

The Art and Science of Project Management

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iDigBio Summit III
November 19-20, 2013



This material is based upon work supported by the National Science Foundation under Cooperative Agreement EF-1115210. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



What is a project?

“A project is a temporary endeavor undertaken to create a unique product, service, or result.”

PMBOK® Guide, 4th Edition

- This is code for:
 - Specific and desired outcome
 - Defined start and end date
 - Budget that limits resources

What is project management?

“Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.”

PMBOK® Guide, 4th Edition

- This is code for:
 - Provides structure that promotes success
 - Balances money, time, & resources
 - Promotes effective communication
 - Focuses on goals and outcomes

What is a project manager?

“The project manager is the person assigned by the performing organization to achieve the project objectives.”

PMBOK® Guide, 4th Edition

- This is code for:
 - Responsible for meeting or exceeding stakeholder needs and expectations
 - Responsible for planning, execution, and closing
 - Responsible for making things happen

The myths...

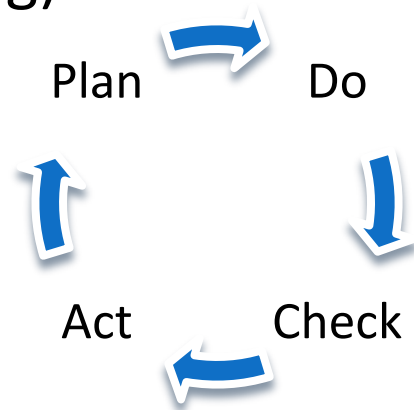
- Project management is just overhead or extra work
- Project management doesn't add any value
- Project management is all “fluff” and not “real work”
- Talk about BORING...

The reality...

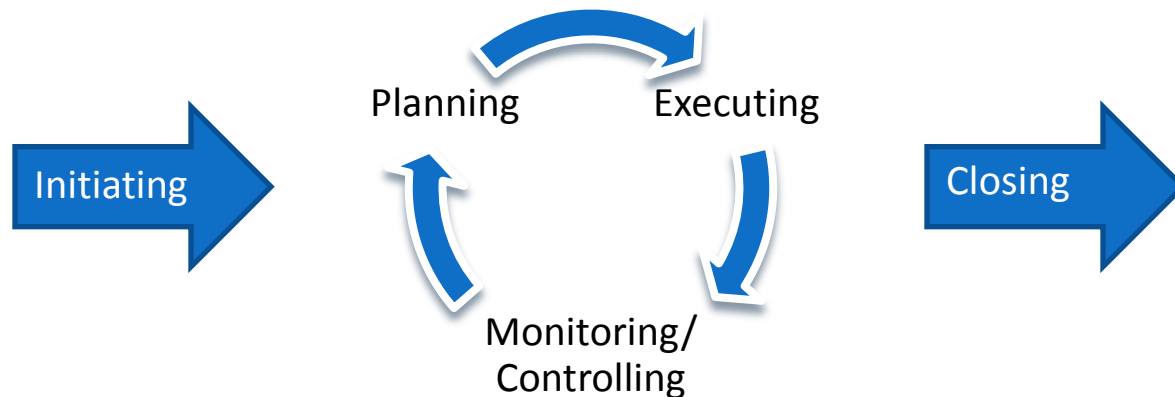
- Project management is great when in the right dose and when applied correctly
 - Too much or too little and some/all of the previous myths are probably true!
- Project management is all about balancing the “**science**” (what the books say you should do) with the “**art**” (what you *really* need to do to make things happen)
- Project managers must be **flexible** and choose/use only what is right for a particular project/team

