# New Lifecycle User Test Feedback and Future Deployment Perspective

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**25ème Forum Utilisateurs CATIA au CERN**

# Introduction

# Pilot projects - Users feedback

# Deployment perspective

# Introduction

WHY ?

Historically

**Needs** for improving SmT data management

**Workshop/Audit** at CERN with consultants

**Specification** to secure CAD data (2D/3D)

**Developments** on SmT & CDD/EDMS systems

**Validation tests** by PLM WG

**Pre-deployment** on pilot projects

Coming months

**Extend** pilot projects (complexity, collaborative work)

**Consolidate** standards catalogue (bottom-up approach)

**Deployment** CERN wide

**Consistency** and **Accessibility** of **3D data**

*From end to end **Product Lifecycle***

**Design** (Integration)

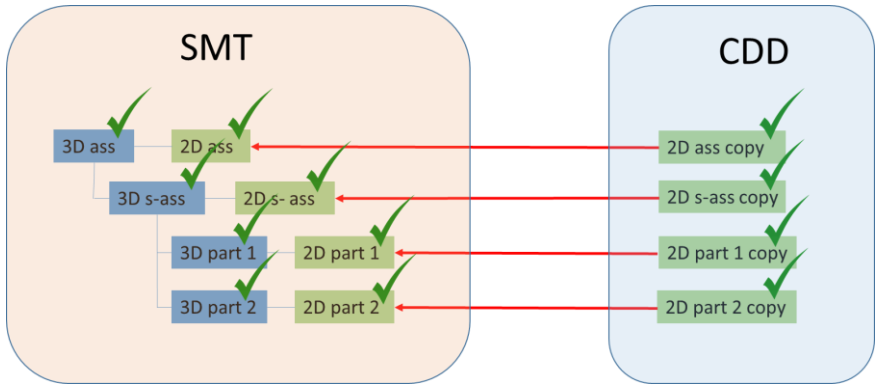
**Manufacturing** (FAO, Metrology)

**Installation** - **Maintenance** - **Dismantling**

# Introduction

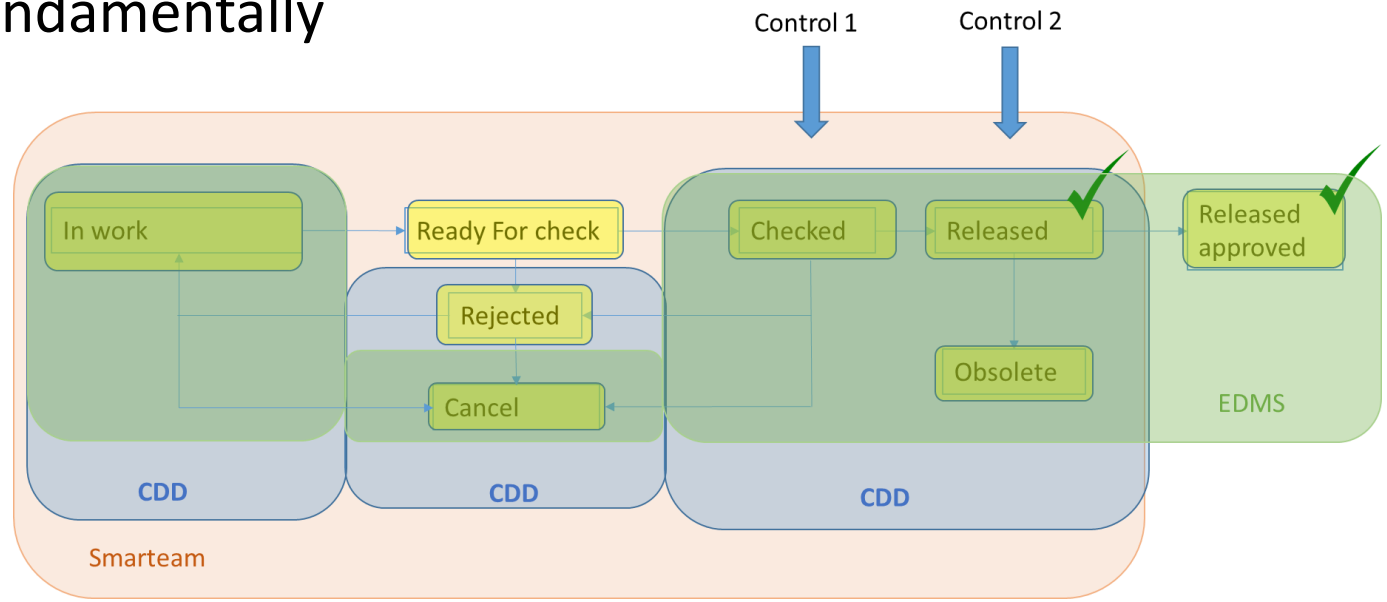
HOW ?

