

Closing the loop: Feedback of comments and re-marking

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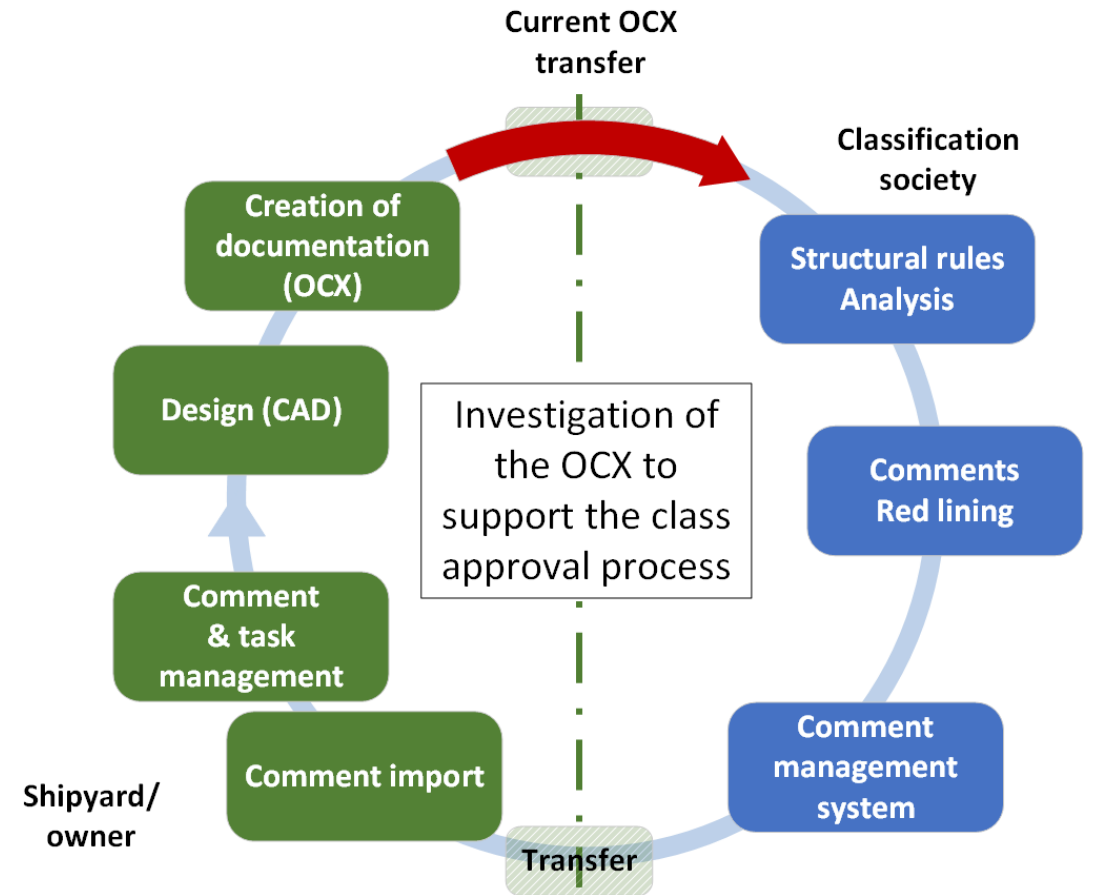
The OCX enables a fully digital feed forward/feed back process

Feed forward (from designer/maker)

- Digital design documentation (OCX)

