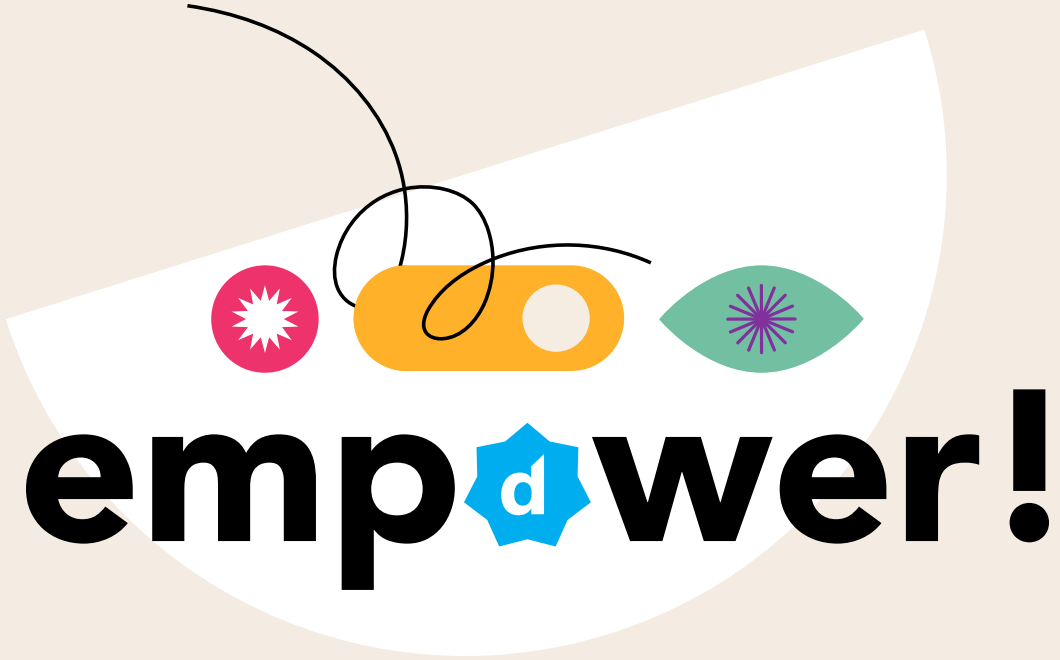
empowerd!

Welcome

empower!

Set up your own first User-Defined API for your DataMiner System

DATAMINER USER-DEFINED APIS

YOUR HOST

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WHAT'S ON THE MENU

Agenda

1. Introduction on User-Defined APIs 15 min
    1. API Token
    2. API Script
    3. API Definition
2. Hands-on exercise 20 min
3. Performance guide 5 min
4. DataMiner Documentation 5 min
5. What's new and coming up? 5 min

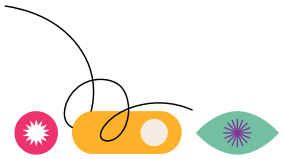
Goals

Understand the concept of User-Defined APIs.

Know what components a user-defined API consists of.

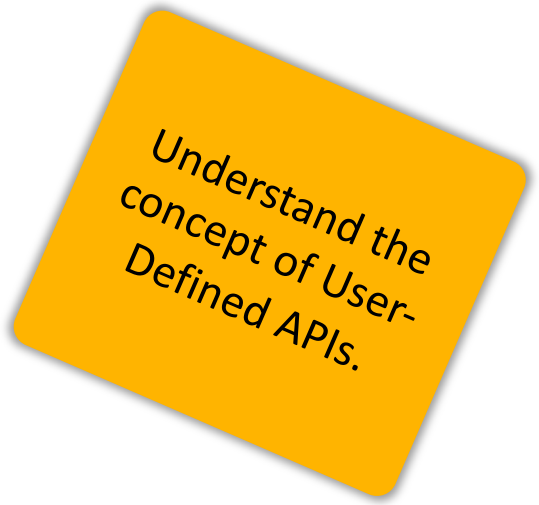
Create a user-defined API in Cube.

Apply performance best practices when creating a user-defined API.



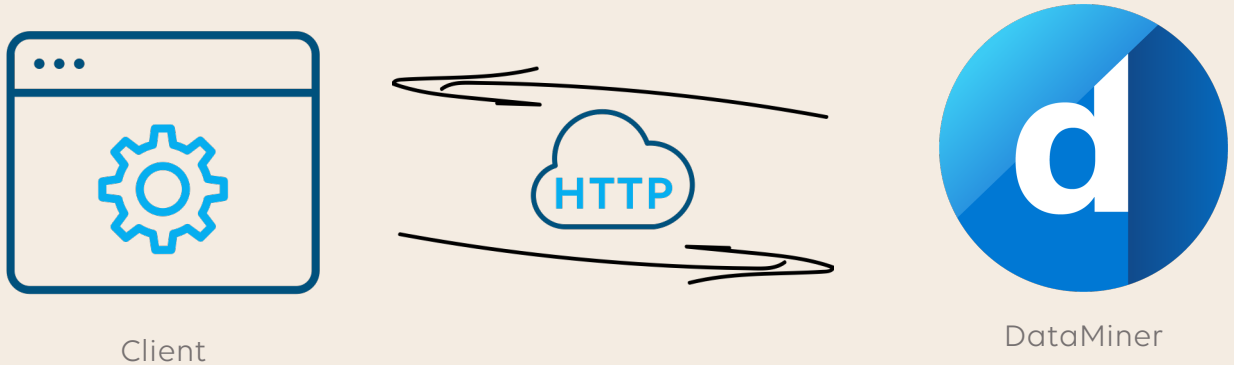
Introduction on User-Defined APIs

Let's get started!



User-Defined APIs - Introduction

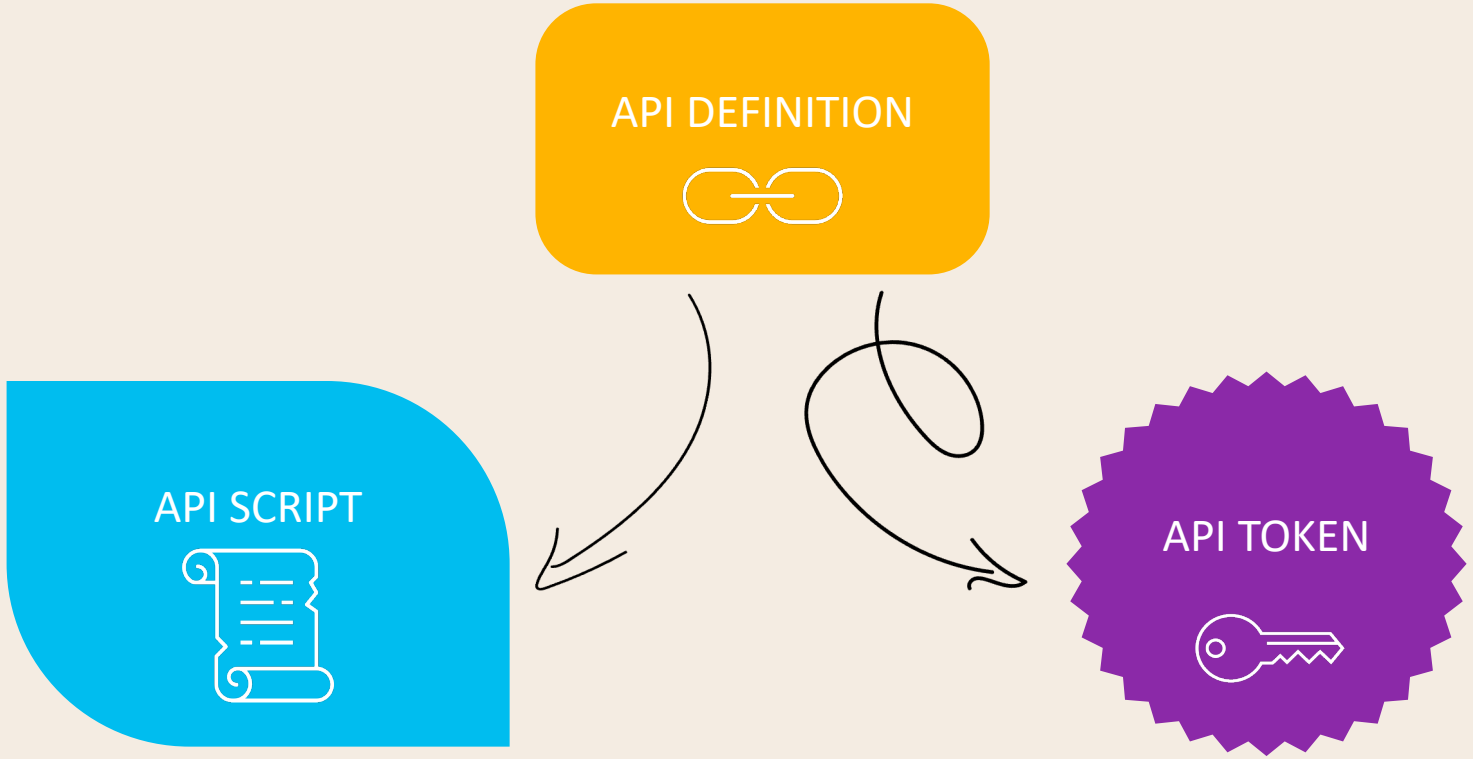
- Expose **automation script** as an API
- Control access using **tokens**
- Available since 10.3.6



User-Defined APIs - Introduction

What is a user-defined API?

Know what components a user-defined API consists of.



User-Defined APIs – Introduction

API automation script

API SCRIPT

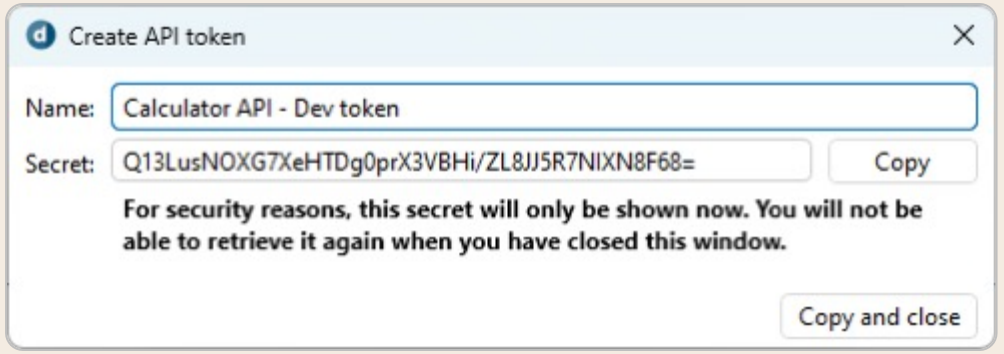
```
public class Script
{
    public void Run(IEngine engine)
    {
        // Script logic
    }
}
```

```
using Skyline.DataMiner.Automation;
using Skyline.DataMiner.Net.Apps.UserDefinableApis;
using Skyline.DataMiner.Net.Apps.UserDefinableApis.Actions;

public class Script
{
    [AutomationEntryPoint(AutomationEntryPointType.Types.OnApiTrigger)]
    public ApiTriggerOutput OnApiTrigger(IEngine engine, ApiTriggerInput requestData)
    {
        var method = requestData.RequestMethod;
        var route = requestData.Route;
        var body = requestData.RawBody;

        return new ApiTriggerOutput
        {
            ResponseBody = $"Received {method} request for route: '{route}' with body: '{body}'",
            ResponseCode = (int) StatusCode.Ok,
        };
    }
}
```

User-Defined APIs – Introduction

API Token

- **Secret:**
  - Must be included with every API request
  - Stored securely in the database
  - Generated according to minimum requirements
  - Can be (temporarily) disabled
- **Name**

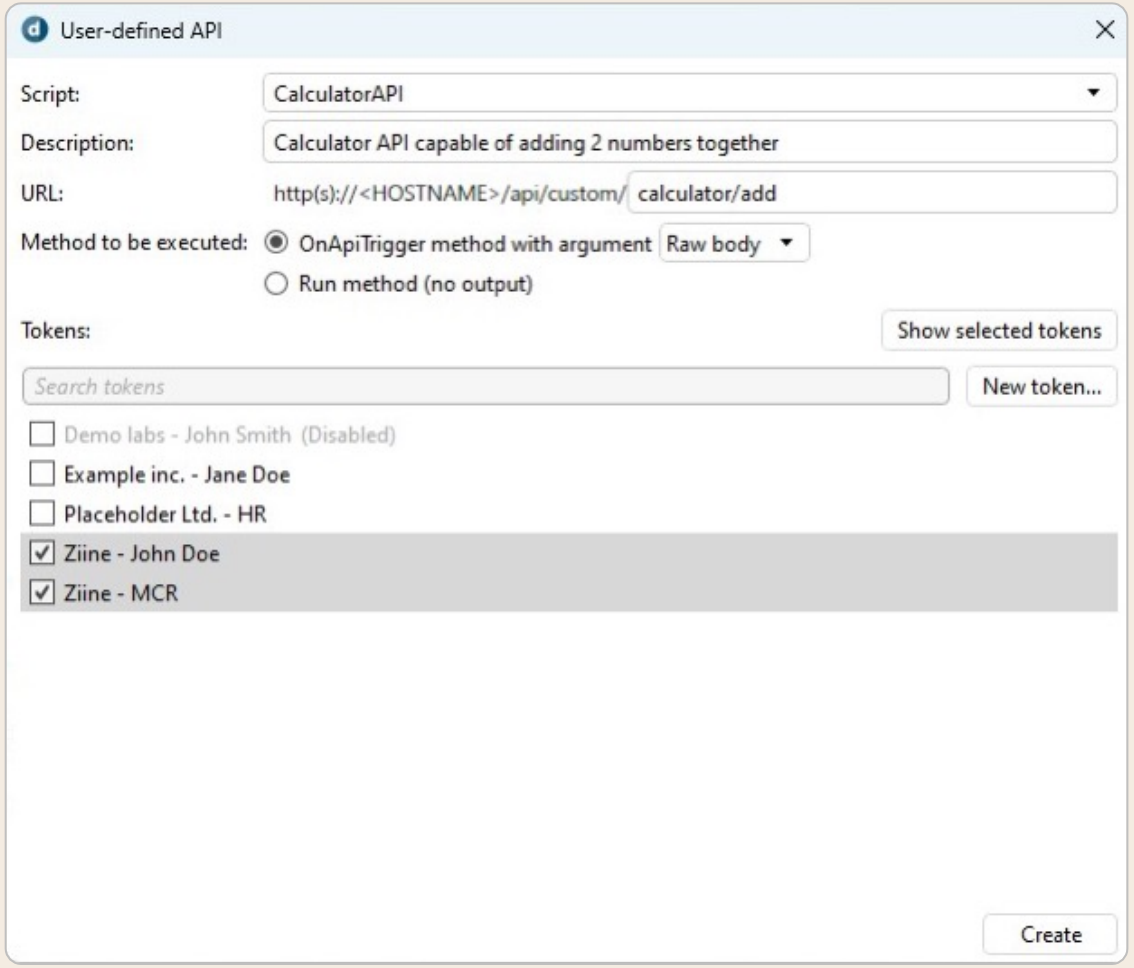


User-Defined APIs – Introduction

API Definition

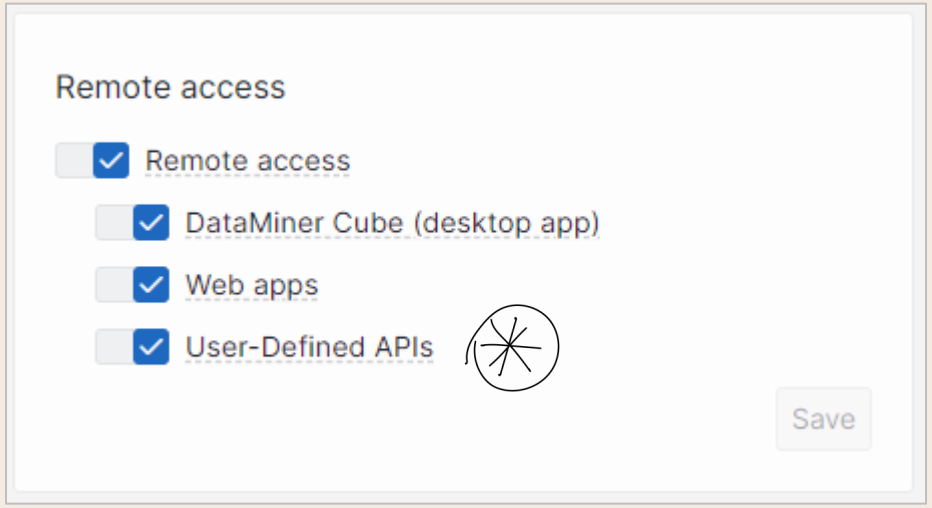
API DEFINITION

- **Script name**
- **Description** (optional)
- **URL route**
- **Token(s)**



Before we get started!

Allow API access through the cloud

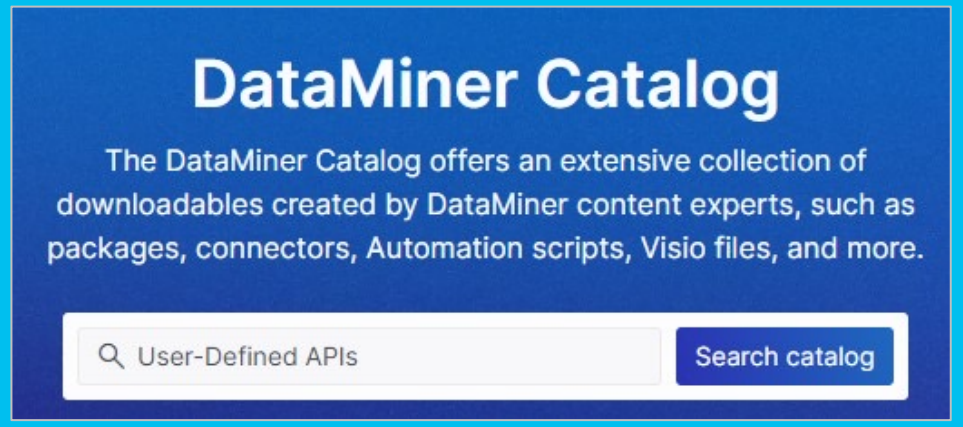


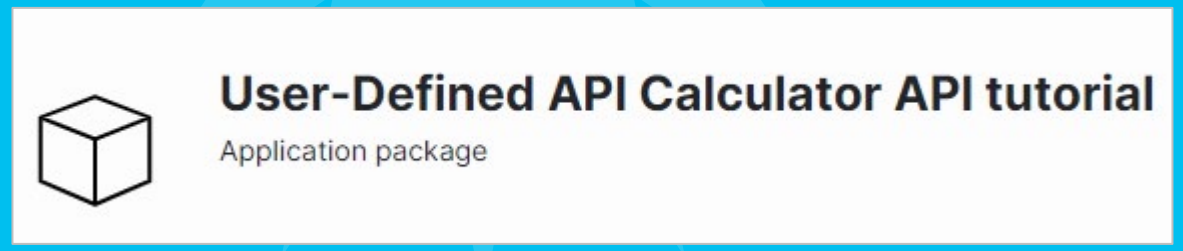
https://admin.dataminer.services

https://**<MyDataMiner>**-**<MyOrganisation>**.on.dataminer.services/api/custom/...

Hands-on time!

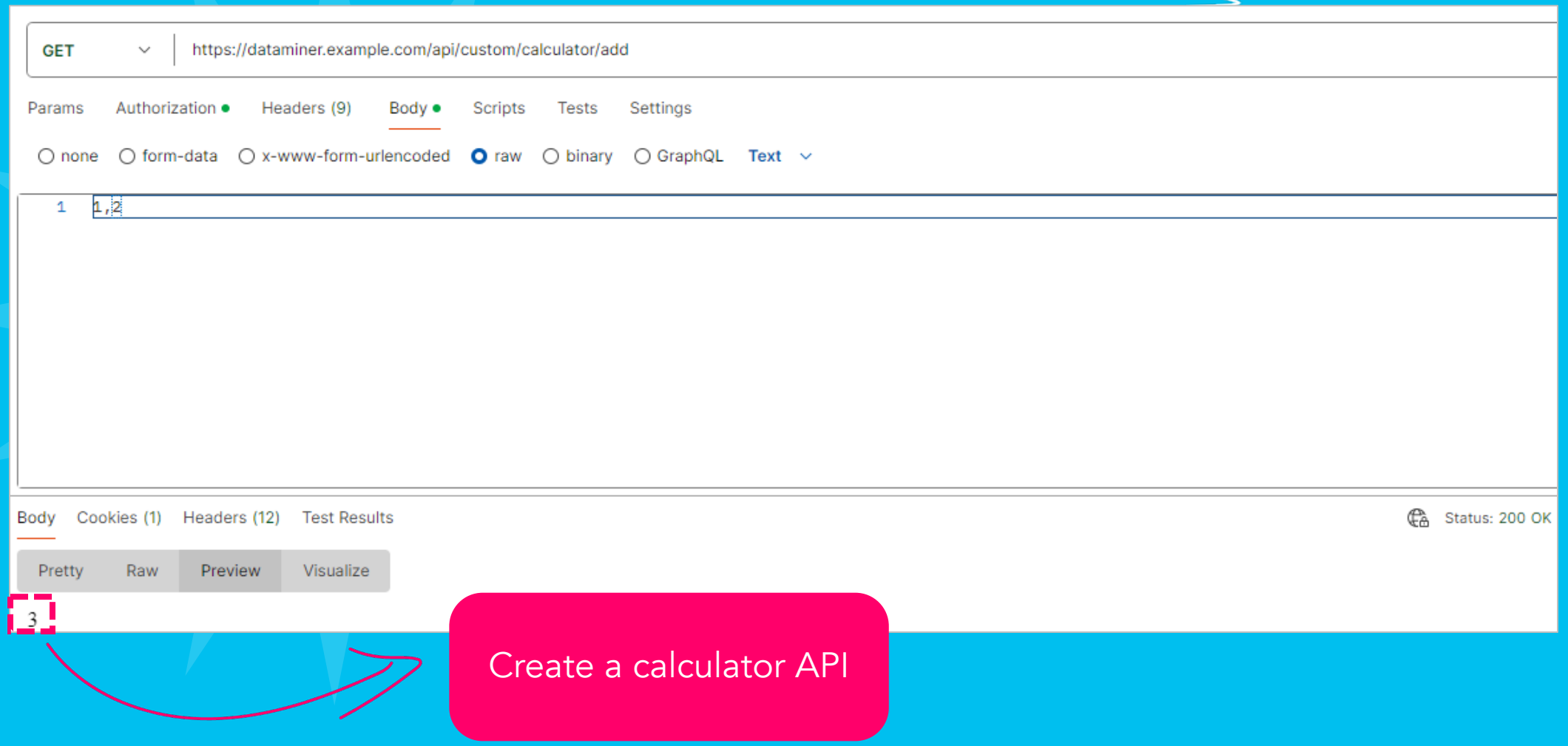
1. Go to '**Catalog.dataminer.services**'
2. Search for '**User-Defined API**'
3. Install 'User-Defined APIs Calculator API tutorial'





Create a user-defined API in Cube.

Let's get our hands dirty!



Create a calculator API

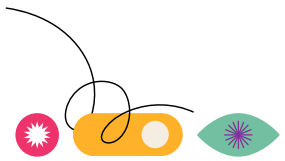
Can't get enough?