**Synchronise** our **2D/3D statuses** in **CDD/EDMS** and **SmarTeam**




without changing

fundamentally




our existing **release** **CDD/EDMS workflow** (C1, C2, Approval, Cancel)

Introduction

**Pilot projects - Users feedback**

Deployment perspective

# Outline

1. Pilot project users
2. Test scope
3. Feedback
4. Impact on standard part CAD catalogue
5. Conclusions

# 1 – Pilot project users

Non critical projects

Motivated and trained users

Designers (RFC, reject)

Vincent Maire EN/MME
Alexandre Perez EN/MME
Romain Ferriere EN/MME
Antti Kolehmainen EN/MME
Cedric Delory EN/MME
Nicolas Chritin EN/MME
Lucas Renaglia EN/MME (soon)
Ricardo Peron EN/MME
Tommi Mikkola EN/MME
Philippe Perret EN/MME

Controls (Checked, released)

Tommy Mikkola EN/MME
PF Marcillac EN/MME
Marc Timmins EN/MME
Benoit Riffaud EN/MME
Robin Betemps EN/MME
Teddy Capelli EN/MME
Michal Strychalski (TE/MSC)
Remy Noulibos (TE/ABT)
Marco Calviani (EN/STI)
Claudio Torregrosa (EN/STI)
Marco Calviani (EN/STI)
Raffaele Esposito (EN/STI)

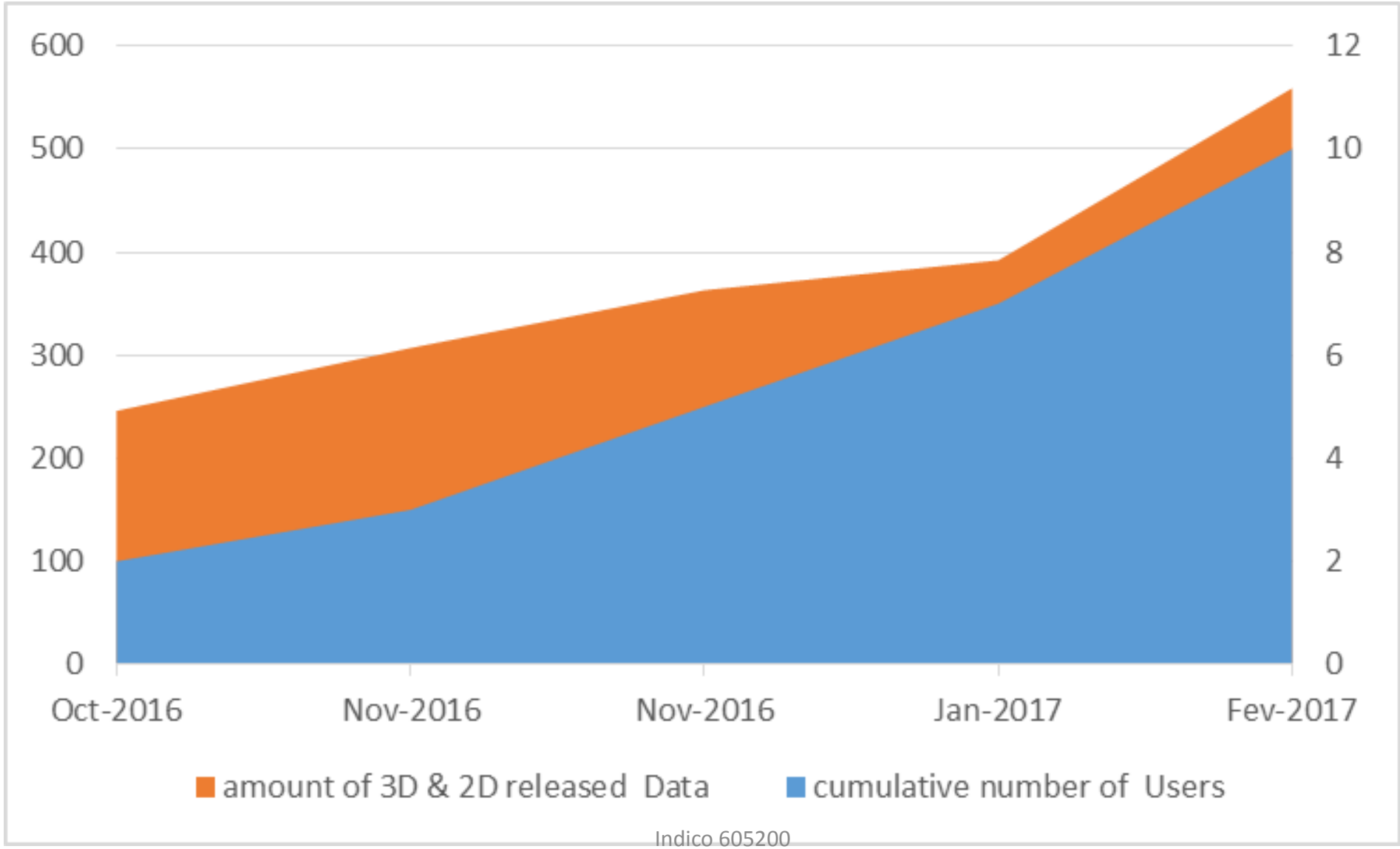
10 users
12 Controllers
1 catalogue manager

Catalogue manager

Raphael Leuxe (standard components)

