
Intro:

In this article, we will discuss Synthesio's advanced semantic capabilities. Inside the dashboard, you will find the following product features:

1. **Entities Discovery** - explore notable emerging entities like products, events, people, geographies, etc.
2. **Semantic Analysis** - explore popular grammatical patterns, i.e., how your audience is commonly expressing themselves
3. **Semantic Explorer** - explore the relationship between emerging entities and how your audience is talking about those entities

The above product features are powered by two data science capabilities:

Named Entity Recognition - Named Entity Recognition is [information extraction](#) that seeks to locate and classify [named entities](#) mentioned in [unstructured text](#) into pre-defined categories.

Parts of Speech - With Parts of Speech, we can identify grammatical elements within your mentions: Verbs, adverbs, nouns, numerical, particles, pronouns, interjections etc.

Part 1 - Product Definitions:

Entities Discovery

Explore notable and emerging entities mentioned in your dashboard.

You can browse through seven main categories of entities:

Category	Explanation	Examples
People	People, including fictional	Donald Trump, Victoria Beckham, Madonna

Organizations	Companies, agencies, institutions, etc.	Chanel, McDo, Amazon
Products	Products & Services	Lavazza, Netflix, Xbox
Countries & Cities	Countries, cities, states, regions	US, Paris, Ireland, Texas
Facilities	Famous places, natural wonders, airports, etc	Disneyland, Broadway, The Eiffel tower
Events	Sports events, festivals, elections	National Coffee Day, Christmas eve, Super Bowl
Identity groups	Nationalities, political groups	Irish, French, the Republicans
Places	Geographical places	North America, Mediterranean, Eastern Europe

Text Analytics

Identify all grammatical elements of our mentions : Verbs, adverbs, nouns, numerical, particles, pronouns, interjections, etc

Some elements are more interesting than others:

Descriptions	cold, new, good, hot
Actions	Love, brewed, made
Expressions	So, just, now, also

Things & Ideas Cream, Ice,
 day, cup, milk

Proper Names Mexico,
 Manchester
 United, Victor

Even more interesting, you can detect and fine-tune grammatical groups and expressions:

Top noun chunks ice cream, brew coffee, cup of coffee, coffee shop, french press

Top verb chunks brewed coffee, drink coffee, iced coffee, make coffee

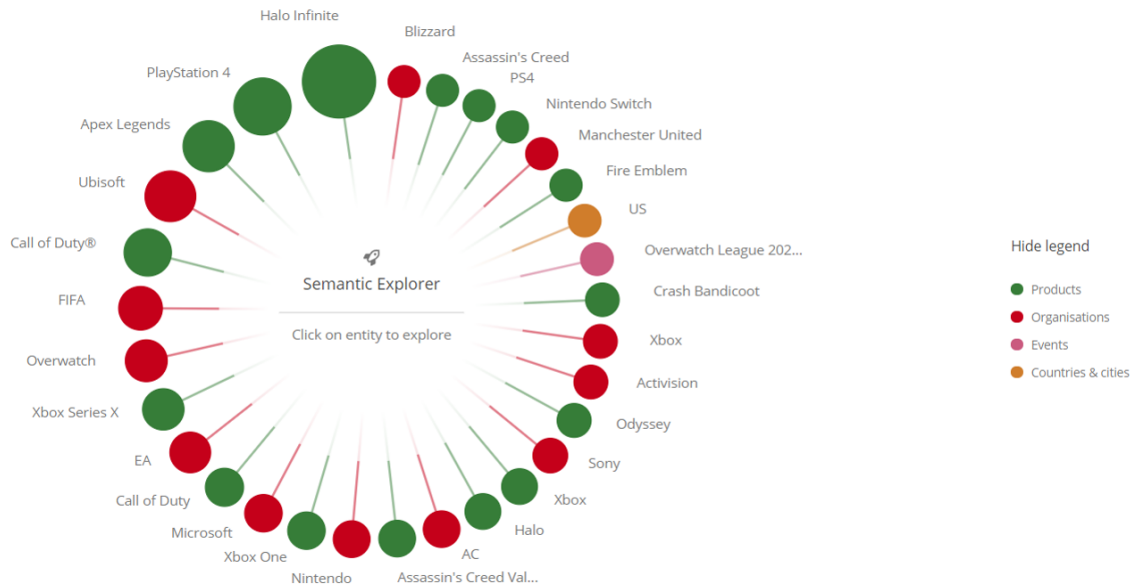
**Top adverbs &
adjectives** pretty good, too expensive, too much, really good, much better,
 most recent

