

Mobile data entry



1. Application	4
1.1 Start application	4
1.2 Login	4
1.3 Use of mobile eForms	5
1.3.1 Basic structure	5
1.3.1.1 Header data	6
1.3.1.2 Customer-specific header data fields	7
1.3.1.3 Mandatory field properties	8
1.3.2 Saving	8
1.3.2.1 Cancel (discard)	8
1.3.2.2 Buffer (temporary saving)	9
1.3.2.3 Save (and upload)	10
1.3.2.4 Removing saved eForms from the device	11
1.3.3 Attaching documents	12
1.3.3.1 Selection dialogue documents	12
1.3.3.2 Capturing documents	13
1.3.4 Storing location information	15
1.3.4.1 Current Position	16
1.3.4.2 Manual position selection	16
1.3.4.3 Selecting a map section	16
1.3.4.4 Storing location data	17
1.3.4.5 Cancelling processing	17
1.3.4.6 Polygons	17
1.3.5 Measures	18
1.3.5.1 "Measures" Selection dialogue	19
1.3.6 Characteristics of routine inspections	23
1.3.6.1 "list control" display option	23
1.3.6.2 „Buttons" display option	24
1.3.6.3 Avoidance of individual fault descriptions	24
1.3.6.4 Documents, location information and measures for each step in the inspection procedure	25
1.3.6.5 Comments on the inspection step	25
1.4 Daily reports	26
1.4.1 Areas of application	26
1.4.2 Design	26
1.4.3 Dialogue management	27
1.4.4 Access rights	28

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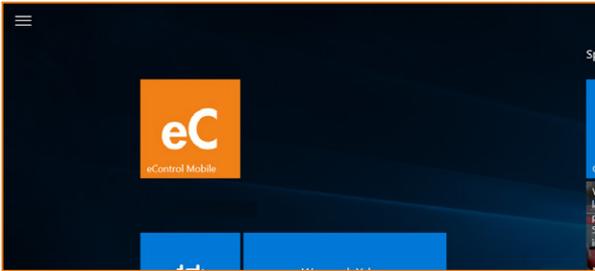
Layout&Graphics: Torben Petrina

1.5 Network and offline operation	28
1.5.1 Automatic uploading	28
2. Administration	29
2.1 Authentication concept	29
2.1.1 Collective accounts	30
2.2 Transaction concept	31
2.3 Universal form definitions	32
2.3.1 Mobile data entry for eControl software modules	32
2.3.1.1 Bird Control (optional licensing)	32
2.3.1.2 Violation management	32
2.3.2 Customer-specific eForms	33
2.3.3 Control elements	33
2.3.3.1 Mandatory field properties	33
2.3.3.2 Headings	33
2.3.3.3 Alphanumerical text fields	33
2.3.3.4 Alphanumerical combination field	34
2.3.3.5 Value range combination field	34
2.3.3.6 "List control" display option	34
2.3.3.7 "Buttons" display option	35
2.3.3.8 Date fields	35
2.3.3.9 Time field	37
2.3.3.10 Numerical Fields	38
2.3.4 Control elements of routine inspections	38
2.4 User rights	39
2.4.1 Form allocations – who may enter which form with a mobile device? n?	39
2.4.1.1 Web and mobile entry	39
2.4.1.2 User right: „***Not for mobile use***“	40
2.4.1.3 Message event	40
2.4.1.4 Case Study	40
2.4.2 Field rights	42
2.5 Location data	43
2.5.1 Location standard	43
2.5.2 Traceability	43
2.5.3 Mobile standard map	43
2.5.4 GIS	43
2.6 User administration and licensing	44
2.6.1 Setting up user master data	44
2.6.2 Licence check when logging in	44
2.6.3 Transfer of UCALs to new users	45

1 Application

1.1 Start application

The application is opened using the start menu.



1.2 Login

A database authentication is required by each user for the initial activation of eControl mobile. The user also must log on, if they have previously logged out or if the user concerned has changed their password via the web application.

The initial application requires a network connection, since database authorisation is necessary.

A screenshot of the eControl mobile login screen. The background is orange. At the top, the text 'eControl mobile' is written in white, with a white Wi-Fi signal icon to the right. Below this, the text 'Version: 1.0.1.39' is displayed. There are three input fields: 'USERNAME', 'PASSWORD', and 'DATABASE...' with a dropdown arrow. At the bottom, there is a white rounded rectangular button with the text 'Login' in orange.

The password length, the relevance of upper case and lower case etc. depend on the password security of the Oracle Database Server as set by the customer.

A detailed description of the authorisation concept can be found in section:

[„2.1 Authentication concept“](#)

1.3 Use of mobile eForms

The definition of mobile forms by an administrator in this specialist field is explained in section „2.3 Universal form definitions“.

1.3.1 Basic structure

The basic structure of mobile eForms corresponds to the structure of web-based eForms, whereby the scope of operation is limited, in order to improve the mobile operability of the eForms and to optimise touch operability.

Aircraft damage
Property and personal damage





Title:

Course of event

Fire department on site?

Operations management on site?

Traffic controller OD informed

Area

Causer category

Causer organization

Causer personal data

Damage

Damage aircraft part

Damage survey by

Airworthiness

Airworthiness Notes

Equipment category

Equipment

1.3.1.1 Header data

Each eForm consists of header data and individual customer-specific data fields. Header data fields are identical for every eForm.

The header data can be expanded by clicking on  :

The header has the following data fields:

<p>Title</p>	<p>Brief description of the relevant situation (max. 500 characters of text). As much information as possible should be structured in the data fields provided in the eForm, in order to enable an efficient workflow management and so that statistical evaluation is not compromised.</p> <p>The eForm definition can be adjusted in such a way that the title is preset in accordance with the eForm description – e.g. “Aircraft damage”. If – with regard to the example – the aircraft type “Cessna” is added, this results in the logical title “Aircraft damage Cessna”.</p> <p>The data field title is a mandatory field.</p>
<p>Begin date/time (mandatory field)</p>	<p>Both data fields “Begin date” and “Begin time” document the event time.</p> <p>The start time refers not to the entry time of the eForm but to the time at which the situation occurs. The time stamp “Start date/time” can be user-specifically and dynamically preset in the user master data.</p>

End date/time	The “End Date/Time” data fields also refer to the end of the documented situation (e.g. end time of runway check). The end date/time data fields are only mandatory fields, if the eForm has been defined as an informal event.
Report (mandatory field)	<p>The report specifies the “primary” report reference of an eForm. The incidents that are relevant for each organisational unit can be filtered via this classification.</p> <p>Insofar as eForms are essentially relevant for different report areas, this must be set in the definition of the eForms. The data field report can be user-specifically and dynamically preset in the user master data.</p>
Location (mandatory field)	<p>eForms can be entered for different locations with eControl mobile.</p> <p>The “location” data field can be user-specifically and dynamically preset in the user master data.</p>

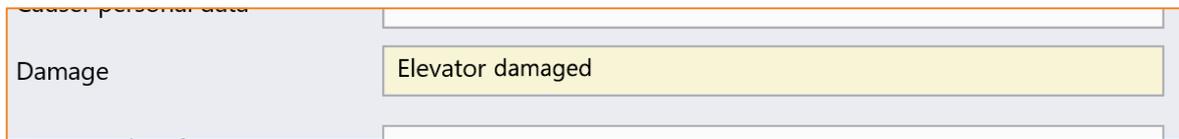
1.3.1.2 Customer-specific header data fields

The event-specific header data fields available in the web version cannot be entered by a mobile device.

From an organisational perspective, it must be ensured that customer-specific header data fields are not defined as mandatory fields.

1.3.1.3 Mandatory field properties

The data fields which must be completed before saving and subsequent uploading of the eForms on the server, are highlighted in yellow.

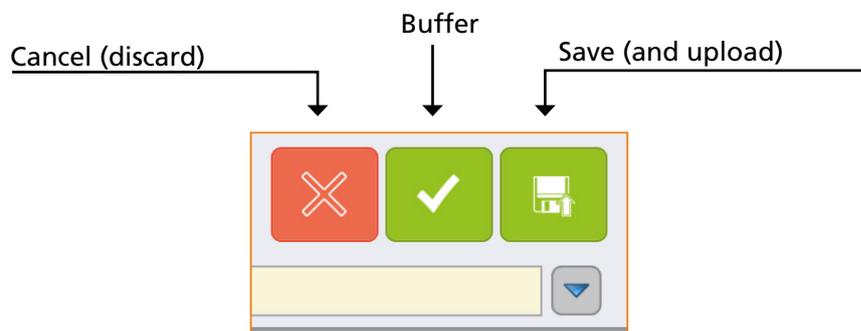


A screenshot of a mobile application interface showing a form field. The field is labeled "Damage" and contains the text "Elevator damaged". The text "Elevator damaged" is highlighted in yellow, indicating it is a mandatory field.

Mobile temporary saving of uncompleted mandatory fields is possible.

1.3.2 Saving

As soon as the processing of an eForm or routine inspection has been completed, the user must decide between the following options:



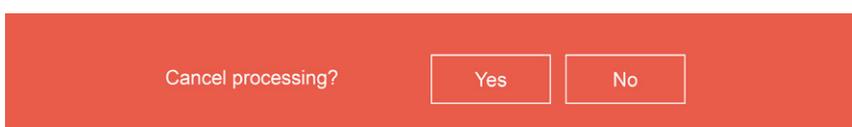
If a mobile device enters the lock screen mode due to inactivity, the entries are retained and can be saved subsequently.

1.3.2.1 Cancel (discard)

If newly entered eForms and routine inspections are cancelled, all data are discarded.

If previously temporarily saved eForms are cancelled, all changes since the last temporary saving are discarded.

In order to prevent the accidental discarding of data, the cancellation must be confirmed using the following confirmation prompt:



A confirmation prompt displayed on a red background. The text "Cancel processing?" is on the left, followed by two buttons: "Yes" and "No".

