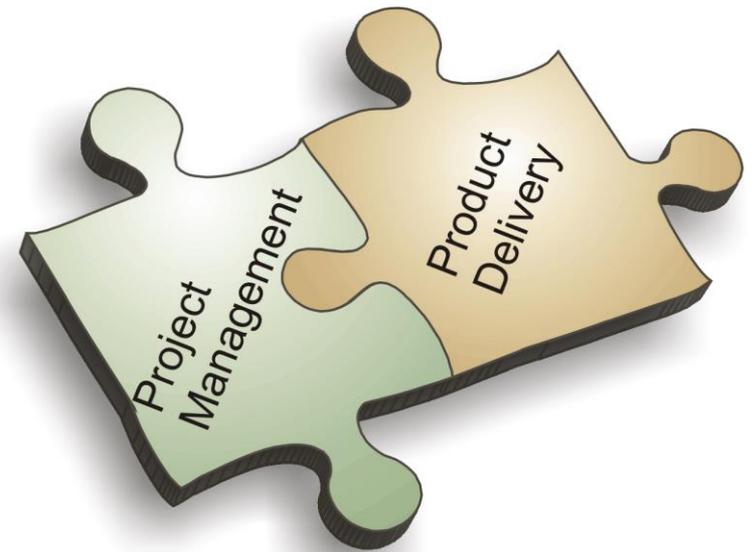




Effectively Managing Your Digitization Project

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Key challenges with scientific, research, & digitization projects

- Scientists want to do research, not project administration/management
- Project administration is time consuming and distracts scientists from their main interests
- Scientists often lack training/experience in project administration/management
- Funding agencies desire accurate cost estimates and predictable outcomes



A few common reasons why projects get into trouble

- Objectives are not well defined
- Communication is inadequate
- Trouble is diagnosed at vulnerable times
- Projects are “near death”



There has to be a better way!

- Educate emerging scientists/managers in the basics of project management
- Transfer knowledge and experience from experienced scientists/managers to those in emerging projects
- Emphasize value of leadership and teamwork



What is a project?

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

<https://www.pmi.org/about/learn-about-pmi/what-is-project-management>

- **Temporary** = defined start and end dates, which limit scope and resources
- **Unique** = specific, desired, non-routine outcome

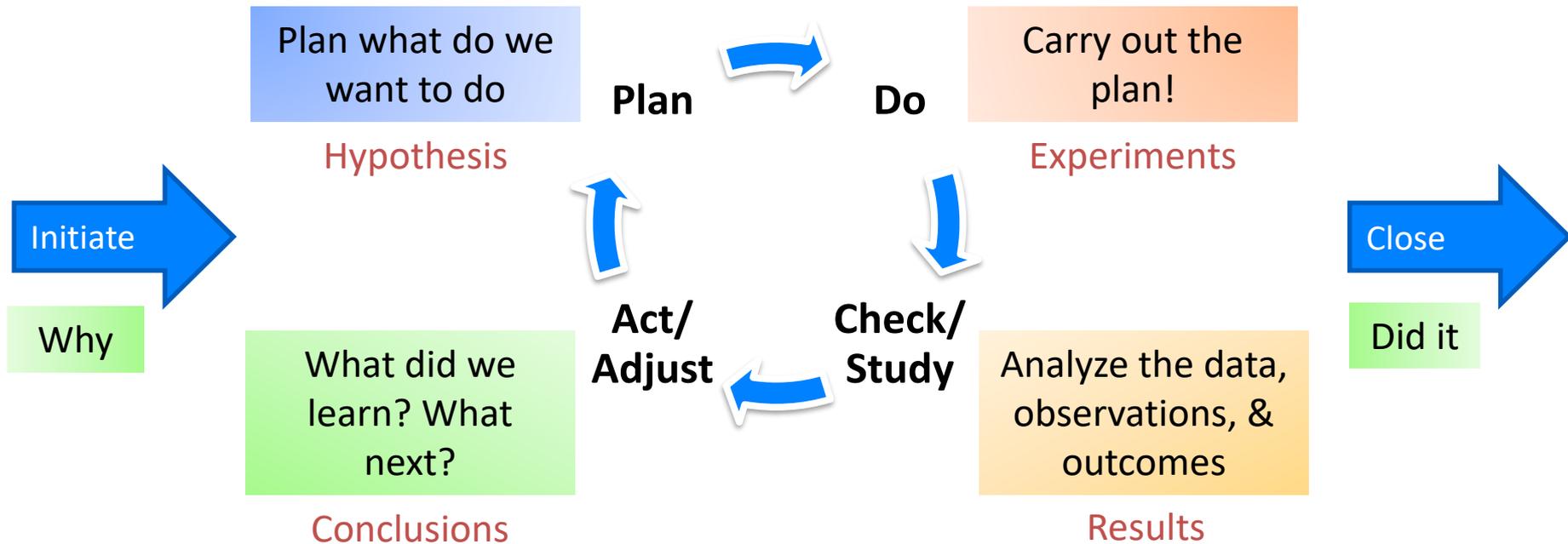
What is project management?

