Creating Questionnaires with the VividForms Editor

V5.1
Imprint

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1. Introduction

With the VividForms Editor Electric Paper has introduced a form creation tool that is easy and quick to use allows you to extend or redesign existing questionnaires or design new questionnaires as desired directly over the web interface. The content in VividForms questionnaires can be modified as desired. Keep in mind that for questionnaires which already have surveys registered to them there is a edit lock. As well as this, the administrator can define his questionnaires as templates and make them available to active users (instructors) for further processing.

2. Access to the VividForms Editor

Using the VividForms Editor is possible not only for the administrator/subunit administrator but also for active users (active instructors). Whereas administrator/subunit administrators always have full access to the editor, access rights for active users can be defined in the user properties. The administrator can make the following settings for each user of an active account:

- **Unrestricted access**: The user can create his own questionnaires or work with existing templates.
- **Extension of templates only**: The user can extend templates with his own questions, but cannot create his own questionnaires.
- **No access**: The user is not authorized to use the Web editor to modify or create questionnaires.

In the administrator’s and subunit administrator’s account, you can access to the VividForms Editor in the menu “Questionnaires”. To create a new questionnaire, click on the option “Create Questionnaire” in the left context menu. In the main window, two
tools now appear for creating questionnaires: the VividForms Editor (left) and the VividForms Designer (right).

Figure 2: Access to the VividForms Editor

The VividForms Designer is a questionnaire designer with extended layout versatility, which is available as an add-on to EvaSys. To use this, a separate license must be acquired. In systems without this license, the Designer is deactivated and cannot be started. For further information on the VividForms Designer, please consult the VividForms Designer manual. If interested in acquiring a license, please contact your customer service agent.

To start the VividForms Editor, click with the left mouse button on the questionnaire graphic under the heading VividForms Editor. The Editor opens directly in the browser window and you can begin creating a questionnaire.

3. Creating a Questionnaire in the VividForms Editor

3.1. Define Form Information

After starting the Editor a form creation wizard opens. Some fundamental information regarding the questionnaire must be deposited here:

- Short Name
  A five to ten digit short name, which may only exist once in the system. It must not contain any spaces.

- Heading
  A longer text describing the questionnaire. This appears in the header of the questionnaire.
• Paper

Choose between the paper formats A4, letter and legal.

Figure 3: Define Form Information

Click on [Apply]. Now the questionnaire is created. It contains a header and the editing bar can be used.

The preview mode, which can be activated in the lower part of the window, should only be switched on if the questionnaire is to be made available to active users (instructors) as a template or for the purpose of instructor’s optional questions. As a rule, it should first be activated after completing the sheets.

• Template

Once you place a tick in the area “Activate/deactivate template mode”, you have defined your questionnaire as a template.

With a questionnaire that is defined as a template, you can decide whether the new items should only be added at the end of the questionnaire. By doing so, you can ensure that the existing structure of your questionnaire cannot be changed. To do this, activate the option “New items may only be added at the end”.

• Max Pages

Defines the maximum number of pages this form can have when being used as a template by other users. If the property “Template” is inactive, the number of pages will be limited internally to 99 pages.

• Max Items

Defines the maximum number of questions allowed on the questionnaire. This enables control over the number of questions which may be added when decentral users take this template to add personal questions. This limitation is inactive when the form is not a template.
3.2. The Editor Control

You can access all functions pertaining to questionnaire creation in the menu panel on the left. The following table gives you an overview of each individual menu and its functions. By clicking on a menu name, it can be opened and closed. By clicking on the padlock icon, the anchoring of the editor control panel to the top of the page is released, so that, if required, it can scroll down with the questionnaire.

<table>
<thead>
<tr>
<th>Add</th>
<th>Edit Question Group: Opens the properties dialog of the selected question group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td>Edit Question: Opens the properties dialog of the selected question</td>
</tr>
<tr>
<td>Question group: Opens the dialog to create a new question group</td>
<td>Edit Pole Labels: Opens the properties dialog of the pole labels</td>
</tr>
<tr>
<td>Question: Opens the dialog to create a new question</td>
<td>Extended Pole Labels: Opens the properties dialog of the vertical pole labels</td>
</tr>
<tr>
<td>Pole Labels: Adds the pole labels defined under form properties</td>
<td>Edit Text Box: Opens the properties dialog of the selected text box</td>
</tr>
<tr>
<td>Extended Pole Labels: Opens the dialog to add vertical pole labels</td>
<td>Picture: Opens the properties dialog of the marked picture</td>
</tr>
<tr>
<td>Line Space: Adds an empty line</td>
<td></td>
</tr>
<tr>
<td>Separator: Adds a horizontal separator</td>
<td></td>
</tr>
<tr>
<td>Text Box: Opens the dialog to create a text box</td>
<td></td>
</tr>
<tr>
<td>Picture: Opens the dialog to add a picture from the library</td>
<td></td>
</tr>
<tr>
<td>Page Break: Adds a page break</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Editor Control Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
</tr>
<tr>
<td>Add Question Group</td>
</tr>
<tr>
<td>Add Question</td>
</tr>
<tr>
<td>Pole Labels</td>
</tr>
<tr>
<td>Extended Pole Labels</td>
</tr>
<tr>
<td>Line Space</td>
</tr>
<tr>
<td>Separator</td>
</tr>
<tr>
<td>Text Box</td>
</tr>
<tr>
<td>Picture</td>
</tr>
<tr>
<td>Page Break</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Edit</th>
<th>Undo (Ctrl + Z): Undoes the last action (up to 20 in a row)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit Question Group: Opens the properties dialog of the selected question group</td>
<td>Cut (Ctrl + X): Cuts the selected object and adds it to the clipboard</td>
</tr>
<tr>
<td>Edit Question: Opens the properties dialog of the selected question</td>
<td>Copy (Ctrl + C): Copies the selected object and adds it to the clipboard</td>
</tr>
<tr>
<td>Edit Pole Labels: Opens the properties dialog of the pole labels</td>
<td>Paste (Ctrl + V): Adds the contents of the clipboard below the marked object</td>
</tr>
<tr>
<td>Extended Pole Labels: Opens the properties dialog of the vertical pole labels</td>
<td>Delete (Del): Deletes the marked object</td>
</tr>
<tr>
<td>Edit Text Box: Opens the properties dialog of the selected text box</td>
<td></td>
</tr>
<tr>
<td>Picture: Opens the properties dialog of the marked picture</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clipboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undo (Ctrl + Z): Undoes the last action (up to 20 in a row)</td>
</tr>
<tr>
<td>Cut (Ctrl + X): Cuts the selected object and adds it to the clipboard</td>
</tr>
<tr>
<td>Copy (Ctrl + C): Copies the selected object and adds it to the clipboard</td>
</tr>
<tr>
<td>Paste (Ctrl + V): Adds the contents of the clipboard below the marked object</td>
</tr>
<tr>
<td>Delete (Del): Deletes the marked object</td>
</tr>
</tbody>
</table>

| Move                                      |
|------------------------------------------|--------------------------------------------------------------------------------|
| Up: Moves the marked object one step up   |
| Down: Moves the marked object one step down |
### Form Properties - Paper View

- **Form properties**: Opens the properties of the questionnaire
- **Layout settings**: Opens the layout settings for the form
- **Repair form**: Recreates the questionnaire
- **Enable numbering**: Toggles the numbering of questions and question groups
- **Edit Pole Template**: Opens the dialog for the definition of pole labels
- **Filter settings, Validation, Required questions, Cross tabulations**: Opens the dialog for the definition of filters, validation, required questions, cross tabulations
- **Change color scheme**: Opens the dialog for adapting the form’s color scheme
- **Picture Library**: Opens the dialog for adding and removing pictures to/from the picture library
- **Line Height, Font Size, Size of the answer boxes, Font**: Selection of line height, size of answer boxes, font size and type for the complete questionnaire

### Form Properties - Online View

- **Form properties**: Opens the properties of the questionnaire
- **Repair form**: Recreates the questionnaire
- **Enable numbering**: Toggles the numbering of questions and question groups
- **Edit Pole Template**: Opens the dialog for the definition of pole labels
- **Filter settings, Validation, Required questions, Cross tabulations**: Opens the dialog for the definition of filters, validation, required questions, cross tabulations
- **Picture Library**: Opens the dialog for adding and removing pictures to/from the picture library
- **Online template**: Selection of the template used for the online view in the VividForms Editor
- **Display**: Selection of the display mode for the online view in the VividForms Editor

