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Saving Money with CAD Management

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Learning Objectives

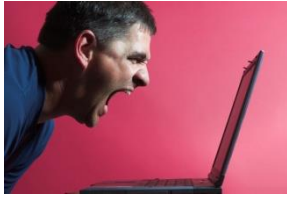
- Learn to identify cost-saving opportunities
- Learn how to quantify rework and error costs
- Learn how to prioritize your task load based on savings potential
- Learn how to build and document a plan using ROI logic

Description

Great CAD managers know that they can positively impact the bottom line by making projects run smoother and by reducing errors, but they often have difficulty getting their management teams to understand. In this session, we will talk about ways to integrate CAD management into project workflows in a way that cuts rework and gets more work done in fewer man-hours—saving the company money on every project. CAD managers will learn valuable tips for selling this approach to their senior managers, while IT and senior managers will gain valuable perspectives on how CAD management can impact their company's profitability. Along the way, we'll pay particular attention to measuring savings and computing the return on investment for CAD management. If you want to get your boss to listen to you, save them money with the concepts you'll learn in this class.

Your AU Expert

Since 1991, Robert Green has provided CAD management consulting, programming, training, and technical-writing services for clients throughout the United States, Canada, and Europe. A mechanical engineer by training, Green has used many popular CAD tools in a variety of engineering environments since 1985. Green has acquired his expertise in CAD management via real-world experience as the "alpha CAD user" everywhere he has worked. Over time, he has come to enjoy the technological and training challenges associated with CAD management, and he now trains CAD managers via public speaking. Green is well known for his insightful articles in *Cadalist* magazine, and for his book, *Expert CAD Management: The Complete Guide* (published by Sybex). When he's not writing, Green heads his own consulting practice, Robert Green Consulting, based in Atlanta, Georgia.



Identify User Problems – Suggest Solutions

CAD managers enjoy an interesting view of the engineering landscape – the view from the end of the process. Development, engineering and design have already been largely completed, so the chances are that as CAD manager you already know the snags and bottlenecks in your company's work methods. This means you are in an excellent position to take an active role in solving the problems before they arise for your department.

If you can suggest a way that CAD work can be done in parallel with engineering, for example, you may provide a way to get your work product out the door faster. If you can find faster methods of checking or routing documents to cut rework, you'll lower costs. If you can solve user problems via CAD management you'll look like a hero to your users and be cheered by management alike.



List the User Problems to Attack

Now write down some of the problems you see sapping productivity in your environment and think about how to make that problem go away. Go with your gut and write things down quickly – if you don't write it down you'll never remember it later.

Problem	Solution
1 _____	_____
2 _____	_____
3 _____	_____
4 _____	_____
5 _____	_____

By focusing on user problems I've chosen to make my number one priority that of making users more efficient. But how do I sell these concepts to users, to managers? How do I get the authority to actually make the changes? These are the questions we must now ponder.



Market Your Ideas with Faster/Cheaper

The only reason CAD users will change the way they work is when they believe they'll get their work done faster. Management will only approve making changes to work processes when they believe they'll save money doing so. Thus – faster/cheaper.

Since users like faster it is obvious that we should focus on selling ideas to users in terms of speeding up the daily CAD work flow. But since making users faster also saves money (time=money) management will love it too!

Getting back to your action list from earlier: Which problems can you solve that will make users faster? We'll know achieve a ruthless focus on solving these problems and convincing our users that we've got their best interests at heart. Sounds simple, right? It is simple. It just requires us to identify the problems, sell solutions and keep management in the loop as we do so.



Make Changes Permanent with Standards

Is there any CAD manager out there who can honestly say they really control CAD standards to perfection? At some user group meetings I spoke at recently I asked this question and didn't get a single positive response. A frequent comment is that CAD standards are easy enough to come up with but hard to enforce. Sometimes we have to deal with users who won't follow the plan and are frustrated with our upper management for not enforcing the rules or helping set a tone of compliance.

I'll now draw a couple of conclusions:

- Users want to get done faster with greater ease of use.
- Management wants savings.

So if we create a standards environment that codifies user time savings the users won't argue with the standards. And if we create a standards environment that saves money for the company management won't argue.

This is what I call the FASTER/CHEAPER standards argument and I've found it to be extremely powerful over the years. The key is to approach users and management on their terms and make the changes permanent by modifying your standards.

