

Forsta Visualizations March 2023 Release



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1 Introduction

This document describes new and improved features in the Forsta Visualizations 2023 March Release.

If you would like to know more about these features, please contact the support team at visualizationsSupport@forsta.com and they will be able to assist you.

Best Regards,
Forsta Team



2 Overview

Text analytics in Forsta Plus

- Forsta Visualizations now allows for open-ended comment data to be analyzed in the Forsta Plus text analytics tool, providing additional insights. By analyzing the text responses, you can identify categories (topics) and the sentiment scores, which can be reported on in StoryTeller dashboards or explored further in for example the Crosstab tool.
- The text analytics process can be initiated manually or automated through a job that triggers when new data is loaded into Forsta Visualizations.
- Applying text analytics on data in Forsta Visualizations requires a user account/license in Forsta Plus.

StoryTeller updates

- Respondent tables can now use any of the thousands of icons from the built-in "Icon and Shape Library" to create visually engaging tables with formatting rules. This update streamlines the process and makes it more efficient than the previous method of uploading images for formatting rules. An example is shown below, where thumbs are used to indicate low and high recommendation scores.

| Current operator | Age group | Gender | Comment | Recommend |
|------------------|-----------|--------|----------------------------------------------|-----------|
| Four | 25-34 | Man | adipiscing elit. | 👎 |
| Four | 25-34 | Woman | adipiscing elit. | 👍 |
| Swedish Telecom | 35-44 | Man | Aenean ac sem sit amet est pulvinar pretium. | 👍 |
| DonkyCom | 15-24 | Woman | Aenean tempus mattis enim, | 👍 |
| Four | 65 + | Woman | Aliquam ornare magna | 👎 |
| Swedish Telecom | 45-54 | Man | Aliquam ullamcorper | 👍 |
| Telecom for You | 55-64 | Woman | Aliquam ullamcorper | 👎 |



- In StoryTeller reports using hierarchy filters, users can perform bulk exports, such as exporting one PowerPoint file per hierarchy node. A new option allows for splitting up large exports into smaller batches. Instead of creating one export job for 500 reports, you can now automatically split up the job into batches of, for example, 50 reports per batch. By batching the exports, you can begin downloading reports earlier in the process as each batch is downloaded separately. In case of failed exports, a smaller number of reports will be affected, if one batch fails the other are still going to be generated. In addition to the batching logic a new "Retry" option is added which can be used in case of a failed exports, simply re-run the export again with a single click instead of having to make same export selections again.
- StoryTeller now has a "Select all" option in the hierarchy tree view filter control, allowing for more efficient bulk selection of hierarchy nodes. This option is enabled by default in newly created projects, but not in existing ones to avoid negatively affecting any "custom code" applied to hierarchy selection. If the new "Select all" option is needed in any existing project it can be enabled by Forsta Visualizations support team.

Project administration

- Projects can have IP restrictions applied, limiting access to only Report users and Administrator users within a defined set of IP addresses. Previously, the valid IP address could only be defined and changed by the Forsta Visualizations support team, but now Administrators can maintain these addresses themselves. If you need to restrict access by IP addresses, contact the Forsta Visualizations support team to enable the function on your project. You can then set up and maintain the valid IP addresses on your own.



- Over the past few years, new administration pages have been continuously added to improve project administration workflow and efficiency. The older legacy pages, such as those used for maintaining questions, answer blocks, question blocks, adding portal tabs, and distributing reports, have up until this point been available in sub-menus but have now been removed. A full list of the older legacy pages that have been removed is shown in chapter 5.2



3 Text analytics in Forsta Plus

3.1 Overview

Forsta Visualizations now allows for open-ended comment data to be analyzed in the Forsta Plus text analytics tool, providing additional insights. By analyzing the text responses, you can identify categories and sentiment scores, which can be reported on in StoryTeller dashboards or explored further in for example the Crosstab tool.

The text analytics process can be initiated manually or automated through a job that triggers when new data is loaded into Forsta Visualizations.

Applying text analytics on data in Forsta Visualizations requires a user account/license in Forsta Plus.

3.2 Process

To apply text analytics to any open-ended variable in a Forsta Visualization project, you first need to set up a hub, a custom data table, and a text analytics dataflow in Forsta Plus. After finalizing the setup in Forsta Plus, you create an "external data service" job within the project in Forsta Visualization. This job will send the data to the custom data table in the hub for analysis, either on demand or automatically when new data is imported. Once the data has been analyzed in Forsta Plus, it will be sent back to Forsta Visualizations and will be ready for reporting.

3.2.1 Setup in Forsta Plus

Below is an overview of the setup process in Forsta Plus. For more information about Forsta Plus, please access the LMS of Forsta Plus.

