Validation integration data

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Main goal

- Only the CATIA/Smarteam data are involved by the data life cycle.
- Why integration data should follow a data lifecycle?
  - To have a correct status on the document stored in smarteam. Not only in work or preliminary.
  - To be sure between different model with the same description only one is the valitaded model and can be used.
  - To follow the different version on a document.

Integration work Process

Study phase

3D models

Integration Team + Design offices

Mechanical design office

- Vacuum
- Machine Equipment
- Magnet
- Beam Instrumentation
- RF equipment
- Etc..

Services design office

- Civil engineering
- Metallic struct.
- Lift
- Shielding
- Piping
- Ventilation
- Ventilation door
- Câbles tray
- Electrical Eq.
- Cryogenic eq.
- Access control
- Sector door
- Transport & handling
- Security Eq. Fire detection
- Survey

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- Data 3D status in Smarteam:
  - In work
  - Preliminary (Snapshot 3D model)
  - Released (Freeze a data version)

- Owner* Data:
  - Top product integration (Integration*)
  - Product or part services (Services*)

Validation data - Released with drawing

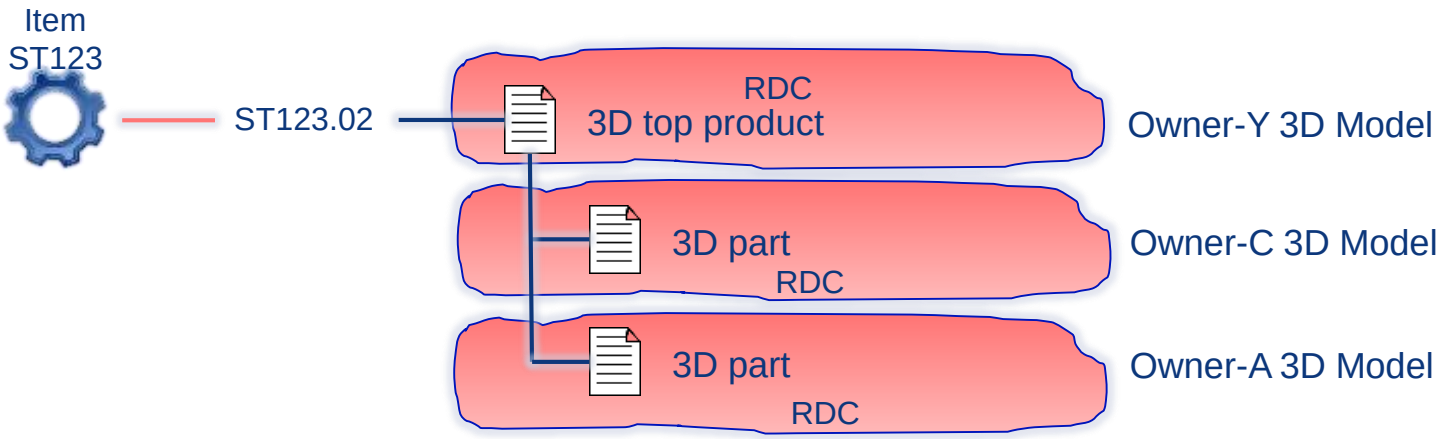
- 3D model ⟶ 2D drawing

Master	Master
Ready for check - Smarteam	Designer owner
Control 1 - CDD	Designer
Control 2 - CDD	Engineer or Project leader
Released	Released

See process in the next slides (6-7)

Validation data - Released with drawing

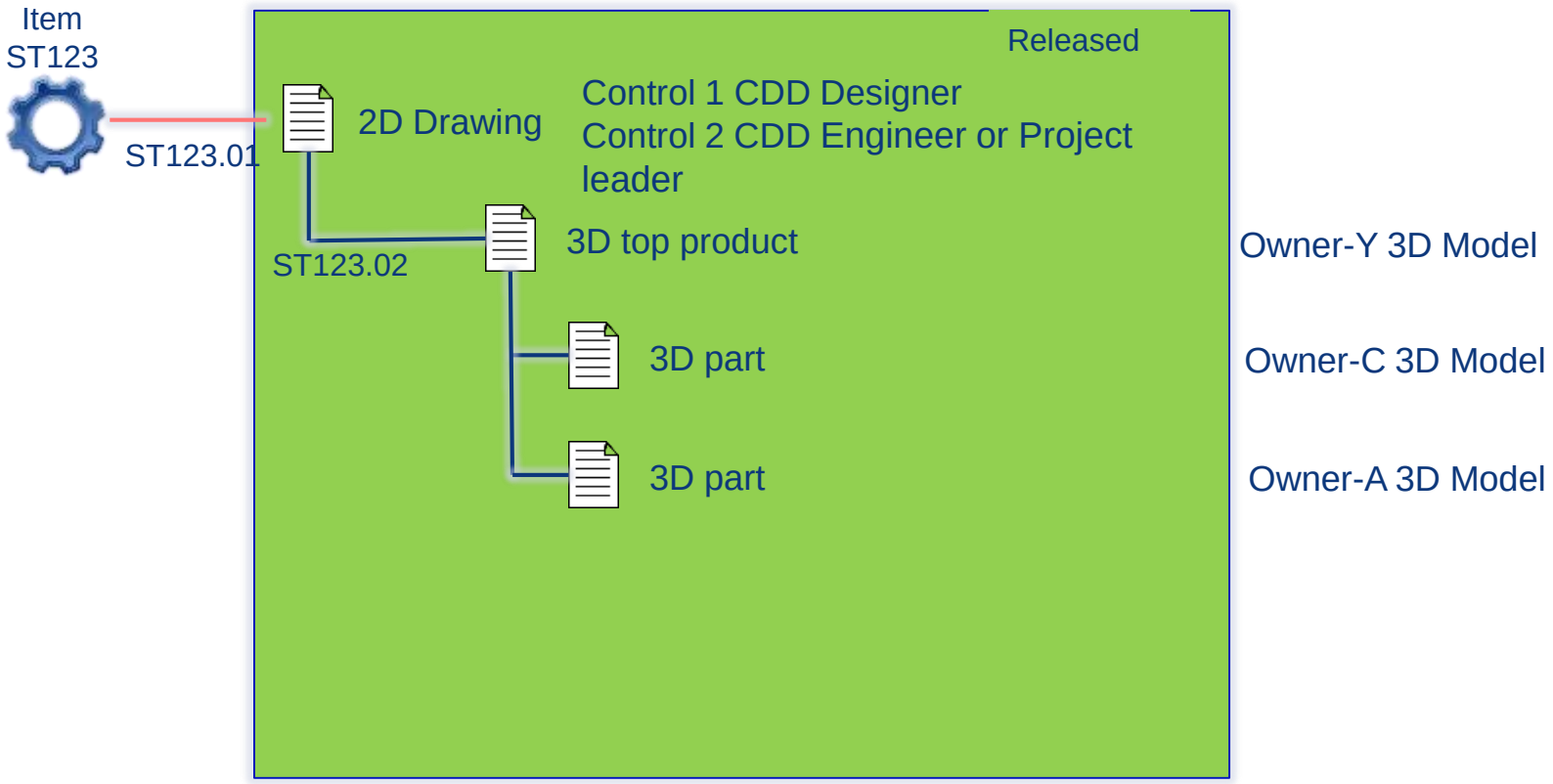
1st Step Ready for check must be done by the owner 3D model



Actions after the ready for check:
Freeze the 3D model
Publish the 3D model in different files format 3DVIA, PDF, STEP, VRML, open in dedicated viewer (spinfire)
Can be view inside CDN (Cad data navigator) with an EDMS access. Link

Validation data - Released with drawing

2nd step Released – Normal process



Validation data - Released with drawing and no drawing

*The drawing can be created just to release the 3D.

3D model Top product Integration → 2D drawing*

Master

Ready for check - Smarteam Designer integration

Control 1 - CDD Designer integration
Control 2 - CDD Project leader integration

Released

Master

Released

3D model product or part Services → No drawing

Master

Ready for check - Smarteam Designer owner services

Released

Validation data - Released for integration*

3D model product or part → No drawing

For integration

Released for integration

Mandatory to have linked to the item:

