

INNOVATION AT WORK

Connecting Visionaries in Radiation Safety, Science and Industry

Conrad Orlando Resort, FL – July 28th – August 1st



MC25 - Breakout Session DosiServ

BLEUSE Olivier

Dosimetry & Telemetry - Product Line Manager

Mirion Connect | Annual Users' Conference 2025 Orlando, Florida



Agenda

DosiServ Introduction

DosiServ Part 2: Advanced features

DosiServ Part 3: Advanced featyres
 DosiServ 2026
 US features & Roadmap



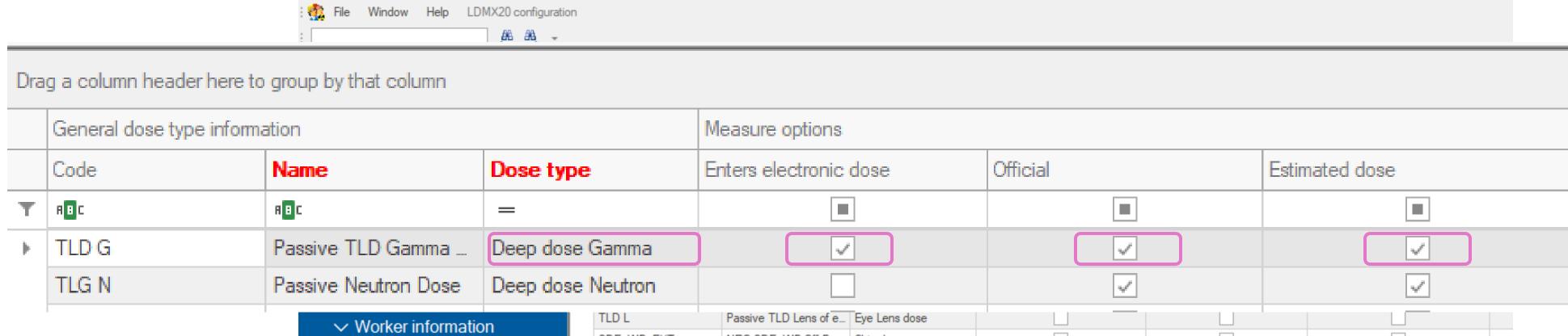
DosiServ - Part 3

• DosiServ & Legal dose



DOSISERV Interface - mgp/localhost - Factory - CONFIG SITE - [Measurement definitions configuration]

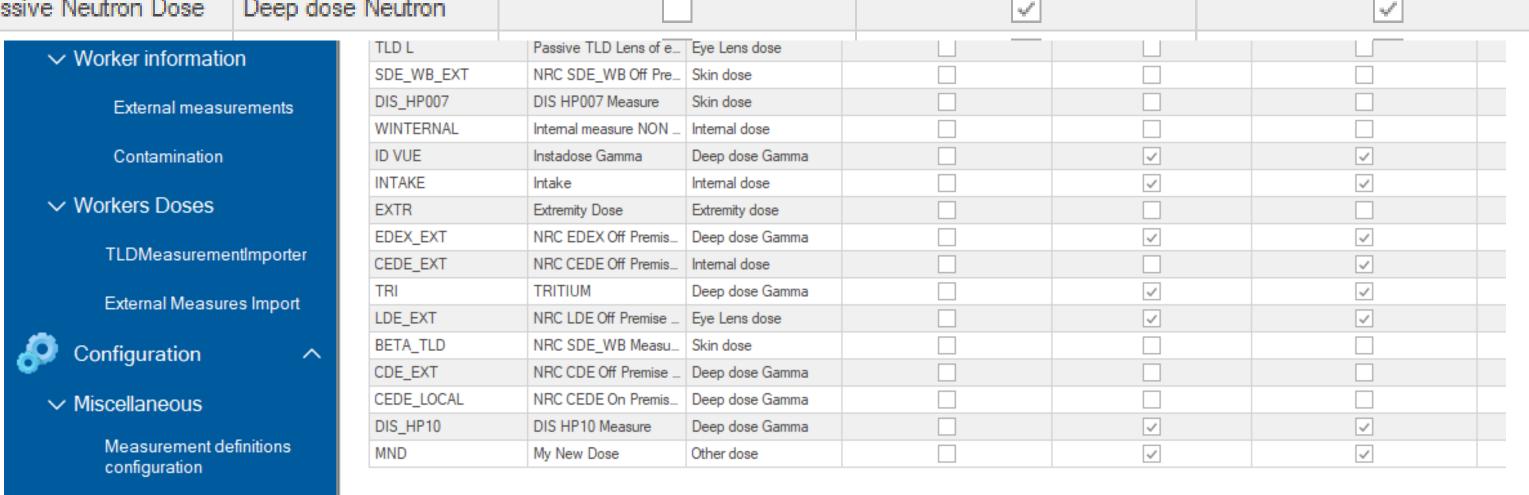
Measure definitions



Participate to estimated dose

→ If Deep Dose Gamme then will « compete » with Electronic

Participate to Official dose
--> If checked AND Deep dose Gamma
THEN will « compete » with Electronic





What dose "compete" means?

Goal: protect the workers not to go over the legal yearly legal

DosiServ uses the **Estimated** dose for access control

Access control	
Enable monitoring check-in/-out status	
Check at controlled-area entry whether dosimeter exists.	
Check if dosimeter is calibrated	
Dosimeter blocked on exit with alarm	N
Access control only on operational dose	







Jan

Feb

Mar

Apr

May

Feb Jan 0,0 Jan mSv

Feb mSv

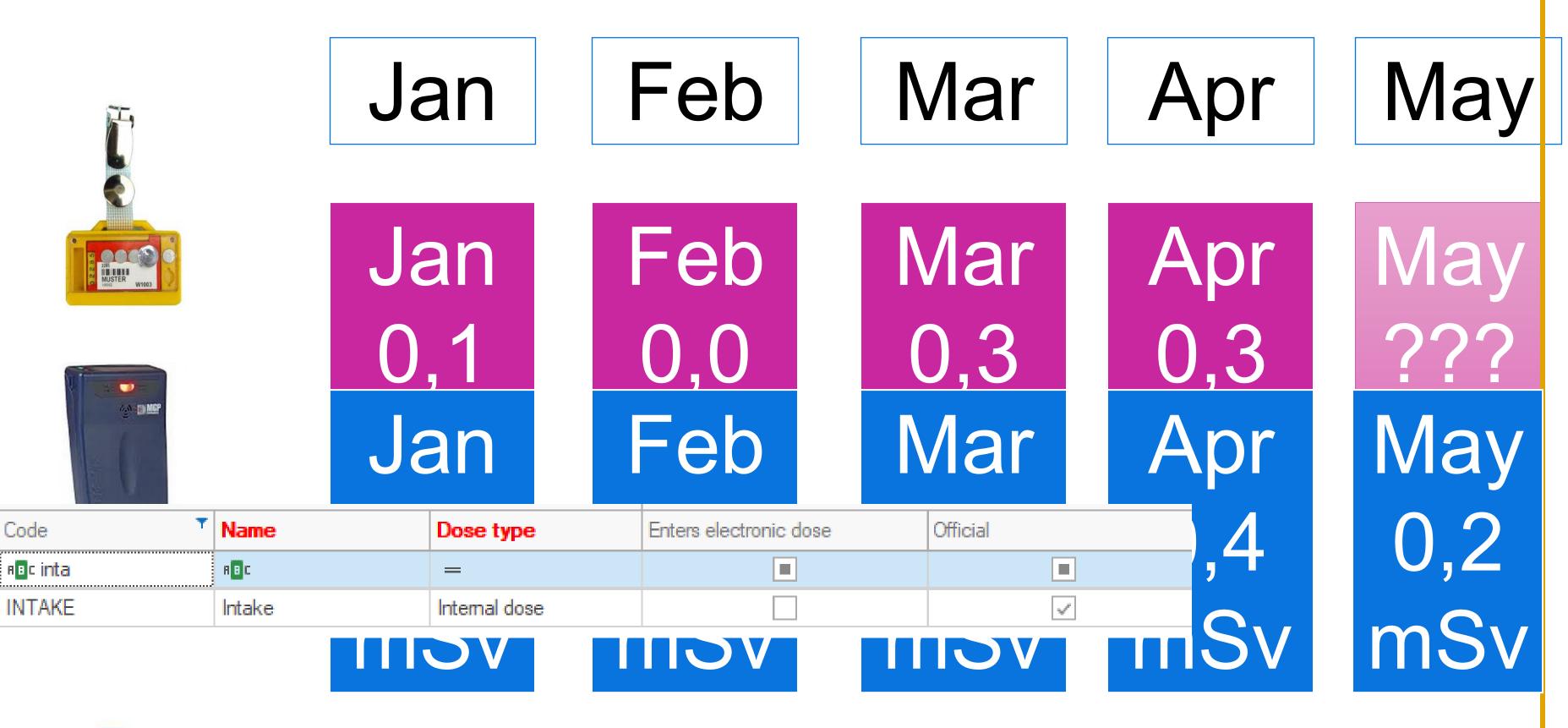
Mar 0,3 Mar mSv

Apr 0,3 Apr 0,4mSv May mSv

mSv 1,28 Engage. Explore. Empower

Why "Official" was introduced

Differentiate Access control values from "official ones"



YTD 0,7 mSv 1,28 mSv





Mar 10

Estimated -> Access control

Official -> For information

Dose and dose rate	^
Dose unit	mrem
Dose rate unit	mrem/h
Calculation factor for dose and dose rate unit	1
Accuracy of dose unit	1
HP10 minimum dose	0,5
HP007 minimum dose	0,5
Dose pre-alarm threshold (%)	80
Rate pre-alarm percent	80
Maximum rate alarm	₹
sliding dose management	₹
XP period number	3
Default duration value of a virtual visit	8:00:00
Reset personal limits	₹
ID format	999999999999
Access control	^
Enable monitoring check-in/-out status	₹
Check at controlled-area entry whether dosimeter exists.	
Check if dosimeter is calibrated	
Dosimeter blocked on exit with alarm	None
Access control only on operational dose	



Introduction to new Worker measure BITS



Introduction to new Worker measure BITS Todays situation

March		April	May
		Measure	

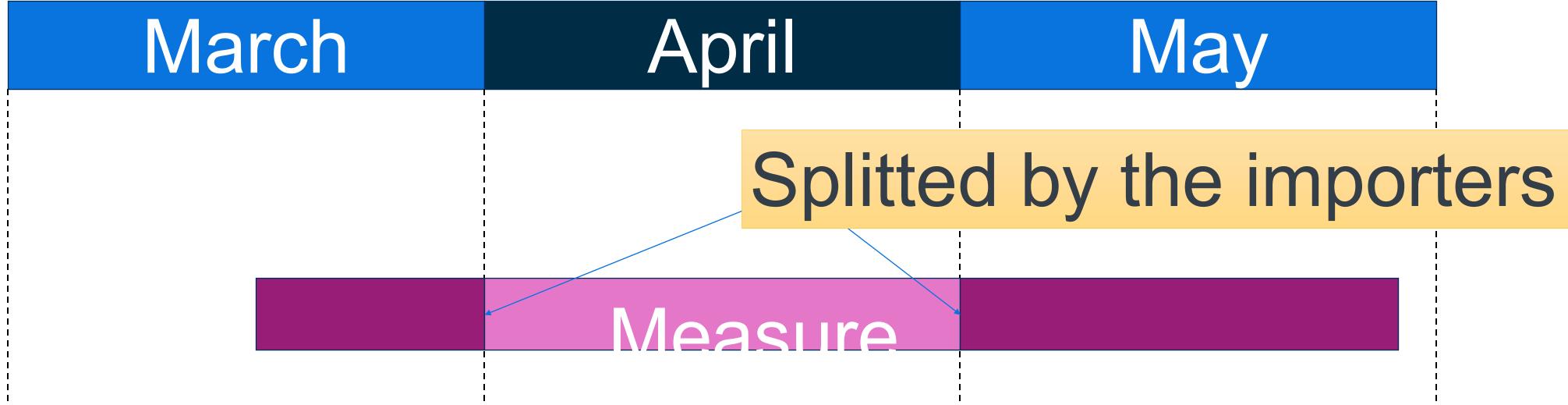
Constraints:

- Cannot overlap multiple periods
- Cannot overlap a year change
- In case of a company change during a measure, the dose cannot be distributed to companies correctly



Introduction to new Worker measure BITS

Bespoke implementations



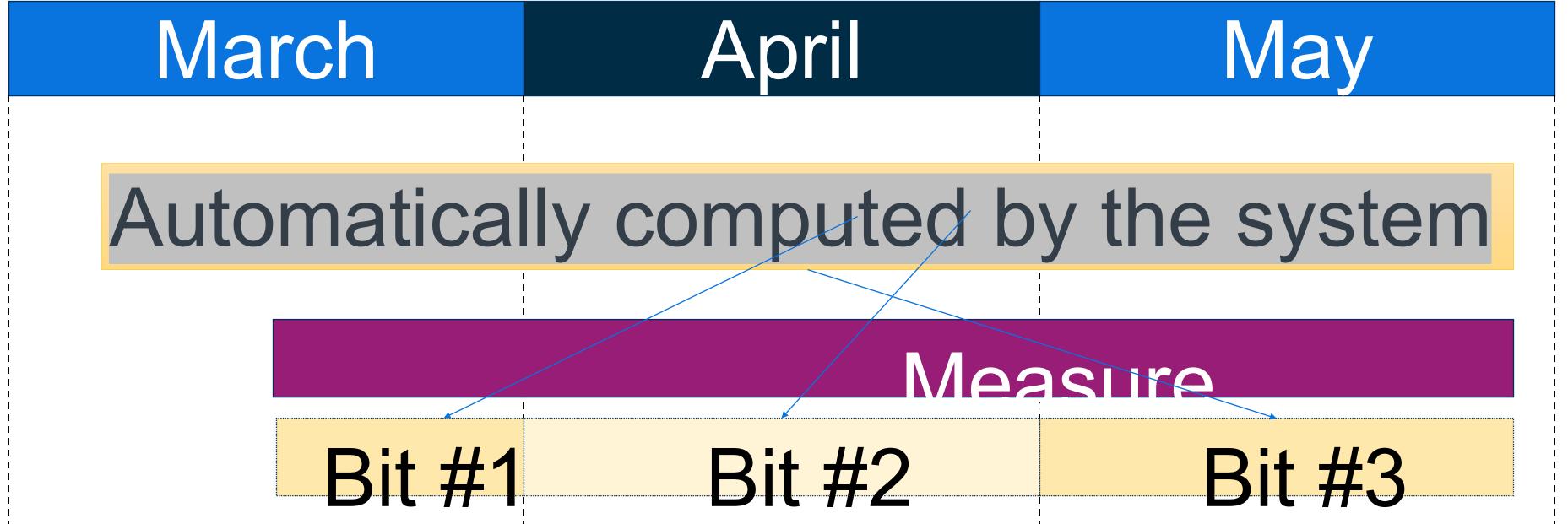
Enhancement:

- The measures are splitted during the import process
- The dose is distributed by prorata-temporis or prorata-dosimetric **Constraints:**
- A fundamental measure can still not overlap multiple periods
- A fundamental measure can still not overlap a year change
 - → A manual aposteriori modification of the doses need to be handled with caution
- In case of a company change during a measure, the dose cannot be distributed to companies correctly



Introduction to new Worker measure BITS

Worker Measure Bits



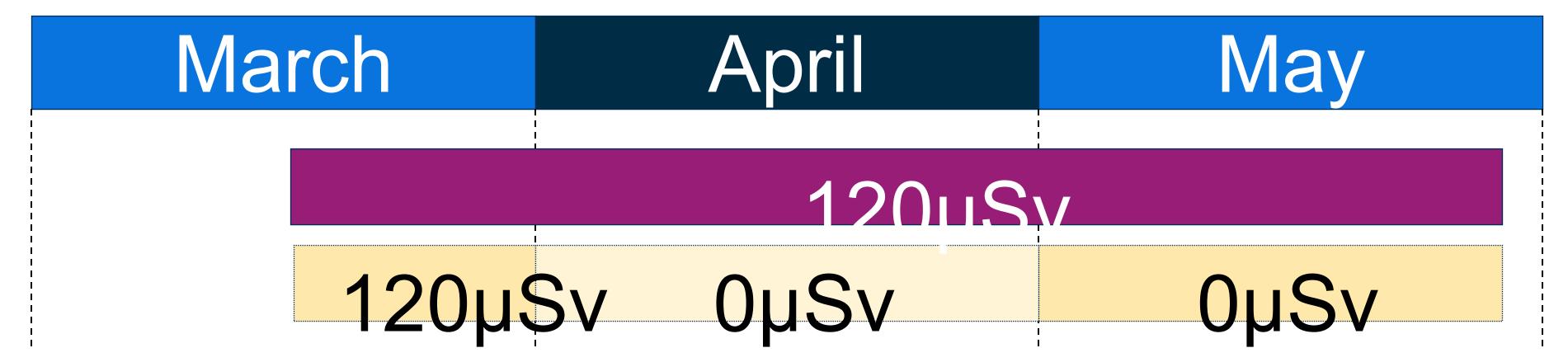
Enhancements:

- Can overlap multiple periods
- Can overlap a year change
- In case of a company change during a measure, the estimated dose is consistent and distributed over the companies
 - → Flexible automatic distribution according to the measurement type configuration : Prorata-temporis / Prorata-dosimetric / All-On-First-Period / All-On-Last-Period
- Dosimetric summaries are as closest as possible to reality!
- Manual dose changes can now be done on the fundamental measure without struggling with calculations



Introduction to new Worker measure BITS: Examples

Worker Measure Bits – First Period



Worker Measure Bits – Last Period

Ma	rch	April	May
	120uSv		
	0µSv	OµSv	120µSv

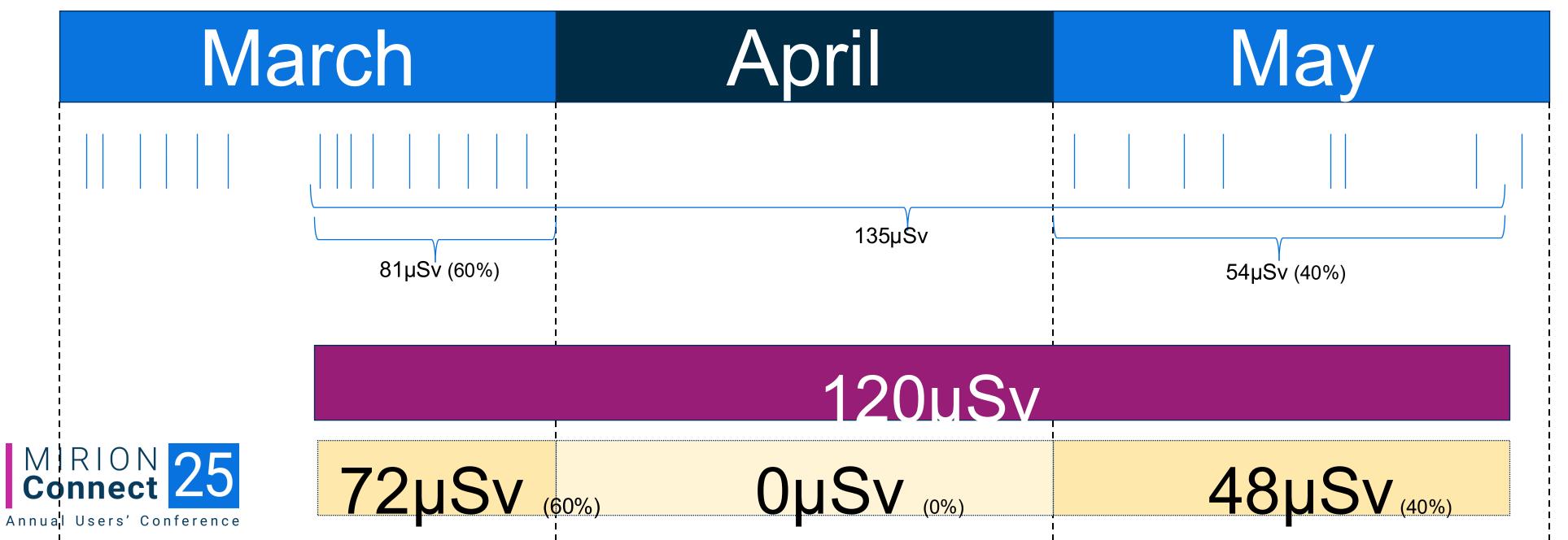


Introduction to new Worker measure BITS: Examples

Worker Measure Bits – Prorata Temporis

March	April	May
	120µSv	
25µSv	50µSv	45µSv

Worker Measure Bits – Prorata Dosimetric

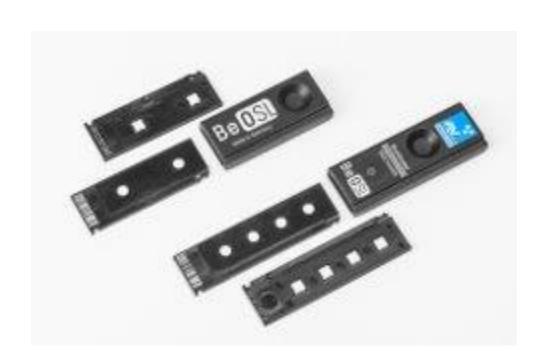


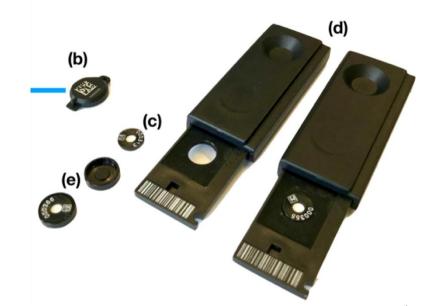
The new connections with OSL readers

- OSL Dosimetry systems
 - OSL Readers
 - Erasers and Irradiators
 - OSL dosimeter
 - Whole body dosemeters 2/4 element
 - Extremity dosimeters
 - Eye lens dosimeters
 - Ambient and environmental dosimeters
 - Automation systems





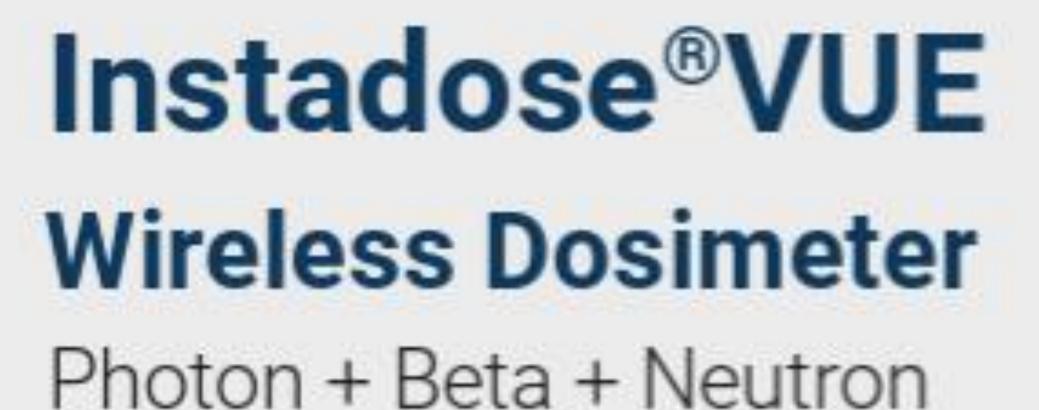






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Instadose









Advancing Safety with Immediate Data

More than 20 years of wireless dosimetry experience.







