Software Firm +
CMMI Maturity Level 2 Initiative +
15 months
=

Dramatic Quality Improvements

Jeff Simpson

Director of Quality

Campus Management Corp

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CMMI . Software Release Readiness

CMM and Six Sigma

F119

Software Development and Project Management

Benchmarking and Hurricanes

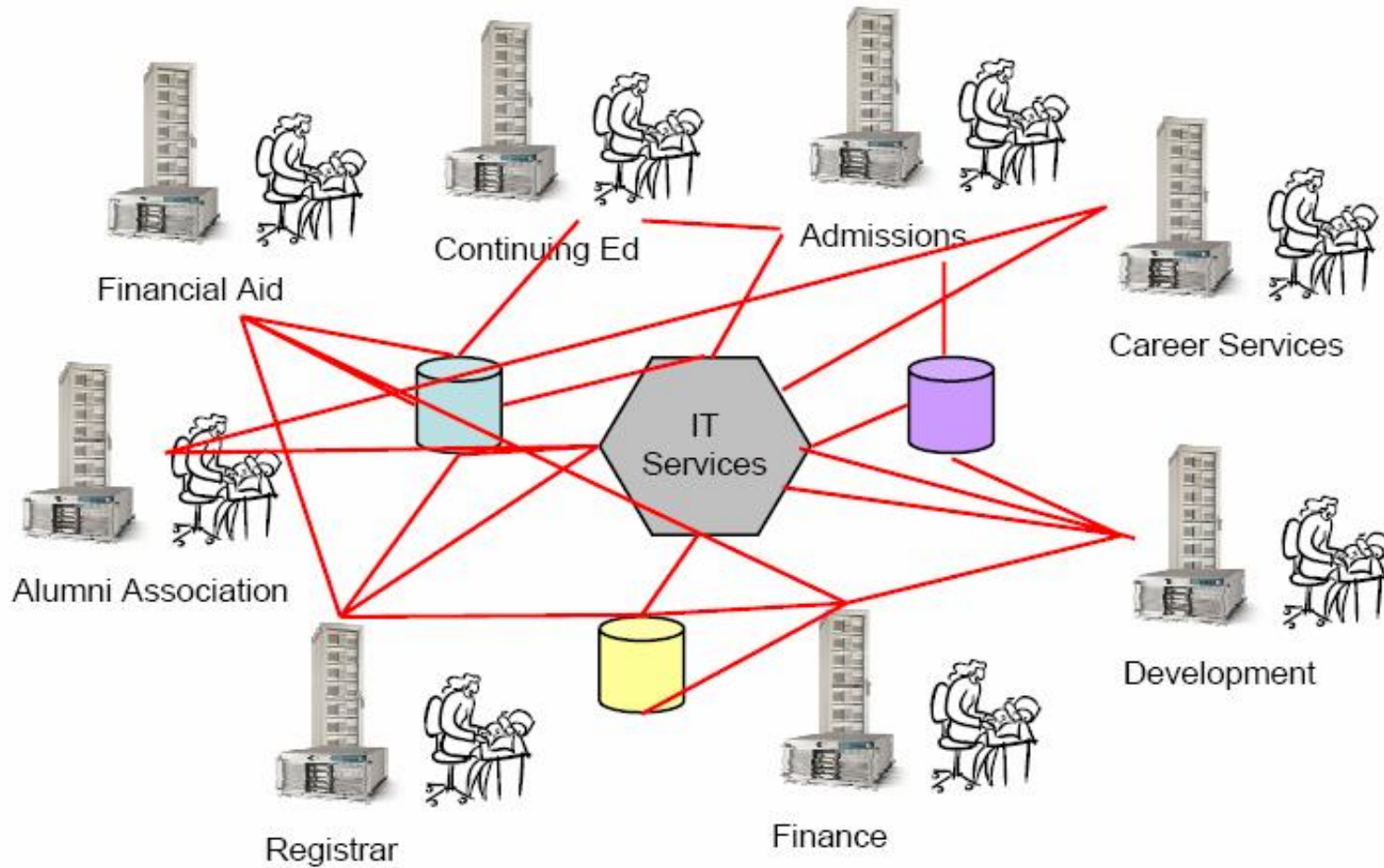# s Software is Software

" **Campus Management is not:**

- **An aerospace giant – developing software to design jet engines or weapon systems**
- **A medium size firm who needs to be a specific CMMI maturity level to compete for defense contracts**
- **A telecommunications leader writing software for the 10,000,000 cell phones it sells per year**

