Cadalyst

CAD Manager's Newsletter (#462)

24 Feb, 2021
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Un-Bottleneck Your CAD Ecosystem, Part 2

Find the bottlenecks in your CAD ecosystem, quantify the issues, and remove them one-by-one.

In the previous installment of *The CAD Manager's Newsletter*, we laid out the framework for analyzing all the components of your CAD system as a unified ecosystem and considered it as a series of components and feedback loops. In this concluding segment, we'll consider how to quantify bottlenecks and create a prioritized plan for getting rid of them. Here goes.

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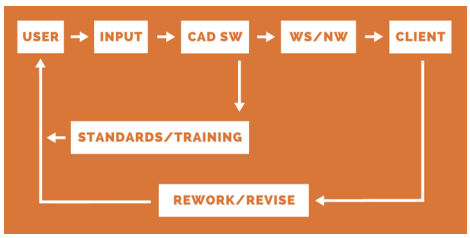
The CAD Ecosystem Redux

You may recall from the last installment that we could think of the CAD ecosystem like this where the components are defined as:

- **The user.** The first link in the series.
- **Input devices.** Mice, trackballs, point-cloud scanners, digital cameras.
- **The CAD software (CAD SW).** The software that stores the user input and processes it all into a final work product.
- **The workstation/network (WS/NW).** Workstation and network to process, transfer, and store the CAD data.
- **The standards/training regimen.** The better the users are trained and the better our standard procedures are, the better the software will serve us.
- **Output devices.** 2D/3D printers, plotters, PDF capture software, etc.
- **The revise/rework process.**

Of course, you may need to add in some additional components to describe your CAD ecosystem, but the checklist above should give you a good starting point.



Find the Bottlenecks

Now, it's time for the fun part. Be brutally honest and assess which component in your CAD ecosystem is slowing you down the most. Is it slow hardware, lack of training, or some combination of other factors? Nobody but you, the CAD manager, can make these judgments, so it makes sense for you to analyze where your company bottlenecks are.

Where to begin? Start at the top row of the diagram because that is the core sequential process that delivers work to the client. If you eliminate the worst bottleneck here, your overall efficiency will only improve. Ask yourself the following questions and record your answers:

- Which item in the top row causes the greatest amount of rework?
- What is the nature of that rework?
- How many hours does this rework require?
- What is the hourly rate for this rework?

Answer these questions and you'll start to understand how much the bottleneck costs your company.

Quantify and Prioritize

Consider a case where there always seems to be issues capturing PDF files correctly, causing the clients to complain and ask for document resubmittal. Quantify the problem like this:

- Due to users not following standard practice for PDF capture, the company is forced to go back to the CAD application, open the file, fix the file accordingly and recapture the PDF.
- This happens roughly 600 files per year and takes 150 hours to fix.
- Calculating the labor rate at $55/hour we quickly see that this problem is causing us not just 150 hours in delay but a loss of $8,250 because, as we all know, time is money.

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Tools and Resources

Prepare Yourself for CAD Management 3.0

According to CAD management expert Robert Green, we're now in the midst of the third major change wave in CAD management (CM 3.0). More a summation of several smaller trends than a single driving trend, CM 3.0 will place new demands on CAD managers and redefine what it takes to compete in the field. To be effective, CAD managers must analyze, adapt, and gain new skills in a never-ending quest for improvement.

Cadalyst has published a 24-page guide that collects seven columns from Green's series on CM 3.0, addressing topics ranging from standards and workflows to the psychology of CAD users and the many languages CAD managers need to speak. **Download this free guide** to learn which skills and strategies you need to be prepared for the changes coming your way.

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