

#### 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: DosiServ 2026
 US features & Roadmap





- Alarms managements
- Contamination Events





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



• DosiServ 2023 (V1.30.5)



### Introduction













- The DosiServ dosimetry system is an integrated state of the art dose management system.
- Current version name: DosiServ 2023

It is fully **scalable** in order to comply with nuclear power plant as well as smaller industry expectations.

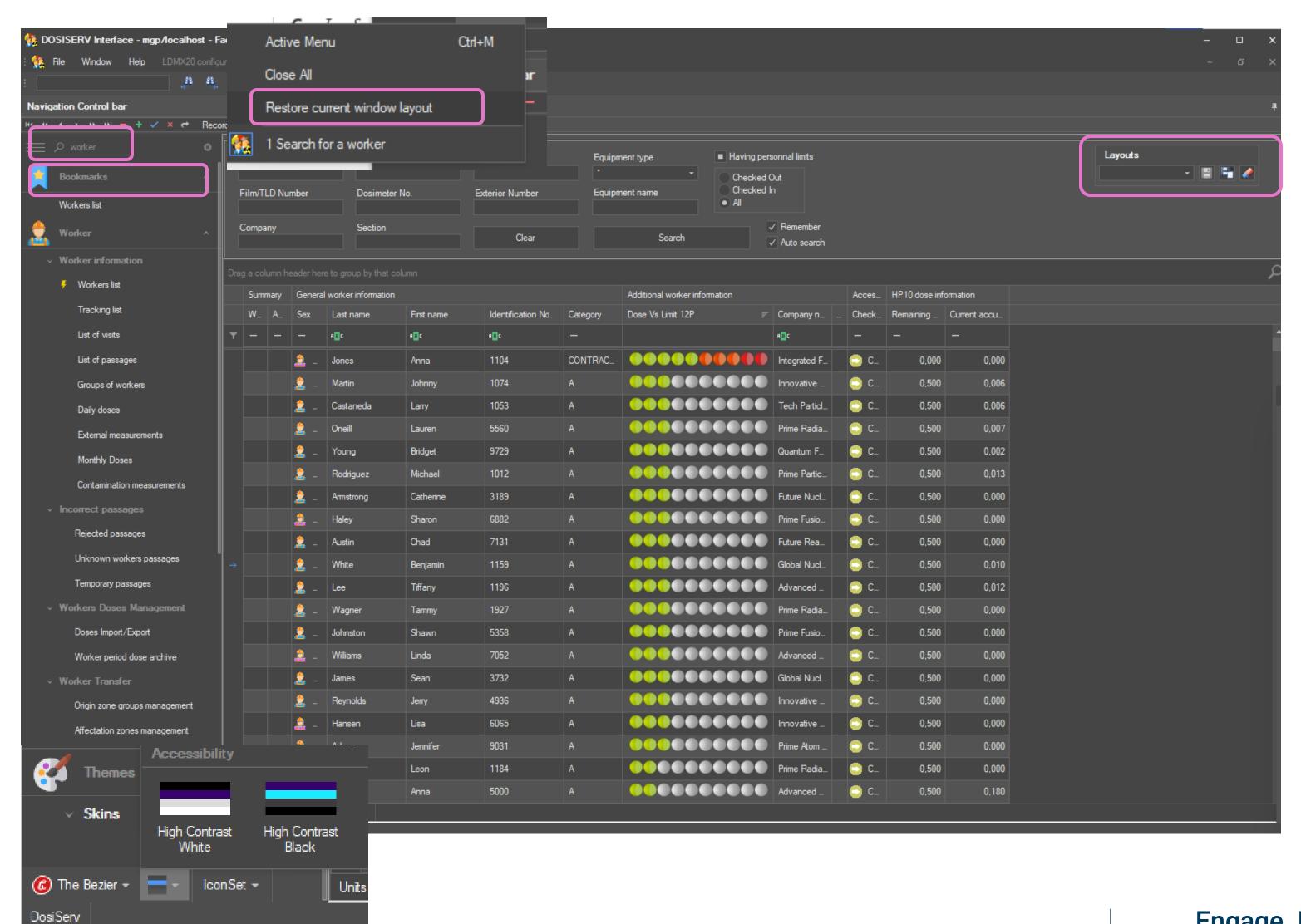
**Multi-languages** 



### Features (New GUI)

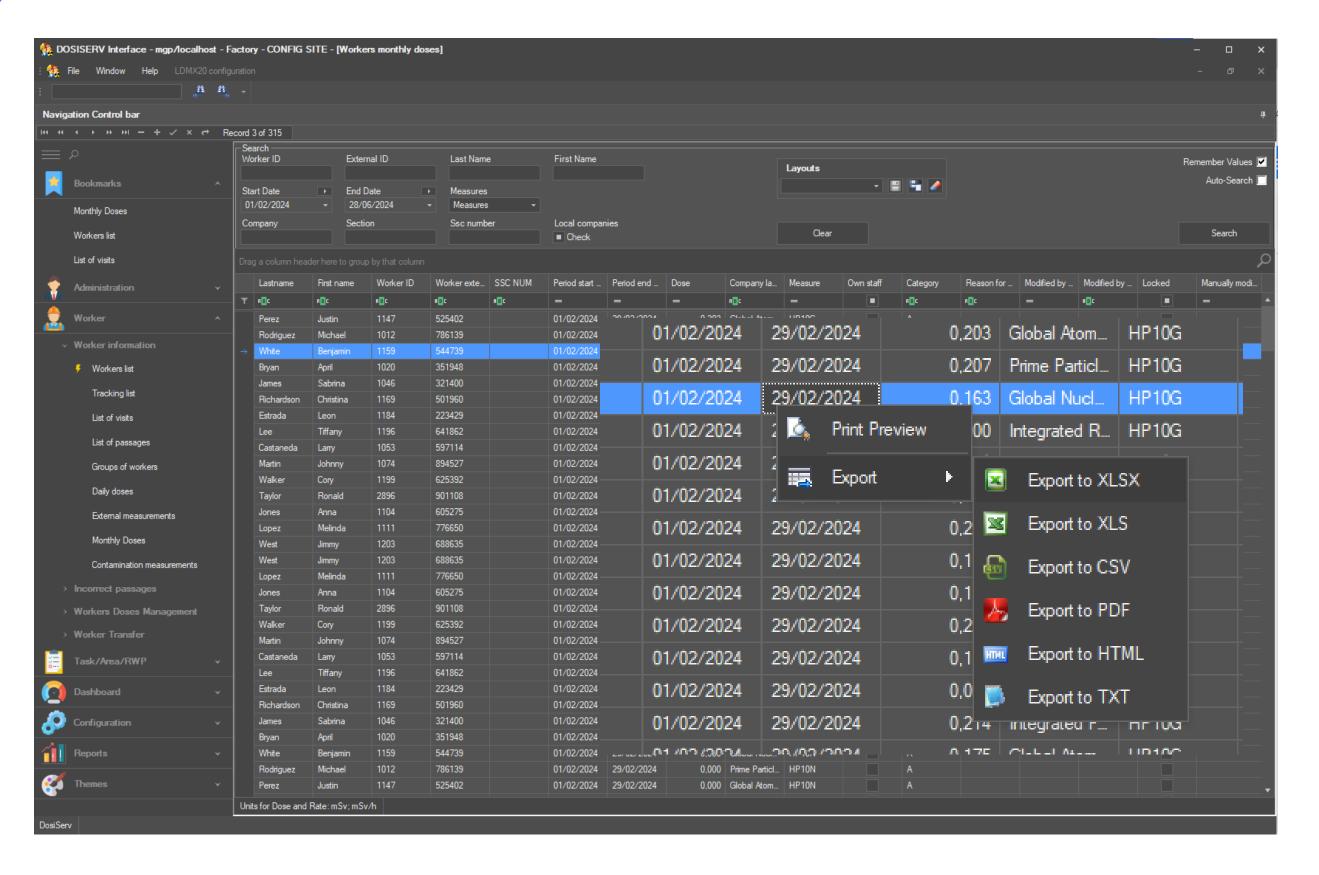
New GUI (Graphical User Interface) offering many enhancements in order to enhance user experience and improve efficiency

Bookmarks
Menu Search
Custom layouts
New Styles
Restore original layout



# Features (New Lists)

New list independent from worker details allow to create custom reports Example: year 2024 monthly doses for all workers





Several new lists have been added (monthly dose list, contamination measurement list, etc.) to provide access to all measurements without needing to navigate through worker details. Since all lists can be exported to Excel, this allows users to generate customized spreadsheets for designing tailored dosimetric reports.

# Features (Dashboard improvments)

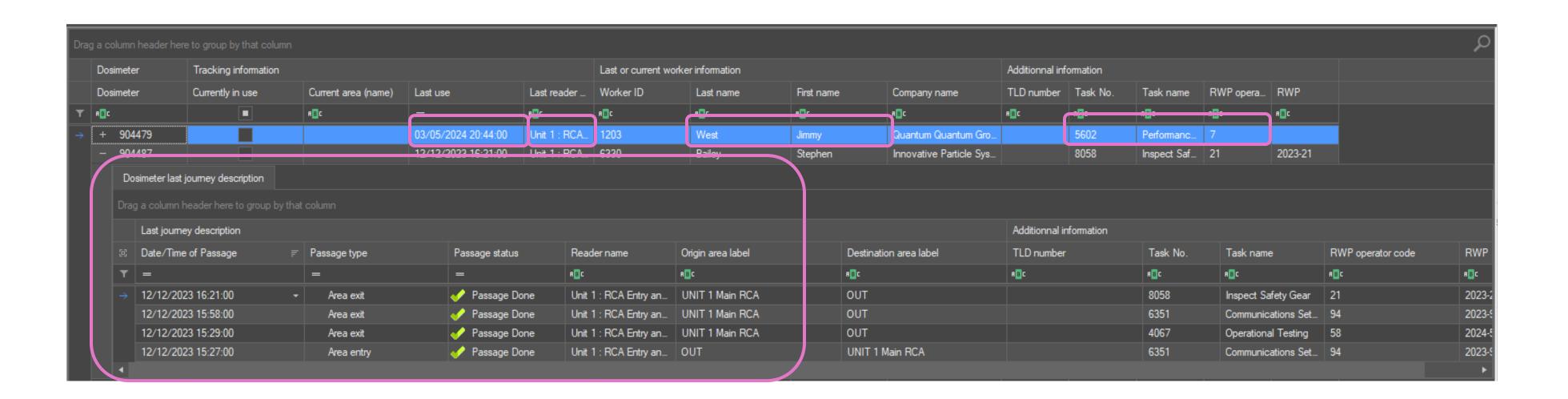
> Several instance of the same widget (using different parameter set)



# Features (Track a DMC)

Based on serial number quickly access to

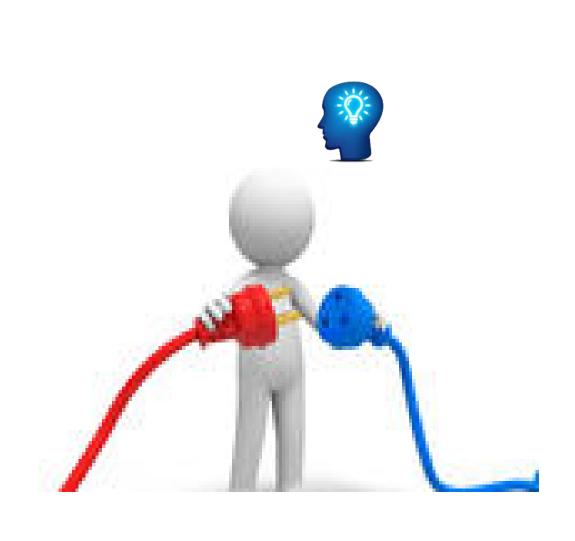
When it was used for the last time
Where it was used for the last time
Who used for the last time
Last Job it was used for
Zoom in

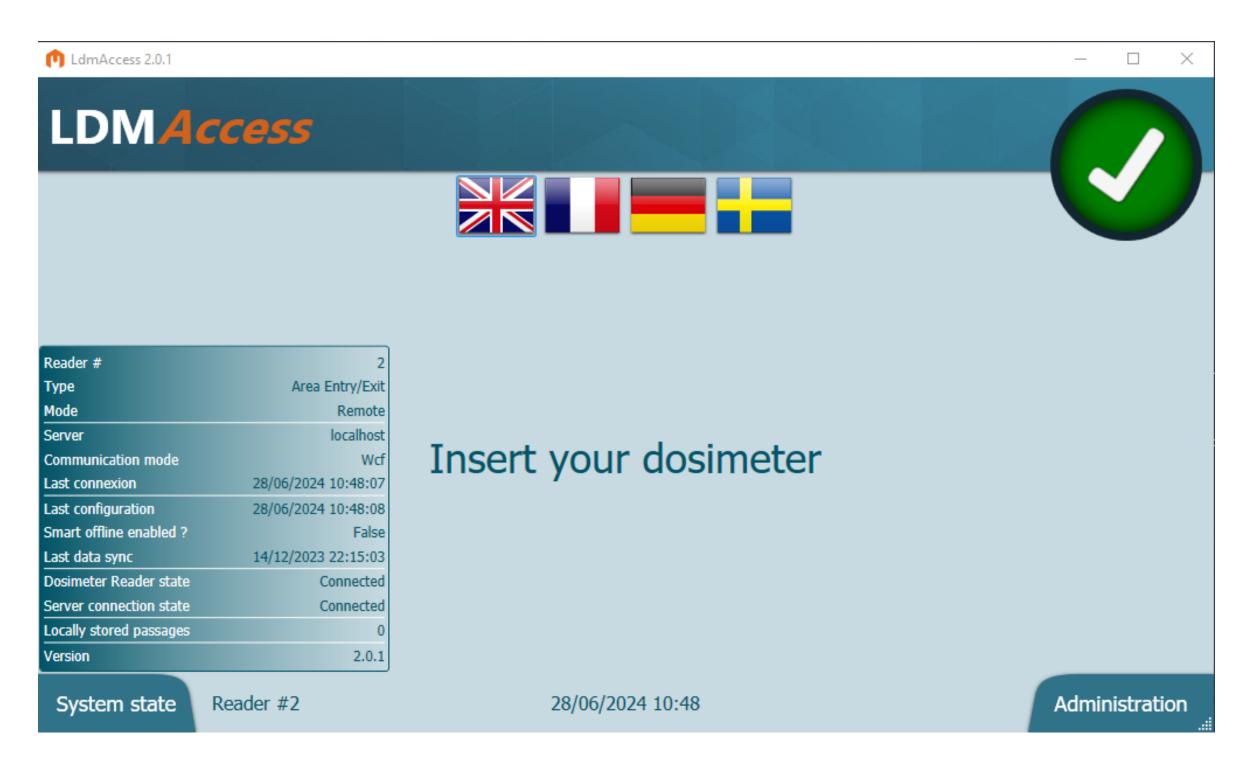


# Features (Smart Offline)

Improvement to make the reader smart offline even smarter

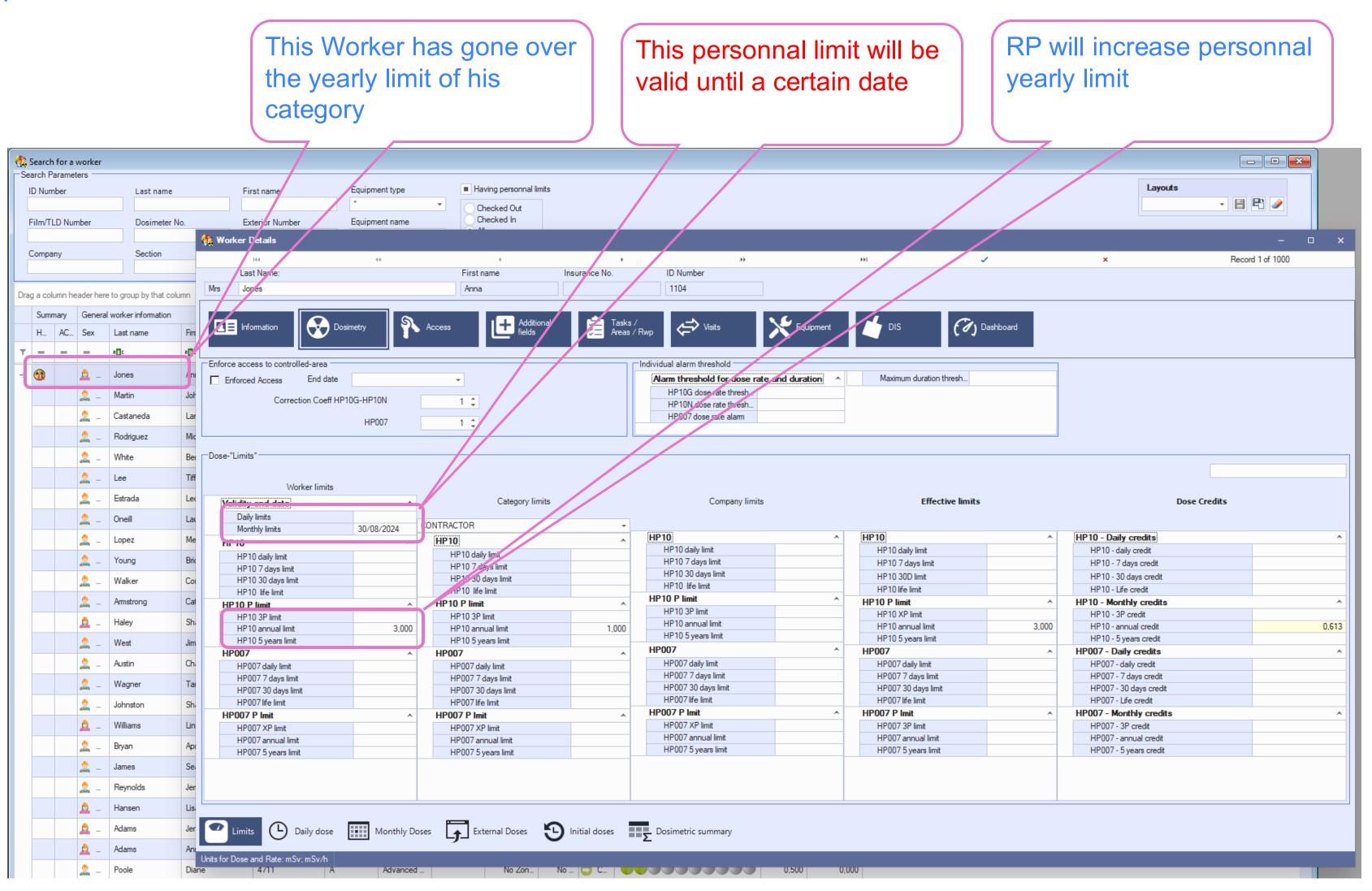
Check worker/task/RWP authorizations
Offer list selection
Program dosimeters based on Job code setting
Easy/on demand update





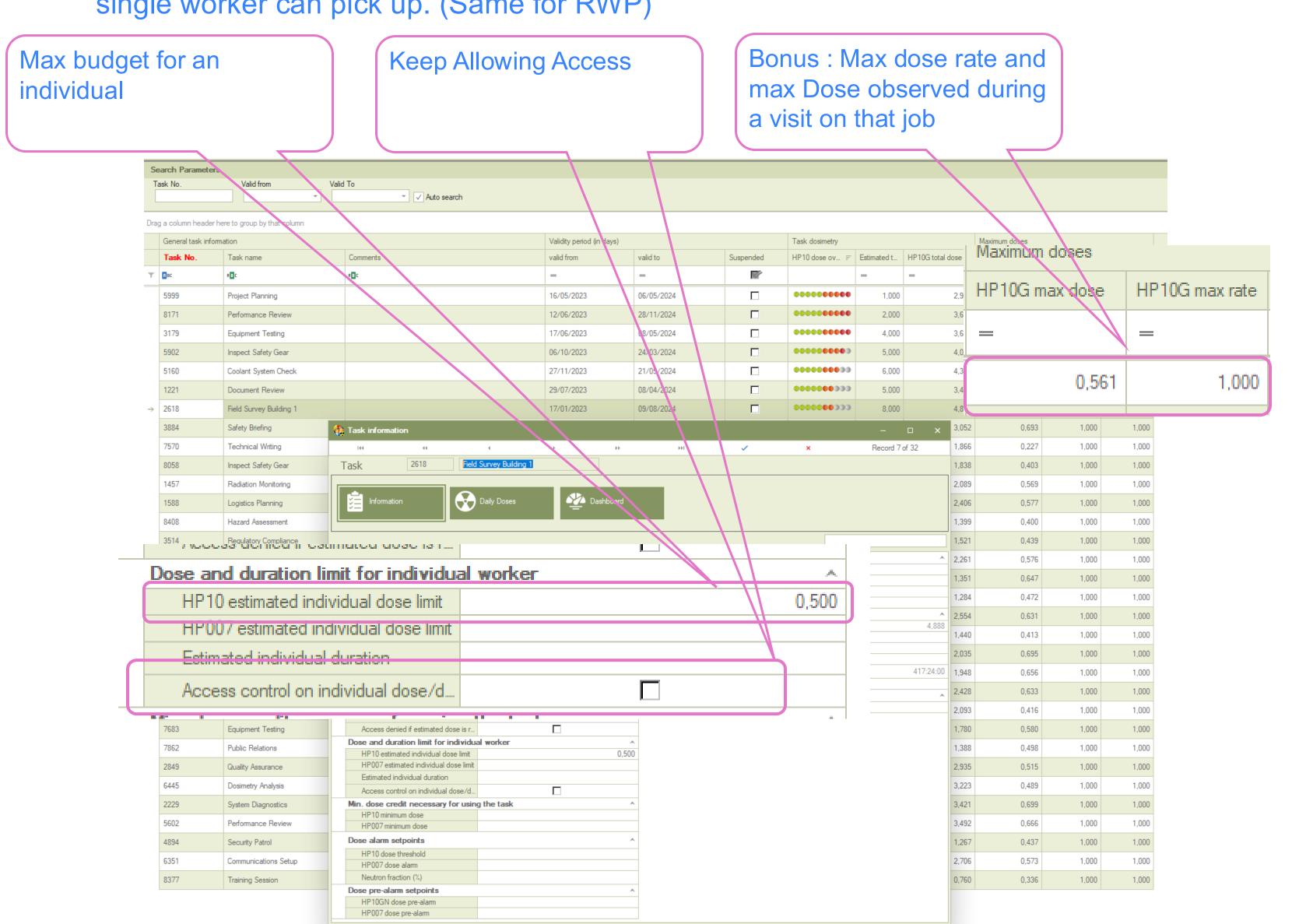
# Features (Personnal alarms valididy)

When raising personal limits of worker, one can define a validity date for those personal values.



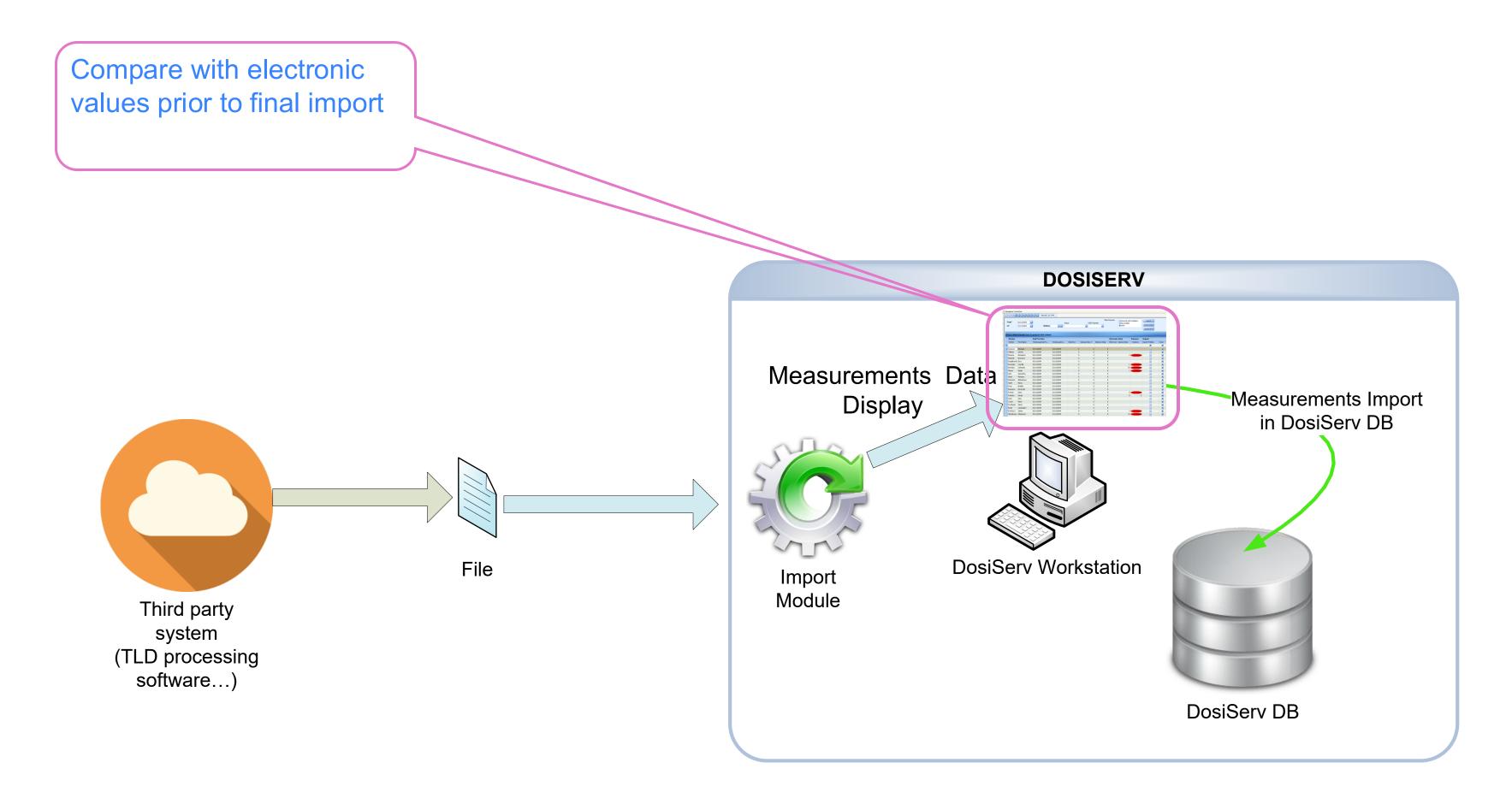
# Features (Task/RWP personnal budgets)

In addition to the budget for the entire task, on can add a maximum dose budget a single worker can pick up. (Same for RWP)



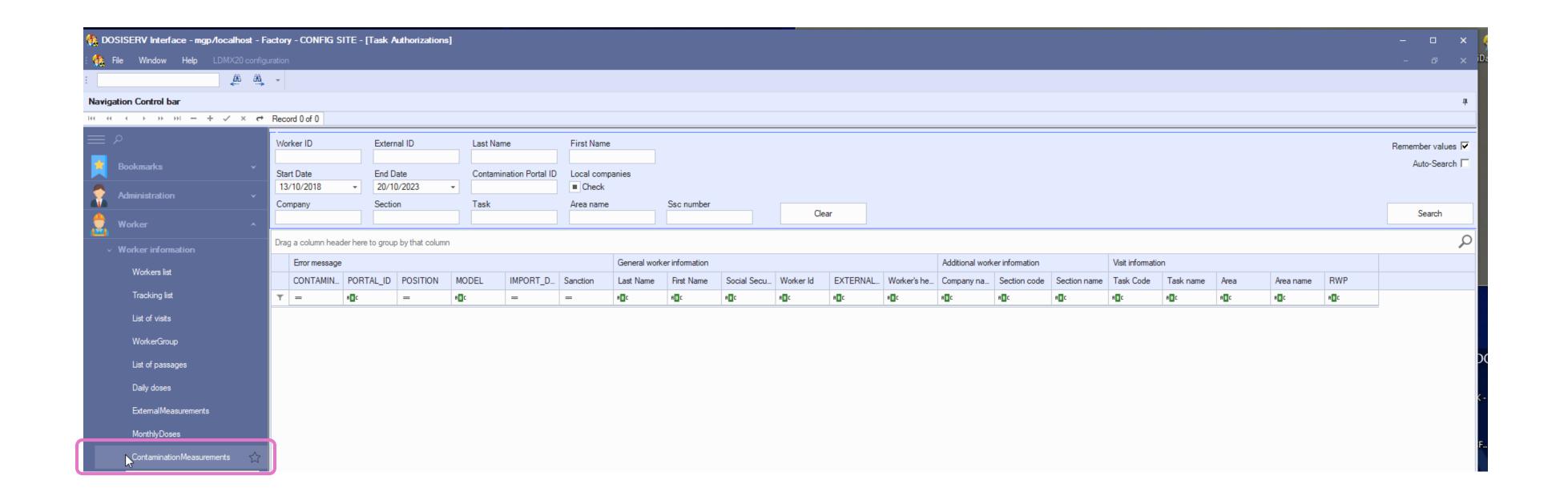
# Features (External TLD import)

> Using a excel csv predefined file one can import external doses previewing values



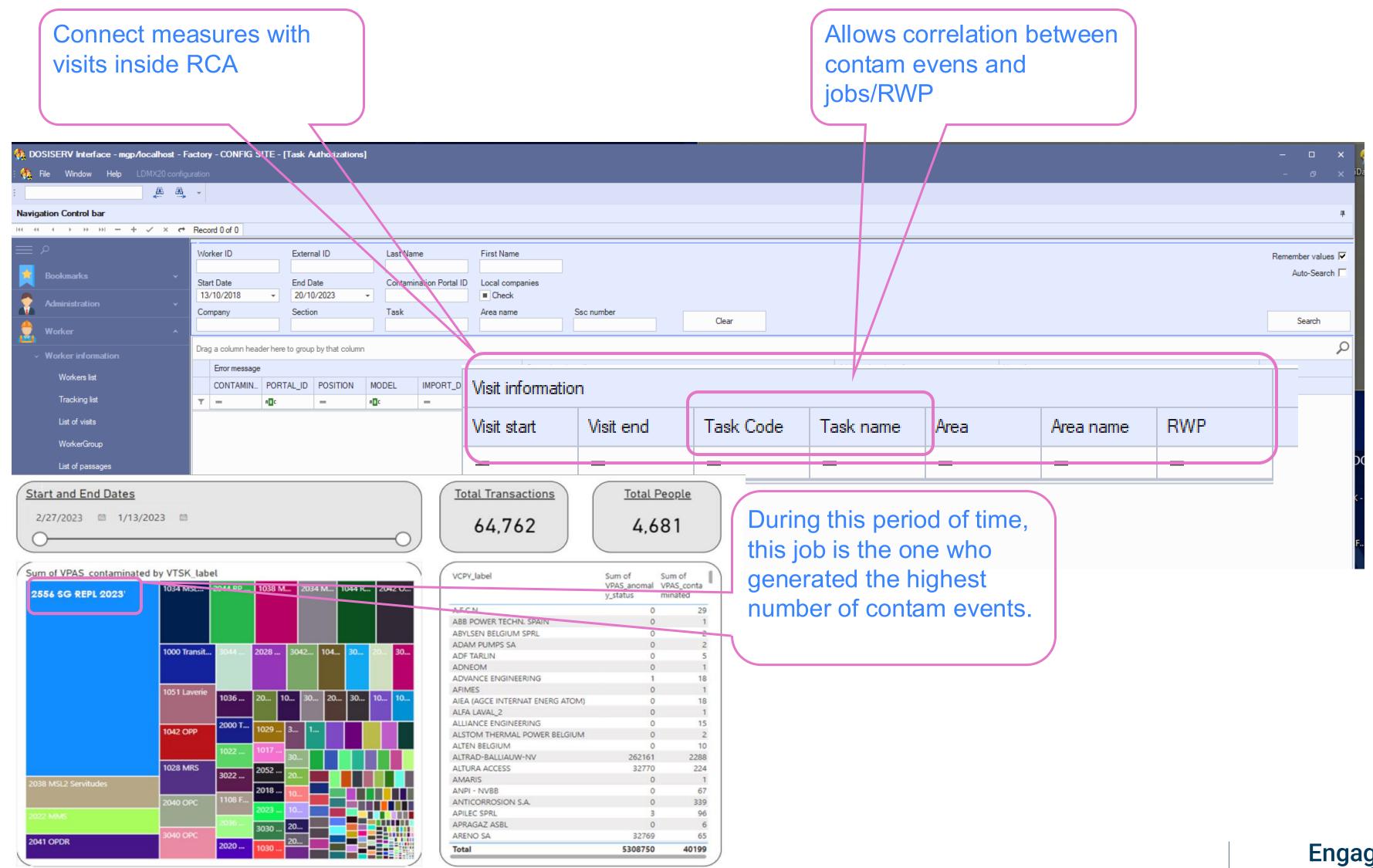
# Features (Body Monitors measure import)

Customizable import to collect generic Body monitors measurements and save those into worker data