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

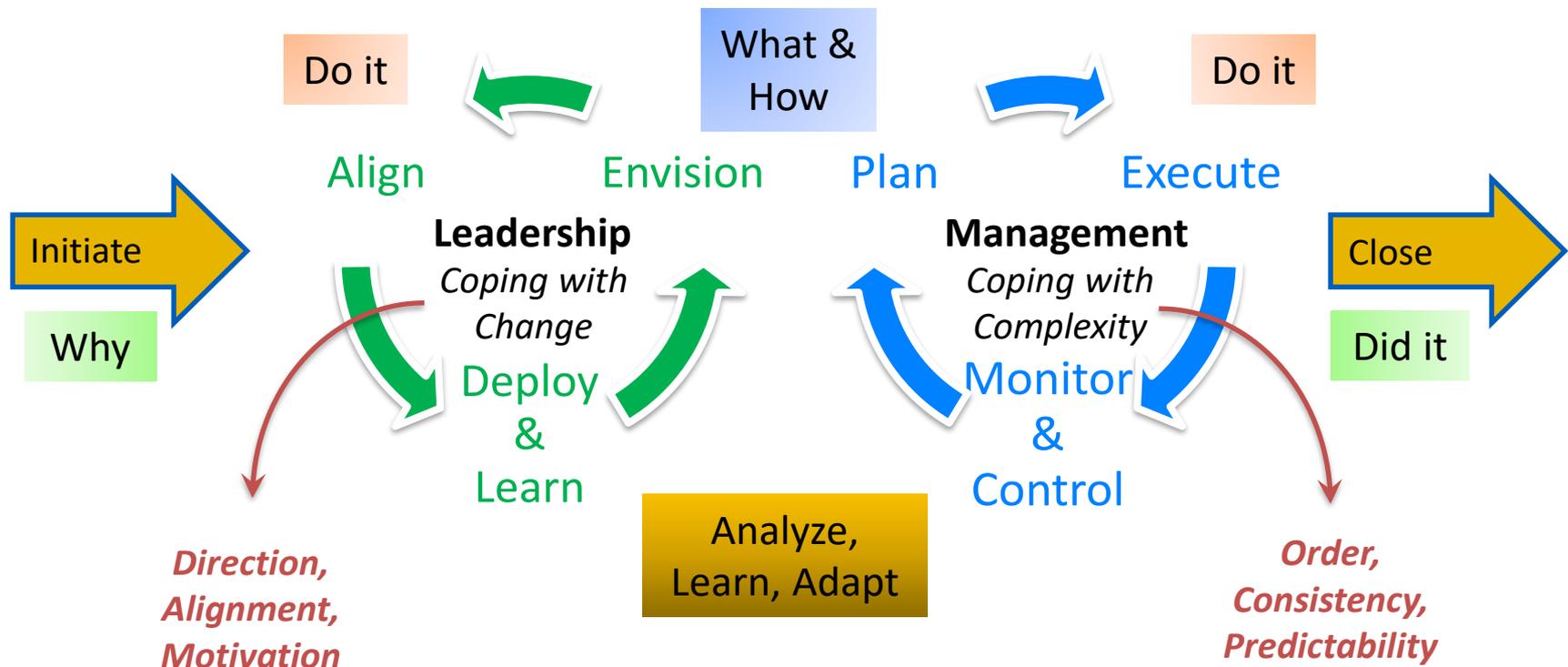
<https://www.pmi.org/about/learn-about-pmi/what-is-project-management>

