Good to Great Technology Management

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Quick bio …

- Mechanical engineer turned computer geek
- Private consultant since 1991
- Focusing on CAD standardization, customization and management
- Cadalyst Magazine contributing editor
- 14 year AU speaker

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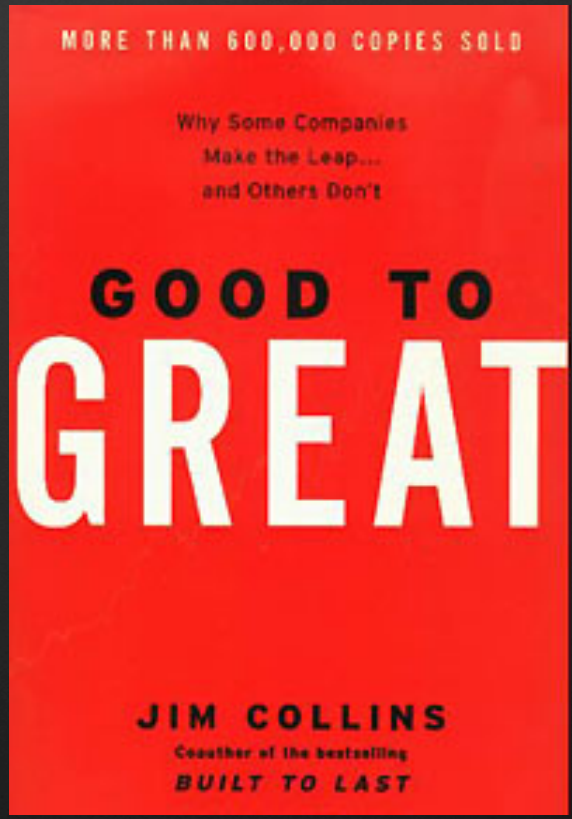
Good to Great
by Jim Collins

- Recommended reading!
- Not CAD but great management concepts
- The basis for today's presentation
- I'll give chapter tie-ins as we go along
- I will go in a sequence that makes sense for most CAD managers



→ **Chapter/Case Study**

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Keynote: There is no easy button!

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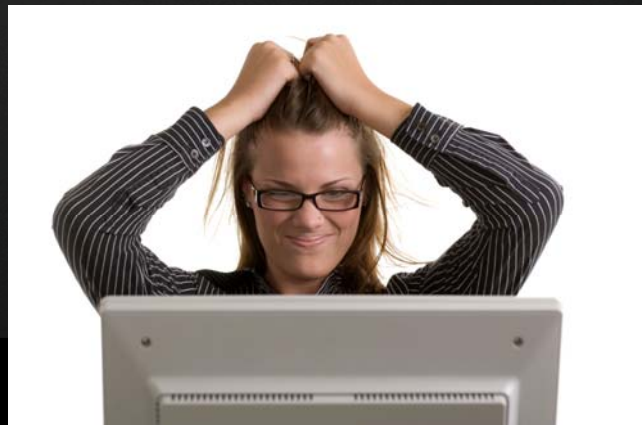
Getting to Great

Know the steps and you'll know where you are now and how to get to great in the long term.

→ Chapter 1

Just Getting Things Done

- This is the step before things get good
- Errors are tolerated
- Rework happens often
- Everything justified with “just get it done”
- Very typical in project manager driven companies …



Getting Good (or Good Enough)

- This is the step before things get great
- Errors are evaluated
- Processes/standards are revised to fix problems
- Cost containment is actively managed
- Catch phrase is “why are we making mistakes”
- Typical in many types of companies
- Lookout! Good is often the enemy of great …

Good Tips: Fixing Broken Processes

- Where are the “traffic jams” in your CAD flow?
- What do users continue to have problems with?
- What are your proposed fixes?
- How much could you save by removing these jams?
- 1/2 year planning frame of mind
- Focus on workflow and thought …

Becoming Great Char

- Errors have been largely fixed
- Processes are well standardized
- Focus is now on optimization
- Catch phrase is “how can we do this better”
- A sense of mission must be established
- Not typical in any type of company
- Good enough often precludes being great …

Great Tips: Optimizing/Changing Processes

- How can we optimize flow to increase speed?
- How can we build our infrastructure to encourage flow?
- How can we reduce the chance of collisions?
- What systems will we need?
- Note: 3 year planning frame of mind
- Focus on innovation and process …

Technology Accelerators

This pertains to any IT or CAD technology

→ Chapter 6

Technology Accelerators

- How do you know which technology to pursue and which to bypass? This is the core concept discussed in Chapter 6.