1.3.2.2 Buffer (temporary saving)

An eForm should be temporarily saved if it has not yet been possible to record all relevant data and if additional mobile processing is required at a later time. The temporarily saved eForms are displayed under the menu item "History" and can be edited again by clicking on them.

The following must be taken into consideration with regard to temporary saving:

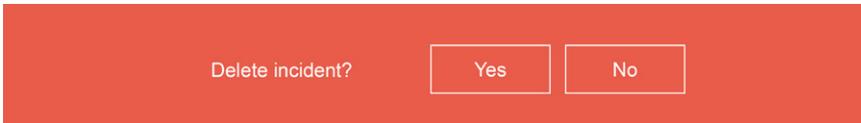
- The field contents are not validated.
- eForms are not uploaded onto the server until they have been finally(!) saved.
- Temporarily saved eForms cannot trigger any email alerts through the eControl notifier.
- Temporarily saved eForms are neither accessible via Web Client nor via the daily report function of other mobile devices. As a result there is the risk of duplicate entry.

Deleting temporarily saved eForms

Temporarily saved eForms can be deleted in the history in the list box BUFFERED by pressing

the button  .

Deletion of temporarily saved eForms is irreversible and will also delete all attached documents, measures and location information. Deletion must be confirmed using the following confirmation prompt:



Delete incident?

1.3.2.3 Save (and upload)

Saving may only occur when all relevant data has been entered and no further mobile processing is necessary. The system checks whether all mandatory fields have been entered – it is not possible to save incomplete eForms.

Saved eForms are automatically uploaded to the server when connected to the network. A manual upload is also possible in the case of a restored network connection via the button

Synchronize

Saved eForms are listed in the dialogue "History" in the "Archive" list display and can be viewed by clicking on this.

eForms with the status  have not yet been transferred to the server. These eForms are automatically uploaded when there is an established network connection.

eForms with the status  have been successfully uploaded on to the server and can be viewed via the daily report function of other mobile devices.

The following must be taken into consideration with regard to saving:

- Subsequent editing on the mobile device is no longer possible after saving
- Documents uploaded onto the server are analysed by eControl notifier and trigger email alerts provided that notification rules apply

Saving must be confirmed using the following confirmation prompt:

Save finally and upload?

Yes

No

1.3.2.4 Removing saved eForms from the device

Incidents, which have been definitively saved and transferred to the server, can be viewed by the user for an unlimited period of time under "History" in the "Archive" list.

To tidy up the archive, proceed as follows:

Click on the Button  in the dialogue .

Incidents, which in the absence of a network connection have not yet been transferred to the server, remain unaffected.

1.3.3 Attaching documents

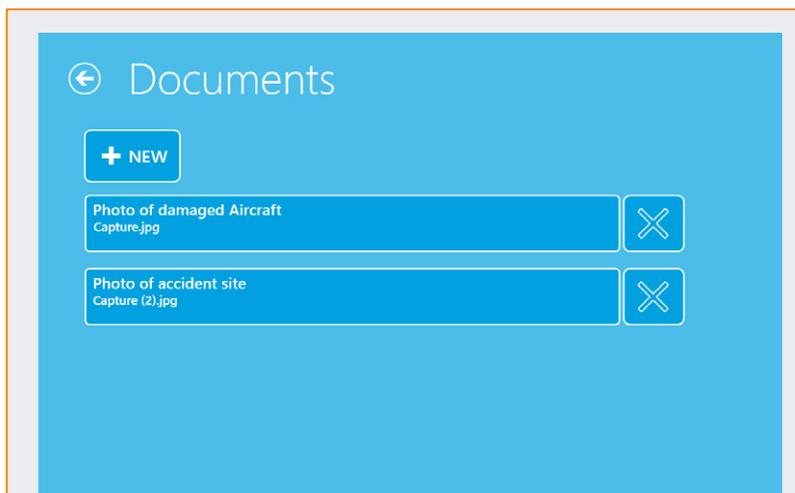
An unlimited number of documents can be attached for each eForm and each step in the routine inspection procedure. In practice, this function is mainly used for simple and convenient event documentation with images. Furthermore any file objects from storage locations, to which the logged on user has access, may be uploaded.

The entry and attachment of documents is initiated via the content buttons  or .

1.3.3.1 Selection dialogue documents

The selection dialogue Documents lists all documents in the order in which these were attached to the current eForm.

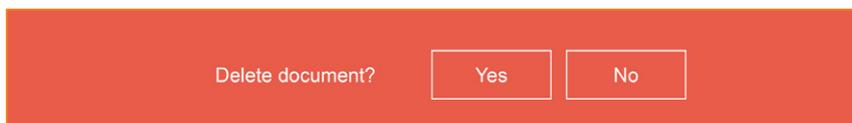
The document title and file name are listed in the overview list for each document.



Clicking on the desired document enables the document information to be edited.

Documents are deleted via the  button.

Deletion must be confirmed using the following confirmation prompt:



An unlimited number of documents can be attached using the  button.

1.3.3.2 Capturing documents

A title must be given for every document (max. 100 characters).

In addition metadata related to each document can be recorded, which enables a keyword search in the central document archive:

- **Document category;** list selection or free text entry (max. 100 characters)
- **Tag 1;** list selection or free text entry (max. 100 characters)
- **Tag 2;** list selection or free text entry (max. 100 characters)
- **Tag 3;** list selection or free text entry (max. 100 characters)
- **Tag 4;** list selection or free text entry (max. 100 characters)
- **Note;** free text entry (max. 4000 characters)

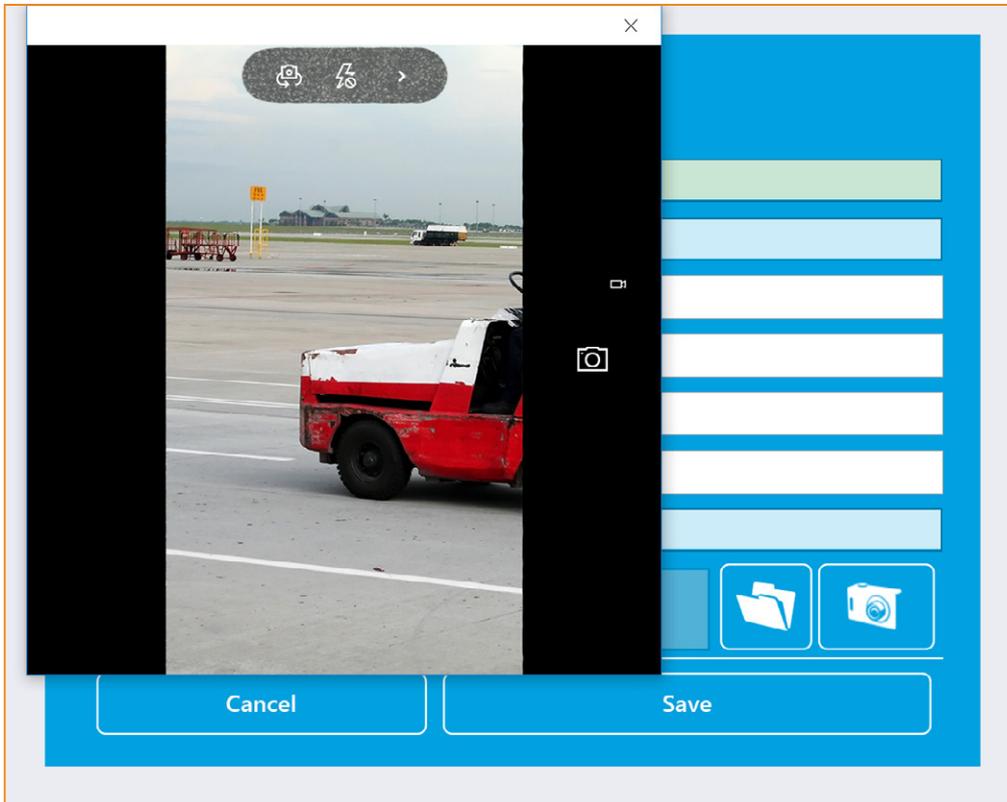
The name of the source file is specified by the system when using the camera or filled upon selection of a document with the respective file specification.

The screenshot shows a mobile application interface for capturing document metadata. The form is titled "Documents" and has a blue header. Below the header, there are several input fields: "Title" (filled with "Photo of damaged vehicle"), "Category" (filled with "Picture documentation"), "Keyword 1" (filled with "Damage"), "Keyword 2" (filled with "Violation"), "Keyword 3" (empty), "Keyword 4" (empty), and "Note" (empty). The "Source file" field is filled with "C:\Users\Maik\Pictures\baggage_cart_clark_ct40.jpg" and includes icons for file selection and camera capture. At the bottom, there are "Cancel" and "Save" buttons, and a large image of a red and white baggage cart with visible damage.

Attaching images and films using the camera:

The device's camera function is activated via the  button.

The system opens a Windows standard dialogue, which facilitates documentation:



The additional camera-specific functions correspond to the Windows system standard.

Loading files from the hard drive

Files saved on the device can also be attached to a mobile eForm.

The dialogue for loading the files is opened via the  button.

A file is selected via file selection dialogue.

The file is finally attached to the eForm via the  button.

