# FROM SCORE TO PERFORMANCE PROJECT PLANNING AND TROUBLESHOOTING

DAVID JORDAN & JENNIFER JOHNSON



#### SOUND FAMILIAR?

#### SiTech Root Problems

- Ad-hoc project planning
- 2. Infrequent, subjective project monitoring and roadblock removal
- 3. Management didn't prioritize work and say no to some projects
- 4. Difficulty managing urgent interrupts from ongoing factory operations
- 5. Unclear roles, responsibility, and accountability regarding projects
- 6. Culture of firefighting



\*PMP is a registered trade and service mark of the Project Management his titre, inc.

©2009 Permission is granted to PMI for PMID Marketplace use only

#### **OBJECTIVES**

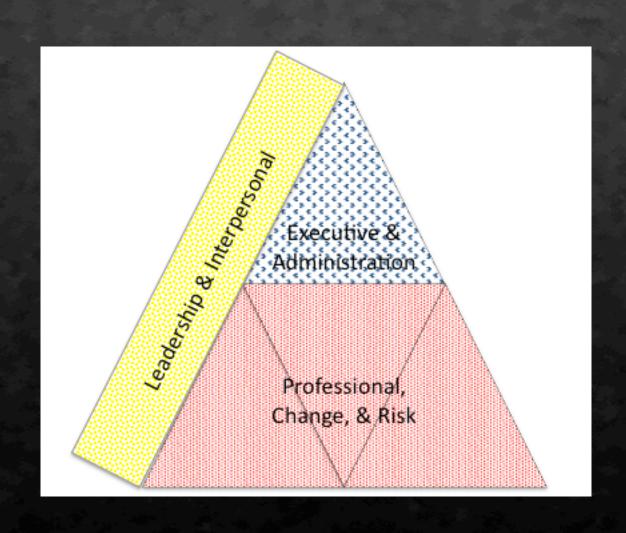
Provide leadership in planning projects

Provide leadership in troubleshooting projects

Use established & proven project management techniques

Manage human dynamics of project teams and stakeholders

# MPLA LEADERSHIP KNOWLEDGE AND SKILLS MODEL



#### KNOWLEDGE AND SKILLS FOR PROJECT MANAGEMENT

#### LEADERSHIP & INTERPERSONAL

**EMPATHY** 

CONFLICT MANAGEMENT

**ADAPTABILITY** 

ORGANIZATIONAL MANAGEMENT

TEAMWORK AND COLLABORATION

INFLUENCING

#### **PROFESSIONAL**

COMMUNICATION

PROJECT MANAGEMENT (TECHNICAL)

**DELEGATION** 

#### **EXECUTIVE & ADMINISTRATIVE**

**OPERATIONS** 

FINANCE

#### DO YOU HAVE A PROJECT TO MANAGE?

RESOURCES (LABOR, CAPITAL)

TASKS

**BUDGET** 

MEET BUSINESS OBJECTIVE

ASSIGNED TO RESPONSIBLE PERSONNEL

HAS AN IMPACT ON PROFIT

#### PROJECTS VS. OPERATIONS

#### **PROJECT**

Temporary / time-limited

Defined start and end in time

Unique/one-off result

#### **OPERATIONS**

ONGOING AND OPEN-ENDED

NEVER "FINISHED"

REPETITIVE PRODUCTION OF "SAME" RESULT

(PREPARING REFRESHMENTS FOR NEW YEARS EVE PARTY)

(PREPARING DAILY FAMILY MEALS)

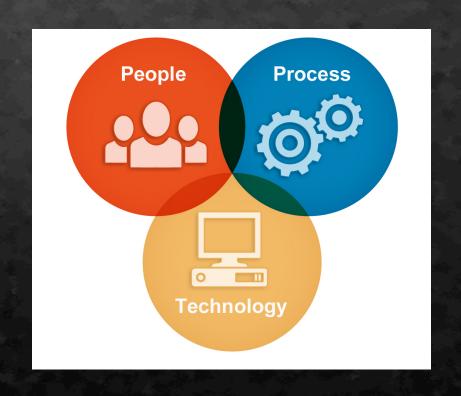
(Kuster 2015)