### Question Library

- **Choose a question from the library**: Opens the dialog to add questions or question groups to the library
- **Add selected question to library**: Opens the dialog to add a selected question to the library
- **Delete selected question from library**: Deletes the question from the library
- **Detach library question**: Detaches the selected question from the library
- **Add selected question group to library**: Adds the selected question group to the library
- **Delete selected question group from library**: Deletes the selected question group from the library
- **Detach library group**: Detaches the selected question group from the library

### Table 1: Editor Control
Creating a Questionnaire in the VividForms Editor

At the foot of the editor control panel, the field meta-information provides an overview of the current state of the questionnaire:

![Figure 4: Editor Control: Meta-information](image)

Individual lines are read from left to right as follows:

- **Line 1:**
  - Template mode activated/deactivated
  - Maximum number of pages
  - Current page number
  - Edit mode

- **Line 2:**
  - Paper format
  - Numbering on/off
  - Information on the active object

- **Line 3:**
  - Current number of questions on the sheet
  - Maximum number of questions on the sheet
  - PDF version of the form
  - Editor version of the form

### 3.3. Viewing Options

Two different display options for displaying the questionnaire in the VividForms Editor are available: the paper view and the online view. With the help of an icon (PDF and globe with green arrow) in the viewing bar above the questionnaire, you can switch back and forth between views, as long as the system is licensed for both types of surveys. If the system is only licensed for paper or online surveys, only the licensed type of view is displayed.
In the system settings (menu “System Settings/EvaSys Settings/VividForms/Standard view VividForms Editor”), the default view when opening the editor (paper or online view) can be defined.

If, in the properties of a questionnaire, it is defined that this is only released for paper surveys, only the paper view is displayed when opening the sheets. If the sheets are only released for online surveys, only the online view is displayed. The button for switching is then no longer available.

3.3.1. Paper View

In the paper view, the display of the questionnaire is simulated as a paper survey. This view can be adjusted by different control elements.

You can use the symbols 👀 and 🕛 to zoom in the preview window to four different levels. Below you can see examples of different zoom levels. Select the one best for your screen resolution:

After zooming, to fit the preview to the size of the chosen window, click on the icon with four arrows.
If the questionnaire you have created consists of more than one page, you can change to the different pages using the arrows, as well as the drop-down list in the upper right hand corner of the screen.
3.3.2. Online View

In the online view, the display of the questionnaire is simulated as an online survey. This view can be adjusted in different ways:

In the menu on the left hand side, under “Form Properties”, the type of display for the online questionnaire can be adjusted. All three display modes (complete, per chapter and per page) can be selected, which are also available for the real online survey. If, for example, the display mode "per page" was selected, tabs are then shown by which one can skip between the individual pages of an online questionnaire.

![Display Modes for Online Questionnaires](image)

If customized online templates were created on the basis of the EvaSys standard template, the online questionnaire can also be presented in the design of the customized template. To do this, select the desired template under “Online templates” in the form properties.
Via the drop-down list in the viewing bar above the questionnaire, you can, where required, simulate the display of the online questionnaire for mobile devices. As well as the standard view, which is intended for screen viewing on PC’s, the view for small, medium and large mobile devices can also be selected. The following screenshot shows the resolution for mobile devices of a medium size:
3.3.3. Preview Functions

Independent of the view in which you find yourself (paper view or online view), preview options are always available by which the paper forms as well as the online survey can be displayed in a separate browser window. Both preview possibilities can be found in the viewing bar above the questionnaire.

In order to display a preview of the future PDF questionnaire, click on the PDF symbol.

A new window opens with a PDF example of your questionnaire. This PDF document is generated in real time on the server. Check to make sure you like your layout. Close the window in order to continue editing the questionnaire.
Figure 11: PDF Preview of Questionnaire

Please note that this preview is not suitable for implementing a survey. In order to create a survey on the basis of a new questionnaire you must first create a folder and then create a survey.

In order to display a preview of the future online survey, click on the online symbol 📨.
A new window opens with a preview of the online survey. Check to make sure you like your layout. Close the window in order to continue editing the questionnaire.

To finish editing the questionnaire, click “Save form and exit editor” (or the symbol with the open door). After that you will reach the details of a questionnaire.

**Hint:**
Your changes of a questionnaire will always be saved automatically. Hence, you do not need to save the questionnaire specially. Whenever you need you can e.g. click further options in EvaSys, e.g. “EvaSys Settings”, without leaving the editor “officially” by clicking “Save form and exit editor”. Your questionnaire in spite will be saved with all your changes and can be accessed as usual.
3.4. Editing the Questionnaire Header

The header area of a questionnaire contains a number of placeholders, which are dynamically filled with the information of the corresponding survey process in the later use of the questionnaire for paper and online surveys. You can recognize the placeholders by their continuous capital letters as well as the angular brackets. With online surveys, you can define whether the survey header should be displayed. These include, for example, the name of the subunit, the name of the course to be evaluated or the name of the instructor.

The placeholders which are automatically indicated during editing of a questionnaire usually suffice. If required, however, these can be individually adjusted. In the following figure you can see the placeholders that the header area contains by default:

![Figure 13: Placeholders in a Questionnaire](image)

Click on a placeholder to edit its content.

![Figure 14: Editing the Placeholder](image)

A placeholder wizard will appear as shown here. You can insert different placeholders in the text fields provided. To do this, click on the buttons which symbolize the relevant content with small graphics.
Following placeholders are available in the icon list:

[SUBUNIT] Name of subunit
[ORGANIZATION] Name of organization
[AUTHOR] Name of instructor
[SURVEY] Name of course or survey
[PERIOD] Name of survey period
[COURSEID] Course ID

In addition to these placeholders, two text elements can be used to fill the box containing hints on completion:

[MARK] Filling instructions part 1
[CORRECTION] Filling instructions part 2

Apart from the placeholders available as buttons, practically all other placeholders can be used which are available for use in text templates, such as [CUSTOMFIELD_X] for the user defined course fields, [PROGRAMOFSTUDY] for program of study etc. This opens automatically if the link “others” is clicked in the placeholder wizard. Placeholders can be copied from the manual and manually inserted into the input field of the placeholder wizard. Instead of the placeholders you can enter text directly. It then becomes a static text which is not adapted to the respective surveys.

As you know, using the cover sheet procedure the header of the questionnaire remains empty because it cannot be adapted to a single particular survey. If you only want use a questionnaire in the cover sheet procedure, you can avoid this issue by inserting static texts into the header instead of the placeholders.

If the questionnaire is to be used for non-anonymous surveys personalized to individual participants, other placeholders can be added. For this simply select a placeholder from the shortlist in the lower area of the dialogue and click on the button marked [+].

The following placeholders are available for non-anonymous surveys:

[PARTICIPANT_FIRSTNAME] Survey participant’s first name
[PARTICIPANT_LASTNAME] Survey participant’s last name
[PARTICIPANT_IDENTIFIER] Survey participant’s ID
[PARTICIPANT_SALUTATION] Survey participant’s salutation
[PARTICIPANT_TITLE] Survey participant’s title
[PARTICIPANT_ADDRESS] Survey participant’s address
[PARTICIPANT_EMAIL] Survey participant’s email address
[PARTICIPANT_CUSTOM1] Survey participant’s first user-defined field
[PARTICIPANT_CUSTOM2] Survey participant’s second user-defined field
[PARTICIPANT_CUSTOM3] Survey participant’s third user-defined field

Note:
The fields for survey participants can only then be used in a survey when participant data for the respective course identification was imported into the EvaSys system via the relevant CSV import.

If a placeholder is to extend across two columns, click on the corresponding placeholder and activate the option “Placeholder across both columns”. Please observe, that EvaSys will automatically delete the placeholder in the other column and, where applicable, you will need to insert it in another area of the questionnaire header.

![Figure 15: Extend Placeholder across two Columns](image)

In order to expand or contract the size of the questionnaire header, the number of lines made available can be adjusted in the placeholder wizard. You can choose between 1 and a maximum of 10 lines. The more lines included in the form header equates to more room being available for the logo.
The logo in the questionnaire header can also be replaced by your own logo. By default, the logo defined as the standard subunit logo is displayed. To integrate a custom logo into the questionnaire header, click on the existing logo. The logo assistant opens automatically.