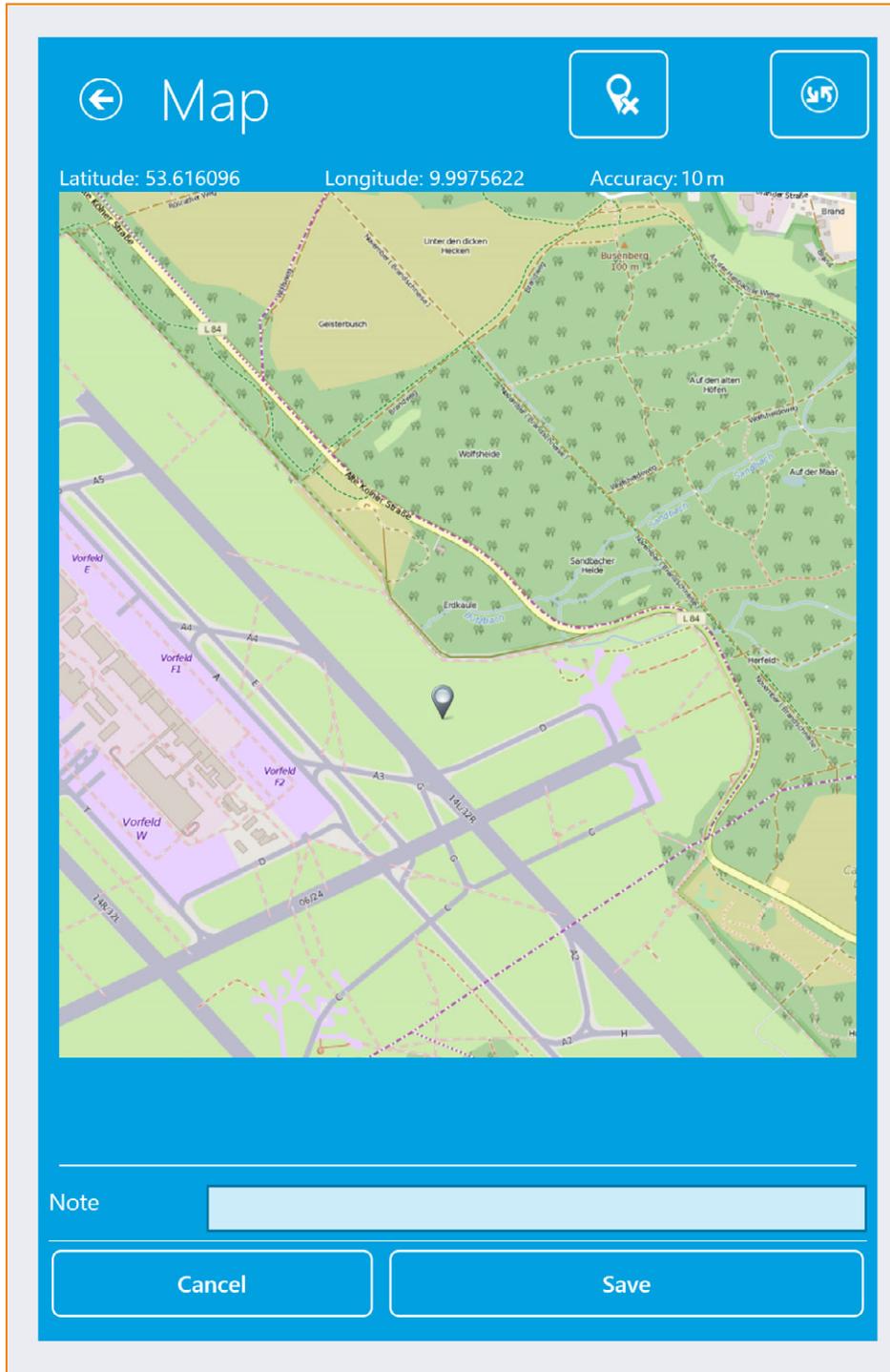
1.3.4 Storing location information

A place for localisation can essentially be entered for every eForm. During routine inspections individual location information is entered as required for each step in the inspection procedure.

Location with a mobile device is usually entered via the installed GPS receiver (Global Positioning System).

Mobile GPS location entry can be initiated at any time via the  button.

The user subsequently arrives at the dialogue "Map":



The information

- Latitude
- Longitude and
- Accuracy

is displayed above the map object.

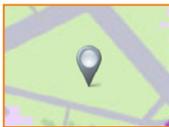
Latitude and longitude refer to the position of the location indicator. Accuracy refers to the current reception accuracy of the GPS receiver.

1.3.4.1 Current Position

When the MAP dialogue is opened the current position of the mobile device is determined and automatically indicated on the map.

Since the year 2000 the standard derivation of the measurement accuracy has been better than 10m and this should be sufficient for most applications.

The current location is visualised using a position indicator:



The position indicator can be reset at any time via the  button to the current position of the mobile device.

1.3.4.2 Manual position selection

Provided that the current position of the mobile device is not the location which must be saved for correct documentation of the situation, the position indicator can be positioned manually on a point on the map.

This is often necessary if a situation is not documented immediately at the scene.

1.3.4.3 Selecting a map section

The map material can be zoomed by pinching two fingers together. The image quality of the zoomed map object depends on the available map material.

The zoom factor is limited to 500% max.

1.3.4.4 Storing location data

Location information is saved via the  button.

All location information can be supplemented by the entry of max. 4000 characters of explanatory text.

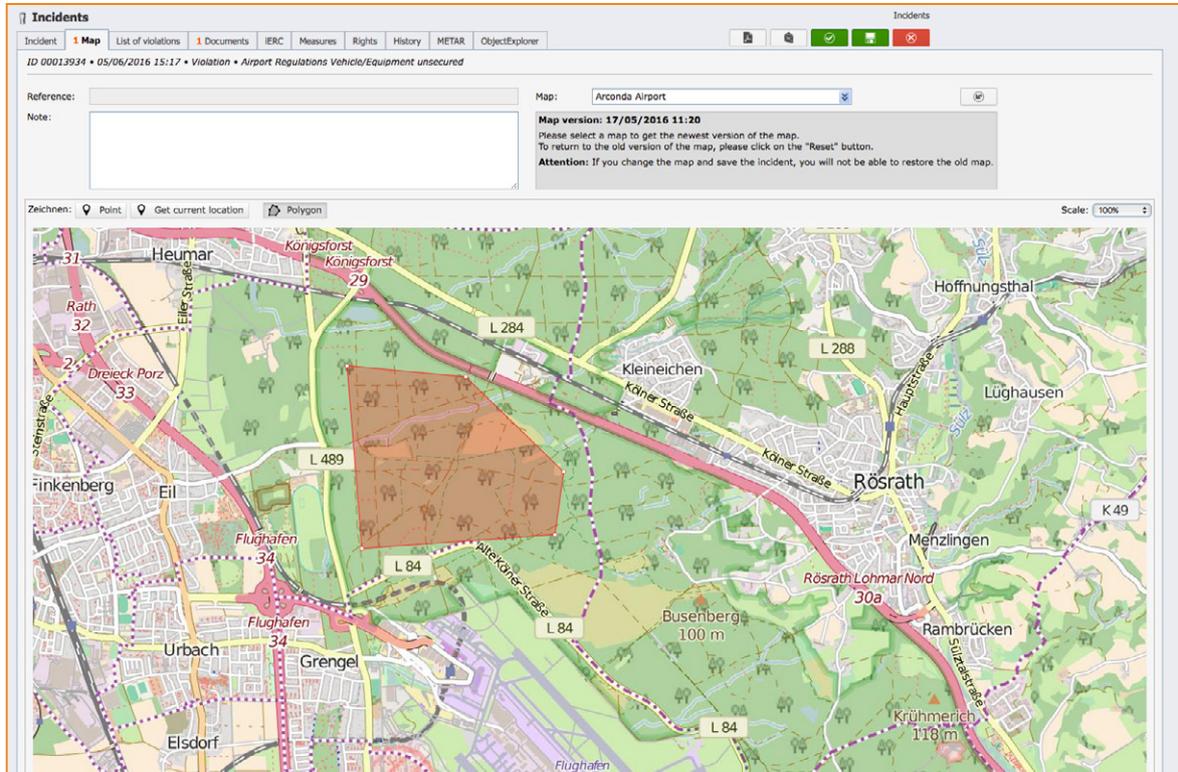
1.3.4.5 Cancelling processing

If no position has previously been saved, the entry of the location information can be cancelled via the  button.

However, if previously saved location information is deleted, this must first be removed via  and the removal of the location information must then be backed up via the  button.

1.3.4.6 Polygons

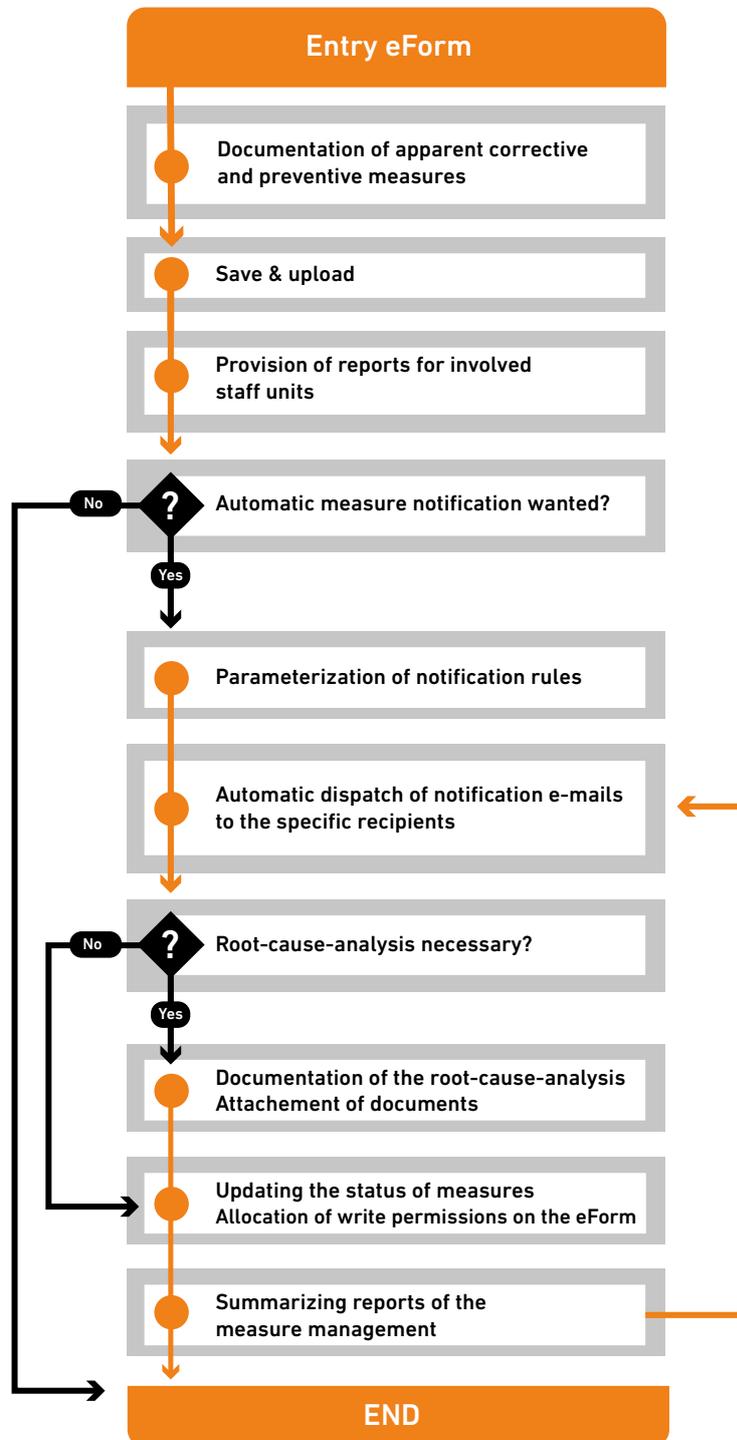
Polygons can only be plotted via the Web workstation and not via the mobile device. A polygon is plotted at the Web workstation by clicking on .



