



Webinar

Exploring Geospatial Big Data with the ARLAS framework

Geo Spatial Big Data Solutions & Expertise





Sylvain Gaudan
CTO



Mohamed Hamou
Software Engineer
& GIS Expert



Dolphine Rambaud
Communication
& Marketing

Gisaia
ARLAS
Tutorial
Start
Configure
Explore
Markets
Offer

Our mission

Everyone benefits in their businesses
from the hidden richness of their Geo Spatial Data



Gisaia

Gisaia

DATA
ENGINEERING



CLOUD



DATA
SCIENCE



GEO
SPATIAL



MACHINE
LEARNING



BIG
DATA



DEV



PROCESSING

Gisaia

GIS



We deliver services & technologies so that you take **advantage** of
your **Geo Spatial Big Data**





ARLAS Exploration

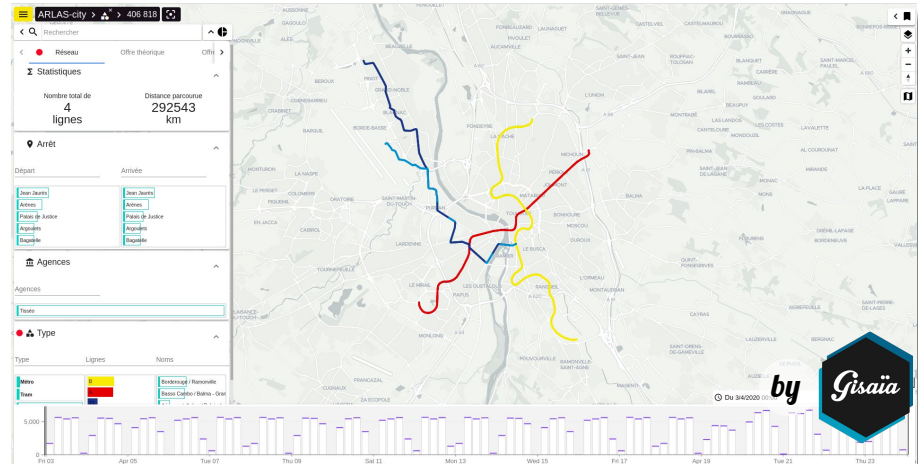
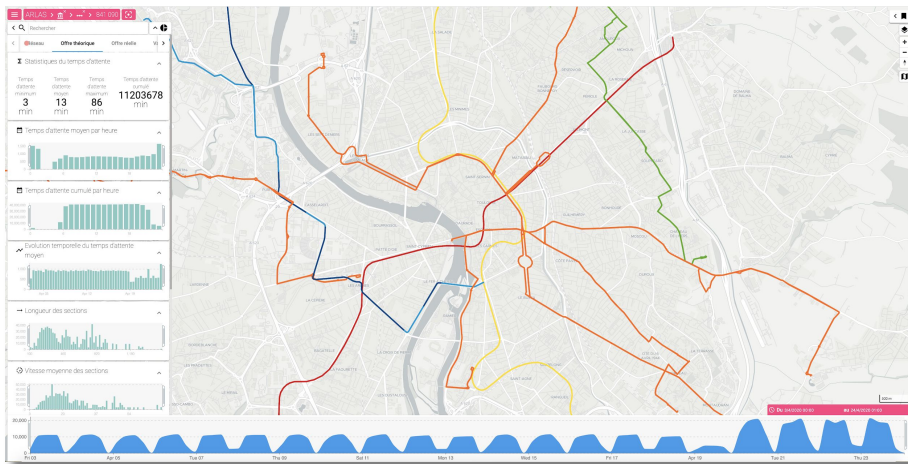
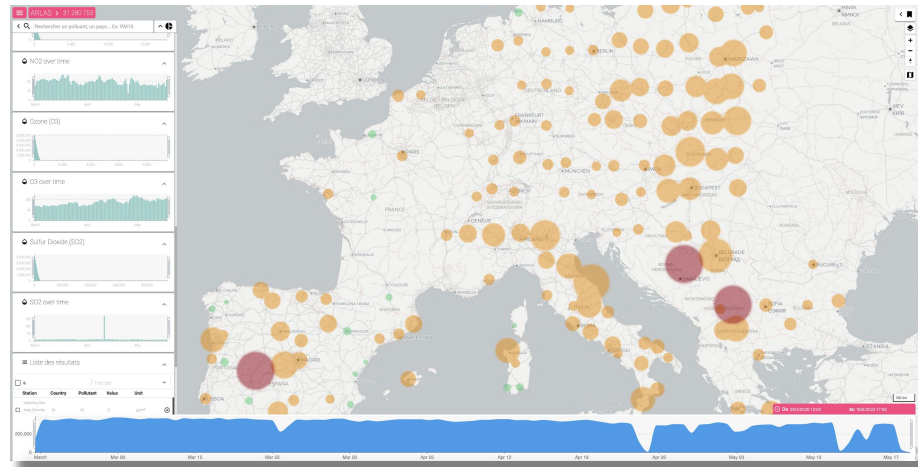
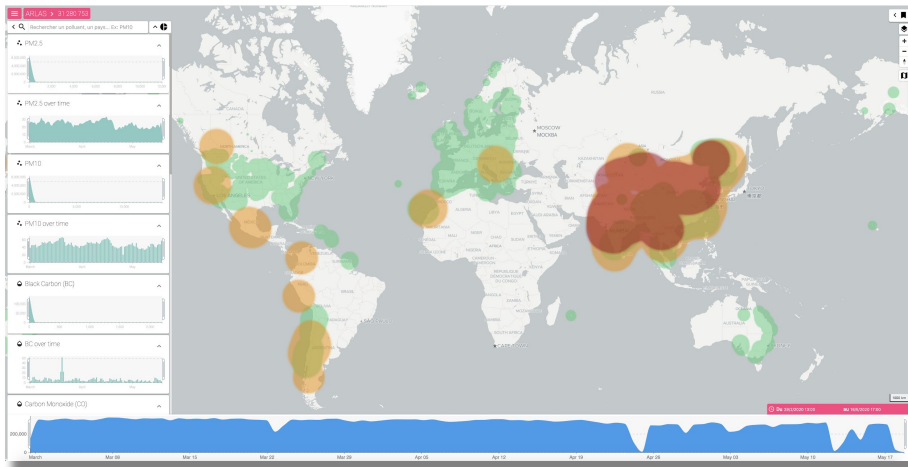


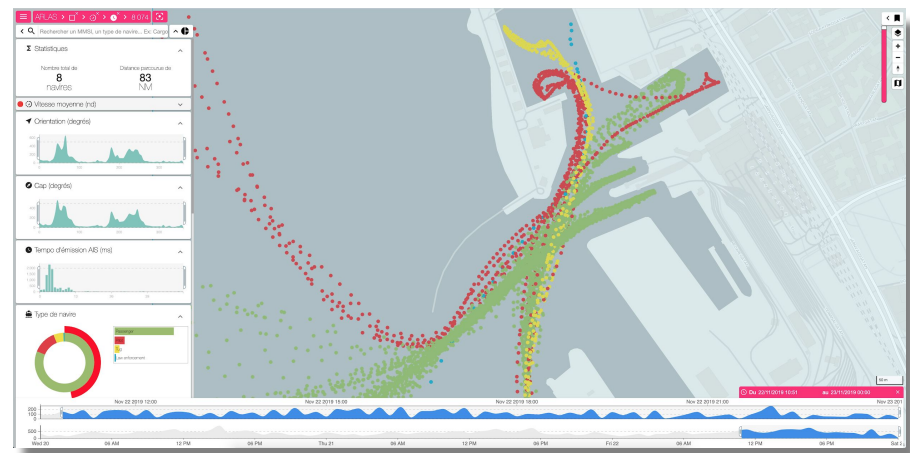
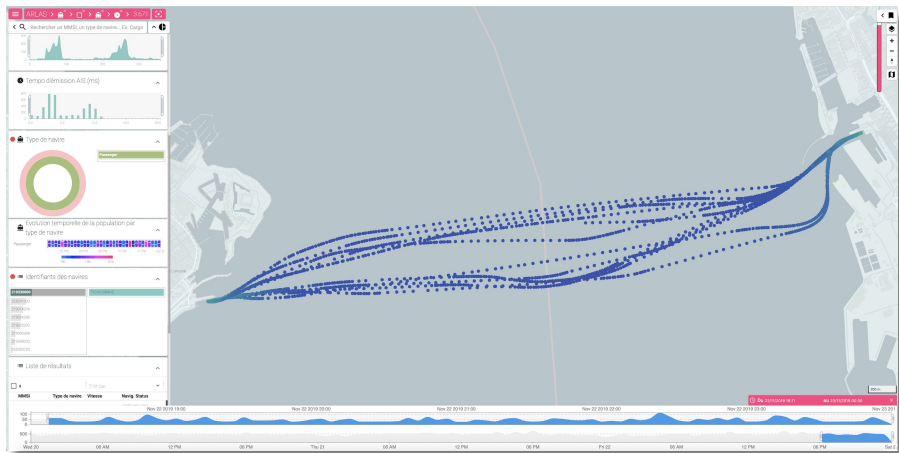
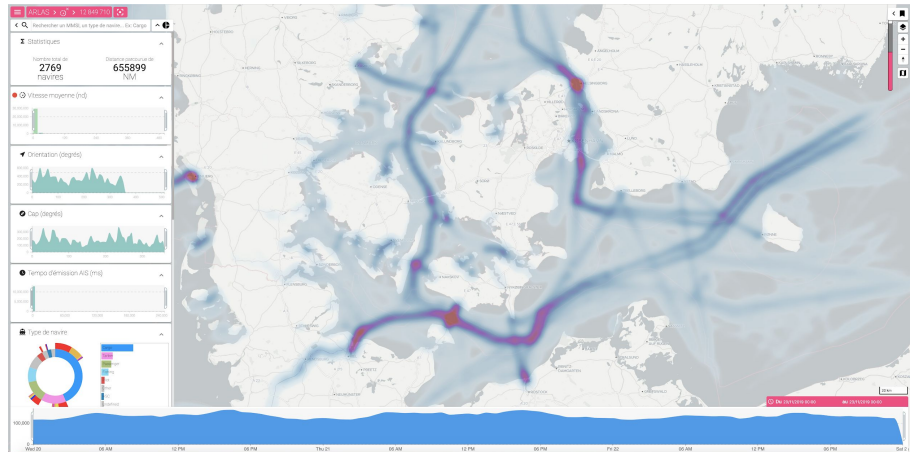
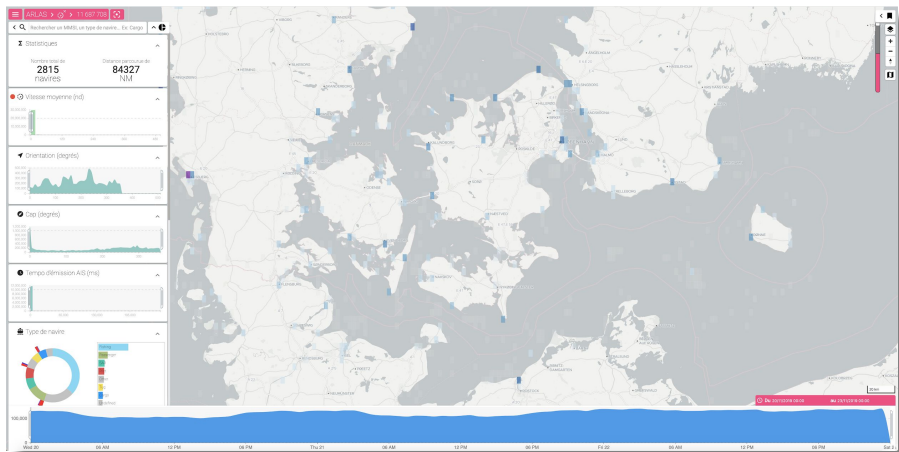
For **everyone** and not only data experts :