" **Campus Management is**

- **A privately held software firm started approx 17 years ago with a vision to provide business solutions to the "for-profit" segment of the secondary education market**
- **Approx 300 employees – growing rapidly**
- **Has expanded its customer base to the "not-for-profit" segment**
- **Revenues and success 100% dependent on the quality of its software**
- **Working hard to achieve CMMI Maturity Level 3 in the 2Q 2008**

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Information in 21st century

of Student Portal

dent lifecycle maangement

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...urity 2 Level Journey – ...began

- **2Q 2005 – major release of software – quality concerns from clients expressed at annual users conference**
  - *Periodic quality initiatives had been attempted but with no structure and quickly abandoned*
  - *As delivery dates were being approached and client demands were increasing all existing process was thrown out the window*
  - *Plenty of CMMI Maturity Level 1 Heroes*
  - *Enterprise clients demanded quality improvements*

- **3Q 2005 – executive decision to commit to quality and filled Director of Quality position**

- **4Q 2005 –**
  - *CMMI – is it the answer ?*
  - *2005 NDIA CMMI Conference*
  - *Consultant Preliminary Search*

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urity 2 Level Journey – Steps

- *1Q 2006*
  - *SEPG Formation*
    - *Two project directors*
    - *Three aspiring project managers*
    - *Documentation specialist*
    - *No CMMI training, but PMI experience*
    - *Influential and enthusiastic*
    - *Unfortunately no software developers*
    - *Weekly meetings*

  - *CMMI Consultant Selection*
    - *Interviewed four consulting firms*
    - *Selected Don Franke Associates per recommendation of a South Florida Lockheed division and a Pratt & Whitney division*

  - *Reorganization*
    - *Director of Quality - Independent of Development*

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...urity 2 Level Journey – Begins

Process Asset Library

nd Consultant Visits

- *Internally Developed Training*
  - *Department wide "Introduction to CMMI"*
  - *Executive Overview*
  - *Introduction to Six Sigma*

- *External Training*
  - *"Introduction to CMMI V1.2 Training" for SEPG members*

- *Initial Consultant visit 1Q 2006, and then every quarter*

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″ *Expectations – Management*

- CMMI is not a magic bullet
- Maturity Level 2 Project Plan

″ *Expectations – Development Staff*

- Do not have to become CMMI experts
- Controlled - gradual change
- Weekly hallway meetings – 5 minutes max
- Positive Reinforcement – convince they are doing a good job (even if they are not) ☺

″ *Expectations – Customers*

- Monthly presentations on progress

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- ## *Why?*

  - ### Not because Measurement and Analysis is a maturity level 2 Process area but because:

    - #### Executives are impatient

    - #### As soon as the CMMI Consultant leaves the room they start whispering, no – actually speaking out loud: "18 months is the average, but we are better than the average, we will achieve maturity level 2 in 6 months"

    - #### Solution – immediately create a baseline of whatever quality indicator is important