INTRODUCTION

- What is approve is not the DMC 3000 !!!
- What is approve is a **service**
- Service is provided by NUVIA

APPROVAL PROCESS

- Approval submission/audit procedures
- Electronic Personal Dosimeters
- Readers
- Dose Management Software
- Dose assessment process/software
- Record keeping





The UK Experience Stake holders









OverView Components

- Approval submission/audit procedures
- Electronic Personal Dosimeters
- Readers
- Dose Management Software
- Dose assessment process/software
- Record keeping





- Approval submission/audit procedures
- Electronic Personal Dosimeters
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- Record keeping



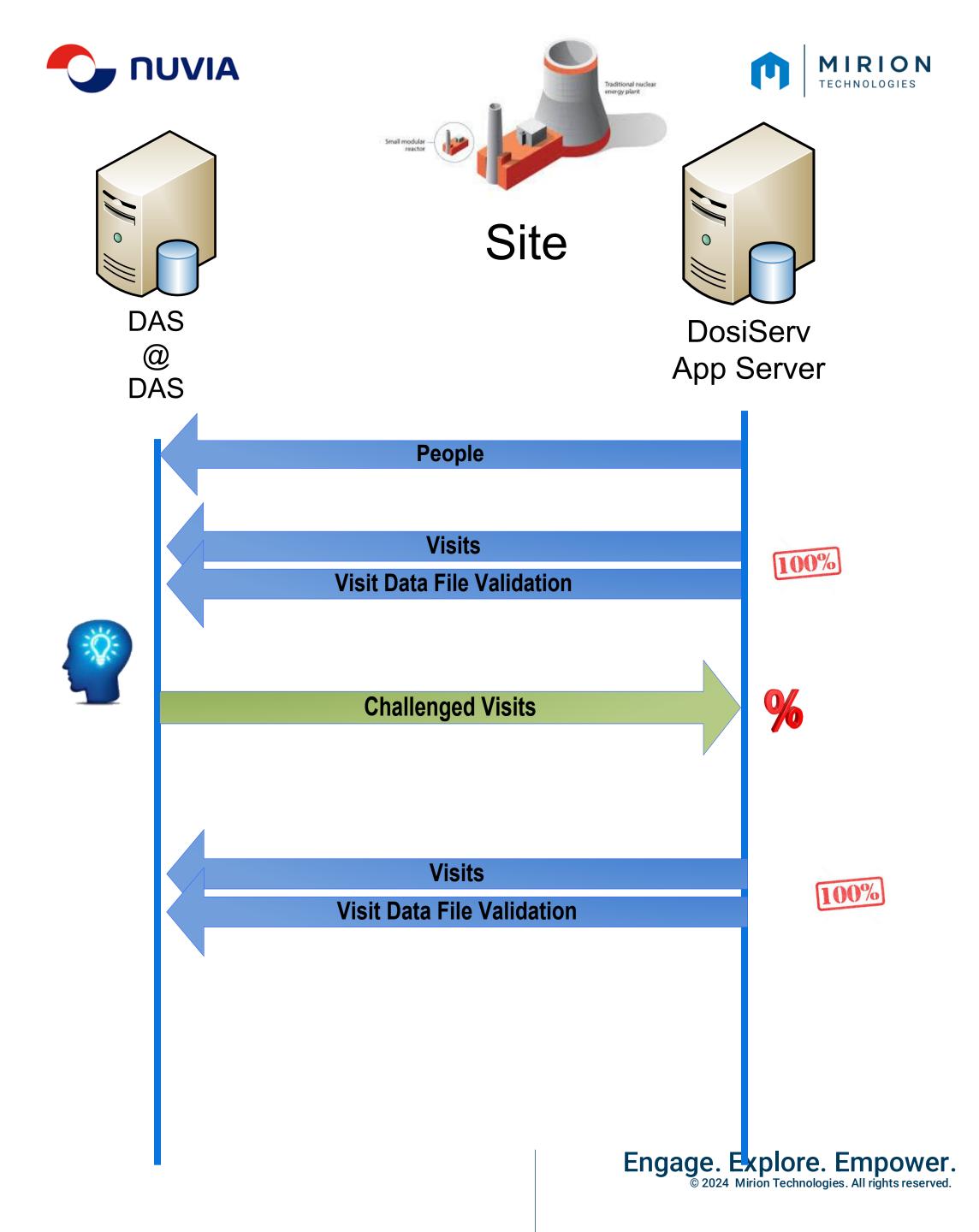


Step 1 (at the end of the month)

- Site Generate files and sends to DAS
 - People
 - Visits
- DAS will then compute and if needed challenge some visits
- Challenges will be sent back to the site for investigation /correction
- Site will "clean up" / justify and send back



The entire approval resides in the ability of the Dose Assessment Software to detect Dosimeter malfunction and/or miss use by the worker as well as the system malfunction and/or miss use by the RP personnel



Connect

MIRION

- Approval submission/audit procedures
- Electronic Personal Dosimeters
- Readers
- Dose Management Software
- Dose assessment process/software

Both HSE and Approved Dosimetry

Service (ADS) perform record keeping

Record keeping



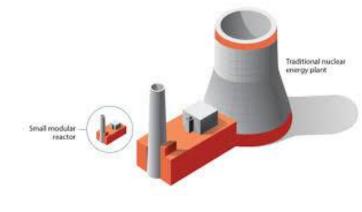






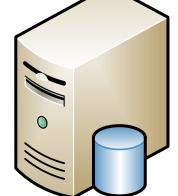












DosiServ App Server

Final Step

NOTA BENE!

- DAS OK with the data
 - Will send back Monthly values to site
 - Will send Data to HSE (legal body)

Worker monthly official doses









January



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- Approval submission/audit procedures
- Electronic Personal Dosimeters
- Readers
- Dose Management Software
- Dose assessment process/software
- Record keeping



The entire approval resides in the ability of the Dose

Assessment Software to detect

- 1) Dosimeter malfunction and/or
- 2) miss use by the worker as well as the
- 3) system malfunction and/or
- 4) miss use by the RP personnel

Dosimeter

- Max HP(10) doses
 (Visit can be commented by the site to avoid challenge)
- HP(10)/HP(0,07) or HP(3) ratio.
- Duration
- Dosimeter fault in self test
- Battery removed
 (triggers measure duration check in perspective with Visit duration)

Dosimetry system

- Dose alarm flag versus Dose alarm setpoint and dose
- Cal due date consistency (not mandatory)
- Dosimeter calibration factor.
- Manually entered visit
- Manually modified visit



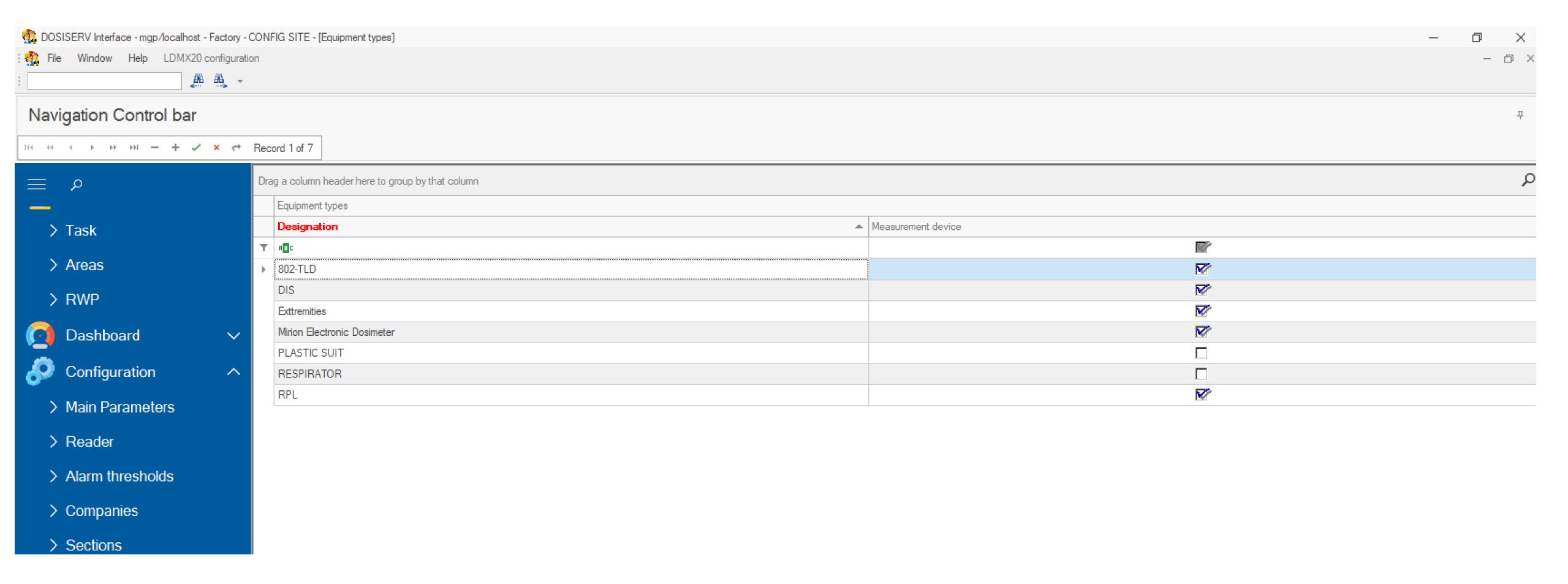
DosiServ - Part 3



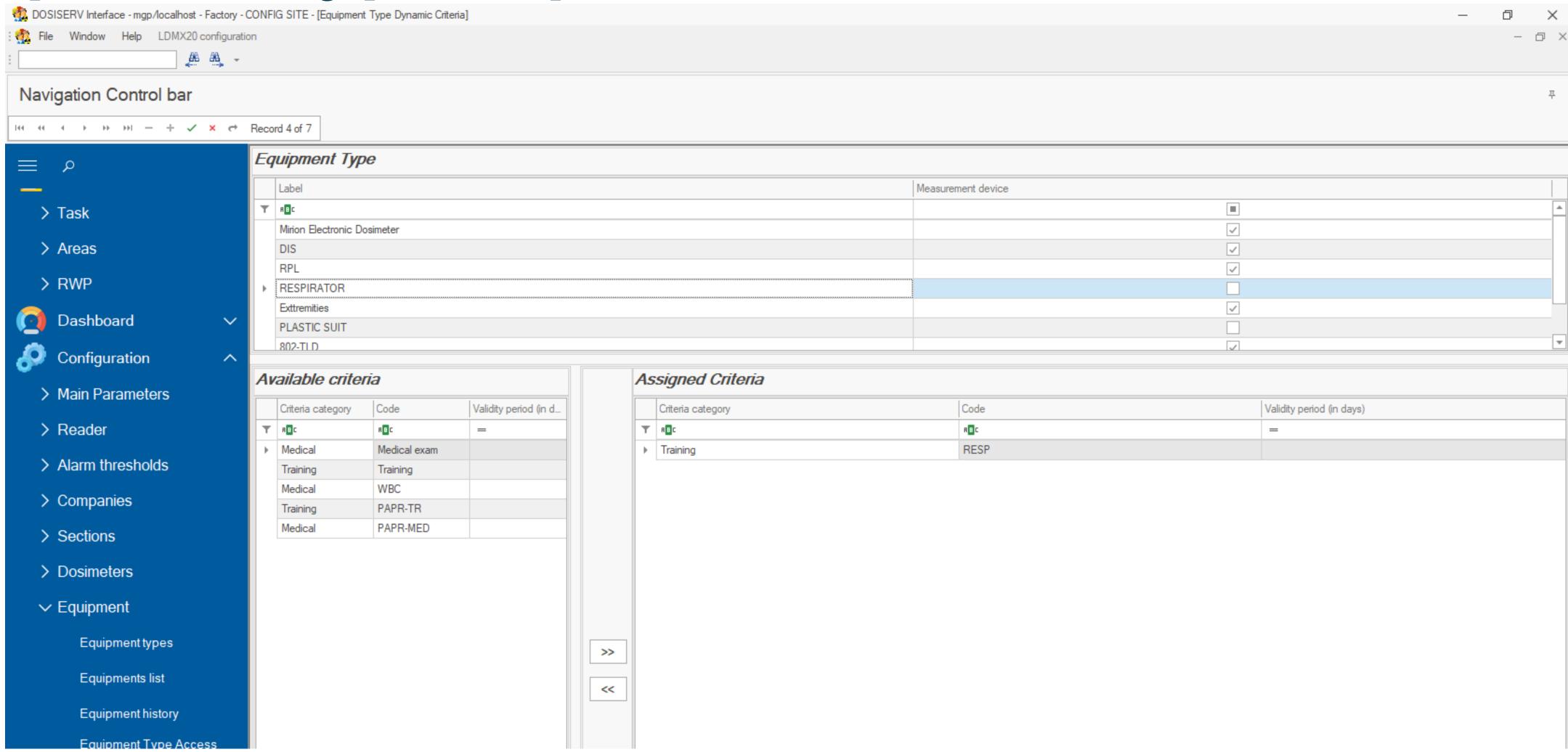
- Equipment Management
- Data Migration



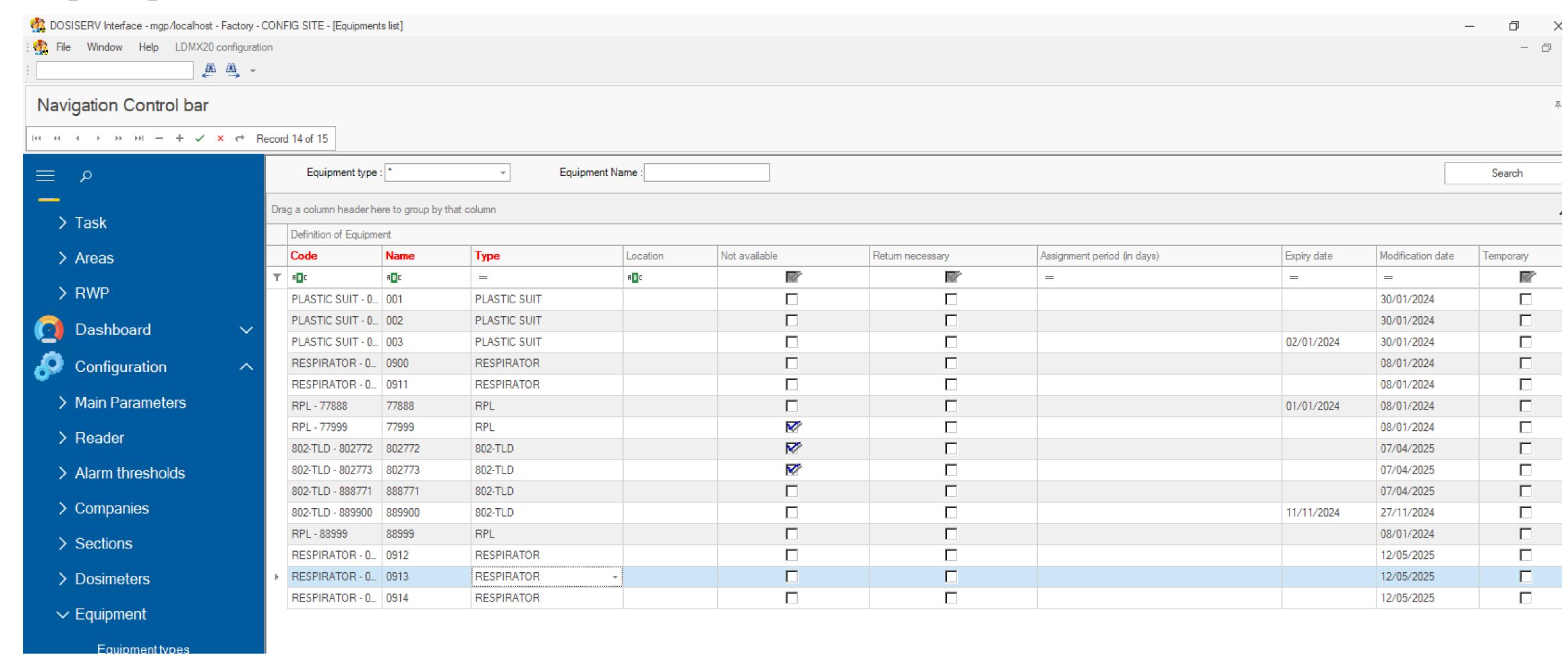
Equipment types



Equipment types qualifications

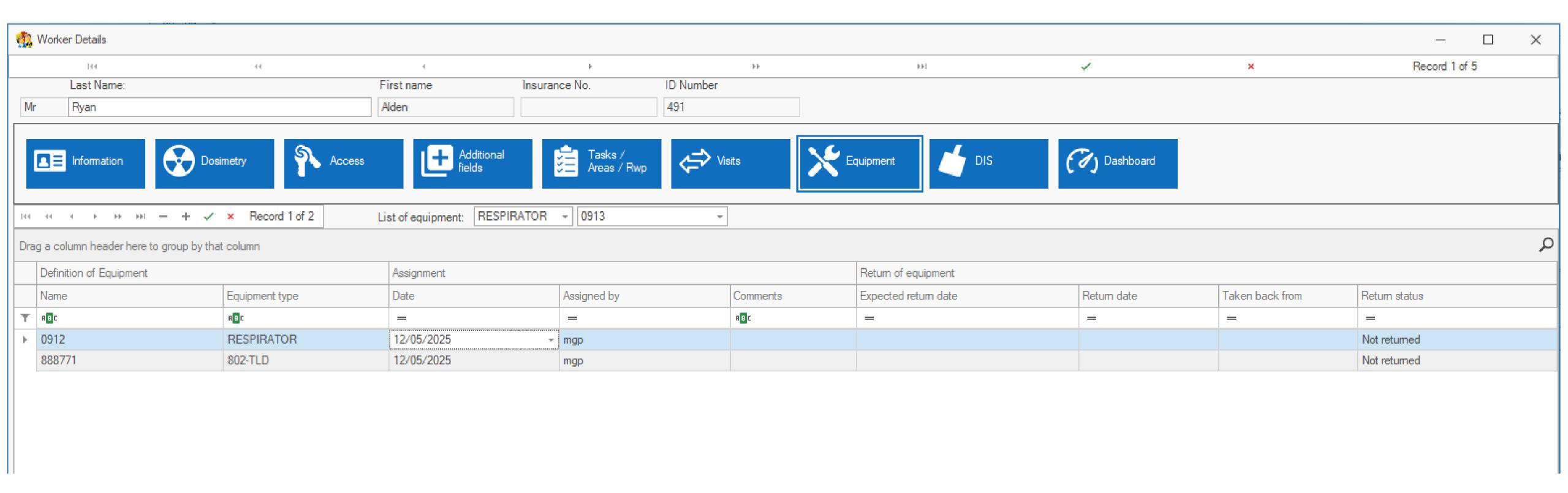


Equipment's themselves

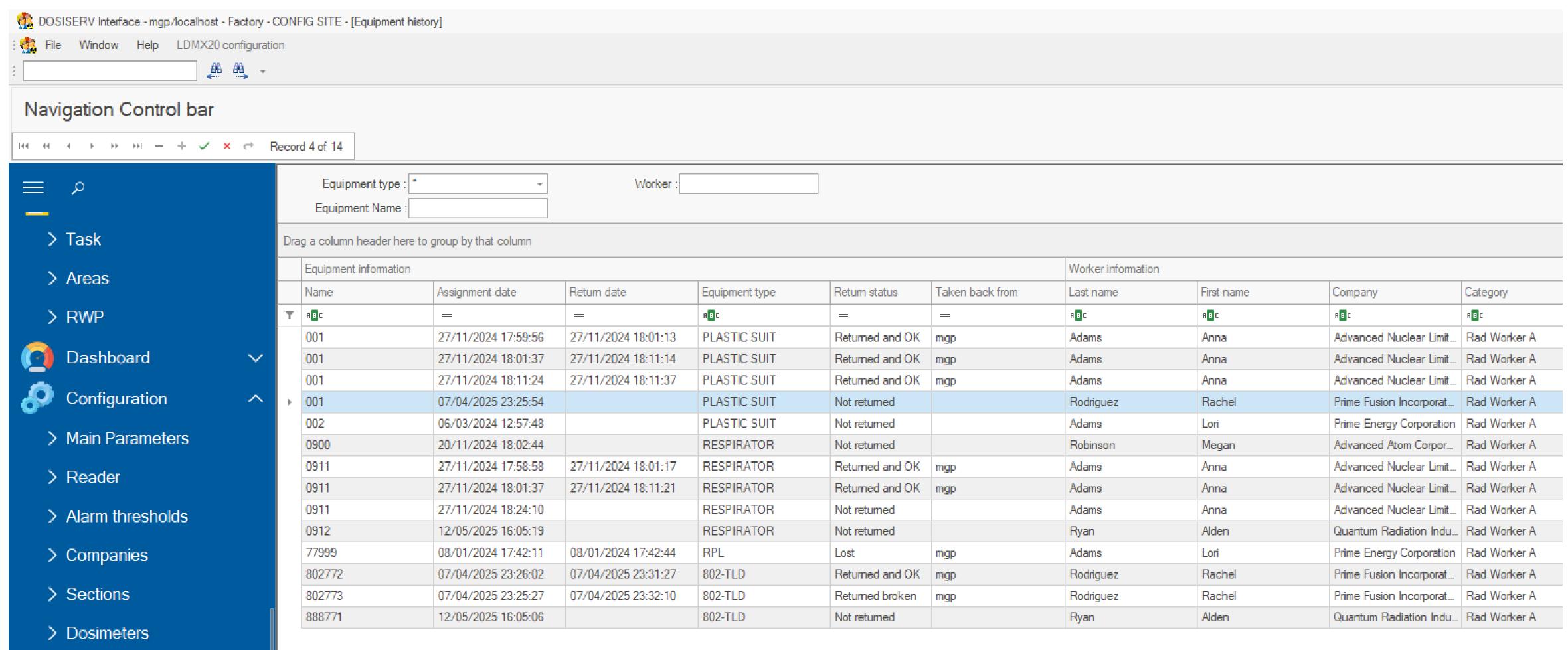




Equipment's hand out and retrieve



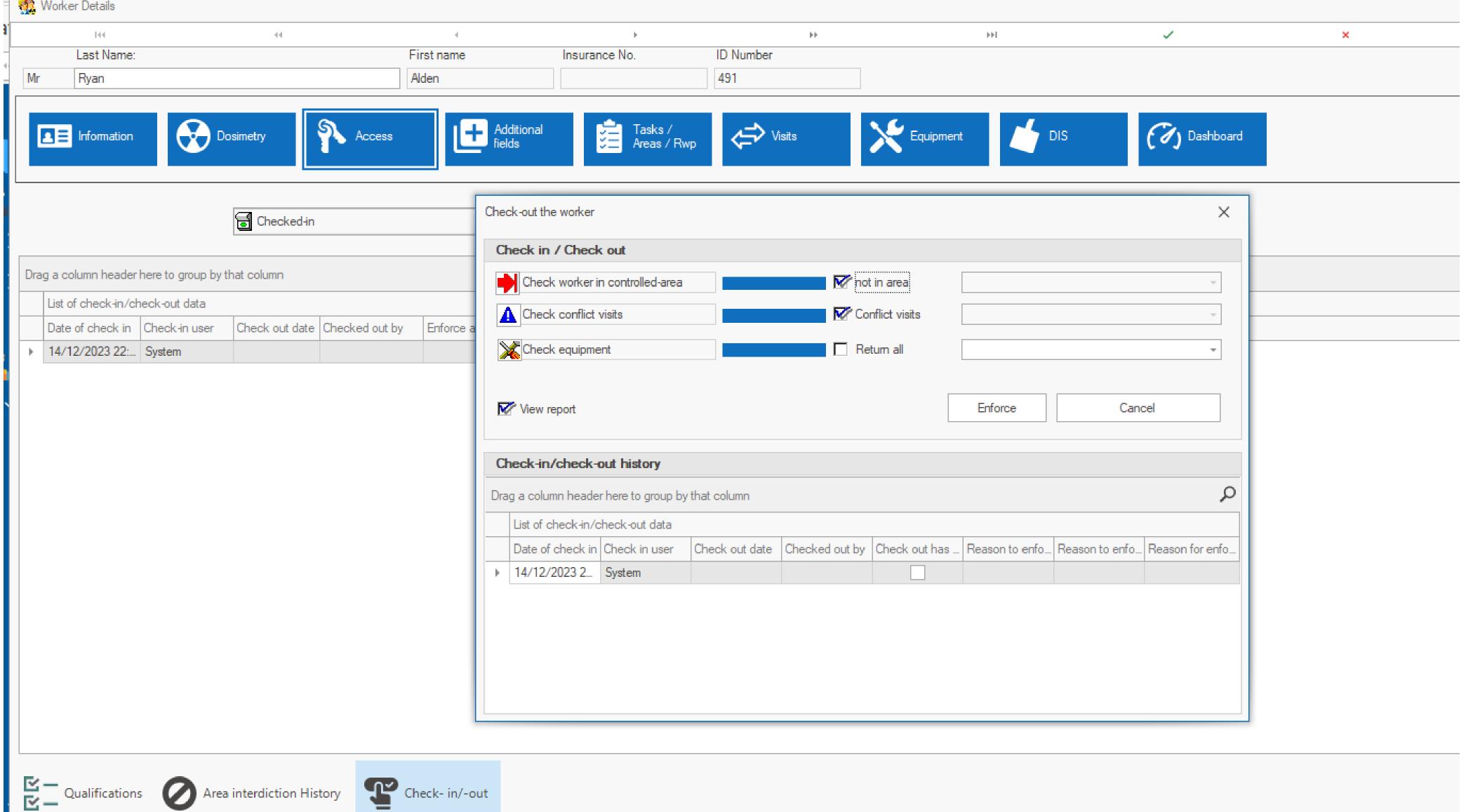
Equipment's history





Fauinment

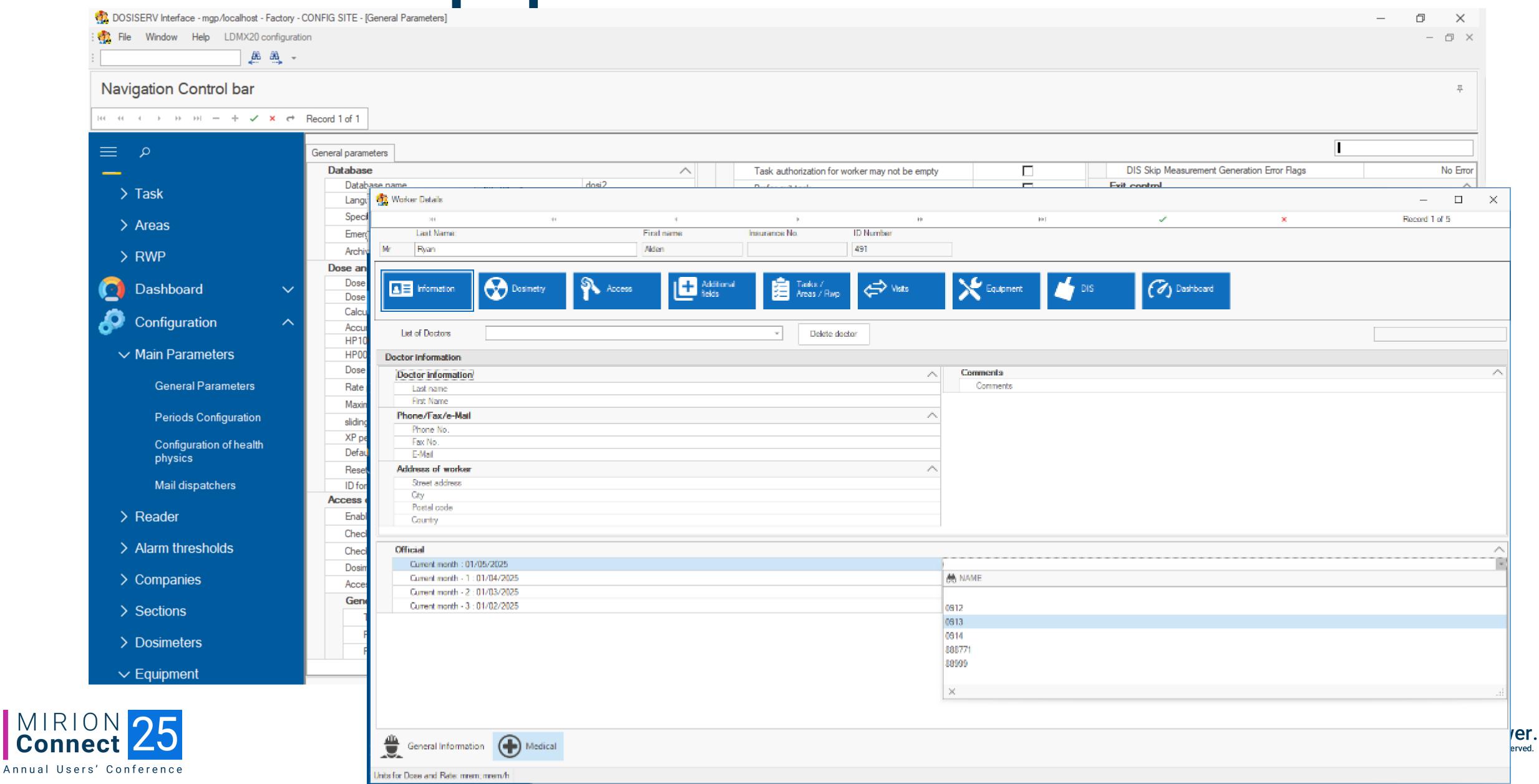
Equipment's and check-out





Units for Dose and Rate: mrem; mrem/h

TLD as an equipment



DosiServ - Part 3

- DosiServ & Legal dose
- DosiServ & Equipment Management
- Data Migration to DosiServ

Migrating to DosiServ - Challenges

Very often when a DosiServ system is deployed at customer site, part of the requirements is to migrate legacy data to DosiServ.

