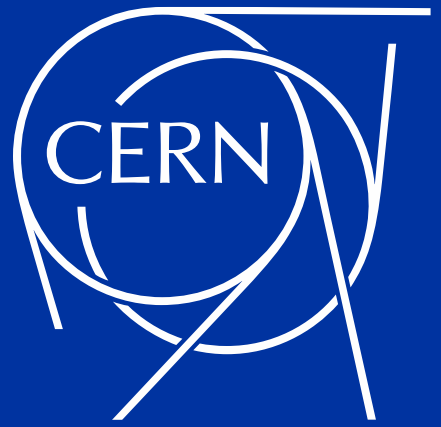


GUCC

(**G**roupe des **U**tilisateurs **C**AO du **C**ERN)

CAD forum

2023-11-06

Agenda

- The GUCC and its mandate
- Local correspondents network
- CAD usage at CERN
- Ongoing working groups
- Useful information

Evolution of the steering committee

GUCS

Groupe **U**tilisateurs **C**ATIA **S**marteam

Thanks to Yvon Muttoni

GUCC

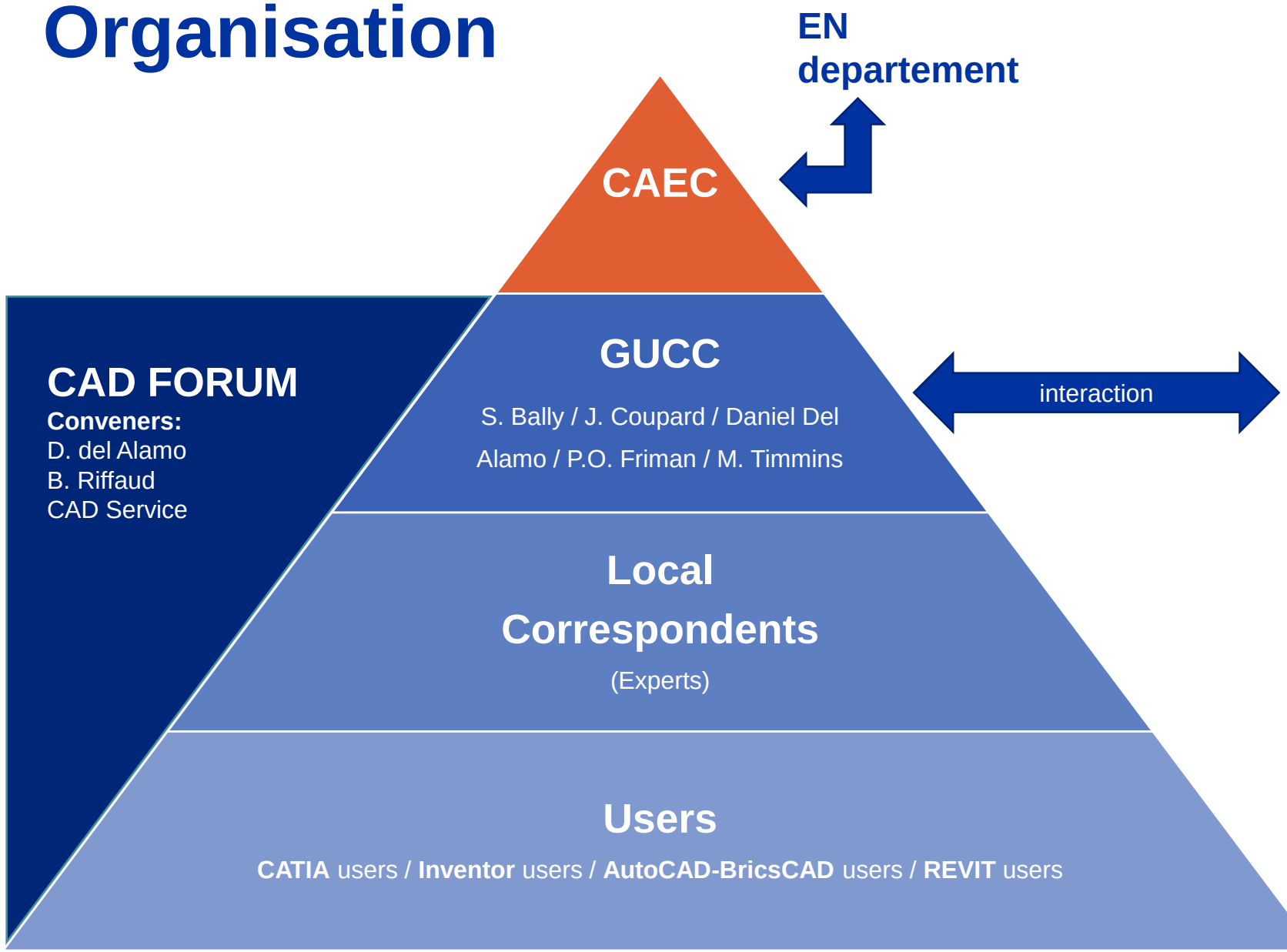
Groupe **U**tilisateurs **C**AD du **C**ERN

Multi CAD

Steering committee:
Stephane Bally EP/CMX
Julie Coupard EN/ACE
Daniel Del Alamo EN/ACE (scientific secretary)
Per-Olof Friman EN/IM PLM team
Marc Timmins EN/MME

AUTODESK REVIT
AUTODESK AutoCAD
AUTODESK INVENTOR
CATIA
BricsCAD®
SMARTEAM
PLM

Organisation



Design Office Responsible

- Civil Engineering (SCE-SAM): **Ludovic Barthelemy**
- Experiments
  - ATLAS (EP-ADO): **Lorenzo Quercia**
  - Alice
  - CMS (EP-CMX): **Stephane Brachet**
  - LHCb
- Integration
  - Accelerators (EN-ACE): **Julie Coupard**
  - Experimental Areas (BE-EA): **Michael Lazzaroni**
- Mechanics (EN-MME): **Alessandro Bertarelli** et **Ofelia Capatina**
- Mechatronics
- Services
  - Electrical (EN-EL): **Marko Wolf**
  - HVAC (EN-CV): **Yannic Body**
  - Tertiary HVAC (SCE-SAM): **Christophe Martel**

