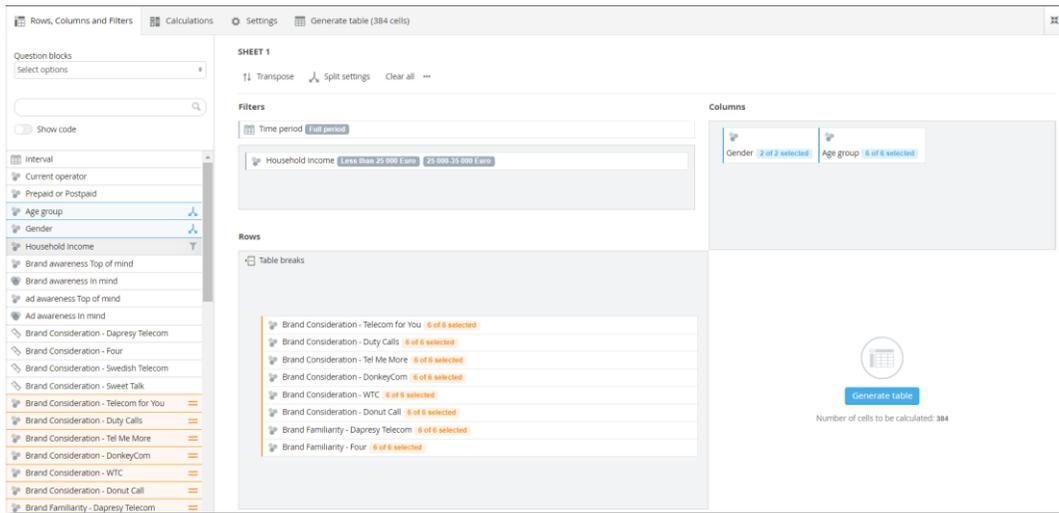


Forsta Visualizations 2021 summary

Cross Table tool

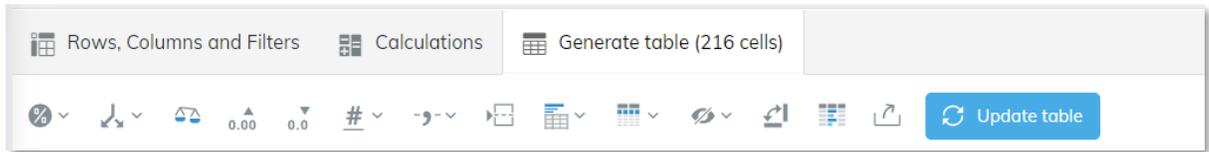
- The Cross Table tool user interface is updated to be more intuitive and efficient to work in. You can now add questions, splits and filters to the table definition with drag and drop, the “Rows & Columns” and the “Filter” tabs are merged which gives a better overview of the table definition. Below we see an example of the new interface.



- A new “table breaks” concept introduced for producing topline reports and comprehensive workbooks more efficient. By using the new table break logic a single sheet in a workbook can contain a collection of tables all sharing the same settings and splits for efficient editing.
- A new Clipboard concept has been introduced to support copying sheets between workbooks. You can for example load a shared workbook, add the interesting sheets to the clipboard and later paste the sheets into your own workbook.
- A new toolbar, with most used table settings, is introduced in the result table for a more efficient workflow. Now you can easily update number of decimals,



enable the base size, insert table breaks etc. when viewing the table without switching tab.



- The information displayed in the table summary information: “the table key” is now customizable. Now it is possible to choose among a set of items to be displayed, such as time period, filters, significance test type and level, if the result weighted or unweighted etc. If tables breaks are used you can also choose if a table key should be displayed for each table or just one for all tables like in the example below.

Sheet 1

Time period: 2011-01-01 to 2011-02-27
 Filter: Gender (Man), Household Income (25 000-35 000 Euro, 35 001 - 45 000 Euro)
 Weighted calculation
 Significance test: Two independent Z test, Level: 10%, Comparison value: First column, Base limit: 30, Count limit: 10
 Benchmark calculation: Units, Comparison value: First column
 Hiding series with base lower than 10, Warning for series with base lower than 30

Brand awareness Top of mind

		Age group									
		15-24		25-34		35-44		45-54		55-64	
		%	Benchmark	%	Benchmark	%	Benchmark	%	Benchmark	%	Benchmark
Brand awareness Top of mind	Dapresy Telecom	19.3 *	39.3	+19.9	44.9 *	+25.6	28.1 *	+8.8	20.7 *	+1.3	28.0 *
	Four	5.0 *	1.8	-3.3	0.0 *	-5.0	8.5 *	+3.4	0.0 *	-5.0	2.8 *
	Swedish Telecom	11.1 *	0.0	-11.1	7.5 *	-3.6	16.3 *	+5.2	6.2 *	-4.9	6.2 *

Brand awareness In mind

		Age group				
		15-24	25-34	35-44	45-54	55-64

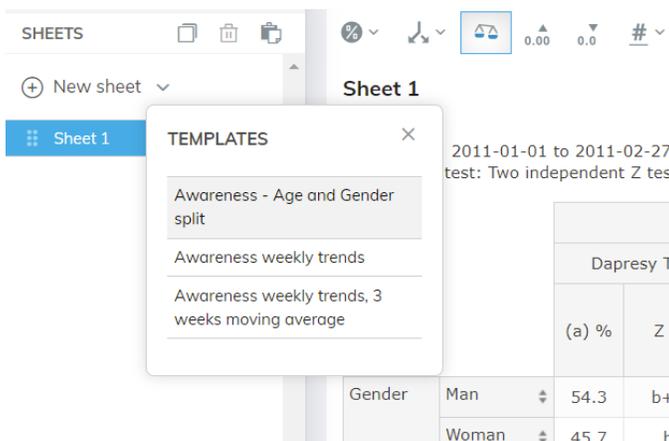


- The significance test, ranking and benchmarking result is now displayed in separate cells by default. With this new logic tables are easier to read and easier to further process in Excel and other tools after export. The new logic is applied by default to newly created tables, existing tables in saved workbooks/favorites displays the result in same cell as before. A switch is available for changing display logic. Below is the new display option to the left and the old to the right.