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ase Defects

Customer Submitted Severity 1 Post Release Defects
10/1/2005 - 9/30/2007
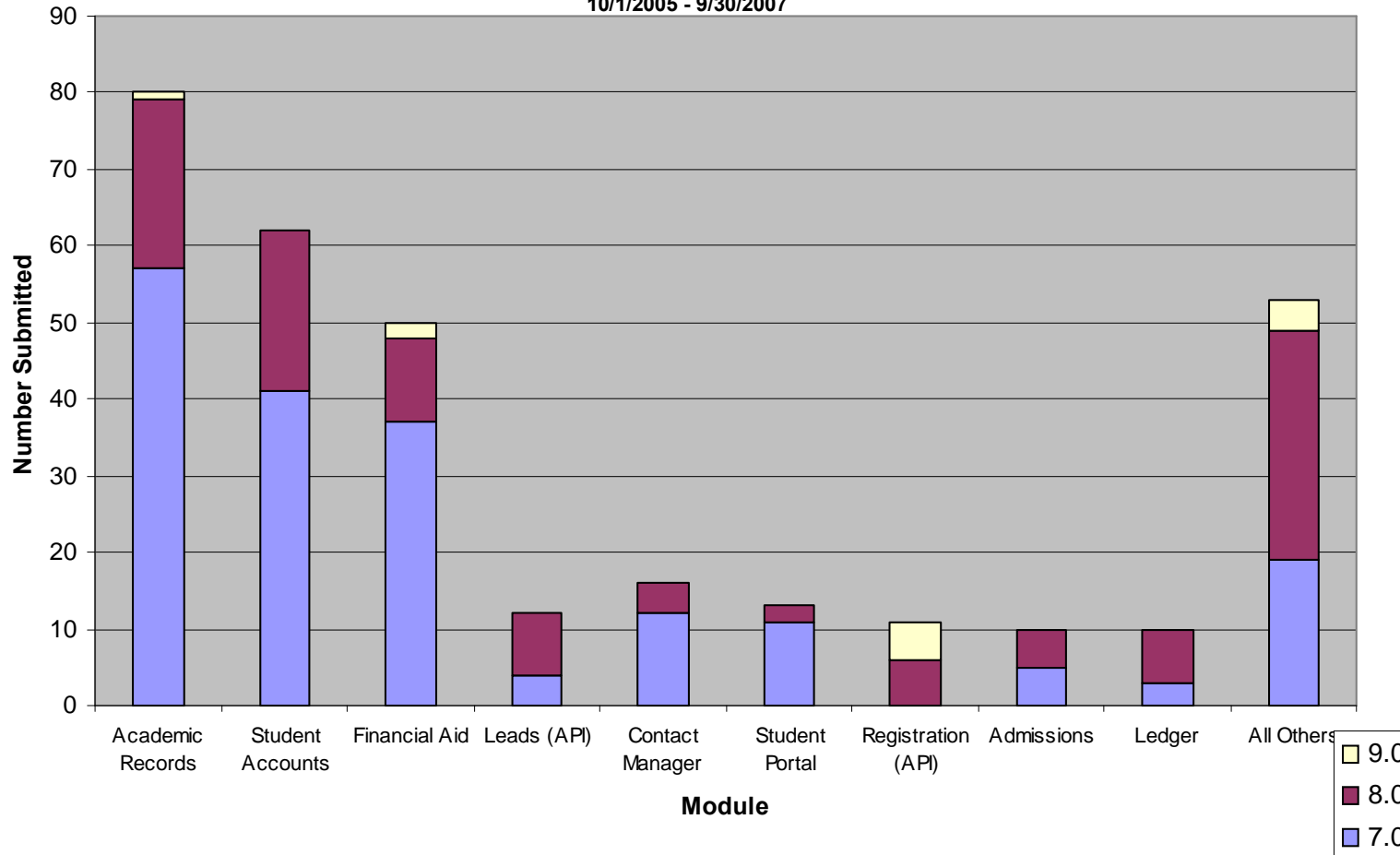
Release 7.0 pre-CMMI

Release 8.0 in the midst of CMMI L2 journey

Release 9.0 post CMMI L2 assessment

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Submittal Rate

Severity 1 Submittal Rate

CMMI Maturity Level 2 Assessment . April 2007

CMMI journey begins Jan 2006

Legend: Total — Linear (Total)

Y-axis: Severity 1 Defects per month (0–70)

X-axis (Month of Submittal): Oct-05, Nov-05, Dec-05, Jan-06, Feb-06, Mar-06, Apr-06, May-06, Jun-06, Jul-06, Aug-06, Sep-06, Oct-06, Nov-06, Dec-06, Jan-07, Feb-07, Mar-07, Apr-07, May-07, Jun-07, Jul-07, Aug-07, Sep-07

