



TrendMiner Live Training Sessions

Statistical Reporting Tricks: Track the Danger of Climate Change





Listen Only
Mode



Use Question Box!



Recording and
Handout will be
provided!

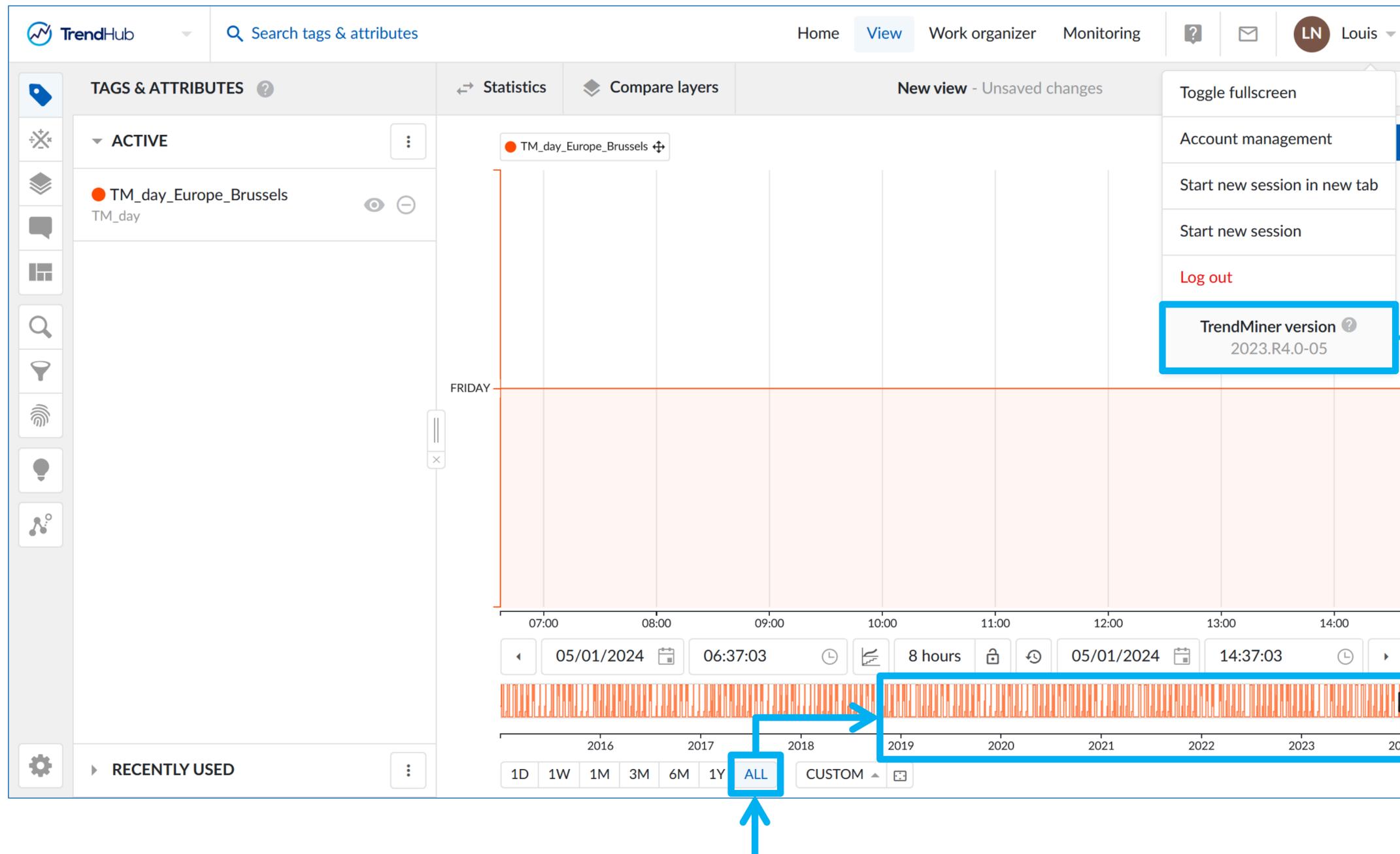
Online training includes exercises.
You may log in to your own TrendMiner account using Firefox or Chrome if possible.

