



Case management as logbook for the cryogenic installations at CERN

Fallverwaltung als Logbuch für die Kryotechnik am CERN

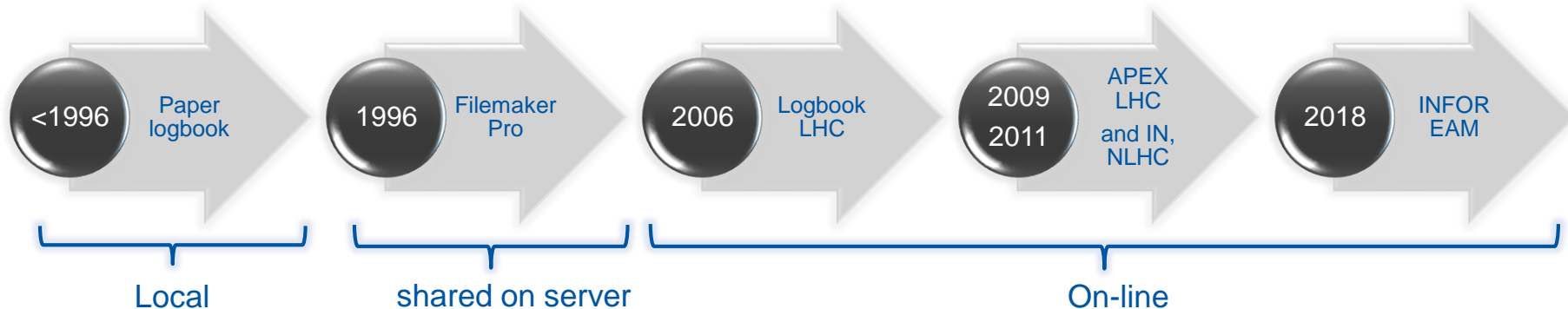
Sigrid Knoops – TE-CRG-ML

Outline

- Definition and needs
- How are we organised?
- Some statistics
- From existing to new application
- New logbook features
- Advantages
- Statistics since Go Live on March 1st 2018
- Improvements

Definition and needs

- The logbook is a daily used tool for operators and needs to be easy to use
 - The logbook shall trace and follow-up events and propose an easy way to retrieve information on past events. ALL type of events, not only work requests.
 - The logbook is a tracking tool and common technical interface from operation to the support teams when asking for interventions.
- **The logbook is the “operation bible” of the installation.**

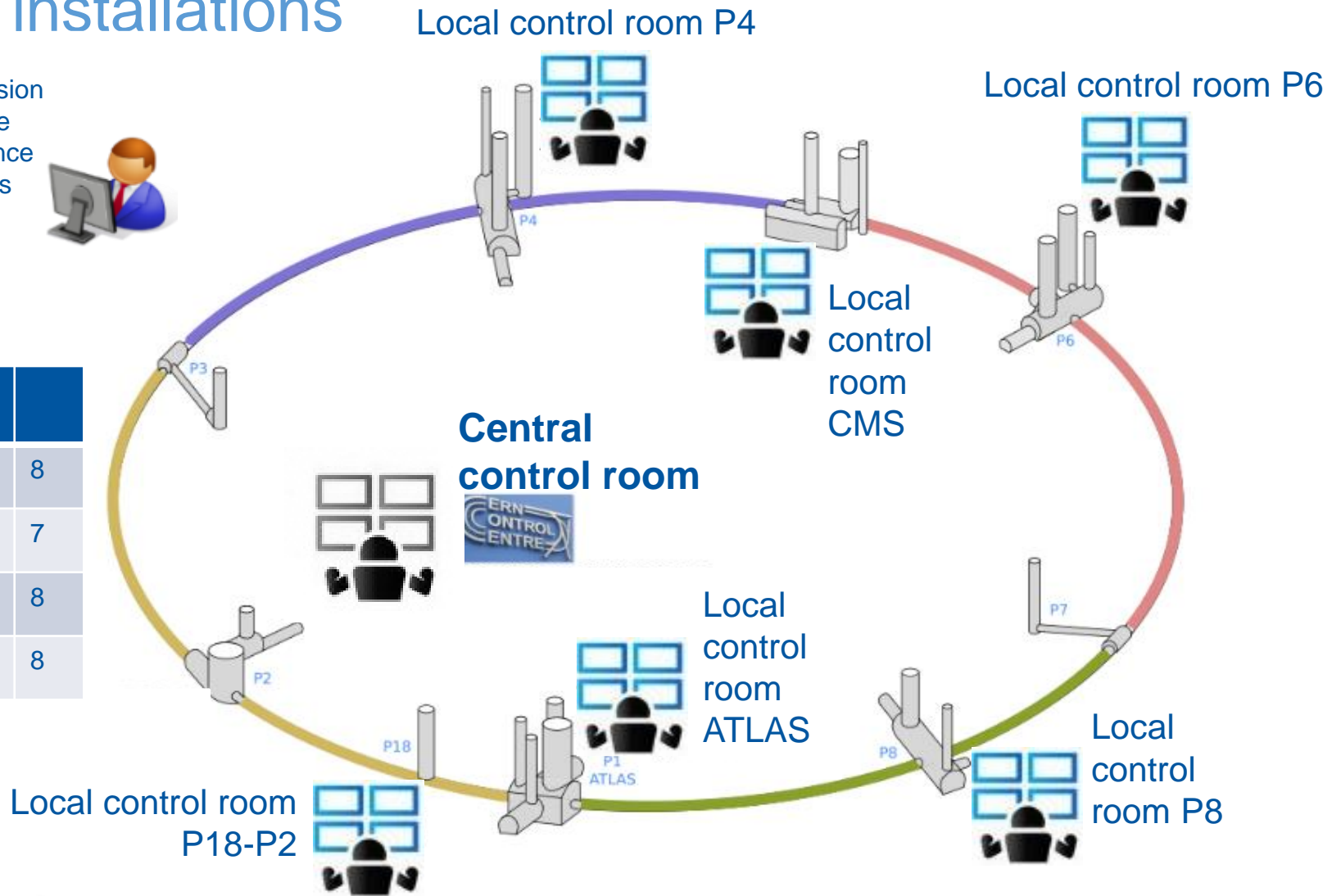


How are we organised?