	Age group							
	15-24		25-34		35-44		45-54	
	(a) %	Z test, 10%	(b) %	Z test, 10%	(c) %	Z test, 10%	(d) %	Z test, 10%
Dapresy Telecom	16.7	b-,c-,d-	41.8	a+	32.0	a+	37.2	a+
Four	3.1		6.8		6.0		5.0	
Swedish Telecom	16.6	b+	2.6	a-	8.8		8.5	
Sweet Talk	11.4		12.1		15.5		12.4	

	Age group			
	15-24	25-34	35-44	45-54
	(a) %	(b) %	(c) %	(d) %
Dapresy Telecom	16.7 (b-,c-,d-)	41.8 (a+)	32.0 (a+)	37.2 (a+)
Four	3.1	6.8	6.0	5.0
Swedish Telecom	16.6 (b+)	2.6 (a-)	8.8	8.5
Sweet Talk	11.4	12.1	15.5	12.4

- The Template sheet process has been slightly updated for a more efficient and streamlined workflow. Now you can choose a template sheet directly when adding a new sheet to the workbook, previously you first had to add a new blank sheet and then apply a template. Below we see how to select a template sheet when inserting a new sheet.





- Previously the significance testing function was disabled when all questions were removed from the table definition but now it stays enabled. The new logic streamlines the workflow as the significance test function does not need to be enabled every time all questions are removed.
- A table of contents sheet, with clickable links, is now included in Excel exports from the Cross Table tool which makes it easier to find and navigate in exported Workbooks with many sheets.
- In projects using hierarchical filter structure the labels of the upper-level units can now be displayed in a nested structure when the hierarchy is used as splits. By displaying upper-level unit names you see where in the organization each unit is located. Below is an example where the region belonging of each store is displayed in a nested structure.

Rows, Columns and Filters Calculations Generate table (66 cells)

Recommendation score per store

Time period: 2011-01-01 to 2011-02-27

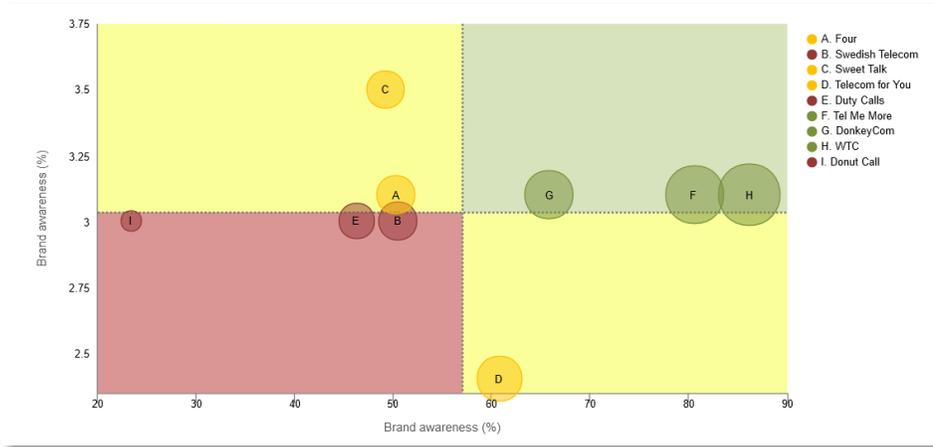
		Total										
		West					East					
		West 1		West 2			East 1		East 2			
		Store 6214	Store 327	Store 575	Store 7654	Store 8368	Store 987	Store 356	Store 1200	Store 2318	Store 9125	Store 6466
		%	%	%	%	%	%	%	%	%	%	
Likely to recommend	1 Not at all likely	21	5	9	4	0	14	13	9	11	3	7
	2	17	29	25	16	33	22	7	25	26	22	31
	3	16	15	14	13	5	8	26	6	16	2	22
	4	29	29	32	16	32	37	30	24	36	43	21
	5 Very likely	6	11	4	16	9	0	3	15	5	19	9
	Don't know	10	10	16	35	22	20	20	21	6	12	9



- When sharing a workbook to other users a “collaborative editing mode” can now be enabled so all the users with access to the shared workbook can save edits. Previously the workbook owner was the only user with rights to save changes to a shared workbook.
- For improved collaboration between Administrator users, a workbook can now be shared to an individual Administrator user or a set of Administrator users, previously we supported sharing a workbook to all other users or to a selected set of Report users only.