- Focus on goals and outcomes
- Promote effective communication
- Predictably meet project requirements within established constraints

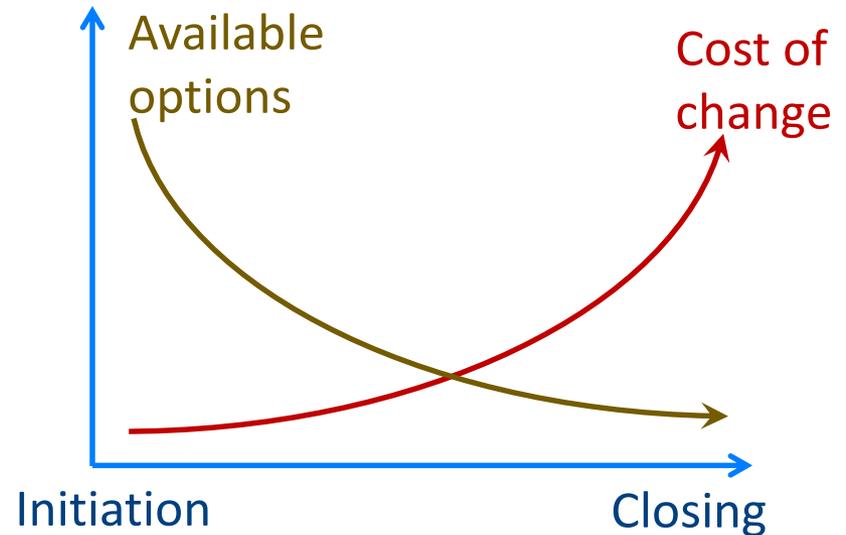
