CS500143

Implementing Autodesk Construction Cloud Across a £1.8billion Business

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Learning Objectives

- Understand how to develop a strategy for implementing Autodesk Construction Cloud in your company
- Identify uses for different BIM 360 modules and Assemble platform
- Explain how to use the product to improve coordination and drive efficiencies on site
- Identify training requirements and deliver the right training for your users.

Description

Implementation of any new solution can be challenging, especially when you are changing the way people have been working for decades. Many see construction as an old-fashioned industry, but the fact that there is so much space for change is what makes it really exciting. The industry is seeing a huge increase in the use of cloud-based construction management platforms, and this class will show you how to introduce and implement Construction Cloud software from Autodesk across the business and inspire your team to use it. The presentation will cover our journey and the processes we implemented to roll out Autodesk Construction Cloud, as well as a case study that demonstrates the use of the platform for coordination and in the field. We were able to gain a 50% time savings on coordination and reporting by using BIM 360 Document Management & BIM 360 Model Coordination and drive efficiencies on-site with Field Management, Assets, and Assemble. This class will be a great opportunity to learn how you can achieve this success too.

Speaker

in LinkedIn

Ivana Tudja is a BIM and Digital Engineering Lead at Mace Group and one of 40 Under 40 Champions in Construction in 2020 by Autodesk Construction Solutions with over 15-years of experience in the AEC industry.

First working as a qualified architect and Autodesk Instructor, she honed her skills on the consulting side before moving into construction. Now with Mace Group, Ivana's focus is on driving the implementation and adoption of digital ways of working.
She is responsible for developing BIM and digital engineering strategies for:
Public Estates, Research, Education, Arts and Culture and Healthcare (PREACH) projects, whilst also making sure they get implemented on-site.

As well as her extensive industry experience, Ivana is also:
- ARB Chartered Architect
- an ex-Autodesk Approved Instructor, having specialized in the use of Autodesk products
- a Cluster Lead for Autodesk Construction Cloud at Mace Group
- a member of Autodesk Steering Board at Mace Group.

All of this while leading an exciting team who are incredibly passionate about changing the industry! Ivana firmly believes that changes in technology are creating more opportunities for women in construction and is eager to promote them. As one of the steps in doing so, she was a keynote speaker for Autodesk at Women in Construction World Series Online Festival 2020 with the topic of 'Digital Transformation - Breaking Down Barriers'. Ivana was also the first EMEA guest on Digital Builder together with Matt Keen (Episode 11) with the topic of Digital Transformation & Technology Adoption.

About Mace Group

Mace is a global company of experts in shaping and making the built environment. It provides development, consulting, construction and operations services for many of the world's most inspiring building and infrastructure projects and programmes – from Olympic parks and iconic skyscrapers to state-of-the-art data centres, schools, hospitals and homes.

The privately-owned company, headquartered in London, UK, has an annual turnover of £1.8 billion. Over 30 years, its growth has been fuelled by an adventurous spirit and the relentless pursuit of a better way. Today, the company employs over 6,000 people across five global hubs in Europe, Middle East and North Africa, the Americas, Sub Saharan Africa and Asia Pacific.

Mace is driven by its purpose to redefine the boundaries of ambition, and its vision of leading the way to a more connected, resilient and sustainable world.

Find out more at www.macegroup.com

Understand how to develop a strategy for implementing Autodesk Construction Cloud in your company

To resolve any problem, you first need to understand it. So to write a strategy, you need to have a clear understanding of the challenges the business is facing, its needs and its goals defined in the overall business strategy. This will help you to create a problem statement, put a long term plan in place and focus on finding the right technology which will help to overcome challenges. Allow yourself to be ambitious and dream big here! It's important to bring the right people on board, so try including subject matter experts in the group and not just staff focused on the technology itself – so for example, when implementing BIM 360 Field, it's recommended to have a Quality manager on board to work together with a BIM manager. In the case of Autodesk Construction Cloud, I would focus on the standardisation, templates, workflows, training and deployment as a minimum.

Use of BIM 360 to improve coordination and drive efficiencies on site

3D Coordination in construction has now been used for years and, in many technologically advanced companies, it became business as usual. However, there was a lot of space for improvement. Doing Coordination in Navisworks Manage meant spending a lot of time on grouping clashes and the software didn't offer an efficient way of tracking issues unless you introduced external tools for both. By moving towards the use of Docs and Model Coordination, our BIM managers were able to do clash detections in the cloud with the automatic grouping of clashes, the ability to track them and immediately assign to the right users. This resulted in significant time savings spent on coordination and also helped with avoiding rework. Our project teams would often find navigation in Navisworks too complicated and didn't have time to look for the latest revisions of the model. Once we made models available in the cloud, we've seen increased engagement and raised awareness of items that still need to be resolved before they can be built on-site.

The use of BIM 360 gave us insights into the state of all of our live projects and enabled us to have an accurate record of information. Instead of having a paper checklist that can easily get lost and don't offer progress tracking, BIM 360 Build enabled us to have live access to information at any point.

