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Understanding the new AutoCAD - ONE AutoCAD with SEVEN toolsets

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CADFMconsultants Ltd.

Learning Objectives

- Discover the new AutoCAD software including specialized toolsets subscription
- Learn how to work with the AutoCAD specialized toolsets and how to deploy them to your AutoCAD team
- Learn how to develop and implement a workflow around the AutoCAD specialized toolsets
- Learn how to develop, implement, and enforce a training program around the AutoCAD specialized toolsets

Description

The AutoCAD specialized toolsets subscription became available with the 2019 release. This means that AutoCAD subscribers can now work more quickly and effectively with specialized AutoCAD toolsets, which include industry-specific features and libraries for architecture, mechanical, and electrical design, plus the AutoCAD web and mobile apps.

A subscription to AutoCAD enables the automation of floor plans, sections, elevations, and other drawings; accurate design of piping, plumbing, and ducting for faster design with mechanical tools; and design of ductwork, electrical conduit, and circuiting for HVAC, plumbing, and electrical with MEP.

Shaun Bryant (CadJedi) is an AutoCAD guru, influencer, and LinkedIn Learning [in]structor. He will take you through the benefits of AutoCAD (including specialized toolsets subscriptions), demonstrating how to utilize the toolsets and make them available to your AutoCAD design team.

Plus, you'll learn how you can take AutoCAD on the road with the AutoCAD web and mobile apps.

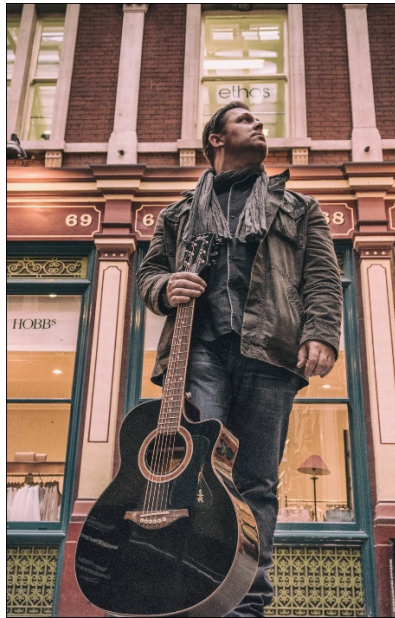
Speaker(s)

Shaun Bryant is an Autodesk Certified Instructor in both AutoCAD and Revit with over 32 years of industry experience. Shaun has worked as a consultant, trainer, CAD manager, and user, with the earlier years of his CAD career in sales, pre-sales, and business development.

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Shaun has been a director on the board of Autodesk User Group International (now known as AUGI) and he is also the author of the reputable CAD blog, Not Just Cad! He is a seasoned Autodesk University (AU) speaker and was the AutoCAD expert at the inaugural Autodesk University London in June 2017. He is also an Autodesk University Speaker Mentor, an AutoCAD Influencer, and an Autodesk Expert Elite. He is also the author of the recent Wiley title, 'Tinkercad For Dummies'.

Known to dabble in a bit of rock 'n' roll as an established singer/songwriter, Shaun lives in the UK and is the owner and director of CADFMconsultants Limited.



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Introduction

Some of you may know me as the AutoCAD guy who does all the AutoCAD video learning over at LinkedIn Learning (previously Lynda.com).

I often get the “Are you the LinkedIn guy?” or “Are you the Lynda.com guy?” and its normally because they recognize my voice before they recognize me physically, which (sometimes) can feel a bit strange!

I am also the owner, main (only) contributor and chief bottle washer of the blog, ***Not Just CAD!***, which you will find here: -

<https://cadfmconsult.com/not-just-cad>

I often blog about all things CAD and sometimes other stuff, and this class is loosely based on a series of AutoCAD blogs I wrote about what was, back then, **One AutoCAD**, the original subscription version, which was released in March 2018, and based around the AutoCAD 2019 release.

However, the current subscription release is now **AutoCAD with SEVEN specialized toolsets** and based around the AutoCAD 2021 release.

The blog content is still relevant, but you just need to remember that it is now: -

AutoCAD with SEVEN specialized toolsets.

You can find the blog series here: -

<https://cadfmconsult.com/autocad-2019-there-can-be-only-one>

When you have a moment, maybe check them out.

In the meantime, let's get going, shall we?