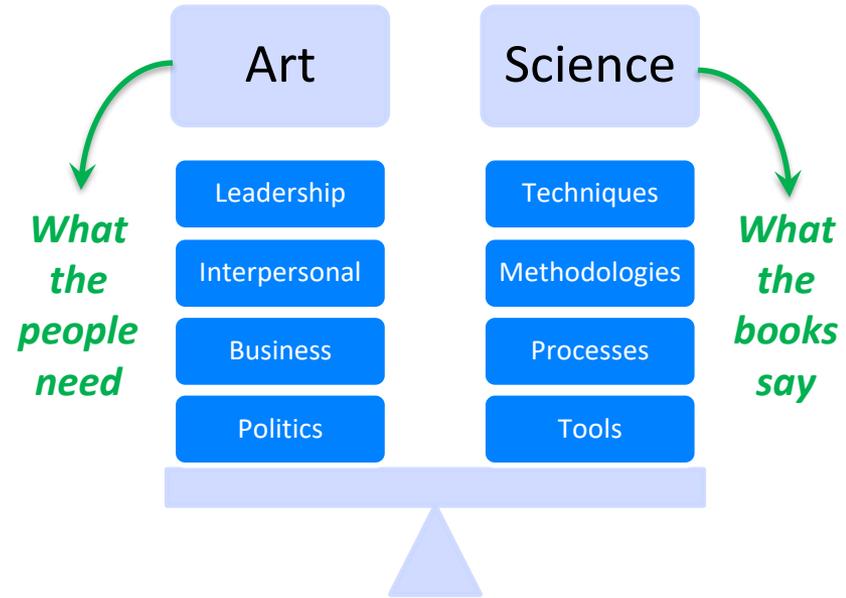
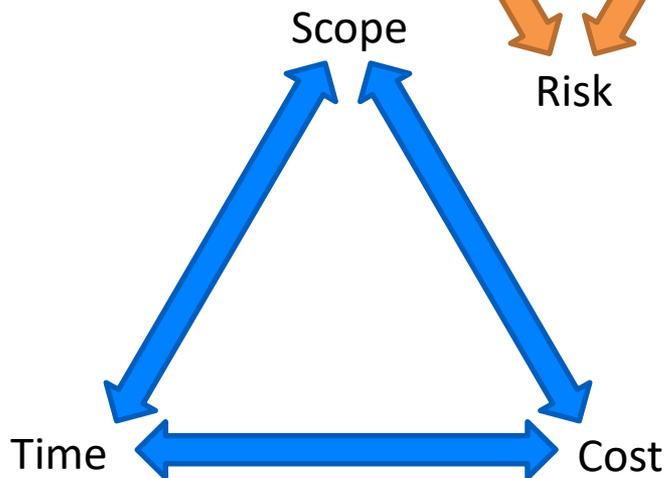
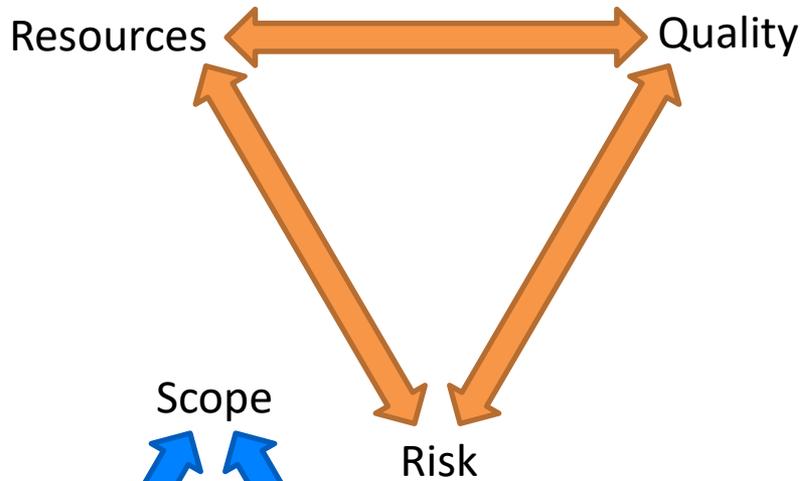
The project management process is analogous to the scientific method