1. Create a Hub

Create a Hub to be used for storing the data and running the text analytics dataflow.



2. Create custom data table

In Custom data, create a new table. No specific table name is required but the following columns must be used:

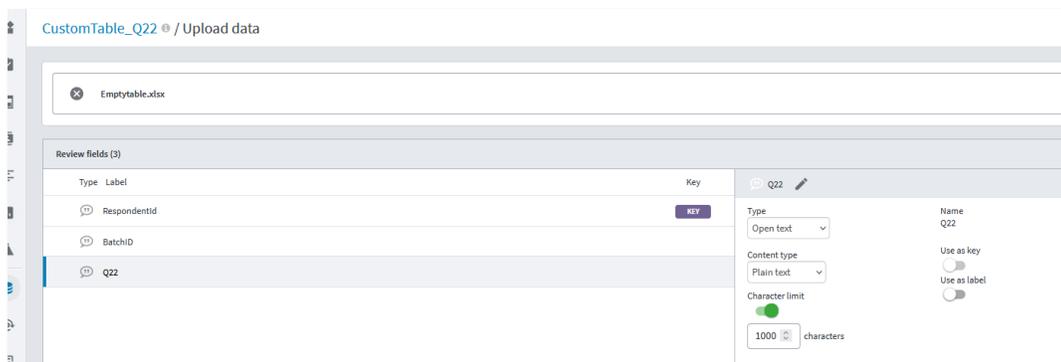
- RespondentID
- BatchID
- [Question code of question to be analyzed]

For example, if you want to analyze an open ended variable with the code "Q22", the column names should be RespondentID, BatchID, Q22.

To create the table structure for the above example import an Excel file with the following format during creation of the table in Custom data.

| | A | B | C | D |
|---|--------------|---------|-----|---|
| 1 | RespondentID | BatchID | Q22 | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

Note: The default text length for open text in a custom table is 255 characters. You should change this to the appropriate value to meet your specific needs. Please refer to the example below.



3. Create Text analytics dataflow

In the Automation page create a new Text analytic dataflow.

- As source in the dataflow select the custom table created in step 2.
- Add the open ended variable field to "Selected fields", see image 1 below.
- Select model and set processing to "Continuous", see image 2 below.

Image 1

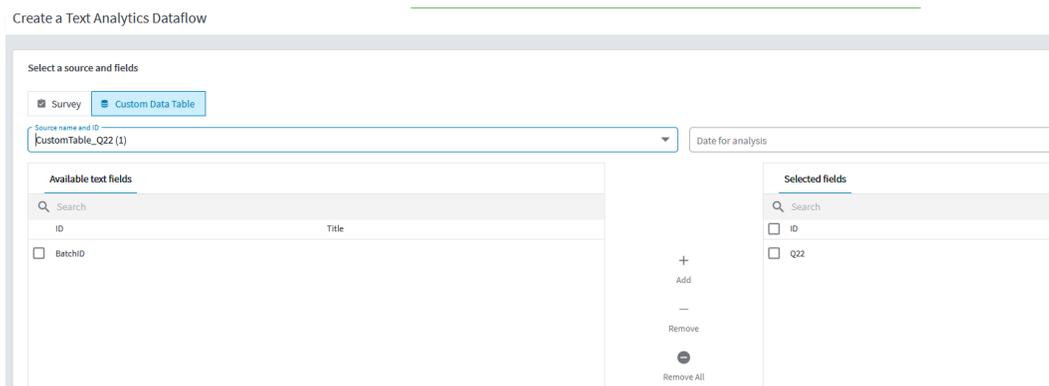
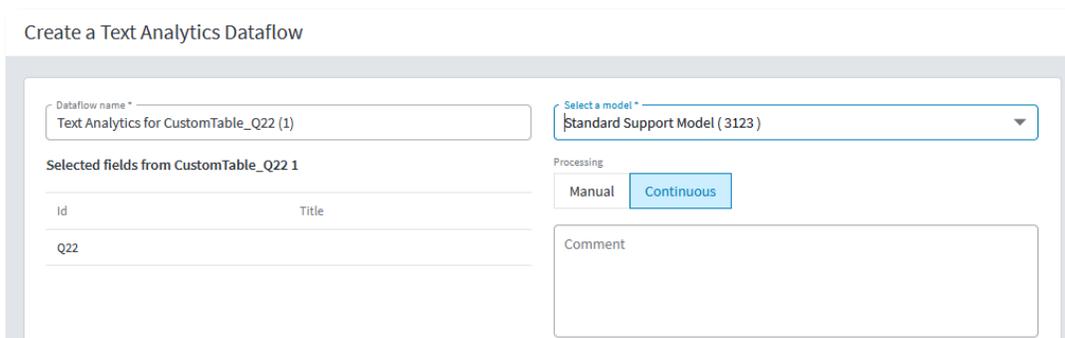


