track and trace ecodriving freight & fleet management navigation and LBS
eCall & bCall road charging infotainment pay-as-you-drive insurance/leasing

DATEX as a deployment enabler

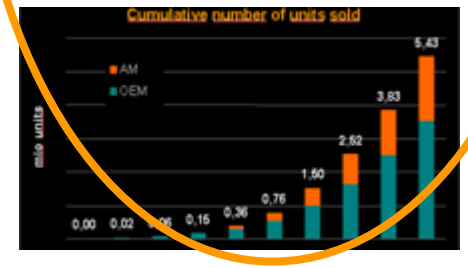
the case of parking in Belgium

20.05.2014

enforcement mobile mapping public transport management payment systems
mobility information variable message signs traffic sign database incident detection

AGES
AGORIA
arc
Atos Worldline
beheersmaatschappij antwerpen mobiel
BARCO
belgacom
be-mobile
bruxellesmobilité mobielbrussel
CORONA DIRECT
D'Ieteren
egis projects
EUROPEAN DATACOMM
FEBIAC
FLIR
FLOW
go mobile
here
IBM
icoms
IMA BENELUX ASSISTANCE
i-Move
fleetware components
Imtech
INFRABEL
kapsch
KATHOLIEKE UNIVERSITEIT LEUVEN
KEY DRIVING
kpn Group Belgium
Logistics in Wallonia
Macq
Mobistar
Multitel
namahn
Nimera
Mobile ICT
NXP
OKTOPUS
REMOTE MONITORING
Parkeerbedrijf Stad Gent
PARKO
pwc
PRODATA
Q2C
software solutions
RAM
MOBILE DATA
SAIT
saner
Satellic
SIEMENS
Wallonie
SPW
Service public de Wallonie
SPIE
TECHNUM
Tein Technology
telenet
TESTRONIC
THALES
TOMTOM
TOURING
TRAFINEO
Transics
TRANSPORT & MOBILITY LEUVEN
UBench
INTERNATIONAL
UBIDATA
Universiteit Antwerpen
UNIVERSITEIT GENT
universiteit hasselt
VAB
Mobiliteit en Openbare Werken
xerox

ITS = Traffic Technology + Mobile Solutions



Public-private cooperation

- LED/VMS = dashboard/smartphone
- Public & private policies in sync
- New form of PPP

- Open data essential
  - Legally required
  - Good for business

ITS Directive (2010/40/EG) - 6 priority actions

1. EU-wide multimodal travel information services
2. EU-wide real-time traffic information services
3. Minimum universal safety-related traffic information free of charge to users
4. Interoperable EU-wide eCall
5. Information &
6. Reservation services for secure parking for trucks

Essence (see Annex directive)

1. EU-wide multimodal travel information services:
    1. **availability and accessibility of real-time travel data** by authorities to private service providers
    2. on **electronical basis**
    3. timely updating by authorities
    4. timely updating by private service providers
    5. based on European specifications
2. EU-wide real-time traffic information services
    1. **availability and accessibility of real-time traffic data** by authorities to private service providers
    2. on **electronical basis**
    3. timely updating by authorities
    4. timely updating by private service providers
    5. based on European specificiations