GoToWebinar – Question box & handout



The screenshot shows the GoToWebinar interface. The main content area displays a monitor icon and the text "Waiting to view Liz Davis's screen." On the right, a "Questions" sidebar is open, showing a question and answer from "Webinar staff". The sidebar contains several icons: a microphone (a), a hand (b), a question mark (c), and a document (d). A blue box labeled "Question box" has an arrow pointing to the question mark icon (c). Another blue box labeled "Handout" has an arrow pointing to the document icon (d). At the bottom of the sidebar, there is an "Exit" button and a "Send" button. The browser address bar shows the URL: app.gotowebinar.com/index.html#311378419/1205308145121961230/6005855076829420560.

Do you need a training account?



1 ✓ 2 ✓ You can complete this training with your own account.

1 Version **2023.R1** or newer

2 After clicking on "ALL", your data will be available until at least 01.01.2019

✗ If one of the requirements is not met, ask for an account in the question box.

INTRODUCTION & TODAY'S GOALS

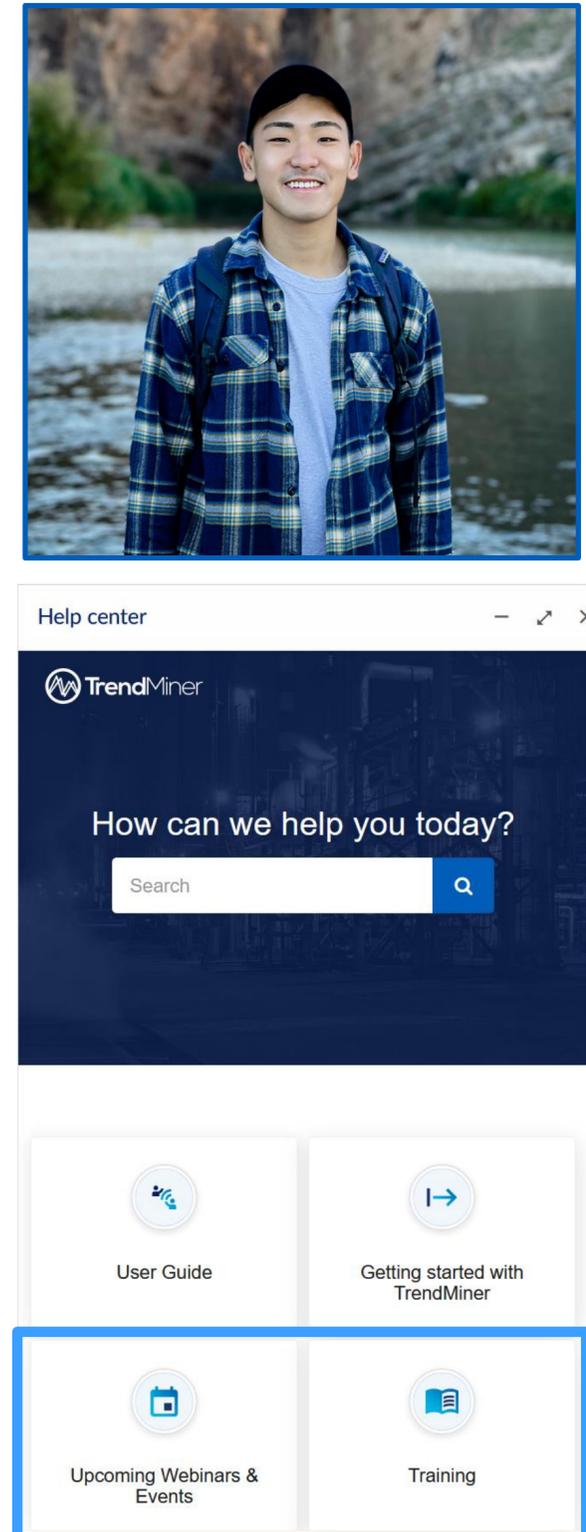




Kevin Li, Data Analytics Engineer

- Support customers reaching value with self-service analytics
- Tackling more advanced use cases
- Support users in their analytics journey

POLL about the users:
What is your current level of TrendMiner knowledge?





