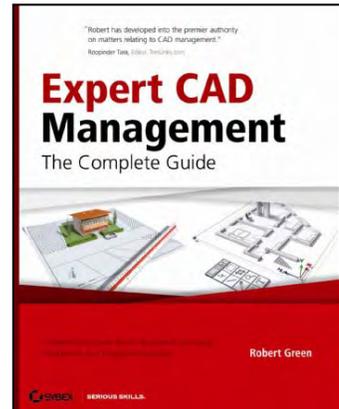


An Open Letter to Senior Management

by Robert Green

If you're a member of senior management and you're reading this it is probably because your CAD manager has brought it to your attention after reading my book, *Expert CAD Management – The Complete Guide*.

I'd like to take this opportunity to state my belief that the CAD manager is one of the most overlooked and underutilized positions in engineering, architecture, and manufacturing today. My message to senior management is that you've got a gold mine of knowledge and technical skill in your CAD manager that you should be taking advantage of.



If you think about it, the CAD manager is a hands-on technician who can also communicate with people, juggle multiple priorities, implement organizational and technological change, and somehow keep everything running in the meanwhile. This is no easy set of tasks, so if you're blessed with a great CAD manager you should be thinking about how to utilize this [his or her?] extraordinary set of skills more fully. In this open letter I'll set forth some ideas for doing so.

Low Overhead = False Economy

As industrial productivity has gone up and cost cutting has become the norm, CAD managers are being pressed to be billable and abandon "overhead activities" that are seen as costing money. The problem is that cost cutting has come to include avoiding tasks like setting up project standards, training users, providing support, and rolling out new software and viewing them as overhead activities, rather than the productivity enhancing activities they actually are.

After all, if setting up project standards and training users on them was done religiously at the start of every new job wouldn't we see reduced rework and overall CAD time during the lifecycle of the project? When CAD management is performed correctly at the start of project cycles everyone benefits as projects run better, standards are followed, and errors are reduced.

Advice for senior management: Work with your CAD manager to define mutually worthwhile tasks like proper project standards formulation, job kickoff training, and job support as "non-overhead" so CAD management tasks are paid for from project budgets. If any departments within your company object, ask them if their projects are always well organized, error free, and easily combined with work from other departments before allowing them to opt out of CAD management.

More Software = More Pressure

Over the last five or so years, CAD software has become more specialized and more complex. Where a CAD manager used to just worry about a 2D CAD tool (usually AutoCAD or MicroStation) it is now common to manage specialized 3D design tools for building modeling, civil topography, or part modeling/assembly tasks. In a very real sense CAD management is harder now than it was before simply because there's more to manage. When CAD managers complain that their job is getting tougher they very likely mean they're at their wits end supporting so many different software tools.

Advice for senior management: Understand that your CAD manager is being pulled in more directions than ever as your company employs new software technologies to get the job done. Know that your CAD manager is the conduit facilitating the implementation of these new technologies and that they need training to stay on top of the ever-changing technology you expect them to master. If at all possible, include some training budget and quality time for your CAD manager to truly understand the software they must manage because not doing so will only diminish the return you can get from all that expensive design software you've purchased.

Involvement with Hardware, Software, and Budgets

In recent years CAD managers haven't had much to do with hardware, operating systems, and networking as corporate IT departments have taken over the purchase and deployment of CAD workstations. The efficiency of this practice is understandable but has led to artificially low cost estimations for CAD hardware and purchasing of equipment that isn't optimized for CAD usage.

There's no way to say it other than this: CAD workstations require more power, more RAM, bigger disks, faster network interfaces, better graphics, and bigger monitors than regular computers and as such they cost a lot more. While your CAD manager may not buy the computers or deploy them anymore, at least make sure they're involved in the specification and budgeting of new computer hardware. After all, you wouldn't let an architect tell a civil engineer what tools they need to do their job so don't let your IT department hamstring your CAD users by under-buying on hardware.

Advice for senior management: Get your CAD manager's unique input on the future of hardware and software platforms early this year and make sure to involve them in the budgeting process to avoid costly IT surprises. CAD computing platforms are going to change a lot in 2007/2008, so it will pay you to have a CAD centric look at the market.