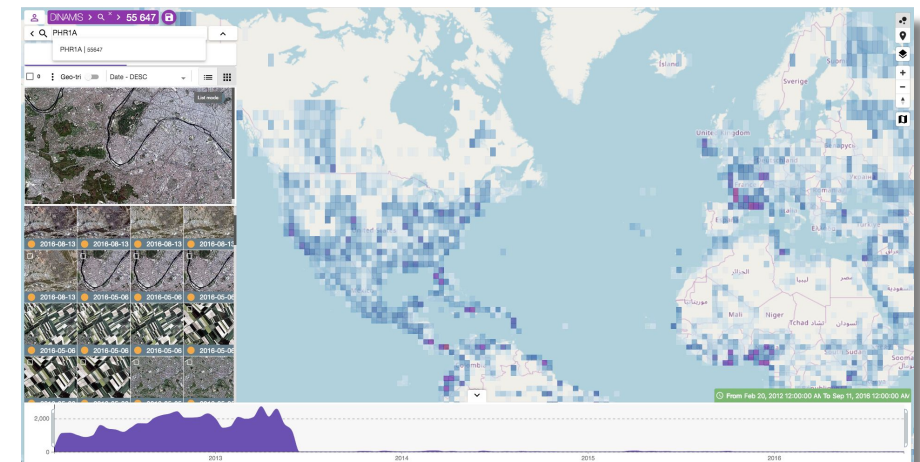
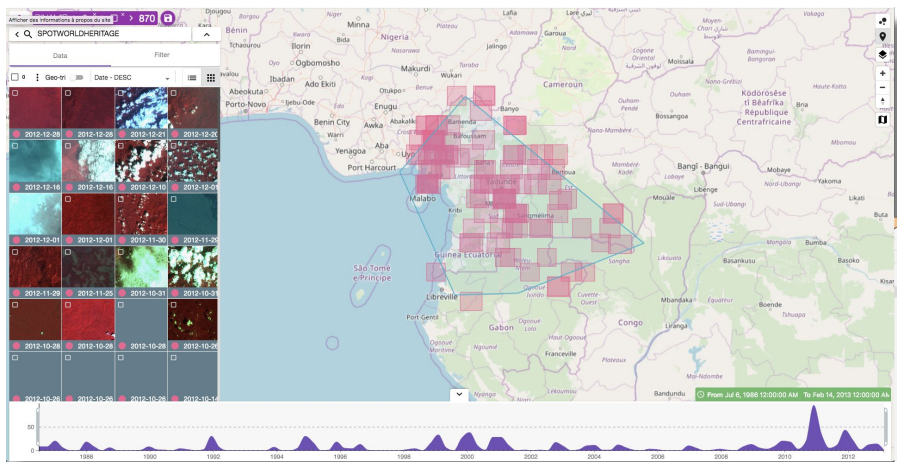
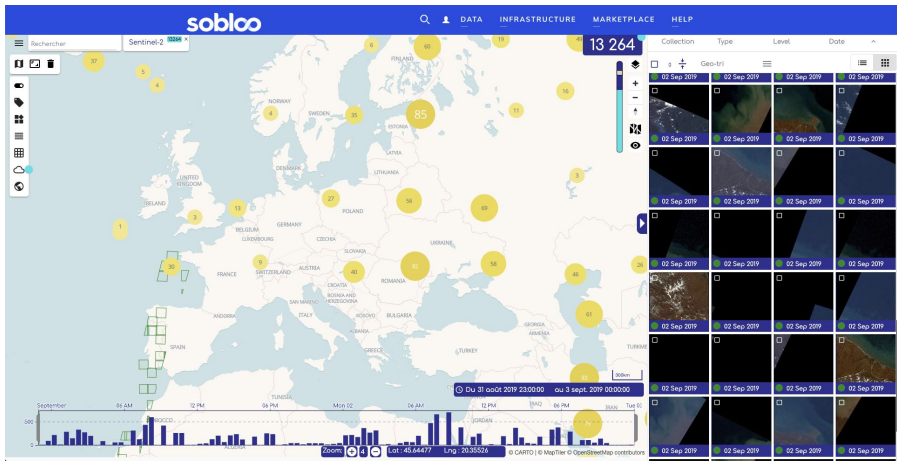
Enjoy exploring data

Multiply analyses from **instant** views, advanced mapping to find key informations for decision making

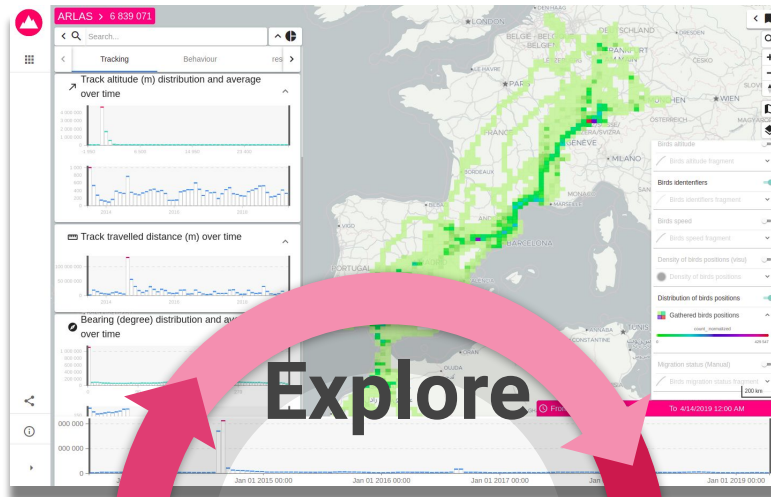
An **Open Source scalable framework** dedicated to Big GeoSpatial Data Exploration







ARLAS Exploration Stack



New!

Editing configuration : Birdtracking demo

Global configuration Visualisation sets Layers

Map initialisation

Initial zoom * Zoom level of the map when the app is first loaded

lat center latitude * Latitude of the map's centre when the app is first loaded

lon center longitude * Longitude of the map centre when the app is first loaded

Allow map extent if allowed, the map extent is updated in the URL after each map move-end

Display scale Display a dynamic scale on the map

Querying data on the map

Geographical operator * The default geographical operator when drawing a bbox or a polygon.

Collection Geographical field * The queried geometry field when drawing a bbox or a polygon

Advanced

Merge Pan For Last * A merge pan around the screen where geographical data will be loaded.

Build
Manage

New!

Map & new configuration

- Birdtracking
- Public-transportation
- AIS courses
- OpenAq Air Pollution

Readers: None

Writers: None

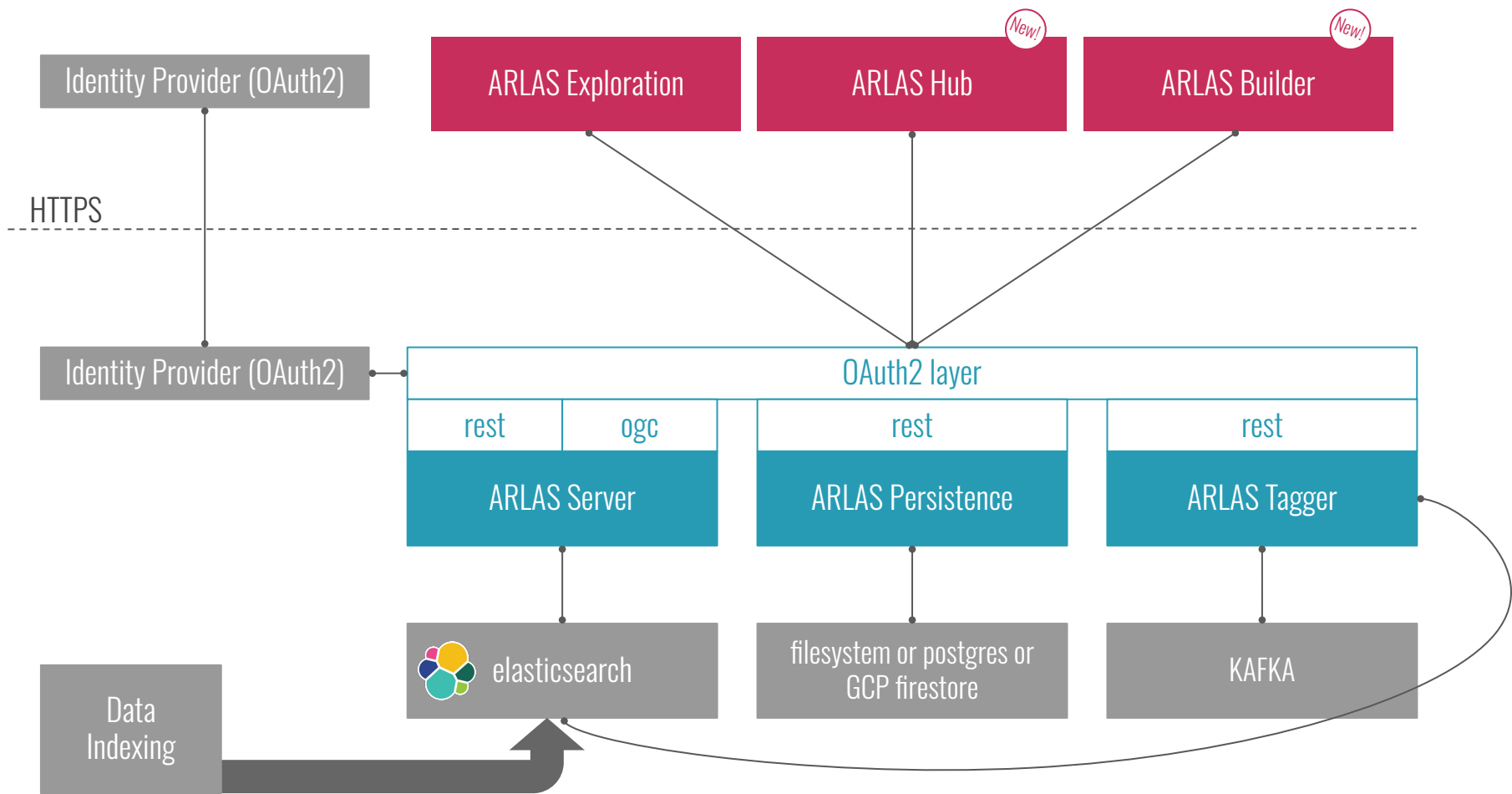
Highlights: - Tracking, - Behaviour, - Measurements

