

2016 & the BIM-enabled graduate

April 23, 2012

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Plan Design Enable



2016 & The BIM-enabled graduate

- **What will this year's intake need to know about BIM in 4 years time?**
 - Data
 - Collaboration in 3D
 - Design management
 - and more Lego



Assets in the built environment:

How it was

- The client wrote something
 - The designer drew something
 - Contractor A dug something
 - Contractor B poured something
 - Contractor C bolted something on
 - The client paid the utility bills
 - Contractor D added some stuff
 - One day it got knocked down
- **Separate activities**
 - **Separate entities**
 - **Potentially adversarial contractual atmosphere**
 - **At each step**
 - loss of data
 - inefficiency crept in.
 - **We need our assets to work harder now!**

Assets in the built environment: A new Nirvana

- 
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- **A flow of data**

- Added to
- Evolving
- Refining
- Delivered to end-users
- Informing and supporting a lifetime of use

Assets in the built environment: The Government's Construction Strategy



Improving Performance
Cost, Value, Carbon



BIM Management for
value, cost & carbon
improvement

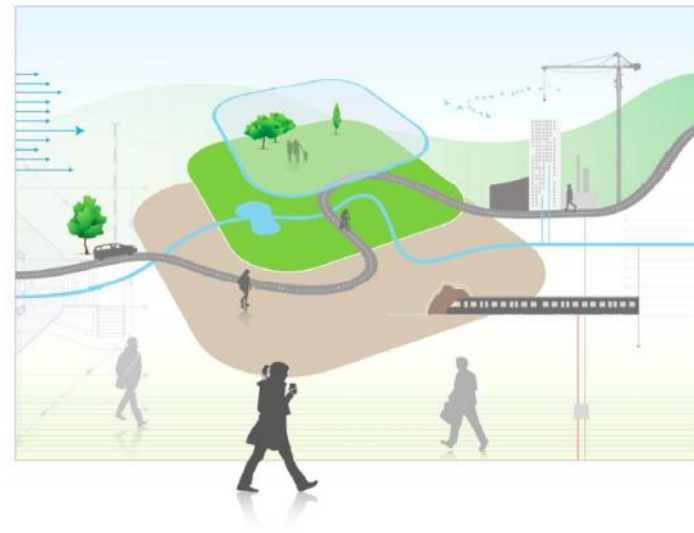
A report for the
Government Construction Client Group
Building Information Modelling (BIM) Working Party
Strategy Paper

March 2011



Abilities and behaviours

- An understanding of data management
- The ability to engage collaboratively in a virtual environment