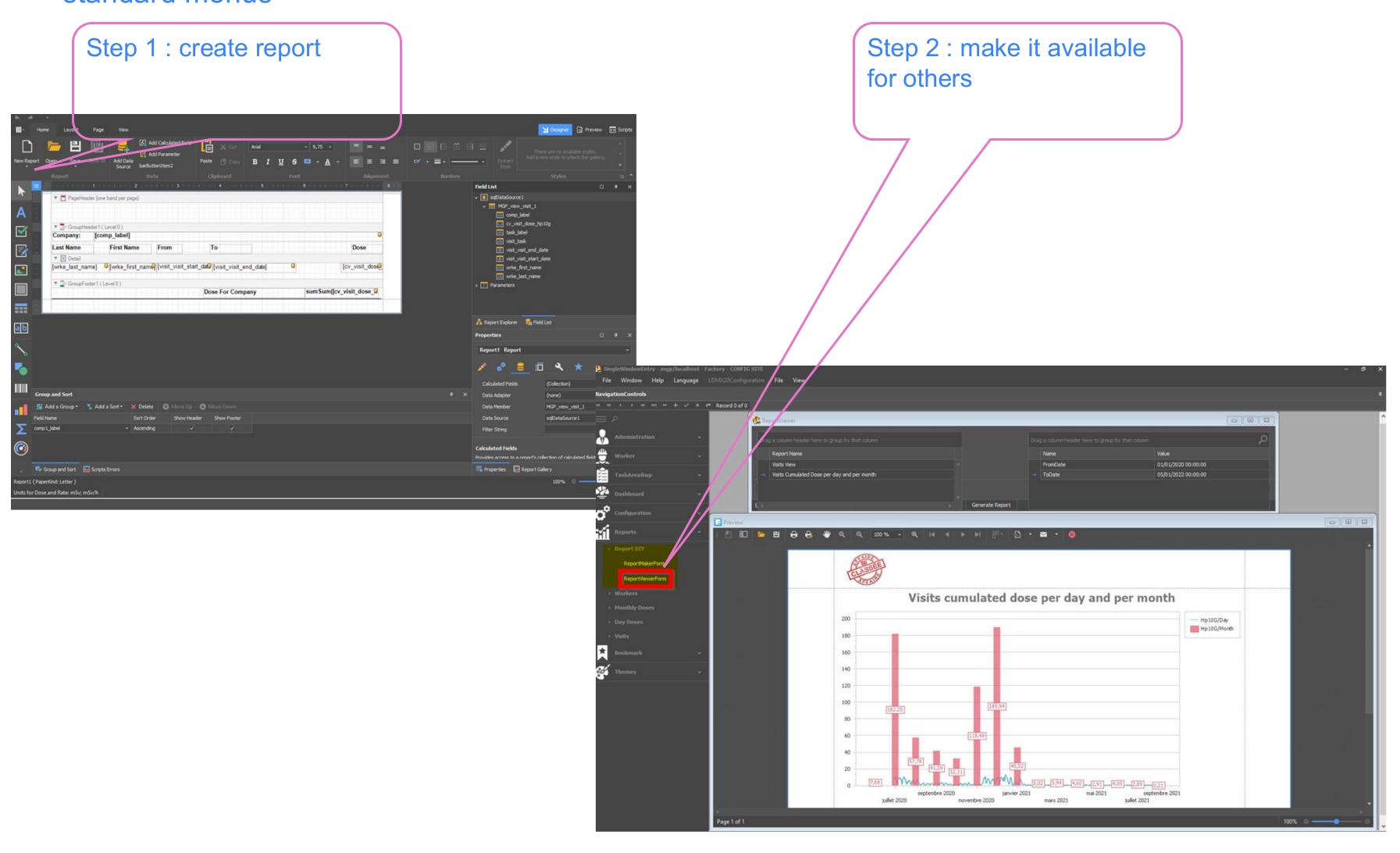
# Features (Body Monitors link measures)

> Imported measures can be linked/connected with electronic dosimetric data (Visits)



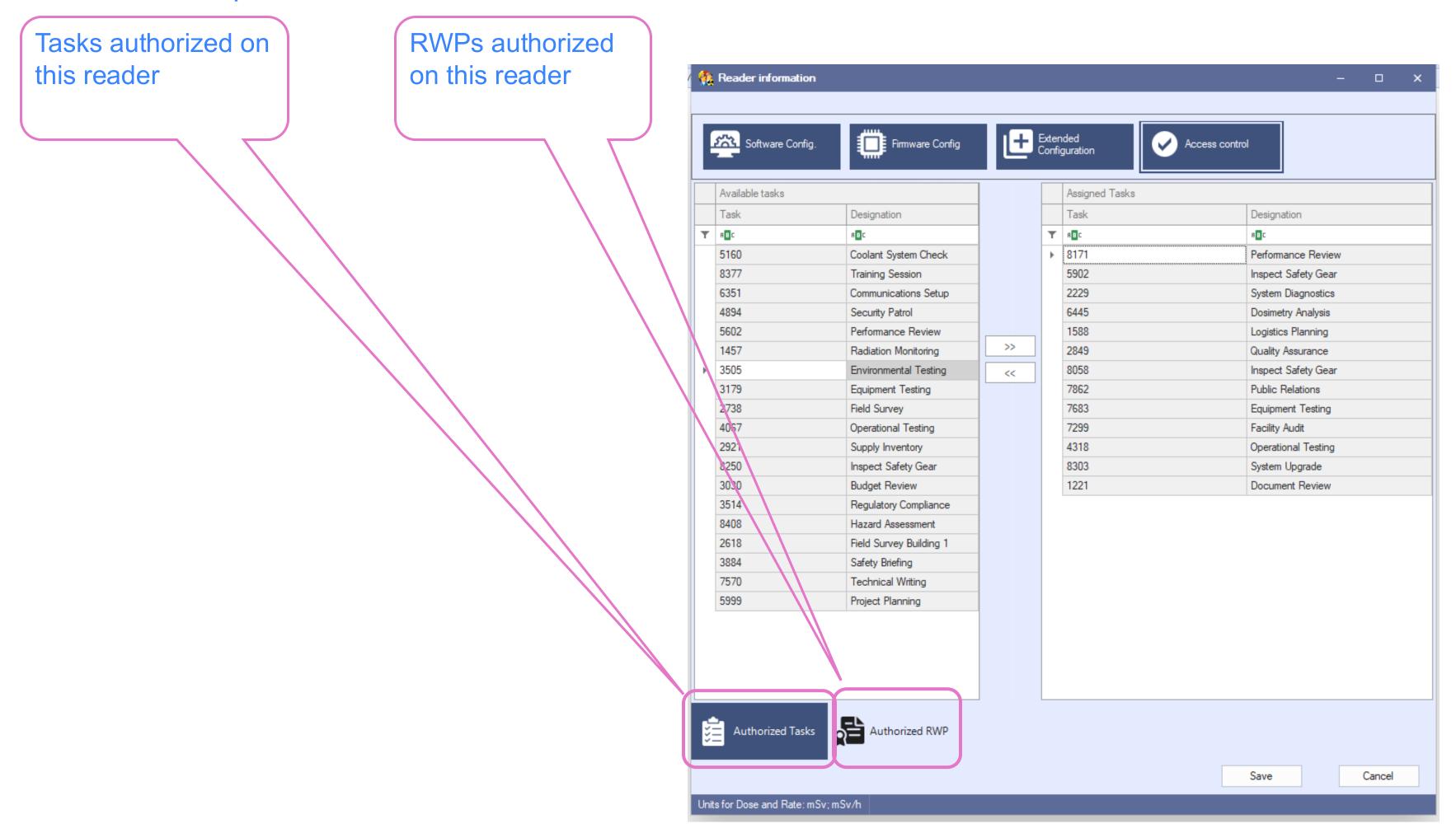
# Features (Custom report)

For expert : one can create a custom (home made) report and incorporate this report into the standard menus



### Features (Authorized Jobs/RWP per readers)

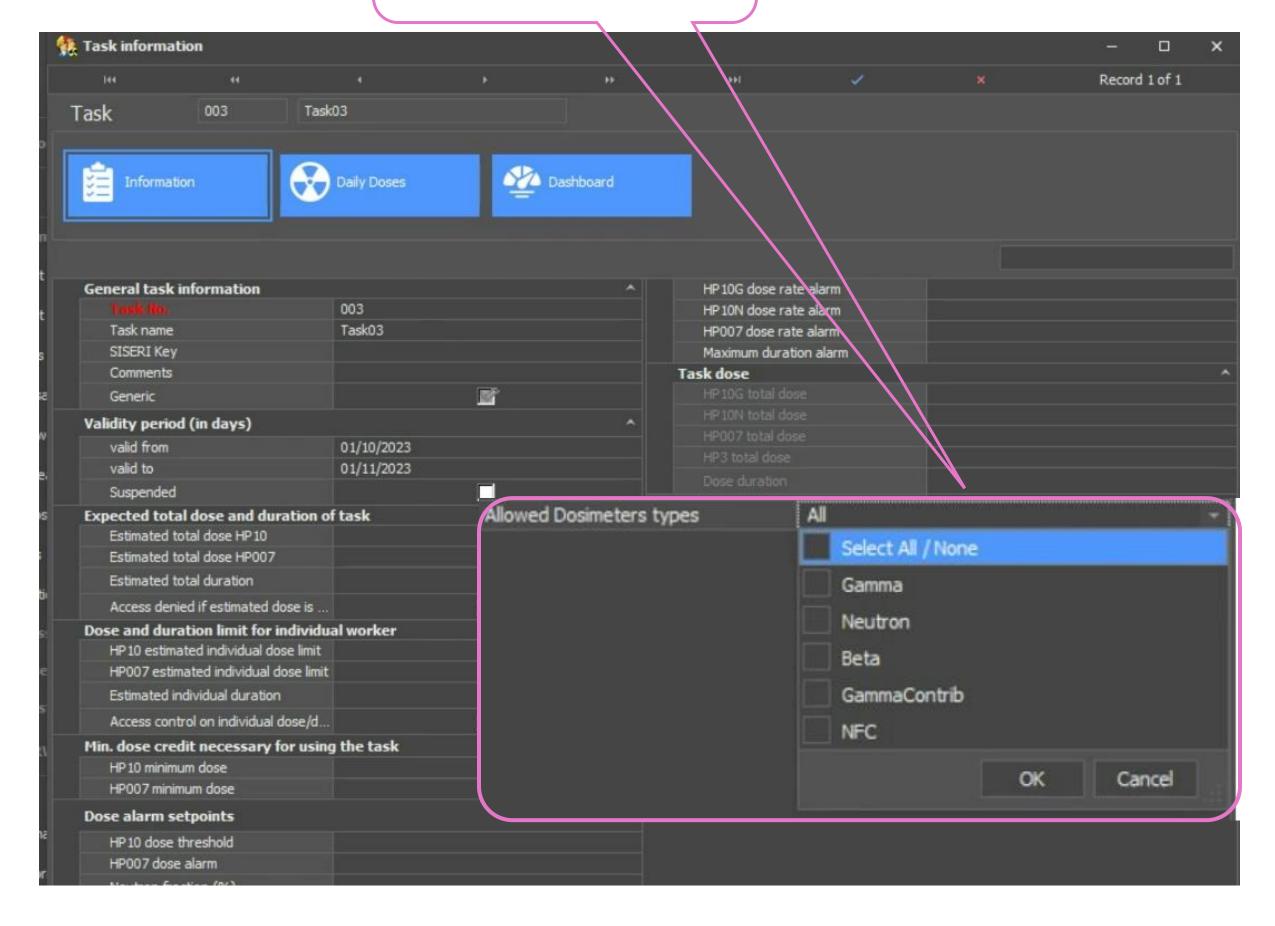
Some site do not have the capability to segregate usage of jobs/RWPs per **zone**, one can now do this per reader



#### Features (Authorized Dosimeters per Jobs/RWP)

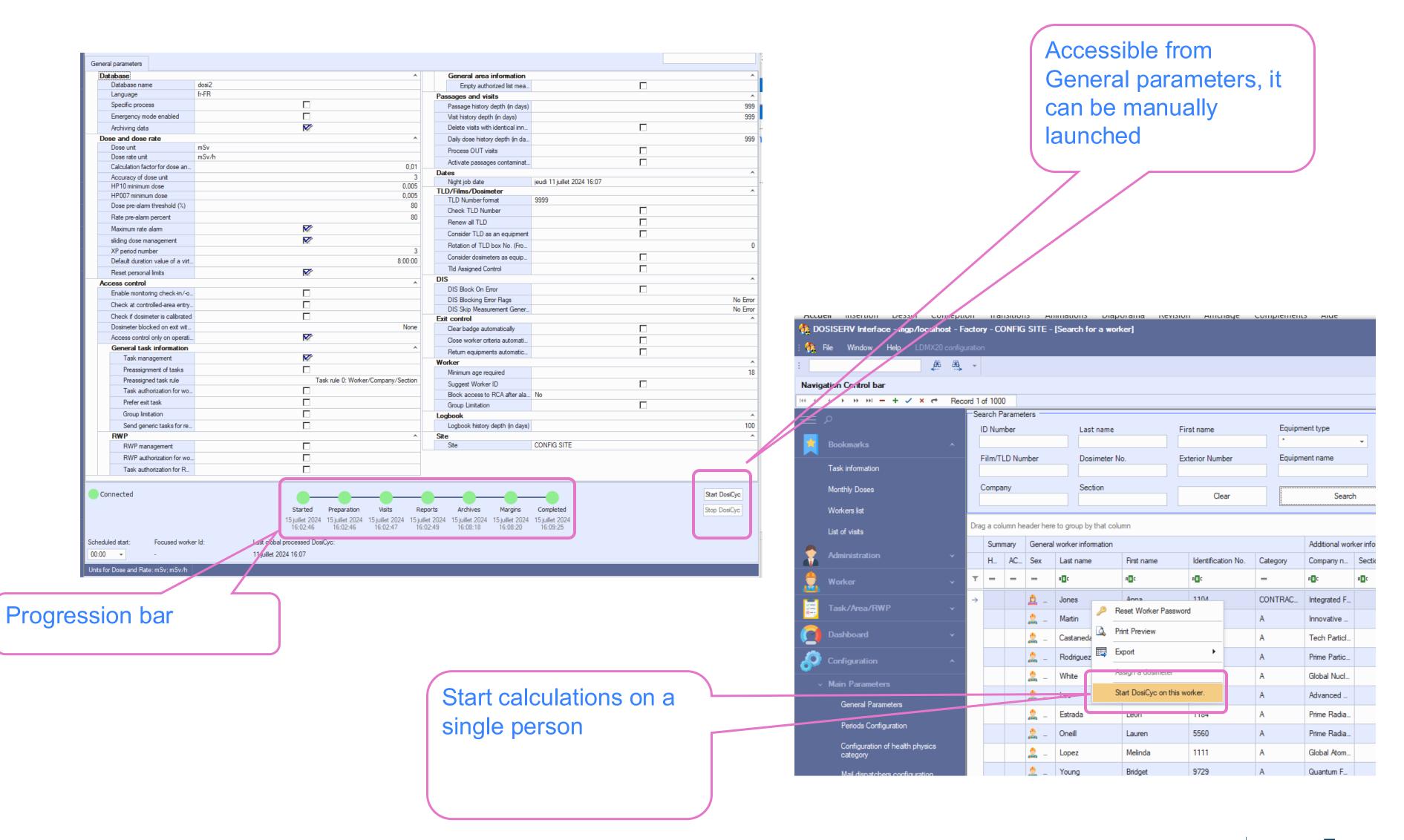
Allows to check, at access control if the worker is using the appropriated DMC for the Job/RWP

What kind of dosimeter is required for this job/RWP



#### Features (DosiCyc Nigth Job)

> The night job is now a service instead of a SW to be launched on a scheduled base







Alarms managements



### Architecture

#### The DosiServ dosimetry system operates with

- Electronic dosimeters (MIRON's whole range, in hands free mode)
- Readers (industrial, and/or PC based kiosks)
- Computer system (server & clients)























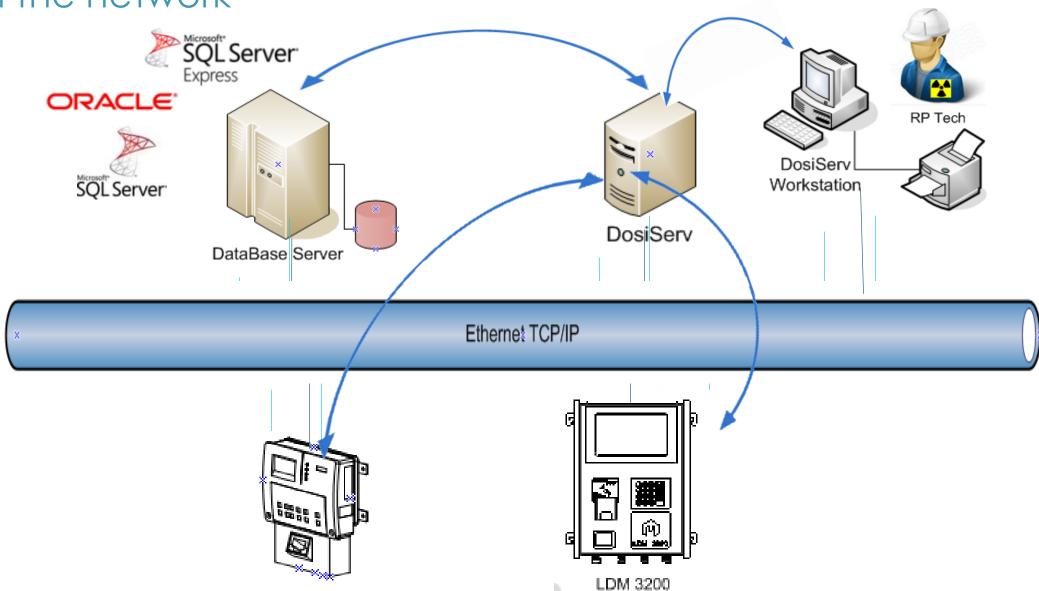
**DMC 3000 Neutron** 



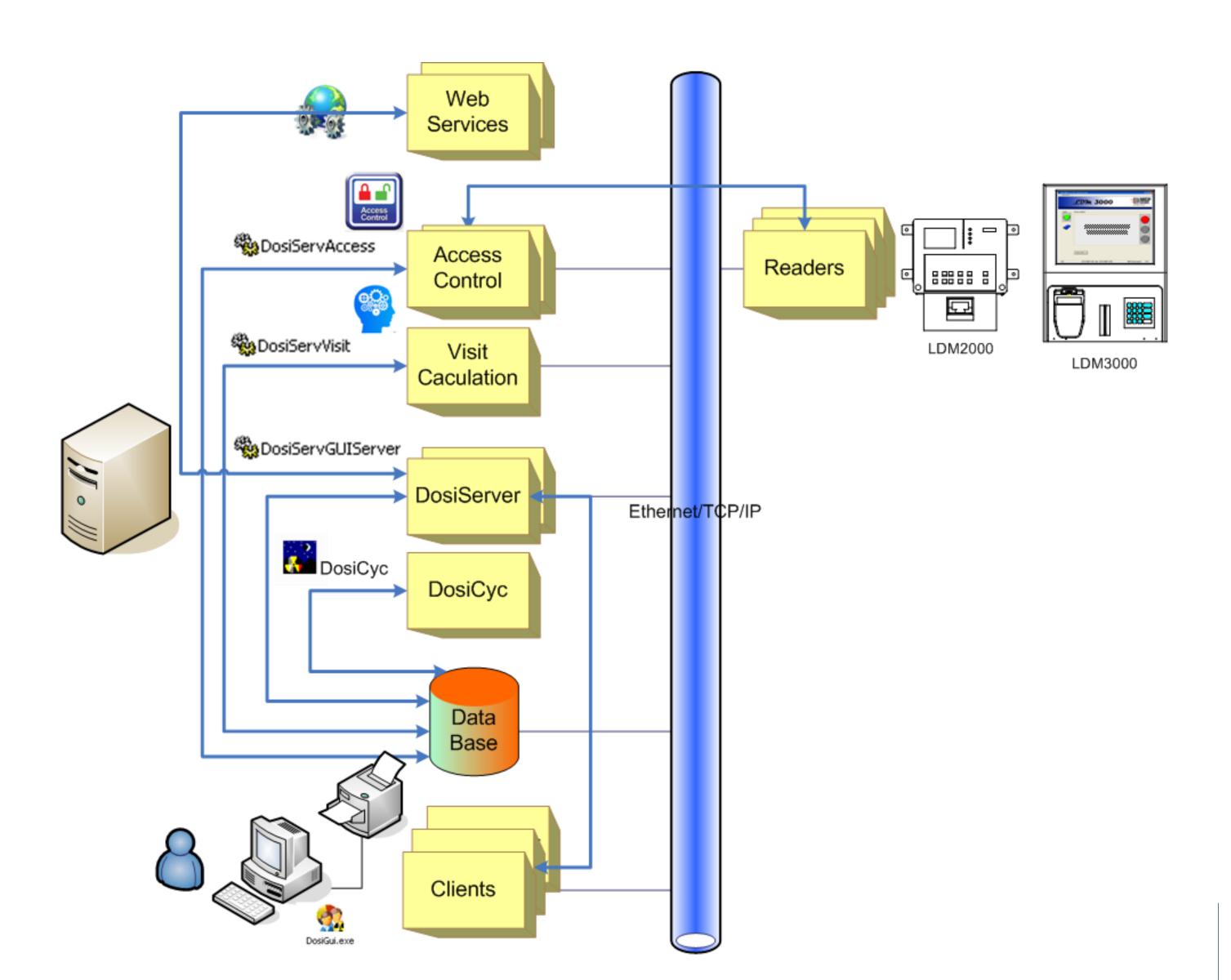
### Architecture

### The DosiServ dosimetry system operates on the network and uses a database to store all information

- The main software resides on a server
- Main software can connect to a database server or hosts its own database
  - Oracle
  - SQL Server
  - SQL Server express
- Readers connect to DosiServ through the network
- Client station for administration connects to DosiServ

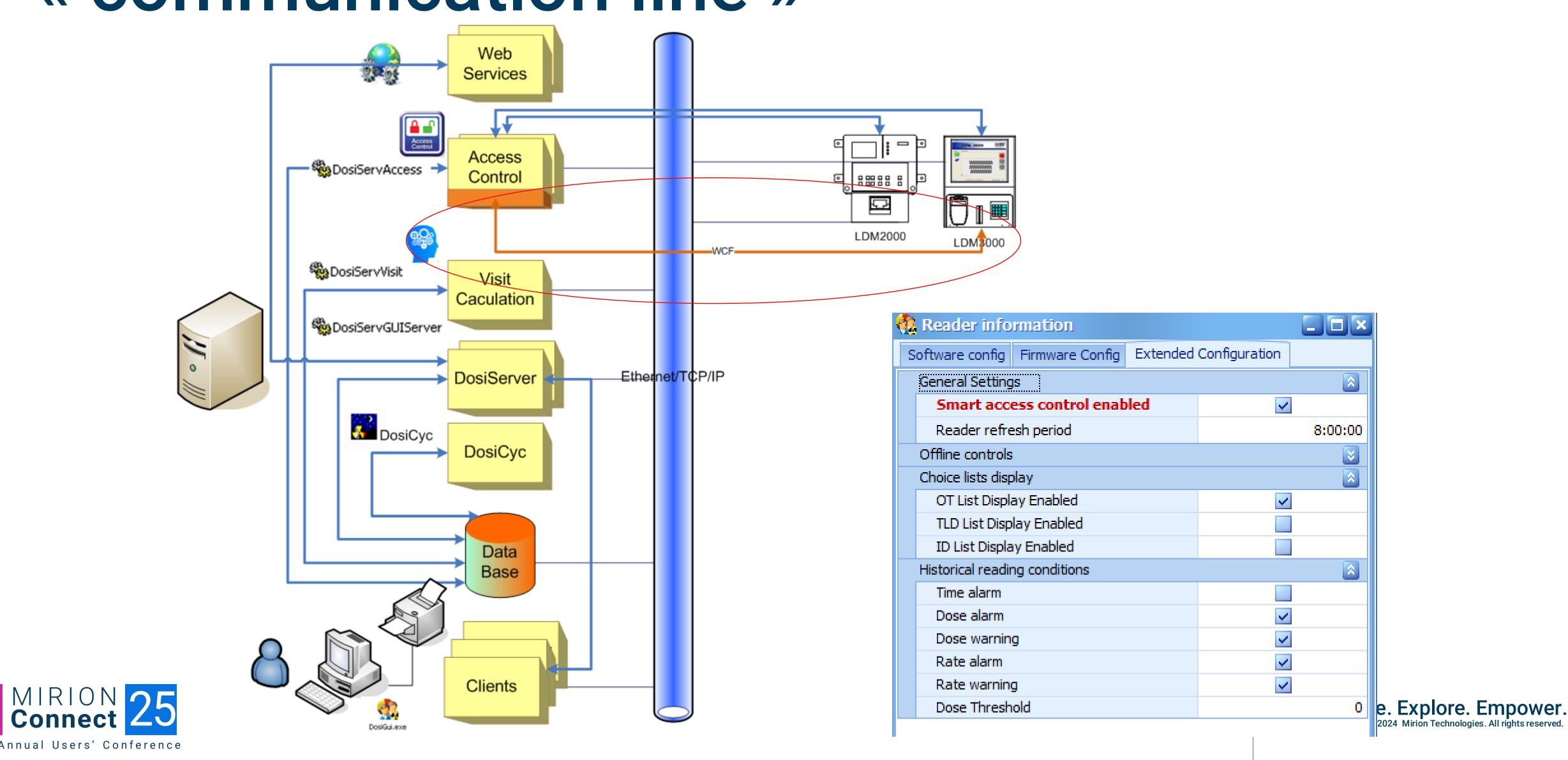


### Processes in DosiServ





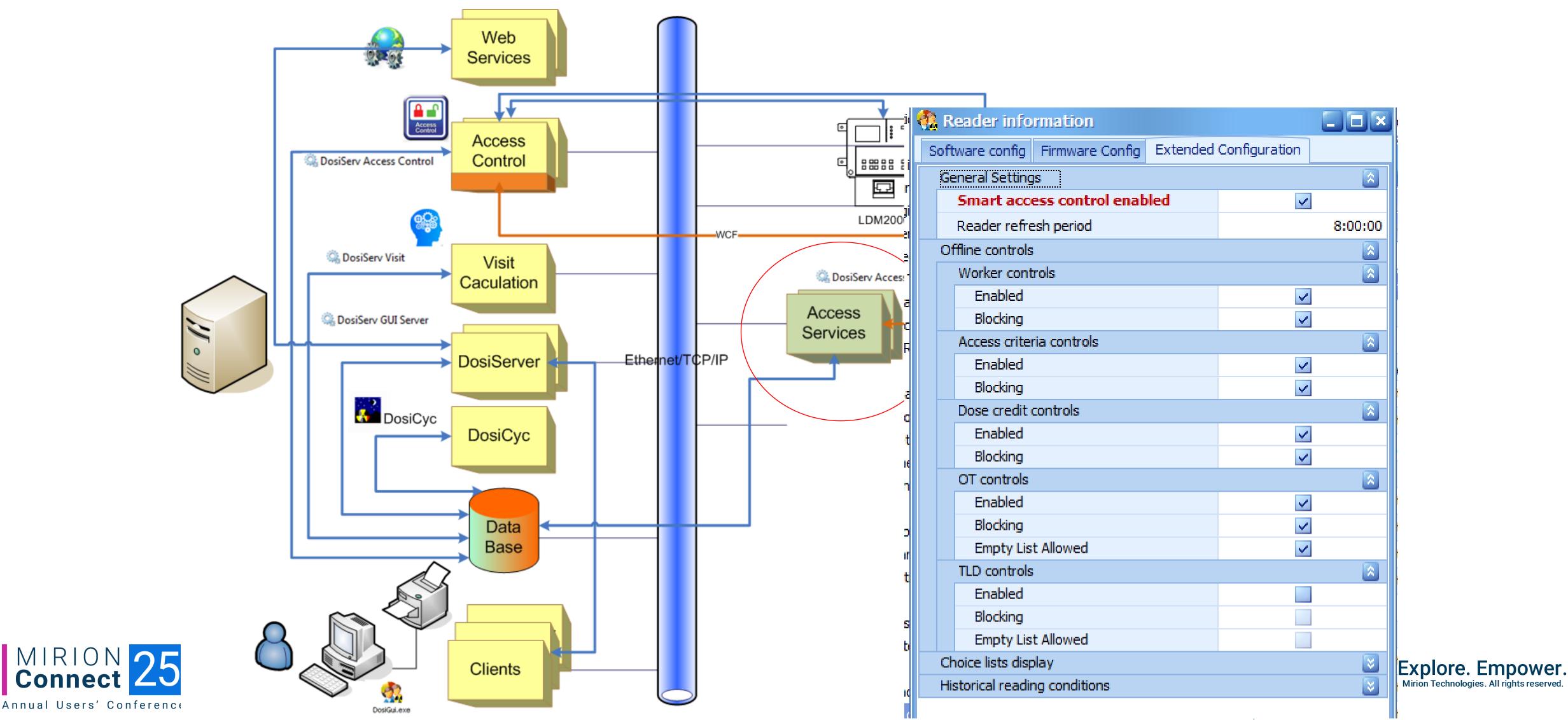
### Processes in DosiServ New « communication line »



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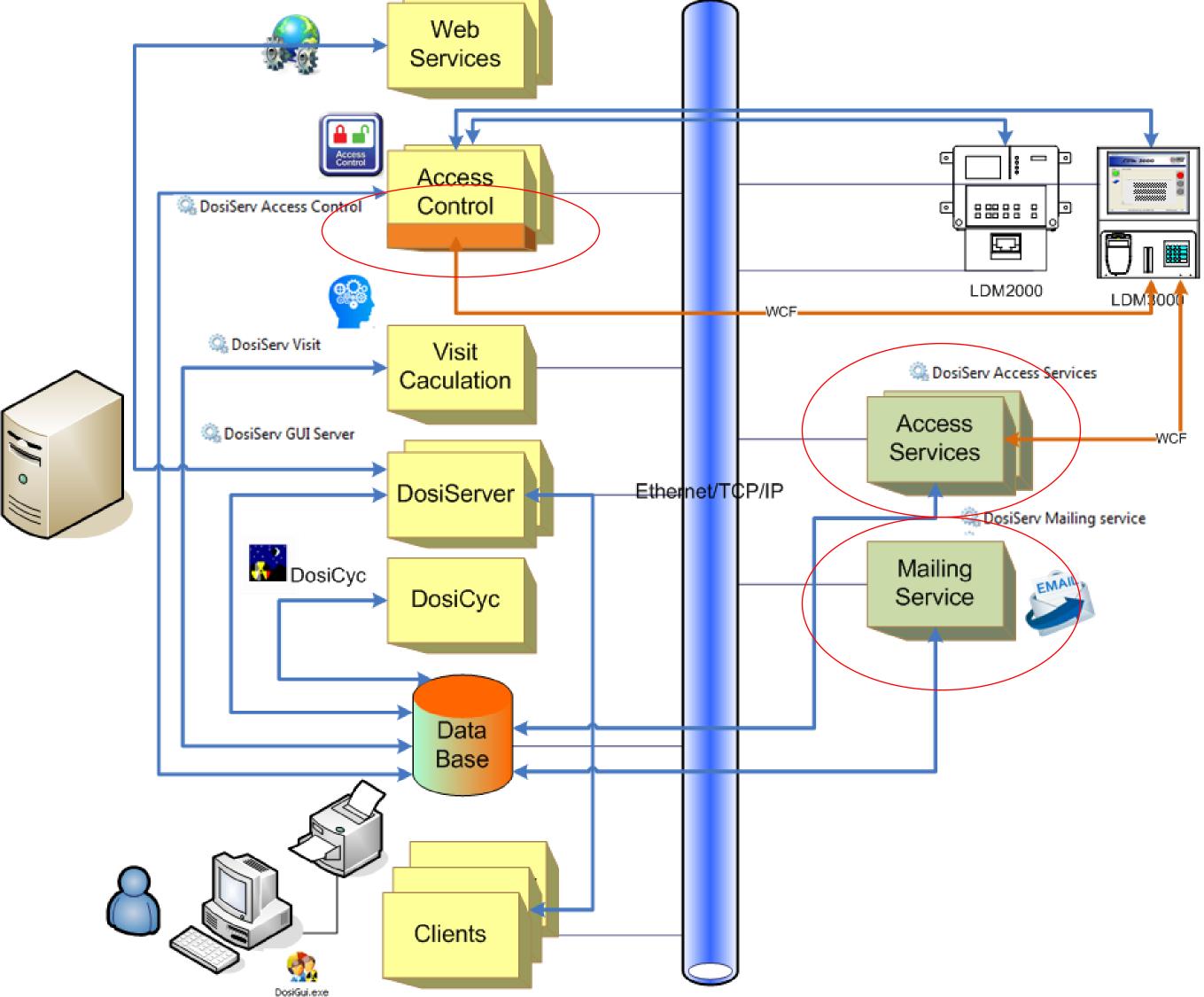
### Processes in DosiServ New