1. Get the last 3 months' CO₂ emissions

- Select period in the focus chart and use the statistics table

2. Detect and assess high emissions periods

- Create a formula to define the exceeded emissions
- Define VBS to detect high emissions, create filters and use the statistics table to check high emissions average

3. Get daily emission report of the last month: check evolution

- Use the time tags and calculations on search results to analyze daily emissions
- Create a scatter plot of emissions vs start time

Exercise 1 – Get the last months' CO₂ emissions



Get the last months CO₂ emissions

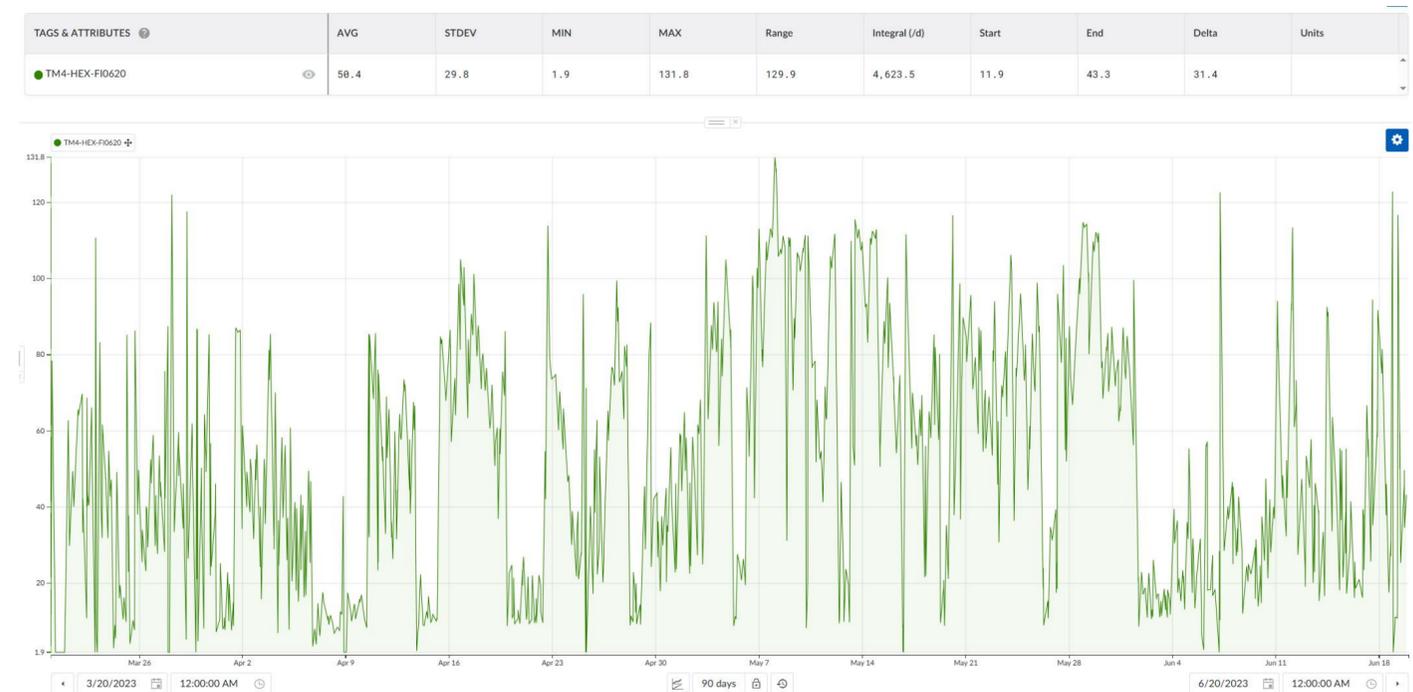


Background:

- In order to reduce greenhouse gas emissions, the total volume of allowances available in a year in USA emissions trading (the “cap”) are being cut annually from 2021 by a linear reduction factor of 2.2 percentage points.
- If we continue exceeding the limit, emissions will be more and more expensive. We want to be aware of emissions and analyze high emission periods in order to save money and move towards sustainability.

