

IM501262 & IM678688-rt

## The Death and Rebirth of the Technical Drawing. Are Drawings Needed Anymore?

Paul Munford, Autodesk

### Learning Objectives

- Discover why technical drawings are the way they are, and where the rules came from.
- Learn what a technical drawing is for and what it needs to do.
- Think about what might replace the drawing, what has been tried so far, and what has succeeded (and what didn't!).
- Consider what the future could bring and what a world would look like without technical drawings.

### Description

Many of us love technical drawings. Bold outlines, crisp details, precise lettering. But is technical drawing dead? It's said that we live in the age of the paperless office. Can this be true?

In this roundtable, we'll ask the big questions about the future of technical drawing.

- Where did technical drawing come from?
- How did we come up the present rules of technical drawing?
- Will we even need technical drawings in the future?
- Where is technical drawings' place in the world of digital prototyping and building information modeling (BIM) projects?
- How will we communicate design intent in the future?
- How many people got caught out when we moved from hand drawing—to CAD? Will we be next?

The speaker doesn't think that technical drawing is dead yet, but that it can and must adapt to suit its role in the future of design communication.

Join this review of technical drawing past and present and help prepare yourself for the future: the future of technical drawing.

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## Paul Munford

Paul Munford is a laugher, dreamer, raconteur, CAD geek, and Industry Marketing Manager for Autodesk in the UK.

Paul's background in manufacturing items for the construction industry gives him a foot in digital prototyping and a foot in Building Information Modeling (BIM).

Paul was a speaker at Autodesk University for the first time in 2012, and he says it's the most fun anyone can have with 250 other people in the room.

[@PaulCADmunford](#)



## Roundtable expectations and format

I have wanted to present this topic for many years! In preparing this class proposal I posted the details on LinkedIn ([click here to see the post](#)). I got such a great response – I decided to change the class type from a presentation to a roundtable so that we could work on the topic together.

**Roundtable** – a mediated discussion engaging attendees. A collaborative experience intended to help solve a challenge or answer a question shared by industry peers.

The intent of this roundtable is to discuss 'Technical Drawings', in the light of current and future technology trends to see if we can format an idea of what the process of design communication may look like in the future.

- We will look into the **past** of technical drawings – and consider why we do what we do?
- We will think about our **present** situation – what has changed in the way we create and distribute technical drawings in our working lifetime?
- We will consider what is **important** – as we take advantage of new technologies, what do we need to keep from the current process?
- We will think about the **future** – what might design, manufacturing, and construction look like in the future, and what will be the place for technical drawings?



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## Update

This handout has now been updated with images from the two roundtable sessions, held at Autodesk University in New Orleans on the 28<sup>th</sup> and 29<sup>th</sup> September 2022.



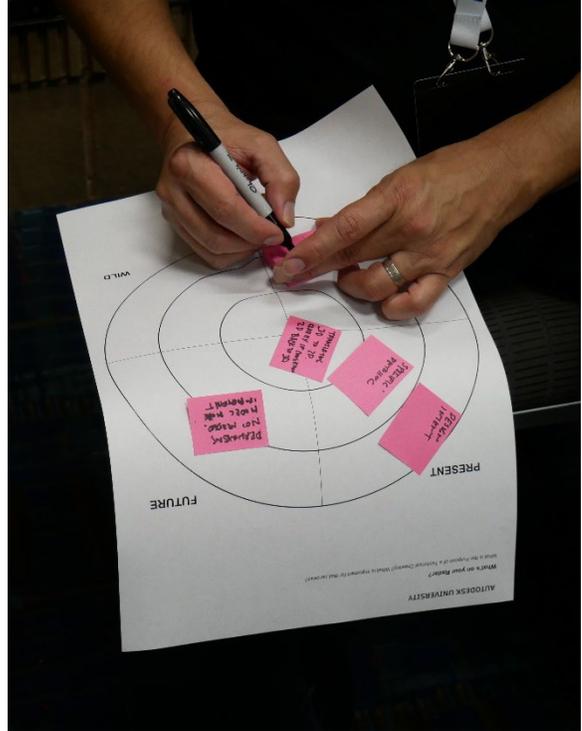
## Feedback:

- *Enjoyed the roundtable discussion and thankful I was able to get in (I was a walk-in). Looking forward to the updated handout.*
- *It was a great discussion and helped me understand better the pulse of drawings versus models and where we might be heading. A little more focus would have made it better*
- *It was a neat topic to discuss. Certain industries may in fact be going away from technical drawings. AEC on the other hand is not for a while. It's a matter of educating people new to the field on how to communicate efficiently with a technical drawing, layout, what views to show, proper dimensioning and note callout. That's what makes this field special because you have to/should have technical training to be able to efficiently do the job. It's not about just learning how to use a CAD software, there is more to it, and we are slacking on the technical training part.*
- *Really hate we ran out of time because I would have loved to hear more from the Autodesk reps after all the conversations we had. Great class!*
- *Great presentation.*
- *This was such a pointless session.*
- *Was an interesting roundtable, could have been a little longer.*

Click this link for more photos: <https://photos.app.goo.gl/1z5W6ZWWcYyE2R3R8>

To download the presentation that went with this class, click this link to go to the class page: <https://www.autodesk.com/autodesk-university/class/death-rebirth-technical-drawing-Are-drawings-needed-anymore-2022>

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## What next?