# TYPICAL MP PROJECT EXAMPLES

START A RESIDENCY PROGRAM

CREATE OR UPDATE QC
PROCESS/PROCEDURE/TOOL

DEPLOY A NEW CLINICAL SOFTWARE/IT SYSTEM



# PROJECT MANAGEMENT PHASES



EACH PHASE IS DEFINED BY GATES/CHECKPOINTS

PHASE BENEFITS

(Verzuh 2011)



#### DEFINING – CHOOSING THE RIGHT PROJECT

SAYING YES OR NO

DEFINING DELIVERABLES/ EXPECTATIONS

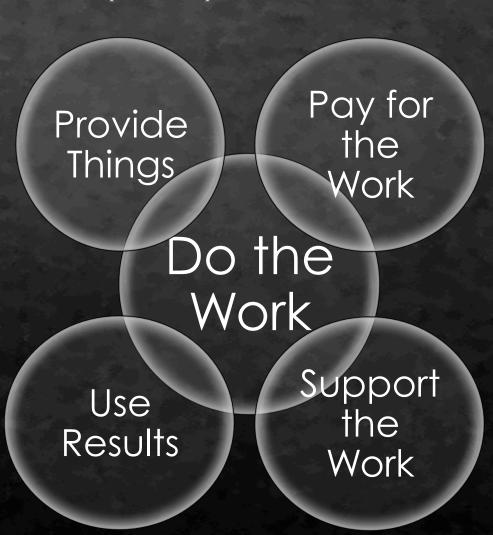


# DEFINING – STATEMENT OF WORK (SOW)

WHAT IS THE REAL PROBLEM TRYING TO SOLVE?

("Why?")

WHO ARE THE STAKEHOLDERS?

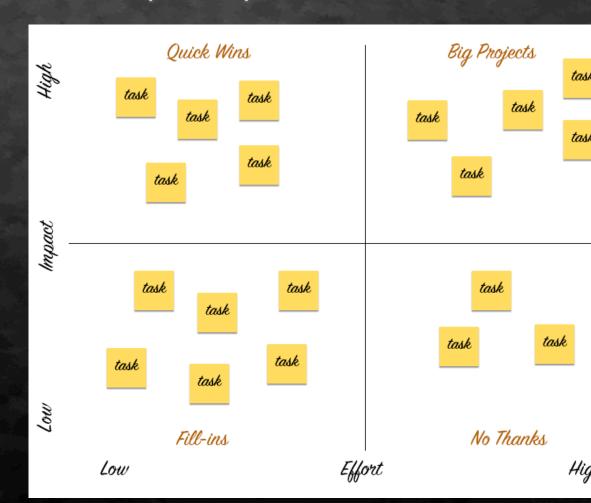


# DEFINING - STATEMENT OF WORK (SOW)

WHAT IS THE PRIORITY OF
HIS PROJECT, RELATIVE TO
OTHER DEMANDS ON
RESOURCES IN THE
ORGANIZATION?

WHOSE PRIORITY

S IT? (APPROVAL LINE)



#### KNOWLEDGE AND SKILLS FOR DEFINE STAGE

LEADERSHIP & INTERPERSONAL

**EMPATHY** 

CONFLICT MANAGEMENT

**ADAPTABILITY** 

ORGANIZATIONAL MANAGEMENT

TEAMWORK AND COLLABORATION INFLUENCING

**PROFESSIONAL** 

COMMUNICATION

PROJECT MANAGEMENT (TECHNICAL)

**DELEGATION** 

**EXECUTIVE & ADMINISTRATIVE** 

**OPERATIONS** 

FINANCE



#### CHALLENGE #1: PLANNING AMIDST AMBIGUITY?

PLANNING SEEMS EASY (TRIVIAL) ASSUMING YOU WILL KNOW WHAT

TO DO.



