

Forsta Visualizations November 2022 Release



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1 Introduction

This document describes new and improved features in the Forsta Visualizations 2022 November 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

StoryTeller

- Paired Z and T tests have been added to StoryTeller. The paired T and Z test is for example often used in ad- and product-testing when the same respondent evaluates several items.
- Significance testing between series in StoryTeller charts and tables is improved to support more complex comparisons when text matching between series is used
- The "Bottom X" values functionality in charts and tables is improved, you can now specify if "0s" should be considered as lowest result or not.

Crosstabel tool

- The Answer selection panel is now supporting keyboard options "Ctrl" and "Shift" which makes it both easier and more efficient to select answers in long lists.

StoryCreator

- Paired Z and T tests is added
- Several minor user interface related usability updates are made, see examples below:
 - Labels are added to navigation icons in Formatting/Series setting/Analyse panel to make it easier to find relevant options.
 - Keyboard "Delete" is now deleting the selected objects completely, previously a Delete resulted in an empty object placeholders.
 - Save option is highlighted when there are unsaved changes.
 - All the series color options are now shown when "Auto coloring" logic is applied which makes it easier to discover the other available coloring options.

Report user management

- User tags are now shown in the Invite panel in Report user management report. The tags in combination with other new options such as “Select all” makes it much more efficient to select and invite a subset of the users.

Project administration

- A project archive function is added so no longer used projects can be archived. The data size of an archived project is not included in calculation of active data in case of having a data point/complete related license model. Project restore functionality will be added in upcoming releases, until then a restore of an archived project is done by contacting support team.
- Copy project flow is improved. A new “Release and copy” option is added so release and copy can be made in a single step. The same logic is added in the copy panel, a new “Copy and open project” is now available.

Raw data export

- SPSS export of raw data is now faster which especially is noticeable when exporting data from bigger projects.

3 StoryTeller

3.1 Paired Z and T test

The Paired Z and T significance tests are now available in StoryTeller.

As a paired significance test includes the respondents that exists in both samples only the most common use cases are for example ad and product testing when the same respondent evaluates several items.

3.1.1 Calculations

The used formulas are shown below.

Note: only the respondents that exists in both samples are included in the significance test calculation. If a respondent only exists in one samples, it will be removed from the test calculation completely, but still be included when the “main” result is calculated.

Paired T-test, categorical mean calculation:

$$t = \frac{\bar{d}}{\frac{s_d}{\sqrt{n}}}$$

$$s_d = \sqrt{\frac{\sum_{i=1}^n (d_i - \bar{d})^2}{n - 1}}$$

$$\bar{x}_1 - \bar{x}_2 = \bar{d} = \frac{\sum_{i=1}^n d_i}{n}$$

Where d is the difference between the same respondent in the two samples and $\bar{d}$ is the mean of all differences, and the degrees of freedom is $n-1$

Paired T-test, % calculation:

$$t = \frac{(p_1 - p_2) - 0}{\sqrt{\hat{p}(1 - \hat{p})\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$\hat{p} = \frac{(p_1 * n_1 + p_2 * n_2)}{n_1 + n_2}$$

Degrees of freedom = n-1

Paired Z-test, categorical mean calculation:

$$z = \frac{\bar{d}}{\frac{s_d}{\sqrt{n}}}$$

$$s_d = \sqrt{\frac{\sum_{i=1}^n (d_i - \bar{d})^2}{n - 1}}$$

$$\bar{x}_1 - \bar{x}_2 = \bar{d} = \frac{\sum_{i=1}^n d_i}{n}$$

Where d is the difference between the same respondent in the two samples and $\bar{d}$ is the mean of all differences.

Paired Z-test, % calculation:

$$z = \frac{(p_1 - p_2) - 0}{\sqrt{\hat{p}(1 - \hat{p})\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$\hat{p} = \frac{(p_1 * n_1 + p_2 * n_2)}{n_1 + n_2}$$

Critical values

Both the mean and percentages T and Z test uses the same critical values as the two independent samples T-Test and Z-test.

