eControl

General Product Catalogue

ARCONDA.systems

eControl

process.safety.first

Index

Page

Publisher: Arconda Systems AG
Sportallee 6
22335 Hamburg

Date: 03 / 2015

Editors: Frank Espenhain
Pascal Rohmann

Layout&Graphics: Torben Petrina

Foreword

„eControl - a catalyst for process management“

eControl is a powerful software product for overseeing processes and promoting progressive improvement for those who understand process management to be a process of continuous improvement.

eControl's user interface is so intuitive that electronic forms can be utilized with minimal effort within your different business departments. These electronic forms generate a data stream which makes business control easier or creates completely new management possibilities.

The concept of eControl is not sector-specific. With eControl every enterprise can improve the efficiency of its process-oriented management systems. eControl is a universal toolbox, which encompasses a variety of previous best-practice solutions and which continues to absorb them.

In order to realize your stated objectives with eControl, your employees must be able to use this software product correctly as well as - putting altogether greater demands on the staff involved - evaluate content objectively, have a sound methodical approach, demonstrate a good knowledge of processes and framework conditions, and above all to share the vision for process improvement.

With these preconditions, eControl is a toolset to inspire your processes and related qualitative, security-specific or business management tasks. This technical product catalogue gives a general overview of the significant functions of eControl. There are whitepapers available for particular tasks - please ask us.

After nearly 10 years in development, eControl, including the optional modules, covers many business sectors. We would like to thank our users at this point, they have inspired many of the developments and ensure that future module developments will meet the demands of our customers.

Please enjoy reading this product catalogue.

Frank Espenhain
CEO

Cornerstones of success

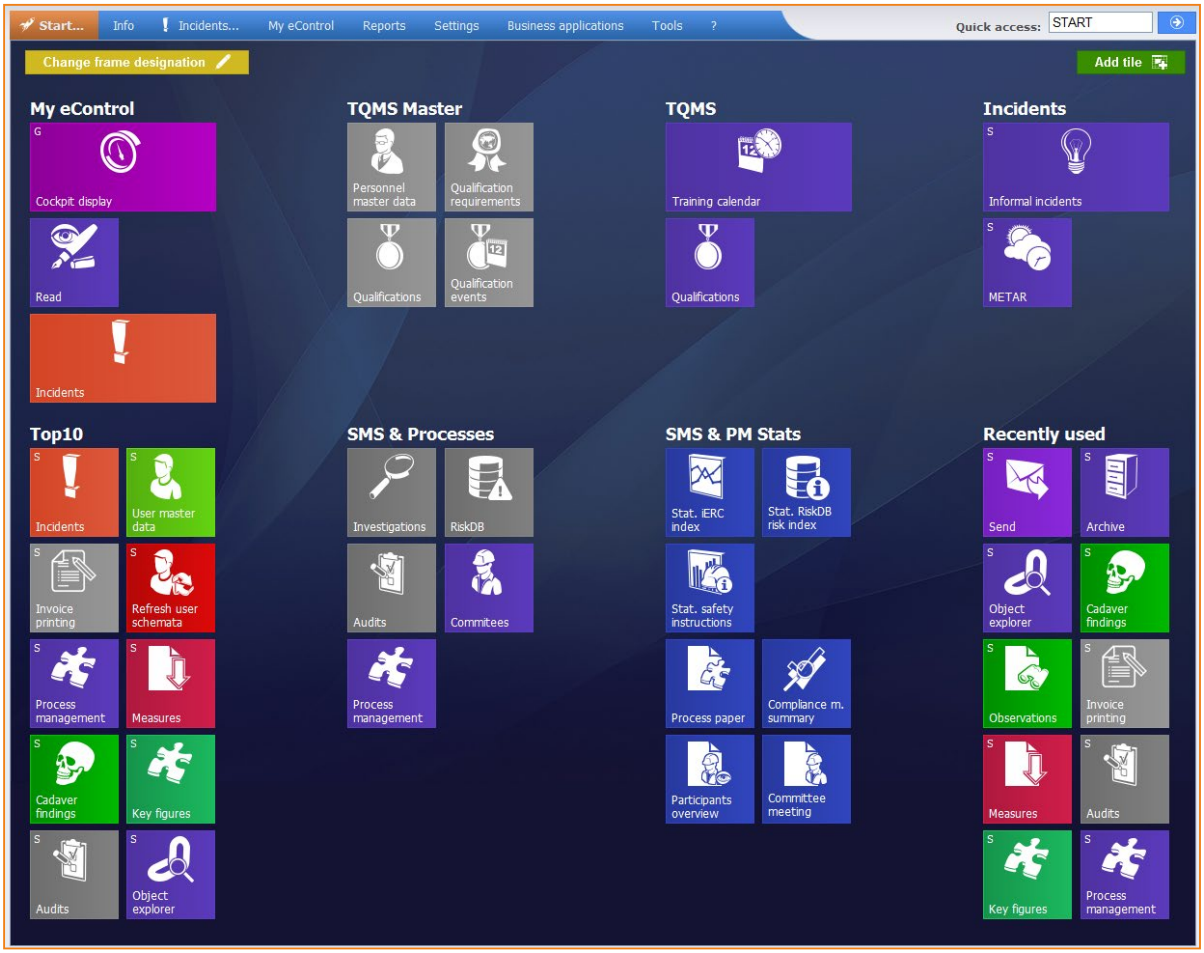
Modular design and company-wide utilization

eControl is a modular software system to support company-wide process management.

eControl Basis offers you a universally applicable web-based software tool which generates process information through the use of (customer-designed) electronic forms; these - when routinely analysed - provide the basis for a continuous improvement process.

Where necessary, each electronic form can be used as an electronic file to concentrate all available data into one event.

eControl contains as a matter of principle a tamper-proof audit trail which gives rise to a digital event archive that not only fulfils all requirements for documentation and investigation, but also the most stringent requirements for data protection and data security.



eControl Basis

eControl Basis is the backbone of the software product eControl. eControl Basis contains all the system components required for the use of eControl as a company-wide process management system. The scope of service of eControl Basis is described in detail in this technical product catalogue. eControl Basis is the technical prerequisite for the use of further modules.

SMS Safety Management System

SMS adds specific functionalities to eControl Basis for the operation of an efficient safety management system. The following components are relevant

- **Risk management**
  - RiskDB – risk inventory
  - Operation Risk Assessment – IERC (Initial Event Risk Classification)
- **Investigation management**
- **Committee management**
- **Safety indicators**
- **(Anonymous) safety tips**

TQMS Training and Qualifications Management System

eControl TQMS contains all the software components necessary to implement an integrated training and qualifications management system built on an eControl Basis. The TQMS module enables process management to be extended to include staff components. TQMS contains a staff management system, dialogues for the administration of qualifications and qualification events, and a mail centre to automate communications.

The Read & Sign system is also embedded in the TQMS module; this supplies the link from process versions and documents to actual staff qualifications.

Bird Control

Bird Control is an avifaunistic module for biotope management and the prevention of bird strikes and collisions involving wildlife in the air industry. Bird Control comprises specific forms to generate a database which meets scientific standards and serves as underlying data for a great number of highly specialized Bird Control report generators. Bird Control also contains ports for data exchange and an interface for the administration of ecological criteria.

Audit Management

The audit management module facilitates and expedites the management of internal, external and supplier audits. Audit management can be implemented independently in different departments across the company. Audit catalogues make it easier to carry out similar audits. There are a number of different procedures available for classifying deviations.

Integrated eControl measure management is used for the planning, execution and control of the effectiveness of corrective and preventive measures; this means that employees can be specifically authorised to access and process individual audits.

Complaints Management

The complaints management module enables the efficient and reliable processing and analysis of complaints. Communication with complainants is made quicker through the use of editable form letters. The departments involved are integrated where appropriate into complaint processing and the assessment and development of countermeasures. Different hierarchical classifications according to the type of complaint or organizational structure facilitate statistical analysis of complaints.

Sound Proofing

The passive sound proofing module serves the administration and pursuit of development measures in the field of passive sound proofing. In the process, eControl can be customized for individual business processes and offers flexibly designable application data and process workflows. Form letters standardize, facilitate and expedite communication with applicants.

Amongst other considerations, the module serves to determine the best possible sound proofing for objects and rooms within legal parameters; the controlled processing of cash flows; digital and tamper-proof archiving of application data; and the assignment of cadastral data in conjunction with GIS Geoinformation systems.

Several statistics are available for the control of applications, and on the basis of an optimized data model these provide convincing figures on potential development areas, cost types etc.

eForms

Appropriately designed electronic forms

Process information at the press of a key

Every enterprise uses countless paper forms, each of which is more or less carefully filled out. In business practice the use of and management in using these paper forms is often not described in sufficient detail in the procedural guidelines. In many instances the design of the forms does not fulfil all business needs.

However the most serious disadvantage of paper forms is that any analysis of information they contain can only be achieved through a disproportionately large amount of effort. Information needed for making decisions cannot be provided quickly and decisions must therefore be made without objective process information.

Search, quality and the audit trail

When eForms are created it is automatically clear by whom, when and how the data will be logged and processed, and whether, in particular situations, other employees need to be informed. For every data field it is instantly obvious which analysis options the database offers. The mandatory fields ensure that all the most important information will be logged.

This structured process of creating electronic forms, or eForms, leads automatically to more intelligent forms and thereby to a qualitative improvement in the information on the form with less effort being required in logging it.

The design of eForms is based, content- and layout-wise, on existing forms. A look in the archive reveals that a variety of fields were never used, others used inappropriately, and some data entry fields, required for a focused analysis of form data, are unfortunately missing. In a form designed by eControl, all data fields can in principle be analysed and used in searches.

A company-wide database

A paper form is filled out, if necessary duplicated, and taken to different recipients who then themselves make entries. This same process then exists in a number of different documents; the same fields or information must be added repeatedly by a number of different people. With the use of eForms this repetition of data entry is prevented and any inconsistencies in databases are overcome.

Dispatch at the press of a key or fully automatically

Each electronic form can be e-mailed as an unalterable PDF along with any attachments. Electronic forms can be sent effortlessly and postage-free in real-time.

eControl Notifier is able to send e-mail notifications fully automatically.
A set of rules fully automatically analyses electronic forms and sends e-mails as soon as the acceptance criteria have been met.

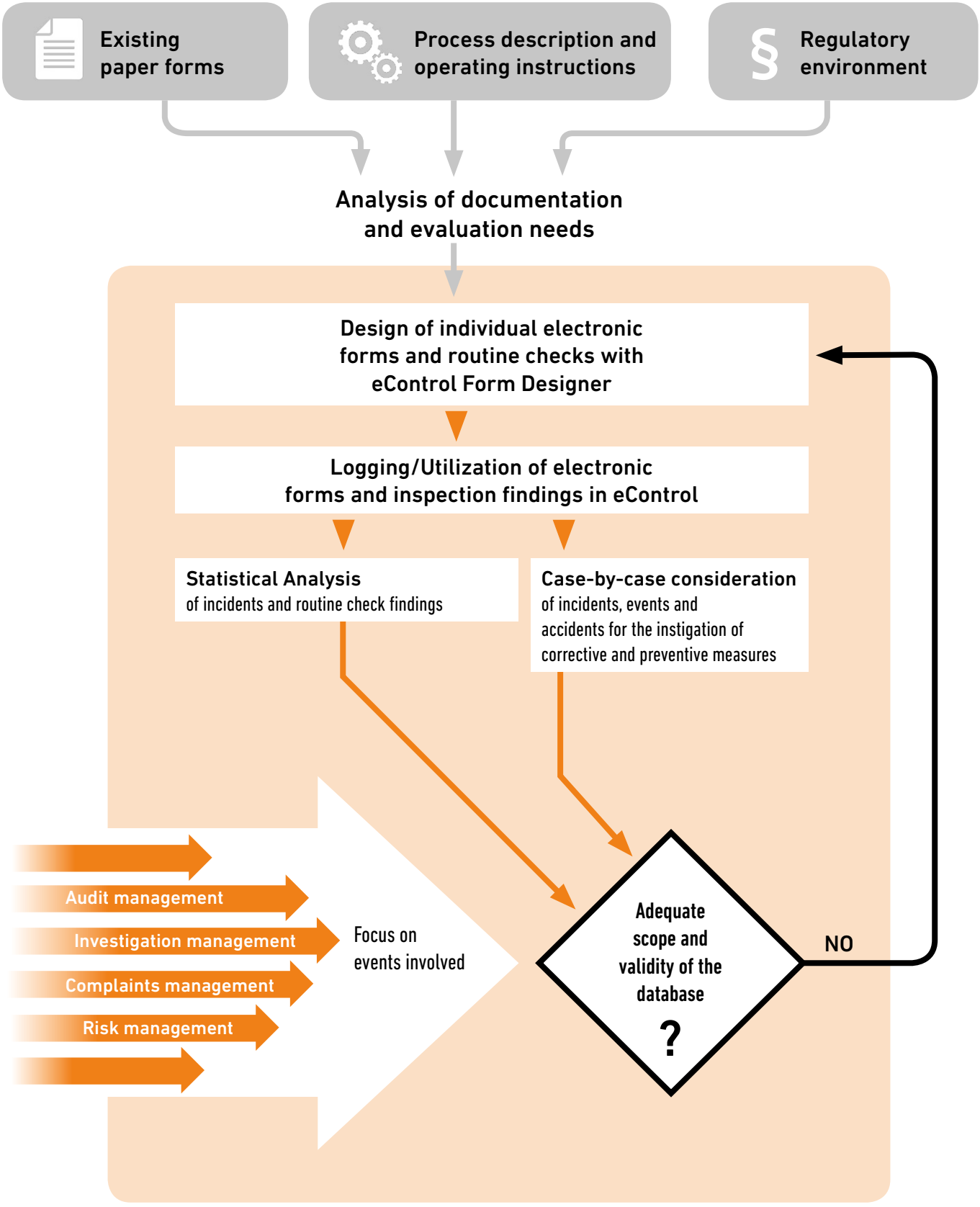
Digital signature always included

The user must personally authenticate when creating or processing a digital form in eControl. The database knows every identity and uses this knowledge to document every entry or change with information on who has made the entry, when and which values have been stored or changed. If the forms are to be processed by a number of different employees, it is clear who has done what and when. With eControl the flow of forms is digitalized throughout and provided fully automatically with a signature.

Routine checks

Routine checks are implemented in order to monitor procedures and processes at regular intervals. They are carried out either at predetermined time intervals and/or as required. Any deviations that show up during the routine checks at particular test points are of particular interest for the instigation of corrective measures and optimization of processing procedures.

Apart from electronic forms, eControl can also produce inspection catalogues for electronic checks which enable system-technical collection and further processing of the inspection findings. eControl provides the same functions for electronic checks as for eForms - from e-mail notifications to statistical analysis to a tamper-proof audit trail.