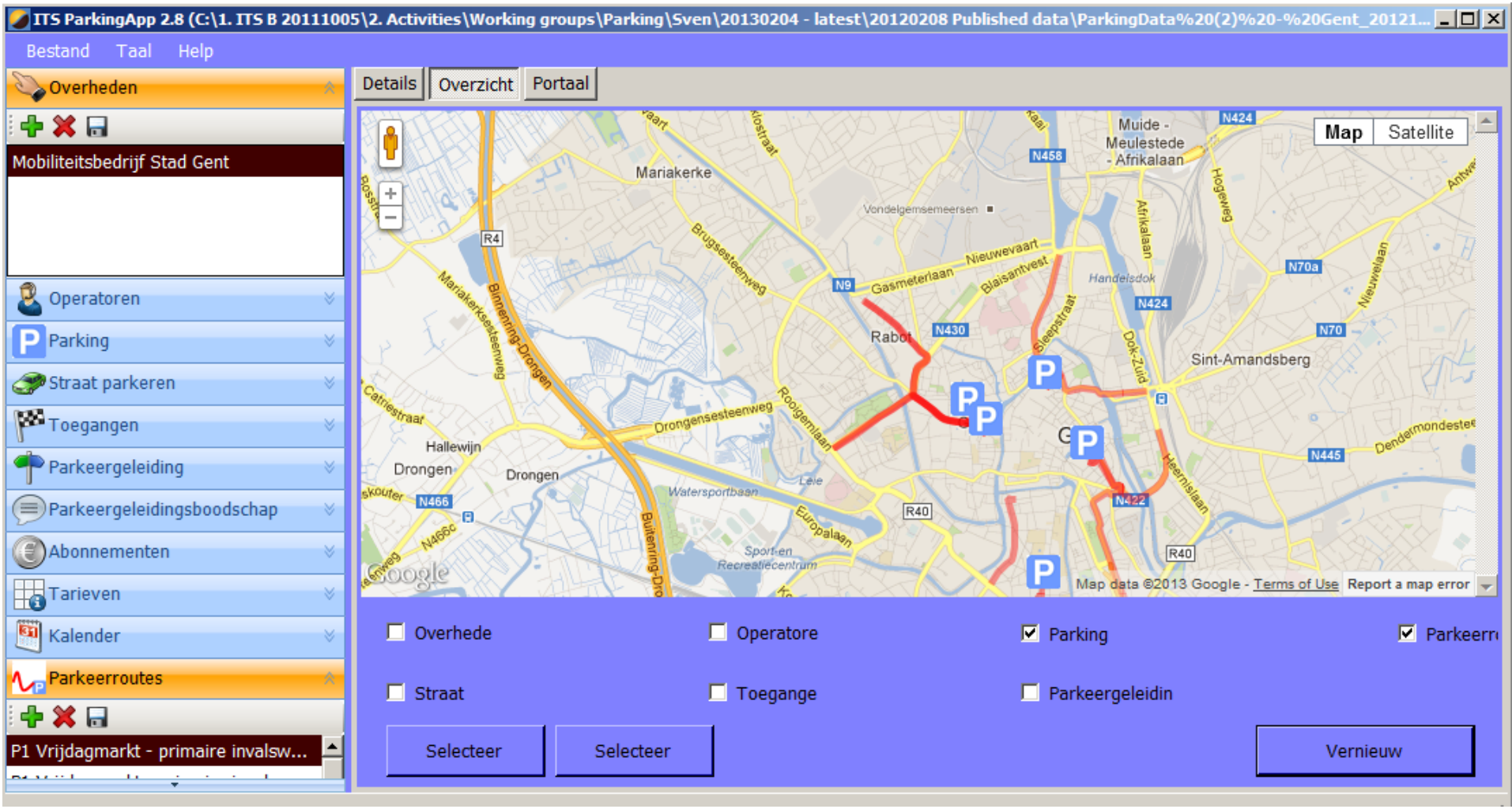
ITS.be working groups

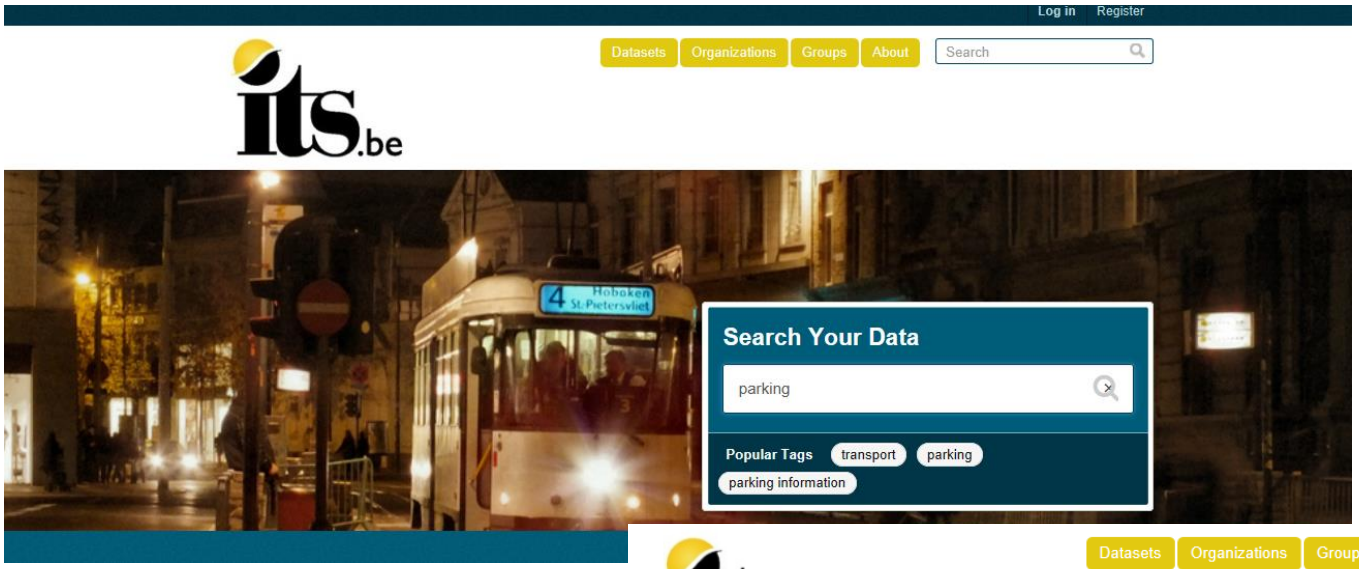
- Parking
- (Secure) Truck Parking
- Public transport information
- Traffic information
- *eCall*
- *Road charging*