1.3.5 Measures

Measures are a key element of each management system and therefore also a component of eControl mobile.

The diagram shown below illustrates how the measure management workflow is initiated with the mobile client and then continued by the process manager with the Web Client.



The main focus of eControl is the documentation and verification of measures with regard to implementation, suitability and efficiency. As a company-wide available system, eControl facilitates the tracking of these or contrary measures.

Active measure management can be comprehensively verified using the eControl reporting system.

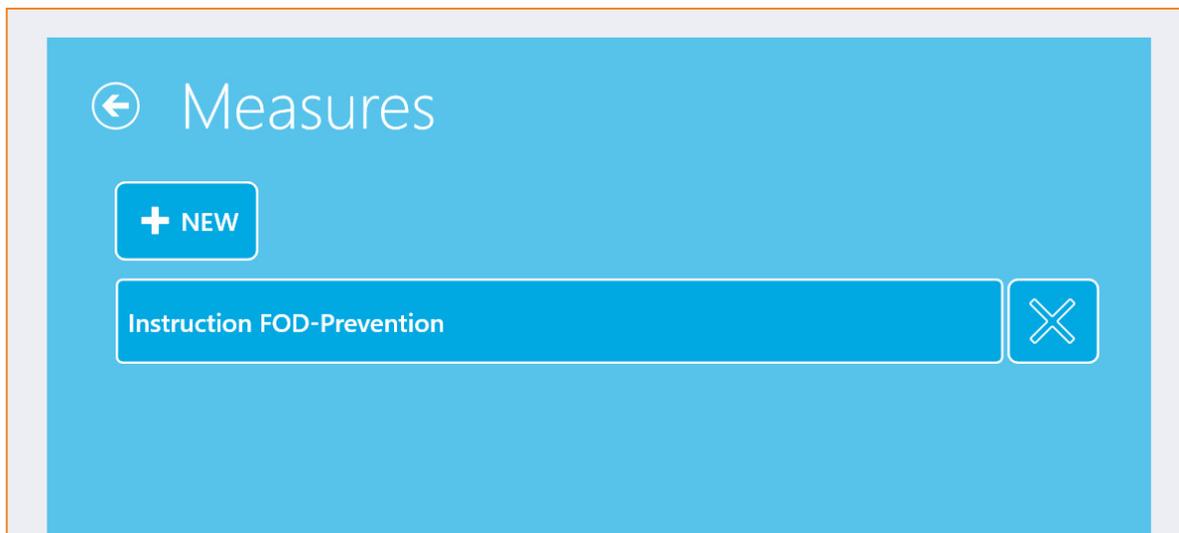
The saving of measures is initiated via the  button. (see Section „1.3.5.1 “Measures” Selection dialogue“)

1.3.5.1 “Measures” Selection dialogue

The selection dialogue “Measures” lists all measures in the order in which these were attached to the current eForm.

A measure title is listed for each measure.

The measure information can be edited by clicking on the desired measure.



Entered or temporarily saved measures are deleted via the  button.

The deletion must be confirmed using the following confirmation prompt:



An unlimited number of measures can be attached using the  button.

Different data fields must or can be listed for each document in the form shown below.

← Measures

Title:

Description:

Keyword 1:

Keyword 2:

Type:

Priority:

Target date:

Actual date:

Status:

Responsible:

Realisation 1:

Realisation 2:

Realisation 3:

Note:

Hide fields

External organisation:

External management:

External Information:

Root cause analysis

Root cause:

Development of a corrective:

Title (Mandatory field)	Brief description of the measure (max. 100 characters of text)
Description (4000 characters max.)	Description of measure
Keyword 1, 2 (max.100 characters):	Both the Keyword 1 and 2 data fields are used for the entry of keywords, which simplify the search in the measure archive.
Type (Mandatory field)	Dropdown-selection between "Preventive" and "Corrective"
Priority (Mandatory field)	Low / Medium / High
Status (Mandatory field)	The measure status is particularly important for workflow management. Possible attributes are: <ul style="list-style-type: none"> • Not yet processed • In Processing • Finished • Finished without processing
Responsible person (Mandatory field)	A formally responsible employee must be indicated for each measure. A user can be selected from the user master data by clicking on the dropdown "Responsible person".
Realisation 1, 2 and 3	For each measure max. three employees can be specified, who are entrusted with the implementation of the measures. A user can be selected from the user master data by clicking on the dropdown "Implementation".
Note (4000 characters max.)	Information on implementation of the measure

Additional data fields can be expanded and collapsed via the buttons  und .

External implementation:

Ext. organisation (200 characters max.)	Description of the external organisation that has been appointed to implement the measure.
Ext. management (200 characters max.)	Documentation of responsibility within the "External organisation"
Ext. reference (200 characters max.)	Reference to the implementation of the measure by the external organisation

Root Cause Analysis:

Root cause (4000 characters max.)	Description of the connection between error and cause
Development of a corrective action (4000 characters max.)	Description of measures
Implementation of the corrective action taken (4.000 characters max.)	Documentation of the implementation of measures
Monitoring and evaluation of the corrective action (4000 characters max.)	Monitoring the effectiveness of the measures introduced

1.3.6 Characteristics of routine inspections

For each step in the inspection procedure it must be entered whether the result of the check is positive or whether a fault must be reported.

Fault:



Positive check result:



The entry can be speeded up, provided that a positive inspection result has been preset. In this case only faults must still be documented, thus significantly speeding up the entry of the inspection result.

Measures taken during routine inspections can be listed in the display options **list box** (see Section „1.3.6.1 “list control” display option“) and **buttons** (see Section „2.3.3.7 “Buttons” display option“).

1.3.6.1 “list control” display option

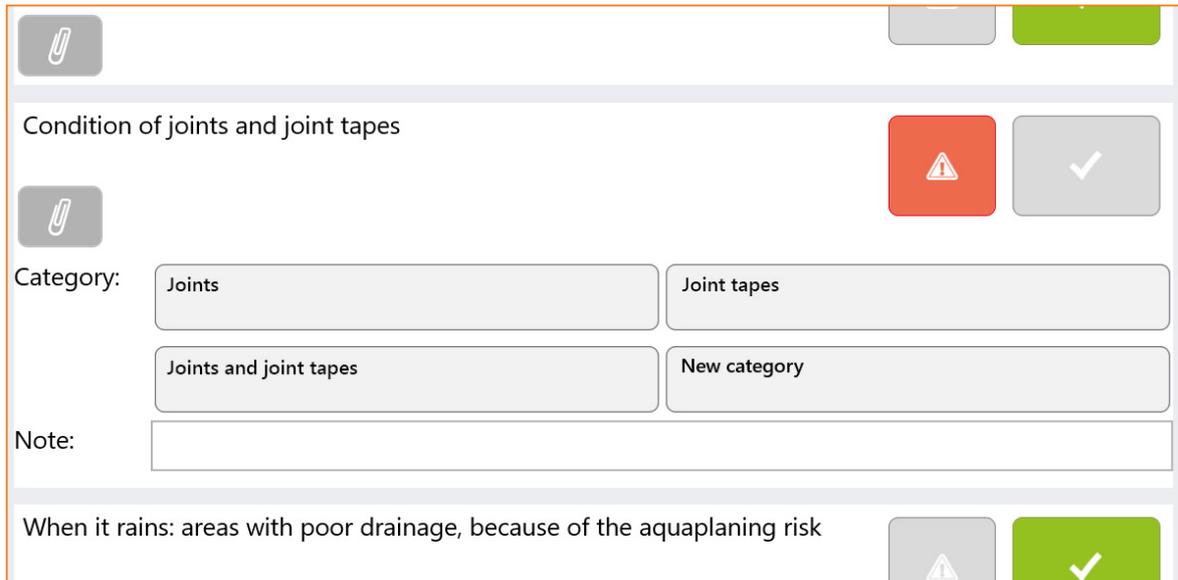
In the example given below the user has the option of either selecting a standard fault from the list view by clicking on it or alternatively capturing an additional free text fault.

The fault categories defined as the value range by the system must be interpreted as a suggestion list when capturing the routine inspection results.

A screenshot of a software interface for recording inspection results. It features a form with several fields and a list of suggestions. At the top left is a paperclip icon. Below it is a 'Category:' label followed by a text input field. To the right of this field is a red button with a warning icon and a grey dropdown arrow. Below the 'Category:' field is a 'Note:' label followed by a list of three suggestions: 'Cover missing', 'Cover damaged', and 'Cover not properly closed'. Below the 'Note:' field is a 'Deposits of' label followed by the same three suggestions. At the bottom left is another paperclip icon. At the bottom right are two buttons: a grey one with a warning icon and a green one with a checkmark icon.