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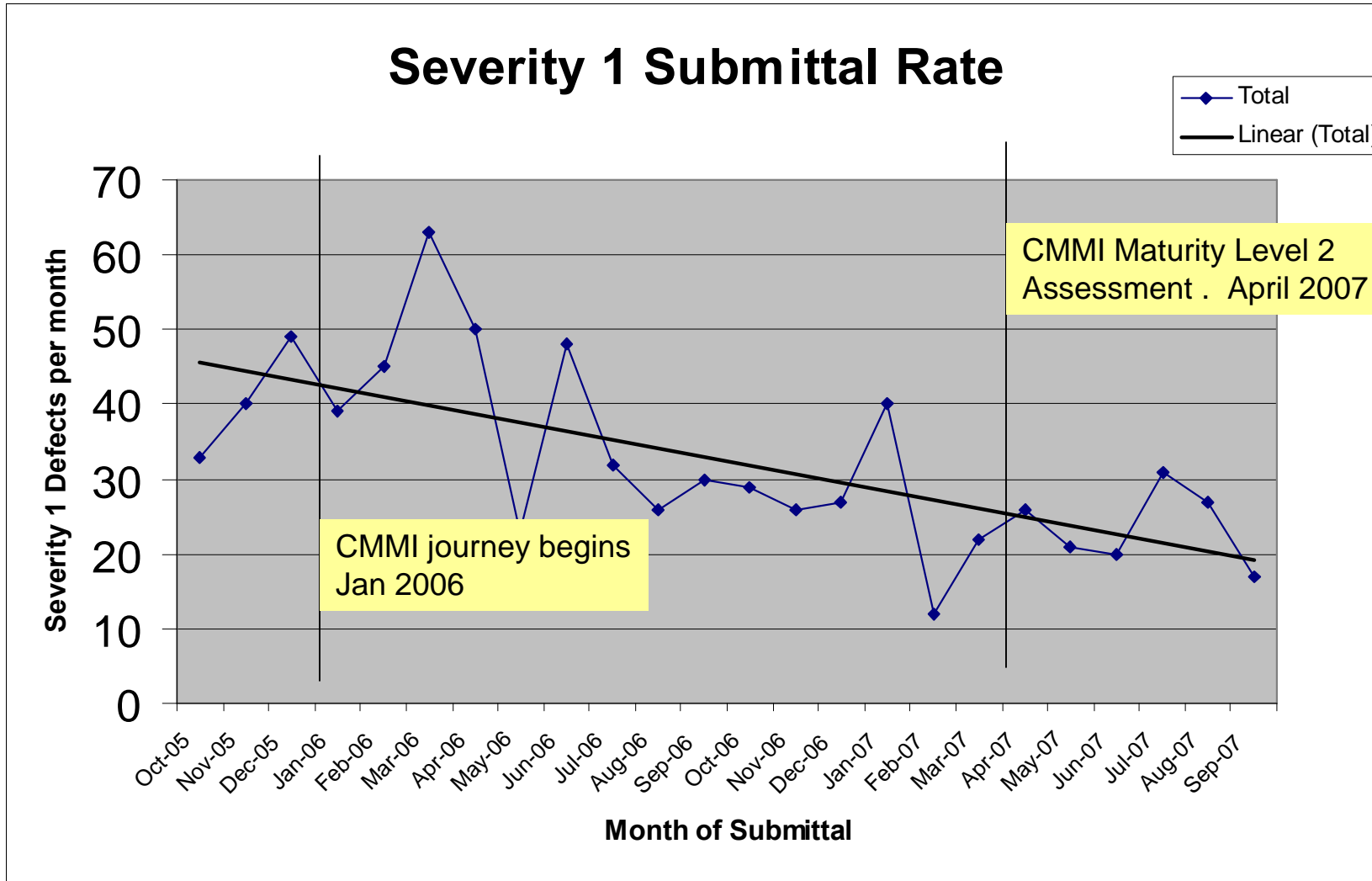
Variance vs Function Points