# 1 – Pilot project users

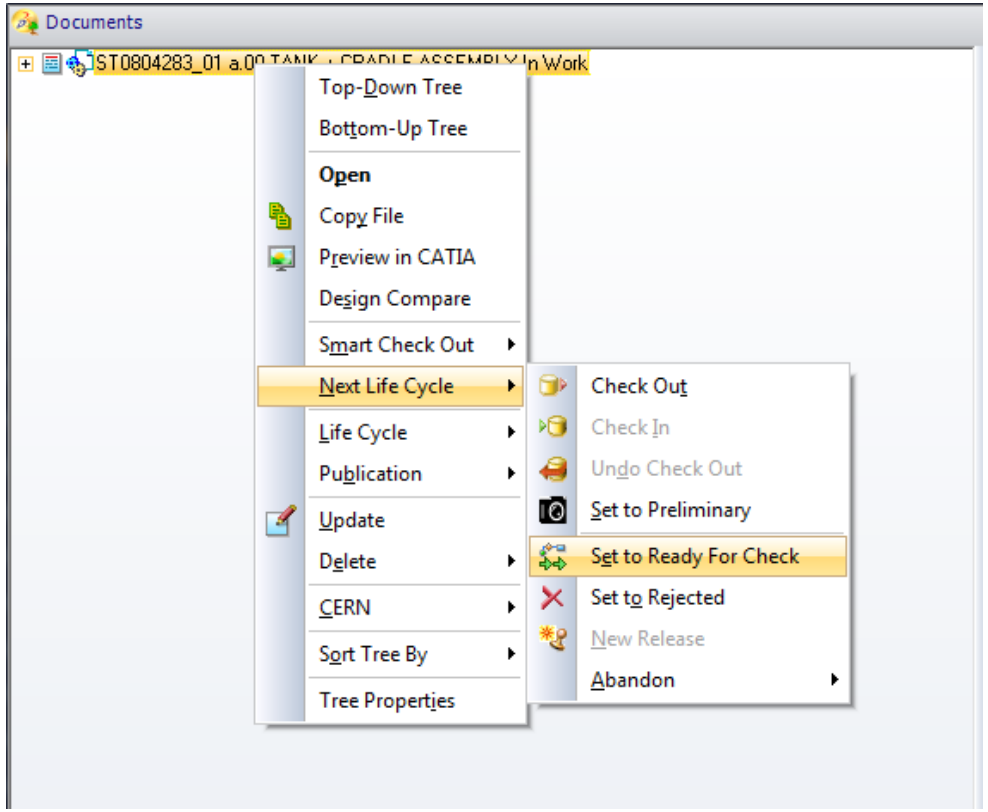
Tests were done on real projects on production database.

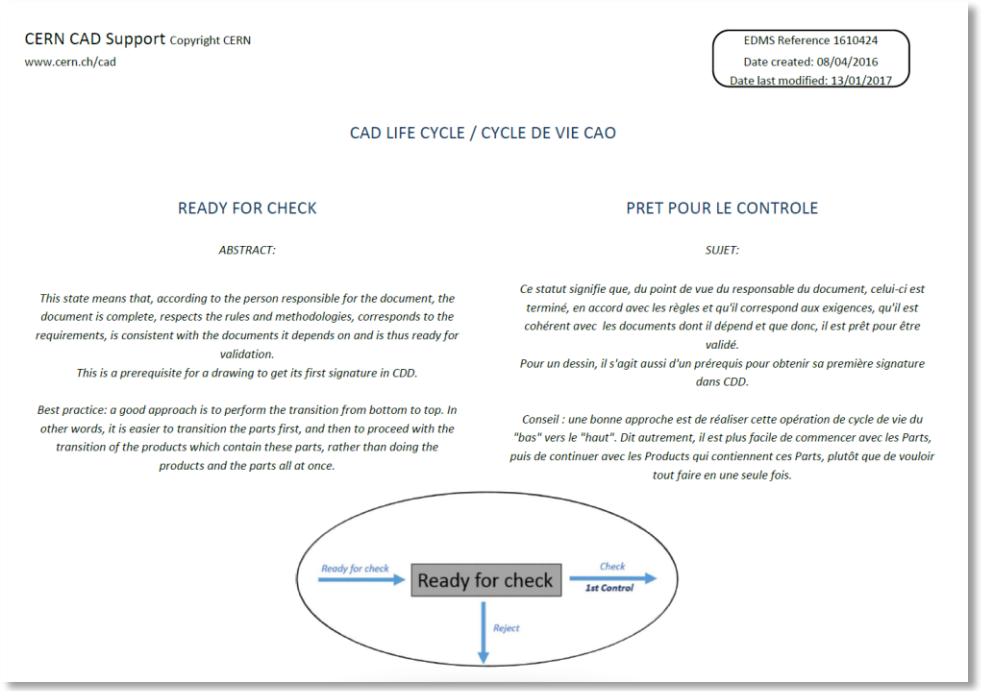


# 2. Test scope

SMT/CDD controls on real CAD data in production on dedicated CDD codes.

Set to Ready For Check
(from smarteam)





CERN CAD Support Copyright CERN
www.cern.ch/cad

EDMS Reference 1610424
Date created: 08/04/2016
Date last modified: 13/01/2017

CAD LIFE CYCLE / CYCLE DE VIE CAO

READY FOR CHECK

ABSTRACT:

This state means that, according to the person responsible for the document, the document is complete, respects the rules and methodologies, corresponds to the requirements, is consistent with the documents it depends on and is thus ready for validation.
This is a prerequisite for a drawing to get its first signature in CDD.

Best practice: a good approach is to perform the transition from bottom to top. In other words, it is easier to transition the parts first, and then to proceed with the transition of the products which contain these parts, rather than doing the products and the parts all at once.

PRET POUR LE CONTROLE

SUJET:

Ce statut signifie que, du point de vue du responsable du document, celui-ci est terminé, en accord avec les règles et qu'il correspond aux exigences, qu'il est cohérent avec les documents dont il dépend et que donc, il est prêt pour être validé.
Pour un dessin, il s'agit aussi d'un prérequis pour obtenir sa première signature dans CDD.