- 2D drawing (CDD Number not necessary CATIA) released

or

- 3D master released

**To use in mechanical reverse engineering*

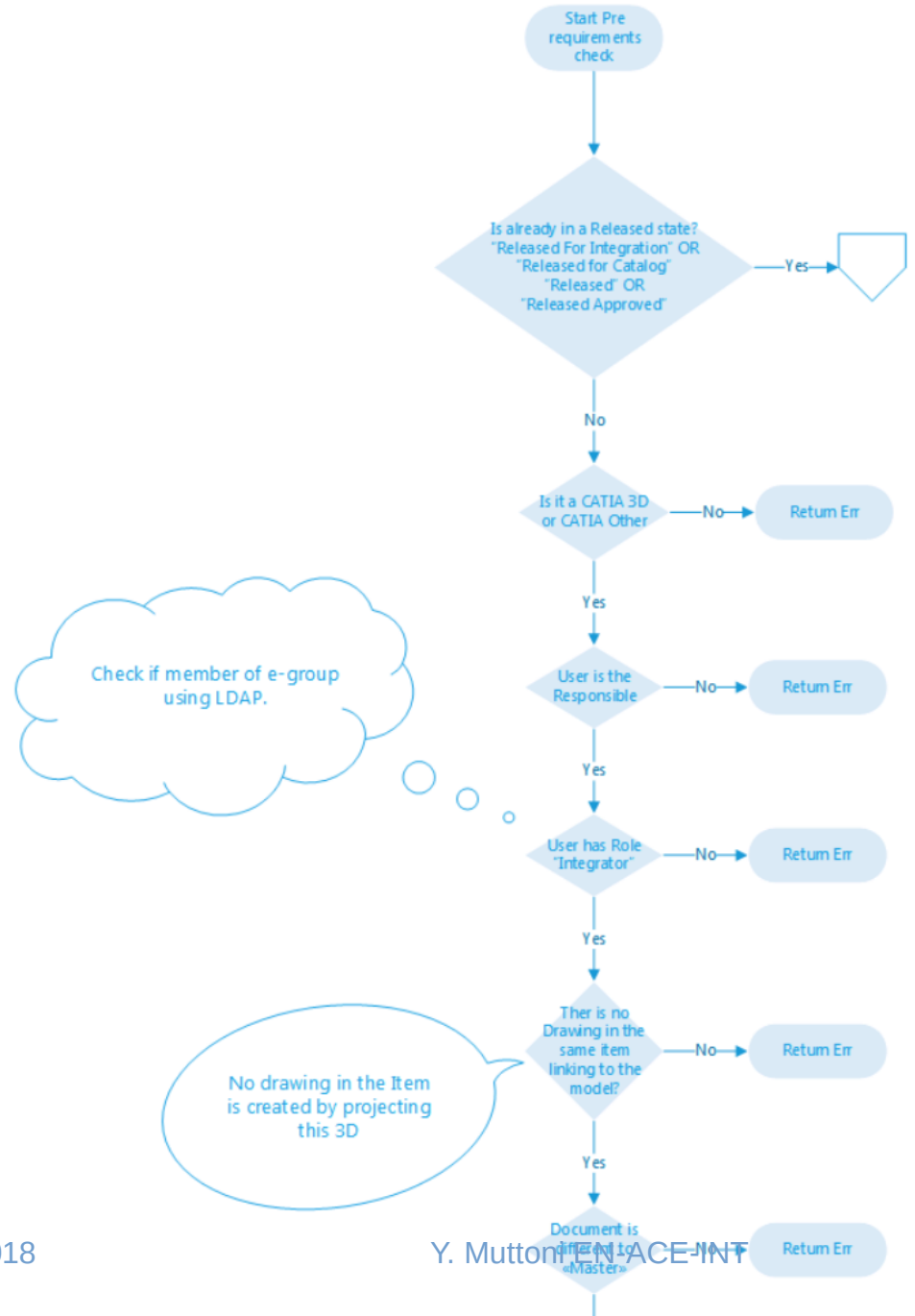
Validation data

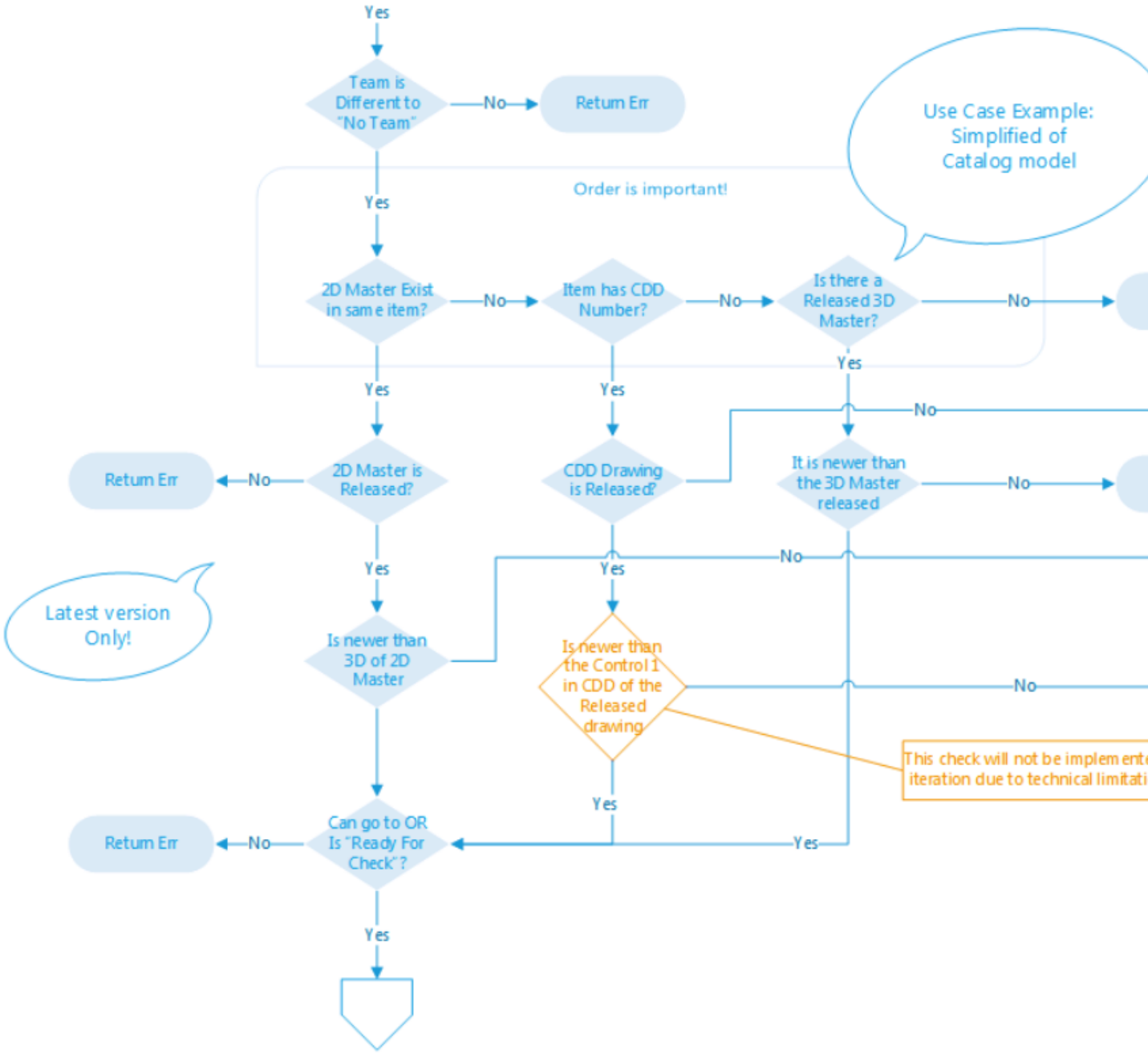
- Solution 4 - Valid for integration

Not yet developed

Spare slides

Pre-Requirements for "Set to Released for Integration"