View, Edit, Duplicate, Share, Delete

Readers: None

Writers: None

Highlights: - NO2, - CO, - PM2.5 & PM10



Exploring bird tracking data with ARLAS



Martin Wikelski - Max Planck Institute for Ornithology in Radolfzell

Exploring some bird tracking data with ARLAS

| 1 | identifier | name | location | timestamp | height_m | speed_ms | trail |
|----|---------------|-------------------------------------|--|------------|----------|----------|---|
| 2 | 00009829ead1a | Redrunner + / DER AU057 (eobs 3339) | '{"lon":8.727199599999999,"lat":50.4122359}' | 1491922507 | 190.65 | 0.15 | '{"coordinates":[[8.727199599999999,50.4122359]]}' |
| 3 | 0002234c8926c | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-4.23421765,"lat":40.3891534}' | 1489520706 | 764.15 | 0.24 | '{"coordinates":[-4.23421765,40.3891534]}' |
| 4 | 00023213e29a2 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":5.37027765,"lat":46.28442295}' | 1490108406 | 769 | 0.135 | '{"coordinates":[[5.37027765,46.28442295]]}' |
| 5 | 000459735349a | Redrunner + / DER AU057 (eobs 3339) | '{"lon":8.74209945,"lat":50.44546895}' | 1500035406 | 212 | 0.23 | '{"coordinates":[[8.74209945,50.44546895]]}' |
| 6 | 0004e7ddeda3a | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-3.6039232500000002,"lat":40.3109780}' | 1506685807 | 575.5 | 0.3 | '{"coordinates":[-3.6039232500000002,40.3109780]}' |
| 7 | 0006b2ec82830 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":8.726527749999999,"lat":50.5421592}' | 1498839907 | 230.1 | 0.215 | '{"coordinates":[[8.726527749999999,50.5421592]]}' |
| 8 | 0006bfd8a94c1 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-4.99635765,"lat":34.0566479}' | 1514198407 | 422.9 | 0.6 | '{"coordinates":[-4.99635765,34.0566479]}' |
| 9 | 00081575beb50 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-4.995831450000001,"lat":34.0567655}' | 1511196607 | 435.9 | 0.29 | '{"coordinates":[-4.995831450000001,34.0567655]}' |
| 10 | 00084269d4242 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-4.9967432,"lat":34.05661765000001}' | 1511718607 | 431.75 | 0.26 | '{"coordinates":[-4.9967432,34.05661765000001]}' |
| 11 | 000992ad5da09 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-4.654495900000001,"lat":40.01803}' | 1489345513 | 494.1 | 0.38 | '{"coordinates":[-4.654495900000001,40.01803]}' |
| 12 | 000b0c629184a | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-5.55910535,"lat":33.88583335}' | 1486528506 | 582.05 | 0.57 | '{"coordinates":[-5.55910535,33.88583335]}' |
| 13 | 000d4d010d85e | Redrunner + / DER AU057 (eobs 3339) | '{"lon":8.439246,"lat":50.55283615}' | 1497636606 | 193.55 | 0.305 | '{"coordinates":[[8.439246,50.55283615]]}' |
| 14 | 000dbfbcca195 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":8.6102901,"lat":50.58217405}' | 1500138307 | 202.45 | 0.52 | '{"coordinates":[[8.6102901,50.58217405]]}' |
| 15 | 000dd2c2b375f | Redrunner + / DER AU057 (eobs 3339) | '{"lon":2.47197235,"lat":42.14779555}' | 1505741406 | 898.8 | 0.25 | '{"coordinates":[[2.47197235,42.14779555]]}' |
| 16 | 000deb0117d79 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":8.612401250000001,"lat":50.57656805}' | 1497895506 | 198.7 | 0.17 | '{"coordinates":[[8.612401250000001,50.57656805]]}' |
| 17 | 000e4f5ab1563 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":8.610191550000001,"lat":50.5740664}' | 1495183206 | 202 | 0.23 | '{"coordinates":[[8.610191550000001,50.5740664]]}' |
| 18 | 000ee23283de | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-6.0277625,"lat":37.070802900000004}' | 1507731306 | 124.7 | 0.33 | '{"coordinates":[-6.0277625,37.070802900000004]}' |
| 19 | 000f03a36f136 | Niclas / DER AU053 (eobs 3341) | '{"lon":0.51577695,"lat":41.538413049999996}' | 1487392807 | 187.05 | 0.565 | '{"coordinates":[[0.51577695,41.538413049999996]]}' |
| 20 | 000f0bd3adaab | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-5.55906445,"lat":33.8858262}' | 1488638707 | 582.45 | 0.185 | '{"coordinates":[-5.55906445,33.8858262]}' |
| 21 | 000f21101dd15 | Redrunner + / DER AU057 (eobs 3339) | '{"lon":-5.559030549999999,"lat":33.8857732}' | 1488027307 | 581.75 | 0.77 | '{"coordinates":[-5.559030549999999,33.8857732]}' |





81 birds, 6.8 millions positions

Tutorial: Exploring some birdtracking data with ARLAS

```
git clone \
  https://github.com/gisaia/ARLAS-stack-birdtracking-tutorial.git

cd ARLAS-stack-birdtracking-tutorial
```

What will we do ?

- 1- Start the ARLAS stack 
- 2- Create `birdtracking_index` in Elasticsearch 
- 3- index `birdtracking_data.csv` in Elasticsearch 
- 4- reference `birdtracking_index` in ARLAS 

1- Starting the ARLAS stack

```
docker-compose up -d \  
  arlas-wui \  
  arlas-hub \  
  arlas-builder \  
  arlas-server \  
  arlas-persistence-server \  
  elasticsearch  
  
Creating network "arlas-exploration-stack_esnet" with the default  
driver  
Creating arlas-persistence-server ... done (http://localhost19997)  
Creating elasticsearch ... done (http://localhost9200)  
Creating arlas-server ... done (http://localhost19999)  
Creating arlas-wui ... done (http://localhost8096)  
Creating arlas-builder ... done (http://localhost8095)  
Creating arlas-hub ... done (http://localhost8094)
```

2- Creating `birdtracking_index` in Elasticseach

```
curl -XPUT \  
  http://localhost:9200/birdtracking_index/?pretty \  
  -d @configs/birdtracking.es_mapping.json \  
  -H 'Content-Type: application/json' \  
  
{  
  "acknowledged" : true,  
  "shards_acknowledged" : true,  
  "index" : "birdtracking_index"  
}
```


2- Creating `birdtracking_index` in Elasticseach

```
cat configs/birdtracking.es_mapping.json
{
  "mappings": {
    "dynamic": false,
    "properties": {
      "identifier": {
        "type": "keyword"
      },
      "name": {
        "type": "keyword",
      },
      "location": {
        "type": "geo_point"
      },
    },
  },
}
```

3- indexing `birdtracking_data.csv` in Elasticsearch

```
cat birdtracking_data.csv \  
  | ./logstash-7.4.2/bin/logstash \  
    -f configs/birdtracking2es.logstash.conf  
  
{  
  "count" : 77 384,  
  "_shards" : {  
    "total" : 1,  
    "successful" : 1,  
    "skipped" : 0,  
    "failed" : 0  
  }  
}
```