Process Changes

Most management teams I know would agree that business gets better by delivering better designs and products faster and cheaper than before. Most management teams would also agree that new software technology, when properly implemented, can assist in facilitating these goals, but that changing the processes within the company is more important than changing the software.

What most management teams I've talked to don't see clearly is that the CAD manager is in a unique position to assist in making the process changes required to gain better efficiency. Believe me when I tell you that CAD managers know which processes work and which ones don't, and have a generally good idea of where changes can best be made to make things work better. CAD managers typically don't have business or accounting degrees, but they can tell you where the inefficiencies are in your operation and how to begin fixing them. Don't believe me? Ask your CAD manager!

Advice for senior management: Instead of viewing your CAD manager as a techno jock view them as an efficiency consultant who can tell you where the inefficiencies in your operation are. If you view your CAD manager as a managerial resource you begin to see the real potential they have to help you improve your business.

Connecting Your Departments

CAD used to be the exclusive domain of engineers and architects, but now we see CAD files used in field operations, prototyping, estimating, supplier integration, and a variety of other uses. If you went back 10 years and asked how many companies were using CAD systems to output bills of materials, interface with the manufacturing floor, or drive custom design and manufacturing of configurable products you'd have found very few companies who even believed in the concept. If you ask the same question now there is general acceptance that CAD can be the hub of engineering or architectural information exchange.

So if CAD files are becoming more useful around your entire company what does that say about the CAD manager? At minimum you should be on the lookout for ways that your CAD manager can help bring departments together. At maximum you should view your CAD manager as an invaluable resource that can translate CAD jargon and technology to the departments in your company that can make great productivity strides by more fully understanding the technology that they can apply.

Advice for senior management: Bring your CAD manager into project team kickoff meetings or quality and improvement initiatives. I think you'll find that your CAD manager can function as a technological common denominator to help you avoid mistakes and maximize company efficiency simply being involved early in the process.

Worthy of Your Time

So if your CAD manager has the potential to provide so many productivity enhancing functions to your company what can you do to maximize this resource? Here are a few suggestions:

Talk with your CAD manager regularly and feel free to give career advice. Many times your CAD manager would love to have some career guidance but probably feels you're too busy to ask. Go ahead and tell your CAD manager what they can do to improve their career because CAD managers get very little mentoring.

Bring the CAD manager into processes like budgeting and process changes so they can experience more of the managerial aspects of the job. In fact, give them some managerial responsibility and you may be surprised how willing they are to participate in the process.

Help the CAD manager enforce CAD Standards. CAD managers try to make things better by creating CAD standards so all users will be on the same page, yet they have little to no power to enforce those standards. Send a signal to your CAD manager by helping them enforce standards and you'll be rewarded with better financial results!

Build business savvy by teaching your CAD manager about your company's return on investment (ROI) methodologies and staffing philosophies. When you show your CAD manager how they can use CAD to justify monetary investments and work within your staffing plans you'll be teaching them how they can best help your company achieve its goals.

Break down the technicality barrier. Speak to your CAD manager in terms of your business expectations and then listen to what your CAD manager is telling you about your software and hardware platforms. If either of you don't understand the other then agree to explain yourselves again using plain language. Remember that business language can be just as confusing to the CAD manager as computer technobabble can be to senior management. By striving to understand each other you'll both have a better total understanding of your company.

In Conclusion

I realize that this open letter to management can be taken as an advertisement for the value of CAD management and CAD managers in general and this enthusiasm is fully intended. As I talk with companies all over the world I've come to believe that the CAD manager is the secret weapon in implementing technology change simply because the CAD manager is the person who actually makes the rubber meet the road.

Without CAD managers teaching, pushing, persuading, and facilitating technological change in our workplaces we'd still be on the drafting board. So I reiterate my core message to senior management: Use your CAD manager and involve them in making your business better. You'll be well rewarded for doing so.

If you have any questions feel free to email me at the address below. Thanks for reading!

Regards,

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