OFTEN THE CHALLENGE IS THAT YOU WON'T KNOW WHAT TO DO

#### PROJECT MANAGEMENT MODELS

FORMAL (FROM SOFTWARE ENGINEERING):

WATERFALL

TERATIVE

AGILE MANIFESTO

INFORMAL

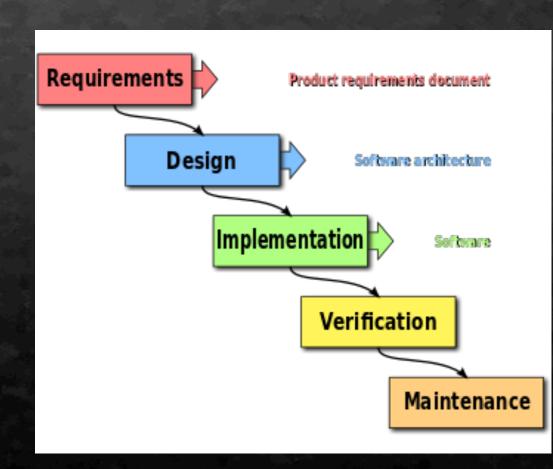
GETTING THINGS DONE / NATURAL PLANNING MODEL

(Verzuh 2011)

#### WATERFALL MODEL

STRICT SEQUENCE OF REQUIREMENTS ANALYSIS, DESIGN, AND DEVELOPMENT PHASES

RECOMMENDED COMPLETE STEPS TWICE



man and Basili 2003)

https://commons.wikimedia.org/wiki/File:Waterfall\_

#### ITERATIVE MODEL

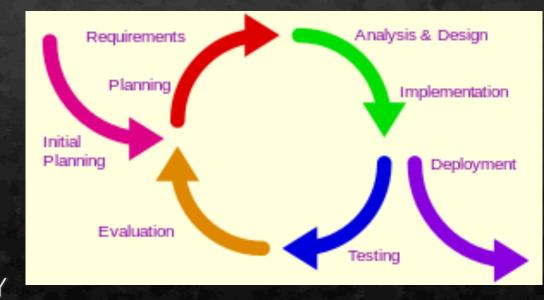
FEEDBACK-DRIVEN REFINEMENT

CUSTOMER INVOLVEMENT

CLEARLY DELINEATED ITERATIONS (~ 1 – 6 WEEKS)

SPIRAL MODEL

PRIORITIZE DEVELOPMENT CYCLES BY RISK

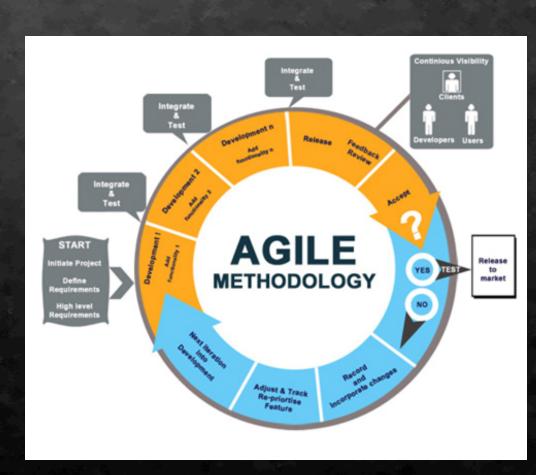


rman and Basili 2003)

https://commons.wikimedia.org/wiki/ File:Iterative\_development\_model.svg

#### AGILE MANIFESTO

PROMOTE MODERN, SIMPLE ITERATIVE AND INCREMENTAL DEVELOPMENT



http://www.aplicatech.com/agile-project-management-aplicatech

#### NATURAL PLANNING MODEL

"BEGIN WITH THE END IN MIND" (STEPHEN COVEY)

DESCRIBE THE DESIRED OUTCOME

DESCRIBE THE SPECIFIC STEPS THAT MUST BE TAKEN (VISIBLE, PHYSICAL ACTIONS)

GRANULAR, NON-AMBIGUOUS TASK DEFINITION

ESTABLISH QUALITY BENCHMARKS: "WHAT DOES 'DONE' LOOK LIKE?"

(Allen 2002)

## WORK BREAKDOWN STRUCTURE (WBS)

#### WHAT IS IT?

TOP-DOWN STARTING FROM PROJECT OUTCOME

Break down to individual tasks = "work packages"

WORK PACKAGES CAN BE GROUPED INTO "SUMMARY TASKS"