Top Adverbs & verb freshly brewed, just looking, highly recommend

Semantic Explorer:

A consumer language nexus to visualize your audience's most common conversation topics, the Semantic Explorer reveals links between related conversations, and surfaces popular, repeated grammatical patterns your audience uses to describe said topics.

- Mapping of how consumers make associations between different topics/expressions
- Useful tool to cross with filters to explore associations

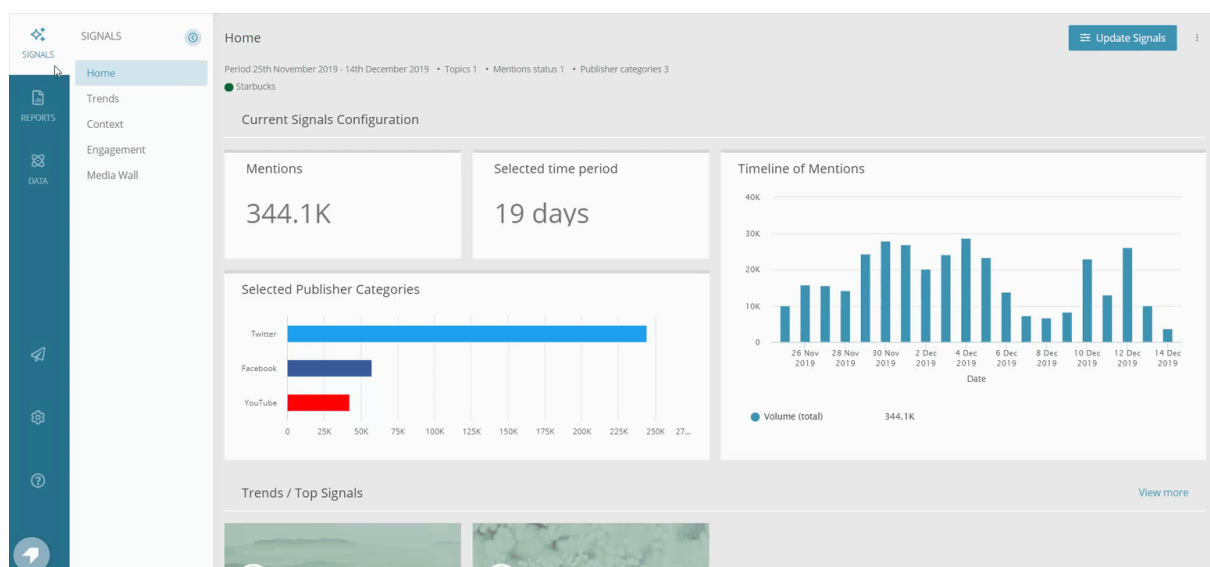


Part 2 - Inside Your Dashboard:

Data

In the Data Section, you have access to scorecards for the 3 above capabilities:

- Entities Discovery
- Semantic Analysis
- Semantic Explorer



Entities Scorecard

You can access all the entities mentioned in your dashboard.

Entities discovery - Beta All categories						Column display	
ENTITY			SENTIMENT	VOLUME	INTERACTIONS	TOPICS	
Starbucks	0 of 8 Q Search ☐ All ☐ People282,399 ☐ Countries & cities140,909 ☐ Products25,566 ☐ Facilities6,892 ☐ Places8,466 ☐ Events10,703 ☐ Organisations381,045 ☐ Identity groups41,093			156.3K ↗	9.6M		
Starbucks Philippines				39.8K →	290.2K		
Costa Coffee				34K →	126.6K		
Facebook				15.7K →	284.2K		
Dunkin				14.7K →	170.4K		
Karen				12.3K →	1.4M		
US				11.3K ↗	1.6M		
LAPD		Organisations		10.8K →	42.8K		
Sheriff's Dept.		Organisations		9.8K →	11.1K		
Dunkin		Organisations		9.1K ↗	172.3K		
Unilever		Organisations		8.9K →	264.5K		
Coca-Cola		Organisations		8.8K →	257.7K		

As noted above, you can filter the dataset based on the type of entity. You can also apply any kind of filters (including your favorite filters), which will narrow down the entities based on the filter criteria.