Goals:

- Determine the amount of emitted CO₂ in the last 3 months



Get the last months CO₂ emissions



Steps:

1.	Load tags	TM4-HEX-FI0620
2.	Set custom context chart	03/20/2023 12:00:00 AM – 06/20/2023 12:00:00 AM → 3 months
3.	Set focus chart	03/20/2023 12:00:00 AM – 06/20/2023 12:00:00 AM → 3 months
4.	Open statistics table	Check “Integral (/d)” value → total CO ₂ consumption

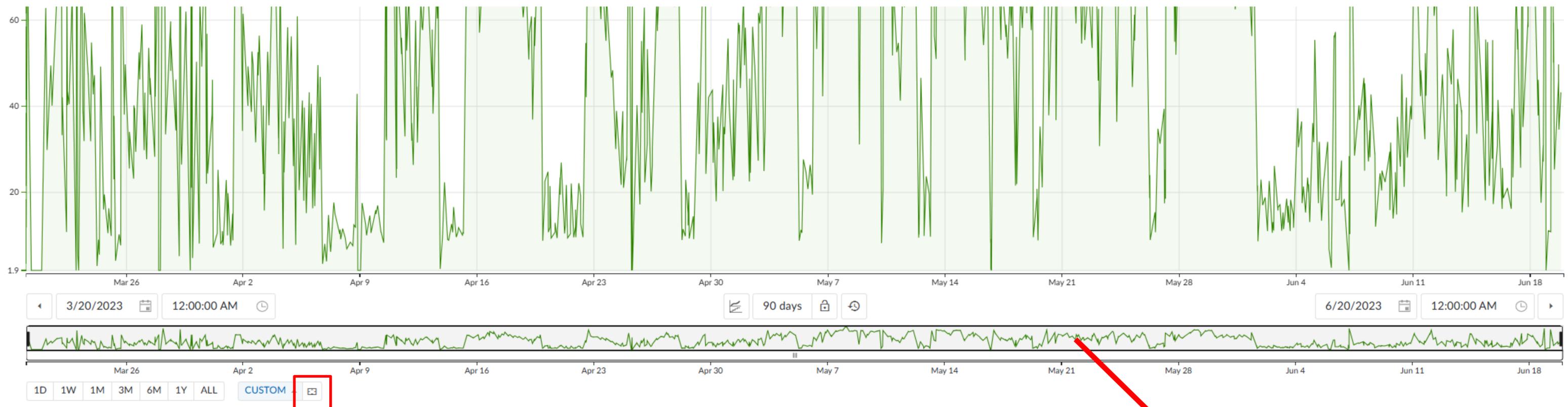
Get the last months CO₂ emissions



Pro tip 



Navigate quicker through time



Zoom context chart to selected focus area

Click once anywhere in the context chart to zoom focus chart to selected context area

Exercise 2 – Detect and assess high emissions periods



Detect and assess high emissions periods



Background:

- Under normal operating conditions, emissions should be lower than 80, as that's the maximum threshold allowed.
- It is key to identify periods where we exceed limits and analyze the percentage of emissions it represents compared to the total.