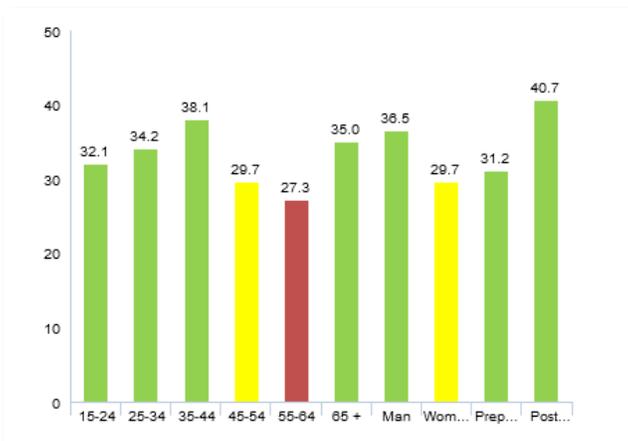
StoryTeller

- StoryTeller reports can now be exported to PowerPoint as native charts and tables to support sophisticated editing in the PowerPoint document. Chart layout can be amended (e.g., change chart type altogether), data series can be edited, removed and added, which has a wide range of potential uses, for instance, when parts of a StoryTeller report should be incorporated in an externally created presentation. Previously, all charts and tables were exported as images without editing possibilities in PowerPoint.
- Scatter and bubble charts now support mean value lines on X and Y axis, colored quadrants and coloring of series by quadrant belonging as shown in the examples below. Other improvements make the scatter/bubble charts easier to read, like for example partially transparent series colors and displaying a shorter version of series label in the grid area and full label in legend.

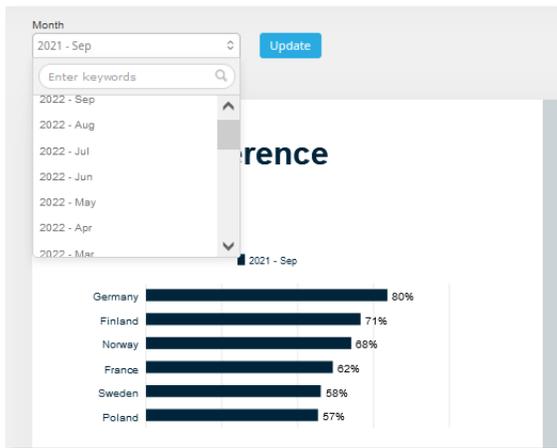


- Value-based series coloring can now be applied to, for example, gauges or bar- and column-charts. For instance, when the value range is between 0-50 the series is colored red, if 50-70 the series is colored yellow and so on. By using value-based coloring it is easier to spot items which for example is above or below a certain target or benchmark value.

Example where value-based coloring has been applied to a column chart. The series with result 0-28 is colored red, 28-31 are colored yellow and 31-100 are colored green



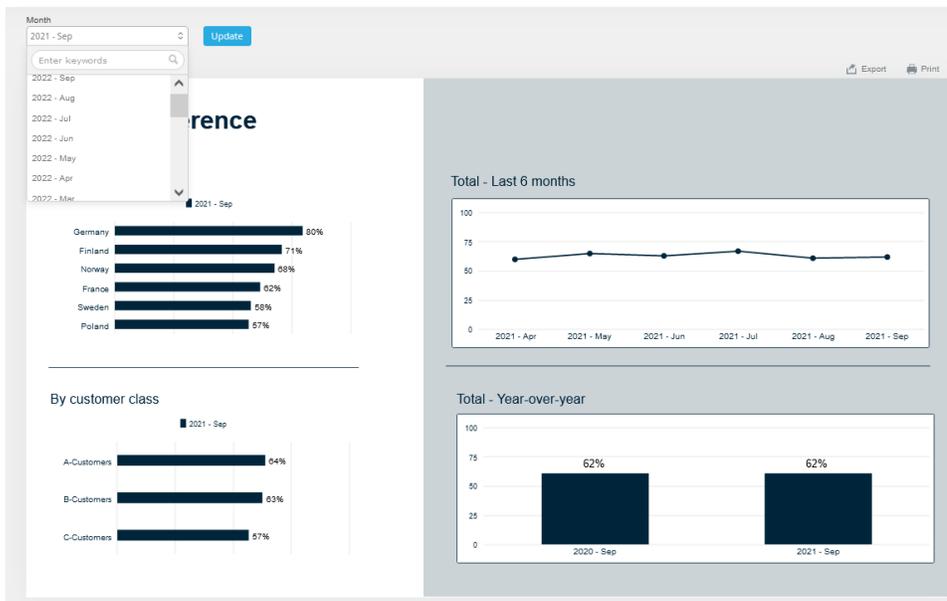
- In optional filters you can now add native time-period filters for week-, month-, quarter- and year-selection. This is useful in continuous running surveys as the Report user can go back to a specific moment in time. Previously this was often solved by computing custom time-period variables, used as optional filters, which was time consuming and required manual maintenance when new data was imported. Below is a typical example where the Report user can select to filter the report by a specific month via the new native month filter.



- New logic is introduced to include previous weeks, months, quarters or years derived from the user selected time-period in optional filters. In the image below we see a typical use case, the user selected September 2021 in the time-period filter and the top right chart displays data for selected month and the five previous months (previously the same logic could be achieved with multiple workarounds but the new native option makes setup easier and saves time.)