Critical values for Z test:

- Significance level 10%= 1.644853627
- Significance level 5%= 1.959963985
- Significance level 1%= 2.575829304

Critical values for T test:

If degrees of freedom > 1500 the following critical values are used:

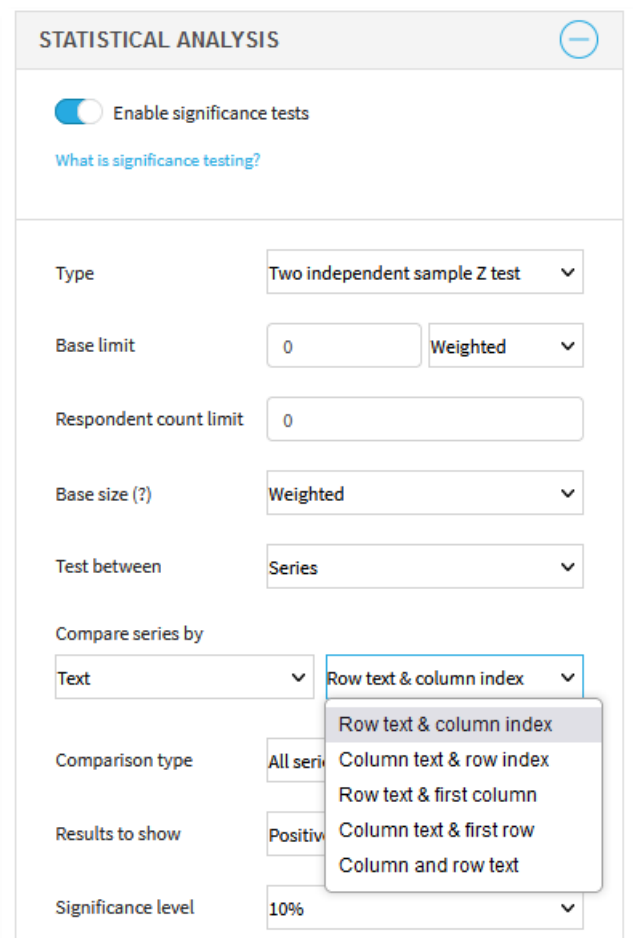
- Significance level 10% = 1.64485362695147
- Significance level 5% = 1.95996398454005
- Significance level 1% = 2.57582930354890

If degrees of freedom ≤ 1500 the “critical value” table is referenced which you find in the online Knowledgebase.

3.2 Significance testing between series

Significance testing between series in StoryTeller charts and tables is improved to support more complex comparisons when text matching between series is used.

Below you see the all the available options when performing a test between series by a text match, below the image you see how the previously available options are mapped against the new.



STATISTICAL ANALYSIS

☒ Enable significance tests

[What is significance testing?](#)

Type: Two independent sample Z test

Base limit: 0 Weighted

Respondent count limit: 0

Base size (?): Weighted

Test between: Series

Compare series by:

Text: Row text & column index

Comparison type: All series

Results to show: Positive

Significance level: 10%

Text match options:

- Row text and column index - *new option*
- Column text and row index - *new option*

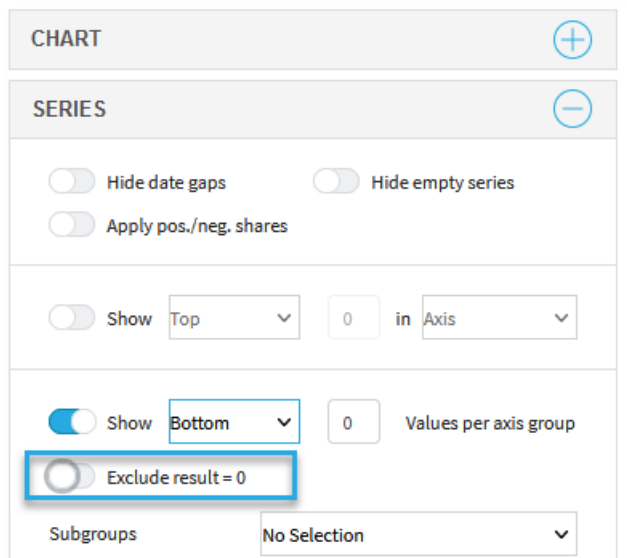
- Row text and first column - *previously named "Rows"*
- Column text and first row - *previously named "Columns"*
- Column and row text - *previously named "Both"*

These new options are available in both charts and tables in StoryTeller.

3.3 Bottom X values improvements

The “Bottom X” values functionality is improved, you can now specify if “0s” should be considered as low result or not.

The new option is shown below.