And get you up and learning about **AutoCAD with SEVEN specialized toolsets!**

1. OBJECTIVE ONE

Discover the new AutoCAD software including specialized toolsets subscription

My initial blog about the One AutoCAD subscription started way back in March 2018, with the premise around the movie Highlander (for those of you old enough to remember...LOL). In the movie when the Quickening starts there can be only **ONE**. Apart from the stunning Queen soundtrack, it was a great movie, and Connor MacLeod (actor Christopher Lambert) of the clan MacLeod was the **ONE**, combined with incredible support from the late Sean Connery as Juan Sanchez Villa-Lobos Ramirez, who (unfortunately) does lose his head.

As they say in the movie, it's a kind of magic.....



Christopher Lambert as Connor MacLeod of the clan MacLeod

And, I have to say that the Queen soundtrack to the film **IS** most excellent!



19 songs, 1 hour, 29 minutes

Shuffle

A Kind of Magic (Deluxe Edition)

Rock • 1986

✓ DOWNLOADED ...

DISC 1

1	One Vision	5:10
2	A Kind of Magic	4:24
3	One Year of Love	4:28
4	Pain Is So Close To Pleasure	4:22
5	Friends Will Be Friends	4:13
6	Who Wants To Live Forever	5:17
7	Gimme the Prize	4:35
8	Don't Lose Your Head	4:38
9	Princes of the Universe	3:32

DISC 2

1	A Kind of Magic (Highlander Version)	4:23
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It's now one AutoCAD with SEVEN toolsets....work specialized....work faster

In the world of AutoCAD 2021, we have only **ONE** too. When you subscribe to AutoCAD with seven specialized toolsets, you get the **ONE** subscription, but the **SEVEN** specialized toolsets of AutoCAD: Architecture, Electrical, Mechanical, MEP, Map 3D, Raster Design and Plant 3D. This not only gives you a specialized AutoCAD by allowing you to work in various disciplines and verticals, but also gives you various workflow improvements too.



When you log in to your account portal, you will see that it has changed and the view of your subscribed AutoCAD you get now is one (pardon the pun) of many, listing all **SEVEN** toolsets under your main AutoCAD subscription. You will also find that the view of AutoCAD in your Autodesk desktop app has changed as well.

>	 AutoCAD Architecture Versions: 2021, 2020, 2019, 2018	1	View downloads
>	 AutoCAD Electrical Versions: 2021, 2020, 2019, 2018	2	View downloads
>	 AutoCAD MEP Versions: 2021, 2020, 2019, 2018	3	View downloads
>	 AutoCAD Map 3D Versions: 2021, 2020, 2019, 2018	4	View downloads
>	 AutoCAD Mechanical Versions: 2021, 2020, 2019, 2018	5	View downloads
>	 AutoCAD Plant 3D Versions: 2021, 2020, 2019, 2018	6	View downloads
>	 AutoCAD Raster Design Versions: 2021, 2020, 2019, 2018	7	View downloads

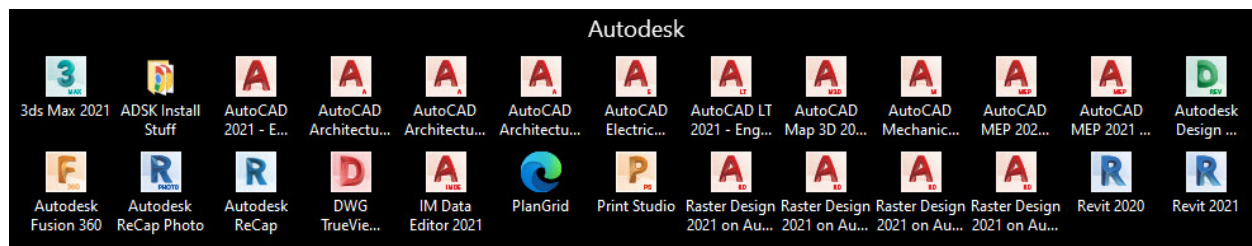
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Your AutoCAD with its associated toolsets now includes industry-specific features, intelligent objects and some cool functionality for architecture, mechanical engineering, electrical design, and more.

- You can automate floor plans, sections, and elevations
- You can draw piping, ducting, and circuiting quickly with parts libraries
- You can auto-generate annotations, layers, schedules, lists, and tables
- You use rules-driven workflows to accurately enforce industry standards

What is nice here is that you can select all the AutoCAD toolset you want to use, or you can select individual flavors of AutoCAD to be installed. This is especially advantageous if you are already a vanilla AutoCAD user and want to test a specific flavor of AutoCAD to see if it fulfills your needs and requirements. For those of you that just want all **SEVEN** flavors, but for one price, it is a great move by Autodesk also.

