The Mission of CAD/BIM Improving Your Company's Processes

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Quick bio …

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Let’s start with a few questions

You might be surprised at the answers

Why do I have the problems I have?

Because we continue to work in reactive mode as fixers rather than in proactive mode to change how CAD/BIM is done.

(Not because you aren't working hard enough!)

What should I be doing?

We should start to fix the root causes of problems so that we can get out of reactive mode.

(Not creating ticketing systems or otherwise ignoring the core issues.)

What is the best use of my time?

Finding the productivity blocking problems, evangelizing on how to eliminate then, and being relentless at making things better.

(Not just accepting the status quo.)

So: What really causes the problems in your day to day CAD/BIM processes?

Lets discuss.

Ask your users …

- What causes you rework?
- What slows you down?
- What would you fix if you could?
- This is an important perspective to have …

Ask your management …

- What's wrong/right with our systems?
- What would you have me do?
- Do you think CAD/BIM can speed projects?
- Do you think CAD/BIM can save money?
- Will you support me in making changes …

Your plans should always fix user problems and speed project execution for them. You should always frame the discussion with management in these terms. Ask and people will tell you.

So how to get started?

With the right mindset and best practices.

Motivate via Mission

Let software support the mission

Success with CAD/BIM software is not an accident! It doesn’t “just happen” it is the result of investigation and strategic planning to meet company needs and lower costs.

Tools ≠ Results

Once we start using BIM everything will work like magic, right?

An Example: Failure

Lotus Riverside Complex
Shanghai
June 27, 2009

Modern tools, bad analysis, good old fashioned failure!

Do modern tools guarantee great results?

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?

Your Mission = Your Tools

Tools do not define the mission

Big mission - Low tech tools

Apollo Saturn V
NASA, USA
1967

38K ROM, and 2K of RAM
@ 0.0000002 GHz
24x12x6 inches – 70 lbs
2000 mA @ 28V (55 Watts)

Mission: Go to the moon

High tech tools – Mission?

iPhone 14
Apple, USA
2022

512 GB storage, 8 GB RAM
3.4/2.0 GHz 6 core CPU
5.8x2.8x0.3 inches – 6 ounces
300 mA @ 3.7V (1.1 Watts)

Mission: Posting to Socials

Never believe that having great software tools guarantees project success – unless a mission drives its usage.

Motivation via Mission

Accomplishing projects with software in ways users and management never thought you could. Achieving the mission becomes the only thing that matters.

Mission: Articulation of Goals

- **Don’t say:** We’re going to use Revit for designs.

- **Do say :** We’re going to be the best AEC firm in our area with the fastest turnaround and Revit will help us do that.

Method: Acknowledging changing methods

Don’t say: This is going to be really, really hard.

Do say : We’ll have to change but it is worth it.

And: We will find better ways to work.

When done, define new missions

Don’t say : We’re done now let’s relax

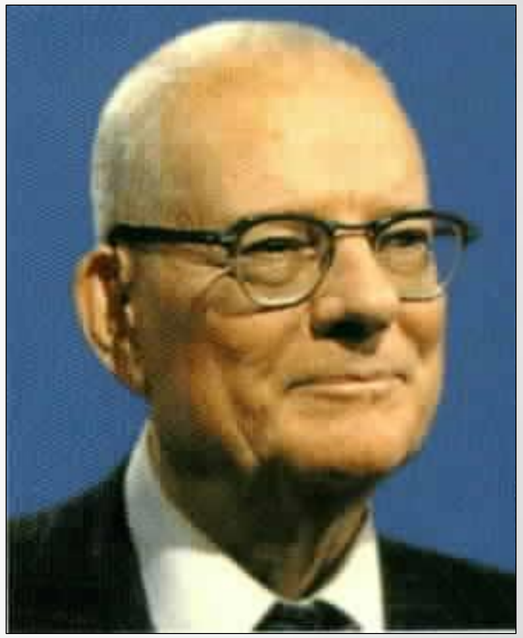
Do ask : How will we do this better next time?

Give your team a mission to accomplish not a piece of software they have to learn. Challenge them to do better then help them do so.

Process defines mission success!