Try the advanced exercises!

https://aka.dataminer.services/UDA-Advanced

Performance guide

Best practices



User-Defined APIs – Performance guide

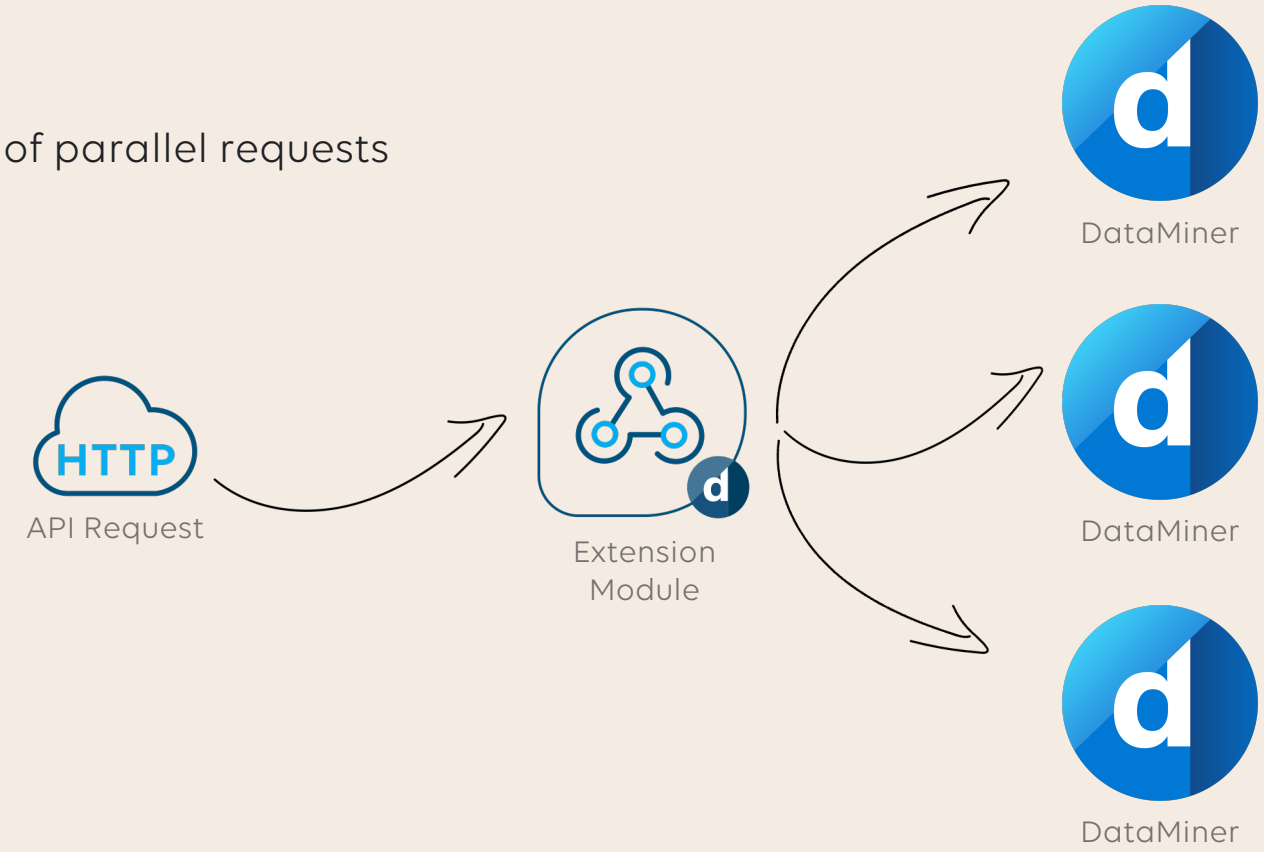
Best practices

- Protect your DataMiner system:
  - Avoid long operations
  - Large request/response body impact the performance
    - 29MB hard limit
  - Use Data Aggregator for large chunks of data

User-Defined APIs – Performance guide

Built-in protections

- Load balancing
- Limited amount of parallel requests
  - Based on CPU



User-Defined APIs – Performance guide

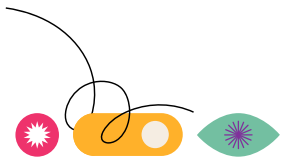
Performance metrics

- Depends on a lot of factors!
  - Internet speed
  - Script logic
  - Hardware
  - Other load
  - …

https://aka.dataminer.services/UDA-Benchmark

User-Defined APIs in the Docs

Documentation



User-Defined APIs - Documentation

Highlights of User-Defined APIs in the DataMiner docs

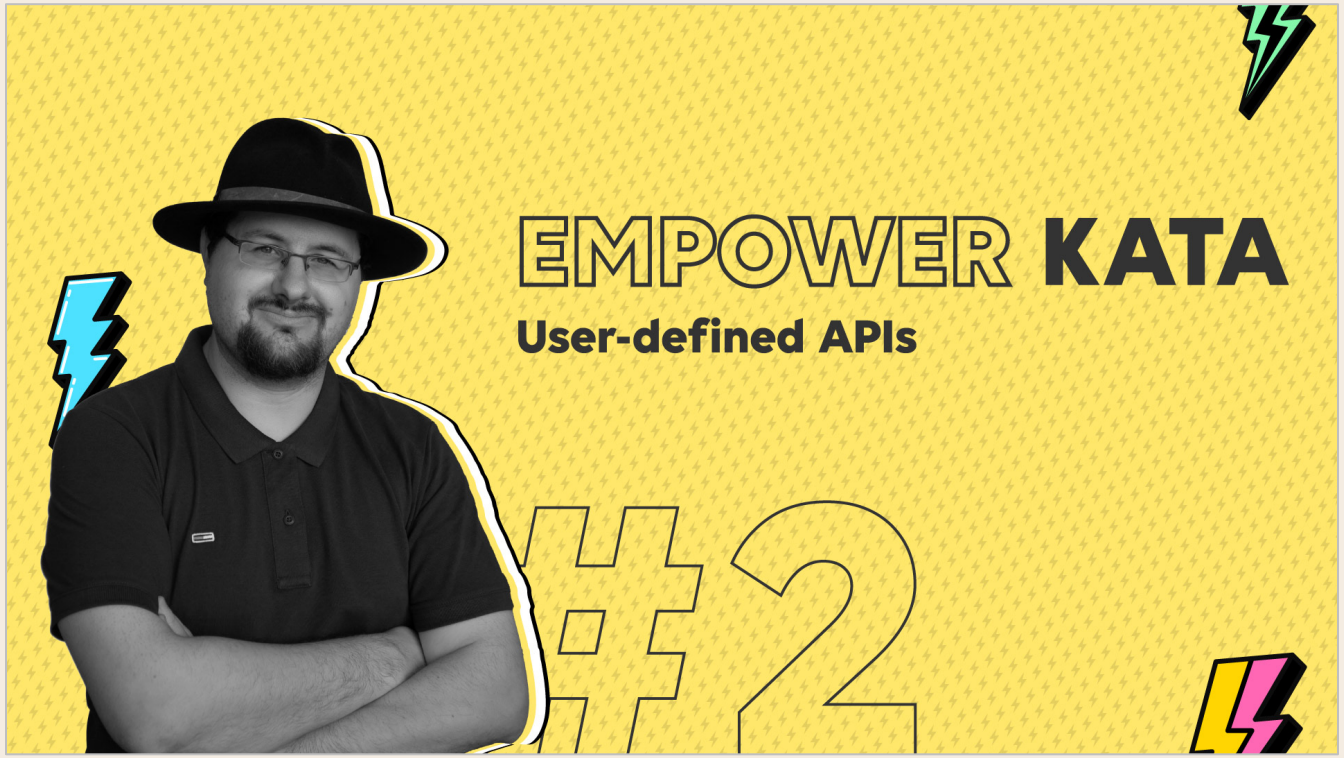
- Error codes – https://aka.dataminer.services/UDA-Errors
- Troubleshoot - https://aka.dataminer.services/UDA-Troubleshoot
- Tutorials - https://aka.dataminer.services/UDA-Tutorials

https://aka.dataminer.services/UDA

User-Defined APIs - Documentation

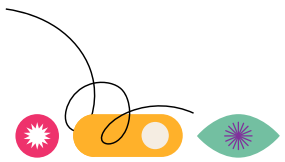
Empower kata

- https://community.dataminer.services/courses/kata-2/



What's new?

Recent and upcoming exciting updates



User-Defined APIs – What's new?

Exciting new features since last Empower

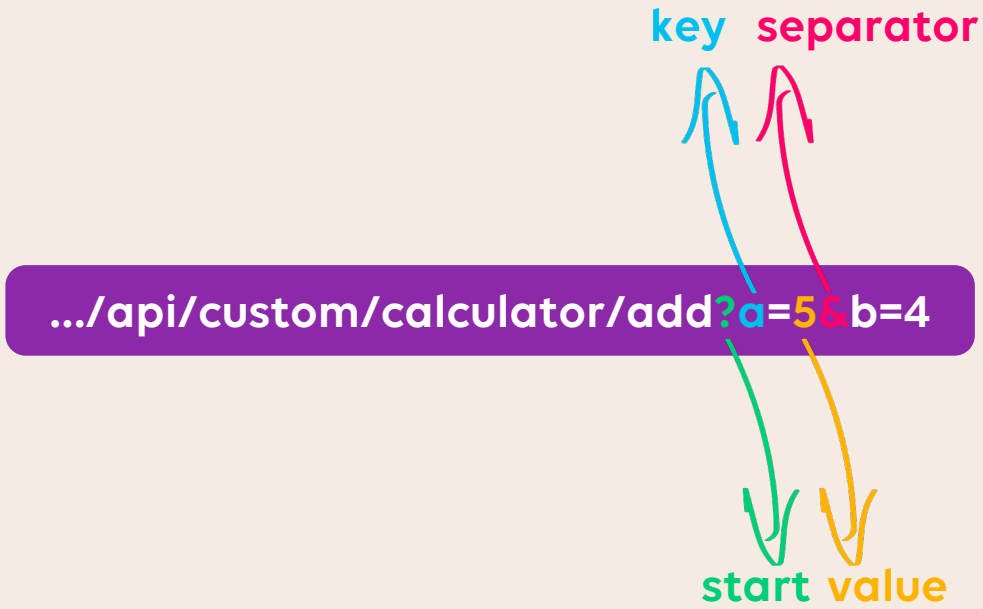
- Token ID is available in API script (10.3.9)

```
public class Script
{
    [AutomationEntryPoint(AutomationEntryPointType.Types.OnApiTrigger)]
    public ApiTriggerOutput OnApiTrigger(IEngine engine, ApiTriggerInput requestData)
    {
        // Guid
        var tokenId = requestData.Context.TokenId

        return new ApiTriggerOutput
        {
            ResponseBody = $"Received {method} request for route: '{route}' with body: '{body}'",
            ResponseCode = (int) StatusCode.Ok,
        };
    }
}
```

User-Defined APIs – What's new?

Exciting new features since last Empower

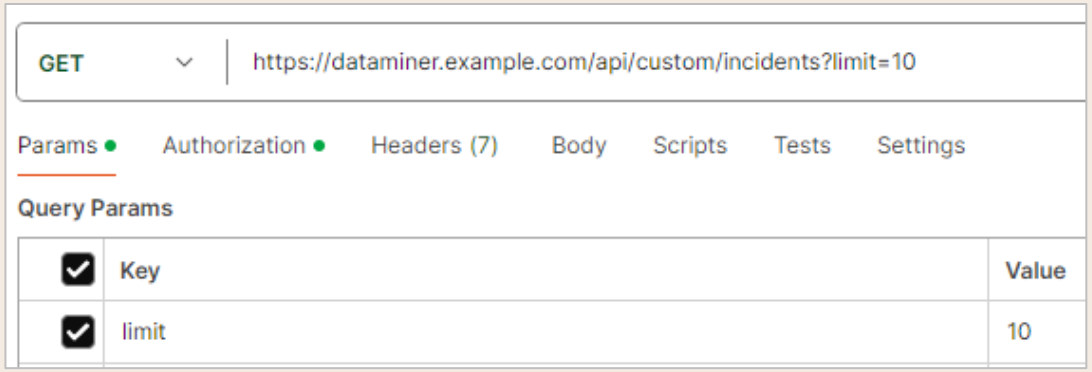
- Query parameters support (10.4.1)



User-Defined APIs – What's new?

Exciting new features since last Empower

- Query parameters support (10.4.1)
  - Common use-case: limit

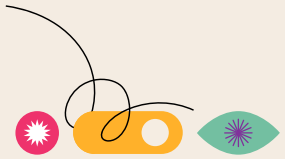



```
using Skyline.DataMiner.Automation;
using Skyline.DataMiner.Net.Apps.UserDefinableApis;
using Skyline.DataMiner.Net.Apps.UserDefinableApis.Actions;

public class Script
{
    [AutomationEntryPoint(AutomationEntryPointType.Types.OnApiTrigger)]
    public ApiTriggerOutput OnApiTrigger(IEngine engine, ApiTriggerInput requestData)
    {
        int limit = 20; // Default limit

        if (requestData.QueryParameters.TryGetValue("limit", out var limitString))
        {
            if (int.TryParse(limitString, out var parsedLimit))
            {
                limit = parsedLimit
            }
        }
```

User-Defined APIs – What's new?

Exciting new features since last Empower

- **Coming soon:**
  - Performance improvement API requests
  - Cube UI real-time updates



Goals

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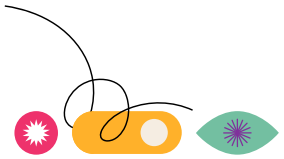


ASK AWAY

empower!

Unlocking Insights

Integrating **AI Data** from **DataMiner** into your **Dashboards** and Apps

Augmented Operations

YOUR HOST

Tobe Deprez

Senior DevOps Engineer DATA CORE

TOBE.DEPREZ@SKYLINE.BE

AUGMENTED OPERATIONS

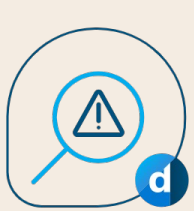
AI in DataMiner?

DataMiner Augmented Operations

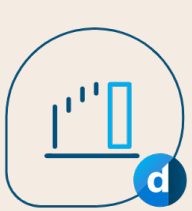
- Remember from day 1 "**Mastering AI in Cube"**

Trend Forecasting

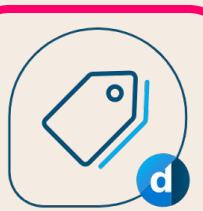
Anomaly Detection



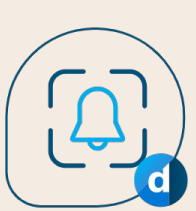
Incident Tracking



Proactive Cap Detection



Pattern Matching



Focus Alarms

Relationship Learning

- Today: In DataMiner **Dashboards**

Agenda

Leverage what you learned at Day 1 in

Mastering DataMiner Cube: Accessing AI-Driven anomalies, relations and patterns

1. Exercise 1: Anomalies
2. Exercise 2: Trend Patterns
3. Q & A

Goals

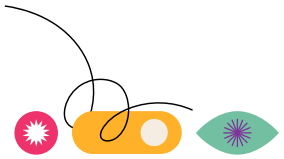
Leverage Augmented Operations in Dashboards (and Low-code apps).

We can leverage anomalies in dashboards

We can leverage Trend patterns in dashboards

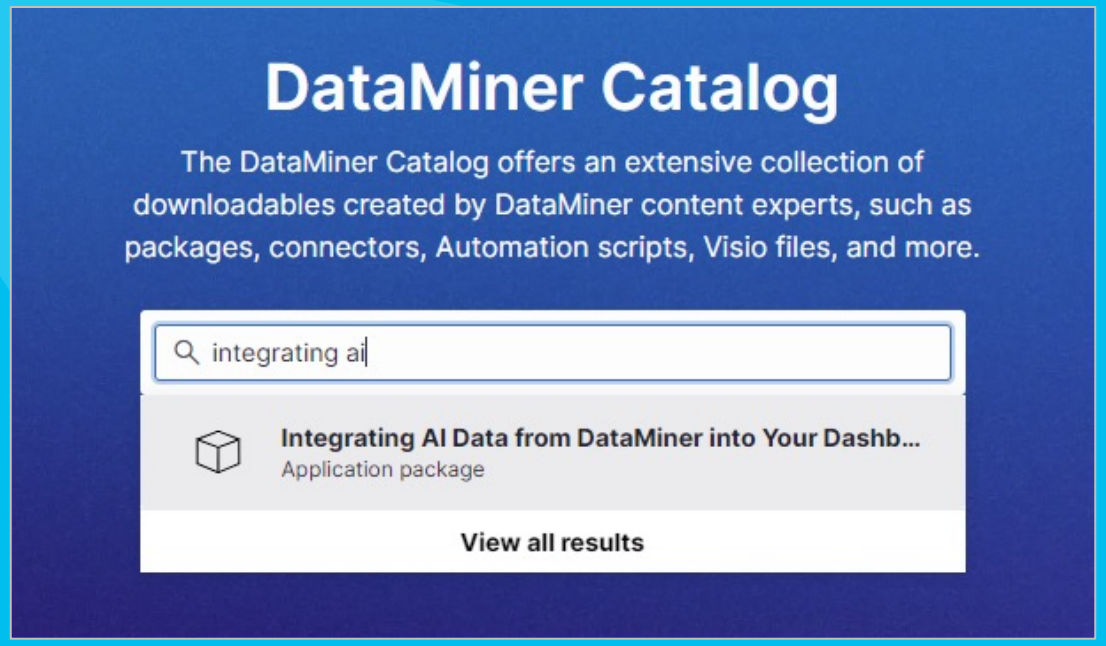
(bonus) We can leverage Time Scoped Relations in dashboards

(bonus) General tips & tricks and applying what we learned yesterday

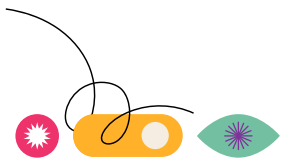


Hands-on time!

1. Go to '**Catalog.dataminer.services**'
2. Search for '**Integrating ai**'
3. Install 'Integrating AI Data from DataMiner into Your Dashboards and Apps'

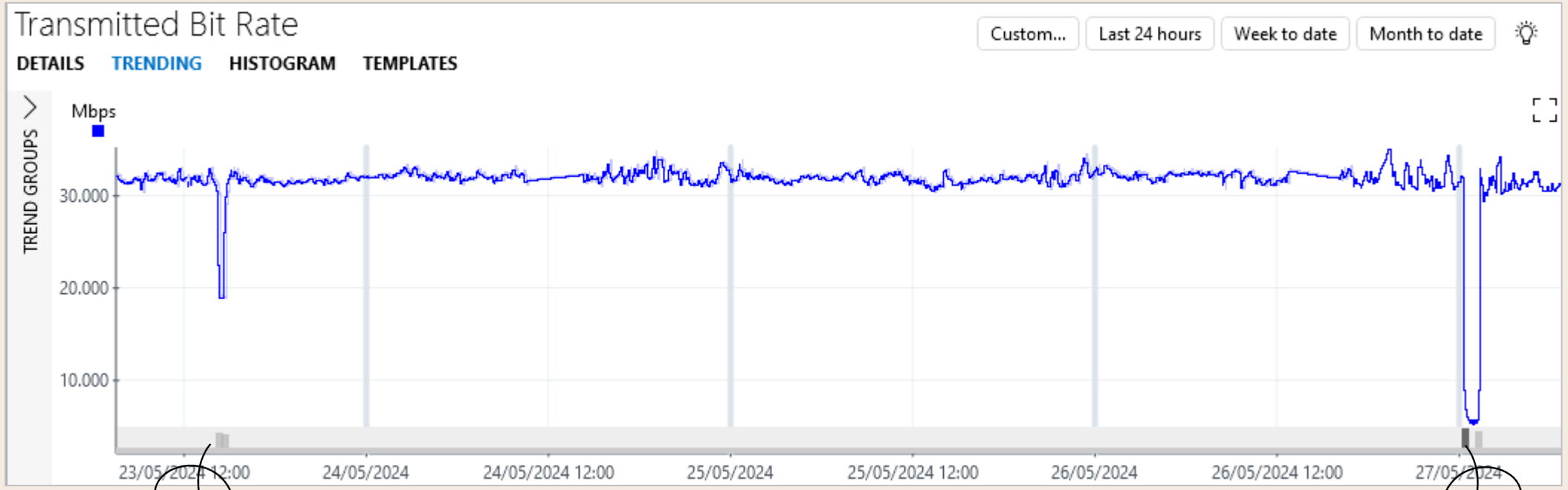


Exercise 1: Anomalies



Recap

Change points vs anomalies



Change point

Any change in behaviour

Grey square under trend graph

No event

Anomaly

Only severe / unexpected changes

Black square under trend graph

Suggestion event (or alarm)

In dashboards and low code apps

Query data sources

Get behavioral change events | DataMiner Docs

By default, the data contains the following columns:

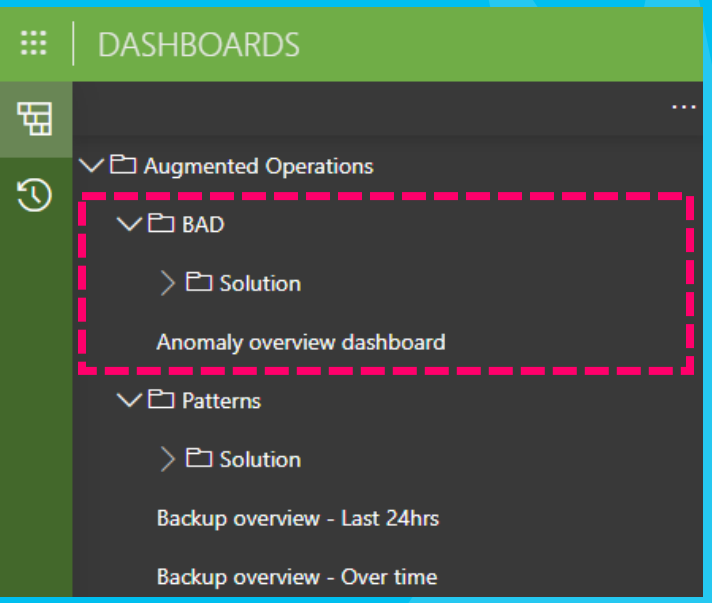
- **Parameter ID**: The ID of the parameter for which the change point was detected.
- **Anomalous**: Whether the change point was marked as an anomaly.
- **Change type**: The type of change point that was detected.
- **Increase**: Whether the detected change point represents an increase (e.g. a level shift up) or a decrease (e.g. a level shift down).
- **Start time**: The detected start time of the change point.
- **End time**: The detected end time of the change point.

The following columns are also available after a Select operation:

- **Element ID**: The ID of the element for which the change point was detected.
- **Change Point ID**: The ID of the change point.
- **Start value**: The parameter value at the start of the change point for level shifts and outliers, or the slope or variance at the start of the change point for trend changes or variance changes, respectively.
- **End value**: The parameter value at the end of the change point for level shifts and outliers, or the slope or variance at the end of the change point for trend changes or variance changes, respectively.
- **Significance**: A number indicating how significant the change point is compared to previously detected change points.
- **Severity**: A number indicating the severity of the change point compared to past trend data.
- **Creation time**: The time when the change point was first detected.
- **Last update**: The time when the change point was last updated.

When one or more table rows are selected, the following feeds are available in the *feeds* section of the data pane:

- **Parameters**: The parameters for which the selected change points were detected.
- **Timespans**: The time ranges from the start time to the end time of the selected change points.
- **Elements**: The elements for which the selected change points were detected.
- **Indices**: The primary key of the table rows for which the selected change points were detected, if any.



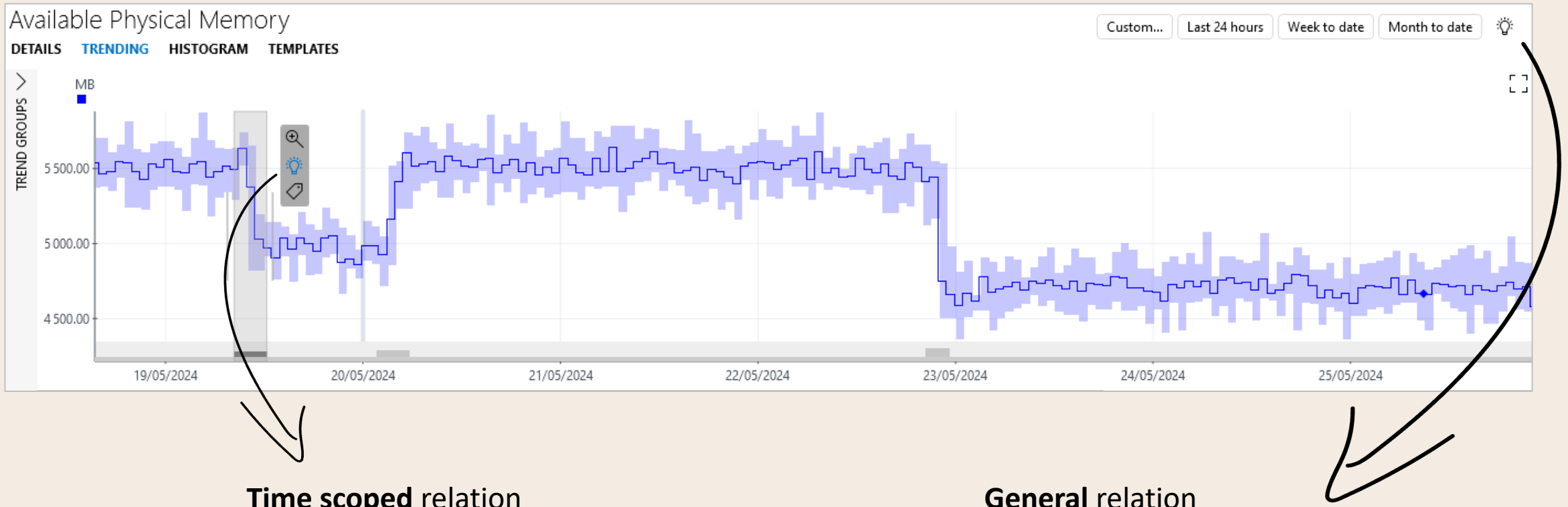
Let's get our hands dirty!