If you want to know more about what is being said about a particular entity, simply click on it and a pre-filtered Listen Tab will appear. You can then browse through the related mentions and investigate.

Entities discovery - Beta All categories						Column display	
ENTITY	CATEGORY		SENTIMENT	VOLUME	INTERACTIONS	TOPICS	
starbucks	Organisations			4.2K ↗	686.1K		
Walmart	Organisations			6.6K ↗	126.9K		
Verizon	Organisations			3.6K →	76.3K		
Unilever	Organisations			8.9K →	264.6K		
USA	Countries & cities			3.7K →	463.9K		
US	Countries & cities			11.3K ↗	1.6M		
UK	Countries & cities			2.9K →	1.1M		
U.S.	Countries & cities			6.5K →	158.5K		
Trump	People			7K →	668.4K		
Tim Hortons	Organisations			6.1K ↗	212.3K		
Tim Hortons	People			4.1K →	1.4M		
Target	Organisations			6.1K →	338.7K		

Semantic Analysis Scorecard

The same principles apply with the Semantic Analysis scorecard. You can find all the grammatical elements and expressions that are notable in your dashboard.

Semantic analysis - Beta 5 of 10 Column display

SEMANTIC ENTITY		SENTIMENT	VOLUME	INTERACTIONS	TOPICS
allegedly found a tampon			9.9K →	24.8K	
police credit union debit card			9.9K →	16.7K	
took a report			9.8K →	12.6K	
now investigating			9.8K →	12.6K	
Drinks Everything			9.1K →	4.4M	
to wear a mask	Nouns with verbs		7.9K →	1M	
to wear masks	Nouns with verbs		5.1K →	31.2K	
wants half	Nouns with verbs		3.8K →	55.8K	
Literally Anything	Adverbs and adjectives		3.6K →	2.4M	
tips after mask encounter	Noun phrases		3.5K →	7.8K	
require customers	Nouns with verbs		3.3K →	21.9K	
iced coffee	Adjectives and nouns		3K ↑	646.2K	

Within grammatical groups, you have a split between single words, proper nouns and expressions, i.e., group of words that make sense together.

Under expressions, you will find these elements:

- Adjectives and nouns
- Nouns with verbs
- Adverbs and verbs
- Noun phrases
- Adverbs and adjectives