### « communication line »



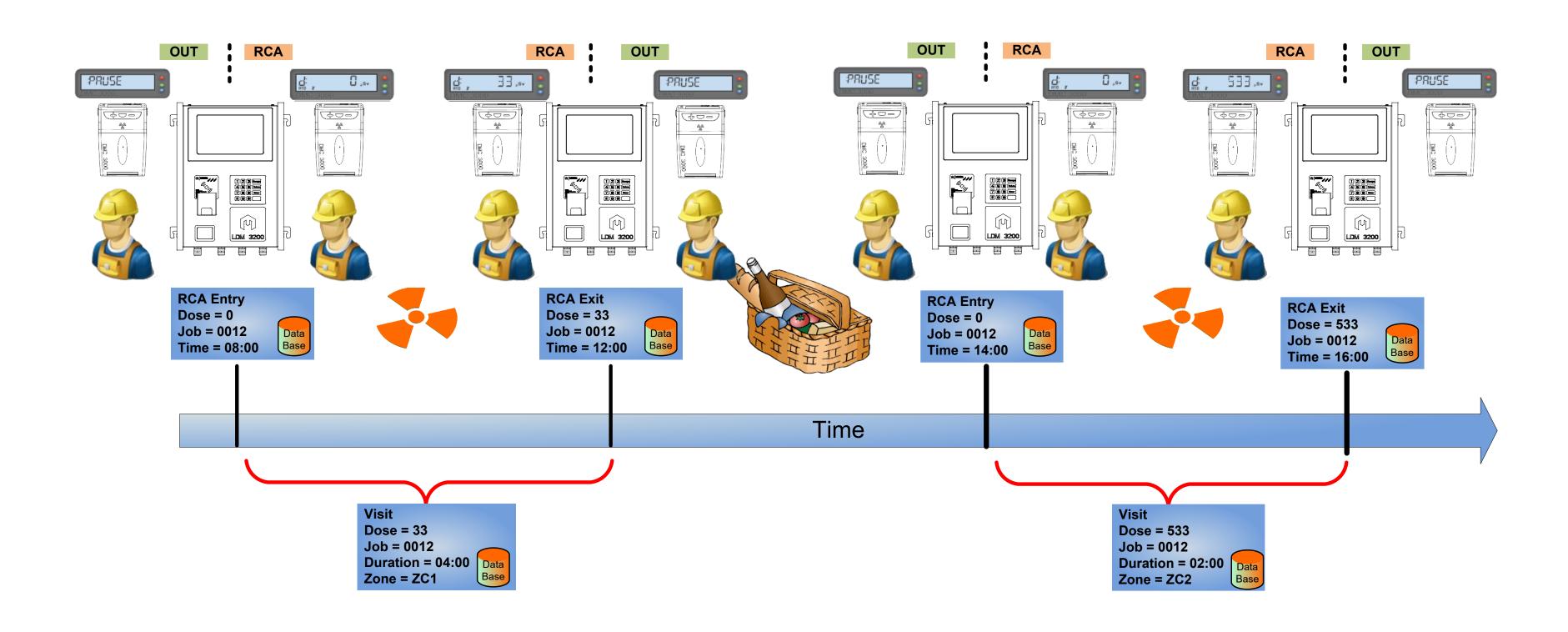
### Processes in DosiServ New

« communication line »

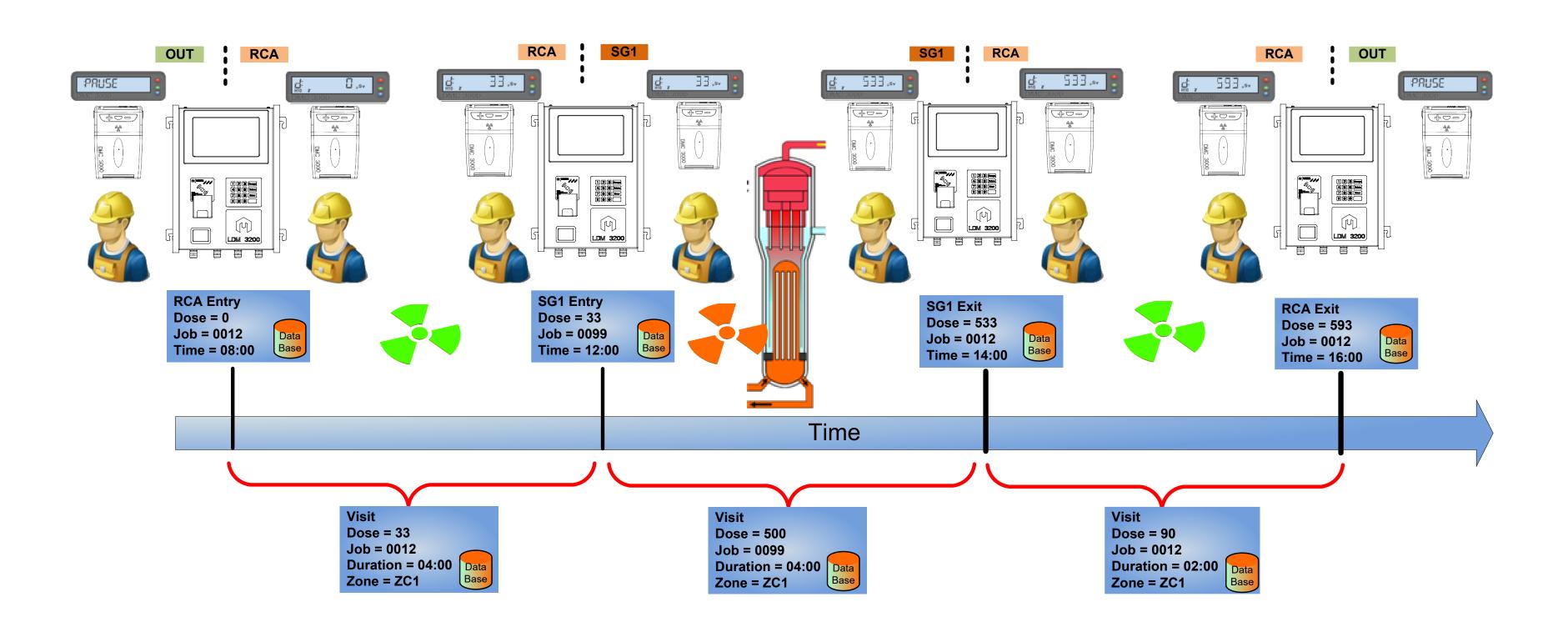




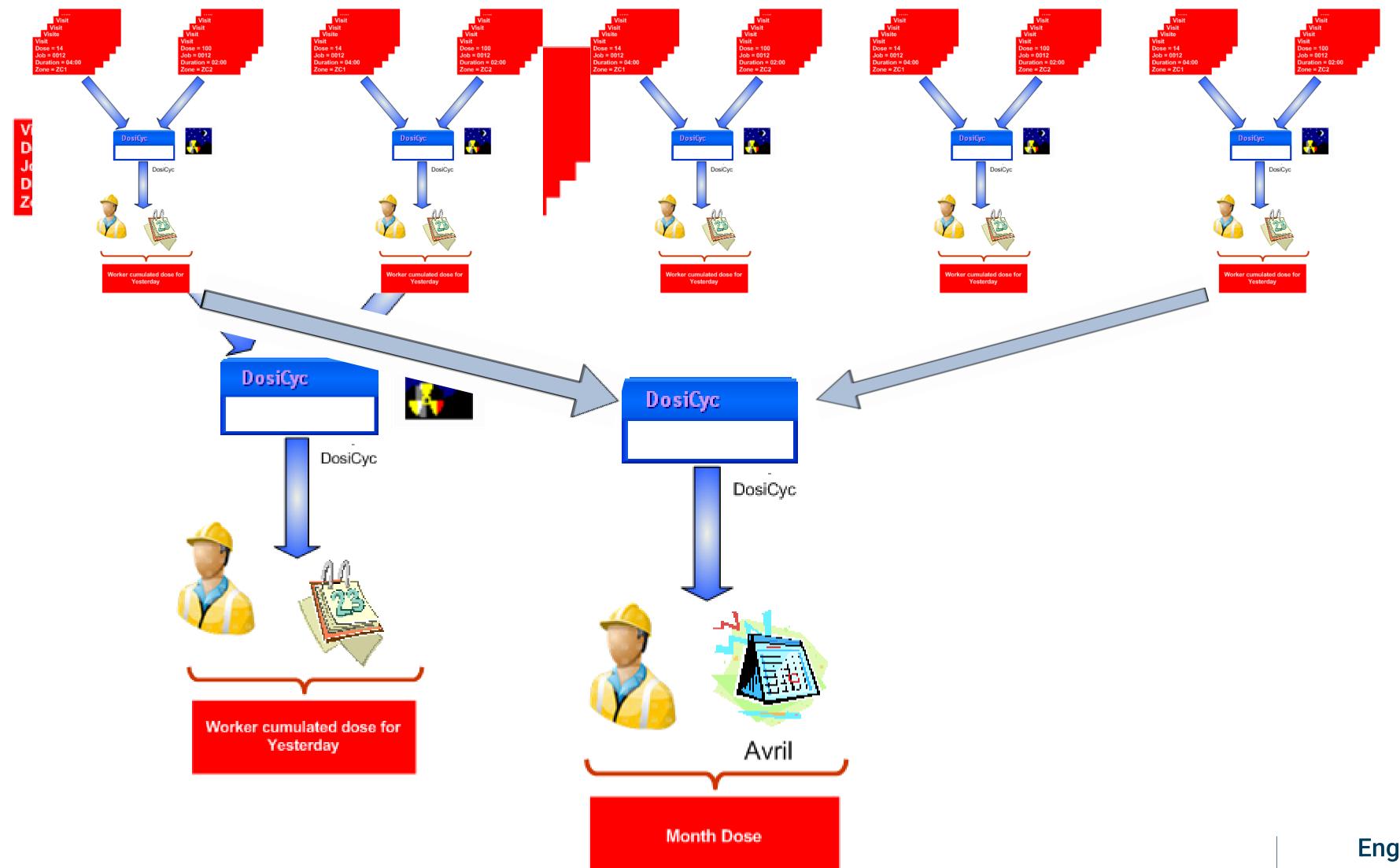
### Passages v Visits



# Passages vs Visits

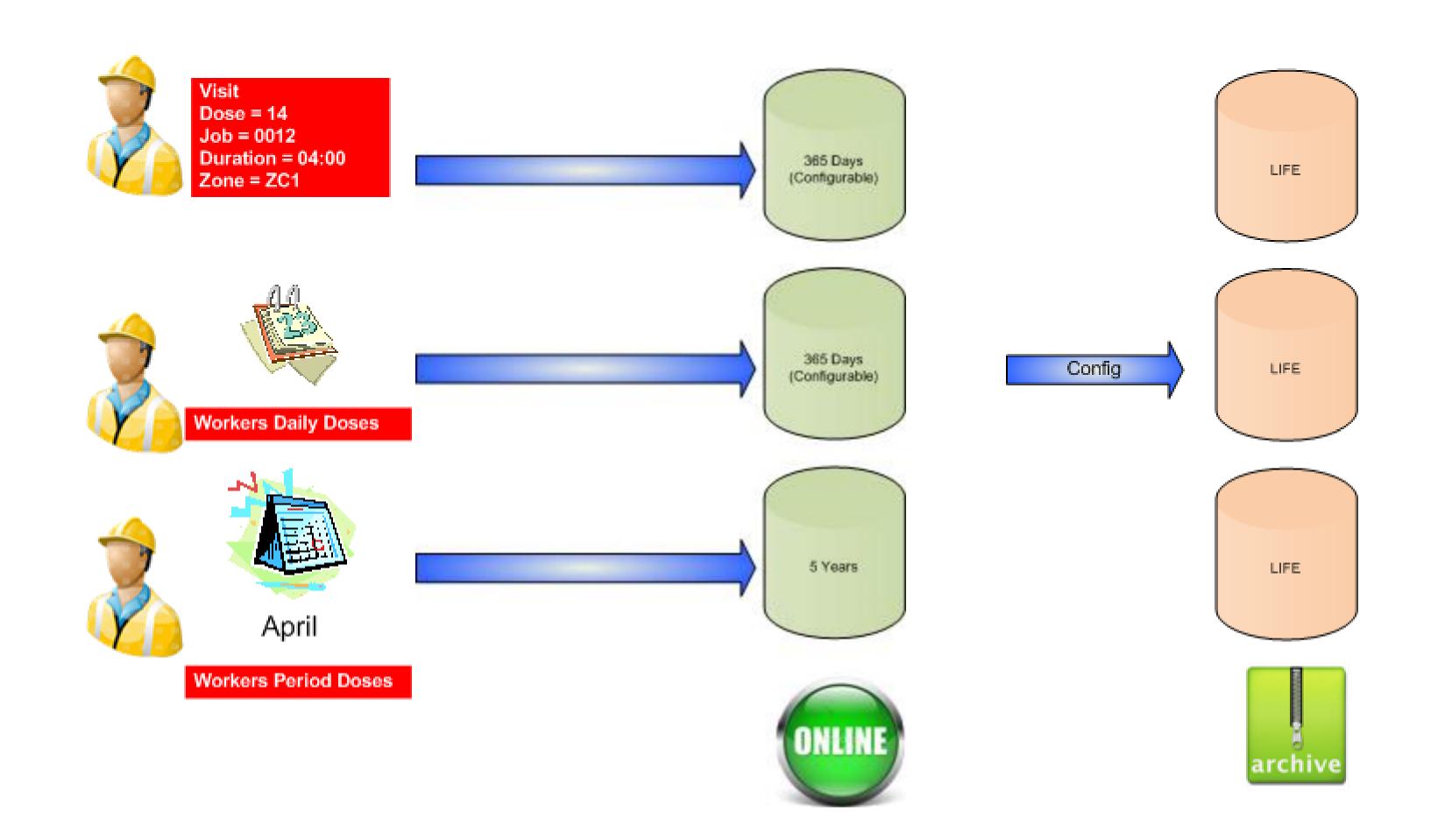


# Dose storage + Archives



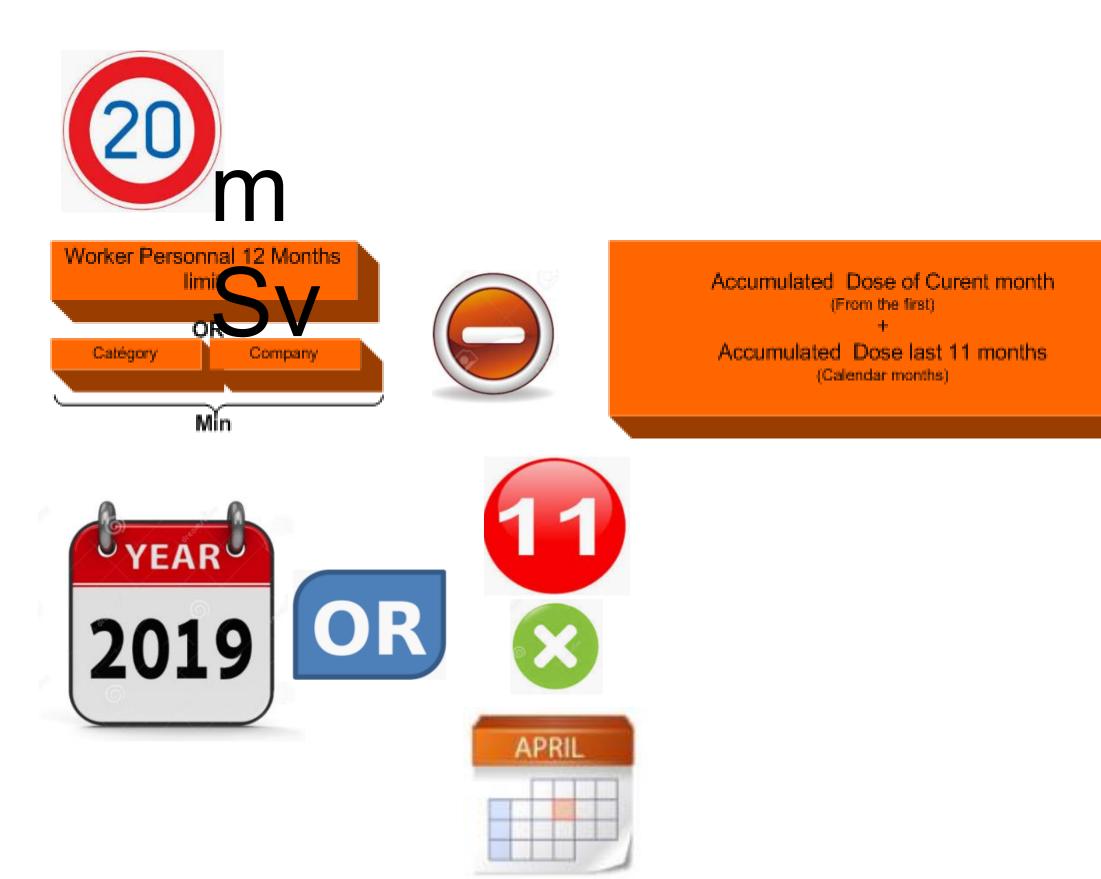


# Dose storage + Archives





### DosiCyc & Dose credit

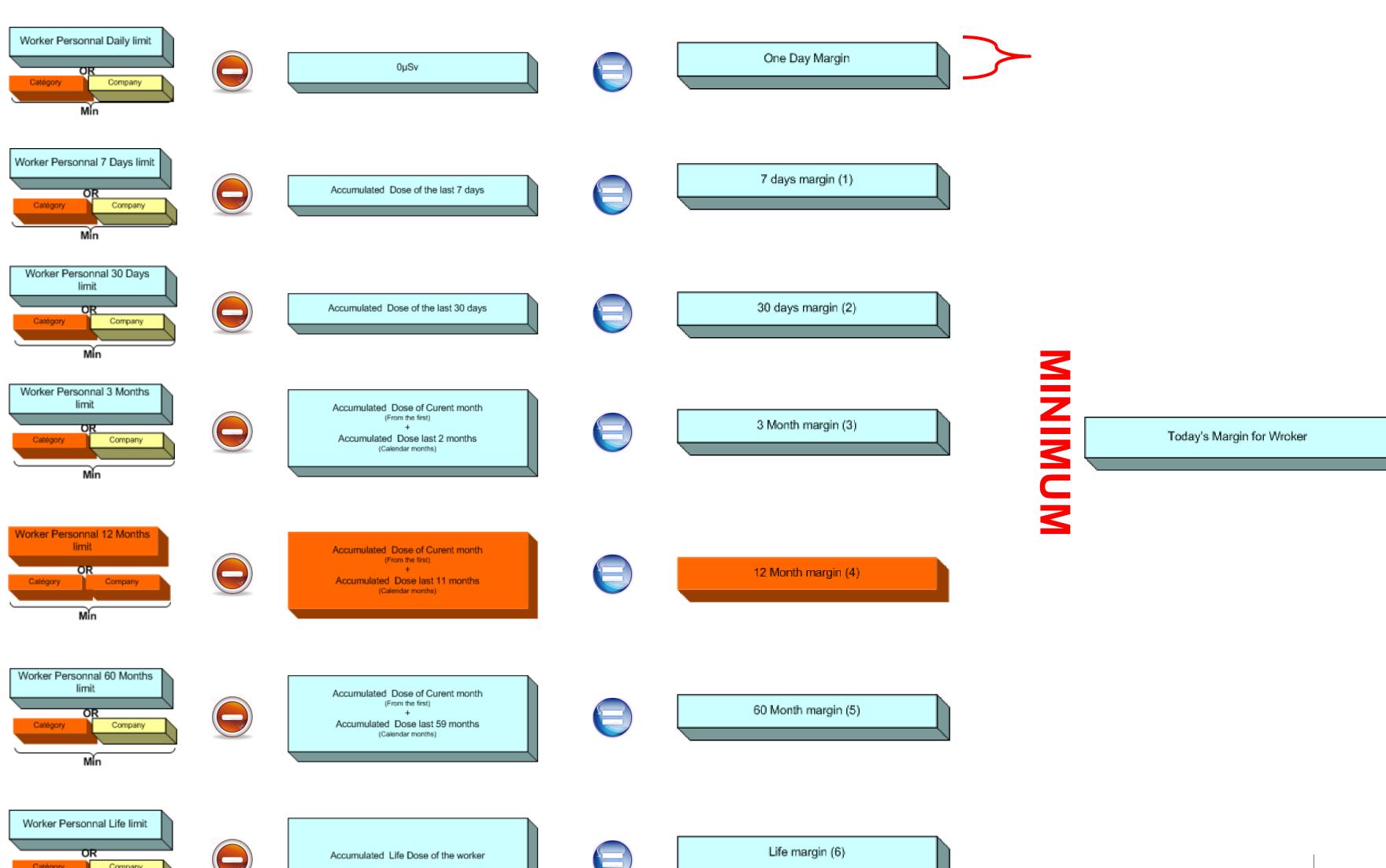




12 Month margin (4)



### Dose alarm calculation

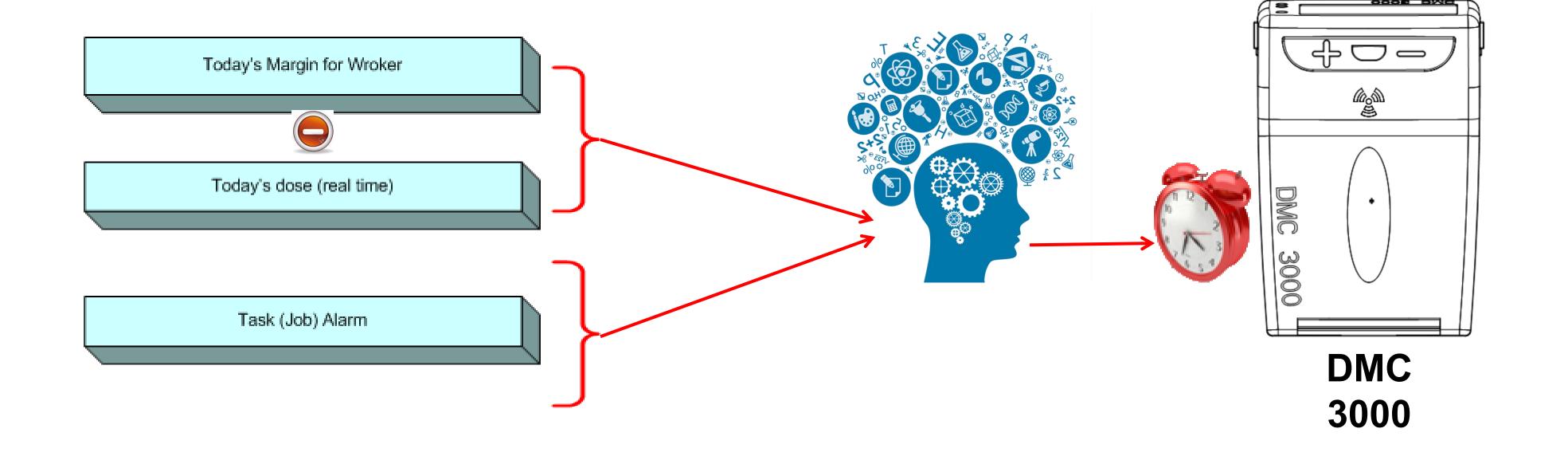








# Passages v Visits



### Dose alarm calculation

### 3 modes

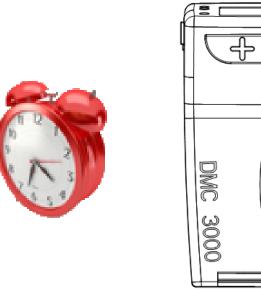
- a) Standard mode
- b) Advanced mode
- c) Smart mode



# a) Standard mode







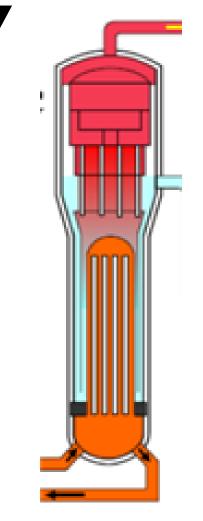
20 µSv

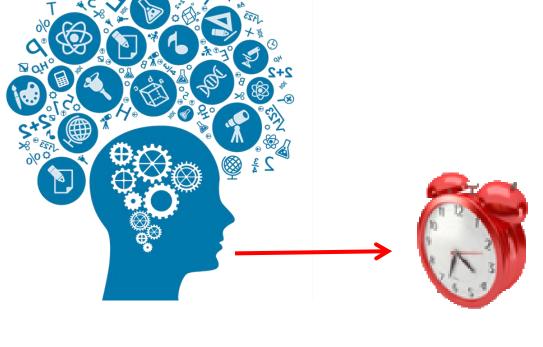
20 USV3000

Sub Zone entry



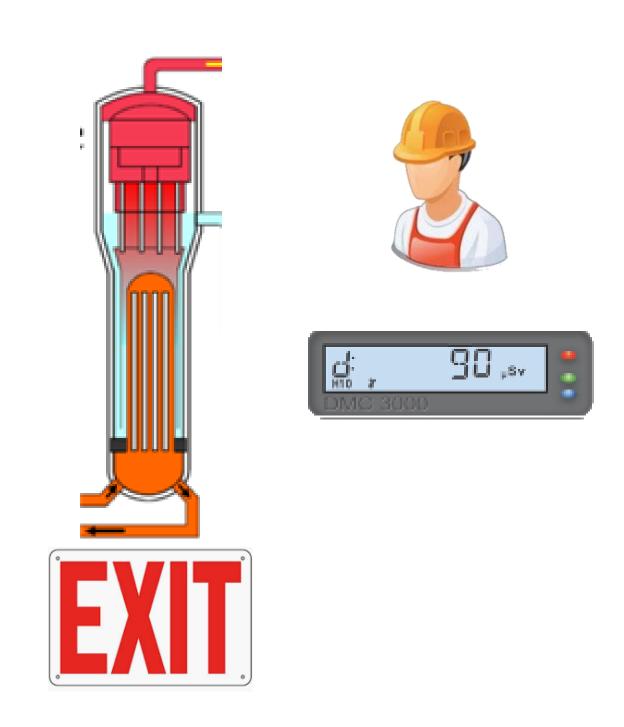
95 µSv

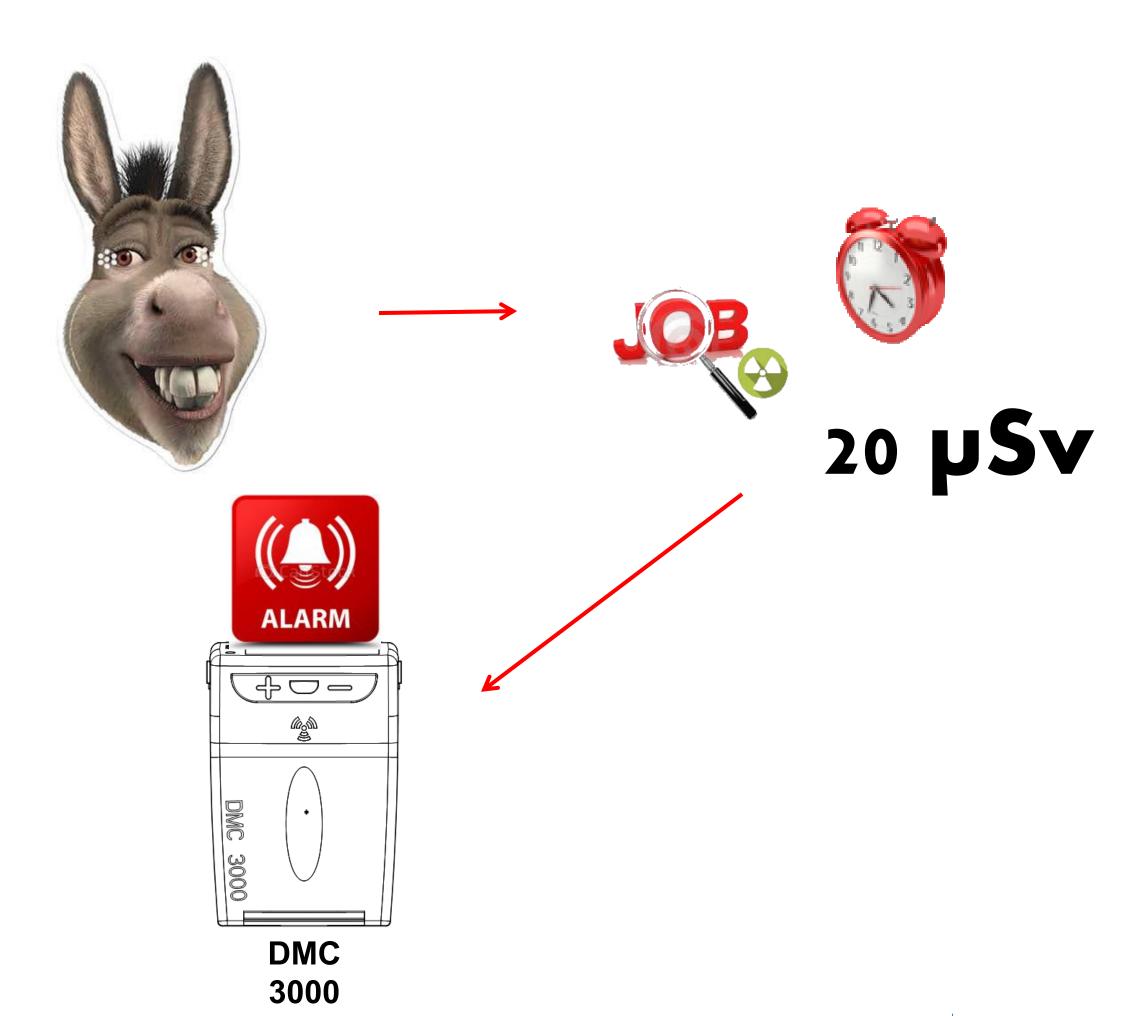




95 µSv

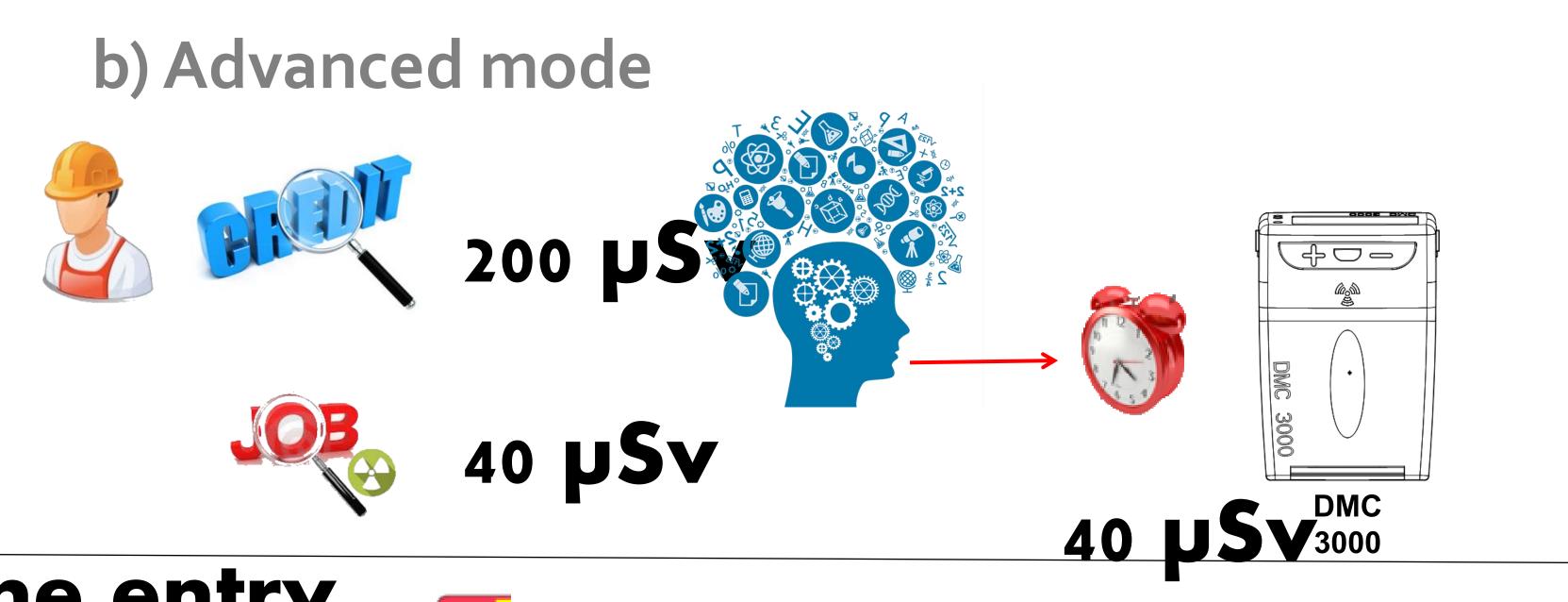
# Dose alarm calculation Standard mode







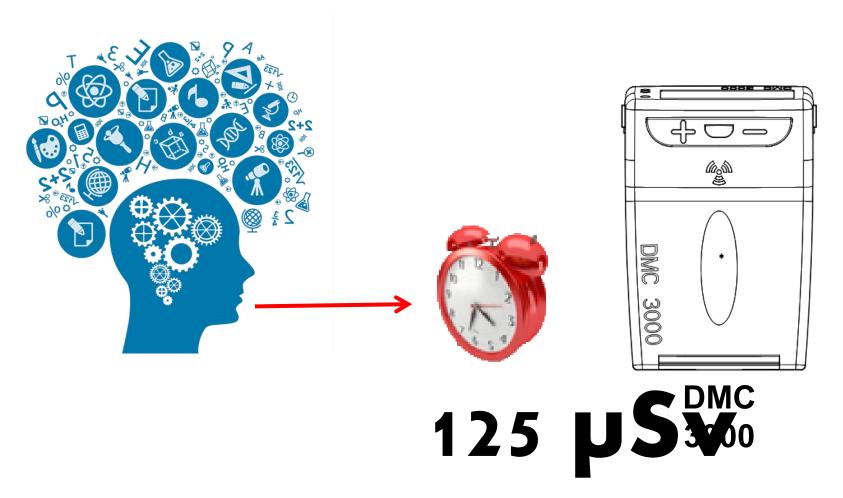
# Dose alarm calculation Advanced mode



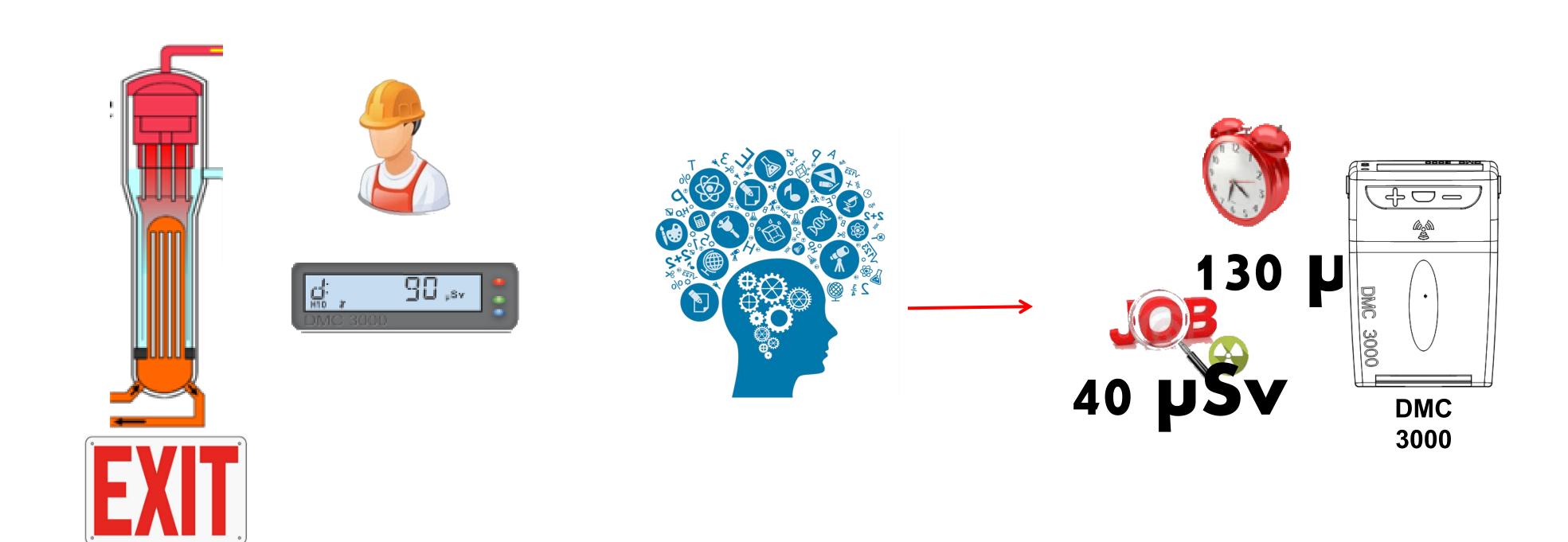


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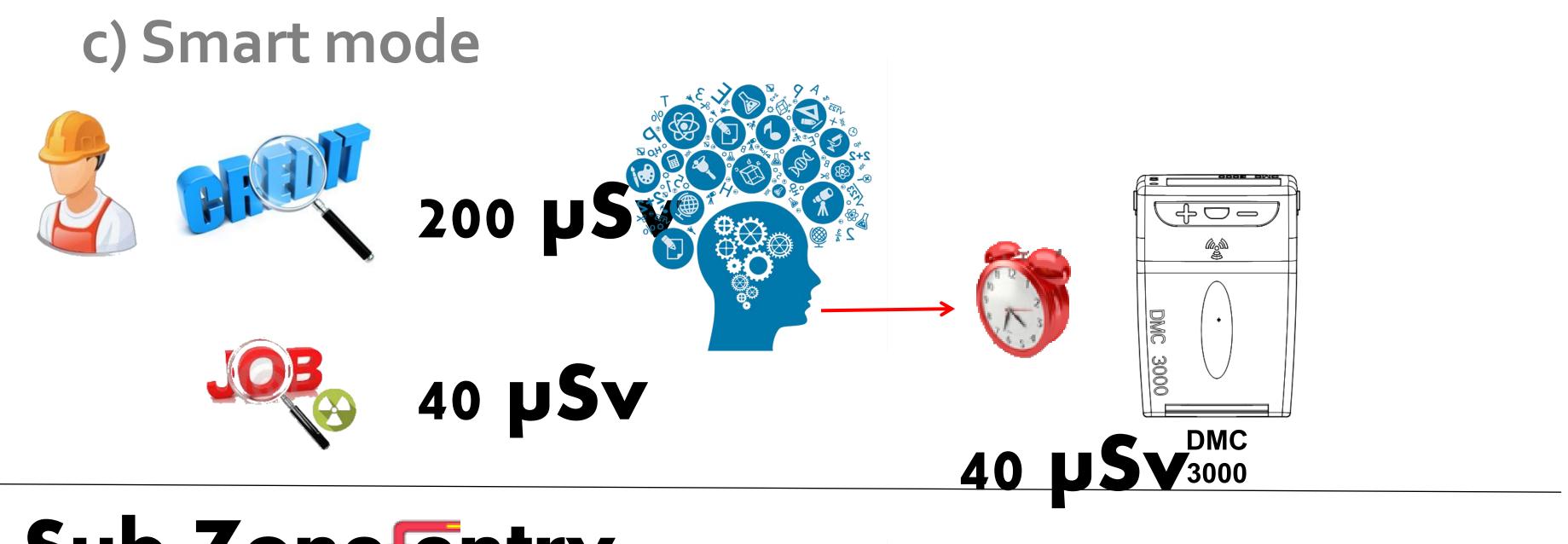