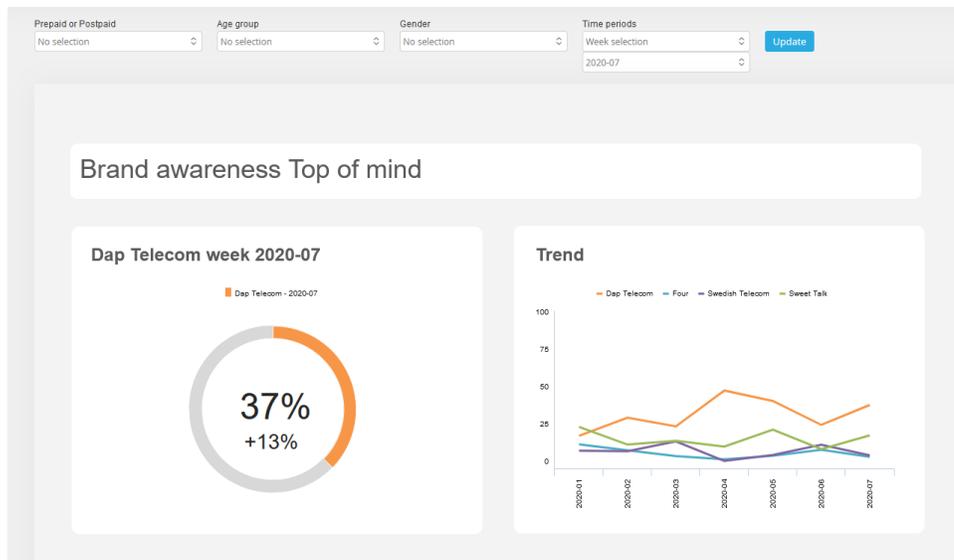
- New logic for “year over year” comparison is added to charts and tables in the StoryTeller which supports comparing result to same month, quarter or year-to-date range in previous years. Previously year over year comparison were solved by additional computed variables so the new logic makes setup easier and saves report setup time. Below we see an example where the chart shows a year over year comparison in bottom right chart based on the month selected by the end-user.





- With new logic in Optional filters the time interval selection (weeks, months, quarters or years) can now be set to follow the selected time-period filter. E.G., if the Report user selects a time-period based on weeks, a weekly interval is applied, if a time-period based on months is selected a monthly interval is applied and so on. This new auto interval selection logic results in a better user experience in reports where the interval is dependent on the time selection.

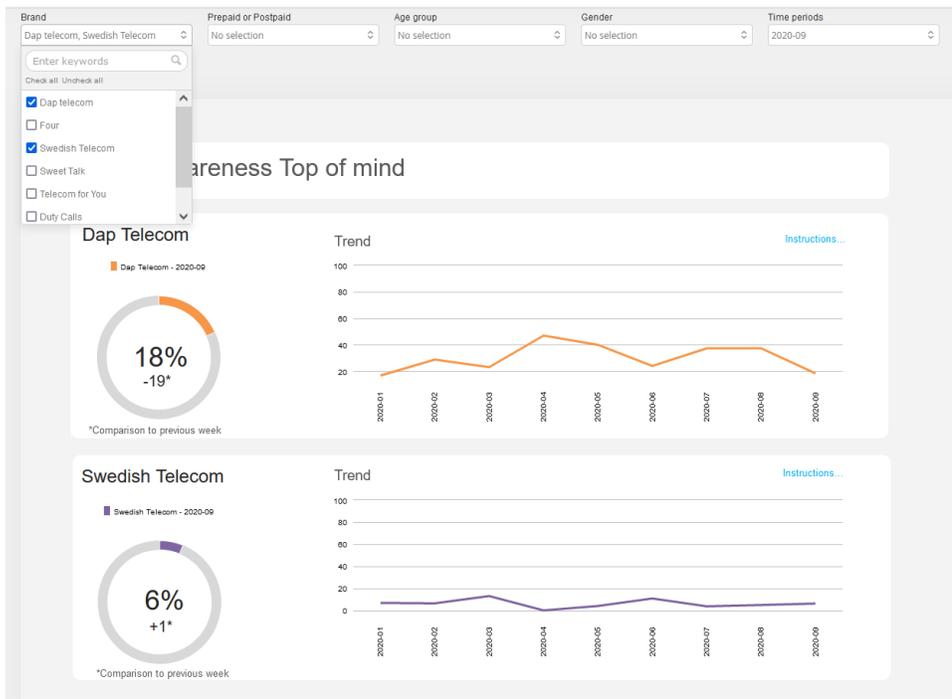
Here is an example report, the user has selected to filter the report by Week 07 in 2020, so, the chart uses a weekly interval and the comparison value in the gauge is difference to previous week. If a specific month is selected as time period filter the line chart changes to a monthly interval and the comparison value in the gauge is based on difference to previous month.



- In optional filter setup you can now specify minimum and maximum number of options the report user is allowed to select in the variable subset filter, the hierarchy filter or in a regular filter. The new minimum and maximum settings

support more customized dashboards built for certain use cases. As an example, the layout of a dashboard can now be customized to compare exactly two brands, as the user will not be able to select fewer or more brands.

Here is an example report built for comparing two brands. Both the min- and max-limit in the Brand filter is to 2, so the user must always have two brands selected.



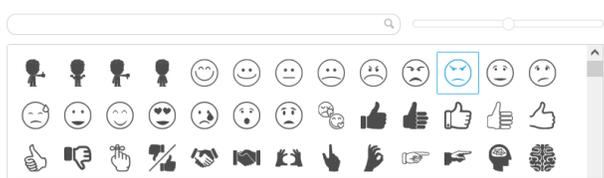
- A new “range” setting has been introduced which is useful when a result needs to be split up in multiple tables/charts due to, for example, space issues. Below we see an example where all countries are sorted by value but shown in three different tables. Each of the tables is originally containing all the countries but most left table shows top 10 rows only, middle table shows rows 11-20 and most right table rows 21-30.