Project Management Cycle – The Science

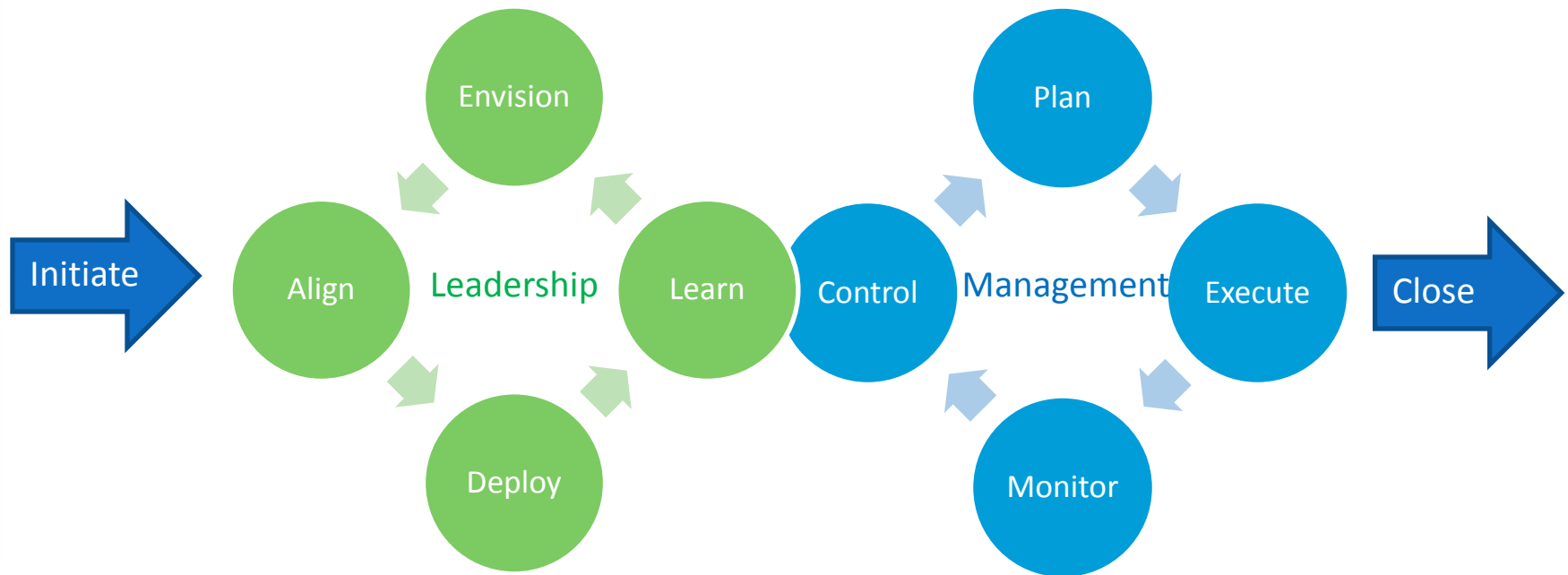
- Old School (Deming)



- New School (PMI)