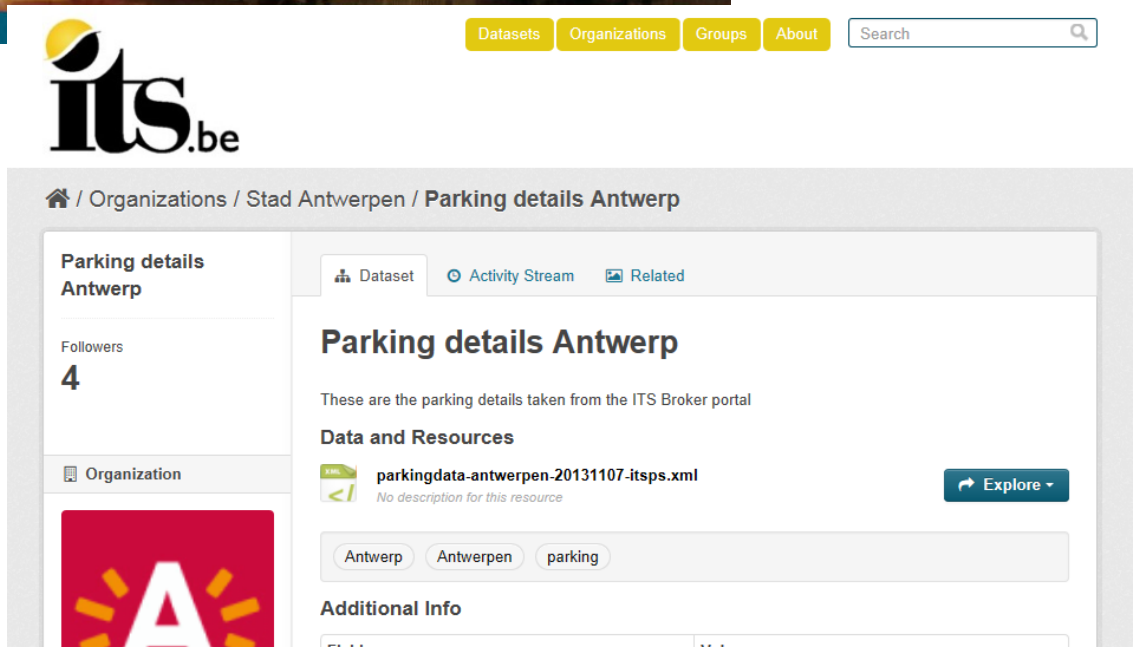
Open data standards

1. Which data
2. Format
3. *Open data portal & search function*
5. *Applications generating content*
6. *Applications consuming content*
7. Licence models
8. Quality