Behavioral Anomaly Detection exercise(s)

We can leverage anomalies in dashboards

Recap

Time scoped relations



Time scoped relation

Selection in trend

Within Element

General relation

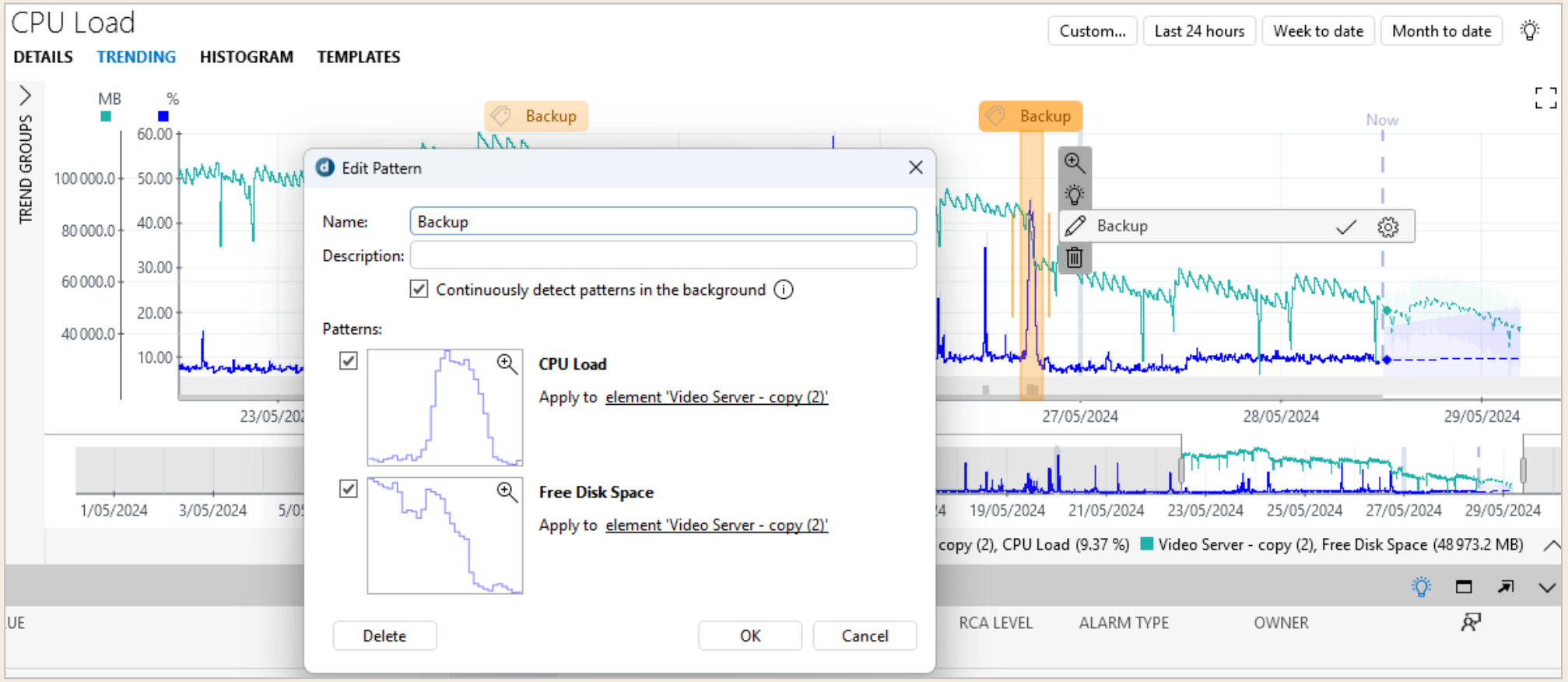
Upon trend loading

Cross Element

Exercise 2: Trend patterns

Recap

Labelled Trend data patterns

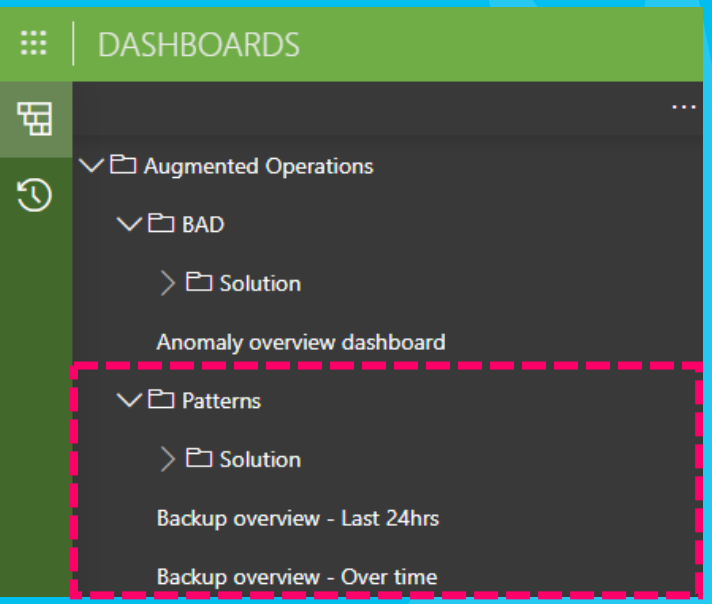


In dashboards and low code apps

Query data sources

Get trend data patterns | DataMiner Docs

Get trend data pattern events | DataMiner Docs



Let's get our hands dirty!

Trend patterns exercise(s)

We can leverage Trend patterns in dashboards

ASK AWAY

Questions?

(bonus) General tips & tricks and applying what we learned on tuesday

empower!

References

documentation

[DataMiner Augmented Operations | DataMiner Overview]

[Analytics Tutorials | DataMiner Tutorials]

[DataMiner KATAs | Bringing the Thunder]

demo

[Empower 2024 AI | DataMiner Catalog]

[Ziine Demo System]

feedback

Reach out to us via [Questions | DataMiner Dojo], [Feature Suggestions | DataMiner Dojo], or by sending us an email at [ai@skyline.be]

Low-code apps

Core Concepts

YOUR HOST

Sebastiaan Dumoulein

PRODUCT OWNER DATA EXPLORATION

SEBASTIAAN.DUMOULEIN@SKYLINE.BE

VISUAL OVERVIEW

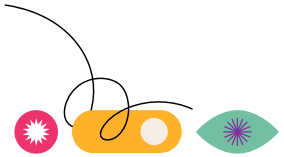
DASHBOARDS

LOW-CODE APPS

GQI

Agenda

1. What are Low-Code Apps?
2. Core concepts
    I. Feeds
    II. Events
    III. Actions
3. How it works together

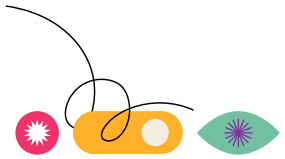


Goals

We understand the core concepts

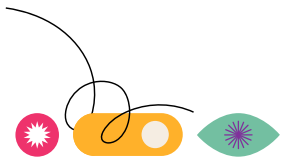
We know how to configure the core concepts.

We can apply them in a combined manner



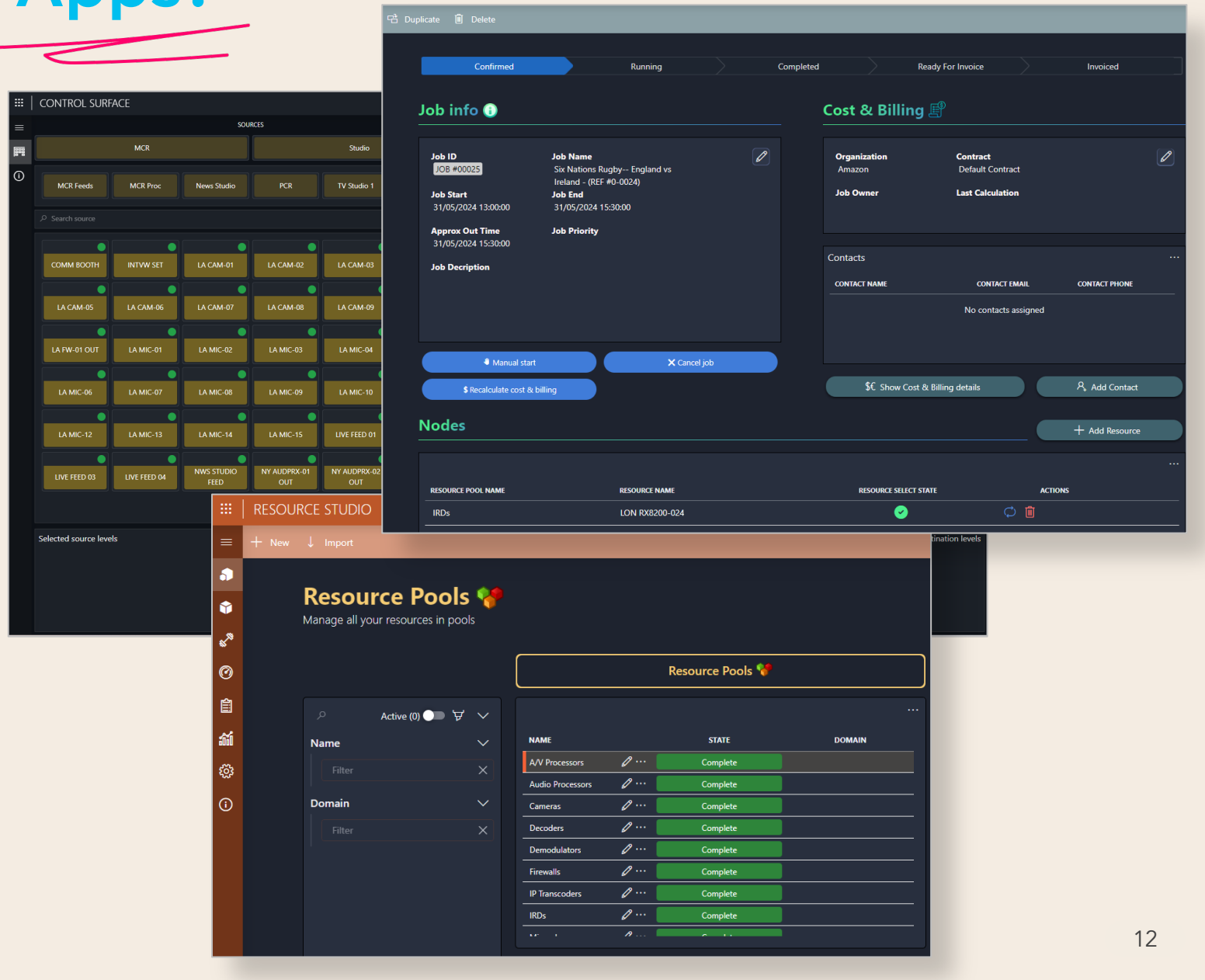
What are Low-Code Apps?

No-Code, Low-Code or A-Lot-Of-Code



What are Low-Code Apps?

- An ideal **DevOps** tool
- **Build – Deploy – Use** in minutes
- Should resolve a use case
- Creates an **isolated context**
- Extension on Dashboards

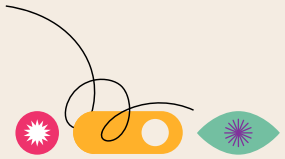


What are Low-Code Apps?

Dashboards vs Low-code apps

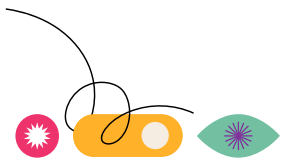
- Any data source
- Catalog of visual components
- One page
- Focus on monitoring & reporting
- Limited in actions and events
- Live sharing
- Export to PDF/Email
- No versioning
- Available in the Dashboards app

- Any data source
- Catalog of visual components
- Multiple pages and collapsible panels
- Focus on interaction
- Access to all actions and events
- Live sharing is on the roadmap
- No export to PDF/Email
- Versioning
- Available on the home page



Core concepts - Feeds

Feed me the knowledge!



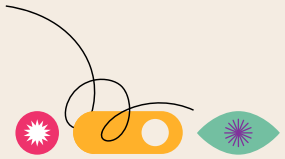
Feeds

What is it?

- Represent an active state of the application
- Contains necessary value(s)
- Updates in real-time

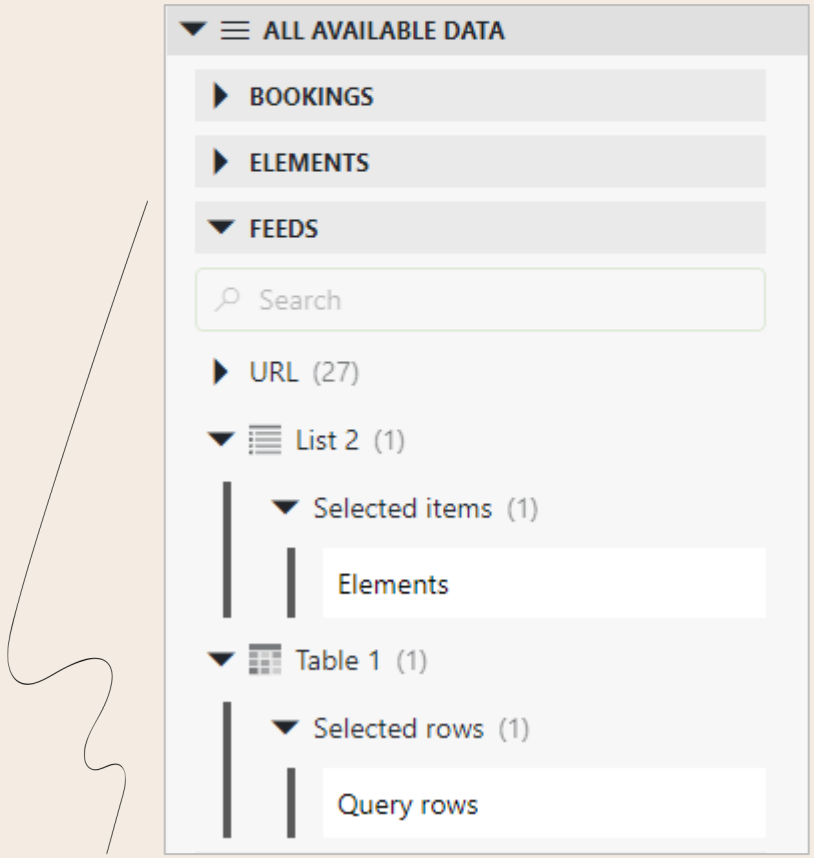
Examples:

- Selected items of a table
- View port of a line chart
- Filled in text of a text input



Feeds

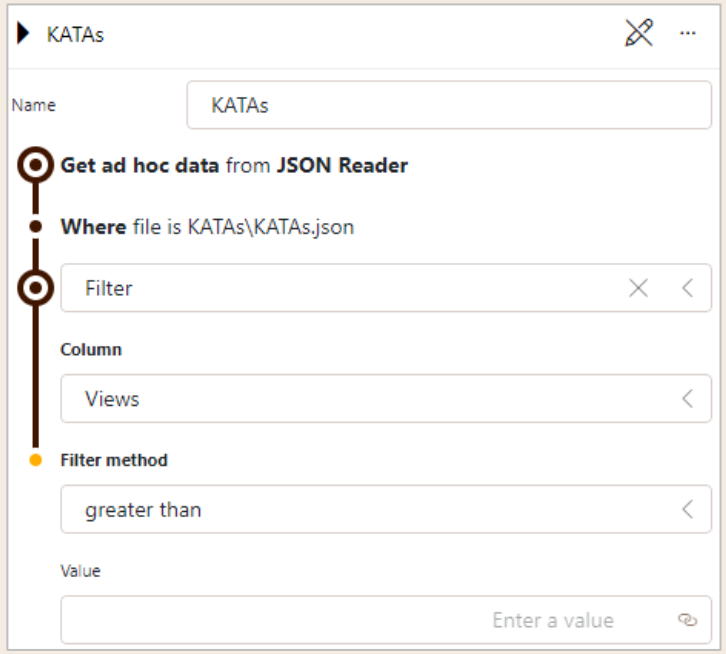
Where can I find them?

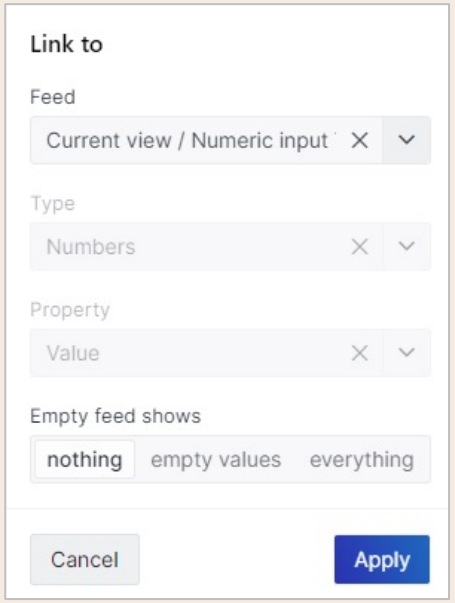


Feeds

How can I use them?

- Whenever you see the 'Link to feed' icon.

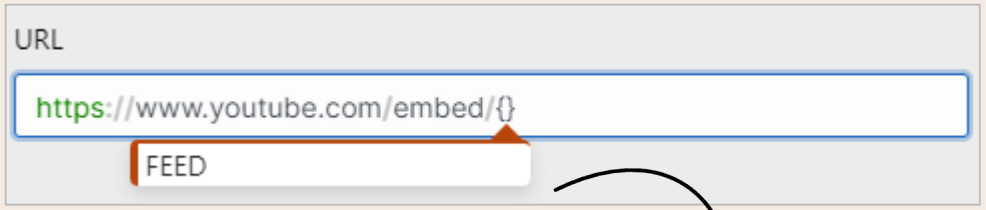


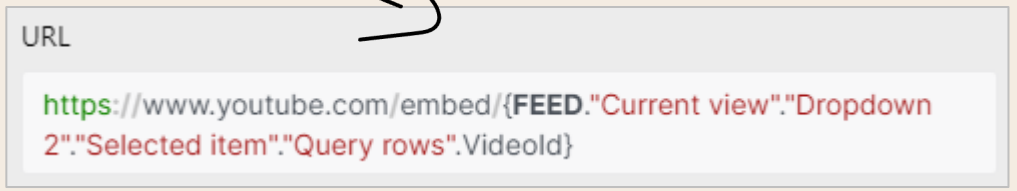


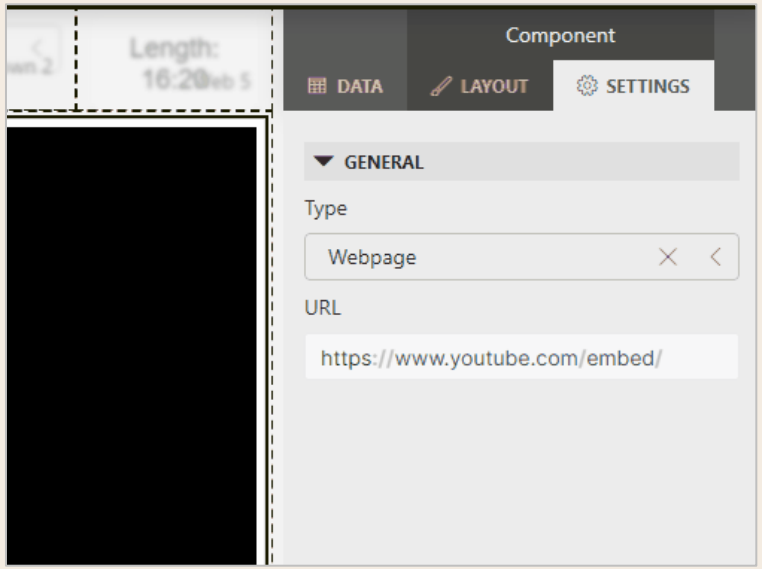
Feeds

How can I use them?

- Whenever there is intellisense on the input.

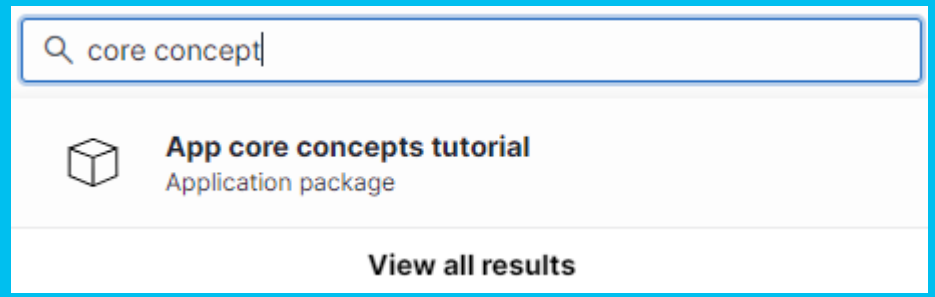




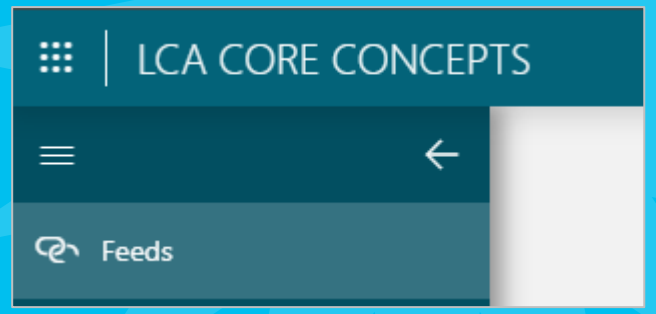


Deploy the exercise app

1. Go to '**Catalog.dataminer.services**'
2. Search for '**core concepts** '
3. Install '**App core concepts tutorial**'



Let's get our hands dirty!

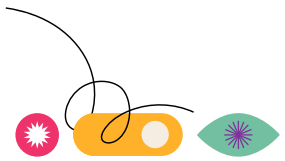


We understand the core concepts.

We know how to configure the core concepts.

Core concepts - Events

Something is happening!



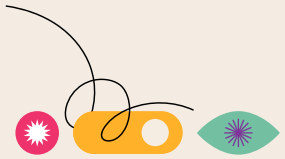
Events

What is it?

- Represents something that happens
- It's volatile and does not have an active state
- Serves as a trigger for actions

Examples:

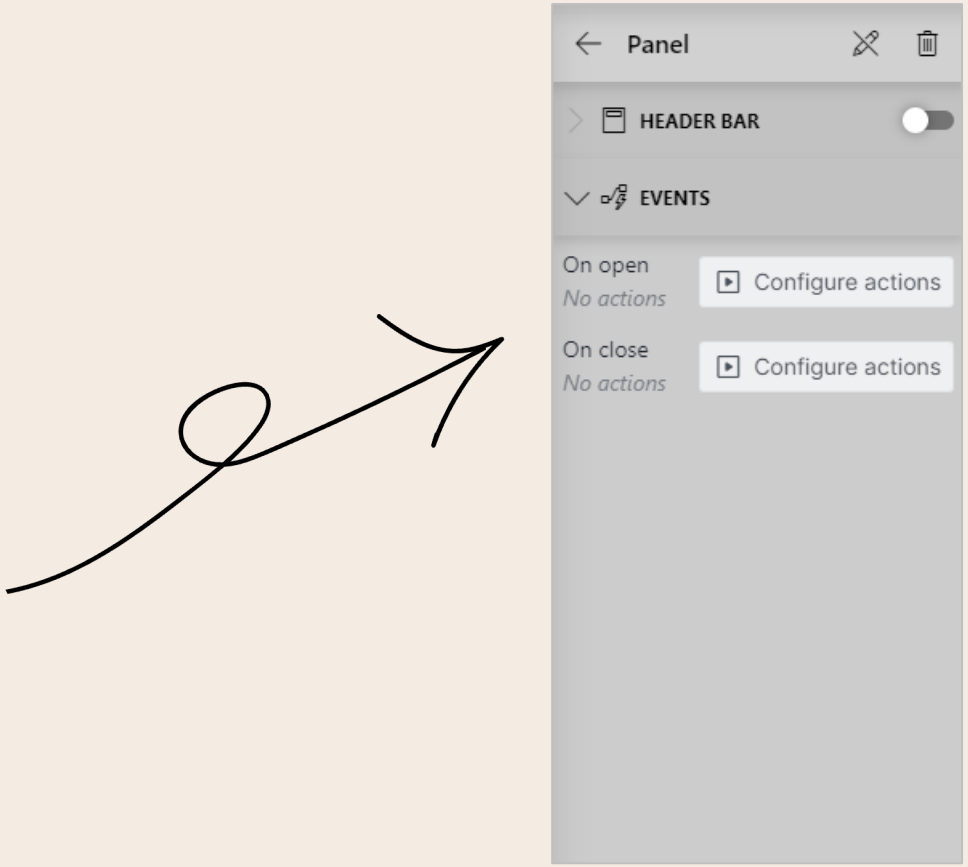
- Upon clicking a button
- Upon opening a panel
- Upon resizing a timeline item



Events

Where can I find them?

Application events for pages and panels,

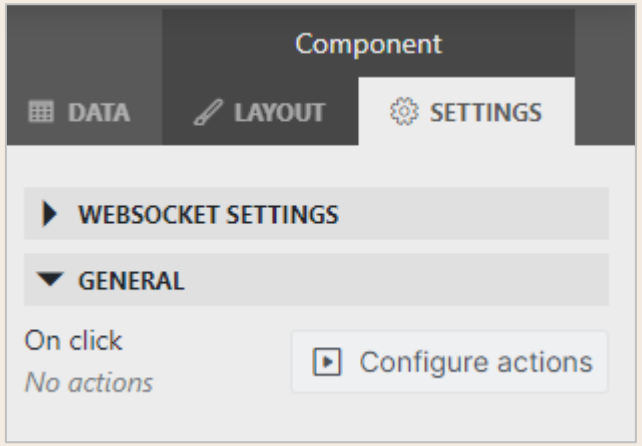


Events

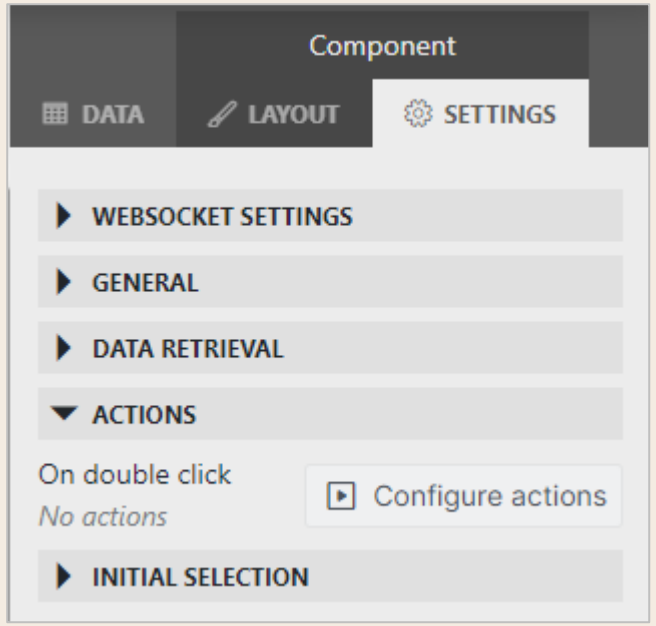
Where can I find them?