This data is usually made of:

- Workers + Companies information
- Workers electronic doses history
- Workers legal doses history
- Job codes / RWPs

As the legacy database and the DosiServ database can use very different DB engines and can have very different structures and data constraints, migrating from a legacy system to DosiServ does not go without challenges.

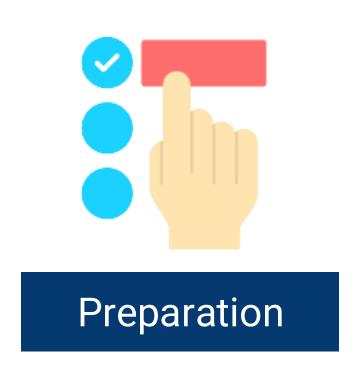


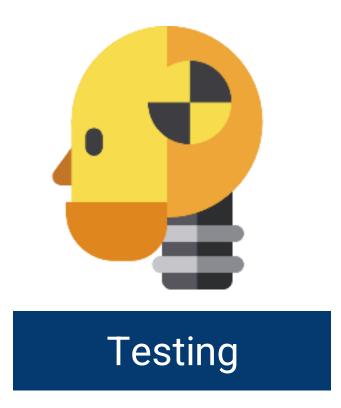
Migrating to DosiServ - Challenges

The key items to address efficiently those challenges are:

- Good cooperation between Mirion and the site (RP, IT/DB).
- Good preparation to define the appropriate migration process
- Perform several test migrations and use tools to verify data
- Have a clearly defined migration plan (including a rollback plan)









Migration Plan



Migrating to DosiServ – Migration Tools

Mirion has been performing legacy data migration on a yearly basis since 2007.

It has been the opportunity to build several migration tools that can be used to ease and secure the data migration.

Each data migration being unique, it is important to identify the most appropriate tools to perform the migration.

Data migration verification is also an important topic.



Migrating to DosiServ – Migration Tools

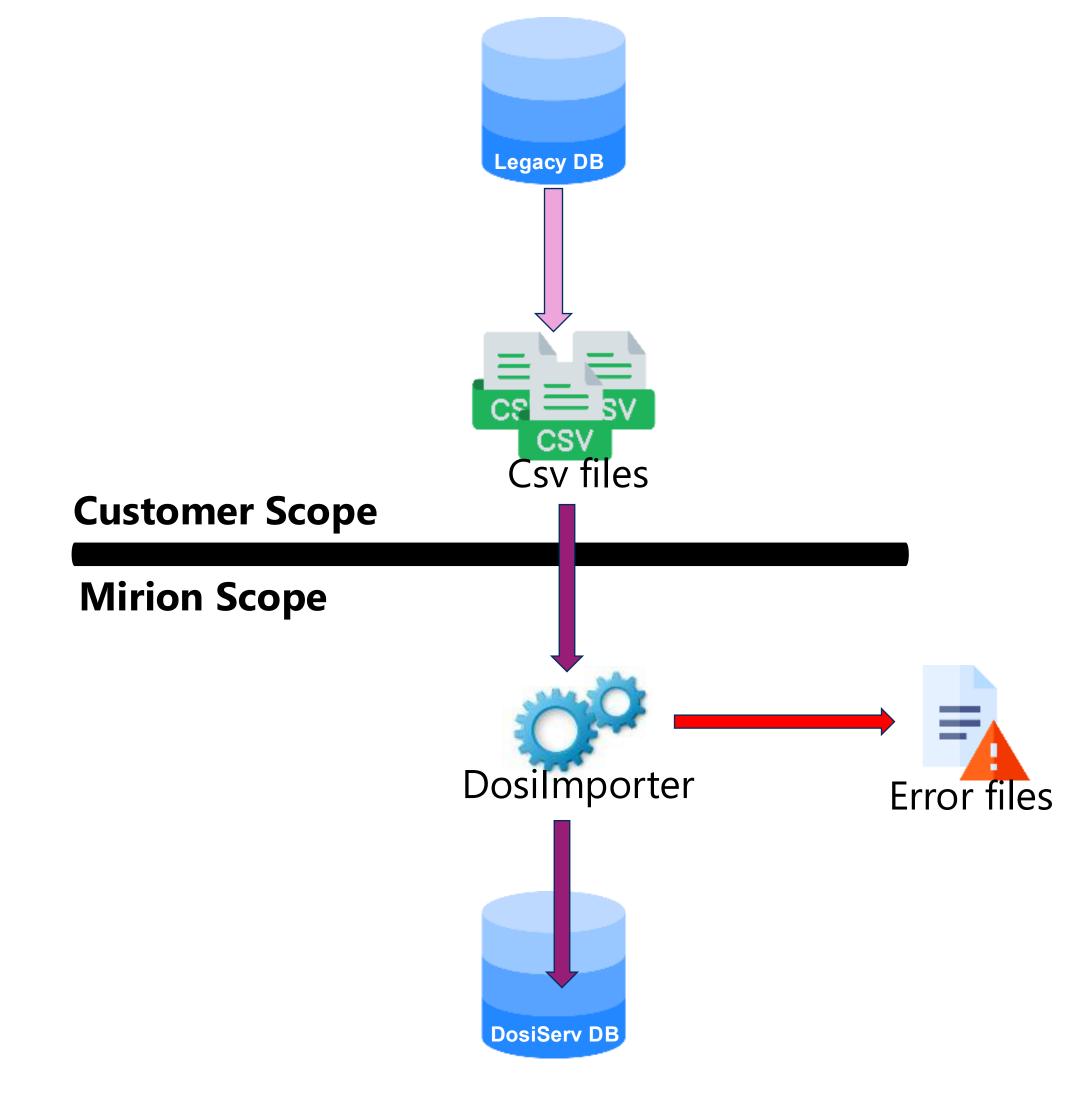
IMPORTERS

DosiServ provides built-in importers that can be used to import data from text files (csv formatted).

It is a two steps process:

- customer IT (usually) generates the files using expected format from the legacy database
- Mirion launches the importer program for every file to import data from the files to the DosiServ database.

Any record that cannot be imported is clearly stored into a dedicated error file.





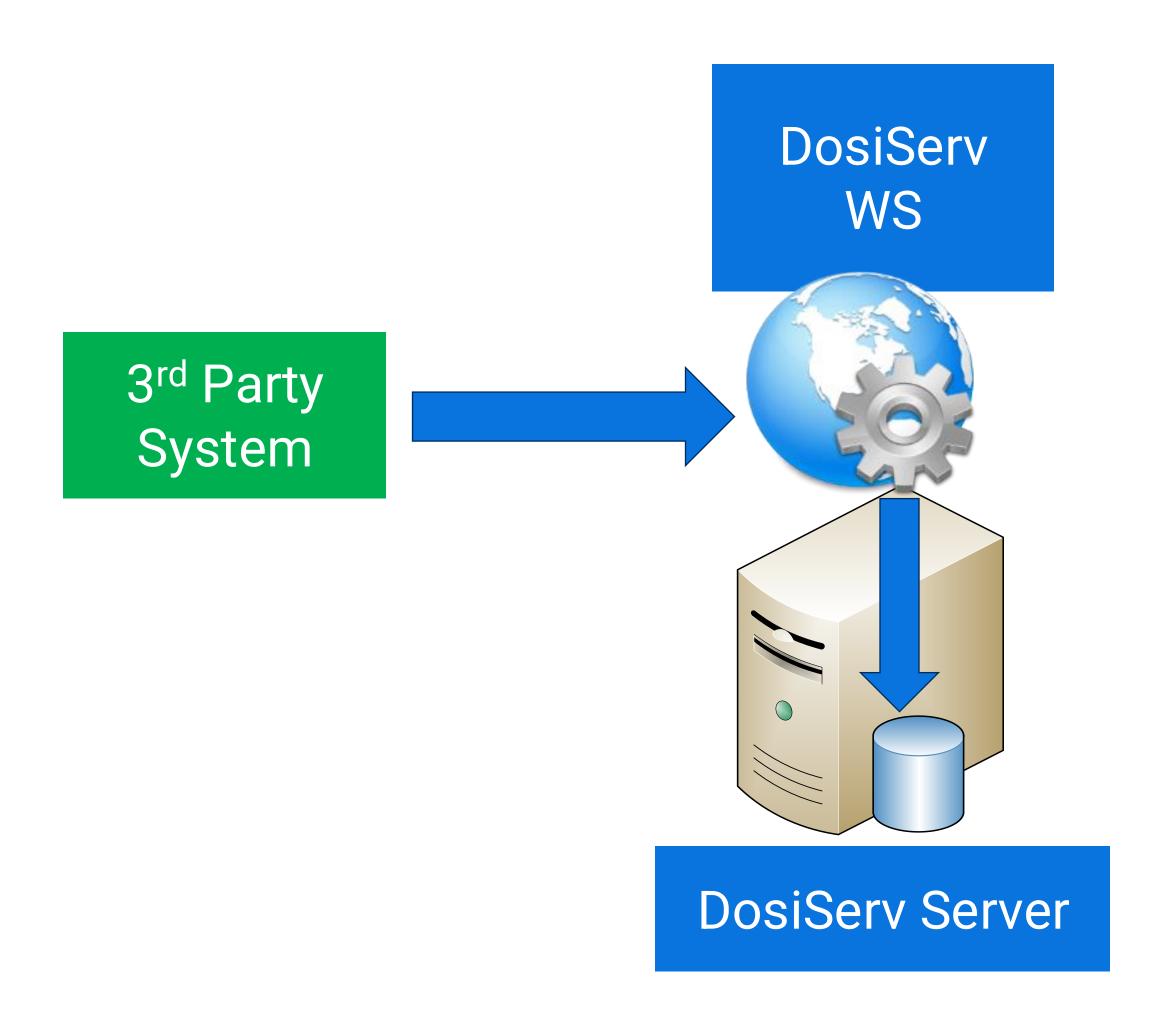
Migrating to DosiServ – Migration Tools

WEB SERVICE

DosiServ provides a built-in API (Webservice) that allows maintaining DosiServ's database information.

- Data that can be updated:
 - Workers Information & Qualifications
 - Workers Doses
 - Workers Jobs Authorization
 - Jobs
 - Companies
 - •

This API is an option to be able to import data into DosiServ.





Migrating to DosiServ – Migration Tools

VERIFICATION TOOL

Being able to verify that data has been properly migrated is part of the migration process.

Mirion can provide tools to check data from an importer file has been properly stored into the DosiServ database.

However, specific customized verification routines are very often setup as every legacy data is unique.

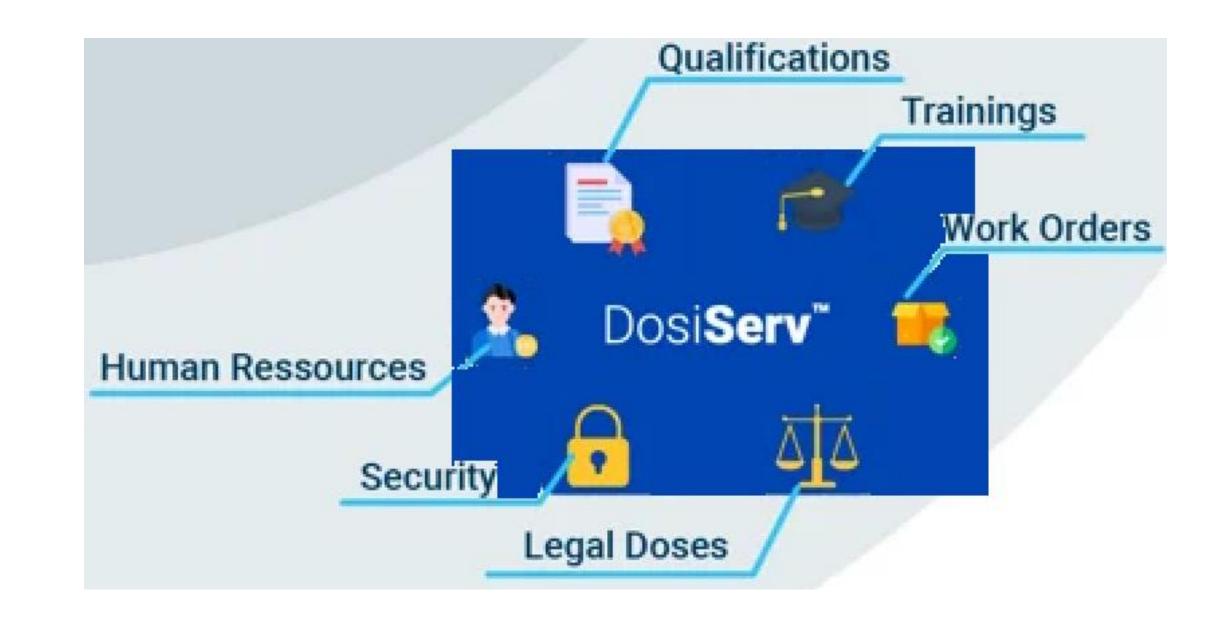


WHEN IS IT NEEDED?

DosiServ is a Commercial-off-the-shelf product.

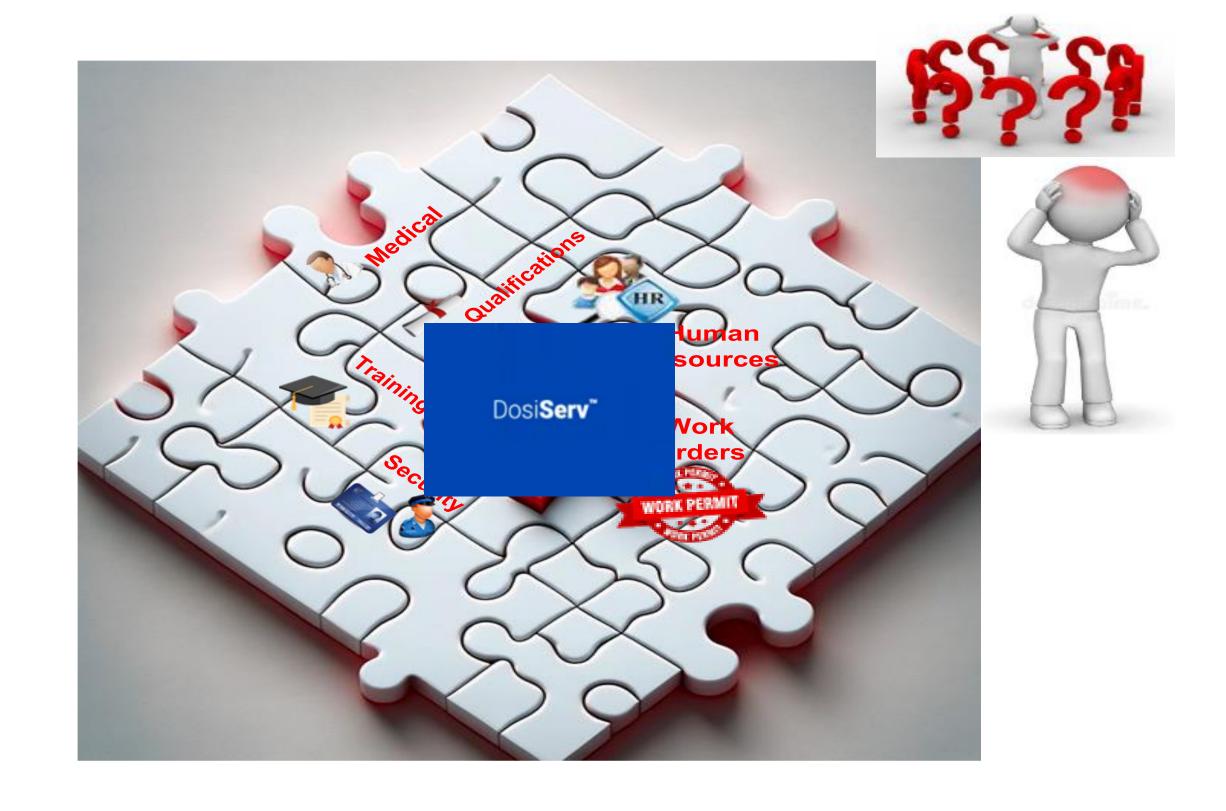
However, its architecture allows customizations and customers can require some customizations if the built-in features can fulfill all requirements.

Mirion will advise customers about the already built-in capabilities (API, importers...) and assesses if customizations are needed or not.



WHEN IS IT NEEDED?

In "big" installations, DosiServ is one more system to be integrated with a large numbers of other systems and the standard API is sometimes not enough to exactly fit.



WHEN IS IT NEEDED?

In "big" installations, DosiServ is one more system to be integrated with a large numbers of other systems and the standard API is sometimes not enough to exactly fit.

In this type of situation, DosiServ can be customized to perfectly adapt to the existing environment.





DIFFERENT TYPES OF CUSTOMIZATIONS CUSTOMIZED API

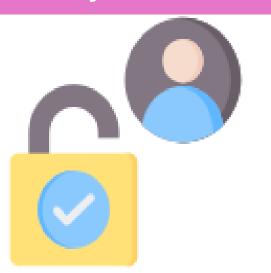
Very frequently, the customizations made to a DosiServ installation are related to build software interfaces with third-party systems, like HR or Access Control, to maintain DosiServ's data from customer's other applications.

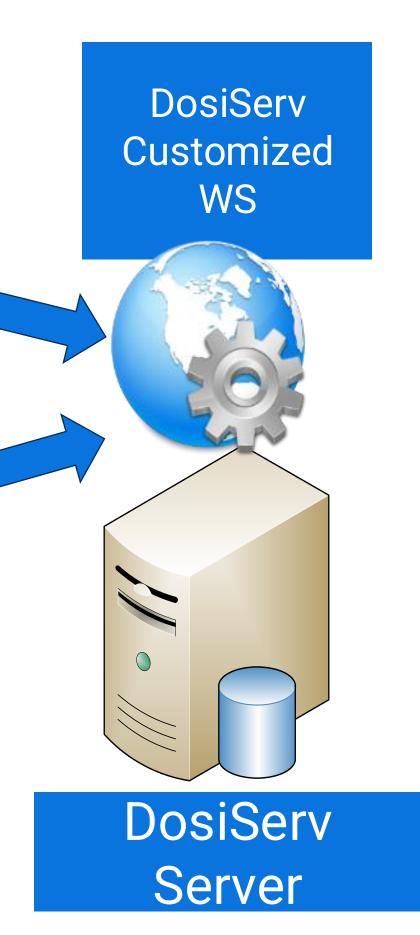
These interfaces are usually webservice based but database to database interfaces are possible too.

Cooperation with customer IT is needed for these customizations.



Access Control System





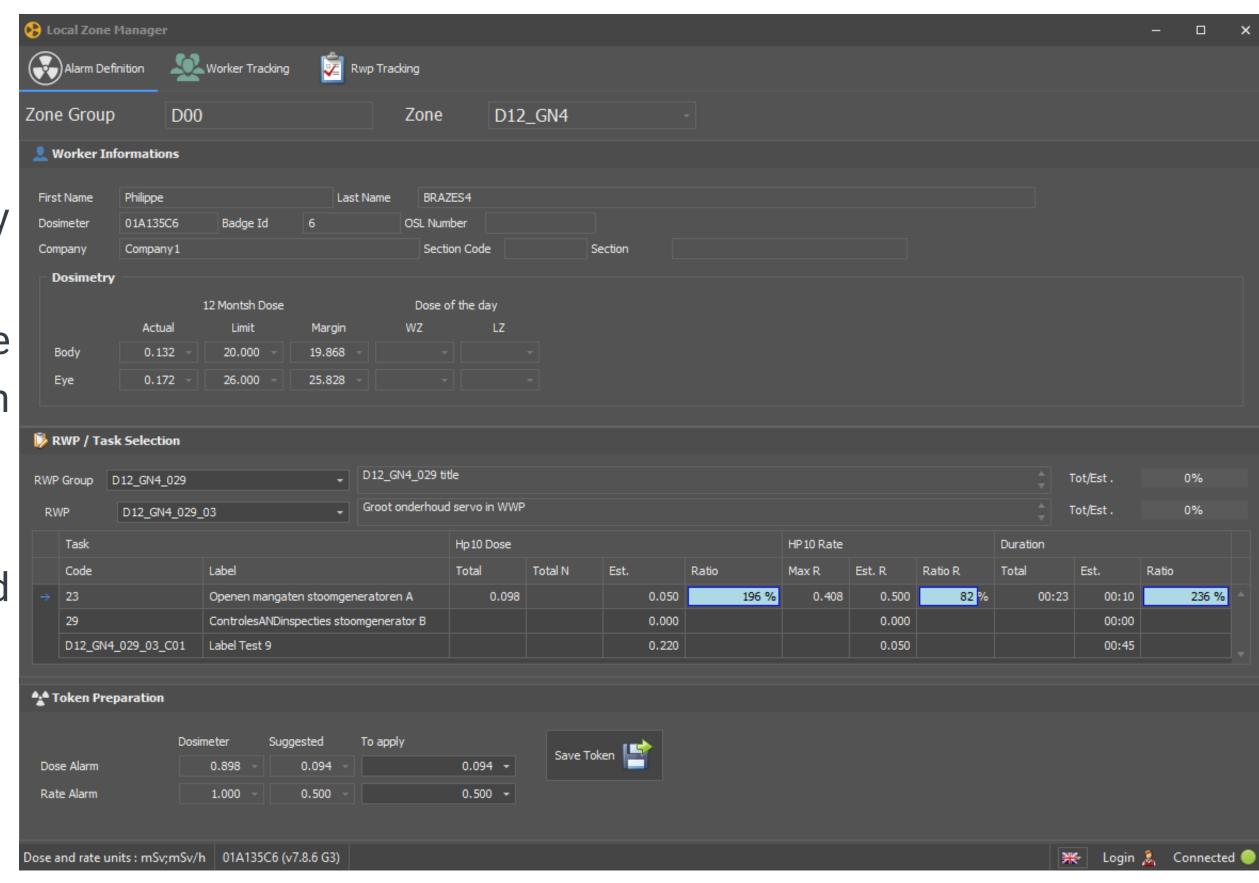


DIFFERENT TYPES OF CUSTOMIZATIONS CUSTOMIZED SCREENS

Sometimes dedicated user interfaces are requested by customers.

The DosiServ application architecture can easily accommodate with theses UI customizations thanks to a plugin mechanism allowing to avoid code duplication.

These UI customizations sometimes get along with customized SW interface like doses export for instance.