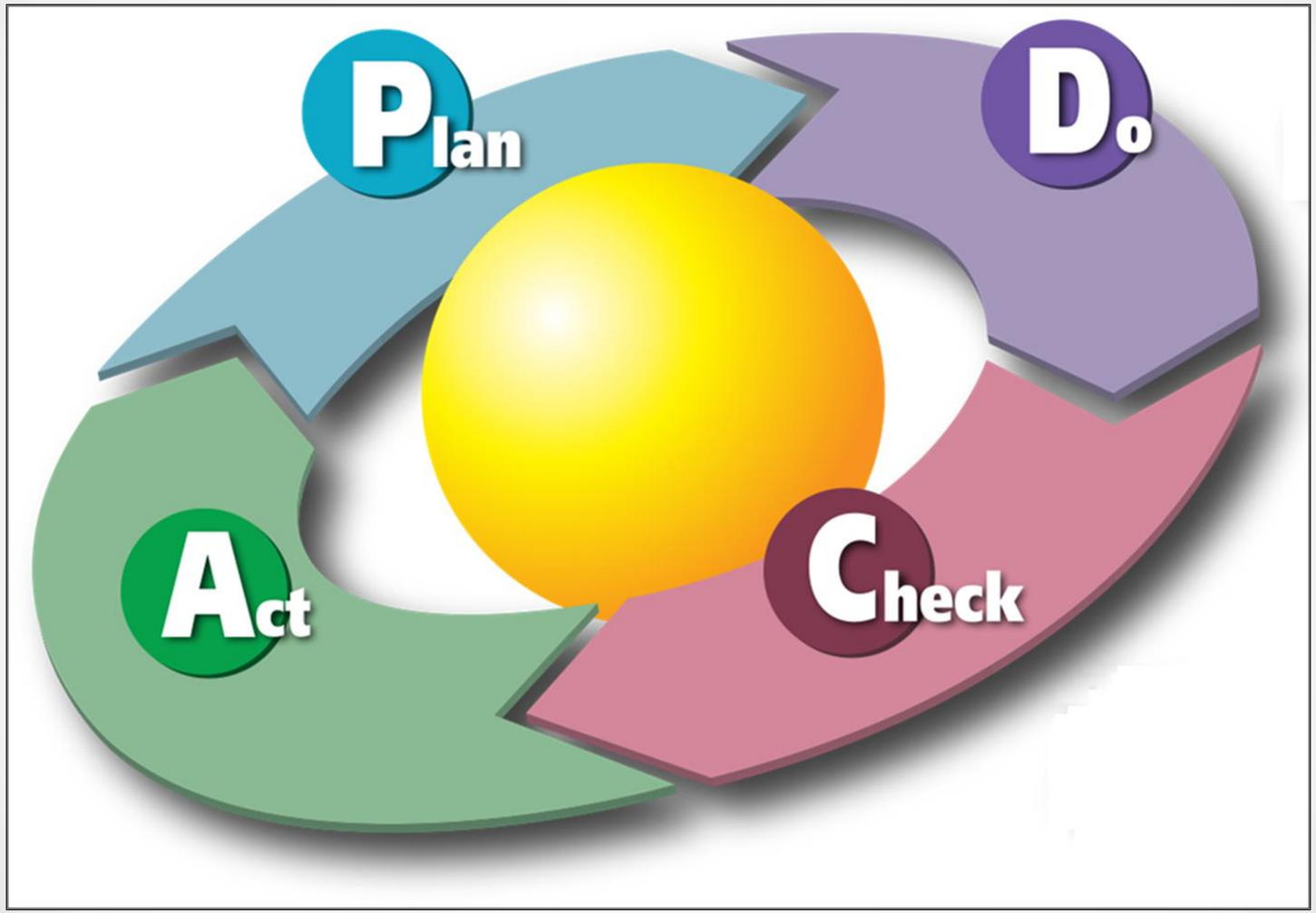
“If you can’t describe what you’re doing as a process then you don’t know what you’re doing.”

Use Deming theory!