#### WHY MAKE IT?

HIGHLIGHT GAPS / INFORMATION STILL

NEEDED

DENTIFY DEPENDENCIES

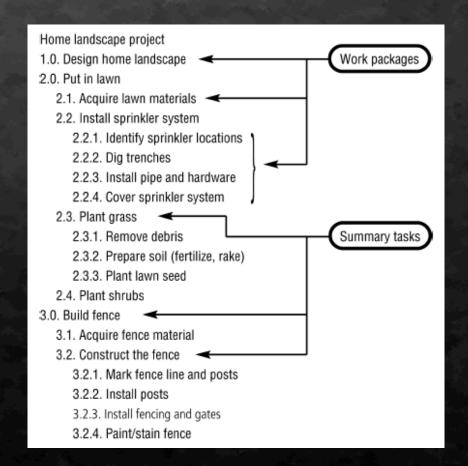
PLAN FOR PEOPLE, TIME, AND RESOURCES NEEDED

(Verzuh 2011)

# WORK BREAKDOWN STRUCTURE (WBS)

Create high-level SUMMARY TASKS AND WORK PACKAGES

GET HELP FROM TEAM OF FRONT-LINE WORKERS, EXPERTS TO DETERMINE DETAILS OF WORK PACKAGES



(Verzuh 2016)

#### DEVELOPMENT OF RESOURCED SCHEDULE

USING THE WBS:

**I**DENTIFY RELATIONSHIPS BETWEEN WORK PACKAGES

PLACE IN SEQUENCE

FOR EACH WORK PACKAGE, DETERMINE:

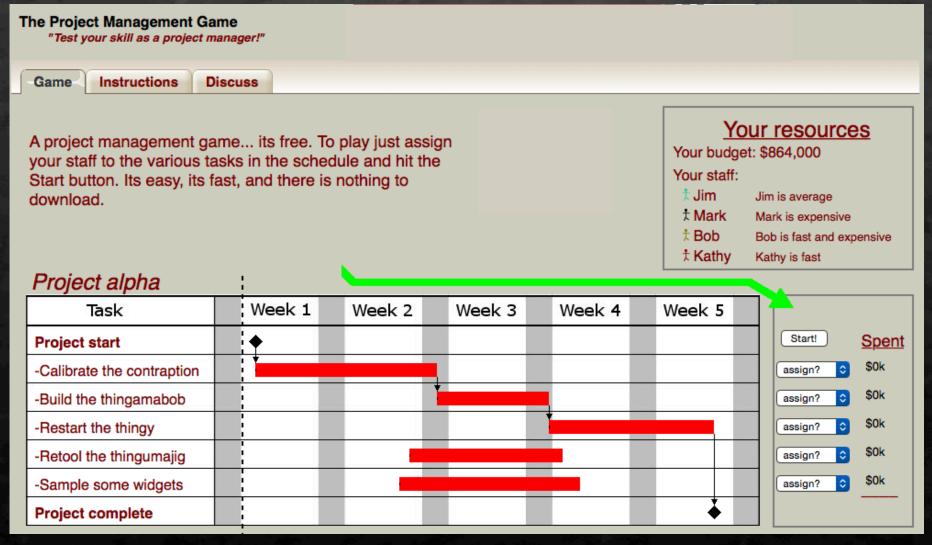
MHO MILL DO ITS

HOW LONG WILL IT TAKE?

WHAT RESOURCES ARE NEEDED?

(Verzuh 2011)

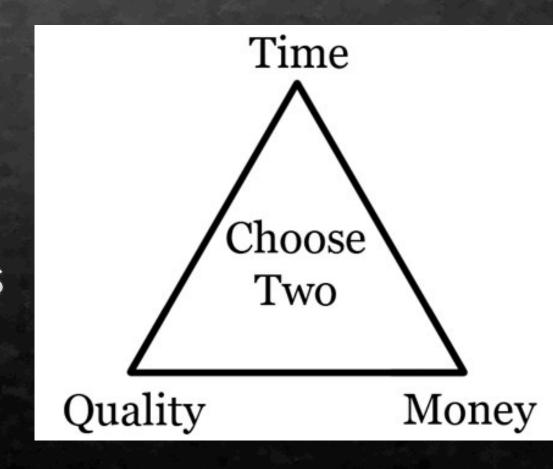
#### GANTT CHART: TIME AND CRITICAL PATH



#### CHALLENGE #2: RESOURCES

PROJECT MANAGER'S TRIANGLE

MUST NEGOTIATE TRADE-OFFS SINCE RESOURCES ARE FINITE



(Verzuh 2011)