Project Management Cycle – The Art

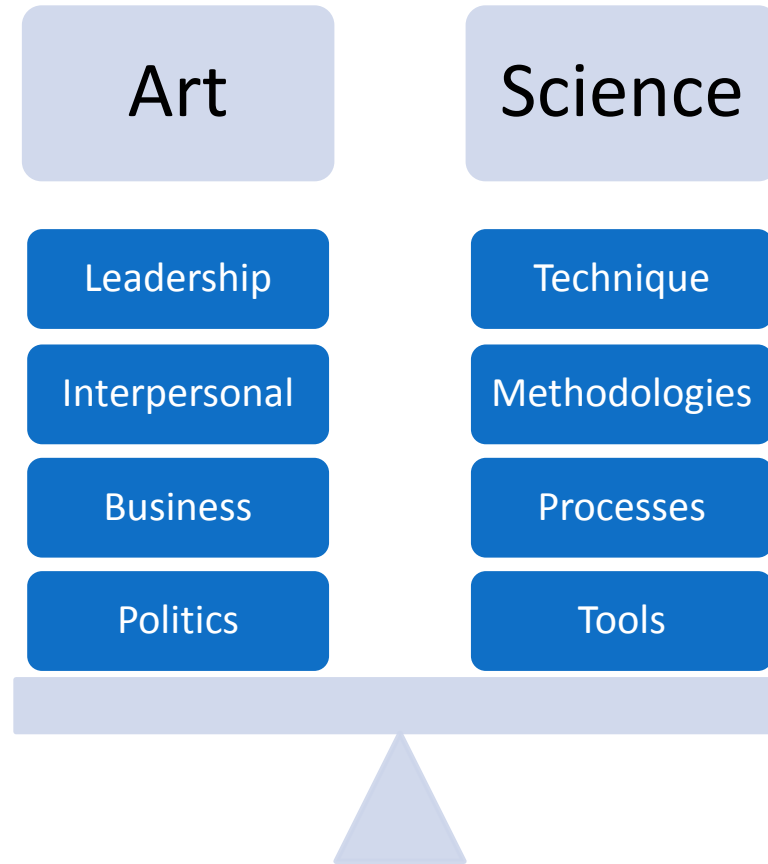


CH2M Hill Project Delivery System, 4th Edition

Example Process Outputs

	Leadership	Management	
Initiate	Customer focus, Team building	Feasibility, Scope of Work	Initiate
Envision	Vision, Mission, Strategy	Workplan, WBS, Schedule, Budget	Plan
Align	Politics, Communication, Endorsement	Task lists, Deliverables	Execute
Deploy	Implement, Enforce	Trending, Evaluation	Monitor
Learn	Assess, Incorporate	Corrective action	Control
Close	Satisfaction	Delivery	Close

Achieving the Balance



What is most important?

- The leadership cycle is *always* the most important and will affect *everything* you do
- Ingredients for success:
 - Relationships
 - Teamwork
 - Endorsement



Relationships

- Relationships are a fundamental part of leadership
- Relationships build long-term trust and confidence
- Ingredients for success:
 - Understand needs, expectations, strengths, & weaknesses
 - Regular communication – Shoemail is better than phone, which is better than email
 - Relationship maintenance during difficult times

Teamwork

- A strong team is vital to the success of any project
- Teaming builds flexibility and creativity into the work
- Ingredients for success:
 - Defend your team – fix problems instead of blaming people
 - Establish regular, effective meetings
 - Plan social activities to help everyone get to know each other
 - Make extra effort to include virtual team members



Endorsement

- Endorsement is more than simple approval – it implies ongoing commitment
- Endorsement ensures mutual understanding and commitment to project success
- Ingredients for success:
 - Foster mutual understanding; affirm the common vision
 - Give all parties a stake in the outcome
 - Identify and discuss risks

OK ... but really ... what's most important?

- Most people think that the Executing & Controlling phases are the most important management activities
 - This is where we define how to do things and how we make course corrections
 - However, these phases often encounter resistance because people have their own ways of being productive and getting things done
 - To make matters worse, management often doesn't understand the “work”

The secret...

- The most valuable phases of a project are **Initiating, Planning, and Closing**:
 - **Initiating** is where you establish your scope of work. Lack of agreement or understanding will cause scope creep and cost escalation due to changes.
 - **Planning** is where you gain a better understanding of what needs to get done and communicate it to your team.

“...plans are useless, but planning is indispensable.”
-Eisenhower
 - **Closing** is when you have agreement from all of your stakeholders that the project is finished. Launch or go-live is not the end of a project.

Initiation

- A simple statement of the **Project Objective** can be your most powerful tool
 - **What** are you going to do
 - **How** are you going to do it
 - **Why** are you doing it
- Achieve stakeholder endorsement before anything is started
- Baseline to measure scope creep against

Planning

- The **workplan** is the guide and map for your team:
 - **What** needs to be done
 - **Who** is doing the work
 - How much will the work cost (**budget**)
 - When will the work be done (**schedule**)
 - **How** the work will be done – **communications** management, **risk** management, **change** management
 - What **metrics** will be used for tracking project **progress**, **quality**, and **scope**
 - What are the internal and external **dependencies**