Catalogue

- **Raphael Leuxe** (EN-MME)

ATS Quality Service

- **Stephan Petit** (EN-ACE)

Configuration and Layout

-

GUCC External Network

CNRS/IN2P3
- Mathieu Walter (CAD Service)

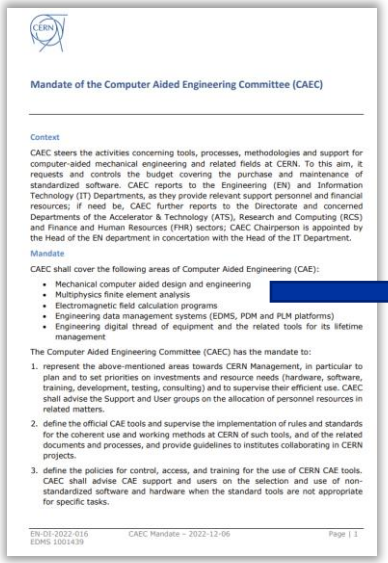
ESS
- Fabien Rey (Integration) - fabien.rey@ess.eu

ITER
- Eric Martin (Design Office)

SLAC
- Robert Coy (Integration) - rcoy@slac-stanford.edu

GUCC mandate

CAEC mandate EDMS 1001439



Mandate of the Computer Aided Engineering Committee (CAEC)

Context

CAEC steers the activities concerning tools, processes, methodologies and support for computer-aided mechanical engineering and related fields at CERN. To this aim, it requests and controls the budget covering the purchase and maintenance of standardized software. CAEC reports to the Engineering (EN) and Information Technology (IT) Departments, as they provide relevant support personnel and financial resources; if need be, CAEC further reports to the Directorate and concerned Departments of the Accelerator & Technology (ATS), Research and Computing (RCS) and Finance and Human Resources (FHR) sectors; CAEC Chairperson is appointed by the Head of the EN department in concertation with the Head of the IT Department.

Mandate

CAEC shall cover the following areas of Computer Aided Engineering (CAE):

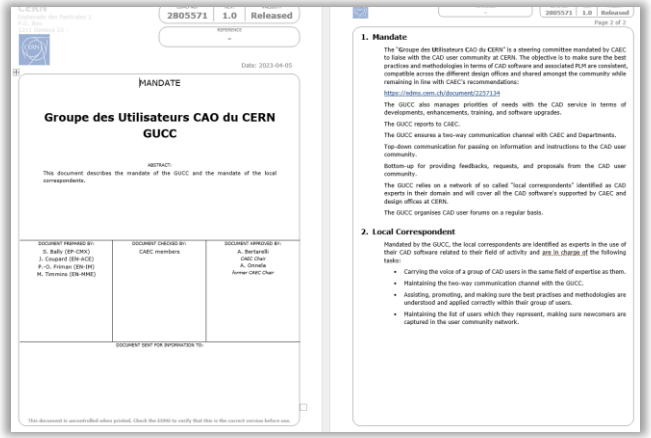
- Mechanical computer aided design and engineering
- Multiphysics finite element analysis
- Electromagnetic field calculation programs
- Engineering data management systems (EDMS, PDM and PLM platforms)
- Engineering digital thread of equipment and the related tools for its lifetime management

The Computer Aided Engineering Committee (CAEC) has the mandate to:

1. represent the above-mentioned areas towards CERN Management, in particular to plan and to set priorities on investments and resource needs (hardware, software, training, development, testing, consulting) and to supervise their efficient use. CAEC shall advise the Support and User groups on the allocation of personnel resources in related matters.
2. define the official CAE tools and supervise the implementation of rules and standards for the coherent use and working methods at CERN of such tools, and of the related documents and processes, and provide guidelines to institutes collaborating in CERN projects.
3. define the policies for control, access, and training for the use of CERN CAE tools. CAEC shall advise CAE support and users on the selection and use of non-standardized software and hardware when the standard tools are not appropriate for specific tasks.

EN-DI-2022-016 CAEC Mandate – 2022-12-06 Page | 1
EDMS 1001439

GUCC mandate EDMS 2805571



MANDATE

Groupe des Utilisateurs CAO du CERN
GUCC

ABSTRACT:
This document describes the mandate of the GUCC and the mandate of the local correspondents.

1. Mandate

2. Local Correspondent

- Reports to CAEC
- Sets Priorities to support service for tools enhancements.
- Top-down communication with CAD users.
- Collect feedback from CAD user community.
- Relying on local expert users (local correspondents) for communication and feedback from users.
- Organisation of forums.