#### BUDGETING

ESTIMATING TIME REQUIREMENTS

ESTIMATING MONEY REQUIREMENTS

PAD, BUT DON'T OVER-DO IT

BE TRANSPARENT WITH STAKEHOLDERS:

Assumptions used to create the budget

REASONING BEHIND ANY PADDING

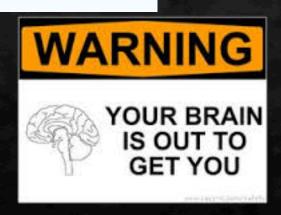
"THIS IS MY BEST ESTIMATE, BUT THIS IS ONLY AN ESTIMATE"

#### CHALLENGE #3:

Analysis Paralysis

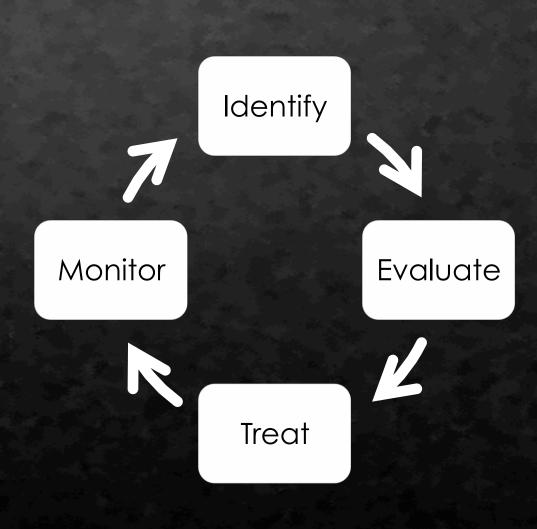
over-analyzing (or over-thinking) a situation so that a decision or action is never taken.

AVOID "ANALYSIS PARALYSIS"



### CHALLENGE #4: RISKS

Plan for risks / perform risk analysis



#### COMMUNICATION PLAN

SHOULD BE EXPLICITLY DEFINED

**STAHW** 

**MHO**\$

HOW OFTEN?

WHAT CHANNELS/FORMAT?

# Communication Strategies HIGH | Important | Key Players | Satisfy | Manage | Monitor | Inform | Low | Others | Affected

LOW

Interest

HIGH

#### COMMUNICATION PLAN

To Whom?	What?	How often? / When (date)?	What channels/format?
Affected members	Project status update	Weekly	FW: email
Boss	Status and barriers	Monthly	FV: Face-to- face meeting