DIFFERENT TYPES OF CUSTOMIZATIONS CUSTOMIZED REPORTS

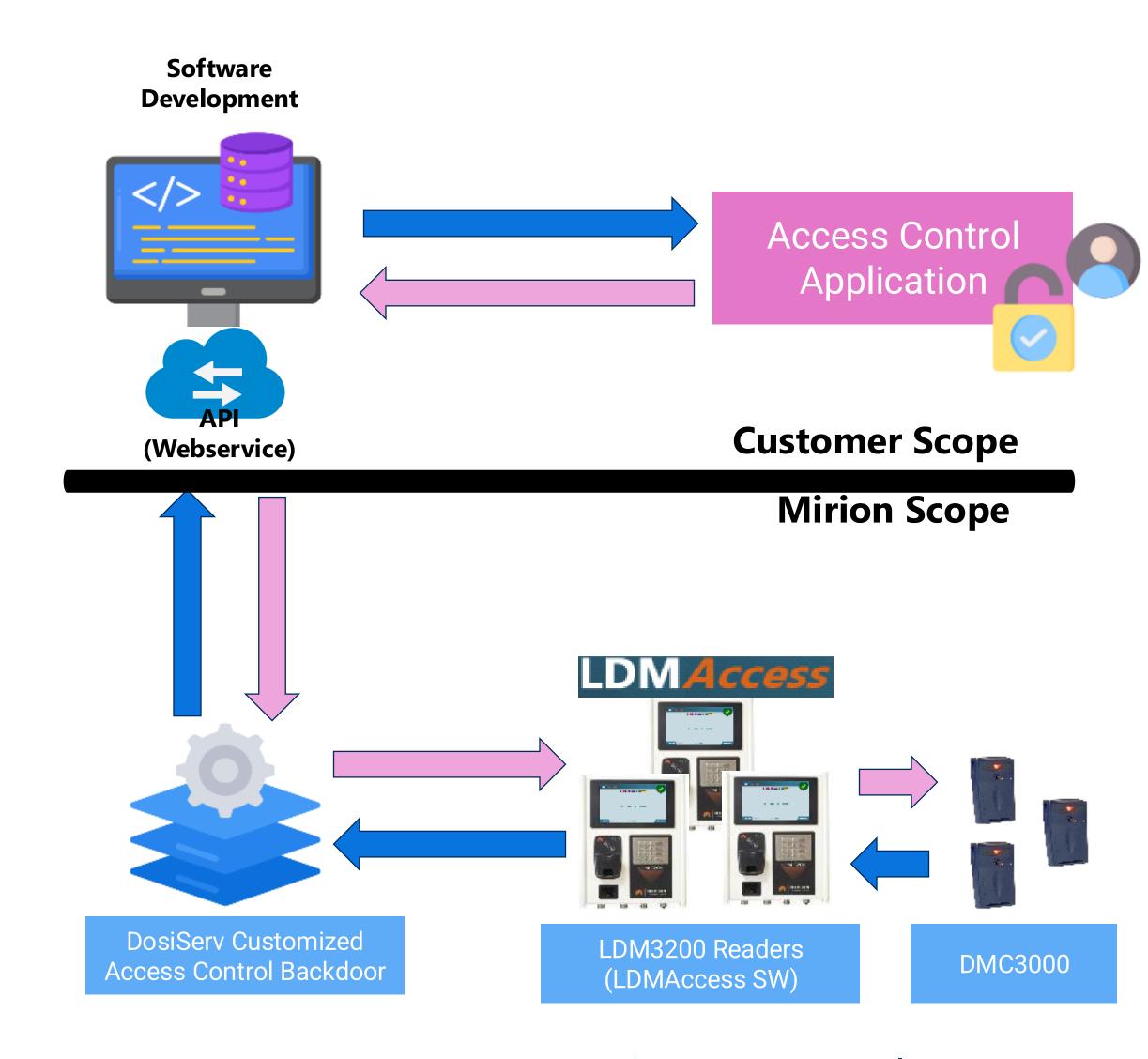
Providing additional reports to DosiGUI is also a common customization that has been done for several customers.

RPC NUMBER: 2007	70001		
RADIATION PROTECTION CERTIFICATE ROUTINE OPERATING SURVEILLANCE ACTIVITIES IN THE CO	20070001 NTROLLED AREA	<u>Revision :</u>	
Component:	Work Order :		
Project Code :	ALARA Review:		
Valid From: 2007/10/11 12:00:00AM	Dose Alarm :		150,00
Valid To: 2008/10/11 12:00:00AM	Rate Alarm :		2,000,0
Total Estimated Man Hours: 4:00	Total Estimated Dos	se:	100,0
Initiated by: Revision Reason: Rev 7 Issued by: mgp		2007/10/11 02:57:20PM 2007/10/12 04:47:51PM	
Radiological Conditions: Expected Values: Survey Number: Dose Rate: Contact: 0.00 CCPS: General area: 2,000.00 Bq/cm 50.00 Neutron: DAC: >1 Beta:	Dosimetry (elem QFD: TLD: TLD Neutron: EPD: EPD Neutron: Neutron:	ents required): False Feet: False Head: True Hand: True Finger: False Other: False WB TLD:	Fai Fai Tr Fai Fai
RP Job Cover : None No Cover necessary	reation.	raise WB ILD.	1 41

DIFFERENT TYPES OF CUSTOMIZATIONS EXTERNAL ACCESS CONTROL

Less frequent that the previous customizations, DosiServ can dedicate the access control to an external access control system.

Several technologies can be used for this purpose and cooperation with customer IT is needed in any case.





DosiServ - Part 3

- DosiServ & Legal dose
- DosiServ & Equipment Management
- Data Migration to DosiServ
- DosiServ 2026
 - Cybersecurity
 - New features
 - Access control
 - Form 4 / Form 5
 - Al



Cybersecurity Challenges

DosiServ is a software application that has been initiated in 2004. The application, as it has been designed at the time, could not have met today's expectations in terms of cybersecurity without a regular effort from Mirion to upgrade the technologies blocks that are involved in the application.

This is really an ongoing process as this field is permanently moving and new possible threats are raised almost every day in the software application world. Some DosiServ releases in the past did not bring a lot of visible features but were necessary to maintain the application at a good level from cybersecurity point of view.





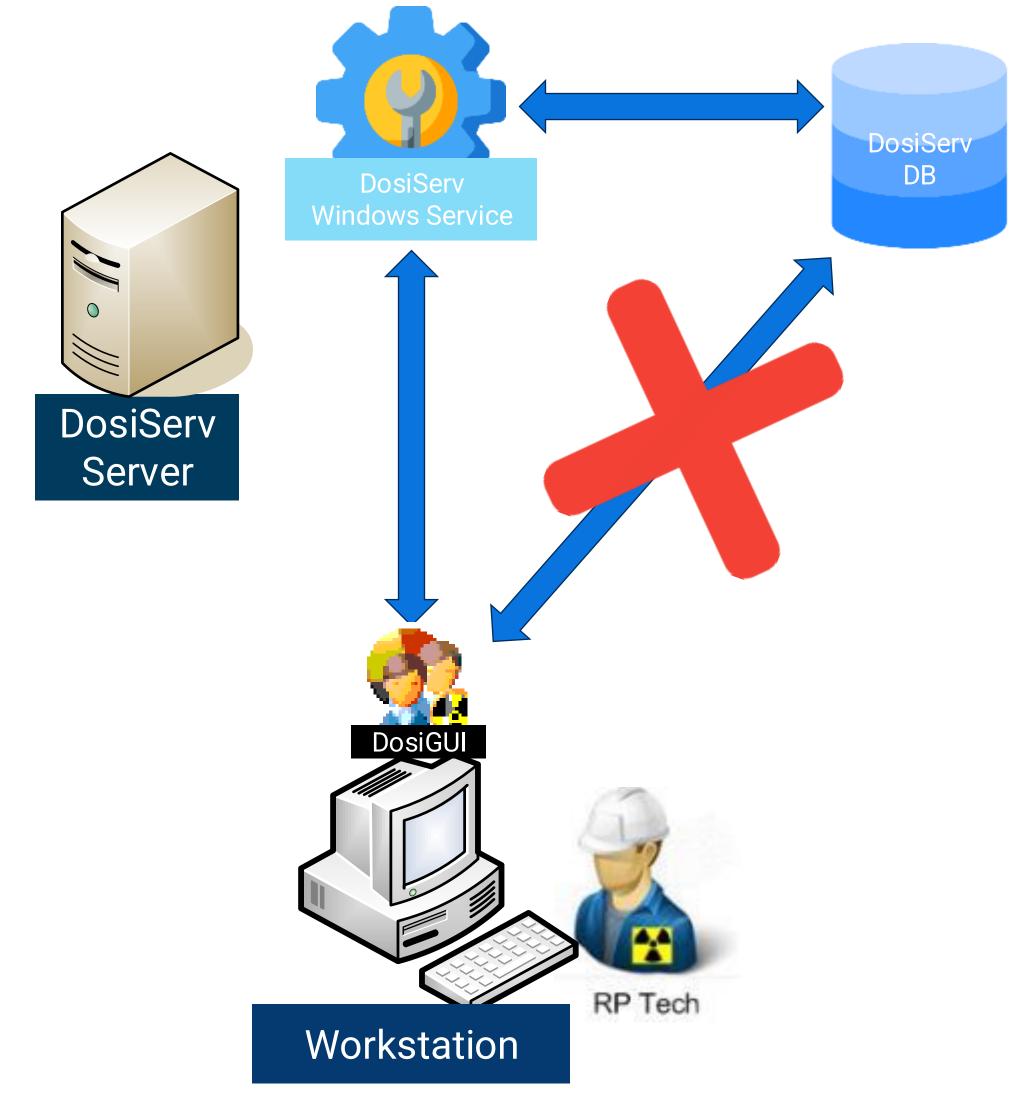
Securing Client / Server communication

DosiServ is a client / server application.

DosiServ client application, DosiGUI, is a desktop application running on the workstations.

DosiGUI does not connect directly to the database.

DosiGUI connects to a dedicated Windows Service running on the DosiServ application server.

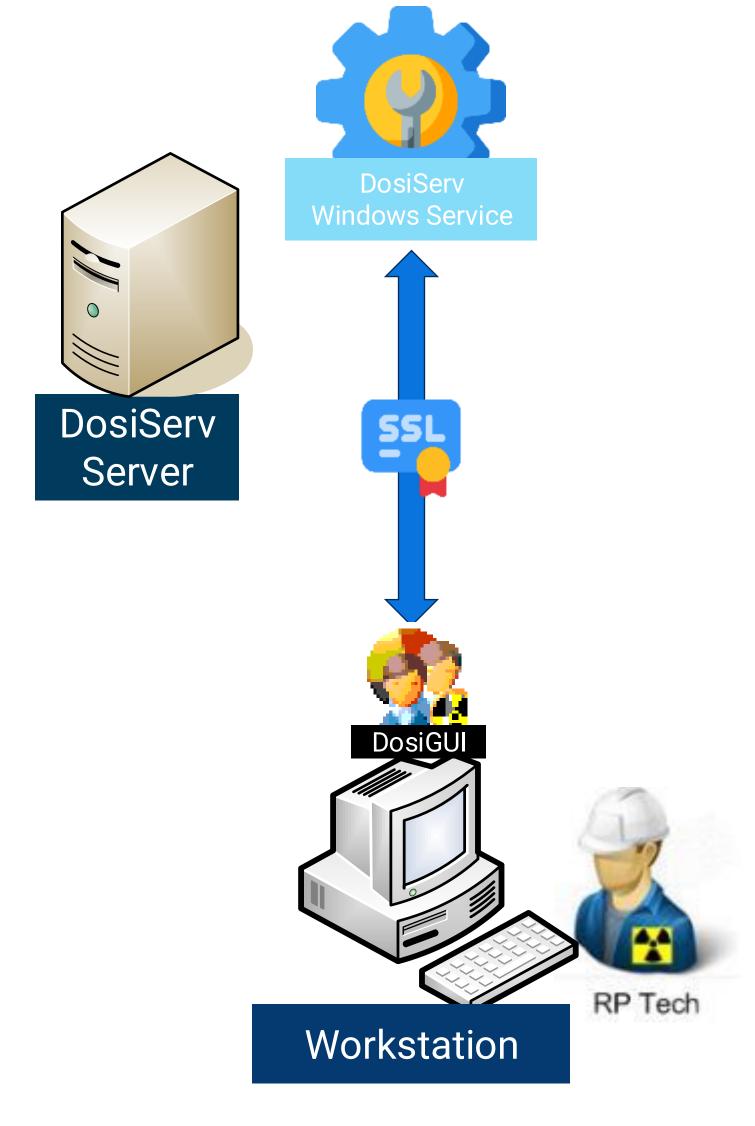




Securing Client / Server communication

In addition, communication between DosiGUI (client) and the Windows Service running on the DosiServ Server is encrypted using certificates.

By default, DosiServ uses its built-in self-signed certificates but the system can be configured to customize the certificates to be used.

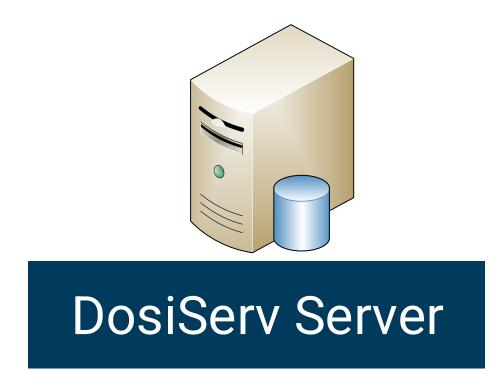




Securing Reader / Server communication

Part of the challenges to maintain DosiServ upto-date in terms of cybersecurity, there is the needs to provide up-to-date & secure protocols with new equipment <u>and</u> to maintain reasonable backwards compatibility with the existing legacy systems.

The communication with the readers perfectly illustrates this compromise.





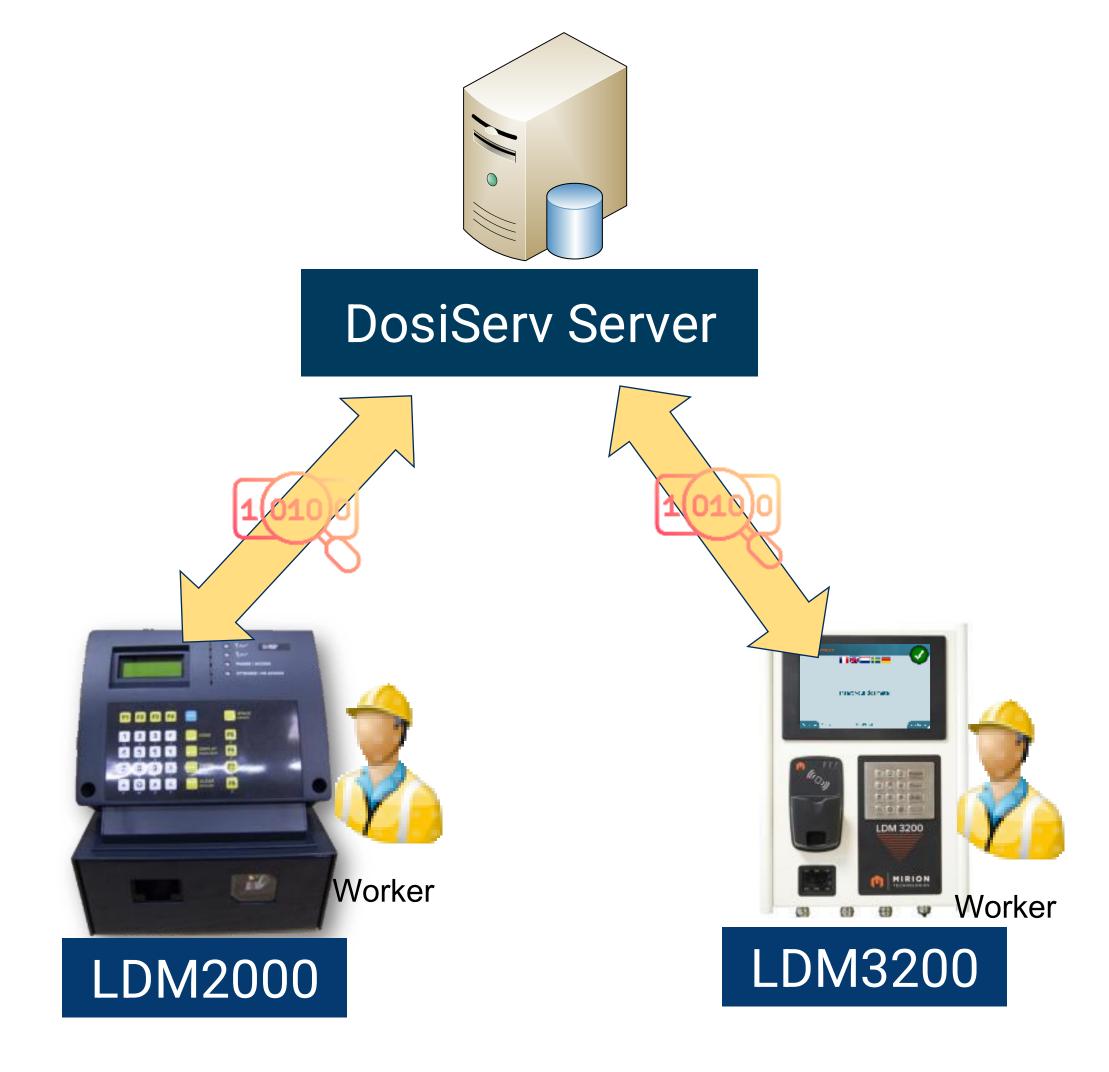




Securing Reader / Server communication

The first releases of DosiServ implemented the existing socket based protocol between LDM2000 and DosiView.

When LDM3000 application was launched, the same protocol has been initially used.



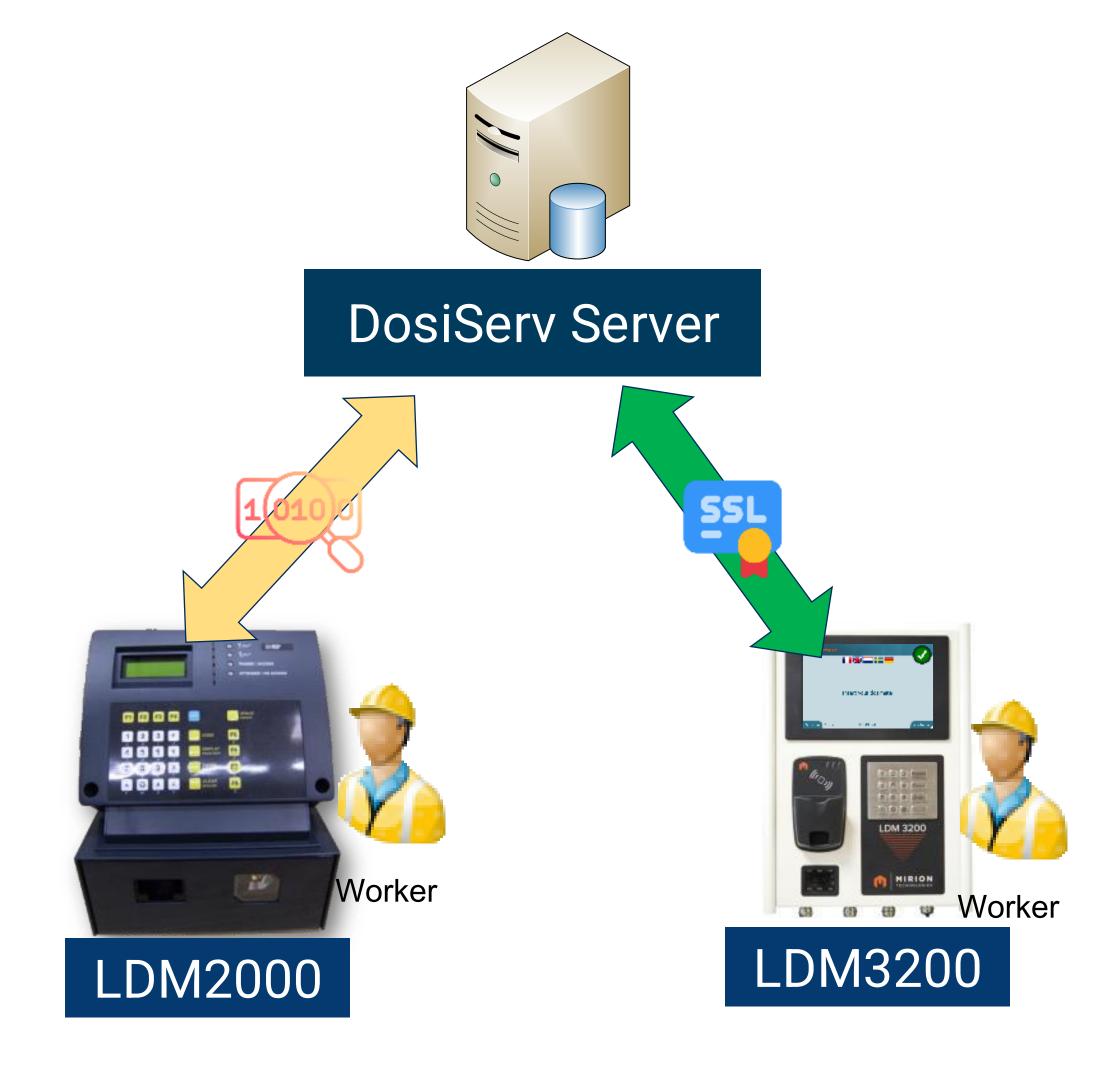


Securing Reader / Server communication

The first releases of DosiServ implemented the existing socket based protocol between LDM2000 and DosiView.

When LDM3000 application was launched, the same protocol has been initially used.

Then, to improve security and to extend possible features, the protocol between LDM3000 and DosiServ has been redesigned. That opened the door to new features (list display, smart offline...) and to a more secure communication involving encryption (using certificates).

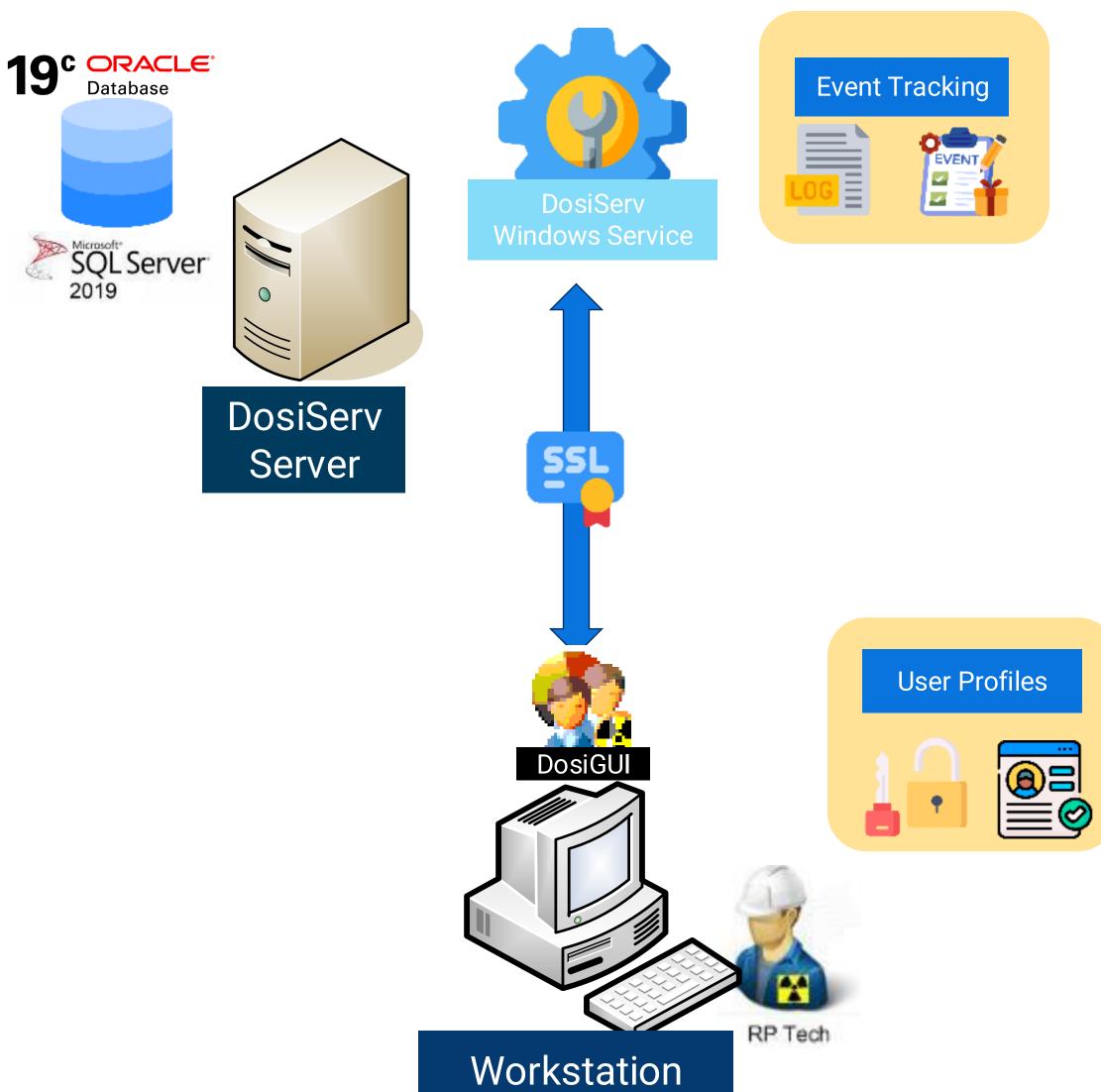




Securing DosiServ Application

DosiServ itself implements some mechanisms to secure the application:

- User profiles management to guarantee users will authenticate and access to authorized data only.
- Event tracking (application logs, event logs, journal tables) to keep track of all important information
- Used of Oracle or SQL Server which are proven DB engines.

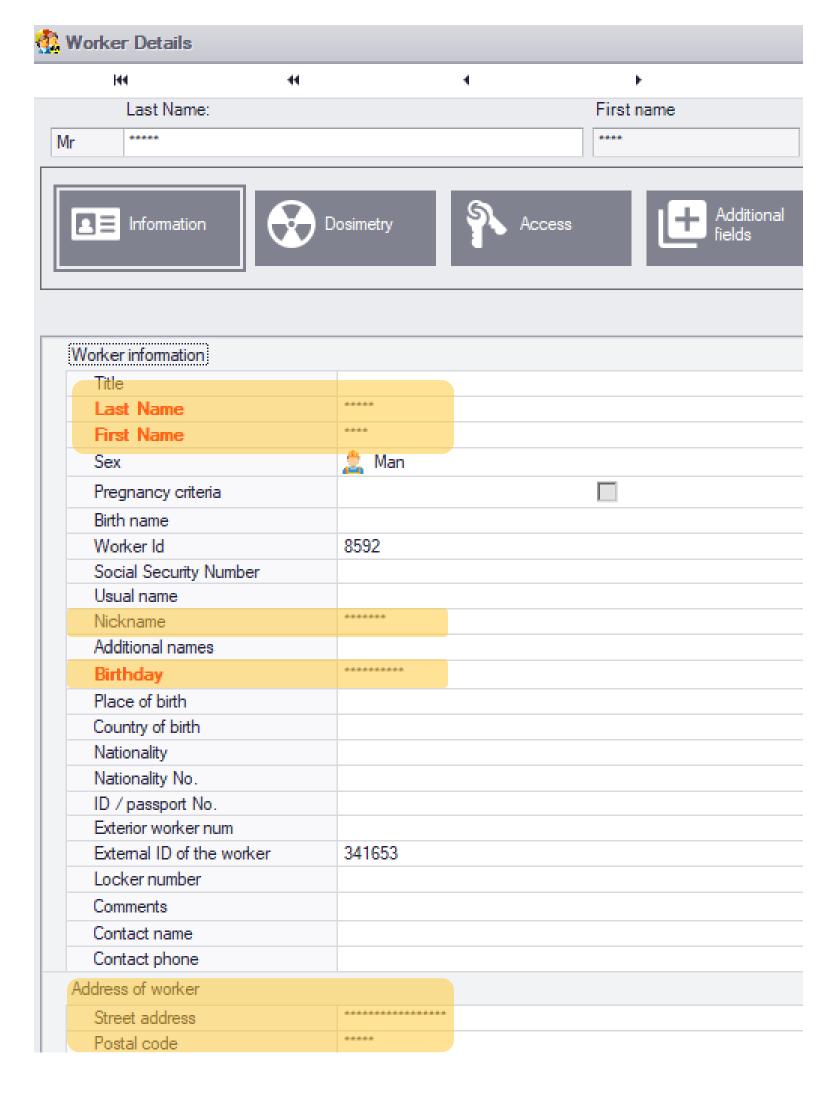


Securing DosiServ Application

Another cybersecurity related feature will be included in DosiServ 2023 SP1.