**Figure 16: Define the Number of Lines in the Questionnaire Header**

**Figure 17: Adjusting the Logo**
Here you can choose whether to
- use the standard logo (subunit logo) or
- use your own logo.

Under “Use own logo” you will find the logos and pictures which you have already uploaded into the “Picture Library” in the menu “Form Properties” in the Editor Control. If you have not yet integrated any pictures (e.g. logos) into the “Picture Library”, you cannot select your own logo. To upload images to the library please see Section C 3.8.1. “Uploading images to the image library”.

In the area “Position in questionnaire header” it can be determined whether the selected logo should be displayed on the left or right side of the questionnaire header. Furthermore, in the “Vertical Alignment”, the orientation of the logo in the questionnaire header (top, middle, bottom) can be defined. In the area “Scale of the box width in %”, the size of the logo can be adjusted. At a size of 100%, the logo can occupy the entire outer third of the questionnaire header. If the percentage is decreased, the logo is scaled down accordingly.

The following illustrations give an example of a questionnaire header expanded to three lines with adjusted placeholders and custom logo in the editor view as well as in a PDF:

![Figure 18: Adjusted Form Header (Editor View)](image1)

![Figure 19: Adjusted Form Header (PDF)](image2)

Alternatively for hybrid surveys, a QR code can be integrated into the questionnaires. Participants with mobile devices then have the opportunity to scan the QR code from the questionnaire header and to complete the questionnaire as an online form. The QR code displayed in the editor preview and QR code on the sample questionnaire is just a placeholder. When creating a hybrid survey, it will be replaced with an individual QR code including a built in PSWD number and appear on each questionnaire.

**Note:**
- Only use QR Codes in questionnaires which are used solely for hybrid surveys.
- Also, always use the placeholder [PSWD] and [SERVER], to allow online access to participants without mobile devices.
3.5. Adding and Editing Question Groups

Question groups unite questions that are thematically similar under a general heading, so that, for example, indicators can be calculated.

Text entries have the following meaning:

Title
Title of the question group

You can highlight the title of the question group (as you can with numerous other elements) with bold or italic fonts or by underlining. To do this, mark the desired element and click the buttons [B], [I] and/or [U] in the bar next to the lettering “headline.

Above the [Arrow back] and [Arrow forward] buttons you can undo editing steps.

Figure 20: Create a Question Group

Presentation slide text
This text appears on the presentation slide in the PDF report in order to explain an indicator.

Please note: This option is only available when the creation of a presentation template is activated in the PDF report settings (“System Settings/Report Settings/Configuration”).

Indicator
Select a scale for the questions that are to be combined to an average.
Creating a Questionnaire in the VividForms Editor

Figure 21: Indicator Selection of a Question Group

The possibility of highlighting the question groups is activated in the menu “Form Properties” in the VividForms Editor:

Font Size

Select the font size for the heading text from 7pt up to 20pt (default: resulting from the chosen default font size in the menu “System Settings/EvaSys Settings/VividForms/Default Font Size”).

Note:
The maximum font size of the question group depends on the size of the line height defined for the questionnaire. Thus, to set a bigger font size for the question group it can be necessary to first enlarge the line height in the menu “Form Properties”.

Text Element

If you check this box then the question group will be changed into a text element. (This is only possible when adding a new question group).

Please Note: When changed into a text element, the question group loses its original function and becomes mere text. You can no longer add items such as questions or design elements to this redefined group.

Having made your settings and clicking on “Apply”, the chapter title will appear in the preview. You can open the properties of the question group again with a double click in the preview window or by using the symbol in the Editor Control menu “Edit” and the menu “Edit Question Group”.

Attention! Clicking on the symbol or on the text “Delete (Del)” in the menu “Clipboard” will delete the entire highlighted chapter as well as all of the questions in it, without any warning or confirmation.

Using the arrow symbols “Up” and “Down” in the menu “Move”, you can move entire chapters up or down. To move a chapter one page forwards or backwards, use the “Copy (Ctrl+C)” and “Paste (Ctrl+V)” function in the menu “Clipboard”.

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3.6. Adding and Editing Questions

Should you wish to add a question to your questionnaire, choose the option “Add question” in the Editor Control. Please note: You cannot add questions without first having created a question group!

In a question group, single questions can be moved up or down by using either the arrow symbols ↑ and ↓ in the menu “Move”, or by ‘drag and drop’, i.e. by right clicking on the question and dragging it to the desired position. To move a question to another question group, you may either use ‘drag and drop’ or the cut and paste function in the menu “Move”.

3.6.1. Overview on the Question Types

Scaled Questions

Linear scales have up to 11 options. In addition to the question text there are two texts at the scale poles. Scaled questions can be grouped and averaged to indicators. Scaled questions are also available for generating cross tabulations. When needed a no opinion field can be added.

![Figure 22: Analysis of Scaled Questions](image)

Open Questions

Responses to open questions are automatically recognized as answered during processing and are integrated in the report document as image files. If the responses have been manually anonymized or are part of an online survey then the responses are in machine print and can be exported together with the raw data.

![Figure 23 (a): Illustration of a Result of an Open Question as Image File as well as (b) in Machine Print Form](image)

ICR-Questions (handwriting recognition)

With the help of ICR questions, handwritten entries of participants can be automatically read and recognized. Participants make their entries in block letters or in one-line
handwriting fields or segmented fields. In the PDF report, these ICR questions can be evaluated as open questions (in this case, all recognized entries are vertically listed) or as closed questions presented using bar charts.

![Figure 24: Presenting Results of an ICR Question with Bar Chart (As a Closed Question)](image)

With the help of ICR questions, dates (such as date of birth, date of ex-matriculation etc.), names (first name, last name), customer number etc. can be captured.

**Note:**
To use ICR questions, it is necessary to purchase an additional ICR license, which is available as an EvaSys AddOn. If interested, please feel free to contact us. If you are interested in the ICR Add-on, please contact our sales department.

Grade Values
Survey participants check a value (paper survey), or give directly a grade value (online survey).

![Figure 25: Illustration of a Question with Grade Value](image)

**Single Choice (1 of n)**
A single choice question has multiple answer options of which only one can be selected (e.g. age, gender, etc.).

Generally you can define as many answer options as necessary, as long as there is enough room left on the page. Nevertheless, there are differences within this question type resulting from the number of answer options provided:

For single choice questions with up to 11 answer options, the position of the options (next to/beneath the question text) can be freely defined. In the report all answer options will be displayed, regardless whether they have been marked on the questionnaires or not.

When a single choice question has more than 11 answer options, the options are always displayed beneath the question text. In the report only those options are displayed, which have at least been selected once by the participants.

![Figure 26: Illustration of a Single Choice Question](image)
**Multiple Choice (m of n)**

A multiple choice question can have unlimited options (unlimited means “as many options as fit on one page”). The options are considered yes/no questions, i.e. not marking an option is interpreted as a “no”. The number of selections per response option is for this reason the same as the number of returns.

![Figure 27: Illustration of a Multiple Choice Question](image)

**Matrix Field**

The matrix field allows the capturing and evaluation of five digit numbers (horizontal matrix question) or 10 digit numbers (vertical matrix question).

Analysis of matrix fields can portray numbers in any dimension.

![Figure 28: Illustration of a Matrix Field Question](image)

**3.6.2. Scaled Question**

Select the question type scaled question and click on [Next]. In the next step enter the question text and click on [Next].

![Figure 29: Scaled Question](image)
The last step involves entering the text of the two poles and selecting the number of check fields. You have the choice between two and eleven fields.

The pole labels and the optional abstention text can be defined individually after enabling the checkbox “individualize pole labels”. Otherwise these labels remain empty or will be defined by the horizontal or vertical pole labels which can be generated separately.

A choice of diagram types to be used in the report is available at the bottom.

Note: Experts may edit the appearance of the report graphics by editing the file lib.jpgraph.php in the EvaSys email folder. Contact your support representative to receive the necessary unencrypted file.

Information on further options when creating a scaled question can be found in the following sections.

Click on [Apply].

The scaled question will now appear in the preview and will be automatically highlighted.