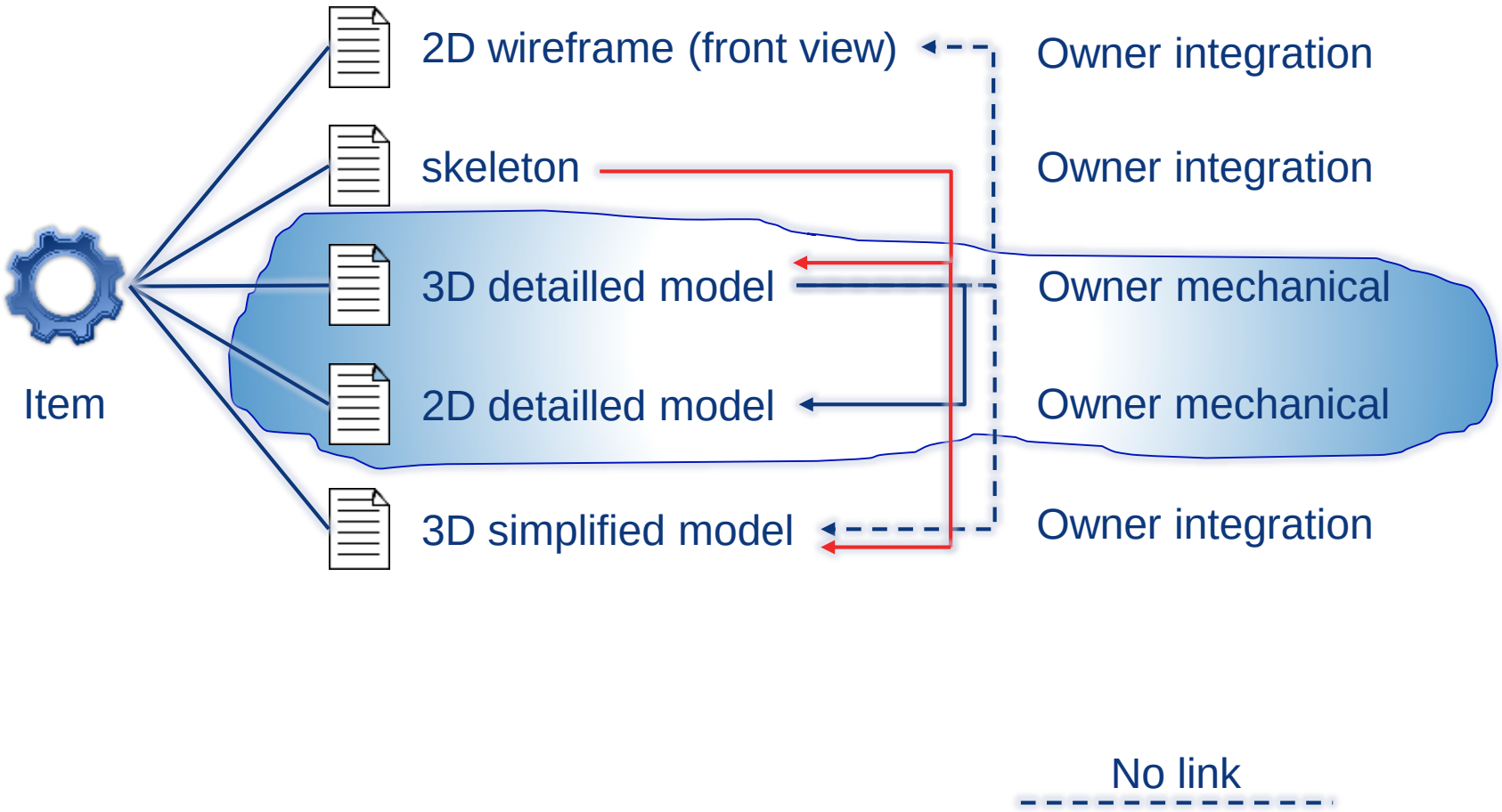

Yes
Team is Different to "No Team"
No
Return Err
Use Case Example: Simplified of Catalog model
Order is important!
Yes
2D Master Exist in same item?
No
Item has CDD Number?
No
Is there a Released 3D Master?
No
Yes
Yes
Yes
Yes
No
Return Err
No
2D Master is Released?
CDD Drawing is Released?
It is newer than the 3D Master released
No
Yes
Yes
No
Latest version Only!
Is newer than 3D of 2D Master
Is newer than the Control 1 in CDD of the Released drawing
No
This check will not be implemente
iteration due to technical limitati
Yes
Return Err
No
Can go to OR Is "Ready For Check"?
Yes
Yes

Integration data

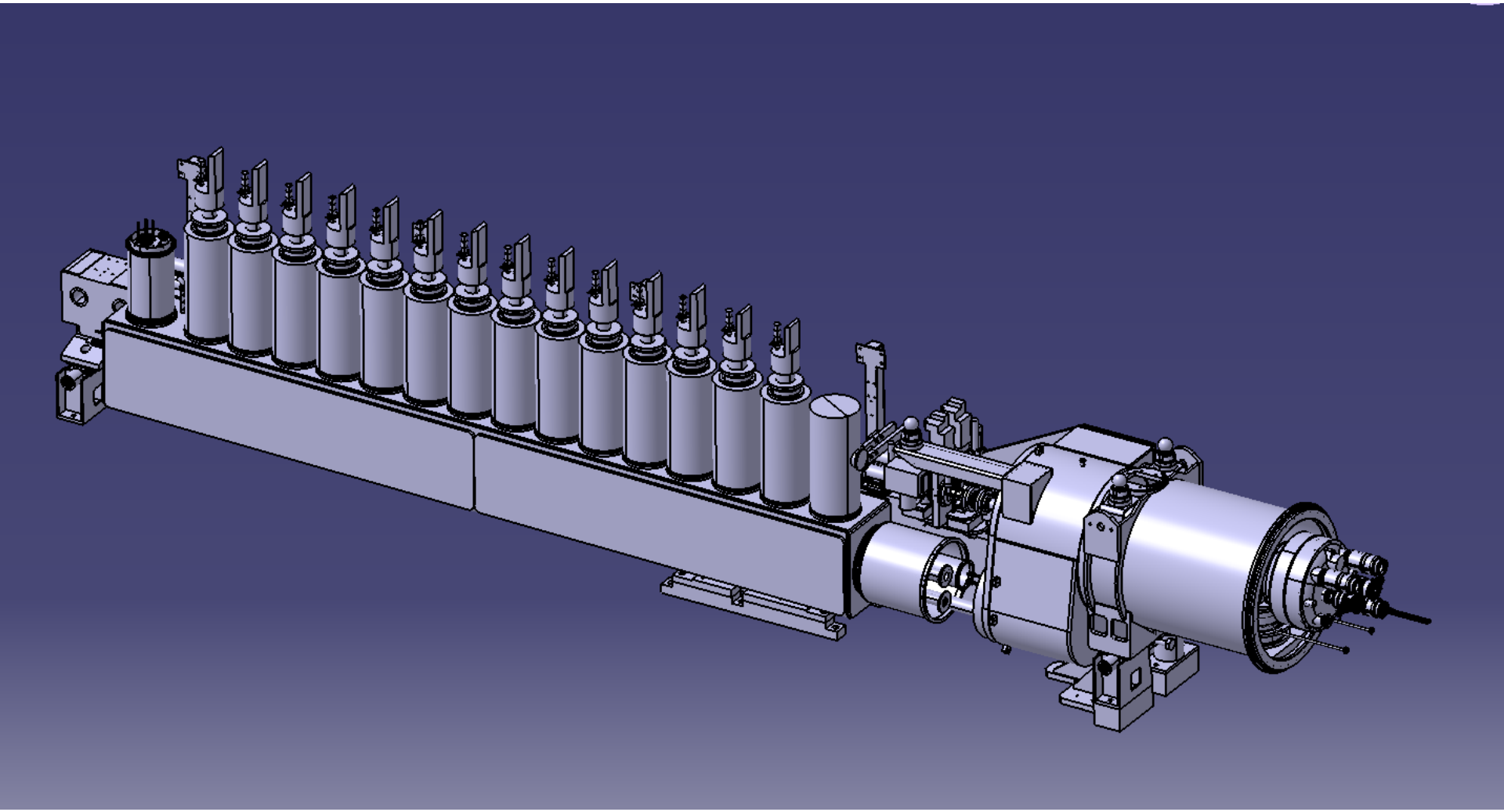
- Conceptual layoutDrawing *
  - Produced by Excel Engine
- Consolidated layout Drawing *
  - Produced by DMU Engine
  - Produced by hand
- Differential layout Drawing
  - Produced by hand
- 3D scene Drawing not necessary
  - Produced by hand