# Key to Types of Communication

FW: Formal Written IW: Informal Written

FV: Formal Verbal IV: Informal Verbal

#### KNOWLEDGE AND SKILLS FOR PLAN STAGE

#### LEADERSHIP & INTERPERSONAL

**EMPATHY** 

CONFLICT MANAGEMENT

**A**DAPTABILITY

ORGANIZATIONAL MANAGEMENT

TEAMWORK AND COLLABORATION INFLUENCING

#### **PROFESSIONAL**

COMMUNICATION

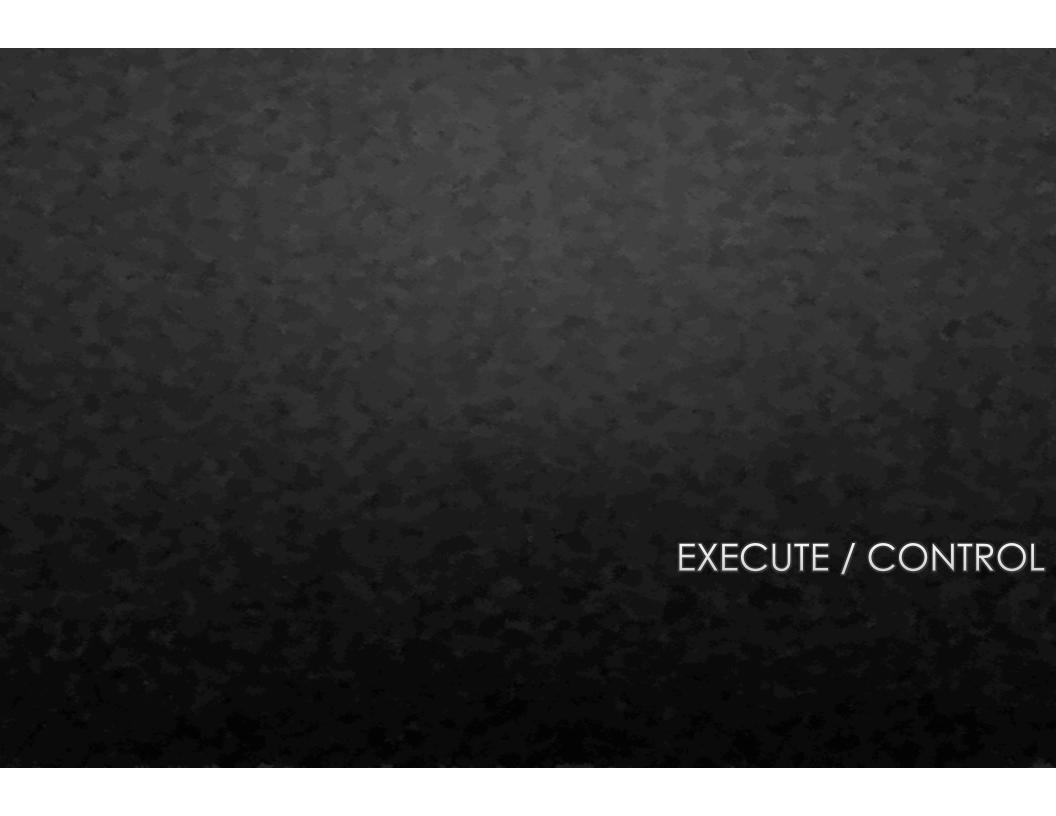
PROJECT MANAGEMENT (TECHNICAL)

**DELEGATION** 

#### **EXECUTIVE & ADMINISTRATIVE**

**OPERATIONS** 

FINANCE



#### DOING

MILESTONES / MEASURE PROGRESS

QUANTITY, QUALITY, AND TIMELINESS OF INFORMATION/FEEDBACK

WHAT IS YOUR "DASHBOARD"?

MILESTONES (DEFINED DURING PLANNING IF POSSIBLE)

MANAGE RISKS

RE-PLAN FOR CHANGING AND UNFORESEEN CIRCUMSTANCES

#### CHALLENGE #5: SCOPE CREEP

SMALL CHANGES IN A PLAN OR PROJECT THAT NECESSITATES OTHER CHANGES WHICH LEAD TO STILL MORE CHANGES...



http://www.akaroleff.com/content/scope-creep-can-be-managed http://www.businessdictionary.com/definition/scope-creep.html

## CHALLENGE #5: SCOPE CREEP

#### CAUSES

UNEXPECTED ISSUES

PERFECTIONISM / GOLD PLATE

PLACATING STAKEHOLDERS

MISUNDERSTANDINGS

YOUR GREAT IDEAS (WRONG TIME!)

#### CHANGE CONTROL

DEFINE PROCESS & EXPECTATIONS

WEB DESIGN: "NOT JUST ADDING ANOTHER BUTTON"

http://www.akaroleff.com/content/scope-creep-can-be-managed http://www.businessdictionary.com/definition/scope-creep.html