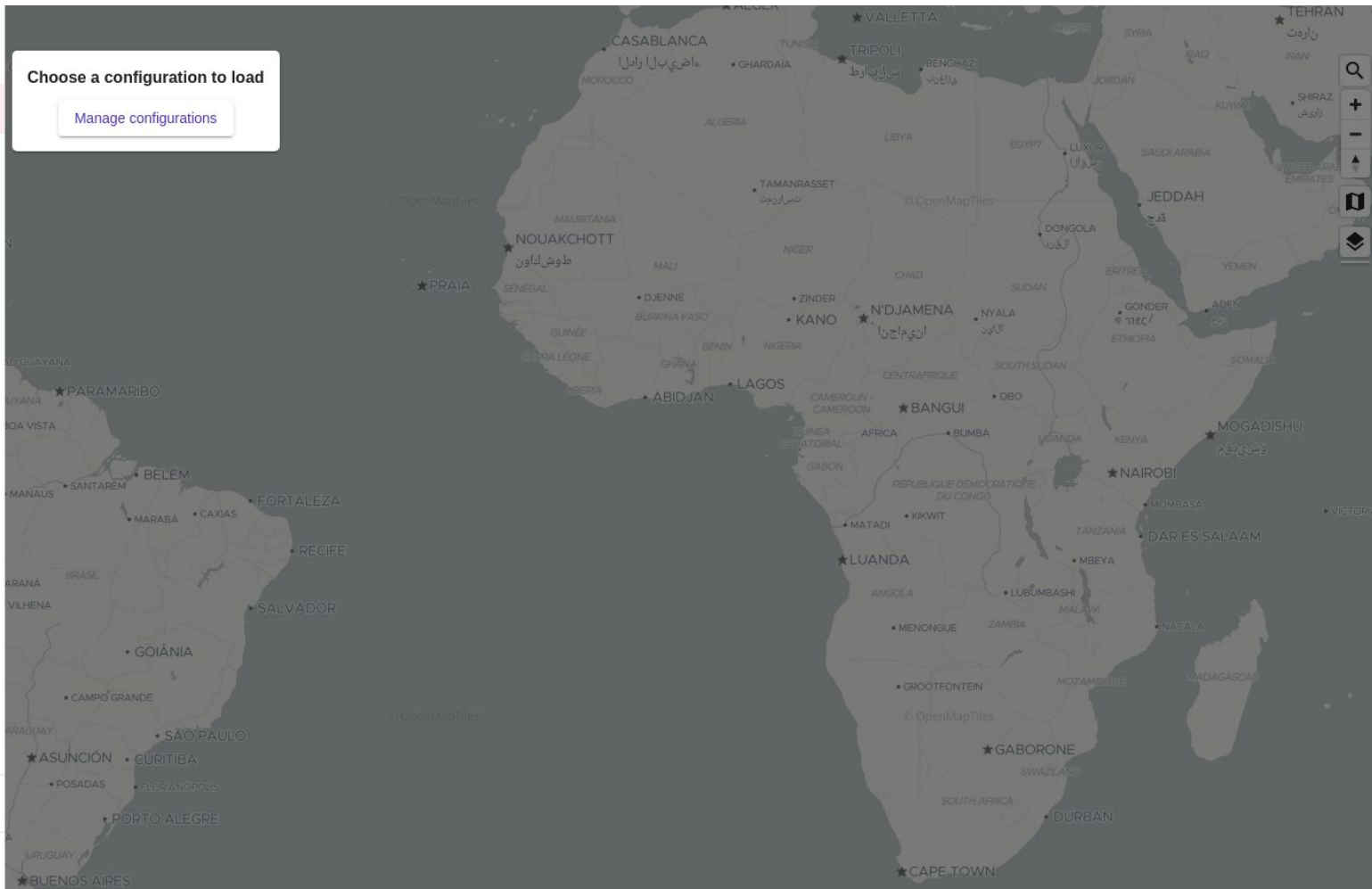
4- referencing `birdtracking_index` in ARLAS

```
curl -XPUT \  
  -H 'Content-Type: application/json;charset=utf-8' \  
  -H 'Accept: application/json' \  
  "http://localhost:19999/arlacollections/birdtracking  
collection?pretty=true" \  
  -d @birdtracking_collection.json  
{  
  "collection_name" : "birdtracking_collection",  
  "params" : {  
    "index_name" : "birdtracking_index",  
    "id_path" : "identifier",  
    "geometry_path" : "trail",  
    "centroid_path" : "location",  
    "timestamp_path" : "timestamp",  
    "custom_params" : {  
      "timestamp_format" : "epoch_second"  
    }  
  }  
}
```



Choose a configuration to load

Manage configurations





ARLAS HuB

+ Create a new configuration





+ Create a new configuration

Create new configuration

Name

Birdracking| x

Create

Cancel





Map

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Look 'n feel

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Download

New configuration

Server URL

http://localhost:19999/arlax

Show collections

Collections

birdstracking_collection

Choose collections available in configuration.
Only one for now.

Back

Start configuration





Map initialisation

Initial zoom *



Zoom level of the map when the app is first loaded

Init center latitude *

40



Latitude of the map's centre when the app is first loaded

Init center longitude *

3

Longitude of the map centre when the app is first loaded

Allow map extent

If allowed, the map extent is updated in the URL after each map move-end

Display scale

Display a dynamic scale on the map

Querying data on the map

Geographical operator *

intersects



The default geographical operator when drawing a bbox or a polygon.

Collection

birdstracking_collection

Geographical field *

trail



The queried geometry field when drawing a bbox or a polygon

Advanced

Marge Pan For Load *

5

A marge pan around the screen where geographical data will be loaded.



Map

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Add layer

A layer helps you analyse a geographical information in your collection. You can customise what geographical data to display and how to render it.

| # | Name | Mode | Collection | Zoom min | Zoom max | Actions |
|---|------|------|------------|----------|----------|---------|
|---|------|------|------------|----------|----------|---------|

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Create configuration

Global configuration

Visualisation sets

Layers

Preview

Edit a layer

Name *

Birds trajectories

Name of the layer. Only used for visualization.

Mode *

Features

Mode of the layer.

Visualisation sets

All layers

The layer can be put in one or several visualisation sets

1 Collection

2 Geometry

3 Visibility

4 Style

Collection *

birdstracking_collect...

Next

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Create configuration

Global configuration

Visualisation sets

Layers

Preview

Edit a layer

Name *

Birds trajectories

Name of the layer. Only used for visualization.

Mode *

Features

Mode of the layer.

Visualisation sets

All layers

The layer can be put in one or several visualisation sets

1 Collection

2 Geometry

3 Visibility

4 Style

Layer rendered geometry

Layer geometry field *

trail

Layer geometry field description



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Create configuration

Global configuration

Visualisation sets

Layers

Preview

Edit a layer

Name *

Birds trajectories

Name of the layer. Only used for visualization.

Mode *

Features

Mode of the layer.

Visualisation sets

All layers

The layer can be put in one or several visualisation sets

1 Collection

2 Geometry

3 Visibility

4 Style

Visible

Whether the layer is visible or not

Zoom min *

1

Minimum zoom level to display the layer

Zoom max *

22

Maximum zoom level to display the layer

Features max *

5000

Maximum number of features to display this layer

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Mode *

Features

Mode of the layer.

Visualisation sets

All layers

The layer can be put in one or several visualisation sets

Collection

Geometry

Visibility

4 Style

geometry feature shape *

Line

geometry feature shape description

Opacity *

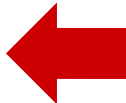


opacity description

Color *

Fix

Fixed color *



Color fixed description

Width *

Fix

Fixed width *



Slider fixed value description

Back

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Cancel



Create configuration

Global configuration

Visualisation sets

Layers

Preview

Add layer

A layer helps you analyse a geographical information in your collection. You can customise what geographical data to display and how to render it.


| # | Name | Mode | Collection | Zoom min | Zoom max | Actions |
|---|--|----------|--------------------------|----------|----------|---------|
| |  Birds trajectories | Features | birdstracking_collection | 1 | 22 | ⋮ |



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Global configuration

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Layers

Preview



All layers

Birds trajectories

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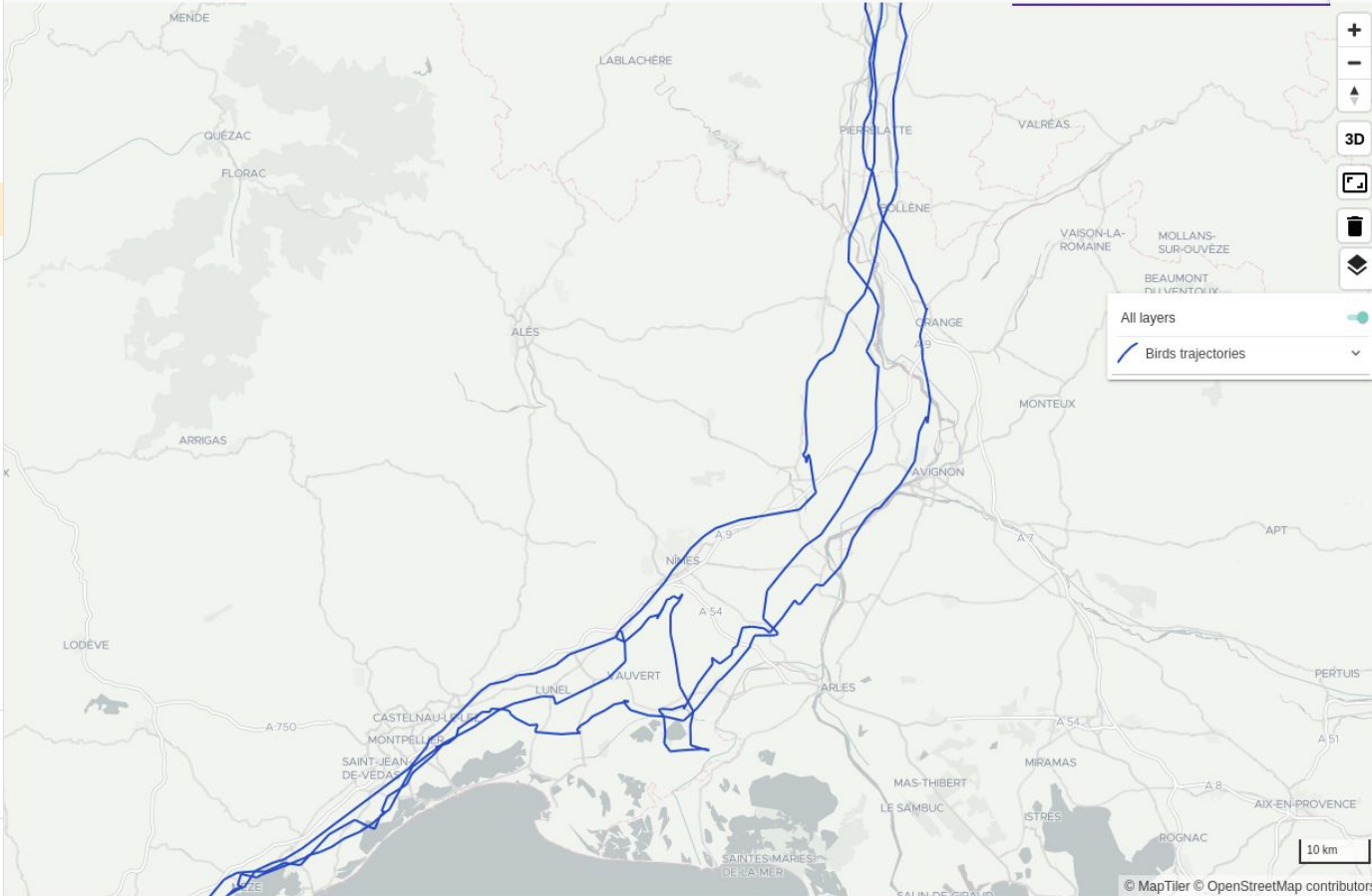
Analytics

Side Modules

Look 'n feel

Save

Download



10 km

Use detailed timeline?