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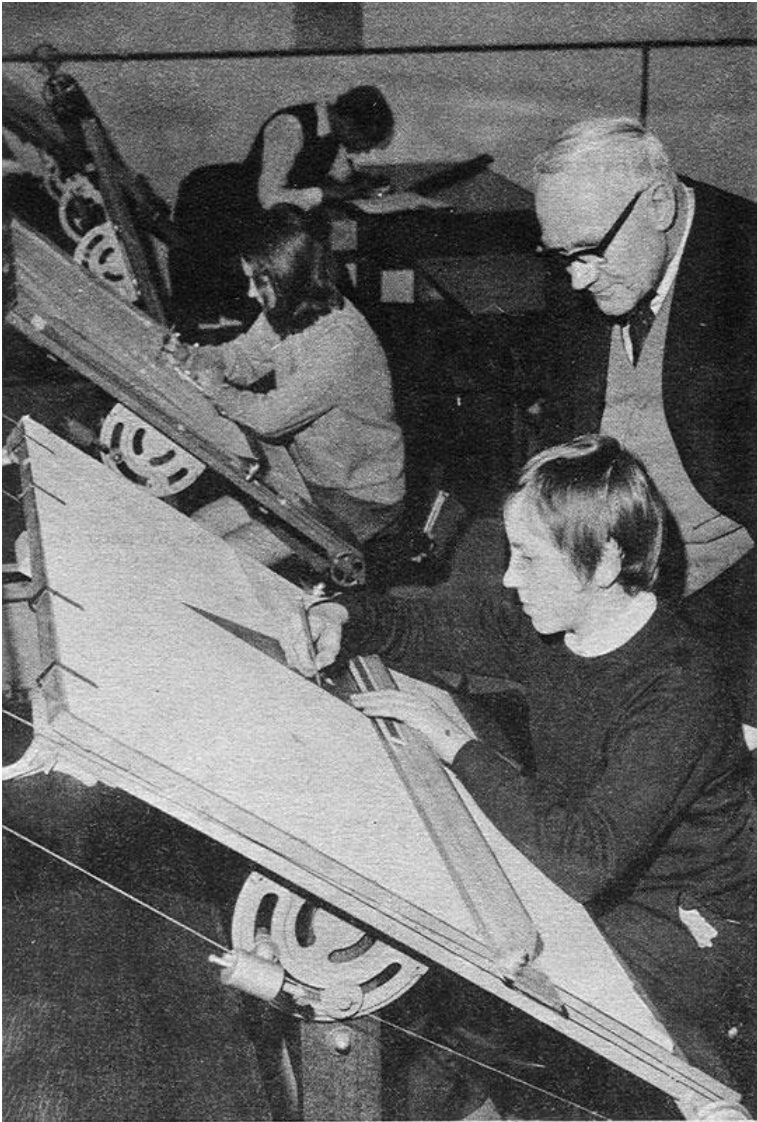
Civil infrastructure data flow

A greater diversity of data than for buildings.

- **Sourcing:** Geomatic files, geospatially related information. What have you got and what can you get? Does it help? What reliance can you place on it?
- **Generation:** Geometrical modelling, production of analytical, cost & carbon data. Multiple innovations. How can data be combined to generate optimal designs?
- **Issue:** Fit for purpose and future legacy uses? Matching the standards and needs of the whole project team, but also anticipating future client needs.

How does your data fit into the total project's journey?