Existing paper forms
Process description and operating instructions
Regulatory environment
Analysis of documentation and evaluation needs
Design of individual electronic forms and routine checks with eControl Form Designer
Logging/Utilization of electronic forms and inspection findings in eControl
Statistical Analysis
of incidents and routine check findings
Case-by-case consideration
of incidents, events and accidents for the instigation of corrective and preventive measures
Audit management
Investigation management
Complaints management
Risk management
Focus on events involved
Adequate scope and validity of the database
?
NO

Division of labour and delegation

Identification and management of relevant forms

Electronic forms offer standardized data preparation in real-time for all those involved in the process. eControl supplies a variety of Best Practice organizational aids for the flexible and comfortable integration of those involved in the process. The system is focused on the management and identification of electronic forms which are relevant to those involved in a particular process.

Access rights

– Which processes am I authorised for?

Access rights are vital in a system that deals with personal and sensitive business information. eControl provides forms which match the user's authorisation level and filters out events for which no processing is planned.

Reporting area

- Which processes are relevant to my area?

Each eControl event is assigned to one or more organizational units. These reporting areas are pre-set for data entry according to user. Reporting areas enable access to electronic forms corresponding to the organizational structure of the company.

Processing status

– Where is action needed?

eControl forms pass - where required - through a workflow, from data entry via processing to finalization or completion by the process.

For the user, closed events tend to be more informal. By looking at the processing status users can specifically access forms which require further processing. A closed event can-not be processed subsequently without special access rights. This 'closure' ensures that agreed form contents will be saved unchanged for the long-term. This approach lends itself particularly to key indicator-related form contents.

Feedback

- Is there a need for clarification?

Every electronic form and every routine check can be supplied with a feedback flag to indicate a general need for clarification. The feedback status can be changed several times in the course of processing.

Release

– Has everything been entered in full and correctly?

On the 'release' of electronic forms, a record is made that the form contents have been checked by an authorised staff member and have been found to be error-free. The right to release is normally the remit of line managers who control and implement process-, data protection and organizational requirements.

Released forms can continue to be processed by those involved, but with this new processing they automatically lose their released status - unless the user is entitled to authorize release and would like this status to be maintained.

Priority

– Meeting the needs of management

Every electronic form can be given a priority status. Since the prioritization of events is closely tied to the process descriptions of a respective company, priority scales can be con-figured according to requirements.

Every form with priority status helps higher-level office holders to filter events with particular significance from normal day-to-day operations. Priority status can also trigger the automatic dispatch of e-mail notifications (cf. eControl Notifier (p. 27)).

Inspection findings

- Were there deviations in the system?

Routine checks are particularly important from the point of view of processing if defects or deviations were found and recorded during the checking procedure. eControl enables targeted filtering and statistical analysis of checks that contain complaints.

eFile

– Where was information already consolidated?

Electronic forms which already contain attached documents, which have given rise to a need for immediate measures to be taken or were the subject of a risk assessment can be specifically filtered and are thus a flexible indicator for the viewer of events of particular concern.

Temporary storage
– Data processing

The documentation of an event can take a few seconds or longer in the case of more complicated matters. Prior operational requirements can if necessary bring the processing of an electronic form to an immediate end on-screen. eControl commands a temporary storage of events in which information can be saved in a tamper-proof way and distributed in real-time, as well as being given temporary storage status which indicates to all involved in the process that recording or processing has not yet been completed. Automated e-mail notification for all those involved in the process (p.27) is stopped during temporary storage so as not to overload the company's information system unnecessarily.

Cost centre, revision status, QS System, product code...

eControl offers 50 alphanumeric, numeric or data fields which can be defined as required as a component of every form and routine check. These data fields are predestined for a company- specific management and classification of electronic forms.

Multi-stage procedures for complex structures

With a combination of the tools mentioned above for filtering and managing the use of electronic forms and routine checks, even the requirements for complex operational procedures can be met. eControl offers many options to make the most of model-specific opportunities. Our consultants will demonstrate established procedures to you which can subsequently be rolled out independently for other departments or company sectors.

Who has classified what and when?

Every adjustment and modification made to an electronic form or routine check is documented in a tamper-proof way. The audit trail keeps a record of who configured what and when - in plain text and without the need for specific knowledge of the system. The contents of and staff involved in an electronic form can be retraced at every stage of the process. The automatic dispatch of e-mail notifications is also logged.

Form designer

Free design of company-specific forms

eForms - as individual as your business

The forms your business uses reflect your processes and have to fit individual organizational requirements. The continuous development of your processes makes the occasional adjustment to the forms used inevitable. eControl Form Designer is an intuitive software component for the creation and maintenance of electronic forms.

With static or system-determined forms the process supervisor will arrive at a situation where he may have to do without extra information which is relevant for effective process management.

Furthermore, implementing risk analyses or investigations can mean that information that is relevant for confident decision-making, has so far either not been recorded or has been recorded in an unsuitable way. After an adjustment in the form definitions this information will at least be available in the future.

With eControl you have an efficient form designer which can create any electronic form and with which existing form definitions can be customized independently to meet changing needs. eControl does not handle the intelligent design of your forms for you in terms of data flow and information to be extracted from the database. However with Form Designer we offer you an interface for needs-based design as well as near-effortless filling out of forms on screen.

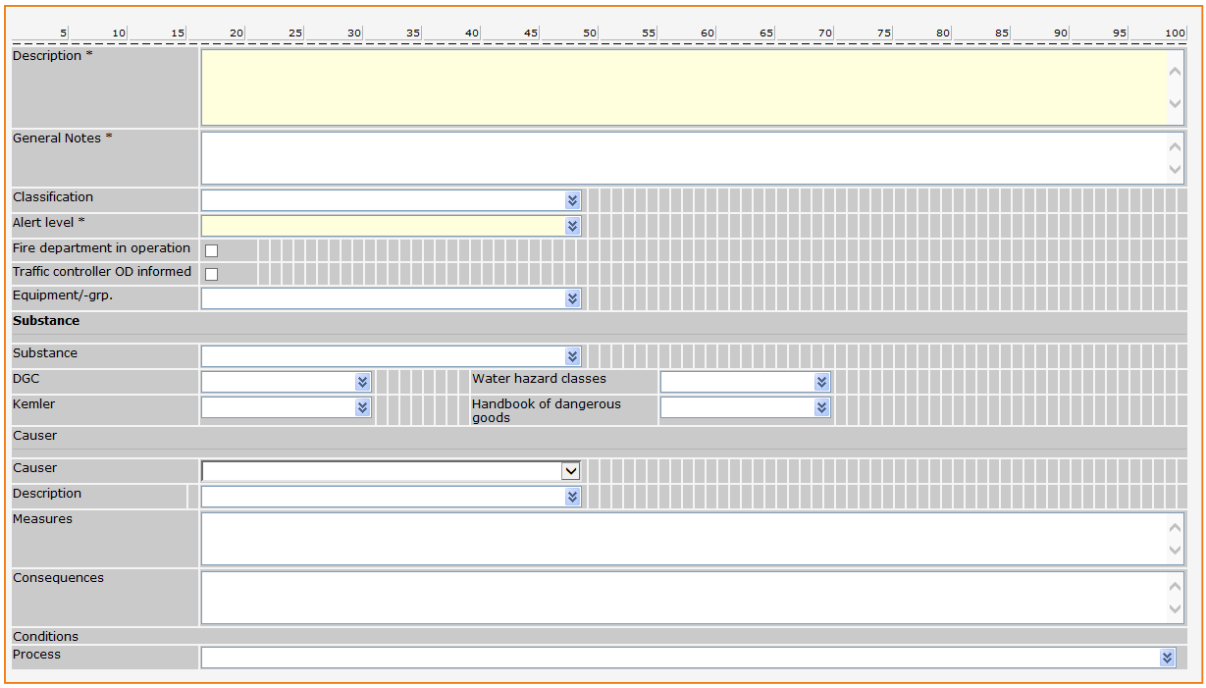
With eControl Form Designer you have the instruments you need to integrate eForms into your operational procedures and thereby collect process data which are needed for your continuous improvement process.

Historization of form definitions

A modified form definition may only affect files which will be filled out in the future. Electronic forms logged in the past are unaffected by this change and will remain unaltered. It is easy to see whether form fields have not been filled in due to lack of information or whether at the time of data logging they did not exist. The historization of the form design is as tamper-proof in eControl as the storage of user data.

Form fields - endless freedom of design

In contrast to paper forms, electronic forms support the user in many ways. eControl provides different features to make the data logging of electronic forms easier, more secure and faster. Conceptually, the data fields of paper forms have been reproduced in eControl Form Designer with added control elements. These control elements can be positioned anywhere on the form to suit ergonomic and organizational considerations.



Value ranges – valuable help with logging

Free definition of value ranges and their related data is a prerequisite for the structured logging of more complex classifications and, at the same time, allows information to be analysed. For example, for types of accidents you can create an individual value range called ‘Accidents’, for which you then specify the value range data ‘Near accidents’, ‘Accidents requiring first aid’ and “Accidents with subsequent absence’.

When it comes to the later completion of this form the user will be able to choose an appropriate accident type from these three value ranges.

It is clear that value ranges considerably improve structured data processing and thus also the sensitivity of filter criteria in data searches. The validity of statistical analyses can also be substantially improved in this way.

Mandatory fields

The management of business processes or workflows can depend considerably on single form fields. If appropriate, eControl Notifier should automatically send an e-mail to the insurance agent if material damage has occurred caused by the company's own employees. In this case the electronic form must include the form field "Own staff yes/no" which must always be filled in (mandatory field) so that the eControl notification service knows reliably whether or not to send an e-mail.

With eControl Form Designer any form field can be designated a mandatory field - however, if you do this you cannot save the electronic form without entering a valid field value in this data field.

Pre-sets

Filling out forms is made quicker by customizing form fields with pre-sets. By minimizing the amount of effort needed to enter data you will gain acceptance from users and standardize obligatory information.

eControl allows individual pre-sets for every form field, whereby dynamic values such as the date, system time etc. will also be pre-entered. User-dependent pre-sets can be defined in user administration.

Documentation and data quality

The correct procedural use of electronic and conventional forms requires a good knowledge of particular operating instructions and process descriptions. eControl allows detailed instructions to be saved for every form field; these can explain purely software-related help topics to do with entering data, as well as subsequent business-related use for the data. This encourages the user to complete the form fields with enough detail.

With eControl these instructions will appear automatically as soon as the cursor hovers over a particular data field. When the electronic form is printed out as a data acquisition form in paper copy, the instructions can be printed out as an optional footer.

Emphasize the essential

Often, just a few form fields are enough to categorize an event in principle and thereby check that the correct procedure can be initiated. Focusing down to the essential form fields is a precondition for summarized shift reports or for the automatic dispatch of news through eControl Notifier. Recipients do not have to wade through a wealth of detailed information in order to pick out the essential points. In eControl Form Designer, any data field can be classified as 'relevant'. When logging electronic forms with eControl these re-porting-relevant form fields can be highlighted.

What you see is what you get!

eControl Form Designer provides a "What you see is what you get" (WYSIWYG) preview for the form definition. This feature speeds up the design of forms from an ergonomic and qualitative point of view.

We would like to highlight here a further interpretation of the WYSIWYG standard.

What you see *…is the electronic form*

The user demands that the forms are intelligently structured and easy to use as well as robustly made. eControl Form Designer makes this job easier for you.

What you get *…are data*

You expect the user to appreciate your electronic forms and to fill them in completely and carefully every time.

Define, search, evaluate and lawfully document

As soon as you add a new form field to a form definition, this fully automatically becomes available in form-specific search masks for targeted search requests or data filters. The contents of these new form fields can be statistically analysed by default and additionally used in various statistics to filter data. Of course, every added or altered data field will be recorded in the legally robust audit trail.

Field rights and Workflow / Form management

Form-based workflow management assumes as a rule that forms are added to by organizational units while the resulting processing is undertaken by other departments or specifically authorised staff.

eControl realizes workflow management through access rights for individual form fields. For every form field users and user groups can be specified that may read and/or process form contents. eControl's authorisation system ensures that the allocation and maintenance of these rights will remain clear and straightforward.

Data field rights are also used for the implementation of data protection requirements; they have been configured for form fields to indicate content relating directly or indirectly to people.

Routine checks

Planning, monitoring, documenting and statistical evaluation

Routine checks are an efficient tool for the verification, maintenance and continuous improvement of the process level. The implementation of routine checks is usually described in procedural or work instructions and is documented using checklists. eControl provides these checklists in digital form.

Routine checks are also modelled with eControl Form Designer. eControl's system standards are applicable to electronic forms and routine checks and help to facilitate system operation.

Checking procedure

One routine check can include any number of steps in the checking procedure. eControl's electronic routine checks ensure that checking procedures are documented in the same way as standardized acceptance criteria. This is a necessary prerequisite for robust statistical analyses of routine checks.