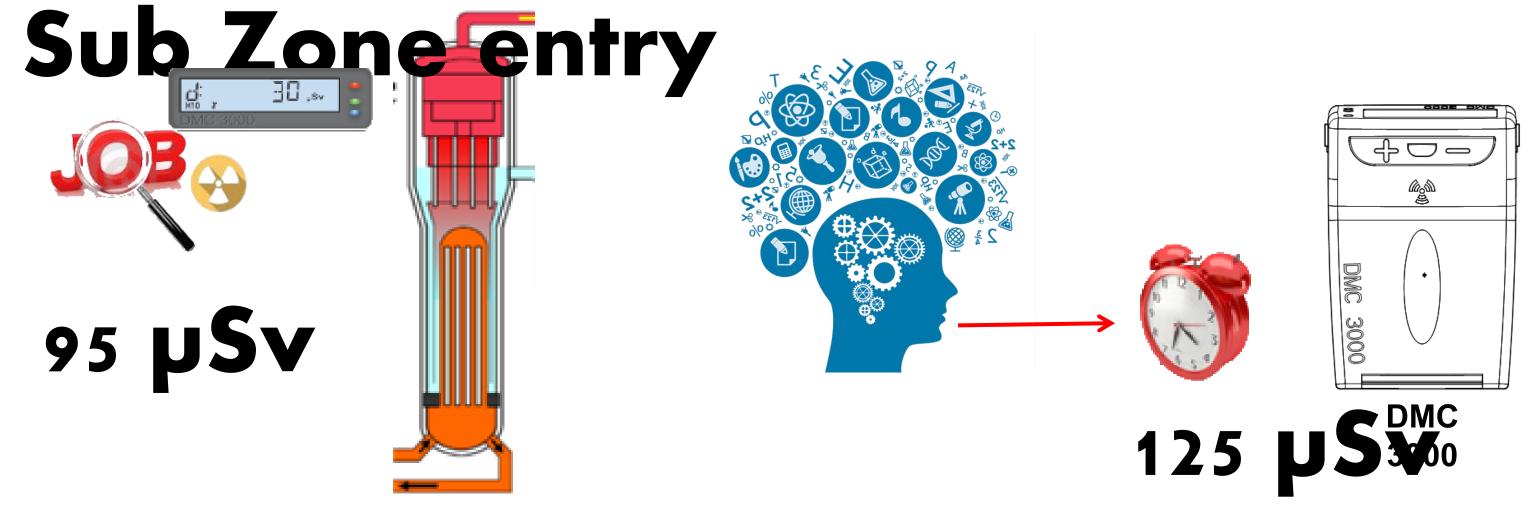
# Dose alarm calculation Advanced mode





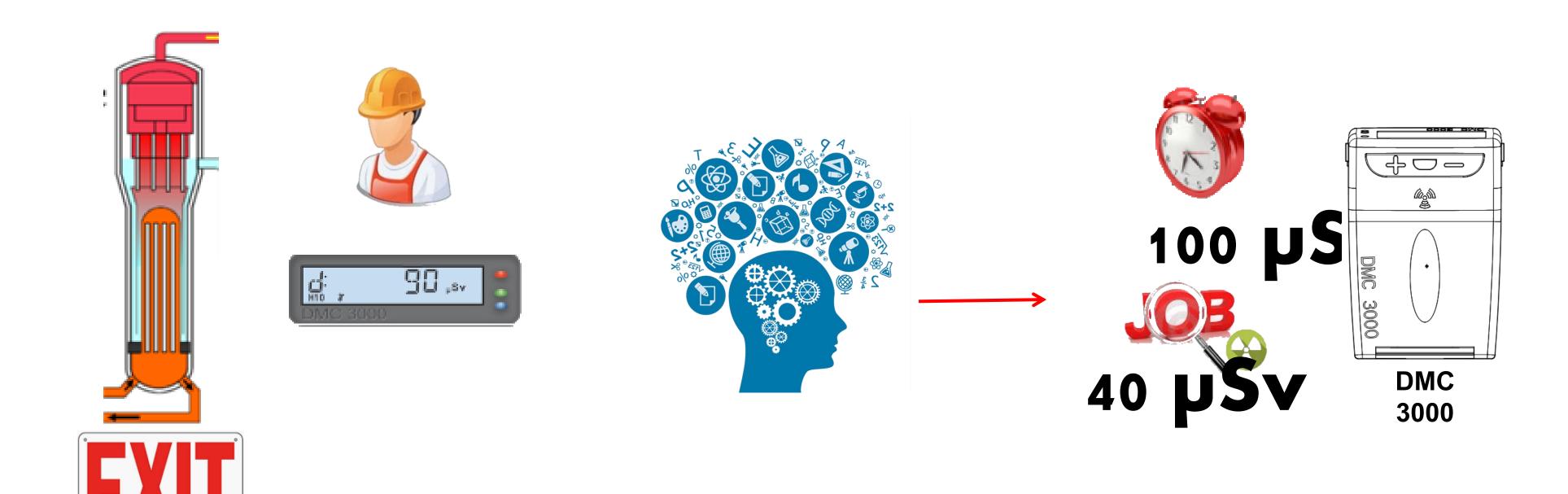
### Dose alarm calculation Smart mode







### Dose alarm calculation Smart mode



100 
$$\mu$$
SV = 90 (1) + (40(2) - 30 (3))

- (1) Dose on the dosimeter
- (2)Job alarm
- (3) Already received on that job since entry



### Dose alarm calculation Reminders

Worker dose credit get priority on alarm values from the Job



Pre alarms choice based on the same concept i.e. In the past pre alarm was a % of the final chosen alarm Now pre alarm from worker and pre alarm from the job get calculated separatly and chosen

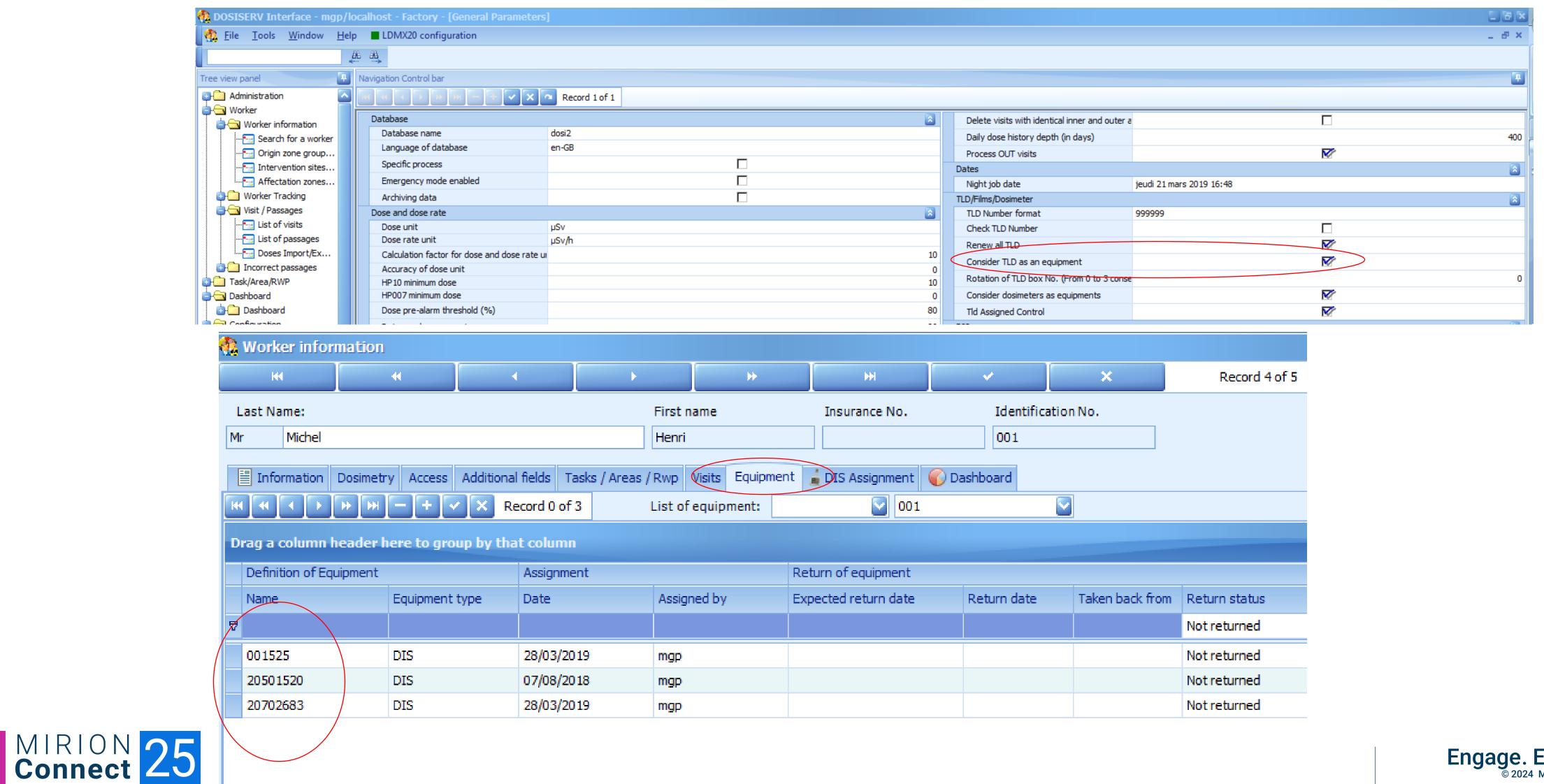


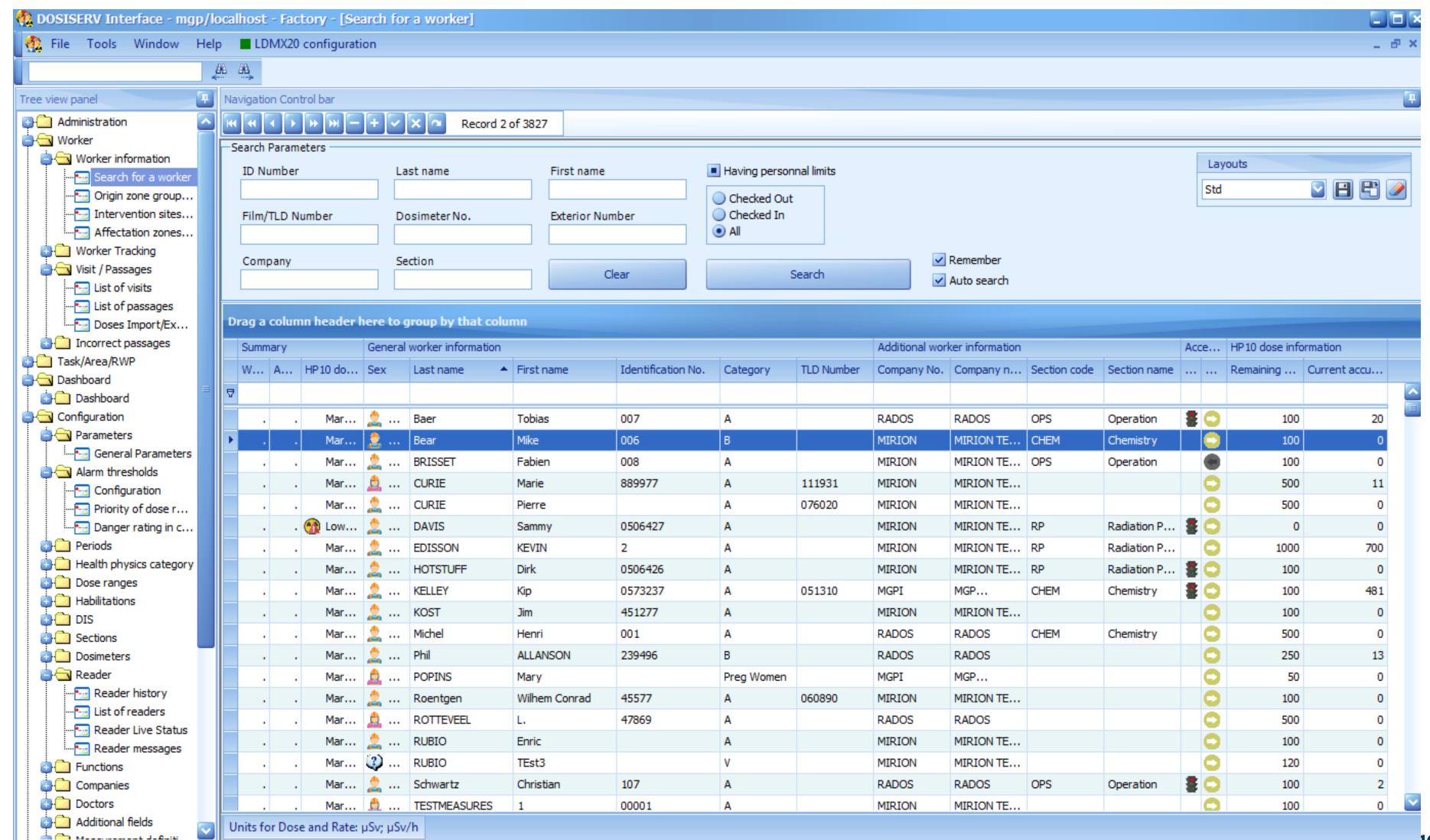
# No wories, DosiServ now helps you

Error message			Time and type of passage		Area information			General worker information				Other passage information				HP10G dose and dose r				
			. Date/Time ▼	Passage type	Re	Reader name	Left	Ent	I	Last name	First name	Compa		Dosimeter No.	TLD	Tas	Dose alarm	Dose warn	7.	HP1
	<b>⊕</b> ⊕ <b>3</b>	X	26/03/2019 14:58:26	Area entry	1	Unit 1 IN O	U1	OUT	001	Michel	Henri	RADOS		A052B0		11			0	
··· alı	(h)	<b>√</b>	25/03/2019 09:31:26	Area exit	1	Unit 1 IN O	U1	OUT	8	CURIE	Marie	MIRIO		01900679			Worker	Worker	11	93
<del></del>	0	<b>√</b>	25/03/2019 09:21:16	Area entry	1	Unit 1 I 🔽	OUT	U1	8	CURIE	Marie	MIRIO		01900679		21	Task	Task	0	
	Ф.	<b>√</b>	25/03/2019 09:20:27	Area exit	1	Unit 1 IN O	U1	OUT	8	CURIE	Marie	MIRIO		01900977		\	Worker	Worker	0	
	① ① 毫 :	X	25/03/2019 09:20:14	Area entry	1	Unit 1 IN O	U1	OUT	8	CURIE	Marie	MIRIO		01900679		21			0/	1



# Handling of legal dosimeter

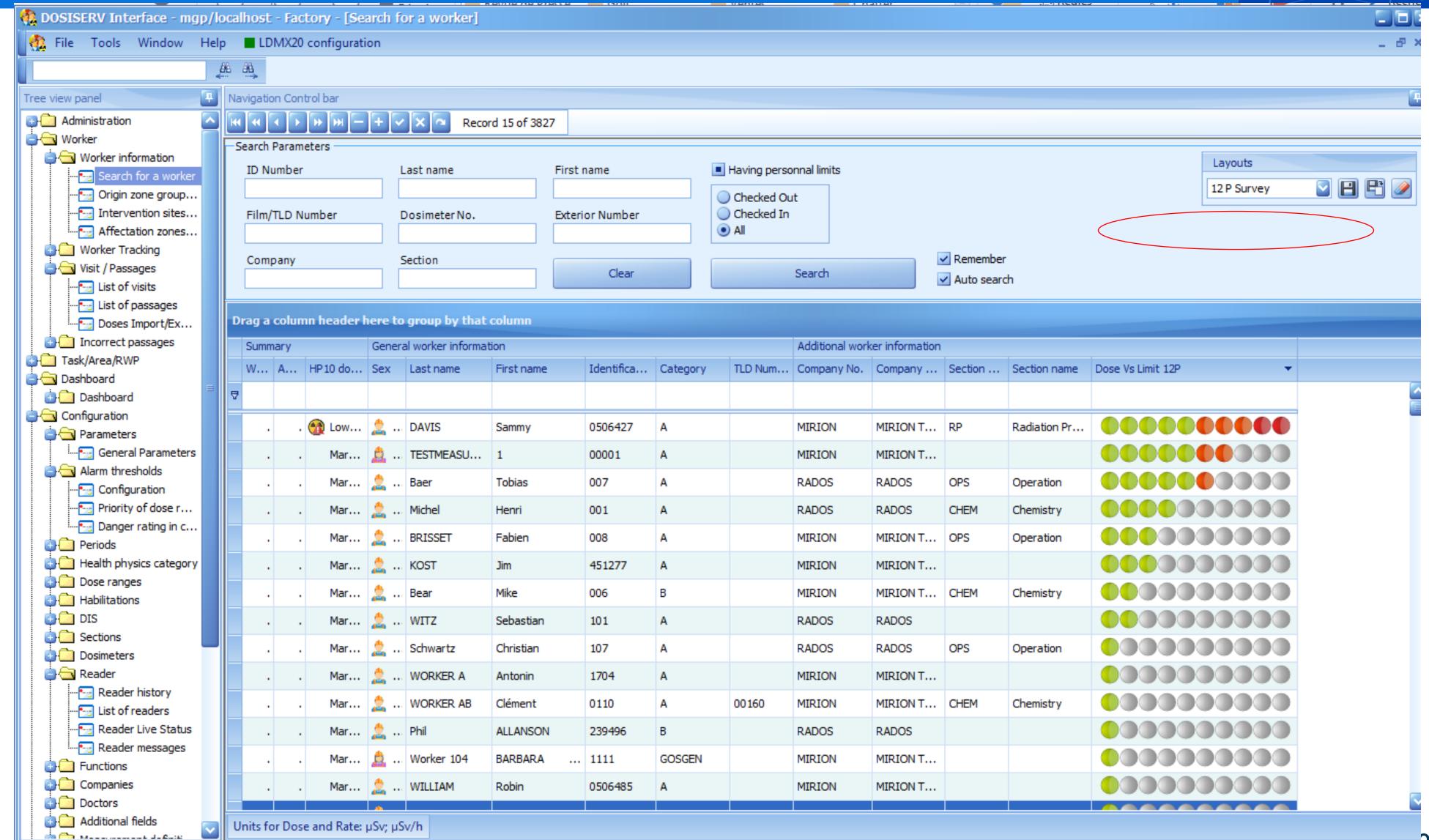




WorkersSearch.ToolTip

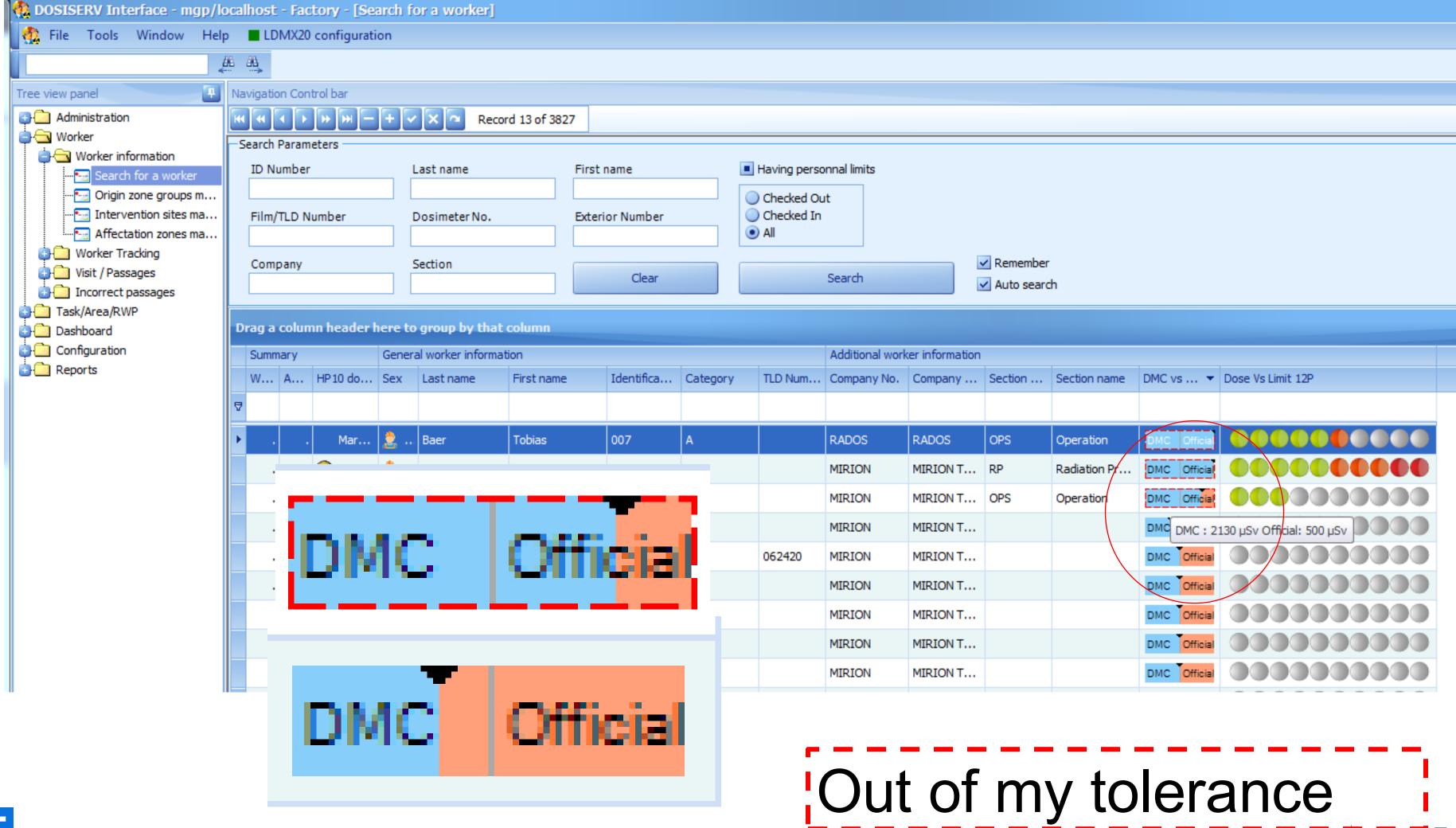
je. Explore. Empower.



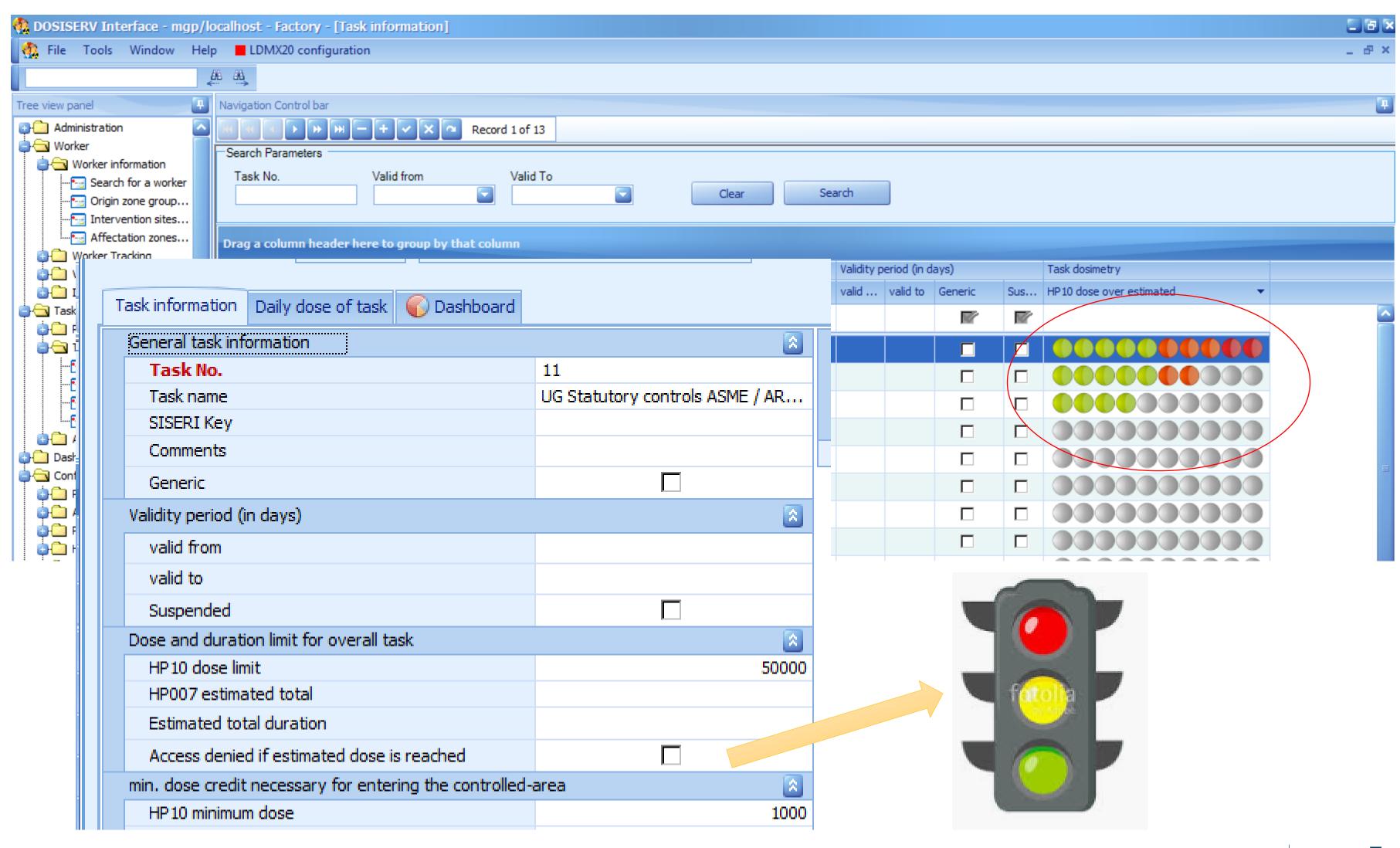




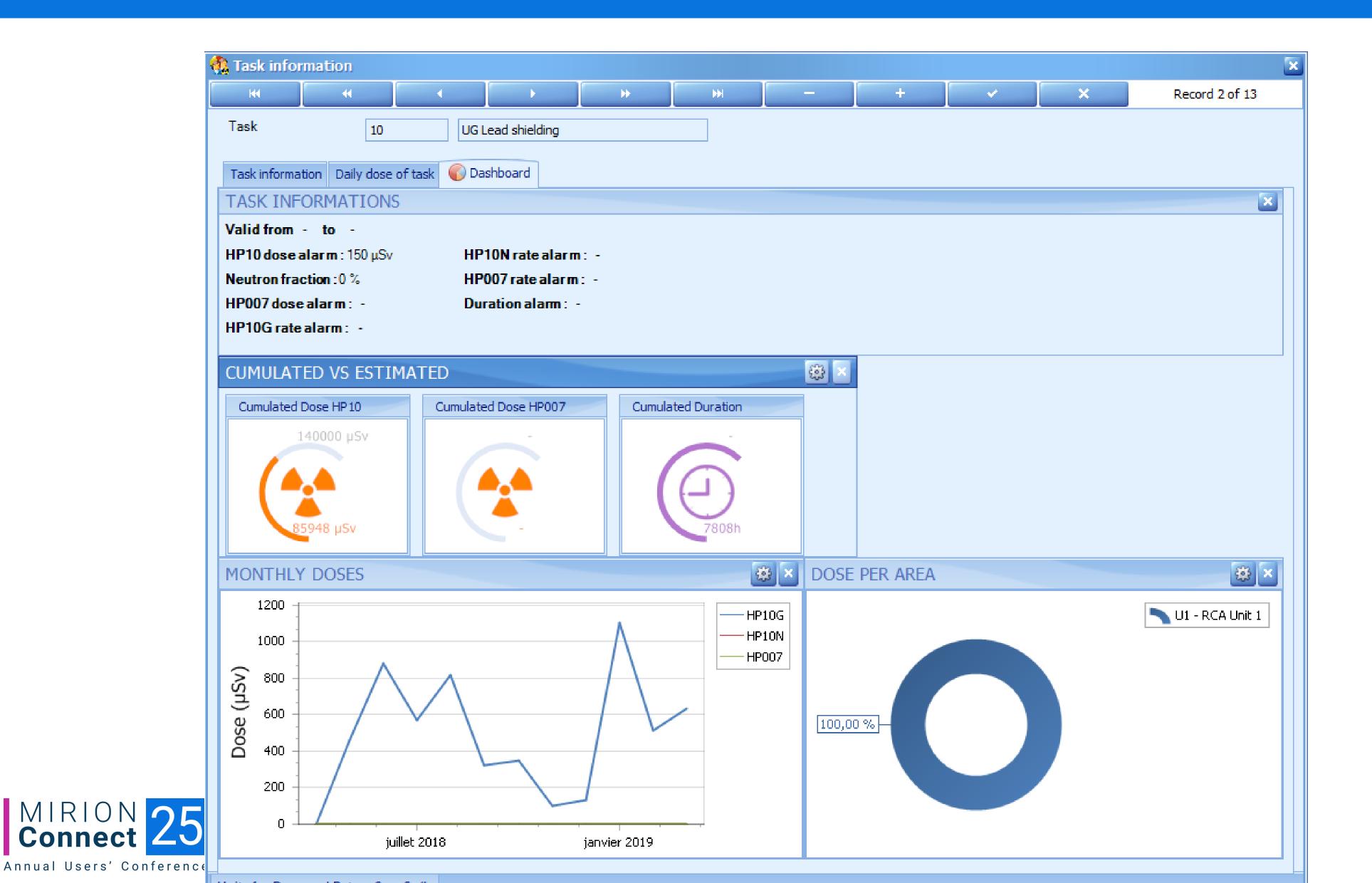
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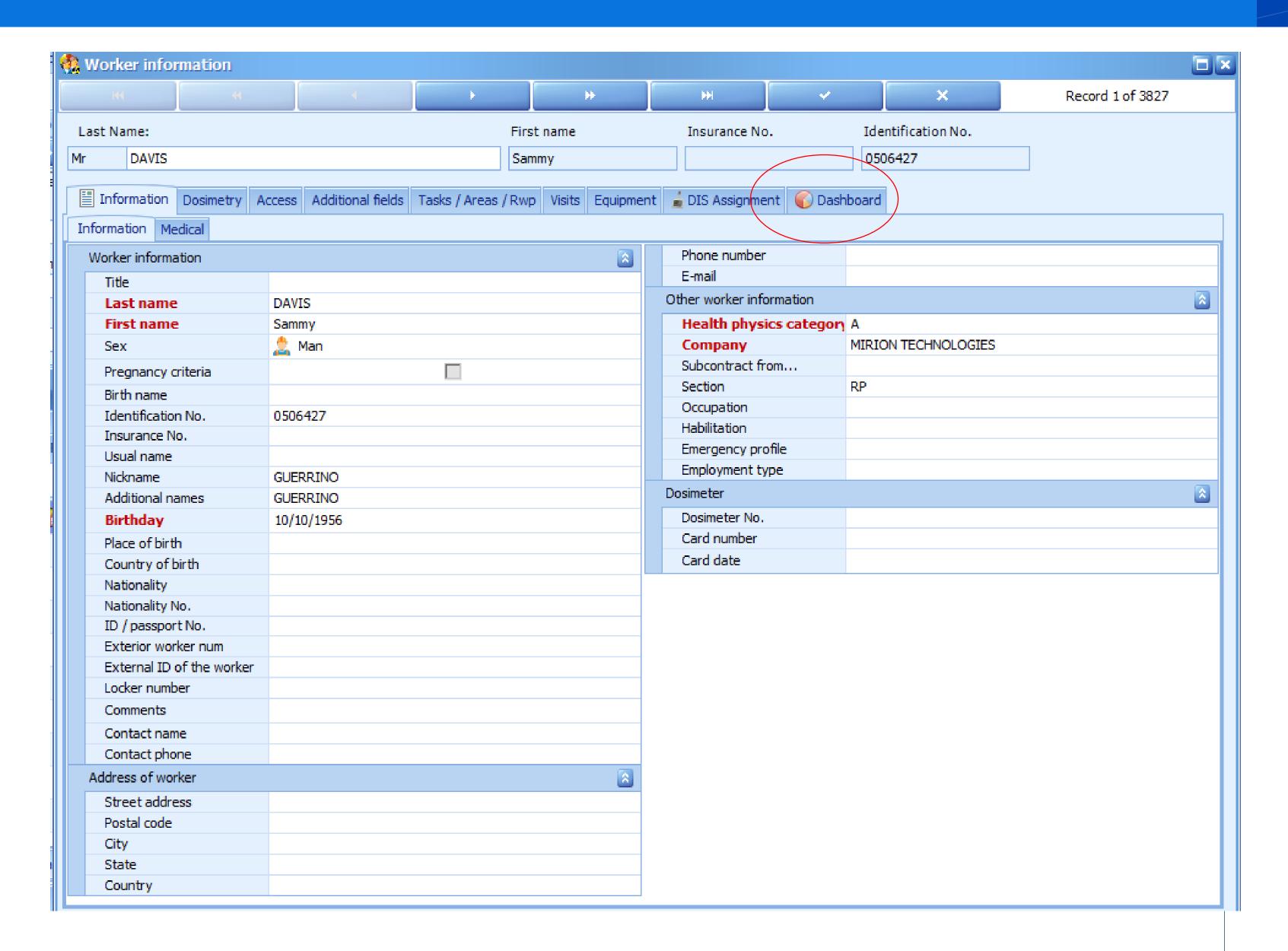




