

## Balancing Cost, Schedule & Quality The Eternal PM Conundrum

For panel discussion w/  
Don Shafer, Pete Collins, Brenda Hall,  
Hank Jones, Herb Krasner,  
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## The Genius of the AND!

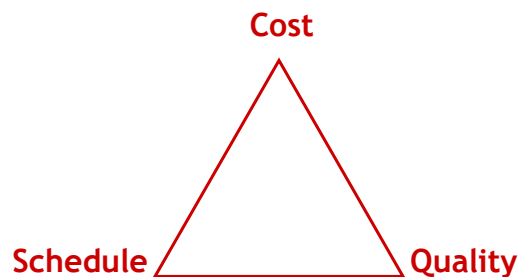
- ✓ Provocative assertion by Jim Collins in *“Built to Last”* sets the stage:  
**End the Tyranny of the OR!**
- ✓ AND is the right mindset!

## Borrowing from Tom Peters!

- ✓ Never accept a problem as given:
  - » Reframe the problem!
- ✓ Original problem:
  - » How do we balance cost, schedule, and quality? The eternal PM conundrum.
- ✓ Reframed problem:
  - » How can we achieve: Low Cost AND Short Schedule AND High Quality?

## Thinking Outside of the Box

- ✓ Traditionally we always look at the triangle



- ✓ We know enough about this problem that we may not be able to solve it this way.



## Low Cost AND Short Schedule AND High Quality? YES!

- ✓ Low Cost
  - » We offer our Clients the opportunity to combine local and overseas talent into their teams.
- ✓ Short Schedule
  - » We recommend to use as many people on the team as the problem can bear.
- ✓ High Quality
  - » We continually train our developers and keep them engaged to take personal responsibility.

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## The Individual is the Key

- ✓ Better people create better software.
  - » The quality of the people is still the most important factor according to Barry Boehm, author of *Software Engineering Economics*.
- ✓ Equip all participants in the software development process with the necessary skills to improve their own software development skills.
- ✓ Teach them how to self-improve!

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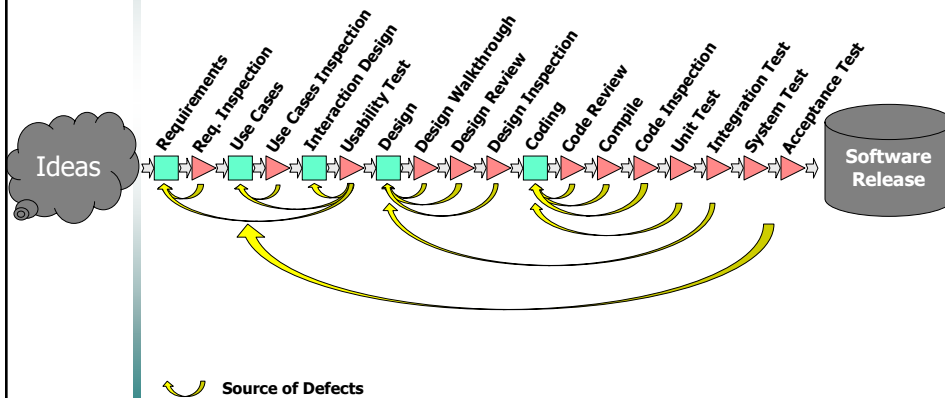
## Research vs. Development

- ✓ Research:
  - » You have to invent something new, that has never existed.
  - » It can only be time limited. When the time is up, evaluate the situation and make a decision: decide whether to continue, or to seek an alternative solution.
- ✓ Development:
  - » You have to use existing technology, or implement a new invention.
  - » Can be planned & scheduled since it has been done before.
- ✓ If you are doing “*library research*” then say it so. This can be scheduled.

## Component-Based Development

- ✓ Decompose the problem into a set of cooperating components.
- ✓ Assemble your software from high-quality components.
- ✓ If you can write high-quality components, then you have a chance of creating high-quality large programs.

## The Typical Source of Defects in a Software Development Process



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## The Benefits of a Disciplined Personal Process

- ✓ Less defects in each person's work.
- ✓ Better understanding of what is needed to complete a project. Each person can tell management or the Client when he/she needs more information to finish the work.
- ✓ Better estimation skills so *we can make commitments that we can keep*. In turn the business can make—and keep—commitments as well.
- ✓ Better project tracking skills. Increased visibility into the project status.
- ✓ Caveat: Personal productivity will drop in the short term as each person is learning a new way to work. It takes time to become expert in a new skill.

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## Closing Quote

*“If things seem under control,  
you are just not going fast enough.”*

—Mario Andretti, race-car driver



## Thank You!

### ✓ Contact Information

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