Components events

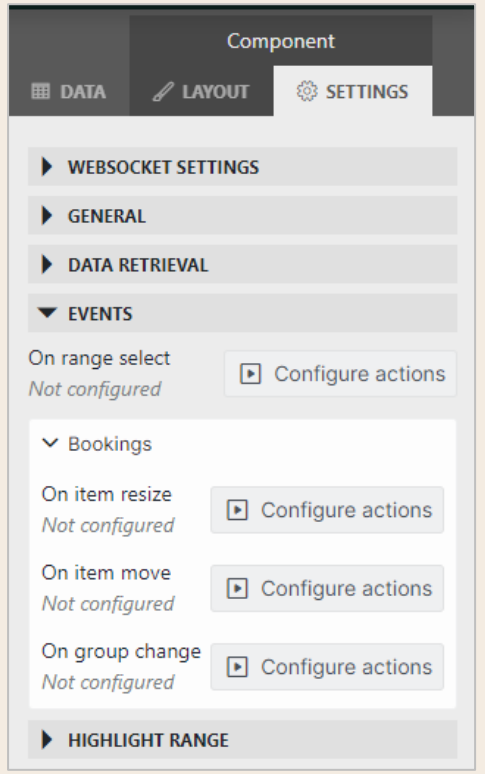
Button



Table



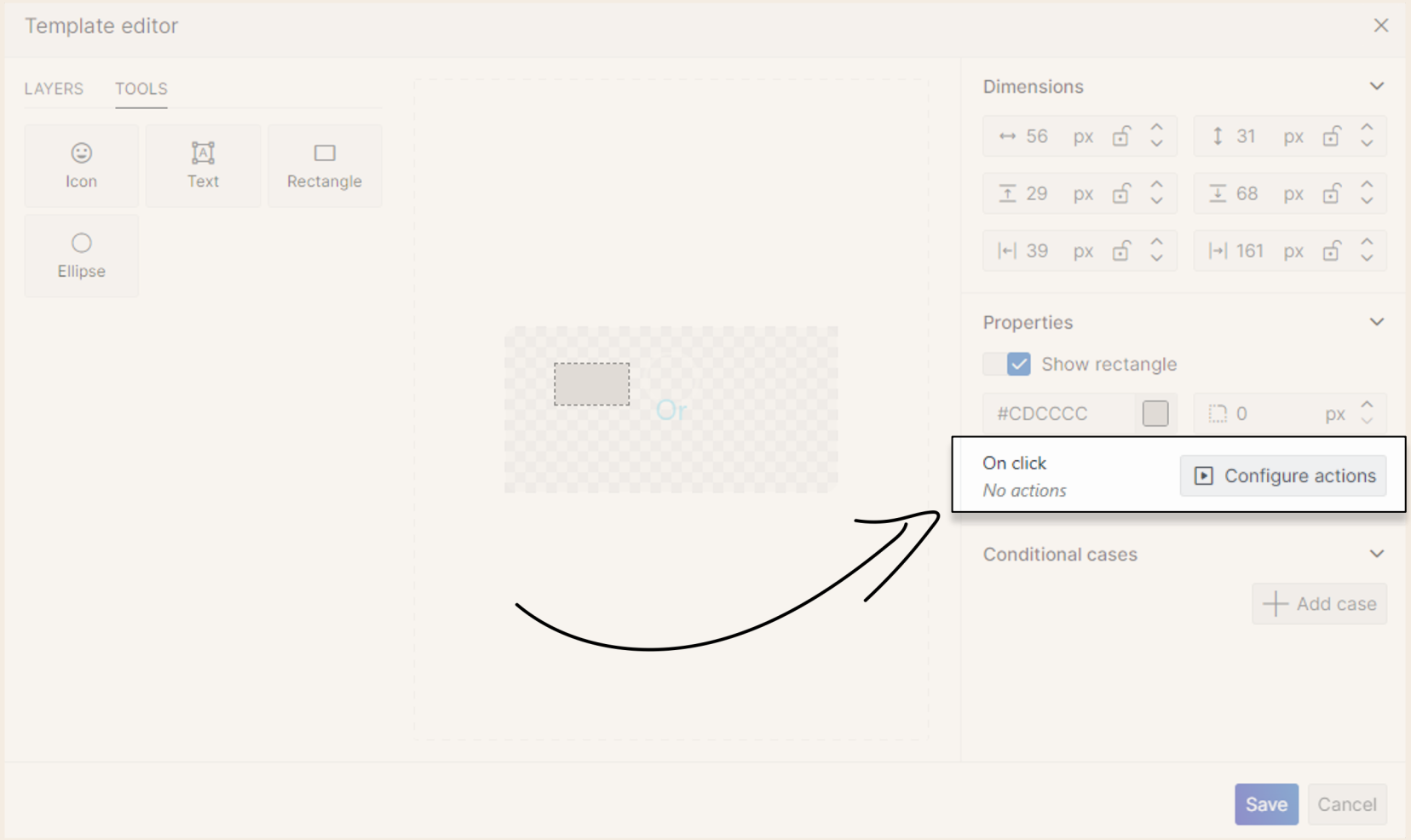
Timeline



Events

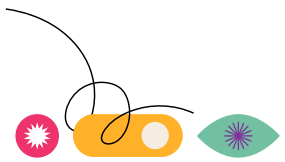
Where can I find them?

Template editor



Core concepts - Actions

Tell me what to do!



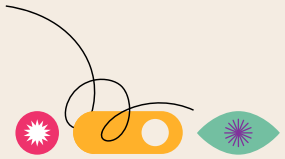
What are actions?

What is it?

- Identifies something that should happen
- Different actions can be run sequentially or in parallel
- Are called by an event
- Can be exposed by a component

Examples:

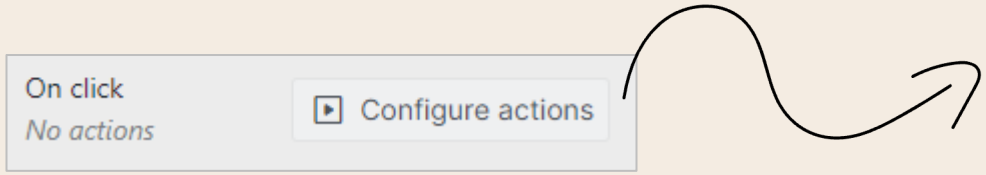
- Launch a script
- Open a panel
- Show a notification

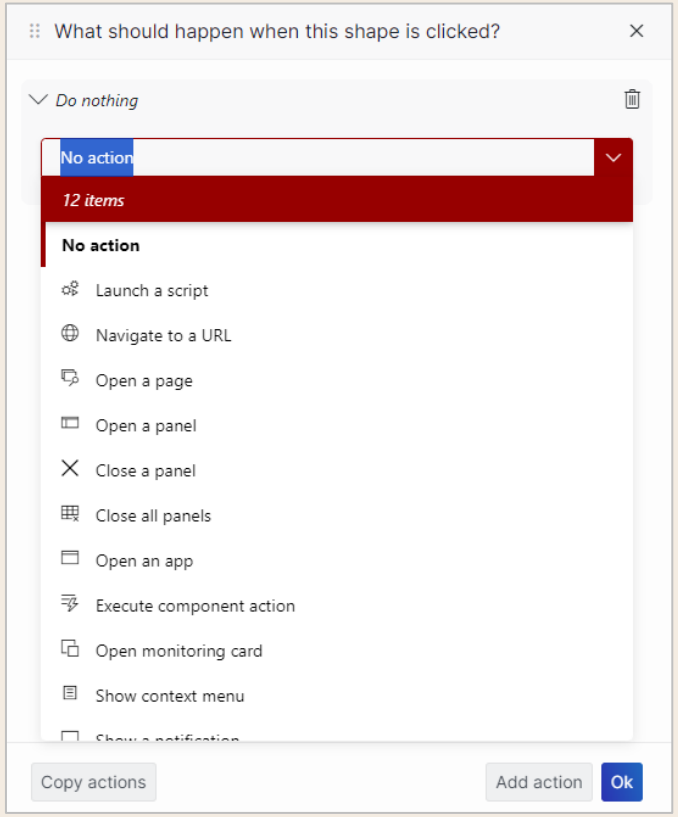


Actions

Where can I find them?

- Everywhere an event is defined
- Configuring actions will open the ‘Action editor’





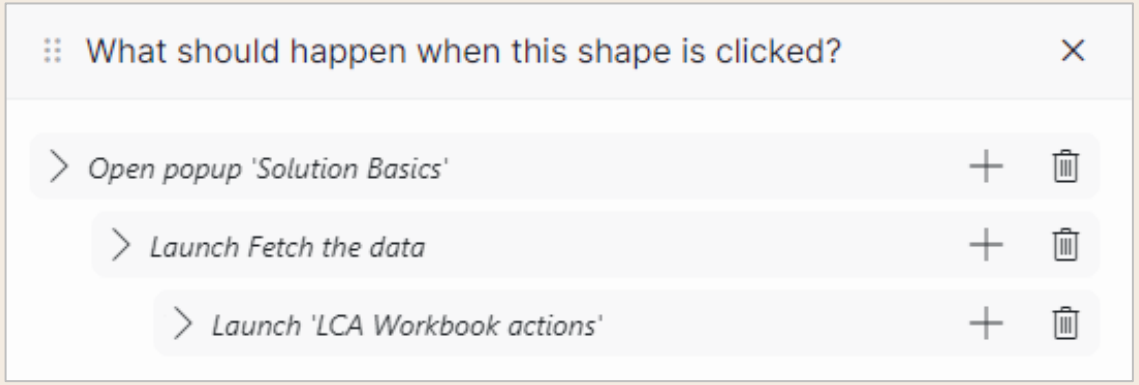
Actions

How can I use them?

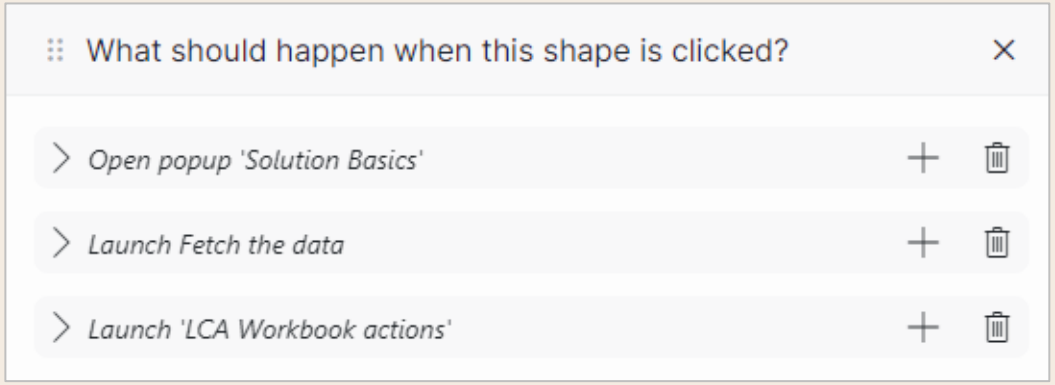
Follow the action configuration

Can be run in sequence or simultaneous

One after another



In parallel



Actions

What are component actions?

Table

Clear **selection**

Fetch the data

Select an item

Form

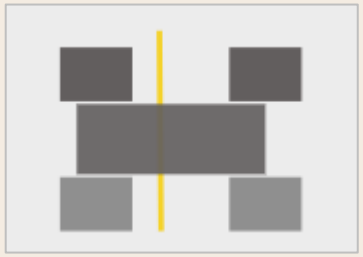
Cancel current changes

Create a new instance

Delete instance

Save current changes

Set form to **edit/read mode**



Timeline

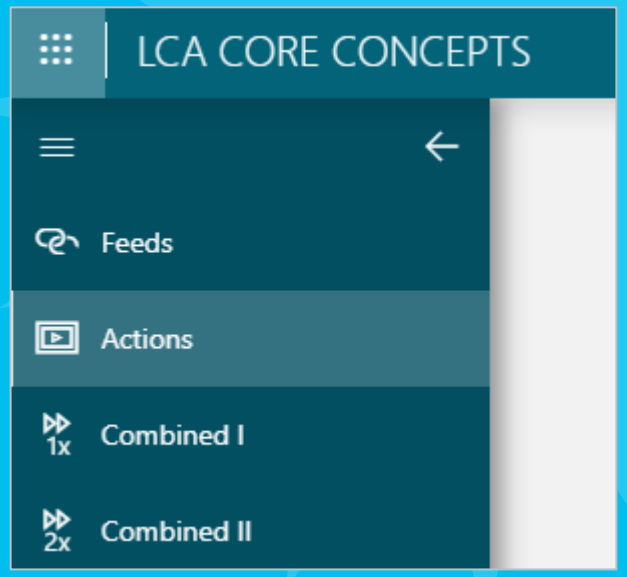
Clear highlights

Fetch the data

Highlight time range

Set **viewport**

Let's get our hands dirty!



We understand the core concepts

We know how to configure the core concepts.

We can apply them in a combined manner

ASK AWAY

empower!

Visualize geographical data on an interactive map

Using the maps component

YOUR HOST

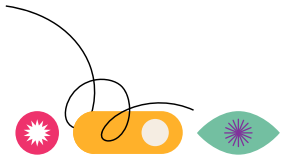
Wim Bruynooghe

DATA EXPLORATION

WIM.BRUYNOOGHE@SKYLINE.BE

Agenda

1. What is the maps component?
2. Visualizing markers
3. Configuring the map
4. Grouping markers
5. Navigation shortcuts
6. Connecting markers
7. Displaying overlays

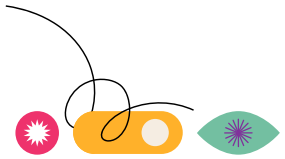


Goals

We can display markers on a map

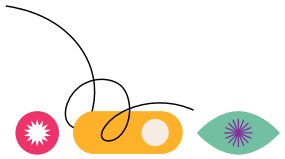
We can use actions to quickly navigate the map

We can display lines on a map



What is the maps component?

Never get lost again



What is the maps component?

Never get lost again

- Dashboards & Low Code Apps component
- Visualizes GQI rows
  - Markers
  - Lines
- Visualizes overlays
  - KML and KMZ
  - GeoJSON
- Requires a Google Maps API key
- *To be released soon* *(currently uses the ReportsAndDashboardsGQIMaps* soft-launch option)

TOWER ID	LATITUDE	LONGITUDE	TRANSCEIVERS	SOURCE
5699	51.1825271626786	3.09326655940459	10	0
25699	51.1826590590674	3.09397568721958	3	5699
5529	51.176321971176	3.13300473058391	9	5699
5797	51.1929758149069	3.14153826913328	5	5529
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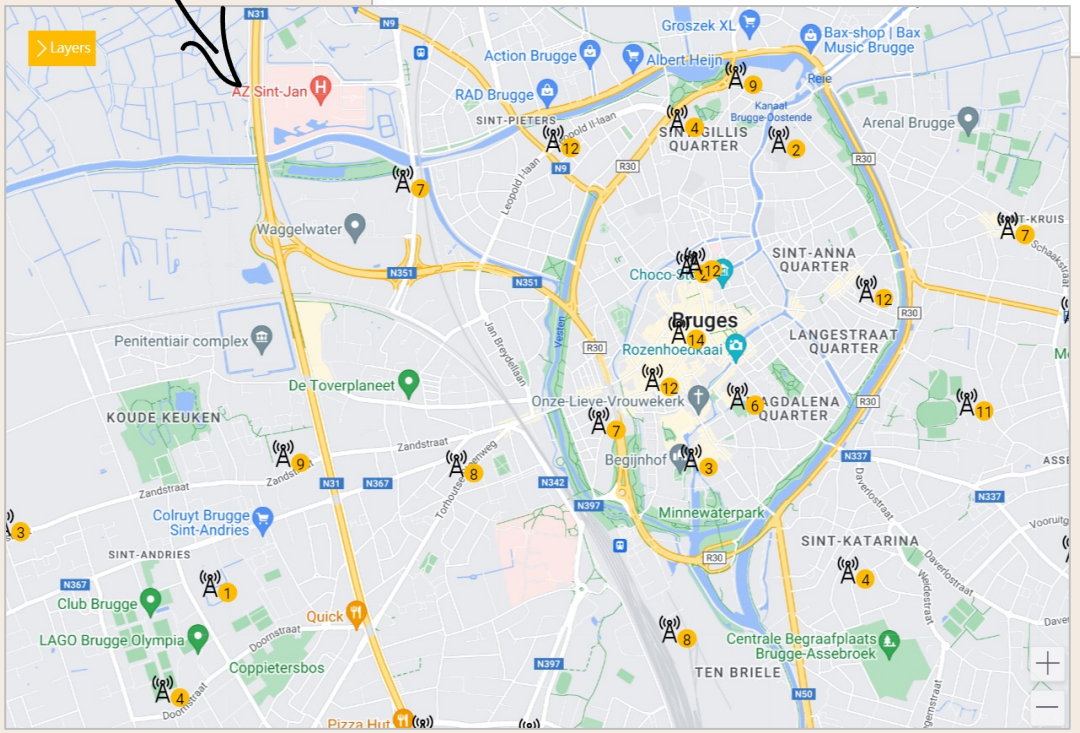
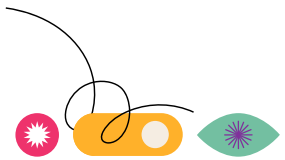
			3	5833



Visualizing markers

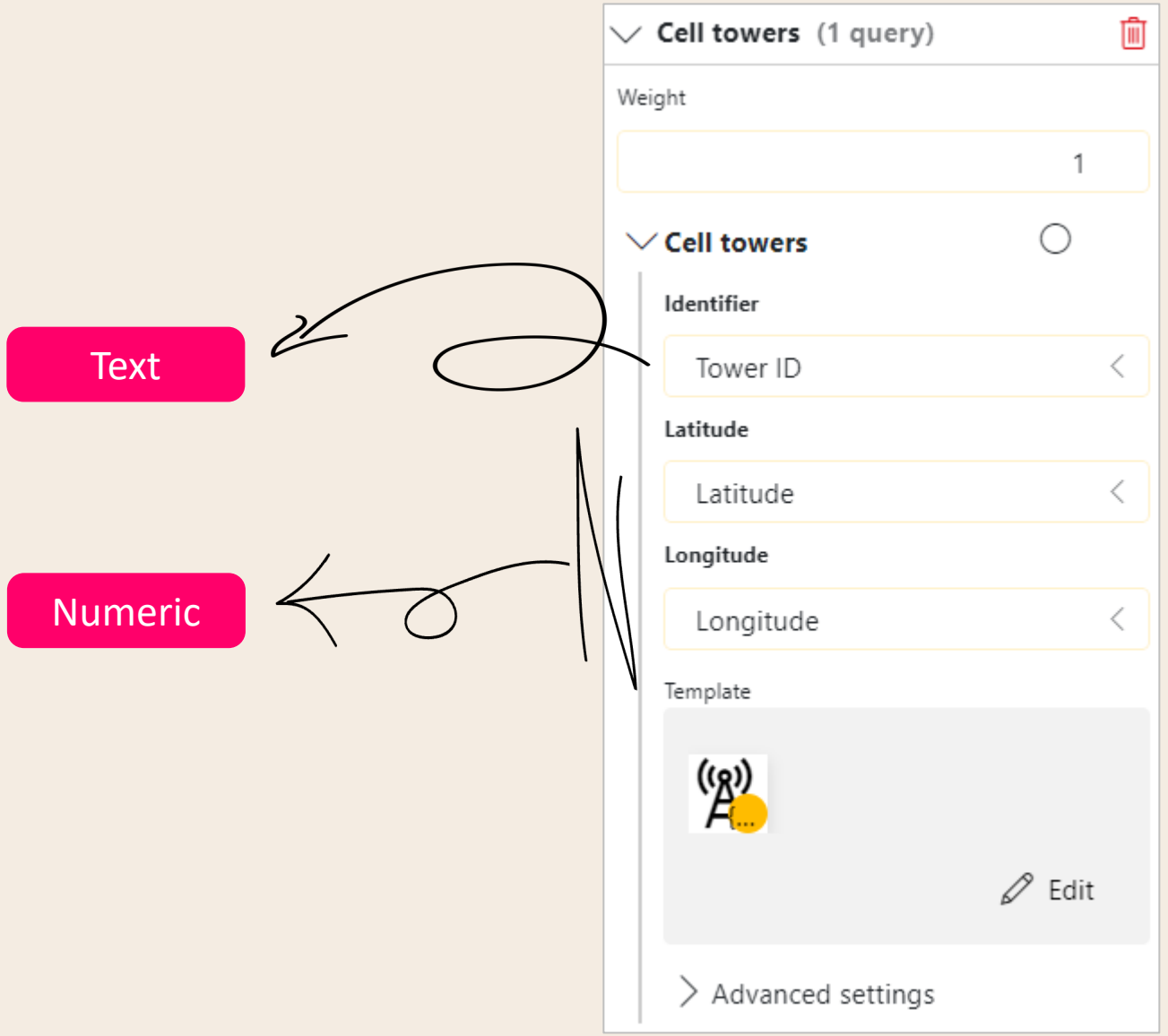
X marks the spot



Visualizing markers

X marks the spot

- Layers
- 3 Columns
  - Identifier
  - Latitude
  - Longitude
- Weights

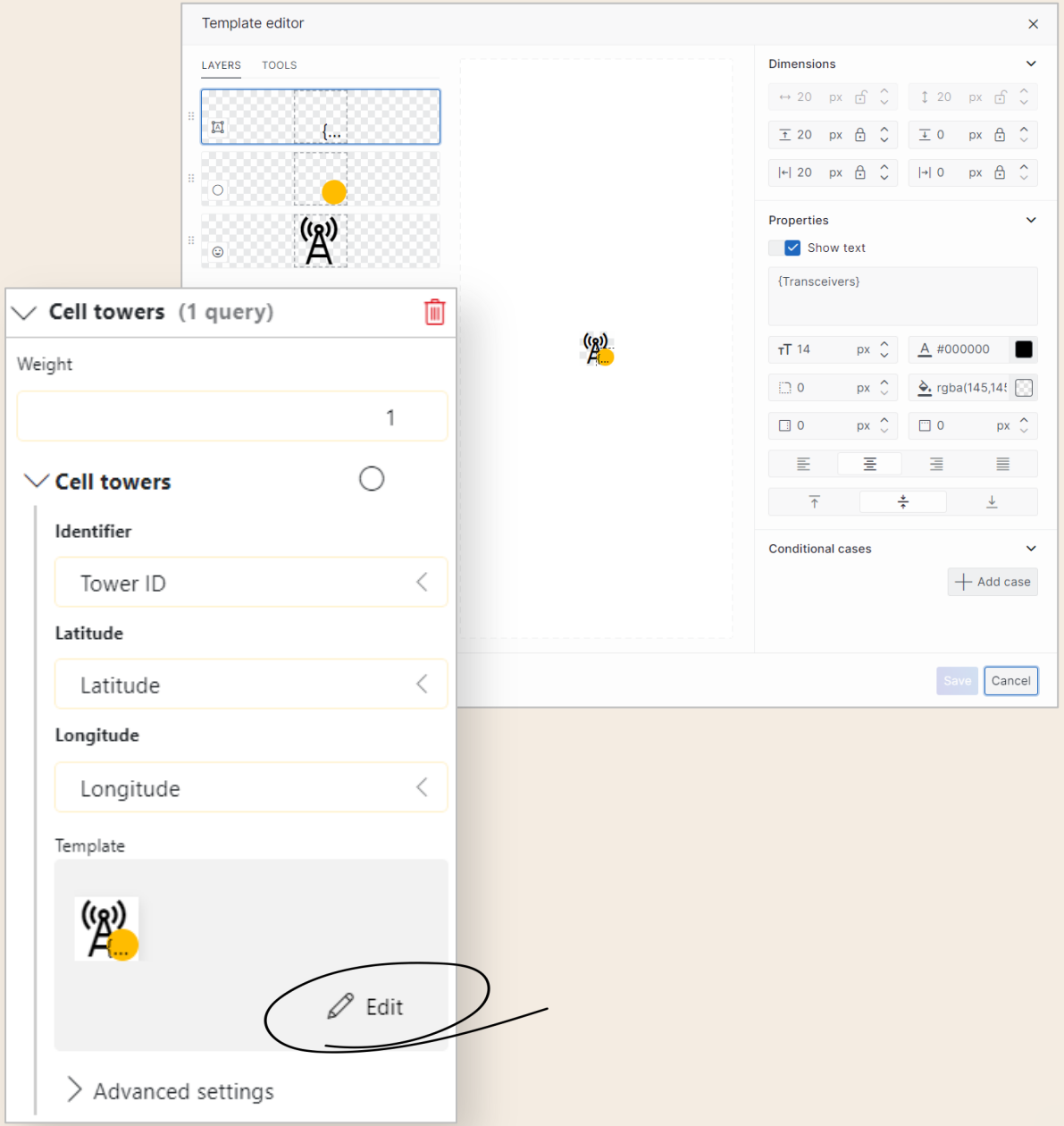


Customizing the look

X marks the spot

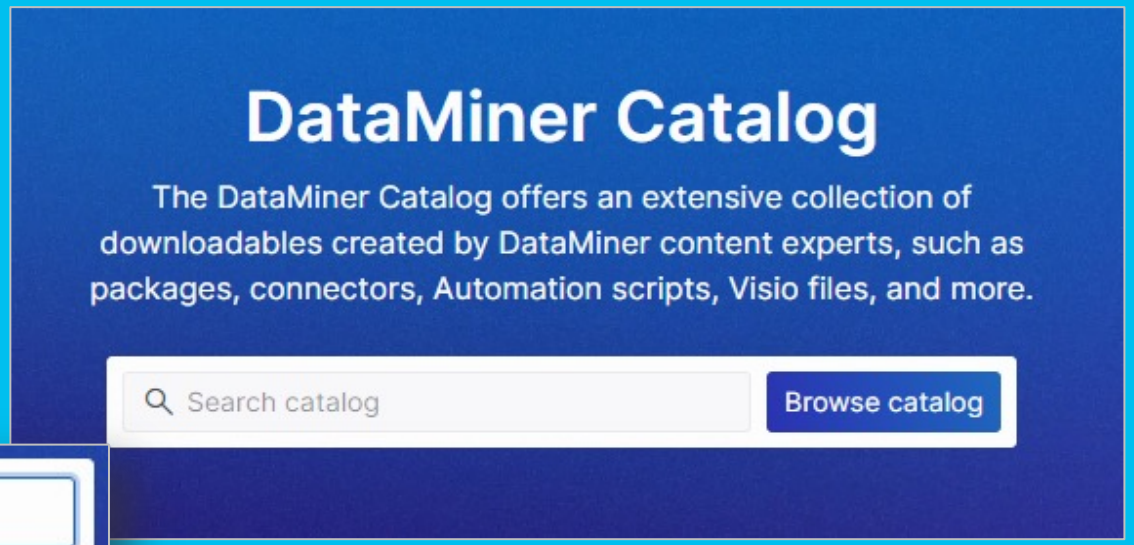
Template

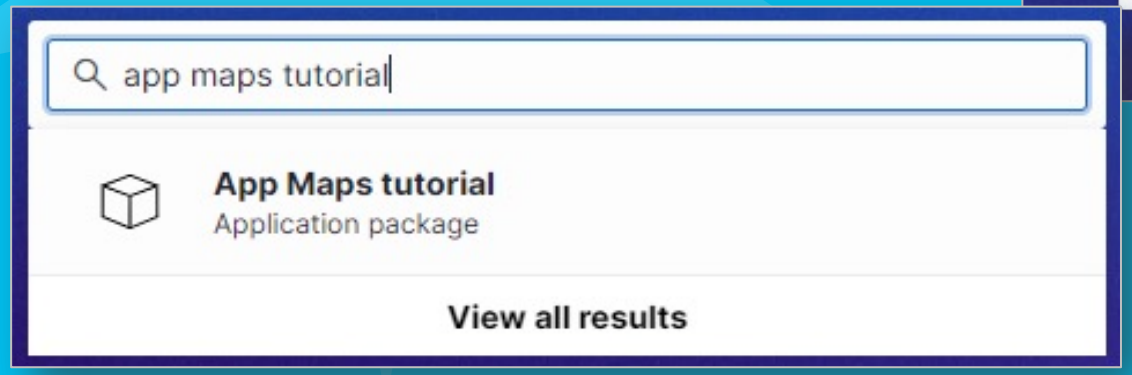
- Configurable shapes
- Conditions
- Actions



Hands-on time!