GUCC communication tools

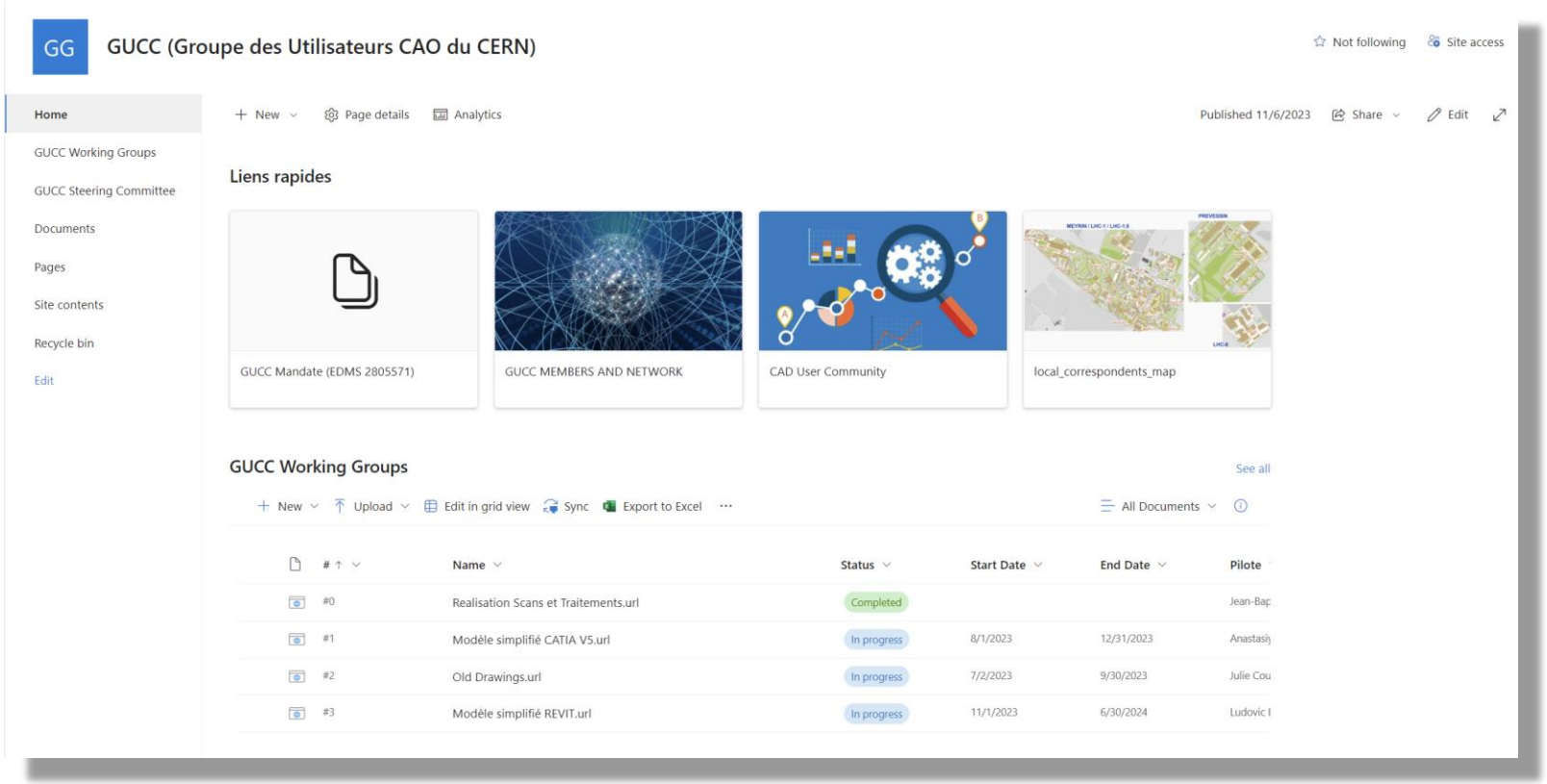
GUCC website

GUCC (Groupe des Utilisateurs CAO du CERN) - Home (sharepoint.com)

CAD forums

- Conveners
  Daniel del Alamo
  Benoit Riffaud
- 4 forums per year

GUCC-Steering@cern.ch



GUCC – Local correspondents

MEYRIN / LHC-1 / LHC-1.8

PREVESSIN

LHC-8

Missing local correspondents:

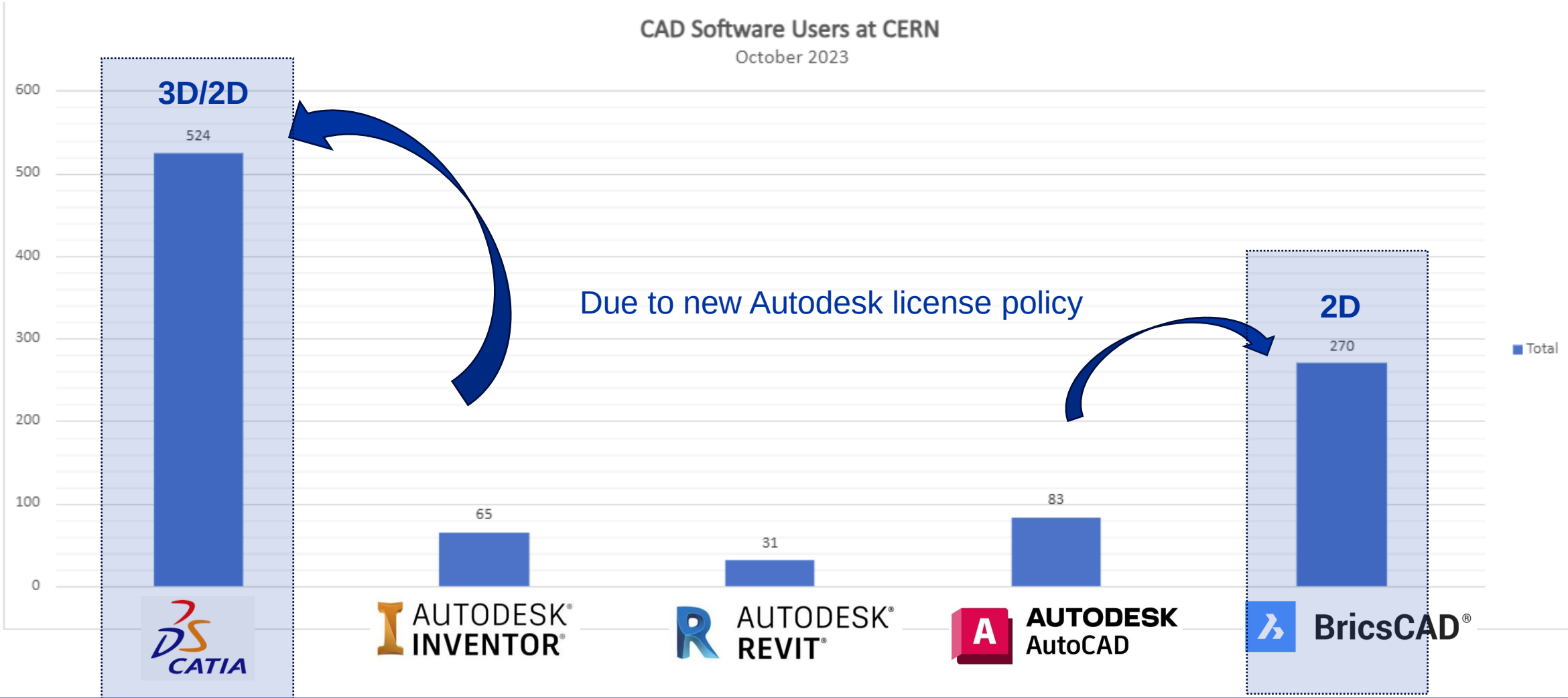
- LHC-1.8
- LHC-8
- Meyrin-1
- Meyrin-2
- Meyrin-4
- Meyrin-7
- Meyrin-11
- Meyrin-13
- Meyrin-14
- Prevessin-1

Any volunteers ?