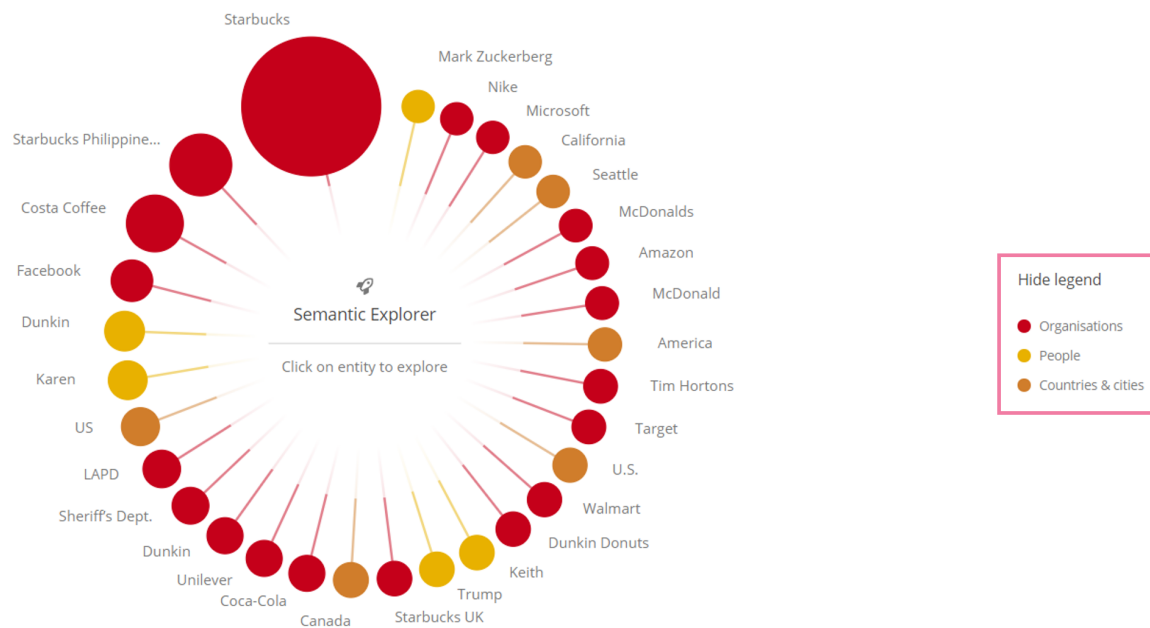
As they are the most interesting and meaningful, the Semantic Analysis scorecard is default filtered on expressions. You can of course adjust the default view by selecting from the available pre-set filters. As for Entities, if you click on an expression, you will access the Listen Tab automatically filtered on mentions that contain the selected expression.

Semantic Explorer

Here you can visualize entities and expressions that are most discussed in your dashboard. You have two main levels of this Semantic Explorer.

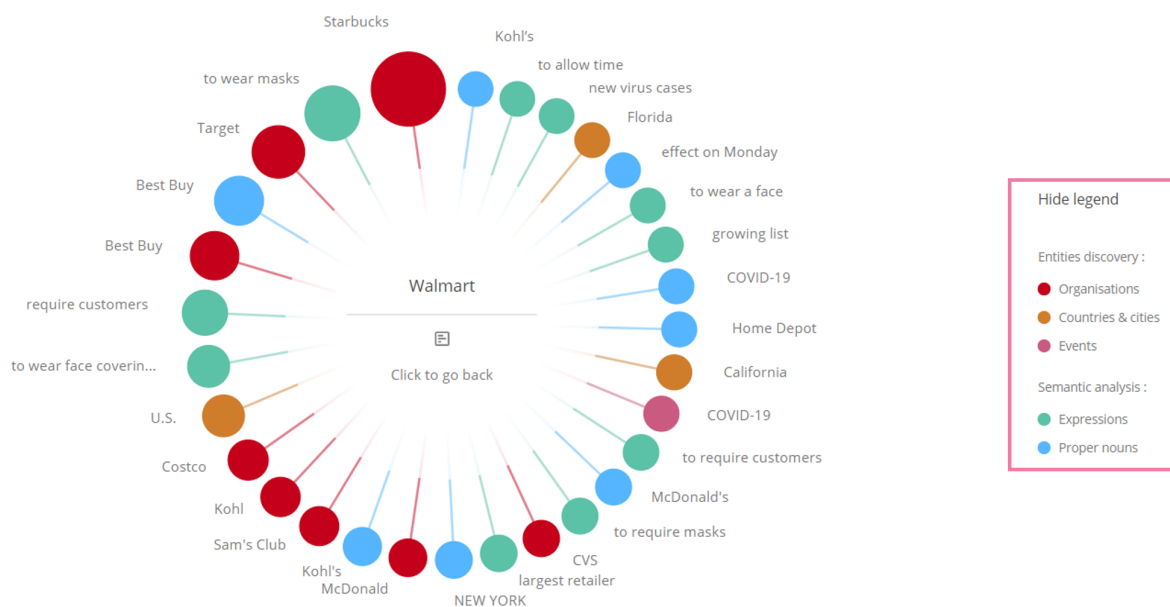
First Level

On the first level, you will only visualize the main entities of your dashboard.