- Those that accelerates your business!
- Those that serve client needs
- Those that increase quality
- Those that serve your core mission
- If they don’t do the above – skip them …

Tools Don’t Make You Great

But using the right tools in the right context can!

➞ **Chapters 4/5**

Which Tool Would You Pick – And Why?

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An Example: Failure

Lotus Riverside Complex
Shanghai
June 27, 2009

Modern tools, modern techniques, good old fashioned failure!

Do great tools guarantee great results?

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An Example: Success

The Sphinx and Great Pyramid
Giza, Egypt
c. 2540 BC

Primitive tools, unknown construction techniques, enduring quality!

Do limited tools deter great results?

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Technology Doesn't Make You Great Either

But using technology in a great way can

➞ Chapters 4/5

Low tech

Apollo Saturn V
NASA, USA
1967-1973

Guidance computer had 38K ROM and 2K of RAM operating at a frequency of 0.0000002 GHz

Achieved something great.

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High tech

Android Phone
Samsung, Korea
2010

32 GB storage, 1 GB RAM operating at a frequency of 1.2 GHz

Achieves Facebook posting and phone connections.

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Mission

Getting people to use tools and technology to achieve something they never thought they could do.

→ Chapter 4

Mission: Articulation

- Be inspiring!
- **Not:** We’re going to learn Civil 3D
- **But:** We’re going to be the fastest, most cost effective, most client responsive Civil Engineering firm in our area and leveraging CAD tools like Civil 3D is going to help us do it!

➞ **Walgreen’s case study**

Method: Acknowledge the unknown

- To accomplish the mission you'll need to embrace new methods!
- **Not:** We're going to do our next BIM project using our same methods but we're just going to work faster.
- **But:** We're going to do our next BIM project by analyzing past successes and failures to arrive at even better methods.
- **And:** We should all be prepared to reinvent how we work and retrain ourselves to make our tools serve our mission.

➞ **Nucor case study**

Team: You're only as good as your people

- To accomplish missions with changing methods you need a flexible team!
- **Not:** Well we have to put Biff and Irma on this new BIM project because they haven't been trained yet.
- **But:** We're going to get our best, most flexible people on new projects to help us refine/reinvent our methods.
- **And:** We can use everything we learn to train Biff and Irma even better!

➡ **Nucor/Walgreen's case studies**

Persistence

- To accomplish greatness you can never stop getting better
- **Not:** Wow that project went really well, now we can kick back.
- **But:** We're good for the moment, but what is the next challenge coming at us and how will we have to adapt our CAD tools to meet those challenges?

➞ **The whole book!**

Team Construction
The Bus Analogy

Who will you take on your bus?

➞ Chapter 3

Who’s on Your Bus?

Imagine taking a bus trip where you don’t know the destination, don’t know the mission, don’t know the tools you’ll need to use and don’t know how long you’ll be gone. What kind of people will you want with you?

- Those who are committed to success
- Those who can learn and expand their skills
- Those who can adapt to new situations
- Those who thrive under stress or pressure
- How do these correlate to CAD users …

Who's NOT on Your Bus?

Who would you not want on the bus?

- Those who are comfortable with the status quo
- Those who refuse to learn new CAD skills
- Those who refuse to modify their methods
- Those who freak out under deadline pressure
- If they don't belong on the bus tell them …

CAD Example: The Pilot Project

Implementing a new piece of software for the first time is like the imaginary bus trip because you don’t know what you’ll have to do get to the destination.

- Pick test pilots
- Pick self learners
- Pick those who value new knowledge
- Pick those who see a career benefit
- Pick those who will work through unknowns
- Get the right people on your pilot project bus …

Leadership Style

If you have the right people on the bus your style will need to change.