- Go to '**catalog.dataminer.services**'
- Search for **'app maps'**
- Install the **'App Maps tutorial'**





Let's get our hands dirty!

We can display markers on a map

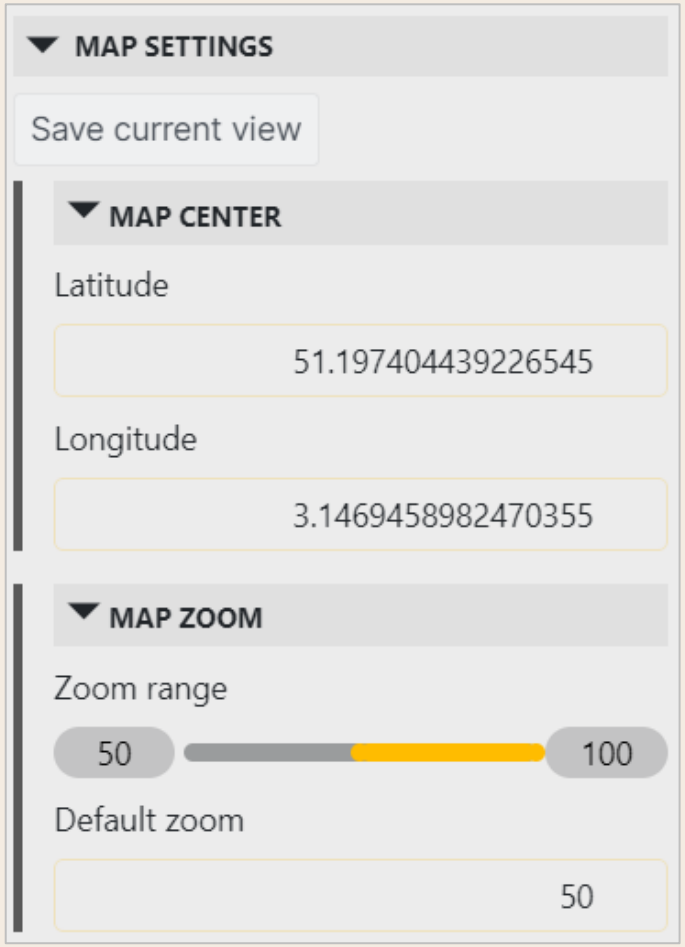
Configuring the map

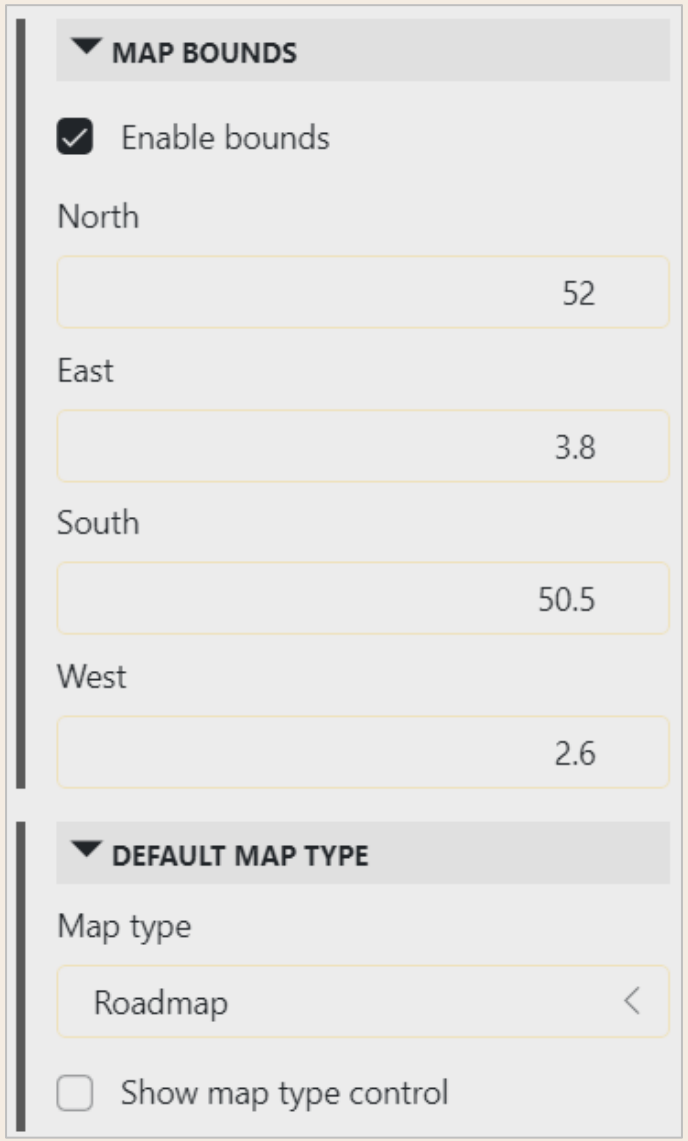
Keep the focus centered

Configuring the map

Keep the focus centered

- Default values
  - Zoom
  - Center
- Min & max zoom
- Viewport bounds
- Map type





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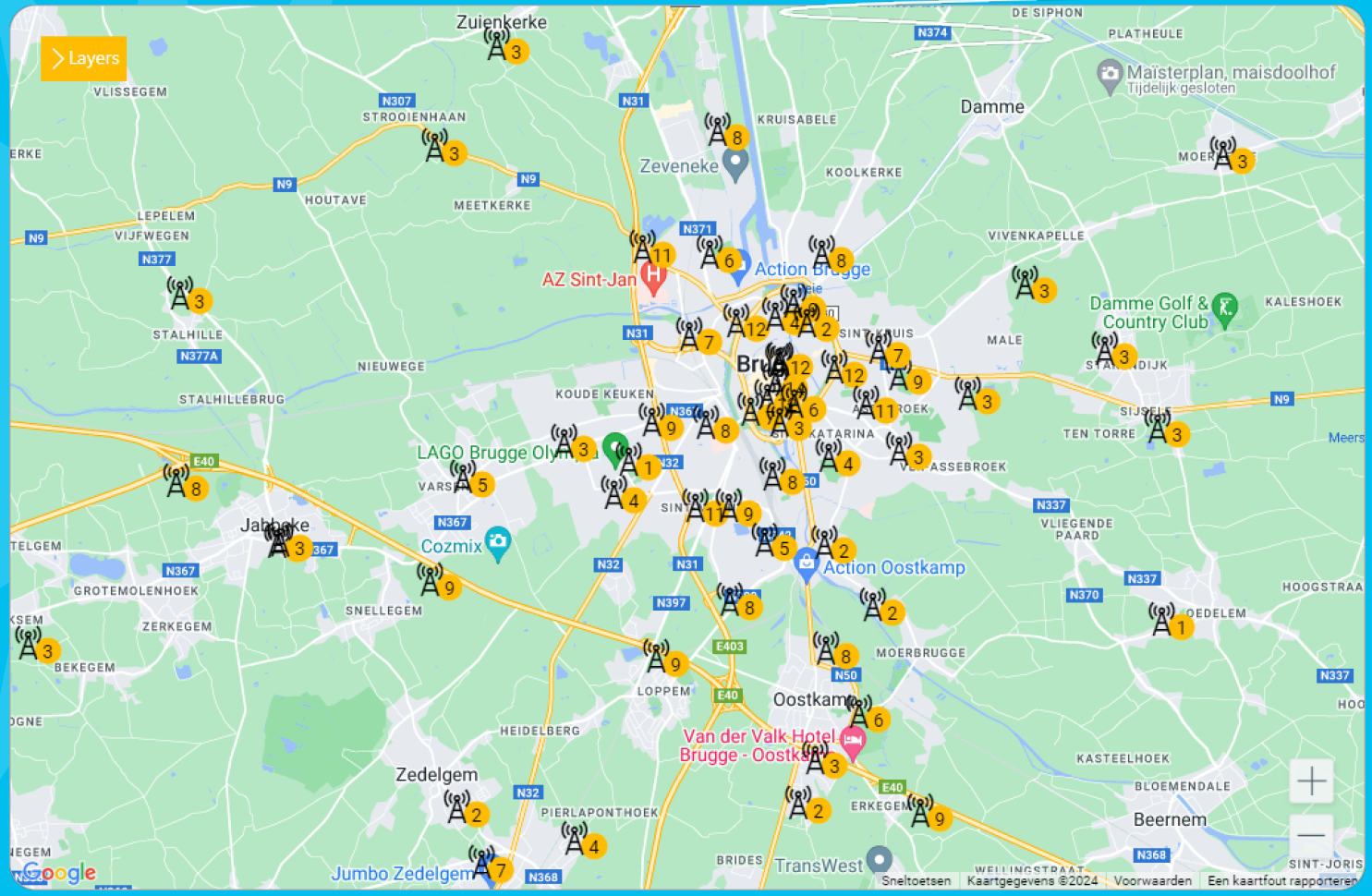
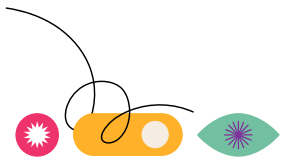


Grouping markers

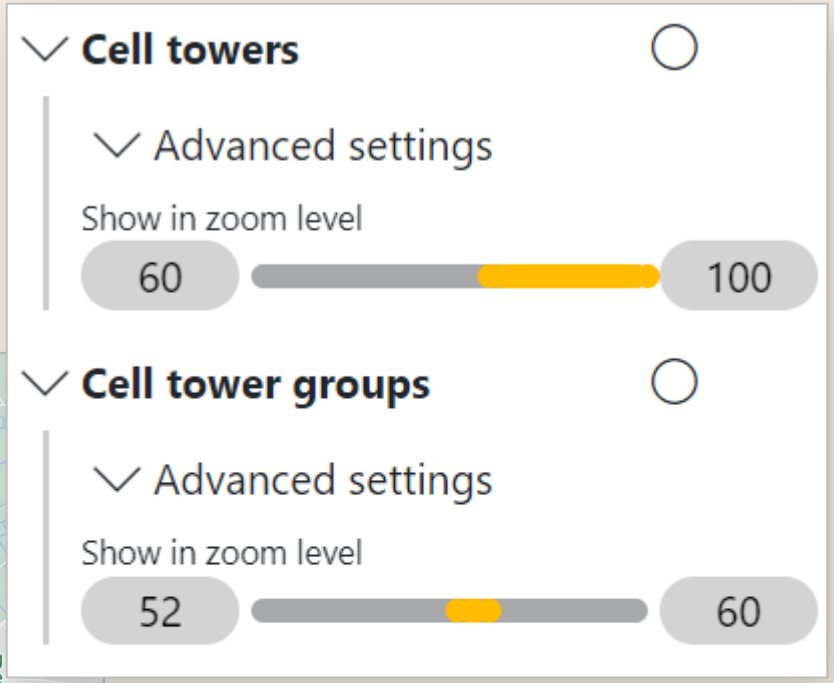
Visualize your data as granular as you want

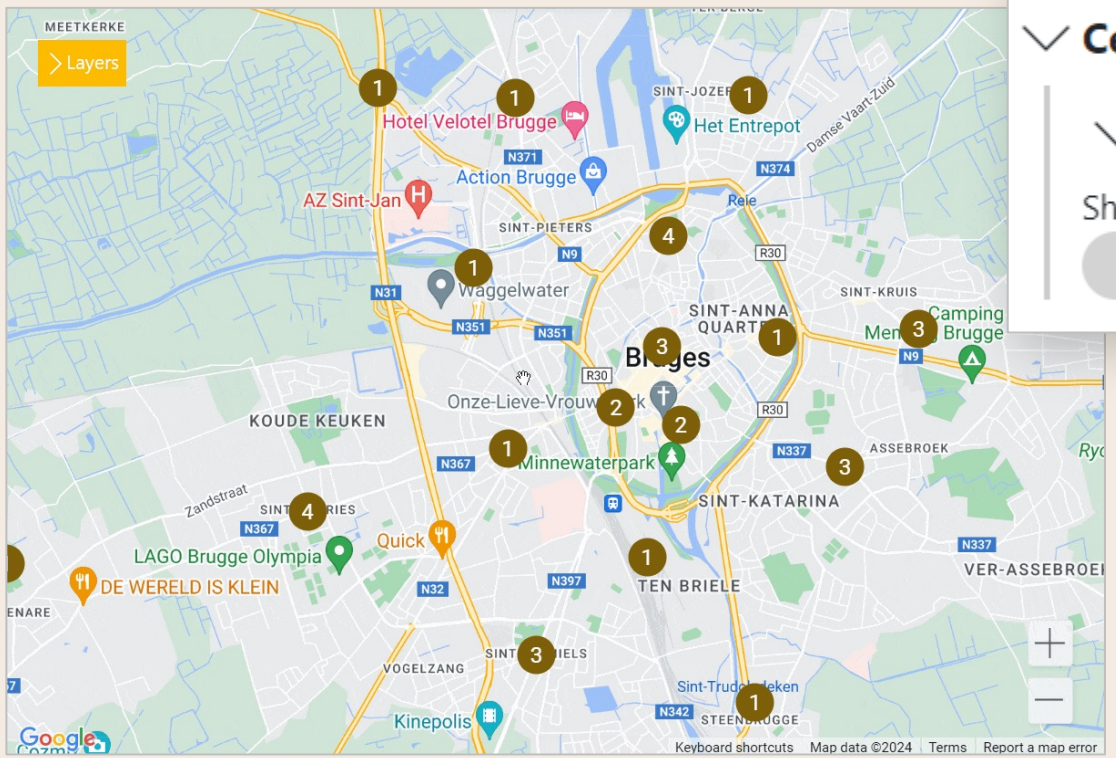


Grouping markers

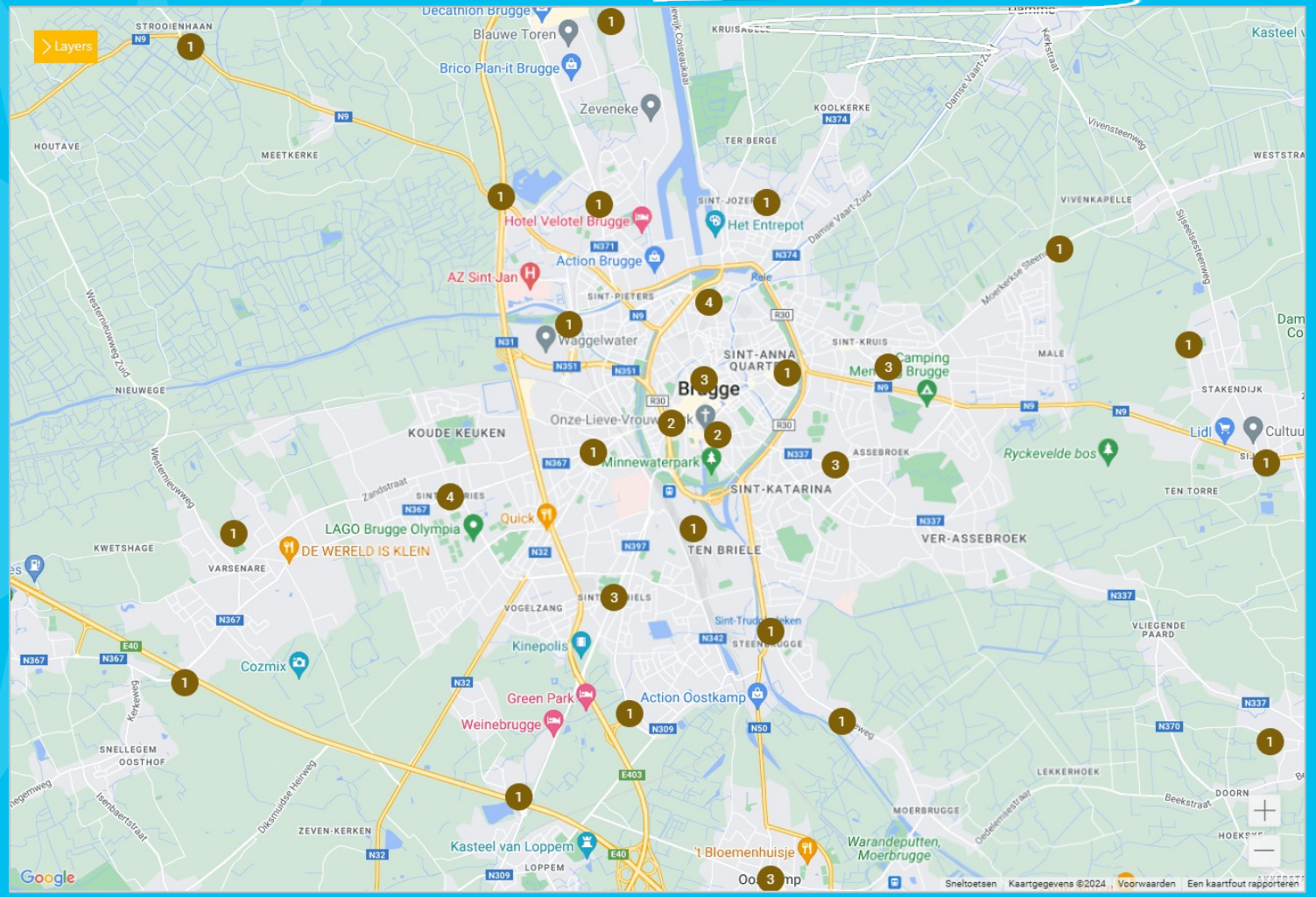
Visualize your data as granular as you want

- No automatic grouping
- Visibility can be configured based on zoom level



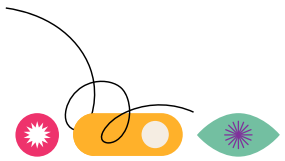


Let's get our hands dirty!



Navigation shortcuts

We can teleport now



Navigation shortcuts

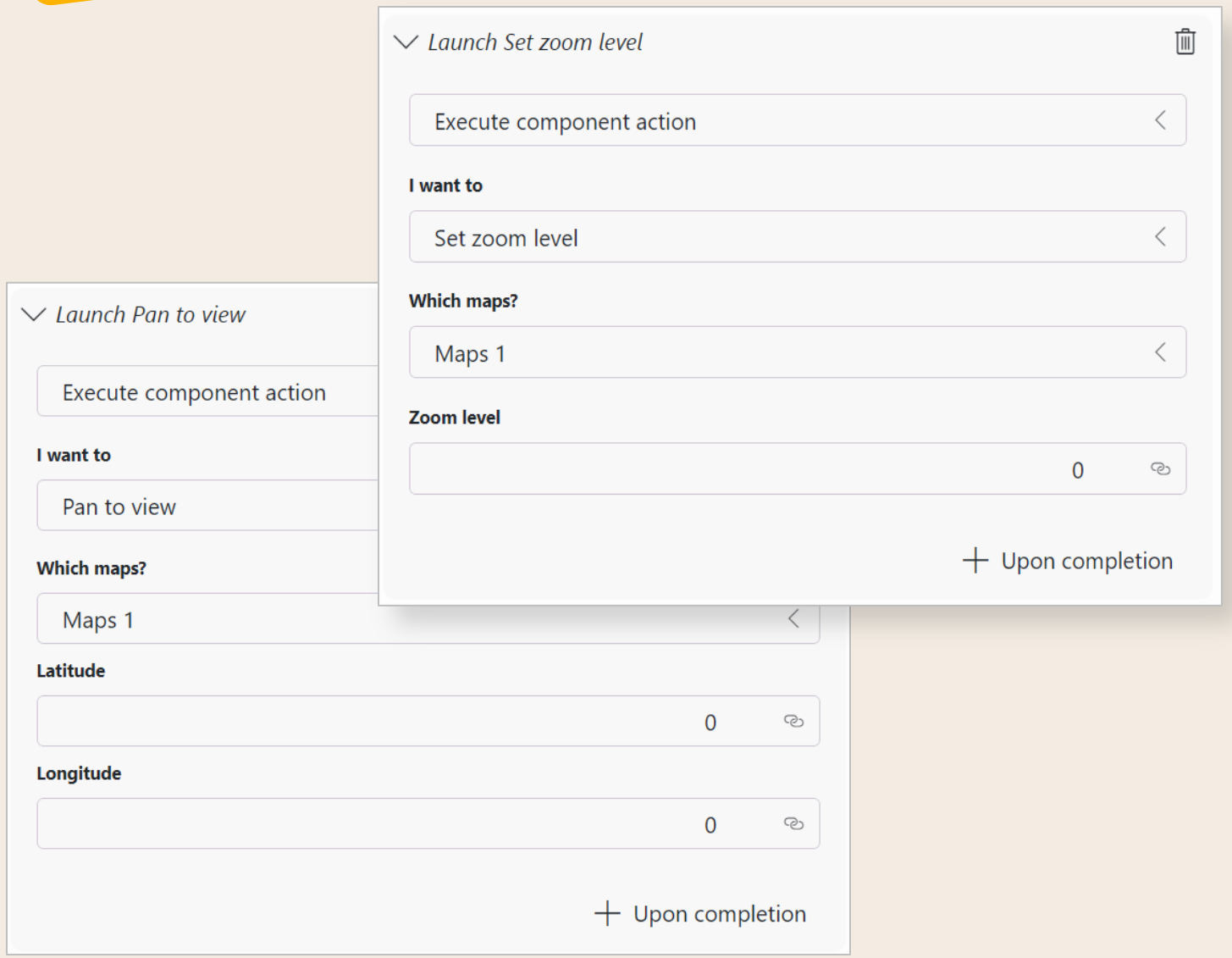
Advanced!

We can teleport now

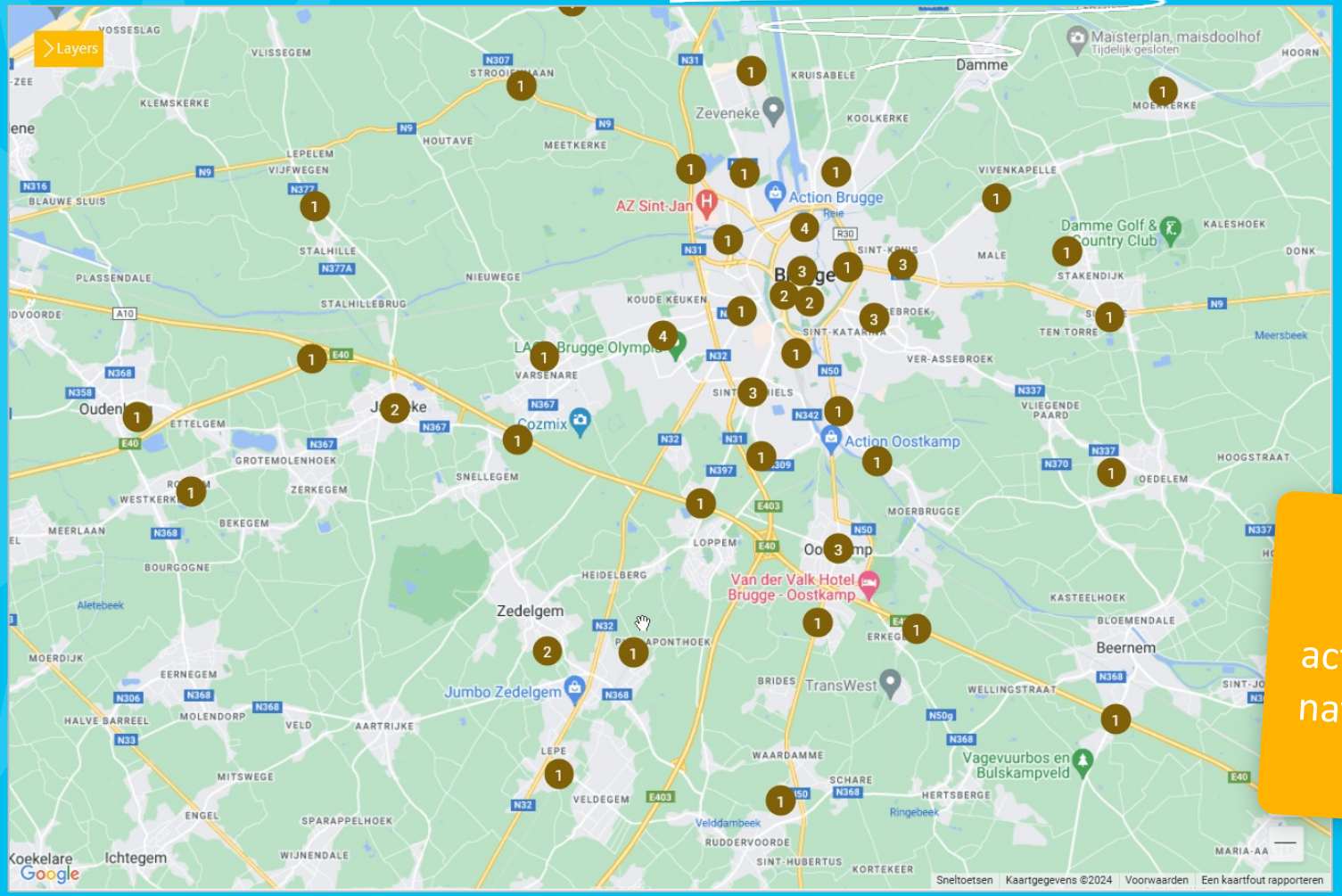
Component actions used for quick navigation

- Pan to view
- Set zoom level

Both actions can be linked to feeds



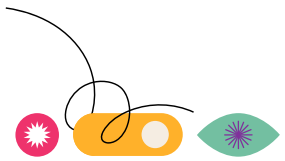
Let's get our hands dirty!