Collaboration: How it was

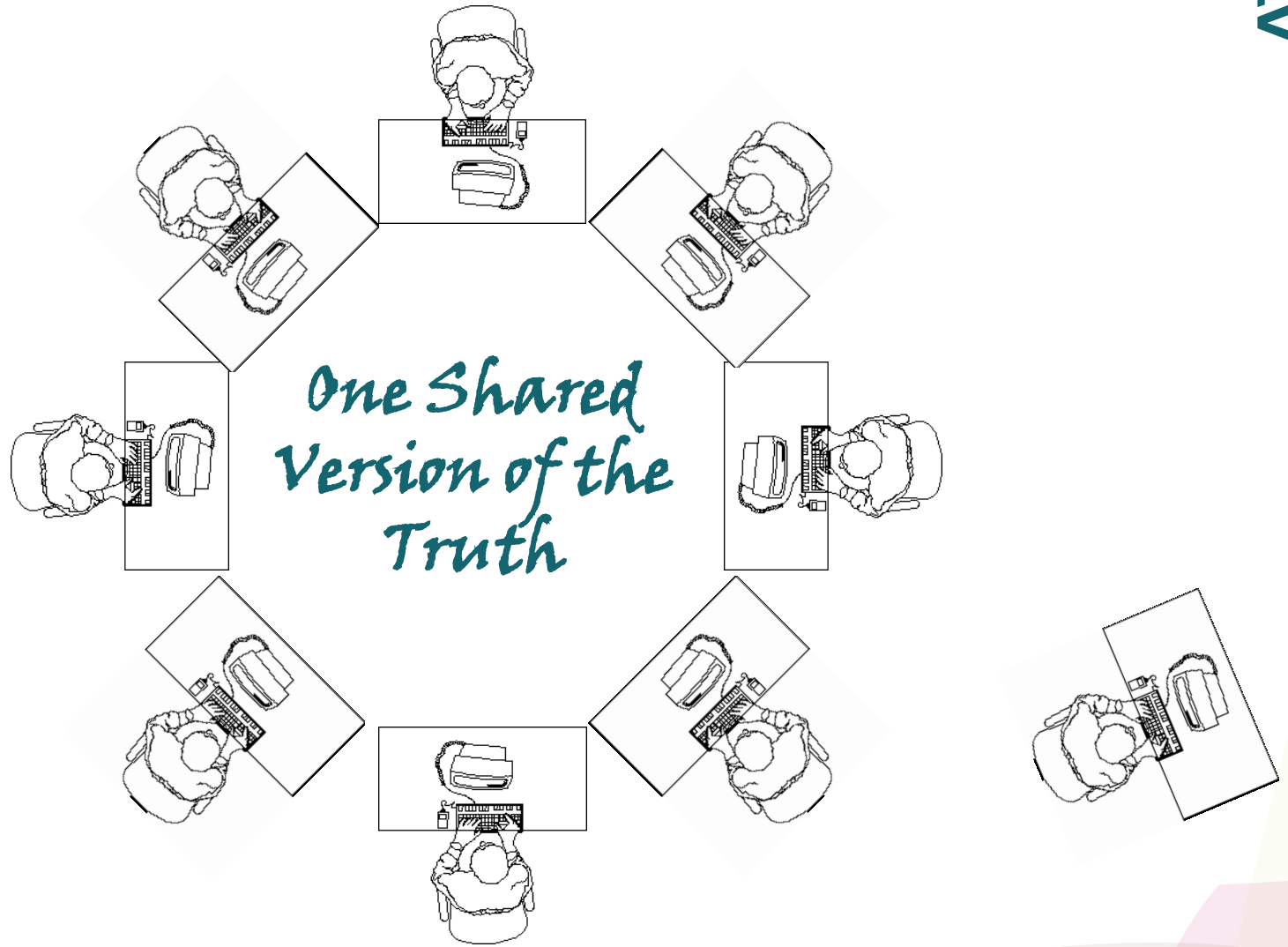


- Design development clearly on view to all
- A social, collaborative environment
- Experienced eyes overlooked it all