LHC installations

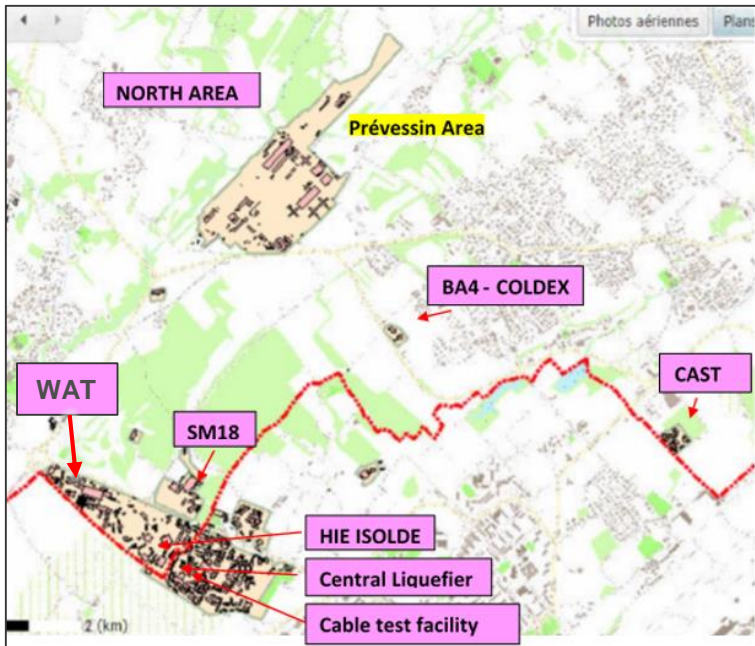


Number of operators:	
P18/P2	8
P4	7
P6/CMS	8
P8/ATLAS	8



How are we organised?

Non-LHC installations



Supervision
available
remotely
In offices



Control room North Area
(several installations,
local and remotely)



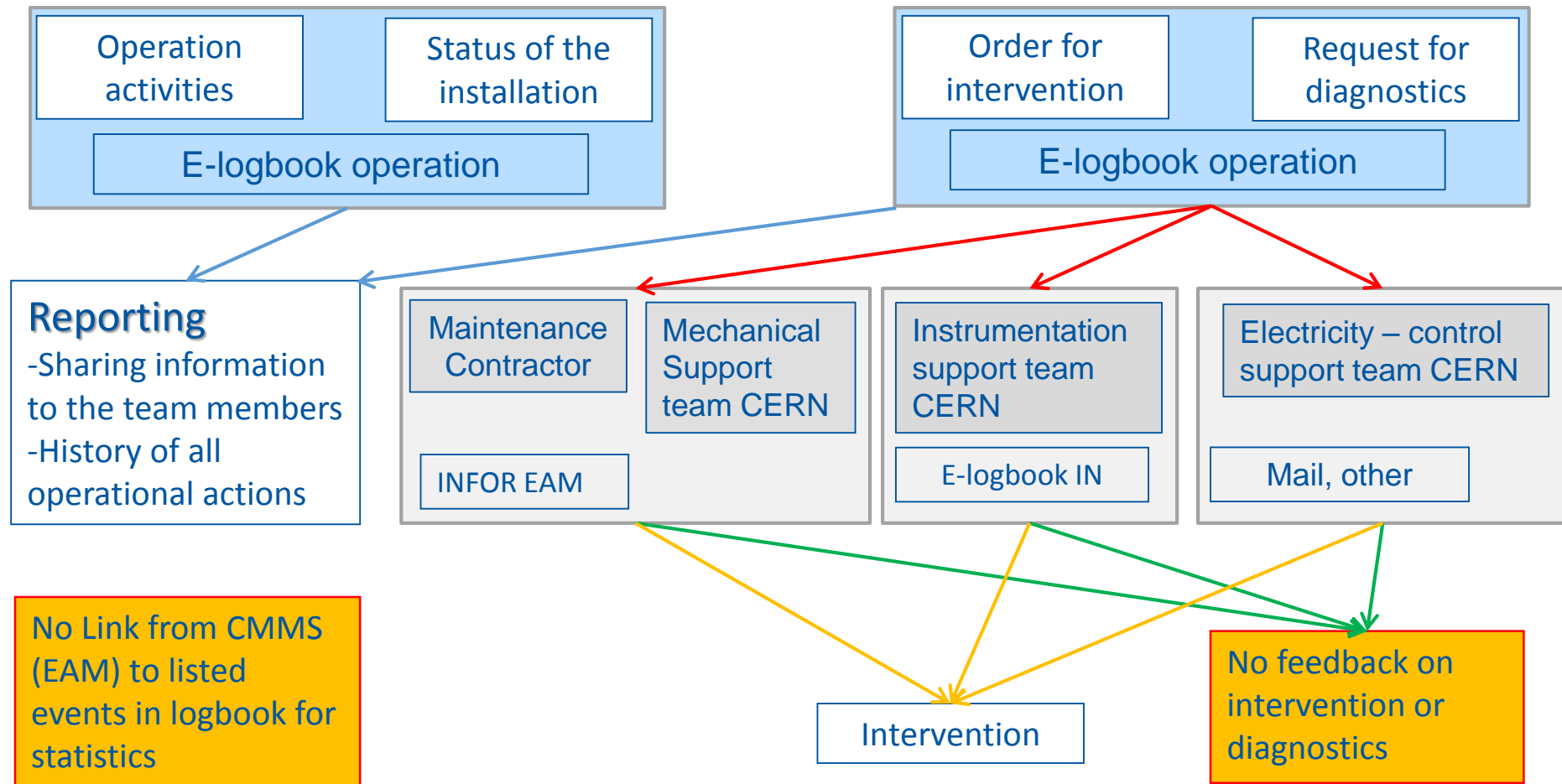
Control room SM18
(several installations,
local and remotely)



Number of operators:	Number of operators:
7	7
Number of Areas to operate	Number of Areas to operate
4	3