1.3.6.2 „Buttons“ display option

Provided that the display mode “buttons” has been selected for a control measure, the fault categories defined by the system are represented as separate buttons:



The screenshot displays a software interface with two main sections. The top section is titled "Condition of joints and joint tapes" and features a red button with a warning icon and a grey button with a checkmark. Below this, a "Category:" label is followed by four buttons: "Joints", "Joint tapes", "Joints and joint tapes", and "New category". A "Note:" label is followed by a text input field. The bottom section contains the text "When it rains: areas with poor drainage, because of the aquaplaning risk" and two buttons: a grey one with a warning icon and a green one with a checkmark.

An individual fault, which is not presented as a standard fault via a separate button, can be entered by clicking on the last button:



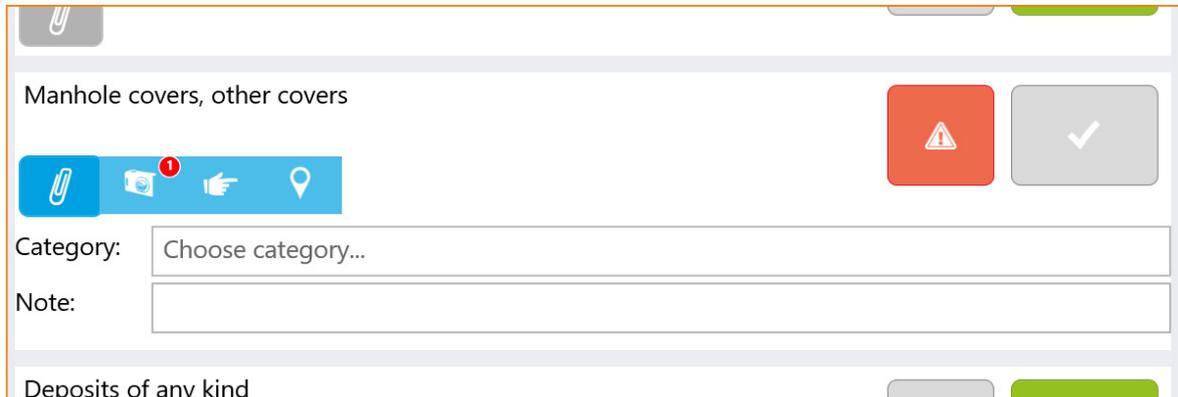
A close-up of the "New category" button, which is a light grey rectangular button with rounded corners and a thin border.

1.3.6.3 Avoidance of individual fault descriptions

Occasionally it is necessary to enter the fault description manually, and in this case the list of standard faults for the steps in the inspection procedure concerned should be expanded, in order to avoid a laborious manual entry and ensure a meaningful statistical analysis.

1.3.6.4 Documents, location information and measures for each step in the inspection procedure

Unlike incidents and informal incidents, documents, measures and location information can be recorded for each individual step in the inspection procedure, in order to document the respective step in the inspection procedure in detail.



The screenshot shows a mobile application interface for an inspection procedure. At the top, there is a header with a paperclip icon on the left and a green bar on the right. Below the header, the text "Manhole covers, other covers" is displayed. To the right of this text are two buttons: a red square with a white warning triangle and a grey square with a white checkmark. Below the text is a blue bar containing four icons: a paperclip, a camera with a red notification bubble, a hand pointing, and a location pin. Underneath the blue bar are two input fields: "Category:" with a dropdown menu showing "Choose category..." and "Note:" with an empty text box. At the bottom of the screen, the text "Deposits of any kind" is visible, along with a grey button and a green bar.

In the case mentioned above, a document and location information are recorded for the step in the inspection procedure "Damage to wooden parts".

The saving of this detailed information is possible irrespective of whether the respective step in the inspection procedure has been classified as inadequate.

1.3.6.5 Comments on the inspection step

Additional information can be recorded for each step in the inspection procedure in the data field "Note".

If only details about the implementation of the steps in the inspection procedure are to be documented, a positive inspection result must then be documented by clicking on the  button.

1.4 Daily reports

1.4.1 Areas of application

The daily report function is suitable for the following area of application:

- **Inspection and prevention of double entry of incidents** (Was the same event already documented by another (mobile) user?)
- **Access to historic incidents** (Does the same event occur repeatedly and how was this previously documented/classified?)

As soon as an event has been saved on a mobile device (see Section „1.3.2 Saving“), this event can be called up on all mobile devices and the Web Clients.

1.4.2 Design

The daily reports function enables access to the eForms and routine checks, which have already been saved on the server.

The information provided corresponds to the daily report display of the Web version and the data structure of the email notifications.

The following information is displayed for every incident:

- ID
- Type
- Date
- Time
- Title
- Responsible
- Measure Y/N
- Documents Y/N

1.4.3 Dialogue management

The dialogue "Daily report" facilitates targeted access to eForms and routine inspections.

The following filter criteria are available:

- Incident-Type
- Date
- Time
- Title
- Responsible

The screenshot shows a web application interface for 'Daily Reports'. At the top, there are four orange buttons: 'New', 'History', 'Daily Reports', and 'Settings'. Below these are filter fields: 'Title' (text input), 'Responsible' (dropdown), 'Report' (dropdown set to 'Operations'), 'Incident' (dropdown), and 'Datum from/to' (date range selector with '19/01/2016' and a clear button). A blue refresh button is also present. Below the filters, the status 'Stand: 19/07/2016 15:16:44' and 'Amount incidents: 213' are displayed. A table lists incidents with columns for 'T', 'Date', 'Time', 'Title', and 'Responsible'. The table contains three rows of incident data.

T	Date	Time	Title	Responsible
	19.07.2016 14234	18:00	Oil alert / kerosene alert Aircraft tractor lost oil	Espenhain, Frank OPERATIONS
	19.07.2016 14232	17:30	Aircraft damage Aircraft damage	Lee, Tim OPERATIONS
	31.05.2016 14095	09:00	Audit in progress Audit in progress CA EASA	Espenhain, Frank OPERATIONS

In order to establish whether a situation has already been reported with another eForm, the eForms must be called up with a limitation on the current date – as in the screen display indicated above.

The dates are sorted chronologically in descending order – if the current situation has already been documented, this should appear at the start of the list.

1.4.4 Access rights

The eForms listed in the daily reports are – as is also the case in the Web based version – dependent on the individual data access rights of the respective logged-on user.

It may sometimes be the case that old incidents are not displayed. This is always the case, if the user has not been granted a sufficient research period. The research period can be adjusted as required in the user master data “time window” to between 1 and 9999 days.

If incidents are displayed, but the title and report relevant fields are tagged with the term --NA— instead of plaintext, then the logged-on user has no read rights (no access) to the respective event. Targeted queries can nevertheless be made, because the owner, a time stamp, the event type and the report area are legible

1.5 Network and offline operation

1.5.1 Automatic uploading

Adjustable time window, standard: 15 mins

The system tries to connect to the interface every 15 mins. and then automatically uploads the completed eForms in that time.

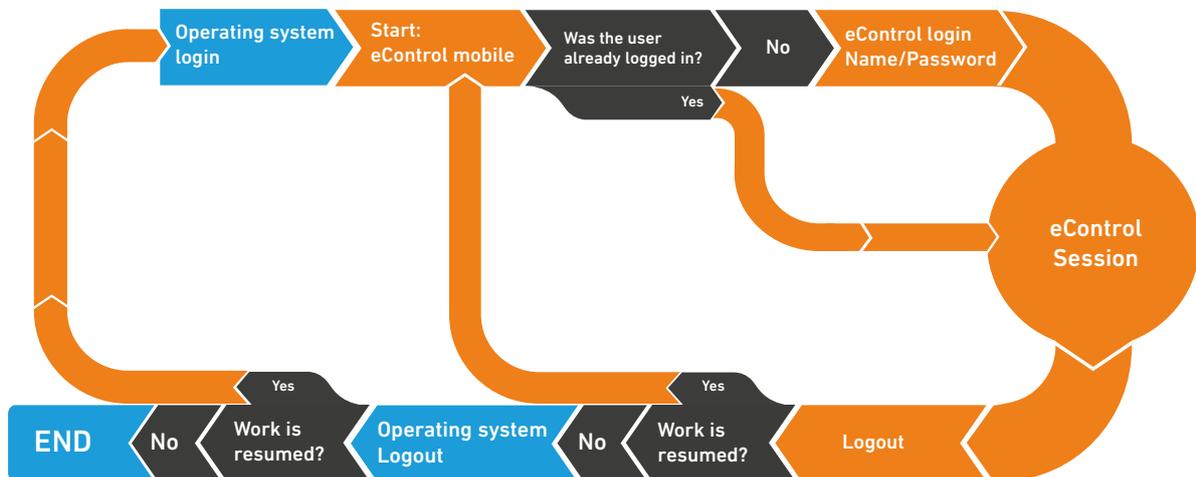
2 Administration

2.1 Authentication concept

eControl mobile uses a two-step authentication concept. This consists mainly of an operating system authentication, which identifies the user and enables secure saving of variable data in the profile of the respective user by means of NTFS. eControl can be started after a successful authentication.

If the user starts eControl for the first time or their eControl registration information has been amended, the user must log on to eControl with their name and password. The initial system logon is only possible if the user has network access.

As soon as a user has been able to successfully log on to eControl mobile, no further login to the mobile app is necessary, provided that the user has not explicitly logged out.