(Personal Identifiable concerns PII Information).

It will be possible to enable a parameter so that PII will be hidden when data is not edited.



Securing Reader Equipment

Mirion is currently working on a Support Contract Offer to maintain reader equipment up-to-date (Operating System and SW)





DosiServ - Part 3

- DosiServ & Legal dose
- DosiServ & Equipment Management
- Data Migration to DosiServ
- DosiServ 2026
 - Cybersecurity
 - New features

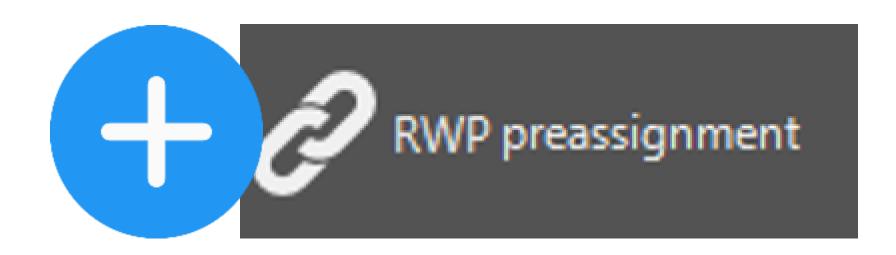


RWP PRE ASSIGNMENT

Pre assignment of RWP as it is possible today with tasks.

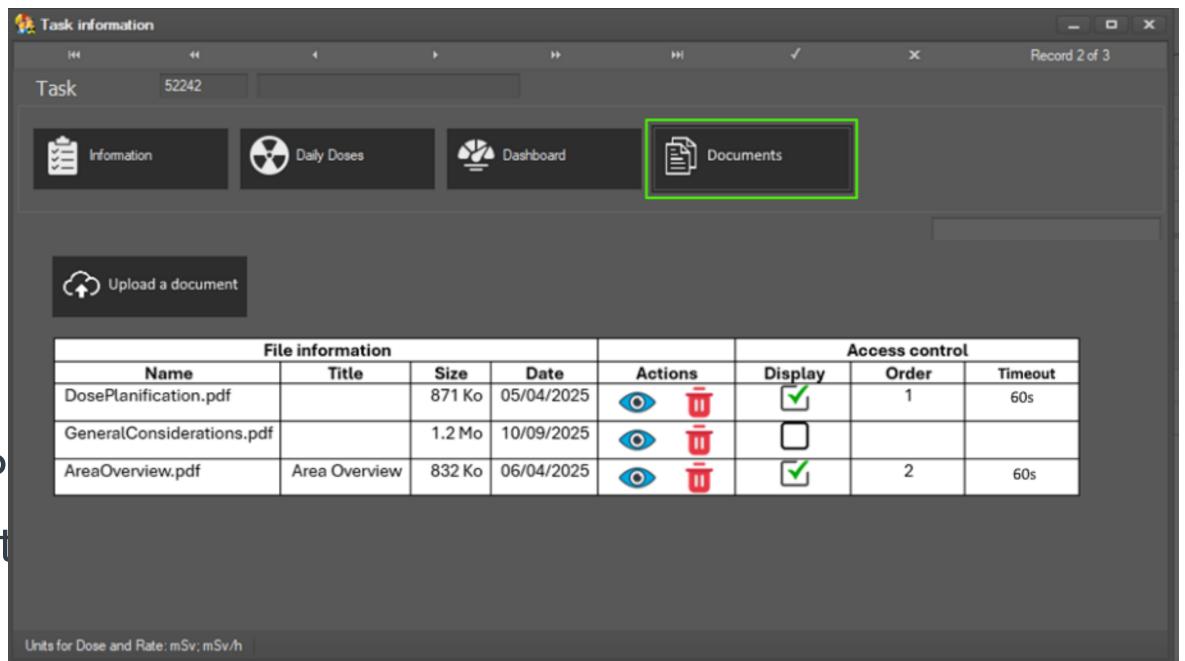
When a valid RWP is pre assigned to a worker, the worker does not have to type/select a RWP and his pre assigned RWP will be automatically linked to the visit.

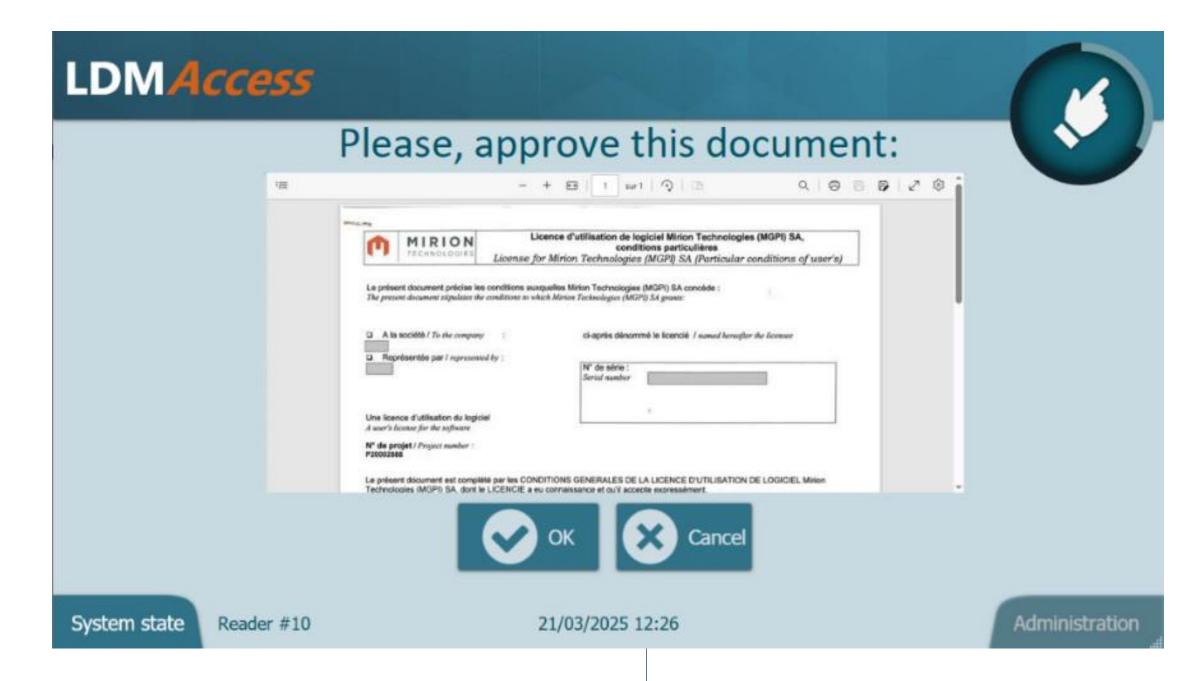




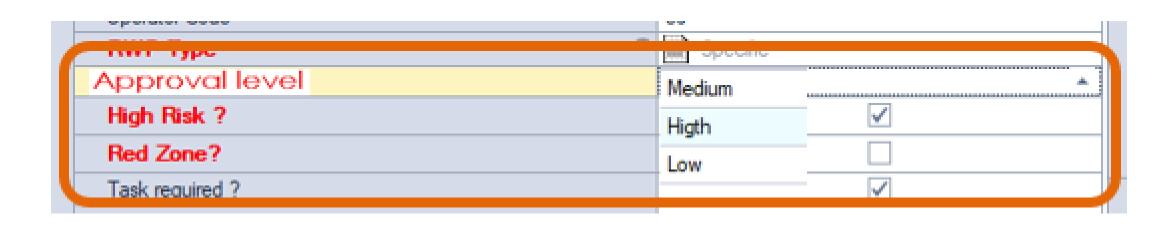
DOCUMENT ATTACHMENTS AND DISPLAY (DosiServ + LDMAccess)

- Attach true document attachment to RWP
- Be able to display documents on reader at access time



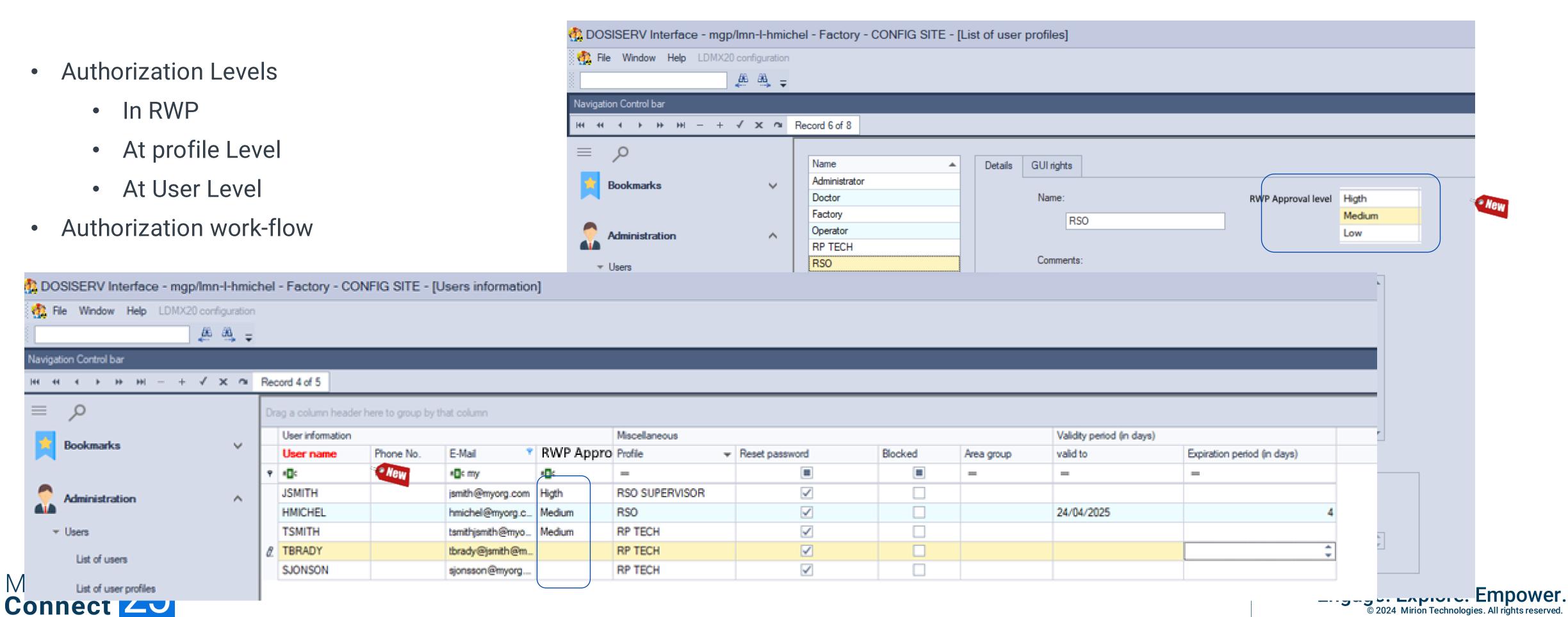






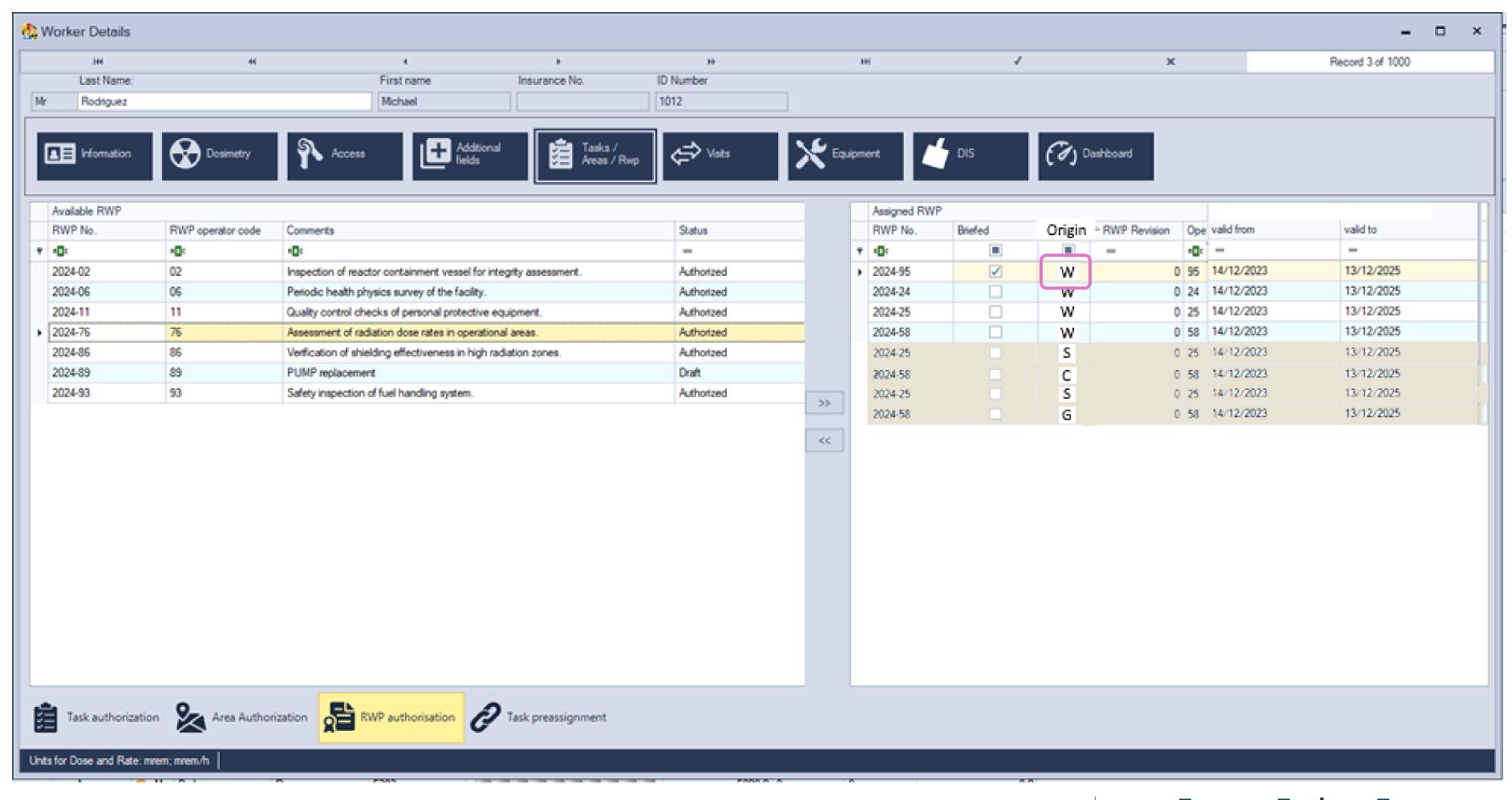
RWP Authorizations and Workflow

Annual Users' Conference



RWP Authorizations Origin

- Authorization Levels
 - By Worker
 - By Company
 - By Section
 - Generic

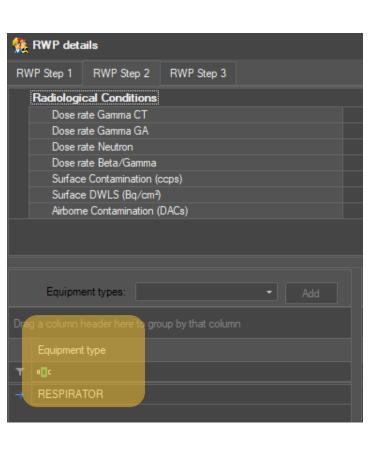


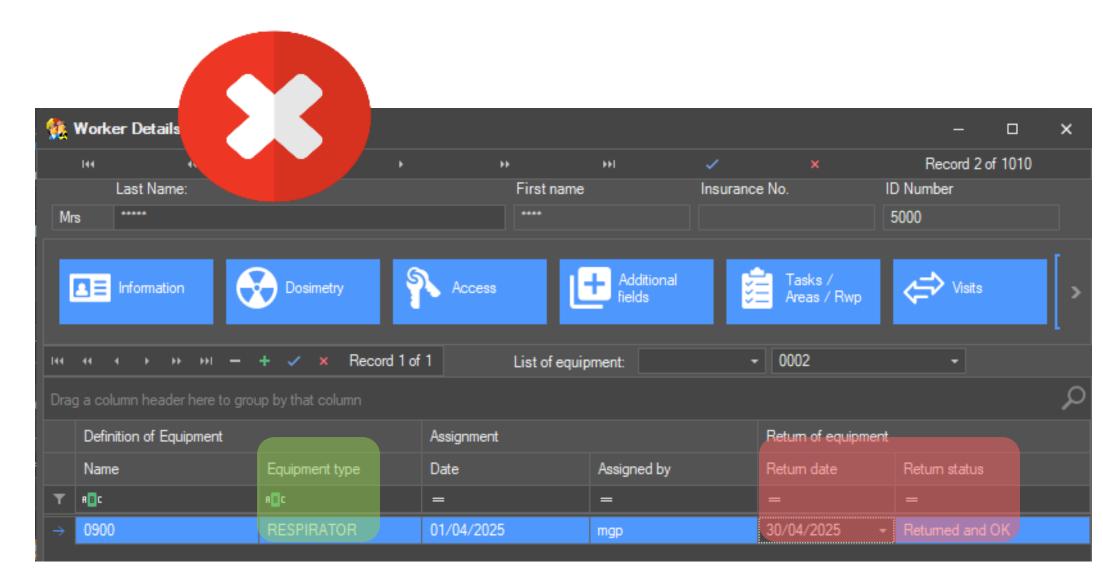


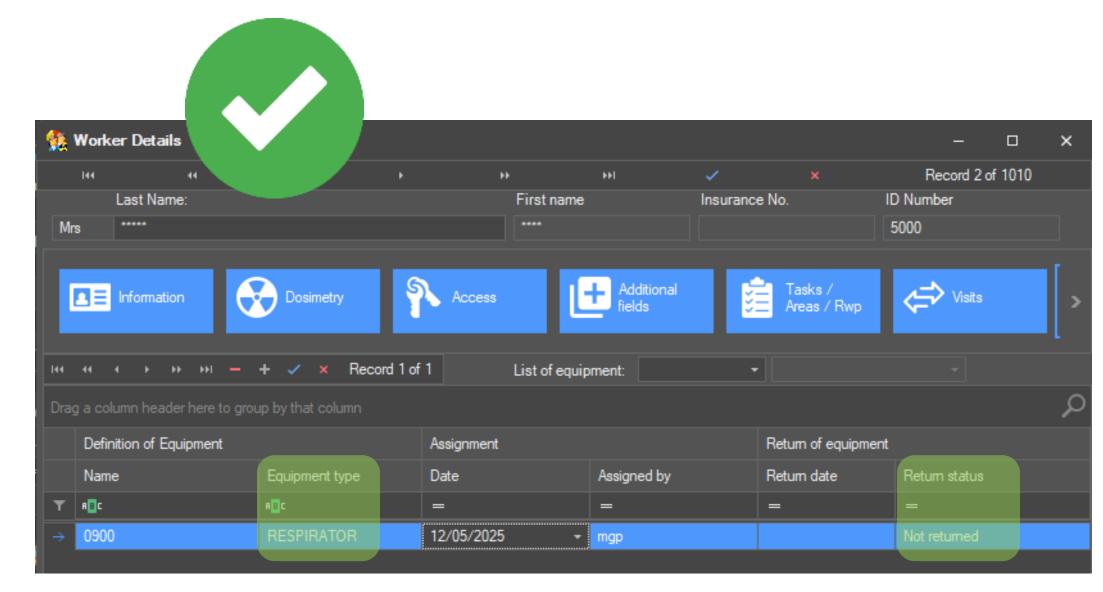
EQUIPMENT ASSIGNMENT CHECK AT ACCESS CONTROL TIME (TASK AND RWP)

Possibility to link equipment types to RWP (already possible) and Tasks (new).

At Access Control time, if a worker selects a Task or RWP linked to an equipment type, then if the workers does not have a valid equipment assignment for this equipment type then access will be denied.









EQUIPMENT CHECK AT ACCESS CONTROL TIME (DosiServ + LDMAccess)

When a RWP or a Task requiring an equipment type is selected, then it will be possible to configure the system to ask equipment scan on the LDMAccess SW to verify that the worker is properly equipped.





Additional Inputs

- The 3 inputs limitation could be overcome now. Being able to allow ID, TLD, RWP <u>and</u> Task inputs for an access sequence is a target for future releases.
- In addition, from discussions with US customers, having another possible input, Work Orders, in addition to RWPs and Tasks would make sense too.



More Flexible Inputs Configuration

- Having more data inputs makes the needs of an intuitive and flexible configuration even bigger.
- Being able to accommodate with reader's offline mode has to be considered too.