*Definition see EDMS 1760014

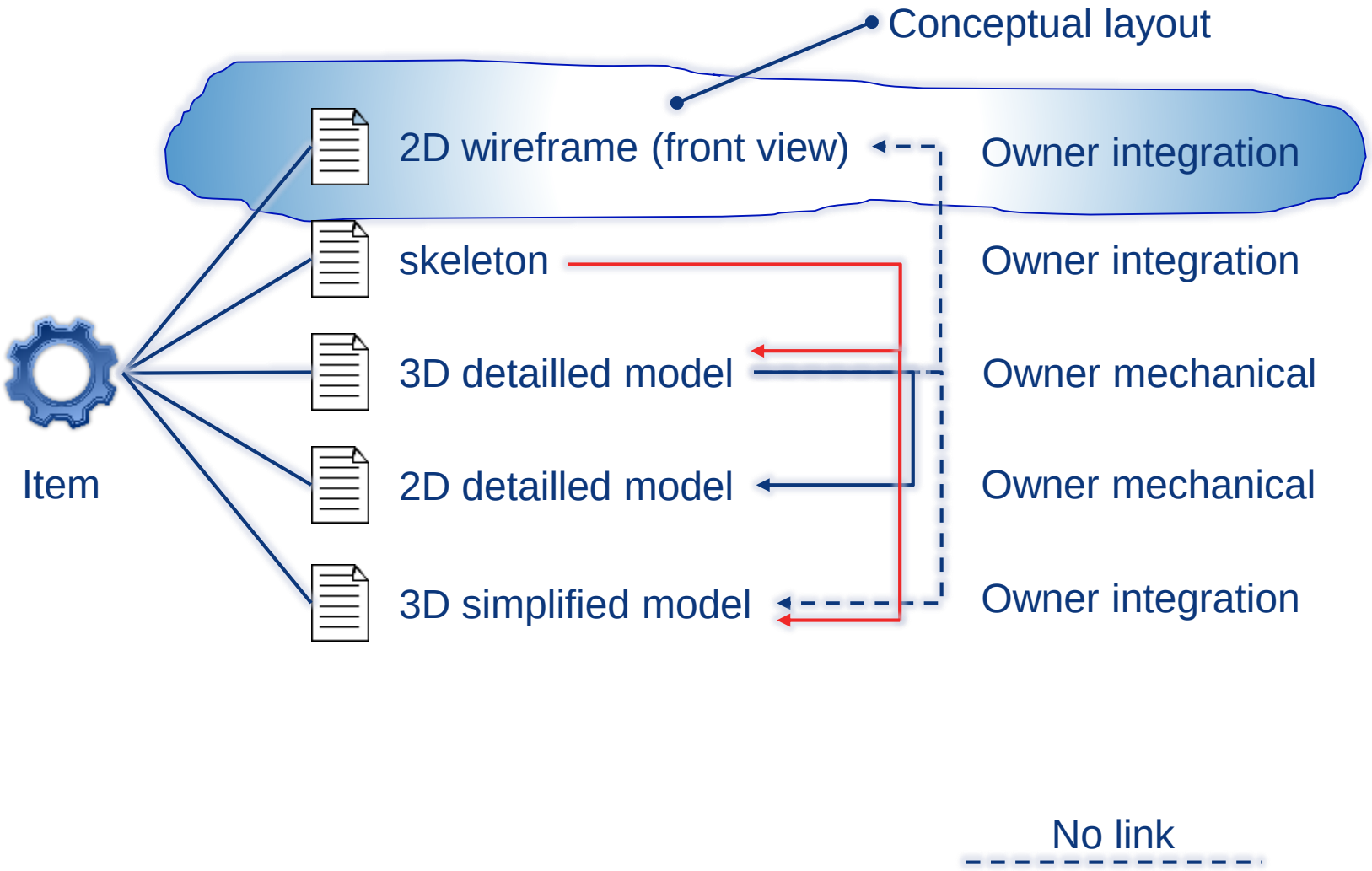
Data model equipment



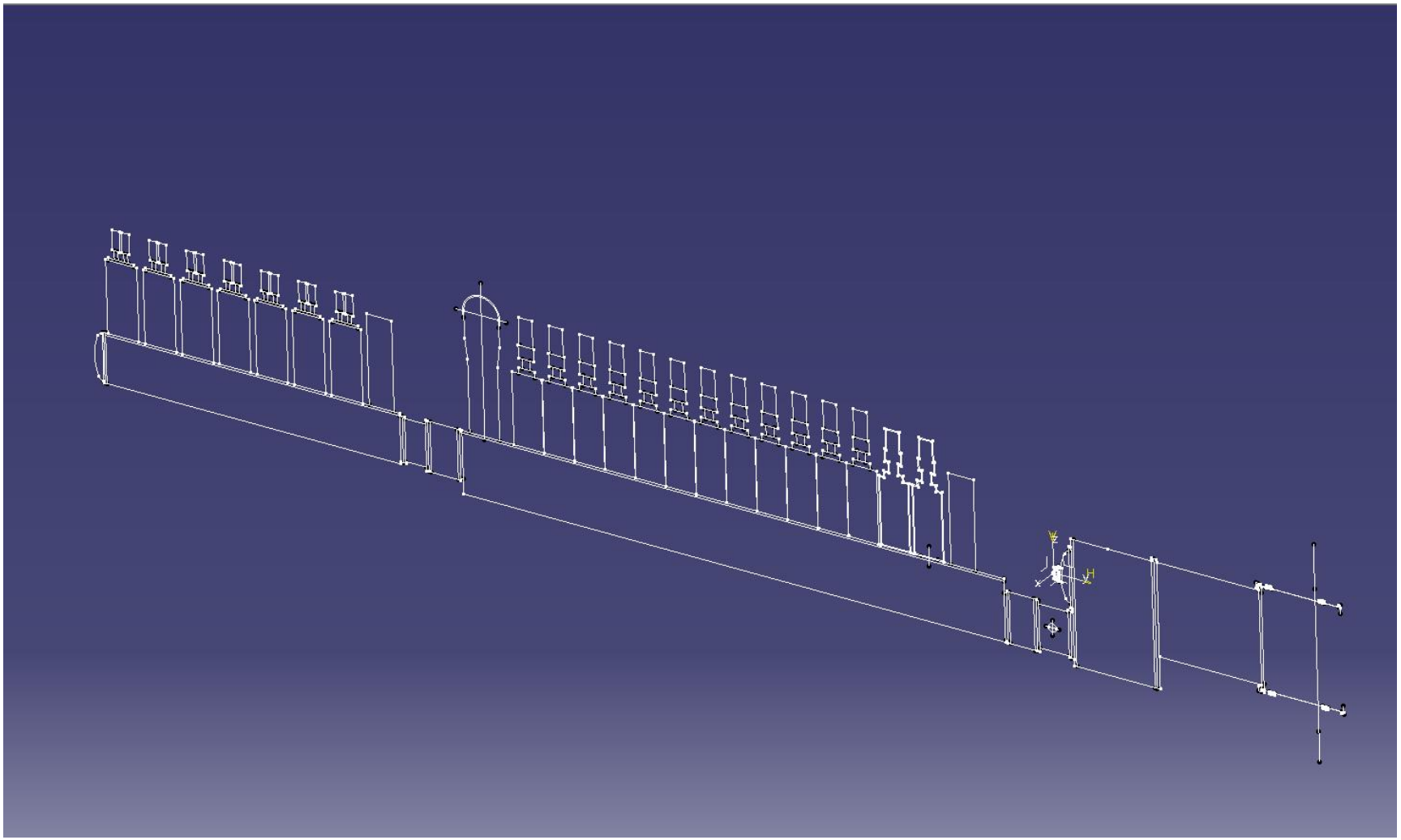
3D detailled model



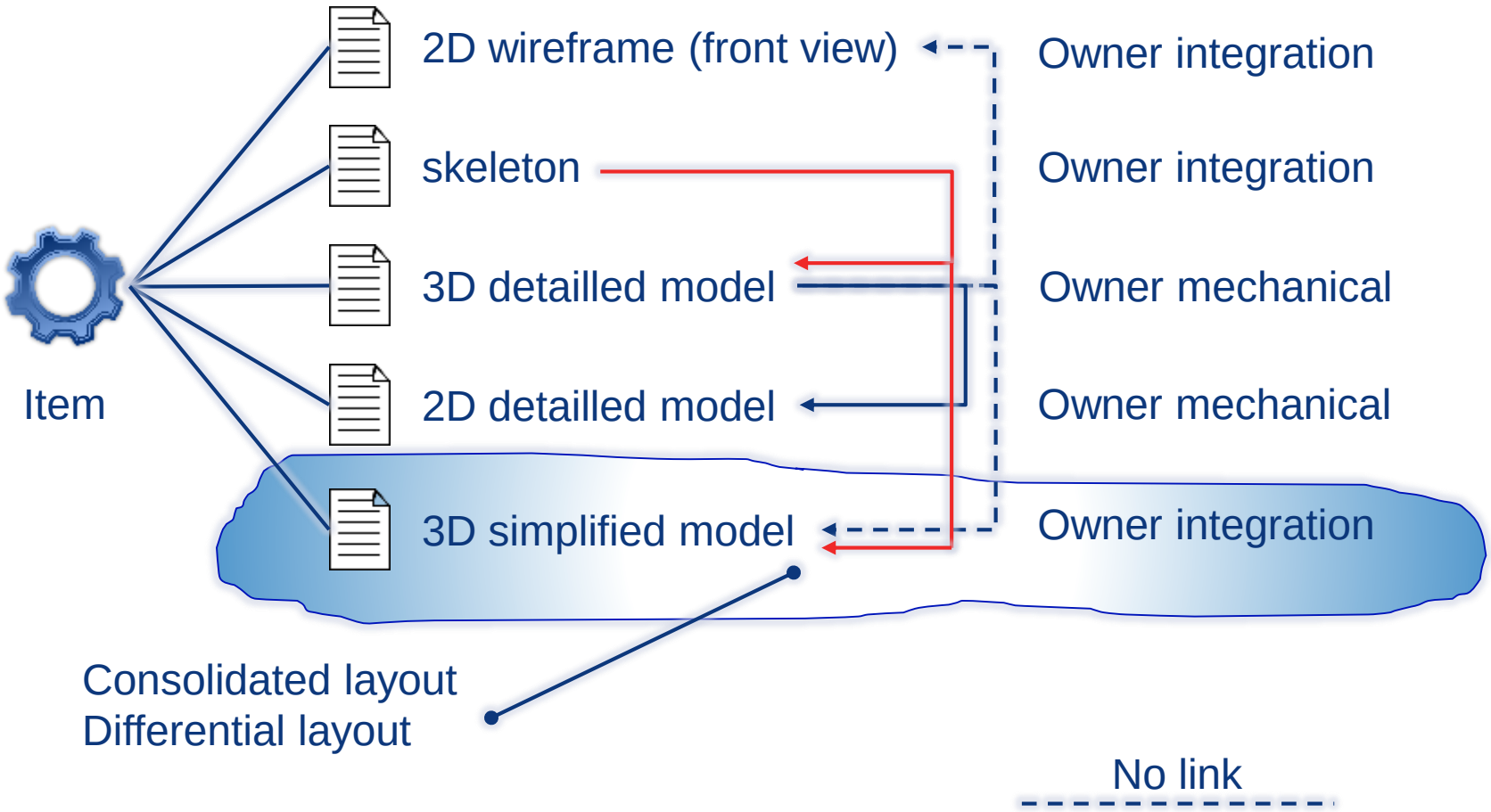
Data model equipment



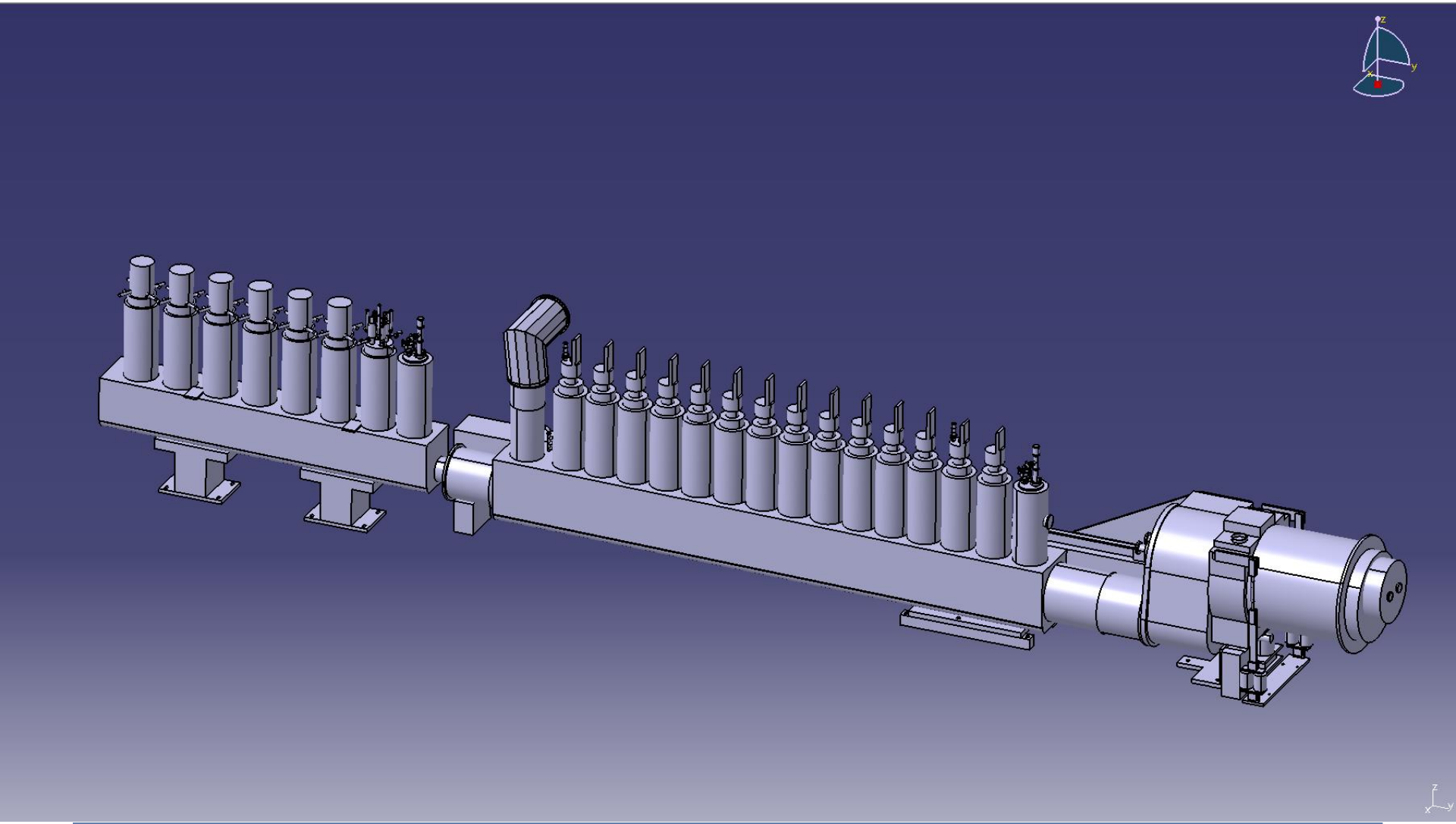