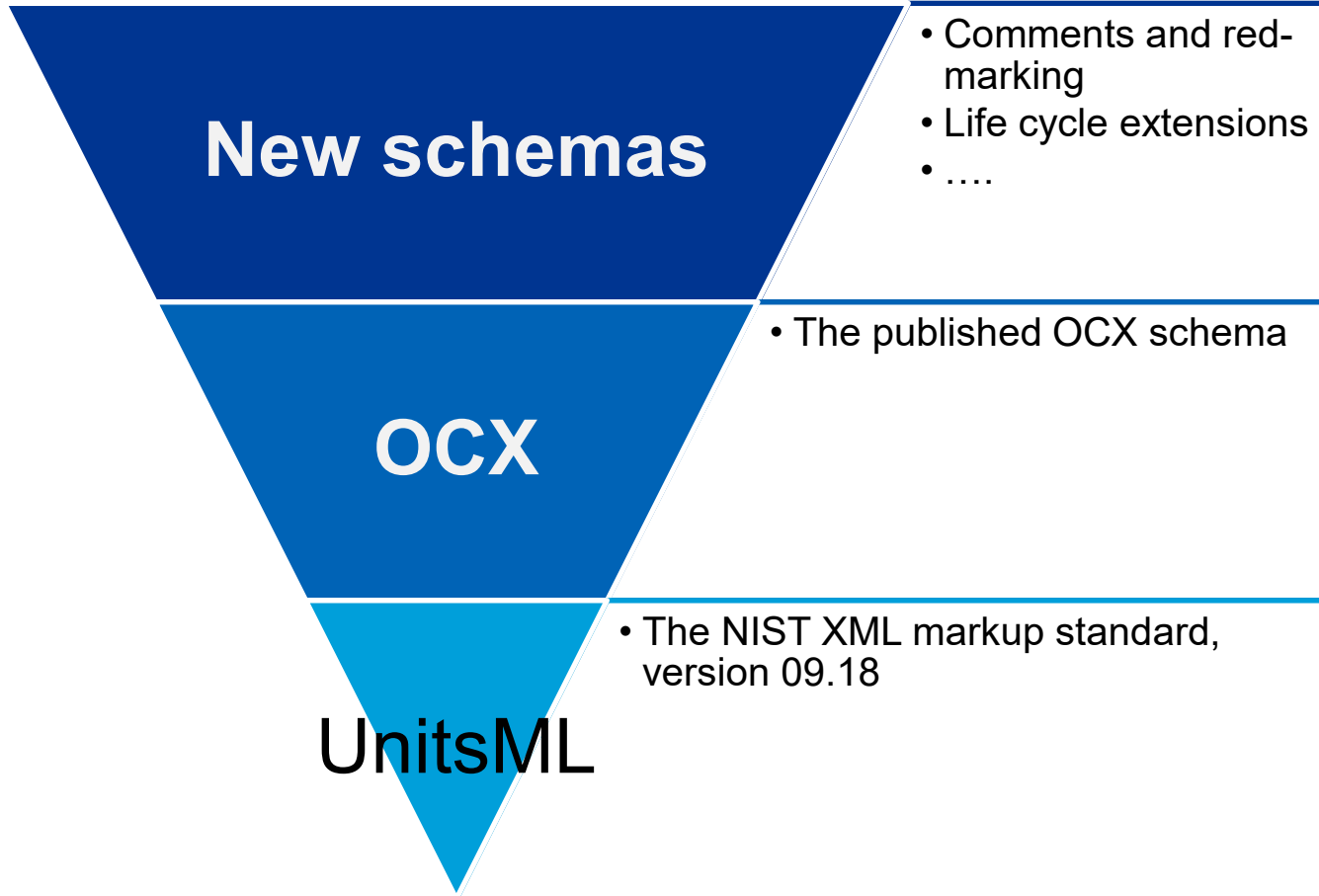
Feed back (from the society/verifier)

- Comments/redlining
- Comments/red lining feedback without sending any model back to the designer/maker
- Feedback can be viewed in the CAD system



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Schema building blocks



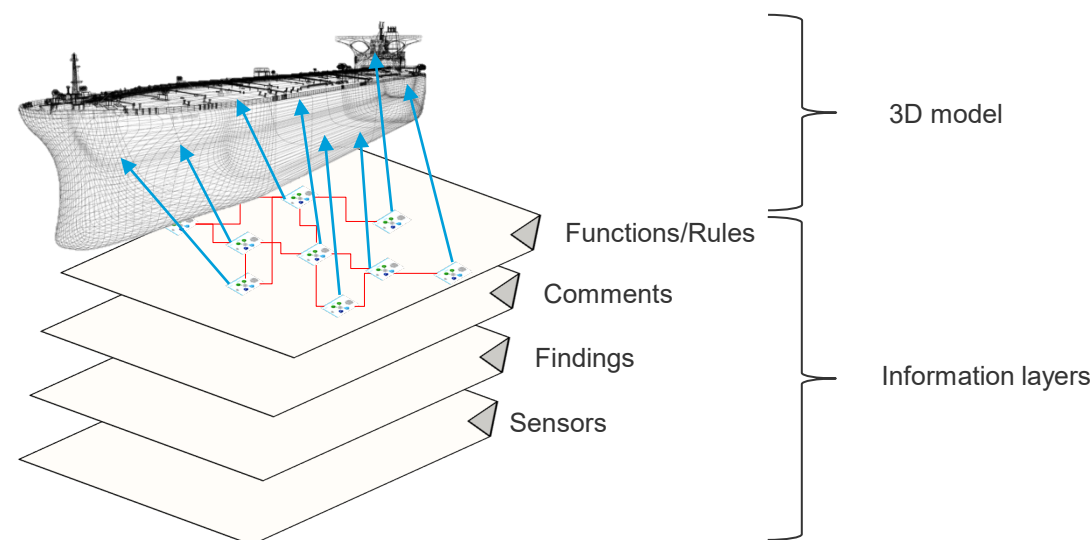
Utilising a standard **W3C XML** construct:

```
<xs:import
namespace="urn:oasis:names:tc:un
itsml:schema:xsd:UnitsMLSchema_l
ite-0.9.18"
schemaLocation="unitsmlSchema_li
te-0.9.18.xsd"/>
```