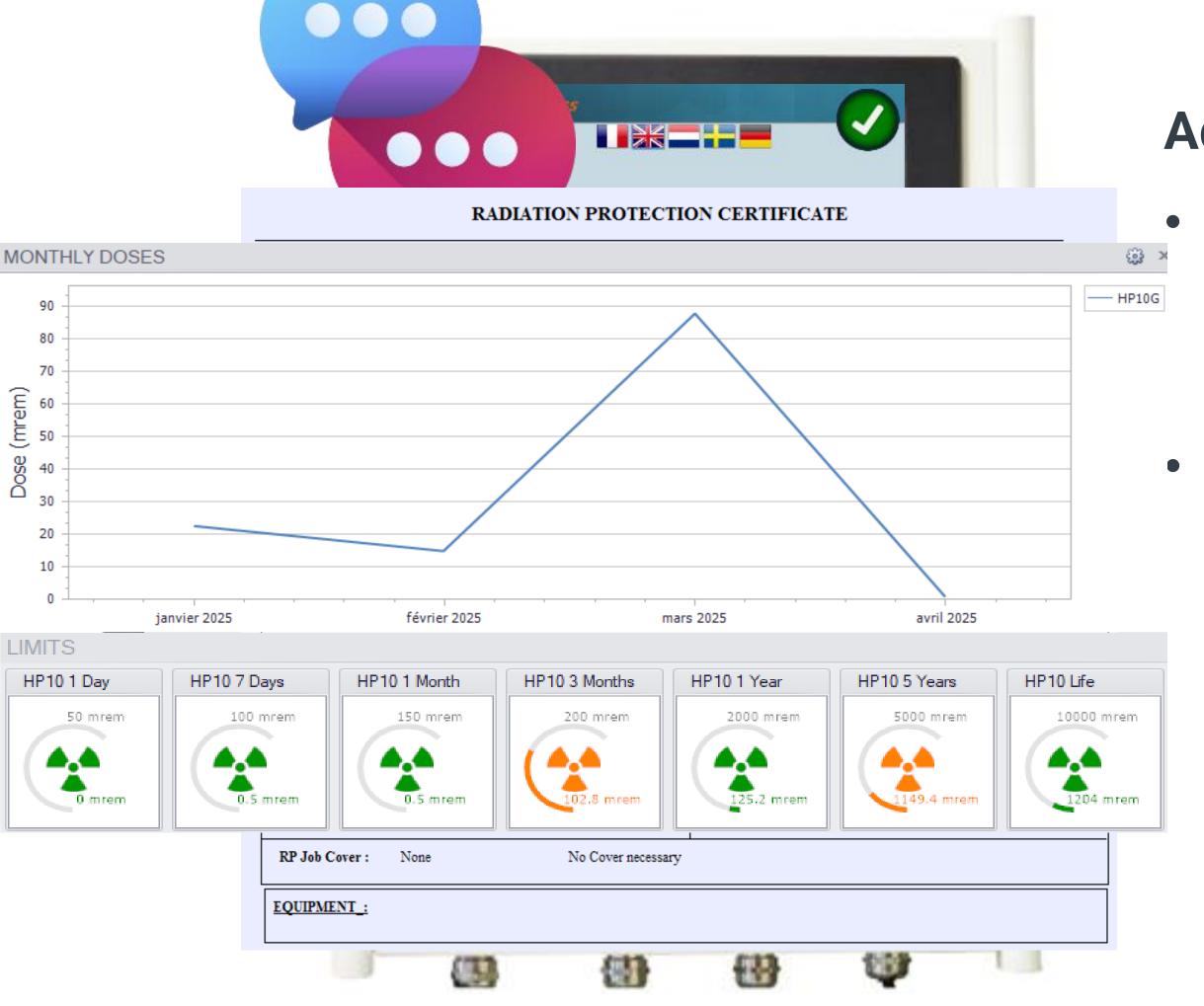




New Worker Authentication methods

- Mirion is currently investigating new options for workers authentication on the reader:
 - Facial recognition
 - Fingerprint scanning
 - •





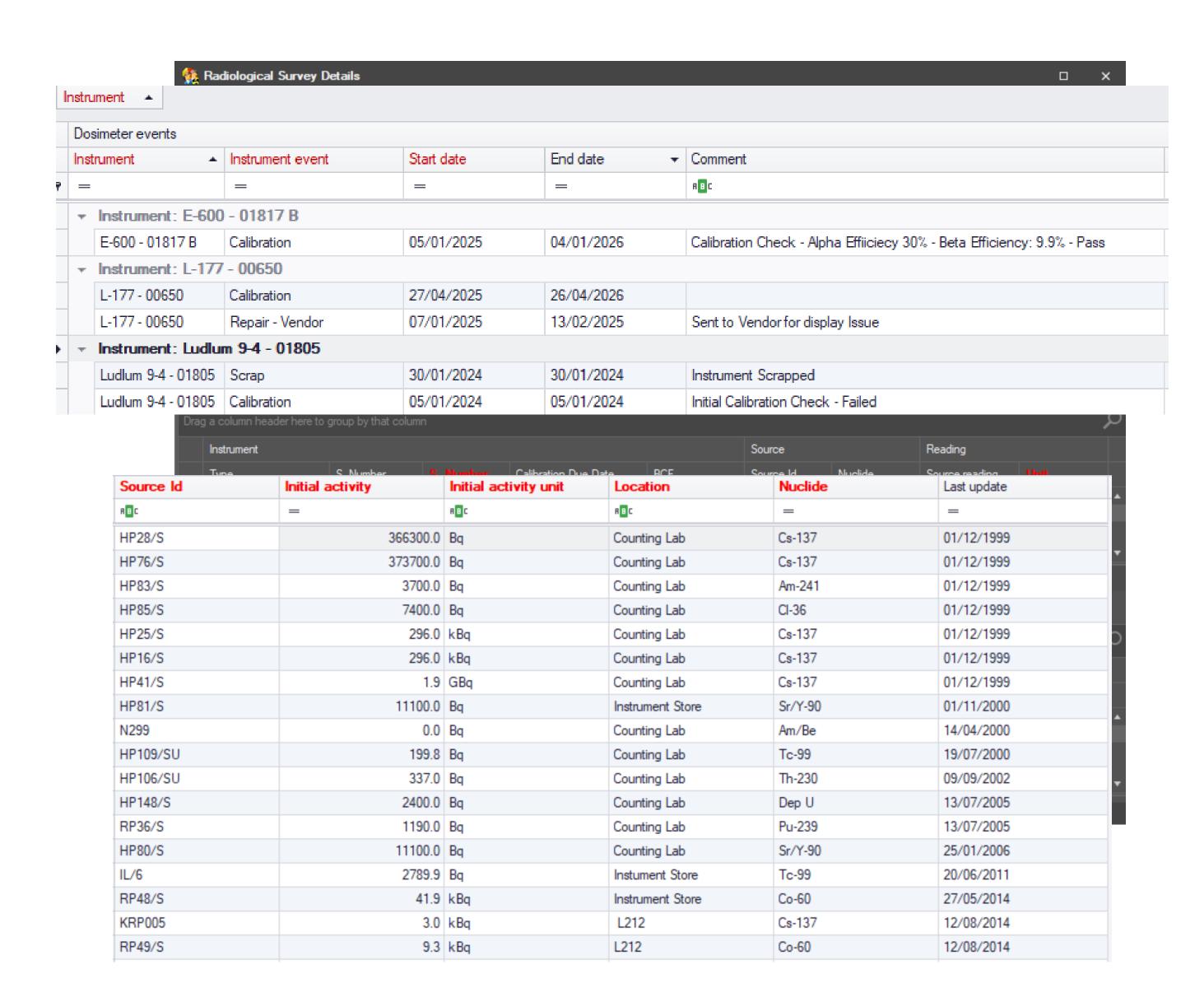
Additional Information Display

- Displaying more information to the worker during the access control sequence is currently investigated.
- The information could be made of:
 - Question/Confirmation (Y/N).
 - Display of RWP Instruction
 - Display of worker's dosimetry
 - Any information that would be valuable...

SURVEY MANAGEMENT

Built-in Survey management modules that will allow keeping track of the performed surveys.

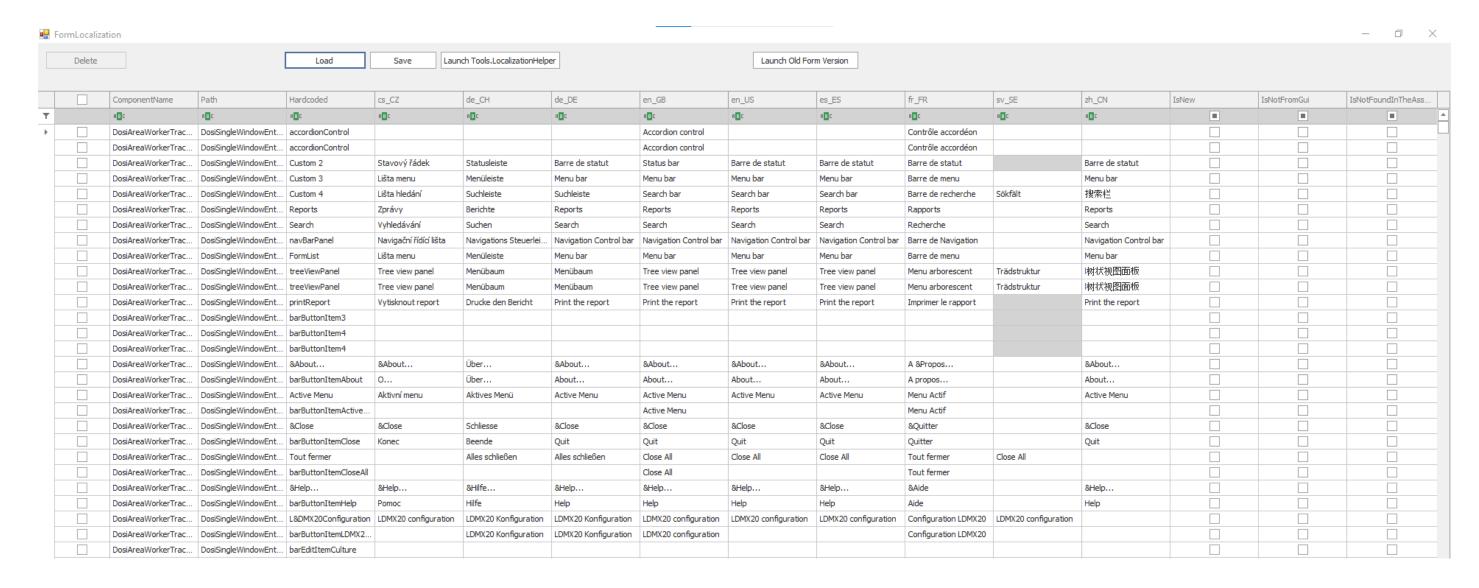
This will also come with a survey instruments follow-up module and a source control management module.

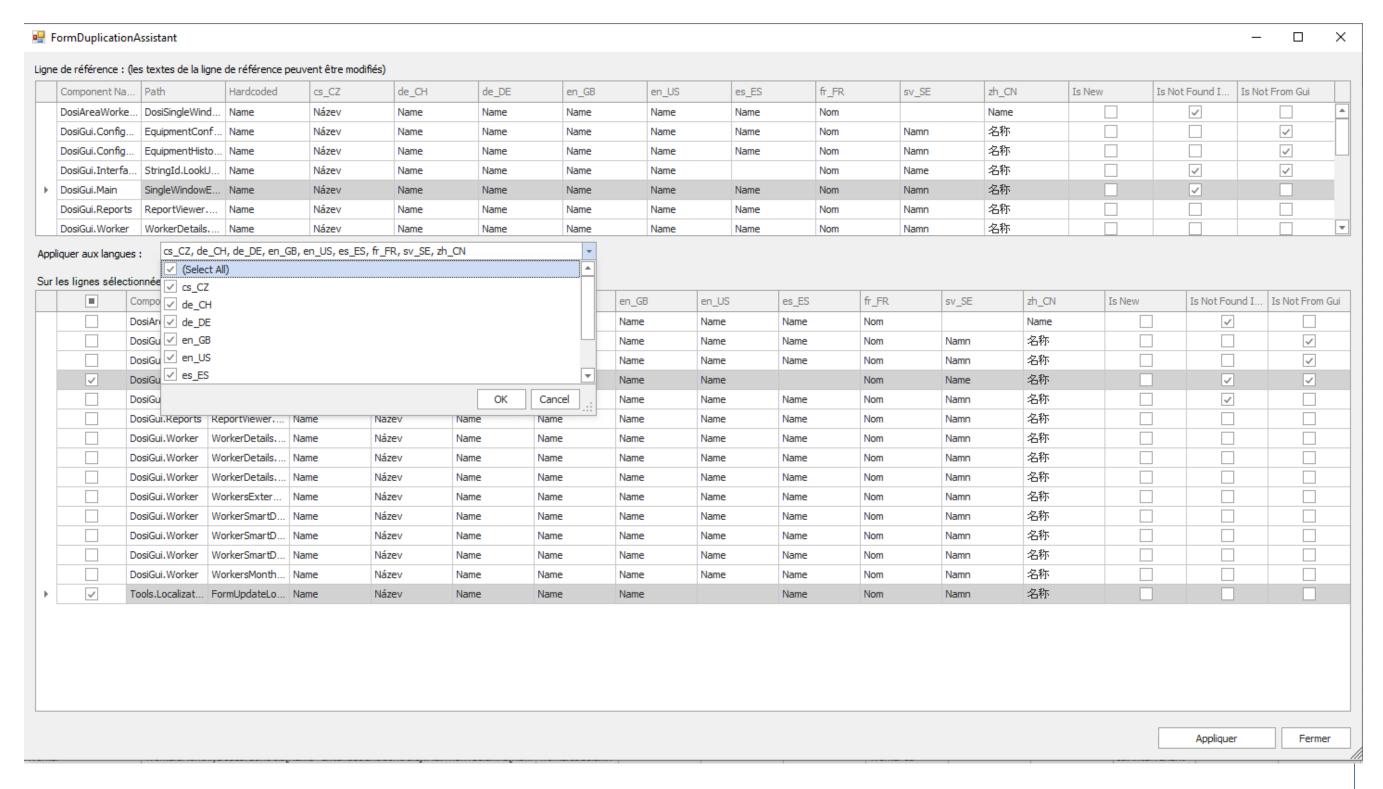




LOCALIZATION HELPER IMPROVEMENTS

The tool used to customize labels or to add new languages will be improved.







QUARTERS OR MASTER PERIODS

It could be interesting to have the possibility to define "master periods" that would englobe one or multiple periods.

Having this notion would make it possible to have quarters defined and specific limits set for those master periods.

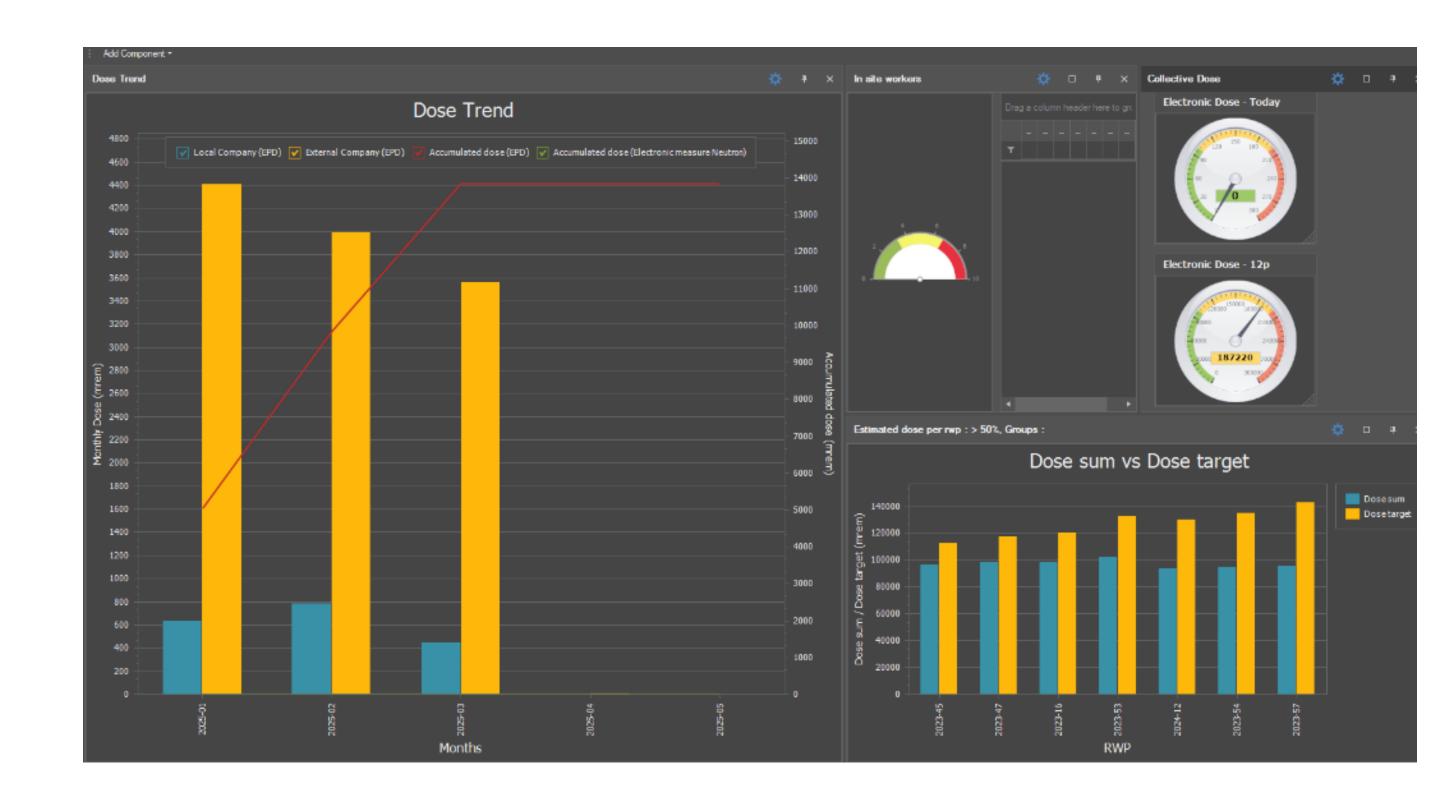
That would be a substitute to having Quarters defined (which would also be interesting).



NEW DASHBOARD COMPONENTS

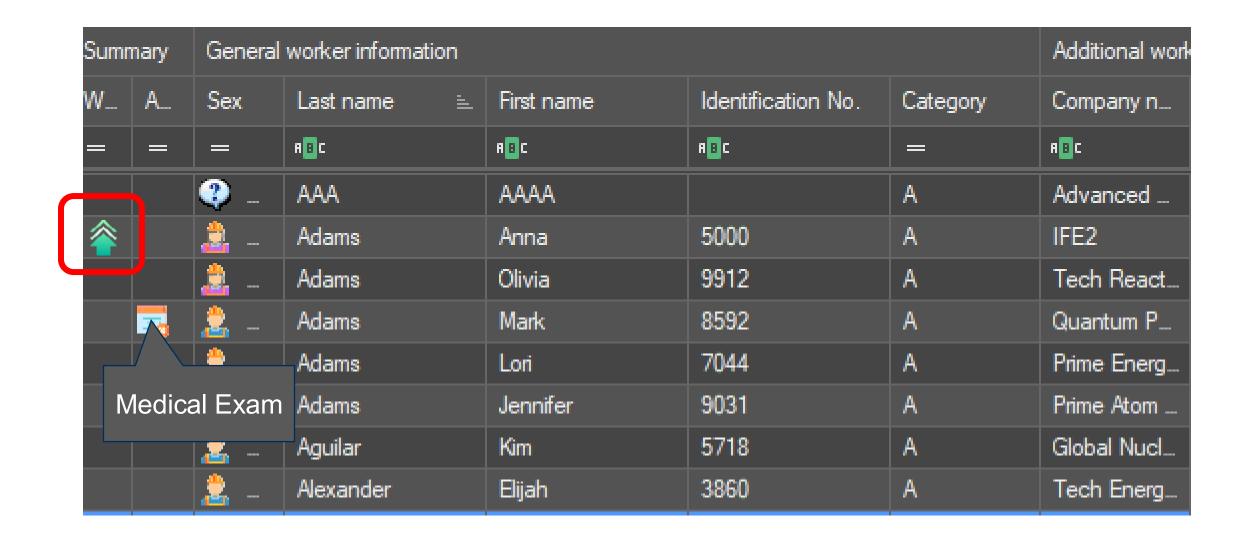
New components on the Dashboard will be investigated.

Contaminations events trend follow-up could be one of them.



ADDITIONAL VISUAL INDICATORS IN WORKER LIST

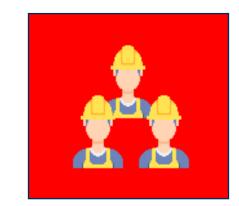
- New visual indicator to highlight workers with personal limits.
- Qualifications component improved to be able to display in a popup the qualification that is outdated/not fulfilled.

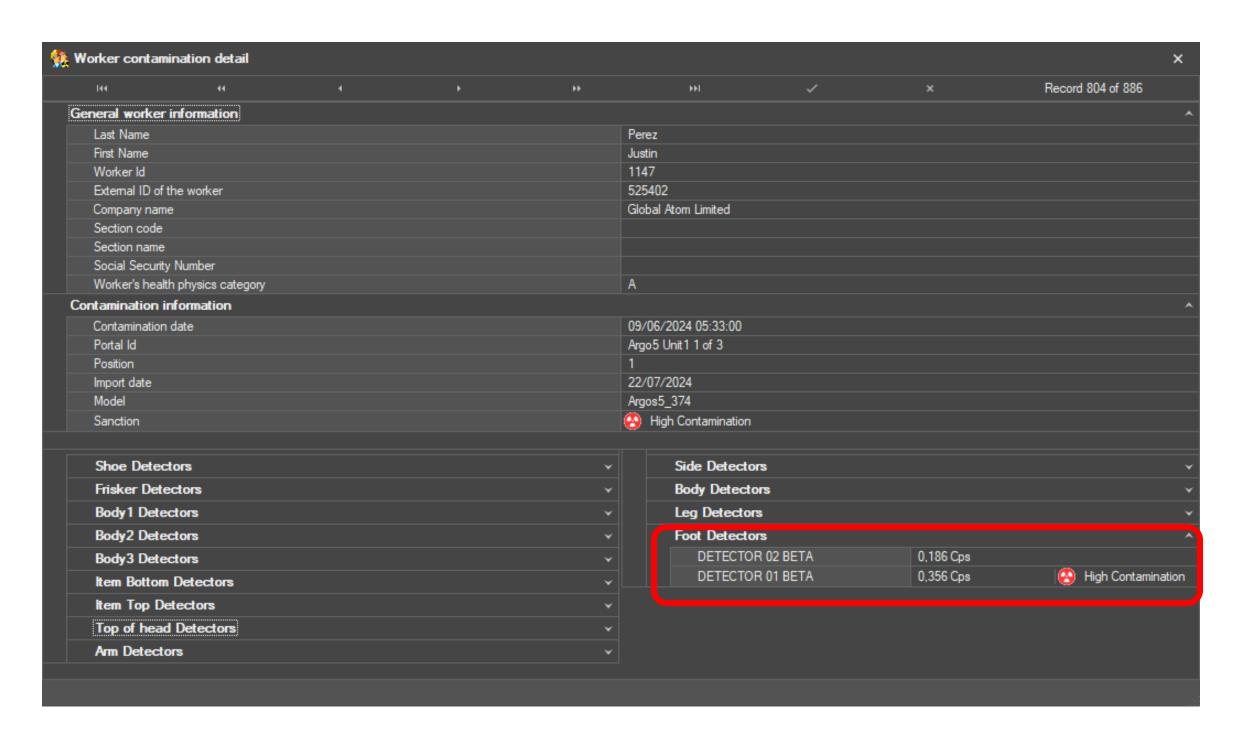


IMPROVEMENT IN DISPLAY OF CONTAMINATION RELATED INFORMATION

 OKG request: distinguish the single contamination passage with the multiple ones (several passages attempted for the same contamination event).







• Contamination measurement details display: focus on contaminated channels at screen opening.

New Features

WORKER DOSIMETRY GANTT VIEWER

 Implementation of a Gantt doses viewer in DosiGui, focused on a worker and a selected period of dates.

That Gantt viewer will display:

- Periods
- Daily doses
- Worker Measures
- Worker Measures Bits
- Worker Period Doses of all types

Mar	ch	April	May			
		120µSv				
	25µSv	50µSv	45µSv			



New Features

MISCELLANEOUS

- Possibility to manage Area RWP authorization
- Customize histogram step based on job/RWP (limitation for job change)
- Implement some visits sanity checks to highlight visits inconsistencies (similar than what has been done with the challenges concept in UK Dosimetry approval)
- Visualization Rights Helper: Provide an intuitive manner to customize the user profiles for DosiGUI.

LDMACCESS

- Display explicit message when a dosimeter is denied due to its status word verification: for instance incorrect status → Battery removed
- Smart offline: dose rate alarm management in SmartOffline Access control (Worker, rwp and task).



New Interfaces and Supported Systems

LEGAL DOSIMETRY

- Built-in interface with Instadose management system
- Built-in interface with BeOSL dose control system







UP-TO-DATE SW COMPONENTS

- Maintaining compatibility with the latest
 Operating Systems and DB Engines
- Upgrade to the latest development tools versions









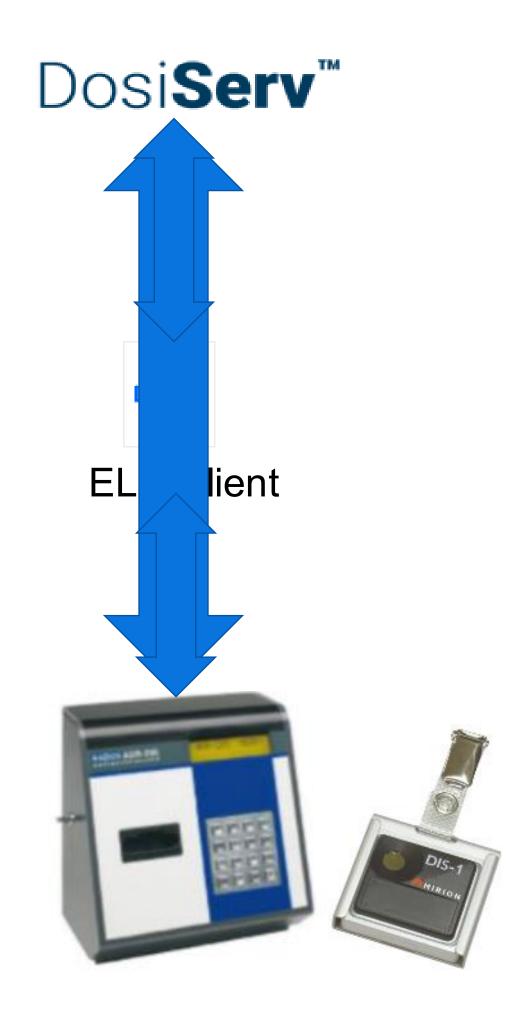




ELD CLIENT REPLACEMENT

The ELD Client software is used by DosiServ to manage the DIS-1 DBR reader.

ELD Client is based on deprecated technologies and for future DIS-1 support redesigning an integrated communication module between DosiServ and the DBR readers seems to be the path to follow.





SSO

CONNECTION TO ACTIVE DIRECTORY

The current Single Sign On feature in DosiServ could be improved to connect to an Active Directory domain to check users authorizations and DosiServ profiles.



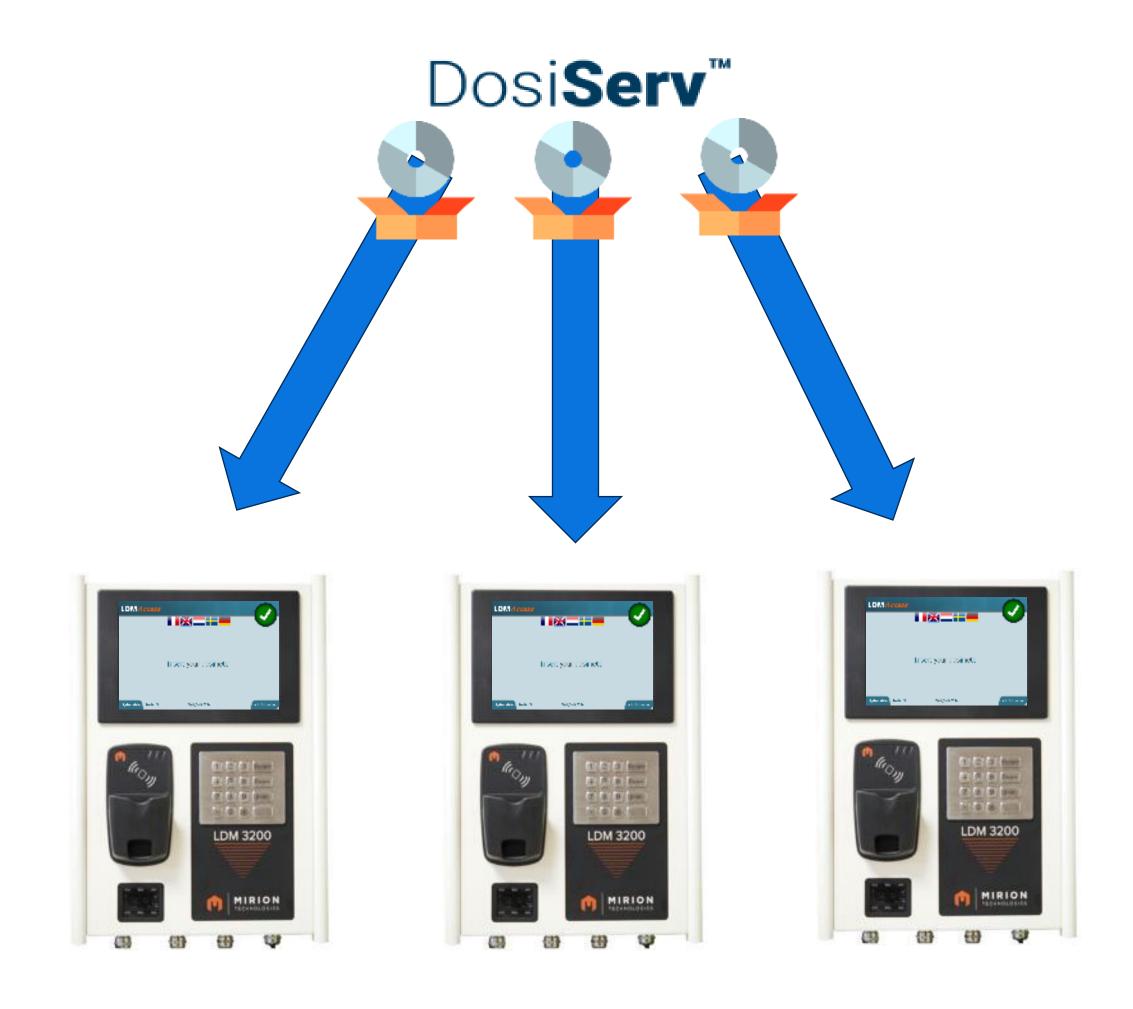


LDMAccess RELEASE DEPLOYMENT FROM DosiServ

The possibility to push reader software update from DosiServ could be valuable since remote access is very often blocked on LDM3200/LDM1000 readers.