On your desktop, each flavor of AutoCAD will still have its own individual icon (just to clutter your desktop, I guess...an untidy desktop is a sign of a great mind, right?), plus, there will be no change to the DWG Launcher. You know that little gizmo in Windows that allows you to open all DWG files using AutoCAD as the preferred application to do so.



My Autodesk desktop icons in a Fence (Fences is an app by Stardock Software)

So, what does this mean?

Does AutoCAD now install as **ONE** application with all these flavors available as ribbon tabs perhaps, in the same way Revit now has Architecture, Structure and MEP all under one roof (pardon the pun, again)?

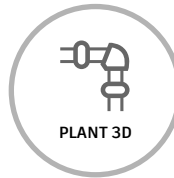
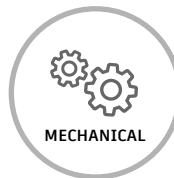
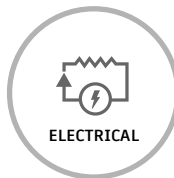
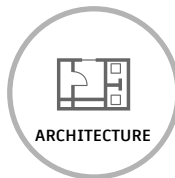
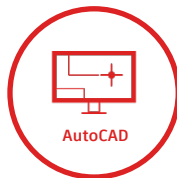
Simple answer, no. This AutoCAD is not made to be used that way.

This AutoCAD subscription is there so that all AutoCAD users can use their **ONE** AutoCAD toolset that fulfills their needs; architects can use AutoCAD Architecture, engineers can use AutoCAD Mechanical, electrical and instrumentation techs can use AutoCAD Electrical and so on.

Let us go back in time to 2012. I was at the Autodesk Media Summit held in the Autodesk HQ in San Francisco. I can always remember the now ex-CEO of Autodesk, Carl Bass, stating back then that he wanted Autodesk products to be a 'toolset', like tools in a toolbox, or like a Swiss army knife, where you chose the appropriate tool or blade to perform the required function.

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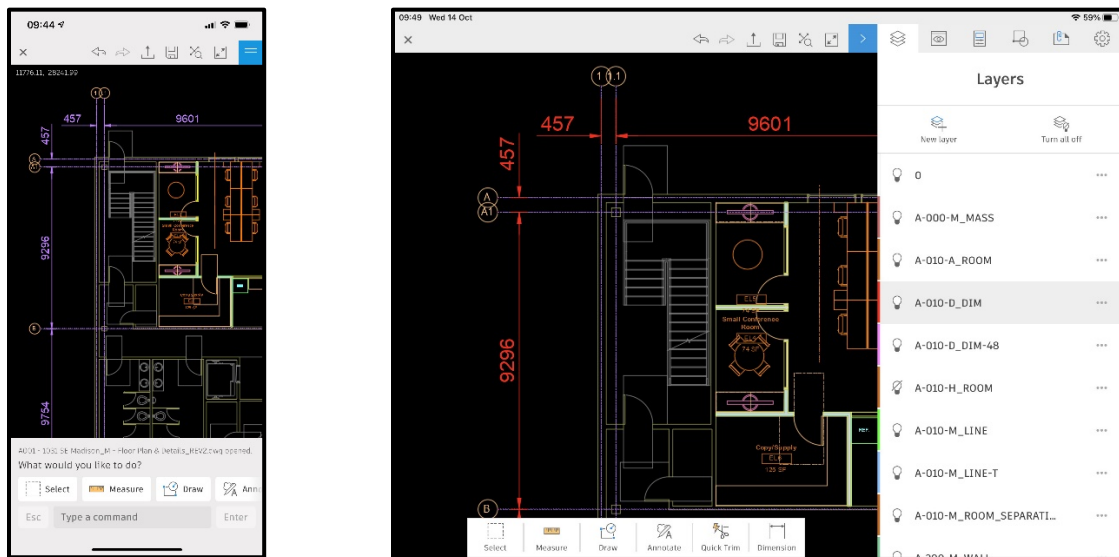
That's what this AutoCAD does. With **ONE** subscription, you get all **SEVEN** of the AutoCAD 'toolsets or blades, should you prefer my Swiss army knife analogy.