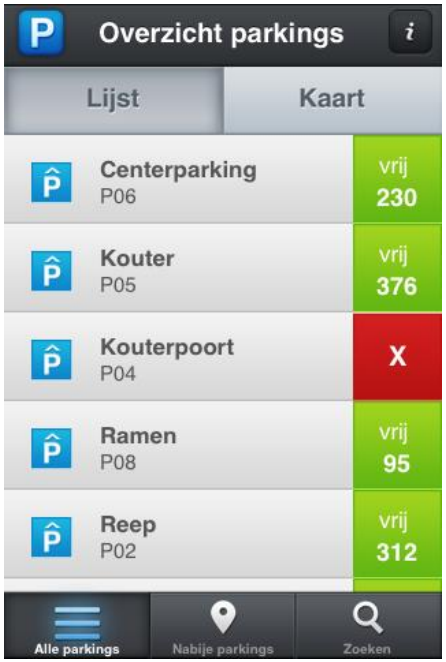
From offering content




Log in
Register
Datasets
Organizations
Groups
About
Search
its.be
Search Your Data
parking
Popular Tags
transport
parking
parking information

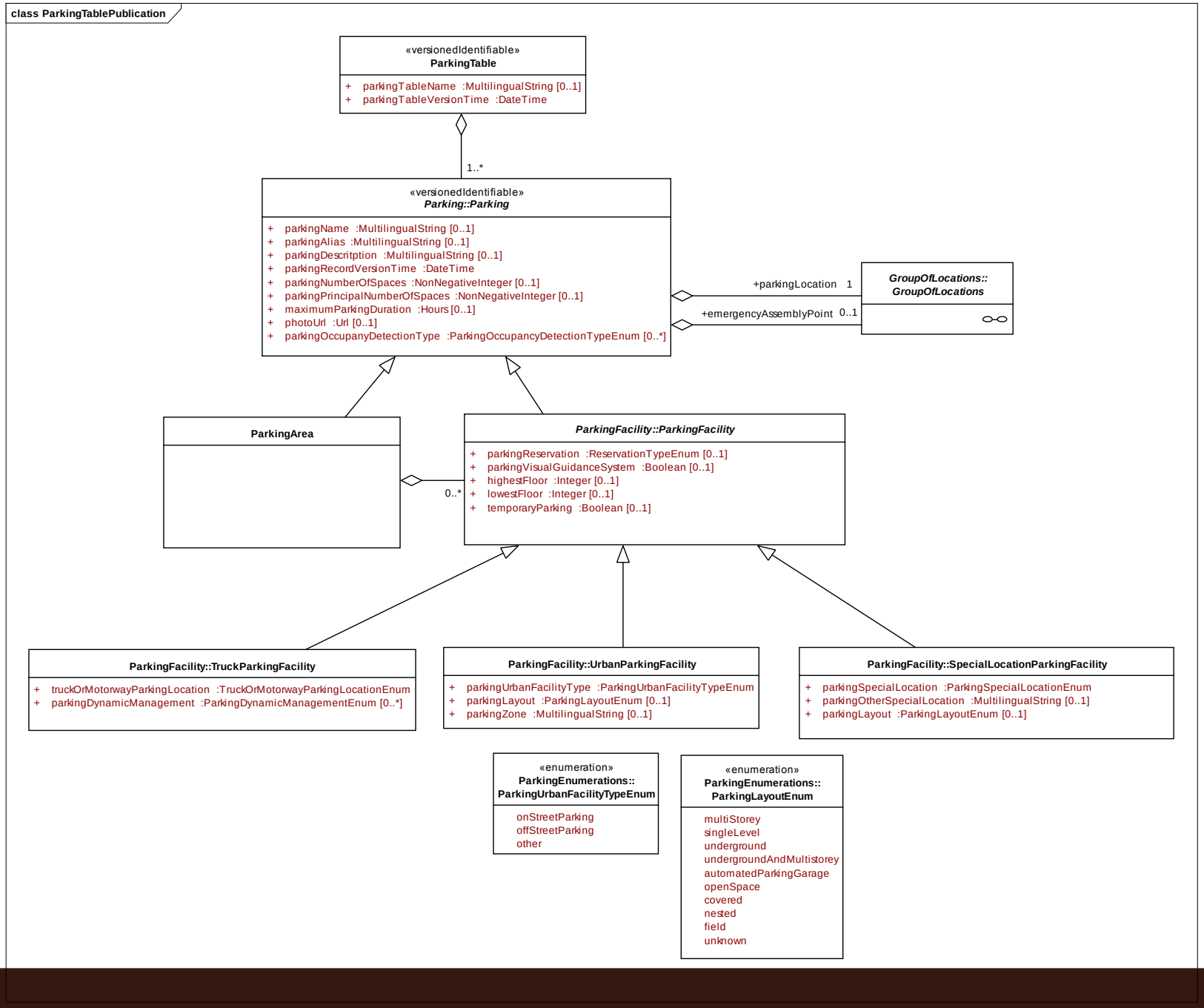

Datasets
Organizations
Groups
About
Search
its.be
/ Organizations / Stad Antwerpen / Parking details Antwerp
Parking details Antwerp
Followers
4
Organization
Dataset
Activity Stream
Related
Parking details Antwerp
These are the parking details taken from the ITS Broker portal
Data and Resources
parkingdata-antwerpen-20131107-itsps.xml
No description for this resource
Explore
Antwerp
Antwerpen
parking
Additional Info