### KNOWLEDGE AND SKILLS FOR EXECUTE STAGE

LEADERSHIP & INTERPERSONAL

**EMPATHY** 

CONFLICT MANAGEMENT

**ADAPTABILITY** 

ORGANIZATIONAL MANAGEMENT

TEAMWORK AND COLLABORATION INFLUENCING

**PROFESSIONAL** 

COMMUNICATION

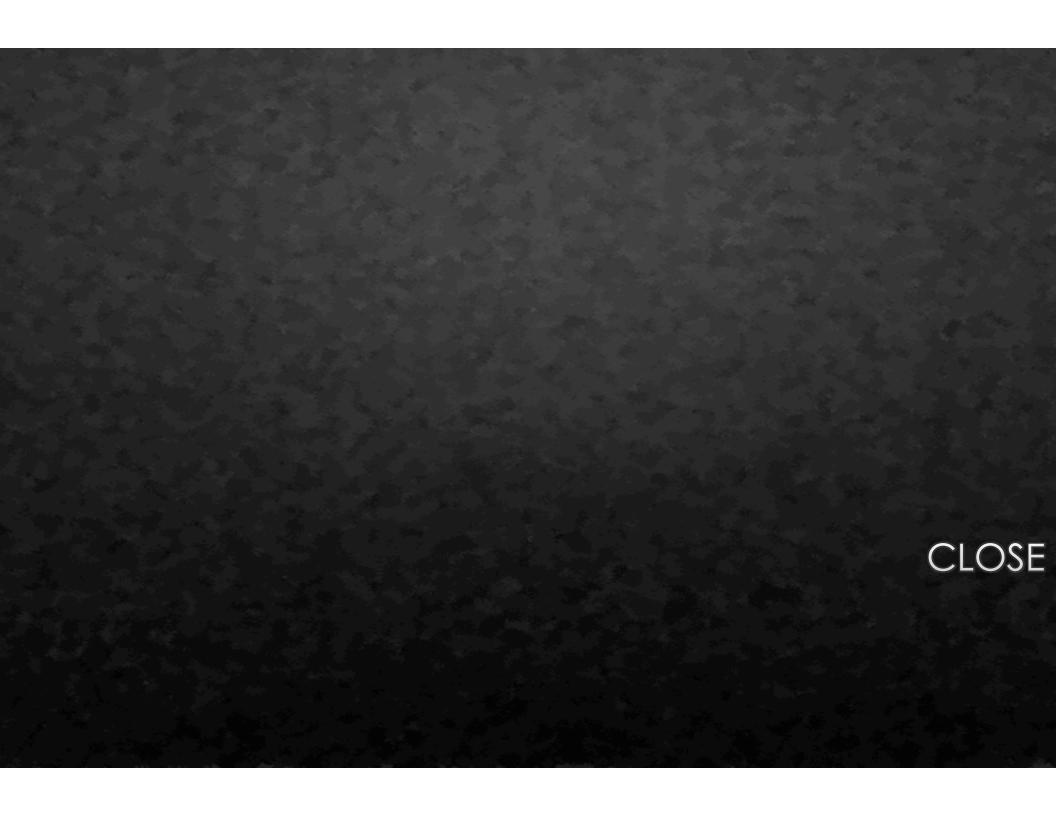
PROJECT MANAGEMENT (TECHNICAL)

**DELEGATION** 

**EXECUTIVE & ADMINISTRATIVE** 

**OPERATIONS** 

FINANCE



WRAP UP / CLOSE OUT

DELIVER THE DELIVERABLE

AFTER-ACTION REVIEW

ARCHIVE ANY REUSABLE TEMPLATES AND CONTENT FOR FUTURE PROJECTS

## AFTER-ACTION REVIEWS

HELD IMMEDIATELY AT END OF PROJECT

NCLUDE LEADERS AND FRONT-LINE STAFF CARRYING OUT TASKS

COMPARE ACTUAL WITH INTENDED (PLANNED) RESULT

EXAMINE REASONS FOR ANY DIFFERENCES

OPEN-ENDED, ACTIVE INQUIRY AND LEARNING

## KNOWLEDGE AND SKILLS FOR CLOSE STAGE

LEADERSHIP & INTERPERSONAL

**EMPATHY** 

CONFLICT MANAGEMENT

**ADAPTABILITY** 

ORGANIZATIONAL MANAGEMENT

TEAMWORK AND COLLABORATION

INFLUENCING

**PROFESSIONAL** 

COMMUNICATION

PROJECT MANAGEMENT (TECHNICAL)

**DELEGATION** 

**EXECUTIVE & ADMINISTRATIVE** 

**OPERATIONS** 

FINANCE



### PROJECT SCOPE

Real issue: <u>Communication</u> of stakeholder needs & expectations

DID SCOPE CHANGE OR "CREEP"?

WAS SCOPE CLEARLY DEFINED AND COMMUNICATED AT THE BEGINNING?

WAS THERE UNDERSTANDING BY ALL PARTIES?

UPON PROBLEM DISCOVERY, CONFLICT MAY ARISE

# PROJECT SCOPE: CORRECTING COURSE

CAN PROJECT BE ACCOMPLISHED WITH COMMITTED BUDGET, SCHEDULE?

WHAT ADJUSTMENTS ARE NECESSARY/POSSIBLE?