Work anywhere with mobile and web apps

You will also notice that you get the AutoCAD mobile app and the AutoCAD web app with the AutoCAD subscription. These apps give you mobility and allow you to take your AutoCAD on the road with you. No more holding down paper drawings with bricks on the hood of your car! You simply need a mobile device or a suitable web browser. AutoCAD. On the road and mobile!

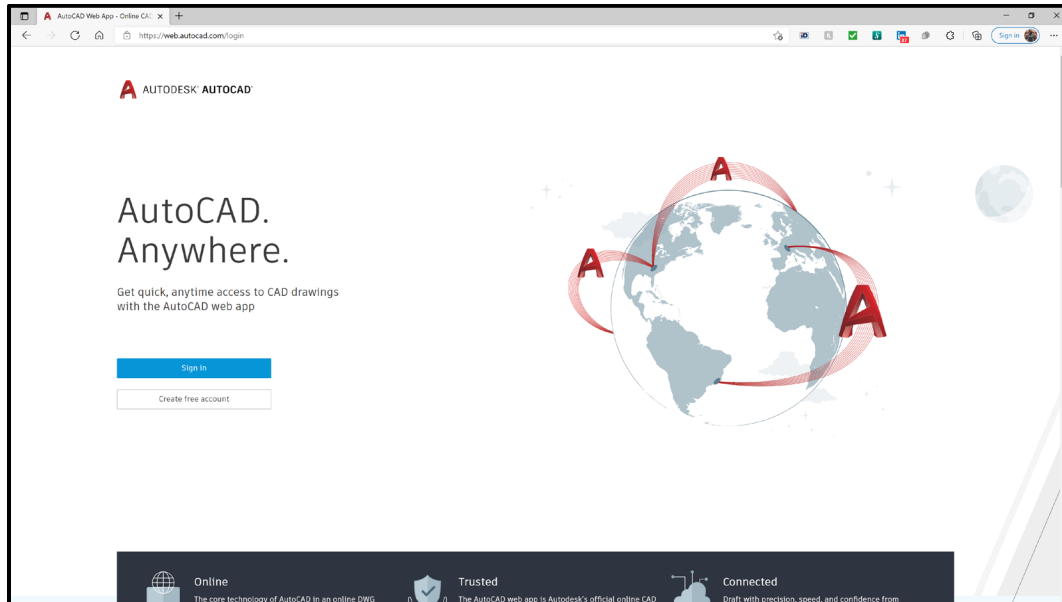
AutoCAD mobile app



The AutoCAD mobile app allows you to take the power of AutoCAD with you wherever you go, the construction site, the factory floor, even to a client office. You still have your core design and drafting tools, and you can work with your CAD drawings anytime and anywhere. You can even download offline versions for when there is no connectivity. This allows you to update DWG files in real-time and access drawings and designs with your phone or tablet. Some of the major benefits derived from the AutoCAD mobile app are: -

- *Streamlined, paperless workflows, with no need for hard copy paper drawings.*
- *Continuous connectivity, even when offline. You can sync back to your desktop anytime.*
- *A cohesive AutoCAD experience, providing precision, consistency, and fidelity.*

AutoCAD web app



The AutoCAD web app allows you to edit, create and view CAD drawings in a web browser on any computer with no software installation being needed. You can use AutoCAD with a simplified interface and access DWG files from anywhere.

Some of the major benefits derived from the AutoCAD web app are: -

- *Use any computer. All you need is a web browser to work with your designs.*
- *Quick workflows. There are no hard copy drawings needed as you can see everything you need in the web app.*
- *A cohesive AutoCAD experience, with a simplified AutoCAD interface that performs exactly as your AutoCAD desktop app does.*
- *Continuous connectivity. You can always get access to your latest designs by way of some of Autodesk's web app partners, Box, Dropbox, Google Drive, and Microsoft OneDrive*

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So, what does this all mean?

AutoCAD now has **SEVEN** specialized toolsets for various disciplines, plus the AutoCAD **mobile app** and the AutoCAD **web app**, and you still have your **vanilla AutoCAD** too. All on **ONE** subscription.

Not only is this a great cost saving, but it allows you to work with your industry-specific AutoCAD without any need to have numerous Autodesk product subscriptions and gives you the scope to move to other AutoCAD toolsets when the need arises.