The CAD office – worst case



The collaborative BIM team



Interfaces and Design Management



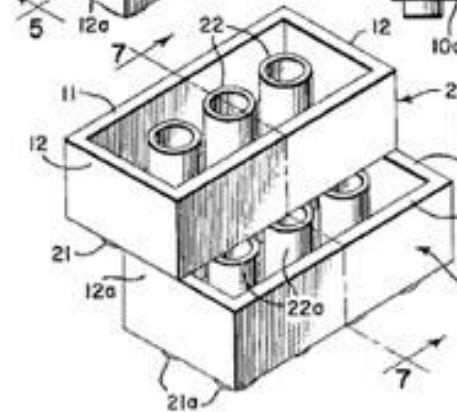
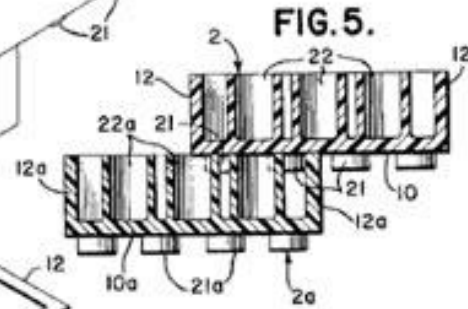
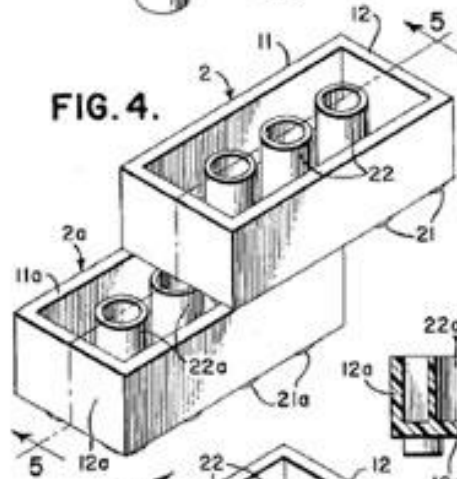
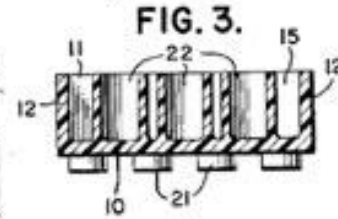
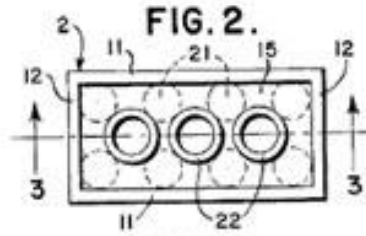
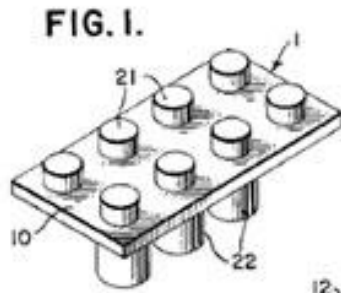
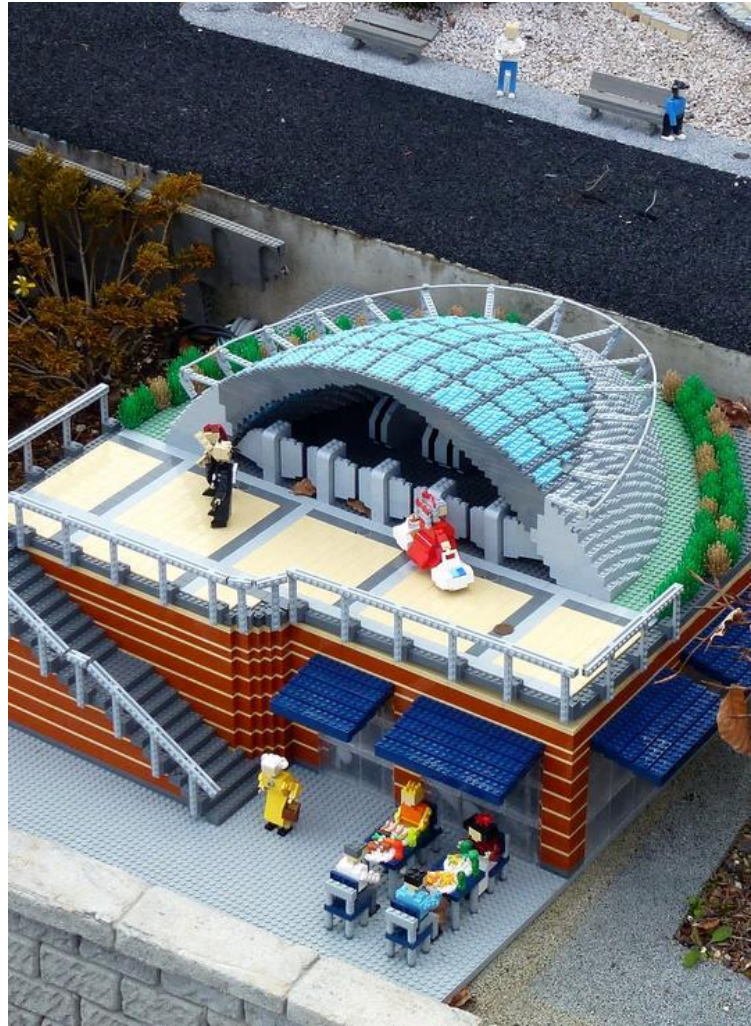


FIG. 6.