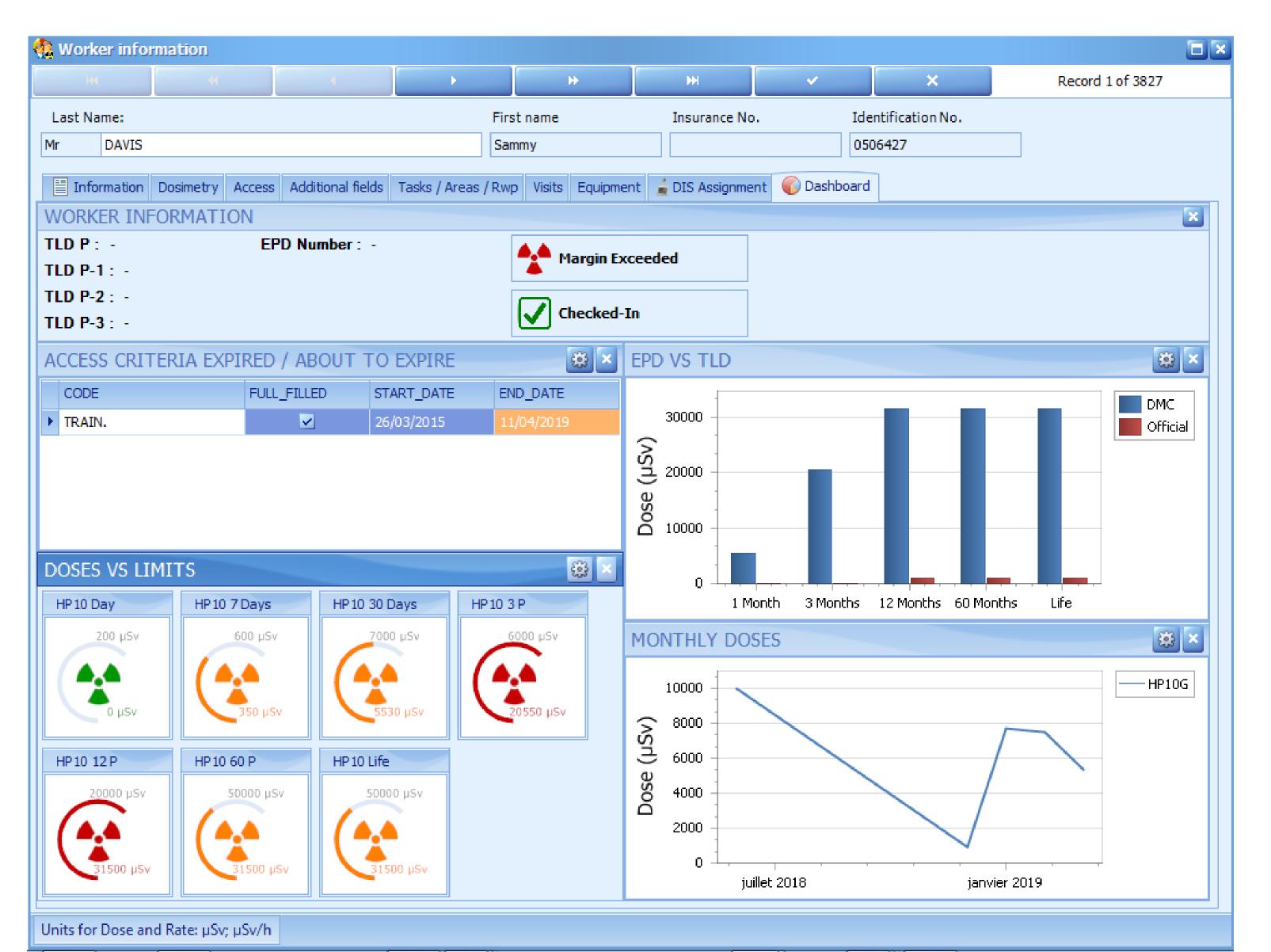




## Dashboard Worker



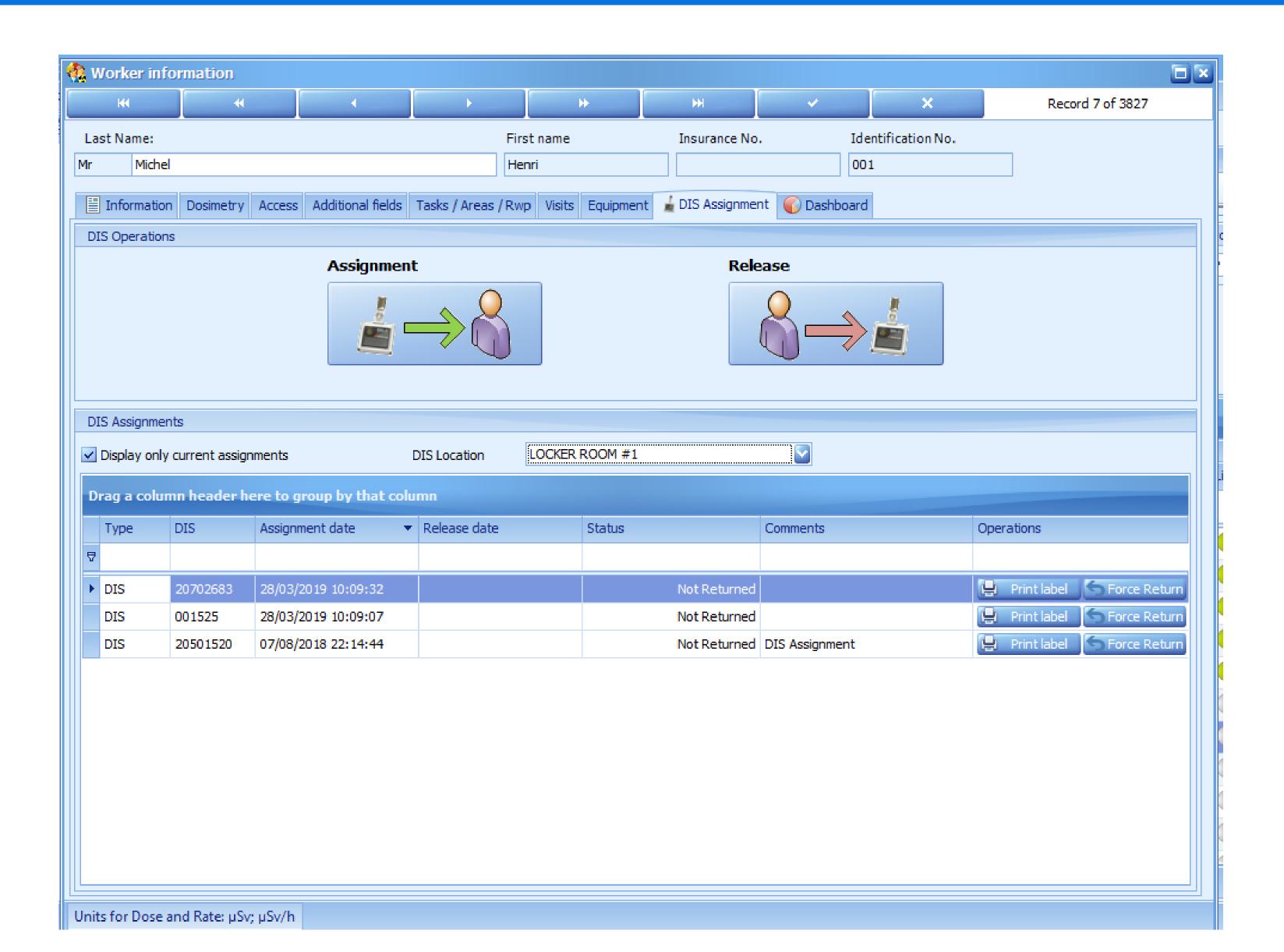






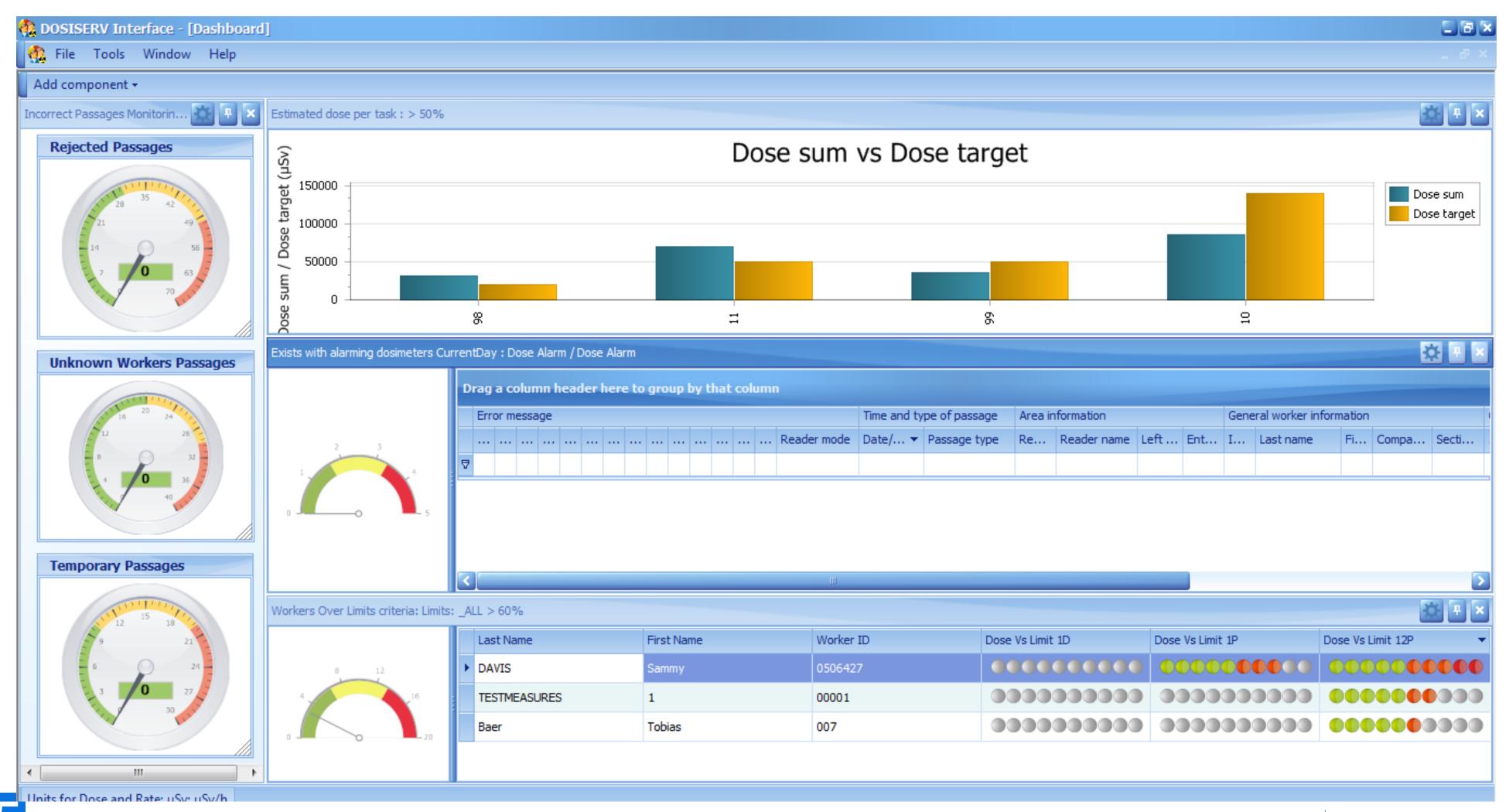
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# DIS-1 Handling

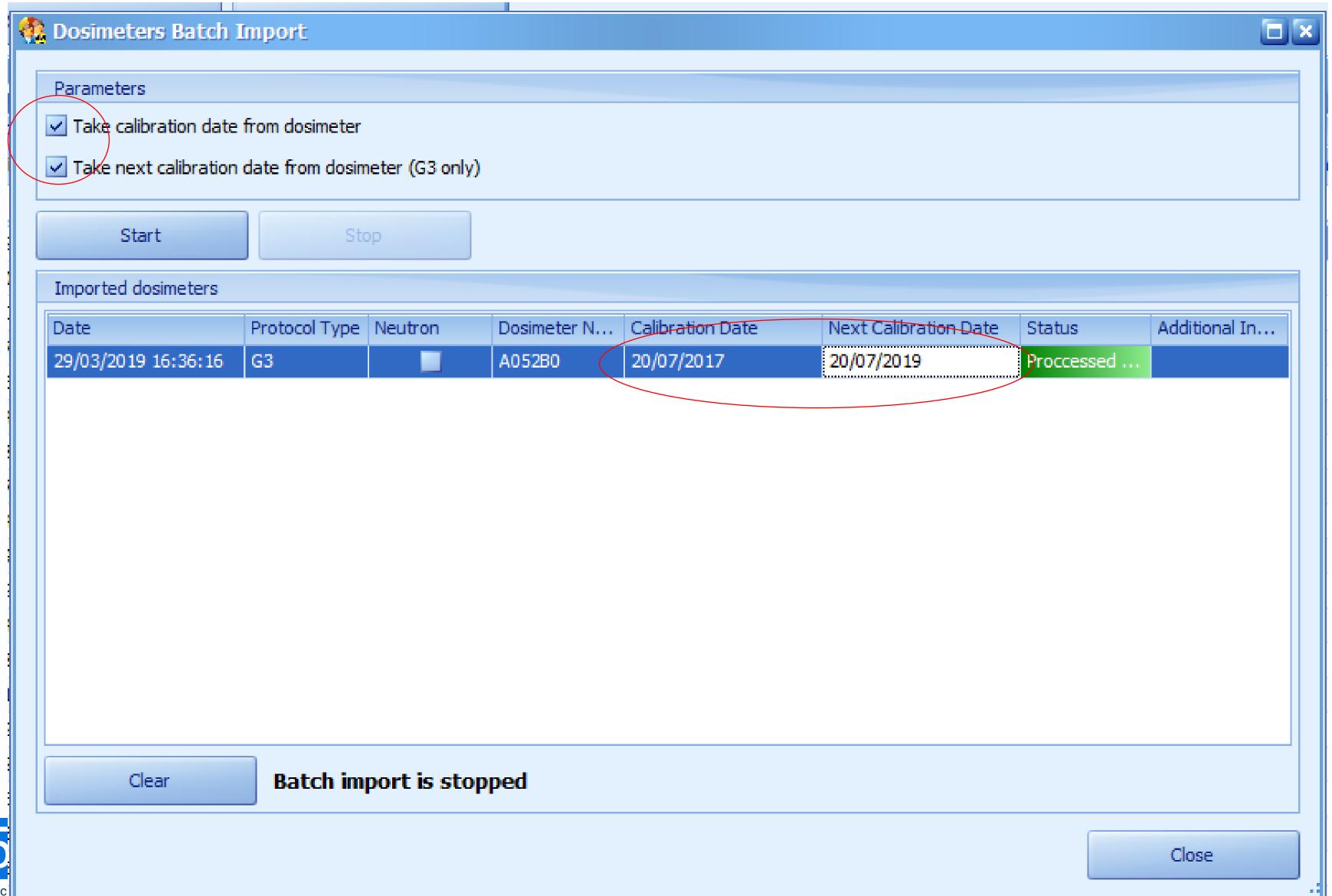




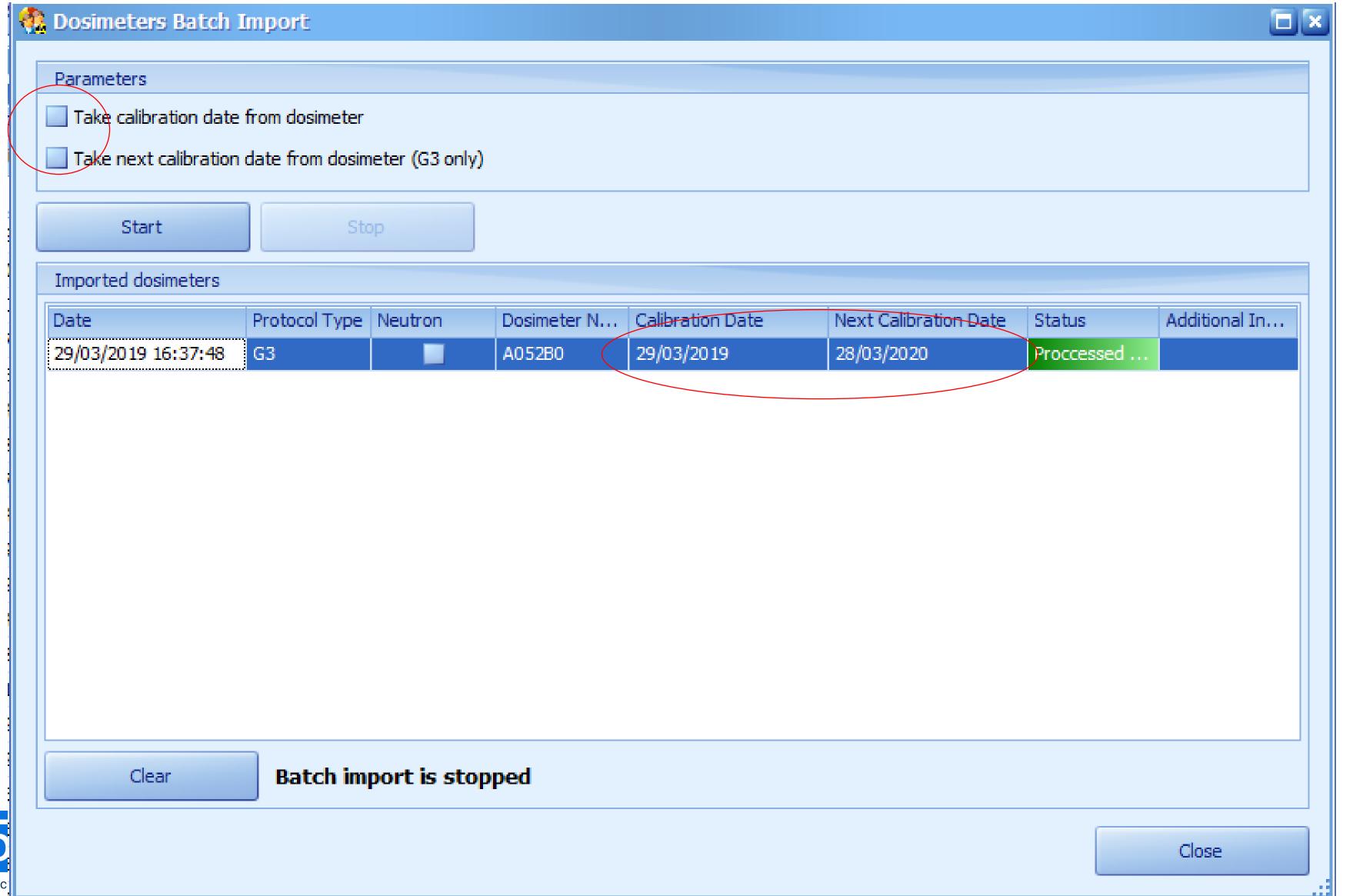
### General Dashboard



# DMC Serial number imports



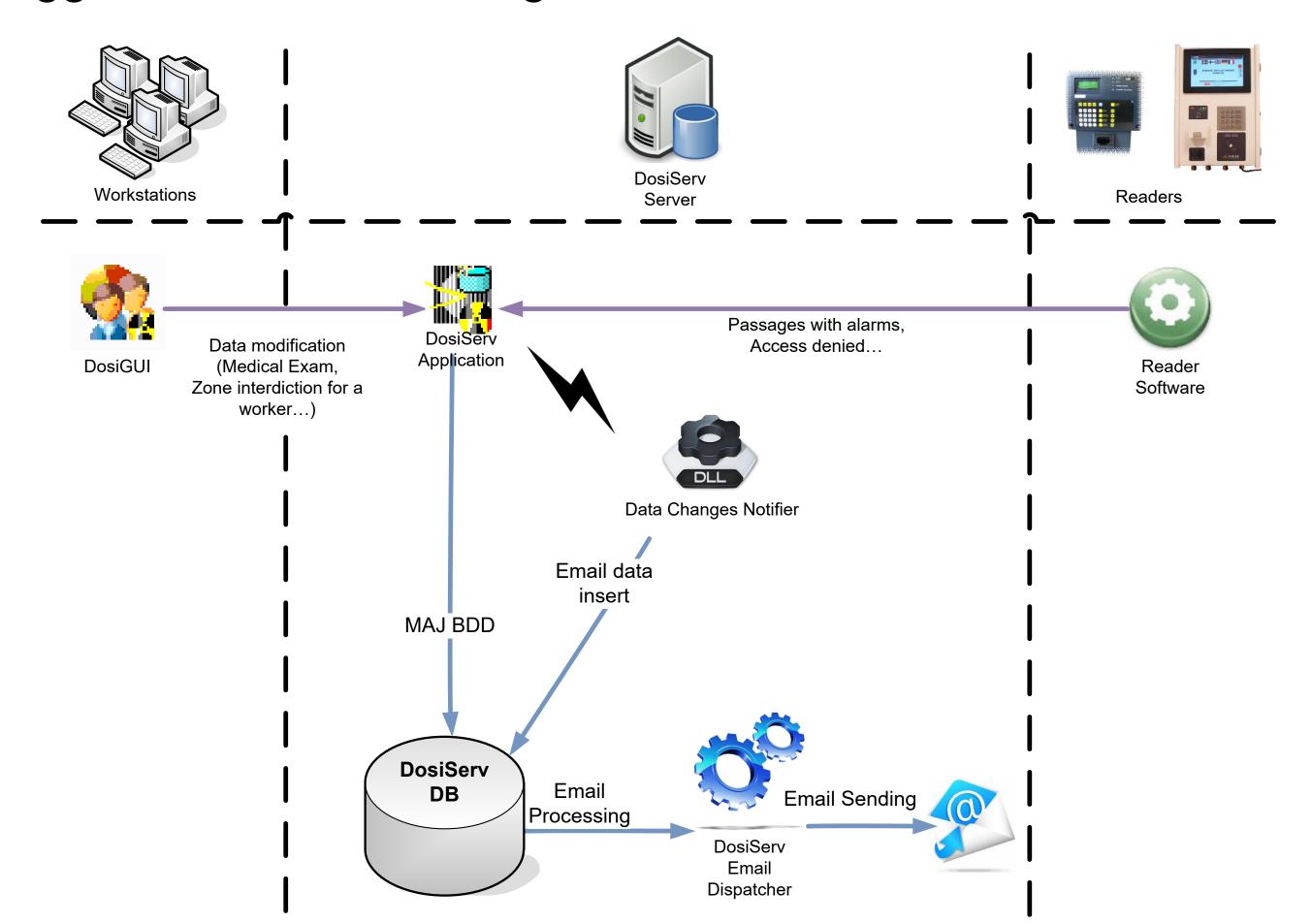
# DMC Serial number imports



## New Email feature

#### Mailing feature

DosiServ embeds now a mailing feature allowing to inform users when specific events occur (passage with alarm, medical exam date modified for a worker...). Events that trigger email can be configured.



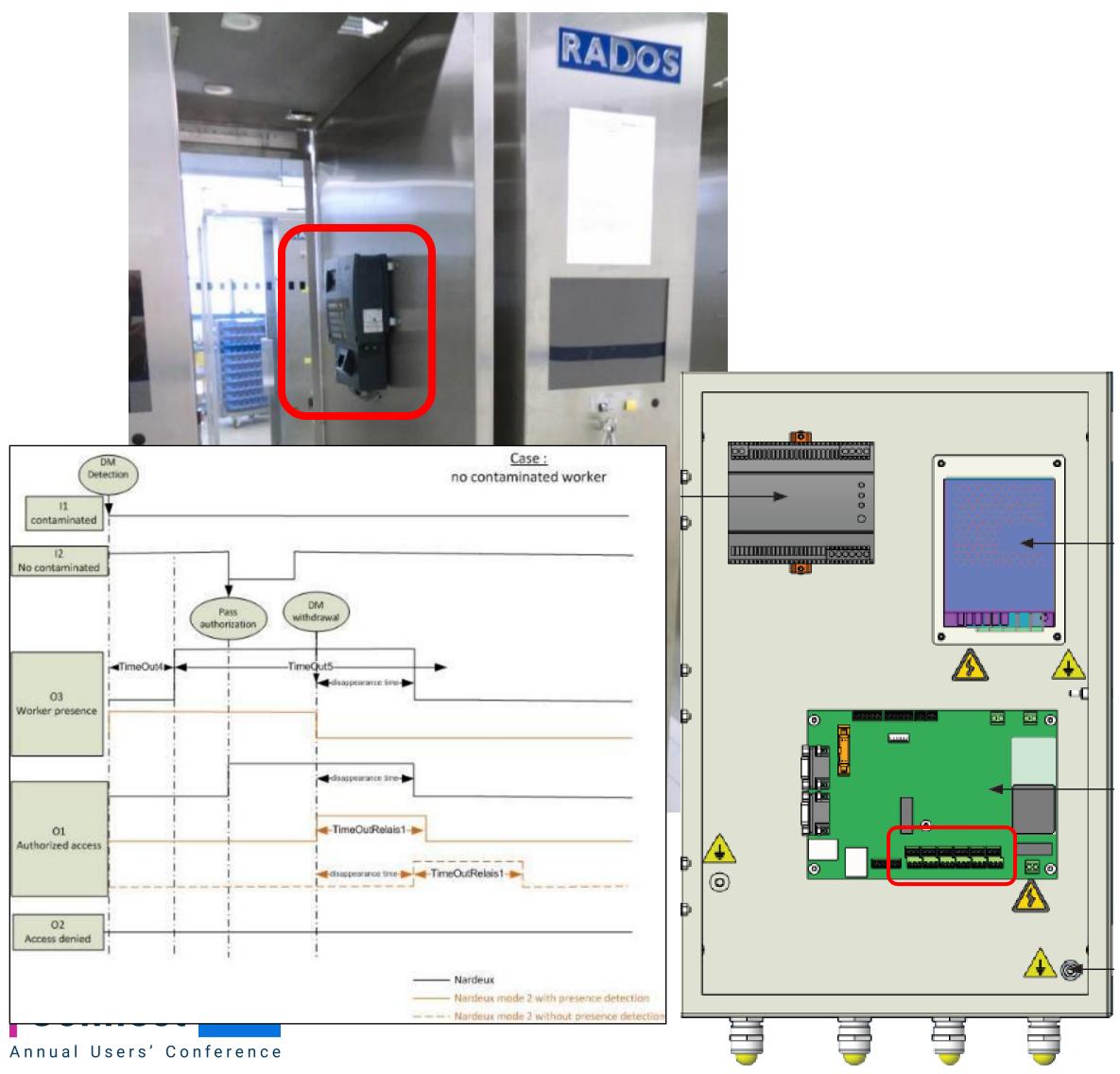


### DosiServ - Part 2



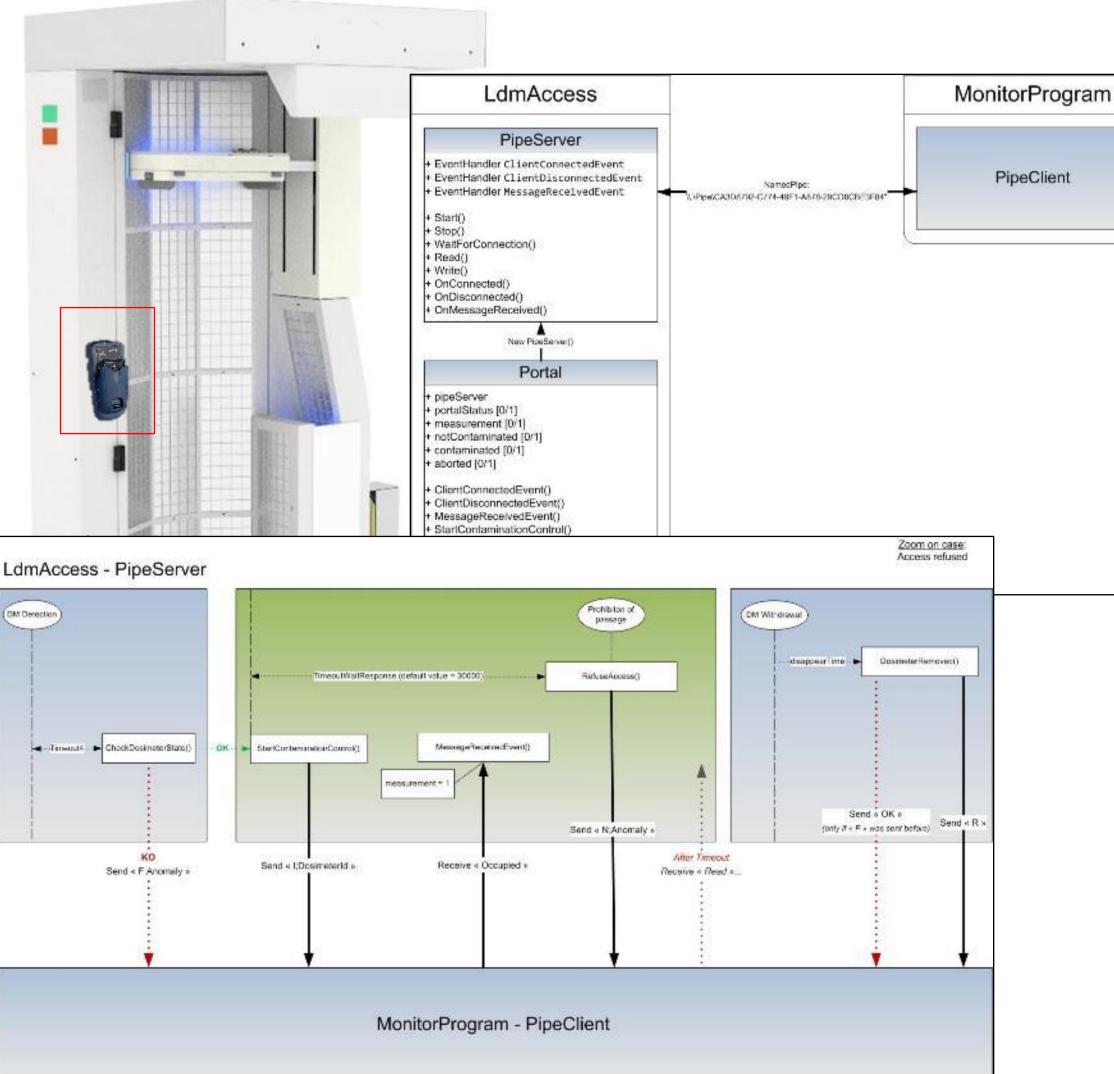
- Alarms managements
- Contamination Events

