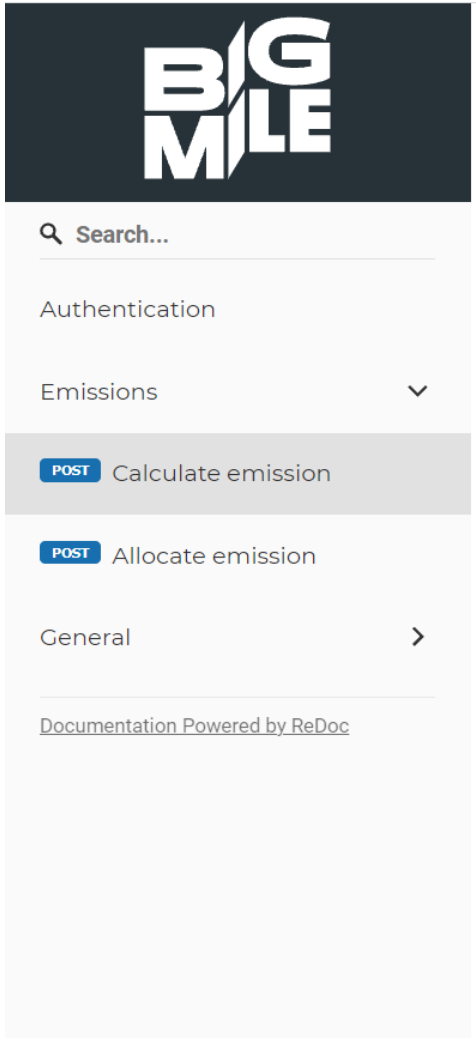
Set-up and Test

- Choose your framework and method
- Documentation available, including samples

Everything works?

- Let’s go into production

BigMile Emission API - documentation



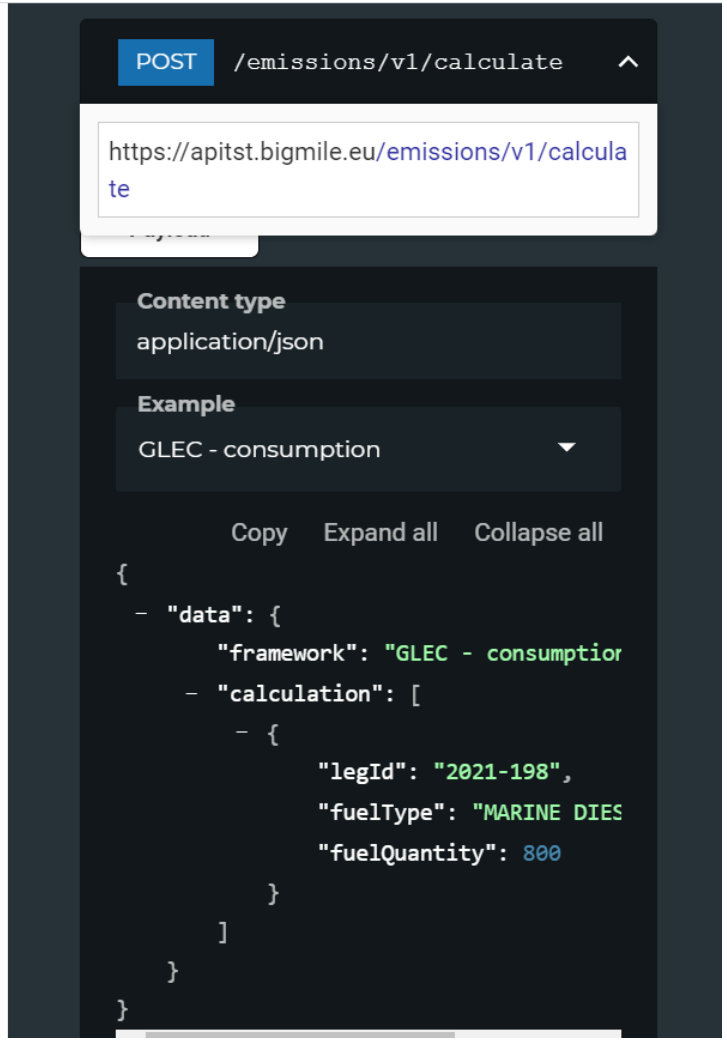
Calculate emission

This endpoint provides the capability to calculate the CO2 emission for one or multiple transport legs. The endpoint supports different emission standards and input data. The used combination should be provided by `framework` property. E.G. `NL - consumption` should be used to calculate and allocate emission if you have data about the fuel consumption and you want to use the NL emission standard.

AUTHORIZATIONS: OAuth2 access token

REQUEST BODY SCHEMA: application/json

- **data** (required) — any
  The calculation input variables.
  - **framework** (required) — string
    GLEC - consumption
  - **calculation** (required) — Array of objects (GLECConsumptionCalculationDTO)
    The calculation input variables.