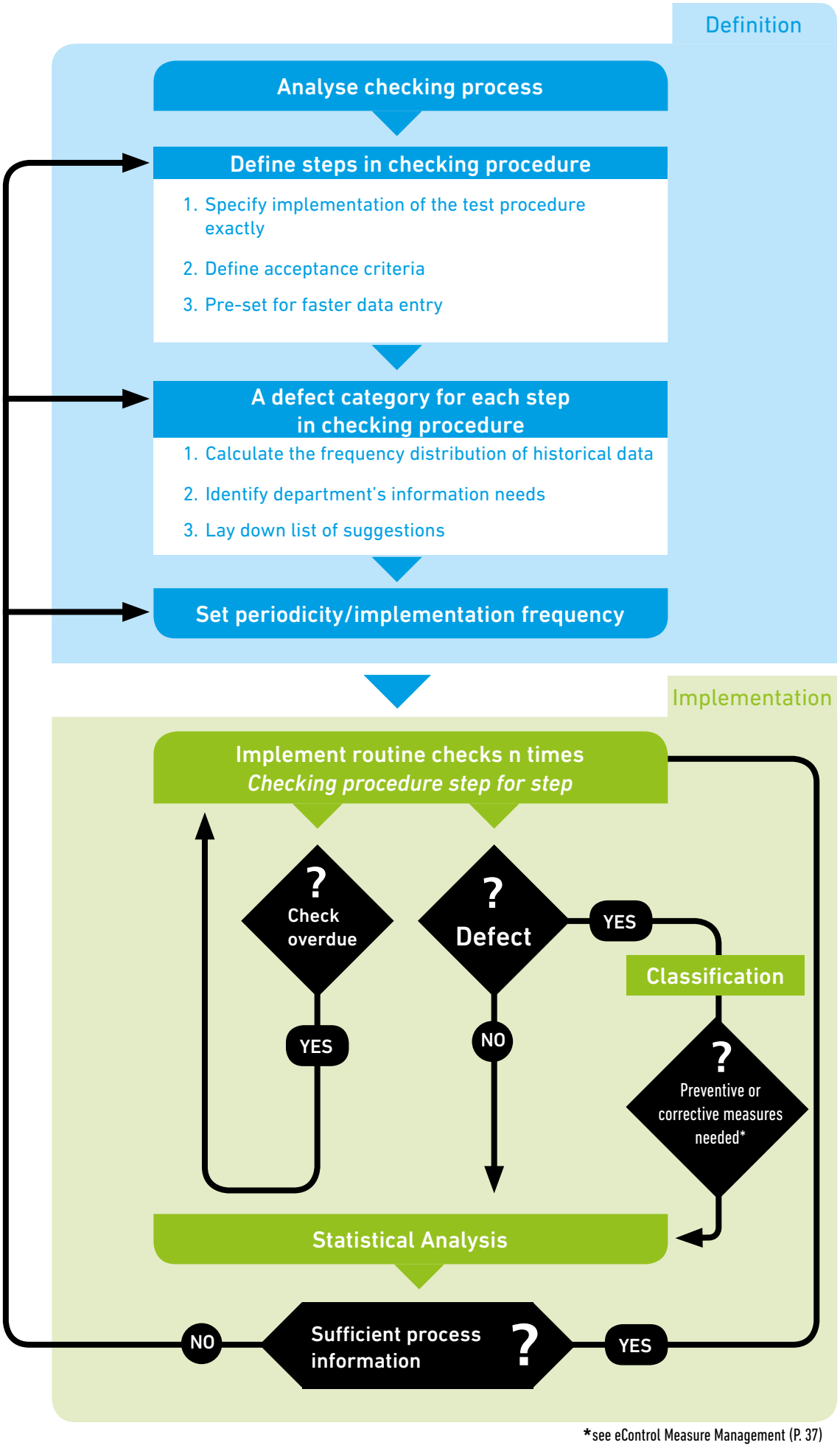
There are instruction fields to record detailed technical definitions of the steps in the checking procedure which are intended to simplify on-screen data entry with the aid of data collection forms or checklists. To speed up the transfer of checklists into the system, test points can be pre-set as 'defect-free'. For each step in the checking procedure, lists of suggestions can be lodged for probable defects. These lists speed up data processing and contribute to the standardization of fault descriptions. This standardization is the key to optimal statistical analysis of routine checks.

Defect categories

Establishing defect categories then enables quick data recording through selection from a list of suggestions. The use of standardized defect categories is the basis of good statistical validity since similar types of defect will fall into the same defect category.

Establishing these lists is a demanding task which must also take account of the process supervisor's need for information. In eControl any number of lists of suggestions can administered using value ranges.

As it is neither practical nor possible to provide suggestions in advance for all the defects which occur, individual defect descriptions can be used at any time.



*see eControl Measure Management (P. 37)

Periodicities - implementation plan

eControl offers numerous ways to plan regular implementation of routine checks. eControl can execute daily, weekly, monthly and yearly checks at flexibly determined time intervals. The timing or frequency of the checks can also be determined (for example, an implementation plan may specify 50 checks).

The implementation plan enables the system to compute whether all the checks have been carried out or whether there have been deviations during implementation. eControl provides a report for the process supervisor of overdue routine checks.

Routine checks versus Audit Management

The audit management module can also deal with test points or questionnaires.

Whereas routine checks are carried out regularly according to the implementation plan by strategic organizational units, audit management is mostly the responsibility of business departments, which plan, prepare and document audits and then oversee the implementation of measures.

In practice, a business audit cannot be undertaken in half an hour, it could take a number of days and involve an inspection catalogue which is equally extensive. It is clear that different management functions are needed for routine checks than for audit management - for a description of audit management please refer to our product catalogue “Safety management”.

From eForm to eFile

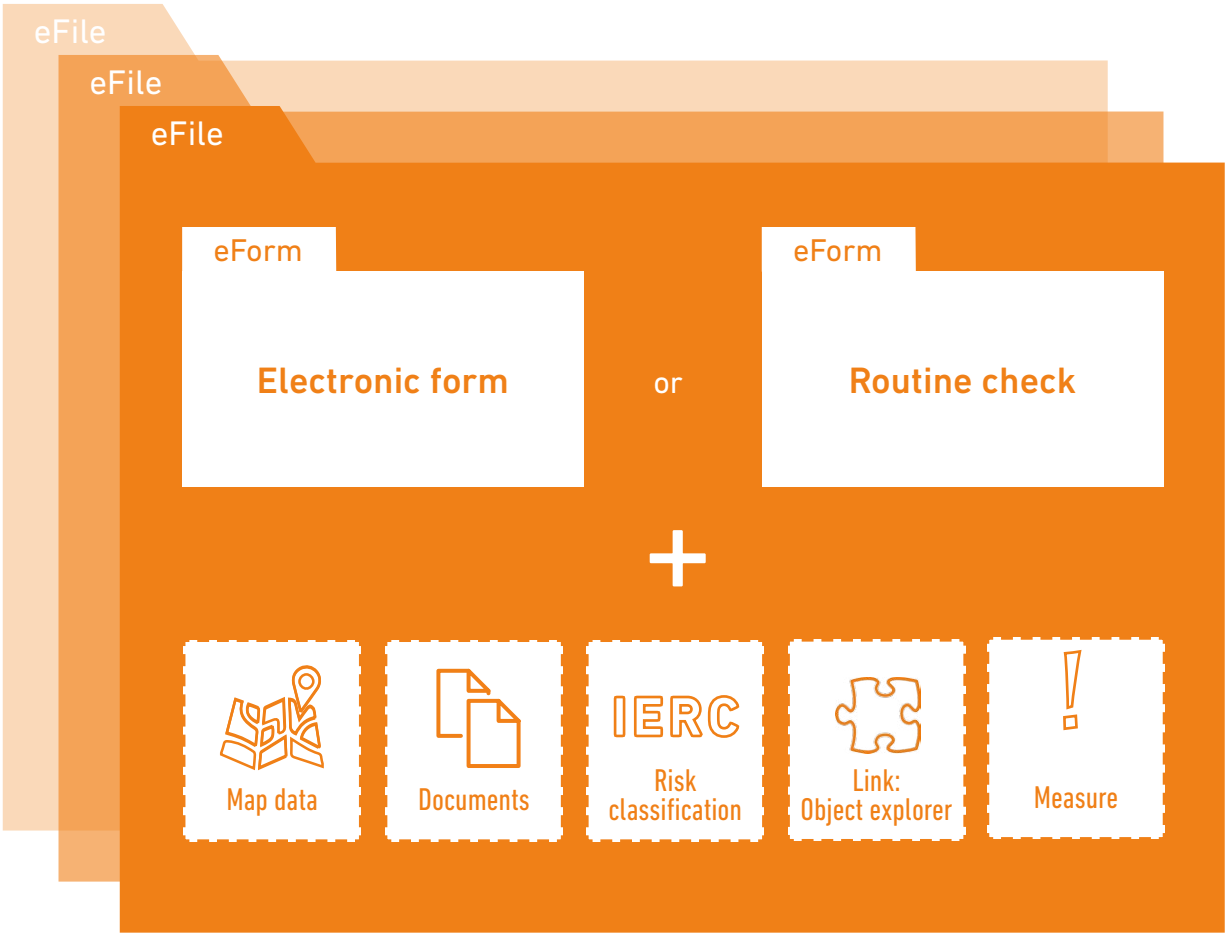
From form to file

Daily data processing is largely carried out using electronic forms and routine checks designed specifically for the process. Of paramount importance is the fast, accurate and convenient logging of information.

However whenever there are incidents, accidents or other occurrences of particular significance to the business, there arises a greater need for documentation. eControl enables a variety of other information to be added to the electronic forms.

The electronic form "eForm" then becomes a digital file - an "eFile", which allows different users to collaboratively document every fact centrally, fully, consistently and in a tamper-proof way.

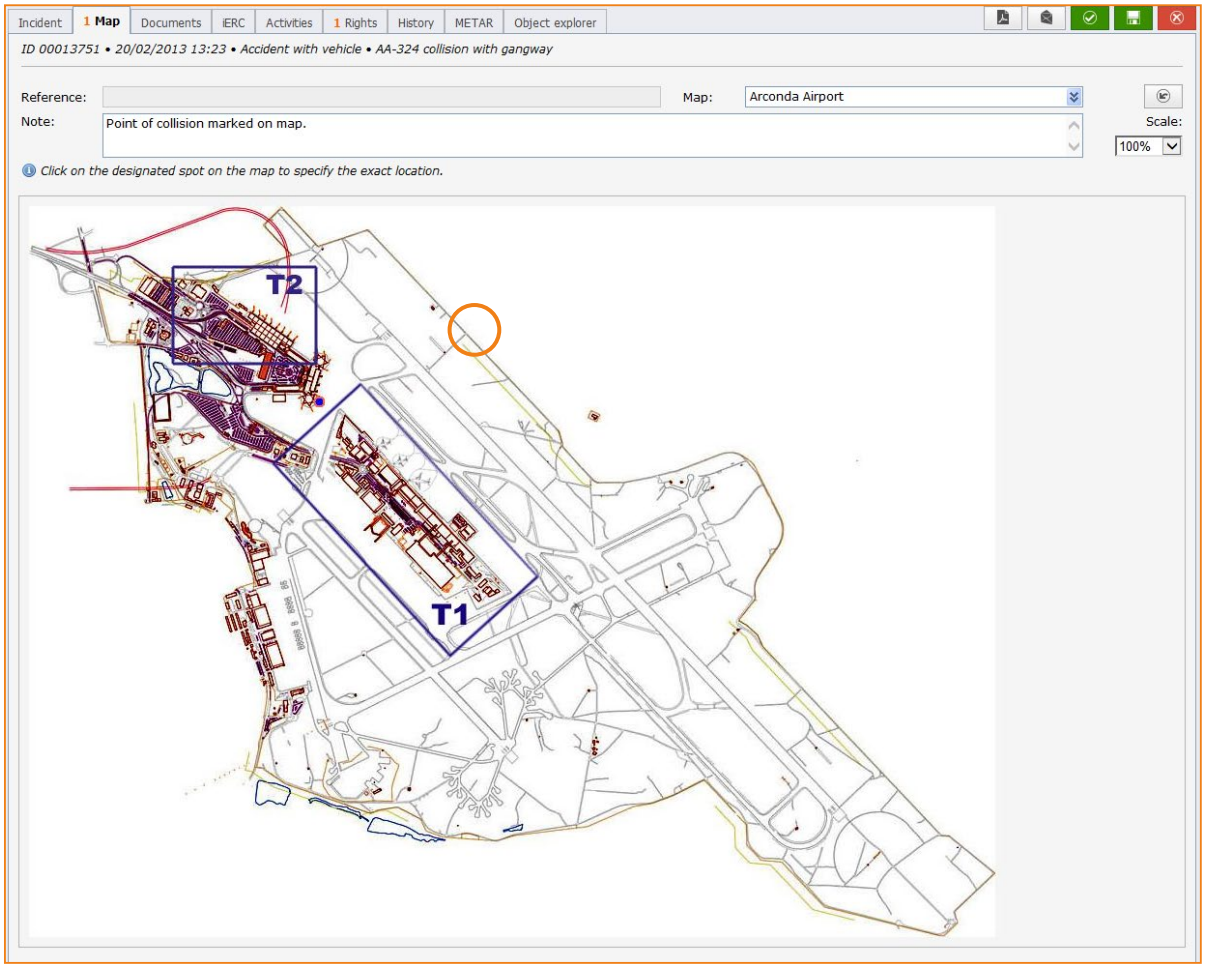
The authorisation concept of eForms applies to all components of the eFiles - a user who has no read permission for a form cannot see any attached images either - not even on if he later searches through the central archive for them. Moreover, each user can be given authorisation for the parts of the electronic file they are generally allowed to see.



Map data

Noting a more or less exact location can make documentation of information easier. Cartographic statistics make it easier to find accident black spots and other local 'hot spots'.

Assigning location information can be done with the click of a mouse by selecting a particular map.



eControl can save location information for a variety of objects and this can be displayed fully automatically on a map.

eControl's map master data module serves customer administration of any number of maps in a hierarchical structure.

The layout of premises will change over time due to construction works and will necessitate an update of the map records on file. eControl Revision Security guarantees that all location information up to the map object's alteration will refer to the old map object or the one that was used when the location information was first entered (eControl uses the exact easting/northing coordinates of surveyed maps).

Documents

Saving pictures, documents and other digital objects in an electronic form is a basic function of the system. Common storage of electronic documents is managed by a central data-base.

eControl's data access rights apply in the same way for electronic forms as for all their attached documents - reliably and without extra administrative effort.

eControl's documents are governed by a fully automatic version management - old file versions continue to be stored in the archive for auditing purposes. eControl records seamlessly which document versions have been saved and when.

Replacement of attached documents with a newer file version goes hand-in-hand with automatic new versioning; old file versions are stored in the archive for audit purposes.

eControl's forms can be linked with other forms, investigations etc., which means that, system-wide and at all times, documents will be displayed even if they are only 'indirectly' attached to linked objects.

Measures

Systematic and complete documentation, planning, implementation and pursuit of preventive and corrective measures is a central component of every management system. Any number of measures - provided appropriate authorisation has been granted - can be specified for every electronic form or routine check. In the same way as for documents, eControl displays not only the measures associated with electronic forms but also those of their linked objects. The aim is to coordinate measures across the company and thereby avoid overlapping or counteracting measures.

The measures dialogue has been standardized throughout the system to ease operation - the definition of a measure for a property damage form is no different from a corrective measure connected with an audit step.