Release 9.2 FPA Vs Actual Chart
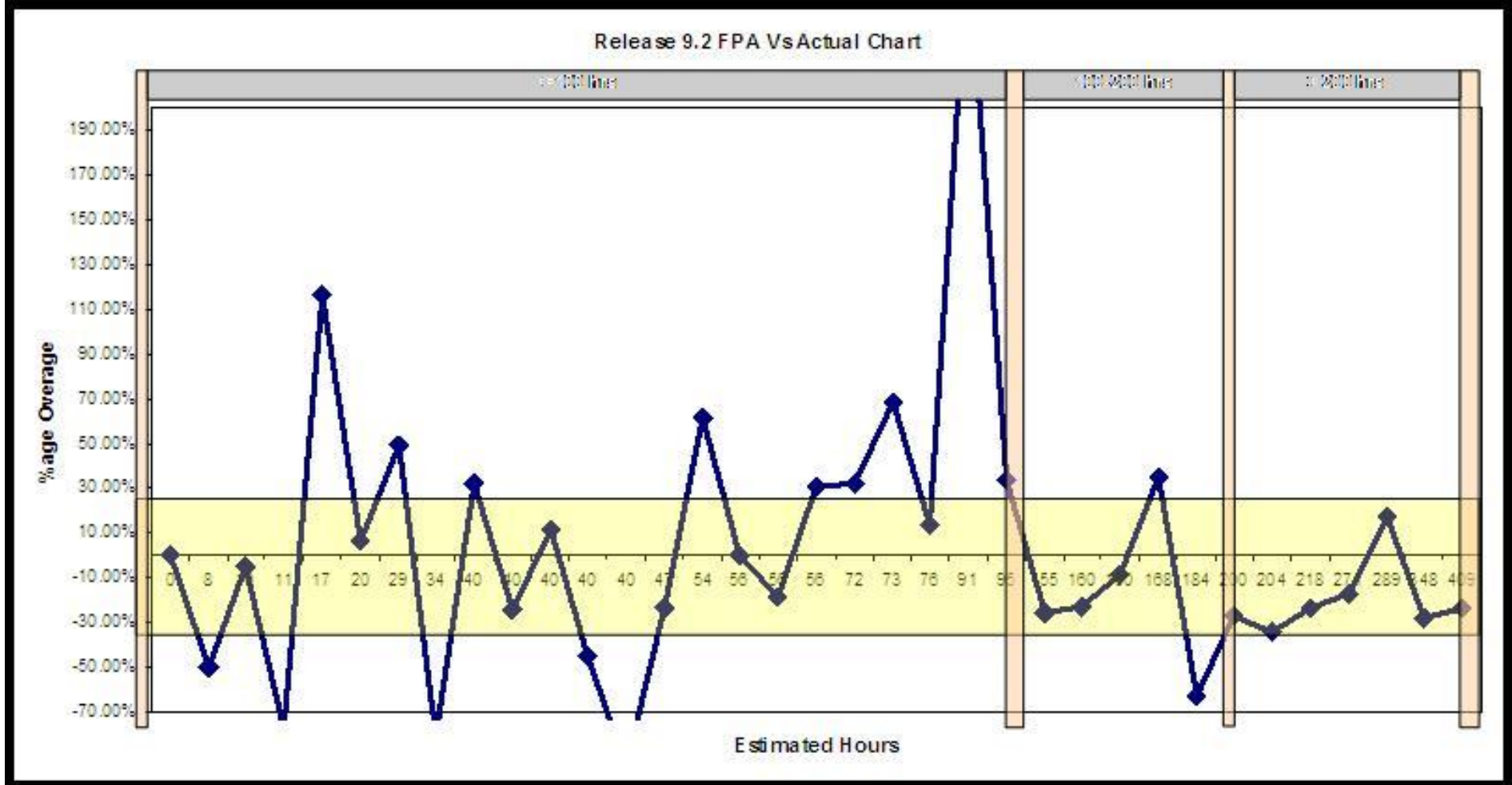
...urity 2 Level Journey – ...ecommendations

- ″ **SCAMPI C –**
  - . *do your own, easy to do, doesn't have to be perfect*
  - . *great communication reference with executives*

- ″ **SCAMPI B –** *critical, why*
  - . *Not free, and if executives won't pay for one to show their commitment, then stop, do not pass Go*
  - . *A great pretest for assessment team and organization*

- ″ **SCAMPI A –**
  - . *Treat it as fun, culmination of great work*
  - . *Do not stress out organization*
  - . *Just like any other week – if it is not, are you really CMMI Maturity Level 2, or 3, etc ?*

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uccess

˝ **Training** . word of caution . make sure internal trainer is good, not just good, very good . keep sessions to the point, not much fluff, no silly games

˝ **Project Planning** . the key process area

˝ **Quality not CMMI -** Donq keep talking CMMI but the message is quality . when it comes right down to it that is what it is all about

˝ **Experience** . hire someone who has CMMI experience

˝ **Quick Hits** . almost subliminal CMMI messages

˝ **Customers** . most important advocate

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s to Success

˝ Google . don't become addicted - don't want your weekly status report to read "Googled Measurement and Analysis+

˝ Graybeards - great source for baseline but be skeptical

"We got some tall tales that we love to tell
They may not be true
But we sure do remember them well"

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CMMI Maturity Level 2

˝ Immediately performed a CMMI Maturity Level 3 SCAMPI C

- Kept executive buy-in

- Development organization realized the journey is not over

- helped prevent regression (not talking about testing)

˝ Agile Methodology

- First reaction . %Oh No+. and more %Google-ing+

- Led to switch to consultants . *David Consulting Group*

- Doing some great things with Project Planning and related process areas . adopting into standard life-cycle process

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turity Level 3 Gap Analysis

Process Area	Specific Practices		
	Green	Yellow	Red
ML3 - Decision Analysis Resolution	0	1	5
ML3 - Integrated Project Management	2	7	0
ML3 - Verification	1	7	0
ML3 - Risk Management	2	5	0
ML3 - Validation	3	2	0
ML3 - Requirements Development	7	3	0
ML3 - Technical Solution	6	2	0
ML3 - Product Integration	0	9	0
ML3 - Organizational Training	0	6	1
ML3 - Organizational Process Focus	3	6	0
ML3 - Organizational Process Definition	4	1	0
Totals	28	49	6

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Questions Please ☺

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