cadalyst
CAD Manager's Newsletter
Strategies and solutions for the real world *by Robert Green*

Sept 8, 2021 • No. 476

IN THIS ISSUE

- Day-to-Day Innovation Offers Steady Benefits
- Tools and Resources
- What's New from Our Sponsors
- CAD Cartoon
- What's New at Cadalyst.com

CAD Management
Cadalyst Library
Cadalyst Newsletters
CAD Tips Archive

About the Author
Account Management
Contact Editors
Contact Advertising Sales

Follow Cadalyst

Day-to-Day Innovation Offers Steady Benefits
Gradual, incremental innovation wins the day by giving users small changes that are easy to implement, plus increase efficiency.

Years ago, I noticed how often the words innovation and innovative showed up in software marketing. Like the "paradigm shift" or "productivity enhancement" buzz phrases before them, it seems that all the software companies want to talk about these days are their "innovative" solutions. This led me to examine what innovation really means and how I can best leverage it as a CAD manager to make my company better.

As CAD managers, is innovation really part of our job? Well, isn't implementing new tools and unfamiliar workflows in a user community that's set in their ways an act of innovation? My answer to this question is a resounding, "Yes!" In this edition of the CAD Manager's Newsletter, I'll lay out strategies for using gradual, incremental innovation to boost your company's CAD performance and your career prospects at the same time. Here goes.

Image source: klenger/stock.adobe.com.

Radical vs. Incremental Innovation

Most times when we hear about innovation, the implied meaning is big changes brought on by radical new tools or technologies. This "radical innovation" concept gets all the attention, yet radical innovation is almost impossible to actually implement. Do you think ditching 2D CAD for BIM 10 years ago was easy? Was being the first company to implement 3D printing easy? No way! Radical innovation is hard because of the following factors:

Big costs. Radical innovation often means new tools, new hardware, involved IT integration, and extensive research to achieve upper management approvals and funding.

Immature software. Radical new software tools are invariably full of functional gaps and bugs, and often require learning new customization tools. As an example, Autodesk purchased Revit in 2002, yet substantial adoption of BIM tools didn't make any real progress for another 10 years. In fact, we're still reading about barriers to BIM adoption today — nearly 20 years later.

Extensive workflow changes. Radical changes in tools cause changes in workflows which in turn requires lots of training and staff adaptation. Why? Because radical innovation makes you discard what you already know to implement something new that you don't know — and that can be a very disruptive process.

Unknown disruptions. Radical innovation is an unknown, so the problems you'll find are unknown as well. These problems can delay project execution and drive-up costs as you wade through the unknowns to find solutions.

What's the conclusion on radical innovation? Simply that no CAD manager can drive radical innovation on their own because the risk of disrupting production and financial resources required can only be approved by those above us.

What CAD managers can execute is a more modest process that I like to call *Gradual Incremental Innovation*, which is cheaper, less risky, and within a CAD manager's span of control. Let's explore.

Applying Incremental Innovation

As a CAD manager, I know that my management team expects me to accomplish the following key objectives:

- Keep the CAD tools and systems running
- Keep the users efficient
- Keep projects on track

- Keep labor costs down

So, my question now becomes: "What new tools, techniques, training sessions, and workflows do I have the authority to implement that can help me meet these objectives?" Please note my emphasis on having the authority to implement your innovations — otherwise you'll be stuck waiting for upper management's approval.

The answer to the questions I posed above will form the basis of your incremental innovation plan. The plan will use innovative solutions to known problems that will be incrementally applied, as time permits.

Read more for Robert Green's three-step process for mapping out an incremental innovation plan, plus how to get users excited about the plan and follow it. **Read more** »

Tools and Resources

VIRTUAL EVENT: 3DEXPERIENCE FORUM 2021
Plenary Session: September 9, 1pm EST
Dialogues: September 21–23, 1pm EST
Dassault Systèmes North America announced its 3DEXPERIENCE FORUM 2021 virtual Plenary Session. Examine the business, societal, and consumer impacts brought about by a fast-changing global environment, and inspire and enable you to drive growth and sustainable innovation to meet current challenges and future opportunities. Join the virtual **3D**EXPERIENCE Dialogues round table discussions focused on complex challenges, future outlook, and practical solutions for post-pandemic innovation.
Register online

IntelliCAD 10.1
The IntelliCAD Technology Consortium (ITC) released IntelliCAD 10.1, which according to the company includes performance improvements and new features, such as faster entity selection and drawing regenerating. New features include the ability to insert and work with geographic maps, restore default program settings from the operating system Start menu, create and edit tables and table styles, create and edit sheet sets, insert dynamic blocks, import PDF files with more advanced options, import point data from CSV and TXT files, import map files, and more. **Read more** » ▼▼▼

