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The Seven Deadly Sins of CAD and BIM Management

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Learning Objectives

- Learn common missteps that CAD/BIM Managers often take.

- Learn about the importance of looking at the CAD/BIM manager job from multiple points of view.

- Discover strategies to avoid falling into traditional traps.

- Find out how not to be that support guy.

Description

Are you a glutton for the perfect CAD/BIM standard? Do you lust after other CAD/BIM managers who have the authority to get things done? Do project teams become greedy about their own standards, wrathfully rejecting the standardized and more efficient ways you proudly implement? You need not despair. This class will focus on ways to put yourself into the enviable position of having users who listen to you. Combining more than two decades of CAD, BIM, and IT support and management experience, plus years of working with numerous companies to help support their technical managers and staff, we will discuss the things nobody likes to talk about—the sins CAD and BIM managers commit while doing their jobs. What sins might you be guilty of, and what's the path to righteousness? Join this session to learn some of the common pitfalls, missteps, and misconceptions that come with the job, and uncover why they happen, and learn how to avoid them.

![Autodesk University logo]

Speakers

Donnie Gladfelter

Donnie Gladfelter is a highly visible and respected thought leader in the CAD community with more than two-decades of experience in the AEC industry. As an Autodesk Expert Elite member, he is well known for The CAD Geek Blog www.thecadgeek.com, six Autodesk Official Press books, and dozens of Autodesk University classes since 2007. A top-rated speaker at Autodesk University and other industry events, Donnie has presented to audiences of 60,000+ people, and provided training to thousands on Autodesk design technology. As an Eagle Scout, he helps design teams be prepared for whatever their projects throw at them as a technical product and online manager at CADD Microsystems an Autodesk Platinum Partner, and as a former member of the Autodesk User Group International AUGI board of directors.

Jason Kunkel

Jason has worked across the design and technology spectrum of the AEC industry for over 20 years. After graduating from the University of Virginia School of Architecture, he began his career as an architectural designer for a major mid-Atlantic architecture firm specializing in large, public sector projects.

Discovering a passion and knack for technology, he migrated to the IT support world, spending over a decade as the Director of Information Technology, where he applied that passion to help architects and engineers leverage technology in new and exciting ways, and save time in the process.

Working at CADD Microsystems, Jason has been able to apply his knowledge and experience to help a wider range of customers achieve the same goals. He is one of the founders of RevitRVA, a Revit user group in the central Virginia area, and has a wide array of knowledge and experience with both software and hardware to help companies improve their processes and work more effectively. He also finds it very odd to write in the third person, like Gollum.

Introduction

Nick Burns

Back in the late 90's, *Saturday Night Live* introduced the character "Nick Burns – Your Company's Computer Guy". As IT support was just starting to become a role every company had, the caricature of Nick Burns and his dismissive "know it all" attitude was sadly something that everyone seemed to be able to relate to.

Fast forward to today, and so many roles at companies seem to have at least a relationship with or a similarity to the classic "IT support" role. CAD and BIM Managers are no different. This is not only because of the reliance on technology in their daily tasks, but their function and "soft" skills overlap as well.

A cross section of skills and roles

Working with numerous firms, we have discovered one thing about the typical CAD and BIM Manager: that there is no typical CAD or BIM Manager.

There is, however, a Venn diagram of skills, drives, personality types, and drives that often ends up with a very big overlap that seems to end up leading to CAD and BIM Managers.

This leads to a similar set of problems that we have seen with many many people in these roles, and many times, a similar set of solutions.

Take a look at the man…ager in the mirror

A lot of this conversation covers some difficult topics. A lot of the recommendations we have first rely on some heavy self-reflection and some honest internal talk. As a former CAD and BIM (plus IT to boot) Managers, we have had to take that same hard look and haven't always like what we came back with. But, above anything, the thread that seems to connect CAD and BIM Managers is the desire to fix problems. Hopefully, with a little honesty, and a touch of self-deprecating humor, we can identify they issue, troubleshoot a solution, and develop a new set of documented standards that will helps us all move forward together.

> *To make typing/reading this easier, we will abbreviate "CAD and/or BIM Manager" as* ***CBM***. *Thanks for playing along.*

What the role entails

Certainly, individual specific functions vary from firm to firm. Larger firms may give a CBM a staff to work with. Smaller firms expect their CBM to work on billable project in addition to supporting the design software. But we have found some common themes that are usually shared across the board:

- You put forth a lot of extra effort
- A lot of that effort ends up being invisible
- Many users aren't getting better despite your best efforts
- You find yourself in an odd middle ground between production *users* and *upper management*

What it seems to boil down to is, users don't do what we say and upper management doesn't listen to us.

This sins of Users and Upper Management

Let's face it: this job would be a lot easier if it wasn't for everyone else. This course is all about "sins" and "righteousness". Let's kick things off going through the sins of Users and Upper Management to see if we can start dealing with it.

