

CHEP2015 Okinawa, Japan April 13-17, 2015

The Evolution of CERN EDMS

Aleksandra Wardzinska, Stephan Petit, Rachel Bray, Christophe Delamare, Griselda Garcia Arza,
Tsvetelin Krastev, Krzysztof Pater, Anna Suwalska, David Widegren
CERN – GS Department – ASE Group

CERN

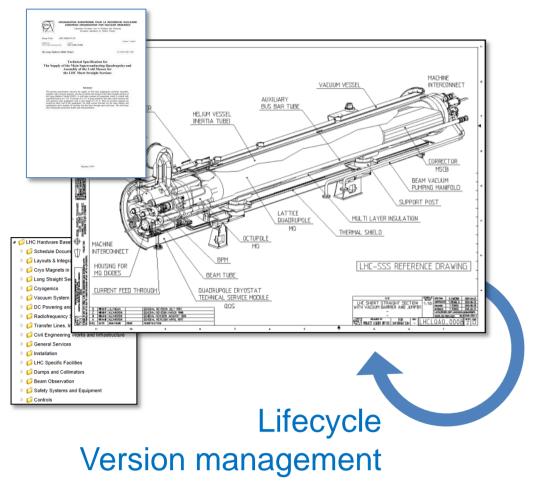
European Laboratory for Particle Physics Geneva, Switzerland

Large-scale long-term projects such as the LHC require the ability to store, manage, organise and distribute **large amounts of engineering information**, covering a wide spectrum of fields. This information is a living material, evolving in time, following various lifecycles. It has to reach the **next generation of engineers** so they understand how their predecessors designed, crafted, operated and maintained the most complex machines ever built.

This is the role of CERN EDMS. The Engineering and Equipment Data Management Service has served the High Energy Physics Community for over 15 years. It is CERN's official PLM (Product Lifecycle Management), supporting engineering communities in their collaborations inside and outside the laboratory.

What does EDMS bring to Physics?

Example: the life of a LHC Dipole followed by EDMS from the beginning until now - Collaborative work - Traceability - Quality control - Lifecycle management - Long term



ORGANISATION EUROPEENE POUR LA MICHENNE MANUAL STREET

COMMANDATION

ORGANISATION

DE JOSEPH STREET

FOR CONDUCTOR MILITARY STREET, ATTOMATION

ORGANISATION

DE JOSEPH STREET

FOR CONDUCTOR MILITARY POUR LA RECHERCIS NOTLEUR

ENTREET

FOR THE LABORY COLDINATION FOR NUCLEUR RESIDENCE

ENTREET

FOR THE

FOR THE

Technical specification

FOR THE SUPPLY OF

FOR OTHER SUPPLY OF

FOR OTHER



LHC Project
Working Summary Schedule

Working Summary Schedule

State of the State



1989 **Design**

1999 **Tendering** 2002 Manufacturing

2006
Installation &
Commissionning

2008
Operation &
Maintenance

2015 and beyond...

"EDMS has been and will remain a major partner of the LHC for the upcoming decades. I cannot imagine the design and operation of accelerators without a strong Electronic Data Management System"