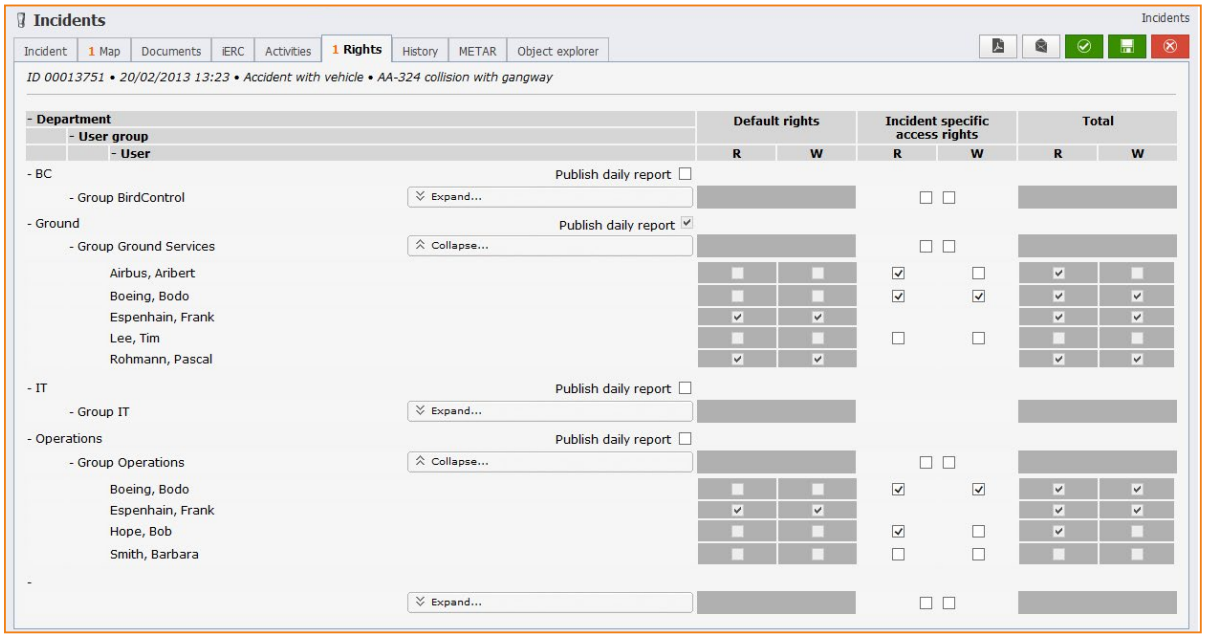
Individual event rights

With individual event rights, the central data storage of electronic forms and routine checks is designed in such a way that respective operational areas can filter their ‘own’ data in a targeted way, thereby also meeting all data protection requirements.

Users’ access to an electronic form is always controlled by data access rights. The “Individual event rights” tab shows which individuals are allowed access or can make modifications. If, during processing, staff need to be involved who do not normally have authorisation, they can be authorised by mouse click. This additional authorisation is then only valid for the current electronic form - authorisation for other forms of the same kind stays as it was be-fore.

Allocating business operating areas facilitates straightforward filtering of ‘own’ data. If a form is normally processed by many different operating areas, this can be pre-set. The aim is to consistently bring together in a single form information from all operating areas involved in a process.

If, as an exception, the form currently being processed needs to go to a further operating area so it can be utilized by the default filters there and appear in that area’s shift or daily report, this can also be done easily using the “individual event rights” tab



Audit Trail

It is not possible to tell from electronic forms whether they have been repeatedly modified or compiled by different people.

It is therefore particularly important that eControl documents every content modification in a tamper-proof way. Audit Trail delivers information on what has been modified when and by which user in chronological order for every data field. This history is not kept just for the electronic form itself but for the entire "eFile". Thus every modification to documents, measures, location information, user rights, risk classifications and object links remains seamlessly traceable. Information on dispatched e-mails can be added to the chronological ordering of modifications. This means that a traceable record is kept of who was notified when and how. This service is available fully automatically for all e-mail alerts from eControl Notifier and optionally also for the dispatch of electronic forms as PDFs by users.

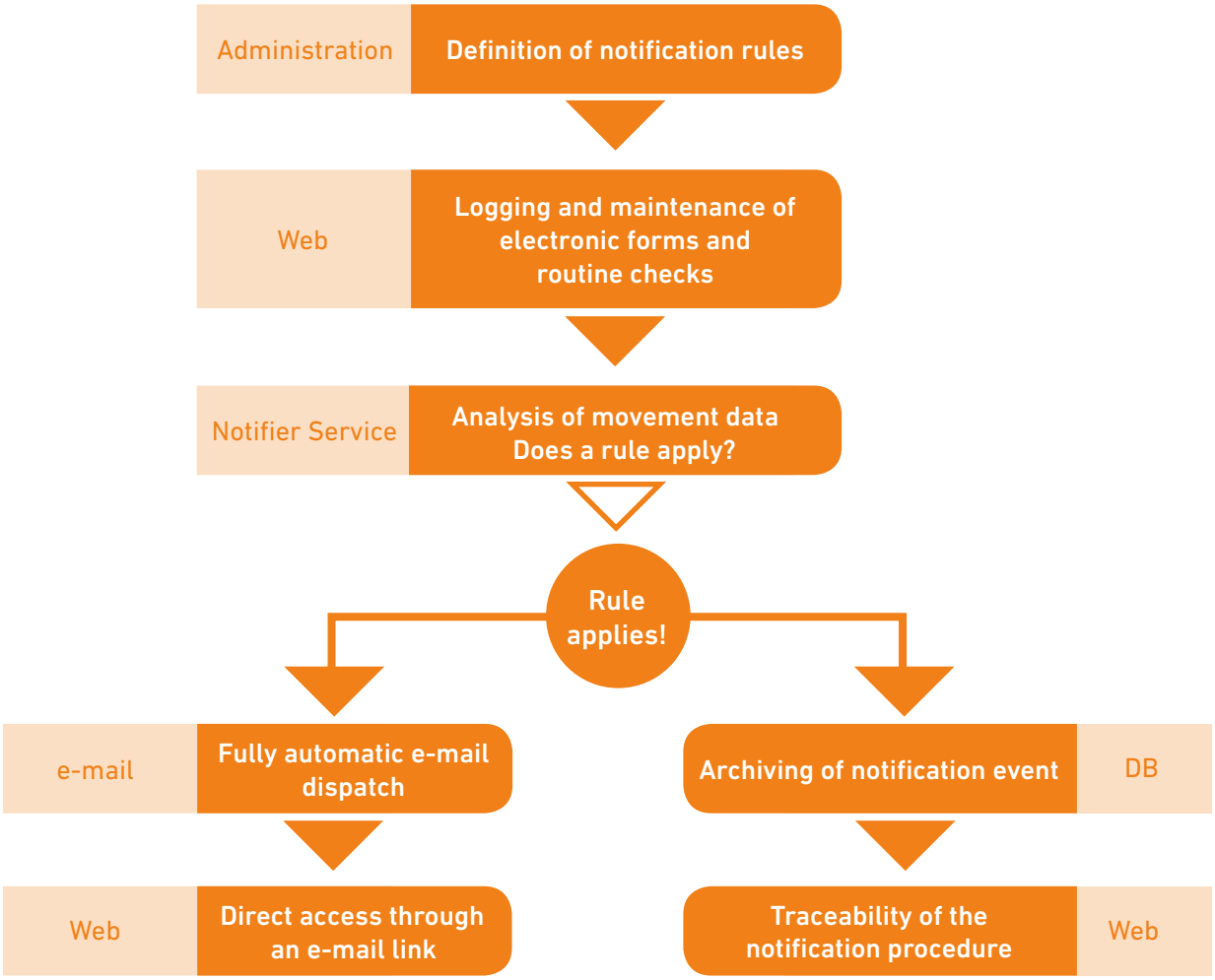
Audit Trail is so simply and clearly structured that it can be understood by any user without the need for specialist knowledge. eControl provides a tamper-proof change log across the board for every data table. With valid administration rights, every modification to the software product can be seen.

eControl Notifier

Fully automatic dispatch of e-mail alerts

eControl Notifier is a notification service available for all electronic forms and routine checks.

eControl Notifier checks fully automatically to see whether notification rules apply and sends e-mail notifications in real-time.



Who is notified?

In principle all users and user groups of eControl are recipients. Recipients can be adjusted individually or as needed for every notification rule.

How are the rules defined?

Conditions of any complexity can be formulated using comparison operators, logical operators, brackets etc. In order to be able to target the analysis of form modifications it can be specified for every form field involved whether a field value is utilized before or after changes are saved.

With eControl Notifier any number of terms can be formulated. The definition of these terms takes place through a convenient user interface. In line with the system's philosophy every form field created by eControl Form Designer can be used for a definition of conditions. In order to make the creation of rules as easy as possible, eControl checks the formulations for mathematical as well as logically correct structure.

While the definition of notification rules is taking place, eControl checks independently to make sure your defined condition is semantically correct.

When do notifications happen and what form do they take?

eControl Notifier sends e-mails. eControl additionally supports redirection to Unified Messaging Systems to send notifications as faxes or text messages.

Notification occurs - provided one of the notifier rules apply - a few seconds after an electronic form or a routine check is saved. Dispatch occurs fully automatically and autonomously through the Windows service of eControl Notifier.

What information do the messages contain?

The dispatch of e-mails is registered along with information on the rule which triggered it, transparent and evident for all users to see in the audit trail of the respective form.

Along with vital status information, eControl Notifier sends the contents of fields which have previously been marked as essential in Form Designer. When compiling the notifications the system checks data field by data field to see whether the recipient has sufficient authorisation to view - if not, the field contents are anonymized.

When it comes to the definition of rules, eControl Notifier's system design guarantees that no complicated overlaps with access rights need to be taken into account. Conversely necessary modifications to user and data access rights can be carried out without the need for a review of the notification rules. eControl Notifier sends a short summary of the essential form fields. eControl Form Designer defines form fields of particular relevance as needed. In addition e-mails contain a direct link to the respective form and, with that, access to all detailed information.

How is data protection guaranteed?

eControl Notifier only sends e-mails to system users. In this way eControl can check right down to field level whether the e-mail recipient has read authorisation. Where this authorisation does not exist, instead of the protected field contents only a notification of the missing authorisation appears.

Authorisation system

Combine data protection and process requirements

Function and data access rights

eControl offers different authorisation processes to make data access as flexible as necessary and as restrictive as possible. The system has - as do many other software products - function-oriented user rights to manage the availability of menu items, command buttons and tabs. In addition to these user rights, eControl also contains data access rights. These control who sees whose data and, where applicable, is allowed to process it.

User rights

To make the utilization of eControl's user rights easier, all eControl rights can be awarded on a case-by-case basis. There is no need for a combination of different user rights to be assigned in order for function access to be granted to a user. User rights are structured according to modules or technical aspects. With one mouse click individual, or even all, user rights for a module can been authorised.

Data access rights

With data access rights, eControl checks whose data the user would like to access. Data access rights can be individually specified for each type of form.

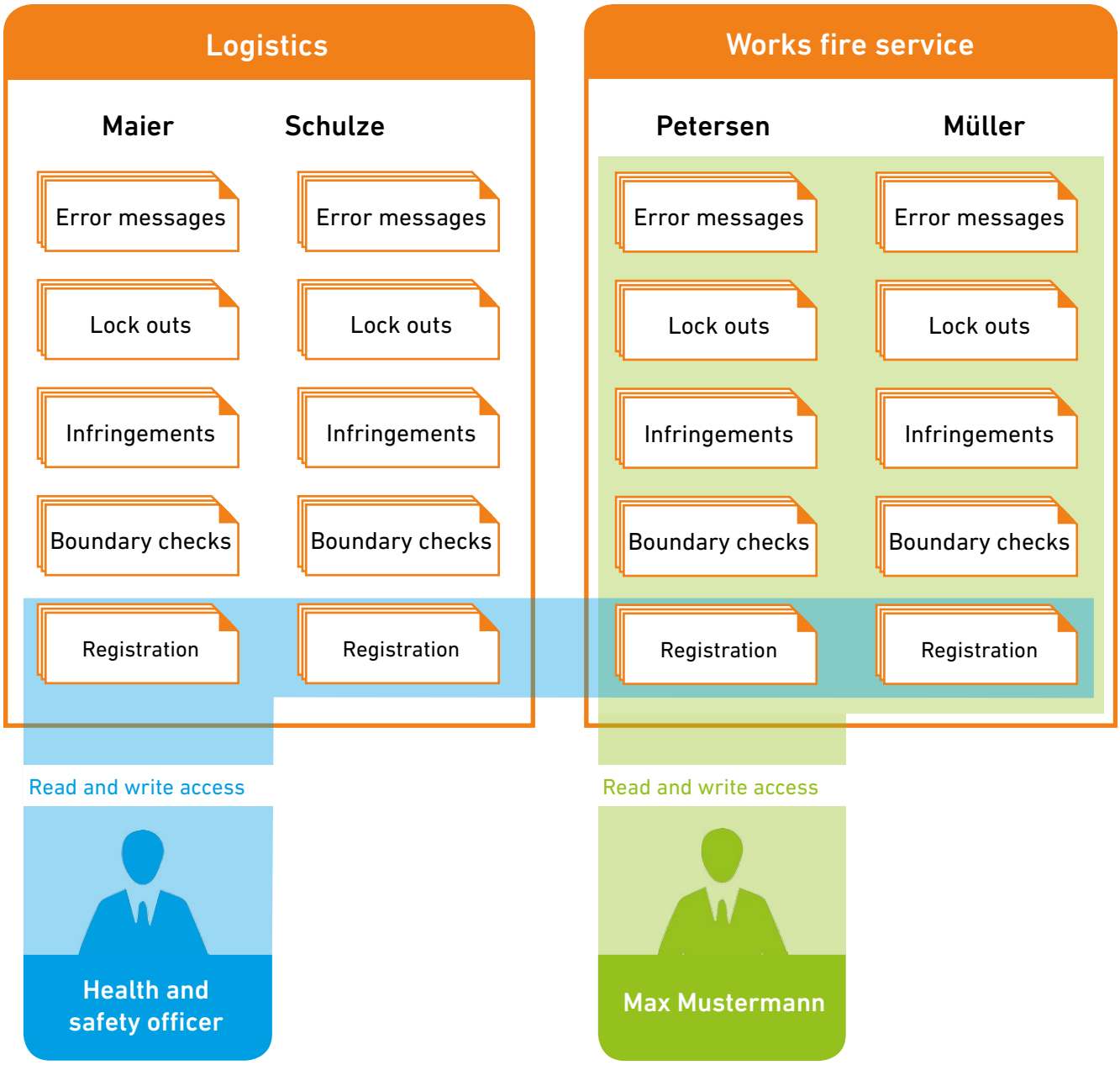
Data access rights are awarded so that they meet the requirements of the company's standard business processes. A rule generator offers a variable definition of data access rights whereby both very special and global or company-wide rights can be agreed.

The **health and safety officer** should have company-wide read and write access to all electronic forms dealing with 'personal injury'.

Employee "Max Mustermann" should have read and write access to electronic forms in the user group "works fire service".

If these data access rights are not sufficient in a particular case, additional users can be authorised with event-specific access rights.

Data access rights:



Templates

Templates simplify the awarding of standard access rights to different users. A template contains user rights as well as data access rights. The rights grouped within a template are granted additionally and are supplemental to any previous authorisations. In eControl, a building block system of templates can be created for functions, business operating areas, modules etc. which standardizes the management of many users in large organizational structures.

Individual event rights

Data access rights are generally valid for all electronic forms or a particular type of form - for example, for all electronic forms called “Registration”. To extend these rights for a single electronic form, so-called individual event rights are available (cf. p. 25)

While the awarding of data access rights is a sensitive administrative function, individual event rights can be granted easily and conveniently by any user with write access. This logic accords with the data protection principles of the system - the user who has been granted additional authorisation through event rights could also have obtained the information in paper form from the user with write access.