Metal Parts Software
Lantek offers CAD, CAM, MES, and ERP solutions for companies that manufacture metal parts from sheet metal, tubes, and profiles using any cutting technology (laser, plasma, oxycut, etc.). It enables the integration of sheet metal and metal processing technologies with manufacturing control software. It recently announced its 2021 Global Release of Lantek Expert, Flex3d, MES and Integra and Analytics.
Read more »

WEBINAR: CIMDATA: Complex Products are Safer with PLM and Digital Twins
September 23, 2021, 11:00 EDT | 8:00 PDT

This webinar will show how effective data analytics combining digital twins (managed in PLM) with experience measures (IoT in the operations) will improve product safety. **Register** »

VIRTUAL CONFERENCE: HxGN LIVE Design & Engineering
The Future of Computer-Aided Engineering (CAE)
October 12–14, 2021
Join designers, engineers, and manufacturing leaders and travel into the future of design & engineering. Choose between 180+ technical customer presentations across 10 tracks, 12 keynote sessions, and more. **Register** »

What's New from Our Sponsors

DISCOVER YOUR
### SOFTWARE'S FULL POTENTIAL

Get the ultimate software experience using the AMD Radeon™ PRO W6000 graphics series, offering high-performing hardware raytracing, lightning-fast framebuffers, optimizations for up to 6x Ultra-HD displays, and superior multitasking capabilities. All wrapped around AMD RDNA™ 2, the established graphics foundation for leading, visually rich games consoles.

LEARN MORE

SPONSORED:
What Will AEC Offices Look Like Post-COVID-19?
Is your company ready to get back to the office or are you ready for something different? **Read more** »
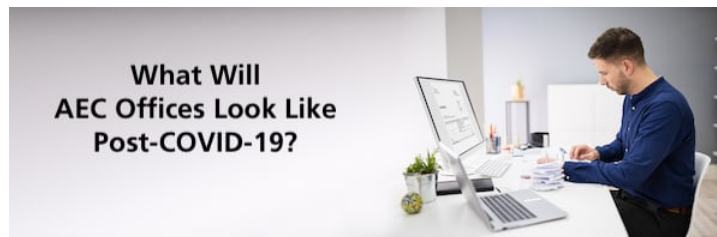
THE ONLY ALL-IN-ONE SOFTWARE BUILT FOR SITE AND LAND DEVELOPMENT
See how OpenSite works on real-world projects.

Watch this video as our product expert takes a project from start to finish in 15 minutes with OpenSite.

CAD CARTOON

— By Roger Penwill,

Keep on laughing!

What's New at Cadalyst.com

Data Collection Steps Up for AEC
New tools expand capabilities of surveying and civil engineering to bring important data into all design aspects. *By Andrew G. Roe* **Read more** »

Herrera on Hardware:
The Evolving Role of the Mobile Workstation, Part 1
HP's ZBook Power G8 epitomizes what's possible in a mobile form factor. Novel at its introduction in the early 00's, the mobile workstation has evolved from the niche to the essential. With a review unit in hand of HP's latest ZBook Power G8 mobile workstation, this month we get the opportunity to check in on the mobile workstation, both to assess its capabilities as a primary computing device as well as the reasons for its expanded market presence. *By Alex Herrera* **Read more** »

CAD Programming: Intro for 2021
Options evolve for automation and customization in AutoCAD and MicroStation to help beginners and power users alike. *By Andrew G. Roe* **Read more** »

Implementing Generative Design for AEC

Cadalyst and Z by HP joined forces to write this white paper on generative design for AEC. Find out how you can get your design firm bought into this technology, what hardware you require, and how to secure funding for any upgrades you may need.

Download now »

Cadalyst's Fab Freebies for CAD Users 2021
Why buy it if you can get it for free!
The editors of Cadalyst, with help from our contributing editors and readers who are in the CAD trenches day in and day out, have updated everyone's favorite guide to helpful tools and resources that don't cost a cent. The latest edition of the "Fabulous Freebies for CAD Users" guide has something for everyone, including unit converters, file and text utilities, PDF converters, BIM tools, CAD management tools, and more!

Download now »

About the Author

Robert Green performs CAD programming and consulting globally and serves as Director of Implementation for Bricsys. He is the author of *Expert CAD Management: The Complete Guide*. Reach him via his web site.

If this topic was not of interest let us know where your interests really are! Answer one question here to help Cadalyst articles and information keep relevant for you!