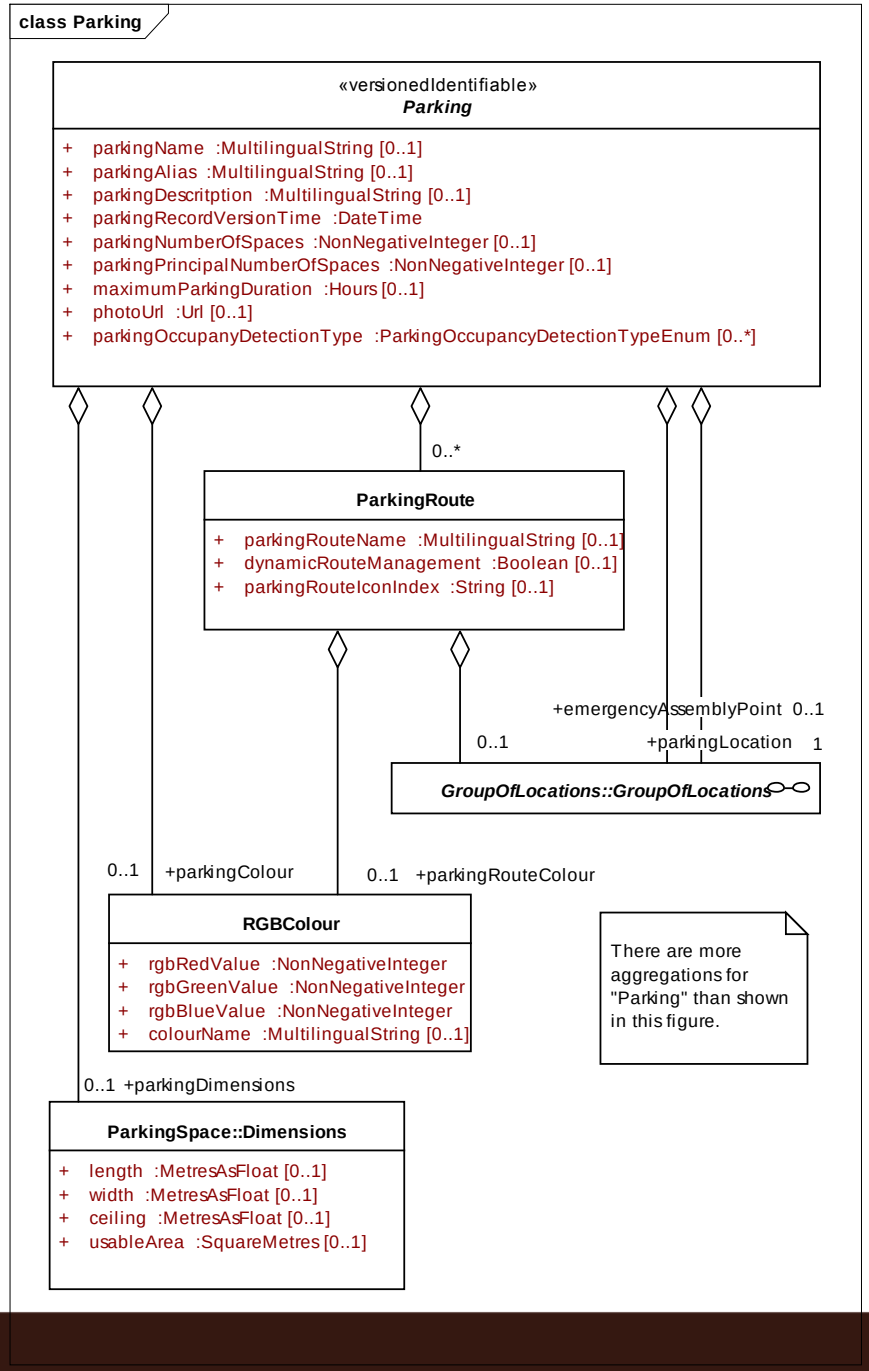
To mobile app



ANDROID APP ON Google play

Available on the iPhone App Store


class ParkingTablePublication
«versionedIdentifiable»
ParkingTable
+ parkingTableName :MultilingualString [0..1]
+ parkingTableVersionTime :DateTime
1..*
«versionedIdentifiable»
Parking::Parking
+ parkingName :MultilingualString [0..1]
+ parkingAlias :MultilingualString [0..1]
+ parkingDescritption :MultilingualString [0..1]
+ parkingRecordVersionTime :DateTime
+ parkingNumberOfSpaces :NonNegativeInteger [0..1]
+ parkingPrincipalNumberOfSpaces :NonNegativeInteger [0..1]
+ maximumParkingDuration :Hours [0..1]
+ photoUrl :Url [0..1]
+ parkingOccupanyDetectionType :ParkingOccupancyDetectionTypeEnum [0..*]
+parkingLocation 1
+emergencyAssemblyPoint 0..1
GroupOfLocations::
GroupOfLocations
ParkingArea
ParkingFacility::ParkingFacility
+ parkingReservation :ReservationTypeEnum [0..1]
+ parkingVisualGuidanceSystem :Boolean [0..1]
+ highestFloor :Integer [0..1]
+ lowestFloor :Integer [0..1]
+ temporaryParking :Boolean [0..1]
0..*
ParkingFacility::TruckParkingFacility
+ truckOrMotorwayParkingLocation :TruckOrMotorwayParkingLocationEnum
+ parkingDynamicManagement :ParkingDynamicManagementEnum [0..*]
ParkingFacility::UrbanParkingFacility
+ parkingUrbanFacilityType :ParkingUrbanFacilityTypeEnum
+ parkingLayout :ParkingLayoutEnum [0..1]
+ parkingZone :MultilingualString [0..1]
ParkingFacility::SpecialLocationParkingFacility
+ parkingSpecialLocation :ParkingSpecialLocationEnum
+ parkingOtherSpecialLocation :MultilingualString [0..1]
+ parkingLayout :ParkingLayoutEnum [0..1]
«enumeration»
ParkingEnumerations::