Site	Mail	CAD_Tool
LHC-1		
	edouard.demeure@cern.ch	CATIA
	martin.doubek@cern.ch	BricsCAD
Meyrin-3		
	nicolas.sebastien.chritin@cern.ch	CATIA
Meyrin-5		
	karol.rapacz@cern.ch	CATIA BricsCAD
Meyrin-6		
	angel.navascues.cornago@cern.ch	CATIA Revit Inventor AutoCAD BricsCAD
Meyrin-8		
	damien.brethoux@cern.ch	CATIA BricsCAD
	filip.kubaszak@cern.ch	BricsCAD
Meyrin-9		
	cristina.penades.huesca@cern.ch	CATIA BricsCAD
	jean-pierre.billon.grand@cern.ch	CATIA
Meyrin-10		
	julien.pascal.dequaire@cern.ch	CATIA
	johan.paul.dauge@cern.ch	CATIA Revit AutoCAD BricsCAD
Meyrin-12		
	christophe.bault@cern.ch	CATIA BricsCAD
	yoann.obry@cern.ch	CATIA Revit AutoCAD BricsCAD
Prevessin-2		
	regis.seidenbinder@cern.ch	CATIA
	stephane.brachet@cern.ch	CATIA BricsCAD
Grand Total		

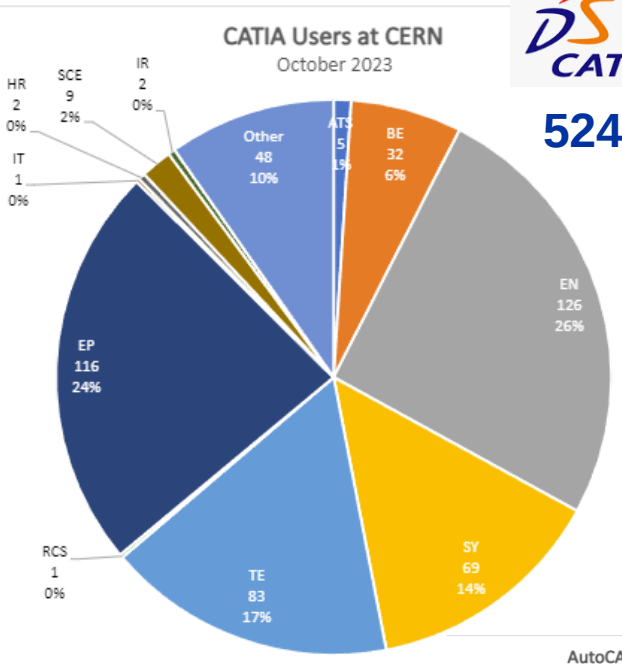
CAD usage at CERN

More statistics can be found here: statistics



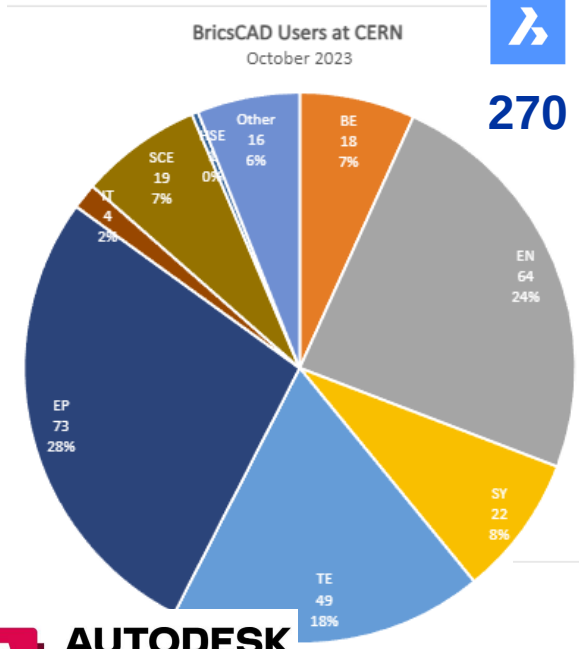
CAD usage at CERN

More statistics can be found here: statistics



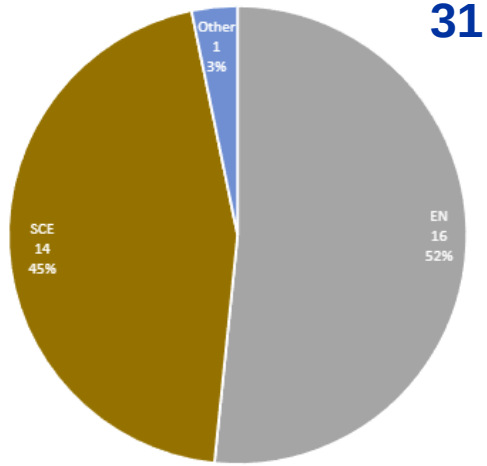
CATIA

524



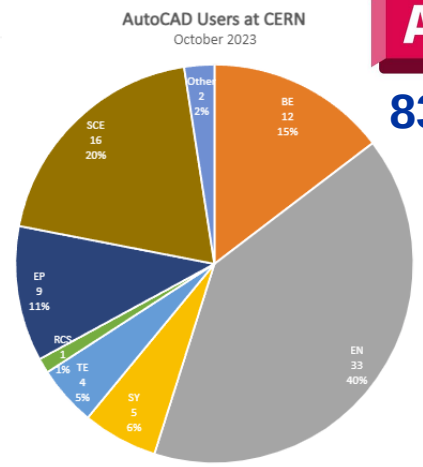
BricsCAD®

270



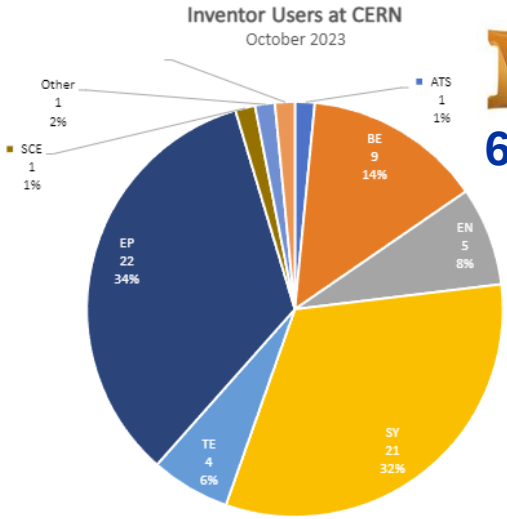
AUTODESK® REVIT®

31



AUTODESK AutoCAD

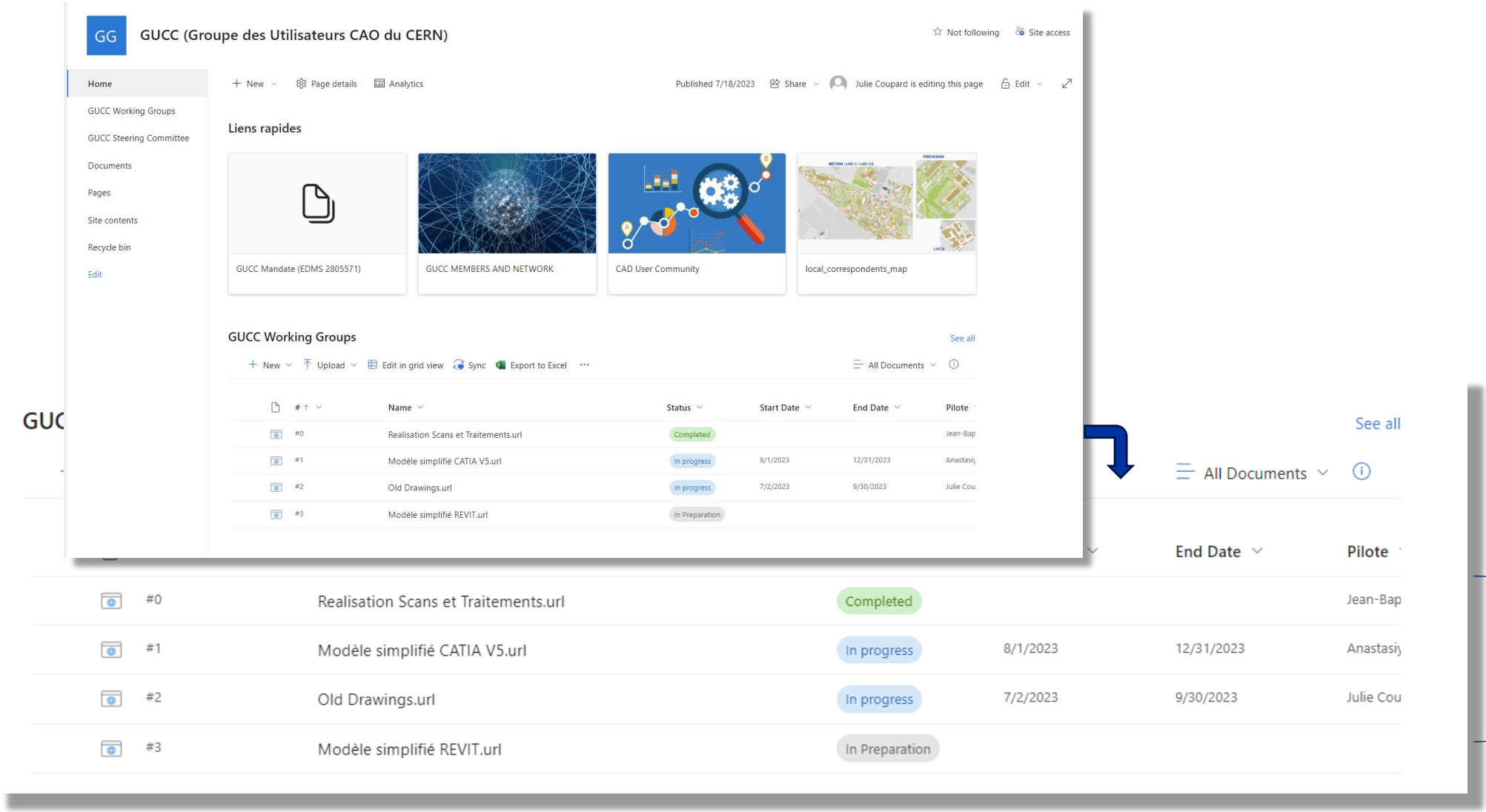
83



AUTODESK® INVENTOR®

65

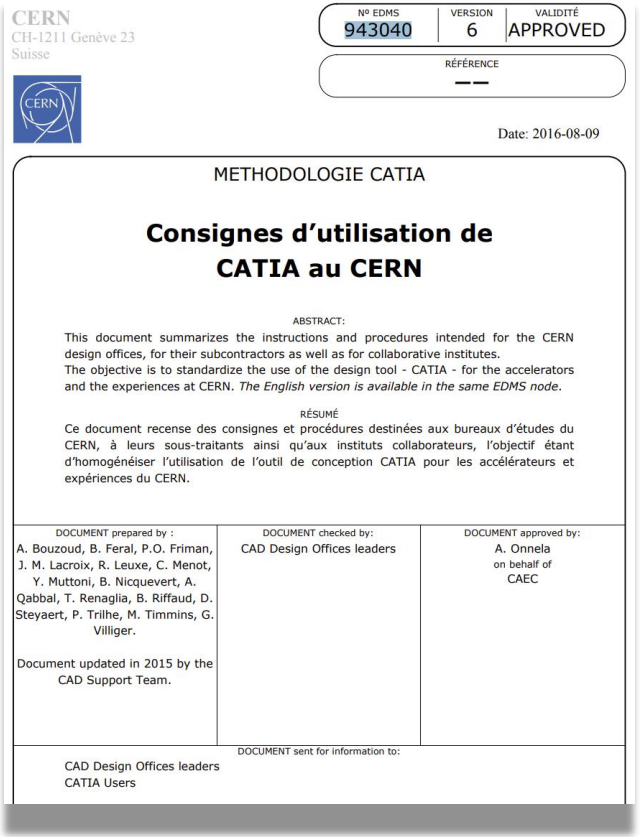
Ongoing working groups



4 working groups
1 completed
2 in progress
1 in preparation

Useful information

Consignes d’utilisation de CATIA au CERN: edms 943040 (exists in French and English)