Identifying uses for different BIM 360 modules and the Assemble platform

Autodesk Construction Cloud consists of several different cloud solutions with individual modules which can cover a wide range of uses. The ones listed below are those which brought the most tangible benefits to projects from my perspective.

BIM 360 Main Uses

Document Management & Model Coordination
- Document Management
- Model Viewing

- Design Management & Coordination
- Cloud-based clash detections
- Model Comparisons
- Risk Management

Build / Field Management
- QA / QC
- Site Diaries

Build / Project Management
- Meeting Minutes

Insights + Construction IQ + Power BI
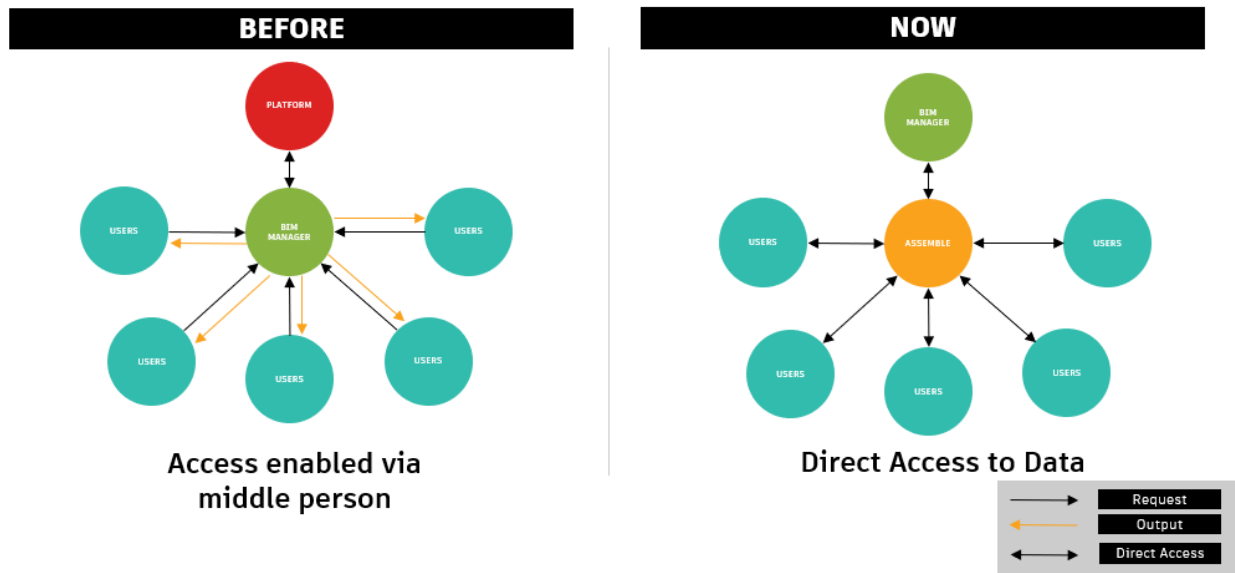- Data Analytics

Assemble Main Uses
Pre-construction Stage
- Quantity Take-Off

Construction Stage
- Progress Tracking
- Asset Data Checks
- Sustainability – embodied carbon calculations

Quantity take-off from complex and high-quality models produced by our consultants and supply chain is not something new to us – we've been doing it for years. However, the use of Assemble brought significant changes in the way we work and enabled more efficient workflows. Diagrams below show how our teams were accessing the information previously and what is happening now. We have a BIM manager who takes ownership of the platform and does things like model uploads but all the users can access the information independently.