# Physical Integration



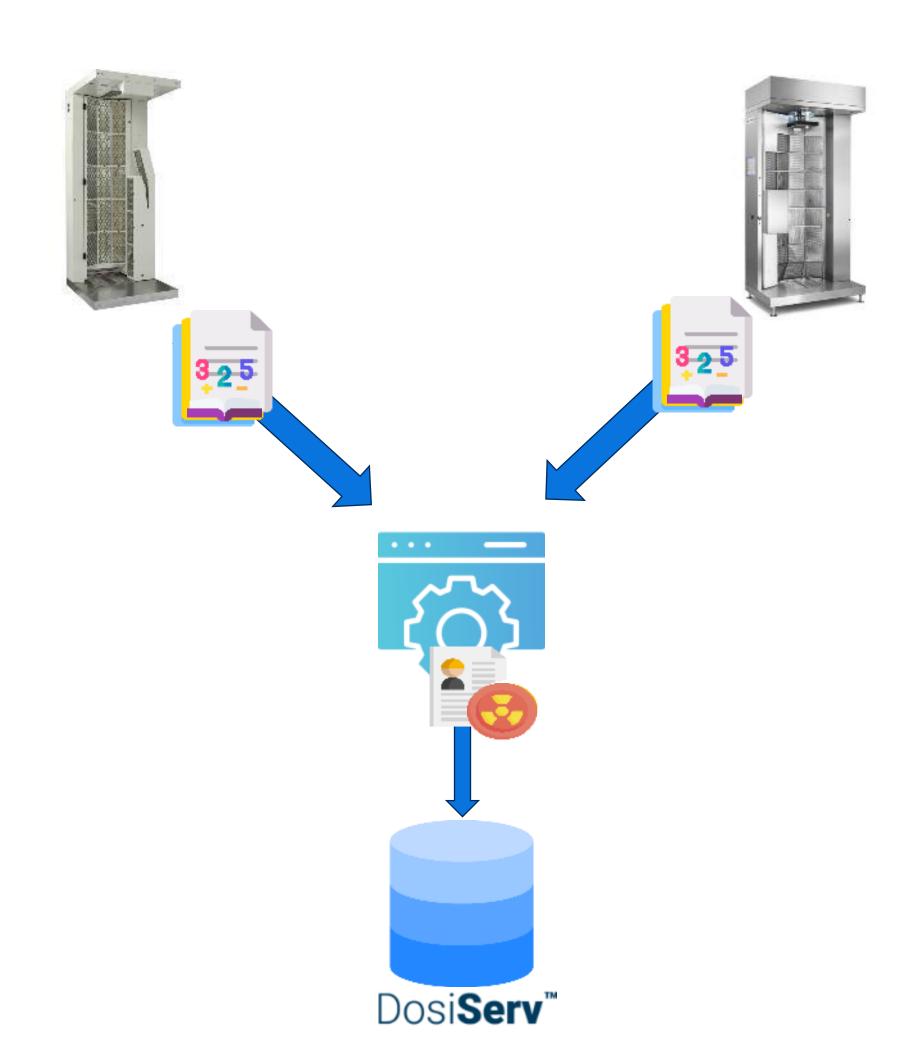
- Mirion Dosimetry Readers (LDM3200, LDM1000, LDM2000) can be physically integrated into body monitors.
- Communication between equipment is driven by inputs/outputs relays.
- This type of integration allows:
  - Flagging the contaminated passages in DosiServ
  - Synchronizing behaviors of the dosimetry reader and the body monitor :
    - Badge ID sent from DMC to body monitor
    - Dosimeter detection/removal <-> start measurement / Door opening
    - clean/contaminated events <-> passage granted/denied
    - Etc....

# Logical Integration



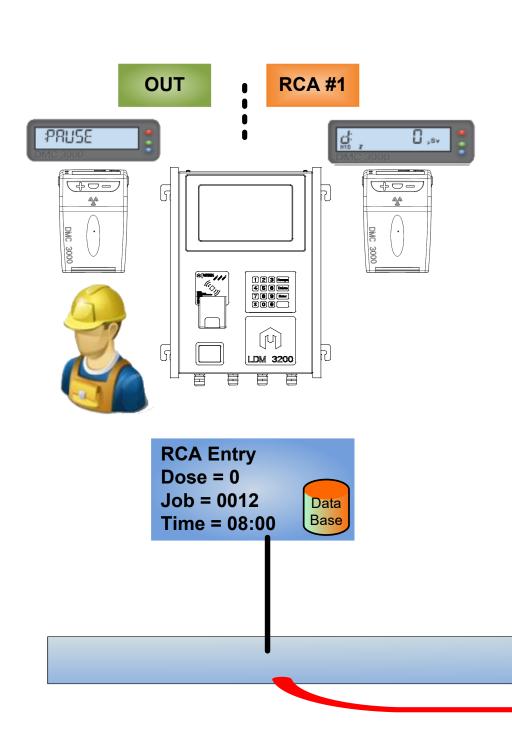
- LDMAccess SW can be installed on the Argos body monitors computers with a LDM320W USB reader.
- Communication between equipment is driven by software communication between the 2 applications (LDMAccess / Monitor Program).
- This type of integration allows the exact same features than the physical integration but with less hardware equipment.

# Post Event Integration



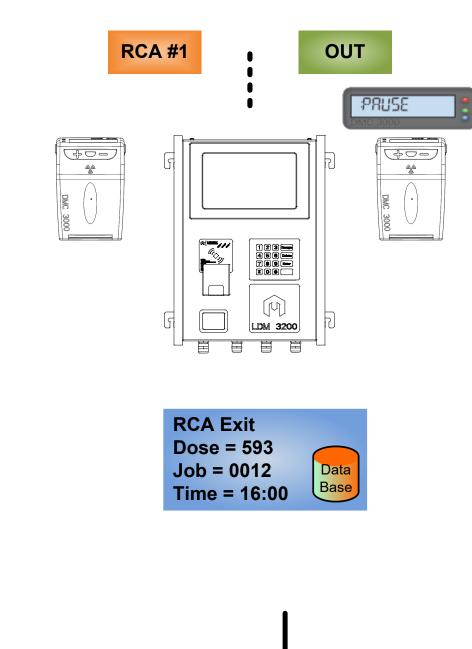
- This integration does not necessarily involve dosimetry readers.
- DosiServ imports measurements files from the body monitors.
- At measurements import time, an algorithm assigns measurements to workers and link them to the "closest" relevant passage.
   Passages are not flagged as contaminated in this integration (it could be a future improvement).

# Post Event Integration









Time

- 1. The Worker switches on dosimeter and enters the zone
- 2. When exiting the Zone the worker will show a contamination event in the monitor
- 3. Workers take necessary actions and finally exits
- 4. Worker switches off dosimeter
- → DosiServ will record a visit for that person and the Job code selected at entry time

Visit
Dose = 593
Job = 0012
Duration = 08:00
Zone = RCA#1

The system will propose its best estimate in order to connect the visit with the Contam Event AND with the measurement results

# Contamination information in DosiServ

Body monitors integration allows at the end of the day storing contamination related information into the DosiServ database.

# Information that can be stored in DosiServ

- Contaminated Passages (flag)
- Contamination Measurements
- Exploitation of Contamination
   Information

# Contaminated Passages information

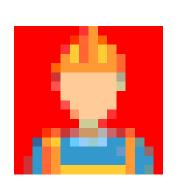
Physical Integration
Logical Integration
Post Event Integration

Passages in DosiServ are flagged as contaminated and can be highlighted in DosiGUI.

This flag is generated at the reader level in the case of physical and logical integrations.

This flag can be leveraged for reporting purpose.

The post event integration links the measurements to a passage but without flagging the passage in case of contaminated event.



	Time and type of passag	je	Area i	General worker information					
Conta	Date/Time ▼	Passage type	Read	Identific	Last name	First name	Company name		
=	=	=	=	R B C	RBC	AB C	R■C		
No	03/07/2024 00:16:00	Area entry	1	1196	Lee	Tiffany	Advanced Quantum Systems		
No	03/07/2024 00:09:00	Area exit	1	1184	Estrada	Leon	Prime Radiation Limited		
No	02/07/2024 23:47:00	Area exit	1	1196	Lee	Tiffany	Advanced Quantum Systems		
No_	02/07/2024 23:45:00	Area entry	1	1074	Martin	Johnny	Innovative Reactor Technologies		
Co_	02/07/2024 23:04:00	Area exit	1	1053	Cuffe	Grant	Tech Particle Incorporated		
No_	02/07/2024 20:51:00	Area entry	1	1196	Lee	Tiffany	Advanced Quantum Systems		
<u> </u> Co_	02/07/2024 20:38:00	Area exit	1	1184	Estrada	Leon	Prime Radiation Limited		
No_	02/07/2024 20:34:00	Area entry	1	1053	Cuffe	Grant	Tech Particle Incorporated		
No	02/07/2024 20:27:00	Area exit	1	1046	James	Sabrina	Tech Particle Limited		
No_	02/07/2024 19:16:00	Area entry	1	1184	Estrada	Leon	Prime Radiation Limited		
No	02/07/2024 19:11:00	Area exit	1	1169	Richardson	Christina	Innovative Fusion Group		
No_	02/07/2024 18:49:00	Area entry	1	1169	Richardson	Christina	Innovative Fusion Group		
No	02/07/2024 18:32:00	Area exit	1	1159	White	Benjamin	Global Nuclear Solutions		
No_	02/07/2024 17:02:00	Area entry	1	1046	James	Sabrina	Tech Particle Limited		
No	02/07/2024 16:32:00	Area exit	1	1020	Bryan	April	Integrated Reactor Solutions		
No	02/07/2024 15:41:00	Area entry	1	1159	White	Benjamin	Global Nuclear Solutions		
Co_	02/07/2024 15:27:00	Area exit	1	1147	Perez	Justin	Global Atom Limited		



### Contamination Measurements

Physical Integration

Logical Integration

Post Event Integration

Contamination files can be imported from body monitors to be linked to workers in the DosiServ database.

To do so, it is needed that workers authenticate on body monitors so that workers badge numbers will be stored in the measurements files, allowing DosiServ to use these numbers to retrieve the proper worker in its database.

onitor_ID;monitor_location;card_ID;date_time;result;para_set;P2 front active;P2 back active;beta net fron	t ch 1:bet	a result	front ch	1:beta:
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;000000000000000000000000000000000000				
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;000000000000000000000000000000000000		0.00;0;	0.28;0;	
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;000000000000000000000000000000000000		0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;000000000000000000000000000000000000		0.08;0;	0.00;0;	
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;000000000000000000000000000000000000		0.00;0;	0.00;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;000000000000000000000000000000000000		0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;000000000000000000000000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;000000000000000000000000000000000000	0.00;0;	0.08;0;	0.00;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;000000000000000000000000000000000000	0.69;0;	0.00;0;	0.00;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;000000000000000000000000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.08;0;	0.00;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;000000000000000000000000000000000000	0.69;0;	0.00;0;	0.00;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;0000000000000000000;0000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.08;0;	0.00;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;0000000000000000000;0000000000000000	0.69;0;	0.00;0;	0.00;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;0000000000000000000;0000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.08;0;	0.00;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;0000000000000000000;0000000000000000	0.69;0;	0.00;0;	0.00;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;0000000000000000000;0000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.08;0;	0.00;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;0000000000000000000;0000000000000000	0.69;0;	0.00;0;	0.00;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;0000000000000000000;0000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.08;0;	0.00;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;0000000000000000000;0000000000000000	0.69;0;	0.00;0;	0.00;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;0000000000000000000;0000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;000000000000000000000000000000000000	0.00;0;	0.08;0;	0.00;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;0000000000000000000;0000000000000000	0.69;0;	0.00;0;	0.00;0;	0.00;
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;000000000000000000000000000000000000	0.00;0;	0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;0000000000000000000;0000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0
adosMonitor;751; no card reader;09/12/2013 10:55:13 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.08;0;	0.00;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:36:13 ;2;default;0000000000000000000;0000000000000000	0.69;0;	0.00;0;	0.00;0;	0.00;
adosMonitor;751; no card reader;09/12/2013 10:47:53 ;2;default;0000000000000000000;0000000000000000	0.00;0;	0.00;0;	0.28;0;	0.15;0
adosMonitor;751; no card reader;09/12/2013 10:54:08 ;2;default;000000000000000000000000000000000000	0.67;0;	0.08;0;	0.23;0;	0.00;0

### Contamination Measurements

Physical Integration

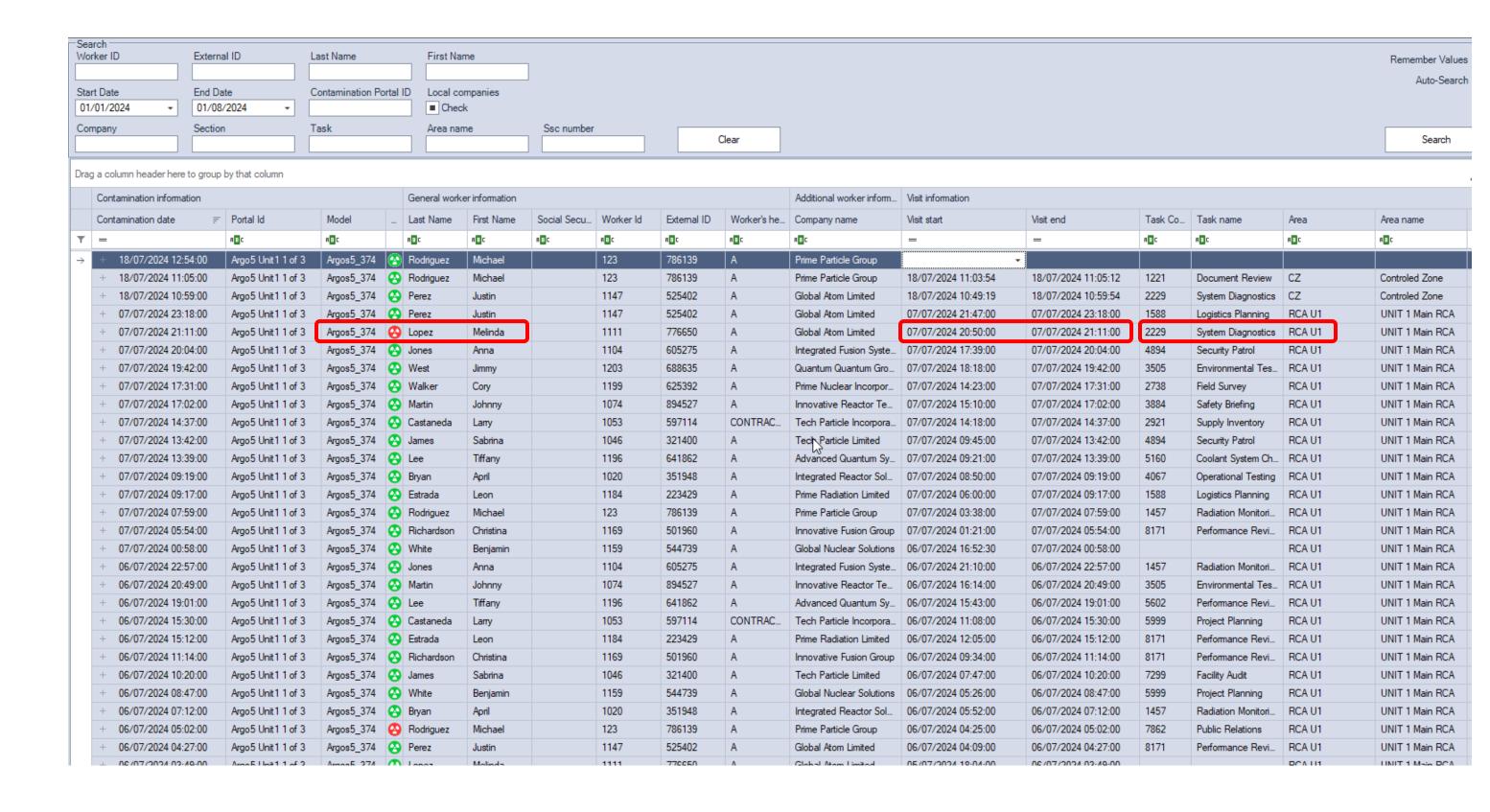
Logical Integration

Post Event Integration

Measurements that match an existing worker in DosiServ are imported in the DosiServ database.

DosiServ links the measurements to the visit (the passage actually) that is the closest to the measurement's date and time.

The measurements will be in consequence also linked to the visit's task, RWP and zone, offering available data for reporting purpose.





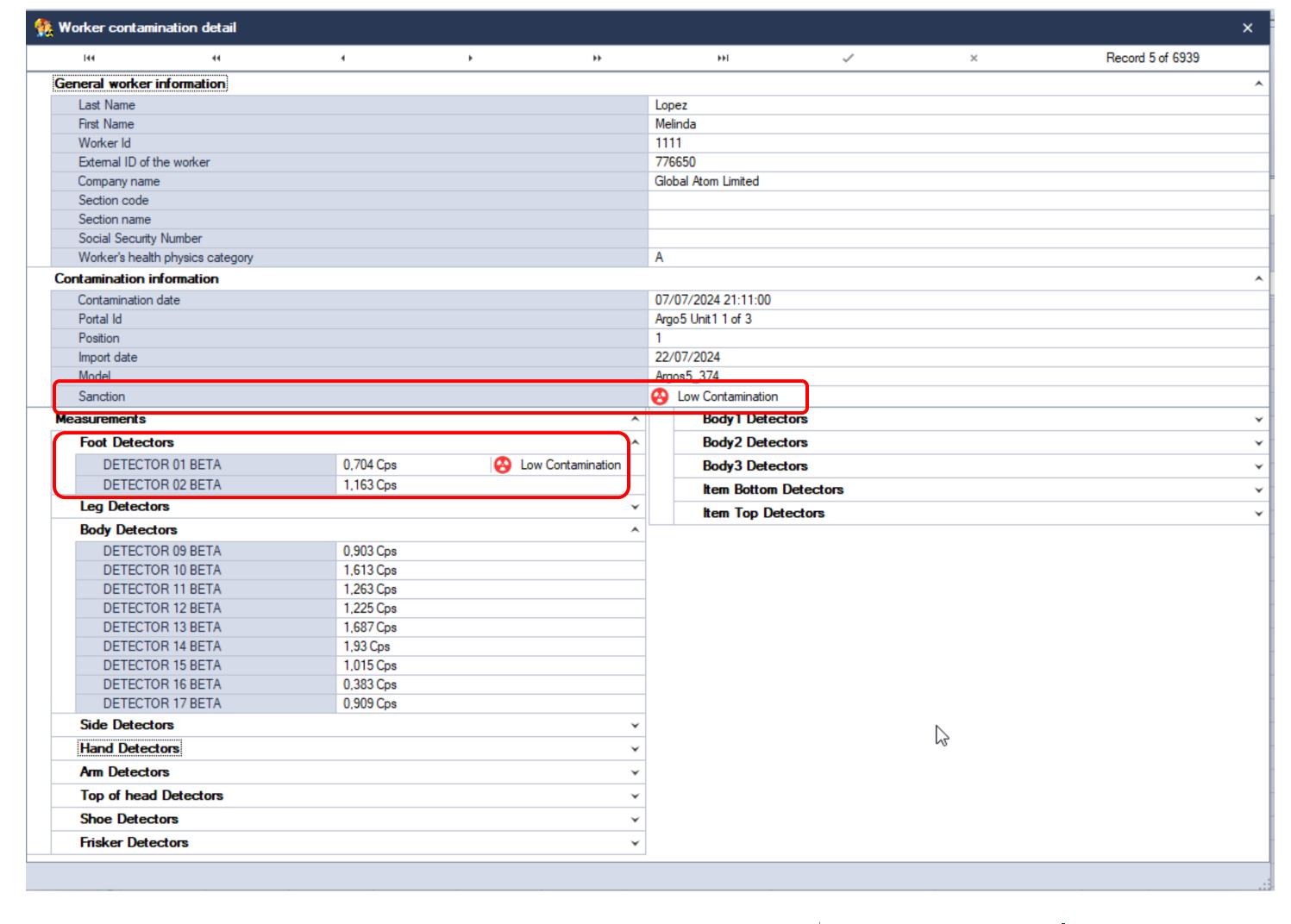
### Contamination Measurements

Physical Integration

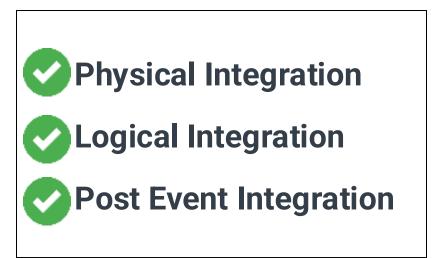
Logical Integration

Post Event Integration

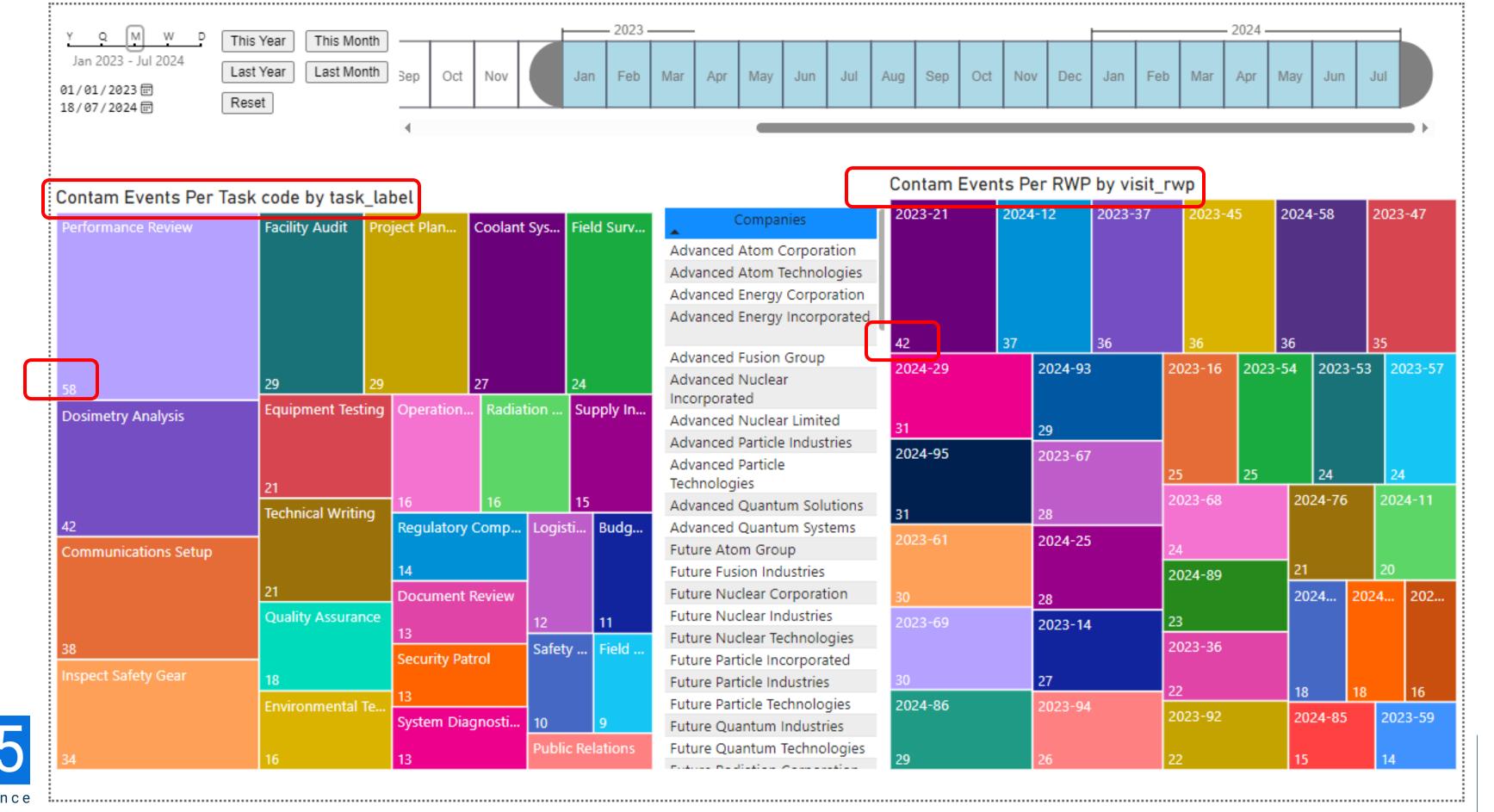
All measurement values from all detectors are stored, allowing identification of the location of the contamination.



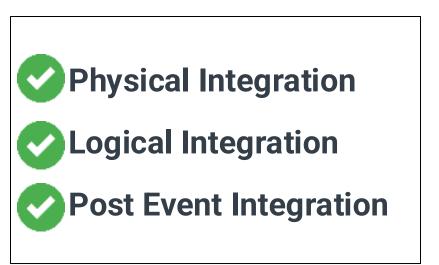
### **Exploitation of Contamination information**



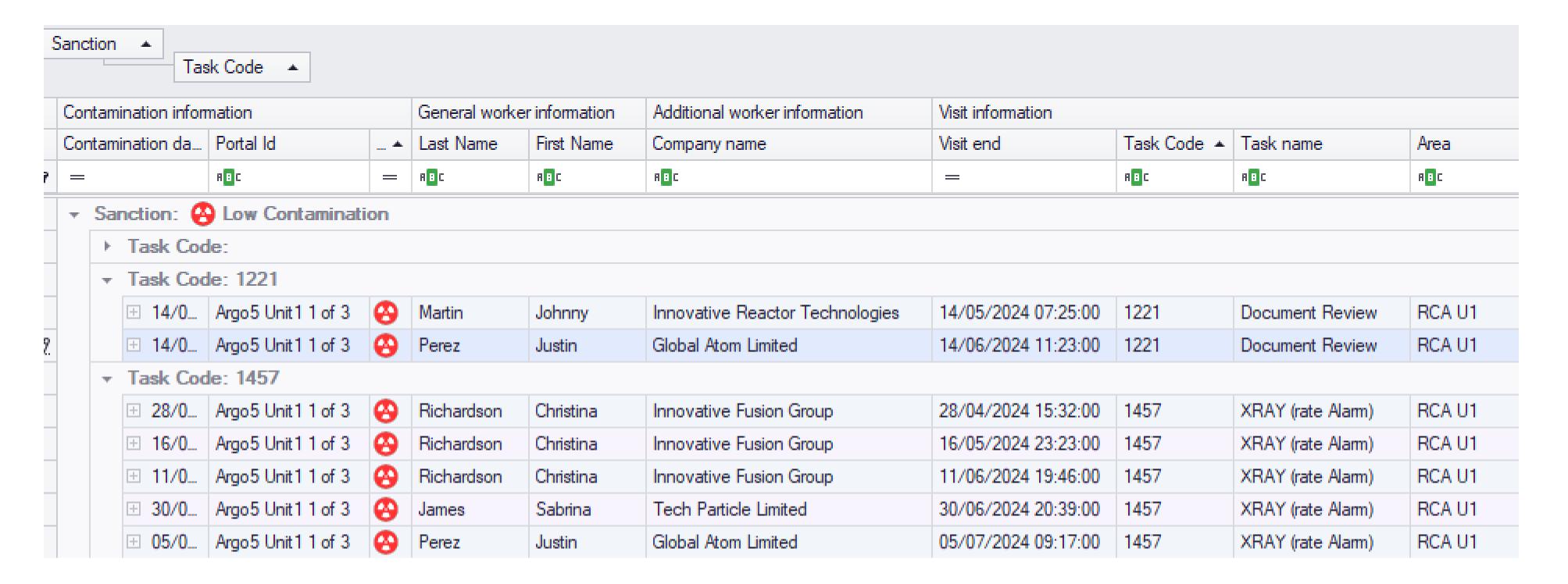
Once contamination information is stored in DosiServ and linked to workers and passages, building reports to produce statistics on contamination events become an achievable target.



### **Exploitation of Contamination information**



The contamination measurements screen, as it links measurements with the related visits and tasks / RWP provides a built-in feature to follow-up statistics on contamination events per task or per companies for instance.



# Overview on the generic measurements import configuration

The body monitor measurements file import feature in DosiServ is very flexible and can accommodate to any file format.

#### Measurements Import Configuration

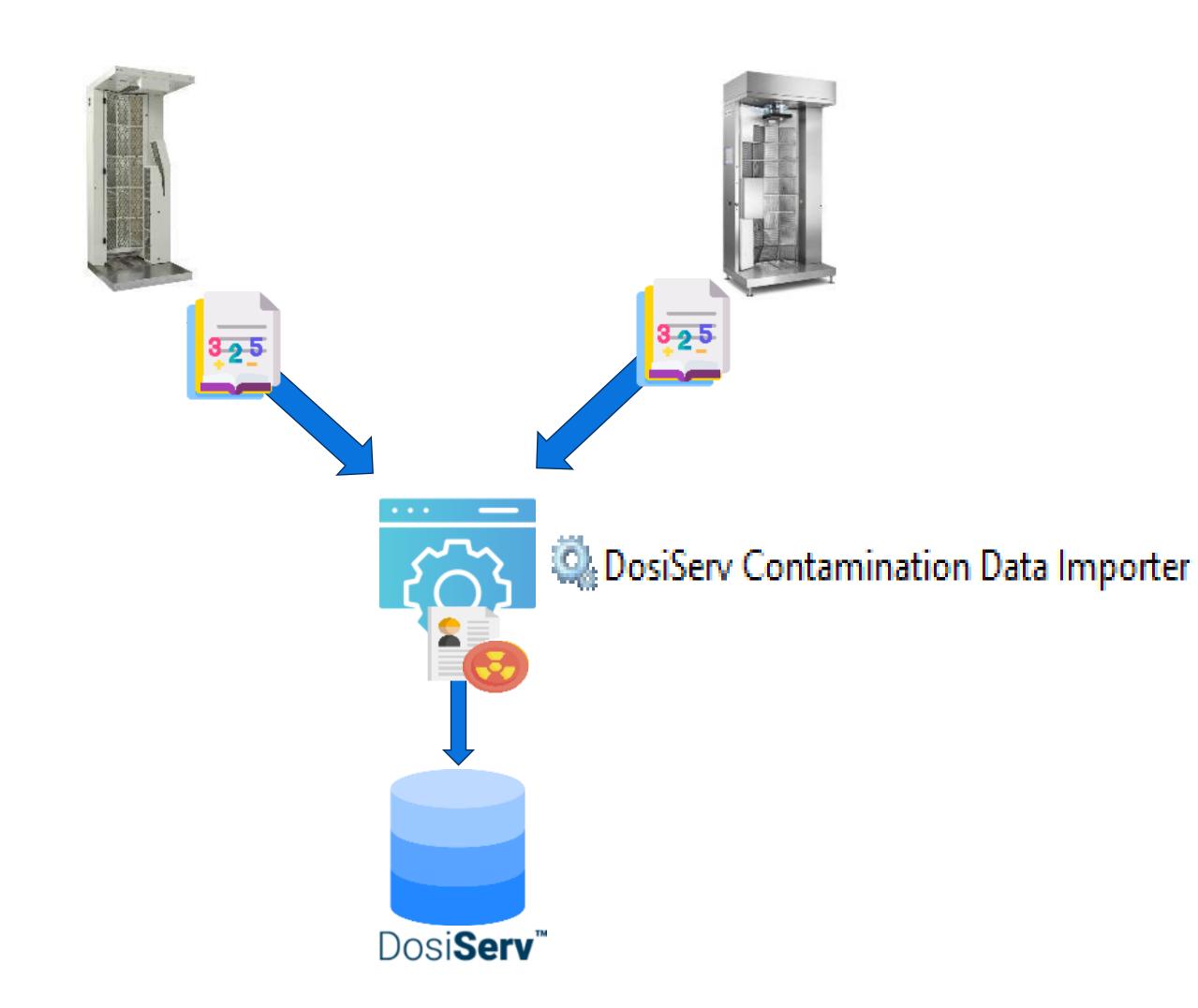
- Windows Service Configuration
  - Overview
  - Monitors Definition
  - Other parameters
  - Link with Passages/Visits configuration

# Windows Service Configuration - Overview

The import of the body monitors measurements file is performed by the DosiServ dedicated Windows service named *DosiServ Contamination Data Importer*.