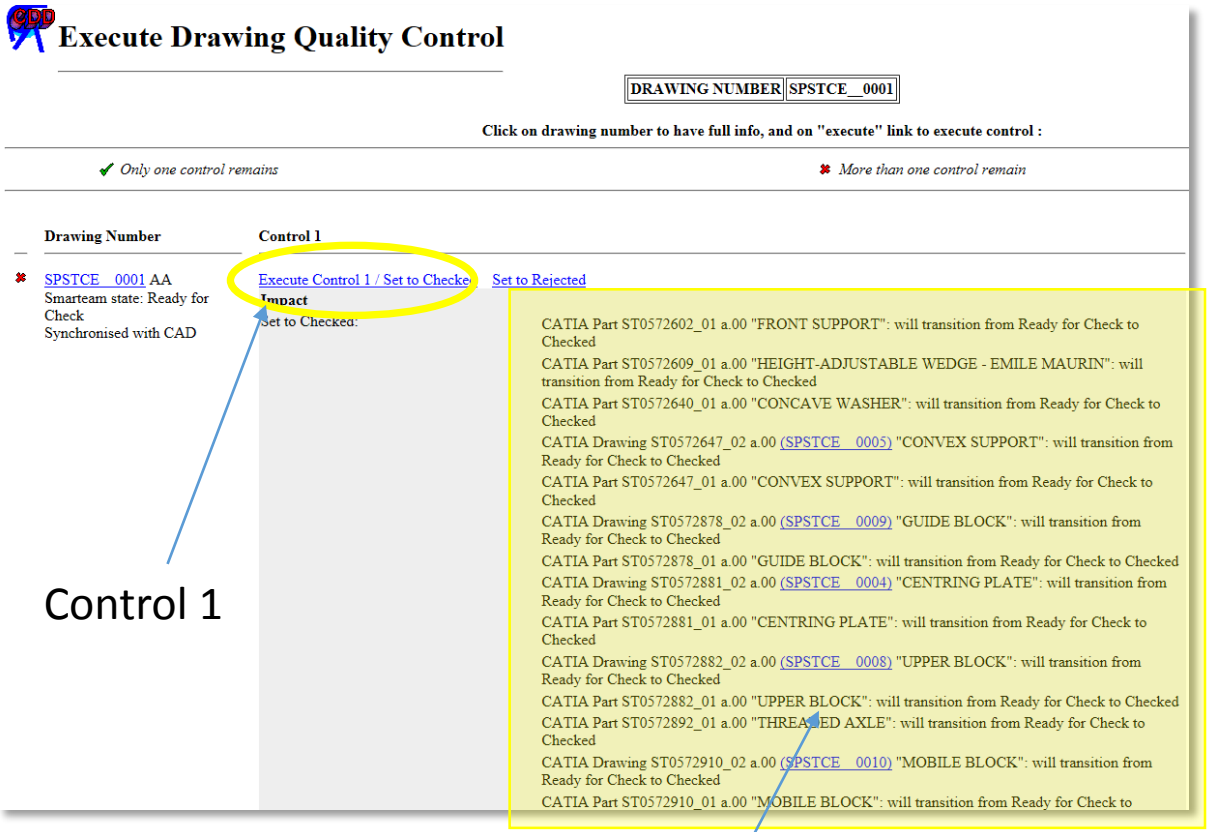
Conseil : une bonne approche est de réaliser cette opération de cycle de vie du "bas" vers le "haut". Dit autrement, il est plus facile de commencer avec les Parts, puis de continuer avec les Products qui contiennent ces Parts, plutôt que de vouloir tout faire en une seule fois.



[“Ready for check” transition documentation]

# 2. Test scope

Execute control 1 & control 2 (From CDD)



**Execute Drawing Quality Control**

DRAWING NUMBER | SPSTCE__0001

Click on drawing number to have full info, and on "execute" link to execute control :

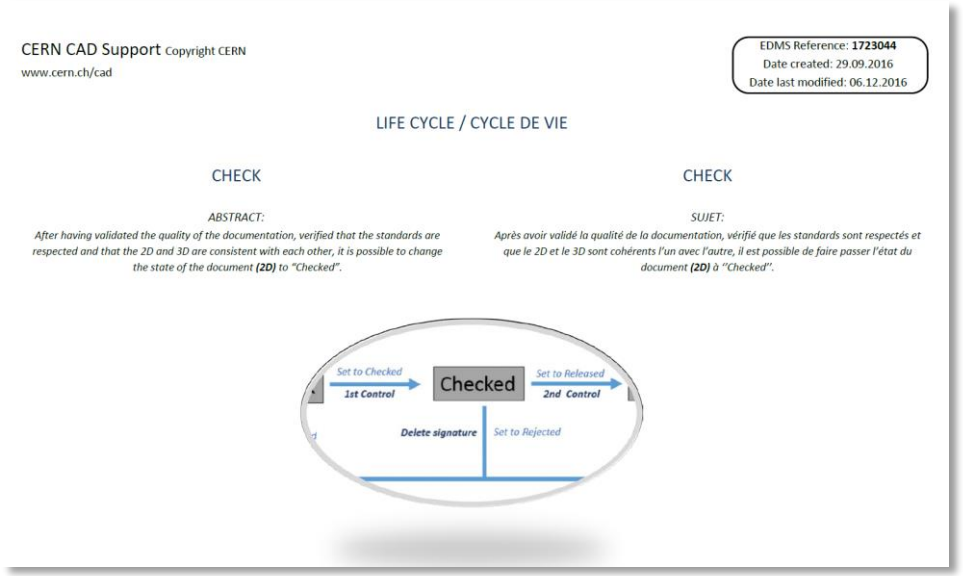
✓ *Only one control remains* ✖ *More than one control remain*

| Drawing Number | Control 1 |
|---|---|
| ✖ SPSTCE__0001 AA<br>Smarteam state: Ready for Check<br>Synchronised with CAD | Execute Control 1 / Set to Checke Set to Rejected<br>Impact<br>Set to Checked: |