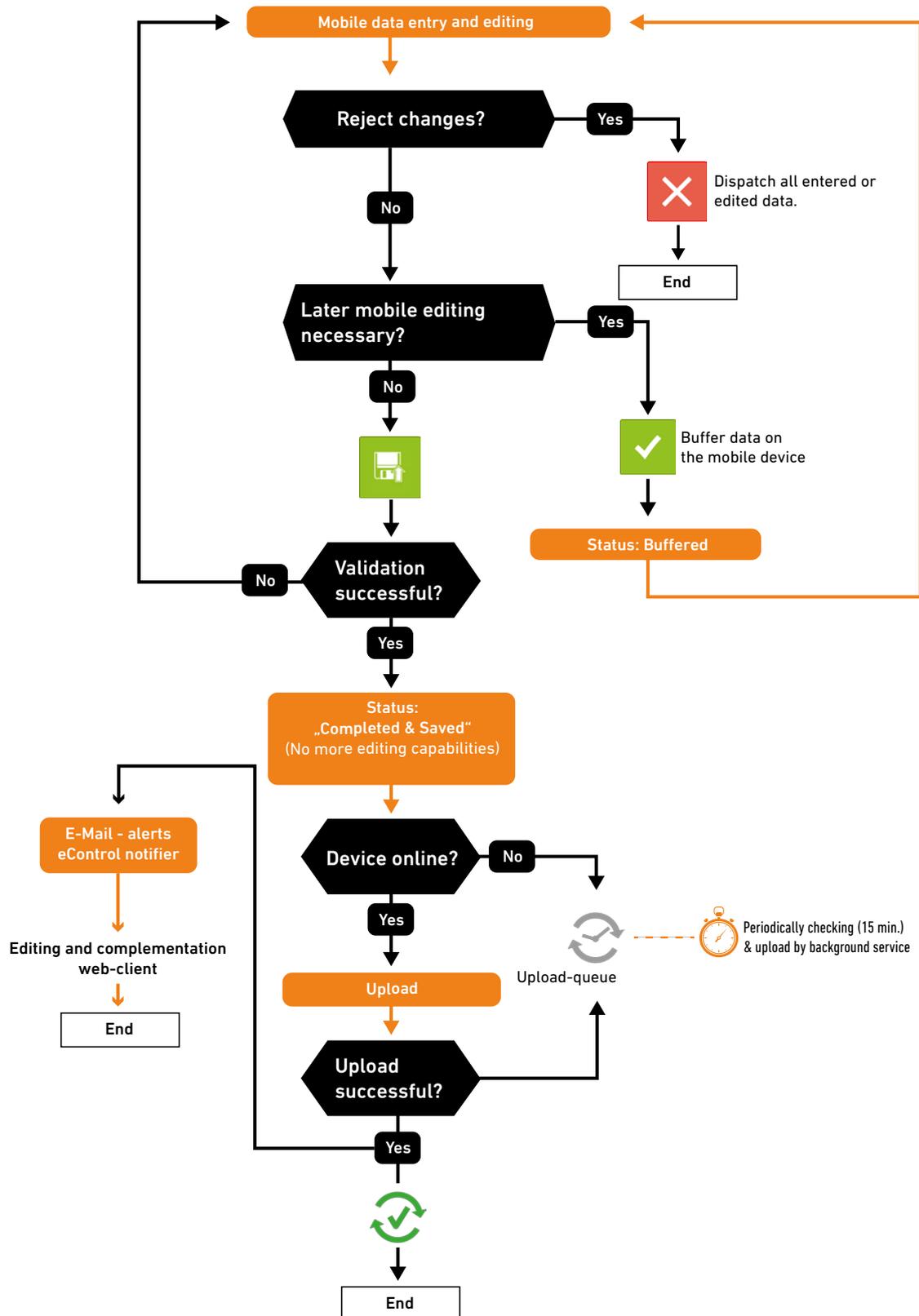


2.1.1 Collective accounts

Collective accounts can be used neither at operating system level nor in eControl mobile, since they are not compatible with the authentication procedure and the general system operating concept.

2.2 Transaction concept

The transaction concept is explained based on the flowchart shown below.



2.3 Universal form definitions

The system's electronic forms can not only be used on the workstation but also for mobile data entry.

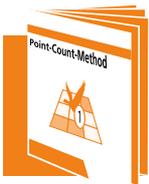
2.3.1 Mobile data entry for eControl software modules

Mobile entry forms showing specific additional functions have been developed for different software modules.

2.3.1.1 Bird Control (optional licensing)

There are four different eForms for the Bird Control software module, which display specific additional functions for a biotope management based on scientific criteria:

- Wildlife observations
- "Animal observations - Point-stop method"
- Cadaver findings
- Bird strikes



Information on our fast data entry system for animal observations and wildlife control can be found in the handbook: „Animal observation - Point-stop method“

2.3.1.2 Violation management

The eForm "Violation management" enables the mobile documentation of violations by those with regulatory responsibility.

Violations entered by mobile devices are directly transferred to the violation management workflow and drastically reduce processing time with an improved documentation quality



Information on the business processes of the violation management can be found in our Handbook „Violations“

2.3.2 Customer-specific eForms

Form definitions, which have been functionally adapted to customer-specific business processes, cannot be displayed as standard by a mobile device.

For technical and organisational reasons offline operation is often not possible with these incidents or control elements are used, which are not suitable for mobile entry.

2.3.3 Control elements

2.3.3.1 Mandatory field properties

A mandatory field must be filled out in order to definitively save an eForm or in order to be able to save it on a mobile device and transfer it.

The display of mandatory fields cannot be suppressed in the mobile form definition. Temporary saving of eForms is also possible if all mandatory fields have not been entered.

2.3.3.2 Headings

The display of a headline in the mobile form definition can be switched on or off via the checkbox Display in mobile version .

The "Line" attribute is not considered in the mobile device.

The expansion and collapse of screen elements is not supported by eControl mobile.

2.3.3.3 Alphanumerical text fields

The display of a alphanumeric text field in the mobile form definition can be switched on or off via the checkbox Display in mobile version .

Alphanumerical text fields are displayed in mobile Client irrespective of the adjustment in height in the attribute master data, which is necessary for complete display of the text.

The maximum text length in the mobile version is also 4000 characters.

The maximum display height in mobile Client is 15 lines.

2.3.3.4 Alphanumerical combination field

The display of a alphanumeric combination field in the mobile form definition can be switched on or off via the checkbox Display in mobile version .

Alphanumerical combination fields are displayed in eControl mobile as alphanumeric entry fields. Unlike the Web Client, data already entered is not pre-selected, in order to minimise the transfer volume to the mobile devices.

The maximum text length in the mobile version is also 4000 characters. It is displayed in single rows.

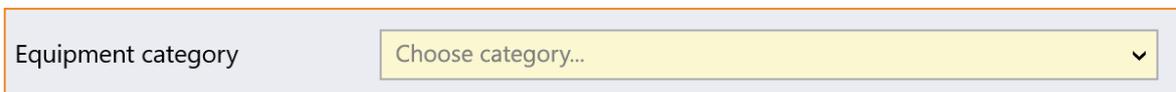
2.3.3.5 Value range combination field

The display of a value range combination field in the mobile form definition can be switched on or off via the checkbox Display in mobile version .

Value range fields can be displayed as selection buttons in the mobile device or as a drop-down-selection field.

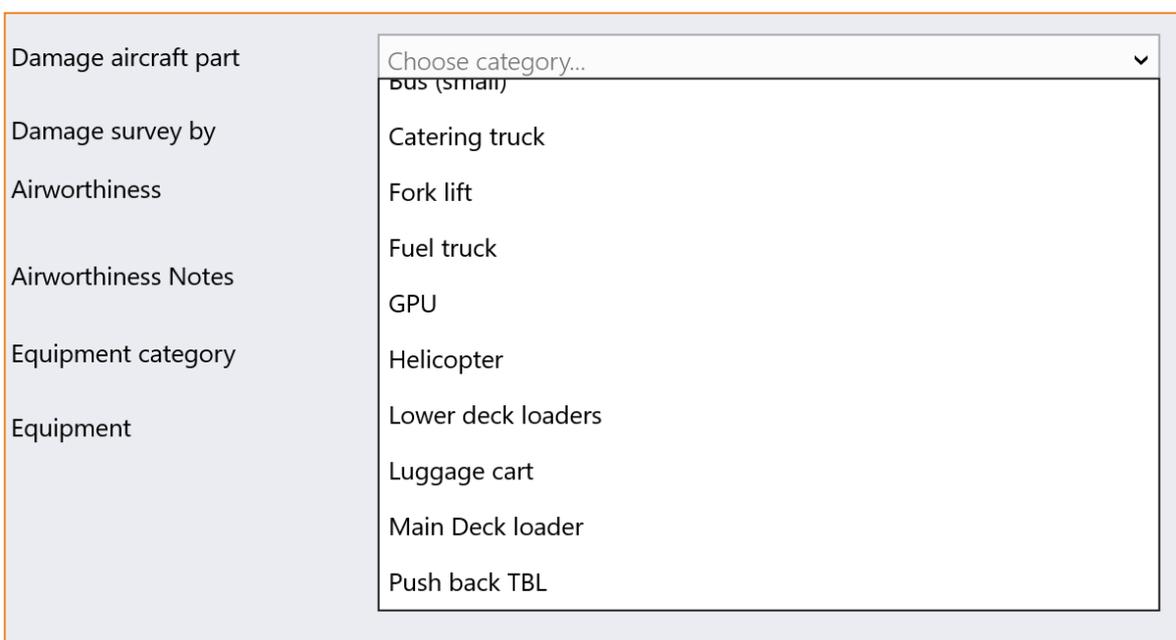
2.3.3.6 "List control" display option

In the "list control" display option, the combination field is displayed as a dropdown control element in the mobile Client:



Equipment category

A list of options for selection is displayed by clicking on the value list:



Damage aircraft part
Damage survey by
Airworthiness
Airworthiness Notes
Equipment category
Equipment

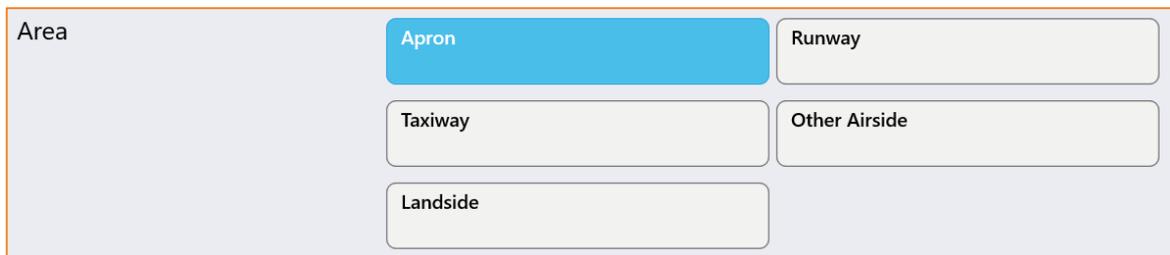
Choose category...
Bus (small)
Catering truck
Fork lift
Fuel truck
GPU
Helicopter
Lower deck loaders
Luggage cart
Main Deck loader
Push back TBL

Value lists are sorted according to the sort field of the value range data in ascending alphabetical sort order.