- `xs:import` \equiv use
- Must reference a specific schema version
- New schemas can be developed and maintained isolated from referenced schemas

A new schema may be an additional information layer supporting a variety of business processes

- Regulations contain both functional and location specific requirements
- The OCX can provide a way to unambiguously link functions to location/position
- Additional layers of information can be added in downstream processes
- A layered information structure is adaptable to process changes
- Layered information sets can be managed outside the 3D model



Benefits

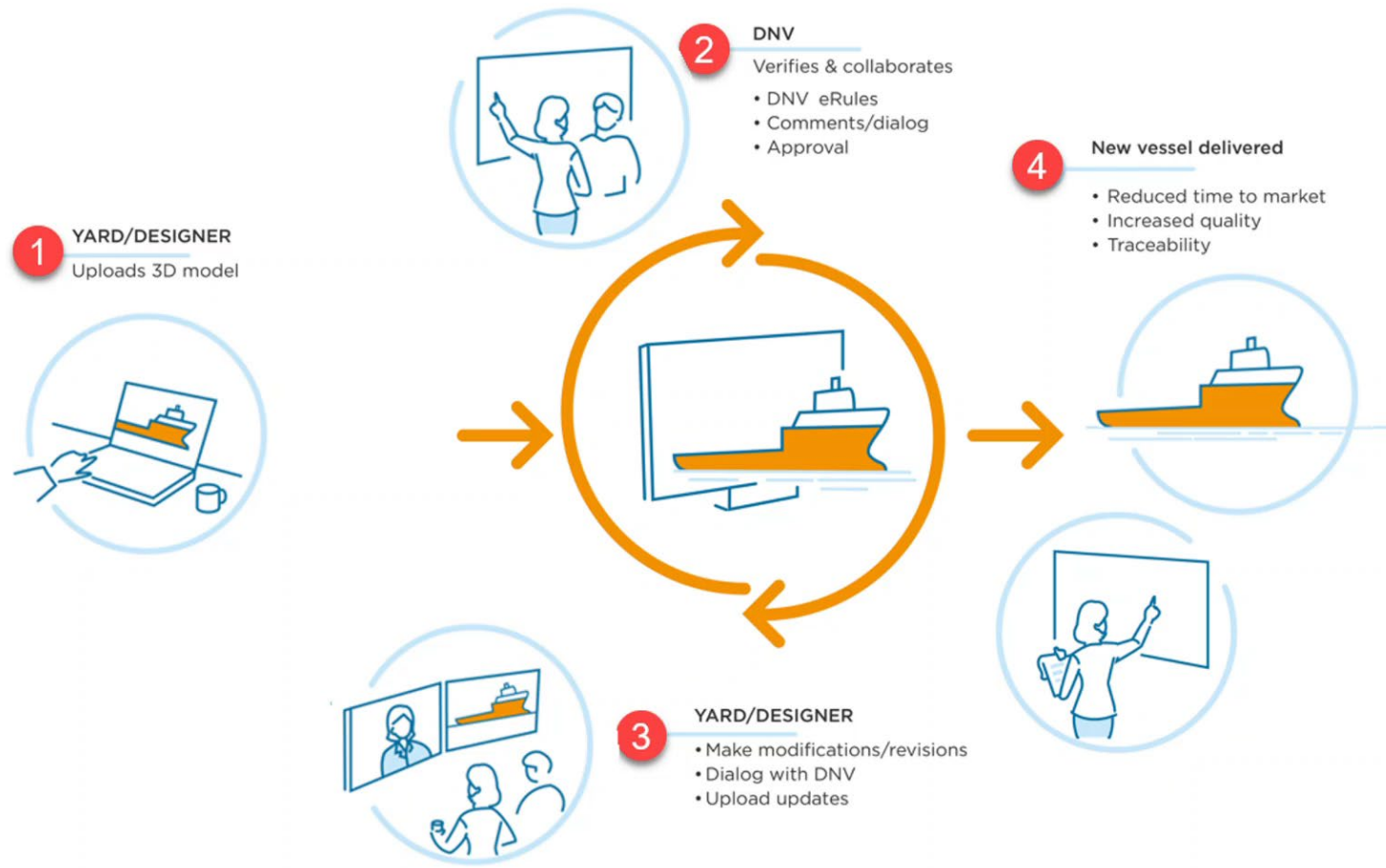
Piloting/Prototyping

- New schemas can be developed and tested independently of any referenced schema including the OCX
- Can be developed and tested outside the OCX standards community