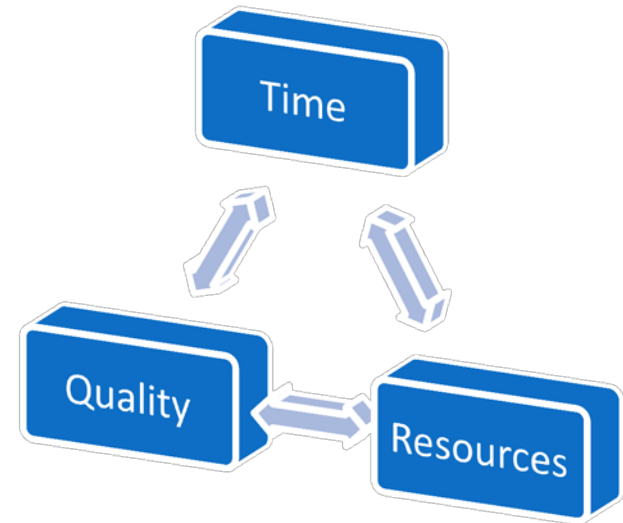
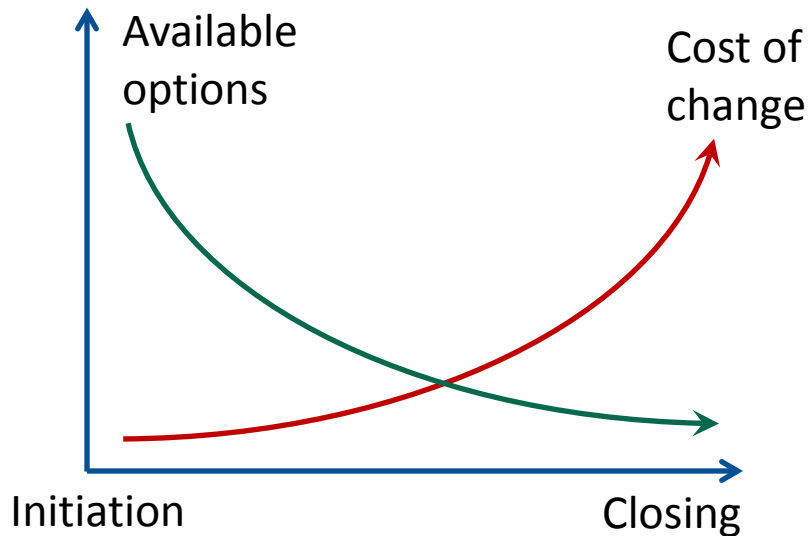
Monitoring

- Avoid “percent complete” as a progress tracking tool
 - People lie
 - People guess and are overly optimistic
 - Work expands to fill available time
 - The last 20% takes 80% of the time (80/20 rule)
- Binary completion (is it done? Y/N) is a more accurate measure of progress
- The solution is to plan **milestones** or measureable metrics
 - Granularity is key – need to be just fine enough to provide measurement of progress

Executing & Controlling

- Change is inevitable. Period.
 - Stakeholders will always change their minds; requirements will always change even after a “freeze”
 - You cannot stop this; you can only make them aware of the impact
- Evaluate changes based on their ability to advance the project objectives; quantify the impact in terms of schedule, resources, and quality
- Let the *customer* prioritize changes based on impact

Knowledge is power...



- The most valuable and least said word in a project manager's vocabulary is "NO".
- The second most valuable and least used phrase in a project manager's vocabulary is "I don't know".

Closing

- If you've done your job well, closing is easy:
 - Stakeholder needs/expectations have been met/exceeded
 - Customer knows exactly what was delivered
 - Customer/stakeholders are satisfied (hopefully)
- Closing is simply a matter of acknowledging that everything was delivered as agreed ... but write it down!
- What if they still want more?
 - Knowledge is power...

In summary...

- Project Management is not evil and will not turn you into a mindless zombie



- Leadership is always important and affects everything
- The secrets are Initiating, Planning, and Closing
- Knowledge is power – time, quality, cost (pick any two)

Everything I know About Project Management I Learned from *Star Trek*

1. Non-interference is the Prime Directive.
2. Seek out new life and new civilizations.
3. Keep your phaser set on stun.
4. Humans are highly illogical.
5. There's no such thing as a Vulcan death grip.
6. Live long and prosper.
7. Having is not so pleasing a thing as wanting; it is not logical but it is often true.
8. Infinite diversity in infinite combinations.
9. Tribbles hate Klingons (and Klingons hate Tribbles).
10. Enemies are often invisible — like Romulans, they can be cloaked.
11. Don't put all your ranking officers in one shuttlecraft.
12. When your logic fails, trust a hunch.
13. Insufficient data does not compute.
14. If it can't be fixed, just ask Scotty.
15. Even in our own world, sometimes we are aliens.
16. Boldly go where no man has gone before!

<http://www.educause.edu/ero/article/everything-i-need-know-about-it-management-i-learned-star-trek>

Resources

- Project Management Institute: www.pmi.org
- DoIT Project Management Advisor: www.pma.doit.wisc.edu
- www.usability.gov
- The Project Management Game: thatpmgame.com
- Project Science: www.projectscience.org