Image 2



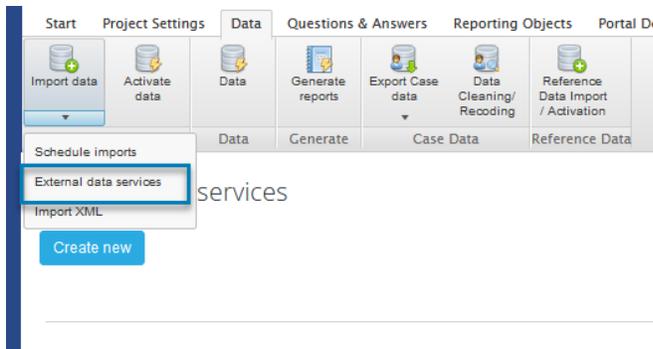
Note: If multiple open ended variables should be analyzed you need to set up a custom data table and text analytics dataflow for each variable.

3.2.2 Setup in Forsta Visualizations

3.2.2.1 Create External data service jobs

In your Forsta Visualizations project go to External data service page and create a job for each open ended variable to be analyzed in Forsta Plus.

The External Data service page.



To create a new job click “Create new” and follow the steps below (see also image further down)

1. Name the job

2. Set the job to Active

Set status to Active by ticking the check box to be able to run the job later on (only active jobs can be run). A job that should be paused/not run can be set to inactive.

3. Select Forsta Plus Text analytics as provider

4. Enter base url, ClientId and ClientSecret

Enter the base url for the Forsta Plus instance you use, for example <https://ws.euro.confirmit.com>.

If you do not have your ClientId and ClientSecret contact Forsta plus helpdesk.

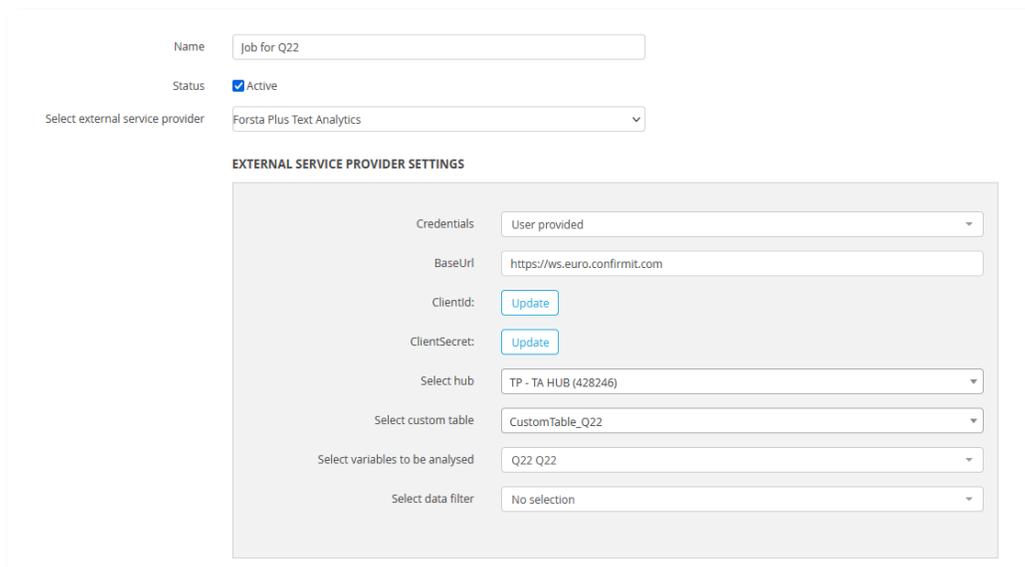
5. Select the Hub and custom table created in Forsta Plus.

6. Select the open ended variable to be analyzed.

7. Filter data (optional)

If necessary, apply a filter to send only a subset of the data for analysis. This can be useful, for example, when different text analytics models need to be used for different touchpoints in a CX survey.

Example of job setup.



The screenshot shows a web interface for configuring a job. At the top, there are three fields: 'Name' with the value 'job for Q22', 'Status' with a checked 'Active' checkbox, and 'Select external service provider' with a dropdown menu showing 'Forsta Plus Text Analytics'. Below this is a section titled 'EXTERNAL SERVICE PROVIDER SETTINGS' which contains several configuration options:

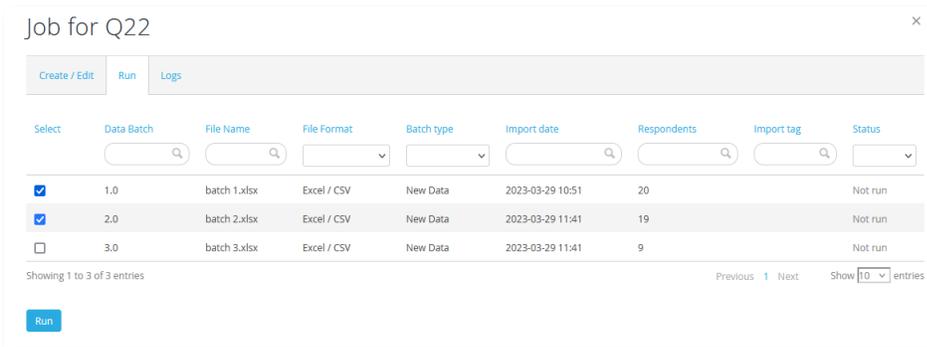
- 'Credentials' dropdown menu set to 'User provided'.
- 'BaseUrl' text input field containing 'https://vs.euro.confirmit.com'.
- 'Clientid:' label with an 'Update' button.
- 'ClientSecret:' label with an 'Update' button.
- 'Select hub' dropdown menu set to 'TP - TA HUB (428246)'.
- 'Select custom table' dropdown menu set to 'CustomTable_Q22'.
- 'Select variables to be analysed' dropdown menu set to 'Q22 Q22'.
- 'Select data filter' dropdown menu set to 'No selection'.



3.2.2.2 Manual job execution

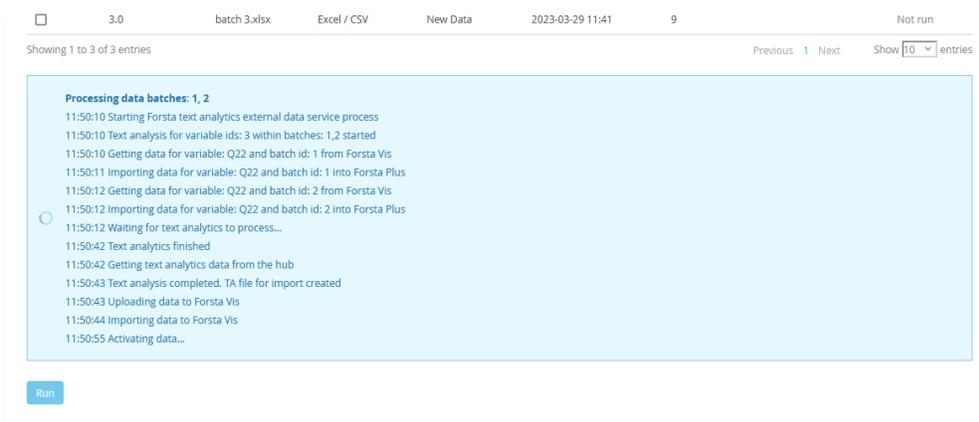
To run the job manually enter the job and the Run/Re-run tab shown in the image below. In the Run tab you select which data batches you want to send to for analysis. Select the desired data batches and click the Run button to start the process.

Here we see the Run tab, select the batches to be run and hit Run to start the process.



When starting the job the status is shown in the bottom of the screen. The job is completed when the new data batches with analyzed data has been imported and activated in Forsta Visualizations, a successful message is shown when the process is completed. The time the process takes is dependent on the data volumes. The more data the longer time the analyzes and data activation takes.

Here we see an example of the status of a running process.





Note: you can also always check the status of currently running jobs and previous run jobs in the Log tab as shown below.

Here we see the Log tab which can be used to check the status and any potential error messages if the process fails.

The screenshot shows a web interface for a job titled "Job for Q22". At the top, there are buttons for "Create / Edit", "Run", and "Logs". Below these are search filters for "Time", "Event Type", and "Message". The main area contains a table of log entries:

| Time | Event Type | Message |
|---------------------|------------|-------------------------------------------------------------------|
| 2023-03-29 11:51:07 | Info | Forsta text analytics process finished successfully |
| 2023-03-29 11:50:55 | Info | Activating data... |
| 2023-03-29 11:50:44 | Info | Importing data to Forsta Vis |
| 2023-03-29 11:50:43 | Info | Uploading data to Forsta Vis |
| 2023-03-29 11:50:43 | Info | Text analysis completed. TA file for import created |
| 2023-03-29 11:50:42 | Info | Getting text analytics data from the hub |
| 2023-03-29 11:50:42 | Info | Text analytics finished |
| 2023-03-29 11:50:12 | Info | Waiting for text analytics to process... |
| 2023-03-29 11:50:12 | Info | Importing data for variable: Q22 and batch id: 2 into Forsta Plus |
| 2023-03-29 11:50:12 | Info | Getting data for variable: Q22 and batch id: 2 from Forsta Vis |

At the bottom, it says "Showing 1 to 10 of 14 entries" and has navigation links for "Previous", "1", "2", "Next", and a "Show 10 entries" dropdown.