Use these settings as default for scaled questions

If you would like to apply the settings of the created scaled question (abstention, check boxes, pole texts, chart type, etc.) for all further scaled questions, activate the option, “Use these settings as default for scaled questions”. All scaled questions that you add afterwards, receive these settings per default.
Mirroring of Individual Scaled Questions

The VividForms Editor allows you to mirror individual scaled questions. Using this method, control questions can appear inverted in the survey but at the same time flow correctly into the calculation of the indicators.

On your questionnaire, you can establish mirrored scaled questions in two different ways:

1. by composing a question text in a negative way with the pole labels being consistent throughout the questionnaire, e.g. “The technical equipment is poor” with the pole labels “strongly agree” (left) and “strongly disagree” (right).

2. by inverting the pole labels for a question while the phrasing of the question remains positive, e.g. “The technical equipment is excellent” with the pole labels “strongly disagree” (left) and “strongly agree” (right). This method is only apt for scaled questions with individual pole labels.

To create a mirrored scaled question, click on the option “Set this scaled question as a mirrored question” whilst you are creating the scaled question. In the VividForms Editor preview, the scaled question is marked with a red arrow “.”

Dual Scale

The combination of quality and importance (dual scale) is a frequently encountered question type. The purpose of the combination is to separate the important cases from the unimportant ones. Bad and unimportant as well as good and unimportant cases should be disregarded as negligible. The dual scale is helpful, in that it separates the relevant and irrelevant areas of a survey, therefore aiding target-oriented decision making. It is also a useful function for testing new items.

Note:

To use the dual scale, insert your scaled questions with individual pole labels as you are used to in the VividForms Editor. Please note the following:

- Scaled questions which are to be later linked to each other, need to have an identical scale (for example, both questions have a 6 point scale).
- The scale has to comprise 4-6 checkboxes (no longer/shorter scales possible).
- The quality rating of the poles must also be consistent with each other. This means that in quality questions, if the left pole is the positive one (very good/agree), then in importance questions, the left pole has to be the positive one too (very important).
- The dual scale is only expedient if you have stored individual pole labels for each scaled question.

In the following example, a scaled question was first inserted on the quality of the technical equipment. Then, a second scaled question was inserted on the importance of the technical equipment. By activating the option “Combine to dual scale with previous question”, both of these scaled questions are linked to each other.
Creating a Questionnaire in the VividForms Editor

In the VividForms Editor, the activation of the dual scale, that is, the linking of a quality to an importance scaled question, is marked by a yellow bracket:

![Figure 32: Combining Scaled Questions with each other (Dual Scale)](image)

Please note, moving, cutting out or deleting the scaled questions cancels the link.

Display in the PDF Report

In the menu “System Settings/Report Settings” you can change the configuration settings for every PDF report by clicking on the icon in the column “Configuration”. With the configuration setting “Dual scale profile line” you can activate the display of the dual scale in the PDF report. By selecting “0” the display of the dual scale is deactivated. By selecting “1” you define that the critical values appear on the left side of the scale, with “2”, the critical values appear on the right side of the scale.

The critical values are calculated by subtracting the result of the quality question (a) from the result of the importance question (b). On a 6 point scale, the values range between -5 and +5. Values of +1 to +5 are considered critical as soon as the positive pole (agree/very important) in the questionnaire, appears on the left side. Values from -1 to -5 are considered critical as soon as the positive pole (agree/very important) in the questionnaire appears, on the right side.
The technical equipment is...

<table>
<thead>
<tr>
<th></th>
<th>excellent</th>
<th>very important</th>
<th></th>
<th>very unimportant</th>
<th>poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

\[(a) - (b) = \]

\[\begin{array}{cccccc}
-5 & -4 & -3 & -2 & -1 & 0 \\
1 & 2 & 3 & 4 & 5 & 6
\end{array}\]

noncritical area

Critical area

Figure 34: Explanation of the Dual Scale Calculation

Apply settings to all other scaled questions

You can, if required, apply the settings for a scaled question to all the scaled questions already available on the questionnaire.

For this, activate the option “Apply settings to all other scaled questions” and click on the button [Define settings]. A window will then open, where you can determine which settings should be applied, and define if the selected settings should be applied for the complete questionnaire, or just for the current question group.

Figure 36: Scaled Question: Apply Settings to all other Scaled Questions

To apply the settings, close each of the opened windows with the button [Apply].
3.6.3. **Open Question**

Select the question type open question and click on [Next]. You can now enter the text of the open question.

![Figure 37: Open Question: Enter the Question Text](image)

Now click on [Next] and choose the size of the comment box depending on the number of lines needed. Any number of lines up to the whole remaining page area may be selected. The maximum number of characters allowed for the answer can also be defined for online surveys.

![Figure 38: Open Question: Define the Required Space](image)
After having defined all options click on [Apply]. The open question will now appear in the preview and will be automatically highlighted.

![Open Question in the Editor Preview](image)

**3.6.4. ICR-Question (Handwriting Recognition)**

EvaSys supports handwriting recognition via ICR. With the help of handwriting recognition, short handwritten texts can be read and processed automatically. This feature is only available when licensed. For further information please contact your vendor.

Select “ICR Question (Handwriting recognition)” as the question type, and click on [Next]. In the display area there are two basic options available: segmented and non-segmented presentation.

![ICR Question: Types of Presentation](image)

In the non-segmented presentation, a one-line handwriting field without subdivision is displayed. For recognition, the language (German/English) as well as the type of characters to be read are defined. Four character types are available:

- **Alphabetical** = letters only
- **Alphanumeric** = letters and numbers
- **Numeric** = numbers only
• Numeric+ = numbers and special characters: $ / * + , . < > = ~ @ € £ ¥ ¢ '

Figure 41: ICR-Question: Choice of Character Types

For the segmented presentation of the ICR question, a number of settings are available. In addition to the language, the format of the segmented fields is predefined. From the drop down menu, predefined formats such as dates (e.g. NN"/"NN"/"NNNN) can be selected as well as your own new formats, such as for customer numbers, etc. can be stored.

Figure 42: ICR Question: Setting Segmentation

The following options are available for own formats
• N for numerical entries
• L for alphabetical entries
• A for alphanumerical entries as well as special characters.

To define your own format, delete the default format in the input field and enter your new format using the keyboard or by clicking the buttons [N], [L] and [A]. Please note that if you use any separating characters you have to set them in inverted commas (eg “/”), otherwise, they will not be recognized as such by EvaSys.
Adding and Editing Questions

**Hint:**

Internal tests during quality assurance have shown that the average recognition rate for numerical values is the highest; around 99% of values are correctly recognized. For the alphabetical values, the recognition rate is also very high, lying at around 90%. Because of the elaborate character set, recording alpha-numerical values has the lowest recognition rate, with around 74%.

For this reason, to achieve the greatest possible reading reliability, assign the individual segments numerical or alphabetical character formats if you can. This significantly reduces the complexity of the subsequent verification.

Also, for segmentation different styles can be selected: the fields can be presented closed at the top, top open or half open. The selected segmentation is shown not only on paper questionnaires, but in the online survey too.

In addition to segmentation, the presentation of an ICR question in the PDF report can be specified. Here there are the following options:

- **Like an open question:** In this case, the results are displayed individually one below the other, analogous to the results of an open question. Identical entries are concentrated and have "mentions" added to the corresponding number (for example: 21337 (2 mentions).

  ![Figure 43: ICR Question: Display like an open question](image)

- **Bar for every mention:** The results are analyzed using bar charts, with each answer option receiving its own bar. Identical entries are concentrated. This option is recommended for double-digit numbers at maximum.

  ![Figure 44: ICR Question: Display with bars for every mention](image)

- **Bar for mentions across 10 groups:** The results are analyzed in a bar chart. The group number relates to the number of bars (here 10) that should be displayed later in the PDF report as the analysis of this question. In this way, numerical queries in the value range 0-999 (format: “NNN”) are divided into the following 10 groups: 0-99; 100-199; 200-299; ... ; 900-999.
Creating a Questionnaire in the VividForms Editor

Each segmented ICR question can also be individually defined as to when it should be displayed in the verification. The following settings are available in EvaSys:

- **Always**: The question is always displayed in the verification, regardless of the Reader's reading reliability. This option should be used when the unread characters should be captured exactly.

- **From low to high reading reliability**: The question is very likely to appear in the verification. Only when all entries of the ICR question have been recognized with absolute certainty does it not appear in the verification.