INVENTOR

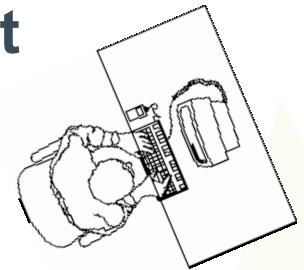
Godtfred Kirk Christiansen

BY *Stearns, Davis, Moller & Mosher*
ATTORNEYS



Our standards - a new emphasis

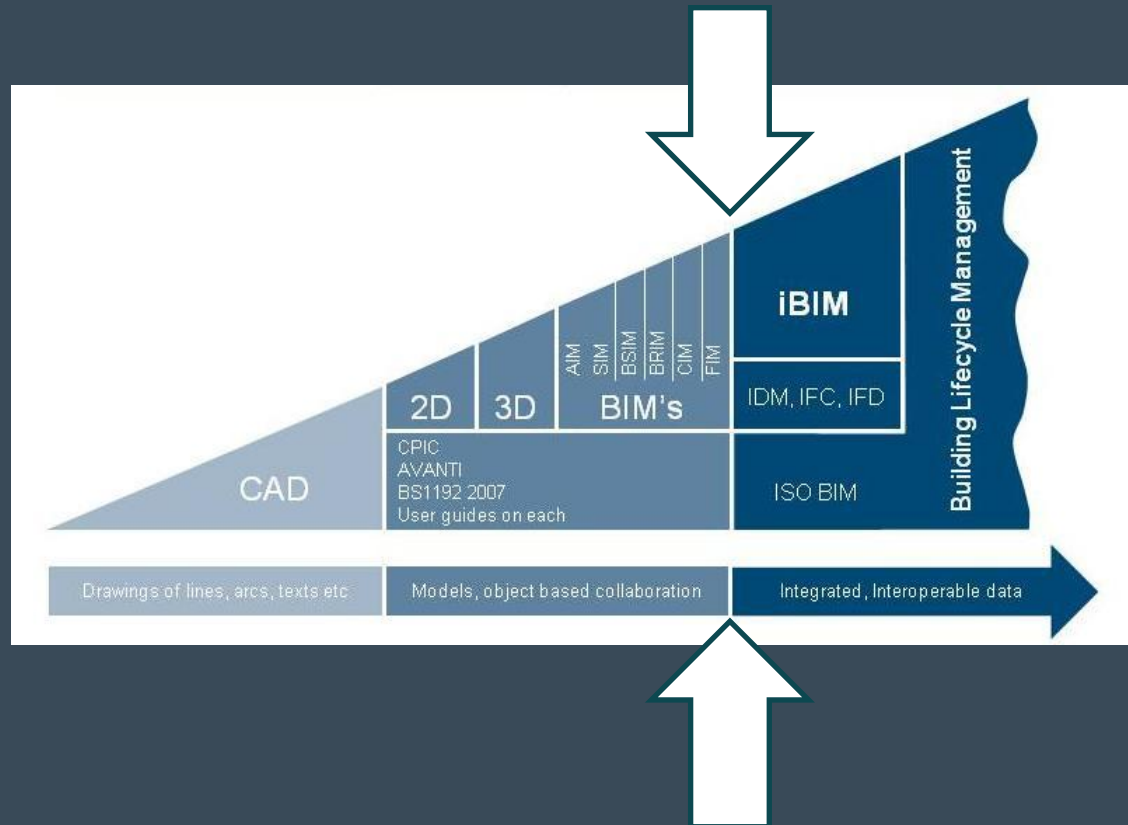
- **BS1192**
- **Design management**
- **BIM Execution Plans**
- **Construction management**
- **A planned delivery process**
- **Facilities management**
- **Asset management**