Value lists are displayed “indefinitely” – as soon as the last element on the value list is reached the list starts again with the first element.

2.3.3.7 “Buttons” display option

A separate button is provided for every element of the value list in the “buttons” display option. The buttons are listed from left to right and from top to bottom in ascending alphabetical sort order of the value range data sort field.



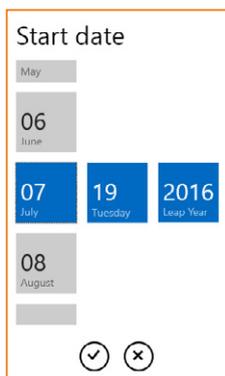
The buttons display option facilitates a simpler and faster selection of elements from a value range list.

The buttons display option can only be used effectively for value lists with few elements.

2.3.3.8 Date fields

Standard date:

The system provides input support for date fields. Clicking in a date field opens the entry dialogue shown below.

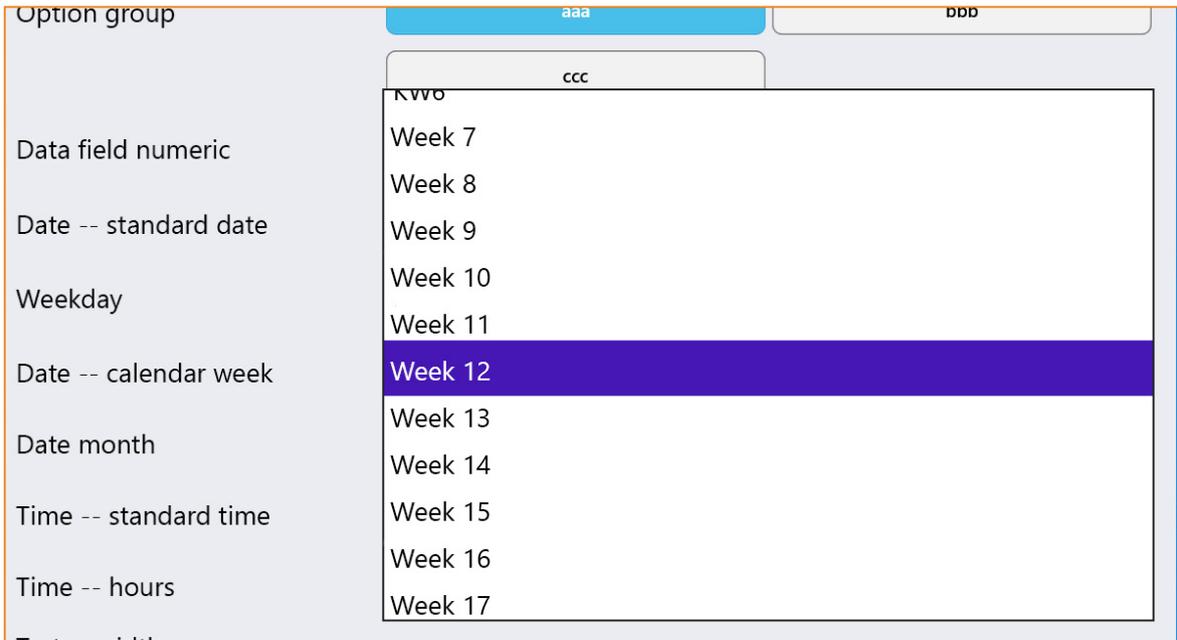


The changes are applied as soon as the entry has been confirmed by clicking on the ✓ tick.

Date fields can be dynamically preset with the server system date.

Calendar week:

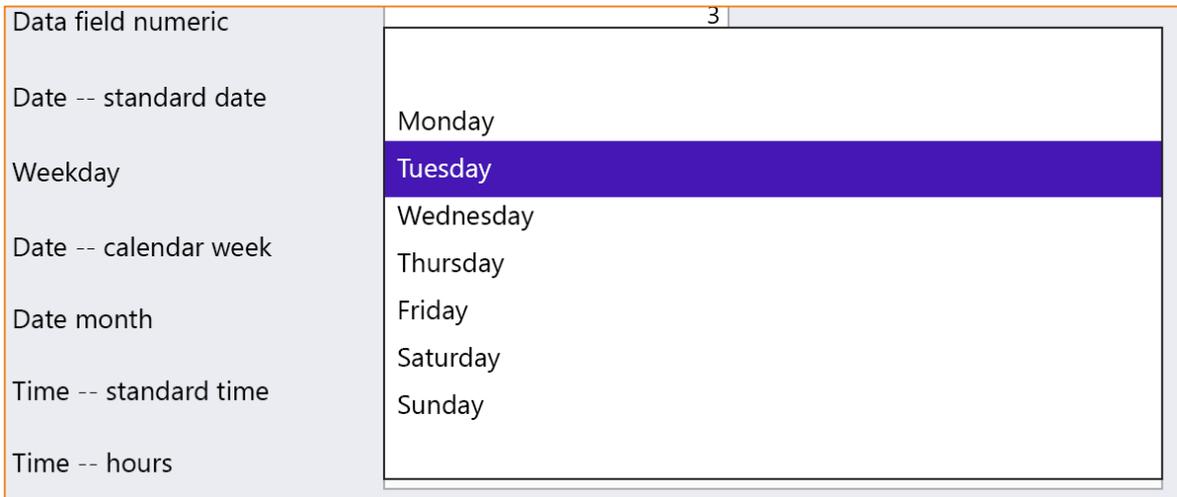
If the entry of a calendar week is intended instead of a standard date, the date field is listed as a dropdown list with the values Week 1, Week 2,..., Week 3.



The calendar week can be dynamically preset with the server system date.

Weekday

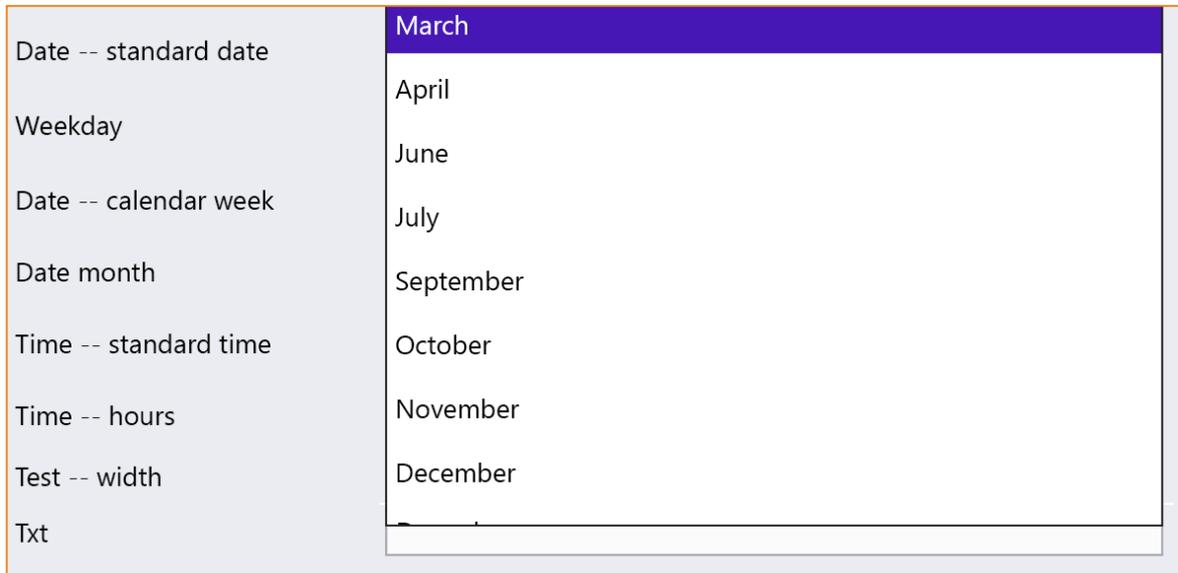
If the entry of a weekday is intended instead of a standard date, the date field is listed as a dropdown list with the values Monday, Tuesday,..., Sunday.



The calendar week can be dynamically preset with the server system date.

Calendar month

If the entry of a calendar month is intended instead of a standard date, the date field is listed as a dropdown list with the values January, February,..., December.

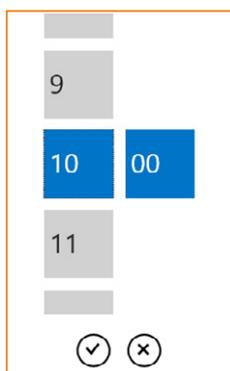


The calendar month can be dynamically preset with the server system date.

2.3.3.9 Time field

Standard time:

The system provides input support for time fields. Clicking in a time field opens the entry dialogue shown below.



The changes are not applied until the entry has been confirmed by clicking on the tick.

Time fields can be dynamically preset with the server system time.

2.3.3.10 Numerical Fields

The use of numerical fields is based on the capabilities of the Web Client, although decimal places and (measuring) units can also be specified here.

