Agenda

Application of Project Management Processes

- What the Executive Sponsor Needs from the Project Manager
- Description of the Portfolio of Project Management Processes
- What Processes should be focused on
  - Per research
  - From our experience
  - How to detect Processes needing more focus
- Information available, links

Introductions

Charley Reed

- DSHS, 1966-2000
- Deputy Secretary, DSHS, 1996-2000
- Rhodes Consulting Services, 2002-present

Mark Tovey PMP

- Project and Program Management, Boeing, VLC
- 10 Yrs PM experience
- Rhodes Consulting Services, 2003-present, Project Management Consulting, Fircrest Downsizing, DDD Support

Rhodes Consulting Services, Inc.

- Project Management, Project Planning
- Formed 12 years ago, in WA for 9+ years
- Multiple State, County, and Municipal Projects incl ACES, ERP (Cook County), Welfare Reform, WorkFirst (WA), TIERS (TX), etc. (approx 40 project, 10 states)

What the Executive Sponsor Needs

10 Things

1. A Clear way to get from points “A” to “Z”
2. Some way to identify all the steps necessary.
3. Some way to determine how all the steps interrelate.
4. Some way to determine who is responsible for what
5. A time table for getting each step done on time.
6. A way to “force” discipline on responsible workers that may be good subject experts but know little about project management.
7. Loyalty, complete honesty.
8. A very clear “heads up” on what is really going on in the project (Good/Bad)
9. Not to read about the project in the paper until it is successfully completed.
10. The completion of a successful project on time..

The Executive Sponsor in the Public Sector

The Goldfish Bowl Effect

- **Nothing in the Public Sector is Private.**
- **The Media is usually more interested in problems than successes**
- **Public disclosure usually means everything must be disclosed.**
- **Good project management provides comfort and assurance not only to the Executive Sponsor, but also to all those who provide oversight.**

What I "Hear" the Executive Needs

What Executive Sponsor Says

1. A Clear way to get from points "A" to "Z"
2. Identifying all the steps necessary.
3. Determining how all the steps interrelate.
4. Determining who is responsible for what
5. A time table for getting each step done on time.
6. "Forcing" discipline on responsible workers that may be good subject experts but know little about project management.
7. Loyalty, complete honesty.
8. A very clear "heads up" on what is really going on in the project.
9. Not to read about the project in the paper until it is successfully completed.
10. The completion of a successful project on time..

What I "Hear"

A. Requirements (1)
B. Clear Roadmap (Plan) (1,6)
C. Detailed Plan (2) incl QA steps
D. Integrated Plan w/ Dependencies (3)
E. Plan w/ clear ownership (4)
F. Plan w/ Scheduled Tasks (5)
G. Tracking (6)
H. SDLC (6)
I. QA (6)
J. Good News/Bad News (7,8)
K. Early Warning System (8)
   - Data Driven, Not Optimism Driven
   - Issue Mgmt/Risk Mgmt
L. External QA – (8,10)
M. Whatever Processes are Required (10)
N. Extreme sensitivity to
   - Success
   - Good controls feeding good communications

Project Management Process Selection

- Introduction - *Portfolio*
- Success and Failure Factors
- PM Processes
- Planning for Success
- Selecting the right PM Processes for a Project

Portfolio of PM Processes

- PMBOK
  - 39 PM Processes according to the PMBOK
    - Activity Sequencing
    - Scope Planning and Definition
    - Integrated Change Control
- CMMI

Level 2 – Repeatable
Software configuration management
Software quality assurance
Software subcontract management
Software project tracking and oversight
Software project planning
Requirements management

What Processes to Focus On - from Research

Sources

- Capers Jones – analyzed 6,700 projects
- Etc.

Success and Failure Factors

Unsuccessful Project Technologies	Successful Project Technologies
No historical S/W measurement data	Accurate S/W measurement (Tracking)
Failure to use automated estimating tools	Early use of estimating tools (Planning)
Failure to use automated planning tools	Continuous use of planning tools (Planning)
*Failure to monitor progress or milestones	*Formal progress reporting (Tracking)
Failure to use effective architecture	Formal architecture planning (Planning)
*Failure to use effective development methods	*Formal development methods (SDLC)
*Failure to use design reviews	*Formal design reviews (QA)
*Failure to use code inspections	*Formal code inspections (QA)
*Failure to include formal risk management	*Formal risk management (Risk Mgmt)
Informal, inadequate testing	Formal testing methods (QA)
Manual design and specifications	Automated design and specifications (SDLC)
Failure to use formal configuration control	Automated configuration control (incl CC)
More than 30% creep in user requirements	Less than 10% creep in requirements (Change)
Inappropriate use of 4GL's	Use of suitable languages (Planning)
Excessive and unmeasured complexity	Controlled and measured complexity (Change)
Little or no reuse of certified materials	Significant reuse of certified materials (SDLC)
Failure to define database elements	Formal database planning (Planning)