BEFORE

PLATFORM
BIM MANAGER
USERS

Access enabled via middle person

NOW

BIM MANAGER
ASSEMBLE
USERS

Direct Access to Data

Request
Output
Direct Access

Identify training requirements and deliver the right training for your users.
I often say that you can get everything else right but unless your users can use the product and they are supported during the process, you are unfortunately very unlikely to succeed.
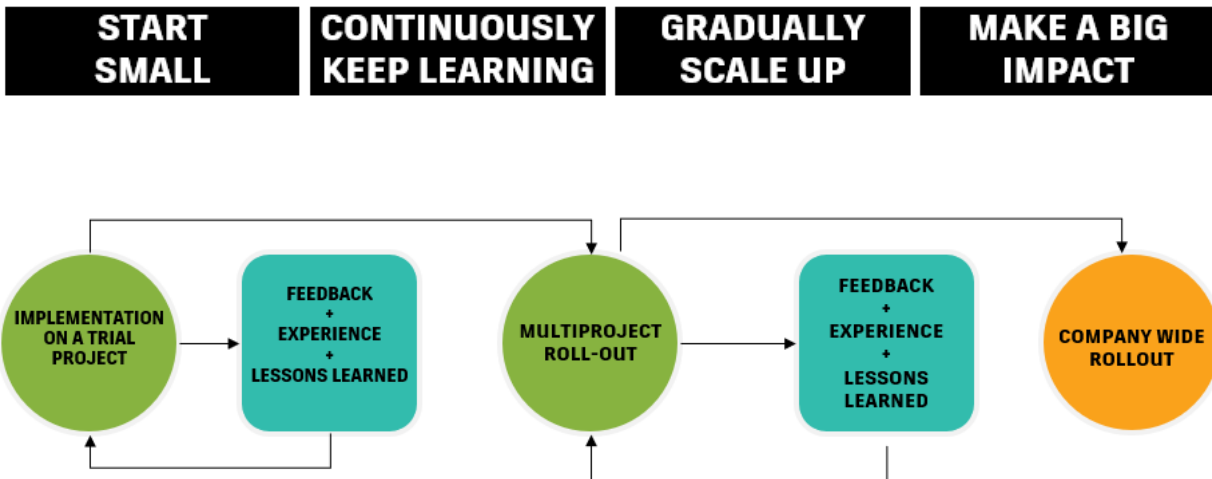To identify training requirements, you might want to create a company-wide survey to get a clear understanding of the current knowledge level and areas to focus on. This can cover certain tools like Autodesk Construction Cloud or focus on a wider digital skillset.
Training should be customised for your particular company/users, straightforward and hands-on in cases your target audience needs to use the product (and not just have general awareness about it). It's hard to implement Field tools if you are not present on-site, so make sure to go and meet your users to understand their challenges. I would recommend using plenty of practical examples and anecdotes to really capture their attention when presenting! It's really important not to stop here – lack of continuous support is where you can lose people. We want technology to help our staff and make them more efficient and not make things overly complicated. This is why solving the small issues as they appear will assure everyone sticks to using the product and they don't quit over something that can be resolved easily with the right support in place.

KEY FOR SUCCESS:
CONTINUOUS SUPPORT

Test, Test, Test…

Rolling out new technology on multiple large scale projects can be extremely challenging and many things can come as a surprise. This is why it's really important to test your workflows first – start from a test project and get other users on board. I would normally keep this project permanently active, as there is normally a need for additional tests, especially when the new features get released. Once you test every single feature, get feedback and adjust the system/template based on it, you are ready for a roll-out on a live job. However, things don't stop here. Once you have a live project, you'll always discover new things you need to deal with, so you'll keep updating your standards to reflect this. The next thing will be to roll the system out on multiple projects and repeat the whole process until you are ready for a company-wide rollout. This principle assures that you don't make big mistakes that are hard to fix.

| START SMALL | CONTINUOUSLY KEEP LEARNING | GRADUALLY SCALE UP | MAKE A BIG IMPACT |

IMPLEMENTATION ON A TRIAL PROJECT → **FEEDBACK + EXPERIENCE + LESSONS LEARNED** → **MULTIPROJECT ROLL-OUT** → **FEEDBACK + EXPERIENCE + LESSONS LEARNED** → **COMPANY WIDE ROLLOUT**

Digital Transformation

If you would like to understand how do you compare against others in terms of your digital maturity and the quality of your workflows, I would recommend using [Autodesk's Benchmarking Tool](#) which can help with giving you insights into that.

Digital Transformation is a complex process, especially if it's done in a traditional industry like construction and on a very large scale. Therefore, here are my 5 key steps to make it easier for you:

- **Have a vision** – you are not going to change an industry without thinking out of the box and dreaming big. Think about your ideal vision for the future and allow yourself to be creative. You'll often hear people saying that this is how we've always done things and it's important that you don't get stuck in this mindset that will stop you from growing.
- **Do your research** - explore the market, things are changing every day so it's important to explore the market and keep up with really quick and progressive changes in the industry. I went from being an Instructor and an expert in AutoCAD years ago to hardly using it nowadays. However, the desire to learn and adapt to new technologies helped me to stay relevant.
- **Test the product yourself** – I can't stress enough how important hands-on experience is. I wouldn't just rely on what you read about different products as it can often be really misleading. Nothing can replace hands-on experience and that's why it's important to have it, even if you are not using the product yourself on day to day basis.
- **Know your people / Win people over** - Establish connections and meet your teams, understand what their needs are and support them along the way. This will help you to build trust and also to get feedback to assure that any issues which weren't predicted get resolved.
- **BE A REBEL** - how else are you going to change the industry that hasn't changed in so long. Believe me, I do hear no over and over again before I get permission to do certain things, so make sure you don't give up easily.

Summary

You will often hear how construction doesn't want to change or how it would be just too hard to change it. This type of attitude is very unlikely to work to your advantage. During my career, I've met so many great people working in construction who were willing to embrace technology once they understood why are we introducing it. The key thing to win them over is to make clear how you are not trying to create more work for them and show benefits they can gain by changing the way they work. If you then provide a hands-on training focused on their role, they are likely to be your biggest aliases once their project is successful.

Hopefully, this presentation helps you to speed up and enhance your own digital transformation journey! I would love to hear your feedback or answer any questions you might have. If you enjoyed the presentation, I would appreciate if you can press 'Recommend' on the Class page and I will make sure to answer questions if you leave them in the comment box. I've provided several links below which you might find useful in addition to this class.

That's it from me until next years' Autodesk University!

Useful Links

Please note that ACC is constantly evolving with very frequent updates - this is why it's also really important to use the latest tutorials when learning the product, as it has evolved a lot since it was first released.