CATIA Part ST0572602_01 a.00 "FRONT SUPPORT": will transition from Ready for Check to Checked
CATIA Part ST0572609_01 a.00 "HEIGHT-ADJUSTABLE WEDGE - EMILE MAURIN": will transition from Ready for Check to Checked
CATIA Part ST0572640_01 a.00 "CONCAVE WASHER": will transition from Ready for Check to Checked
CATIA Drawing ST0572647_02 a.00 (SPSTCE__0005) "CONVEX SUPPORT": will transition from Ready for Check to Checked
CATIA Part ST0572647_01 a.00 "CONVEX SUPPORT": will transition from Ready for Check to Checked
CATIA Drawing ST0572878_02 a.00 (SPSTCE__0009) "GUIDE BLOCK": will transition from Ready for Check to Checked
CATIA Part ST0572878_01 a.00 "GUIDE BLOCK": will transition from Ready for Check to Checked
CATIA Drawing ST0572881_02 a.00 (SPSTCE__0004) "CENTRING PLATE": will transition from Ready for Check to Checked
CATIA Part ST0572881_01 a.00 "CENTRING PLATE": will transition from Ready for Check to Checked
CATIA Drawing ST0572882_02 a.00 (SPSTCE__0008) "UPPER BLOCK": will transition from Ready for Check to Checked
CATIA Part ST0572882_01 a.00 "UPPER BLOCK": will transition from Ready for Check to Checked
CATIA Part ST0572892_01 a.00 "THREADED AXLE": will transition from Ready for Check to Checked
CATIA Drawing ST0572910_02 a.00 (SPSTCE__0010) "MOBILE BLOCK": will transition from Ready for Check to Checked
CATIA Part ST0572910_01 a.00 "MOBILE BLOCK": will transition from Ready for Check to

Control 1

Propagation to depend documents



CERN CAD Support Copyright CERN
www.cern.ch/cad

EDMS Reference: **1723044**
Date created: 29.09.2016
Date last modified: 06.12.2016

LIFE CYCLE / CYCLE DE VIE

CHECK

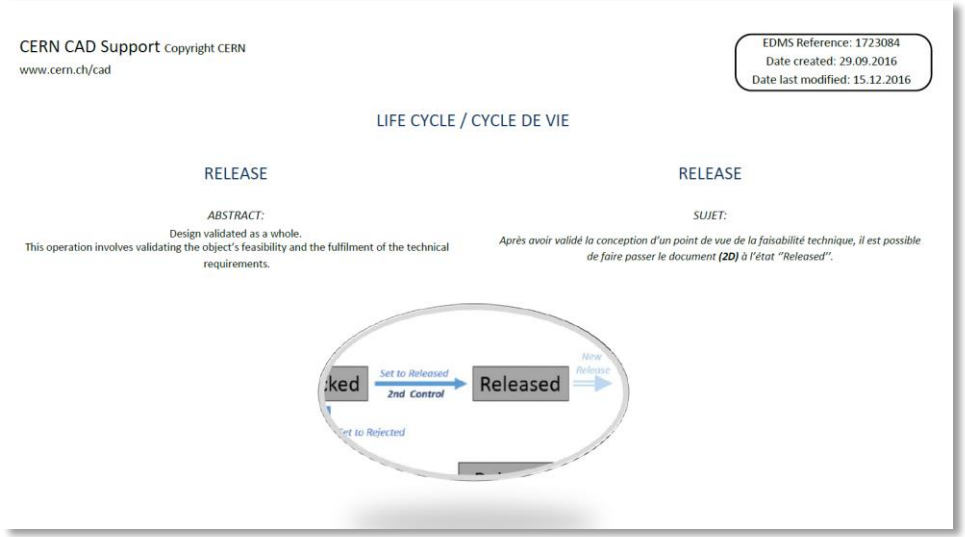
*ABSTRACT:*
*After having validated the quality of the documentation, verified that the standards are respected and that the 2D and 3D are consistent with each other, it is possible to change the state of the document **(2D)** to "Checked".*

CHECK

*SUJET:*
*Après avoir validé la qualité de la documentation, vérifié que les standards sont respectés et que le 2D et le 3D sont cohérents l'un avec l'autre, il est possible de faire passer l'état du document **(2D)** à "Checked".*

Set to Checked 1st Control | Checked | Set to Released 2nd Control
Delete signature | Set to Rejected

[“Checked” transition documentation]



CERN CAD Support Copyright CERN
www.cern.ch/cad

EDMS Reference: 1723084
Date created: 29.09.2016
Date last modified: 15.12.2016

LIFE CYCLE / CYCLE DE VIE

RELEASE

*ABSTRACT:*
Design validated as a whole.
This operation involves validating the object's feasibility and the fulfilment of the technical requirements.