- **From low to middle reading reliability**: Only ICR questions that the Reader has recognized with low to medium reading reliability are displayed in the verification.

- **Only when reading reliability is low**: Only ICR questions that the Reader has recognized with low reading reliability are displayed in the verification. All other questions (medium to high reading reliability) are not displayed in the verification. This option is suitable when the verification requirements should be as low as possible, and when, under certain circumstances, incorrectly read values can be accepted.

**Note:**
Please note that the options “bar for every mention” and “bar for mentions across 10 groups” are only available for segmented numerical ICR questions.

The characters that have been securely read in the verification are highlighted in white, while those that have been insecurely read are highlighted in yellow, speeding up verification.

**Note:**
Please note that the settings for verification only apply if the verification is activated when the survey is created.
By clicking the button [Apply] the open question is inserted into the questionnaire.

If you create a survey with a questionnaire which contains open questions with handwriting recognition, the “verification” is automatically activated. This can be deactivated if desired.

To ensure a high reliability of results we also strongly recommend the use of verification when working with open questions and ICR.

3.6.5. Single Choice/Multiple Choice Question

Select the single choice question type and click on [Next]. You can now enter the text of the question and then click on [Next].
Next to “Option” enter the text for the first option and click on [Add option]. The option will now appear in the option list. Repeat this procedure until you have entered all the options.

You can highlight each option, edit or change their sequence by clicking on the symbols 🗄️, 🔍 and 🍼.

Settings for the display in online surveys can be made for both single choice question types. You can choose between the drop-down list and checkbox list.
For paper based surveys the alignment of answer options of single choice questions can either be set to “next to the question text” or “beneath the question text”. For questions with more than 11 answer options, only the option “beneath the question text” can be selected. The option “Default Questionnaire Layout” refers to the settings defined in the menu “Form Properties/Layout settings”.

After all the options have been entered, click on [Apply].

The single choice question will now appear in the preview and will be automatically highlighted.

Figure 49: Single Choice Question in the Editor Preview

The ability to limit the number of possible answers is a specific feature of multiple choice questions. The value “Max:” is predefined with zero which allows all options to be selected. Enter a number here to limit the available options.

Figure 50: Multiple Choice Question: Enter the Answer Possibilities

In the Editor preview, multiple choice questions are marked with a red “MC”. This is, of course, not visible in the PDF.
For both single choice questions as well as multiple-choice questions, there is the option to integrate an image into the question. To do this, click the button [Integrate image] in the “Image” section. An image selection wizard opens, which allows you to select the appropriate image. It is immediately shown in the preview.

There are different possibilities available for the alignment of the image:

- Next to answer options (default setting)
- Between question text and answer options
- Below question text and answer options
- Next to question text and answer options

You can also decide whether the image should be aligned left or right. With the help of the value in the “scaling in % of page width”, the size of the image can be matched to the questionnaires.
Click [Apply] to save the settings. When the question is inserted, the image is presented in the desired position on the questionnaire.

![Figure 52: Integrating Images into Single Choice and Multiple Choice Questions](image)

3.6.6. **Horizontal Matrix Question**

The horizontal matrix question enables you to display five digit numbers. Select the matrix field question type and click on [Next]. You can now enter the text of the question. Then click on [Next].

![Figure 53: Single Choice Question with Integrated Image](image)
In the next window, select the matrix question type (horizontal or vertical), the minimum and maximum value, the number of groups in the PDF report, and the method of capturing the matrix value.

In this example the minimum value is set at 1, the maximum value at 99.

The group number refers to the number of bars that will represent the analysis of this question in the PDF report. A group number of 10 corresponds to the value areas of 1-9, 10-19, 20-29 [...] 90-99, that is ten groups. If the number of groups is left at the default value of 0, then each value will be displayed individually in the bar chart of the PDF report.

Furthermore the entry in the matrix field can be read as a natural number or text, i.e. to be read as a string of characters. When capturing matrix values as text, it is possible that a series of numbers with leading zeros, i.e. as can occur in postal codes, can be captured correctly.

![Figure 54: Create a Horizontal Matrix Question](image)

On the questionnaire, the question regarding age is shown as a two row matrix. Respondents can mark the 10's in the top row, and the 1's in the lower row.

![Figure 55: Horizontal Matrix Question in the PDF-Preview](image)

### 3.6.7. Vertical Matrix Question

With the vertical matrix question up to ten digit numbers can be entered, i.e. student number, zip codes, etc.

Select the question type matrix field and click [Next]. You can now enter the text of the question. Then click [Next].
In this example, a vertical matrix question was selected with a minimum value of 00001 and a maximum value of 99999. In the report, the results are presented in 10 categories. In order to also register leading zeros, the matrix value is captured as text.

Figure 56: Create Vertical Matrix Question

The PDF preview of this vertical matrix question looks as follows:

Figure 57: Vertical Matrix Question in the PDF Preview
When filled out, such a matrix question could, for example, look like this:

![Completed Vertical Matrix Question](image)

**Figure 58: Completed Vertical Matrix Question**

**Note:**
The handwritten numbers only serve for clarity (so the student/participant or if necessary the verifier, can check the entry). They will not be read in!

As an alternative to the matrix question and to avoid errors by the participants when they are filling out the form, an ICR question can also be used to record numerical values. The handwritten numerical entries are then automatically analyzed.

### 3.6.8. Grade Value

Select the grade value question type and click on [Next]. You can now enter the question text and then click on [Apply].

![Grade Value in the PDF Preview](image)

**Figure 59: Grade Value in the PDF Preview**

The survey participant can now give a grade by checking a place before and after the decimal point.

The advantage of this method is that the high accuracy of checkboxes makes it unnecessary to use ICR for handprint recognition, which would mean a considerable amount of review and correction. Please note that only values between 1.0 and 5.0 will be considered.
3.7.  Adapting the Size of Answer Boxes

You can change the size of your answer boxes in the VividForms Editor under “Form properties”. You have five sizes (8pt, 9pt, 10pt, 11pt and 12pt) to choose from:

![Form Properties](image)

Figure 60: Adapting the Size of Answer Boxes

**Note:**
Line spacing must be at least 2pt greater than the answer box size.

If, for example, you have defined a line spacing of 11pt and then set your answer box size up to 11pt, the system automatically increases the line spacing to 13pt.

If you reduce the line spacing, EvaSys automatically reduces the size of your answer boxes so that, as a basic principle, a minimal difference in size of 2pt is ensured.

**Hint:**
In order to achieve an appealing layout for your questionnaires, we recommend selecting a minimal difference in size of at least 3pt in relation to the size of your answer boxes.

**Attention:**
The larger the answer boxes, the fewer can be displayed.

With a scaled question with 11 response possibilities, your answer box size will be 8pt. Now if you increase your answer box size to 9pt, for reasons of available space, only 10 answer boxes will be displayed. With a answer box size of 10pt, you can only display 9 answer boxes. With a answer box size of 11pt or 12pt, only 8 or 7 answer boxes can be displayed.
Creating a Questionnaire in the VividForms Editor

boxes are displayed, and so on. (Before applying the change, you will get a warning message. If you then click on [Cancel], your changes will not be applied).

Decreasing the number of answer boxes follows automatically in the system when increasing the answer box size. If you decrease the size of the answer boxes afterwards, the number of answer boxes displayed, will not, however, be automatically increased by the system. This means, that when decreasing the size of the answer boxes, you have to increase manually the number of answer boxes. To do this, double click on the corresponding scaled question and select in the area of “Define options”, as in creating a scaled question, the number of desired answer boxes.

With all other question types, an increase in the size of the answer boxes has no effect on the question.

These changes (decrease in the number of answer boxes) only occur with scaled questions, other question types are not affected.

3.8. Adding Pole Labels

3.8.1. Horizontal Pole Labels

This function allows pole label headers for groups of scaled questions to be defined.

Firstly it requires the section “Form Properties” in the VividForms Editor control to be opened. Select the option “Edit pole template”.

![Edit Pole Template](image)

Figure 61: Edit Pole Template

Enter the text elements which should be used for the labels and click [Apply].

Next create a new question group. Now the option “Pole Labels” in the section “Add” can be selected. Click on “Pole Labels” to add them to the questionnaire.

![Pole Labels in the PDF Preview](image)

Figure 62: Pole Labels in the PDF Preview
Continue adding scaled questions. Do not define individual pole labels since the pole label headers perform this function.