Dr. Edwards Deming

The Deming Cycle: Constant Improvement



Software Accelerators

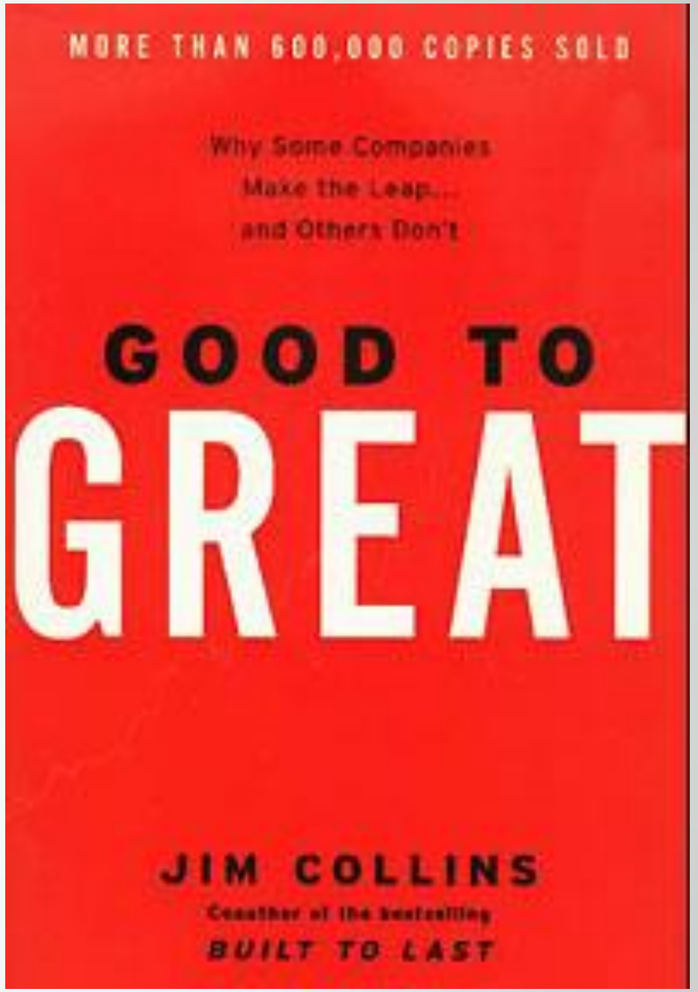
As software changes, look for new features that solve your problems and support goals.

Good to Great

by Jim Collins

Read this book!

I would like to thank Mr. Collins for changing the way I think about software management.



Accelerator features

How do you know which features to pursue?

- Those that accelerate your business!
- Those that support the mission
- Those that can be standardized easily
- Those that increase quality …

Non-Accelerator features

How do you know which features to avoid?

Those that don’t fit the prior criteria!

No matter what software tools you implement make sure you emphasize the tools/functions that speed you up while skipping the parts that slow you down!

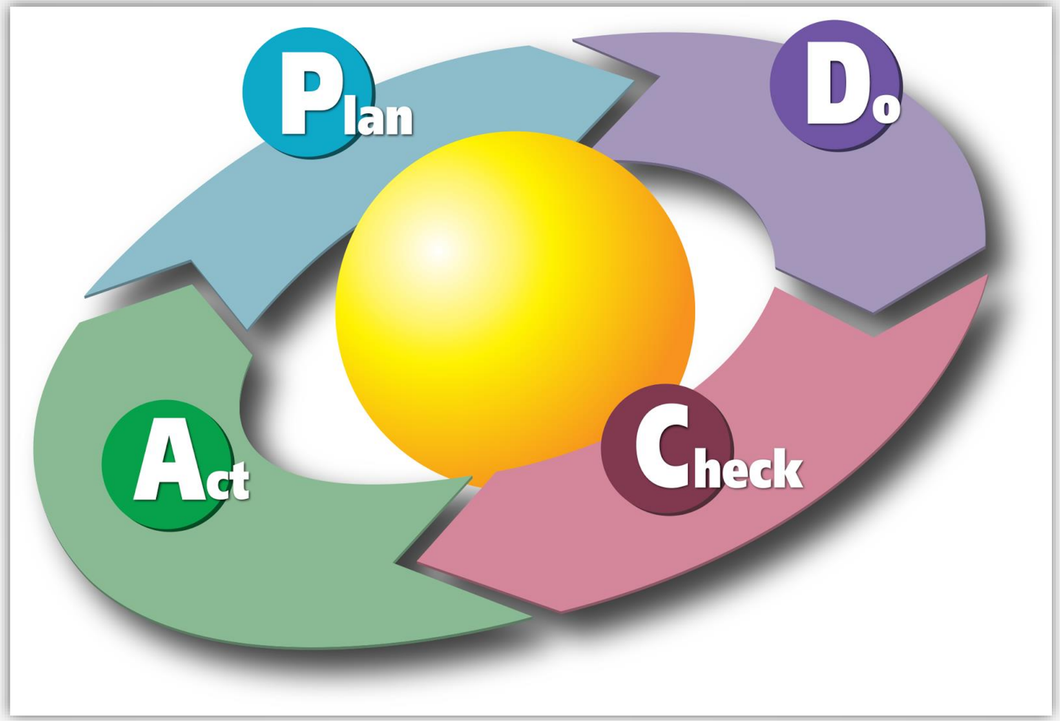
Skunk Works/Pilot Projects

Prove new work methods and tools using rapid innovation and pilot project testing.

More on this in next class!

Standardize and Train

To make new processes permanent. Let all your research result in new standard methods that save time and speed projects!



Constantly Improve

Plan-Do-Check-Act - Repeat

Summing Up

Don’t suffer with the same problems all the time!
Improve processes and make them stick by changing the culture.

(And watch your career take off!)