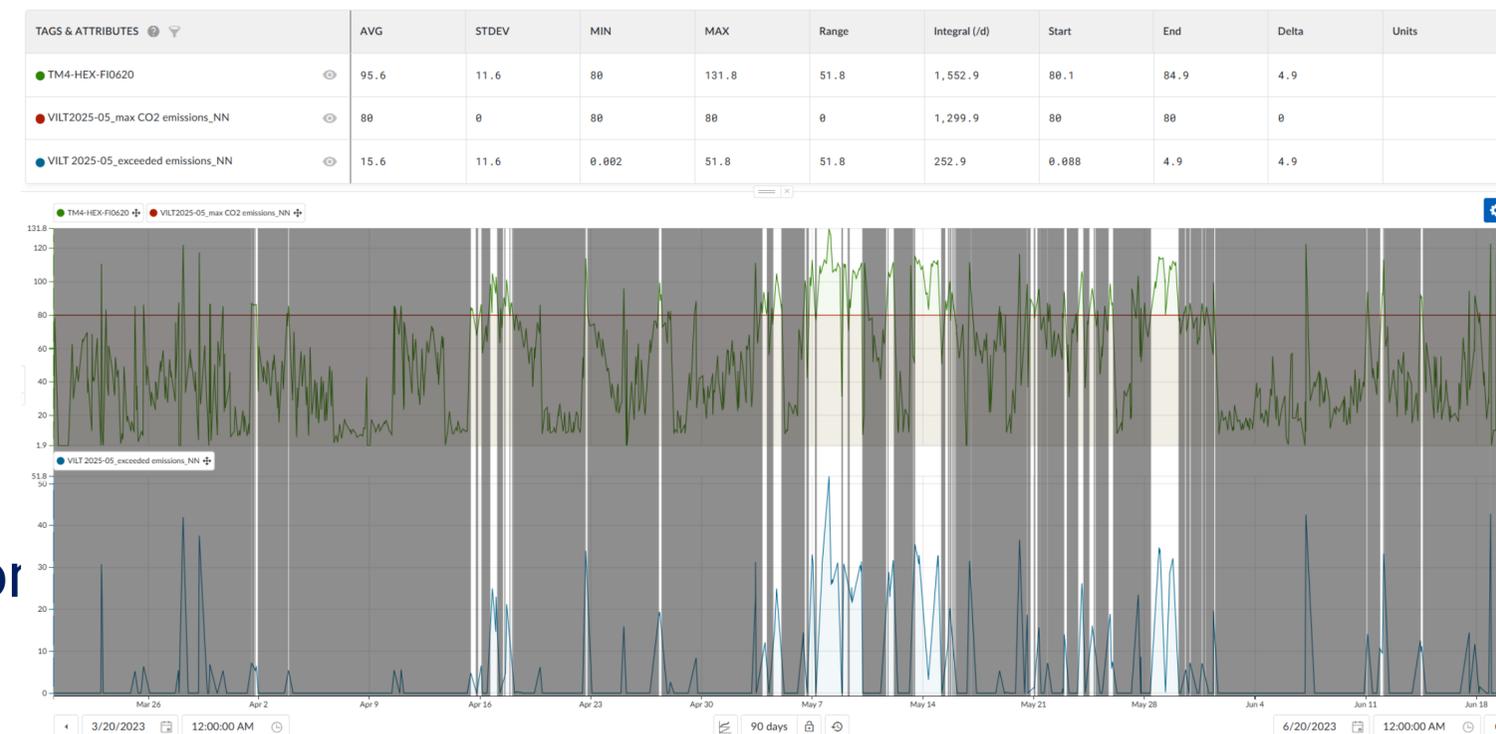
Goals:

- Show the emissions limit together with actual emissions flowrate.
- Calculate percentage of emissions that should be reduced.
- Calculate emissions average when exceeding the limit.

Poll question:

- ❖ In TrendMiner, how would you create a new variable that or shows exceeded emissions?

Eg.: current emissions=100, limit=80, new variable=20



Detect and assess high emissions periods



Steps:

1.	Continue from	Exercise 1		
2.	Create a new formula	"80"	Save as "max_CO2 emissions_initials"	Merge it with TM4-HEX-FI0620 -> select red color
3.	Create a new formula	<code>if(em>80, em-80, 0)</code> <code>em -> TM4-HEX-FI0620</code>		Save as "exceeded_emissions_initials"
4.	Open statistics table	Check "Integral (/d)" value of "exceeded_emissions_initials"		
5.	Initiate a value-based search	"TM4-HEX-FI0620"	>	80
		Min. duration		30 minutes
		Save search as		"High emissions"
6.	Create dynamic filter	Select search "High emissions" -> filter out everything else		Save as "High emissions"
7.	Open statistics table	Enable filter "High emissions"		Check "Average" value of TM4-HEX-FI0620