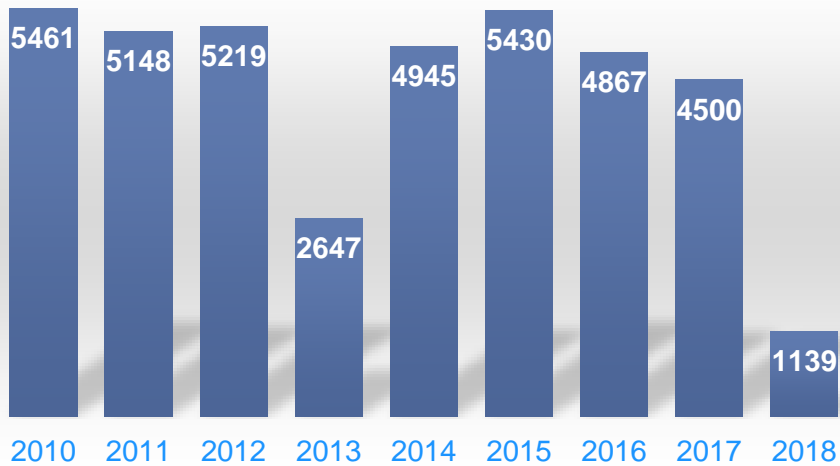
How are we organised? former logbook

Information Flow for Logbook

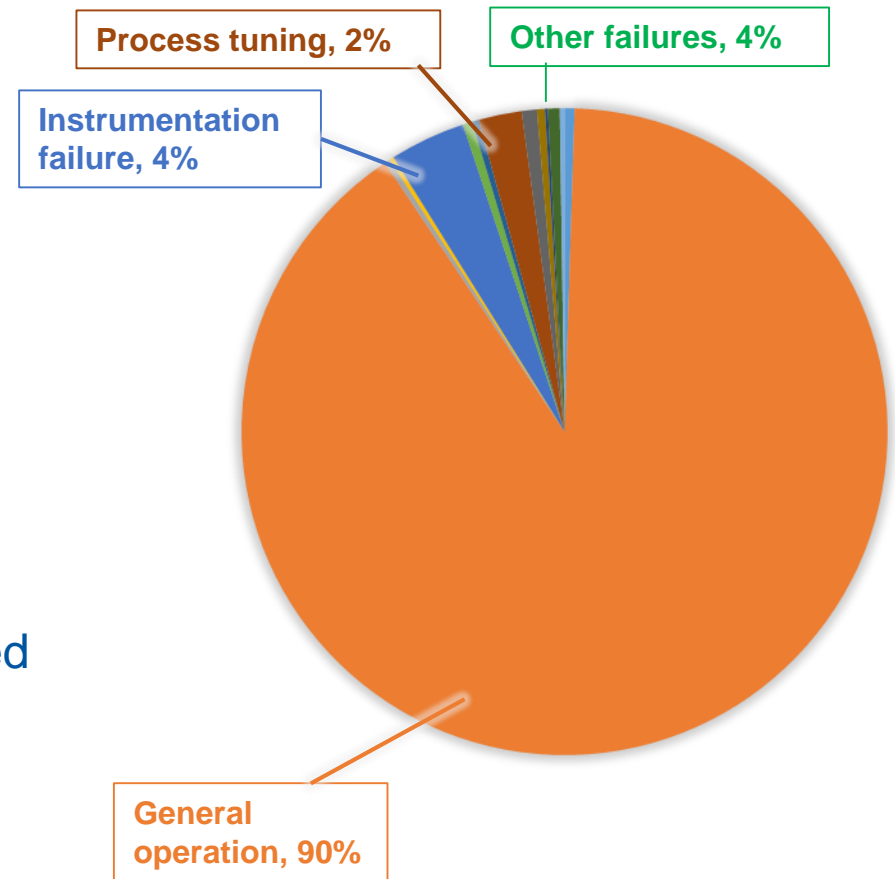


Some statistics: LHC logbook

2017, former logbook results (4500 cases)



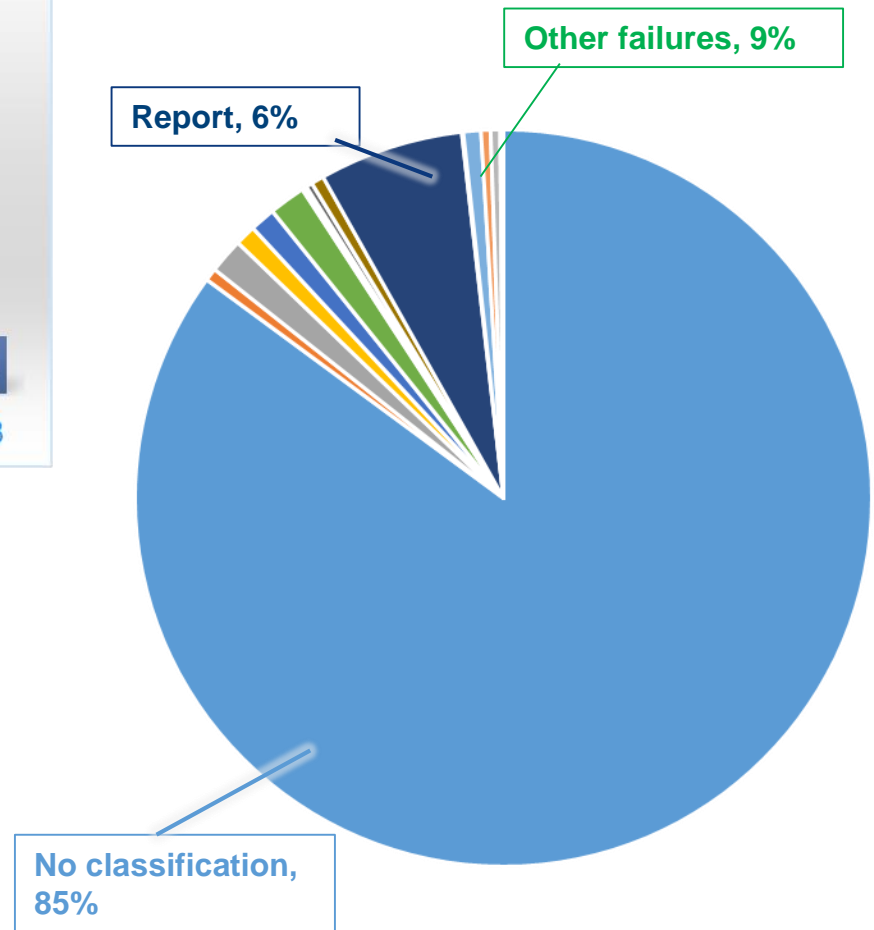
- About 4500 to 5500 cases a year
- Statistics on type of event less detailed as no many predefined event types where existing in the former logbook.



Some statistics: non-LHC logbook



2017, former logbook results (1436 cases)



Compared to LHC logbook:

- Less events
- Even less classification of events.