2D wireframe



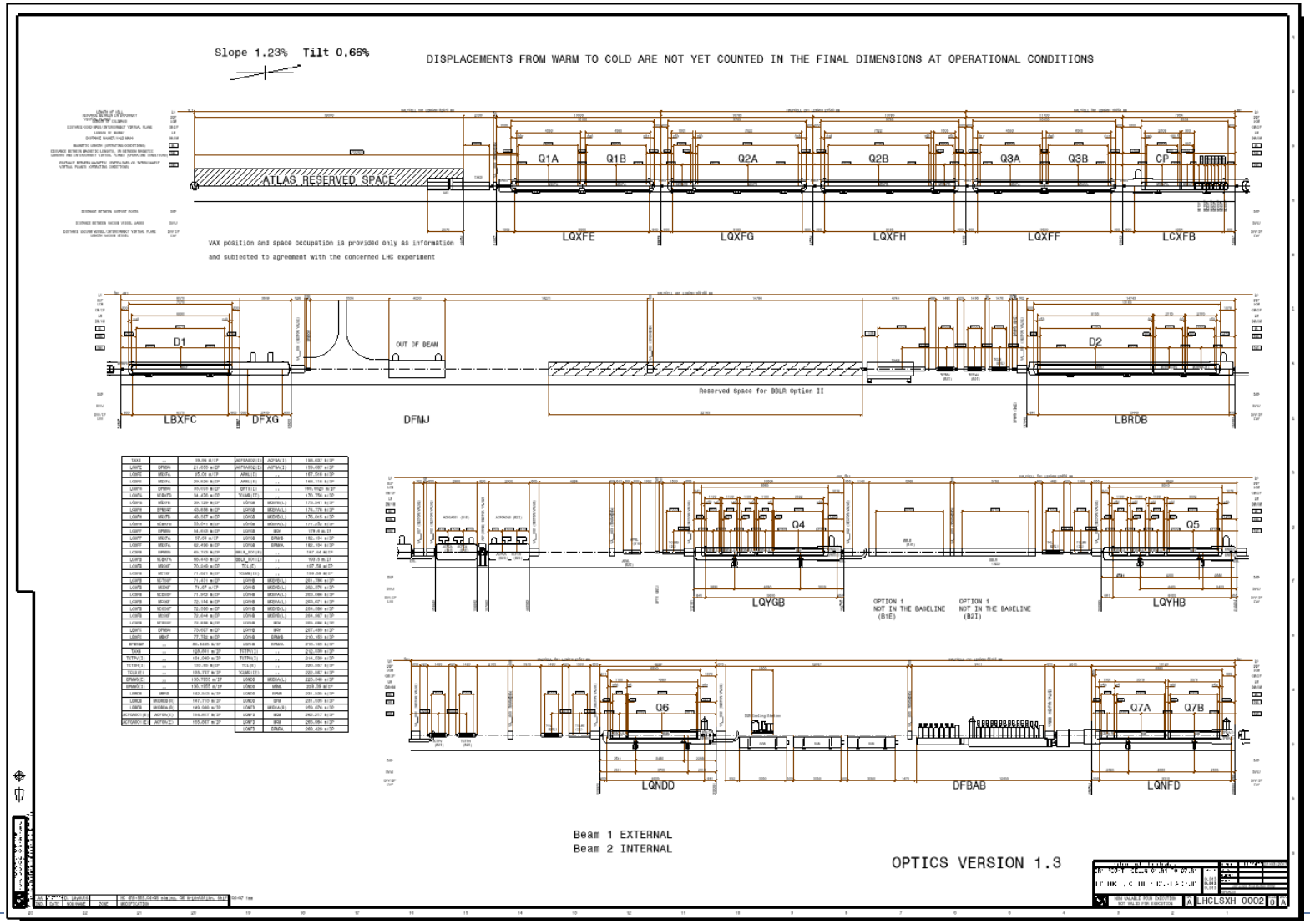
Data model equipment



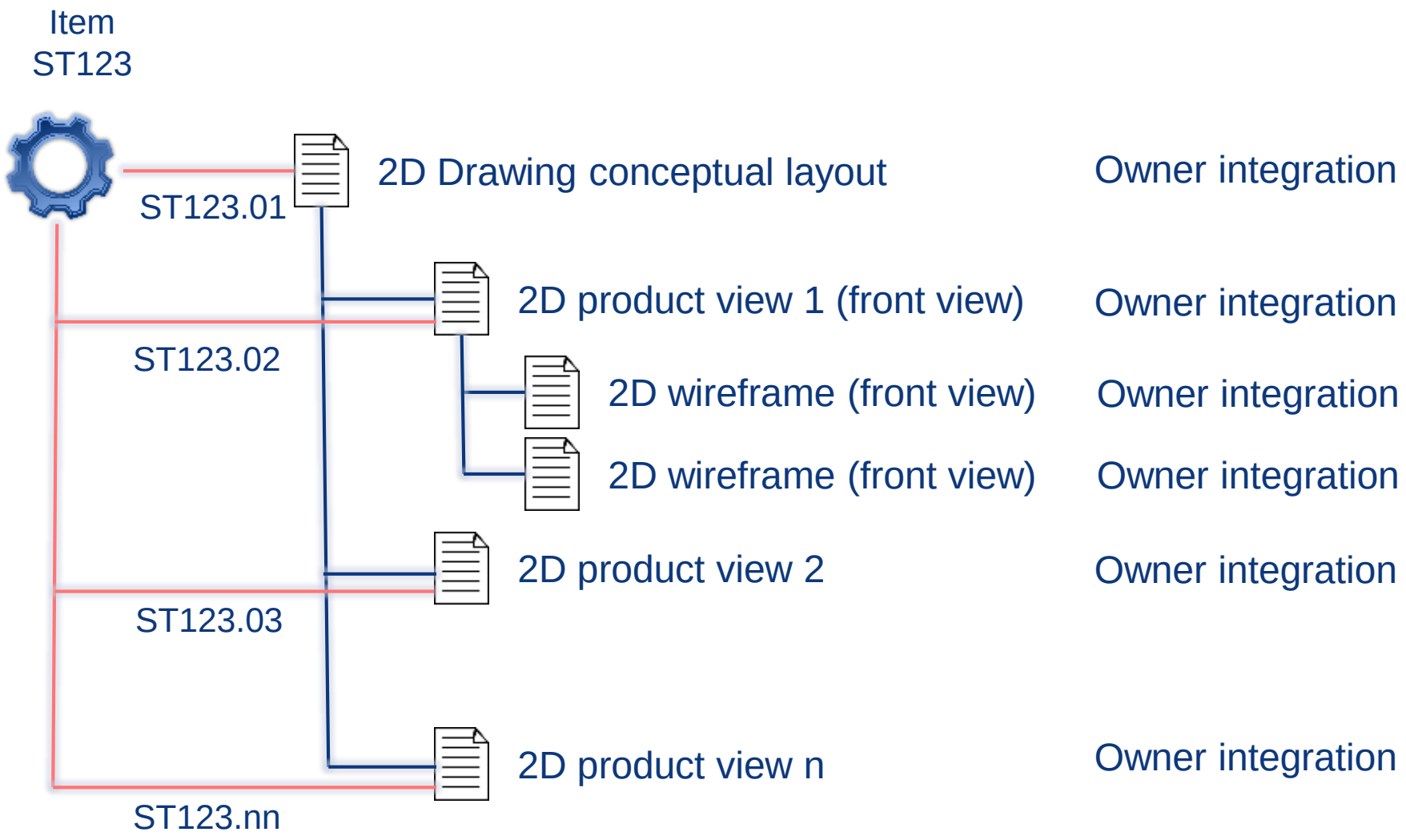
3D simplified model



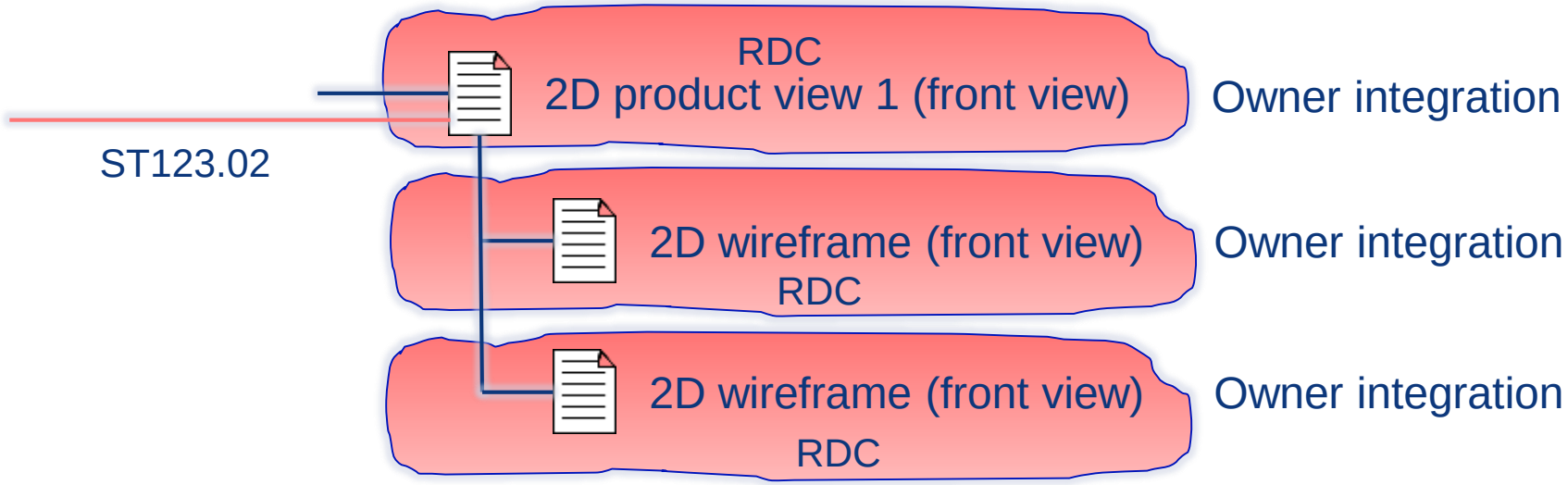
Data conceptual layout Excel engine



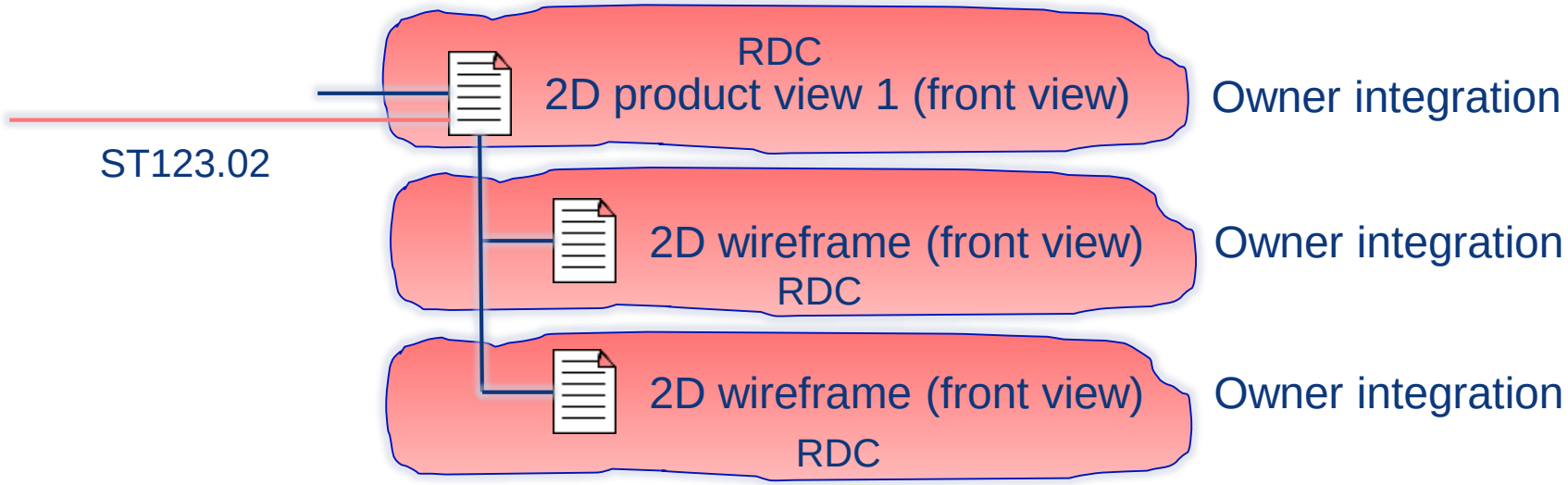