→ Chapter 2

The Level 5 Leader

- Builds greatness seemingly without trying to
- By inspiring others
- By demonstrating commitment
- By demanding performance
- Via a humble, positive, results driven, non-egotistical style …

➡ **Darwin Smith and Lee Iacocca examples**

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The Level 5 CAD Manager

- Builds great CAD software ecosystems
- Inspires users to learn
- Knows the tools and is committed to their usage
- Demands high quality work from all users
- Driven yet calm, inquisitive, mentoring, conversational …

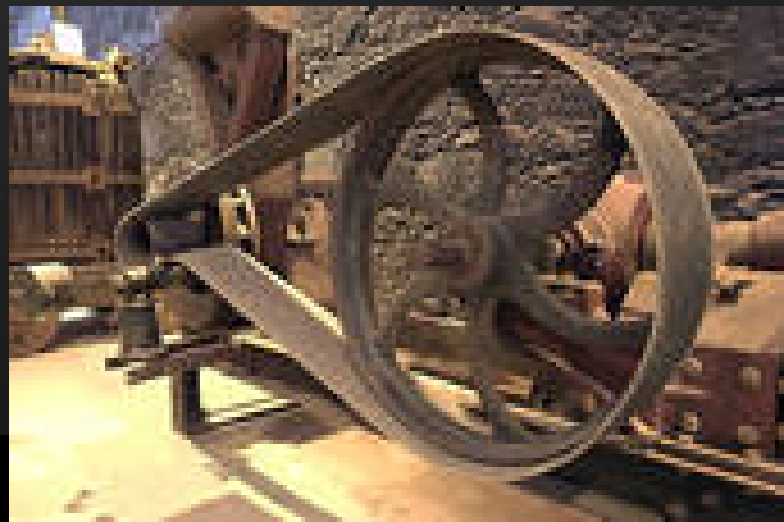
Culture Shift
The Flywheel Analogy

Think of it as intellectual inertia

➞ Chapter 8

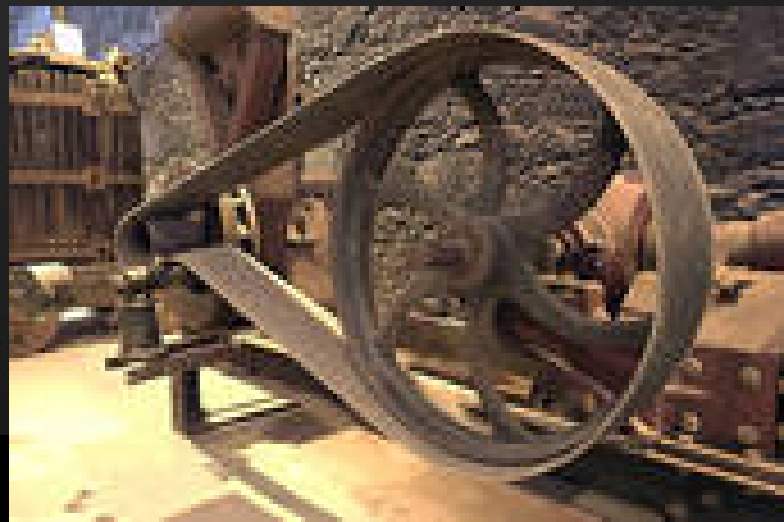
Establish a Greatness Flywheel

- Use it to store your greatness momentum
- Hard to get started (the first push is a killer)
- Easy to maintain (if you give it a regular push)
- Its momentum carries you through hard times
- It will stop if you quit turning it though …



The CAD Flywheel

- Pilot projects start the flywheel turning
- Project work and training feed the flywheel
- Continual improvements maintain the flywheel
- Every project you do benefits from the flywheel
- Stop innovating and the flywheel stops …



Instilling Discipline

So that great continues to happen

➞ Chapter 6

The Cool Thing About Discipline

If you plan for great, expect great, do pilot projects to achieve great and manage in a way that rewards great discipline starts to just happen.

- Users start to self train
- New methods are adopted voluntarily
- Teams keep each other honest
- More people try to get on the bus …

Summing Up

Senior Management Loves Great

But you'll have to explain what you're up to.

Get Management to Go Great!

- Show them how much they can save
- Show them how much more customer responsive you can be
- Demonstrate how much better projects flow
- Demonstrate how a great mindset yields unexpectedly great results
- Let them see you make things great and get a career boost
- If you don’t go to management who else will …

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