Today consultants (specifiers) for the Call for Tender primarily write the specifications for the Tender in a Word-paradigm or in a database and send to other parties in pdf.

There is no direct or only an analogue link to the building models or other tools or i.e. the Tender list. There is normally no possibility for reuse of data by other participating parties.

Few consultants have also tried to use the specification tool in the conceptual design phase.
Construction Element Specifications in relation to BIM

The big challenge with Building Information Modelling (BIM) is to support the cooperation of the parties and to reuse and use of data created by the previous link in all building phases – that is in the total life cycle of the building work.

This challenge is only solved if all parties have access to the tool or its data at a given time in the process. The possibility to share specification models and their data in the same way as the construction models and other models.

This means that property data in one tool can be taken out and reused in other tools and listed as information in documents. This creates new requirements for the specification tool regarding structure, function and form.
CE-properties in the Building model + Specification model

Building model-CE
- Geometric data
  - Form: 
  - Length: 8500 mm
  - Height: 2500 mm
  - Thickness: 120 mm
  - Area: 20,50 m²
- Administrative data
  - CCS prod.ID: #AD
  - CCS type-ID: %AD(AAEU:12)
  - Type: TG12 gypsum wall
  - Measure rule: CCS M_ULM11
  - IfcObject: IfcWall
  - Work sect.: B1.290 Framework construction

Example: Wall Gypsum board
- Energy simulation
- Quantity list
- Tender list
- Base of Production

Specifications-CE
- Performance data
  - Fire rating: EI 120 A2-s1,d0
  - Sound rating: 44 dB
  - Load: 0 kN
- Product data
  - Layer: 2x2
  - Edge: Cutted
  - Quality level: Q3
- Administrative data
  - CCS prod.ID: #AD
  - CCS type-ID: %AD(AAEU:12)
  - Type: TG12 gypsum board
  - IfcObject: IfcWall
The Digital Specification Tool

During all phases of the construction process

Construction entities

Spaces

Construction elements

Extract of property data
Extract of references

Digital spec. tool

CCS-server

Extract of classification codes and metadata
The digital BIM-specification for Construction Elements

During all phases of the construction process

Purpose:
- Specification
- Functional requirements
- Conceptual design
- Tender
- Product specification
- As built-specification
- Maintenance data specification

Construction element spec.

Extracts of property data
Extracts of references
Extracts of classification codes and metadata

Dig.spec.tool
CCS-server
4 questions for short comments

1. How do you create interoperability between the Building model, the Specification model and the Tender list?

2. Do your specification use written descriptions or descriptive property data or both?

3. Do you have user conflicts between building modellers and specifiers, e.g. about property data?

4. Do you have a tolerance management tool?