- Successful developments can be proposed for the OCX standards community as a standard extension or to be included in a future evolution

Standardisation

- A schema extension has a clear interface to the published OCX schema
- Schema proposals are documented in a uniform way (as an XML XSD schema following the W3C XML standard)
- May have no impact on the existing OCX schemas and can be easier adopted by the OCX standards community

DNV is closing the loop: Feedback to designer/yard



Customer interaction steps:

1. The yard/designer submits the 3D model to DNV together with other design documentation
2. DNV reviews the 3D model, give comments and can reuse the model for calculations
3. The yard/designer receives feedback/comments and submit a revised model
4. The design is approved and the yard receives the approval confirmation.

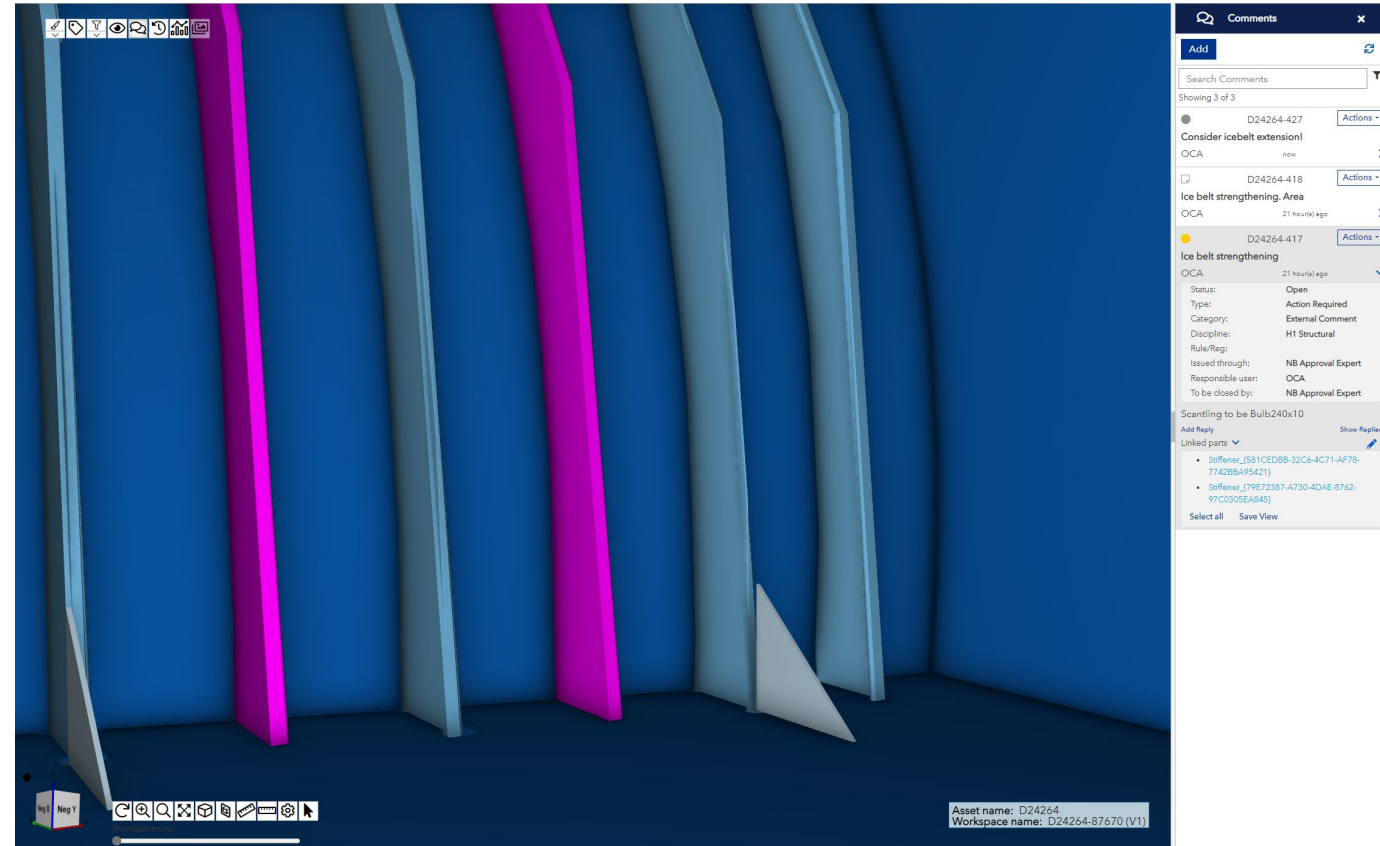
View model and add comments in Sesam Insight