Workflow rights

Workflow rights control access to individual form fields. Every form field can be specified individually for each user with which field contents can be seen and, where necessary, additionally processed. eControl ensures that workflow rights are reusable and conveniently assigned, whereby overlaps and repeat authorisations are also supported.

Time-controlled authorisation system

eControl also has a time-controlled authorisation system. Each user can be assigned a “period of validity” for electronic forms. If this period of validity is overrun, the electronic forms in question are no longer displayed to the user. In this way it is possible to prevent undesirable search activity in a targeted manner without affecting utilization of the data-base by other users.

Leaving the company

eControl's users are on the one hand technically owners of their own data, which is saved in eControl's personnel-specific or user-specific master data, such as which department they belong to. On the other hand eControl's users are, from a technical perspective, stand-alone database users who have data access rights and additional access rights to data objects. When an employee leaves the company the user is physically deleted from the data-base along with all his/her access rights.

The logical user however is not lost and is just given a delete flag. The authorisations of other users for the past database and the utilization of that database remain unaffected.

As safe as Oracle

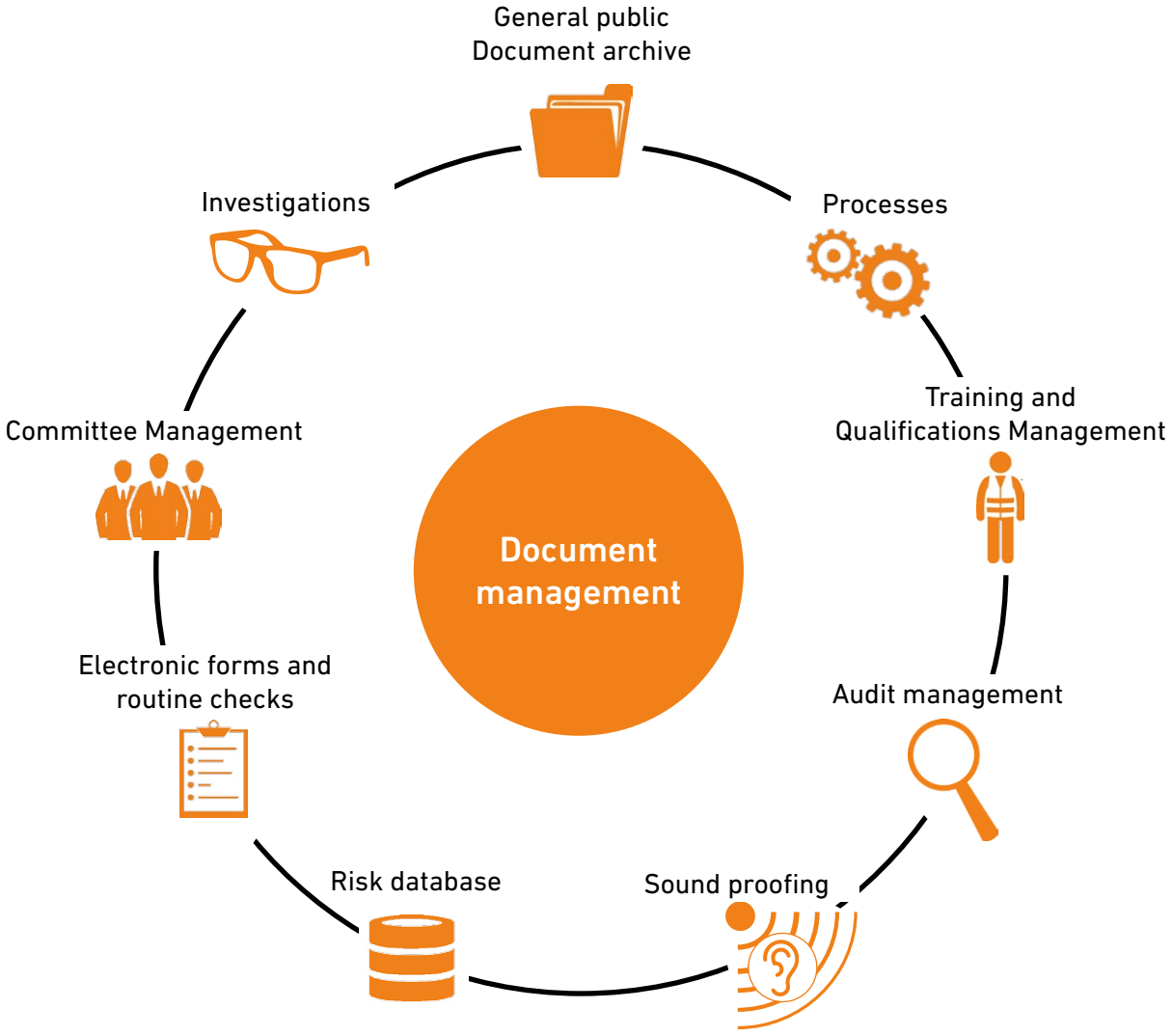
eControl's authorisation system is based on the security architecture of the Oracle system and adopts the high level of data protection and numerous safety features of that database system.

Thanks to the technically sophisticated implementation of the eControl notification system, it is for instance possible to deploy all the password features of the Oracle system, from complexity to period of validity.

Document management

Scalable, central and structured electronic archive

eControl Document Management is a basic function of the system, used in all modules, which greatly facilitates the management of a central and systematically structured document archive while complying with data protection requirements.



Systematic archive structure

Documents can be stored for all above-mentioned data objects. This object reference creates a basic structure that proves its worth as the archive gets bigger and it requires no administrative effort. This results in a good objective structure which is familiar to the eControl user. As an exception to this, the "general public document archive" has no object reference. For instance, legislative texts or technical datasheets could be stored in this part of the archive. To make navigation around this part of the entire archive easier for the user an n-level hierarchical sub-structure can be set up.

By what right?

The general public document archive enables documents to be published and is available to every eControl user. These documents do not have any particular data protection requirements. eControl can refuse access to this part of the archive, for example to guest users. All other parts of the archive were created in the context of forms, audits, risks and are only displayed if the user is allowed access to the actual data object.

The transfer of rights to higher-level data objects is fully automatic, thus saving effort from users or administrators. If, for example, an image is attached to a damage to property form, eControl ensures that the image can only be viewed if the user is allowed to read the electronic form.

What can be searched for?

eControl's document archive already offers good filtering options through the data object structure. Document searches relating to content can be carried out using the document title, different keyword fields and even screen tips. These recordable metadata can be logged whenever archiving takes place and are available subsequently system-wide for document searches. eControl offers a full-text search in which the metadata of all documents to which the user has individual access rights are searched.

Linked documents

eControl's data object explorer links eControl's data objects in order to store semantic connections in a reproducible way. The document archive uses these connections and displays the documents of linked data objects.

For example, if an investigation is initiated during a routine check, these two data objects must be linked. During the course of the investigation process images previously taken with a digital camera as part of the routine check will automatically be made available.

Standardized, straightforward operation

Documents can be stored and maintained in the form of electronic forms, investigations, audits etc. Irrespective of specific modules, the same module will be used throughout, thereby keeping the operation optimally standardized and easy to use.

Version management

Documents can be corrected, added to or otherwise modified over time. eControl provides fully automatic version management. Whenever a new or modified file-version is added to an archived document eControl independently assigns it a new version number. The ‘old’ version of the document is still available under its old version number, while the new version of the document has the new version number.

eControl keeps hold of the documents which are actually being used for every point in time and obeys the most stringent demands for audit security.

Document processing and teamwork

For document processing within a team eControl offers the option to check document versions out and back in again. The versioning of different documents is also carried out fully automatically for documents that have been checked out. When a document is checked out, it can immediately be seen across the system that the document in question is currently being revised; the latest checked-in or finished version can be downloaded from the archive.

Measure management

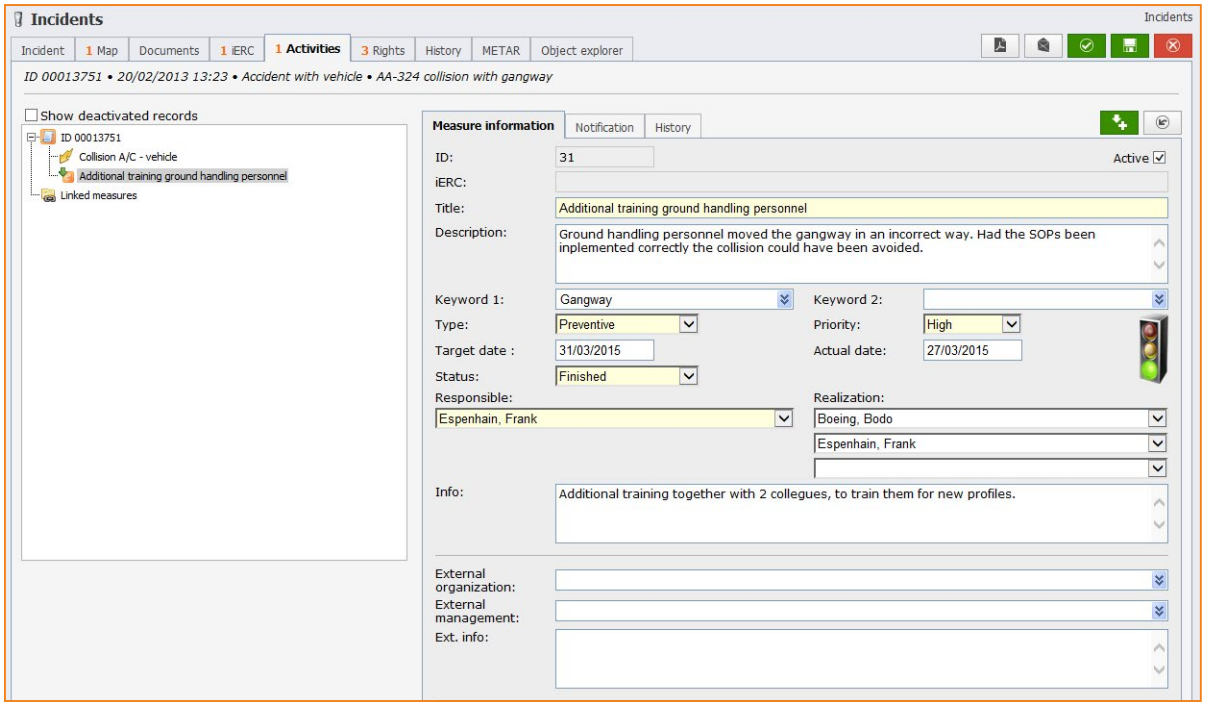
Planning, documenting, monitoring and verification

In a functioning management system deviations from operational, official, technical or other regulations trigger corrective and preventive measures.

eControl offers central measure management which shows up overlapping or counteracting measures thereby easing the burden on resources. The scope of service of eControl Measure Management covers every function, from planning to commissioning and implementation to monitoring effectiveness.

A system-wide standard

eControl Measure Management is standardized across the system for electronic forms, audits, investigations, committees and the risk database. The benefits stem from a simplified scheduling and implementation of measures for initiators, supervisors and representatives, whereby even the commissioning of external third parties is covered. This standardization brings with it a number of advantages. On one hand eControl's performance is made easier through integrated dialogues, on the other hand the different modules deliver the same data and therefore provide the ideal prerequisite for company-wide measure management that contributes to the avoidance of counteracting and overlapping measures.



Data object reference

In eControl measures are always created in the context of a data object. The urgent measure "apply a binding agent" after an oil leak is stored with the related electronic damage to property form. Access rights to a higher-level data object also apply to the related measures. No further action is needed in order to fulfil data protection requirements.

Data object reference classifies measures and facilitates access for supervisors and representatives to their 'own' measures - for example, the pre- and post-processing of a compliance audit.

Notification of measures

Monitoring the timely implementation of measures and the communication associated with them can be - depending on the size of the company and number of measures - a labour-intensive task. eControl automates part of this communication and significantly reduces the burden on staff caused by active measure management. eControl governs the automatic dispatch of e-mails during the creation, lateness and completion of measures. The system's push-service can be used both for the company's own staff and external third parties.

These notifications are focused on implemented measures which are overdue or delayed - eControl can follow up in adjustable time intervals as required until the measure has been completed.

Reports for every stakeholder

In the context of measures, stakeholders are employees who have either instigated measures themselves or been commissioned to implement those measures. This view can be set for individuals or by line managers for departments, business areas or the entire organization. Typical questions related to this topic are:

*What is the status of the measures **ordered** by me/my department?*

*What is the status of measures to be **implemented** by me/my department?*

These reports need to bring together all available information on measures, which, thanks to eControl, has been systematically standardized.

Object explorer

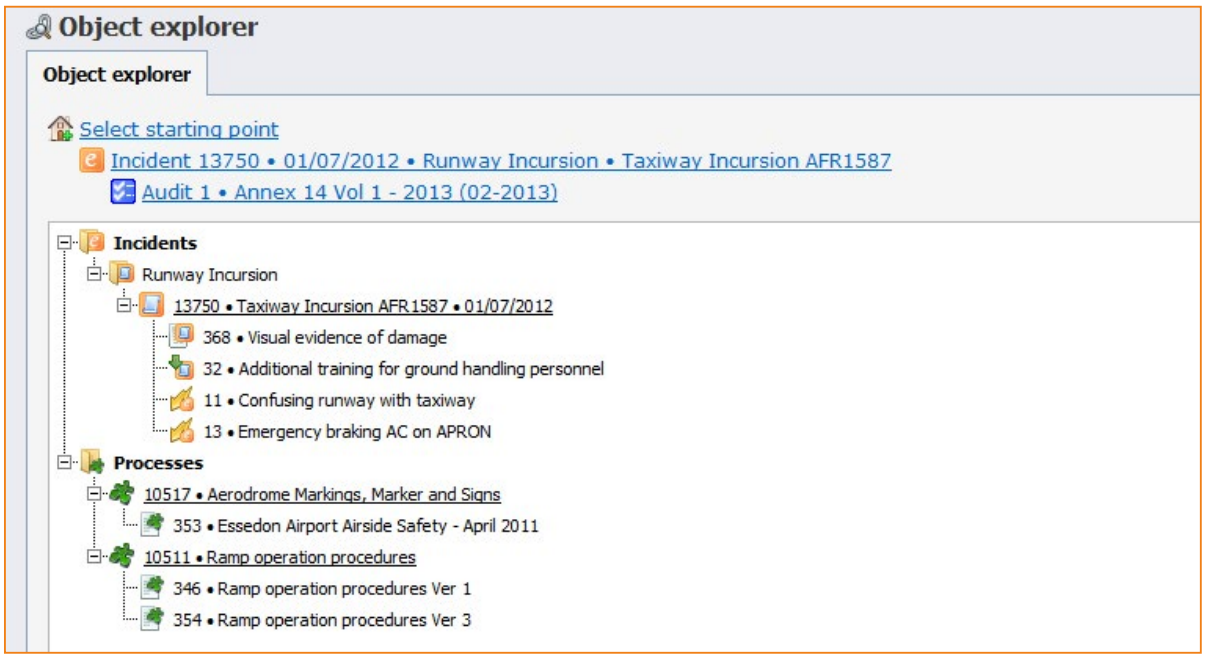
Identifying connections clearly

A passenger injures him/herself on the outside folding door of a bus – an eControl search reveals that a similar injury happened some time previously to a person travelling on the same type of bus. With Object Explorer a permanent bidirectional link is set up between the two electronic forms. In this example, the subsequent investigation is linked with one of the two cases of personal injury, so that the staff working on the investigation are automatically directed to the two linked cases.