- **AutoCAD** – plus the AutoCAD mobile app and AutoCAD web app, with....
- **AutoCAD Architecture**
- **AutoCAD Electrical**
- **AutoCAD MEP**
- **AutoCAD Map 3D**
- **AutoCAD Mechanical**
- **AutoCAD Plant 3D**
- **AutoCAD Raster Design**

2. OBJECTIVE TWO

Learn how to work with the AutoCAD specialized toolsets and how to deploy them to your AutoCAD team

So, let's look at the AutoCAD web app and AutoCAD mobile app in a bit more detail, and some of the **SEVEN** toolsets and how we can work with them and talk about some tips that will give you a quicker deployment to your team.

Web and Mobile

There is some great functionality in AutoCAD 2022.

One of these is the ability to save your desktop AutoCAD designs directly to the AutoCAD web app and the AutoCAD mobile app.

If you go to the Quick Access Toolbar (top left of the desktop AutoCAD application window – icons shown below in the handout), you will see the icons there that not only provide you with the facility to save to the **Web & Mobile** cloud folders but also go directly to those saved cloud-based designs and open them directly in the AutoCAD desktop again as well.



What's new with the AutoCAD web app and the AutoCAD mobile app?

The AutoCAD web app is much enhanced to give a highly sophisticated browser-based AutoCAD interface that is quicker and faster. I won't bore you with the techie stuff, but suffice to say, you will be using the equivalent AutoCAD executable (EXE) in your browser, the same as you would be on your desktop. This makes for a much-needed boost to what was (sometimes) quite a jerky, laggy web-based application in the past.

You will find the AutoCAD web app at web.autocad.com and you get a great new command panel incorporating some of the more familiar AutoCAD drafting icons, just like the AutoCAD desktop app.

The AutoCAD web app allows you to add reference drawings (XREFs) at your leisure, and if they are saved in the cloud in the same location as the host drawing, using the save to Web & Mobile options in the AutoCAD desktop app. They will operate in the same way as relative XREFs that you might use locally.

Something I **LOVE** (yes, love, not just like) is that you have the native AutoCAD window and crossing selection tools in the AutoCAD web app. They work in the same way as your AutoCAD desktop app and provide a rounder user experience. We have grown

used to these methods of selection, and it is great to see Autodesk taking the desktop user experience tools into the web-based version. The AutoCAD web app is by no way perfect yet, but I can see it getting to a point where the AutoCAD desktop app will become browser based.

Hardware is also becoming much more robust and portable, such as the Apple iPad Pro and the Microsoft Surface Pro, that have the grunt under the hood to run the AutoCAD web app and the AutoCAD mobile app extremely effectively when out on the road.

What makes the AutoCAD web app even more like the AutoCAD desktop app is that there are even keyboard shortcuts included as well. I mean, come on, who doesn't love a keyboard shortcut or two? Trust me, as a seasoned AutoCAD user (thirty-three years this year), I am a big fan of keyboard shortcuts!

Using other AutoCAD toolsets

Whilst you might have an AutoCAD with seven specialized toolsets subscription, you do not need to be running all **SEVEN** AutoCAD toolsets all the time! Who knows, you might, but that could be a touch of overkill (see what I did there? Great AutoCAD humour, right?).

The whole idea of this subscription package is that you have a 'toolbox' of AutoCAD's. All of which perform different functions as per your needs and requirements. For example, if you need to do some architectural work, you would run the Architecture toolset. If it was mechanical work, the Mechanical toolset and so on.

This AutoCAD brings you all the **SEVEN** AutoCAD flavors together in the one place. This is a huge benefit, as you now only need **ONE** subscription for all of them. Deployment becomes easier that way, and should the need arise for one of your CAD team to use another AutoCAD flavor, the toolsets are readily available.

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Installation

So, how do you install your AutoCAD and its **SEVEN** specialized toolsets? Well, it's simple. You install it just like you used to, in fact. You install vanilla AutoCAD if you need it. You install AutoCAD Raster Design if you need it. The only two exceptions to this are the AutoCAD web app and the AutoCAD mobile app (for obvious reasons).

You simply download the specific toolset of AutoCAD that you need. Run the install and off you go. Situation normal.

There is a little bit of crossover in the AutoCAD universe too. You will find that the Raster Design toolset sits nicely in your vanilla AutoCAD installation with the usual Raster Tools tab on the AutoCAD ribbon.