Data conceptual layout Excel engine



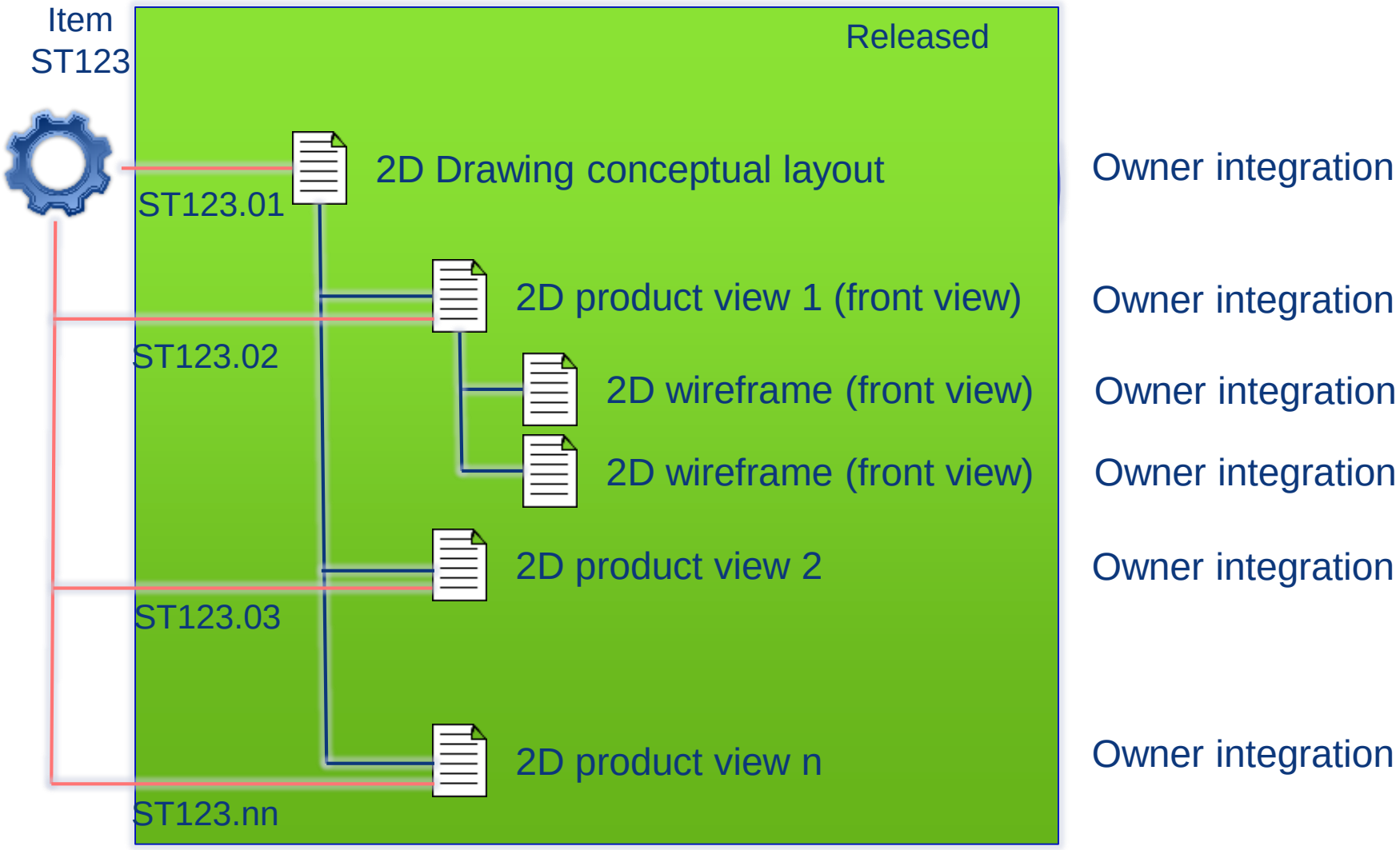
Data conceptual layout Ready for check



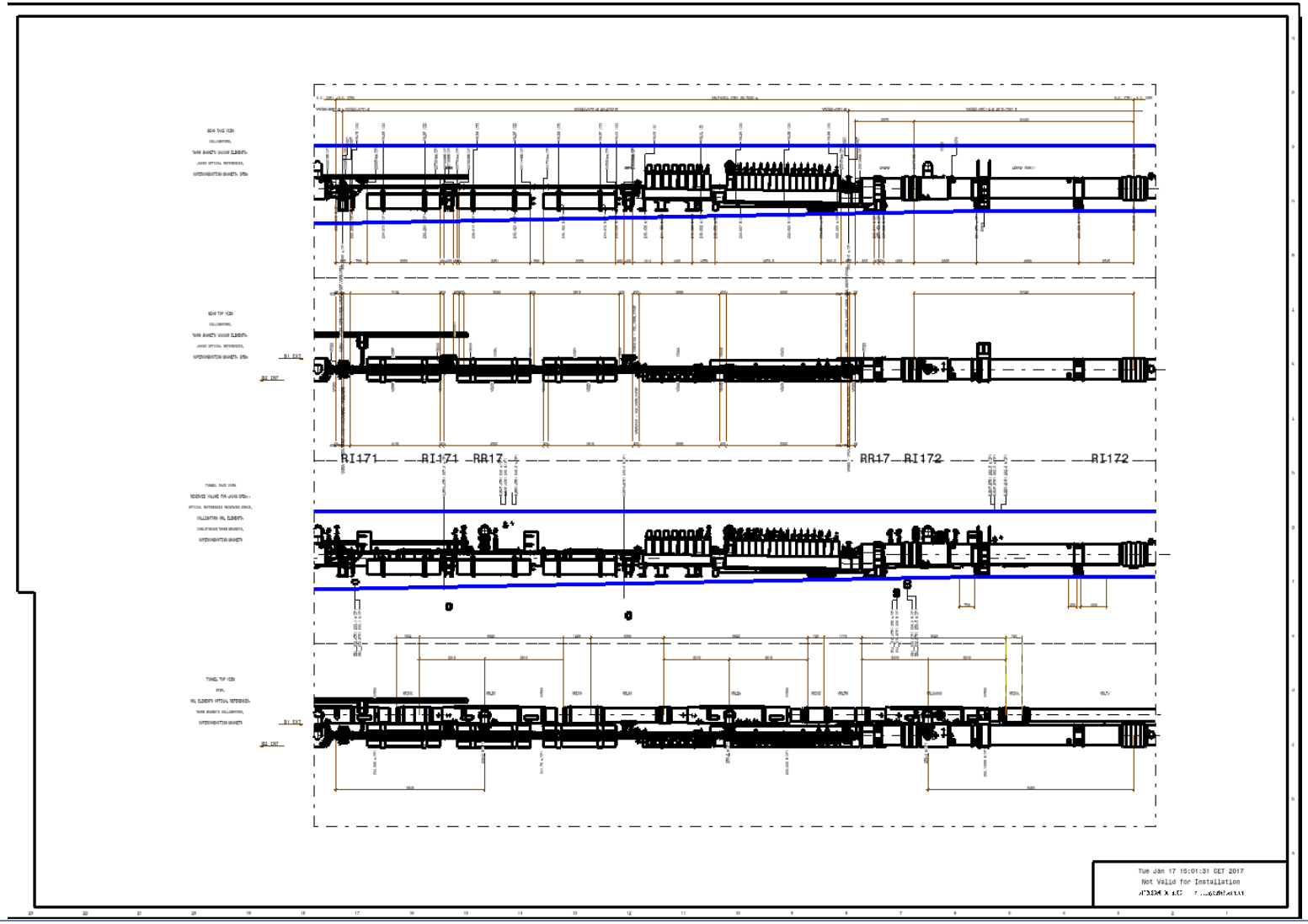
Data conceptual layout Ready for check



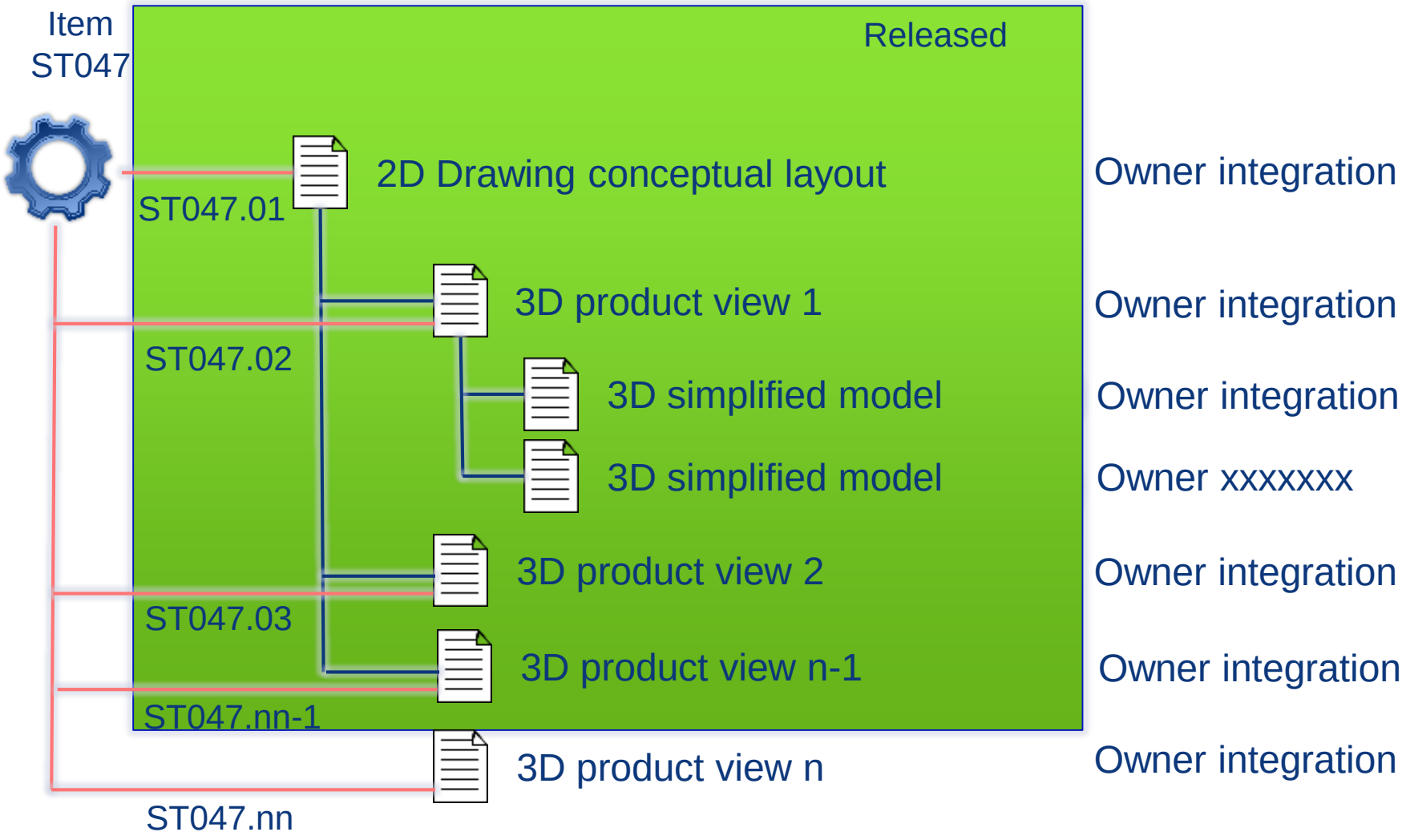
Data conceptual layout control