Overall connections are visualized clearly so that even complex connections can be documented in the required detail without any media breaks.

Object Explorer also shows related documents and measures taken, and thus avoids both unnecessary documentation and duplication in the management of action taken.

Object Explorer is available throughout the system for all objects, whereby bidirectional access to documents and actions requires authorisation for read access to the data objects involved, in line with the eControl system standard.



Organizational structure

Flexible implementation of organizational requirements

The organizational structure of your company is as unique as a fingerprint – optimal support for process sequencing is made much simpler by eControl's flexible presentation of organizational conditions.

Illustrating any type of organizational structure

Globalization, the variety of continuously evolving markets, a diversified range of products and, not least, differing regulatory demands, all necessitate multidimensional organizational structures in which each business operating area needs to justify itself to several higher authorities or superiors.

eControl decouples the organizational structure from the authorizing structure, thus creating the technical precondition for the illustration of a whole variety of organizational structures.

Location - business operating area - employees

A basic allocation of electronic forms to locations is the technical basis for business processes which go beyond the location itself. Location is a standard selection criterion for all statistics and indicators.

An additional way to categorize electronic forms is by business operating area, and these are used to implement functional and organizational requirements. Individual operating areas can in theory be assigned to various locations – for example, to illustrate a central quality or safety management system with the relevant staff in single locations.

In addition, eControl offers the possibility of assigning single electronic forms to various business processes. In this way, eControl can also cope with business processes which, in case of need, require the collaboration of several operating areas.

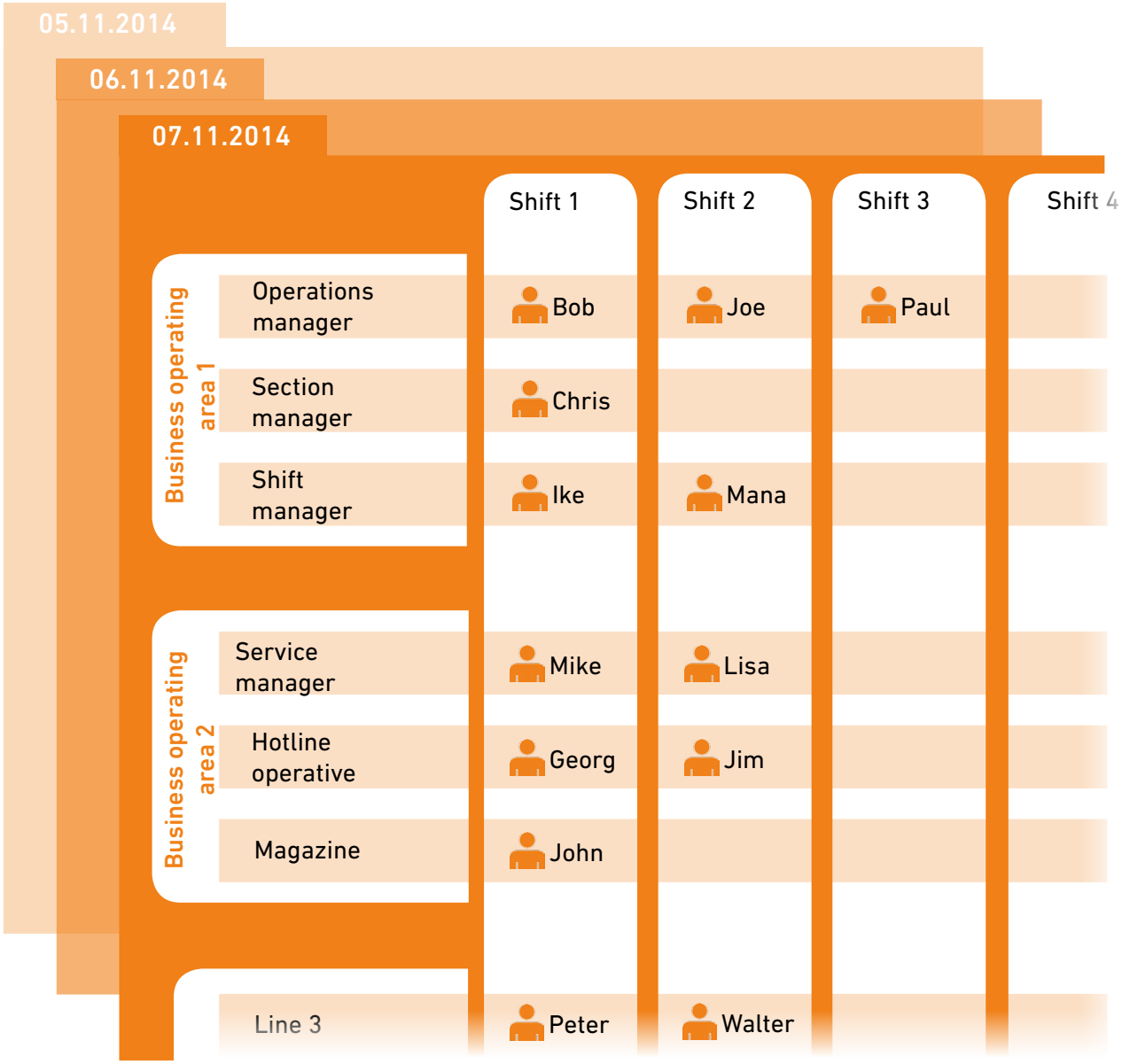
A further possibility of assigning electronic forms to several operating areas creates flexibility, in order to cope with non-standard processes.

Pre-selection of employees' operating areas speeds up data processing and simplifies the management and evaluation of electronic forms.

Shifts

Shift working is an organizational necessity for many companies. With eControl a maximum of 5 shifts per reporting day can be set up. The shifts can overlap the calendar day; overlaps between shifts, for example when one shift is handed on to the next, are also possible.

eControl targets the documentation relating to the allocation of personnel to key functions in order to facilitate a later search or investigations with the responsible partners and supervisors. It is also possible to use the shift model in great detail and in the context of rudimentary shift planning.



Processing

Documentation and structuring of processes and subsystems

eControl Processing handles the central administration of all the processes and subsystems connected with the business and enables the pyramid of documentation – handbooks, instructions for use, lists of working procedures and so on - to be managed in a way which is in line with the respective internal regulations. In parallel, structuring according to norms, etc., can be added, in order to satisfy compliance requirements (cf. p. 44).

Processes - backbone of procedural analysis

Processing is a wide-ranging structural element which is also reflected in the design and use of eForms. These electronic forms deliver vital information about process execution in real time. In risk management, the process and system tree brings together operational risks (IERC – Initial Event Risk Classification) and the risk database (RiskDB).

For further information about risk management with eControl see our product catalogue:
„SMS & Audit - Safety and Audit Management“

eControl TQMS, Training and Qualifications Management, is the link between qualification events and process versions. With this software model, Read & Sign and other techniques stand ready to maintain the level of qualifications in the face of changing requirements.

For further information about our TQMS module see our product catalogue:
„TQMS - Training and Qualifications Management“

Dynamic process landscape

The process landscape can be altered to suit with eControl and thus also satisfy many types of requirements.

Process, procedural and working instructions, etc., should be regularly checked and updated – this version management also includes other applicable documents for which automatic version management ensures that any changes are seamlessly traceable as time goes on.

For all processes and subsystems, measures can be administrated and links created via Object Explorer.

The system additionally makes it possible to widen the process master data to include the business's own data fields, and to categorize the data according to content. The data fields, or process attributes, are of course stored in a tamper-proof way according to eControl's system standard and allow centralized holding of process data related to technical criteria, compliance norms and any other requirements.

In business practice Processing works by division of labour, so that all employees in a company are involved in it, directly or indirectly. With eControl individual user rights can be awarded for each process, in order to authorize process ownership and responsibility in a targeted manner and to delegate parts of the processing system.

User rights can be awarded not only for a particular process but in addition also for specific technical information. eControl Processing - can be put to use, therefore, for the storage of sensitive information in a centralized environment.

Compliance management

Producing, verifying and maintaining conformity with norms

eControl Compliance Management presents a unified platform for logging and documenting all activities connected with a compliance monitoring system.

Compliance Management is a basic function of the system, which offers a highly integrated software solution, in conjunction with Audit Management as well as Training and Qualifications Management.

Requirements

A free definition of requirements is possible for any number of compliance norms. eControl offers a way of assigning responsibilities personally in order to implement and check individual requirements.

Individual data fields are used for the structured storage of detailed information for the norm in question. Compliance statistics deliver freely definable cross-table analyses, and thus an evaluation of the compliance status, at the press of a key.

In the context of requirements eControl Document Management is used to manage documents and eControl Measure Management to administer corrective measures.

Audit management

Integrated planning, administration and assessment of compliance audits enables proof and maintenance of the level of compliance. eControl's Audit Management module makes possible - the creation of audit catalogues, as well as the differentiated storage of test results, and keeps these data in the form of a report for a variety of recipients.

Training measures

The improvement and maintenance of the level of compliance often requires staff to have suitable qualifications, necessitating appropriate training measures.
eControl TQMS Training and Qualifications Management is available for the planning, implementation and certification of these training measures.

Shift book

Clearly laid out, uncomplicated and in real time

eControl Shift Book keeps track of the events in a particular reporting period and provides comprehensive daily reports to use at shift handovers or for review at management level.

Uncomplicated and consistent

eControl extracts shift reports directly from previously logged electronic forms and routine checks. There is therefore no need for any extra effort in maintaining a separate shift book. The contents of the shift book exactly match the details on the electronic forms. Additionally, the same data access rights apply for the daily reports and the electronic forms, so that data protection requirements are also automatically fulfilled. Of course, the shift books also include routine checks, so that any defects can be noted in detail.

Time scale and depth of report

The time scale for eControl daily reports can be selected at will. The depth of the reports can also be selected, so that either just the form fields relevant to the report or, if desired, all the form fields present can be included in the scope of the report.

Shift information

To make it easier to search for and subsequently to amend shift reports, the duty officers are cited for each shift and business operating area.

In this way eControl can document a maximum of 5 shifts per reporting day, whereby these may overlap and can be slotted as required into the chronology of events with a note of the start and end times of the shift.

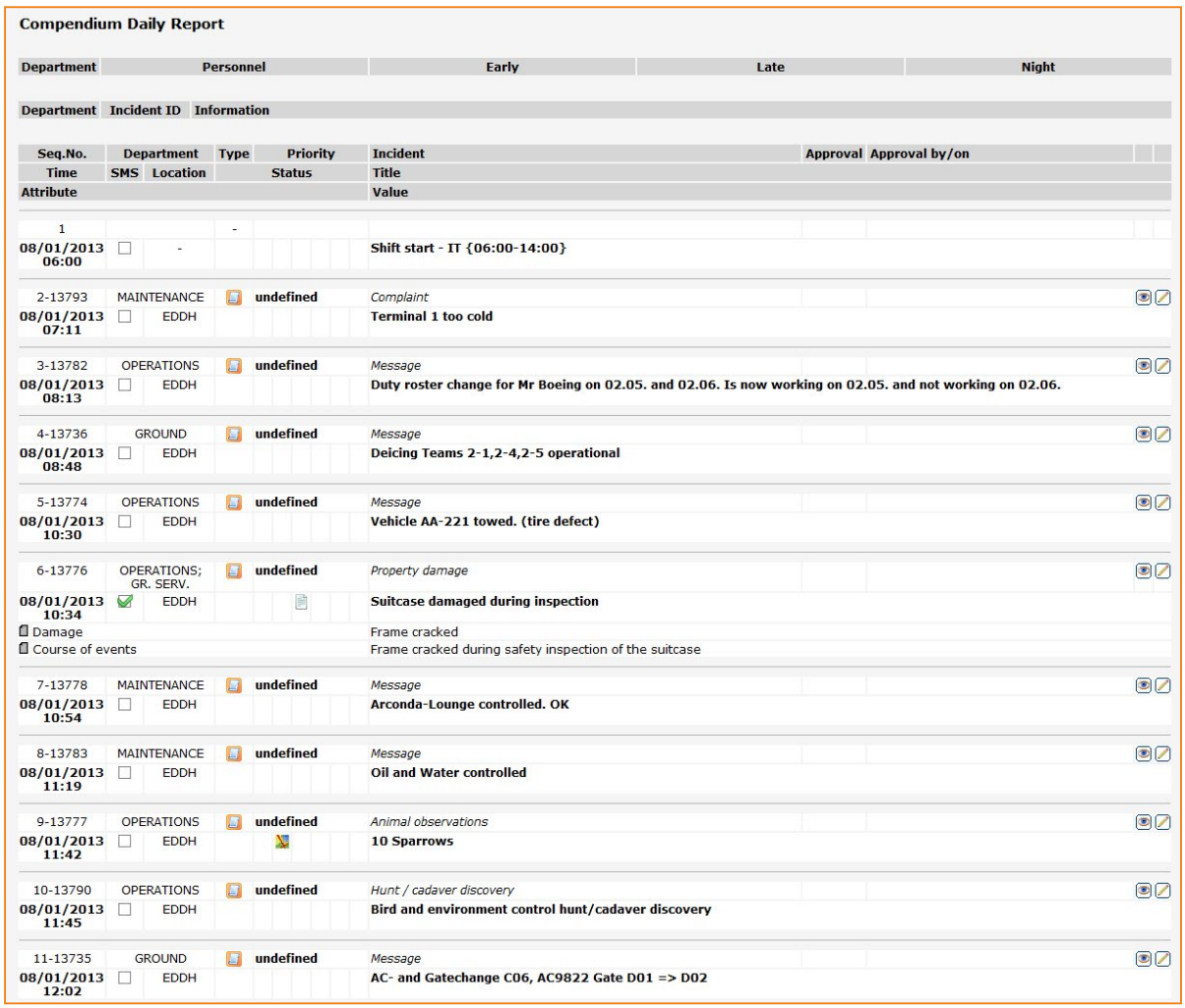
Interactive functionality

eControl daily reports offer interactive functionality for reviewing at executive level. Every electronic form which appears in the report dialogue can be seen at the press of a key, or worked on – once the necessary authorisation has been obtained.