Data

Render

Timeline

Temporal aggregation field *

x

The timeline represents the chosen aggregation field distribution.

Fixed buckets number Fixed bucket's interval

Number of buckets *

There are two ways of configuring the timelines's buckets size.
- Fixed buckets number: you choose how many buckets to have on the timeline.
- Fixed bucket's interval: you decide how large a bucket's interval should be.



Timeline

Search

Analytics

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Use detailed timeline?

Data

Render

Timeline

Chart title *

Number of birds positions

Chart title description

Chart type *

bars

Chart type description

Date format *

English (%b %d %Y...

Date format description

Is multi-selectable

Is timeline multi-selectable description

 Map

 Timeline

 Search

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Search

Placeholder *

Search a bird

Text displayed in search bar



Search field *

internal.fulltext

x

Search field description



Autocomplete field *

internal.fulltext

x

Autocomplete field description

Autocomplete size *

5

Autocomplete size description

Map

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Analytics board is empty. [Create a new tab.](#)

 Map

 Timeline

 Search

 Analytics

 Side Modules

 Look 'n feel

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 Download





Analytics board is empty. [Create a new tab.](#)

Map

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Analytics

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Save

Download

Name

Tracking

OK

Cancel



Tracking



+ Add a group



Map

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Tracking



Title

Birds identifiers



Birds identifiers



+ Add a group

Map

Timeline

Search

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Look 'n feel

Save

Download



Tracking



Title

Birds identifiers



+ Add

Birds identifiers

Map

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Look 'n feel

Save

Download

Choose widget type

histogram

donut

powerbars

resultlist

metric

swimlane

Add

Cancel

Tracking



Title

Birds identifiers



Birds identifiers



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Analytics

Side Modules

Look 'n feel

Save

Download

Powerbars

powerbar title *

Title Bird id|

Data

Render

Powerbar field *

name



Powerbar field description

Powerbar size *



10

powerbar size description

Cancel

Save



Tracking



Title

Birds identifiers



Bird id



+ Add a group

Birds identifiers



Bird id

Redrunner + / DER AU057 (eobs 3339)

Niclas | DER AU053 (eobs 3341)

Map

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Tracking



Map

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1 Analytics

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Look 'n feel

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Download

Title
Birds identifiers

Bird id +

Birds identifiers

Bird id

| |
|-------------------------------------|
| Redrunner + / DER AU057 (eobs 3339) |
| Niclas DER AU053 (eobs 3341) |

Title
Speed distribution

+ Add

Speed distribution

Choose widget type

| | |
|-----------|------------|
| histogram | donut |
| powerbars | resultlist |
| metric | swimlane |

Add Cancel



Tracking



Map

Timeline

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Side Modules

Look 'n feel

Save

Download

Histogram

Choose a title for this histogram *

Title Speed distribution

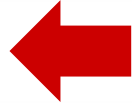
Data

Render

x-Axis

x-Axis field *

speed_ms x



Choose a temporal or numerical field for the horizontal axis

Fixed buckets number

Fixed bucket's interval

Number of buckets *

50

There are two ways of configuring the chart's buckets size.
- Fixed buckets number: you choose how many buckets to have on the chart.
- Fixed bucket's interval: you decide how large a bucket's interval should be.

y-Axis

y-Axis metric

Hits count



- choose the metric represented on the y-Axis

Cancel

Save



Tracking



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☰

Title
Birds identifiers

Bird id

☒

☰

Title
Speed distribution

Speed distribut...

☒

+ Add a group

Birds identifiers

Bird id

Redrunner + / DER AU057 (eobs 3339)

Niclas DER AU053 (eobs 3341)

Speed distribution








[+ Create a new configuration](#)

 Birdracking 

Readers
None
Writers
None

Highlights
- Tracking

-  View
-  Edit
-  Duplicate
-  Share
-  Delete



ARLAS > 77 384

< Search...

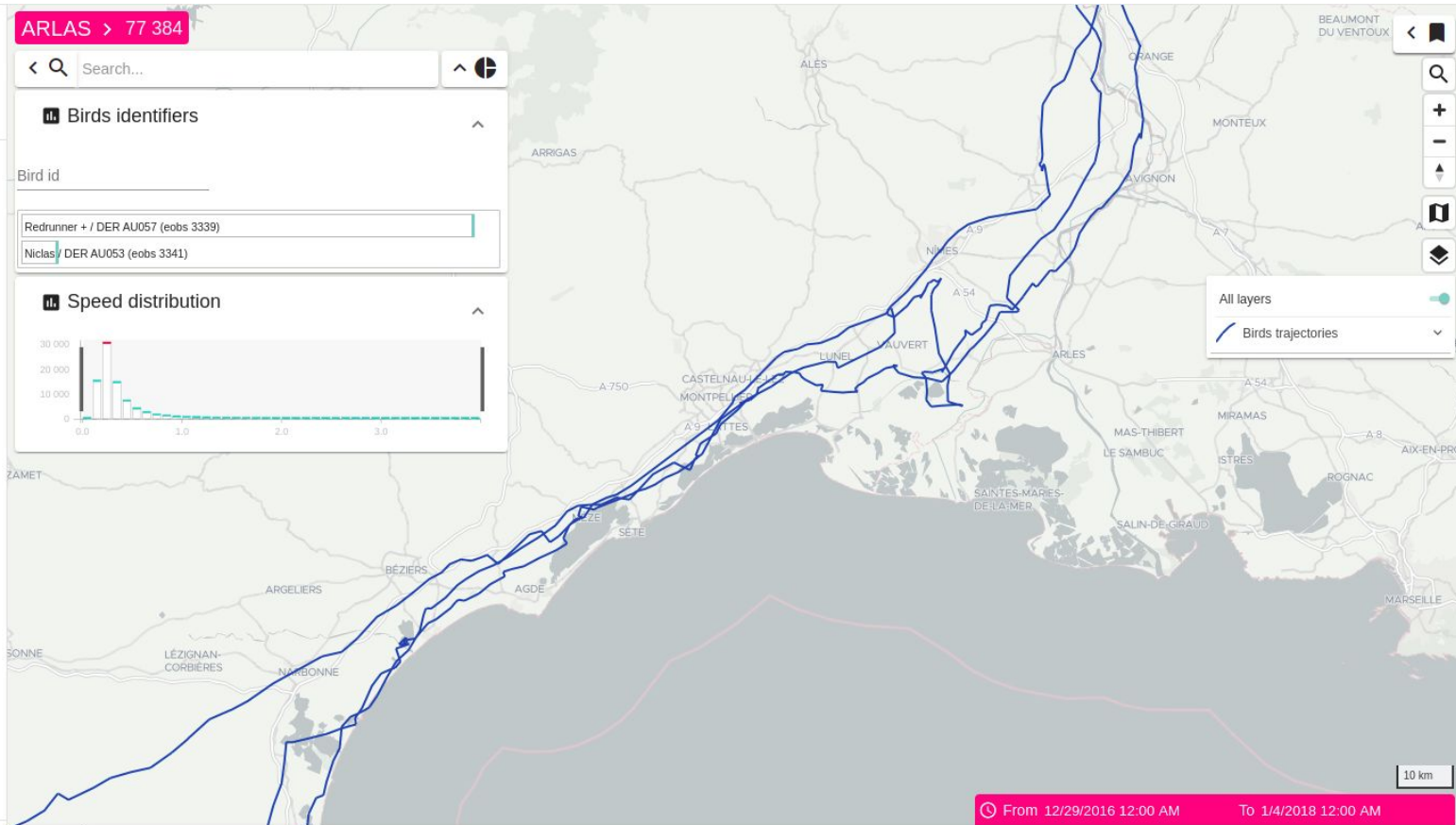
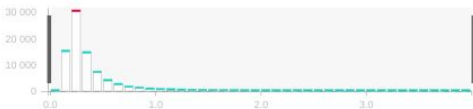
Birds identifiers

Bird id

Redrunner + / DER AU057 (eobs 3339)

Niclas / DER AU053 (eobs 3341)

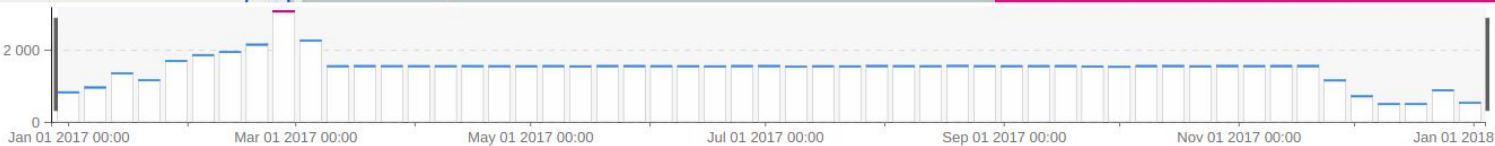
Speed distribution



All layers

Birds trajectories


From 12/29/2016 12:00 AM To 1/4/2018 12:00 AM



+ Create a new configuration

 Birdracking 

Readers
None
Writers
None
Highlights
- Tracking

-  View
-  Edit
-  Duplicate
-  Share
-  Delete





Global configuration

Visualisation sets

Layers

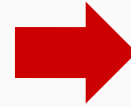
Preview

Add layer

A layer helps you analyse a geographical information in your collection. You can customise what geographical data to display and how to render it.

| # | Name | Mode | Collection | Zoom min | Zoom max | Actions |
|---|--------------------|----------|-------------------------|----------|----------|---------|
| 1 | Birds trajectories | Features | birdtracking_collection | 1 | 22 | ⋮ |

- Preview
- Edit
- Delete



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Mode *

Features

Mode of the layer.