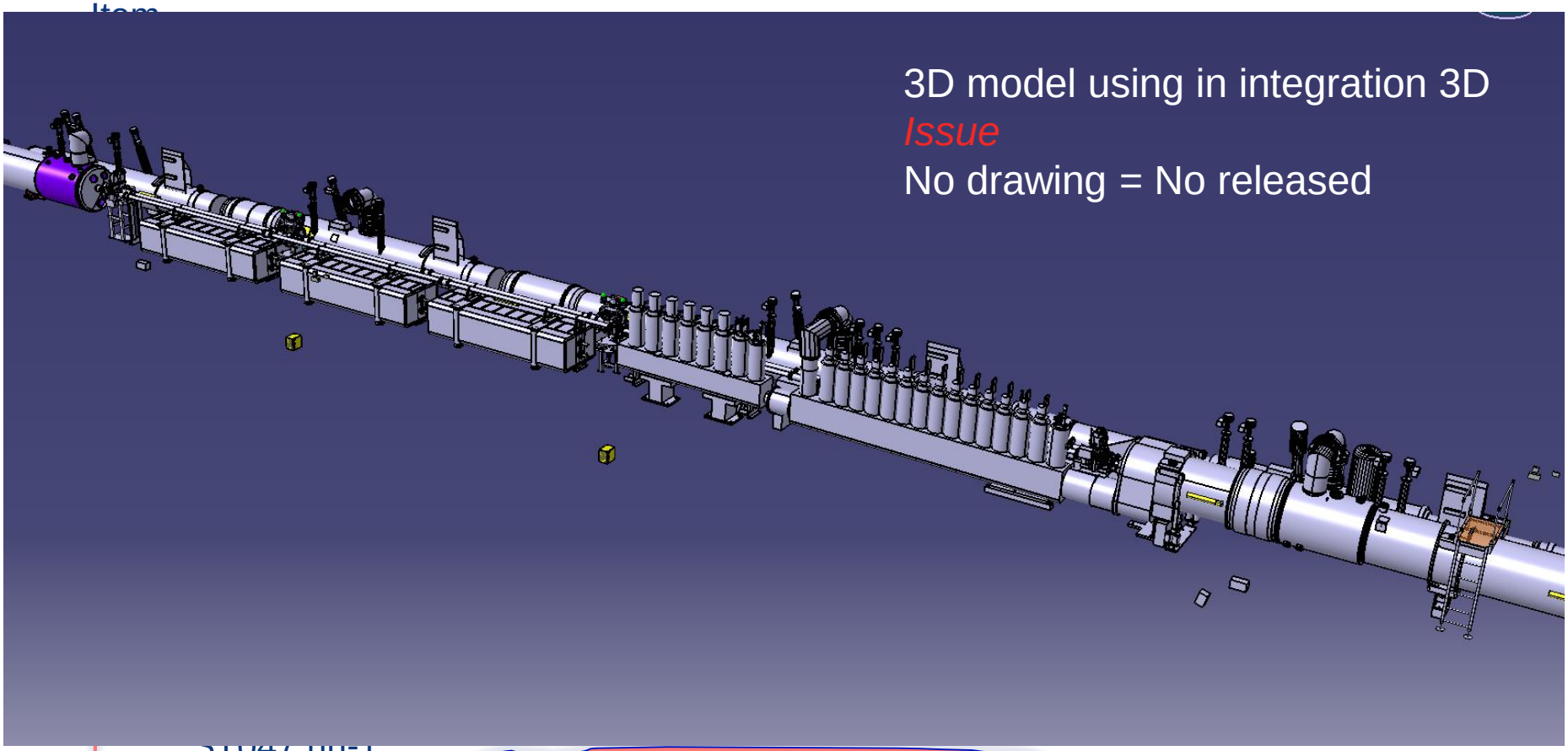
Data consolidated layout DMU engine



Data consolidated layout DMU engine



Data consolidated layout DMU engine



ST047.nn-1

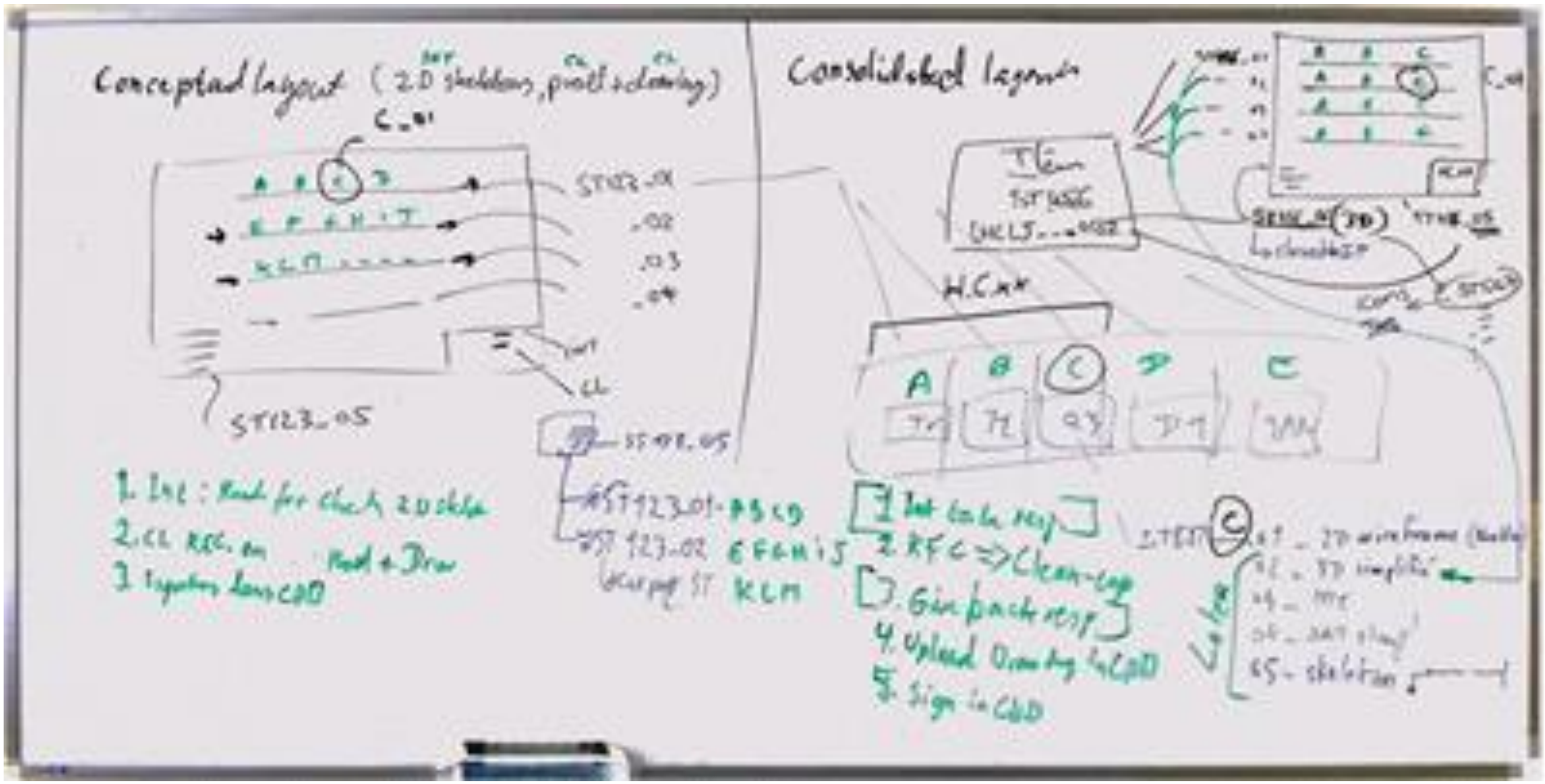
3D product view n RDC

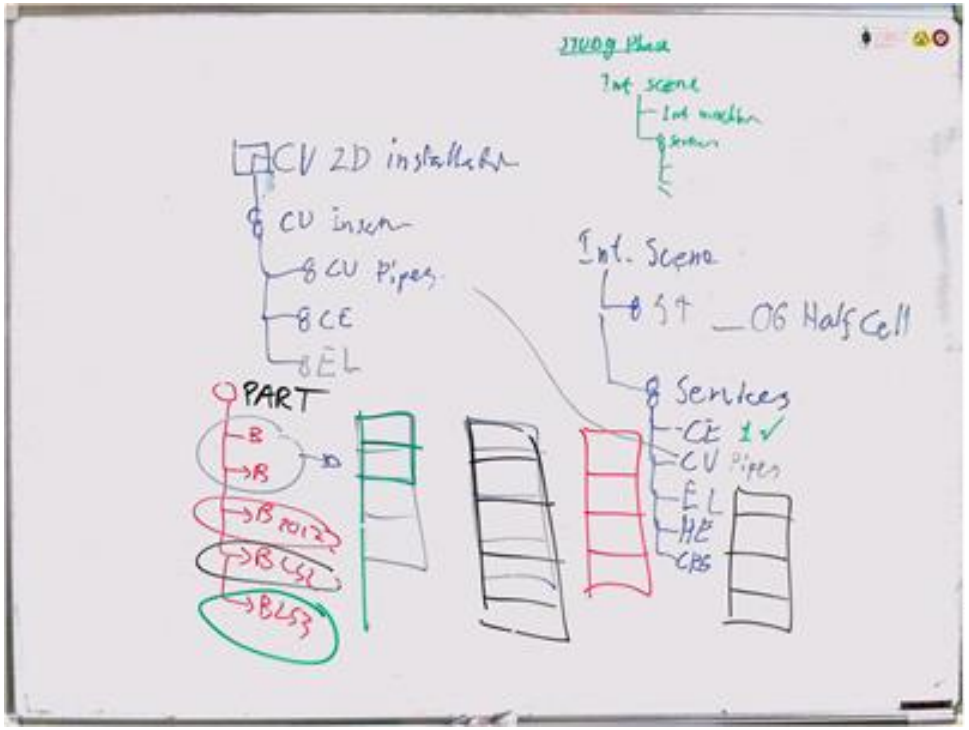
Owner integration

ST047.nn

3D scene

Next step


Conceptual layout
Consolidated layout
H.C.xx
A
B
C
D
E
Clean-up
Sign in CAD


CV 2D installation
CV insert
CV Pipes
CE
EL
PART
Int. Scene
Services
CE
CV Pipes
EL
HE
CBS


CERN
EN
ENGINEERING
DEPARTMENT