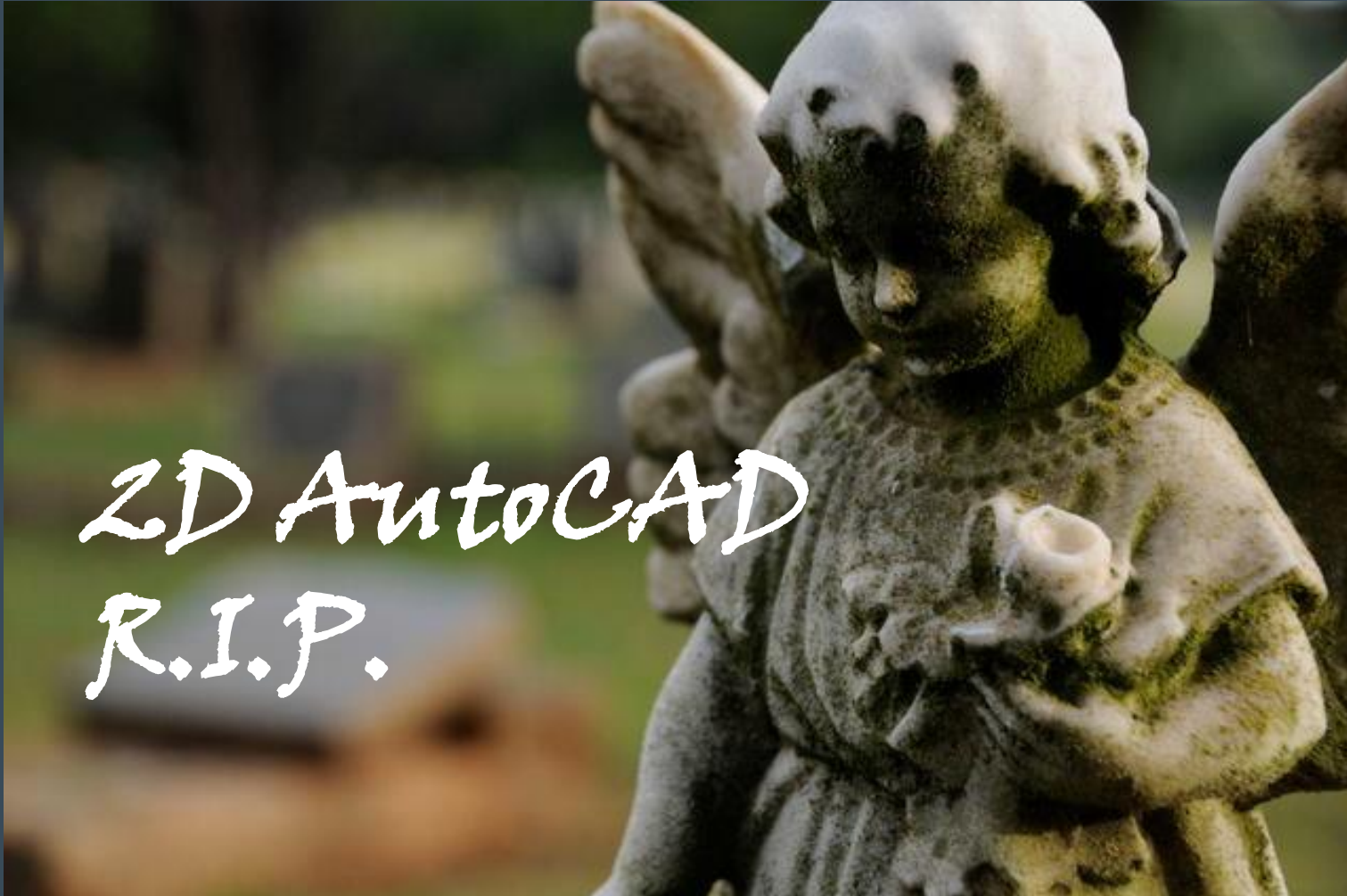
2016

2016

Level 2 BIM is here!



2016



ZD AutoCAD
R.I.P.

2016

Why am I going
to employ your
grads?

Behaviours I want from grads - 2016

1. They understand data

- the sources, formats, reliability and use

2. An ability to be engaged in a collaborative 3D virtual environment

- to receive, review, evolve, create, share, deliver

3. To have a clear appreciation of design management

- the lifecycle of data from inception to completion

Entry Level