Likely to recommend
Mean, scale 1-5



Top 10	11-20	21-30		
Luxembourg 3.16	Portugal 3.08	Thailand 3.03	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.	
Denmark 3.14	Greece 3.07	Germany 3.03		
Hungary 3.13	Norway 3.07	US 3.03		
Japan 3.13	India 3.07	Argentina 3.03		
Malta 3.12	Italy 3.07	Russia 3.02		
Iceland 3.11	Egypt 3.06	Guatemala 3.01		Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum
Brazil 3.11	Sweden 3.06	Netherlands 3.01		
Finland 3.10	Canada 3.05	Australia 3.00		
France 3.09	Croatia 3.05	Turkey 2.98		
South Korea 3.09	Poland 3.04	New Zealand 2.98		

- Additional icons have been added to the Icon and shape library. There are new emojis representing anger, frustration, love, sadness, surprise, worry, concern etc. for improved infographic capabilities. There are also new icons in food & beverages- and in the animal category.



- Charts and tables displaying differences to uploaded reference values can now be sorted ascending/descending based on the difference to the reference data.

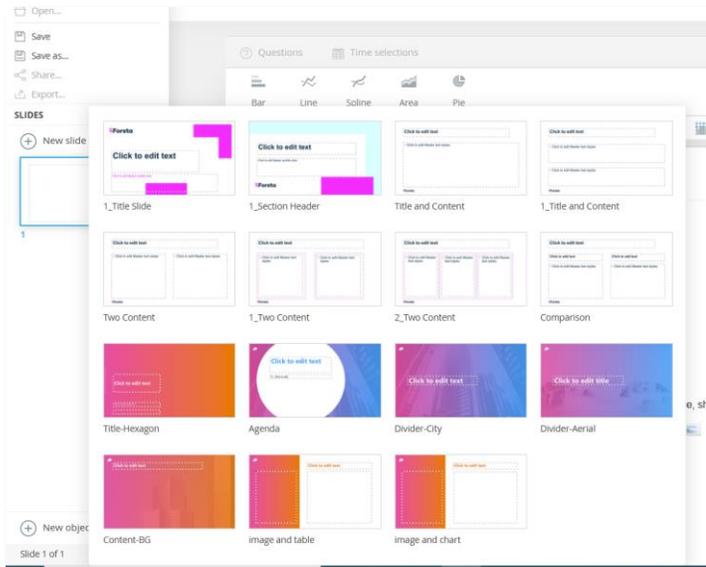
Example, all the attributes below are sorted by the value in the first column, which is the difference to the target value (the reference value) which is shown in the last column in the table.



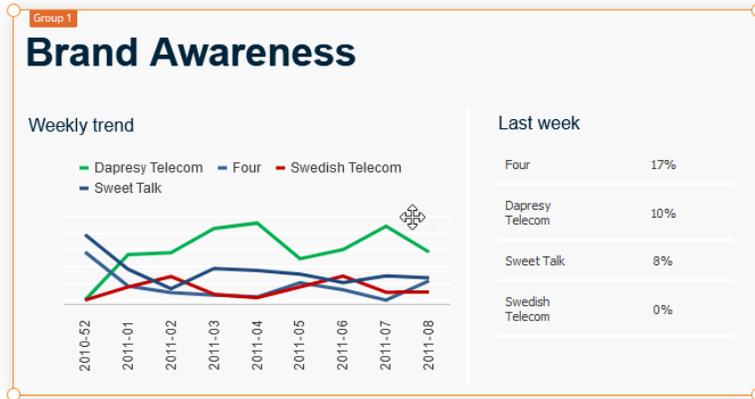
StoryCreator

- With the new layout master template function you can upload your own corporate design PPT layout master template to the StoryCreator report which is a great improvement in the process of deck creation to match branding and makes creating sophisticated layouts simple. Just as in PowerPoint you can select any available slide layout template to start off with when creating a new slide. The different placeholders such as charts, tables, text boxes added to the Master templates will be added as objects to the slide and have same positions as in the Master template which makes the deck creation easier.

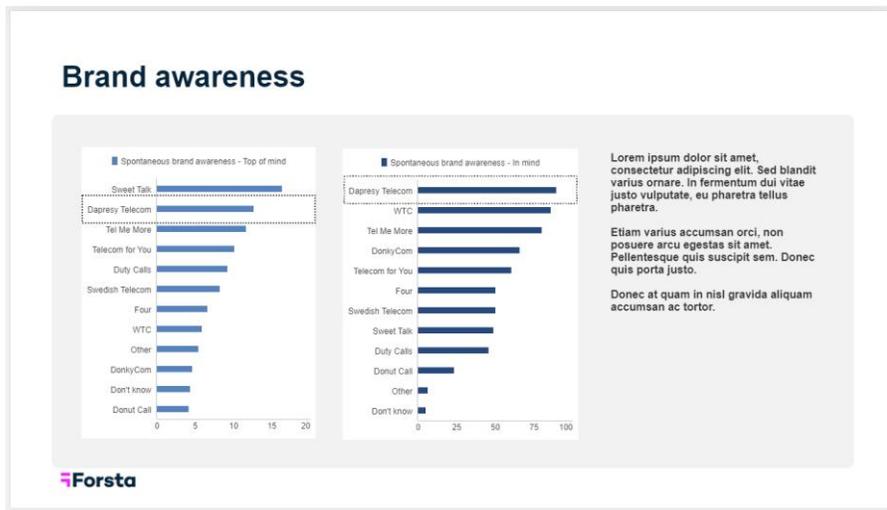
Here is an example of the "New slide" panel in a StoryCreator using an uploaded Master slide template, in this panel the user can now select any of the template slides from the uploaded slide master as starting point when creating a new slide.