From existing to new application

Global list / Global List Detectors / **Open list** / Open List Detectors / Statistics / Admin / Insert Event in New Logbook

Ongoing operation

Date	Updated date	Author	Title	Equipment	Site	Num
02-OCT-2017 16:32	08-FEB-2018 16:30	BBARRIA	Plan de lecture des Q1433 et 435	Purif	CAST	20044746
View	29-OCT-2017 16:37	27-FEB-2018 17:29	Température CP Haute - Surveillance compresseur et filtre à huile	CP	Bar 163	24696462
View	28-NOV-2017 11:14	13-FEB-2018 16:16	recherche fuite helium	INFRA: Ballons He	SM18	24872640
View	08-JAN-2018 09:40	09-JAN-2018 17:16	All systeme	Cluster G - Station Longue	Bar 163	-
View	17-JAN-2018 16:02	15-MAR-2018 17:32	Start process 11TS	Cluster G - Station Longue	SM18	-
View	29-JAN-2018 11:25	01-FEB-2018 18:16	Test de fuite	Installation Cast	CAST	25061296
View	20-FEB-2018 16:50	20-FEB-2018 16:53	Rebroussement cable par Devor	CIBLE	Compass	-
View	21-FEB-2018 09:39	21-FEB-2018 14:20	NA62 - Test fermeture IPV02 sur vide isolation Crystalat LK	vacuum	NA 62	-

OFFilter

OPEN Events

Creation date	Site	Equipment	Category	Title	Author	Num	WO	Status
17-JAN 16:02	SM18	Cluster G - Station Longue	Operation	Start process 11TS	SQUIDO	11 1	2392	Open
07-MAR-2018								
Creation date	Site	Equipment	Category	Title	Author	Num	WO	Status
27-FEB 09:01	Bar 243.253	CP K2	Pre-problem	Defaut softstarter K2 en phase de démarrage	MUGNET	4	23696	Open
02-MAR-2018								
Creation date	Site	Equipment	Category	Title	Author	Num	WO	Status
28-FEB 07:19	BA6	QURTH-TAB	Stop installation	Avisé boîte froide suite trip TU1 sur défaut cooling water	LDELPRAT	1	23785	Open
01-MAR-2018								
Creation date	Site	Equipment	Category	Title	Author	Num	WO	Status
28-FEB 16:29	BA6	GACR-BA6	General operation	Mise en warm-up du cryostat	LDELPRAT	1 2	23712	Open
28-FEB-2018								
Creation date	Site	Equipment	Category	Title	Author	Num	WO	Status
28-FEB 03:45	Bar 243.253	LIGNE-GAZO	Pre-problem	Miseau gazs trop haud job 10	CLUQUET	1 2	23731	Open
28-FEB 17:13	Compass	CP2	General operation	Conditionnement compresseur/signes BF	CLUQUET	1	23714	Open
27-FEB 17:03	Compass	CRPL	General operation	Test de fuite CP CB et dewar	BBARRIA	1 1	23699	Open
28-FEB 15:06	NA 62	Kryostat, Calorimetre	General operation	Purge emergency cooler	FNICOLOT	1	23711	Open
28-FEB 09:55	BA6	GUIS-TAB	Pre-problem	Surveillance positionneur CV706 sur VB1 ligne retour vers LP CP	LDELPRAT	1	23706	Open
27-FEB-2018								
Creation date	Site	Equipment	Category	Title	Author	Num	WO	Status
24-JAN 16:47	Compass	CP2	General operation	Test etanchéité comp	CLUQUET	2 1	23628	Open
28-OCT 16:37	Bar 163	CP	Operation Ongoing	Température CP Haute - Surveillance compresseur et filtre à huile	MPVONET	13 4	23184	24696462 Open
26-FEB 17:28	Compass	CB	General operation	Test etanchéité BF dewar	CLUQUET	1	23691	Open
13-FEB 13:37	Compass	vide bulbe bulbe	Pre-problem	étanchéité, leak pump, vide etanchéité, PV22	BBARRIA	2	23727	Open

- Predefined lists for equipment and installations, at different levels
- Some predefined lists for categories
- Possibility to add document
- Link to other logbook for interventions on special instrumentation
- Link to EAM Light for creation of work orders
- Possibility to add comments
- Status Open/Closed for follow-up of actions

Global list / Global List Detectors / **Open list** / Open List Detectors / Statistics / Admin / Insert Event in New Logbook

< Back to list / Edit Event / Close event / Add Comments / e-Mail event

Event ID	23602	Author	SQUIDO
Creation date	17-JAN-2018 16:02 (Last modification: 15-MAR-2018 17:32)		
Location	SM18	Equipment	Cluster G - Station Longue
Severity	Operation Ongoing	Source	Users
Fault			
Title	Start process 11TS		
Actions	Test échangeur sous vide apres reparation test en pression		
Impact	None	WO related	
Unavailability		Chyo Ready lost	
Event status?	Open		

Documents attached

Preview	Comments	Author
		NGRAUDG

Comments for this entry

Date	Comments	Author
15-MAR-2018 17:32	Start phase 1.9k	ERMILLET
13-MAR-2018 15:30	Mise en warm-up à la demande du client	SQUIDO
08-MAR-2018 16:03	test d'isolement demande par le client	SQUIDO
04-MAR-2018 15:29	Pompage 1.9k	NEBALIN
22-FEB-2018 16:26	Passage en warm up	ERMILLET
19-FEB-2018 16:53	Passage en mode 4.6k suite à la demande du client	NGRAUDG
12-FEB-2018 17:07	modif consigne débit CL de 0.6 à 1.2g/s	NEBALIN
12-FEB-2018 10:20	Prentier test de perte sans courant sans pompage mais échangeur pas vide, fermeture de la vanne de pompage (CV081) pendant 33min, remontée en température de 110 mK	NGRAUDG
08-FEB-2018 14:31	Changement de parametre de pompage 1.60mtr - 100mtr - 50mtr - 30mtr	SQUIDO
24-JAN-2018 08:26	Lancement du pompage à 1.9k	SQUIDO
22-JAN-2018 11:03	test d'isolement demande par le client valeur bloquée débit réduit à 0.3g/s sur CV023 CV033	SQUIDO

From existing to new application



Direct link to other logbook (Tunnel Instrumentation Support Team) for creating a request, direct link to INFOR EAM for creating a work order