#### Its duty is to:

- Collect and store the files from the body monitors on a regular basis
- Process the measurements files to create measurements records that will be linked to workers and stored into the DosiServ database
- Link the contamination measurements to the relevant passages (no contaminated flag is set)





# Windows Service Configuration - Monitors definition

The **DosiServ Contamination Data Importer** Windows service can be configured in the Contamination Data Importer.exe.config file in the DosiServ installation folder.

The body monitors to be checked by the service need to be configured in the <a href="contaminationImportSettings">contaminationImportSettings</a> section:

```
contaminationImportSettings>
<systemFiles>
  <!-- KBG : Not responding portals on 11/2024-->
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.193" portalName="192.168.3.193-RPOO-ARGOS1" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.211" portalName="192.168.3.211-LLW-ARGOS8" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.214" portalName="192.168.3.214-CHEM-ARGOS9" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <!-- KBG : Portals connected on 11/2024-->
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.194" portalName="192.168.3.194-RPOO-ARGOS2" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.195" portalName="192.168.3.195-RPOO-ARGOS3" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.196" portalName="192.168.3.196-RPOO-ARGOS5" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.204" portalName="192.168.3.204-DWS-ARGOS5" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.205" portalName="192.168.3.205-DWS-ARGOS6" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.206" portalName="192.168.3.206-6-KPM-101-AR" portalModel="KBG Argos5 130" fileNameOrPattern="CONTAM[130][DZ].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.207" portalName="192.168.3.207-ISI-ARGOS7" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
  <systemFile folderPath="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\192.168.3.254" portalName="192.168.3.254-0-KPM-001-AR" portalModel="KBG Argos5 191" fileNameOrPattern="CONTAM[191][GI].CSV" dateFormat="yyyy-MM-dd HH:mm:ss.fff" />
</systemFiles>
<ftpFiles>
</ftpFiles>
/contaminationImportSettings>
```



### Windows Service Configuration - Monitors definition

```
<portalModel model="Argos6" monitorIdIndex="0" contaminationDateIndex="1" workerIdIndex="3" positionIndex="4" uniteIndex="263">
   <zone id="1" zoneDescription="Foot" zoneType="Detector" zoneGroup="Foot" columnIndexInFile="9" fieldName="DETECTOR01 RATEALPHA" fieldLabel="DETECTOR 01 ALPHA" />
   <zone id="1" zoneDescription="Foot" zoneType="Detector" zoneGroup="Foot" columnIndexInFile="6" fieldName="DETECTOR01 RATEBETA" fieldLabel="DETECTOR 01 BETA" />
   <zone id="2" zoneDescription="Foot" zoneType="Detector" zoneGroup="Foot" columnIndexInFile="15" fieldName="DETECTOR02 RATEALPHA" fieldLabel="DETECTOR 02 ALPHA" />
   <zone id="2" zoneDescription="Foot" zoneType="Detector" zoneGroup="Foot" columnIndexInFile="12" fieldName="DETECTOR02 RATEBETA" fieldLabel="DETECTOR 02 BETA" />
   <zone id="3" zoneDescription="Foot" zoneType="Detector" zoneGroup="Foot" columnIndexInFile="21" fieldName="DETECTOR03 RATEALPHA" fieldLabel="DETECTOR 03 ALPHA" />
   <zone id="3" zoneDescription="Foot" zoneType="Detector" zoneGroup="Foot" columnIndexInFile="18" fieldName="DETECTOR03 RATEBETA" fieldLabel="DETECTOR 03 BETA" />
   <zone id="4" zoneDescription="Foot" zoneType="Detector" zoneGroup="Foot" columnIndexInFile="27" fieldName="DETECTOR04 RATEALPHA" fieldLabel="DETECTOR 04 ALPHA" />
   <zone id="4" zoneDescription="Foot" zoneType="Detector" zoneGroup="Foot" columnIndexInFile="24" fieldName="DETECTOR04 RATEBETA" fieldLabel="DETECTOR 04 BETA" />
   <zone id="5" zoneDescription="Shoe Top" zoneType="Detector" zoneGroup="Body" columnIndexInFile="33" fieldName="DETECTOR05 RATEALPHA" fieldLabel="DETECTOR 05"</pre>
   <zone id="5" zoneDescription="Shoe Top" zoneType="Detector" zoneGroup="Body" columnIndexInFile="30" fieldName="DETECTOR05 RATEBETA" fieldLabel="DETECTOR 05 BETA" />
   <zone id="6" zoneDescription="Shoe Top" zoneType="Detector" zoneGroup="Body" columnIndexInFile="39" fieldName="DETECTOR06 RATEALPHA" fieldLabel="DETECTOR</pre>
   <zone id="6" zoneDescription="Shoe Top" zoneType="Detector" zoneGroup="Body" columnIndexInFile="36" fieldName="DETECTOR06 RATEBETA" fieldLabel="DETECTOR 06 BETA" />
   <zone id="7" zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="45" fieldName="DETECTOR07 RATEALPHA" fieldLabel="DETECTOR 07 ALPHA" />
   <zone id="7" zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="42" fieldName="DETECTOR07 RATEBETA" fieldLabel="DETECTOR 07 BETA" />
   <zone id="8" zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="51" fieldName="DETECTOR08 RATEALPHA" fieldLabel="DETECTOR 08 ALPHA" />
   <zone id="8" zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="48" fieldName="DETECTOR08 RATEBETA" fieldLabel="DETECTOR 08 BETA" />
   <zone id="9" zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="57" fieldName="DETECTOR09 RATEALPHA" fieldLabel="DETECTOR 09 ALPHA" />
                zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="54" fieldName="DETECTOR09 RATEBETA" fieldLabel="DETECTOR 09 BETA" />
                 zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="63" fieldName="DETECTOR10 RATEALPHA" fieldLabel="DETECTOR 10 ALPHA" />
                 zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="60" fieldName="DETECTOR10 RATEBETA" fieldLabel="DETECTOR 10 BETA" />
    <zone id="11" zoneDescription="Leg" zoneType="Detector" zoneGroup="Body" columnIndexInFile="69" fieldName="DETECTOR11 RATEALPHA" fieldLabel="DETECTOR 11 ALPHA" />
```



### Windows Service Configuration - Other Parameters

Some other parameters can be configured in the Contamination DataImporter.exe.config file:

```
(appSettings>
<!-- Microsoft Application Logging Block settings -->
<!-- applicationLogLevel: none, always, error, warning, informational, debug -->
 <add key="applicationLogLevel" value="informational" />
 <add key="instrumentationConfigFile" value="ContaminationDataImporter.EIF.config" />
 <!-- number of loop max to connect to database -->
 <add key="maxWaitingLoopNumber" value="20" />
<!-- Folder on the localmachine where to copy each 'contam.csv' files from each "pc name\folder" before computing
<!-- After beeing computed the file will be copied into a folder called like dateTimePattern value
 <!-- If an error occured in one line, a .err file will be created with each problematic line
 <add key="filesPath" value="D:\DosiServ-Shared\ARGOS-CONTAM-FILES\" />
 <add key="dateTimePattern" value="yyyyMMdd HHmmss" />
 <!-- How often the service shall wake up and compute the files -->
 <!-- Unit is the HOUR -->
 <add key="serviceFrequency" value="6" />
 <!-- Delete original files after import process -->
 <add key="deleteOriginalFiles" value="0" />
 <!-- tolerance period to associate contamination and exit passage, in seconds -->
 <add key="passageContaminationTolerancePeriod" value="60" />
 <!-- obsolescence time of the imported contamination data. Unit is days. 0 = No purge. -->
 <add key="dataPurgeTime" value="0" />
 <!-- Lists the values, separated by a comma, of the Card Reader column (#3) that will be ignored by the import service. Example "no card reader". -->
 <add key="ignoredCardReaderValues" value="no card reader,-" />
 <!-- if not defined or set to 1, system checks if a more recent contamination has been already imported for a portal : if then, skip the current contamination -->
 <!-- if set to 0, this checking is not done -->
 <add key="checkLastImportDateByPortal" value="1" />
 <!-- ignore contamination older than this value, 0 to disable the feature -->
 <add key="maxContaminationAgeForImport" value="730" />
/appSettings>
```



# Windows Service Configuration - Link Passage/Measurements

To enable the algorithm that will link contamination measurements to passages in the DosiServ database, it is needed to tick the following check box in the DosiGUI's general parameters screen:

Activate passages contaminations links feature

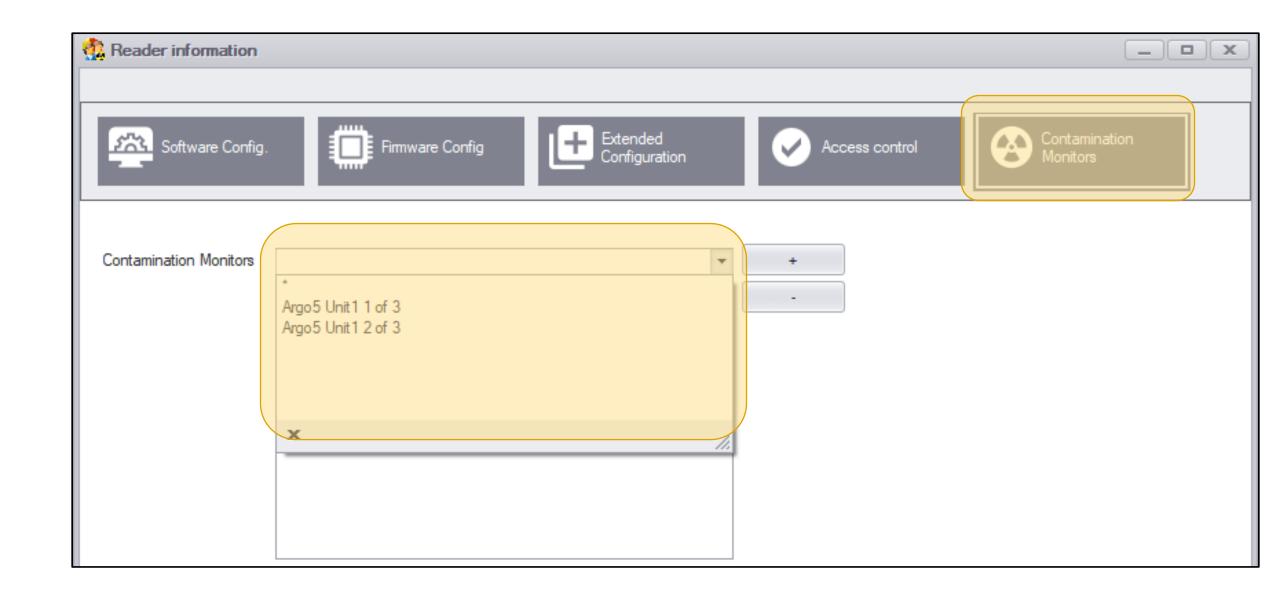


# Windows Service Configuration - Link Passage/Measurements

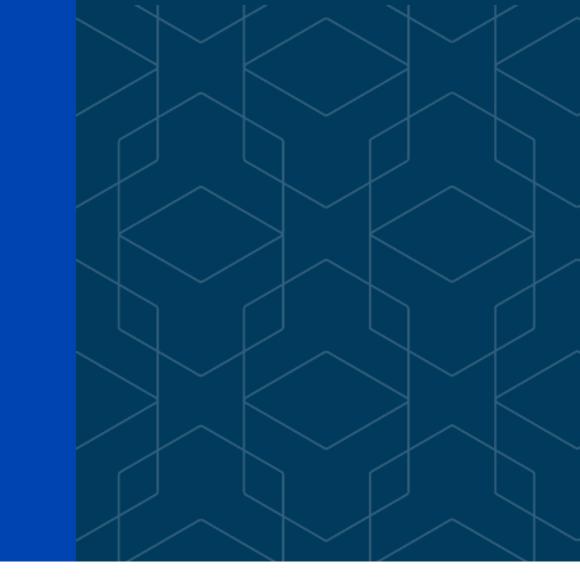
Then, to facilitate the algorithm, it is required to link the dosimetry readers to one or several body monitors.

The idea is to link to a body monitor the readers that are likely to be used after having gone through this specific body monitor.

The algorithm will try to link the measurements from a body monitor only to the passages done on the readers that are linked to this body monitor.



#### Roundtable



From users' point of view, how having the contaminated events and measurements in the DosiServ database could be leveraged?

Is there any additional feature to the current DosiServ's contamination measurements capability that could be valuable?

For which purpose?

#### DosiServ - Part 2

- DosiServ 2023 (V1.30.5)
- Alarms managements
- Contamination Events
- RWP & Task Management

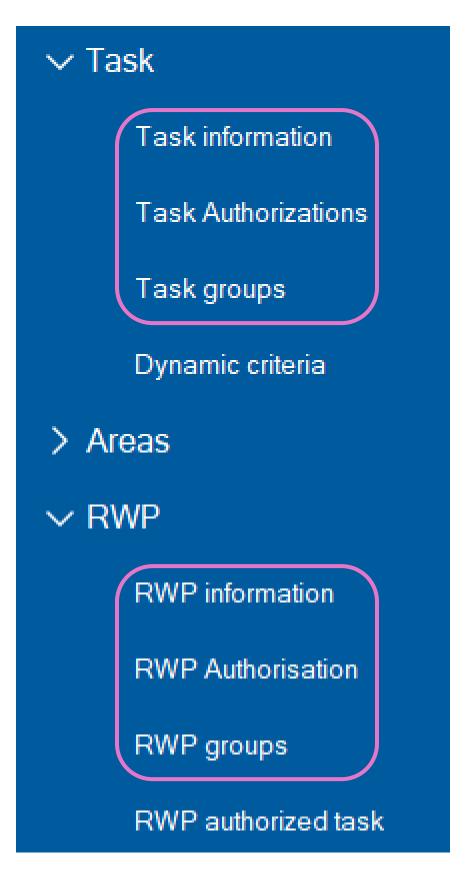


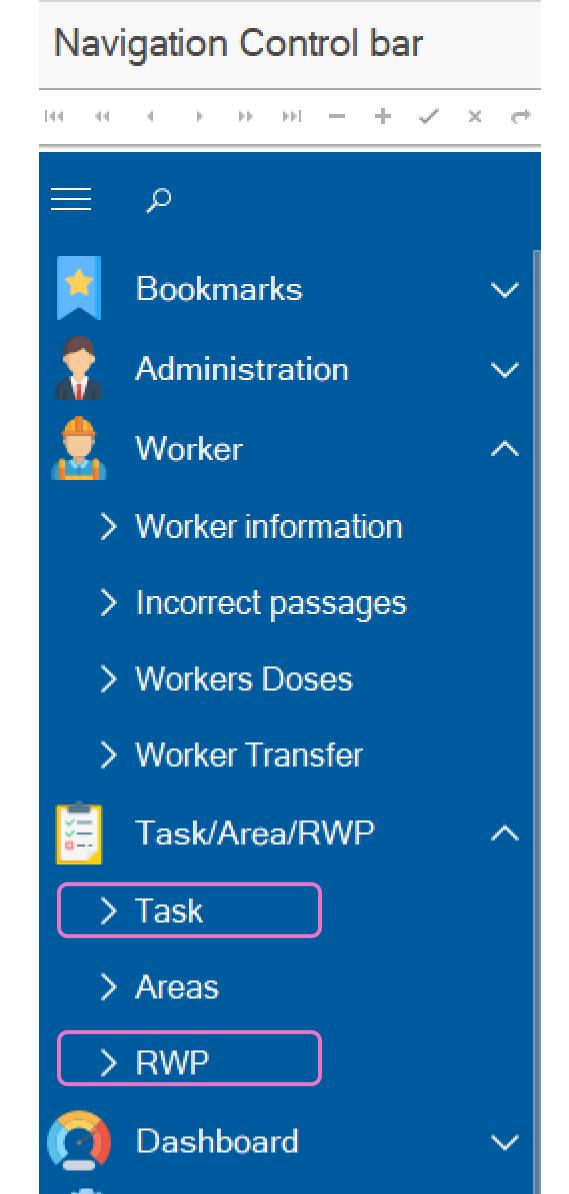
#### Locations

- Both items are located in the same area in the main menu
- Both items have common sub menus: Information/Authorizations/Groups

Dra	Drag a column header here to group by that column									
	General task info	mation	Validity period (in days)			Task dosimetry		Maximum doses		
	Task No. 🔺	Task name	Comments	valid from	valid to	Suspended	HP10 dose over estimated	HP10 dos	HP10G max	HP10G max r
₹	R ■ C	явс	<b>n</b> ⊡c	=	=			=	=	=
	1221	Decomissionning		29/07/2023	01/08/2024		9999999999	10,0		
	1457	XRAY		23/10/2023	21/09/2024		3333333333	5,0		
	1588	Logistics Planning		16/08/2023	08/01/2024		0000000000			
	2229	Default Set points		12/06/2023	12/10/2024		3333333333	9000,0		
	2618	Field Survey Building 1		17/01/2023	10/10/2025		000000000	10,0	57,0	335,4
	2738	Routine Survey		20/04/2023	16/10/2024		3333333333	2,0		
	2849	Quality Assurance		30/06/2023	24/07/2024		0000000000			
	2921	Supply Inventory		28/11/2023	30/07/2024		3333333333			
	3030	Budget Review		20/04/2023	04/04/2024		0000000000			
	3179	Equipment Testing		17/06/2023	08/05/2024		3333333333			
	3505	Environmental Testing		31/08/2023	11/10/2024		3333333333			
	3514	Regulatory Compliance		16/07/2023	03/07/2024		3333333333			
	3884	RadioGraphy		20/09/2023	07/03/2025		000000000	50,0	53,2	456,0

RV	VP Code ▲	Operat	Revision	Status	Description	Authorized by	Authorization date	Suspended by	Suspension Date	HP10 dose sum over estimated dose	Gamma dose	Estimated tot	Neutron dose
яВ	С	RBC	=	=	R <b>∃</b> C	RB C	=	RBC	=		=	=	=
20	24-02	02	0	Authorized	Inspection of reactor contain	mgp	16/10/2023			0000000000		12000,0	
20	24-02		1	Draft	Inspection of reactor contain					0000000000		12000,0	
20	24-06	06	2	Authorized	Periodic health physics surv	mgps	08/08/2024			0000000000		12000,0	
20	24-11	11	2	Authorized	Quality control checks of per	mgp	11/01/2024			0000000000	1571,8	12000,0	
20	24-24	24	0	Authorized	Leak testing of radioactive w	mgp	11/06/2023			0000000000	2625,3	12000,0	
20	24-25	25	0	Authorized	Calibration of radiation monit	mgp	01/03/2023			0000000000	3101,3	12000,0	
20	24-58	58	0	Authorized	Quality control checks of per	mgp	16/02/2023			000000000000000000000000000000000000000	6795,8	12000,0	
20	24-76	76	0	Authorized	Assessment of radiation dos	mgp	03/09/2023			000000000000000000000000000000000000000	8101,3	12000,0	
20	24-86	86	1	Authorized	Verification of shielding effec	mgp	08/08/2024			00000000000	9189,6	12000,0	
20	24-93	93	0	Authorized	Safety inspection of fuel han	mgp	20/11/2023			0000000000	9513,9	12000,0	
20	24-95	95	0	Authorized	Routine maintenance of cool	mgp	16/12/2023			000000000	10321,9	12000,0	
RF	L200	325200	1	Authorized	PUMP replacement	mgp	08/04/2025			0000000000	1,7	12000,0	

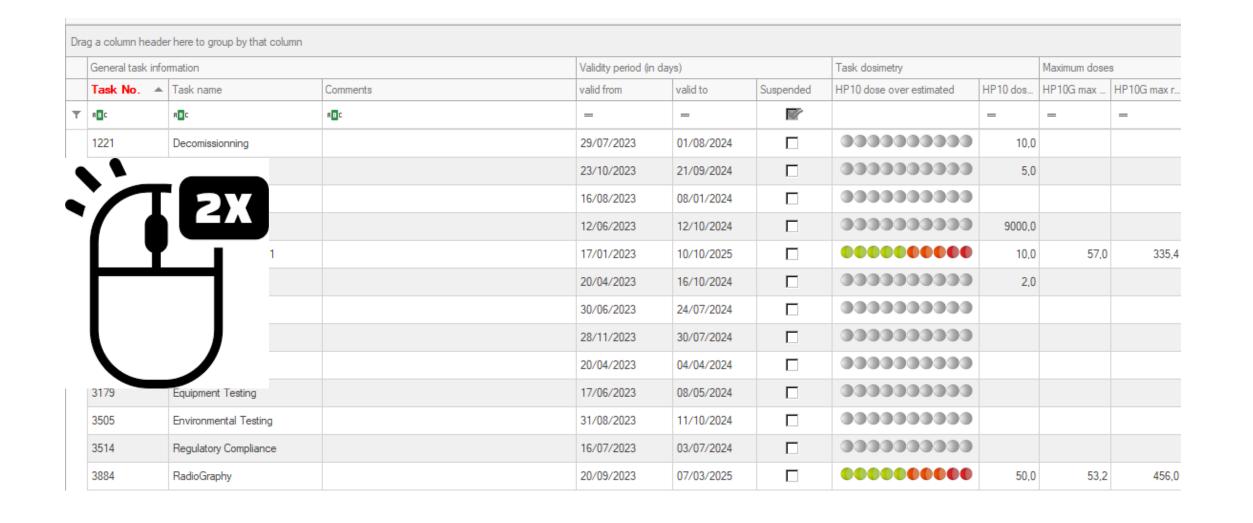




Configuration

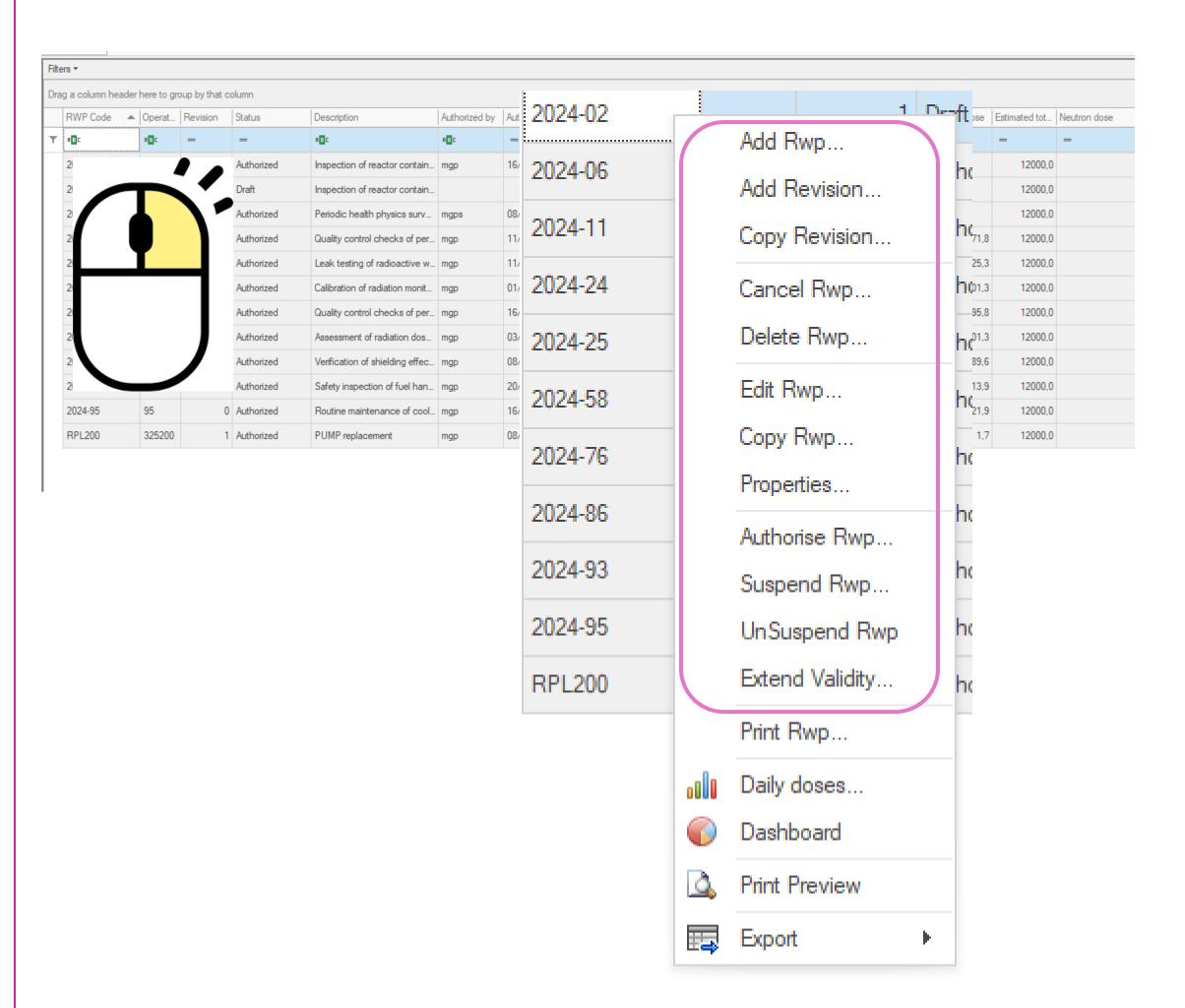
# Editing

#### Task



# What is the menu telling us:? The RWP follow a longest administrative process

RWP

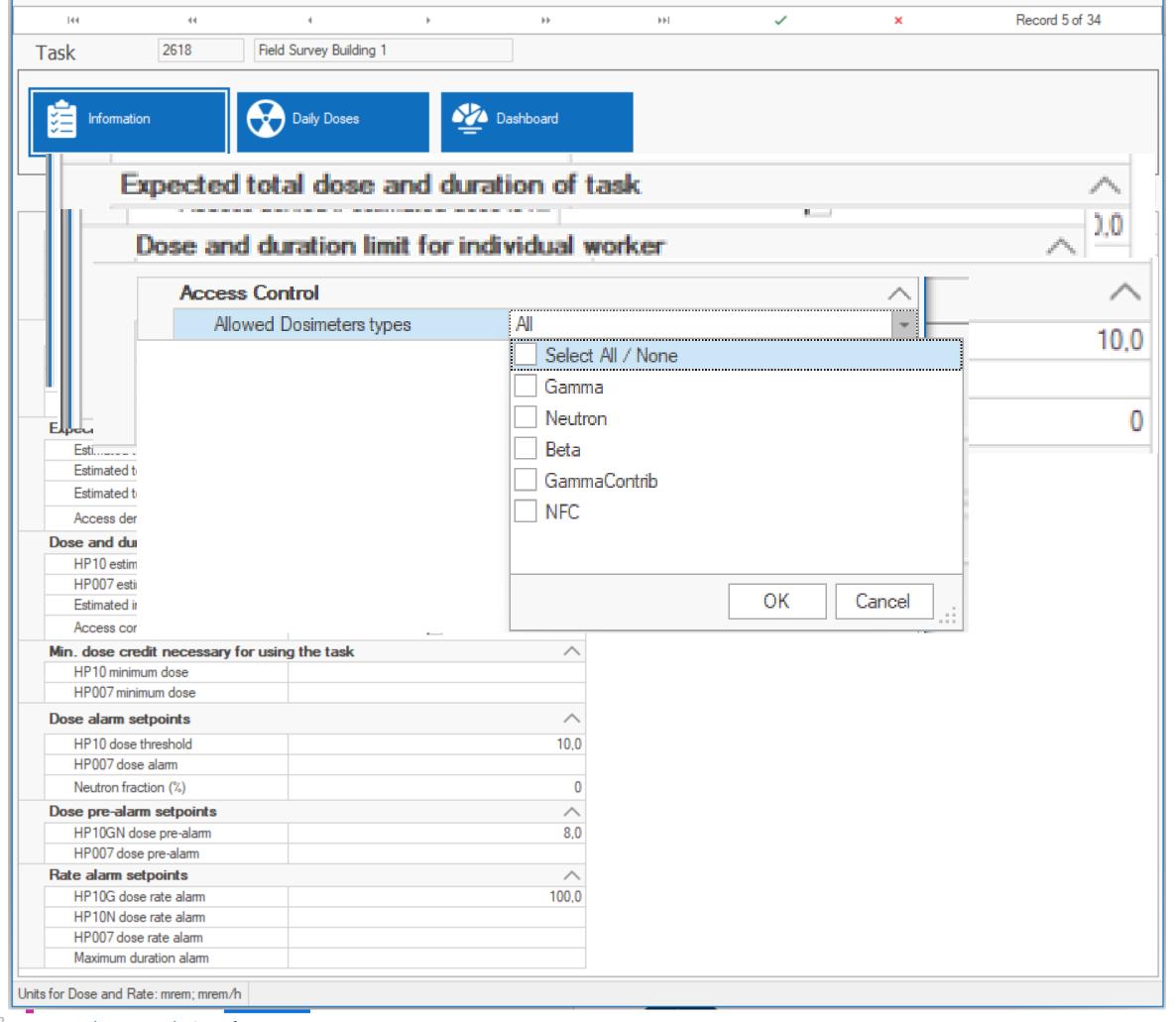




#### Details and similarities

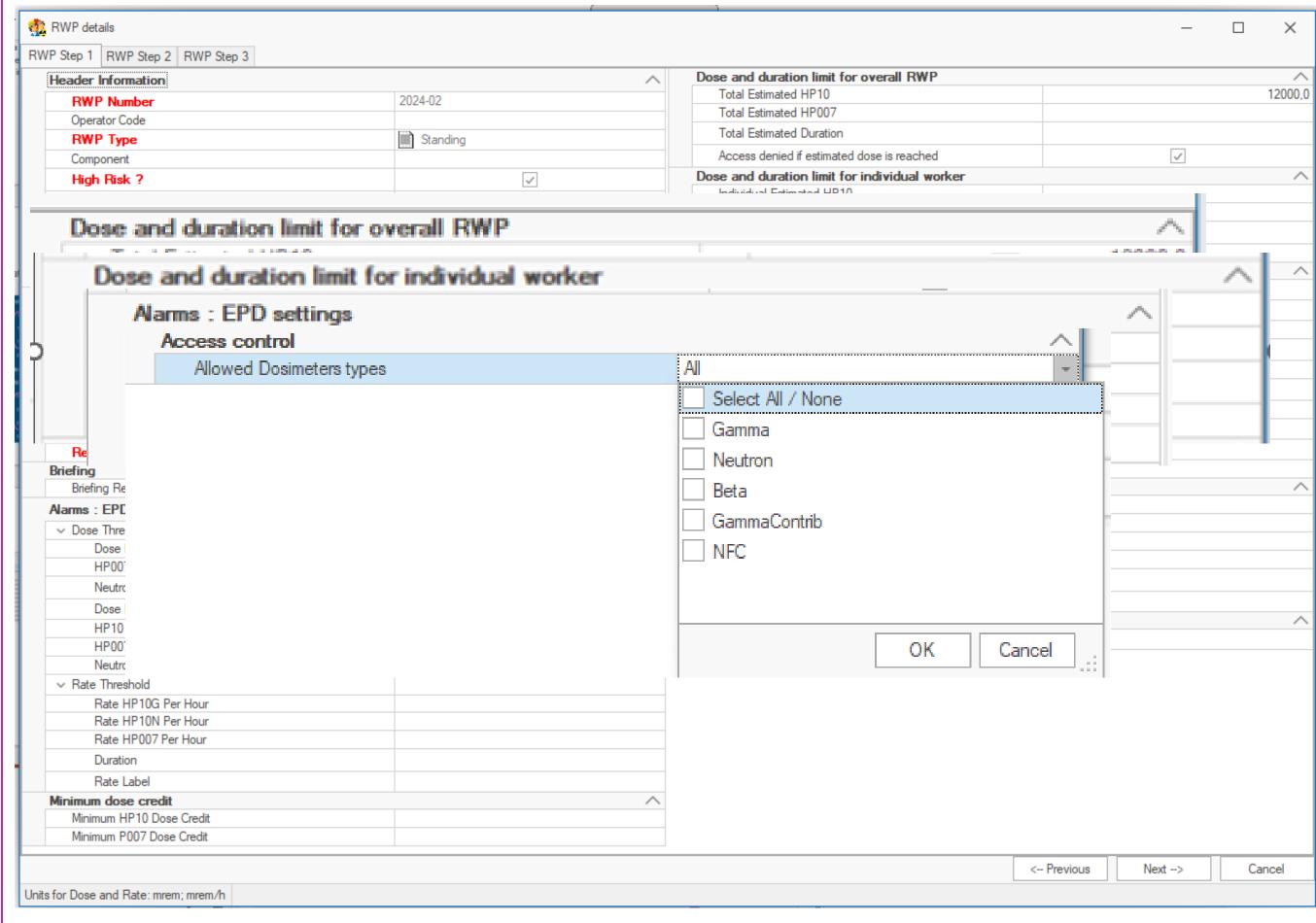
Task

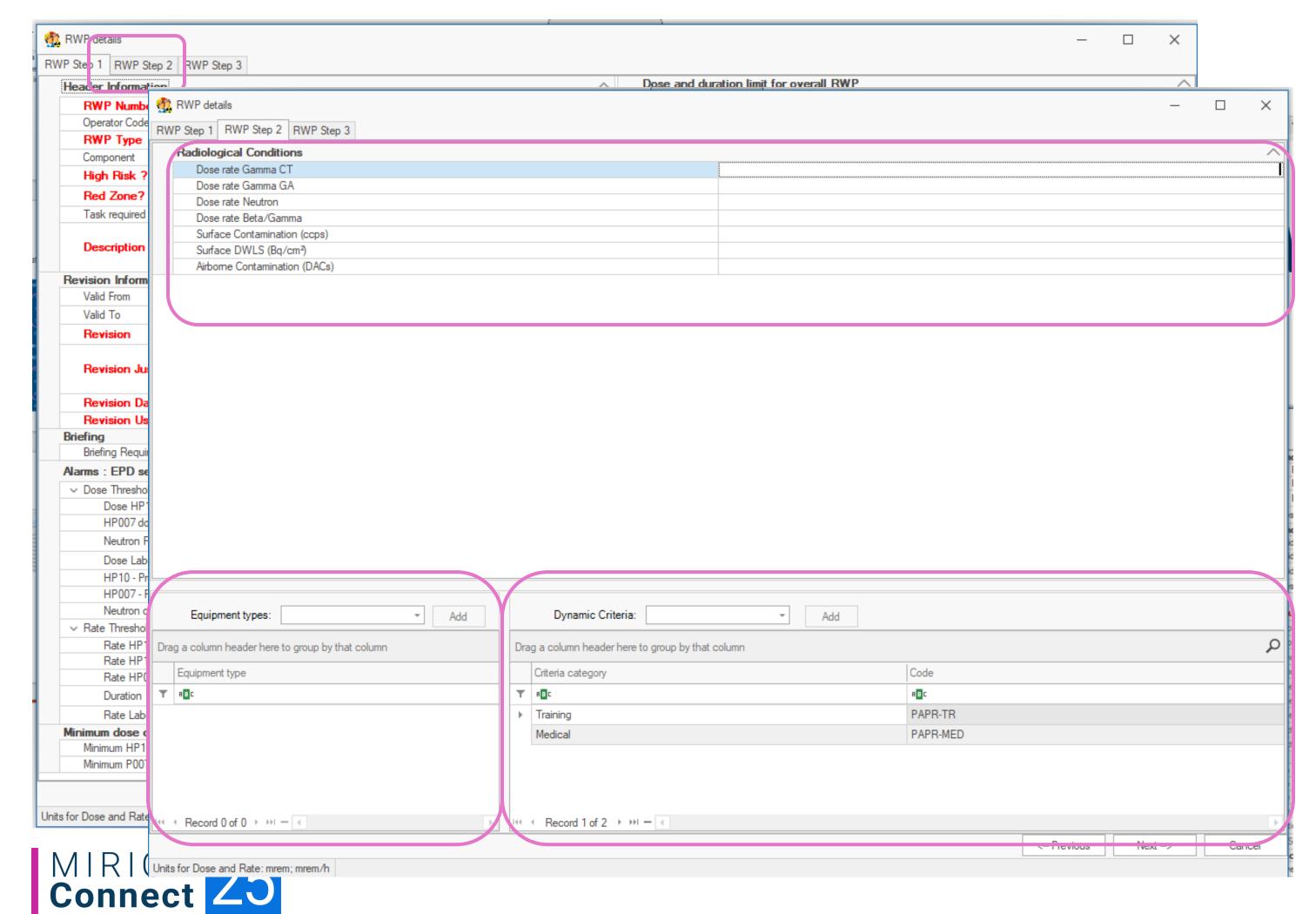
🤼 Task information



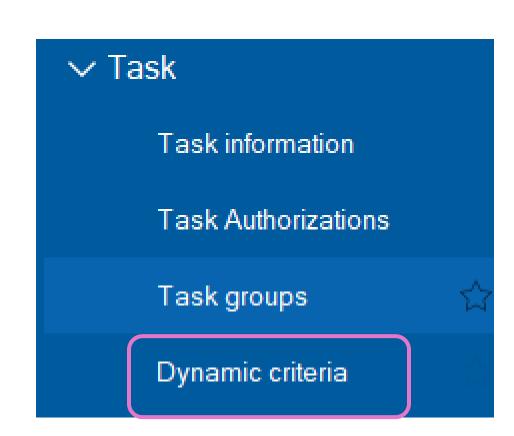
- Both items have a global budget
- Both items have an individual Budget (Thanks to CERN)
- Access can be blocked (or not)
- Both have Dosimeter (EPD) setpoints
- Both can specify Dosimeter to be used