Detect and assess high emissions periods

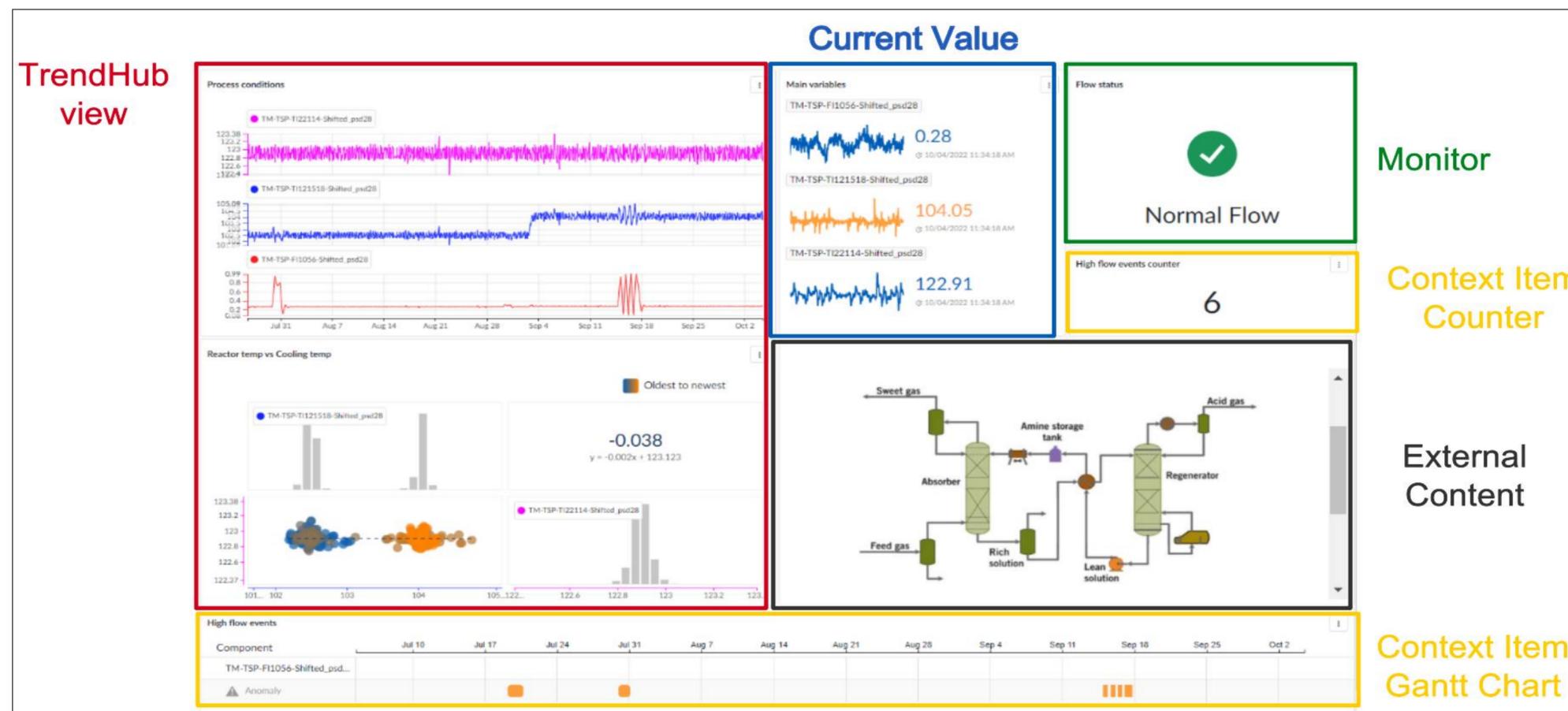


Pro tip 



Save the view, along with the filter, and create a Dashboard

Control your process better than you ever dreamed of --> <https://vimeo.com/showcase/8476721/video/761813665>



Exercise 3: Get daily emissions report of the last month



Get daily emissions report of the last month



Background:

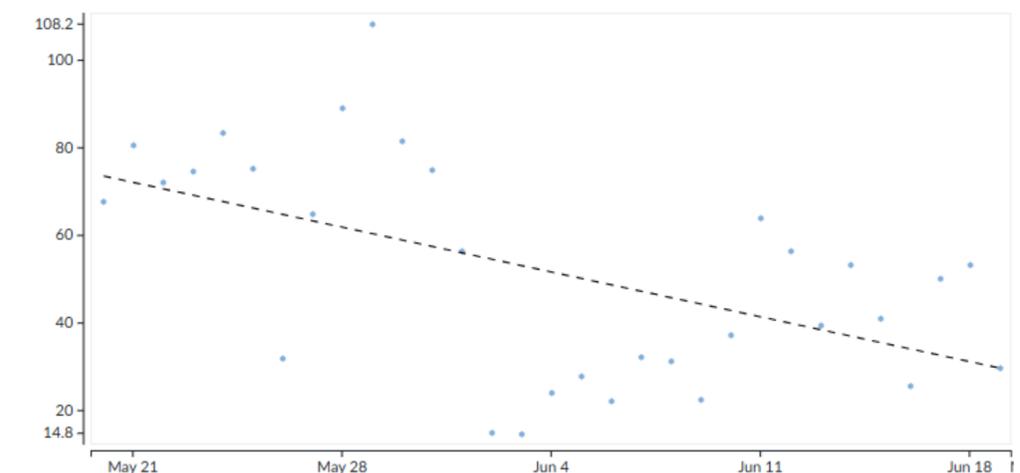
- In order to analyze the recent emissions, it's necessary to get the daily emissions during the last month.
- By plotting emissions vs time, we will be able to check possible trends and what has been the process performance in terms of emissions.

Goals:

- Get the total CO₂ emissions of each day during the last month.
- Create a chart representing the CO₂ emissions over time.

Poll question:

- ❖ In TrendMiner, how would you get a daily emissions report of the last month?