Possible to link documents or screenshots from supervision

but



No feedback on intervention or diagnostics from interveners



No link from CMMS (EAM) to logbook events for better diagnostics, statistics



Different applications to be used by the operators and support teams



Several different logbooks in parallel with different layout



No developer support for existing logbook, only maintenance support

From existing to new application

- One common approach for all logbooks for the cryogenic installations
- Integration in an existing application and therefore developer support by a CERN support group
- Linking to other logbooks whenever possible
- The operators should trace ALL actions, not only demands for interventions or reporting on faults.
- Easy to use and layout adapted to the needs of all operation teams
- More predefined lists for better statistics, better analysis

➤ INFOR EAM CASE MANAGEMENT

New logbook features: Presentation of the new application

Operations - CASE

Site	Event Start Date	Case	Source	Description	Name	Subtype	Crypto ready loss duration	Subsystem	Equipment	Equipment Class	Status	Created By	Date Created	Date Updated
Q50C	12-AUN-2009-17-33	70077	EHO48	Old Logbook	MICHEL COMBE		Unknown	RM_23			Done	MICHEL COMBE	15-MAY-2009 11:18	15-MAY-2009 11:18
Q50C	13-AUN-2009-17-33	70096	EHO48	Old Logbook	MICHEL COMBE		Unknown	CRYO 2			Done	MICHEL COMBE	15-MAY-2009 11:20	15-MAY-2009 11:20
Q50C	13-AUN-2009-09-43	70065	COG83	Old Logbook	MICHEL COMBE		Unknown	QSCA_2			Done	MICHEL COMBE	15-MAY-2009 11:12	15-MAY-2009 11:12
Q50C	13-AUN-2009-19-25	70084	COG738	Old Logbook	MICHEL COMBE		Unknown	QSCA_4			Done	MICHEL COMBE	15-MAY-2009 09:05	15-MAY-2009 09:05
Q50C	13-AUN-2009-19-28	70033	Unlabeled	Old Logbook	MICHEL COMBE		Unknown	QSCA_2			Done	MICHEL COMBE	15-MAY-2009 07:53	15-MAY-2009 07:53
Q50C	13-AUN-2009-19-21	70002	EHO48	Old Logbook	MICHEL COMBE		Unknown	ABC_45			Done	MICHEL COMBE	15-MAY-2009 07:25	15-MAY-2009 07:25
Q50C	13-AUN-2009-15-52	70011	C1	Old Logbook	ARNAUD GALLON		Unknown	CRYO			Done	ARNAUD GALLON	15-MAY-2009 06:02	15-MAY-2009 06:02
Q50C	13-AUN-2009-15-56	70089	FC283	Old Logbook	ARNAUD GALLON		Unknown	CRYO 2			Done	ARNAUD GALLON	15-MAY-2009 05:02	15-MAY-2009 05:02
Q50C	13-AUN-2009-15-58	70099	7008	Old Logbook	ARNAUD GALLON		Unknown	CRYO 2			Done	ARNAUD GALLON	15-MAY-2009 03:09	15-MAY-2009 03:09
Q50C	13-AUN-2009-15-59	70098	SRK2	Old Logbook	ARNAUD GALLON		Unknown	ABC_45			Done	ARNAUD GALLON	15-MAY-2009 02:41	15-MAY-2009 02:41
Q50C	13-AUN-2009-17-51	70097	T3042	Old Logbook	ANNE EYCHENNE		Unknown	CRYO			Done	ANNE EYCHENNE	15-MAY-2009 22:01	15-MAY-2009 22:01
Q50C	14-AUN-2009-08-52	70096	T3	Old Logbook	ERIC MILLET		Unknown	CRYO 2			Done	ERIC MILLET	15-MAY-2009 18:54	15-MAY-2009 18:54
Q50C	14-AUN-2009-09-41	70095	ZDF7	Old Logbook	FRANCOIS		Unknown	CRYO 8			Done	FRANCOIS	15-MAY-2009 09:39	15-MAY-2009 09:39

In INFOR EAM Extended
 → not usable as layout,
 → not adapted to our needs

The new logbook has been created on the same web application as the CERN in-house Light version (EAM Light).

EAM Light – Work Orders

Case Code	Date Created	Created By	Work Order	PM Code	Equipment	Description	Assigned Department	Requested Intervention Period	Priority
Q-NR1CA	15-MAR-2018	CLUGJET	21588873		QBRH-AC-CV227	Voir des cartes Press	Q50P	SD - Facility Shutdown	Urgence
Q-NR1CA	15-MAR-2018	SAMKMO	21583205		QVFA-LE104	Revision complete du detecteur de	Q50V	Whenever possible	Urgence
Q-LHCACCA	14-MAR-2018	JOURAND	21583507		QSCB-4-SCV568	Garniture a changer sur SCV568	Q50E	To be defined by Operation	
Q-LHCACCA	14-MAR-2018	JOURAND	21583502		QSCA-4-P300	Changement capteur sur transmetteur de temperature T1237	Q50E	Whenever possible	Bas
Q-NR1CA	14-MAR-2018	CLUGJET	21584995		QURH-A-PV282	Fuite AC Q282	Q50E	SD - Facility Shutdown	Urgence
Q-LHCACCB	14-MAR-2018	SAMKMO	21584794		QSCCA-8-P310	Pompe de demarage	Q50V	Whenever possible	
Q-NR1CHS	14-MAR-2018	RELDRAIN	21584674		QCRS-K0002	Apparition de fuites à l'ouverture d'un traitement Logon	Q50M	To be defined by Operation	
Q-LHC1FR2	14-MAR-2018	NBAUN	21583727		QLCTH-9-0001	Creation case ventille pour CRB	Q50M	To be defined by Operation	
Q-NR1CHS	14-MAR-2018	MICHAET	21583906		QSCB-199-002	Inspection capteur arret/retourne preference grille	Q50M	Whenever possible	Haute
Q-LHCACCB	14-MAR-2018	SMARTIN	21582644		HCLHC1CHAD-CR00002	Remplacement Cable DCS-H-Qua-en02 PB	Q50E	To be defined by Operation	
Q-LHCACAL	15-MAR-2018	RAMUNY	21583360		QSC3H-A-REV005	Remplacement CV increase slide valve HSCP3	Q50PE	YETS 2017-2018	
Q-LHCACCB	14-MAR-2018	SMARTIN	21581795		HCLHC1CHAD-CR00003	Remplacement cable Automate GSCA-EMC-902	Q50E	To be defined by Operation	
Q-LHCACCA	14-MAR-2018	KHAFI	21581349		QSCA-4-15A68H	remplacement fluide	Q50E	To be defined by Operation	Haute
Q-LHC1CHS	14-MAR-2018	KHAFI	21581330		QURH-C-1P230	remplacement fluide turbine 1	Q50PE	To be defined by Operation	Haute
Q-CR10708	14-MAR-2018	CLUGJET	21581205		QVPT0424	maintenance groupe mobile	Q50V	SD - Facility Shutdown	Bas
Q-LHCACCA	14-MAR-2018	RELDRAIN	21580933		QSCB-4	Compatibilite equipage CRB sur detendeur retour	Q50M	To be defined by Operation	