ParkingUrbanFacilityTypeEnum
onStreetParking
offStreetParking
other
«enumeration»
ParkingEnumerations::
ParkingLayoutEnum
multiStorey
singleLevel
underground
undergroundAndMultistorey
automatedParkingGarage
openSpace
covered
nested
field
unknown


class Parking
«versionedIdentifiable»
Parking
+ parkingName :MultilingualString [0..1]
+ parkingAlias :MultilingualString [0..1]
+ parkingDescritption :MultilingualString [0..1]
+ parkingRecordVersionTime :DateTime
+ parkingNumberOfSpaces :NonNegativeInteger [0..1]
+ parkingPrincipalNumberOfSpaces :NonNegativeInteger [0..1]
+ maximumParkingDuration :Hours [0..1]
+ photoUrl :Url [0..1]
+ parkingOccupanyDetectionType :ParkingOccupancyDetectionTypeEnum [0..*]
0..*
ParkingRoute
+ parkingRouteName :MultilingualString [0..1]
+ dynamicRouteManagement :Boolean [0..1]
+ parkingRouteIconIndex :String [0..1]
+emergencyAssemblyPoint 0..1
0..1
+parkingLocation 1
GroupOfLocations::GroupOfLocations
0..1 +parkingColour
0..1 +parkingRouteColour
RGBColour
+ rgbRedValue :NonNegativeInteger
+ rgbGreenValue :NonNegativeInteger
+ rgbBlueValue :NonNegativeInteger
+ colourName :MultilingualString [0..1]
There are more aggregations for "Parking" than shown in this figure.
0..1 +parkingDimensions
ParkingSpace::Dimensions
+ length :MetresAsFloat [0..1]
+ width :MetresAsFloat [0..1]
+ ceiling :MetresAsFloat [0..1]
+ usableArea :SquareMetres [0..1]

Conclusions

- Open data allows to (roughly) double the value of monitoring investments
- ITS directive & standardisation (European legislation& standards)
- All concerns must be addressed - open dialogue between public & private sector necessary