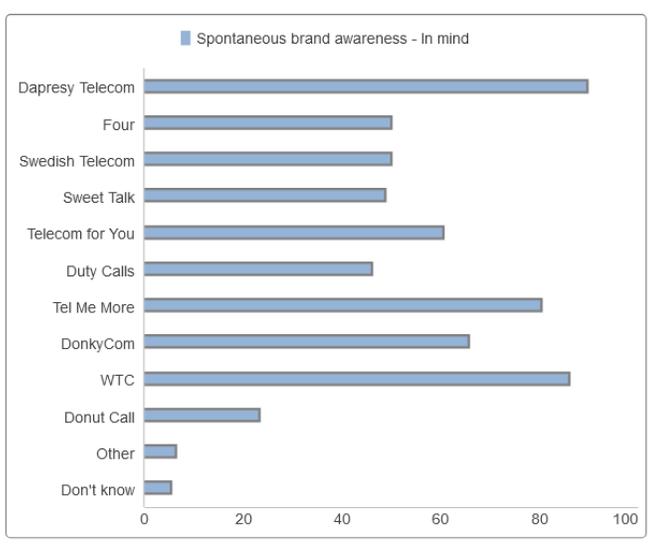
- A new Clipboard concept has been introduced to support copying slides between decks. You can, for example, load a shared deck, add the interesting slides to the clipboard and later paste the slides into your own deck.
- A Group function enables grouping of multiple objects. The logic is similar to that used in PowerPoint. By grouping, multiple objects the setup of reports is much more efficient. Some benefits of using groups: grouped objects can be moved around easily, all objects connected to each other can be resized by simply resizing the Group element, multiple objects that belong to the same group can be copied with a single click.



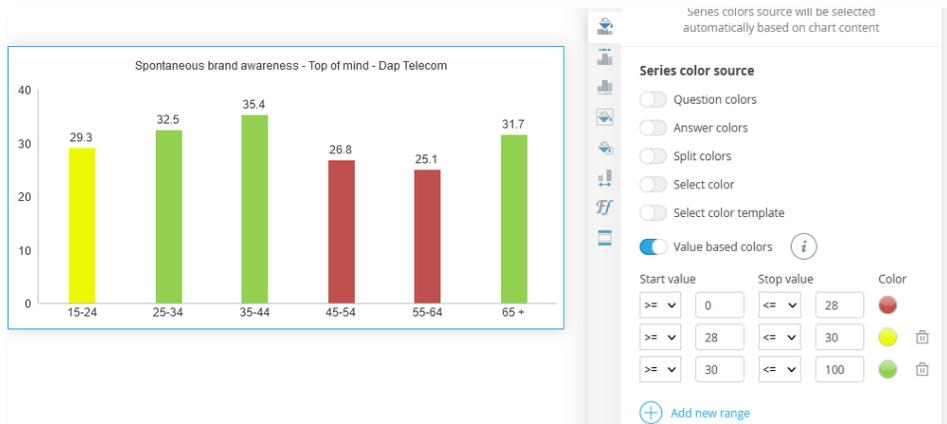
- Shapes (lines, rectangles, circles etc.) can now be inserted and used as, for example, background objects and for highlighting results like in the slide below.



- Borders can now be applied to data series such as bars and columns and to chart- and grid-background. Below is an example of chart with series- and chart-borders enabled.

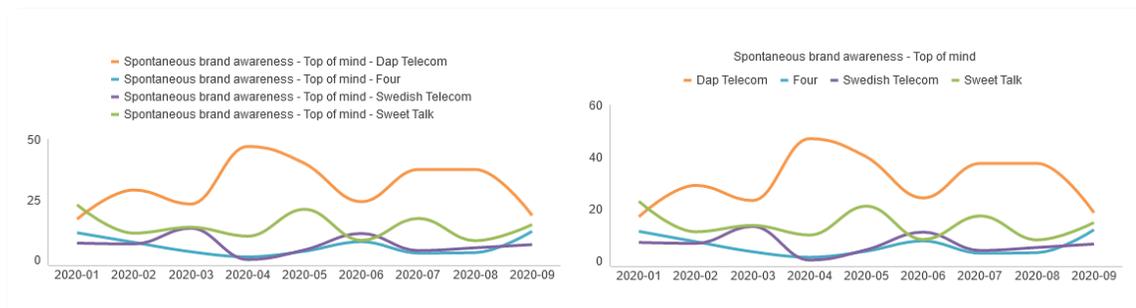


- In charts and tables you can now create top and bottom lists used to, for example, show top 5 brands, top 5 image attributes etc.
- The new value-based chart series coloring logic implemented in StoryTeller is also available in StoryCreator, see example below where series are colored in red, yellow or green based on the value.