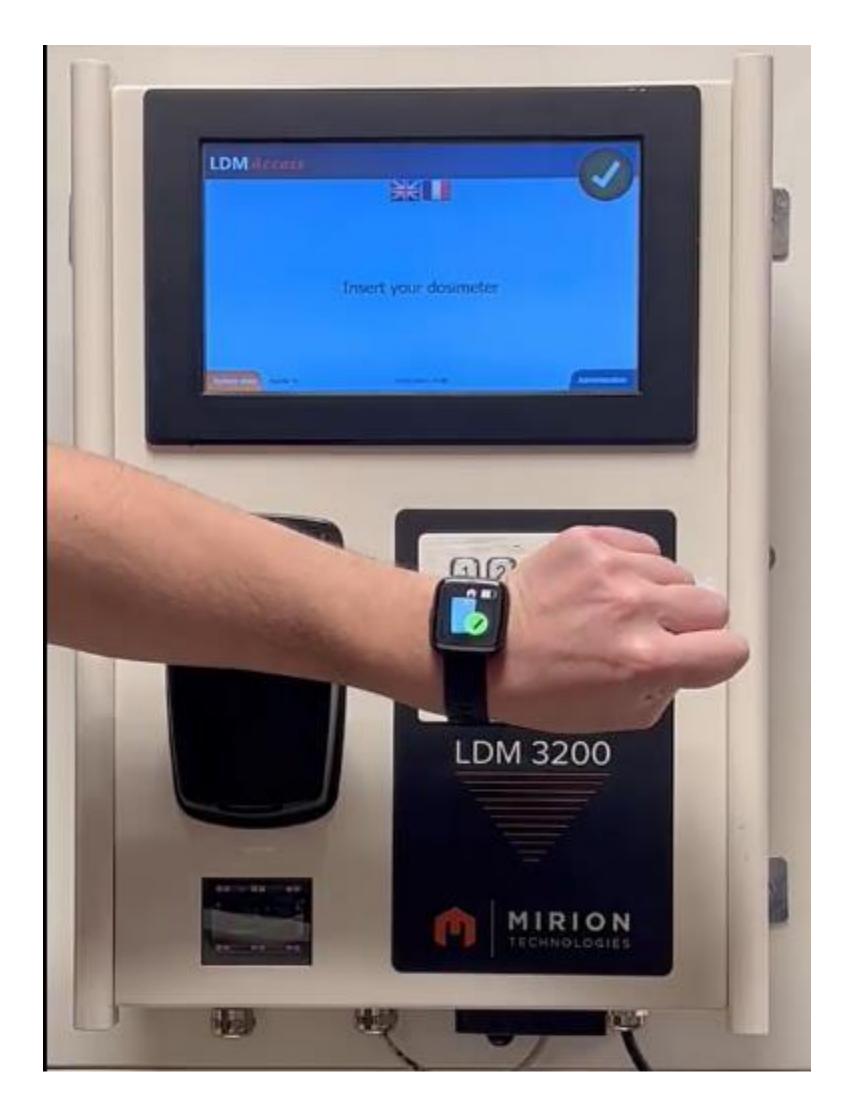
On the same idea, having the possible to reset the readers from DosiGUI could be investigated.

An alternative could be a LDMAdmin Webpage.





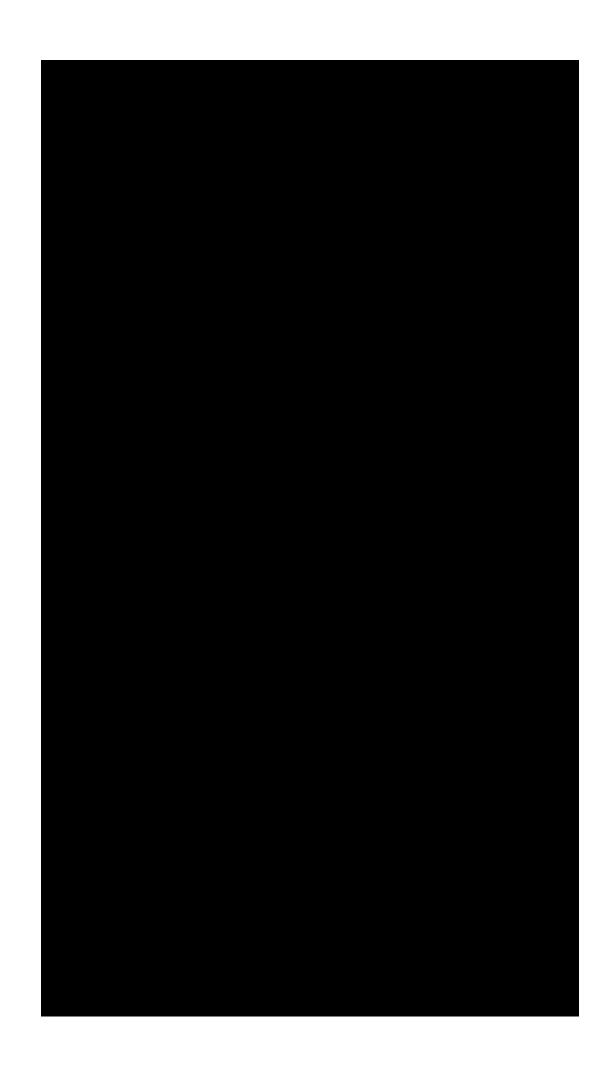
LDMAccess / DosiServ Protocol Improvements



Other Extended Capabilities

- The DosiServ ecosystem can leverage from all the latest innovations that have been introduced in the active dosimetry product line.
- The use of external module (Beta, Neutron...)
 can be checked depending on the selected RWP/Job.
- The NFC capability can be used for MirionWatch Quick & Easy Pairing/Unpairing

LDMAccess / DosiServ Protocol Improvements



Other Extended Capabilities

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DosiServ - Part 3

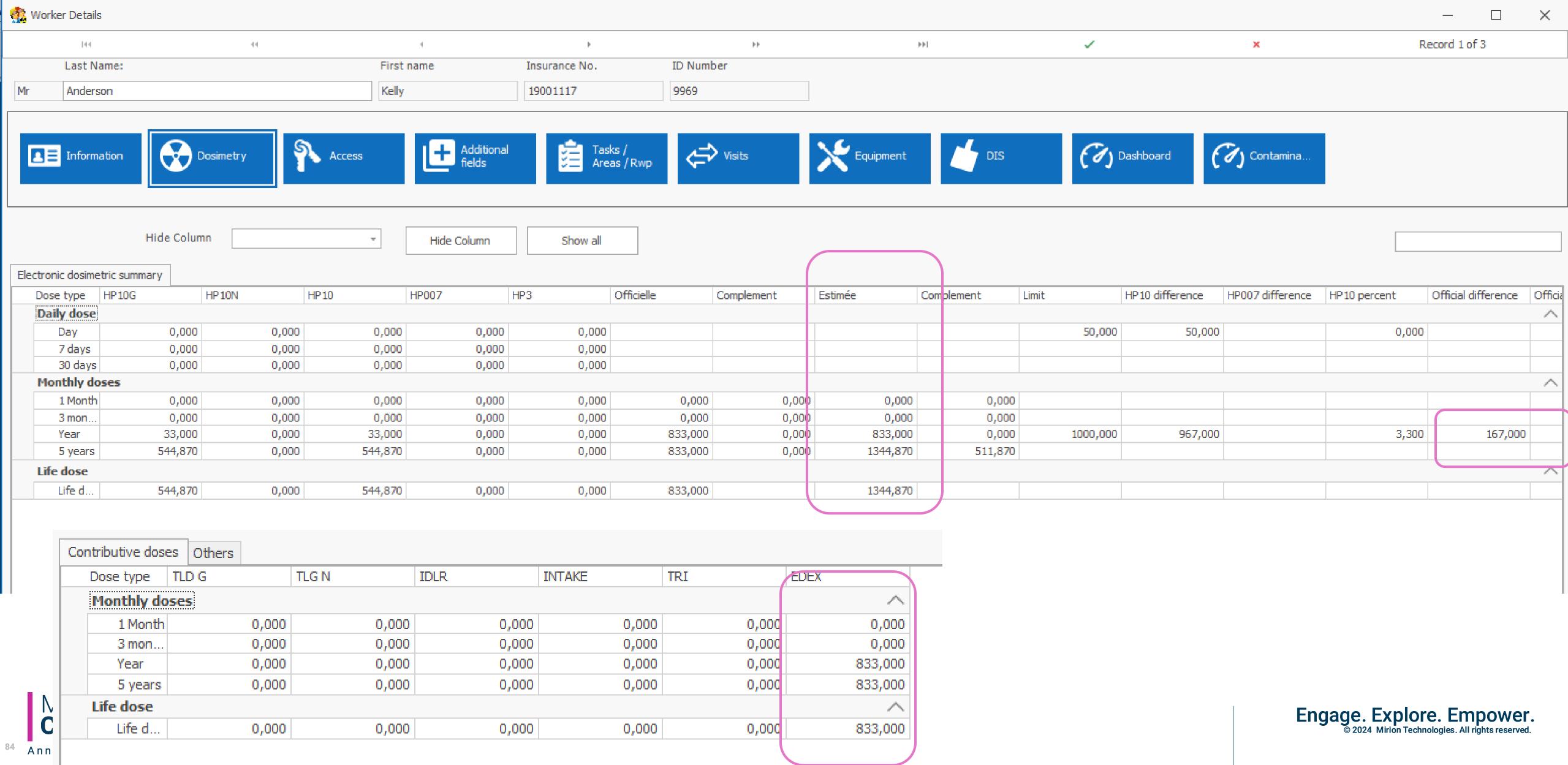
- DosiServ & Legal dose
- DosiServ & Equipment Management
- Data Migration to DosiServ
- DosiServ 2026
 - Cybersecurity
 - New features
 - Access control
 - Form 4 / Form 5



U.S. NUCLEAR REGULATORY COMMISSION **n**Form 4 Input NRC FORM 4 APPROVED BY OMB NO. 3150-0005 EXPIRES: 11/30/2023 (11-2020) 10 CFR PART 20 Estimated burden per response to comply with this mandatory collection request: 15 minutes. This information is required to record an individual's lifetime occupational exposure to radiation to ensure that the cumulative exposure to radiation **CUMULATIVE OCCUPATIONAL DOSE HISTORY** does not exceed regulatory limits. Send comments regarding burden estimate to the Information Services Branch (T-6 **n**Form 5 Output A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0005), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17Street NW, Washington, DC 20503; e-mail: oira_submission@omb.eop.gov The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the *Note: Social Security Numbers must not be visible on the outside of any package sent by mail. document requesting or requiring the collection displays a currently valid OMB control number. Form4 Import Form 5. DATE OF BIRTH MALE (MM/DD/YYYY) 6. Monitoring End 8. Licensee Number 9. Dose Type Monitoring Start Licensee Name Exposure NPF-73 01/03/202 15/03/2024 RECORD ROUTINE 13. SDE, WB 11b. DDE 12. LDE 14. SDE, ME 11a. EDEX 15. CEDE 16. CDE 7. TEDE 18. TODE 0,200 ND ND ND ND ND ND ND 7. LICENSEE NAME 8. LICENSE NUMBER MONITORING PERIOD (MM/DD/YYYY – MM/DD/YYYY) 9. 10. RECORD ROUTINE ESTIMATE NO RECORD 18, TODE 12. LDE 13. SDE,WB 16. CDE 11a. EDEX 14. SDE,ME 15. CEDE 17. TEDE 11b. DDE 7. LICENSEE NAME 8. LICENSE NUMBER MONITORING PERIOD (MM/DD/YYYY – MM/DD/YYYYY) RECORD ROUTINE 0,600 ND ND ND I ND ND ND ND RECORD ROUTINE **ESTIMATE** PSE NO RECORD 18. TODE 17. TEDE RECORD ROUTINE PSE New Period NO RECORD 17. TEDE 18. TODE 19. Sign. of indivifual 21. Certifying Organization 22. Sign. of Designee NATURE OF DESIGNEE 23. DATE SIGNED

Connect 4

All Doses in rem





Report viewer form

Form 4 C

U.S. NUCLEAR REGULATORY COMMISSION

CUMULATIVE OCCUPATIONAL DOSE HISTORY

APPROVE

annually report

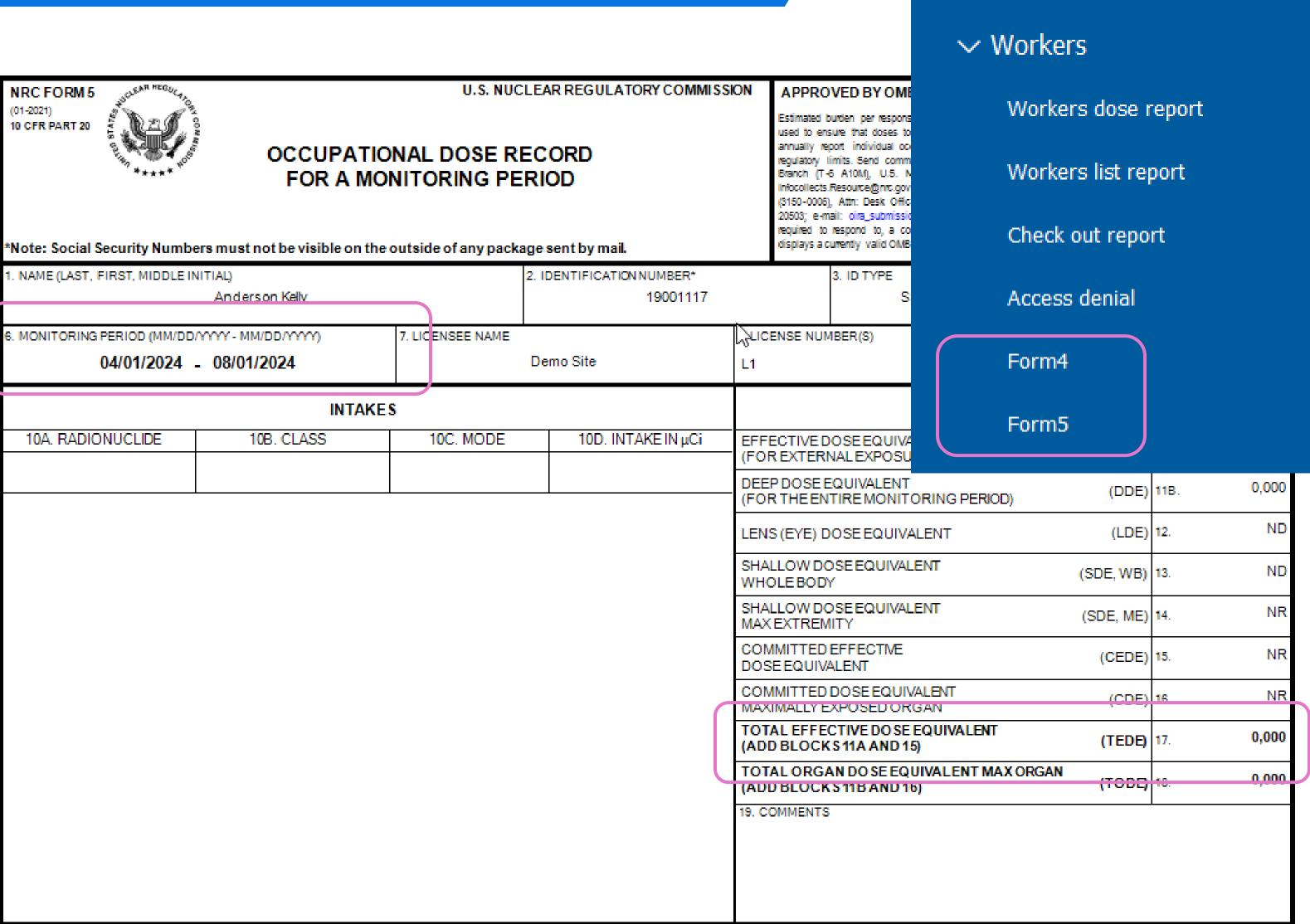
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				LLV	WR REPOSITORY							