CERN
CH-1211 Genève 23
Suisse

Nº EDMS	VERSION	VALIDITÉ
943040	6	APPROVED

RÉFÉRENCE
——

Date: 2016-08-09

METHODOLOGIE CATIA

Consignes d’utilisation de CATIA au CERN

ABSTRACT:

This document summarizes the instructions and procedures intended for the CERN design offices, for their subcontractors as well as for collaborative institutes.
The objective is to standardize the use of the design tool - CATIA - for the accelerators and the experiences at CERN. *The English version is available in the same EDMS node.*

RÉSUMÉ

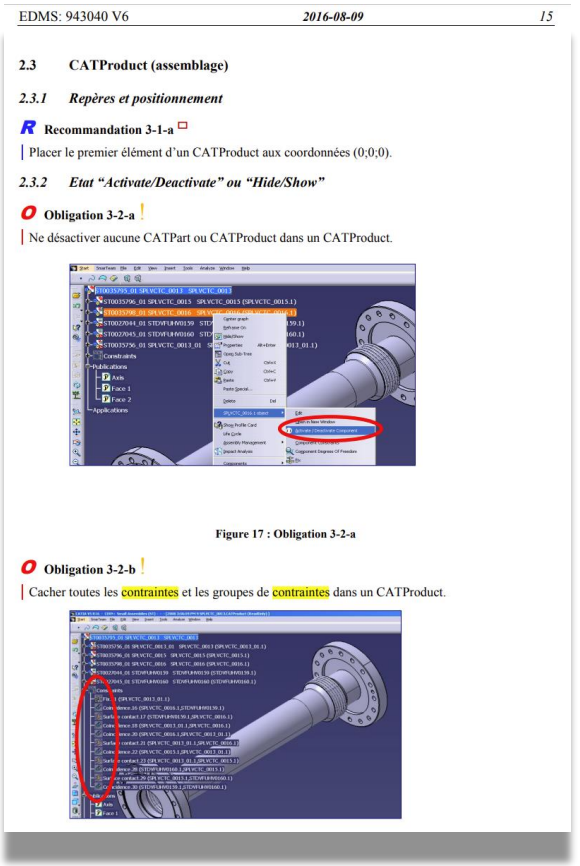
Ce document recense des consignes et procédures destinées aux bureaux d’études du CERN, à leurs sous-traitants ainsi qu’aux instituts collaborateurs, l’objectif étant d’homogénéiser l’utilisation de l’outil de conception CATIA pour les accélérateurs et expériences du CERN.

DOCUMENT prepared by :	DOCUMENT checked by:	DOCUMENT approved by:
A. Bouzoud, B. Feral, P.O. Friman, J. M. Lacroix, R. Leuxe, C. Menot, Y. Muttoni, B. Nicquevert, A. Qabbal, T. Renaglia, B. Riffaud, D. Steyaert, P. Trilhe, M. Timmins, G. Villiger. Document updated in 2015 by the CAD Support Team.	CAD Design Offices leaders	A. Onnela on behalf of CAEC

DOCUMENT sent for information to:

CAD Design Offices leaders
CATIA Users

example



EDMS: 943040 V6 *2016-08-09* *15*

2.3 CATProduct (assemblage)

2.3.1 Repères et positionnement

R **Recommandation 3-1-a**

Placer le premier élément d’un CATProduct aux coordonnées (0;0;0).

2.3.2 Etat “Activate/Deactivate” ou “Hide/Show”

O **Obligation 3-2-a** !

