

# IDM Success Stories

Jan Karlshøj, IDM Coordinator  
buildingSMART Process Room  
Waltham, March 13, 2013

# Candidates

- **Asked IDM Coordinators about status of IDMs**
  - Limited response

# Candidates Identified by Jan Karlshøj

- **Concept Design BIM 2010, e.g., O'Mahoney Federal Courthouse**
  - Unable to evaluate the project
- **Design to Building Energy Analysis**
  - AECOO Testbed Project (<http://www.opengeospatial.org/pressroom/pressreleases/1064>)
    - Process and software demonstrations in the webinar prove that the following is achievable today:
      - Quantitative cost and performance justification of design decisions early in the design process, resulting from parallel, partially automated, and near-real-time cost estimating and building energy performance simulation;
      - Standardized process definition that identifies tasks and information requirements for all participants and stakeholders, and unambiguously defines all data exchange requirements across the process;
      - Effective electronic information management and dissemination that serves all processes and project participants and stakeholders; and
      - Effective use of Industry Foundation Classes (IFC - ISO Standard 16739).
  - Van Buren Land Port of Entry
  - O'Mahoney Federal Courthouse

# Identified Candidates by Jan Karlshøj

- **Nordic Energy**
  - Unable to evaluate the effect
- **COBie – originally based on IDM**
  - Numbers may exist

# Danish IDM on Validation of Spaces in Architectural Competitions

- **Client**
  - Palace and Properties Agency
- **Adopted by**
  - Danish University and Property Agency
  - Defence Construction and Establishment Service
- **Scope**
  - Manage and check spaces from architectural competitions
- **Limitation**
  - Based on capabilities in existing software certified according to buildingSMART's Coordination View, ver. 1
- **Issues during development**
  - Harmonize requirements; e.g., measurement of space - > how to model spaces
  - Spaces were measured using 3 different methods. Each department had its own method. Spaces are now measured according to the Danish Standard 13,000:2007.
- **Implementation**
  - Existing BIM authoring tools
  - BIM Checker developed by Dalux
    - [http://www.dalux.dk/flx/dk/produkter/dalux\\_bim\\_checker\\_kvalitetssikring\\_af\\_bim\\_og\\_ifc/](http://www.dalux.dk/flx/dk/produkter/dalux_bim_checker_kvalitetssikring_af_bim_og_ifc/)

# Danish IDM on Validation of Spaces in Architectural Competitions

- **IDM**

- In Danish <http://www.ses.dk/da/Vaerktoejer/~media/Files/Vaerktoejer/Raadgiveraftaler/IDM%20-%20DK-GOV-Area.ashx>

- **Developments Cost**

- Consult \$ 20,000
- Internal cost?
- Software?

- **Effect**

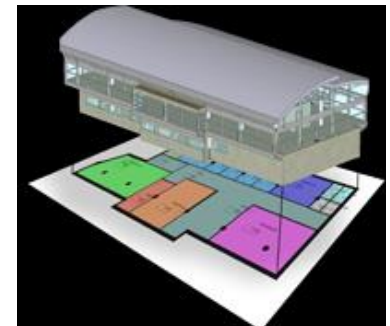
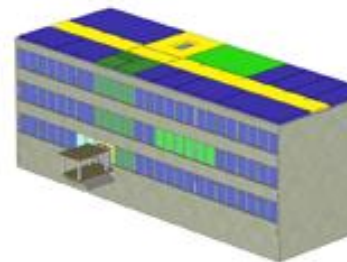
- Client
  - Before: 2 weeks per project to measure and validate data
  - After: One hour
- Architects have accepted the system as they can verify their models before the are submitted

- **ROI**

- E.g., 20 competitions with \$100,000 - fee for access to software
- Better material



Kategori	Volumen	Volumen (m³)	Volumen (m³)	Volumen (m³)	Volumen (m³)
1	100,000	100,000	100,000	100,000	100,000
2	200,000	200,000	200,000	200,000	200,000
3	300,000	300,000	300,000	300,000	300,000
4	400,000	400,000	400,000	400,000	400,000
5	500,000	500,000	500,000	500,000	500,000
6	600,000	600,000	600,000	600,000	600,000
7	700,000	700,000	700,000	700,000	700,000
8	800,000	800,000	800,000	800,000	800,000
9	900,000	900,000	900,000	900,000	900,000
10	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000



[http://www.dalux.dk/flx/dk/produkter/dalux\\_bim\\_checker\\_kvalitetssikring\\_af\\_bim\\_og\\_ifc/](http://www.dalux.dk/flx/dk/produkter/dalux_bim_checker_kvalitetssikring_af_bim_og_ifc/)

# Danish IDM on Validation of Spaces in Architectural Competitions

- **Interview**

- In Danish: [http://www.dalux.dk/files/1/daluxbimchecker\\_i\\_bips\\_nyt.pdf](http://www.dalux.dk/files/1/daluxbimchecker_i_bips_nyt.pdf)
  - “Such that you take all the necessary quantities from the model to calculate the proposed area and energy economy, and such that you can quickly check whether the proposal complies with the competition program space and space requirements.”
  - “However, the IFC file was used - we could work with and if required made a 3D PDF from the IFC file. However, the IFC model is in fact the same - and much more. So in recent competitions, we have concentrated on it and worked to be sharper on our requirements the model so that it best serves the interests of our needs.” (Mette Carstad)
  - “It is probably the competition overall, which I felt best equipped to assess and evaluate the submitted proposals against each other.” (Sajet Mahmudovski)






From left:  
Mette Carstad,  
Marianne Thorbøll,  
Sajet Mahmudovski

<http://www.ses.dk/da/Vaerktoejer/~media/Files/Vaerktoejer/Raadgiveraftaler/IDM%20-%20DK-GOV-Area.ashx>

# Danish IDM on Validation of Spaces in Architectural Competitions

- Tested in several projects
- Consultants were given free access to the BIM Checker from Dalux

Project	BIM Checker	IFC Area	Result
Niels Bohr 	No	Yes	Only useful for visual inspection
Panum 	Optional	Yes	Useful
KU Life 	Demand	Yes	Super



# Danish IDM on Validation of Spaces in Architectural Competitions

- **Development**



- **Use**



# Others candidates

- **Please inform me**
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