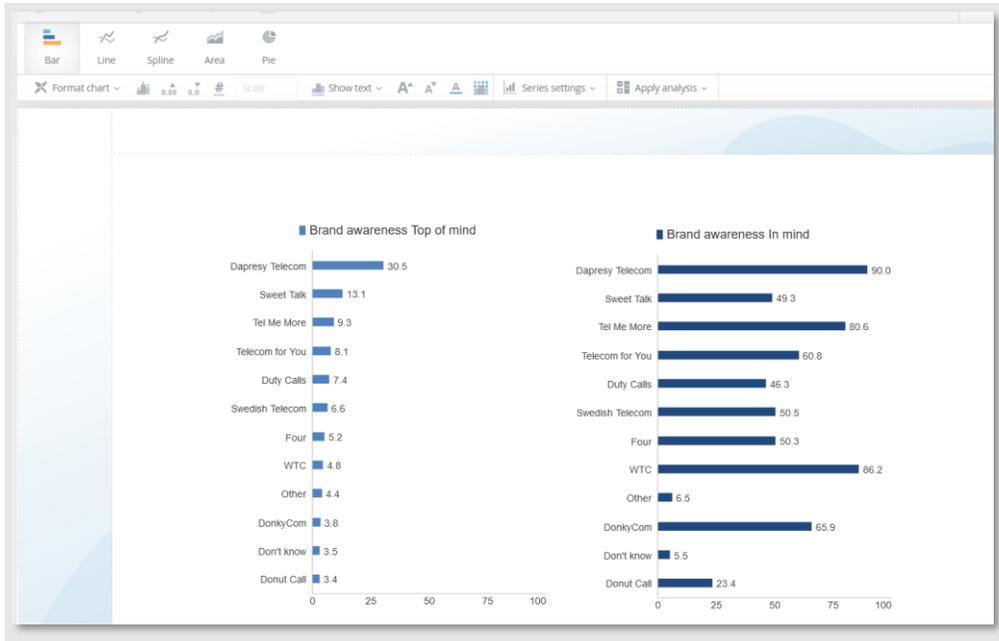


- New smart legend label logic moves repeated text from the legend items into a legend header, which makes the legend easier to read without manual and time-consuming changes like hiding the repeated text and add same text into a separate text box above the chart.

Below is an example of the new function to the right and the old to the left.



- Deck sharing support is now available in the StoryCreator which allows an Administrator user or a Report user to share a deck to one or many other users. When sharing a deck, the user can enable a "collaboration mode" so all the users with access to the shared deck can save their own edits.
- A table/chart in a saved deck can now be sorted by another table/chart in the same deck. Below we see an example where the "In mind brand awareness" chart to the right is sorted by the "Top of mind awareness" chart to the left.



My stories

- The editable PowerPoint export function recently released in StoryTeller is now also available in My Stories. When exporting a report in editable format the charts and tables are exported as native PowerPoint objects allowing advanced editing in the PowerPoint document. Chart layout can be amended (e.g., change chart type altogether), data series can be edited, removed and added, which has a wide range of potential uses. Previously, all charts and tables in My Stories were exported as images without editing possibilities in PowerPoint.

Calculation updates

- You can now exclude answers such as a “Don’t know” or a “Refuse to answer” from percentage calculations. It is an Answer block level setting, like the existing Exclude from Mean value setting, which means that the definition is made once and then applied to all questions which share the same Answer block. This exclusion logic is applied to all percentage calculations in StoryTeller,

StoryCreator and the Crosstable tool. Previously, you had to clean or recode the data to exclude certain answers from the calculations which is no longer needed when the new setting is applied.

- The base sizes used in calculation of looped/stacked questions were previously based on the unique number of looped responses (weighted or unweighted) but now you can choose if the base size should be the unique number of looped responses or the unique number of respondents. The new base size option is added to StoryTeller, StoryCreator and Cross Table tool. The default option is, as before, the unique number of looped/stacked responses.

Project administration

- Creation of Index variables has been made easier. You can now filter the question list by Question blocks for faster question selection. There is a new option to automatically set an equal weight on all ingoing questions if all questions should have the same impact on the index. Previously you had to manually calculate, and insert, the weight per question so the new option cuts setup time.
- In the Question page you can now resize the width of each column for easier editing and a better overview, this is, for example, useful in surveys with long question texts or long question codes. Below is an example where the text column has been made wider for easier editing.



CODE	TEXT	TYPE	COLOR	ANSWER BLOCK
> Media	Where have you seen or heard about our brand recently? (Select all that apply)	☑ Multi	Orange	TV/Radio/Internet
> Attr1.10	Please rate the following brands and statement using a scale of 1 to 5 - WTC- Donut Call	☑ Single	Light Blue	1 Don't agree/2/3
> Attr1.9	Please rate the following brands and statement using a scale of 1 to 5 - Market leader - WTC	☑ Single	Purple	1 Don't agree/2/3
> Attr1.8	Please rate the following brands and statement using a scale of 1 to 5 - Market leader - DonkeyCom	☑ Single	Light Green	1 Don't agree/2/3
> Attr1.7	Please rate the following brands and statement using a scale of 1 to 5 - Market leader - Tel Me More	☑ Single	Red	1 Don't agree/2/3
> Attr1.6	Please rate the following brands and statement using a scale of 1 to 5 - Market leader - Duty Calls	☑ Single	Blue	1 Don't agree/2/3
> Attr1.5	Market leader - Telecom for YouPlease rate the following brands and statement using a scale of 1 to 5 -	☑ Single	Dark Blue	1 Don't agree/2/3
> Attr1.4	Please rate the following brands and statement using a scale of 1 to 5 - Market leader - Sweet Talk	☑ Single	Dark Green	1 Don't agree/2/3