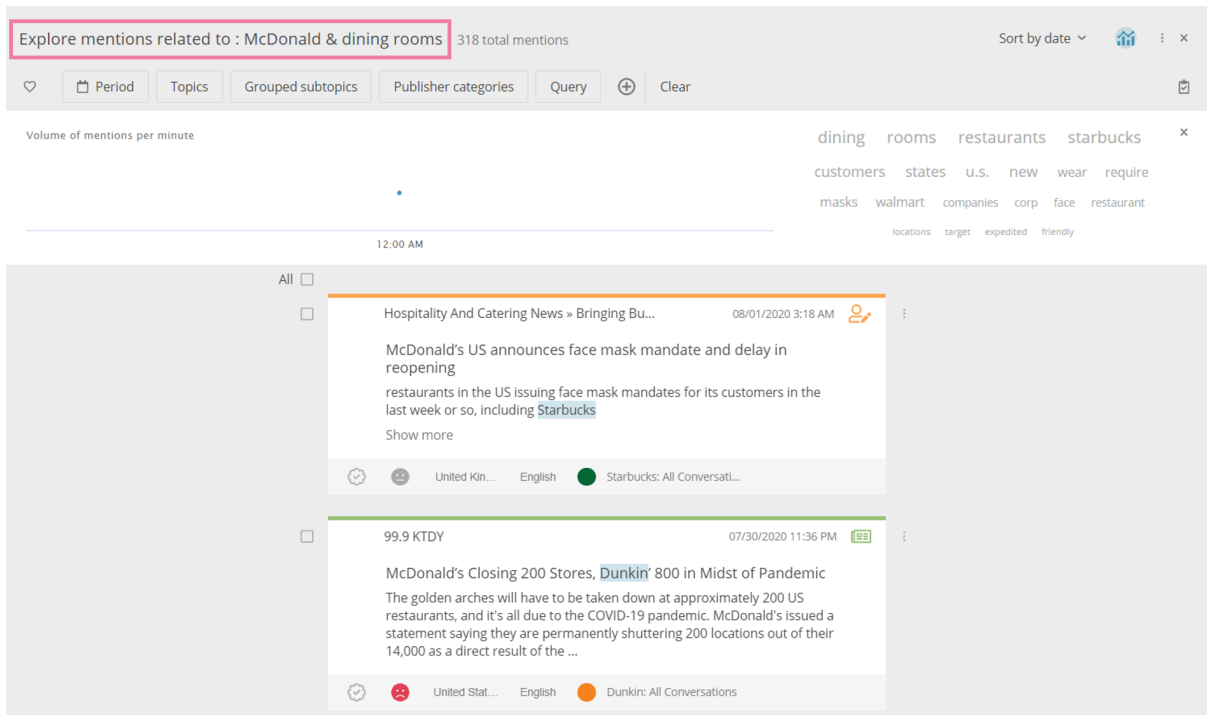


Second Level

You can click on the entity and access the second level where you visualize all the entities AND expressions that are mentioned together with the entity you selected on the first level.