RELEASE

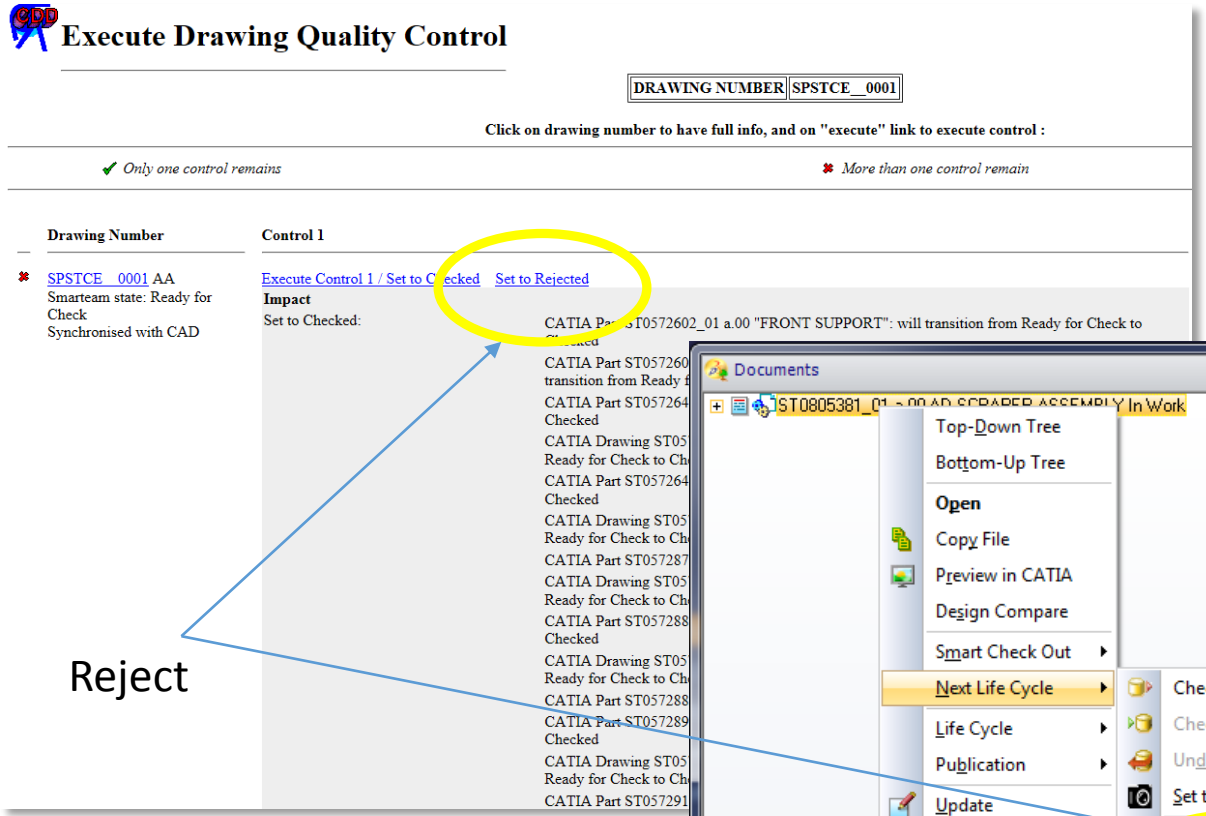
*SUJET:*
*Après avoir validé la conception d'un point de vue de la faisabilité technique, il est possible de faire passer le document **(2D)** à l'état "Released".*

Set to Released 2nd Control | Released

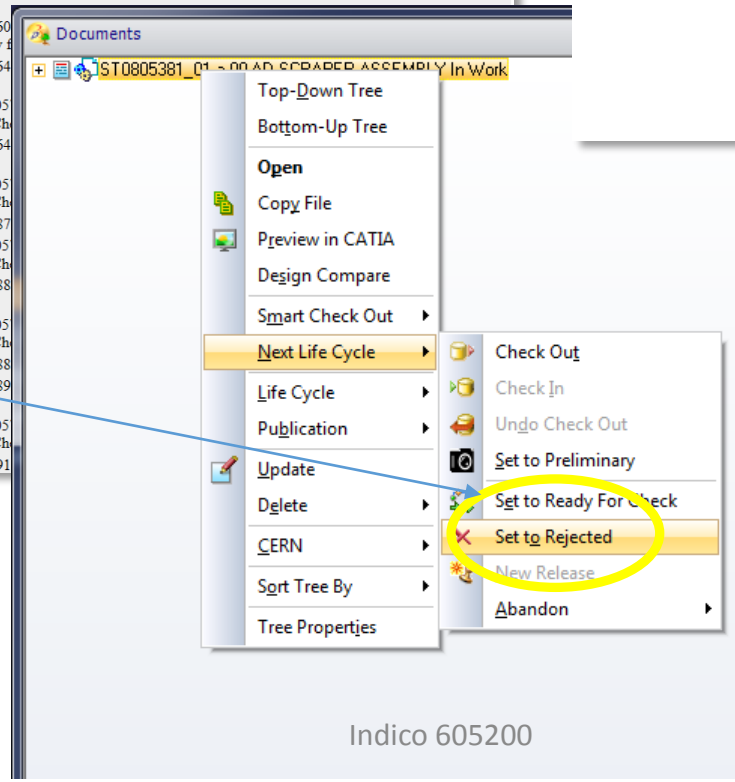
[“Release” transition documentation]