2.3.4 Control elements of routine inspections

The steps in routine inspection procedures are conceptually related to the “Value range combination fields”.

The user can also choose between the “Buttons” and “Dropdown field” options in this control element.

The screenshot shows the configuration interface for an incident attribute. The 'Incident attributes' tab is active, showing the configuration for an attribute with ID 309 and designation 'Damage'. The 'Field type' section is set to 'Combination field value range'. The 'Display option' dropdown is open, showing 'Buttons' and 'List control' options. The 'Incident attribute ID' is 309, and the 'Designation' is 'Damage'. The 'Field type' section includes options for 'Heading', 'Data field alphanumeric', 'Combination field alphanumeric', 'Combination field value range', 'Data field boolean', 'Option group', 'Data field numeric', 'Date', and 'Time'. The 'Combination field value range' option is selected. The 'Display option' dropdown is open, showing 'Buttons' and 'List control' options. The 'Display in mobile version' checkbox is checked. The 'Value range', 'Default value', and 'Note' fields are also visible.

Individual steps of routine inspection procedures cannot be selected for display in eControl, because the scope of the inspection should always be the same irrespective of the entry type.

2.4 User rights

The additional authorisation control for mobile eForms can be omitted as far as possible with eControl mobile.

Irrespective of this it must be taken into account, that not every eForm created with eControl aviation is also suitable for a mobile data entry.

Individual or user-specific eForms can be selected with eControl for mobile entry, which facilitates a simple adjustment to the field of application of the respective user.

For the purposes of a convenient and clear data capture, only eForms required by the user should be transferred to the mobile device.

2.4.1 Form allocations – who may enter which form with a mobile device? n?

2.4.1.1 Web and mobile entry

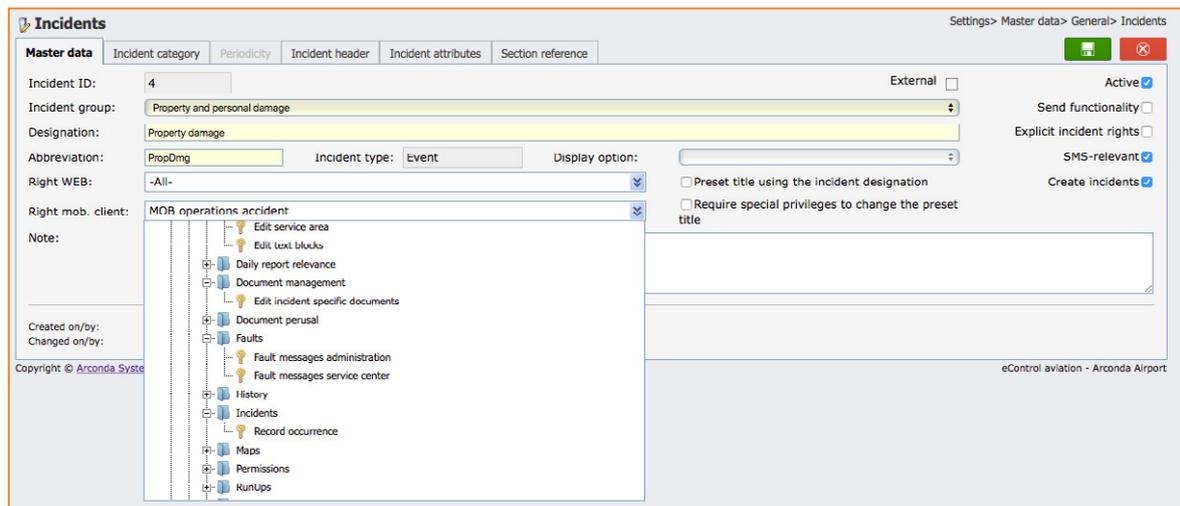
Mobile data access is set in accordance with the data entry procedure via Web Client.

Step 1: Creating a new user right

“Settings / Master data / User administration / User master data”

Step 2: Linking user right and event definition

The previously defined user rights can be defined as a prerequisite for the mobile entry of the currently edited form, as this is selected from the tree structure of rights.



In this way a user right can manage the mobile entry of one or several forms.

Every other available right can of course also be used for this control. If an appropriate user right already exists, the definition of a new law is not necessary. This would for example be the case, if the authorisation for mobile data entry corresponds to the authorisation for data entry in WEB.

On the other hand, a separate user right can be defined for every eForm, thus enabling an allocation of individual forms to specific users.

Step 3: User authorisation

The mobile data entry assumes that the user individually has the previously linked user rights.

2.4.1.2 User right: „***Not for mobile use***“

If the eForms are essentially not for mobile use, the “***Not for mobile use***” user right must be assigned.

(This user right should – according to the concept – not be granted to any mobile user.)

2.4.1.3 Message event

The so-called “Message” eForm is intended for the documentation of unspecific situations. The message event is external and can essentially be used by every user who as an eControl user has access to a mobile device.

2.4.1.4 Case Study

In the example below the user rights

- MOB General
- MOB Incident
- MOB Safety

are set up, to manage the mobile data entry of 20 eForms.

The user rights

- EXTERNAL: BirdControl administration
- EXTERNAL: Entry violations

are provided by the modules “BirdControl” and “Violation Management”.

	MOB General	MOB Incident	MOB Safety	EXTERNAL BirdControl administration	EXTERNAL Entry violations
Accident with externals		•			
Aircraft damage		•			
Accident with vehicle		•			
Aircraft-problem			•		
Animal collision report				•	
Animal observation				•	
Checksheet apron	•				
Deployment company fire department / rescue operation	•				
Incident / near accident	•				
Insecure situation (IED, broken seal on a/c)	•				
Medical emergency	•				
Message	-	-	-	-	-
Obstacle on apron			•		
Oil alert / kerosene alert	•				
Property damage		•			
Runway Incursion			•		
Violation			•		
Weather	•				
Work accident	•				
Work on flight opera- tions area			•		

2.4.2 Field rights

Who may enter which data fields?

The eControl aviation system ensures that the user rights which are necessary for processing data fields, are also enforced for mobile eForms.

With eControl it can essentially be established for every form field, which rights are necessary for editing - or more restrictively - for editing and inspection of the field contents.

If the logged-on user does not have any of the rights assigned, the data field cannot be edited in Web Client. The field is displayed as deactivated in the browser.

In order to make the form display in eControl mobile as simple as possible, generally no data fields are transferred, for which the user does not have the required access rights. These data fields do not appear in the mobile eForm.

2.5 Location data

2.5.1 Location standard

Only aspects of the local coordinates relevant for mobile data entry are listed in this handbook.

eControl location data entry is generally based on the WGS84 standard of the World Geodetic Society. The WGS 84 standard has been adopted for aviation by decision of ICAO 1989.

2.5.2 Traceability

The long-term traceable saving of geo coordinates with regard to authentic map material at the time of the event is ensured by the use of static maps, whereby different image formats can be supported.

Previous map versions are archived with an update of the map material in the map master data under "Settings -> Master data -> General -> Maps..."

In the case of access to older saved eForms the version of the map material is always used, for which the time of entry was used on the mobile device or in Web Client.

2.5.3 Mobile standard map

A map can be classified in the map master data as a "Mobile Map".

The field „Map type“ must be set as "Mobile".

The mobile Client is designed as standard for the use of a single map. This map must therefore cover the required localisation and be available in an image quality, which allows a sufficiently good zoom.

2.5.4 GIS

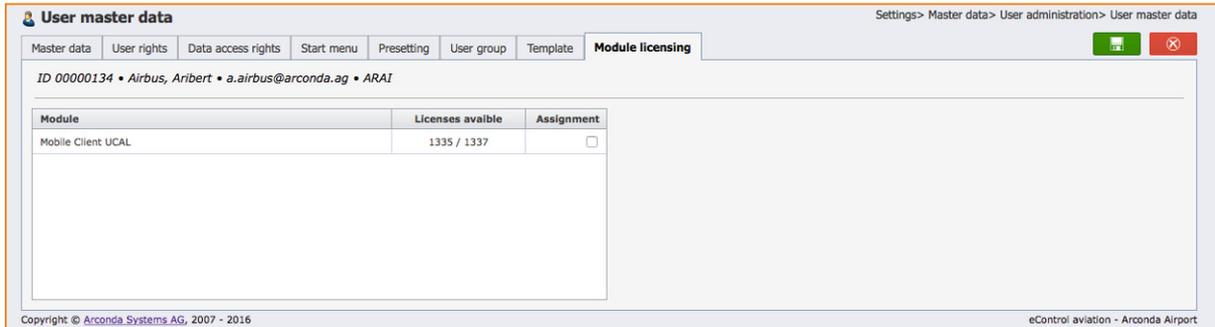
If desired, different customer-specific GIS systems can also be integrated into the Web application.

2.6 User administration and licensing

The use of the mobile Client requires user-dependent licensing in eControl.

2.6.1 Setting up user master data

The use of eControl mobile by a user assumes that they have been assigned a mobile Client UCAL (User Client Access License) in the user master data dialogue.



The "Licenses available" column provides information on the number of licenced Mobile Client UCAL Users and the UCALS used to date.

The number is updated after saving the licence allocation.

2.6.2 Licence check when logging in

eControl mobile prevents access without valid UCAL licensing. A negative check result is indicated by the following reference:



In this event the interdisciplinary system administrator must be consulted, in order to provide the licensing in the user master data dialogue.

2.6.3 Transfer of UCALs to new users

As soon as a user is no longer able to perform mobile data entry operations, UCAL licenses may be transferred to another user.

The UCALs must firstly be withdrawn inside the master data dialogue described in section „[2.6.1 Setting up user master data](#)“.

After a seven- day blocking period they may be assigned to any other system user.

eControl

Process Management | Operation Management | Safety Management | Audit Management | Qualification Management | Compliance Management | Environmental Bird Control Management

Customers:



Customers international:

