cadalyst
Navigate the world of design technology

January 10, 2024
Issue #520

Looking Ahead in 2024

Forecasts and resolutions for the upcoming year from a CAD manager's perspective.

Well, it is now 2024 and in the New Year we traditionally take stock of where we've been, where we're going, and what resolutions and changes we want to make. CAD managers should undertake this same review/resolve exercise so we can update our plans for the upcoming year.

In this installment of the CAD Manager's Newsletter I'll update my recommendations and resolutions from prior years for the New Year and add some new information about current trends along the way. Here goes.

Author's note: As always, I base my opinions and draw conclusions on my interactions with CAD managers, senior management teams, and personal experience — your mileage may vary.

Image source: FutureStock/stock.adobe.com.

IT Continues to Dictate CAD Policies

The trend of CAD being managed more by IT policies and cloud infrastructure accelerated big time during COVID. As companies struggled with how to host remote meetings, control files, and integrate new technology for remote work, CAD became less about CAD and more about remote work management.

This IT trend shows no sign of abating as changes in file sharing, cloud apps, scattered resources in Teams silos, remote access issues, and CAD licensing. IT management is an ever-larger part of the job. Think you can go back to just worrying about CAD or BIM now that the world is back to normal? Nope. The expectation for remote work has been set and we'll all have to become ever more IT savvy to keep our CAD tools running properly so projects are executed smoothly.

What resolutions can we make for this increased IT burden and how should you approach the task?

Resolve to: Manage your CAD and IT resources in a way that makes things easier for users to work with tools and files, saves money whenever possible, lowers the chance for costly errors, and maximizes speed of operations. This should be your sole focus and anything that is outside these objects should be on your low priority list.

Resolve NOT to: Update software that is already working well, undertake big organizational changes, or enter into expensive new software contracts without seeing PROOF from vendors or your internal IT staff that the changes will work and are worth the time it will take for any training needed.

Software Costs Go Even Higher

Any of you who participate in budgeting know that software costs keep increasing. And, more and more, it isn't the cost per seat that is driving up costs so much as other ancillary factors. These trends became prominent last year but are accelerating and will become even more common this year. Consider the following:

- Named user policies mean license sharing or "pooling" can no longer be used to keep costs down.

- More and more “extras” and “upcharges” are being applied, such as premium fees for Single Sign On (SSO) or cloud data tools.
- Migration from traditional desktop-based CAD/BIM tools to a patchwork quilt of cloud applications costs a substantial amount of implementation time and time is, after all, money. Plus, in my experience, these new tools are often bug-ridden and require substantial trouble shooting.
- Administrative burden — in terms of IT and CAD manager time — continues to increase as licensing compliance becomes a more challenging task.
- Dealing with licensing issues like AWS server outages that power cloud-based licensing and application services can cause serious loss of production time. Sometimes this can’t be avoided, but you should be aware, nonetheless.

Taken together these trends are making CAD tools more expensive and senior management teams are noticing. As I predicted in 2023, company CFO’s and boards are doing all they can to reduce seat counts and licensing costs. This trend will only accelerate in 2024.

So, what can we do?

Resolve to: Ruthlessly justify and optimize what you already have — especially if you can leverage perpetual software tools rather than annual subscriptions. If you don’t really need it, get rid of it.

Resolve to: Skip software updates to keep implementation costs down unless absolutely required.

Resolve to: Analyze what software your users need to do their jobs and lower license counts aggressively to save.

Resolve to: Skip the AI (artificial intelligence) hype unless it can be PROVEN that it will save you money in your current usage patterns.

Resolve to: Replace expensive tools with less expensive tools if you can. Downgrade casual users to lightweight tools, etc.

Resolve to: Be creative in using remote access and machine sharing to keep software costs down. I’m not telling you to violate any licensing policies here, but I am saying do everything you can to keep seat counts down.

Resolve NOT to: Buy software that isn’t mission critical at your location or cave-in to software company pressure to buy things you simply don’t need.

CAD Software Becomes More Modular

The good news now is that a whole new selection of products (not from the big CAD software houses) are making CAD a more modular and plug-in architecture than in years past. Products such as Enscape, Grasshopper, and Lumion are changing the visualization and complex surface modelling environments, for example. And, as more modules that operate with IFC file formats permeate the BIM environment, the environment will become even more modular.

So, how should you take advantage of this? How do we navigate this complex, plugged-in and modular landscape?

Robert Green helps you navigate this complex landscape, plus suggests the minimum configuration for CAD/BIM, how to handle short-staffing issues, and strategies to gain more support for dedicated CAD management time.

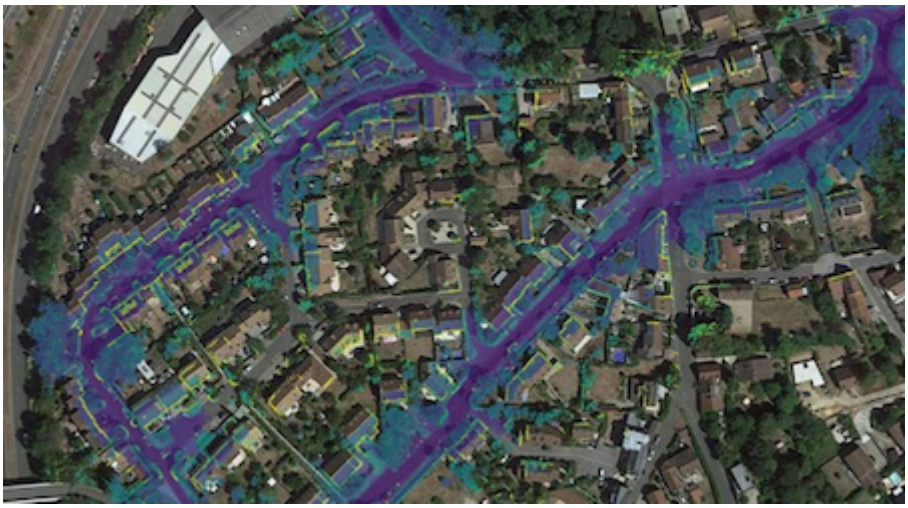
READ MORE >>

Tools & Resources

GIS and BIM Together
During the recent Autodesk University, Esri and Autodesk highlighted their partnership and showed how GIS and BIM work together. Digital transformation in the AEC industry requires professionals to use geospatial and design data together. Esri has partnered with Autodesk to put GIS and BIM integration at the center of construction projects for a more sustainable, resilient future. According to the company, they are bridging the gap between GIS and BIM, delivering real business value to architects, engineers, contractors, and owners. Find out more about this partnership and how GIS and BIM work together.
Learn more >>

Call for Abstracts: ASTM International Conference on Advanced Manufacturing 2024
Hilton Atlanta, Georgia. 28 Oct – 1 Nov, 2024. This conference addresses application specific requirements of various industry sectors in addition to covering the fundamentals of advanced manufacturing processes with the goal of transitioning research to application through standardization. Industry, academia, and government agency professionals in the AM community are invited to address the current and future state of: industry standards, design principles, qualification/certification, and more.
Read more >>

Tech Watch: Nvidia Drives AI Forward in the Automotive Sector
Mercedes-Benz, Polestar, Kodiak, Pebble and more showcase the newest AI-infused vehicles at CES using technology from Nvidia. Amid interest in generative AI, the auto industry is racing to embrace the power of AI across a range of critical activities, from vehicle design, engineering and manufacturing, to marketing and sales. Mercedes-Benz is using digital twins for production with help from Nvidia Omniverse. **Read more >>**



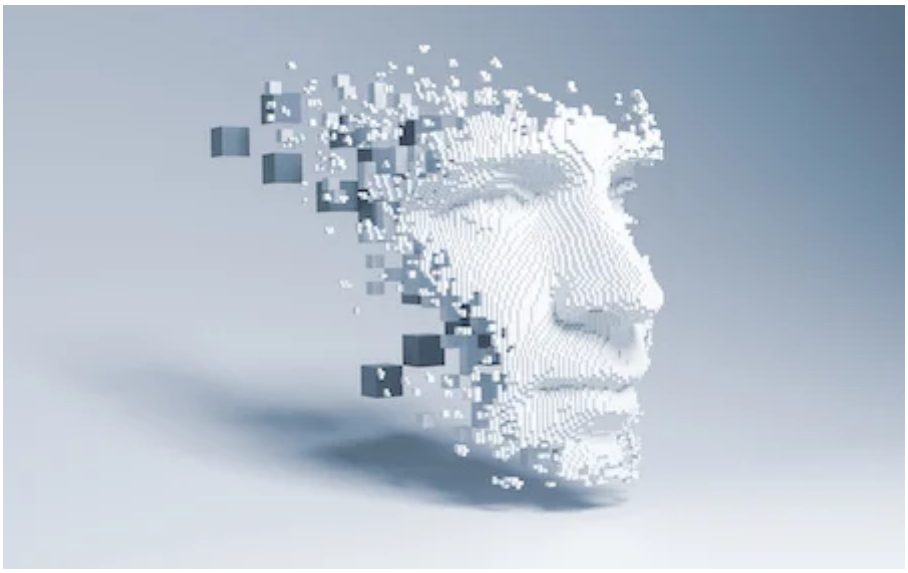
3D Mapping
Exwayz 3D Mapping (3DM) is an all-in-one software that can process the raw data of LiDAR sensors and fuse it with Global Navigation Satellite System (GNSS) data to create centimeter-accurate 3D maps of wide environments such as cities or industrial areas, according to the company.
Read more >>

Event Watch: 3DEXPERIENCE World 2024
11–14 February 2024, Dallas, TX. The theme of 3DEXPERIENCE World 2024 is Sustainability and Sustainable Energy, and you can hear from industry experts and 3DS customers, attend panels, watch keynote speakers, and view the innovation showcase. General sessions cover the future of R&D and manufacturing and Dassault Systèms plans and expectations for AI in its company and industrywide.
Read More >>

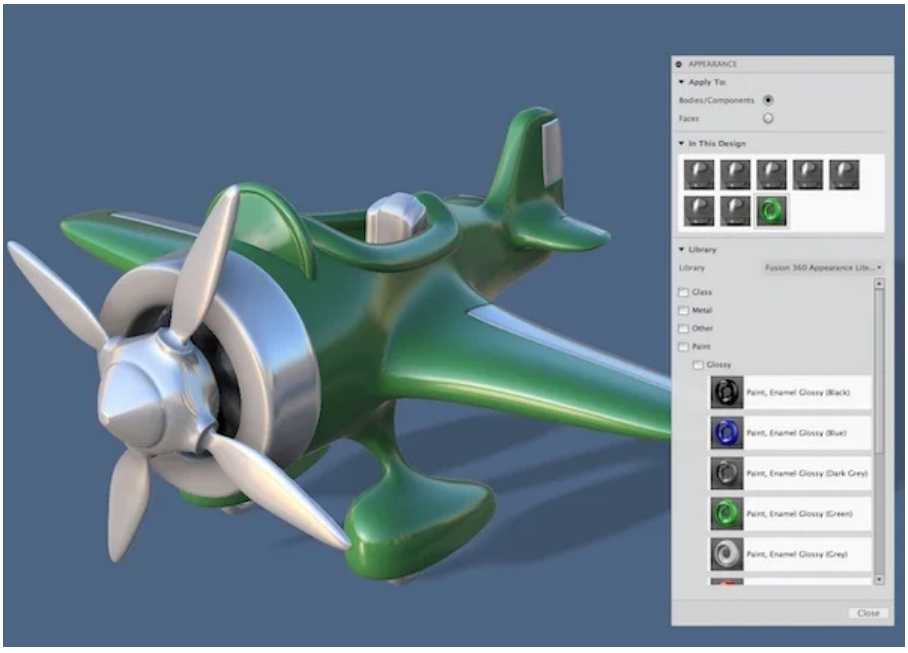
Event Watch: Additive Manufacturing Users Group Conference 2024

10–14 March 2024, Chicago, IL. AMUG is dedicated to the advancement of additive manufacturing technology. It brings together engineers, designers, managers, and educators from around the world to share expertise, best practices, challenges, and application developments in additive manufacturing. The users group is dedicated and open to the owners and operators of commercially available additive manufacturing and 3D printing technology. **Read More >>**