3.2.2.3 Automation of job execution

The jobs can be run automatically on data batches imported via the Import scheduler. All the External data service jobs set to active can be selected when creating an Import scheduler job. The selected jobs will be run automatically as the last step in the import process after the survey data has been imported and activated.

Here we see the option for selecting the External data service job to be run automatically when importing data via the Import scheduler.

Import data from other source

Import tag: <no tag>

Import type: Single import Run import on save

Date: 03/29/2023 Current server time: 2023-03-29 13:52:30

Time: 14:00

Batch type: New data set

Select mapping variable

Stacked data to be connected to existing data sets

Data options:

- Import Metadata
- Ignore new meta data
- Activate Data Append dataset to active data
- Delete inactive data Activate Latest 1 datasets

External data services: × Forsta Plus Text Analytics - Job for Q22

Data source: FTP Server

3.2.2.4 Data batches and formats

The analyzed data imported to Forsta Visualization is imported as two different batches:

- A “flat” batch with overall sentiment scores for the whole comment
- A looped batch with categories and sentiment score per category

These data batches are displayed in the Data page in same way as all other data sets, see example below.



Here we see an example of the text analytics data batches in the Data page, see batch 4 and 5.

| Imported data batches | | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------|-------------|--------------------------------|---------------------|-------------------------|-------------|--|--|
| Apply to All (5) | | | | | | | | | |
| APPLY ACTIVATIONS NOTIFICATIONS ACTIVATION HISTORY EDIT TAGS DELETE DATA | | | | | | | | | |
| Active | ID | File name | File format | Batch type | Date | Respondents (responses) | Data points | | |
| Active | 5 | Looped_CustomTable_Q | Json | Looped data | 2023-03-29 11:50 AM | 13 (27) | 108 | | |
| Active | 4 | Main_CustomTable_Q22 | Json | Updates to existing dataset(s) | 2023-03-29 11:50 AM | 39 | 78 | | |
| Active | 3 | batch 3.xlsx | Excel / CSV | New Data | 2023-03-29 11:41 AM | 9 | 27 | | |
| Active | 2 | batch 2.xlsx | Excel / CSV | New Data | 2023-03-29 11:41 AM | 19 | 57 | | |
| Active | 1 | batch 1.xlsx | Excel / CSV | New Data | 2023-03-29 10:51 AM | 20 | 60 | | |

The flat data batch contains two questions:

- an open ended question showing the text that was analyzed
- a scale question with data for the overall sentiment score.

Below we see these variables in Questions page and also the data of these in a Respondent table in StoryTeller.

The Questions page shows the following variables for Q22:

| ID | Variable Name | Question | Type |
|----|-------------------------------------------------|------------------------|------------|
| 3 | Q22 | Q22 | Open ended |
| 4 | OverallScore_Text_Q22 | OverallScore_Text_Q22 | Open ended |
| 5 | OverallScore_Score_Q22 | OverallScore_Score_Q22 | Scale |
| 7 | CategoryScore_variable - CategoryScore_category | CategoryScore_variable | Single |
| 8 | CategoryScore_variable - CategoryScore_category | CategoryScore_category | Single |
| 9 | CategoryScore_variable - CategoryScore_category | CategoryScore_score | Scale |

The Respondent table shows the following data:

| Respondent ID | Response Date | OverallScore_Text_Q22 | OverallScore_Score_Q22 |
|---------------|---------------|----------------------------------------------|------------------------|
| 1 | 2023-03-29 | The brand reputation and reliability. | 5 |
| 2 | 2023-03-29 | The price and affordability. | 0 |
| 3 | 2023-03-29 | The quality of the camera. | 0 |
| 4 | 2023-03-29 | The size and weight of the phone. | 0 |
| 5 | 2023-03-29 | The operating system and user interface. | 0 |
| 6 | 2023-03-29 | The battery life and charging speed. | 0 |
| 7 | 2023-03-29 | The storage capacity and expandability. | 5 |
| 8 | 2023-03-29 | The durability and ruggedness. | 3 |
| 9 | 2023-03-29 | The availability of accessories and add-ons. | 0 |
| 10 | 2023-03-29 | The screen resolution and size. | 0 |
| 11 | 2023-03-29 | The speed and performance of the processor. | 5 |
| 12 | 2023-03-29 | The design and aesthetics of the phone. | 0 |



The looped data batch contains three questions:

- a single choice question showing the code of the analyzed variable
- a single choice question showing the category
- a scale question showing the sentiment score of the category

Below we see these variables in Questions page and also the data of these in a Respondent table in StoryTeller.