We can use actions to quickly navigate the map

Connecting markers

It's all connected



Connecting markers

Advanced!

It's all connected

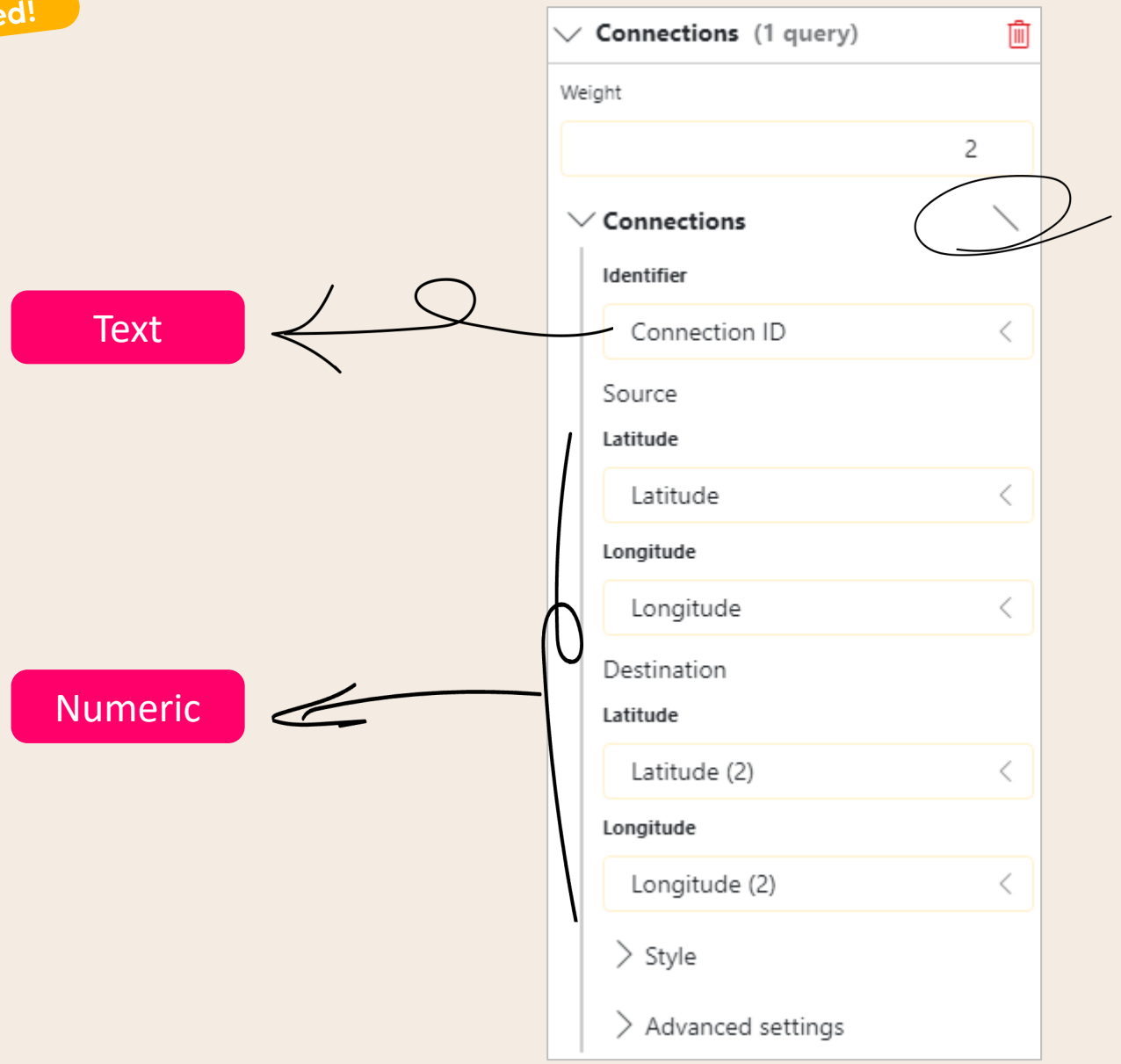
Independent of markers

5 Columns

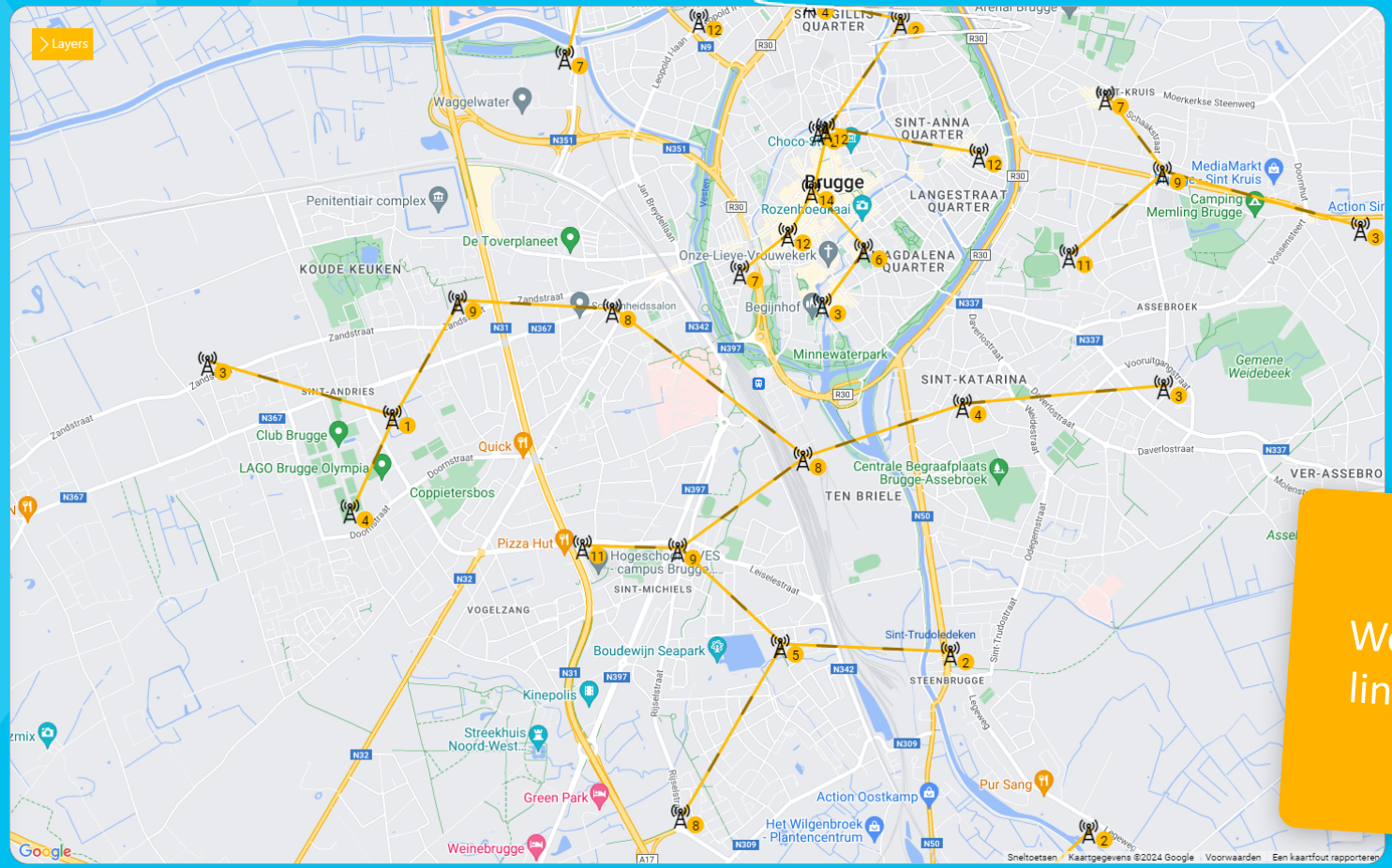
- Identifier
- Source & destination latitude
- Source & destination longitude

Styling

- Color
- Width
- …



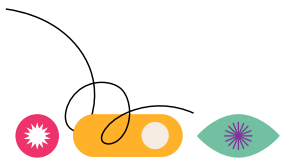
Let's get our hands dirty!



We can display lines on a map

Displaying overlays

Tattooing the map

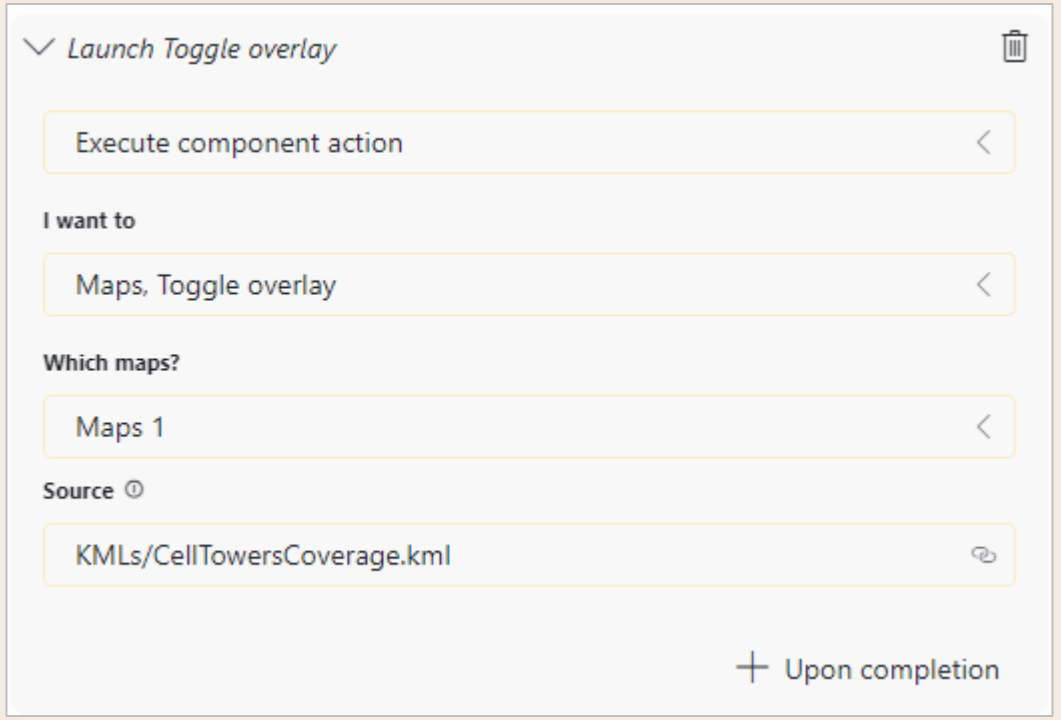


Displaying overlays

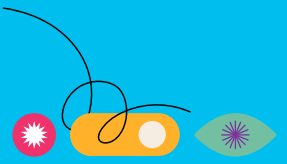
Advanced!

Tattooing the map

- Different types
  - KML and KMZ
  - GeoJSON
- Component actions
  - Open overlay
  - Close (all) overlay(s)
  - Toggle overlay
- Overlay files
  - Hosted publicly
  - Behind secured public endpoint on DMA



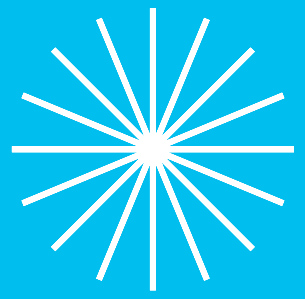
Let's get our hands dirty!



ASK AWAY

empower!

Time to put it all together and make a real-world example



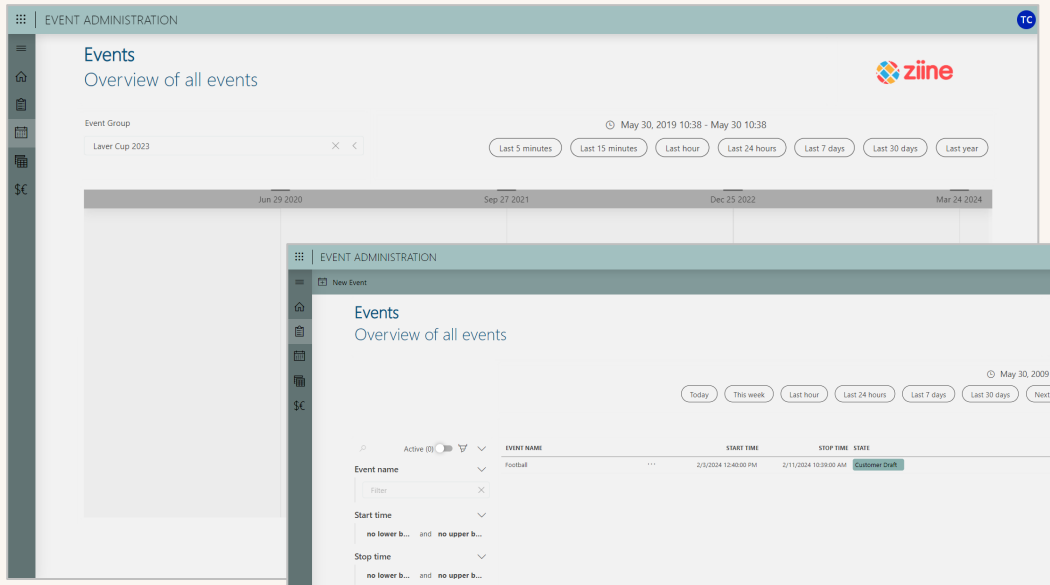
YOUR HOST

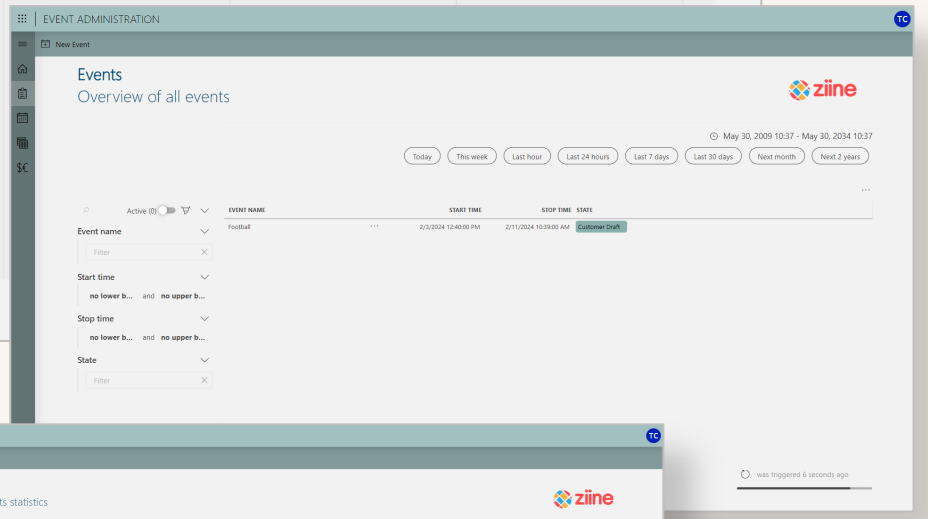
Toon Casteele

VISUAL OVERVIEW
TRENDING

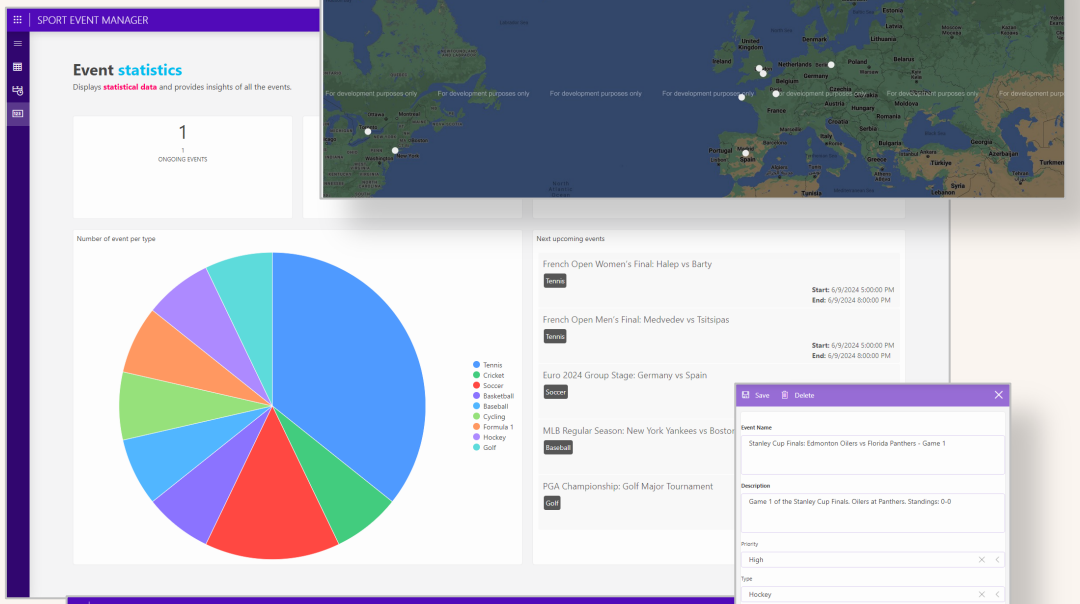
AGILE COACH DATA EXPLORATION & CORE

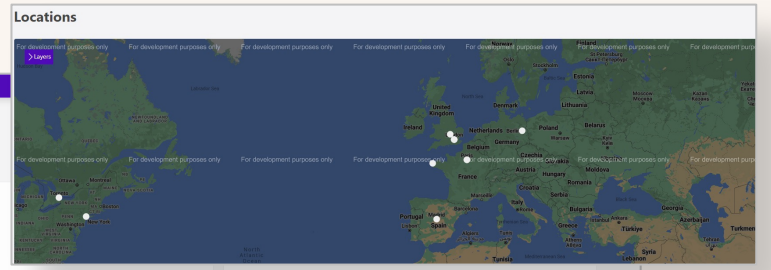
TOON.CASTEELE@SKYLINE.BE

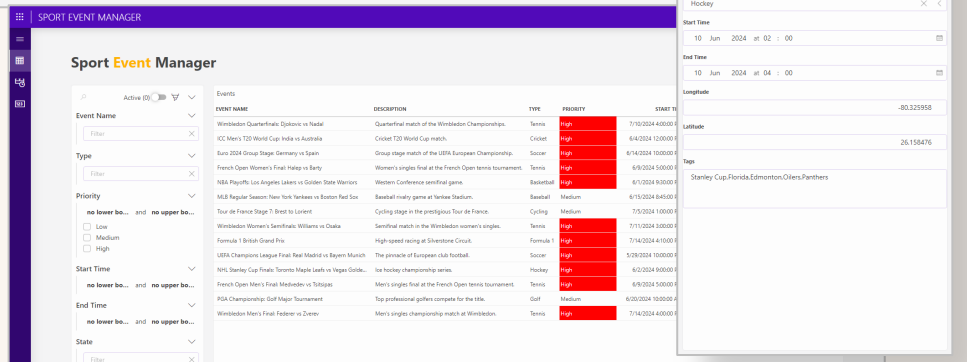

EVENT ADMINISTRATION
Events
Overview of all events
ziine
Event Group
Laver Cup 2023
May 30, 2019 10:38 - May 30 10:38
Last 5 minutes
Last 15 minutes
Last hour
Last 24 hours
Last 7 days
Last 30 days
Last year
Jun 29 2020
Sep 27 2021
Dec 25 2022
Mar 24 2024


EVENT ADMINISTRATION
New Event
Events
Overview of all events
ziine
May 30, 2009 10:37 - May 30, 2034 10:37
Today
This week
Last hour
Last 24 hours
Last 7 days
Last 30 days
Next month
Next 2 years
Active (0)
EVENT NAME
START TIME
STOP TIME
STATE
Football
2/3/2024 12:40:00 PM
2/11/2024 10:39:00 AM
Customer Draft
Event name
Start time
Stop time
State
was triggered 6 seconds ago

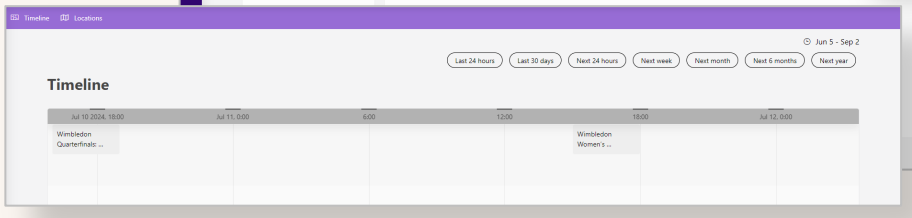
EVENT ADMINISTRATION
New Event
Home
Overview of events statistics
ziine
Number of Events
1
Events in the future
1
Ongoing events
3
Stats
Status of the jobs
Customer Draft
Number of Events per Customer
Fox Sports
Revenue per Customer (USD)
Next 5 events
Football
Customer Draft
Show details...


SPORT EVENT MANAGER
Event statistics
Displays statistical data and provides insights of all the events.
1
ONGOING EVENTS
Number of event per type
Tennis
Cricket
Soccer
Basketball
Baseball
Cycling
Formula 1
Hockey
Golf
Next upcoming events
French Open Women's Final: Halep vs Barty
Tennis
Start: 6/9/2024 5:00:00 PM
End: 6/9/2024 8:00:00 PM
French Open Men's Final: Medvedev vs Tsitsipas
Tennis
Start: 6/9/2024 5:00:00 PM
End: 6/9/2024 8:00:00 PM
Euro 2024 Group Stage: Germany vs Spain
Soccer
MLB Regular Season: New York Yankees vs Boston
Baseball
PGA Championship: Golf Major Tournament
Golf


Locations
Layers

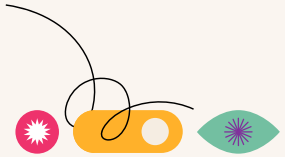

Save
Delete
Event Name
Stanley Cup Finals: Edmonton Oilers vs Florida Panthers - Game 1
Description
Game 1 of the Stanley Cup Finals. Oilers at Panthers. Standings: 0-0
Priority
High
Type
Hockey
Start Time
End Time
Longitude
-80.325958
Latitude
26.158476
Tags
Stanley Cup,Florida,Edmonton,Oilers,Panthers

SPORT EVENT MANAGER
Sport Event Manager
Active (0)
Events
Event Name
Type
Priority
Start Time
End Time
State
EVENT NAME
DESCRIPTION
TYPE
PRIORITY


Timeline
Locations
Jun 5 - Sep 2
Last 24 hours
Last 30 days
Next 24 hours
Next week
Next month
Next 6 months
Next year
Timeline
Jul 10 2024, 18:00
Jul 11, 0:00
6:00
12:00
18:00
Jul 12, 0:00
Wimbledon Quarterfinals ...
Wimbledon Women's ...