What was your takeaway from this roundtable? How has it changed, or verified your current thinking? What will you do next?

- What is your vision for the 'technical drawing' process in your industry and/or company?*
- Who are your stakeholders? What are their requirements?*
- Can you create a baseline measurement – 'where are we now?' What KPIs will you set to measure the success or failure of your project?*
- What consulting, training or technology will you need to invest in?*
- Whose support will you need to fund your project? What evidence will you present to justify the expense?*
- What is the 'Low hanging fruit'? What are the small changes you could make today that will pay off for your company?*
- How will you tackle the remainder? How will you plan the work? How will you work the plan!*

Please send me your feedback on this roundtable format, handout, and presentation:

[Paul.Munford@Autodesk.com](mailto:Paul.Munford@Autodesk.com).

Please feel free to use this roundtable format to conduct training in your company. Please feel free to share the handout, presentation, and class page from [Autodesk University Online](#).

If you'd like to have your say on what we can do to improve this workflow, please leave a message on the forum, a suggestion on the ideas board, or join the feedback community to test new functionality which may be included in future versions of Revit and Inventor.

Check out the '[Your feedback for Autodesk](#)' section of this handout for details.

## Thanks

*Thank you very much to Alex Brandt, James Austin, Sarah Cunningham, Kimberly Fuhrman, Brent Scannell, Toni Qin, and Luke Mihelcic for helping to put this roundtable together.*

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## Resources

More information on MBD (Model based design/dimensioning), 3D Annotation (3DA), Product model information (PMI)

[Training: MBD Using Modern GD&T](#)

[The Digital Thread: Connected Approaches to Manufacturing](#) (Ken Foo, AU2021)

[NIST Model-Based Enterprise Program](#)

[NIST MBE PMI Validation and Conformance Testing Project](#)

[NIST Smart Manufacturing Systems \(SMS\) Test Bed](#)

[Model Based Enterprise / Technical Data Package Summit Report](#)

[Implementing the Model-based Enterprise for a Measurable Return on Investment](#)

[ASME Enabling a Model-Based Enterprise](#)

[NIST Model-Based Enterprise Summit 2020](#)

[NIST Model-Based Enterprise Summit 2019](#)

[NIST 2012 MBE Presentations](#)

[AIAG: Model Based Enterprise \(TDP\)](#)

[CAPVIDIA: What is PMI \(Product Manufacturing Information\)?](#)

## AU Online

More free classes on technical drawing and CAD/BIM standards from previous Autodesk University conferences on Autodesk University online:

[Click here for more AU classes by Paul Munford](#)

[AS226780 Document DNA: Relevant 2D Documents in a 3D World](#)

[CES469327 Standards for Developing Standards: A How-to for Busy CAD Managers](#)

[AS466605 Drawing from Experience: Four CAD Managers with Decades of Experience Tell All](#)

[MFG500007 Details, Details, Details—Tips and Tricks of Detailing in Inventor](#)

[MFG321660 It's STILL All in the Details—Tips and Best Practices of Detailing in Inventor](#)

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## More learning resources

[Click here to access the Autodesk Learning catalog](#) – learn new skills to help you in your current role or prepare for a new one!

[Click here to access the Autodesk certification learning pathway](#). Free content to help you prepare for Autodesk user certification.

Here are a few of our partners that offer self-paced, online learning for you to check out:

- [LinkedIn Learning](#)
- [Global eTraining](#)
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Are you looking for bespoke training or consultancy? [Click here to find Autodesk-approved consultants.](#)

## Your feedback for Autodesk

You can ask questions and look for answers all year round in the [Autodesk Community Forums](#)

Suggest your ideas, or vote on the ideas of others – how can we improve the Autodesk products that you use?

[Autodesk Inventor Ideas Forum](#)

[Autodesk AutoCAD Ideas Forum](#)

[Autodesk Revit Ideas Forum](#)

[Autodesk 3ds Max Ideas Forum](#)

Join the Autodesk feedback community. Try out prototypes of new functionality for future releases and have your say on the future of Autodesk products:

<https://feedback.autodesk.com/>

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