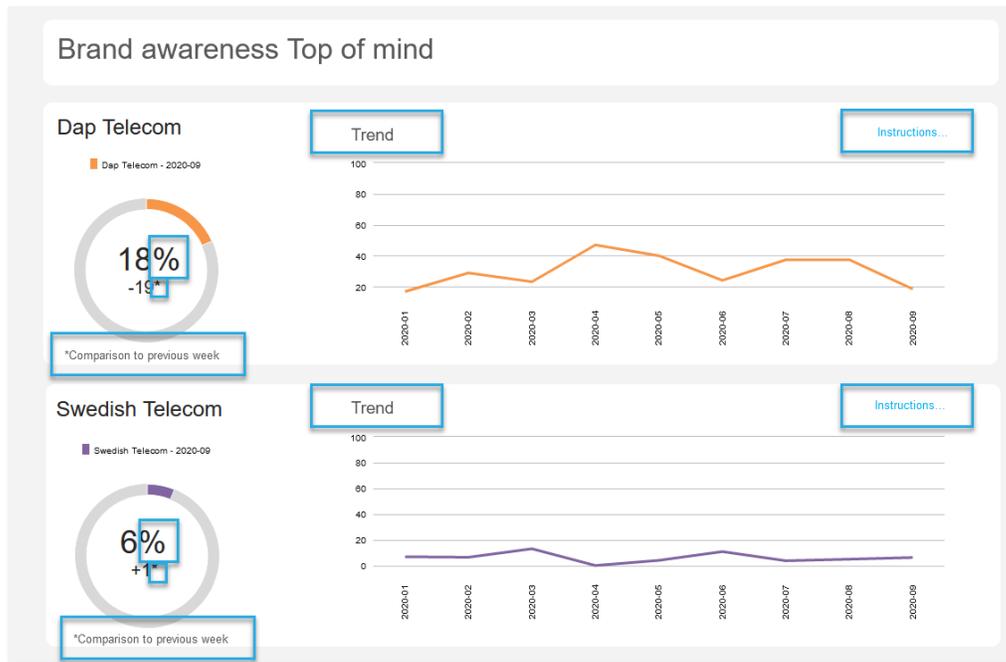
- A new column has been added to Questions grid displaying information about inactivated Answer options per question. Previously this information was shown inside the Answer block page only, so the new column gives a faster overview of which questions that contains inactivated answer options.
- A couple of usability updates have been added to the Questions page. The answer list can be expanded for multiple questions simultaneously which makes it easier to compare answer lists between questions. The full expression of computed variables is now shown when expanding the answer list in the question grid which gives a better overview and makes it easier to compare expressions between computed variables/answers. Previously the full expression was shown in the tooltip only.

ID	ANSWER TEXT	EXPRESSION
1	Segment A	01-Current operator=(1 - Dapresy Telecom)0 AND 02-Prepaid or Postpaid=(1 - Prepaid)0 AND 03-Age group=(4 - 45-54,5 - 55-64,6 - 65 +)0 AND 04-Gender=(2 - Woman)0 AND 05-Household Income=(4 - 45 001- 55 000 Euro,5 - 55 001- 64 000 Euro,6 - More than 65 000 Euro)0
2	Segment B	01-Current operator=(1 - Dapresy Telecom)0 AND 02-Prepaid or Postpaid=(1 - Prepaid)0 AND 03-Age group=(4 - 45-54,5 - 55-64,6 - 65 +)0 AND 04-Gender=(2 - Woman)0 AND 05-Household Income=(1 - Less than 25 000 Euro,2 - 25 000-35 000 Euro,3 - 35 001 - 45 000 Euro)0

- In the Download/Upload meta data function, used to edit labels such as question texts, text boxes in Storyteller reports, filter names etc. in Excel file there is now a

new option to download unique labels only which makes editing more efficient in use cases where the same label is used in multiple places. The new logic can be especially beneficial when downloading the StoryTeller text boxes or StoryTeller objects to Excel as in many cases the same label is used in multiple objects, like for example an instruction text in Text boxes or a Low base size warning text in charts and tables.

Here we see a typical report where same labels are shown in multiple places. By using the new option to export unique labels you need to edit one label only in the Excel file.



Report user management

- As an Administrator user you can now login as a Report user without knowing the password by copying a "direct" link. Each copied direct link is valid for a one-time login.



- The Multi-factor-authentication (MFA) used to provide an additional level of security was previously applied on a customer level and affected all Administrator users and all Report users in all the customer's projects. With the new updated function, the MFA can now be enabled/disabled per project to apply MFA to specific projects only.
- When using multi factor authentication a verification code is sent to the email address associated with the user's account during the login process. The email sender address can now be customized for an improved white-labeling support.
- The Reset password email template text can now be customized, at the customer level, for improved white labeling. There is no user interface for defining the template text so if you have a need for your own reset password email text please contact the support team.
- The Forgot password email sender address can now be customized for improved white labeling. It is a customer level email address applied to all your projects.

Enfesys - Event emails

- Direct links in Event emails were previously using the system default domain rather than a custom domain (e.g. with the customers name included) when events were triggered by scheduled data imports. To support use of correct addresses in the direct links, a new setting has been introduced in email template setup where the desired domain can be specified. Existing events continue to use the system's default domain in the direct links triggered by scheduled data imports until a customer specific domain is defined in the email template.



Alchemer/SurveyGizmo data connector updates

- Users can now choose which language is imported.
- The Original variable names can now be imported as well, this means that the imported metadata will better match the SPSS files generated from Alchemer.