Agenda

1. Small recap
2. Use case
3. Basic event table
4. Putting events on a timeline
   - How does a timeline work?
   - Filter timeline events
5. Getting metrics out of the events



Goals

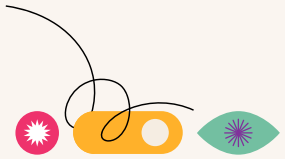
We made our own event manager

We understand how we can use a timeline

We are inspired to be creative

Small recap

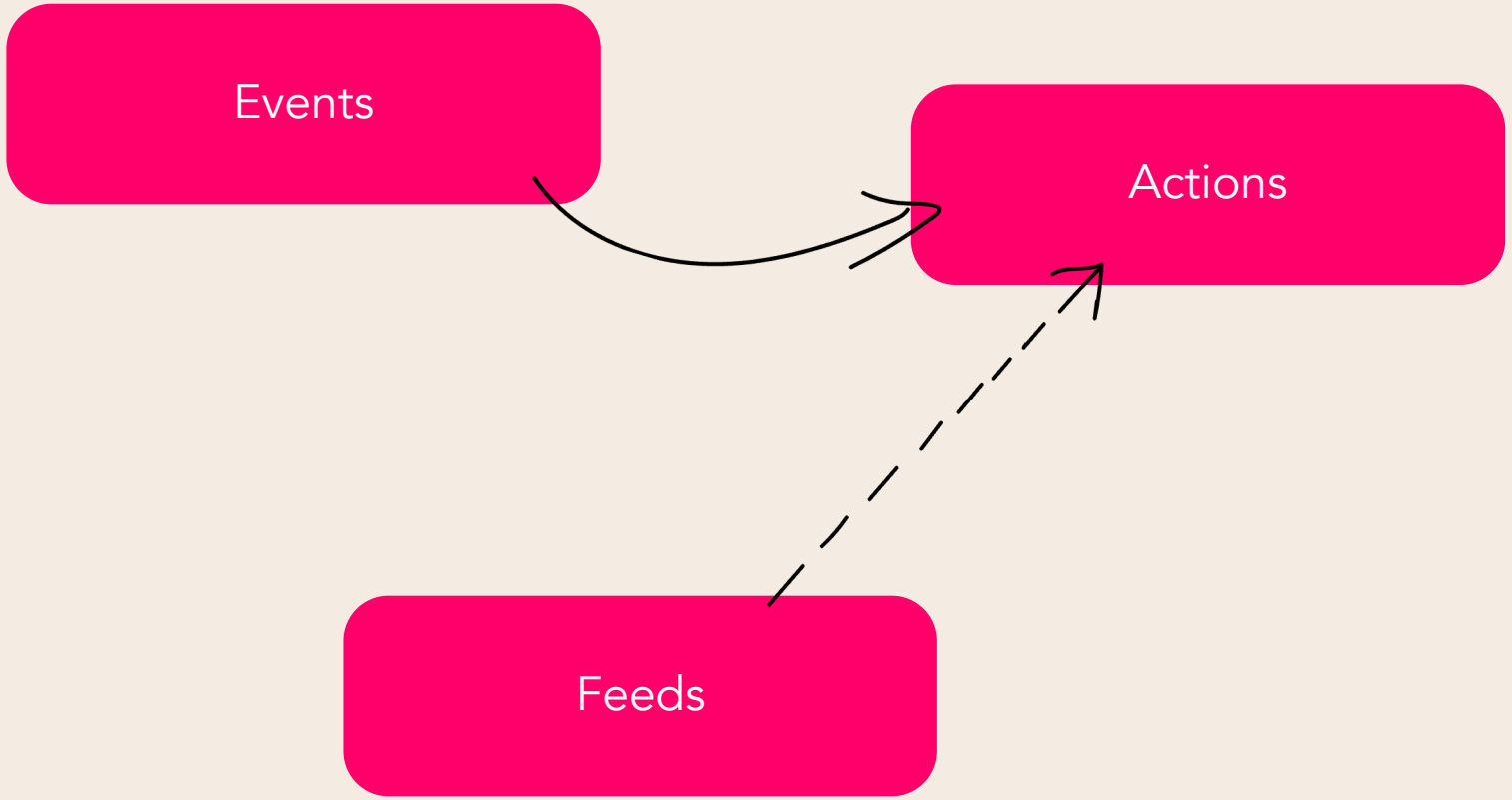
Because we never remember everything



Small recap

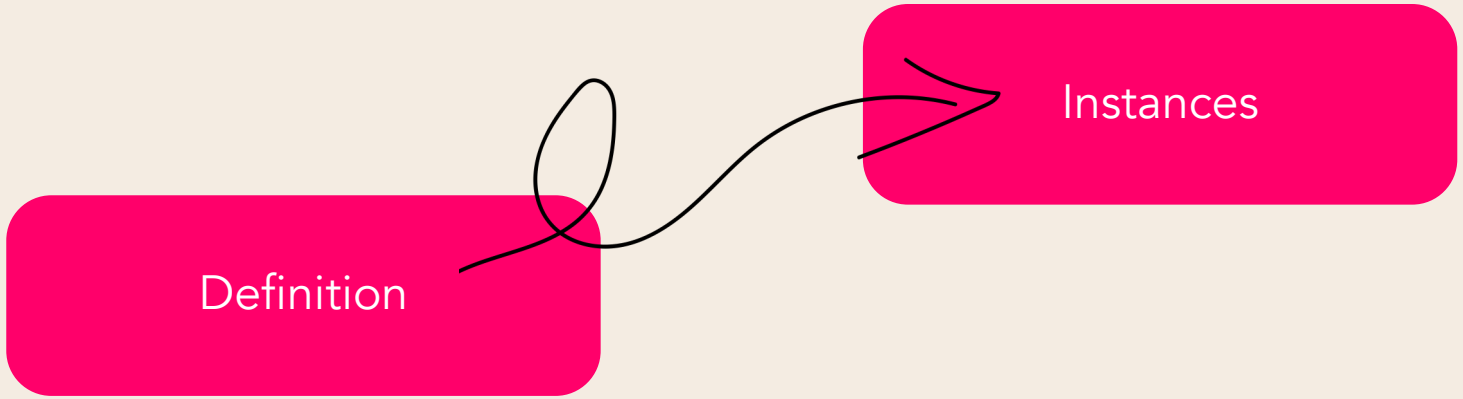
Three main parts of Low Code Apps

- Events
- Actions
- Feeds



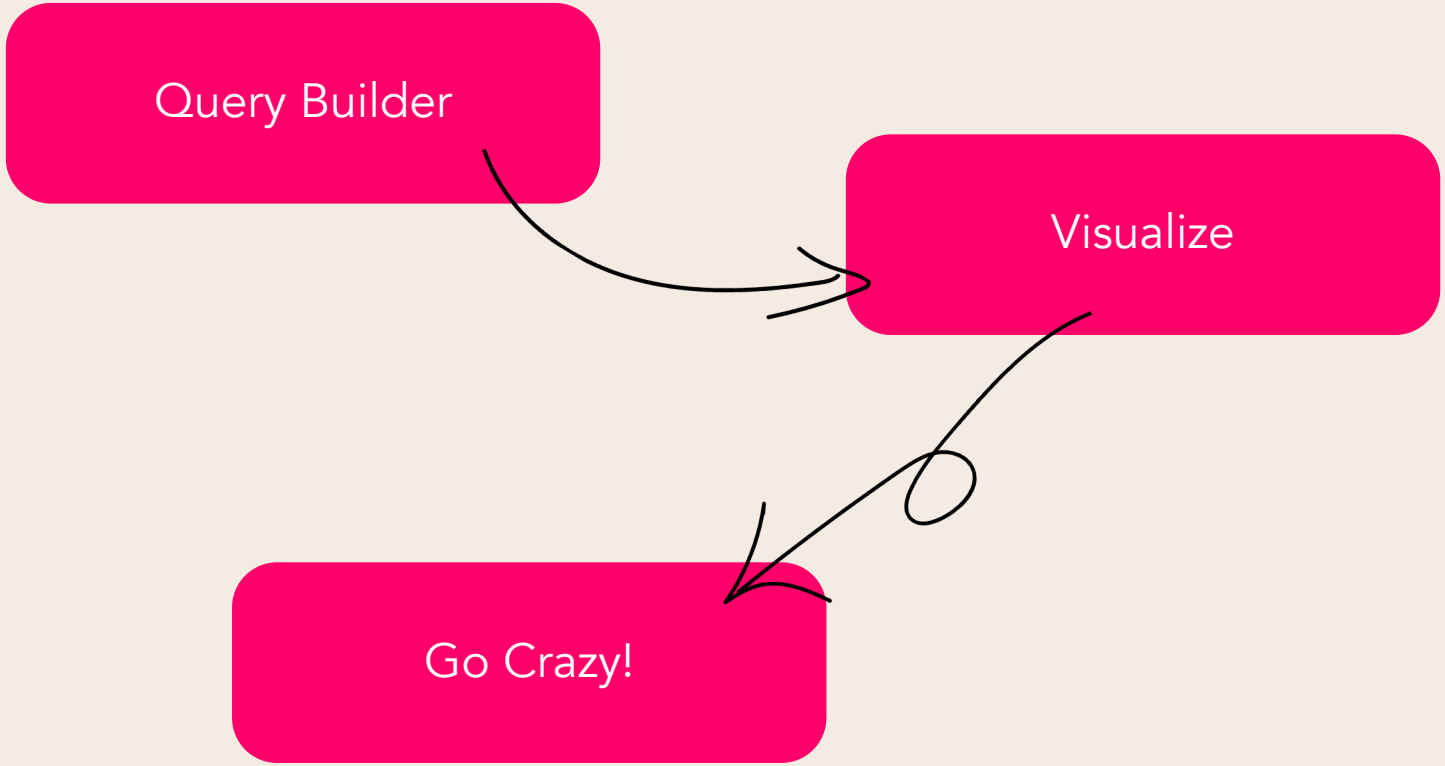
Small recap

DataMiner Object Modelling (DOM)



Small recap

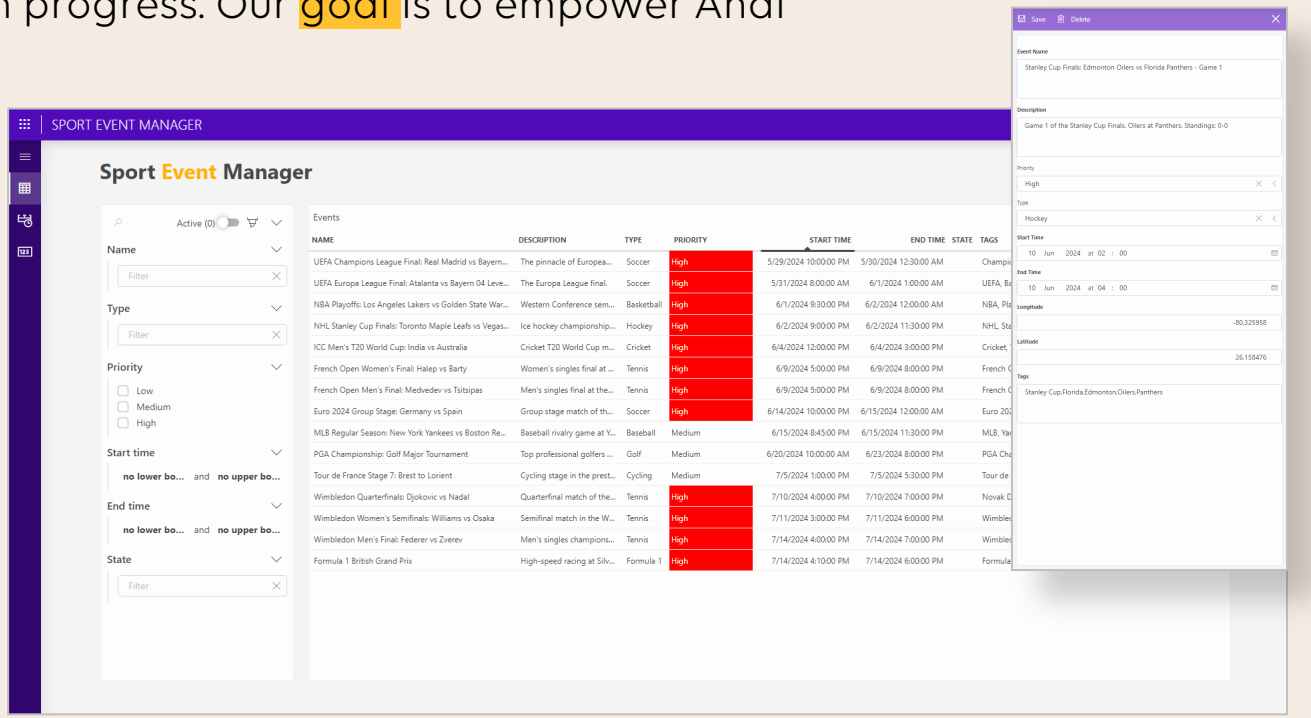
Generic Query Interface (GQI)



Use case – first increment

Let's practice what we've learned

Get ready for another thrilling project, team! We have an incredible opportunity to create a sophisticated tool that will revolutionize event management for our exceptional manager, Andi Tamer. Andi will be thrilled by the insightful information we'll provide about our events, including upcoming events, past events, and events in progress. Our goal is to empower Andi to manage these events with ease and efficiency.

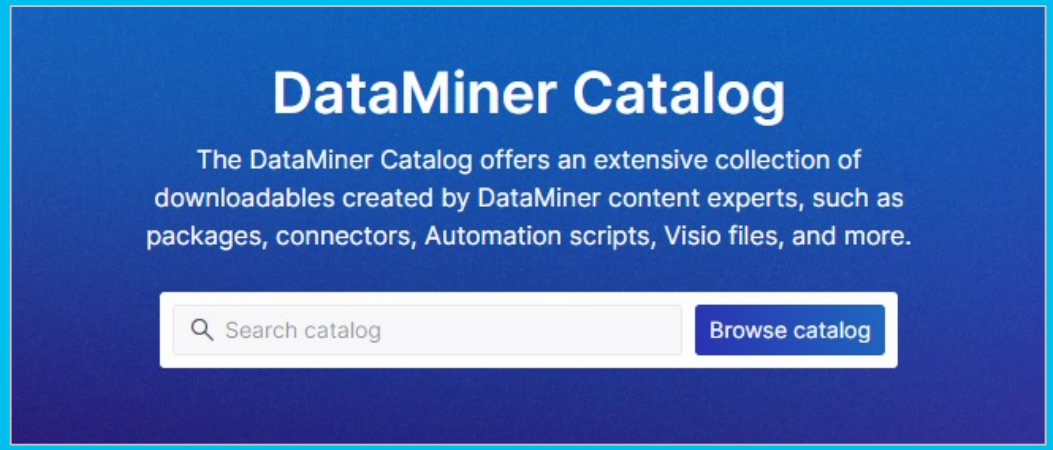


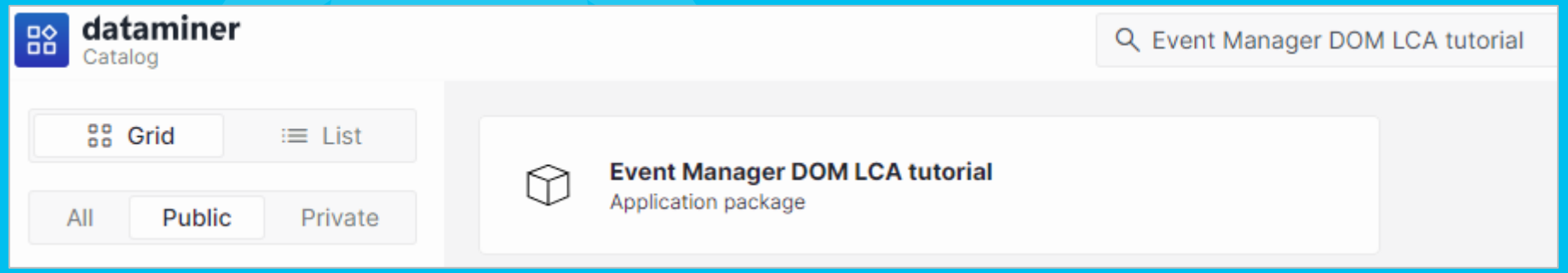
Goals:

- Basic event page
  - Filtering for event state
  - Easy to navigate and beautiful on the eye
- Add, edit and delete events

Hands-on time!

1. Go to '**Catalog.dataminer.services**'
2. Search for 'Event Manager DOM LCA tutorial'
3. Deploy the application package





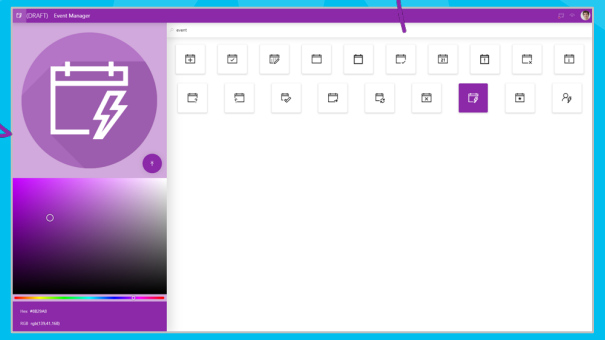
Start a new app from scratch.

Other apps

Let's get our hands dirty!

(DRAFT) New application

Choose your icon, color and name.



Let's make Andi Tamer happy with our first increment!

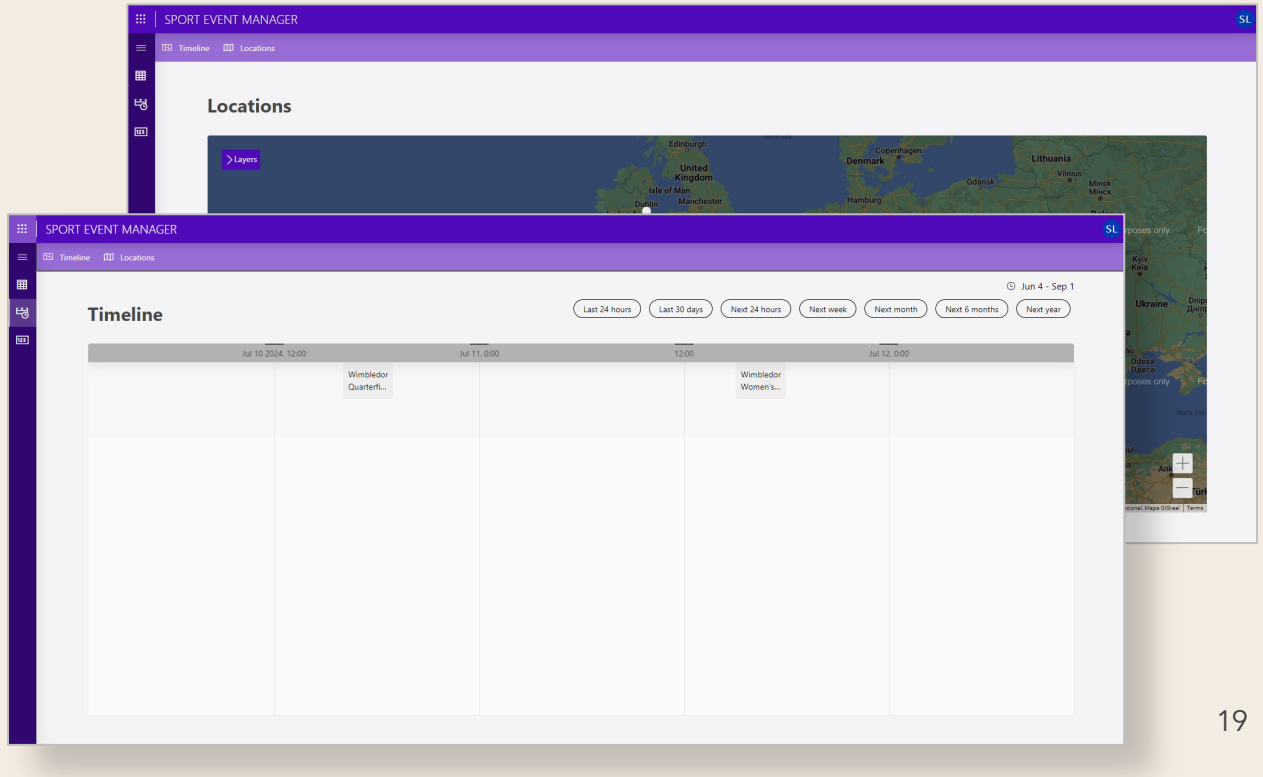
Use case – second increment

Andi's Chronological Extravaganza!

But that's just the start! Andi wants an advanced timeline visualization that displays all events in chronological order. This timeline should be interactive, allowing Andi to zoom in on specific periods or apply a time range. Additionally, integrating maps will provide a geographical context for each event. This visual representation will make it easier for Andi to understand the sequence, timing, and location of each event..

Goals:

- Interactive event timeline page
  - Allow for selecting a specific time range
  - Add filters to allow Andi for quick filtering of time ranges
- Optional: Interactive maps
  - Allow to see where the events take place



Let's have a look

GET INSPIRED

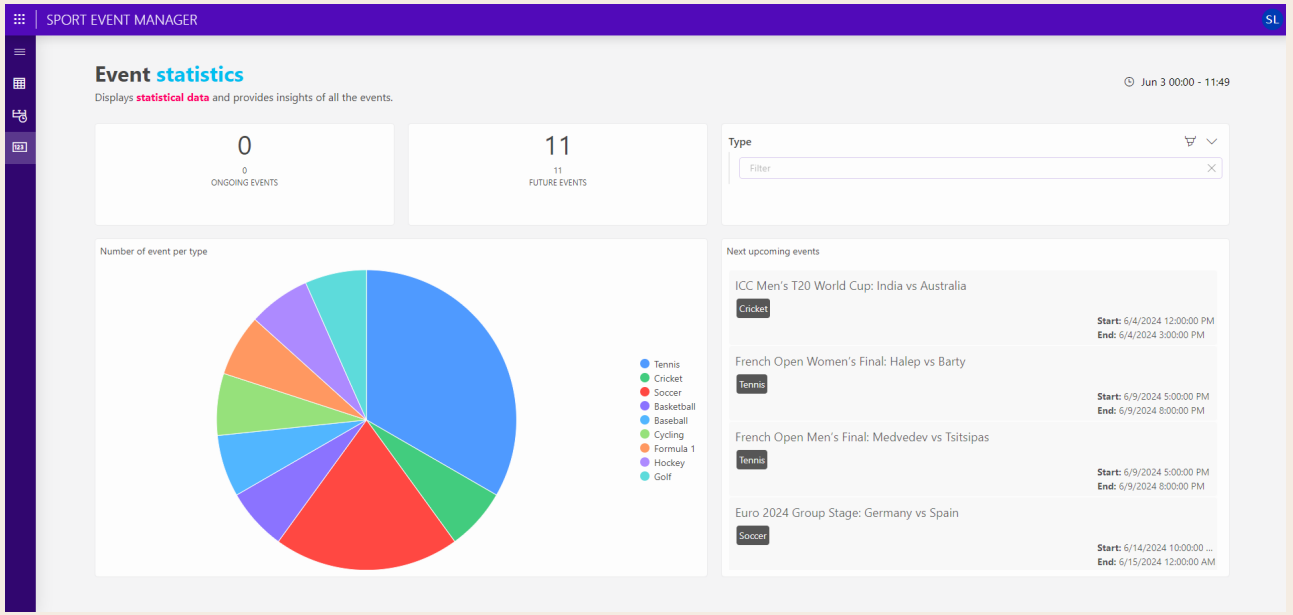
Use case – final increment

Crystal Clear Reports for Event Brilliance!

Our ultimate objective is to provide analytics to give insights on event performance, attendance, and feedback. Andi wants data-driven reports that can help make informed decisions and improve future events.

Goals:

- Event statistics page
  - See counters for ongoing and future events
  - See upcoming events



Let's have a look

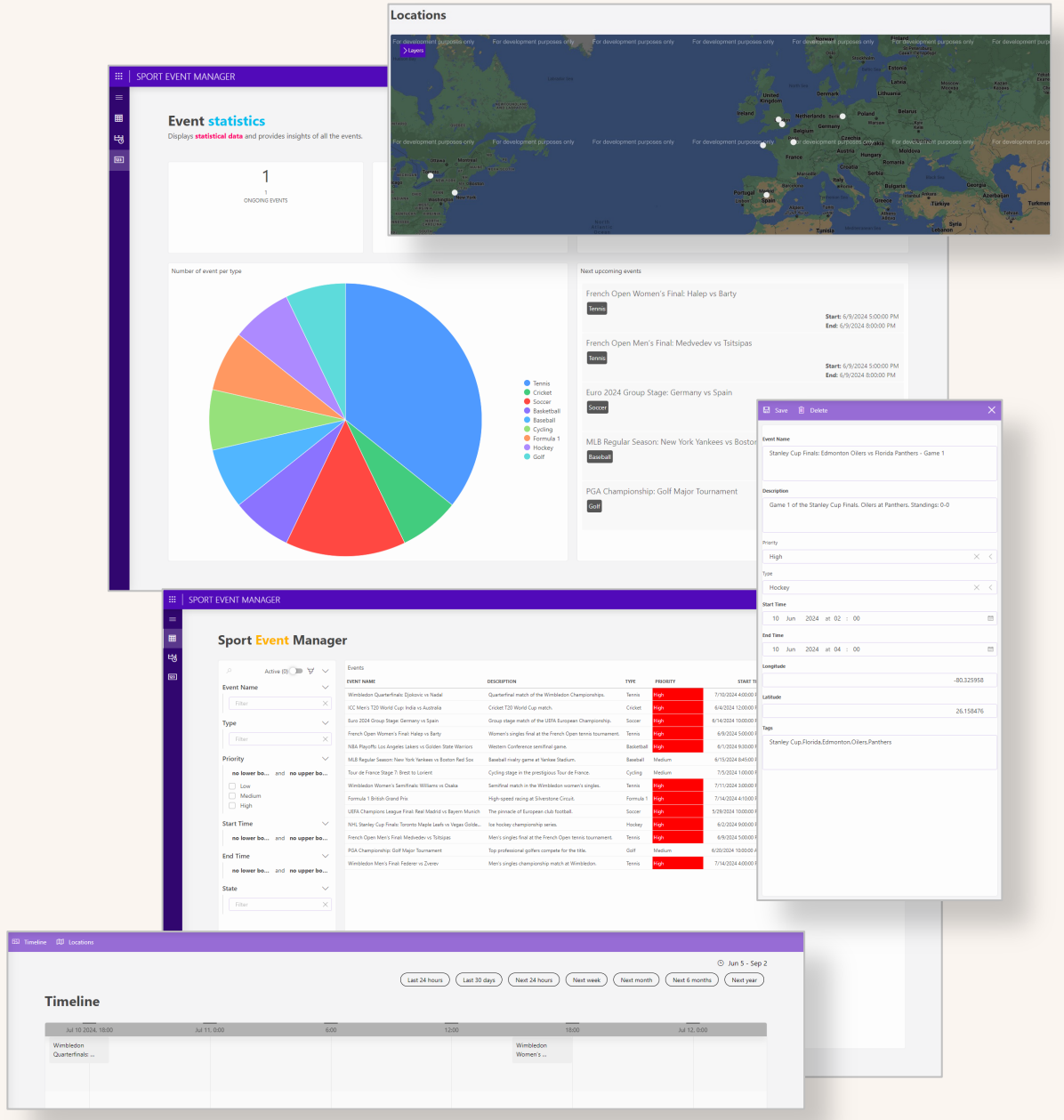
GET INSPIRED

Make the story yours

150

Lead the Charge to Success!