| Question ID | Question Text | Question Type |
|------------------------|------------------------|---------------|
| Q22 | Q22 | Open ended |
| OverallScore_Text_Q22 | OverallScore_Text_Q22 | Open ended |
| OverallScore_Score_Q22 | OverallScore_Score_Q22 | Scale |

| Respondent ID | Response Date | CategoryScore_variable | CategoryScore_category | CategoryScore_score |
|---------------|---------------|------------------------|--------------------------------------------|---------------------|
| 6 | 2023-03-29 | Q22 | Problem resolution | 0 |
| | | Q22 | Problem resolution - Speed of Service | 0 |
| 10 | 2023-03-29 | Q22 | Problem resolution | 0 |
| | | Q22 | Problem resolution - Resolved / Unresolved | 0 |
| 11 | 2023-03-29 | Q22 | Problem resolution | 5 |
| | | Q22 | Problem resolution - Speed of Service | 5 |
| 13 | 2023-03-29 | Q22 | Problem resolution | 5 |
| | | Q22 | Customer Service | 5 |
| | | Q22 | Problem resolution - Quality of Service | 5 |
| | | Q22 | Reason for contact | 0 |

Note, the data batches containing the analyzed text analytics data always include data for all respondents that have been sent to Forsta Plus for analysis. After each import, all previously imported data batches with text analytics data are deactivated, and only the latest one is activated. This process is automated, but deletion of deactivated data sets is not automated. It is recommended to delete non activated data batches as the more data stored in project the longer the data activation takes.

4 StoryTeller updates

4.1 Respondent tables, icon support in Formatting rules

Respondent tables can now use any of the thousands of icons from the built-in "Icon and Shape Library" to create visually engaging tables with formatting rules. This update streamlines the process and makes it more efficient than the previous method of uploading images for formatting rules. An example is shown below, where thumbs are used to indicate good and bad NPS values.

Example of icons used to indicate low and high Recommendation scores.

| Current operator | Age group | Gender | Comment | Recommend |
|------------------|-----------|--------|----------------------------------------------|-----------|
| Four | 25-34 | Man | adipiscing elit. | |
| Four | 25-34 | Woman | adipiscing elit. | |
| Swedish Telecom | 35-44 | Man | Aenean ac sem sit amet est pulvinar pretium. | |
| DonkyCom | 15-24 | Woman | Aenean tempus mattis enim, | |
| Four | 65 + | Woman | Aliquam ornare magna | |
| Swedish Telecom | 45-54 | Man | Aliquam ullamcorper | |
| Telecom for You | 55-64 | Woman | Aliquam ullamcorper | |

The use of Icons in Formatting rules works in the same way as when applying Icons to formatting rules in regular tables. Follow the steps below to add icon to a Formatting rule in Respondent tables.

- Open the Formatting rule panel and define the name and expression as always
- Enable the new option "Select icon from Icon and Shape library"
- Select the desired icon and color through clicking the default circle icon. Now the Icon and shape library opens and the icon selection and belonging settings such as colors, rotation, padding are set.

- Decide the icon size, the default value is 30x30 pixels
- Save

Here we see an example.

Editor allows you to create new or edit existing formatting rules.
[Learn more](#)

Name

Apply to

Variable

Answers

| |
|---|
| 0 |
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

Image Select from Icon & Shape library

Icon 

Icon size

| | | | |
|-------|---------------------------------|--------|---------------------------------|
| Width | <input type="text" value="30"/> | Height | <input type="text" value="30"/> |
|-------|---------------------------------|--------|---------------------------------|

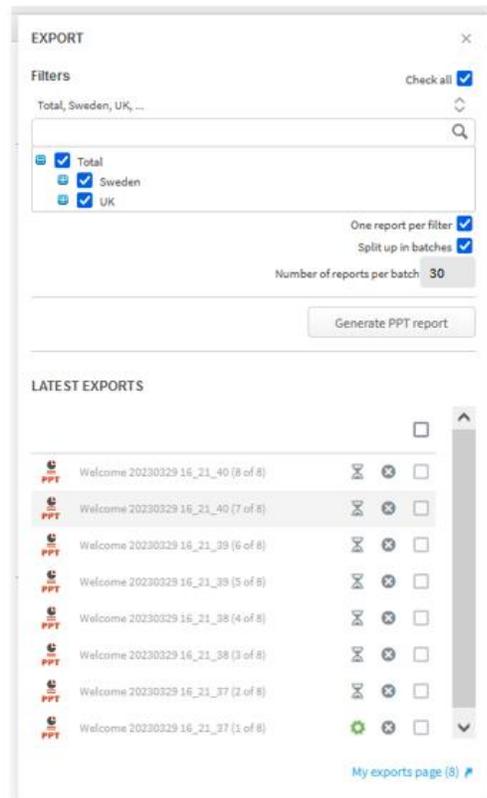
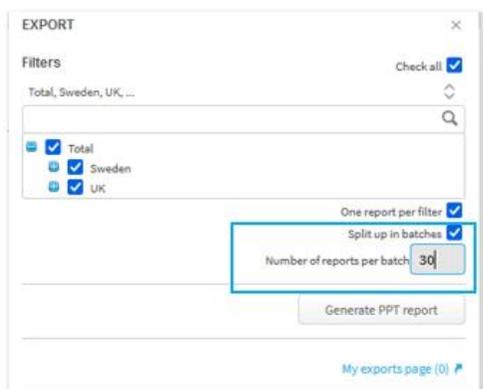
Note; icons are, like images, not included in Excel export of respondent tables.