The image shows a configuration panel for a chart series. It has a 'CHART' header with a plus icon and a 'SERIES' header with a minus icon. Under 'SERIES', there are several settings:

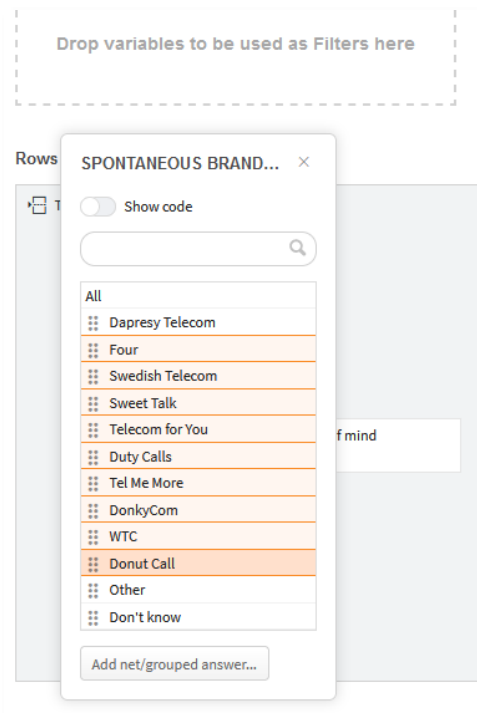
- ☐ Hide date gaps
- ☐ Hide empty series
- ☐ Apply pos./neg. shares
- ☐ Show Top 0 in Axis
- ☒ Show Bottom 0 Values per axis group
- ☐ Exclude result = 0 (highlighted with a red box)
- Subgroups No Selection

4 Crosstable tool updates

4.1 Improved answer selection

The Answer selection panel is now supporting keyboard options “Ctrl” and “Shift” which makes it both easier and more efficient to select answers in long lists.

Below is the answer selection panel shown, you can now use CTRL and Shift to easier select desired.



5 StoryCreator

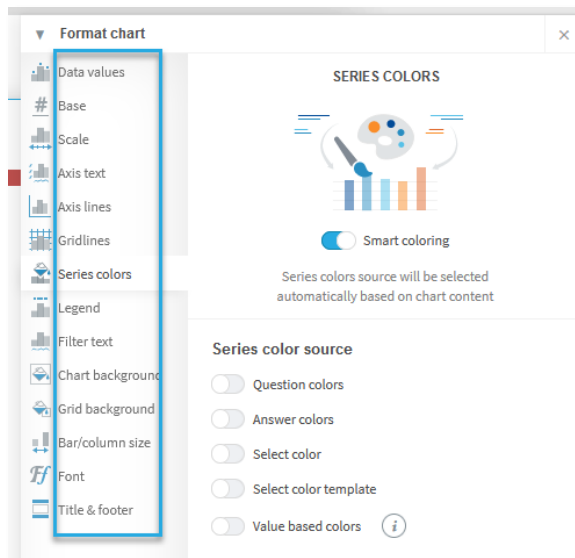
5.1 Paired Z and T tests

Paired Z and T tests is now also available in StoryCreator, see formulas in chapter 3.1.1

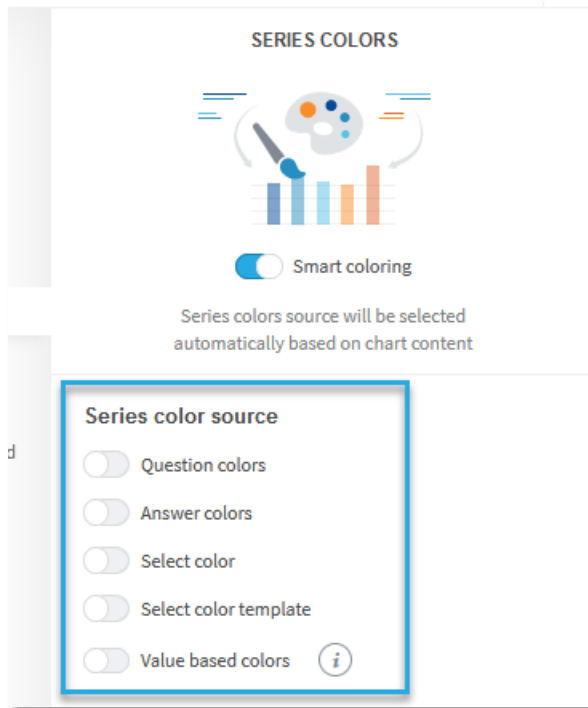
5.2 Usability updates

Several minor usability updates are made in StoryCreator, see examples below:

Labels are added to navigation icons in Formatting/Series setting/Analyse panel to make it easier to find relevant options.