I'll now make some recommendations:

- Talk to users about saving clicks and picks and show them how your standards prevent mistakes that used to be common. Do this and the users will see the time savings.
- Talk to management about time savings (scheduling) and reduced rework due to better standards. Do this and management sees savings.



Broaden the Standards Discussion

When you've achieved some success with your initial push into faster/cheaper CAD management it is time to have a more philosophical discussion with your management about standards. The time is now to make management realize how much you understand about standardization and how profitable it can be for management to empower you.

Since CAD managers always tell me the core problem they have with standards is getting the standards enforced, let me give you this key equation:

Management understanding standards = Your ability to enforce

Here's how you spell it out for management point by point:

Standards = consistency

Consistency = automation

Automation = faster/cheaper

Faster/faster = more profit for the company

More profit = everyone (especially you) look like a genius

The reason I go out of my way to outline how you gain upper management's support is to be sure you'll have the political support required when some user(s) decides not to follow the standards

Now that you've demonstrated how well standards can solve problems and make you more efficient, don't lose momentum. Talk with your management and make sure they know the success you're having with your new emphasis on standards. Don't be bashful in advertising what you've been able to achieve, and be sure to point out any cost savings you've gained.



Objection Handling

So what should you do when you've created good standards, explained them, quantified the time/money savings and people still object to following them? If you've approached standards in the way I've outlined objection handling is actually easy. Here's how:

Restate the problem. Focus on the wasted time you used to experience working the old way.

Restate the solution. Demonstrate how effective the new standard work method is.

Ask for an alternative. If the user/manager can come up with a better way to do things – great! But if they can't you then have the upper ground.

Restate the goal and outcomes. You can now handle the objection by simply stating that not following the standards costs time and money and that nobody can make an argument why the company should spend more time or more money just because someone doesn't want to follow procedure.



Go to the top if needed. If objections still persist take the issue to upper management and walk them through the exact process I did above. When management comes to understand that standards are in their financial best interest they'll handle the objections for you.



Push for Cost Effective Training

I receive a lot of email that asks, "How do I get my management to approve training?" To answer this question in one phrase I'd say, "Tell management your users will be more efficient and streamlined after the training is complete, so the company can save money."

Of course it will be up to you to live up to these compelling promises, so you'd better be ready for the challenge.

Get the Ball Rolling

While formulating your training regimen, ask yourself the following questions and you'll automatically focus on the right areas for training:

- What are the questions I get asked the most about our CAD software?
- Are there any CAD procedures or repetitive tasks that people have problems with?
- Where do we lose the most time, and what could we do in a training environment to cut our losses?

Now that you've created a list of questions and time-sapping problems you'd like to address with training, you can put the items in a list with the greatest savings potential at the top. This prioritized list now becomes your training table of contents that you will show to management to get your training program approved. You may even want to write a short paragraph on each topic, explaining how training will eliminate the problem and roughly how much time can be saved to demonstrate the cost savings potential.

You may only get approval to train on certain topics on your list or you may get a certain number of training hours approved, so be sure you prioritize in a way that saves the company the most and gets you the best value for your training time.



Tell Management What You're Doing (Reporting)

With all the tasks you juggle as CAD manager the last thing you want to worry about is writing reports to your management right? I sympathize. Writing reports can be drudgerous but there are some very compelling reasons to do so. Specifically, the benefits CAD managers enjoy when they engage their senior manage staffs via good reporting are better communication, fewer misunderstandings and generally better rapport. Let's be honest, you're the only CAD manager at your company and nobody else really understands what you do that well right? This lack of understanding means you operate in a vacuum where you and only you know why you're doing what you're doing. And when nobody else understands what you're up to those around you can form incorrect perceptions that can make you job even more difficult.

In order to target what facets of your job you should report on you need to combat the misperceptions that exist in your company. Each case is, of course, different but the common misperceptions I've seen CAD managers suffer through include the following:

CAD management is easy. When people don't understand the details of what you do they will almost always underestimate how hard your job is. And when users or management think your job is easy they'll try to load more tasks on you thus reducing your effectiveness even more.

CAD management is only a software issue. When management thinks CAD management is just about software they clearly don't know how many training, support, negotiation and human resource problems CAD managers deal with.

Not understanding upcoming dangers. Let's say you have a large volume plotter is that is outmoded and a maintenance problem but replacing it will be expensive so the issue just keeps getting put off. If you, and only you, understand the consequences of having a major plotting failure then everyone will be in shock when the problem actually happens. And believe me when I say that you'll hear the following question, "Why didn't you tell us?"