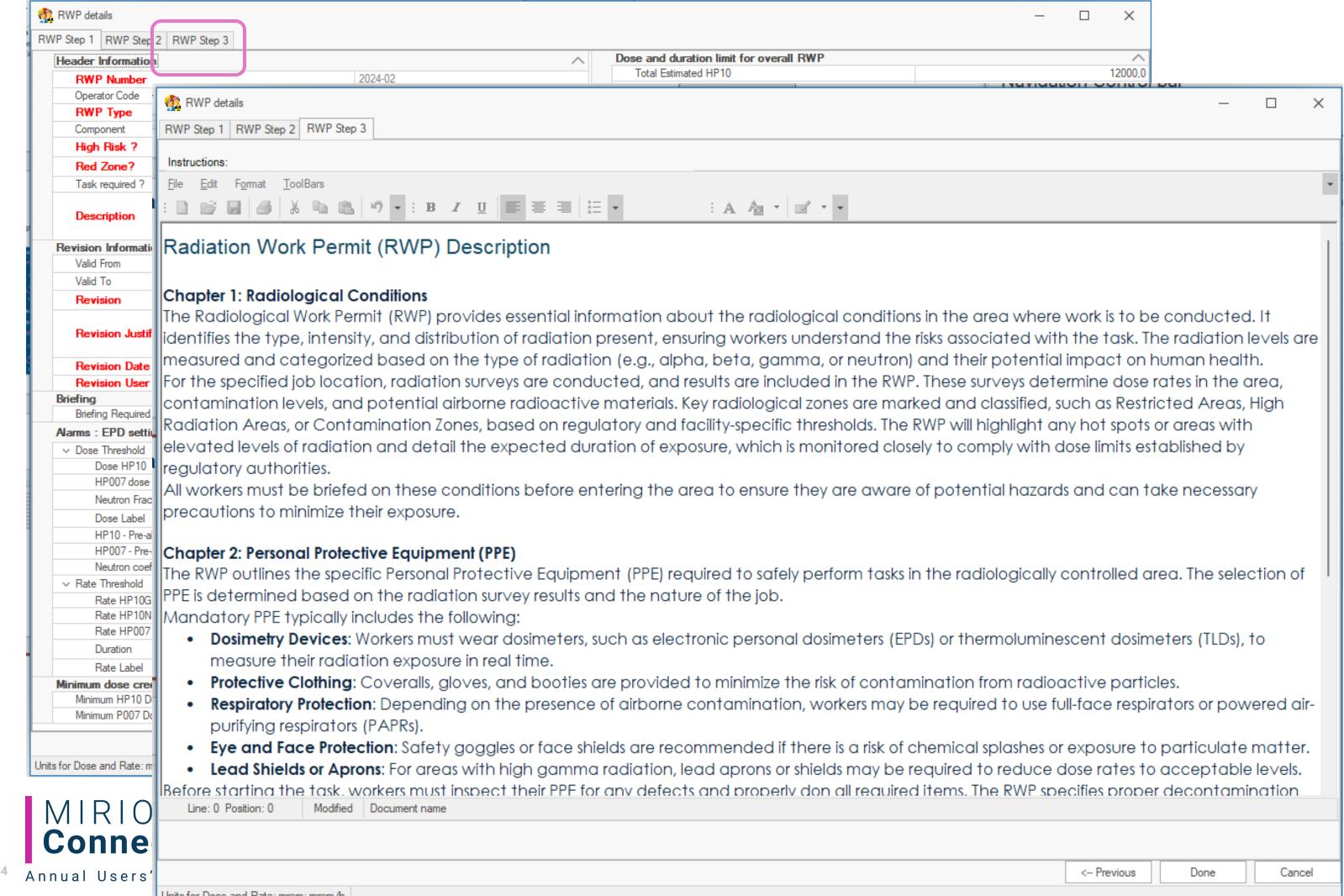
**RWP** 





- RWP provides rad conditions info
- Equipment's required
  - Access control will check if qualifications required by equipment are fulfilled
  - Future: Access control will check the Worker is in procession of the required instruments
- Qualification required designed INSIDE the RWP (where same concept is done "outside" the Task)

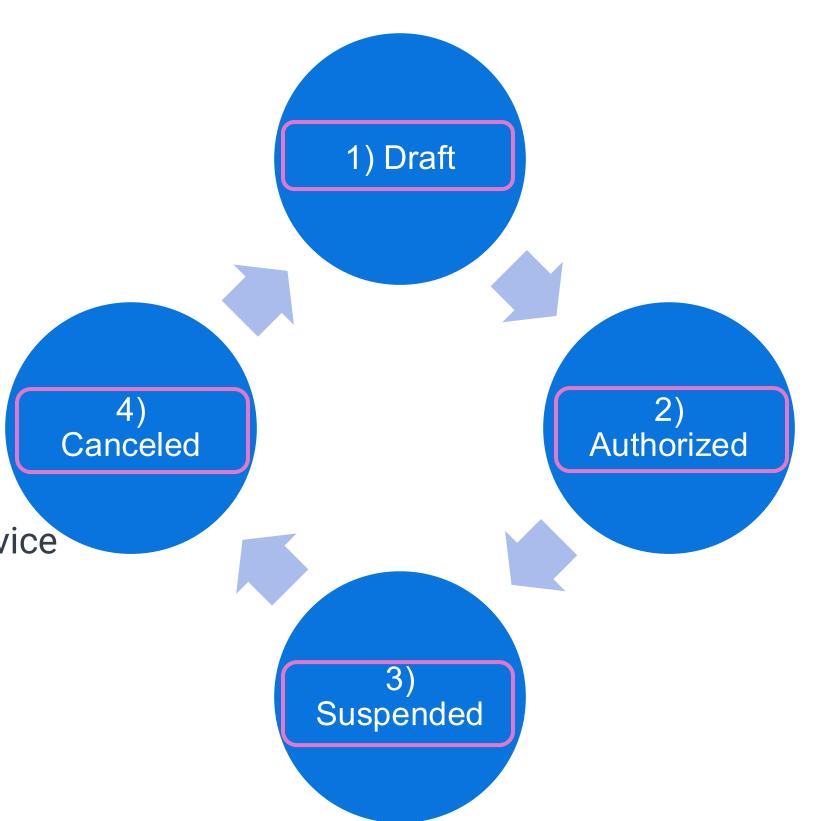




RWP detailed free information

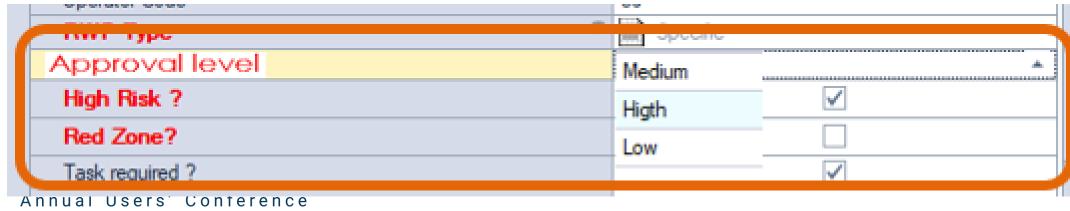
#### Follows a workflow

- Draft
  - Can be started from scratch (new RWP)
  - Can be a new revision (1)
  - Can be copied from a previous revision
  - Can be create from a copy of an RWP
- Authorized
  - Controlled by Profile (2) (3)
- Suspended (A way to temporary stop) (4)
- Canceled → A new revision has been put in service



2024-02		1 Deaff
		Add Rwp
2024-06		Add Revision
2024-11		Copy Revision
2024-24		Cancel Rwp h
2024-25		Delete Rwp h
2024-58		Edit Rwp h
2024-76		Copy Rwp
2024.00		Properties
2024-86		Authorise Rwp
2024-93		Suspend Rwp
2024-95		UnSuspend Rwp h
RPL200		Extend Validity h
		Print Rwp
	0000	Daily doses
		Dashboard
		Print Preview
Р		Export

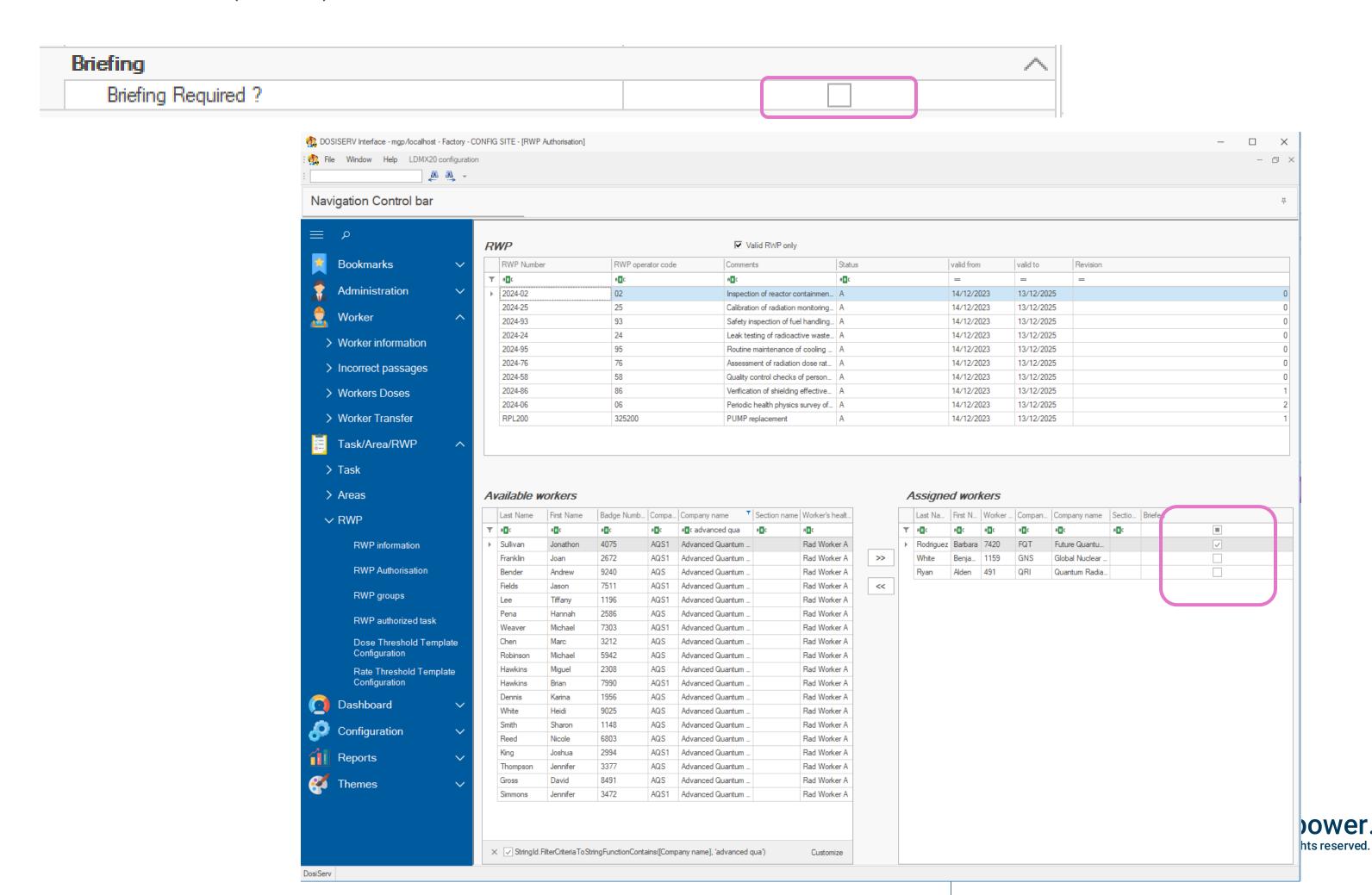




- (1) Only the header will be copied
- (2) Only certain user may authorize RWP
- (3) RWP level with profile levels
- (4) Suspend / Unsuspend controlled by profiles

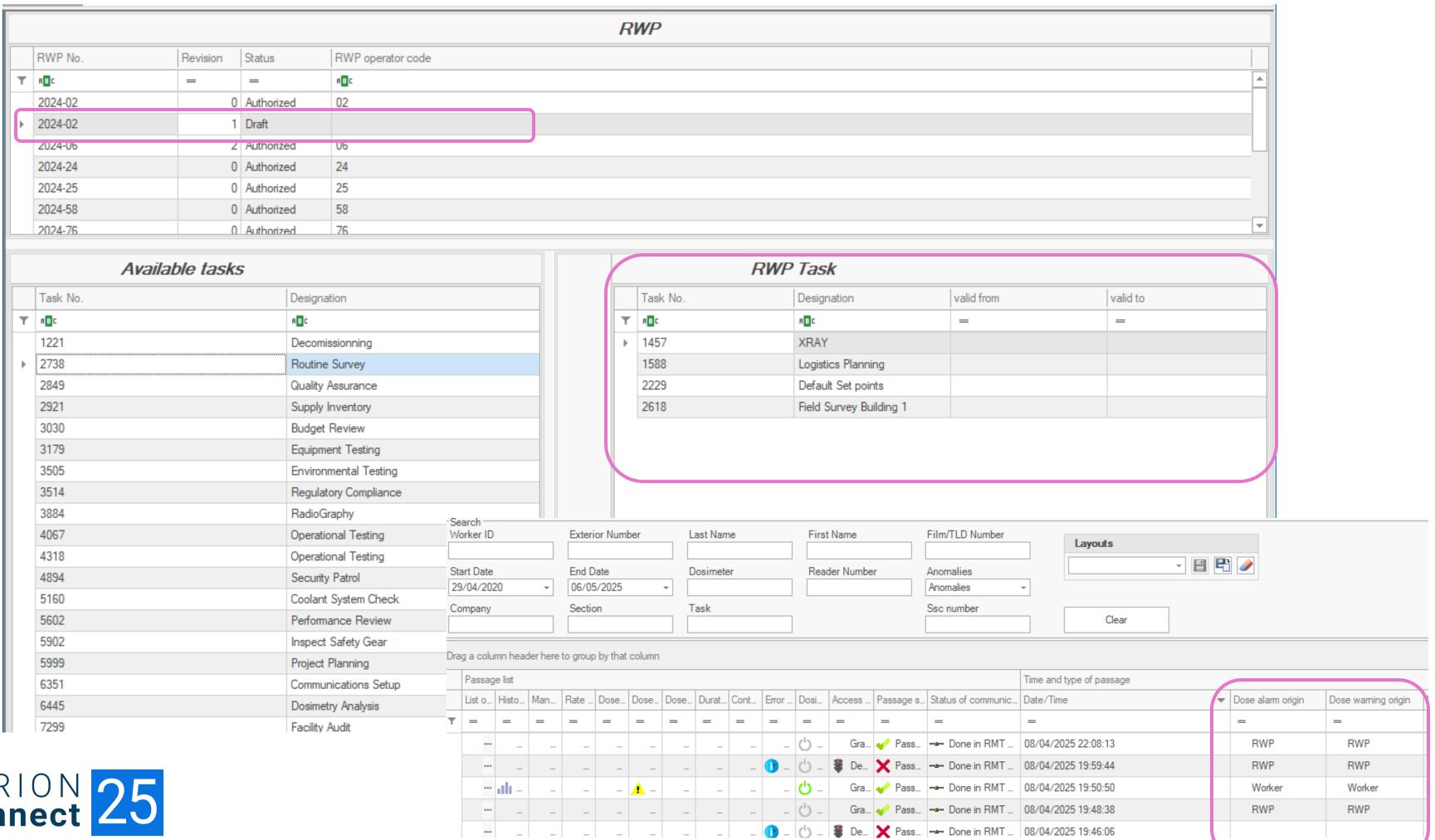
#### **Allows Briefing**

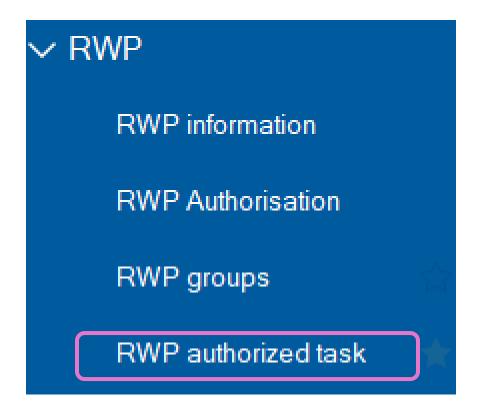
- When created one can specify if briefing is required for workers
- When authorizing a new revision ALL briefing can be canceled (or not)



#### **Embed Task**

One can select RWP AND task at entry time



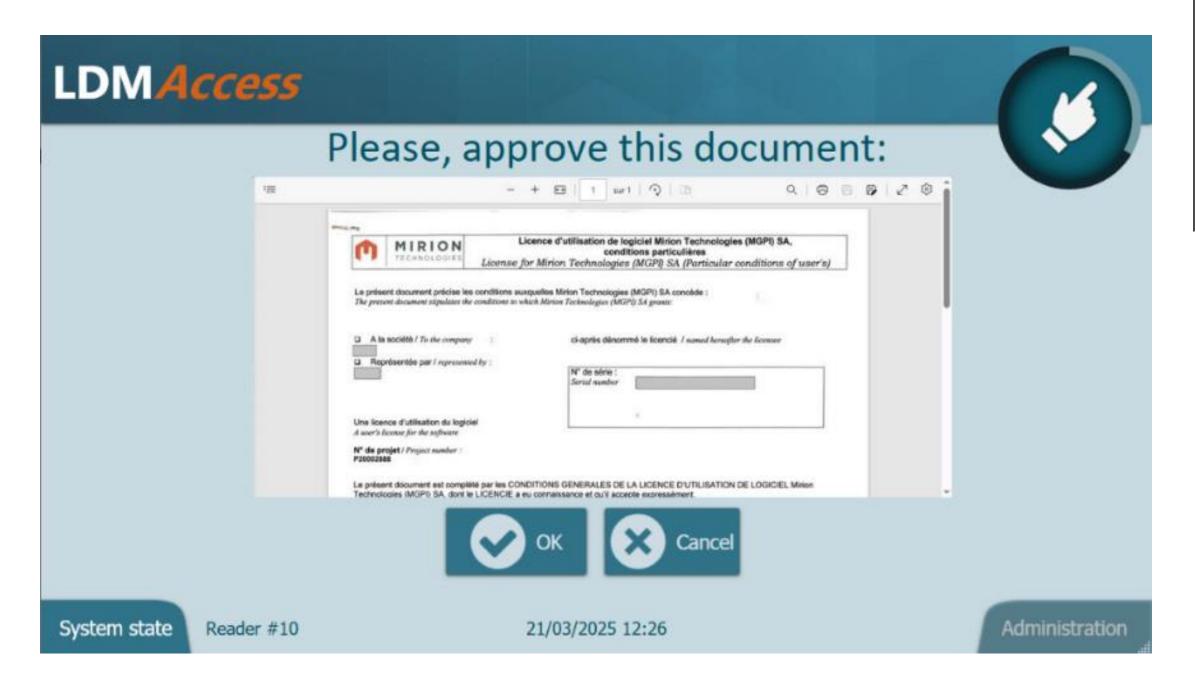


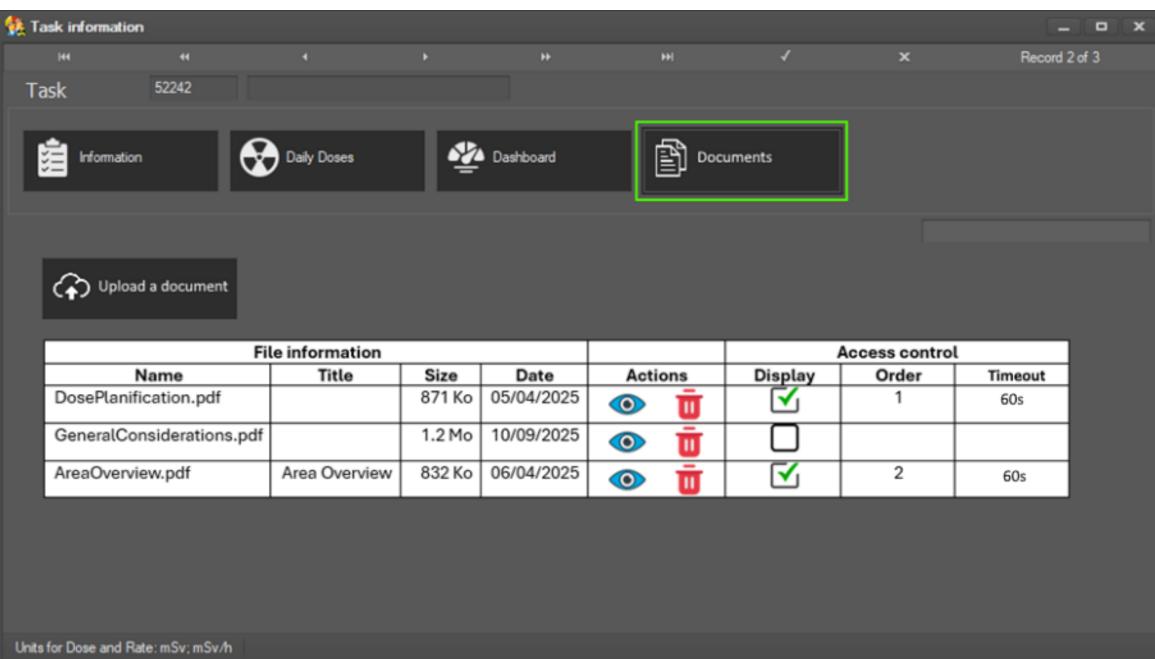




#### Future

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



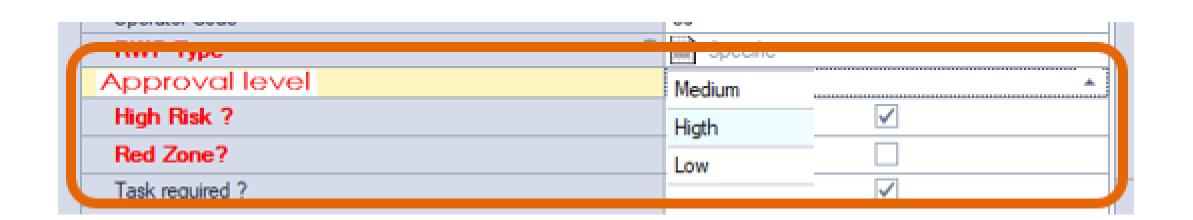


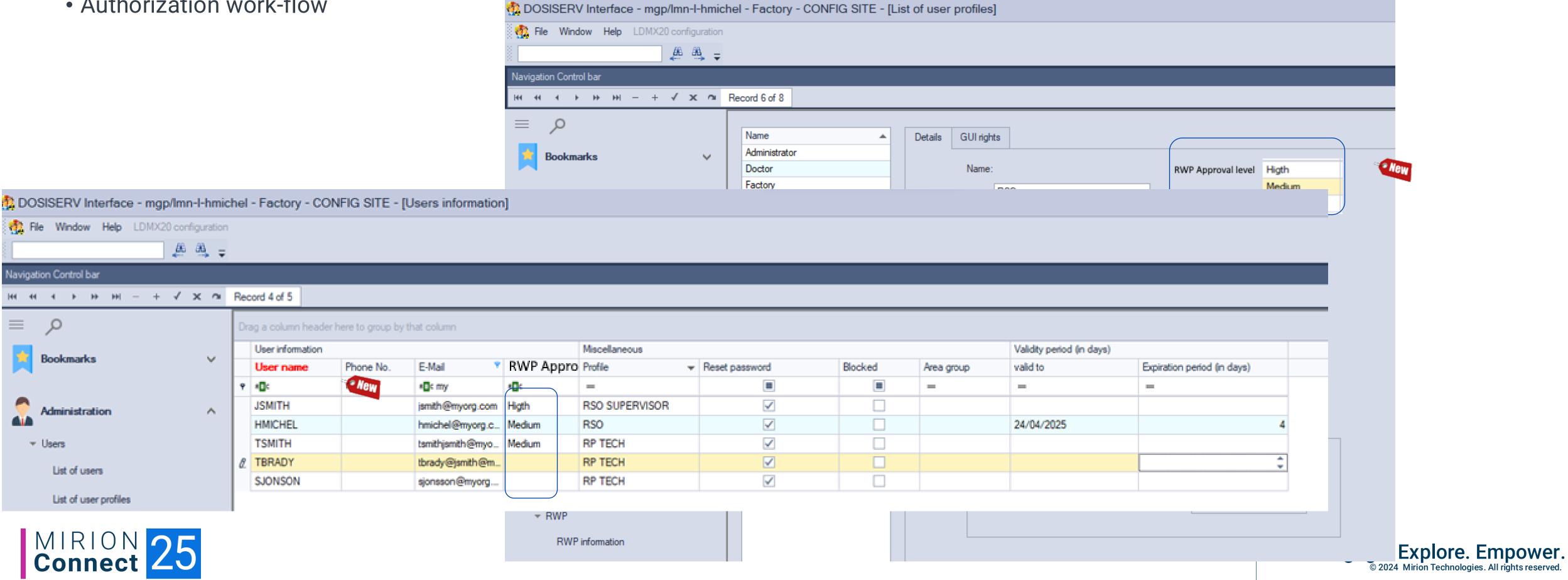
#### Future

- Authorization Levels
  - In RWP

Annual Users' Conference

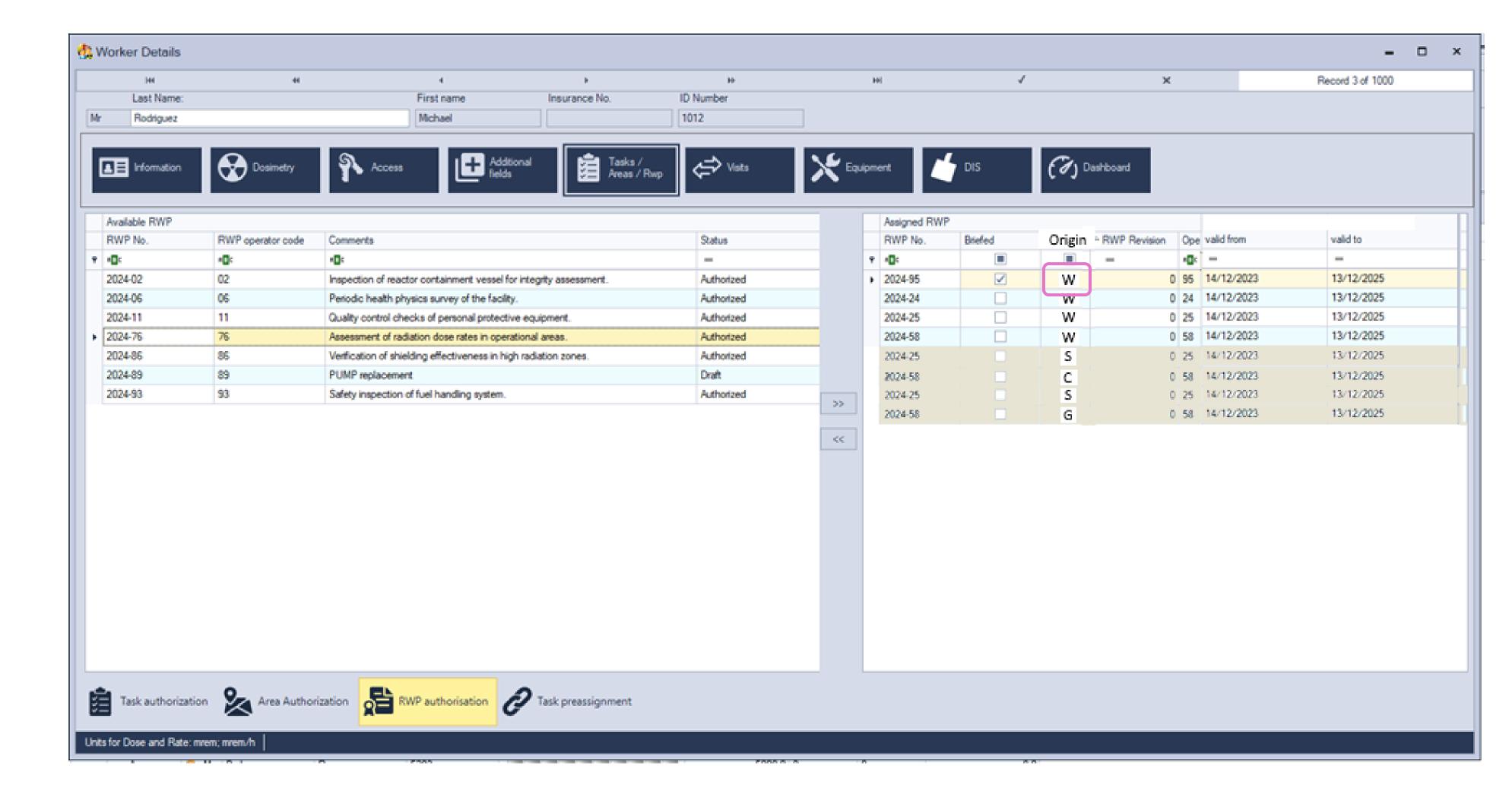
- At profile Level
- At User Level
- Authorization work-flow





#### Future

- Authorization Levels
  - By Workers
  - By companies
  - By Sections
  - Generic



# Take Away

- At the end of the day we do have a dose in front a number that has been selected
  - → Statistics can be done with both methods
- RWP is "heavier" on the admin side
- Be able to display documents on reader at access time coming soon for RWP