All the series color options are now shown when “Auto coloring” logic is applied which makes it easier to discover the other available coloring options, previously these were hidden until “Auto coloring” was disabled.



Keyboard “Delete” is now deleting the selected objects completely, previously a Delete resulted in an empty object placeholders.

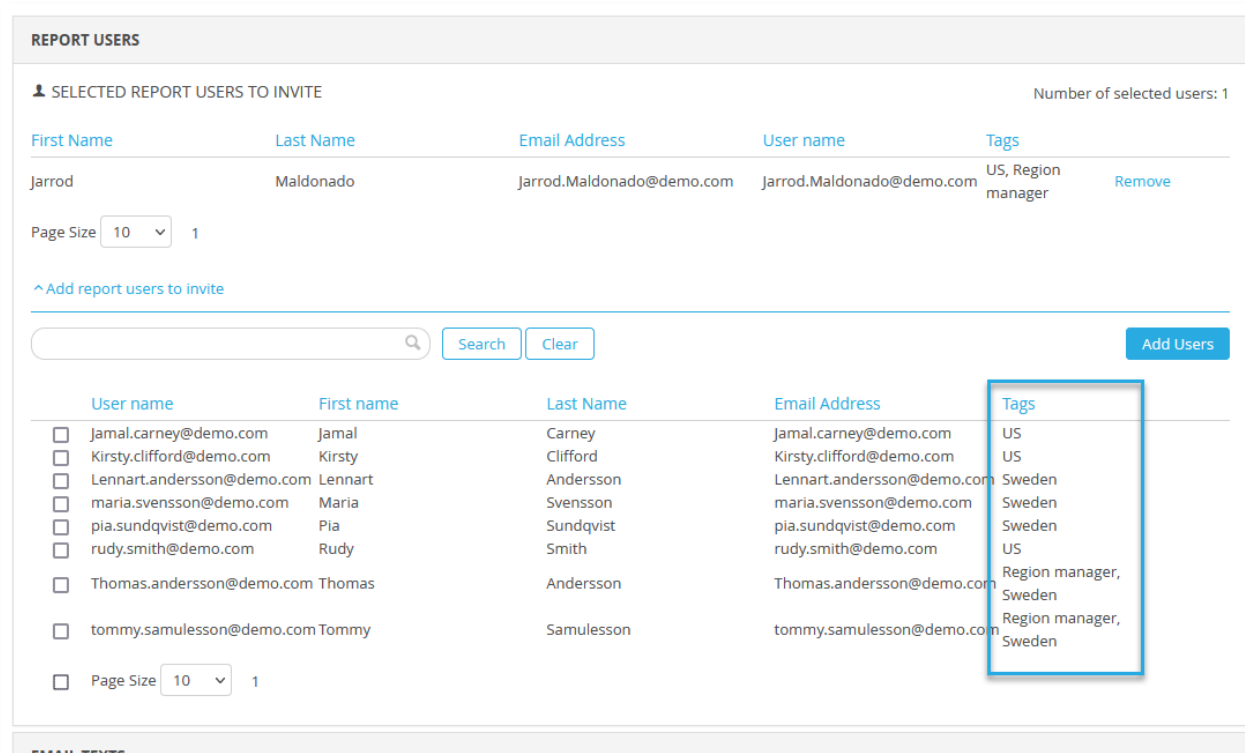
Save option is highlighted when there are unsaved changes.

6 Report user management

6.1 Improvements in Invites panel in Report user management report

User tags are now shown in the Invite panel in the Report user management report. The use of tags in combination with other new options such as “Select all” makes it much more efficient to select and invite a subset of the users.

Here we see an example of tags shown in the user list in Invite page.