Get daily emissions report of the last month

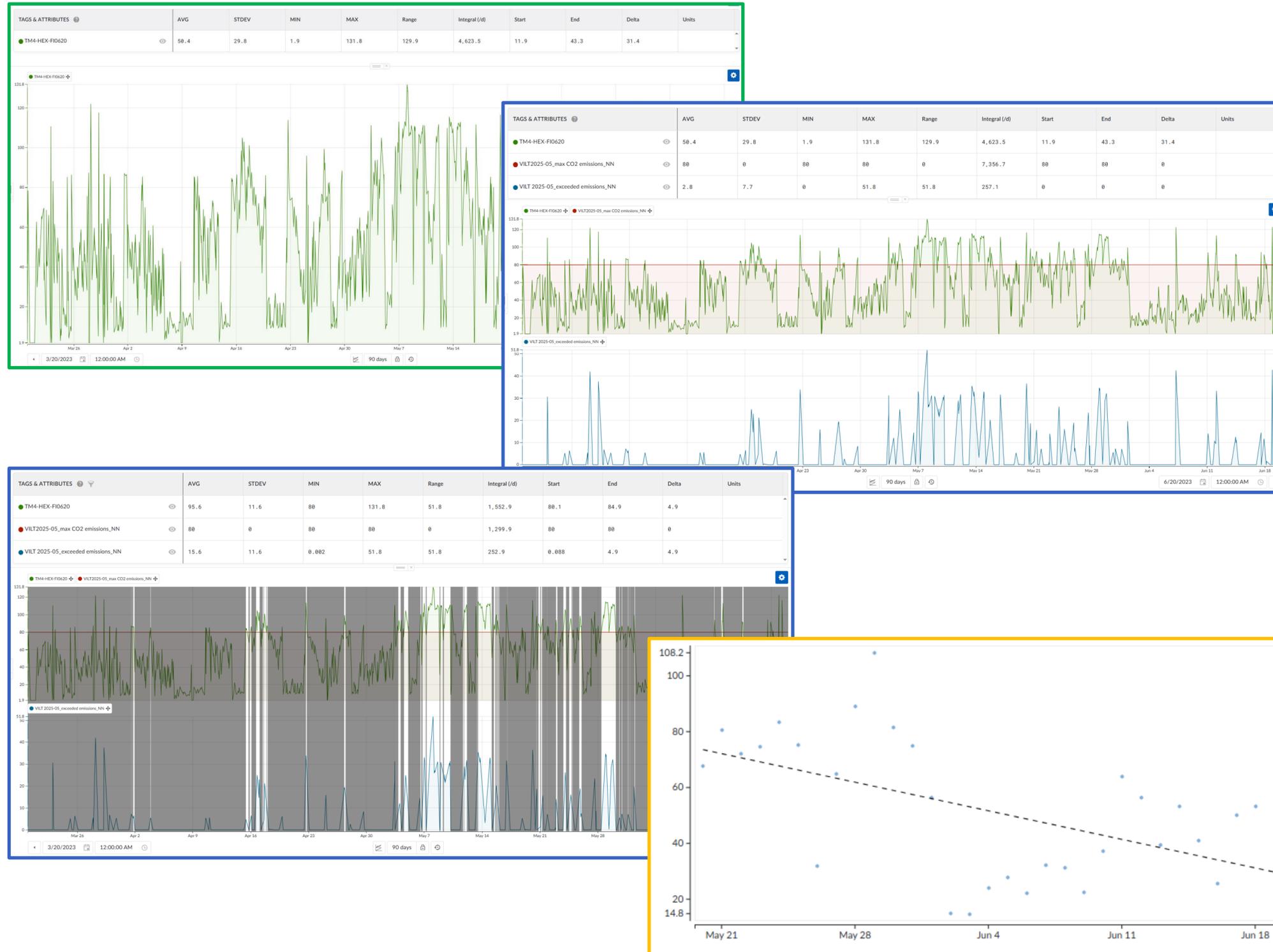


Steps:

1.	Continue from	Exercise 2	Disable all filters	
2.	Load tags	TM_day_time zone		
3.	Set custom context chart	05/20/2023 12:00:00 AM – 06/20/2023 12:00:00 AM --> 1 month		
4.	Set focus chart	05/20/2023 12:00:00 AM – 06/20/2023 12:00:00 AM --> 1 month		
5.	Initiate a value-based search	TM_day_time zone		constant
		Min. duration		2 minutes
		Add calculation (emissions)	Tag: TM4-HEX-FI0620	Operator: Integral/d
6.	Event analytics	Scatter plot		

WRAP-UP





- **Statistics table** to check total emissions over last 3 months

- **Formula** to show **exceeded emissions**
- **Statistics table** to check total emissions above the **limit**

- **Filter** to highlight **high emissions period**
- **Statistics table** to check **average** high emissions value

- **Search** for constant **days** and add **calculation** -> **emissions**
- **Event analytics** -> **scatter plot** emissions vs time

Do you want to learn more?

Intermediate Guides & Live Training Webinars

Here you can find the **Intermediate Guides**:

User Guide / Training / Intermediate Guides

Intermediate Guides



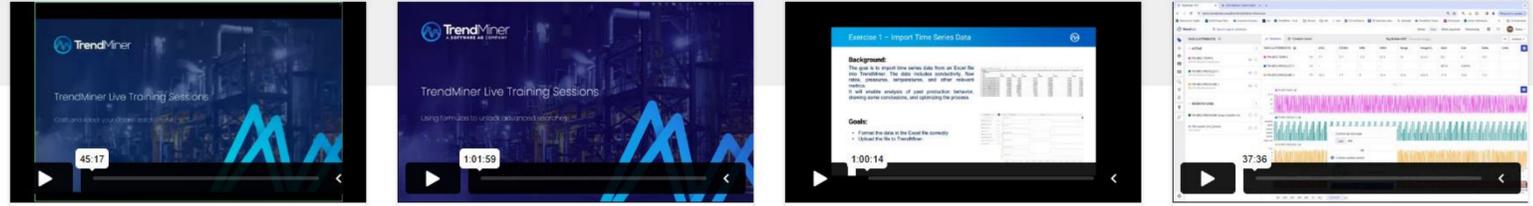
In this section

- Get your process statistics (Int)
- Detect, warn & contextualize anomalies and process events (Int)
- Create your actionable dashboard (Int)
- Trouble shooting (Int)
- Create your own KPIs and Variables (Int)

<https://userguide.trendminer.com/en/intermediate-guides.html>

Here you can find all **Live Training Webinars** from the past years:

Live trainings - English (2020-2024)



- Craft And Adopt Your Goals (45:17)
- Using formulas to unlock ... (1:01:59)
- Data Importing - Everything... (1:00:14)
- Is Tag Builder only for ex... (37:36)

<https://vimeo.com/showcase/8476721>

Create your account now: <https://community.trendminer.com/>



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- Admin / IT
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Discover TrendMiner adoption, value and roll-out

Search your answers in the community, User Guide, and Admin Docs.

Ask your questions or inspire other people by sharing your TrendMiner experiences

Check out role-specific landing pages and find relevant topics easily

Discover diverse categories



QUESTIONS?

