Connecting the Dots: QPM, OPP, CAR, and OPM

CMMI Conference
November 15-18, 2010

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Abstract 11177
What Does HONEST High Maturity Behavior Look Like?

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Objectives

- Intended for people who are new to high maturity.
- Shows how inter-connected the high maturity process areas are.
- Stresses how using high maturity can result in success, even in your personal lives
- Will use personal life example to help you understand basic principles.
Northrop Grumman Information Systems (IS) Sector

IS Sector
- 7,000 contracts
- 32,000 employees

Products and Services
- Mission support
- Cybersecurity
- Enterprise applications
- Command, control, and communications
- IT & network infrastructure
- Management & engineering services
- Intelligence, surveillance, & reconnaissance

CMMI Appraisals
- Over 80 organizations (over 250 projects) appraised at Level 3 or higher
- Completed 32 Level 5 appraisals
Almost a Personal Improvement Presentation

Book contains 7 principles:

- Principles of Personal Vision (OPM)
- Principles of Personal Management (QPM)
- 8th new habit: Principles of Taking High Maturity Seriously

Even self improvement textbooks use high maturity concepts.
High Maturity Process Areas Should **NOT** Be Like This

Should not do each process area in isolation and pop out with a level.

Railroad Tracks Never Connect
High Maturity Process Areas **Should** Be Like This

Dot-to-dot where high maturity process areas continually connect to one another, e.g., OPP to QPM to CAR to OPP to OPM to QPM to OPP . . .

High maturity continuously bounces back-and-forth between dots.
Examples of Not Connecting the Dots

- Baselines and models (OPP) are not used by projects (QPM)
- Making improvements (OPM) that are not based on an analysis of existing performance (OPP)
- Managing your project (QPM) without an understanding of your current performance (OPP) Note that baselines and models can be at a project level.
- Not using what projects have learned (CAR) to make organizational improvements (OPM)
- Not using performance measures (QPM) to help figure out the root cause of performance problems (CAR)
- And the list goes on …

For high maturity, some of this behavior is expected.
Personal Example is Money

- Example shows how I manage money using high maturity concepts
- Use of high maturity concepts helped to reach personal goals (business objectives)
- Many aspects of my personal example can be used to manage spending in organizations
When M&A Started

- Moved away from home at 19 years old in 1978 with $600.
- Worked full time at TRW, Inc. in the graphic art department.
- For no particular reason, immediately started tracking spending.
- Collected barely any metrics (kindergarten M&A)

![Image of a receipt from January 1979]
M&A 101: Baby Metrics

You have to start collecting data, even if you start off with baby M&A.
M&A Evolved Quickly

• By the end of 1979, M&A quickly evolved to log more details.

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/3</td>
<td>Cosmopolitan - 1 year subscription</td>
<td>21.00</td>
</tr>
<tr>
<td>12/5</td>
<td>Contemposhoes - Pacific Square - 2 pairs</td>
<td>76.32</td>
</tr>
<tr>
<td>12/5</td>
<td>Fabric Galaxy - Karen's Xmas present</td>
<td>318.00</td>
</tr>
<tr>
<td>12/5</td>
<td>Surprise Store - Kraig and my pants</td>
<td>50.77</td>
</tr>
<tr>
<td>12/15</td>
<td>Yoke - MasterMind for Dads birthday</td>
<td>10.00</td>
</tr>
<tr>
<td>12/15</td>
<td>Cash - spending money</td>
<td>(200.00)</td>
</tr>
<tr>
<td>12/19</td>
<td>May Co. - 2 shirts Glenni's Xmas - Kraig</td>
<td>43.46 (10.00)</td>
</tr>
<tr>
<td>12/19</td>
<td>Contempos Casuals - 1 shirt</td>
<td>29.68</td>
</tr>
<tr>
<td>12/23</td>
<td>Licorice Pizza - 4 albums</td>
<td>423.60 (20.00)</td>
</tr>
</tbody>
</table>

I clearly had no control over my spending.

• Only interested in total spending (the process, not subprocesses)
As you get used to M&A, you “grow up” and gather more details.
M&A Went Overboard

- Soon after, obsessive compulsive disorder kicked in.

<table>
<thead>
<tr>
<th>CASH</th>
<th>Breakfast at Mammoth Lodge</th>
<th>5/22</th>
<th>3.55</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH</td>
<td>Clip on Polaroid for glairs</td>
<td>5/22</td>
<td>6.36</td>
</tr>
<tr>
<td>CASH</td>
<td>Loft ticket for full day</td>
<td>5/22</td>
<td>13.00</td>
</tr>
<tr>
<td>CASH</td>
<td>Dinner at Shogun - Denny needed</td>
<td>5/22</td>
<td>5.00</td>
</tr>
<tr>
<td>CASH</td>
<td>Arcade after Dinner</td>
<td>5/22</td>
<td>2.00</td>
</tr>
<tr>
<td>CASH</td>
<td>Swenson ice cream - single cone</td>
<td>5/22</td>
<td>1.00</td>
</tr>
<tr>
<td>CASH</td>
<td>Breakfast at The Inn - Denny had</td>
<td>5/23</td>
<td>0.00</td>
</tr>
<tr>
<td>CASH</td>
<td>Gas paid to Denny for trip</td>
<td>5/23</td>
<td>10.00</td>
</tr>
<tr>
<td>CASH</td>
<td>Gas paid to Chee for trip</td>
<td>5/23</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>Condo paid by Kawaber Father</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Logged a penny. Even started to log when I found a penny in the parking lot.