The pole labels are automatically assigned to all scaled questions below. This allows them to be displayed in the PDF reports.

### 3.8.2. Vertical Pole Labels

Vertical pole labels can be defined as an alternative to the horizontal labels. Chose the option “Extended Pole Labels” after creating a new question group. Now enter the option texts into the dialog. Each text element is limited to 25 characters.

![Extended Pole Labels](image)

**Figure 63: Enter and Edit of the Vertical Pole Labels**

Click [Apply] to close the dialog and create the vertical pole labels on the form.

Now scaled questions can be added. The system will assign the left and right pole labels to each defined scaled question below the vertical pole labels.

![Vertical Pole Labels in the Editor Preview](image)

**Figure 64: Vertical Pole Labels in the Editor Preview**

Please note that those labels between the two poles are not linked to the scaled question and will not be visible in the PDF report or exports.
3.8.3. Inclined Pole Labels

In addition to horizontal and vertical pole labels, you can also use inclined pole texts for paper surveys. You can define the degree of inclination, under “Extended Pole labels”:

![Image of Extended Pole Labels dialog box]

Figure 65: Inclined Pole Labels – Degree of Inclination

As you can see in the above graphic, you have eleven different degrees of inclination to choose from.

**Note:**

In the preview of the VividForms Editor, the pole labels are always in a vertical position. To get a preview of the inclination, please call up the PDF preview.

The following graphic shows you the preview in the VividForms Editor, which is identical for all levels of inclination:

![Image of pole labels in preview]

Figure 66: Inclined Pole Labels in the Preview of the VividForms Editor (Independent of the Degree of Inclination)
In the following graphics, you can see examples of possible inclinations in the PDF preview.

Figure 67: Inclined Pole Labels (45°) in the PDF Preview

Figure 68: Inclined Pole Labels (65°) in the PDF Preview

Figure 69: Inclined Pole Labels (-90°) in the PDF Preview

3.9. Adding Graphical Elements

3.9.1. Line Space

Using the line space gives extra room between single objects.

Open the menu “Add” and select “Line Space”. An empty line will be added below the active object.

Figure 70: Line Space in the Editor Preview
Creating a Questionnaire in the VividForms Editor

The line space can be selected, moved and modified using the clipboard functions “Cut”, “Copy” and “Paste”.

3.9.2. Separator

The separator allows the optical separation of questionnaire content and can be added freely inside question groups.

Open the menu “Add” in the Editor control and select “Separator”. A horizontal line will be added below the active object.

![Separator in the Editor Preview](image)

The separator can be selected, moved and modified using the clipboard functions “Cut”, “Copy” and “Paste”.

3.9.3. Text

To add a text area open the menu “Add” and select “Text Box”. A dialog box appears which contains a text box. Type in the desired text or paste content from another text editing tool into this edit box.

Alignment options are available to align the text box content to the left, right, center or as justified text.

Click on [Apply] to create the text area.

![Text Area in the Editor Preview](image)

As with other objects, the text area on the questionnaire can be moved around. The text also appears in online surveys and, if desired, in the PDF report too. To activate this, select the option “Show text boxes” in the menu “System Settings/Report Settings/Configuration”.


3.9.4. Page Break

If a page becomes full, VividForms Editor will automatically apply a page break to continue adding objects on the following page.

Page breaks can also be added manually at each phase of the questionnaire. First mark an object by clicking on it with the left mouse button. Now open the menu “Add” and select the option “Page Break”.

![Page Break in the Editor Preview](image)

The page break will be symbolized by a selectable row containing the text // … Page Break. The next object added to the form will appear on the following page.

If the page break is deleted later, the objects throughout the rest of the questionnaire will realign.

3.9.5. Line Height, Font Size and Font Type

With the line height you can change the vertical space needed for a line. This could be necessary if, for example, a questionnaire does not quite fit on two pages. Decrease the line height and you will be able to make do with two pages.

![Accommodate Line Height, Font Size and Font](image)

On the other hand, a questionnaire that is not quite filled can be made to look better by increasing the line height.

The font size affects all question objects with the exception of chapter headings. These should not be made too large.
The following font types are available:

- Arial
- Georgia
- Tahoma
- Times New Roman
- Verdana

Please examine the PDF sample issue after changing the font type using the PDF preview to make sure that all texts appear correctly. If not you may have to reduce the font size.

3.9.6. Filtering of HTML-Tags

**Note:**

This feature should only be used by users with technical knowledge.

You should be aware of the implications of your changes and always check them. Only then you can ensure that your online surveys appear with the desired layout and functions.

With online surveys, in addition to highlighting you have other formatting options with bold and italic fonts and underlining. You can use HTML tags for the formatting (for online surveys only).

For this purpose, activate in the EvaSys Settings in the “VividForms” part the option “Allow editing HTML source code in VividForms Editor”. The button “Source code” appears in the dialogue for text entry and formatting in the VividForms Editor. This affects, for example, the assistant for the creation of question groups as well as questions:
Adding Pictures to a Questionnaire

3.10. Adding Pictures to a Questionnaire

3.10.1. Upload Pictures to the Picture Library

To add pictures to a questionnaire you have to first upload them.

Please note: You can integrate pictures in the image formats JPEG and PNG in the VividForms Editor. The JPEG-format is especially suitable for photographs. Because of losses resulting from compression it is not recommended for text and graphics.

The advantage of the PNG-format is the compressed storage without losses which cannot be guaranteed with the JPEG-format. Thus the PNG-format is suitable for photographs as well as text and graphics. However, files in the PNG-format are considerably bigger than the according JPEG-files.
To upload pictures click on the button [Picture Library] in the menu “Form Properties” in the VividForms Editor. A new window called “Picture Library” opens:

![Picture Library Menu](image)

**Figure 76: Option “Picture Library” in the Menu “Form Properties”**

The new window “picture library” appears:

![Picture Library Window](image)

**Figure 77: Picture Library**

If you click on [Browse], you can search for the picture in your file system. Clicking on [Upload pictures] integrates it in the picture library. Here you can see a picture that was uploaded and integrated in the picture library. On the left hand side you can see the name of the added picture, on the right hand side the preview.

Clicking on [Delete picture] removes the marked picture from the list.

Please note: The system does not ask you to confirm the deletion. When you click on the button, the picture will irrevocably be removed from the list.
3.10.2. Integrating Pictures in a Questionnaire

As soon as you have uploaded pictures into the picture library, you can integrate them into the questionnaire.

You can find the option [Picture] in the menu “Add“. As with the other items you can only add a picture to a question group. As long as you do not define a question group you cannot select the option [Picture].

When you have created a question group you can integrate pictures – the option can be selected.

![Option “Picture” in the Menu “Add” – Activated (left) and Deactivated (right)]

When clicking on [Picture] the picture assistant opens in a new window:

![Picture Assistant]

You can select a picture from a list there. You will see the selected picture in the preview.

Additionally you can define the position of the picture on the questionnaire – left-aligned, centered or right-aligned.

If you choose to scale the picture, the basis for this is the width of the page (width of page = 100%).
In this case the alignment is “centered” and the scaling is 25%.

When you click on [Apply] you add the picture to the last place in the questionnaire where the focus was (i.e. where you last clicked on the questionnaire).

Via clicking on the picture and using the key [Delete] you can remove the picture from the questionnaire again. (Alternatively you can set the focus on the picture and choose [Delete] in the menu “Clipboard”.)

The position and selection of pictures can be changed after insertion (as long as the questionnaire is not in use). Just double-click on the picture and the picture assistant will open. (Alternatively choose [Picture] in the menu “Edit”.)

If you look at the PDF preview (you can view this via the PDF symbol above the upper left corner of the form), you will get a preview of the actual appearance of the questionnaire. Here you can see an example:

![Figure 80: Picture in the PDF Preview](image)

**3.11. Layout Settings**

Via the menu item “Layout Settings” in the menu “Form Properties”, you can choose between two layout variations, the “Traditional Layout” and the “Optimized Layout”. New questionnaires are generally produced with an optimized layout, which has an improved alignment of the checkboxes. Existing forms that were created with earlier versions of EvaSys, retain the traditional layout. If these are copied for further processing, the optimized layout can be assigned to them later.
The default setting for the position of the response options of single choice questions is anchored in the layout settings at the bottom. The settings selected here (next to the question text/beneath the question text) apply to all single choice questions that are newly inserted. In the properties of each question, the position can be adjusted manually, if necessary.