2

DNV

Verifies & collaborates

- Rule calculations
- Comments/dialog
- Approval



View model and add comments in Sesam Insight

2

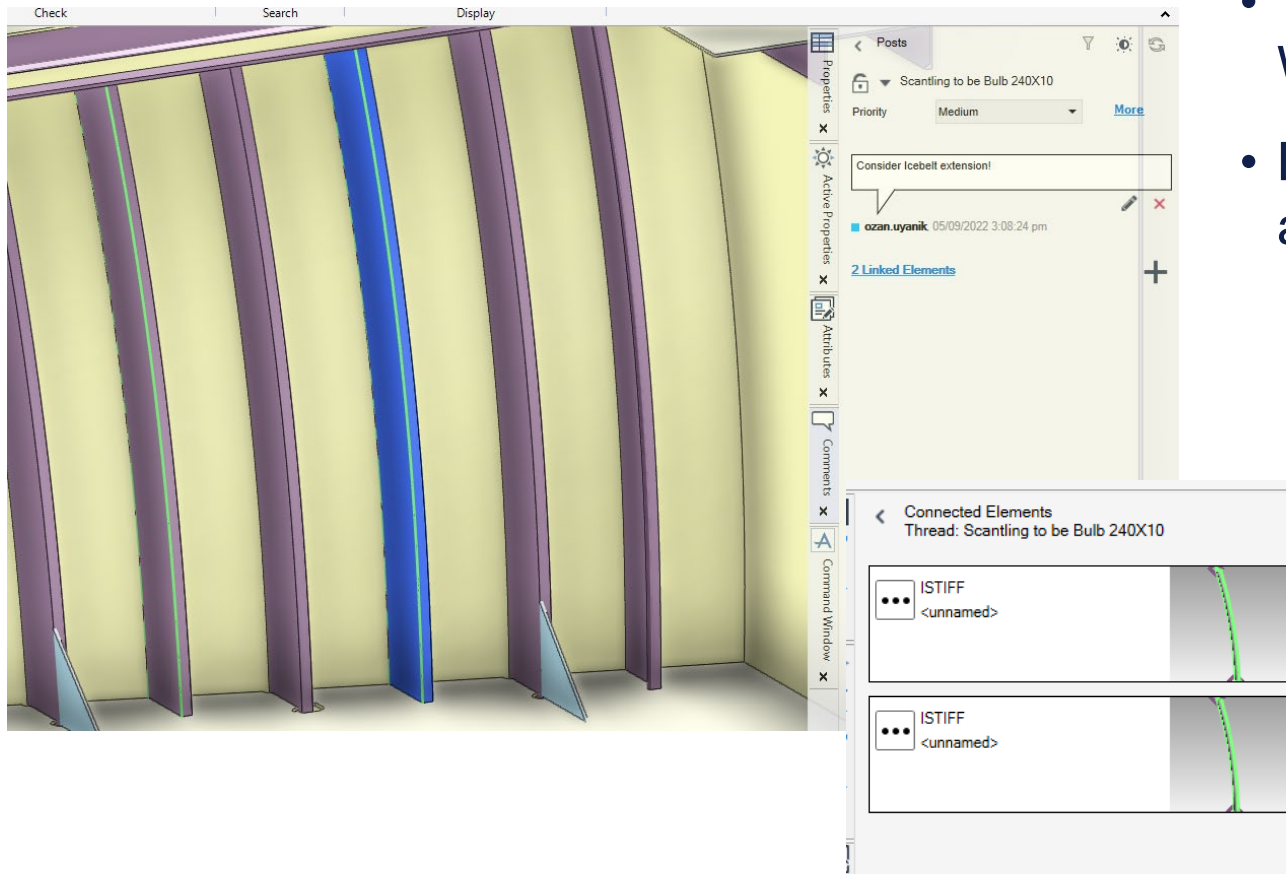
DNV

Verifies & collaborates

- Rule calculations
- Comments/dialog
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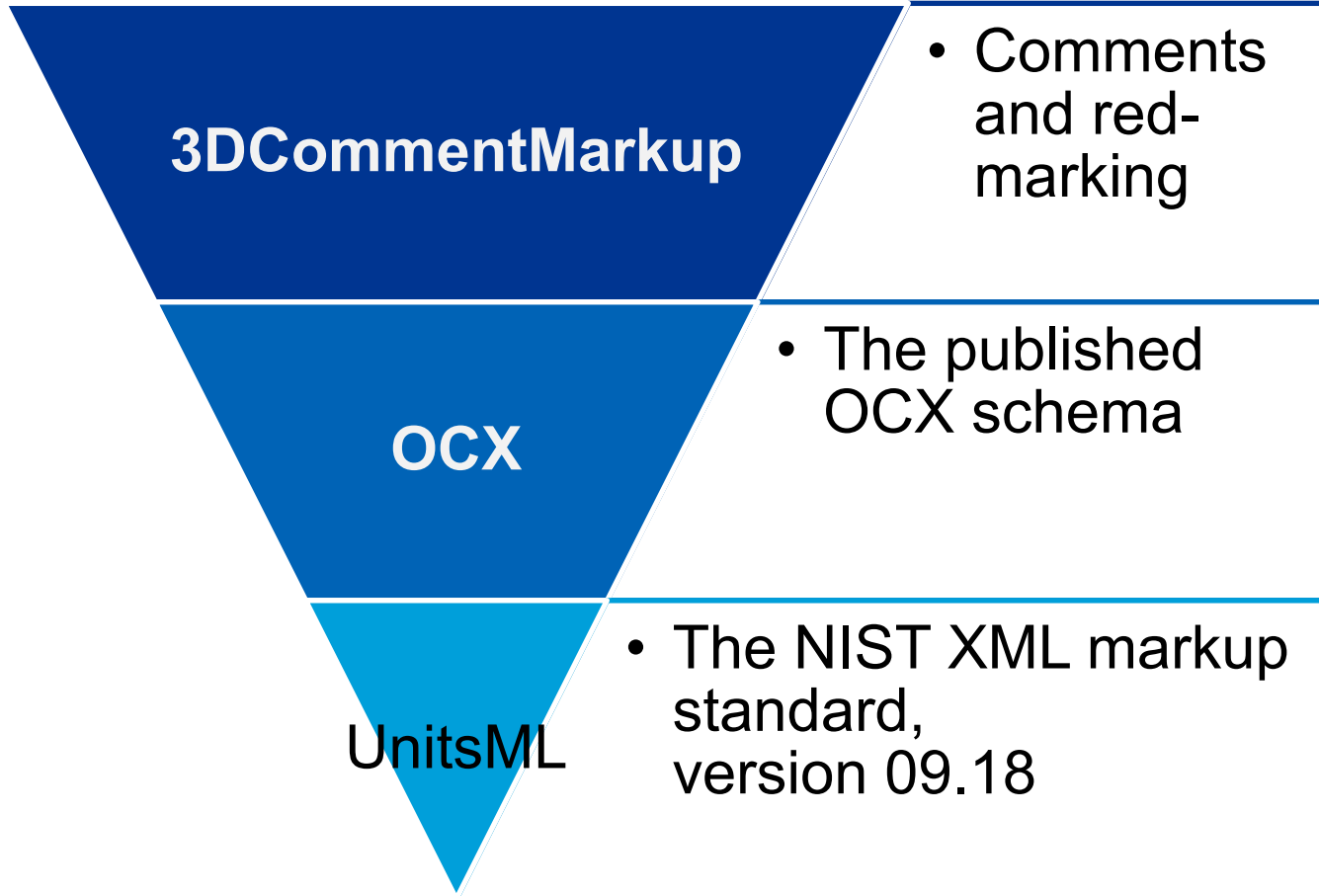
- When yard/designers use our tools to view comments, DNV is in control of the information exchanged and responsible for the user experience
- But what if customers want to use a design review tool of their choice?

Closing the loop



- Technically feasible through a published API. We can do it today
- But there is a need to need to standardise to avoid maintaining multiple interfcaes

Closing the loop



There is a need for standardising downstream processes building on the OCX standards

The OCX standards community can play a role