EAM Light – Logbook

Site	Event Start Date	Case	Source	Description	Name	Subtype	Crypto ready loss duration	Subsystem	Equipment	Equipment Class
Q50L	2018-03-19 11:31	77854	Revue/Inspection	give sur CV03 QURA	Information			QMS-4	QURA-4	Q50F
Q50L	2018-03-19 11:23	77858	Revue/Inspection	Intervention CE sur CV01 DFBA0-SCM	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 10:12	77848	Revue/Inspection	Inspection soupapes DF8	Report			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 09:58	77845	Revue/Inspection	LPCA equipped for intervention Q5068	Information			QMS-4	QMS-4	Q50C
Q50L	2018-03-19 09:09	77844	Revue/Inspection	mise en fond ADS1	Information			QMS-8	QURCA-8	Q50F
Q50L	2018-03-19 06:43	77841	Revue/Inspection	Loss of C3 - Level High DF8AB	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 05:44	77840	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:29	77838	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:24	77837	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77836	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77835	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77834	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77833	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77832	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77831	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77830	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77829	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77828	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77827	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77826	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77825	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77824	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77823	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77822	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77821	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77820	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77819	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77818	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77817	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77816	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77815	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77814	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F
Q50L	2018-03-19 03:23	77813	Revue/Inspection	Change CCC sur A16	Information			QMS-2	QMS-2	Q50F

New logbook features: List view

The screenshot displays the EAM CRG Logbook LHC interface. On the left, a sidebar contains navigation options: 'Available Logbooks' (1), 'CRG Logbook Non LHC', 'CRG Logbook LHC', 'New Logbook Entry' (2), and a list of predefined filters (3). The main area shows a table of records with columns: Site, Event Start Date, Case, Source, Description, Nature, Subtype, Cryo ready loss duration, Subsystem, Equipment, and Equipment Class (5). A filter configuration panel (4) is visible above the table, and an 'Export to CSV' button (6) is at the bottom right.

Site	Event Start Date	Case	Source	Description	Nature	Subtype	Cryo ready loss duration	Subsystem	Equipment	Equipment Class
Q02L	2018-03-19 11:23	77858	Ronde/Inspection	Intervention CE sur CV891 DFBAD LCM	Information			QA2_DFB_23		Q3BF
Q04L	2018-03-19 10:12	77848	Ronde/Inspection	Inspection soupapes DFB	Report			QA4_DFB_34		
Q06L	2018-03-19 09:18	77845		LHCA stopped for intervention LSH668	Information			Q45A-6		Q35C
Q08L	2018-03-19 09:09	77844		rise en froid ADS1	Information			Q18A-8	QURCA-8	Q3BF
Q02L	2018-03-19 06:43	77841	Beep	Loss of CS - Level High DFBMB	Fault			QA2_DFB_23		
	2018-03-19 05:44	77840		Consignes CCC shift 6-14h	Instructions	CCC consignes				
	2018-03-18 21:23	77838		consignes SHFT CCC 22h - 6h	Instructions	CCC consignes				
	2018-03-18 13:46	77837		Consignes CCC for Afternoon shift 1400-2200	Instructions	CCC consignes				
Q04L	2018-03-18 11:33	77836	Beep	Loss of FEC Communication S45	Report		02:34:00	QA4_DFB_45		
	2018-03-18 05:32	77835		Consignes CCC shift 6-14h	Instructions	CCC consignes				
	2018-03-17 21:20	77834		consignes SHFT CCC 22h - 6h	Instructions	CCC consignes				
Q01A	2018-03-17 21:10	77833		Default SP 11C1750	Report			QUI2H-A		Q4R
Q01A	2018-03-17 20:57	77832		Default control EH230	Report			QUR1H-A	QUR1H-A-EH0230	Q4QR
Q01A	2018-03-17 16:57	77831		1P364 pompe LHe TOR	Fault			QXP1H-A	QXP1H-A-1P364	Q4Q
	2018-03-17 12:53	77830		Consignes CCC for Afternoon shift 1400-2200	Instructions	CCC consignes				
Q01A	2018-03-17 12:26	77829	Beep	Trip of Tu3 Atlas MR	Information			Q45A-A	QUR1H-A	Q3BF
Q04L	2018-03-17 11:41	77828		Beep niveau DFBLC	Fault	General operation failure		QA4_DFB_34		
Q01A	2018-03-17 11:00	77827		Reduced SP on Toroid Dewar	Information			QXP1H-A	SPOM__FWP-00999900	
Q06L	2018-03-17 07:24	77814	Other observation source	QurCA attempted to connect 4.5K via Qui	Fault	Control Software failure		QURCA-6		
	2018-03-17 05:39	77813		Consignes CCC shift 6-14h	Instructions	CCC consignes				

1. Link to the 2 logbooks (LHC and non-LHC installations)
2. Create new event
3. List of the predefined filters
4. Opens the filter configuration panel

The filter configuration panel shows a dropdown menu for 'Filter: Case Starts With' with options for 'Case' and 'Starts With'. Below the dropdown are logical operators 'AND', 'OR', and 'X'. The panel also displays the column headers for the logbook table: Site, Event Start Date, Case, Source, Description, Nature, Subtype, Cryo ready loss duration, Subsystem, Equipment, and Equipment Class.