In the process, all the information contained in an eFile is immediately available, and can be corrected, added to or commented upon if need be. Downstream business processes can be conveniently controlled via the status management of releases, feedback and priorities.

Compendium of daily reports

The daily reports compendium collects all the electronic forms and routine checks from the whole company together into a single daily report. In addition to a flexible processing period, various filters are available such as prioritization, reporting areas etc. in order to deliver a targeted summary for the executive level. To make it easier to use, all query settings can be stored in a reproducible format.



Compendium Daily Report

Department	Personnel	Early	Late	Night
Department	Incident ID	Information		

Seq.No.	Department	Type	Priority	Incident	Approval	Approval by/on
Time	SMS Location	Status		Title		
Attribute				Value		
1		-				
08/01/2013 06:00	-			Shift start - IT {06:00-14:00}		
2-13793	MAINTENANCE		undefined	*Complaint*		
08/01/2013 07:11	EDDH			Terminal 1 too cold		
3-13782	OPERATIONS		undefined	*Message*		
08/01/2013 08:13	EDDH			Duty roster change for Mr Boeing on 02.05. and 02.06. Is now working on 02.05. and not working on 02.06.		
4-13736	GROUND		undefined	*Message*		
08/01/2013 08:48	EDDH			Deicing Teams 2-1,2-4,2-5 operational		
5-13774	OPERATIONS		undefined	*Message*		
08/01/2013 10:30	EDDH			Vehicle AA-221 towed. (tire defect)		
6-13776	OPERATIONS; GR. SERV.		undefined	*Property damage*		
08/01/2013 10:34	EDDH			Suitcase damaged during inspection		
Damage				Frame cracked		
Course of events				Frame cracked during safety inspection of the suitcase		
7-13778	MAINTENANCE		undefined	*Message*		
08/01/2013 10:54	EDDH			Arconda-Lounge controlled. OK		
8-13783	MAINTENANCE		undefined	*Message*		
08/01/2013 11:19	EDDH			Oil and Water controlled		
9-13777	OPERATIONS		undefined	*Animal observations*		
08/01/2013 11:42	EDDH			10 Sparrows		
10-13790	OPERATIONS		undefined	*Hunt / cadaver discovery*		
08/01/2013 11:45	EDDH			Bird and environment control hunt/cadaver discovery		
11-13735	GROUND		undefined	*Message*		
08/01/2013 12:02	EDDH			AC- and Gatechange C06, AC9822 Gate D01 => D02		

Reports and statistics

Meaningful assessments at the press of a key

The storage of electronic forms in a central database makes it possible to generate powerful reports and statistics 'at the press of a key'.

eControl offers more than 150 report generators, enabling reports, trend analyses, frequency distributions, cartographic evaluations and specialized statistics to be created.

Standardized usage

The use of the report generators is made simpler by a standardized, intuitive user guide.

1. **Specify the criteria for selection**
2. **Check the on-screen preview**
3. **Select the output medium (data file/e-mail/table)**

Flexible report generators

The questions that can be answered using eControl are a reflection of the respective process landscape and every bit as individual. eControl provides basic types of report -, which can then be constantly finely adjusted by means of various selection parameters.

Query generators

For important statistics query generators are provided, with which all kinds of retrieval expressions, including comparison and logical operators, brackets, etc., can be formulated. Every form field created with the eControl Form Designer is able to formulate these retrieval queries. In addition, once authorisation has been approved, freely definable SQL expressions can be used to retrieve data from the whole database. eControl makes possible private or public storage of the query criteria, including technical advice and explanations.

Output standards

Each report is formulated in the first instance as a PDF file. The heading always includes, besides the client's logo, all the selection criteria which have been applied to guarantee the meaningfulness of the data. It can also be seen from the report when and by whom it was created.

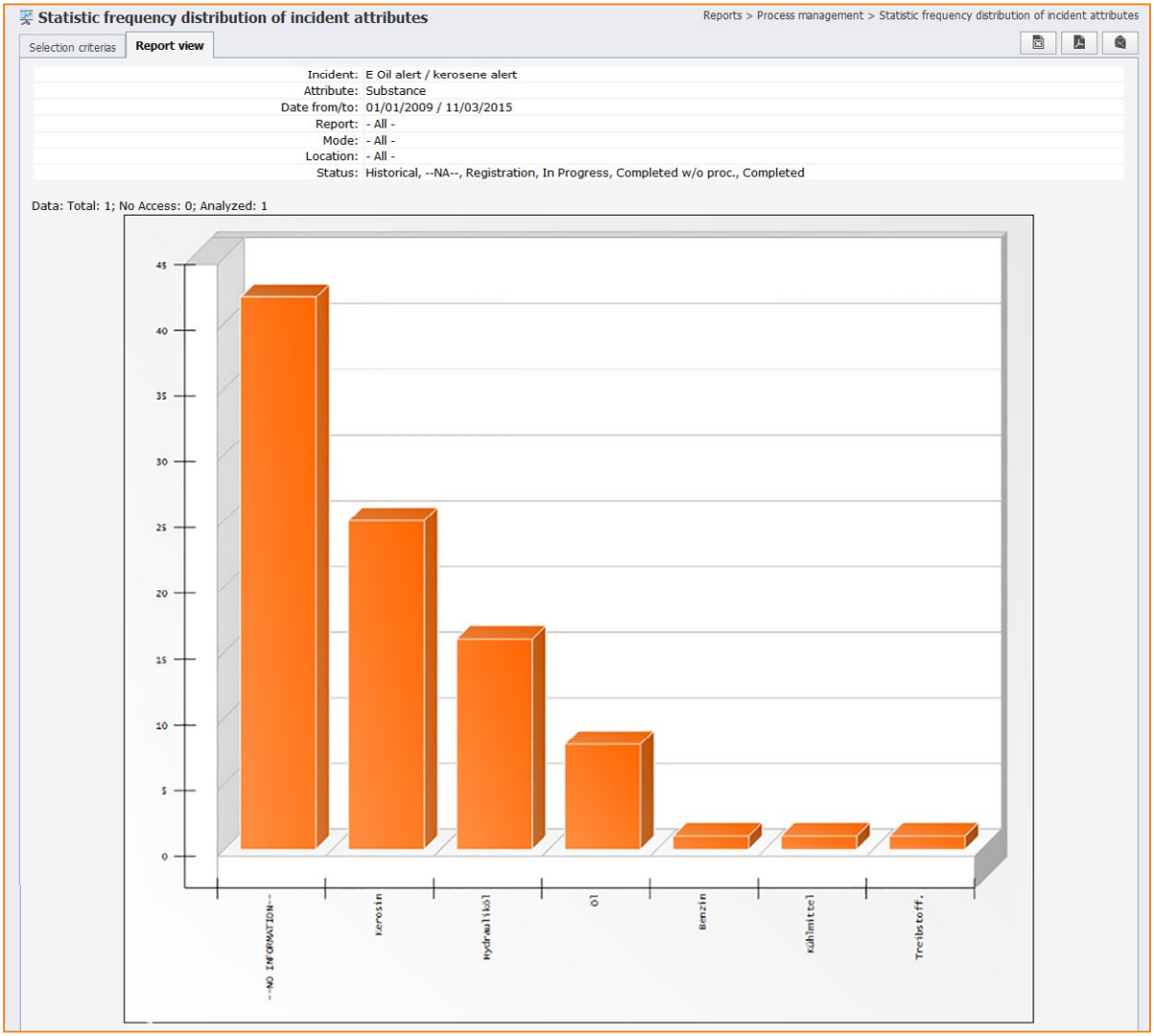
With a further mouse click every report can be attached to a system e-mail and sent to predefined distributors.

Transfer of CSV data for spreadsheet analysis

To prove correlations and other connections statistically, modelling assumptions are needed, by means of which the available data can be verified. The statistical analysis is carried out using spreadsheet calculations or statistics programs, with eControl providing the necessary data as required in CSV format.

By what right?

eControl's report generators essentially demand individual authorisation. Insofar as the output includes single form fields, data access rights are automatically enforced by the system, to satisfy eControl's data protection standards.



Cockpit statistics

Publication of up-to-date key indicators

Cockpit statistics make possible targeted publication of continuously updated key indicators and statistics for system users. The cockpits include technical explanations and can be called up by assigned users with no statistical expertise or special user rights.

Query definition

eControl Cockpit Statistics store all selection criteria and all other query settings, in order to be able to reproduce these automatically. To define cockpit statistics, both appropriate user rights and a good understanding of the stored data are necessary in order to achieve adequate informative value and quality in the statistical information.

The storage of the cockpit definition can be done privately or publicly. Filing a technical description of the cockpit definition allows system users to interpret the cockpit statistics without any differentiated knowledge of the systems and the data.

Cockpits –KPI´s, SPI´s etc…

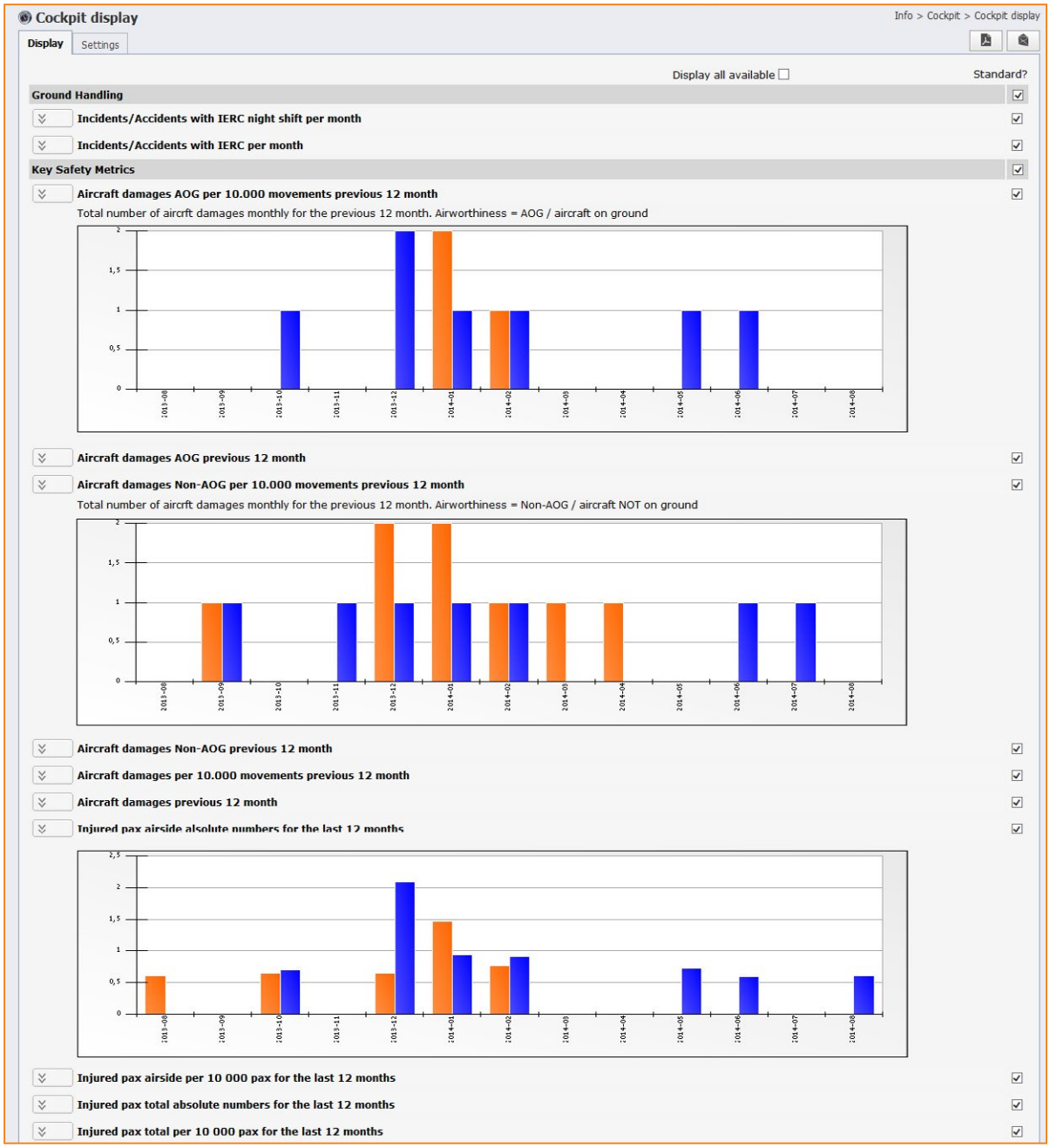
Several query definitions for key figures that belong together, for example Key Performance Indicators (KPI) or Safety Performance Indicators (SPI) can be bundled together into one information cockpit.

Current data every day

Cockpit statistics are updated daily by the system, fully automatically. The process is highly efficient, whereby the statistics are worked out only for the first user of the day – subsequent users receive only the resulting calculations, instantly.

By what right?

eControl offers radically simplified user administration in order to specify which cockpit / which key indicators need to be displayed on the system for which user.


Cockpit display
Info > Cockpit > Cockpit display
Display
Settings
Display all available
Standard?
Ground Handling
Incidents/Accidents with IERC night shift per month
Incidents/Accidents with IERC per month
Key Safety Metrics
Aircraft damages AOG per 10.000 movements previous 12 month
Total number of aircrft damages monthly for the previous 12 month. Airworthiness = AOG / aircraft on ground
Aircraft damages AOG previous 12 month
Aircraft damages Non-AOG per 10.000 movements previous 12 month
Total number of aircrft damages monthly for the previous 12 month. Airworthiness = Non-AOG / aircraft NOT on ground
Aircraft damages Non-AOG previous 12 month
Aircraft damages per 10.000 movements previous 12 month
Aircraft damages previous 12 month
Injured pax airside absolute numbers for the last 12 months
Injured pax airside per 10 000 pax for the last 12 months
Injured pax total absolute numbers for the last 12 months
Injured pax total per 10 000 pax for the last 12 months

Revision security

System-wide legally robust documentation of data changes

Security of the overall process

Complete documentation of all versions of and changes to data is carried out fully automatically and independently by means of the Oracle™ database. Information on each transaction is logged by the database to indicate who, accessed what information and when, noting the revision level of the data before and after any change has been made.

Data records cannot generally be physically deleted system-wide, but instead are marked with a delete icon when a request for deletion is made. User signatures are created through personal direct registration with the database.

Protection against modification and falsification

On the system side, users and administrators have no possibility of overriding the modification history or deleting modifications.

All database transactions are either entirely saved or entirely rejected, including suggestions for revision – there is no way that corrupt data can be stored. This is standard for the eControl system and applies to all objects in the database.