Visualisation sets

All layers

The layer can be put in one or several visualisation sets

1 Collection

2 Geometry

3 Visibility

4 Style

geometry feature shape *

Line

geometry feature shape description

Opacity *



opacity description

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Fixed width *



Slider fixed value description

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geometry feature shape description

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Source field *

name

Manual source field description
Manage colors description

Manage colors

Width *

Fix

Slider fixed value description

Fixed width *



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< 🔍 Search...

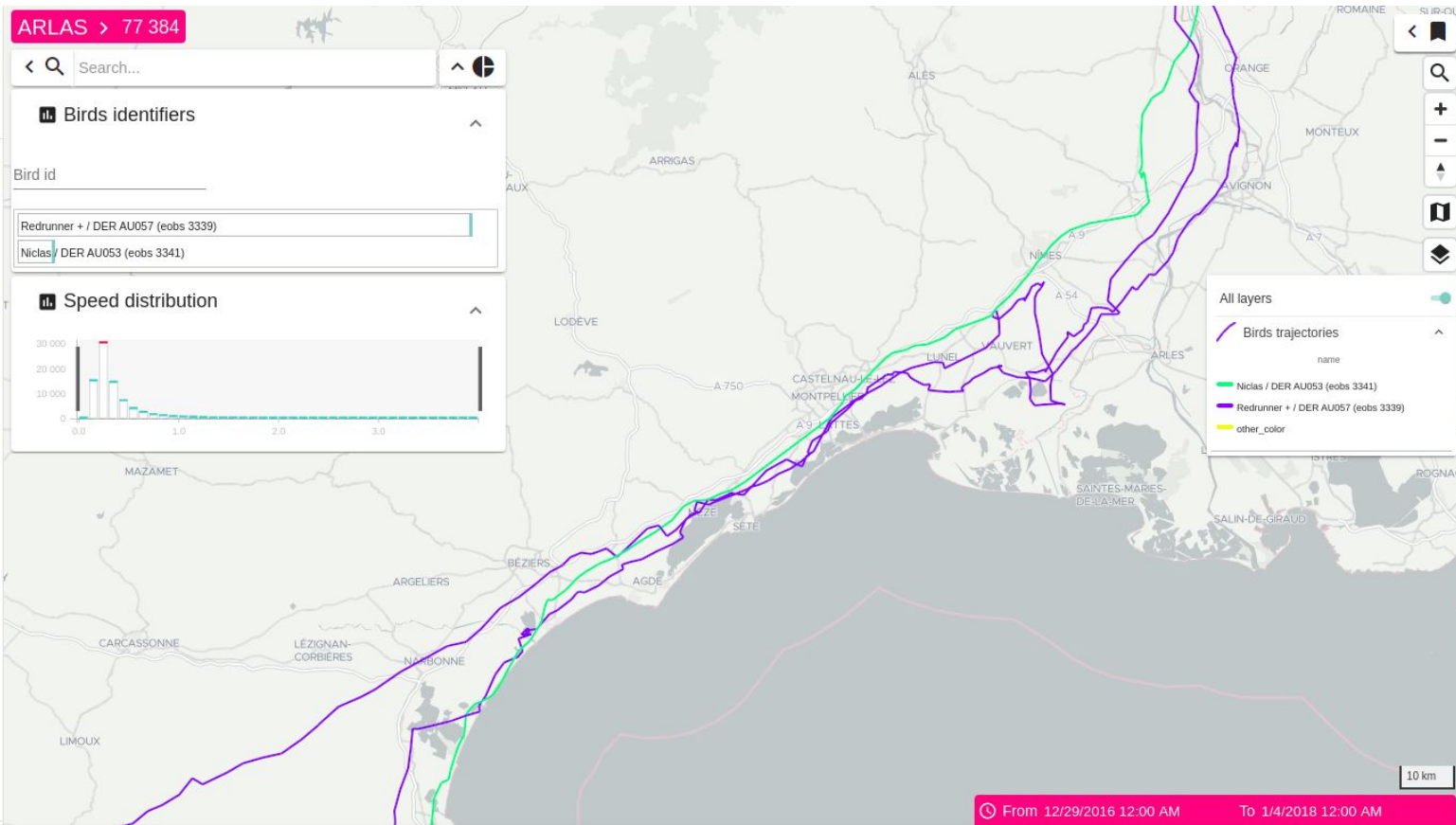
Birds identifiers

Bird id

Redrunner + / DER AU057 (eobs 3339)

Niclas / DER AU053 (eobs 3341)

Speed distribution

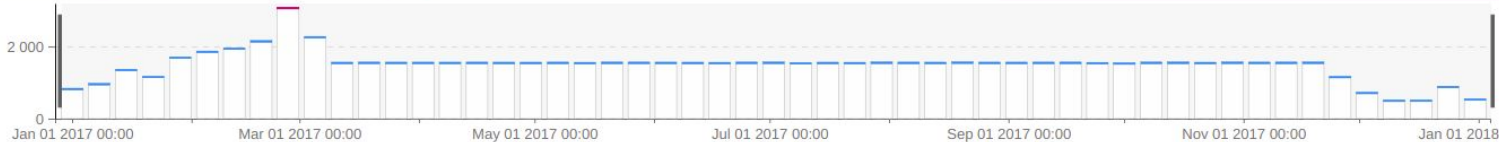


All layers

Birds trajectories

- name
- Niclas / DER AU053 (eobs 3341)
- Redrunner + / DER AU057 (eobs 3339)
- other_color

🕒 From 12/29/2016 12:00 AM To 1/4/2018 12:00 AM





Global configuration

Visualisation sets

Layers

Preview



Add a Visualisation set

A visualisation set is a space where to organise layers that have to be displayed/hidden together.

| Name | Layers | Displayed by default | Actions |
|------------|----------------------|-------------------------------------|---------|
| All layers | • Birds trajectories | <input checked="" type="checkbox"/> | ⋮ |

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Visualisation sets

Layers

Preview

Edit a visualisation set

Name *

Altitude layers

Name of the visualisation set

Displayed by default

When the map is loaded, the layers put in this Visualisation set will be displayed/hidden

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Global configuration

Visualisation sets

Layers

Preview

Add a Visualisation set

A visualisation set is a space where to organise layers that have to be displayed/hidden together.

| Name | Layers | Displayed by default | Actions |
|-----------------|----------------------|-------------------------------------|---------|
| All layers | • Birds trajectories | <input type="checkbox"/> | ⋮ |
| Altitude layers | | <input checked="" type="checkbox"/> | ⋮ |

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Edit a layer

Name *

Birds positions altitude



Name of the layer. Only used for visualization.

Mode *

Features

Mode of the layer.

Visualisation sets

All layers

Altitude layers

The layer can be put in one or several visualisation sets

1 Collection

2 Geometry

3 Visibility

4 Style

Collection *

birdstracking_collect...

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Features

Mode of the layer.

Visualisation sets

All layers

Altitude layers

The layer can be put in one or several visualisation sets

Collection

Geometry

Visibility

4 Style

geometry feature shape *

Line

geometry feature shape description

Opacity *



opacity description

Color *

Interpolated

Source field *

height_m



Interpolated source field description

Normalize by key description

Normalize

Normalize by key?

Manage palette

Width *

Back



Mode *

Features

Mode of the layer.

Visualisation sets

All layers

Altitude

The layer can be put in one or several visualisation sets

Collect

geometry feat

Line

Opacity *

Color *

Interpolate

Source field *

height_m

Normalize

Normalize

Manage palette

4 Style

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Select a palette



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Download

Opacity * 

opacity description

Color *
Interpolated

Source field *
height_m

Normalize
Normalize by key?

Manage palette

Interpolated source field description
Normalize by key description

Width *
Interpolated

Source field *
timestamp

Normalize
Normalize by key?

Key *
name

Minimum width * 

Maximum width * 

Interpolated source field description
Normalize by key description
Normalize key field description
Min value description
Max value description



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< Q Search...

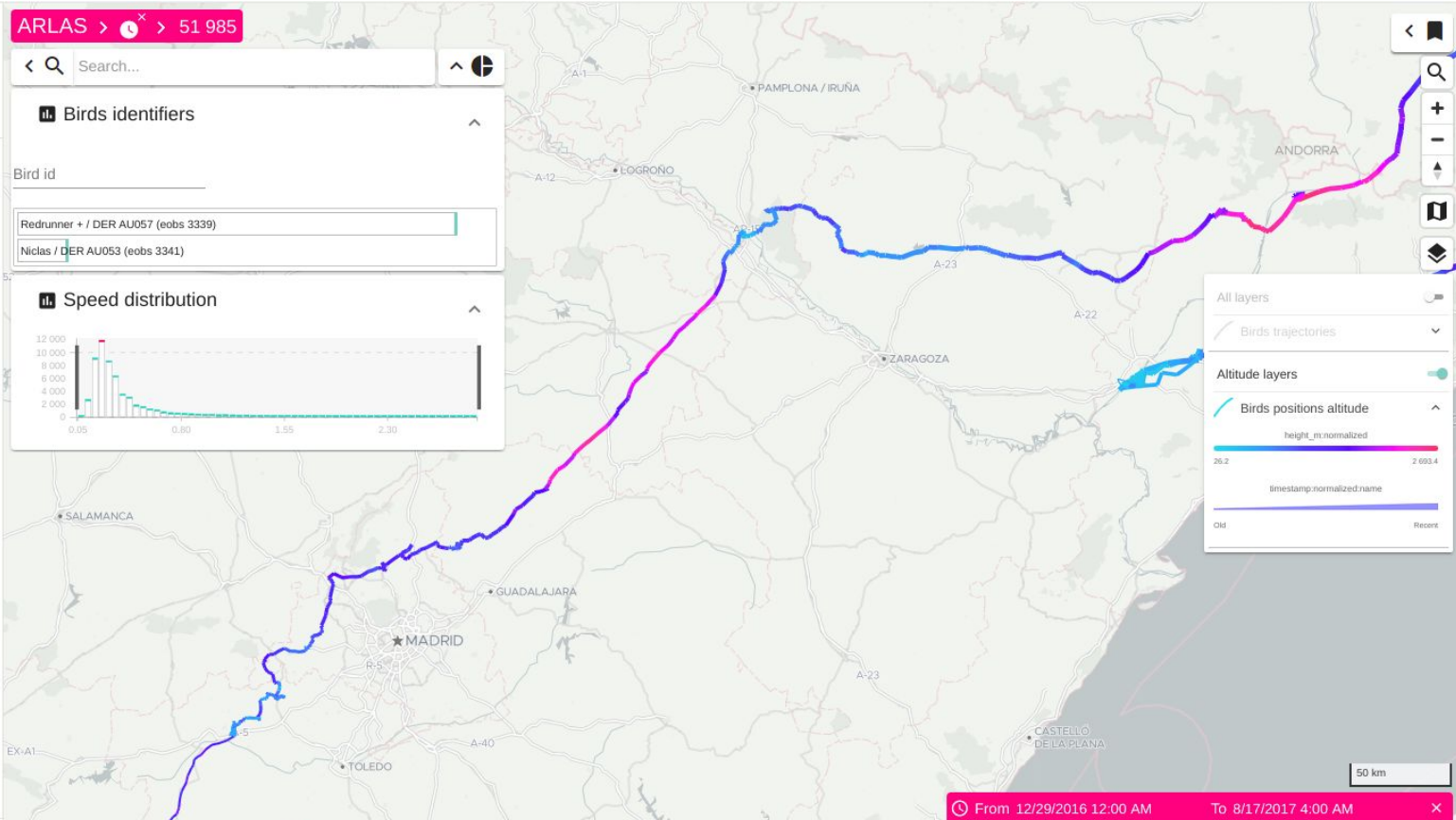
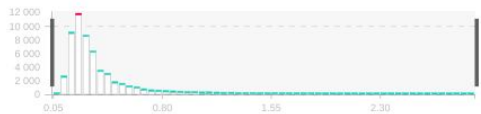
Birds identifiers