4.2 Export improvements

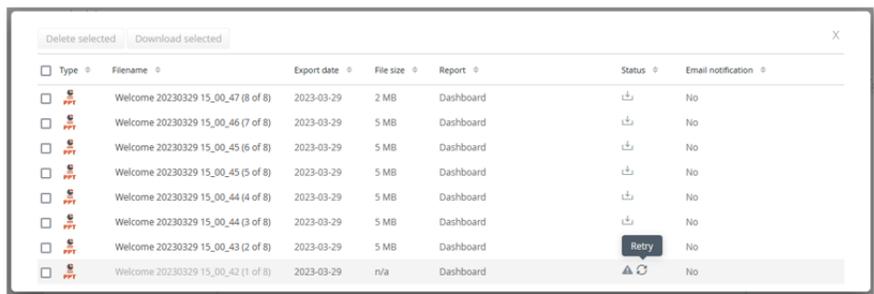
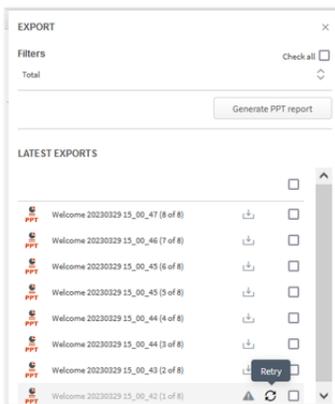
In StoryTeller reports using hierarchy filters, users can perform bulk exports, such as exporting one PowerPoint file per hierarchy node. A new option allows for splitting up large exports into smaller batches. Instead of creating one export job for 500 reports, you can now automatically split up the job into batches of, for example, 50 reports per batch. By batching the exports, you can begin downloading reports earlier in the process as each batch is downloaded separately. In case of failed exports, a smaller number of reports will be affected, as if one batch fails the other are still going to be generated.

The new batch option in Export panel. To the left, we can see that the export is split into 30 reports per batch. When "Generate PPT report" is clicked, eight separate export jobs are created with 30 reports per batch. The reports are split up in batches by their names in alphabetically order.



In addition to the batching logic a new “Retry” option is added which can be used in case of a failed exports, simply re-run the export again with a single click instead of having to make same export selections again.

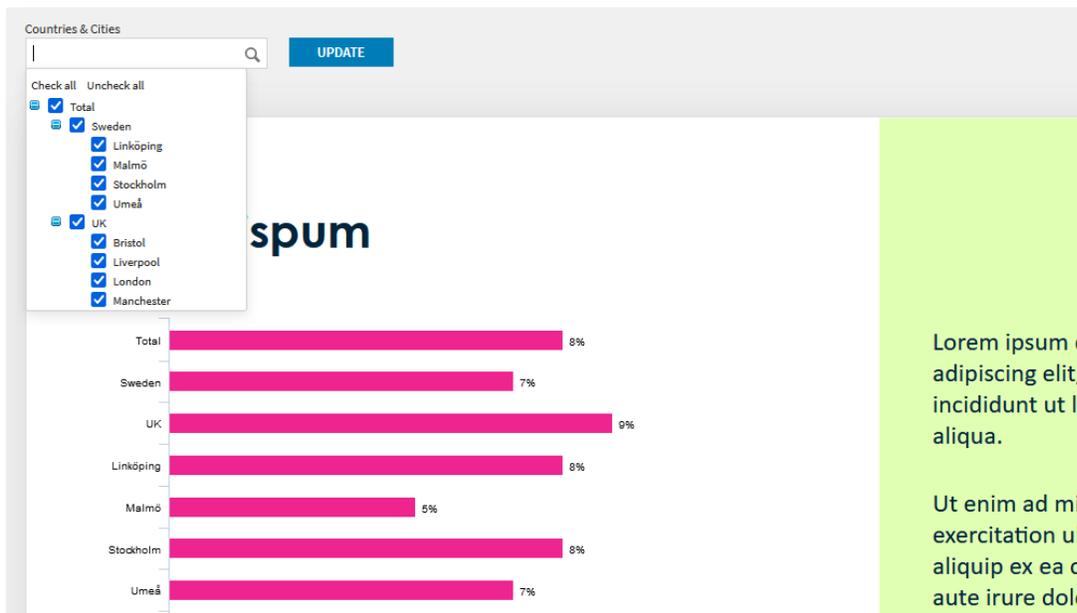
Example of failed export, click the “Retry” icon to start the export job again. As shown the “Retry” option is available in both the Export panel and in My exports page.



4.3 Select all in Hierarchy tree view

StoryTeller now has a "Select all" option in the hierarchy tree view filter control, allowing for more efficient bulk selection of hierarchy nodes. This option is enabled by default in newly created projects, but not in existing ones to avoid negatively affecting any "custom code" applied to hierarchy selection. If the new "Select all" option is needed in any existing project it can be enabled by the Forsta Visualizations support team.

Here we see the new Check all and Uncheck all options in the top of Hierarchy selection control.



Note; the Check all and Uncheck all is only shown when multi select is allowed, if only single select is allowed these are not show.

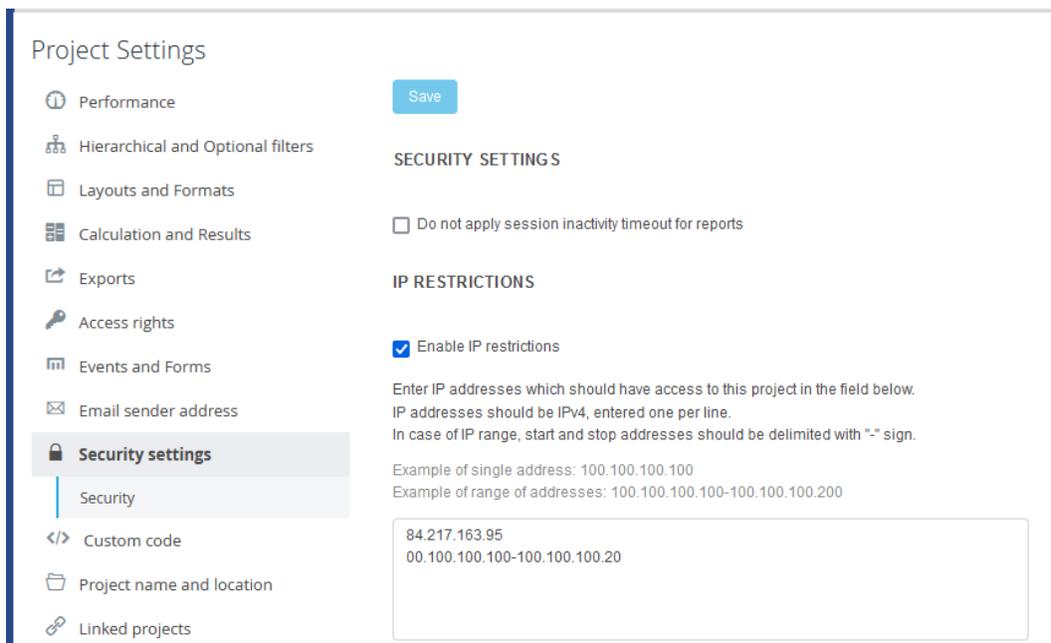
5 Project administration

5.1 IP restriction

Projects can have IP restrictions applied, limiting access to only Report users and Administrator users within a defined set of IP addresses. Previously, the valid IP address could only be defined and changed by the Forsta Visualizations support team, but now Administrators can maintain these addresses themselves.

If you need to restrict access by IP addresses, contact the Forsta Visualizations support team to enable the function on your project. Then you find the IP address configuration in Project settings page under Security tab as shown below.

The IP restriction configuration view.



5.2 Removed legacy pages

Over the past few years, new administration pages have been continuously added to improve project administration workflow and efficiency. The older pages, such as those used for maintaining questions, answer blocks, question blocks, adding portal tabs, and distributing reports, have up until this point been available in sub-menus but have now been removed.

The following 18 legacy pages are now removed:

- Questions (legacy)
- Sort order Questions - New variables (legacy)
- Sort order Answers - Grouped answers (legacy)
- Grouped Answers (legacy)
- Question blocks (legacy)
- Sort order Question blocks (legacy)
- Filters (legacy)
- Compute variable (legacy)
- Merge into new variable (legacy)
- Input variables (legacy)
- Inactive Questions & Answers (legacy)
- Date variables (legacy)
- Weight variables (legacy)
- Delete Meta data (legacy)
- Delete Case data (legacy)
- Distribute (legacy)
- Portal tabs (legacy)
- Variable subsets Vs H-filters (legacy)