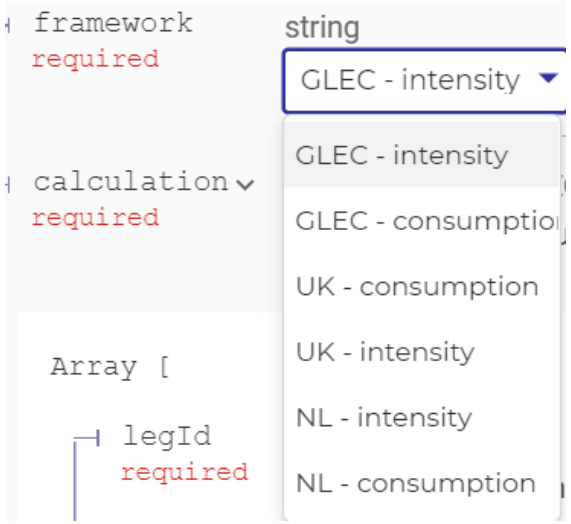
BigMile Emission API

Calculate = CO_2e for a single trip

Request parameters: 1st step is choosing the framework/methology

Consumption based calculation

- legID
- fuelType
- fuelQuantity



Intensity factor based calculation

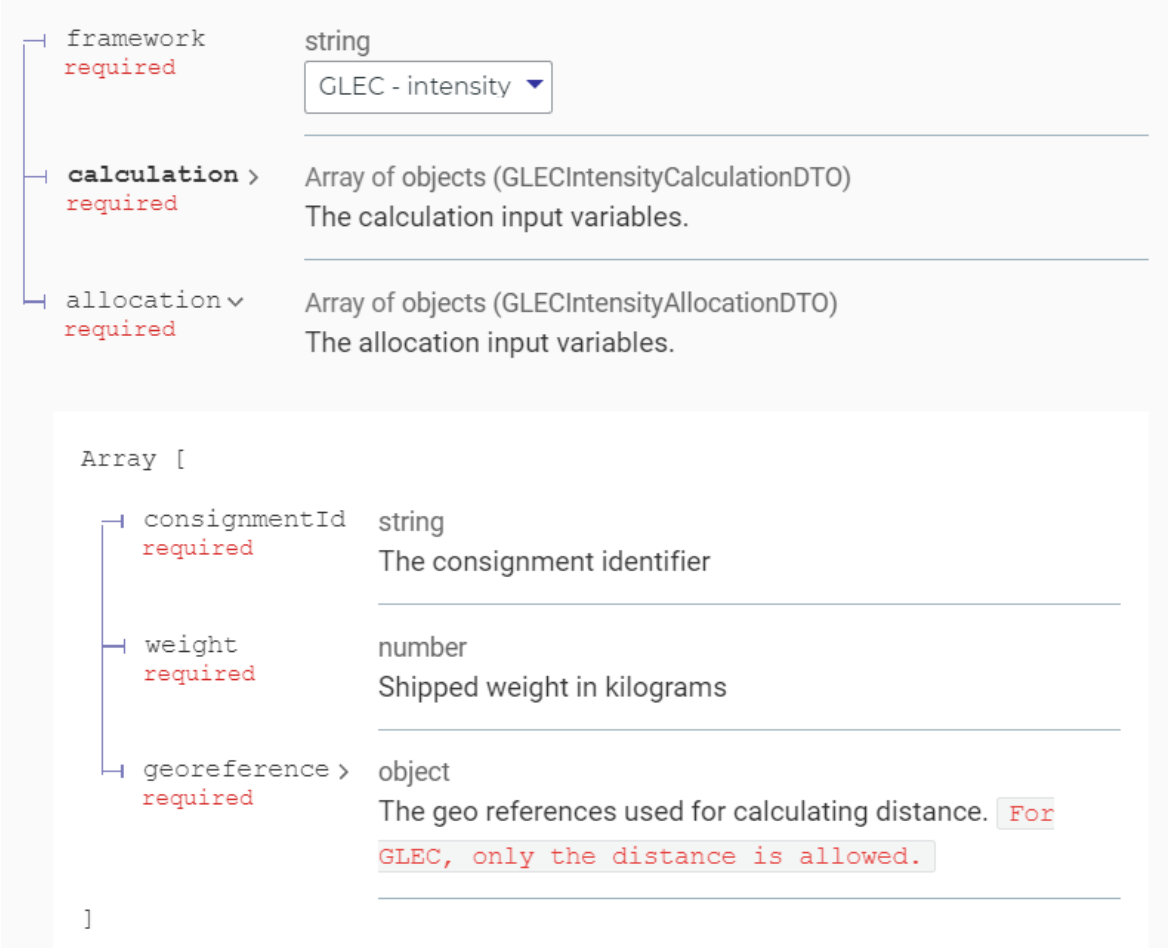
- legID
- georeference (planned distance or xy-coord)
- vehicleType (all modes of transport)
- fuelType
- cargoType (bulk/general or container)
- Weight (kg)

BigMile Emission API

Allocate = CO_2e for each shipment/transport leg

Request parameters: in addition

- consignmentID
- weight (kg)
- georeference (GLEC = distance)



Companies using BigMile for carbon footprint analytics

Companies using BigMile for carbon footprint analytics

Companies using BigMile for carbon footprint analytics

Bostik smart adhesives

NEDMAG

mandersloot

H&S GROUP

LEGRO your blend for life

Ahold Delhaize

ptc Particuliere Transport Cooperatie

Companies using BigMile within the Lean & Green program

BIG MILE

Integration Partners

IXOLUTION
INTELLIGENT EXECUTION

Delivermatch

Yellowstar
IT FOR SOCIAL SUPPLY CHAINS

ASPECT® ICT

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