3.12. Adjusting Color Scheme

Under a new menu item in the “Form properties” (“Change color scheme”) different color shadings for question groups and questions can be defined. This improves the readability and increases the optical quality of the questionnaire.

To change the color of your question or question group, click on the “green pencil” icon next to the corresponding option.

You can change the following areas:

- Font color of the question groups,
- Background of the question groups,
- Background of odd questions (e.g.: 1.1. and 1.3., etc.),
- Background of even questions (e.g.: 1.2. and 1.4., etc.)
After clicking on the pencil icon, the color selection dialog opens. Here, at the top of the window, you can select a color directly, set as an RGB value or as an hexadecimal number.

At the bottom of the dialog, the brightness of the color is set. Whilst the font and the background for question groups may have any color depth, the color value for the background of the questions should not be too dark, so as to ensure high readability when scanning. EvaSys immediately checks the brightness of the selected color. If too dark a color was selected, the message “A brighter color is required” appears. With the slider in the area “Brightness”, the brightness can be increased. Once the allowed minimum brightness is reached, the warning disappears. The new color can be adopted by clicking on [OK].
The following figure shows an example of a questionnaire with an adjusted color scheme:

![Questionnaire with Adjusted Color Scheme](image)

**Figure 85: Questionnaire with Adjusted Color Scheme**

### 4. Repair Form

When editing large questionnaires it may occur in rare cases that the order of the objects gets confused. In such a case click on “Repair Form” in the “Form Properties” menu of the Editor control. The questionnaire will be rebuilt.

### 5. Use of the Question Library with VividForms

You can integrate both question groups and questions from not yet implemented questionnaires, as well as protected questionnaires into the question library. In the following, the procedure for adding the question groups and questions is described in detail.

#### 5.1. Adding a Question from the Library

Click on the symbol 🤔 in order to adopt a question-group combination from the question library.

A dialog will open and you should now select a group. With the check field you can select whether the group will be transferred to the questionnaire (the marked checkbox in the screenshot). In the next selection the elements of this group will appear.
Use of the Question Library with VividForms

You can select one or more questions (with the Ctrl key).

With the check field you can determine whether the question will be transferred to the questionnaire. In this case they are assigned to a new question group (you can recognize that by the green tick mark in the window). If the checkbox “Create” in the window before is not activated, you will see a red cross instead of the tick mark. In this case no question group will be created.

You can choose between two possibilities regarding the order of the elements:

- The order of the elements as it was on the original questionnaire, from whence the question group comes from (and from that to which it was inserted in the library). This is the default sorting order.
- Alphabetical sorting of the elements. – if you decide on this sorting order, activate the option “Alphabetical sorting”.

Furthermore, you can sort the questions on the “questionnaire alphabetically. To do this, activate the option “Alphabetic Sorting”. If you don’t activate this option, the questions on the questionnaire will be sorted in the displayed, original order.

Figure 86: Question Library – Selection of a Question Group
Figure 87: Question Library – Selecting Questions

By clicking on the magnifying glass symbol you can see a scaled down preview of the selected questions.

Figure 88: Question Library – Preview of the Selected Questions

Please note that elements that are taken from the library are marked with an [L] (= Library).
5.2. Undoing the Connection between a Question and the Library

You cannot modify questions or chapters from the library. You will see this by the gray shading of the selection options in the properties dialog as well as by the symbol \(\text{Lib}\).

If you would like to edit a question from the library you must first undo the connection to the library by using the symbol \(\text{Lib}\). The question can then be edited again.

You can detach the library question by selecting the question on the questionnaire and choosing the option “Detach library question”.
5.3. Adding a Question to the Library

If you would like to add a question you have highlighted, click on \( \text{ } \) in the area question library on the edit bar.

The dialog shown to the right will appear. You have three options:

**Include in an existing Question Group**
Select a group from the list and click on [Apply].

**Create a new Group**
Select the second option and enter the name for the new group. Click on [Apply].
Add the current (highlighted) Group

Select the third option. The current group will be added as a new group in the library and the highlighted question will be added to this group.

**Note:**
Only the (subunit) administrator can create groups, which are visible to all users, by activating the answer box “Question visible to all users”. Groups and questions created by Instructors are only visible to themselves.

The administrator also has the possibility of denying subunit administrators this right. To do this, he activates the option “Public items disabled” in the user profile of the subunit administrator. The subunit administrator can then no longer add public questions to the library. All groups and questions are then, as with the instructors, only visible to him.

![Figure 93: Question Library: Definition of the User Rights for Public Items in the User Profile of a Subunit Administrator](image)

**5.4. Deleting a Question from the Library**

With a click on you can delete the highlighted question from the library.
5.5. Adding a Group to the Library

With a click on the symbol the group you have highlighted will be entered as a new group to the library. The elements of this group will not be entered.

5.6. Deleting a Group from the Library

With the symbol in the editor control bar you can delete the current group from the library.

6. Filter Settings, Validation, Required Questions and Cross Tabulations

6.1. General Information

If you open the menu “Form Properties” (on the left hand in the VividForms Editor), you will find the option “Filters, Validation, Cross Tabulations, Required Questions”. Click on this option and the dialog for editing these elements will open up. These options are also available in the details of a questionnaire in the area “Advanced Settings”. In “Questionnaires/Questionnaire List” please click on the name of the questionnaire you like to activate the filter settings, validation, required questions or cross tabulations for. The details of this questionnaire open automatically. Open the dropdown list in the area “Advanced Settings” and choose the desired option. Thus click on [Edit] to edit the option.

Filter Settings

This is where you define whether certain answers will cause other questions to be suppressed. In an online survey suppressed questions will not appear or will be inactive. For paper surveys filter settings apply after processing, i.e. retrospectively.

Validation

By defining validations you can test entries to open questions and matrix fields in online surveys with value ranges and regular expressions before a survey participant can send the questionnaire.

Required Questions

Those questions for which an answer is compulsory can be defined here.

Cross Tabulations

The cross tabulations shown here will appear in the PDF report.

To save the form and close the Web editor, click on the diskette symbol . You will return to the questionnaire administration. In order to completely delete the questionnaire, click on the trash .
6.2. Filter Settings

Filter settings allow you to suppress questions which may in certain circumstances be irrelevant. This is especially interesting for online surveys, where this prevents invalid questions from being responded to.

![Filter Settings](image)

However the filter settings defined here are also used for data from paper surveys. When analyzing each completed questionnaire a check is carried out whether the filter settings should be applied.

**Example:**

A question asks about the use of presentation programs in a course. If this question is answered with a “No” then questions about the quality of such presentations will not be asked (online surveys) or not analyzed (paper survey).

![Filter Settings: Selecting Items to be Skipped](image)

In order to create a filter setting, select from the list a single choice question and click on [Add].

Now select a response value for which the filter setting should be applied. In the lower area you will see a list of all the questions following the filter question. You can now highlight all of the questions that should not be displayed or should not be analyzed. When you are finished, click on [Save]. Repeat this procedure for each additional filter setting.

In the settings (“System Settings/EvaSys Settings/Survey Online/Display of filtered questions in online survey”) you can determine, whether deactivated questions in
online surveys are to be greyed out or completely hidden. Hereby it is now possible to
hide questions in all three display modes for online surveys ("per chapter", "per page"
and "complete").

Figure 96: Settings for Filtered Questions

6.3. Validation

By defining validations you can test entries to open questions and matrix fields in
online surveys with value ranges and regular expressions before a survey participant
can send the questionnaire.

Figure 97: Validation

To create validations select a matrix field or an open question from the list and click on
[Add].

Now select which values can be accepted:

• Numbers only – Here you can delimit the value range by storing a minimum and
  maximum value.
• Letters only – i.e. no blanks
• Letters or numbers only.
• Date.
• Pattern (simplified syntax) – By default, the following templates are available:
  - three-digit number,
  - word(underscore)number,
  - serial number.

All three examples are based on the following legend:

• L = Letter
• W = Word
• D = Digit
• N = Number
• A = Alphanumeric (= digit or letter)

In addition, there is the possibility of using square brackets to label a placeholder as optional. In this way, the following pattern: D[D][D]-W means that only input consisting of a number of one to three digits, a hyphen and a word (in this order), will be accepted.