REAFFIRM SHARED GOALS

### DELEGATION TO PROJECT TEAMS

PROVIDE CLEAR ENOUGH DIRECTION AND SUFFICIENT RESOURCES (TIME, MONEY, SPACE, EQUIPMENT, ETC.) TO ACCOMPLISH THE TASK AS DIRECTED

PROJECT MANAGER'S JOB IS TO REMOVE AMBIGUITY FOR TEAM MEMBERS

### DELEGATION TO PROJECT TEAMS

WHEN DELEGATING: YOU ARE STILL ACCOUNTABLE FOR TASKS CRITICAL:

TRACKING PROGRESS

REGULAR FOLLOW-UPS

LEVELS OF INITIATIVE: PREFERRED = ACT INDEPENDENTLY AND REPORT BACK AT REGULAR SCHEDULED INTERVALS

DEFINE IN COMMUNICATION PLAN

HUMAN DIMENSIONS

Procrastination

GETTING UNSTUCK: EXCUSES ARE REALLY NEXT STEP TASKS OR SUB-PROJECTS STANDING IN CRITICAL PATH

HESITANT TO ASK QUESTIONS / APPEAR IGNORANT

# CORRECTING FOR PROCRASTINATION

Ensure understanding of outcome and actions required

Ensure appropriate resources provided

Establish early check-ins to verify progress

Make It Safe To Fail (Fail Early and Fail Small)

## BE AWARE OF OVERLOAD AND BURNOUT!



SHOULD TACKLE THE MOST UNPLEASANT TASKS FIRST, SO YOU HAVE A FEELING OF ACCOMPLISHMENT AND CONTROL.



6-14 © 2014 Scott Adams, Inc. Wat by Universal Uci

PROJECTS AND SOME EXTRA ANXIETY THAT I'M DOING THEM IN THE WRONG ORDER.



OFF YOU GO.



#### TOOLS AND SOFTWARE

SEEK SIMPLE: AVOID TOO MUCH COMPLEXITY

What functionality does your project really need?

WHO NEEDS TO SEE WHAT, WHEN?

WHO IS PUTTING IN INFORMATION AND UPDATING, HOW, AND HOW OFTEN?

<sup>\*</sup>Remember that the US nuclear power plant fleet was built and the Manhattan Project Carried out without using MS Project

#### REVIEW AND SUMMARY

TECHNICAL ASPECTS OF PROJECT MANAGEMENT USE SPECIFIC TECHNIQUES AND SKILLS

GOOD PROJECT MANAGEMENT IS A LEADERSHIP EXERCISE THAT DEMANDS:

COMMUNICATION

**EMPATHY** 

MANAGEMENT OF CONFLICTS (PREFERABLY BY ANTICIPATION)

TOLERANCE AND MANAGEMENT OF AMBIGUITY

#### REFERENCES

- Allen, D. (2002). Getting Things Done: The Art of Stress-Free Productivity. Penguin Books.
- BOEHM, B. (1985). A SPIRAL MODEL OF SOFTWARE DEVELOPMENT AND ENCHANCEMENT, IN 14.
- BOEHM, B. (1986). A SPIRAL MODEL OF SOFTWARE DEVELOPMENT AND ENHANCEMENT. ACM SIGSOFT SOFTWARE ENGINEERING NOTES, 11(4), 14-24.
- Cockburn, A. (2006). Agile software development: the cooperative game. Pearson Education.
- Kruchten, P. (2004). The rational unified process: an introduction. Addison-Wesley Professional.
- Kuster, J., Huber, E., Lippmann, R., Schmid, A., Schneider, E., Witschi, U., and Wüst, R. (2015). Project Management Handbook. Springer; Heidelberg.
- LARMAN, C., & BASILI, V. R. (2003). ITERATIVE AND INCREMENTAL DEVELOPMENT: A BRIEF HISTORY. COMPUTER, (6), 47-56.
- ROYCE, W. W. (1970, August). Managing the development of large software systems. In proceedings of IEEE WESCON (Vol. 26, No. 8, pp. 328-388).
- SMITH, P. G. (2007). FLEXIBLE PRODUCT DEVELOPMENT: BUILDING AGILITY FOR CHANGING MARKETS. JOHN WILEY & SONS.
- US ARMY (1993). A LEADER'S GUIDE TO AFTER-ACTION REVIEWS. TRAINING CIRCULAR 25-20, DEPARTMENT OF THE ARMY.
- Verzuh, E. (2011). The fast forward MBA in project management. John Wiley & Sons.