5. You can sort the columns by clicking once or twice on the column-head
6. You can export to Excel the results of the table

New logbook features: Record view

Save + New Delete LOGBOOK ENTRY

BASE EVENT CAPTURE

Nature Description*

Date Created Date Updated Event Source

Created By SIGRID

POSITION CAPTURE +

CAPTURE +

CRYO READY LOSS CAPTURE +

ACTIVITY CAPTURE +

EVENT DETAIL CAPTURE +

COMMENTS +

LINKS (0) +

PARENT EVENTS (0) +

FOLLOW-UP WORK ORDERS (0) +

CONNECTIONS +

Depending on the Nature, some blocks are opened, for providing more details

The different blocks

- Base event capture
- Position capture
- Capture (special)
- Cryo Ready loss Capture
- Activity Capture
- Event Detail Capture
- Comments block
- Additional Documents block
- Links block
- Parent Events block
- Follow-up work orders block

BASE EVENT CAPTURE

Nature Description*

Fault

Ongoing operation

Report

Instructions

Modification request

Information

Old Logbook (not for new event)

Event Source

Created By SIGRID

Examples:

- With nature = modification request, only the “modification request” (special) capture block is expanded.
- With nature = report, the report capture block is expanded, together with the activity capture block.
- With nature = fault, the fault capture block is expanded, together with the activity capture block and the cryo ready loss capture block.

New logbook features: Increase the number of predefined lists

Predefined lists are important for good statistics

Nature of the event

Fault

Ongoing operation

Report

Instructions

Modification request

Information

Old Logbook (*not for new event*)

Subtype of FAULT

Power failure

Water & compressed air failure

Communication failure

Instrumentation failure

Mechanical failure

Control Software failure

Control Hardware failure

Vacuum failure

User failure

Process tuning failure

General operation failure

Human error failure

Subtype of MODIFICATION REQUEST

P&ID documentation

Electrical documentation

Control documentation

Other documentation

Control logic

user interface

Electrical cabling

mechanics

GMAO-CMMS

Subtype of INSTRUCTIONS

CCC consignes

Liquid Transfer

Gaz Transfer

New logbook features:

Link with the existing functional positions of INFOR EAM

Record view:

The screenshot displays the 'LOGBOOK ENTRY' record view in INFOR EAM. It is divided into two main sections: 'BASE EVENT CAPTURE' and 'POSITION CAPTURE'. The 'BASE EVENT CAPTURE' section includes fields for 'Nature', 'Description*', 'Date Created', 'Date Updated', 'Event Source', and 'Created By' (with the value 'SIGRID'). To the right of this section is a vertical list of expandable sub-sections: 'EVENT DETAIL CAPTURE', 'COMMENTS', 'LINKS (0)', 'PARENT EVENTS (0)', and 'FOLLOW-UP WORK ORDERS (0)'. The 'POSITION CAPTURE' section, which is expanded, contains fields for 'Site', 'Sub System', 'Equipment Class', 'Equipment', and 'Equipment Code Other Info'.

A CASE (an event) can be attached to:

- an existing equipment in the INFOR EAM equipment list
- an equipment at a higher level in the structure
- or **even** an equipment not yet existing in the INFOR EAM equipment list

New logbook features:

Link to other information in INFOR or other databases

Record view:

The screenshot displays the 'LOGBOOK ENTRY' record view. The main interface is divided into several sections: 'BASE EVENT CAPTURE' (with fields for Nature, Description, Date Created, Date Updated, Event Source, and Created By), 'POSITION CAPTURE', 'CAPTURE', 'CRYO READY LOSS CAPTURE', and 'ACTIVITY CAPTURE'. On the right, there are expandable sections for 'EVENT DETAIL CAPTURE', 'COMMENTS', 'LINKS (0)', 'PARENT EVENTS (0)', and 'FOLLOW-UP WORK ORDERS (0)'. A 'CONNECTIONS' window is overlaid on the right side, showing a network of linked events. The central node is a log entry with ID 21086, titled 'test', with a description 'Change PV058 in CV058 (bypass valve Nexans valvebox)'. It is linked to two other events: ID 1808834 (Change PV058 in CV058 (bypass valve Nexans valvebox)) and ID 10329 (Beep TT_BS > 30K MI 5885).

If the event has been linked to other events, work orders or URLs, the connection block is showing all connections in a dynamic way.

New logbook features:

Use of colours and icons for fast retrieval

List view:

EAM CRG Logbook LHC Support Request SIGRID (QCERN+)

Select Dataspy: All Records Run

Filter: Case Starts With

Site	Event Start Date	Case	Source	Description	Nature	Subtype	Cryo ready loss duration	Subsystem	Equipment	Equipment Class
Q04L	2018-03-15 16:14	77708	Beep	Multiples Beep sur niveau bas DFBLC	Information			QA4_DFB_34		
	2018-03-15 15:43	77697		Changements jauges a vide QSKA	Report					
Q02L	2018-03-15 15:39	77698	Beep	Beep Niveau haut DFMBM	Information			QA2_DFB_23		
Q06L	2018-03-15 14:31	77745		Arret pour test pompe desni	Report			Q45A-6		
Q02L	2018-03-15 14:00	77689	Other observation source	mauvais calibrage des vannes DADB31-06R2-CV891 + DADB34-	Fault	Control Hardware failure		QA2_DFB_23	QIVEC.AA6R2.CV891	
	2018-03-15 13:39	77687		consignes SHIFT CCC 14h - 22h	Instructions	CCC consignes				
Q01A	2018-03-15 13:33	77686		connexion B3B8	Report			QXPTH-A		Q4R
Q08L	2018-03-15 10:18	77677		Arret LHCCA pour remplissage d'huile	Information			QSCCA-8		
Q18L	2018-03-15 09:38	77675		transfert Helium P6 -> P18	Information	Balance Helium		QSV-18		
Q08L	2018-03-15 08:55	77674		Deconnection LHCA						
Q02L	2018-03-15 08:23	77673	Beep	Perte de 3 TT891/893 sur DFBC LCM	Report		00:42:00	QA2_DFB_12	QYTCF.UA23.64	
	2018-03-15 05:39	77672		Consignes CCC shift 06 -> 14h	Instructions	CCC consignes				
Q01A	2018-03-14 23:56	77671		Report on all MR actions this week (new PAD and new CPU)	Report			Q45A-A		
	2018-03-14 21:17	77670		Consignes CCC shift 22-6h	Instructions	CCC consignes				
	2018-03-14 17:26	77665	Other observation source	Consigne P6 >>> CCC	Instructions	CCC consignes				
Q08L	2018-03-14 17:24	77664		consignes ccc P8	Instructions	CCC consignes				
Q04L	2018-03-14 17:23	77663		Consigne P4 -> CCC	Instructions	CCC consignes				
Q02L	2018-03-14 17:19	77661		Consignes P18/P2	Instructions	CCC consignes				
Q01A	2018-03-14 17:09	77667		Instructions Atlas -> CCC	Instructions	CCC consignes				
Q06L	2018-03-14 16:55	77660	Beep	Perte CM suite a un Quench Q5L6	Information		01:09:00	QA6_SS_56		
Q02L	2018-03-14 14:46	77657		test sur cheminee 31 DFBL56R2-1-48	Information			QA2_DFB_23		

Records: 90 of 1000+ Export to CSV

To help operators to find rapidly events of the same “category”, colour coding and small icons are used to complete the visual information.