** From Capers Jones "Software Systems Failure and Success 1995" , p. 6

Success and Failure Factors

S/W Project Management Performance on Successful and Unsuccessful Projects

Activity	**Successful Projects**	**Unsuccessful Projects**
Sizing	Good	Poor
Planning	Very Good	Fair
Estimating	Very Good	Very Poor
Tracking	Good	Poor
Measurement	Good	Very Poor
Quality Control	Excellent	Poor
Risk Analysis	Good	Very Poor
Overall Performance	***Very Good***	***Poor***

** From Capers Jones "Software Systems Failure and Success 1995", p. 152

Success and Failure Factors

The overall ranking of US software expense and schedule elements is of interest, since coding is only in fourth place

Defect removal operations

Paperwork in all forms

Meetings and communications

Code development

From Capers Jones “Applied Software Measurement 1991”, p. 230

Success and Failure Trends

$59.5 Billion Wasted! The U.S. gross domestic product loses 0.6% a year because of software defects. Currently, over half of all errors are not found until "downstream" […] or during post-sale use. This occurs even though vendors already spend 80% of development costs on defect removal.

From Mark Windholtz, "Lean Software Development"

Product Development Lifecycle

- Software Development Lifecycle (SDLC)
- 6 Stages (Defined by "Rapid Development, 1996"
  - Software Concept
  - Requirements Development
  - Architectural Design
  - Detailed Design
  - Coding and Debugging
  - System Testing
- Reviews before completion of each stage and moving to the next
- Consistent repeatable process
- Proven development steps

Product Development Lifecycle

Cost to Fix One Defect

QA

Given that it was introduced during requirements

- During Requirements $ 195,--
- During Design $ 489,--
- During Coding $ 997,--
- During Testing $ 7,136,--
- During Deployment even more
- Costs are multiplied by the number of defects

Source: SEMATECH Technology Transfer #92111389A-TRG, March 5, 1993

Initiating Processes

For Initiating all Projects

- Determine Scope
  - Determine the size of the project
  - Determine the complexity of the project
  - Scope allows you to know when you are done
- Determine Major Risks
  - Identify major risk items
  - Develop contingency and abatement plans
- Select Biggest Impact Processes
  - What areas are the biggest risk factors?
  - How much time do you have for implementing the processes?

Selecting the Right PM Processes

How do you know which processes are best

- 39 Processes from PMBOK
- 17 KPAs from CMMI
- SDLC
- Many others
- Automated Tools

In many cases, it's not – What processes to implement but – How formal or rigorous should the process be.

What Processes to Focus On

•from personal experience

•for supporting Exec Sponsor

Examples

- •ACES
- •Welfare Reform
- •Saskatchewan Gaming Machines

Example - ACES

Automatic Client Eligibility System (ACES)

•State Government
•Traditional Waterfall Development
•Prior failures (Cosmos, bad –restart)
•Approx 125 staff (state, mostly contractors, IBM)
•Lots of media attention

Processes Used from the Beginning

•Practically everything

Processes made more robust

•External QA
•Internal, External Communications
•Project Planning
    •1100->6200 tasks, CPM, extensive resource mgmt analysis, larger scope (external interfaces)
•Internal QA – structured, scheduled review of artifacts
•Issue Management

What events caused processes to be added or modified?

Communications
Mgmt Decision

External QA
Need for strong stakeholder/field support, additional overview of development

Project Planning
•Inability to know "true" schedule of recovery and required resources
•Inability to know resources required

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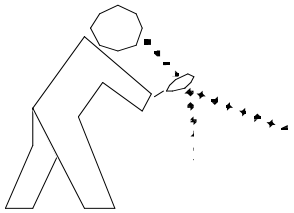
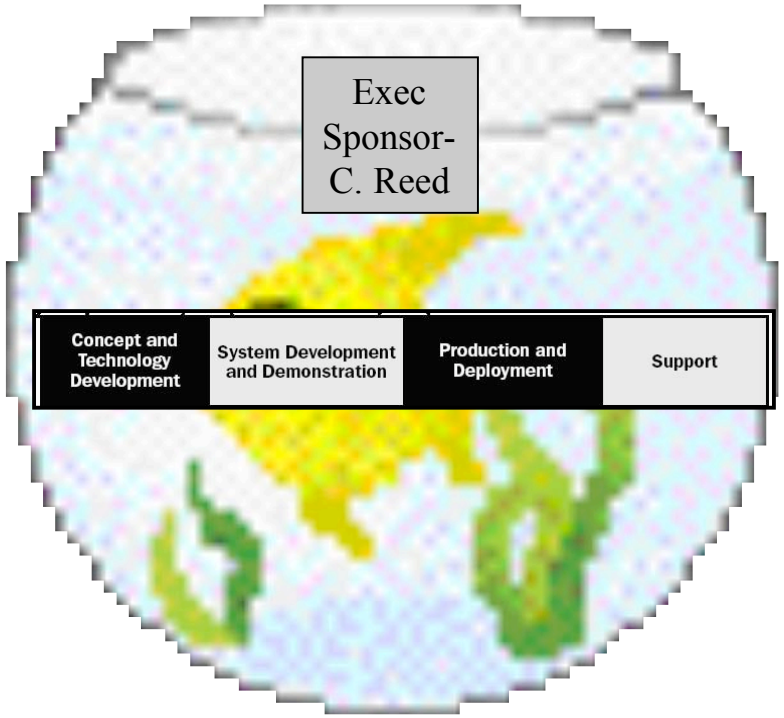
ACES Project Environment