I **Users don't understand the software basics**

We make a ton of training videos for them and tell them where to find more. Some complain that they can't learn from videos, but they need to learn how to learn.

II **Upper management doesn't listen to us**

We specifically told them that learning Dynamo could help get us ready for generative design processes, but it's like they didn't even understand the words we were saying. And then, yesterday the company president insisted we automate production processes.

III **Users only come to us when it's a crisis**

There was that one time when it was hard to track down a CBM support member, and we don't really talk to them except during a crisis, but they should still reach out and ask for help when things are slow and easy.

IV **Upper management doesn't recognize our contributions**

We built all those LISP routines that are pretty cool (but nobody seems to use), and it's not important to me what the firm's objectives are, but we're doing neat things here that we should get recognition for.

V **Users aren't sharing any knowledge they have**

We cancelled our lunch and learns and never did get that intranet up and running, but sharing knowledge is a great way for everyone else to learn. Of course, even with those resources, everyone is too busy to participate.

VI **Upper management isn't providing the resources we need**

We told them we needed that new cloud service and VR headsets. We don't need to explain why; they should just trust us.

VII **Users aren't following the standards, especially near a deadline**

The CAD/BIM Manual is either a light 984 pages, a decade out of date, or maybe both. In either case, we've repeatedly simplified it all with daily emails explaining what individual files on the server are good to use and which ones should be avoided. This stuff is easy, why don't the users understand?!

Ouch… let's start over

After spending a LOT of time trying to make our own teams work better, and watching many CBMs try to do their job, we have come to a tough tough tough realization:

It's not them. It's us.

This is, a little hyperbolic. Things are never cut and dry.

But we have seen many CBMs take the attitude that everyone else needs to play catch up. We are here as a splash of cold water to try to lay out some very specific things that we can do to not only be better CBMs, but to make our teams work faster and our upper management happier at the same time.

You're an expert at the software applications you support. Being an expert is probably how you got your job. Although invaluable for much of your role as a CBM, there's a strong chance your expertise is also limiting your accomplishments as a CBM.

With this new understanding, let's take a look at some of *our* sins.

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This sins of CAD and BIM Managers

I   **Only doing what you *think* you should be doing or what you *want* to be doing**

We identify problems that need to be addressed with every user interaction, and our first inclination is to develop a solution. Despite solving this bevy of problems every week, we can never seem to get ahead. We don't always have a clear understanding of what our responsibilities and duties are. That can be caused by not getting that information, not understanding the firm's business objectives and how you fit into them, and on a smaller level, not taking the time to understand individual project objectives.

II   **Being inflexible**

There is often a tendency to only support the ideal of the tools and processes – meaning we sometimes try to work with things as how *they should be* and not *how they actually are*. This can lead us to assume we know what the fix is before hearing the whole problem, not to mention users resisting the solutions you try sharing with them.

III   **Not knowing your team – your whole team**

This role is about leading, not ruling or dictating. With that comes the need to get to know the people you support. Coming to learn your team isn't a one-way street. Your users will only give as much as you give. We have seen many times a lack of understanding lead to creating systems, tools, processes, and training for the CBM, and not the staff. Until you do this, users will only contact you when it's a crisis.

IV   **Having a bad process to roll out a good process**

It is our nature to want to learn and created new tools. But simply pushing the latest gizmo is often counterproductive. What we may recognize as the "best" way to do something might not always end up being the most "efficient" way for the team. Baby steps for a rollout can be far more effective than trying to overhaul everything at once. Evolution, not revolution!

V   **The drive to be the smartest person in the room**

We have a tendency to want to be the expert in our field, and this is a great motivator as long as it doesn't impact how things are done or who does them. Sometimes with this attitude it's hard to admit when we are wrong, as well as crush other good ideas before someone else gets to voice them. No one is an expert at everything, and no one expects you to be either.

VI We could be better at communicating

Frequency and technique in communicating is key. The onus is not on the recipient to adapt to our way of communicating – it's up to us to change how we deliver the message so everyone can see it. In addition, it's critical to start communicating with management at their level.

VII Having a bad attitude

There's no way to sugar coat this one – lack of good listening skills, lack of empathy, and lack of patience happens far more among CBMs than we like to admit. !

How did it get like this?

There are a multitude of reasons that we see this collection of sins on the CBM end. It's not that we're evil people.

Well, *most* of us aren't evil.

Instead were tactical, technical people. That's can be a a strength and a liability.

We like to fix things using technology. It's why we are good at this job. Sadly, there are a lot of problems that cannot be fixed with 1s and 0s and as the CBM role is a more public facing job, nobody clued us into the need to look outside our usual toolbox for a tool to fix the issue.