You can utilize blocks and move them between drawings using DesignCenter or Tool Palettes. You can use the Windows clipboard to copy and paste, but there's no **BIG** AutoCAD interface in a single AutoCAD application that covers all the toolsets. However, there's nothing to stop you running a session of vanilla AutoCAD and the Electrical toolset and moving blocks between the two. That's simply how AutoCAD works. So, I hope now you get what I am saying about the toolbox/Swiss army knife idea when you install what you need.

Before you do install your AutoCAD toolsets though, there is a fantastic time saver on the official AutoCAD blog from Marcus O'Brien from the Autodesk team. If you use the **Install Now** option from your product management portal (**manage.autodesk.com**), the AutoCAD installer will check if you already have vanilla AutoCAD installed and will only install the parts of the specific toolset that you need, thus saving download time and disk space! You can find the blog post link below. The blog post does refer to AutoCAD 2019, but it is still the same in the 2022 version.

<https://blogs.autodesk.com/autocad/whats-new-autocad-2019-installing-specialized-toolsets/>

And by the way, there is no need to install **EVERY** toolkit either. That is just AutoCAD desktop icon overload.

Yep, it looks pretty, but ask yourself, do you really need **EVERY SINGLE** AutoCAD toolset installed?

That's just being greedy, right? :-)

3. OBJECTIVE THREE

Learn how to develop and implement a workflow around the AutoCAD specialized toolsets

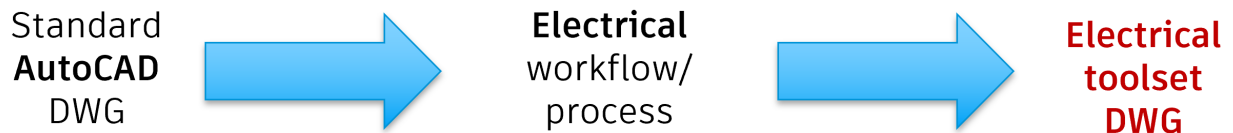
After the deployment of the toolsets, you require from your AutoCAD subscription, you now need to consider a new workflow. If you are a multi-disciplinary practice, you could consider moving architectural work to the Architecture toolset, electrical work to the Electrical toolset and so on. To do that, you need to think about several elements: -

The conversion of DWG files to the appropriate toolset

Various toolsets work with DWG files in different ways. For example, the Electrical toolset requires that all drawings be added to a project using prescribed template (DWT) files to ensure that all electrical data from the drawings can be extracted into specific reports to known electrical standards.

This will require a change in the way you work that, initially, will require your team to make changes in their day-to-day workflows which will, over time, allow you to become more productive in your desired discipline, whether that be architecture, electrical, mechanical etc.

A typical workflow/process might be as follows, when transitioning to the Electrical toolset: -



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The setting up of recognized CAD standards for each toolset

Each discipline-specific toolset has built-in industry specific standards. These standards must be set up and adhered to, to get the required output that meets those standards. This will require a change in workflow standards too, to ensure that each project meets those standards required to achieve that output.

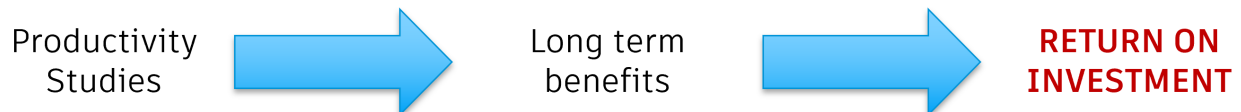
Again, this will require a workflow change. A typical example is the Architecture toolset. When moving from the vanilla AutoCAD desktop app, you can make the move to full 3D architectural modelling with the Architecture toolset, which will require a change in working methodologies. These will take time to transition and fall into place, but the advantages will become apparent if your workflow changes are managed effectively.



Explaining the benefits of the AutoCAD toolsets to the powers that be

If you already have an established AutoCAD workflow, it may be that the higher powers in your organisation look at your suggestion of moving to a specific toolset as something that will cause problems and, more importantly, cost money.

It is imperative that you explain the benefits of the appropriate toolset and demonstrate measured studies for that toolset that show the time savings and benefits available. Autodesk provide case studies for this exact reason, so that you can highlight the time saved using an AutoCAD toolset against using your existing vanilla AutoCAD workflow.



4. OBJECTIVE FOUR

Learn how to develop, implement, and enforce a training program around the AutoCAD specialized toolsets

Full training in AutoCAD is essential, regardless of whether it is for your vanilla AutoCAD or for one or more of the AutoCAD toolsets. Training is a fundamental requirement and must be maintained to ensure a competent CAD team.