Bird id

Redrunner + / DER AU057 (eobs 3339)

Niclas / DER AU053 (eobs 3341)

Speed distribution



All layers

- Birds trajectories
- Altitude layers
- Birds positions altitude

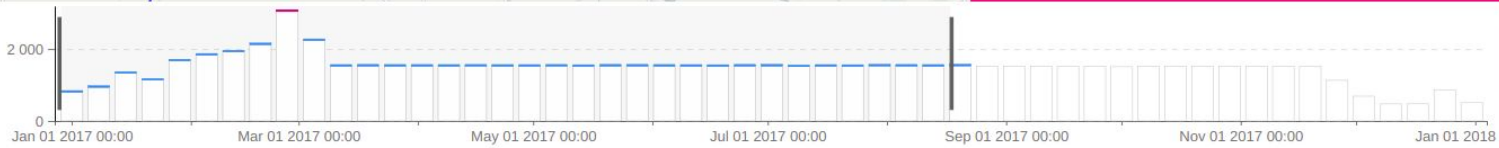
height_m: normalized

26.2 ————— 2 693.4

timestamp: normalized name

Old ————— Recent

From 12/29/2016 12:00 AM To 8/17/2017 4:00 AM





Global configuration

Visualisation sets

Layers

Preview

Add a Visualisation set

A visualisation set is a space where to organise layers that have to be displayed/hidden together.

| Name | Layers | Displayed by default | Actions |
|-------------------|----------------------------|-------------------------------------|---------|
| All layers | • Birds trajectories | <input type="checkbox"/> | ⋮ |
| Altitude layers | • Birds positions altitude | <input checked="" type="checkbox"/> | ⋮ |
| Aggregated layers | | <input checked="" type="checkbox"/> | ⋮ |

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Global configuration

Visualisation sets

Layers

Preview

Edit a layer

Name *

Birds positions distribution

Name of the layer. Only used for visualization.

Mode *

Cluster

Mode of the layer.

Visualisation sets

All layers

Altitude layers

Aggregated layers

The layer can be put in one or several visualisation sets

1 Collection

2 Geometry

3 Visibility

4 Style

Collection *

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Mode *
Cluster

Mode of the layer.

Visualisation sets

- All layers
- Altitude layers
- Aggregated layers

The layer can be put in one or several visualisation sets

1 Collection — 2 Geometry — 3 Visibility — 4 Style

Map

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Look 'n feel

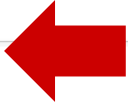
Aggregate your data over a Grid

geo aggregation field *
location

Choose the geo-field that will be aggregated in the Grid

Granularity *
Fine

Choose the granularity of the Grid



Displayed geometry

cluster geometry type *
Aggregated geometry

cluster geometry type description

Aggregated geometry type *
Cell

Aggregated geometry type

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Save

Cancel

Save

Download



Name *

Birds positions distribution

Name of the layer. Only used for visualization.

Mode *

Cluster

Mode of the layer.

Visualisation sets

All layers

Altitude layers

Aggregated layers

The layer can be put in one or several visualisation sets

Collection

Geometry

Visibility

4 Style

geometry cluster shape *

Polygon

geometry cluster shape description

Opacity *



opacity description

Color *

Interpolated

Hits count

Metric

Normalize

Manage palette

Back

Save

Cancel

Customize the palette



Cancel

Back to templates

Save



Global configuration




Visualisation sets

Layers

Preview

Add layer

A layer helps you analyse a geographical information in your collection. You can customise what geographical data to display and how to render it.

| # | Name | Mode | Collection | Zoom min | Zoom max | Actions |
|---|--|----------|--------------------------|----------|----------|---------|
| |  Birds trajectories | Features | birdstracking_collection | 1 | 22 | ⋮ |
| |  Birds positions altitude | Features | birdstracking_collection | 1 | 21 | ⋮ |
| |  Birds positions distribution | Cluster | birdstracking_collection | 2 | 22 | ⋮ |



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ARLAS > 77 384

< Q Search...

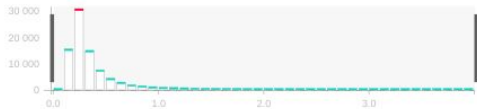
Birds identifiers

Bird id

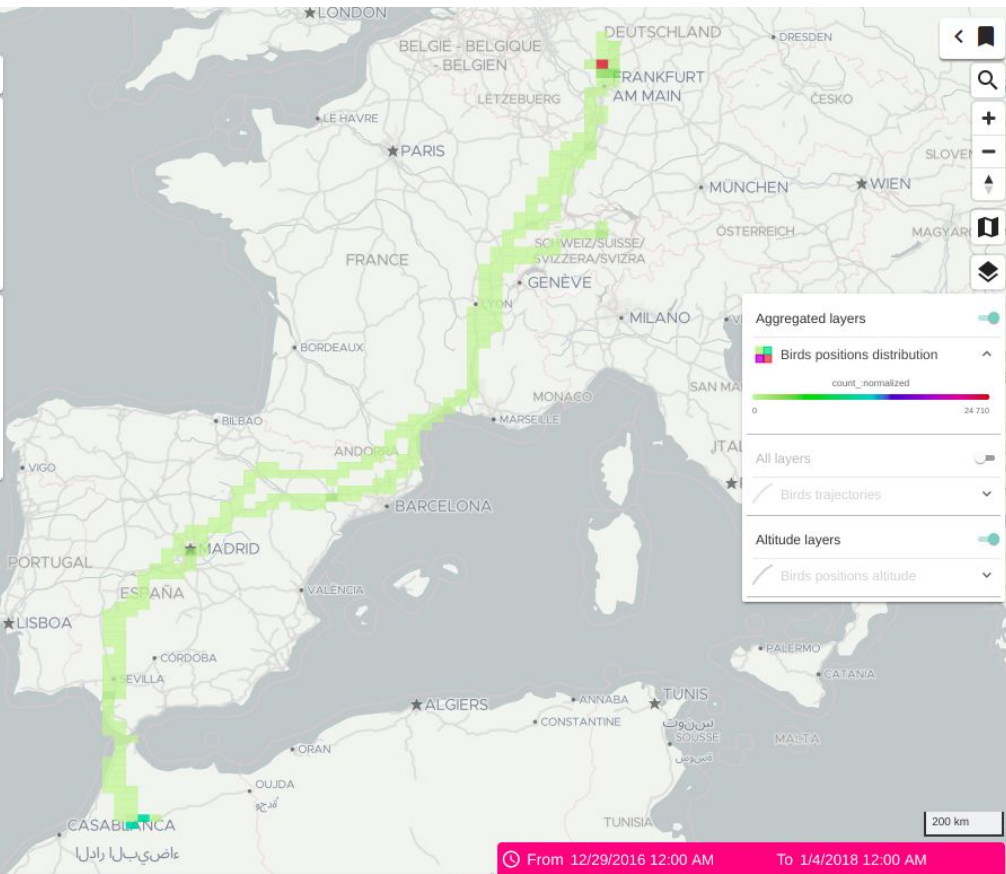
Redrunner + / DER AU057 (eobs 3339)

Niclas / DER AU053 (eobs 3341)

Speed distribution



ANTALGADA



From 12/29/2016 12:00 AM To 1/4/2018 12:00 AM

200 km





ARLAS > 6 839 071

Search...

