

# Estimating

How to start an estimating process or  
how to make your current process better.

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TIP  
Just Do It!

# Sneak Preview

- Start with what you have...WAG is OK
- Capture results
- Refine
- Repeat
- Automate when mature

Surprise bonus...

# Start with what you have

- It's not rocket science
- Devise a method which accounts for:
  - Project Size
  - Developer Capability
  - Design Complexity
- Example

# Our 1st Estimating Process

- Project: Big, Small
- Developer: Experienced, Inexperienced
- Results:
  - +/- 75% for each project
  - +/- 25% for program

# Our 2nd Estimating Process

- Project: Big, Medium, Small
- Developer: Experienced, Inexperienced, Novice
- Complexity: Difficult, Average, Easy
- Results:
  - +/- 40% for each project
  - +/- 15% for program

## Future Enhancements... mature processes

- Mature development processes = consistent effort
- Mature estimation process can only occur AFTER mature development processes are in place.

# Future Enhancements... function points

- Size is the biggest problem
- LOC only a guess EARLY
- Function Points +/- 10% after requirements

# Future Enhancements... automation

- Available tools:
  - QSM: SLIM
  - COCOMO (Revic)
  - COCOMO II
  - Home grown using industry data, then your own data
  - Morotz: Estimate Expert
  - MS Project

# A closer look at SLIM

(Software Lifecycle Model)

(similar to other commercial products)

- $K = (LOC / (C * t)) * 3$ 
  - K=total lifecycle in years; C=technology constant in years; t=development years
- Pro: fewer parameters than COCOMO
- Con: cost; EXTREMELY sensitive to tech factor; not suitable for small projects

# A closer look at COCOMO

(COConstructive COst MOdel)

- Pro: Free (Revic); Tunable parameters
- Con: 15 Tunable parameters; Learning curve; Subjectivity
- Greater detail = Better results

# Close

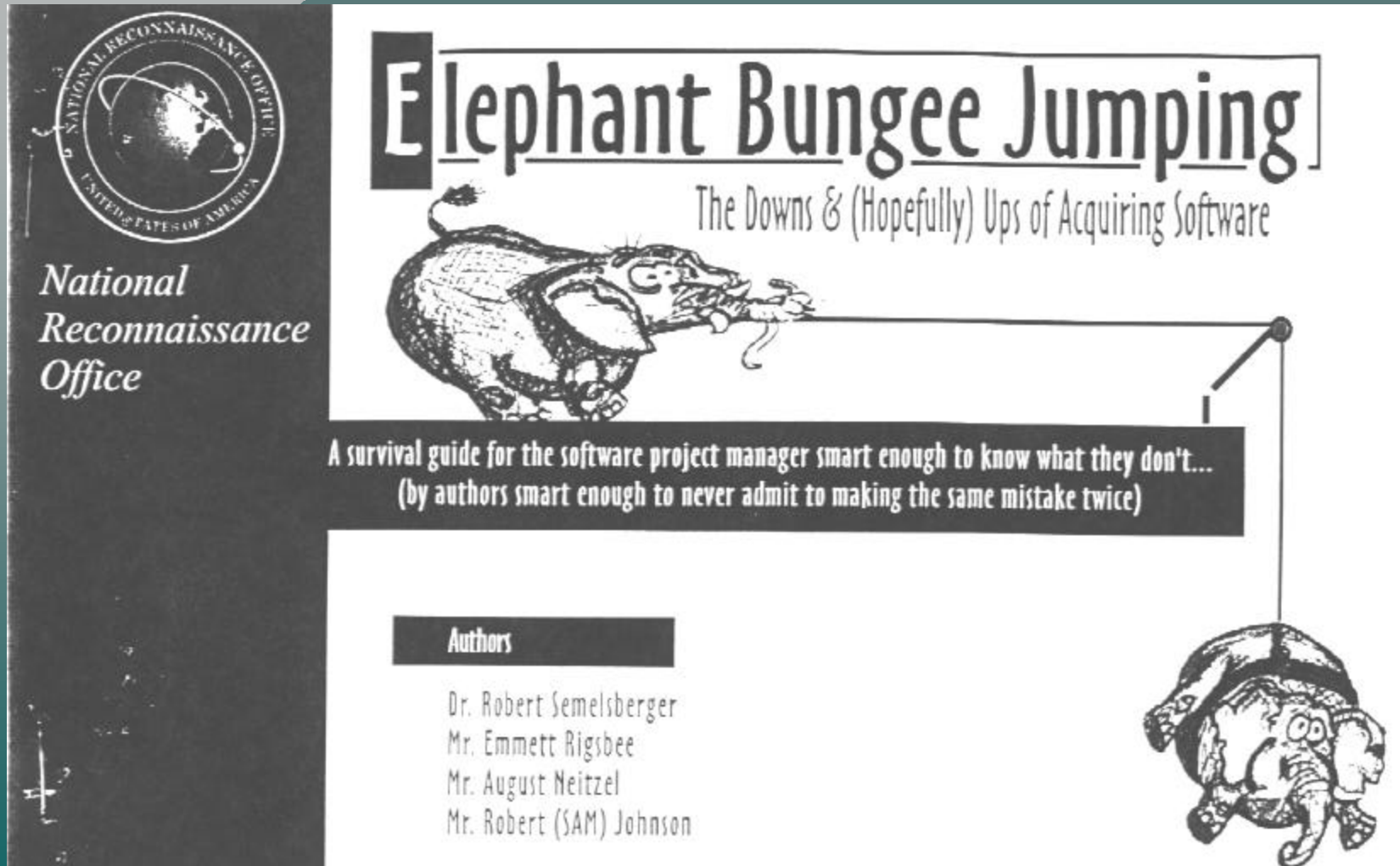
- Start NOW with what you have.
- Improve with each iteration.
- When you achieve CMM level 3, look to Function Points.
- At CMM Level 4, automate using YOUR historical data.

# Trusted CMM

When SW/data integrity is essential

- 5 “trust” levels
- Supplements SW-CMM
- Examples:
- More info: David Kitson @ SEI

# Coming Soon:



The book cover features a cartoon illustration of an elephant on a bungee cord. The elephant is shown in two positions: one at the top of the cord, looking down, and another at the bottom, having jumped. The cord is attached to a pulley system on the right side of the cover.

**National Reconnaissance Office**  
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# Elephant Bungee Jumping

The Downs & (Hopefully) Ups of Acquiring Software

A survival guide for the software project manager smart enough to know what they don't...  
(by authors smart enough to never admit to making the same mistake twice)

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