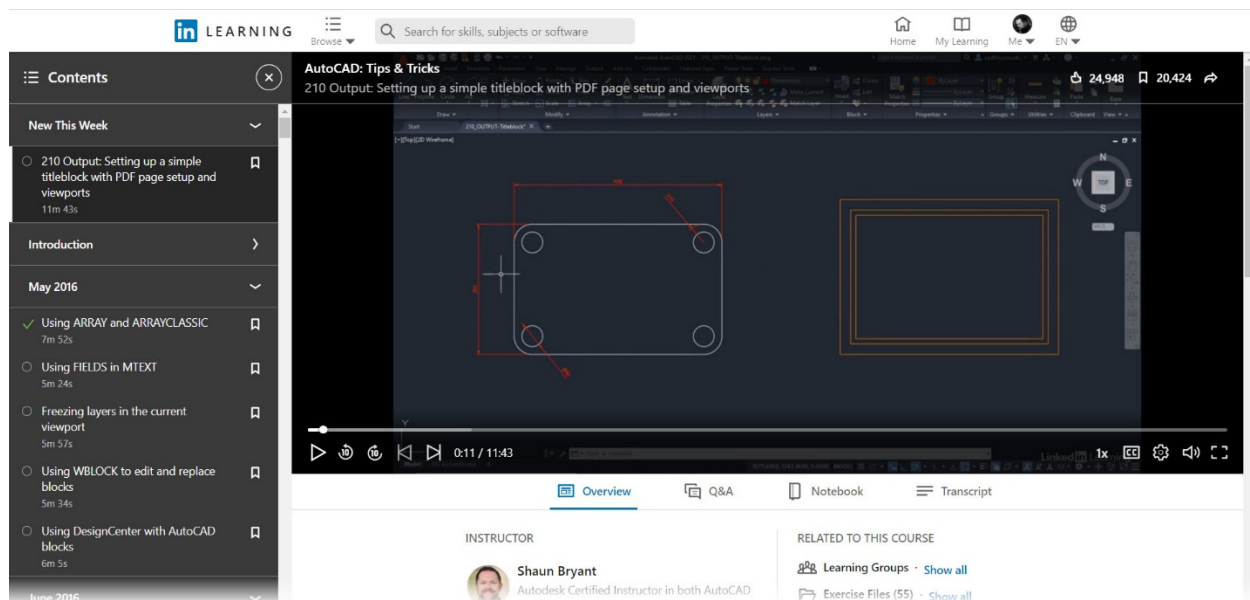
There's a quote I always use when I get countered by higher management about how training costs money and wastes operational time on chargeable work and I get asked,

“What happens if we train them, and they leave?”

My reply is,

“What happens if we **DON'T** train them, and they **STAY**?”

As an ex-CAD manager, I have heard pretty much every counter argument against training and learning. My biggest argument back nowadays is that training can be done without leaving your desk. As some of you already know, I am the AutoCAD [in]structor for LinkedIn Learning providing a full library of AutoCAD learning titles, ranging from beginner level upwards.



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Online learning can be done at the speed and convenience of the learner. There are no expenses to cover apart from the subscription to the learning provider and the investment of the learner's time. No classroom to get to, no hotel and travel to cover.

This type of online training can allow you to manage, maintain and monitor your CAD team's training and learning progress and suitable training and learning methodologies can be put in place to benchmark their progress; including using the online training to get staff through their Autodesk Certification examinations.

I will, however, stress that online training should **NOT** replace classroom training! People still learn from people, but how do we do that in today's circumstances? The pandemic has all but closed numerous Autodesk Authorized Training Center's (**ATCs**) from being able to provide physical classrooms.

Look at where you are, right now at this moment. You are learning at a **VIRTUAL** Autodesk University! In the same way, Autodesk ATCs have developed new training methodologies, where you can attend a virtual classroom, using products such as Microsoft Teams, Zoom, and other proprietary online learning platforms. You **CAN** still learn!

People will always learn from people, whether that be (virtual) instructor led training, from your peers at work, or even just from talking to others at (say) a User Group meeting. Learning is a blended process, where ALL aspects of learning combine to make you a more rounded CAD user.

Learning (virtual, or otherwise) allows you to become a fully rounded user of AutoCAD and all its associated toolsets, and, providing you have an Autodesk account and internet access, you can utilize your One AutoCAD subscription to make sure you have your AutoCAD 'toolbox' available at any time for you and your AutoCAD team.