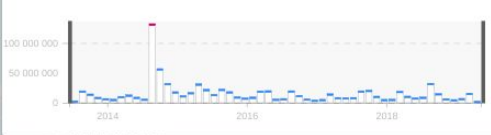


Tracking Behaviour res

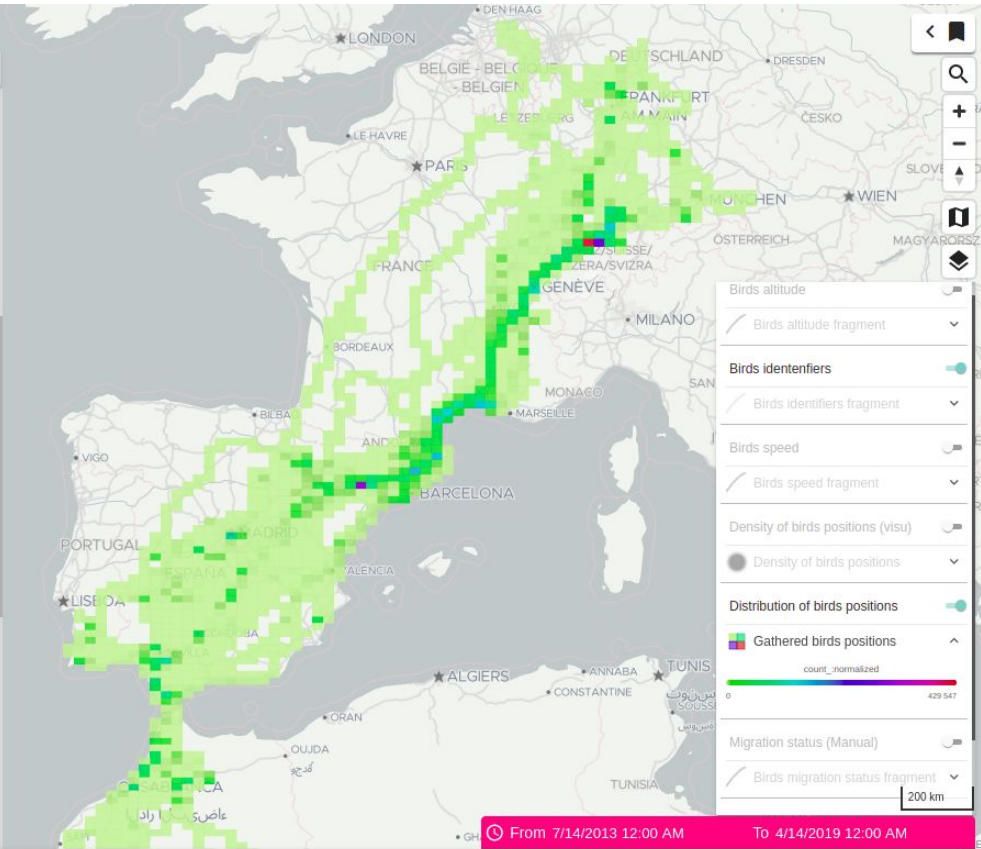
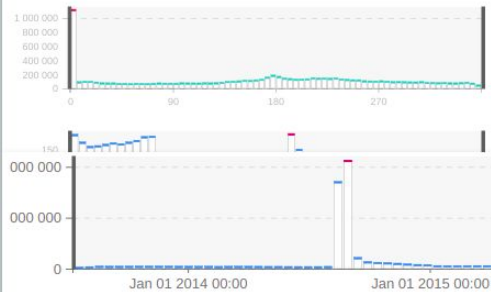
Track altitude (m) distribution and average over time



Track travelled distance (m) over time



Bearing (degree) distribution and average over time



Birds altitude

- Birds altitude fragment

Birds identifiers

- Birds identifiers fragment

Birds speed

- Birds speed fragment

Density of birds positions (visu)

- Density of birds positions

Distribution of birds positions

- Gathered birds positions

count_normalized

Migration status (Manual)

- Birds migration status fragment

200 km

Link to Birds tracking tutorial

<https://github.com/gisaia/ARLAS-stack-birdstracking-tutorial>

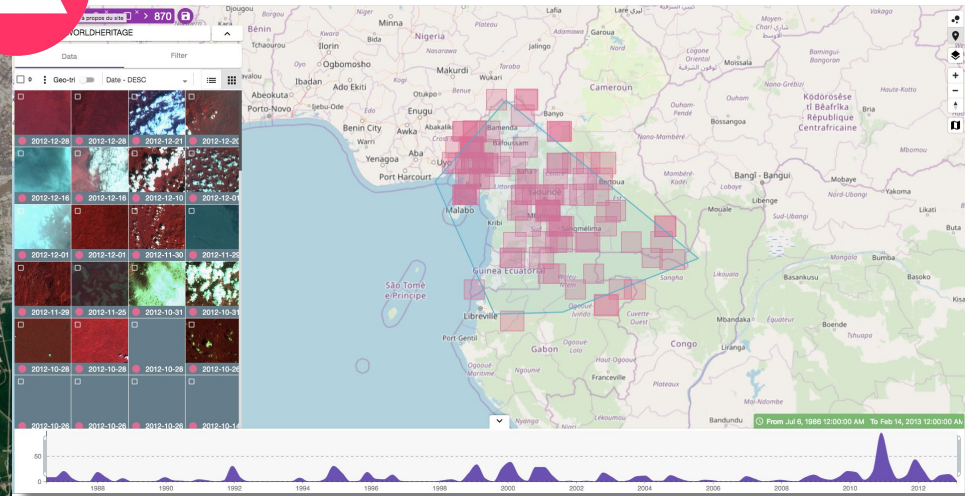
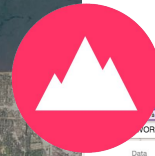
Current ARLAS-stack version

14.0.0 released on November 9th

Earth Observation

With ARLAS

- A ready-to-use catalogue of Earth Observation products
- Instantaneous visualisation and interaction
- Comprehensive vision of the entire catalogue
- Ability to confidently select key EO products
- Distributions over time and other data dimension
- Ability to restrict and filter in terms of value range, map and histograms
- An inspiring and engaging user experience



SECTOR FACTS

- Billions of satellite observation data
- Data is only intelligible to experts
- Difficulty in making the voluminous catalogues clear and accessible
- Customers miss out on relevant earth observation products

Transportation & Logistics

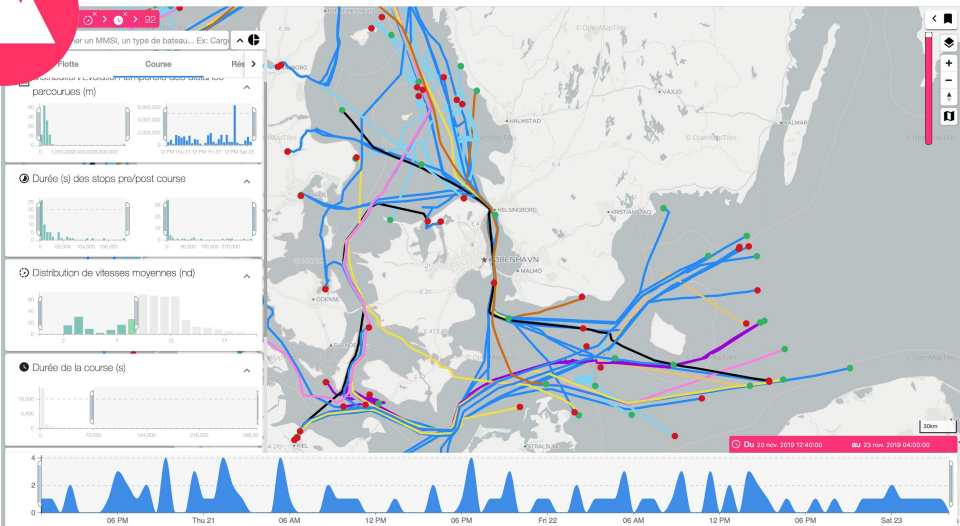
With ARLAS

- Get to know your assets
- Transform location data into asset intelligence according to time and fleet-specific parameters
- Detect asset activity and behaviour
- Reconstitute travel patterns
- Identify transit time performance and identify slow sections
- Identify intermediary & delivery points

Road | Maritime | Air

SECTOR FACTS

- Competition is fierce
- Increasing time pressure on deliveries
- Thinning profit margins
- Risk of asset theft and damage
- Insufficient loads and empty runs
- Reinforced environmental regulations
- Saturated transport infrastructures



Public Transportations

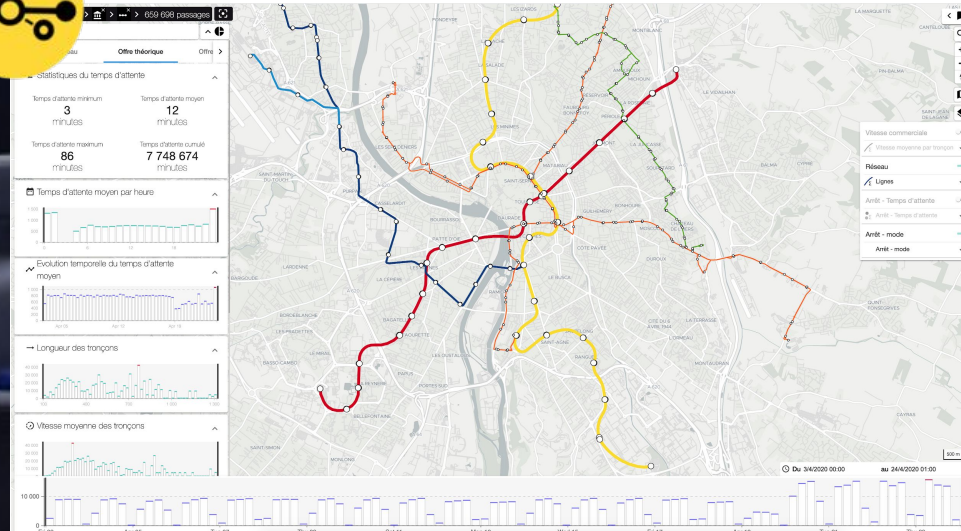
With ARLAS

- Gain a global vision of the complexity and subtleties of a transportation service
- Explore instantaneously hundreds of lines over a long time period
- Acquire analytical insights in terms of service performance
- Customise analysis reports with regard to delays, observed speeds and canceled trips



SECTOR FACTS

- Increasing network design and operational complexity
- A variety of modes of transport
- Fragmented silo data streams
- Sophisticated timetable design
- Large fleet sizes
- Difficulty to respond precisely to public demand
- Arduous analysis of delays, cancellations and incidents



A photograph of a vineyard in autumn. The foreground shows rows of grapevines with yellowing leaves. In the background, a small town with a prominent church spire is visible on a hillside under a hazy sky.

But also ...



- **Parametric insurances**
 - **Agriculture**
 - **Renewable energies**
- **Telecoms**
 - **5G Planification**



OPEN
SOURCE

MAKE IT
YOURS

Test it, use it, adopt it, augment it.

OUR OFFER

CLOUD



ON PREMISES

MISSION
BASED

Some references



They support us





Thank you

dolphine.rambaud@gisaia.com

sylvain.gaudan@gisaia.com

mohamed.hamou@gisaia.com

arlas.io
gisaia.com

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linkedin.com/company/gisaia/

