Software Firm +
CMMI Maturity Level 2 Initiative +
15 months
=
Dramatic Quality Improvements

Jeff Simpson
Director of Quality
Campus Management Corp
<table>
<thead>
<tr>
<th>CMMI ı Software Release Readiness</th>
<th>CMM and Six Sigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development and Project Management</td>
<td>Benchmarking and Hurricanes</td>
</tr>
</tbody>
</table>
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
Information in 21st century
Snapshot of Student Portal

CAMPUS® University

My Home Page

Campus Info
- Online Application
- My Academics
- Transfer Credits
- Financial Aid
- My Housing
- My Profile
- Message Center
- My Finances
- My Financial Aid
- My Documents
- My Career
- External Links

Weather
- Conditions for Boca Raton, FL at 9:53 am EST
- Current Conditions: Light Drizzle, 61°F
- Forecast:
  - Tue - Sprinkles, High: 73 Low: 61
  - Wed - Partly Cloudy, High: 78 Low: 65
- Full Forecast at Yahoo! Weather
  (provided by The Weather Channel)

News Center
- News
  - Campus Management Corp announces new configurable web portals, providing schools with more control...more
  - Corrie Bryan of Highland, Md has received an Associate of Arts degree in Culinary Arts...more

MSN TopStories
- U.S. unit walks fine line in Baghdad
  - The American and Iraqi plan to pacify Baghdad rests on the assumption that U.S. troops can win the trust of a wary population by protecting civilians trapped amid sectarian warfare.
- Astronaut arrested in alleged plot
  - A NASA astronaut charged with attempting to kidnap a romantic rival in a love triangle with another astronaut was allowed to go free on bail.
- Fire investigators ‘No Go Team’
  - An Investigation

Calendar
- Tuesday
- Choose Day
- February 2007
- S M T W T F S

Advisor Center
- New Staff Group
- Mani Masta

Hello Mona! Logout | Help

February 06, 2007
Student lifecycle management

One Campus

Web portals and workflows to serve students better

- Admission & Recruiting
- Alumni & Advancement
- Marketing & Recruiting
- Admissions
- Academic Records
- Student Accounts
- Financial Aid and Scholarships
- Portals
- Accounts & Billing
- Academics & Learning
- Housing
- Course Management
- Advising & Audit
- Finance & Accounting
- Scheduling, Advising & Degree Audit
- Career Services
- Career Placement
- Alumni

Click Here to upgrade to Unlimited Pages and Expanded Features
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
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
CMMI Maturity 2 Level Journey – The Work Begins

Guidelines

Type Name | Modified
--- | ---
RABJobDuties | 5/29/2007 1:01 PM
CMMC Naming Convention for Project Documents | 5/16/2007 10:11 AM
Software Release Approval Process | 3/30/2007 1:17 PM
Process Asset Development | 3/30/2007 1:17 PM
Build Integrity Guidelines | 3/29/2007 8:11 AM
Customer Change Request Guidelines | 2/6/2007 11:44 AM
Data Management Policies | 2/8/2007 5:04 PM
Design Review Guidelines | 2/7/2007 5:35 PM
Micro-Small-Large Decision Flow | 12/28/2006 10:46 AM
Requirements Resources | 10/8/2007 2:36 PM
Lessons Learned | 9/24/2007 1:54 PM
Presentation Templates | 6/18/2007 10:03 AM
Sample Templates from Requirements Training | 6/15/2007 4:06 PM
E-Project Guidelines | 1/8/2007 11:03 AM

Add new document

Templates

Edit Type Name | Modified | Checked Out Category To
--- | --- | ---
Category (0) Department (0) | 3/23/2007 12:10 PM | 0) Department
Meeting Notes Template | 3/23/2007 12:10 PM | 0) Department
DefectTemplateDev | 3/24/2007 4:47 PM | 0) Department

Links

- CMMI Product Development Portal
- Software Engineering Institute CMMI
- Requirements Management
- Project Planning
- Project Monitoring and Control
- Measurement and Analysis
- Process and Product Quality
- Configuration Management
- Supplier Agreement Management
- Business Continuity - Disaster Recovery
- CMMI Version 1.2
- Change Request System
- Software Metrics
- CMMI - Agile
- Add new link

Announcements

- Core Dev Team Reference Chart by Tara Ash: 5/3/2007 2:48 PM
- Patch Team Assignments by Module

Process Asset Library

CAMPUS SM MANAGEMENT
Training and 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**
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
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
Customer Submitted Severity 1 Post Release Defects

- Release 7.0 pre-CMMI
- Release 8.0 in the midst of CMMI L2 journey
- Release 9.0 post CMMI L2 assessment
Submittal Rate

Severity 1 Submittal Rate

- **Total**
- **Linear (Total)**

Month of Submittal

Severity 1 Defects per month

CMMI journey begins Jan 2006

CMMI Maturity Level 2 Assessment ñ April 2007
Schedule Variance vs Function Points
CMMI Maturity 2 Level Journey – Recommendations

**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?
Keys to Success

• 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: Don't 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
More Keys to Success

Google: don't become addicted - don't want your weekly status report to read "I 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”
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
<table>
<thead>
<tr>
<th>Process Area</th>
<th>Specific Practices</th>
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<tr>
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<td>ML3 - Decision Analysis Resolution</td>
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<td>ML3 - Product Integration</td>
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Questions Please 😊