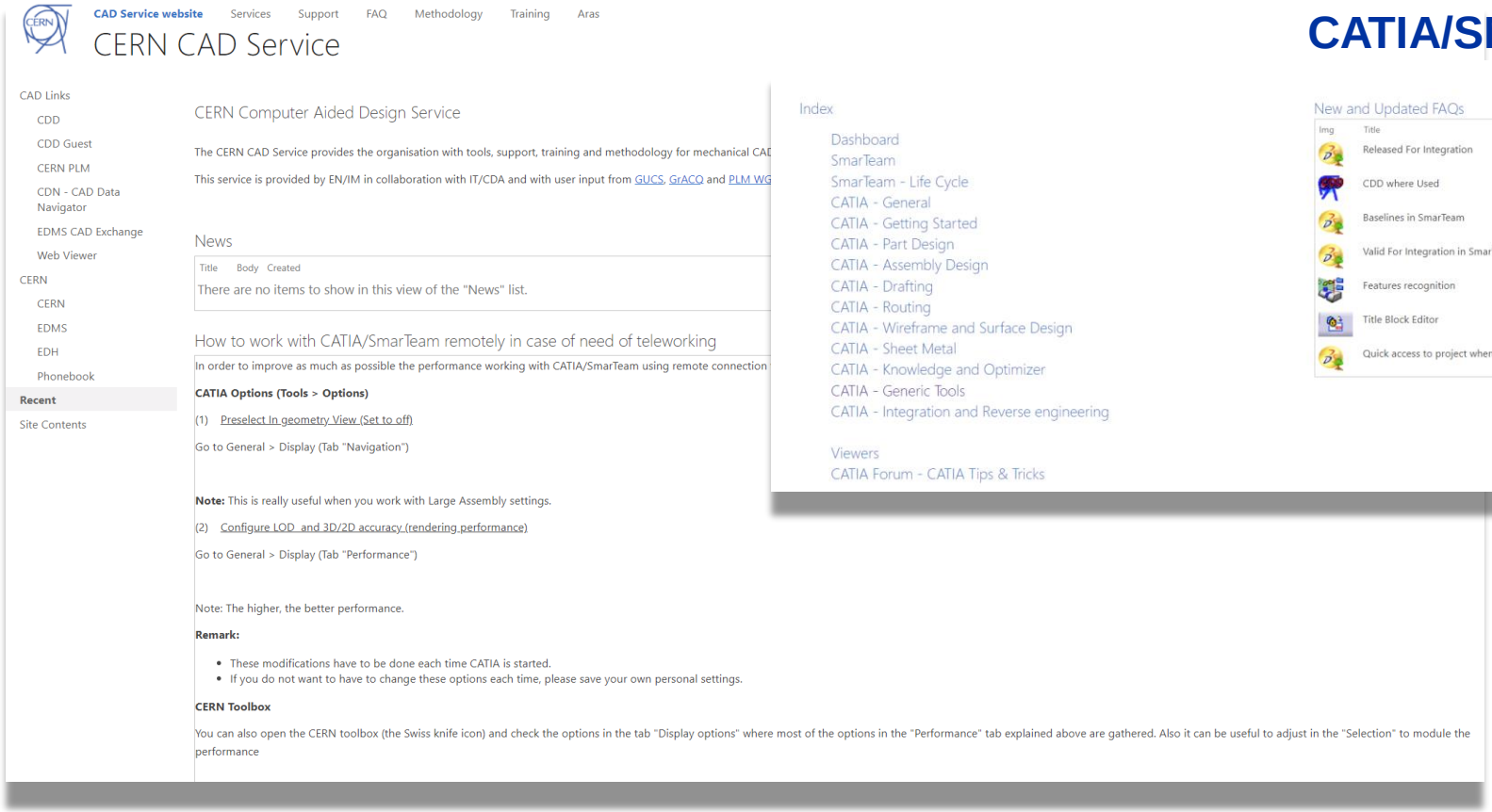
Ne désactiver aucune CATPart ou CATProduct dans un CATProduct.

Figure 17 : Obligation 3-2-a

O **Obligation 3-2-b** !

Cacher toutes les contraintes et les groupes de contraintes dans un CATProduct.

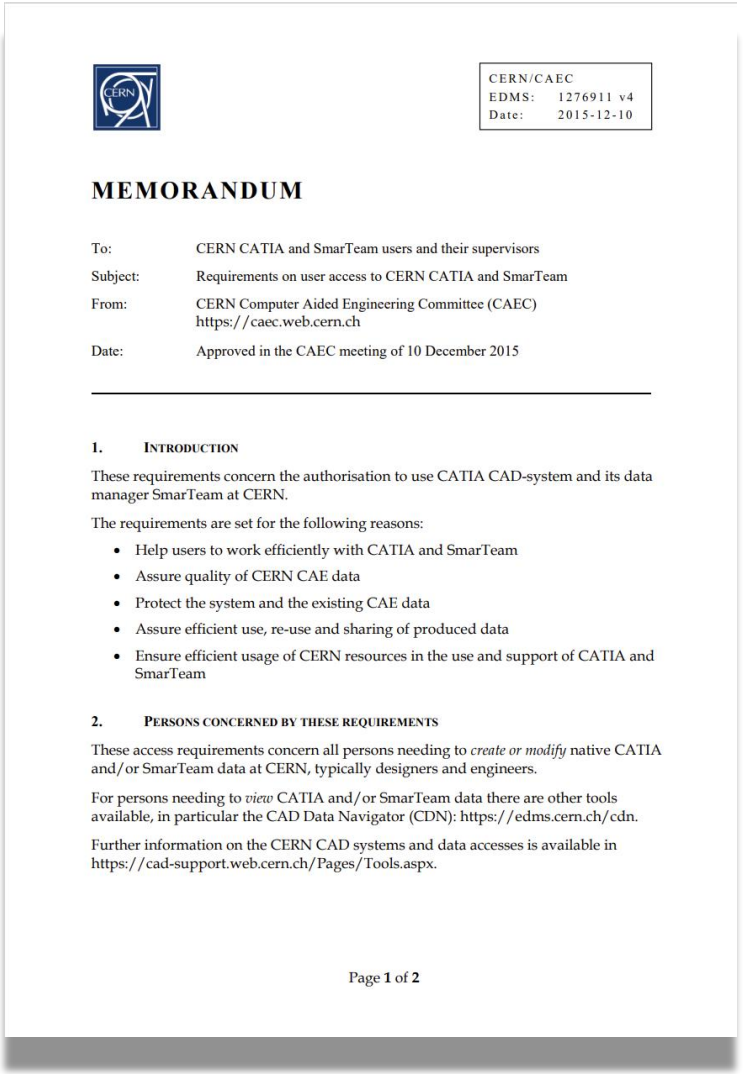
CAD service website: here



CATIA/SMT FAQ

Access to CATIA & smarteam at CERN

CAEC memorandum



CERN/CAEC
EDMS: 1276911 v4
Date: 2015-12-10

MEMORANDUM

To: CERN CATIA and SmarTeam users and their supervisors

Subject: Requirements on user access to CERN CATIA and SmarTeam

From: CERN Computer Aided Engineering Committee (CAEC)
https://caec.web.cern.ch

Date: Approved in the CAEC meeting of 10 December 2015

1. INTRODUCTION

These requirements concern the authorisation to use CATIA CAD-system and its data manager SmarTeam at CERN.