In today's Work From Home (**#WFH**) office, consider setting up a blended training or learning program. Think about how you would set up a blended learning program to utilize the latest tech: -

Classroom instructor led training (ILT)

- People will always learn from people
- Face-to-face or remote/virtual (Zoom, MS Teams, BlueJeans....)

Online learning (LinkedIn Learning)

- With the **#WFH** ethic now part of working life, encourage certification as part of the workflow
- Certification preparation (Cert Prep courses)

Autodesk Certification – benchmarking the standard

- Autodesk Certification can become your knowledge benchmark for skills

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RETURN ON INVESTMENT

- Well-equipped and well-trained staff are more efficient and productive
- They are also much happier in their roles!
- Give them the tech and the training they need!



Using the **AutoCAD** with **SEVEN specialized toolsets** subscription, combined with the **AutoCAD web app** and **AutoCAD mobile app**, gives you incredible flexibility, utilizing **core AutoCAD technology**.

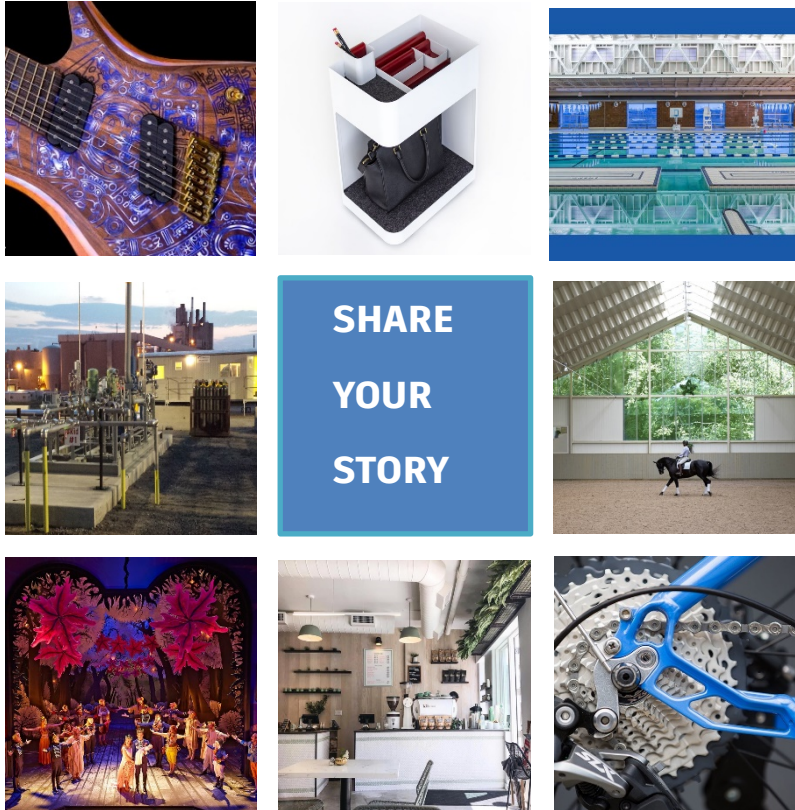
This provides you with seamless workflows and processes when collaborating with not just your CAD team, but with stakeholders and clients as well.

In fact, **ALL** the AutoCAD toolsets and apps give you, as a designer, an incredible amount of product and technology to, quite literally....

....MAKE ANYTHING.

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AutoCAD needs YOU!



Want to be featured by AutoCAD?

We want to hear your story!

Go to: [autode.sk/autocadstory](https://autodesk.com/customer-stories/case-studies?products=product--autocad)

The AutoCAD team is looking for more stories from customers like you to share on the website, blog, and in marketing materials. I am sure all of you here can think of a cool project you have worked on using AutoCAD that could be featured. Get out your phone and put in this link: [autode.sk/autocadstory](https://autodesk.com/customer-stories/case-studies?products=product--autocad) to submit your project. AutoCAD is looking for a variety of stories from all different parts of the world, so I encourage you to fill out the link and get your work featured.

See the AutoCAD stories here:

<https://www.autodesk.com/customer-stories/case-studies?products=product--autocad>

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Please stay in touch after Autodesk University!

My contact details are as follows: -

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TAKEAWAY TIP:

Share your **LinkedIn** QR codes to stay in touch.
Quicker than a business card!