CAD management is all overhead. When management thinks CAD management is all overhead they start to question why CAD management is needed at all. And when your senior management questions if they even need you then there's clearly a misperception of what you're actually doing.

Why Reporting is Crucial

So if you'd like to avoid all the nasty consequences of your management not understanding your job what should you do? You should educate them with the right types of reports so that they never again mischaracterize what you do, that's what! Therefore, you should find ways to keep your management in the loop using the most economical reporting format you can – more on that shortly.

Remember, you're the only person who can report on what's happening with CAD management so if you don't do it who will? In fact, the biggest reason that CAD management misperceptions exist is precisely because most CAD managers don't report to their management in a regular format that is easy for senior management to understand. So let's see how to make reporting really work for you with minimal effort.



A Format that Works

A simple way that I've found to report involves using a rolling diary style format on a weekly basis. In this reporting scheme you track what you've done and what you plan to do in a brief one page memo and publish it to your management team on a fixed day each week (Monday's or Friday's tend to work best).

The advantages to this reporting style for you are:

- You form a diary of tasks that documents the wide range of material your work on that will serve to reinforce your value when it comes time for your performance review.
- You get the benefit of review what you've actually achieved each week which keeps you focused on what you're trying to accomplish. This sort of mental discipline is hard to maintain when fighting the common fires of CAD management, but a written weekly report will help keep you on track.
- You raise the awareness of what CAD management really is and how valuable it is by simply listing your tasks for management to read about. In a sense you can brag on yourself without actually bragging if your weekly report shows your boss how much you do.
- You demonstrate to your management team how technical you are by documenting technical tasks while the very report you write demonstrates your management prowess. Again, this sort of self promotion just tends to happen when you present a well crafted weekly report.

The advantages of this reporting style for your management are:

- They are able to keep up with a lot of information very quickly since the report is written in a very brief style.
- They are able to keep up with how tasks you work on affect projects since your report is chronologically written. Remember that your management is probably more worried about how technology problems affect schedules than they are about how you actually resolve the problem!
- They are able to gain all these benefits on their own timeframe wherever they may be. This means that when you meet with your management in person you'll be able to really focus on key issues rather than having to answer a bunch of task based questions that you've already reported on.
- They actually start to understand the huge range of tasks you work on and come to understand that you have one foot in CAD space, one in production and yet another in management. They will come to this realization as they read multiple reports over a fairly long time span but the realization will sink in, trust me.



Do Not Be Seen as Overhead

In addition to educating your management on what you're doing it is key that you address the issue of billable time versus overhead. Since many CAD managers are working engineers, architects and designers that battle over what's overhead and what's job billable will always be an issue. One way to reduce your overhead is simply to make CAD management tasks report to jobs and to demonstrate that in your reports.

To make the concept of overhead reduction clear in your reports take care to emphasize which tasks in your report facilitated job production and versus which ones are overhead. You'll note in my sample report that even for tasks like standards formulation or project kickoff coordination I've stressed which job the tasks reported to. By stressing CAD management tasks that actually facilitate job completion you'll be more able to bill the time to actual jobs than overhead.



Think Like Management

I know it runs counter to the technologist instincts that CAD managers usually harbor, but it is imperative to align your thinking with that of management. Try to remember that management's focus is keeping the business going and emerging from slow periods in good shape to win new business and drive profits back up.

If you harmonize your CAD management plan to be efficiency focused, thrifty and business savvy you'll get a lot more recognition from management than you will by being a techno nerd. Right? Of course we all know we'll still be the alpha nerd – we'll just be the alpha nerd that can speak management and succeed. And isn't success the whole point?

Don't Quit!

CAD management is an ongoing process that never stops and is never easy.

However, if you attack the job from the angles I've described you'll stay saner and get better results with less effort. So keep at it and never quit becoming a better CAD manager.

PowerPoints and Materials

You can download updated course handouts (with any additional notes or corrections) for all my presentations at my web site www.CAD-Manager.com on the **AU016** page immediately after AU concludes. You can find a wide range of information on customization, programming and CAD management elsewhere on my web site.

I will send you a PDF copy of the session PowerPoint presentation if you request it. Just send an email to me at rgreen@cad-manager.com and be sure to put the course title in the subject line of your message so I'll know which class you want.