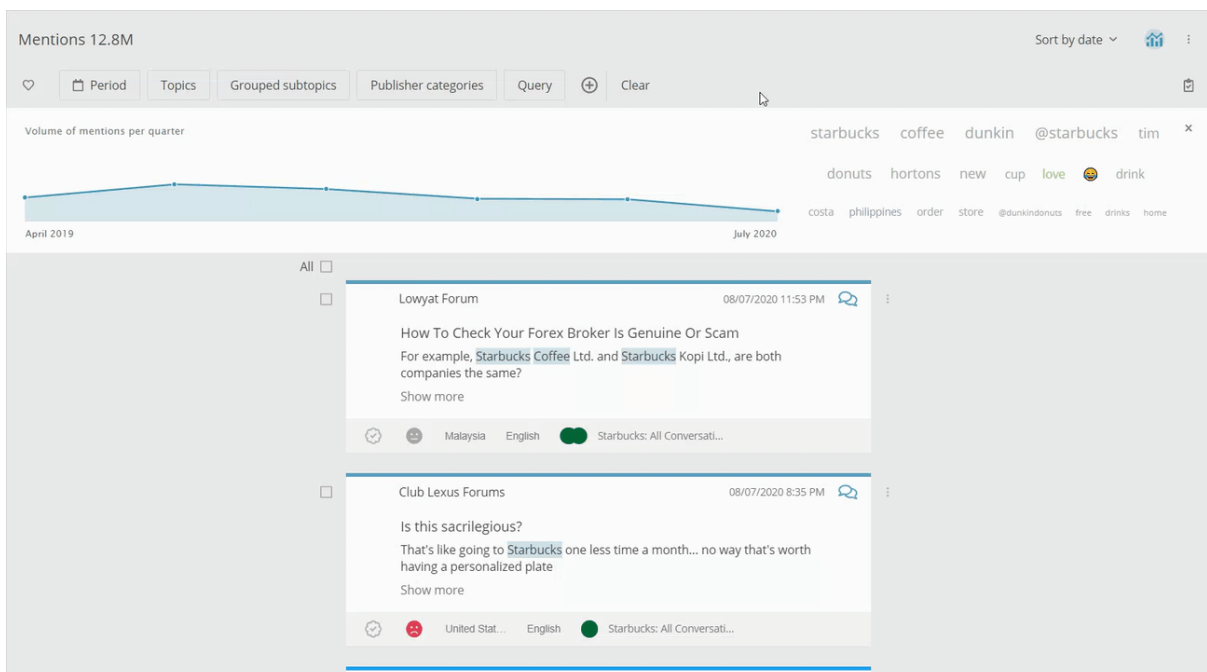
On this second level, you can click on an entity or an expression and it will open the Listen Tab filtered according to the first level and second level criteria. In the example below, you can see that the Listen Tab is opened and only shows the mentions that talk about “McDonald’s & Dining rooms”.



Finally, you can also retrieve your favorite filters in the Semantic Explorer, in order to see the entities and expressions that match your filters.

Listen Tab

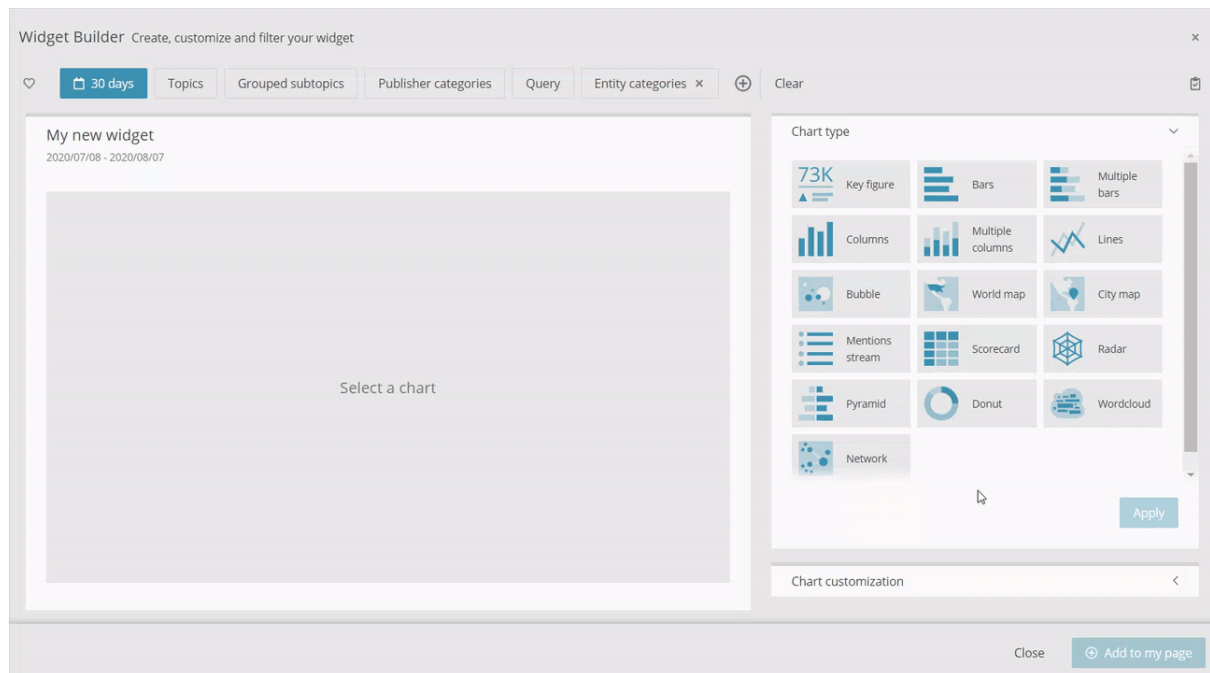
When browsing through your mentions, you can filter on these categories and save them as favorite filters if needed.