- As you collect data, you may start to realize you need more.
The point when you start to care usually leads to high maturity.
The “Event”: My First OPM Business Objective

“Three’s Company”, i.e., pain, led to my first “business objective”
Buy a house in Los Angeles before any of my friends by 21 years old.
With OPM, you have a vision to strive for “Principles of Personal Vision”
QPM: Performance Objectives

• Process performance objectives:
  – Increase my hourly rate as quickly as possible
  – Control my spending

• Both are measurable objectives.
QPM: Monitored Performance

- Continually tried to understand and control spending.
- Graphed typical spending, actual spending, income, and special causes and tried to reduce variation in typical spending.
- Graph shows typical spending eventually stabilized.
QPM: Used Metrics to Control Spending

Controlling spending includes stabilizing and reducing variation.
By age 21 (1980), went from $4.50/hr to $13.50/hr (7 graphic art companies)

Worked 56 hours per week at $20.25/hr (overtime pay)

Continued to track and control spending (QPM)

Significant measurable improvement towards meeting my business objective (OPM)

Bought first house at 22 years old
Seeing tangible measurable improvements motivates people.
• By 198X, I didn’t have enough visibility into spending so I broke the “spending money” process into subprocesses by categories, e.g., food, clothes, entertainment, etc.

• Entered spending into Quicken/Excel to understand typical spending patterns and trends

**Clothes**

Last 2 years, spent a total of $225 on clothes, which includes shoes, underwear, and accessories (so… did I learn to control spending?)
OPP: Understood Actual Performance

Evolved to understand central tendency and range for subprocesses.
QPM: Used Measures to See Improvements

- Used OPP baselines to predict and improve QPM performance
- Understand which expenses I have control over
- Some subprocesses can be controlled through improvements, others cannot

Food

Regression line.

Inflation

Found a really cheap Japanese restaurant, Rice Things, which we now eat at every week. Another discovery is Sizzlers.
QPM: Took Action to Meet Objectives

Some process changes have a visible shift. You can alter your future.
In 2002, came up with a new business objective,…
early retirement at 55
Business objectives should always evolve.
OPP: Created Mortgage Model

- My husband also has the same business objective to retire at 55.
- He created an OPP mortgage model and did “what-if” analysis.
- He refinanced several times, paid additional principle each month, and at age 49 in 2010, paid off his $700,000 and $200,000 homes.

![Payment Estimating System](image-url)
OPP: Created SEI Intro to CMMI Training Model

- Part of my retirement plans is to start teaching the SEI Introduction to CMMI-DEV V1.3 course publicly in Los Angeles on the weekends, starting in Jan 2011.
- Built a model for “what if” analysis for teaching.

![Image of a table calculating profit and student costs]
OPP: Use Models Regardless if They are CMMI Compliant

- Academics will say BAD DIANE, those models didn’t use historical data so they are no good !!!
- If a model helps you make better decisions towards meeting your business objectives, that’s all that should matter.
"All models are wrong, but some are useful", George Box
CAR: What’s Still Wrong With My Spending

- Problem was I still wasn’t happy with my spending, but didn’t know how to fix it
- In 2010, decided to do a CAR, and analyze spending in more detail, and figure out the root cause of some wasteful spending
- Analyzed the utilities subprocess baseline (OPP), which had been ignored for years to see if there was waste.
CAR: Spending Improvements per CAR Analysis

• CAR identified 3 corrective actions:

1. After many years with Time Warner, switched to Verizon saving approximately $30 a month.

2. After many years renting 3 DVDs at a time from NetFlix, switched to 2 DVDs at a time

3. Made my husband pay me half for NetFlix (he didn’t like that)

• CAR analysis, coupled with 3 fixes, helped my QPM objectives which was to control spending
Use CAR when you know it’s broken but don’t know why.
After paying off both homes in 2010, my husband bought our retirement home in the mountains of Los Angeles at 3.5% interest, 0 points, on 1 acre at age 49. Escrow will close Nov 24, 2010.
Why All the Bragging?

Because I want you to beat me up in the parking lot so I finally get time off from work.

Seriously,… it’s because for people/projects to be successful, high maturity behavior needs to be institutionalized, i.e., a part of your day-to-day life.
High maturity is continuing to help us meet our “business objectives”.
Summary

- High maturity process areas are not isolated tunnels.
- High maturity organizations continually use all 4 process areas. They do not say, “QPM and CAR” are not mine, … that’s only for projects, or “OPP and OPM” are not mine, that’s only for organizations. They see value in using all 4 process areas.
- This presentation shows how much you could use high maturity concepts, even in your personal lives, to be more successful.