Most of us think in a more *tactical* manner, and many of these issues are *strategic.*

And finally, as noted before, this job isn't always the best-defined job. Responsibilities are organic and ever changing, a lot like the technology we support. It also has evolved over time from what was originally more of a *reactive* role, but the needs of the modern firm require experts who can turn that around and be *proactive* with their plans and recommendations, but need to be sure to include all teams and objectives.

The CAD and BIM Manager path to righteousness

We've confessed our sins, and it's time for a revival. We like to fix things – let's try to lay out some ways to fix this. Many of these recommendations are "soft" skills, which is tough to quantify, but are essential to tackling this disconnect.

You earned your role as a CBM largely because of your intelligence quotient (IQ). The solution doesn't require you to increase your IQ, but rather your emotional intelligence (EQ). Although this may sound intimidating, bridging this gap isn't as difficult as it might sound. Studies show our IQ remains relatively constant throughout our lifetime. Conversely, emotional intelligence (EQ) is something we can build and improve.

Emotional Intelligence (EQ) is the capability of an individual to recognize their emotions and the emotions of others, discern between different feelings, and label them appropriately. Idioms like "there's no one size fits all solution" spotlight qualities of individuals with a high emotional intelligence.

Understand that you have a social contract between you and your users

There's nothing documented (at least we've never seen a firm with it) about the authority that a CBM has. It's assumed based on our technical prowess and our desire to fix problems.

With that, however, is the understanding that your job is to support them and the firm.

Understand that there is a shared ownership – the standards are the company standards, not the CBM's standards. That means taking input from others and give credit when due on highlights on the standards, tools, and processes that get implemented.

A common quality you'll find in good leaders us the understanding that authority is earned, not granted. This even applies to the CEO of your company. Sure, they have the authority to fire you, but they lack the authority to force you to stay. Good CEOs understand this, and know you'll probably seek other employment if they rule, not lead, the company.

Learn what individual and company priorities are – and make them yours

Make an effort to understand the company business objectives and see how that can be impacted by what you do.

Spend time trying to learn what makes each project different. Contractual or code requirements may require a deviation from the CAD or BIM standards, and that is expected, and needs to be fully supported as much as your company's internal standards.

Try to get to know your users and what they would like to learn as well. When possible, line things up to help them achieve that. This isn't as high a priority as firm or project needs but can be just as beneficial at times.

The leadership of any organization are laser focused on the organization's objectives. If you want leadership to take notice of your contributions, articulate them in a way that aligns with the organization's objectives.

Be a better listener

Stop. Pay attention. There are hundreds of classes and books on how to refine this specific skill. It takes time and training, but it's essential in this role.

When a user asks a question, it's our inclination to offer an answer. Don't. Instead of providing an answer out of the gate, challenge yourself to answer your users.

Find better ways to communicate

Understand the right means for the right people. And be sure to refine your message for your audience. Production staff are more technical. Probably like you. You're probably more comfortable interacting with them. Afterall, they understand the lingo you talk.

On the other hand, while managers probably understand none of that, they are no less interested in the success of the organization. To achieve that, they are focused on objectives and outcomes. The most effective CBMs know how to translate the technical jargon and distill the key objectives and outcomes of your decisions and recommendations.

Make standards, processes, tools, and content that people will use/want/need

The secret to effective standards is shared ownership and reinforcement. Users should refer to *the* standard you help implement as the organization's standard, not *your* standard.

Building a standard that's seen as the organization's standard, and not an individual's, begins with the decision-making method you implement. The CBM should guide the decision-making process, but the actual decisions should be that of the users.

Doing this in an effective manner means the CBM has an awareness both of what users want and what upper management needs. This means the first step to developing standards should be learning what upper management needs teams to do and learning how your users work before diving in headfirst to make something new. Once you have that information, you can then leverage it to guide a far more effective conversation about standards.

Be authentic

Some people are naturally introverted, others naturally extroverted. Some have more reserved mannerisms; others are more animated. Whichever of these you are – it's okay. There are effective managers with all combinations of these character qualities.

Although managers have all different personalities, something every effective manager has is authenticity. In the simplest of terms, authenticity means being you and only you.

Don't try to be like the former CBM, or even the person you think the CBM should be. Don't try forcing yourself to have animated mannerisms if you're a more reserved person. Be you.

The managers who forget this are most often the ones who fail. Users will see through any facade you put up and earning their trust will be far more difficult if they see you as being inauthentic.

Especially as you're getting started as a CBM, it's okay to admit you don't know things. It's okay to ask questions, to ask users to explain something in a slightly different way. Never underestimate the power of saying "the way I understand you is xyz, did I get that right?" All of this will contribute to building your authenticity.

On the same page of not knowing everything, own up to your limitations and missteps. It makes getting recognized for your achievements much easier for upper management to do.

And finally…

Well, don't be a *Nick*.