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20. SIGNATURE - LICENSEE

Form 5 Output



Reports

Report viewer form

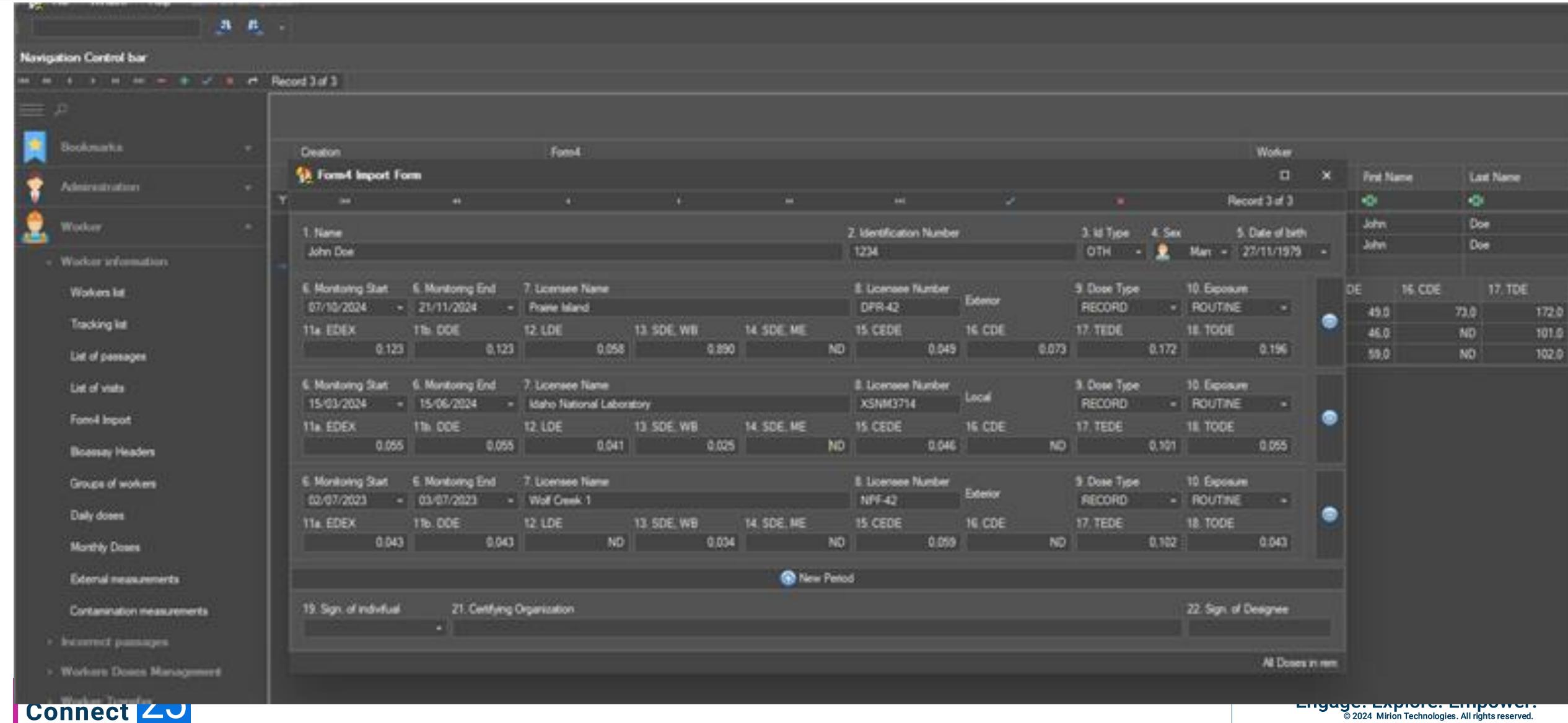
21. DATE PREPARED

08/01/2024

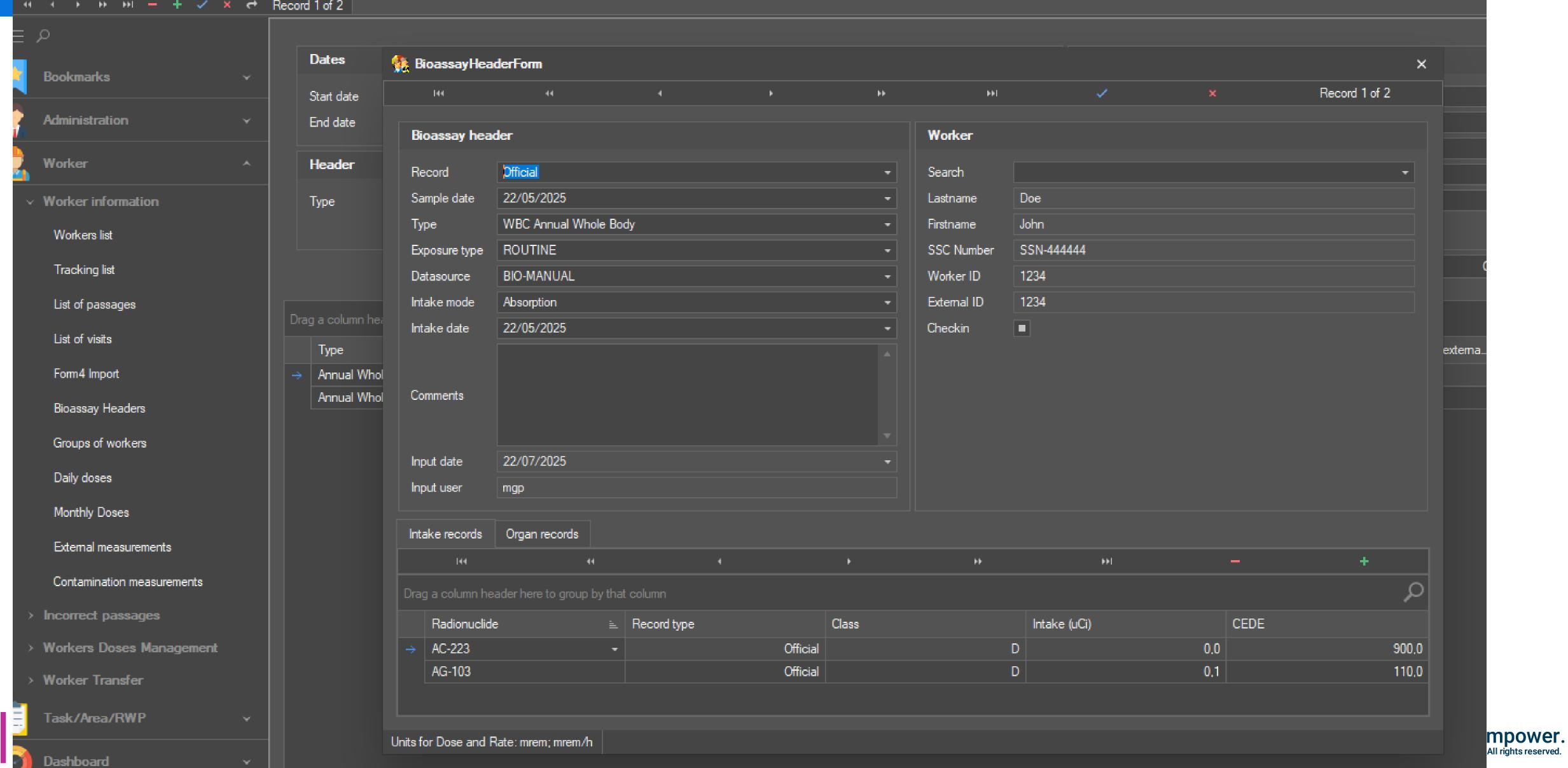








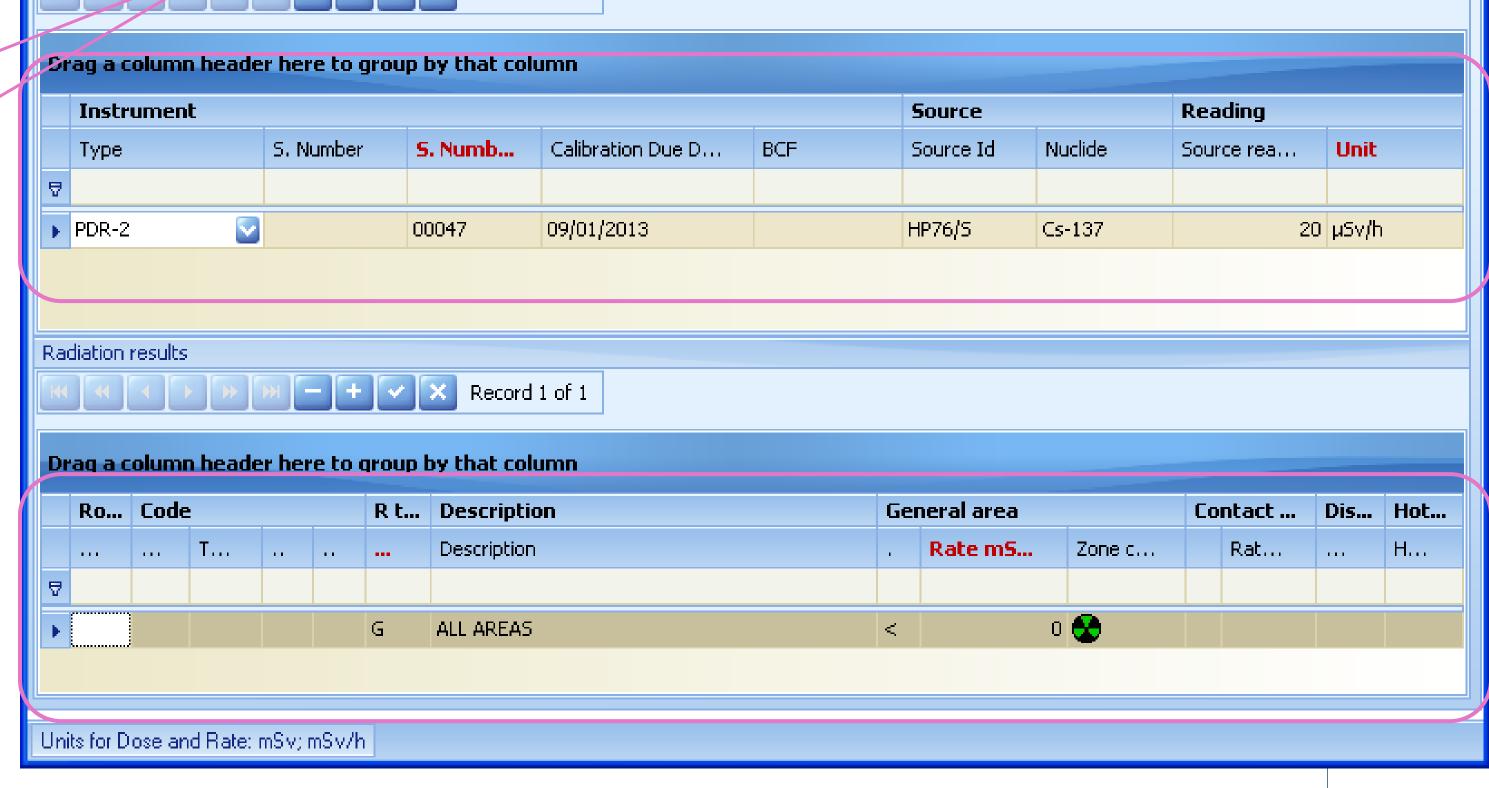
BioAssay



Radiological Surveys

🤼 Radiological Survey Details General Info → Including RWP Create corresponding airborne survey Number Van Wyk, Johannes **General information** Performed by SURVEY_ID Q5818 Reviewed by 19990002 RPC Number Description Description 28/03/2012 13:32:28 CHEMISTRY ACCESS AREA Survey date Survey type Routine Results Radiation result template RP People Contamination information | Link to gamma spec whorksheet | Additional information Radiation Information General information Radiation instruments Record 1 of 1 Rad Info Srag a column header here to group by that column Showing Instrument Source Instruments used **5. Numb...** Calibration Due D... Nuclide Source Id Type S. Number

Results



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Record 3 of 313

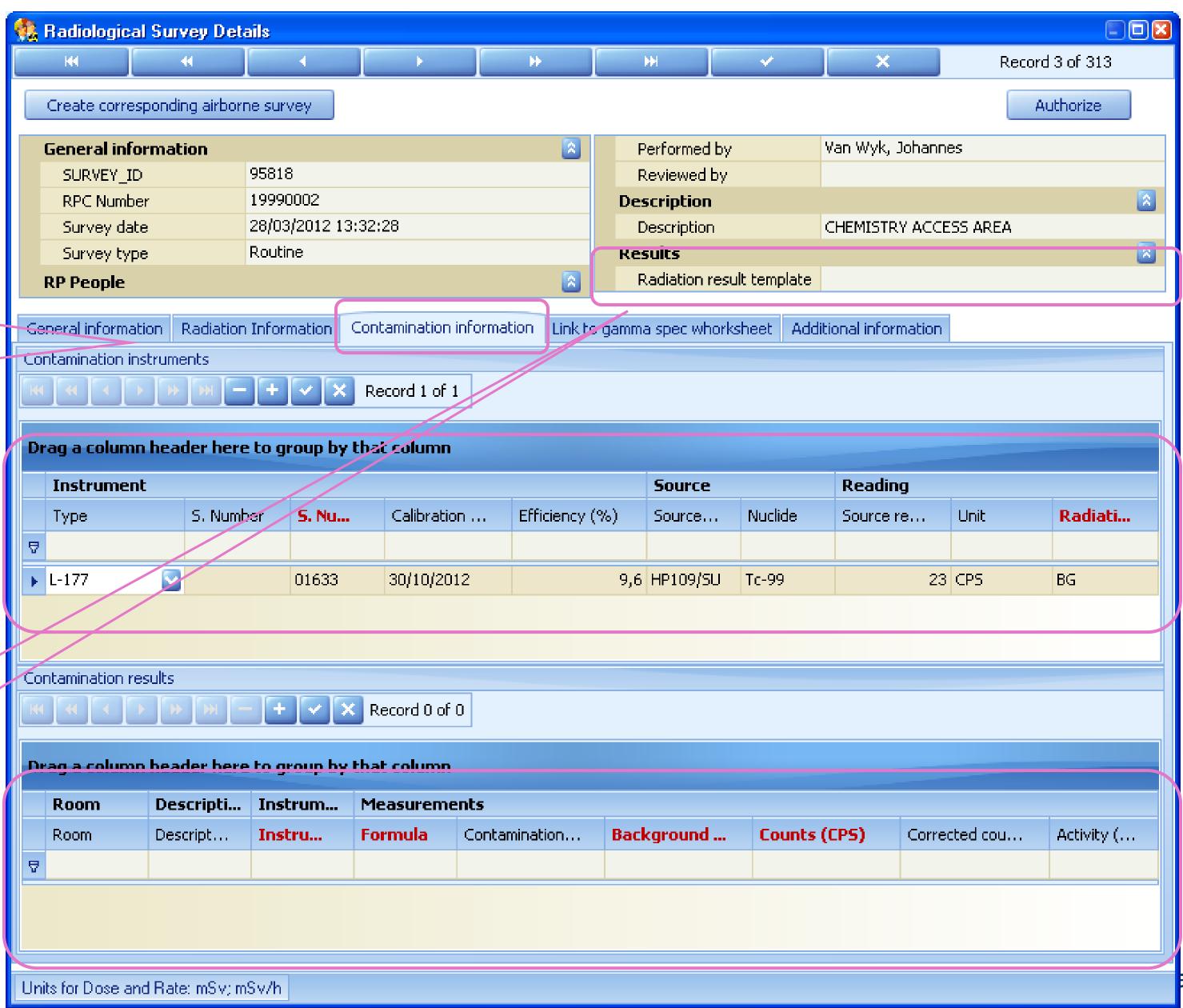
Authorize

Radiological Surveys

Contam Info
Showing

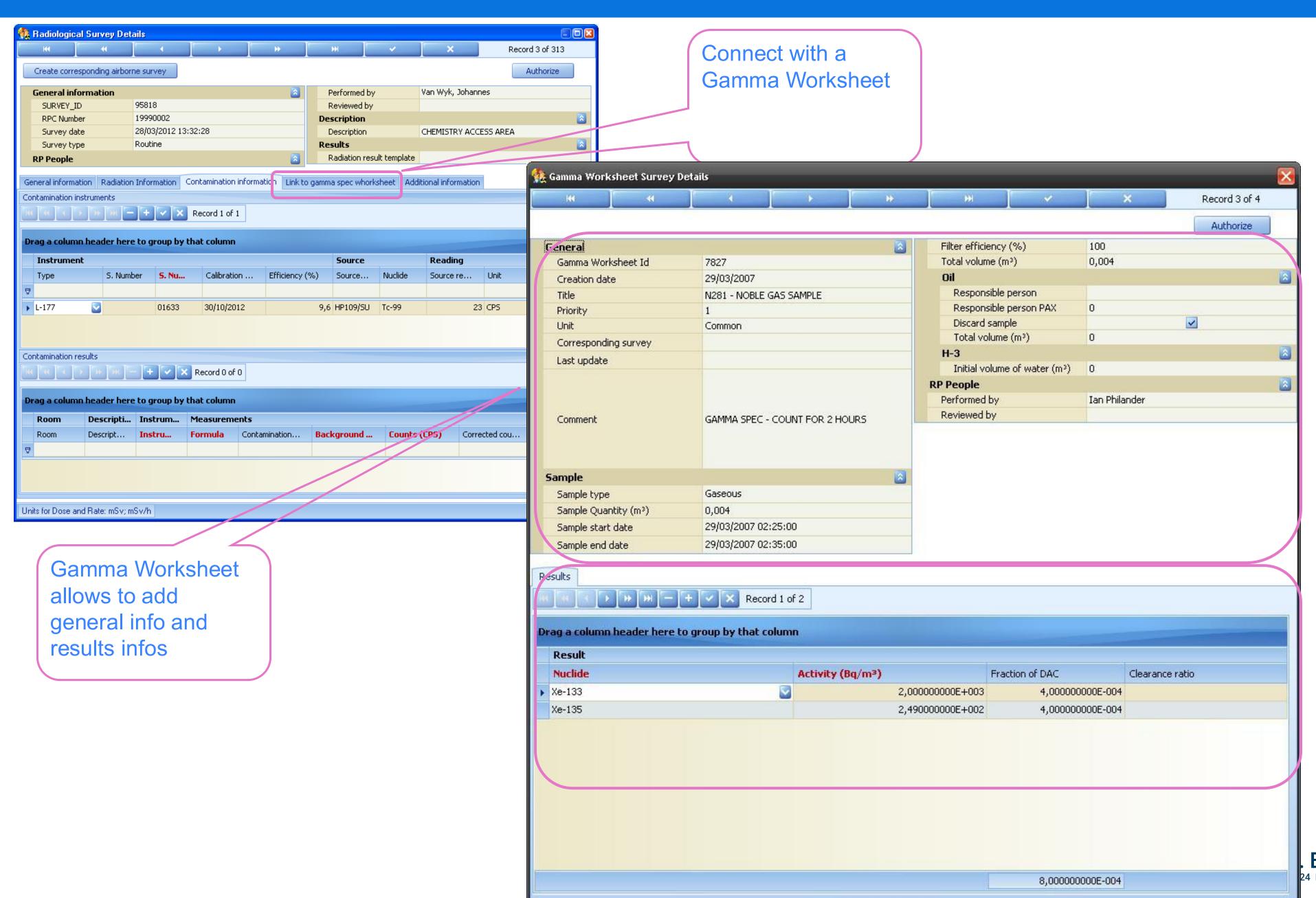
- Instruments used
- Results

Template will populate Results table to be filled up

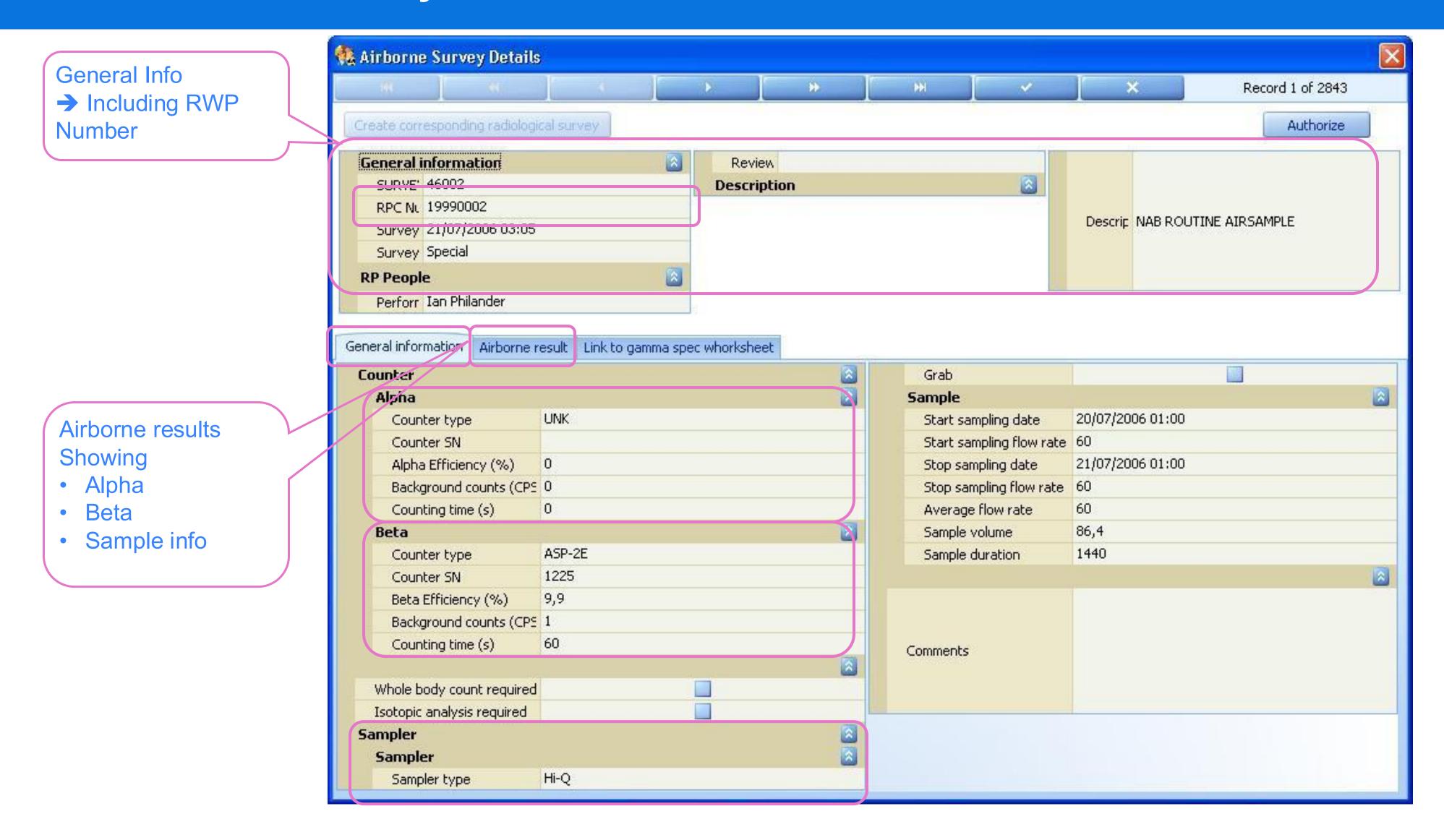


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Surveys Gamma spec Workheet



Airborne Surveys

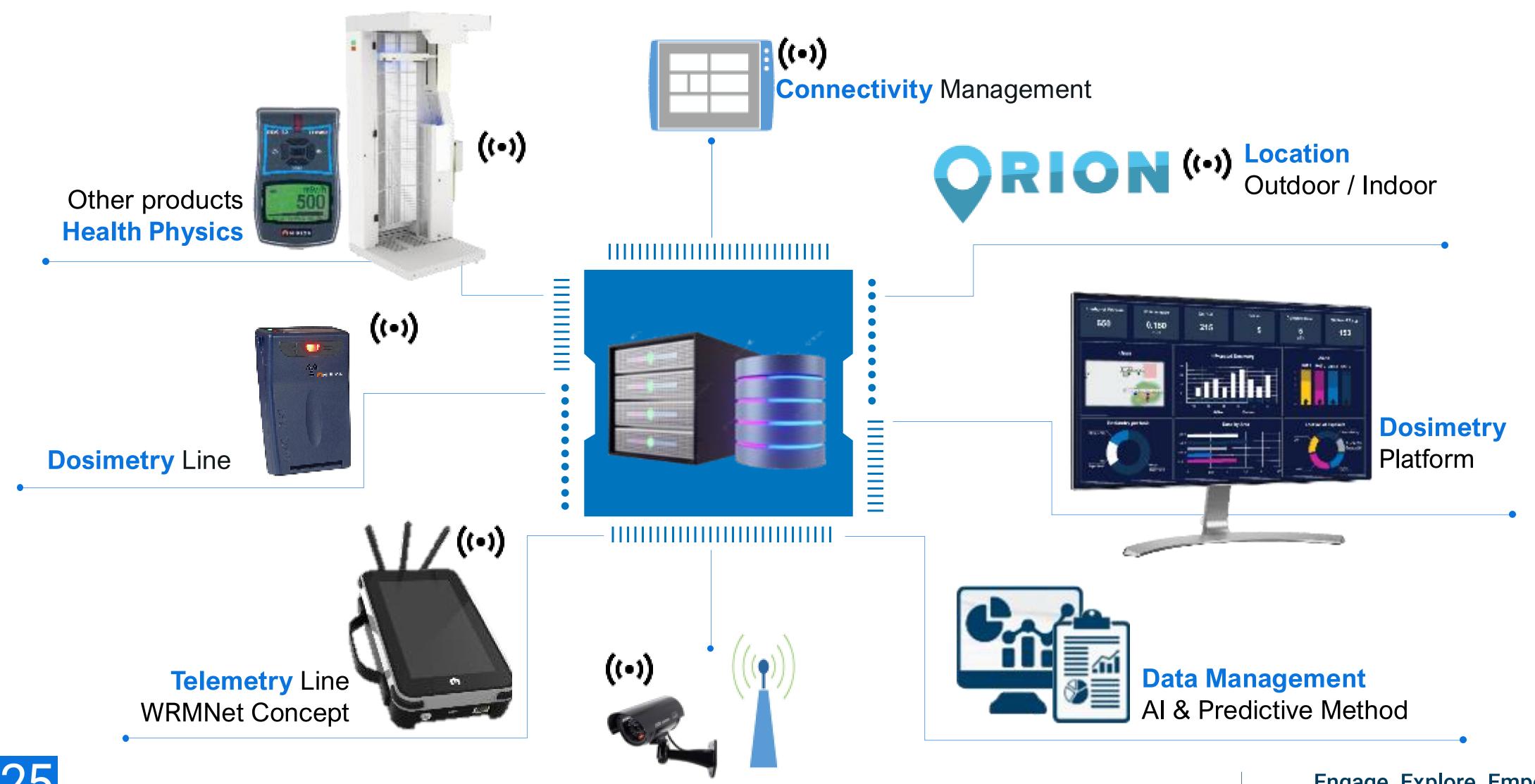


DosiServ - Part 3

- DosiServ & Legal dose
- DosiServ & Equipment Management
- Data Migration to DosiServ
- DosiServ 2026
 - Cybersecurity
 - New features
 - Access control
 - Form 4 / Form 5
- Roadmap



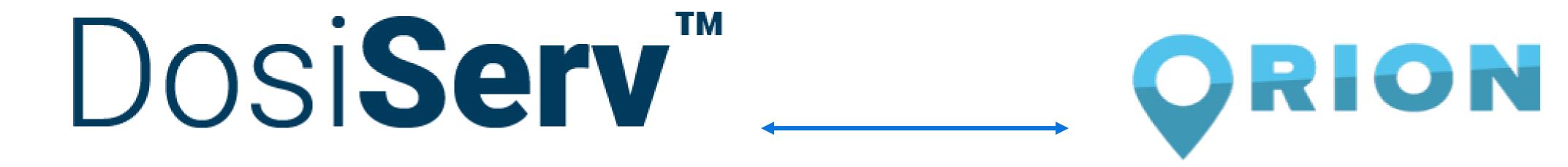
HP - Dosimetry & Telemetry: Vision 2030



Communication



Dose Management & Supervision Solution



Posteriori Data Configuration Data



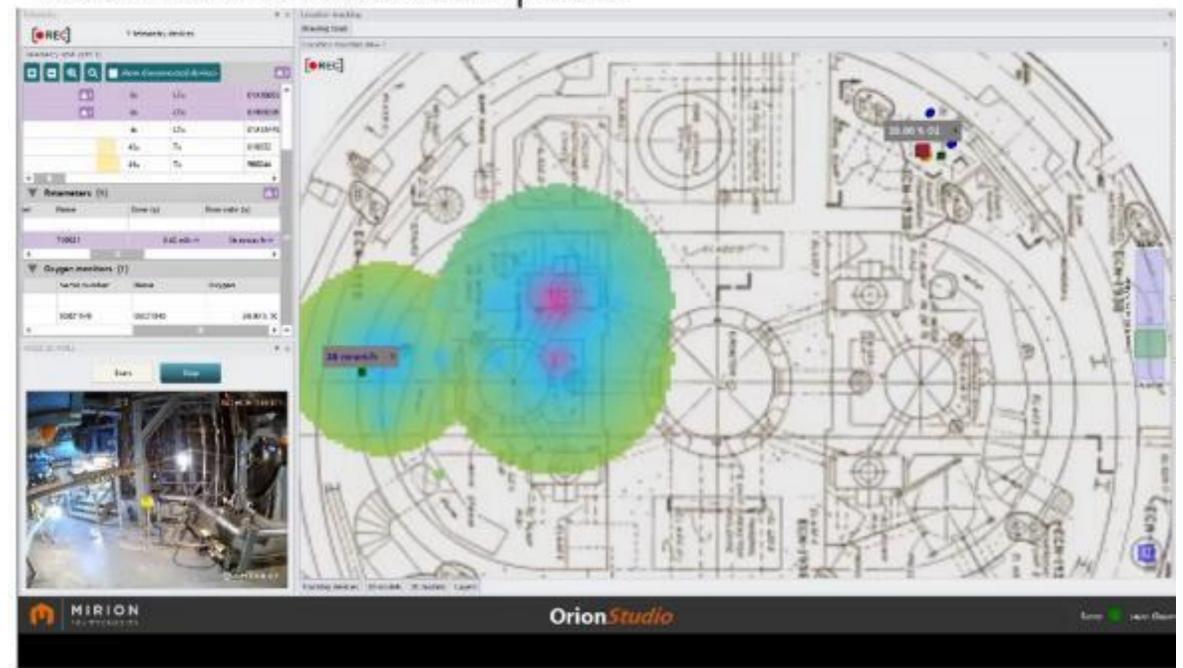
Real Time Location Data (Telemetry + Location)



Entrance Area & Telemetry (Dose Rate Area monitoring)



Orion Studio Screen Capture





Orion or DosiServ

- Can configure the reader to stop any entrance in RCA
- Can send information to Dose
 Management to restrict the access



People into RCA

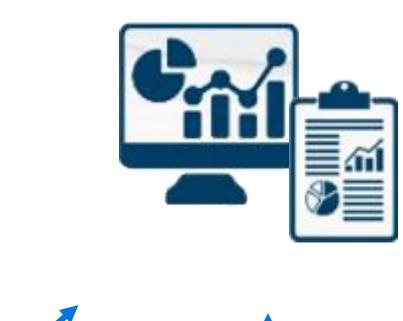


Orion or DosiServ

Can report the number of people in RCA or sub-area.

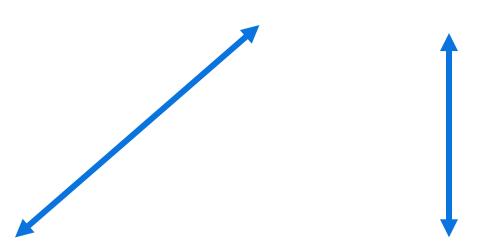


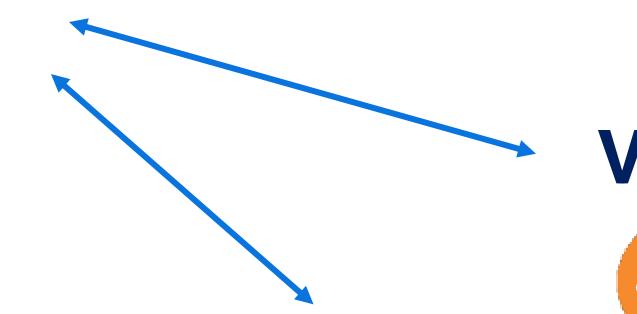
Dosimetry Data Management



Data Management

Al & Predictive Method





Vital[™] Platform







DosiServ

Orion RTLS

Configuration DataDMC Data

Posteriori Data
Dose Management
Data

Real Time Location Data (Telemetry + Location) Data



What DosiServ & Al can do: Support your daily operations



- Smart Training?
- Automatic prompt for support ?
- Quality control?
- DMC managements?
- Face recognition ?
- Safety?
- Translation?
- Alara Optimization
- Alara Planning
- Task Automatisation
- Data Migration
- Optimization process
- Numerical Simulation
- Predictive maintenance

RP Engine:

Différents modules that will be incorporated on SW

- Level 1
 - New user manual Approach: Prompt discussion
 - « Paper » data / OCR recognition
 - Auto full in feature
- Level 2
 - Prompt & configuration
 - Automatic reports bulding
 - UIUX configuration
 - Data integration
 - Managing DMC fleets (calibration & numbers)
- Level 3
 - Predictive maintenance / QA
 - Convergence of data / data mangement
 - Analytics & optimization