What's New at Cadalyst



CAD Manager Column: The AI Hype Tsunami — Can It Actually Help Us?
Treat AI like any new technology and figure out how it can help you do your job better. **Read more >>**



Product Design & Manufacturing Solutions:
The Cloud Trend is Still Your Friend
What engineers are looking for to improve workflows and the products vendors deliver. *By Cadalyst Staff* **Read more >>**

Cadalyst Video: Cadalyst and IMAGINiT Technologies Discuss Reality Capture
At Autodesk University 2023, IMAGINiT Technologies' James Branagan, Reality Capture Solutions Consultant at IMAGINiT, answered a few questions for Cadalyst readers about reality capture technology, the differences between Unreal Engine and Twinmotion from Epic Games, and how this technology can be used in construction, design, and manufacturing.
Watch the video >>

CAD Cartoon

By Roger Penwill Keep 'em Laughing!

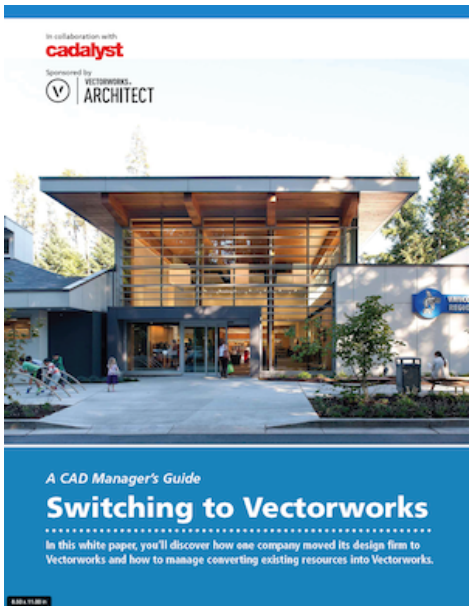
Free Resources

Digital Transformation in Manufacturing

Innovation within manufacturing helps create a culture of continuous improvement to improve product quality and reduce waste, ultimately making companies more successful.
Implementing a digital MES can help you drive innovation on your production floor.

Find out how a digital manufacturing execution system (MES) can transform your factory.

DOWNLOAD NOW



A CAD Manager's Guide to Switching to Vectorworks

Discover how one company moved its design firm to Vectorworks and how to manage converting existing resources into Vectorworks.

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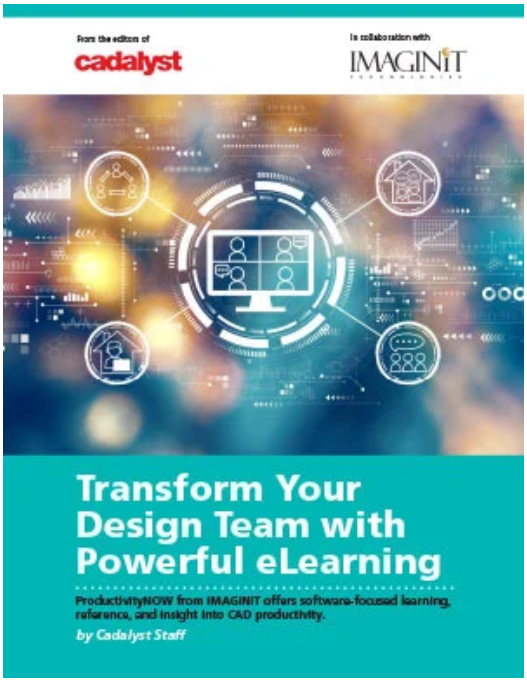

Transform Your Design Team with Powerful eLearning

Training your workforce continues to be one of the most important pillars to forming a strong and efficient team. The challenge becomes making sure your staff are using their design software to the best of their abilities and following your CAD standards. How do you build this foundation and continue to invest in your employees?

Find out how ProductivityNOW from IMAGINiT offers you software-focused learning, reference, and insight into CAD productivity. *By Cadalyst Staff*

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More Digital Design Solutions

Product Design

Building Design

Civil Engineering

Prototyping

Design Testing

Conceptual Design

Reality Capture

Drafting & 2D

Longitude Media, LLC, 8461 Lake Worth Road, Lake Worth, Florida 33467, USA