As well as the common syntax for patterns, there is also the possibility of using regular expressions (on the basis of Perl syntax) to formulate patterns. Regular expressions are often used to recognize patterns and offer a high level of flexibility.

• Pattern (regular expression) – The following template choices are available:
  - three-digit number,
  - word(underscore)number,
  - serial number (simple),
  - serial number (complex),
  - email address.

**Please note:**
A question text should contain instructions for the correct completion of a validation question, so that the survey participant knows which input is admissible.

### 6.4. Required Questions

Questions for which an answer is compulsory can be configured as required questions.

When submitting a questionnaire in an online survey the system checks if all required questions have been answered. If this is not the case, the survey cannot be submitted unless answers to the required questions have been given.

To define the required questions select one or multiple questions and click on [Save]. The selected questions will be displayed with a blue background.

![Figure 98: Configuration of Required Questions](image-url)
6.5. Cross Tabulations

In order to use cross tabulations this function must be activated at “System Settings/Report Settings/Configuration/Create Cross Tabulation”.

Select from both lists the variables you would like to use. You can use scaled questions as well as single choice questions with as many as eleven choices.

The upper question is displayed in the X axis while the lower question is found in the Y axis of the matrix.

The number of cross tabulations possible is unlimited. In the PDF report two cross tabulations per page will be displayed.

![Cross Tabulations](image1)

**Figure 99: Create Cross Tabulations**

![Cross Tabulation in the PDF Report](image2)

**Figure 100: Cross Tabulation in the PDF Report**

Note:
Unlike the filter settings, required questions are not recognized in paper surveys.
7. Defining General Templates

7.1. Defining a Template by the Administrator

The administrator can create templates whose contents cannot be modified by users with instructor accounts.

By activating the box “Template” the form is made available to the active instructor. The instructor can only supplement the questions set up by the administrator.

![Form-Wizard](image)

Figure 101: Activating the Option “Template”

By activating the answer box “Activate/deactivate template mode”, the form is put at the active instructors disposal. The administrator can also determine, that the new items which can be added by the active instructor, may only be added at the end of the questionnaire. This means, that the structure of the questionnaire provided by the administrator cannot be changed, as the instructor may only add his questions at the end. To select this option, activate the answer box “New items may only be added at the end”.

As soon as an active user has added a copy of this questionnaire to his questionnaire administration, a green ball with a white arrow appears in the questionnaire list:

![Template Questionnaire Complemented by an Active User](image)

Figure 102: Template Questionnaire Complemented by an Active User

By clicking on the name or description of a questionnaire in the form list you can open a detail view of the questionnaire. You can even choose under “action” the command “details”. In the detail view you can define how the questionnaire will be used:
The VividForms recognition set organizes itself automatically. As soon as the first survey has been created on the basis of the questionnaire it is activated (= deployed) and can no longer be modified with the editor. If you want to create a new version of the questionnaire then you must copy the questionnaire.

You cannot delete the questionnaire as long as surveys based on the questionnaire are in the system. This is to protect your data.

7.2. Use of Templates in Instructor Accounts

In the menu of the instructor account in the “template” area, you will see a list of questionnaires from the administrator.
Figure 104: Template in an Instructor Account

By clicking on the symbol you can create a copy of the template for editing.

Figure 105: Copy of the Template for Editing

Next you will see the user’s own questionnaire administration with a new entry “(Name of questionnaire) [Template]”. The notice [Template] is automatically added to the heading and shows that the questionnaire is from a template.

Figure 106: Editing a Template

If the administrator has given the authorization, a click on the symbol allows the user to begin editing the questionnaire. Questions from the administrator’s template appear in the Web editor with a [T] (= Template) and cannot be deleted or edited.

The user can add as many question groups and questions as needed, as long as he does not exceed the maximum number of pages or the maximum number of ques-
tions defined by the administrator (see form properties of the questionnaire). Before adding a question to the questionnaire, the user first has to create a new question group. Questions cannot be added to groups already created by the administrator. When setting the form properties, the administrator can define that new elements added by users (such as question groups, questions or design elements) may only be inserted at the end of the questionnaire.

Figure 107: Added Question by the Instructor

8. Editing and Passing on Questionnaires

To show the content of a questionnaire click “Editing” in the Drop Down-Menu on the right hand in the list of questionnaires.

Please note: You can edit a questionnaire only as long as you have not activated them. When surveys are created for a questionnaire the questionnaire is automatically protected against modifications. This is done in order to guarantee processing of a form being used. No changes of any sort to the layout or contents can be made to protected forms.

8.1. Write-protect Mode

As soon as you generate a survey with a certain questionnaire it is automatically protected against further changes.

Write-protected forms in the VividForms Editor have a yellow lock in the area “form information” (see figure).

Figure 108: Write-protect Mode

The following points have no effect on the display of the questionnaire and can so be modified in the write-protect mode:

- Building indicators for question groups
- Display of single choice questions in the HTML survey (Options available include “Checkbox List” and “Drop-Down List”)
- For matrix fields, number of groups in the evaluation report
- Limiting the maximum responses for multiple choice questions
- Selection of the diagram type for scaled questions in the PDF report
- Definition of filter rules, required questions and cross tabulations

In particularly exceptional cases (for example for typos), the write-protect mode can be circumnavigated. You can alter the write-protected mode in the form creation information of a questionnaire, as shown in the following graphic.

![Form Wizard](image)

**Figure 109: Write-protect Mode in the Form Information**

**Note:**
By editing the form, the questions’ answer boxes can change their position, whereby surveys in circulation can become impossible to evaluate.

This warning is to be strictly observed! It is generally not recommended to make changes to forms with surveys. We recommend that before activating the editing mode, you make contact with our support team.

**8.2. Automatic Recognition Set Management**

As soon as a survey has been created using a VividForms questionnaire, VividForms expands its recognition set to assure recognition.

In order to ensure that all returning questionnaires can be correctly processed, it is only possible to delete a questionnaire when simultaneously deleting all surveys based on that questionnaire. This is done automatically when the delete function in the questionnaire administration is activated and confirmed. Use this function therefore with extreme care.

The user of an activated user account must be extremely careful when deleting a questionnaire he has created himself, because there may be surveys which depend
upon the questionnaire to be processed. The delete function can only be activated by opening the lock symbol 🗝️. When a questionnaire is deleted, ALL surveys based on that questionnaire will be automatically deleted as well.

8.3. Import/Export of VividForms Questionnaires

VividForms forms can be exported as files. These files have the ending “vfd”.

As a (subunit) Administrator, the export function is available in the details of a questionnaire (“Settings/Questionnaire/Details”), by clicking on the [Export] button.

A new dialog containing the settings for the export of forms opens. As well as the standard properties (questions, open text, images, formats etc.), here you can select which additional properties of the form are to be exported:
Figure 112: Settings for the Export of Forms

The following items can be additionally exported:

- Quality Guidelines
- Data export configuration
- Norming
- PDF Reports
- Text Templates
- Report for comparison
- Sphinx-Report
- Languages
- Filter settings
- Validation
- Free indicators
- Required questions
- Cross tabulations

**Note:**
Attention: It is sometimes possible that information which is linked to other data in the system cannot be imported into another system. If, for example, a comparison report was created for a questionnaire (i.e. to a subunit report or similar), the import of this report is only available to its own system, not to an external system.
You can get to the export function in the questionnaire detail dialog (Questionnaires/Questionnaire List/Details).

The import of VividForms questionnaires is done in the questionnaire administration (Settings/Questionnaire). Activate the checkbox “VividForms”. Then select an vfd file using “search…” and upload it.

Figure 113: Questionnaire Import

You can also import and export VividForms questionnaires using active instructor accounts. The active instructor will find a form import function in the questionnaire administration area. Imported forms are subsequently only available to the instructor account owner. In the list of personal questionnaires you will see an export function, which can create a .vfd file.

Figure 114: Import and Export of Questionnaires for Active Users

Active users have limited access to the import and export of secondary data. Only the following form attributes can be imported or exported with the questionnaire:

- Filter settings
- Validation
- Required questions
- Cross Tabulations

If the administrator exports a questionnaire with secondary data, such as languages, text templates, norms etc., these are automatically filtered out when the questionnaire is imported into an active user account.
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