- First increment done
- Take the lead on the next iterations!
- Deadline: June 21st
- Send your result to Andi: andi.tamer@skyline.be



We Value Your Feedback!

Help us shape the future of Empower

- Thank you for participating in Empower '24!
- Please take a moment to fill out our feedback form
  - https://forms.office.com/e/1vDWZZMY59
  - Scan the QR code

ASK AWAY

empower!

Inspiring integrations

DataMiner

DevOps

GET INSPIRED

Panel session

THOMAS GUNKEL

Market Director Broadcast
Skyline Communications

MODERATOR

David Mitchinson
Techex

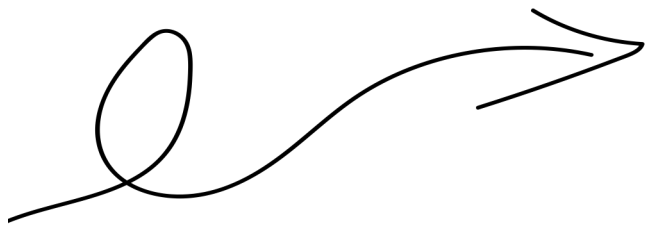
Ralf Korschner
Arista Networks

Ruslan Khudaberdin
Bridge Technologies

Sam Lerouge
Haivision

Technology Partnerships

EXPERTISE IS KEY



DataMiner

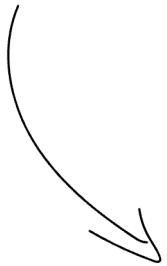
Products & Technology

Workflows

Technology Partnerships

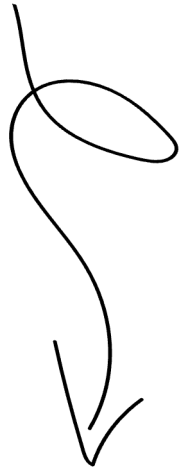
BETTER – FASTER - CHEAPER

Better



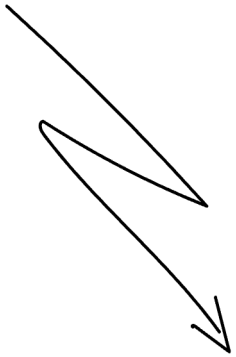
Connectors

Faster



Out-Of-The-Box APPs

Cheaper



Free-Of-Charge APPS

Skyline Lab

TEST – DEMONSTRATE – EVOLVE – INTEGRATE INTO DATAMINER SOLUTIONS

multi-vendor & multi-domain

NMOS IS-04 & IS-05

flow monitoring

PTP monitoring

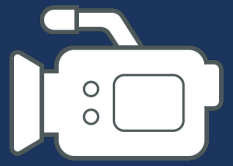
tech partner APPs

Sam Lerouge

Sales Engineer, **HaiVision**

slerouge@haivision.com

Video Networking



Broadcast / Media

Video Contribution,
Remote Production,
Global Video Networking, Live Streaming

SIMPLIFYING THE BROADCASTER'S THIRST FOR CONTENT

Governmen

Situational Awarene
Survei
& Reconnaiss
Critical Visual

SUPPORTING MISSION-

CELEBRATING 20 YEARS
OF INNOVATION IN LIVE VIDEO

HAIVISION

20 YEARS

Haivision | Inventor of the SRT Protocol

650+ Members

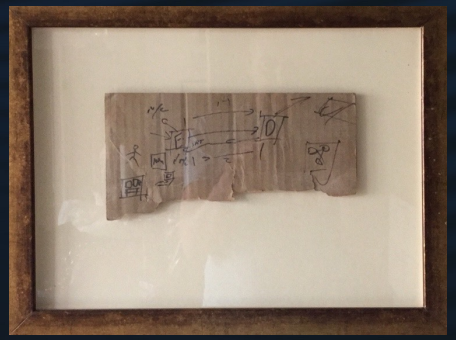
Haivision Received Emmy for SRT

SRT ALLIANCE
SECURE RELIABLE TRANSPORT

SRT Open Source

Haivision Releases SRT Open Source and Begins the SRT Alliance

Haivision releases Makito X encoder with SRT



The original “back of the napkin” SRT idea

SRT Alliance Members

2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

HAIVISION

empower!

Ruslan Khudaberdin

System Engineer, **Bridge Technologies**

ruslan.khudaberdin@bridgetech.tv

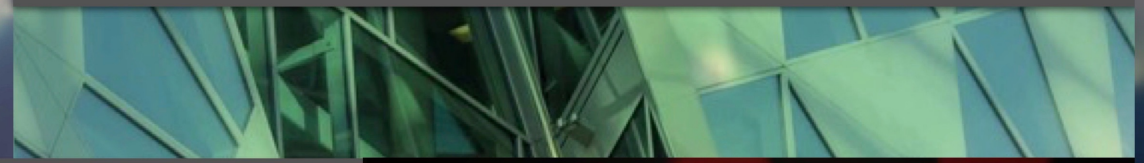
Bridge Technologies

About Us

- Founded in 2004
- Privately owned
- Offices in Oslo
- 35 Employees
- Engineering centric

SAFEGUARDING OVER

900 MILLION SUBSCRIBERS



POWERFUL

MONITORING & ANALYSIS

SOLUTIONS

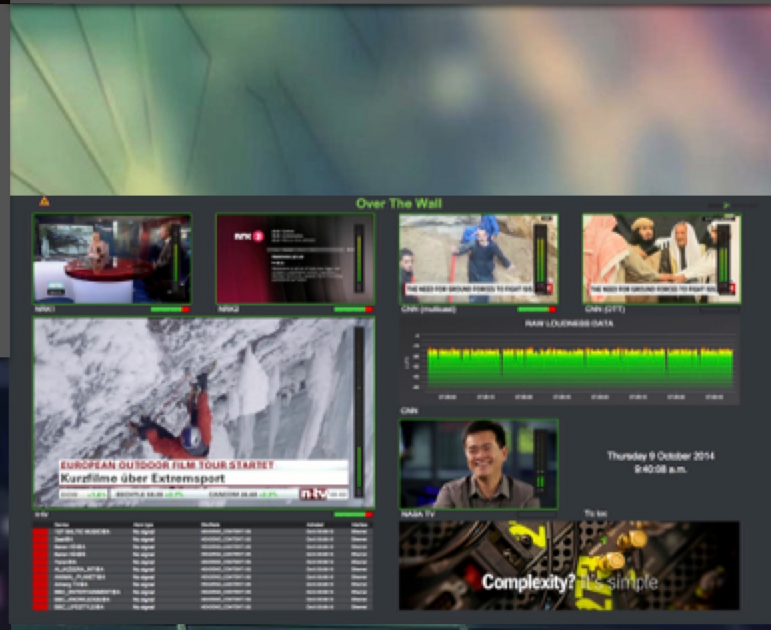
DEPLOYED IN OVER

94 COUNTRIES

MORE THAN

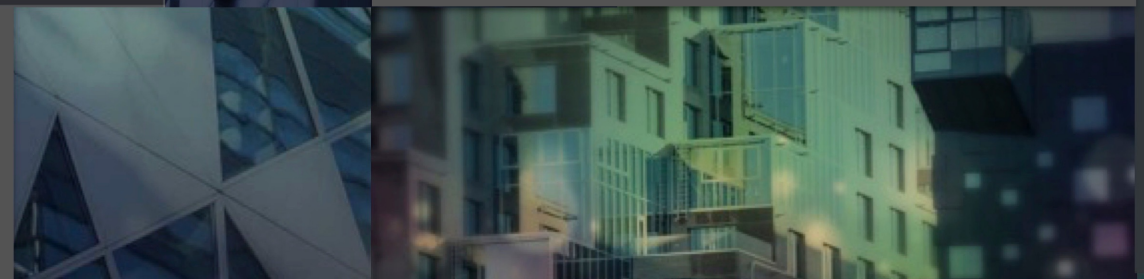
20 000 CHANNELS

PROTECTED



800+ INSTALLATIONS

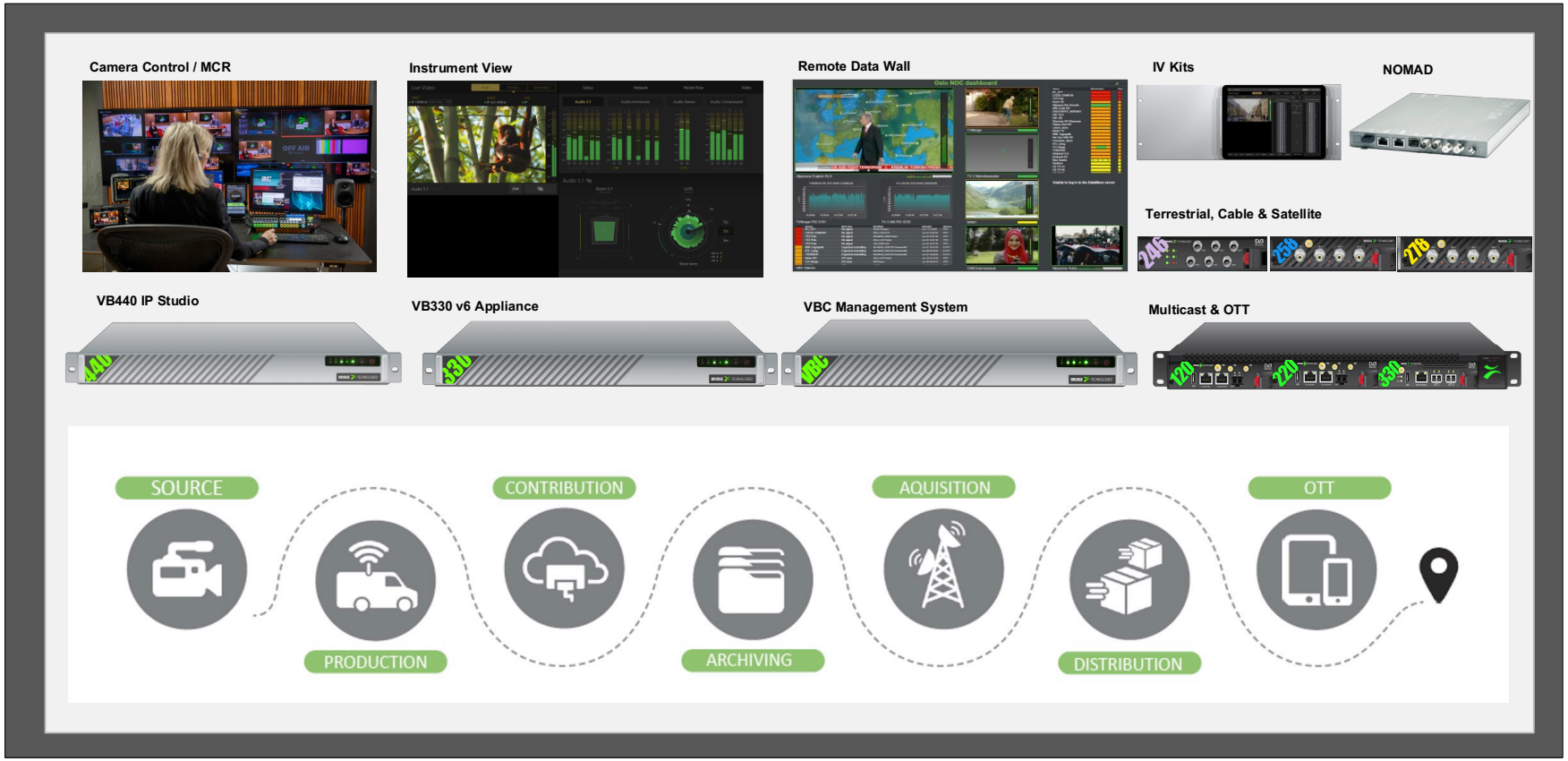
WORLDWIDE



Integrated Services Monitoring

End-to-End analytics

- Integrated Services Monitoring is an approach to quality that addresses the multiple layers of the broadcast and media cycle
- From production through signal acquisition, contribution streams, OTT/streaming media, traditional broadcast distribution with DTT Cable or Satellite to picture archiving



Integrated Services Monitoring

Monitoring & Analysis

- Leading Monitoring & Analysis provider for 20 years
- Showcasing immersive audio & HDR picture analysis
- Global sporting events; Japan, China, Qatar, Australia & Paris
- Atmos & HDR streaming video service providers
- With Dataminer for large Japanese broadcaster; orchestration of ST2110 streams

empower!

Ralf Korschner

System Engineer EMEA, **ARISTA**

ralf@arista.com

Introducing Arista Networks

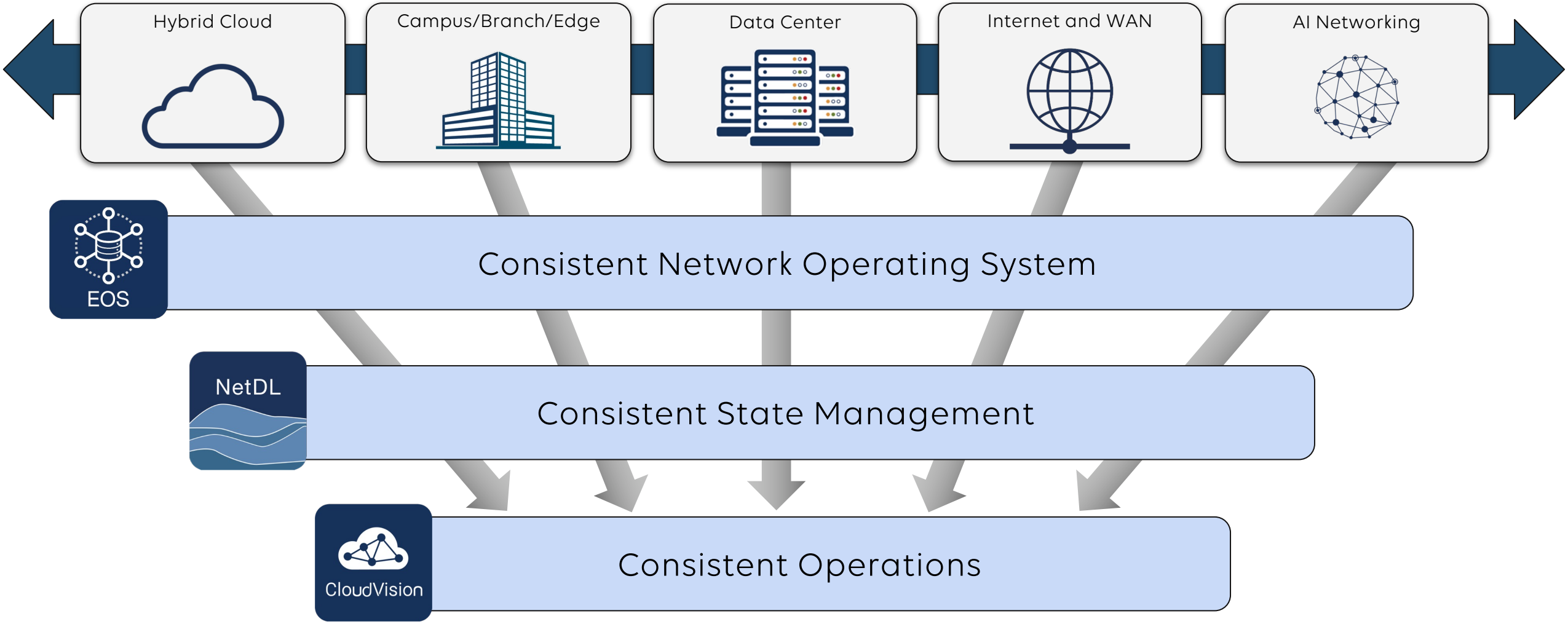
- Financials 2022
  - $4.29B Revenue
- Over 9000 customers
  - ~25% Fortune 500
- 20%+ Market Share [1]
  - #1 vendor in 100/200/400G
    - 41.5% Market Share
- Net Promoter Score +80 [2]
  - Average rating 9.3/10

[1] Crehan Research Q2'2022 [2] TechValidate Survey 2022

Industry Recognition

Leader with top score in strategy in The Forrester Wave™: Open Programmable Switches for Business wide SDN, Q3 2020

Leader with top score in current offering The Forrester Wave™: Network Analysis And Visibility, Q2 2023



Improving efficiency through consistency across ***all*** **domains** and layers

ABOUT

Treat network configurations and network models as software.

Source/Version Control.

Peer Review, Signed Commits, Pre-Deployment and Post-Deployment Automated Unit and System Tests. Static and Dynamic Analysis.

Change and mature the target operating model for modern infrastructure.

VISION

Modernized Operating Model for Networked Systems

empower!

David Mitchinson

Solutions Director, **Techex**

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Techex headlines

Leading broadcast design architect for cloud and IP live broadcast solutions

WE ARE TEAM TECHEX

- We develop, design, commission and support live video transport, processing, redundancy and monitoring solutions for tier-1 broadcasters and media companies
- Centre of excellence for transformation: crafting our own technology and partnering with world-class companies
- Hunting out disruptive technology since 1971, working on the most progressive and critical projects
- Value underpinned by trusted partner status and long-term continuous development engagements
- 50+ employees across UK and USA

WE PARTNER

ACTUS Intelligent Monitoring Platform · ARISTA · ATEME · BRIDGE TECHNOLOGIES · BrightSign · [comprimato] · DENSITRON · harmonic · InSync technology · matrox · MediaKind · MNC software · nevion · sencore · skyline communications · Synamedia · TAG VIDEO SYSTEMS · videon

WE CREATE

txedge.

Premium protocol gateway, protection & monitoring for your most valuable live content

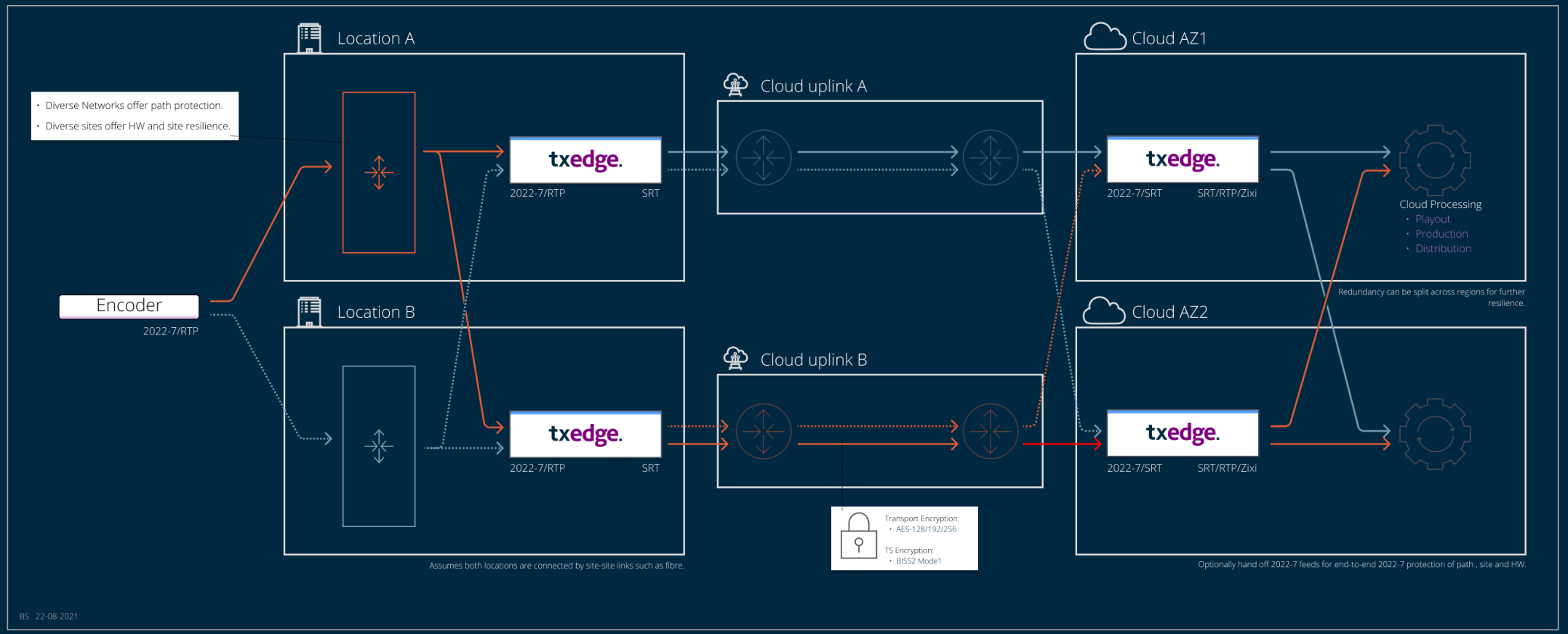
txdarwin.

Live media processing, transport & monitoring for the most challenging cloud and hybrid workflows

techex.

tx edge overview

Enabling end-to-end redundancy and detailed per-hop monitoring



techex.

tx edge key features

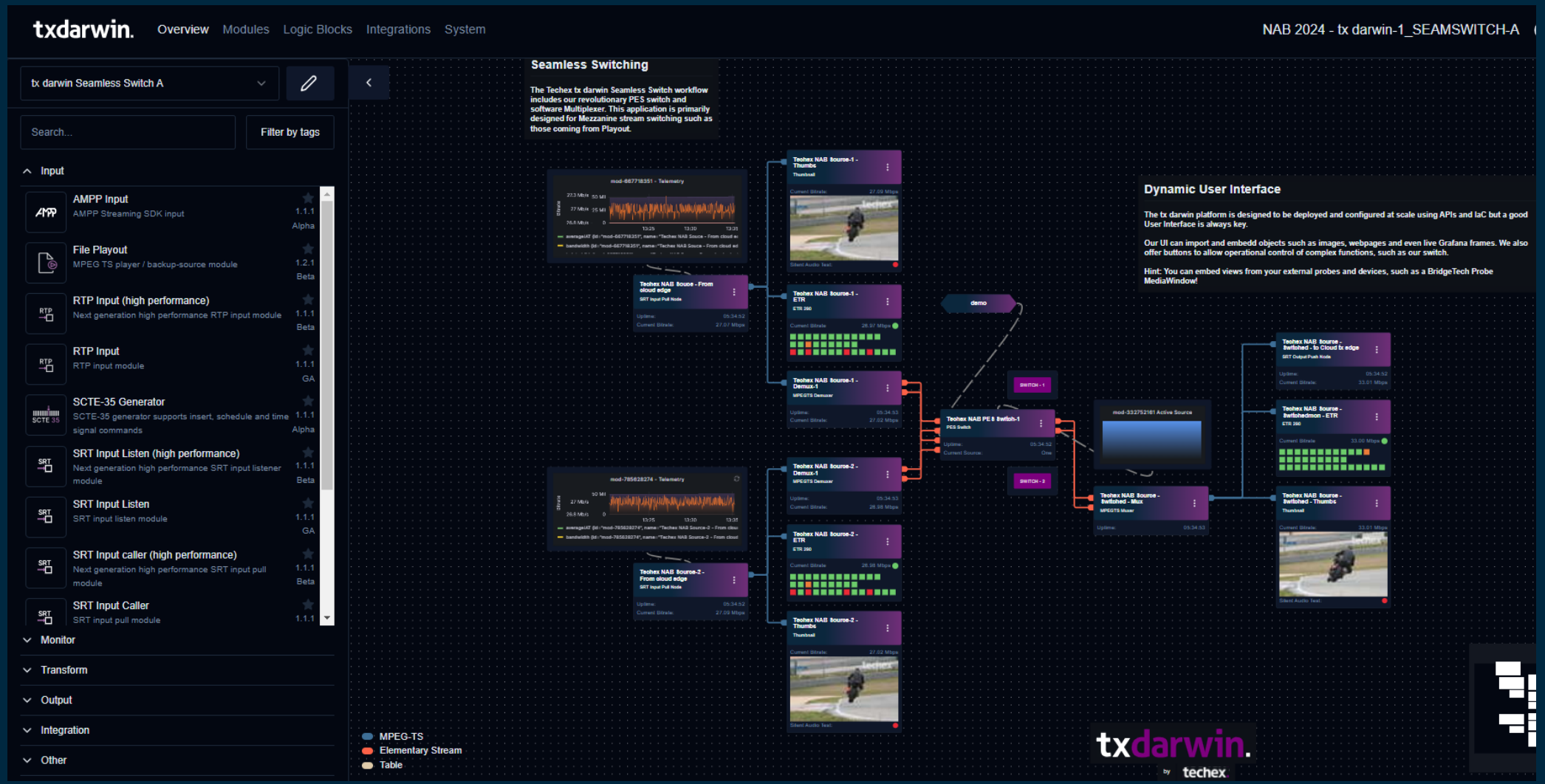
- Provides a properly engineered framework enabling ARQ benefits to be used reliably within Tier 1 broadcast.
- It's about what we build around and on top of the ARQ layer;
  - Trust Boundary protection
  - Content redundancy protection: Maximizing the potential to use ST2022-7 and combine with a variety of other schemes
  - Traffic policing
  - Thorough and consistent monitoring: WHAT is monitored and FREQUENCY of monitoring
  - Proper orchestration
  - Ability to deploy on any compute platform so orchestration is unbroken and can be maintained end to end
  - License orchestration and licensing flexibility
  - MPEG_TS or NDI encapsulated payload
  - Advanced diagnostic tools (including triggered PCAP)
  - Easy integration with external systems (e.g. Dataminer), aided by Techex's orchestration layer to make this a single integration
  - An In-house developed solution that takes no short cuts: Designed to ideally match the requirements of the most demanding Broadcasters / Telcos carrying the highest value content

techex.

empower!

tx darwin

Unique solutions to transform your content



Panel session

THOMAS GUNKEL

Market Director Broadcast
Skyline Communications

MODERATOR

David Mitchinson
Techex

Ralf Korschner
Arista Networks

Ruslan Khudaberdin
Bridge Technologies

Sam Lerouge
Haivision

ASK AWAY

empower!