Traceability and documentation

All modifications to the database are stored chronologically and completely. For secure interpretation of the data an explanatory Data Dictionary is available from the manufacturer.

Access to information on modifications is via a report generator, which needs special administrative authorisation.

Modules

Solutions packages for specialist departments

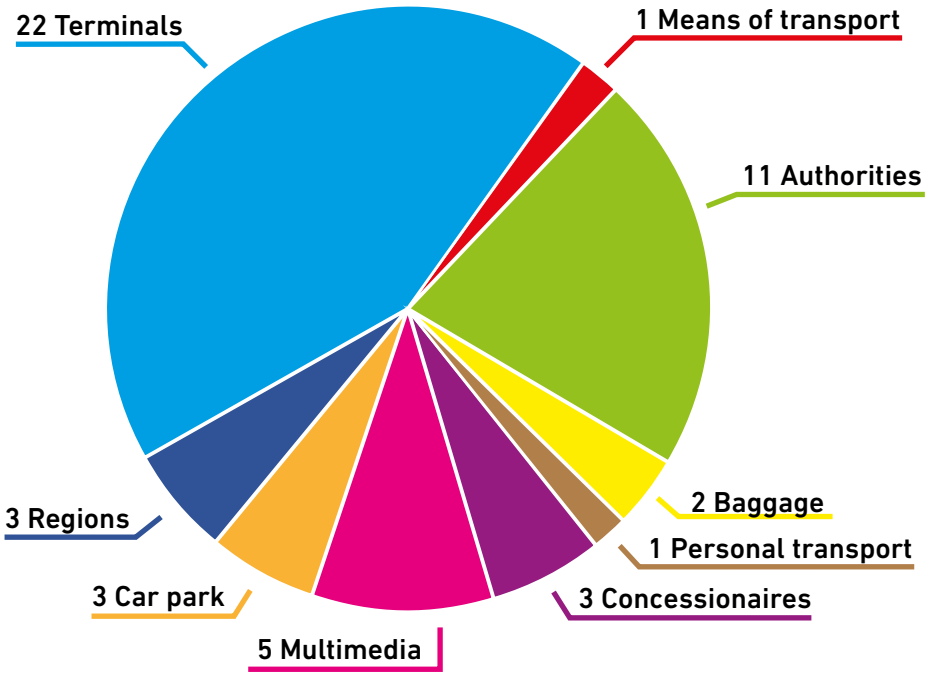
eControl offers modules for certain standardisable business processes that extend over corporate boundaries. eControl integrates these processes into the whole system and thereby obviates the need for 'patchwork' solutions for the software in the specialist departments concerned.

Complaints management

eControl Complaints Management covers all the business processes of client-centred complaints management. The documentation and processing of complaints is based on the electronic forms; these provide programmable tree structures covering the various service areas, grounds of complaint, etc., in order to structure the management and assessment of complaints according to need.

User-definable form letters are available for personalized communication with the complainants.

Workflow management provides for an integration of the organizational units directly connected with the number of complaints. This procedure creates transparency and accommodates the targeted creation and tracking of preventive measures. Specific statistics and reports are used to analyse complaints systematically and to make it easier to recognize priority areas and trends.



Management of reported faults

eControl supports the centralized recording of fault reports through the central technical support line and their allocation and acceptance by the specialist areas tasked with dealing with them. The progress of the job is made transparent throughout to dispatchers and any other users with the required data access rights.

The fault reporting management module can be implemented company-wide and makes it possible to control, follow and document the progress of the job from technical and administrative fault reports.

By means of workflow-based processing, eControl contributes significantly to economical and prompt resolution of faults.

Information about faults, classifications, prioritizations, objects, types of damage, attachments, etc., are available company-wide in real time, in line with the system standard.

eControl offers those involved access to the entire history of fault reports and notes on how they were handled. This archive of solutions to problems makes a decisive contribution to reliable and lower-cost handling of faults.

RunUps

eControl makes it easier for an airport operator to adhere to reporting obligations in line with laws on protection against air traffic noise (FlugLärmG) and the respective regulations of particular States (Länder).

The RunUps or aircraft engine test procedures are recorded by the relevant operating units using a specific electronic form. The report generators then produce the required reports and statistics for authorities, owners, etc., at the press of a key.

The RunUp database is included in eControl's comprehensive standard specification.

eControl mobile

Picking up data at the point of generation and speeding up the process chain

With eControl mobile, data can be recorded on any Windows 8-compatible device, on- or offline.

eControl mobile makes it possible to use mobile versions of any electronic forms and routine checks created and organized using eControl Form Designer. This includes audit results for audits previously defined using eControl mobile software. With eControl mobile there is no longer any need to transfer information from traditional paper sources. As well as saving effort, the information is more rapidly available company-wide. In the mobile data version, seamlessly integrated into eControl, the entire system can cope with the most stringent requirements for data protection and security.

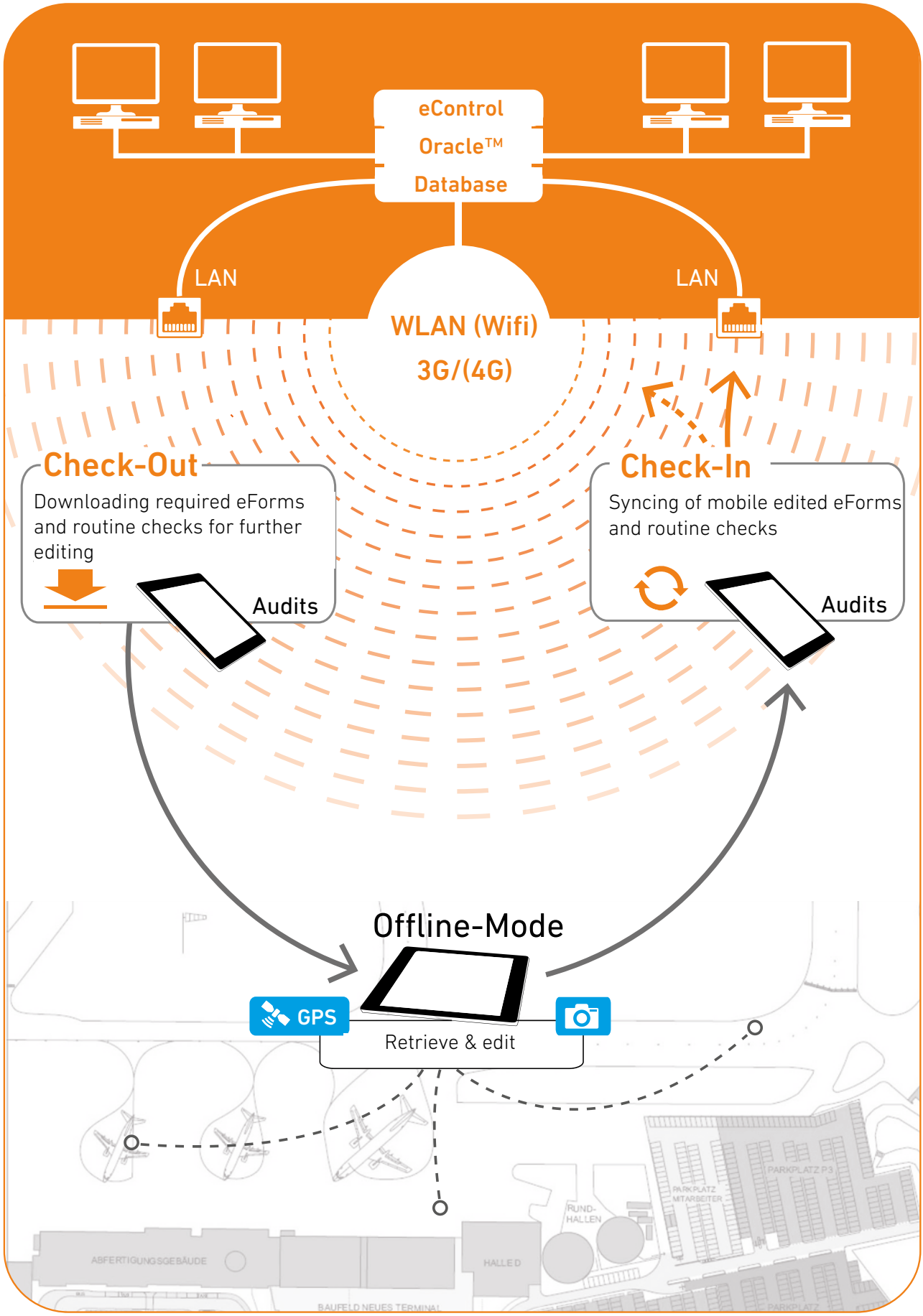
On- and Offline use

eControl mobile ensures that electronic forms can be accessed and processed independently of network coverage. With one mouse click, electronic forms and routine checks are loaded onto a mobile client, which is covered by an intra- or internet. Current form definitions are transferred fully automatically so that there is access to current forms as long as the user has suitable authorisation. Access to and processing of this data can be independent of whether the user is within a network coverage area. Once the user subsequently regains access to a network connection, the data which has been downloaded or processed in the meantime is uploaded into the central eControl database. eControl also offers a transfer of interim results to make the information instantly available company-wide.

Planning support

Dispatchers have, with eControl, a powerful tool with which colleagues with mobile access can have electronic forms and routine checks sent to them in a targeted way, to be used for further processing in the workflow. An intelligent authorisation system ensures that it can be used across departments. Allocation by work group makes possible a mobile first in, first out processing system – those colleagues working in a user group who are using mobile access can work on the processes independently.

Not only that, but everyone using the mobile client can check out additional procedures and load them to be worked on, as long as there is access to a network.


eControl
Oracle™
Database
LAN
LAN
WLAN (Wifi)
3G/(4G)
Check-Out
Downloading required eForms and routine checks for further editing
Audits
Check-In
Syncing of mobile edited eForms and routine checks
Audits
Offline-Mode
GPS
Retrieve & edit

Documents

eControl supports the Windows 8 interface for built-in cameras. At the press of a key, pictures can be streamed into the eControl archive and, if necessary, tagged with further metadata.

GPS support

When data is checked out, hierarchically organized maps can likewise be transferred to the mobile client. As long as these conform to WGS84-standard mapping, eControl mobile shows the current position on the map and can store this long-term, if required, as part of the documentation procedure.

Mobile Devices

In principle, Windows 8-compatible systems with or without touch display can be used as mobile data devices with eControl mobile.

Technical matters

Scalable, future-proof and economical

Future-proofing

All sorts of performance aspects of eControl result from access to stored historical data – whether for trend analyses, as a knowledge base or for analysis of causes, based on the process information collected in the past. As can be seen from this, the usability period for eControl is deliberately planned to be very long.

By using strategic products by Microsoft for web-based software development and by Oracle for the relational database, eControl places great emphasis on a product portfolio which is always being developed further by the market leader and thus satisfies your demands for future-proofing.

Web-based software

eControl is a browser application which can manage without a local software installation. After the installation of the applications server in the intranet the system is available in every workplace.

A further potential saving results from the simple, central updating of software, which needs to be carried out only once on the applications server.
eControl aviation works on Windows, Macintosh and Linux systems as well as on mobile devices.

Also, you can expect a high level of user acceptance for the web-based user interface, which is simple and intuitive to use.

Virtualization

eControl does not need any dedicated server hardware and can be virtualized with no restrictions. Virtualization means further opportunities to save, because eControl needs no exclusive hardware components.

Scalability

eControl's software architecture is variably scalable and as suitable for five as for several thousand users. The Oracle database is in large measure responsible for this scalability, as it can be expanded in line with current demands.

Our Services

Support during the software's whole life cycle

We are with you during the conception and commissioning of process management systems; we are able to support our customers because of our experience, which extends over corporate boundaries, and our in-depth knowledge of the various software functions.

The installation of the system can be mainly handled by the customer independently, or by the manufacturer, or in collaboration with management consultants.

Our consultants, project partners and our development department look after eControl just as much as you want – from the initial idea to servicing.

Needs analysis

If desired, our consultants can carry out gap analyses which compare already installed systems and regulatory requirements to the particular demands specific to the company in question.

Training

We offer training courses and workshops for all system components, in order to ensure smooth running of the entire system. In customer-specific in-house seminars, our consult-ants consider the specific circumstances and requirements of the company in question and make it easier to locate potential for increased productivity and optimization.

Commissioning and data migration

The introduction of a process management system generally links to other procedures, not always supported by software. Our consultants make sure that digital or digitizable data archives can be imported with as little fuss as possible and with an eye to the reporting date.

Interfaces

Interface requirements can as a rule be incorporated into the service programmes which form part of the delivery package for the system. If necessary our consultants can help with the integration of firewalls, gateways, backup systems, virus scanners and other system elements.

Industrial software development and readiness for use

eControl software is under continuous development and improvement. We offer updates as required, from software patches to complete upgrades.

Our hotline is available to customers to deal with anything from system documentation to technical questions. We offer service in both English and German, as standard.

Database management

Arconda Systems AG is available, as an experienced Oracle partner company, to cover all your needs in relation to Oracle databases. This support extends from help with system problems to the provision of conceptual management and high availability. eControl is an official Oracle database product. We also offer special Oracle user licences for eControl, at reduced cost.

Customizing

eControl is a branch-specific modularized standard software with extensive opportunities for altering parameters. As a general rule, the product can be installed without the need for specific software-technical adaptations. Should individual software functions be required, as manufacturers we can of course fulfil this need. Our consultants focus on an objective, universal optimization of the range of functions, through which in the past, the most varied individual adjustments were embedded in the system standard. In this way, we ensure continuous development, while keeping customization and servicing costs to the minimum.

eControl

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

Customers:

BADEN-AIRPARK® FLUGHAFEN KARLSRUHE / BADEN-BADEN

STUTTGART AIRPORT

FBB FLUGHAFEN BERLIN BRANDENBURG

MÜNSTER OSNABRÜCK INTERNATIONAL AIRPORT

LEIPZIG·HALLE AIRPORT

ALBRECHT DÜRER AIRPORT NÜRNBERG

Beiersdorf

AIRPORT WEEZE

Dortmund Airport 21

hannover airport

Köln Bonn Airport

Flughafen Lübeck

Da sind Sie einfach hin & weg! Allgäu Airport

DAVVL e.V.

District Government of Upper Bavaria

AIRPORT SAARBRÜCKEN SCN

Customers international:

Birmingham Airport

Administration de la Navigation Aérienne

Flughafen BERN BELP

PEOPLE'S AIRPORT ST. GALLEN-ALTENRHEIN

MALTA INTERNATIONAL AIRPORT

VIE Vienna International Airport

process.safety.first

ARCONDA.systems
Aktiengesellschaft

Sportallee 6
22335 Hamburg I Germany
Phone: (+49) 40 823 158 0
E-mail: info@arconda.ag
Web: www.econtrol.aero