REPORT USERS

SELECTED REPORT USERS TO INVITE Number of selected users: 1

First Name	Last Name	Email Address	User name	Tags	
Jarrold	Maldonado	Jarrold.Maldonado@demo.com	Jarrold.Maldonado@demo.com	US, Region manager	Remove

Page Size 1

[^Add report users to invite](#)

	User name	First name	Last Name	Email Address	Tags
☐	Jamal.carney@demo.com	Jamal	Carney	Jamal.carney@demo.com	US
☐	Kirsty.clifford@demo.com	Kirsty	Clifford	Kirsty.clifford@demo.com	US
☐	Lennart.andersson@demo.com	Lennart	Andersson	Lennart.andersson@demo.com	Sweden
☐	maria.svensson@demo.com	Maria	Svensson	maria.svensson@demo.com	Sweden
☐	pia.sundqvist@demo.com	Pia	Sundqvist	pia.sundqvist@demo.com	Sweden
☐	rudy.smith@demo.com	Rudy	Smith	rudy.smith@demo.com	US
☐	Thomas.andersson@demo.com	Thomas	Andersson	Thomas.andersson@demo.com	Region manager, Sweden
☐	tommy.samuleson@demo.com	Tommy	Samuleson	tommy.samuleson@demo.com	Region manager, Sweden

Page Size 1

Note, the user tags are only shown in Report user management report when enabled in Project settings page. This means that you can choose if tags are used for internal purpose or if also the Report users with access to the Report user management report should have access to the tags.

When the highlighted option below is enabled, the tags are shown in Report user management report.

Hierarchical and Optional filters

Layouts and Formats

Calculation and Results

Exports

Access rights

Access rights

Events and Forms

Email sender address

Security settings

ACCESS RIGHTS

☐ Enable access rights for filters in StoryTeller, StoryCreator and Cross Table tool

Time for giving project access when limiting project access by From date

00:00

Time for removing project access when limiting project access by To date

00:00

☒ Enable User Tags in Report User Management

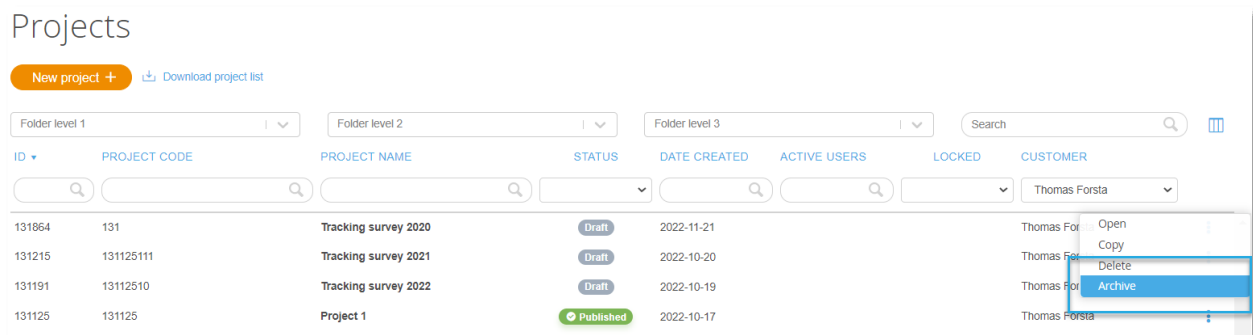
7 Project administration

7.1 Archive project

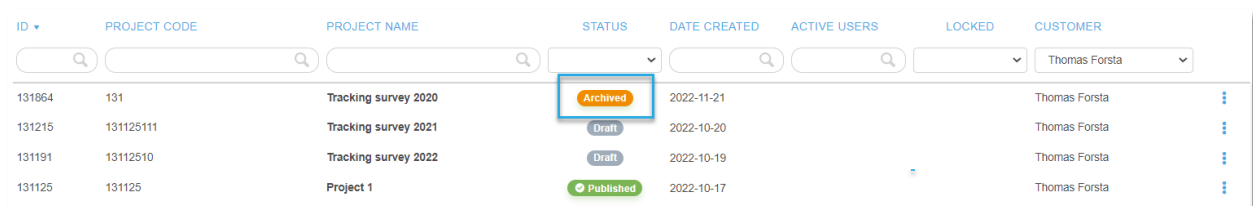
A project archive function is added so no longer used projects can be archived. The data size of an archived project is not included in calculation of active data in case of having a data point/complete related license model.

Project restore functionality will be added in upcoming releases, until then a restore of an archived project is done by contacting support team.

Below is the new Archive option shown. All report users will be removed from the project when it is archived.



An Archived project is still shown in the project list but in an archived state as shown below. An archived project cannot be entered.



7.2 Copy project flow

Copy project flow is improved. A new “Release and copy” option is added so release and copy can be made in a single step. The same logic is added in the copy panel, a new “Copy and open project” is added.

Here we see the two new options.