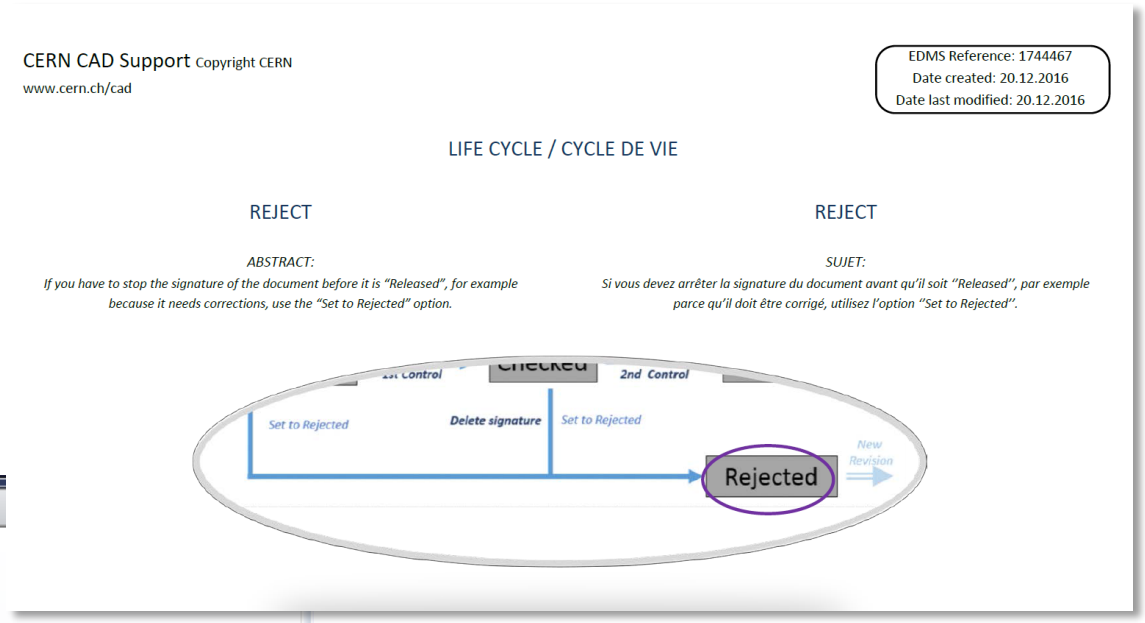
# 2. Test scope

Set to Reject (From CDD or SMT)




Reject




Reject transition documentation

# 3. General Feedback

- **The functionalities comply with the spec. The support & development teams (CAD & EDMS) did a good job !!**
- **No big instabilities. Few bugs (not many) identified and solved.**
- **Issue messages in report are OK. Room for improvement (planned).**
- **Demands a more rigorous way of working (methodologies).**
- **Time consuming (not negligible depending on data state)**. Not the case for c1 and c2 users.
- **2D not up to date with 3D doesn’t prevent validation.**

Releasing a 3D guaranties a date coherence with the 2D but not the compliance. Q checker could be a future option for verifying coherences!

# 3. Feedback in more detail

We are forced to adopt new working methods.

- **Time consuming (not negligible depending on data state)**.

➢ Healing is long (CO, CI to get dates back into coherence especially on large assemblies) *short term cost*

➢ Catch-up data. New index on drawing for release in SMT. *Scenario example on next slide.* *Long term cost*

➢ What do you do with data that doesn't belong to you ? *Medium term.*

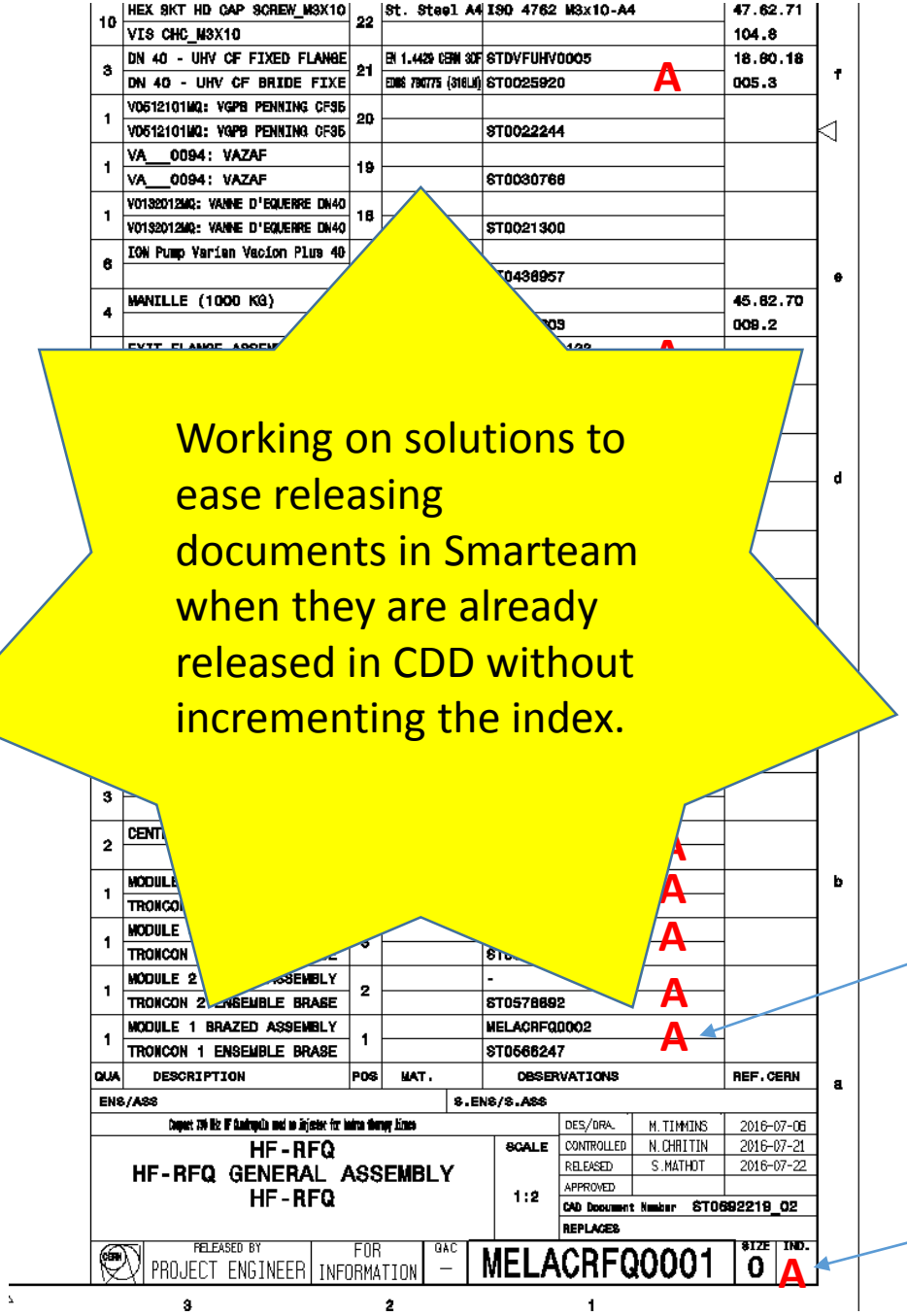
➢ Pay attention to ITEMS which have more than 1 document. (multi-sheet, mounting sequence, etc…) *short term cost*