How Processes Helped ACES and Exec Sponsor

Project Planning and Tracking Process

Updated Weekly

ACES Management Team

External QA

Task Name	Slack	6/26	1995 Q4	Q1	Q2	Q3	Q4	Q
MAJOR DELIVERABLES								
Ready for System Test								
Intake document complete								
Appl. & Case Change complete								
Phase 1								
Phase 2	3.15d							
English Notices Ready for System Tes	0d							
Notices document Complete	-0.11d							
Monthly and Quarterly Reporting (Elig								
Phase 1 FS Elig								
Phase 2 Cash Ready for System T								
Phase 2 w/ CRs 127,132,134,135,	1.38d							
Phase 3	-1d							
Tracking (Alerts, ACM) document com								

- *Portion of Exec Report*
- *Plan 7000+ tasks*

Exec Sponsor Needs from Project
-Well Informed
-Loyalty
-Complete honesty.

Exec Sponsor- C. Reed

Project Needs from Exec Sponsor
•Conversion O/T
•System Performance Support

Example – Welfare Reform

Welfare Reform (WorkFirst) (non-I/T)

•State Government

•Biggest Change in Welfare in 60 Years

•Approx 100 state staff, 1 contractor (SMEs, not experienced in PM)

•Multiple teams (programs, policy, multiple departments) DSHS, ESD, Governor's office

Beginning Processes

•Project planning

- –Scope definitions
- –Requirements/deliverables defined
- –Forced discipline on SMEs, getting from A to B

•Project Tracking and Oversight

Processes Added/Modified

•Issue Management (incl escalation)

•Awareness of sDLC

•Communications (Field, stakeholders, public Reviews)

What events caused processes to be added or modified?

Issue Mgmt

•When task completions were being collected, tasks were not being completed on schedule, issues were holding tasks up (policies, waiting on external department response, etc.)

sDLC

•Review of progress indicated that an integrated design was not complete, construction was proceeding. Progress halted – process implemented for Integrated Design.

More Robust QA

•Design document included significant QA Process (public reviews).

Example – non I/T

Why discuss non I/T

•Many Public Sector projects do not contain a large portion of I/T

•I/T project often contain a large portion of the business side of the organization (non I/T)

Project management challenges with non-I/T teams are often different

•Team may not have been on a significant project before (example, Welfare Reform vs ACES)

•Teams may consist of SMEs, social workers, not technical staff that go from project to project

• Participants may say "I've never had to think this way before (sequential development)

•Will need a defined plan to

- •Get items out of DRAFT (consensus may not be possible
- •Flag issues, escalate

Example - Saskatchewan Gaming Machines

Province of Saskatchewan Gaming Machines

•State Government

Processes Used from the Beginning

•Communications Planning

•Requirements Definition

Processes made more robust

•Requirements Management

- •Detailed Customer Requirements were created and reviewed at every stage of the SDLC

•Change Management

- •Changing Customer Requirements were added without changing the schedule, but increased the revenue

What events caused processes to be added or modified?

Requirements Management

•No original baseline requirements were agreed upon

Change Management

•Customer requests for changes and/or additions were creeping the scope of the project

How to Apply

Initiation

- Start with Basic Processes from experience
- Consider circumstances of public sector
  - Fishbowl
  - On some projects, many project staff may be new to "projects"

Knowledge

- Be knowledgeable of portfolio of formal, strong processes

Add or Modify Processes

- Primarily for Corrective Actions
- Will require "decoding"
  - Detect weak areas
  - Categorize (problem is symptomatic of problems in which process area)
  - Define new or modified process

Links for Information

- This Presentation

  www.rhodes-consulting.com

- PMBOK

  http://www.focusproject.pl/content/download/pmbok2000.pdf

- CMM/CMMI

  http://www.sei.cmu.edu/cmm/