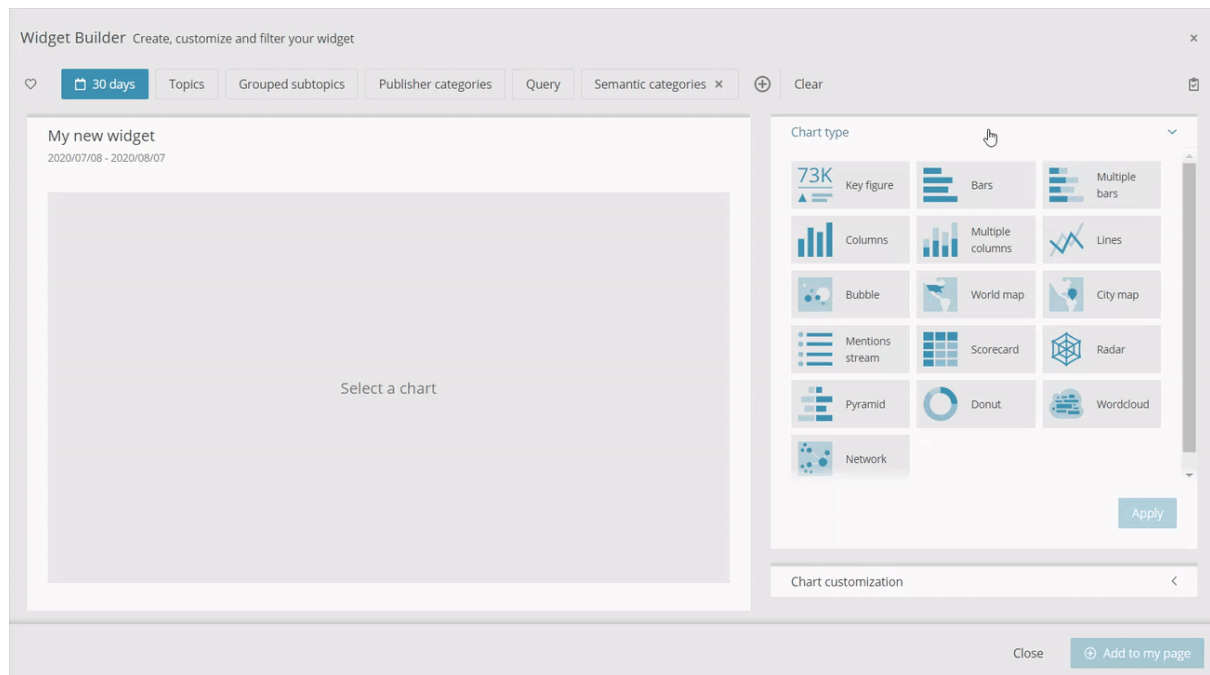
Reports

Semantic capabilities are also available in Reports. You can now build widgets based on entities and/or expressions.

For example, you can build word clouds based on entities. You can of course apply filters to only select one or several entity categories and display a word cloud based only on the selected categories.



It works the same with Semantic Analysis (especially expressions). You can build widgets based on expressions. As an example, you can check out the most used expressions; expressions that generate the most interactions; expressions associated with positive/negative sentiment; expressions that have the highest Social Reputation Score, etc



There's more to come with our advanced semantic capabilities. Stay tuned for more updates to our product and how-to articles as we progress.