➢ Contextual links can be an issue (skeleton methodology is a solution). *Long term cost*

➢ Release on 3D & 2Ds for catalogue components are now mandatory (Raphael Leuxe will need help !). *short term cost*

➢ CDD is slower (Checking dependencies between systems). *Long term cost*

# Scenario
# Modification of a part made in an existing assembly using the new the lifecycle




Working on solutions to ease releasing documents in Smarteam when they are already released in CDD without incrementing the index.

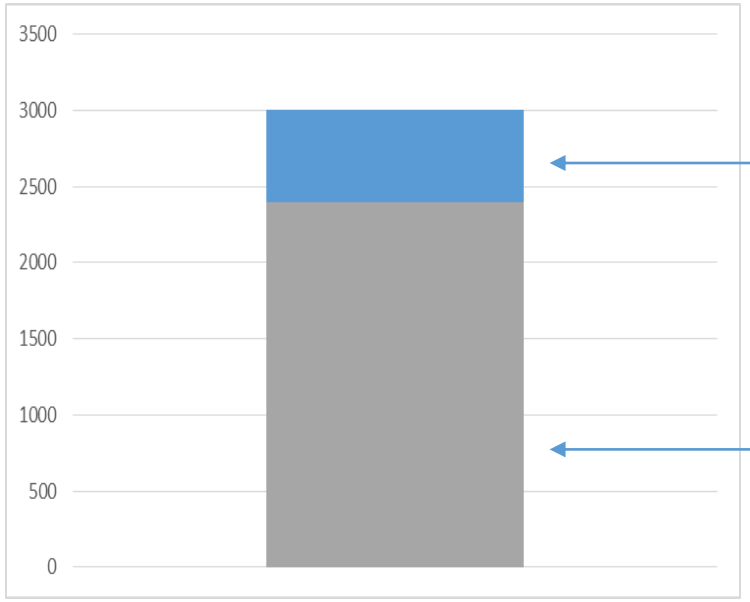
One shot, then no longer needed

CO and CI with new Index in order to Release assembly And checking compliance of data

New chamfer on part.
(becomes Release A)

OK

# 4. Impact on standard parts CAD catalogue




600 models need to be checked and released

2400 element already released in the database

- Cost: 800hrs of work (pending response from management)
- 3 or 4 additional catalogue managers to speed up release procedure for all new requests.

Released for catalogue

Catalogue parts tagged as “Released for catalogue” are reliable.

# 5. Conclusions

- The pilot users all agree on the benefit of the new lifecycle in terms of securing their CATIA data.

- They point out the fact that it will be time consuming especially at the start (clients need to be aware of this).

- Controls are usually done at the last minute just before production !!! Advise is to anticipate and plan the release process to avoid stress.

# Thank you for your attention

Introduction

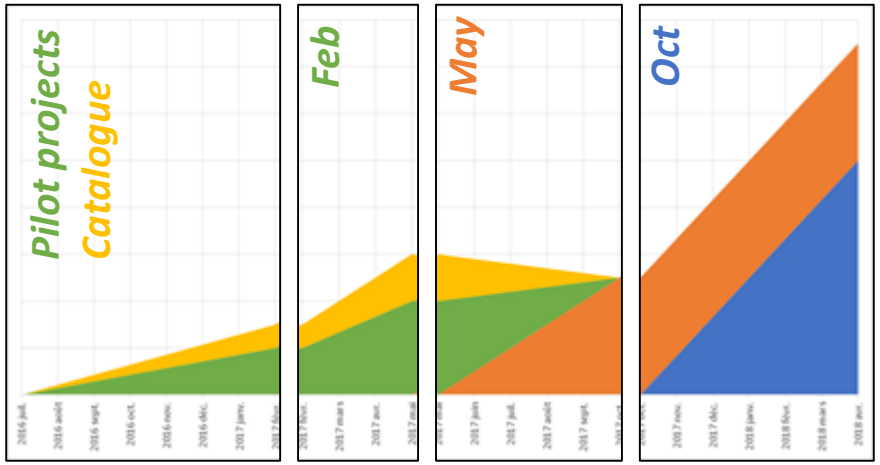
Pilot projects - Users feedback

**Deployment perspective**

# Deployment perspective

## 2017

## Increasing




**Feb – May**

### Extended Pilot Projects

- *Make bigger user **community***
- *Validate **methodology** (complex product, collaborative work)*
- **Training** on new LC & specific CAD **Support** obtainable

## Milestones

**May**

Switch to green light unless

- ***Management** Decision*
- *Extended pilot project **Feedback***
- ***Catalogue** release completion*
- ***Catch-up** methods/tools*
- ***Training** organization*

### Deployment on New Projects/Jobs

- *Variable **Cost**: Legacy catch-up / Design methodology / Collaborative work*

**Oct**

### Global Deployment

- *Whole user **community***

# Conclusions

- Consolidating of **catalogue**
- Tools/Methods are under study to ease **catch-up** effort

- **Anticipate** and contact/propose your **project** as **pilot** to CAD Support

  *Training and Analysis of data & methodology are recommended*

- **Management** agreement to switch new projects in **May**
- Global Deployment foreseen in **2017**