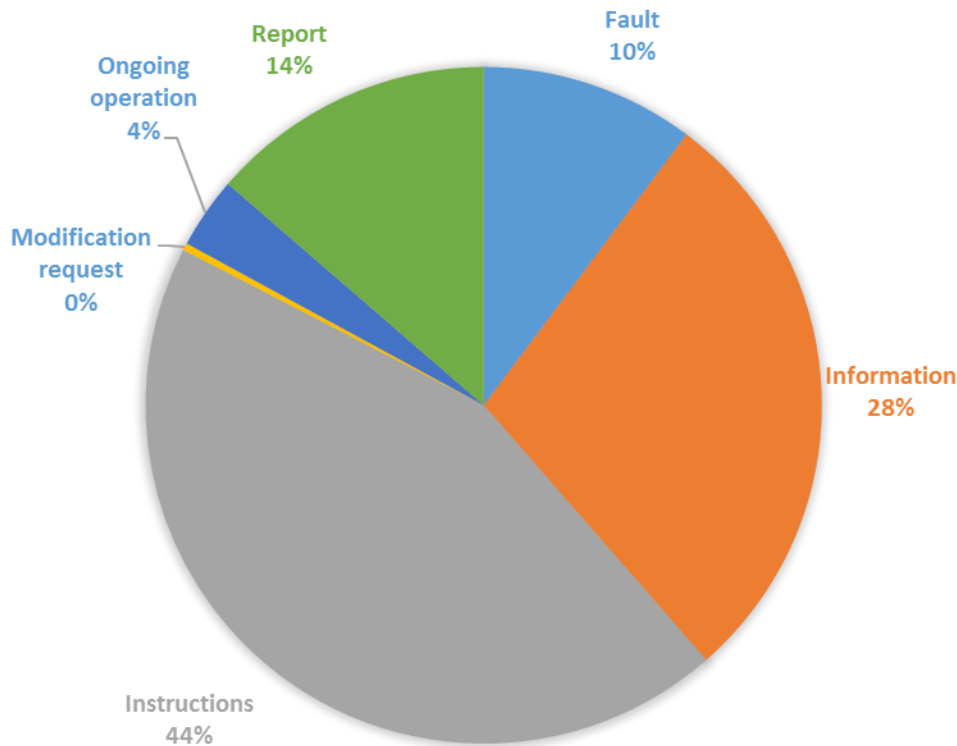
Advantages

- Events and work orders in the same database -> better statistics possible
- Same logbook approach for all cryogenic installations -> better comparisons possible
- On one equipment, be able to see ALL information: operation actions, parameter changes, work request, intervention reports,... -> easier for the equipment responsible
- long-term developer support -> efficient and integrated tool
- Very easy way to add documents, print screens; even on a tablet or smartphone -> add as many documentation as needed, stored in the document management database EDMS.
- Watcher list on event: creator (+ whom ever is added) for using alert manager from INFOR EAM -> Notification when changes occur on event or linked work orders

Statistics since Go Live on March 1st 2018

LHC logbook

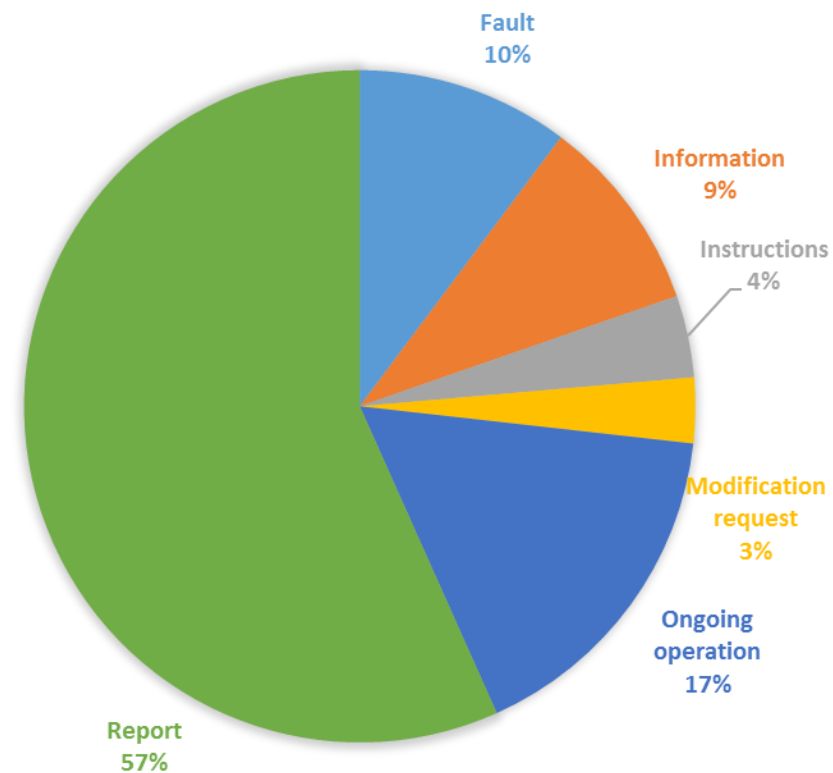
(293 events, 200% of former logbook)



- General operation (old) -> Instructions (New)
- LHC run has not yet started

Non-LHC logbook

(127 events, 200% of former logbook)



- Immediate use of new event types
- Some installations already started the run 2018

Improvements

In operation since the 1st of March 2018 – only 2 weeks.

Training sessions have been held for the operation teams.

We have had a lot of positive feedback and some improvement proposals.

Still to come:

- Be able to clone an event
- Be able to save predefined filters (dataspy)
- Create work requests dedicated for the intervention request on LHC special tunnel instrumentation (now, it is still an APEX based logbook)
- Pentaho cubes and dedicated reports for statistics
- Open the logbook for read-access to non-INFOR users and review write access.
- Whenever needed, improve predefined lists for even better statistics



Questions?

Fragen?

Thanks for listening