The requirements are set for the following reasons:

- Help users to work efficiently with CATIA and SmarTeam
- Assure quality of CERN CAE data
- Protect the system and the existing CAE data
- Assure efficient use, re-use and sharing of produced data
- Ensure efficient usage of CERN resources in the use and support of CATIA and SmarTeam

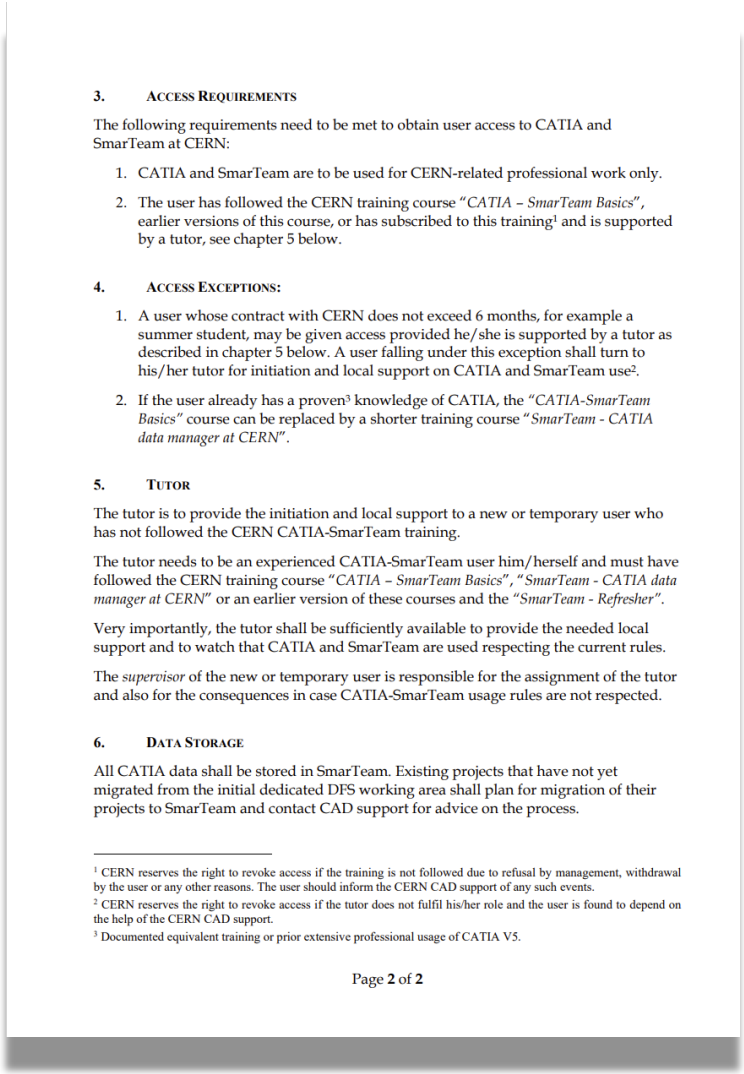
2. PERSONS CONCERNED BY THESE REQUIREMENTS

These access requirements concern all persons needing to *create or modify* native CATIA and/or SmarTeam data at CERN, typically designers and engineers.

For persons needing to *view* CATIA and/or SmarTeam data there are other tools available, in particular the CAD Data Navigator (CDN): https://edms.cern.ch/cdn.

Further information on the CERN CAD systems and data accesses is available in https://cad-support.web.cern.ch/Pages/Tools.aspx.

Page **1** of **2**



3. ACCESS REQUIREMENTS

The following requirements need to be met to obtain user access to CATIA and SmarTeam at CERN:

1. CATIA and SmarTeam are to be used for CERN-related professional work only.
2. The user has followed the CERN training course "*CATIA – SmarTeam Basics*", earlier versions of this course, or has subscribed to this training[1] and is supported by a tutor, see chapter 5 below.

4. ACCESS EXCEPTIONS:

1. A user whose contract with CERN does not exceed 6 months, for example a summer student, may be given access provided he/she is supported by a tutor as described in chapter 5 below. A user falling under this exception shall turn to his/her tutor for initiation and local support on CATIA and SmarTeam use[2].
2. If the user already has a proven[3] knowledge of CATIA, the "*CATIA-SmarTeam Basics*" course can be replaced by a shorter training course "*SmarTeam - CATIA data manager at CERN*".

5. TUTOR

The tutor is to provide the initiation and local support to a new or temporary user who has not followed the CERN CATIA-SmarTeam training.

The tutor needs to be an experienced CATIA-SmarTeam user him/herself and must have followed the CERN training course "*CATIA – SmarTeam Basics*", "*SmarTeam - CATIA data manager at CERN*" or an earlier version of these courses and the "*SmarTeam - Refresher*".

Very importantly, the tutor shall be sufficiently available to provide the needed local support and to watch that CATIA and SmarTeam are used respecting the current rules.

The *supervisor* of the new or temporary user is responsible for the assignment of the tutor and also for the consequences in case CATIA-SmarTeam usage rules are not respected.

6. DATA STORAGE

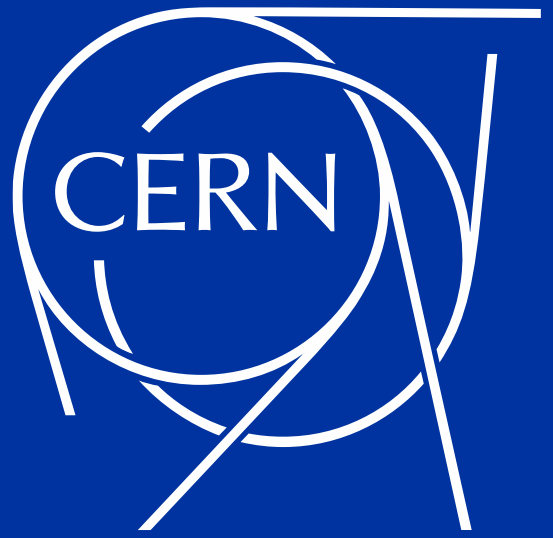
All CATIA data shall be stored in SmarTeam. Existing projects that have not yet migrated from the initial dedicated DFS working area shall plan for migration of their projects to SmarTeam and contact CAD support for advice on the process.

[1] CERN reserves the right to revoke access if the training is not followed due to refusal by management, withdrawal by the user or any other reasons. The user should inform the CERN CAD support of any such events.
[2] CERN reserves the right to revoke access if the tutor does not fulfil his/her role and the user is found to depend on the help of the CERN CAD support.
[3] Documented equivalent training or prior extensive professional usage of CATIA V5.

Page **2** of **2**

Thank you for your attention

Questions ?


CERN