Frédérick Bordry, CERN's Director for Accelerators and Technology

'000'000 documents

500'000 engineering drawings

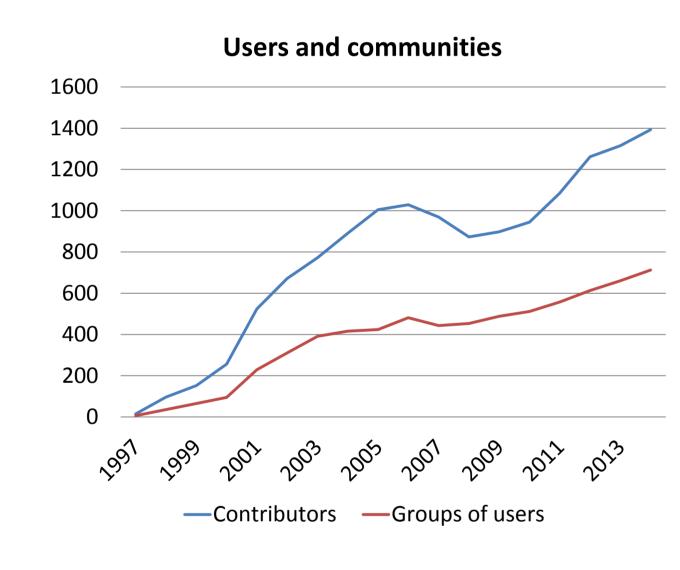
1'000'000 assets

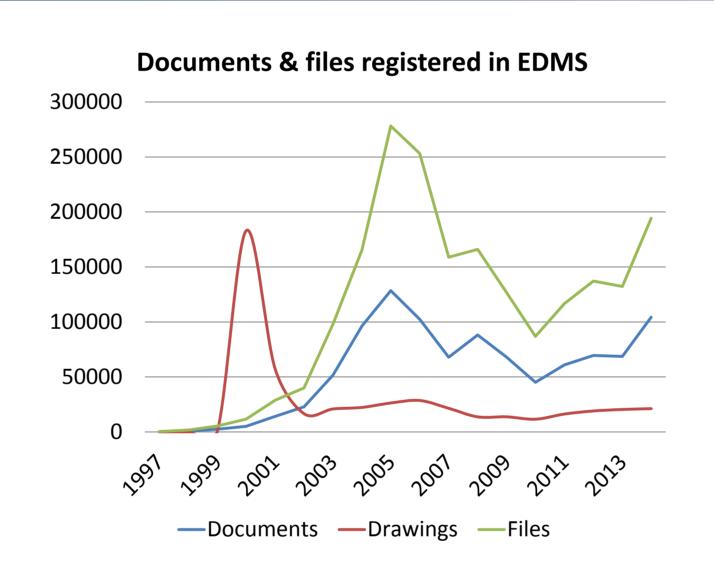
350 new documents/day

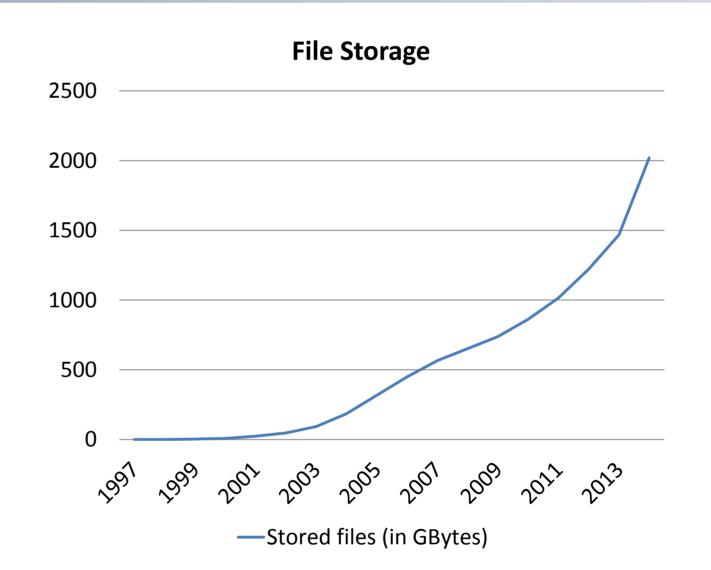
3'700 file downloads/day

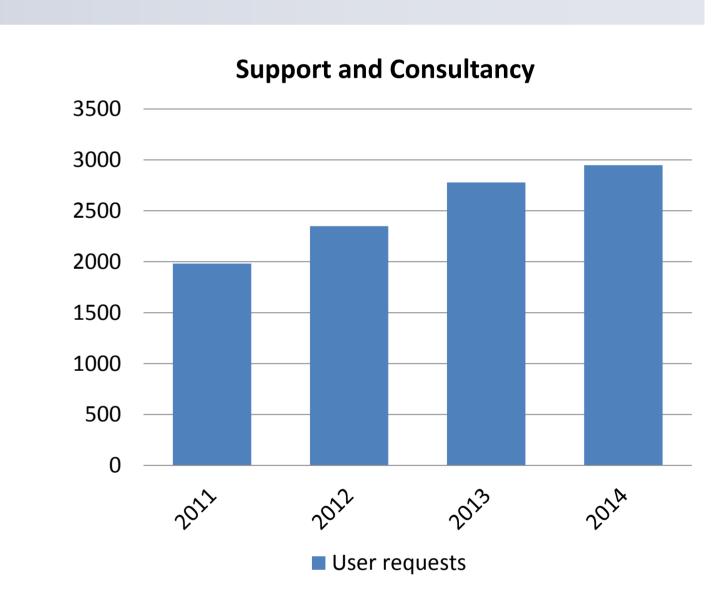
15'000 registered users

Usage evolution

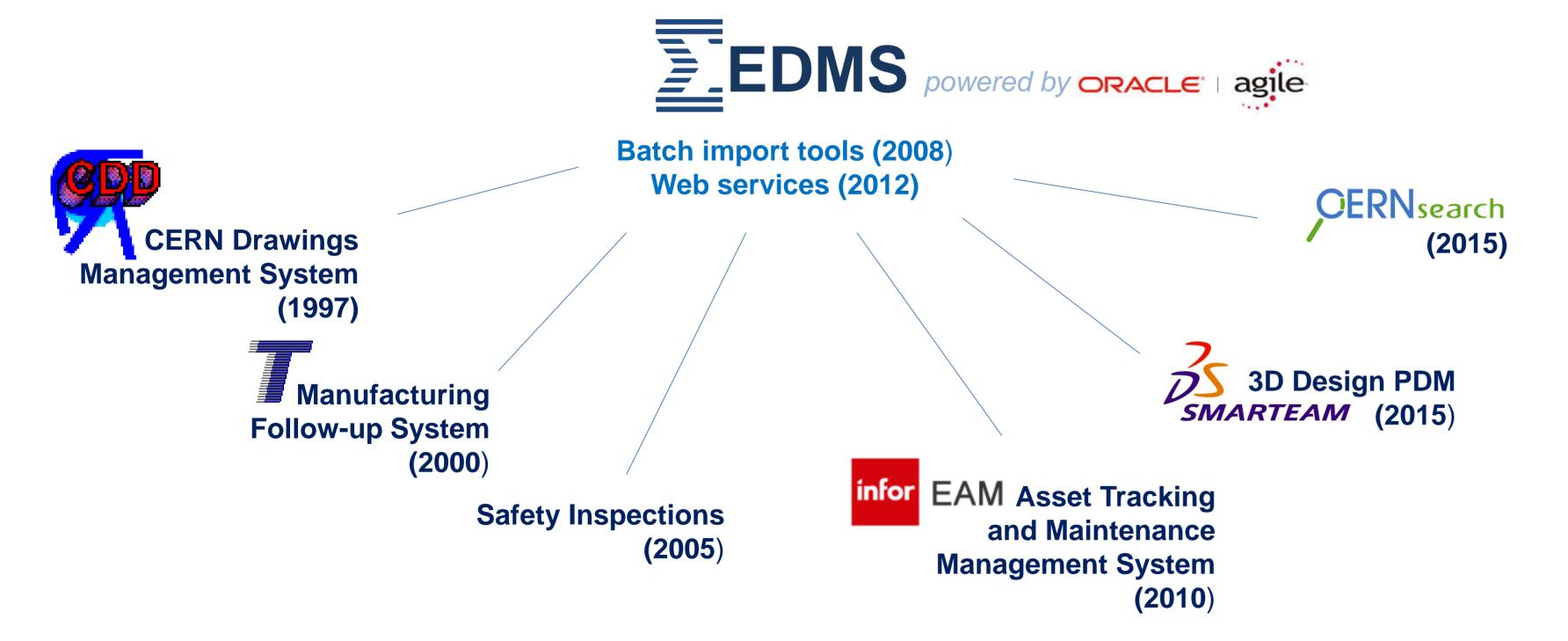








Integration evolution



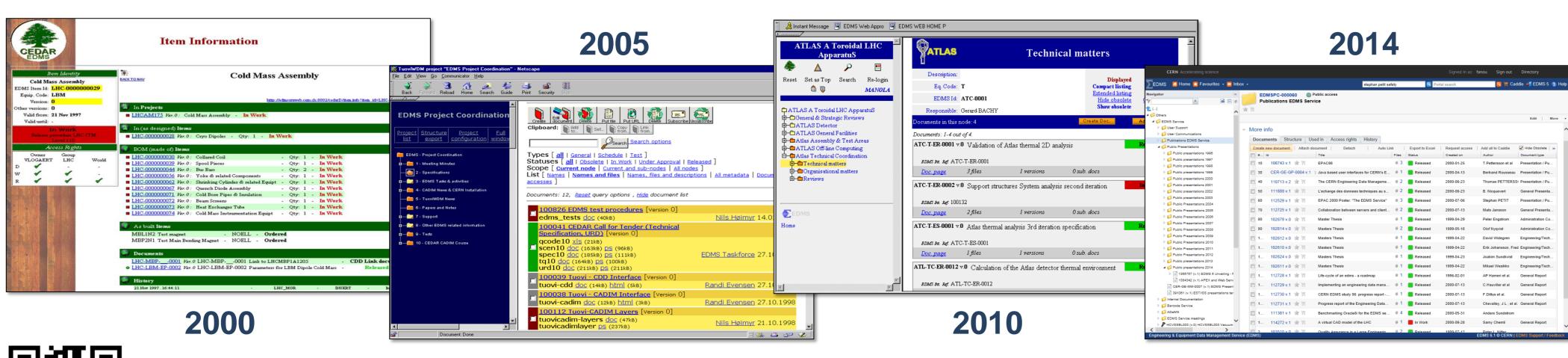
From its early years EDMS was integrated with CDD (CERN Drawings Management System) and MTF (Manufacturing Follow-up System) and therefore was covering the **design**, **tendering**, **manufacturing** and **installation** phases of the LHC and other CERN equipment.

More recently it tightened its links with the CMMS (Computerized Maintenance Management) system in order to better support the operation and maintenance phases. This tandem was heavily used during the LS1.

The integration with Smarteam (CAD system) is almost complete. It will allow **publication of designs in EDMS directly from the CAD interface**, enabling consistent information all along the line.

The latest big news in EDMS is the use of **the central CERN Search engine**.

User interface evolution



In April 2014 we released a new major version of EDMS, featuring a complete makeover of the web interface, improved responsiveness and enhanced functionality.

Building upon feedback received from key users group, we brought what we think is a system that is more attractive and makes it easy to perform complex tasks, targeted at engineers who often are not PLM specialists.