Remember that leadership is an integral part of project management



Project management is about balance...



Successful project managers are:

- **Visionary**
 - See the big picture
 - See both the forest and the trees
 - Don't attempt to be omniscient
- **Reliable**
 - Get things done
 - Say what you mean; mean what you say
- **Organized**
 - Be pragmatic
 - Seek alternatives
 - Keep the ball rolling
- **Flexible**
 - Adapt, overcome, improvise
 - Wear the right hat at the right time

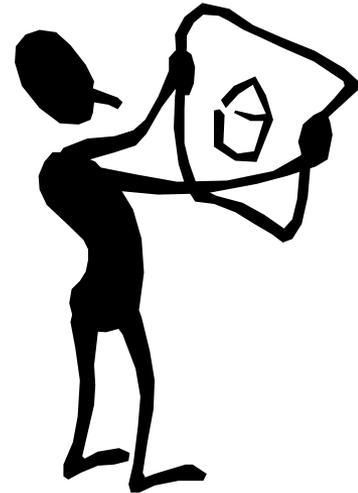
What are the secrets to success?

- **Initiation** is where you establish your **scope of work**. Lack of agreement or understanding will cause *scope creep*.
- **Planning** is where you gain a better understanding of **what needs to get done** and then **communicate it** to the team and stakeholders.
- **Closing** is when you have agreement from all stakeholders that **the project is finished**.



The planning process is more important than the plan, but make a plan!

- A **workplan** serves as 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?
 - How will you manage **communications**?
 - How will you manage **risk**?
 - How will you manage **change**?
 - What **metrics** will you use to track/measure **progress, quality, and scope**?
 - What are your internal and external **dependencies**?
- Remember that a workplan is a **living document**



Understand where you are...

- Avoid using “percent complete”
 - People guess (or lie)
 - People are overly optimistic
 - 80/20 rule: the last 20% takes 80% of the time
 - Work—and meetings—always expand to fill available time
- *Binary completion* is a more accurate measure of progress
 - Is it done? **Yes or No**
 - Create milestones to celebrate progress



Change is inevitable! Period.

- *Accept it* because you cannot stop it.
 - Stakeholders will always change their minds
 - Requirements will always change after a “freeze”
- How you deal with change is what matters!
 - Evaluate changes based on their ability to advance the project objectives
 - **Quantify the impact** of changes in terms of **scope, schedule, cost, resources, quality, risk, ...**
- **Prioritize** changes based on overall impact
 - Let the *customer* prioritize major changes
 - Keep your stakeholders in the loop



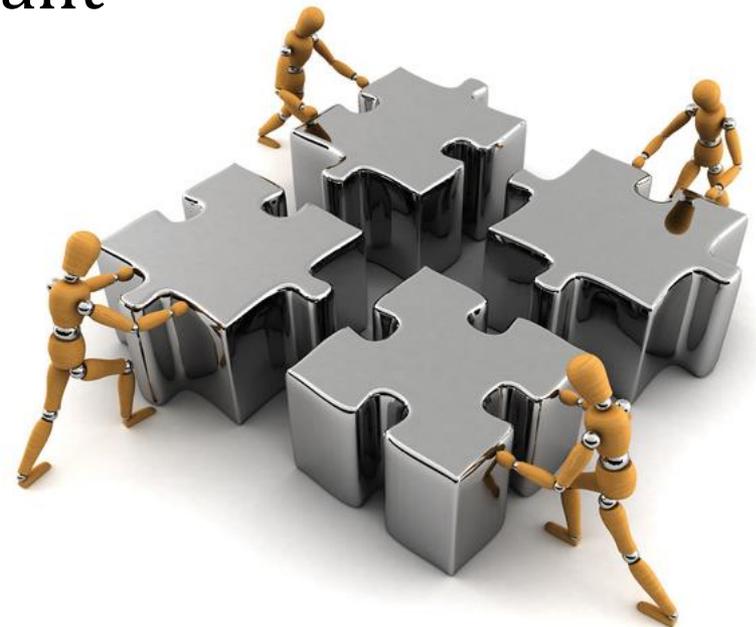
Everything comes with risk

- Bad things can happen, and good things can happen
 - Threats vs. Opportunities
 - The keys are to:
 1. Understand what events or circumstances could hurt or enhance your project, and
 2. Decide what you plan to do about them.
- Create a **risk register**
 - List identified **risks**
 - Estimate **impacts** of realization
 - Generate **contingency plans**



Let's review...

- **Project management** focuses the team on goals & outcomes and provides structure for success
- **Leadership** is always important
- **Flexibility** is critical
- **Planning** is vital
- Actively manage your **risk**
- Always seek **balance**



A few Project Management Lessons I Learned from *Star Trek*

- Non-interference is the Prime Directive
- Keep your phaser set on stun
- Humans are highly illogical
- Live long and prosper
- Infinite Diversity in Infinite Combinations
- Having is not so pleasing a thing as wanting
- Tribbles hate Klingons, and Klingons hate Tribbles
- Enemies, like Romulans, can be cloaked
- Don't put all your senior officers in one shuttlecraft
- Insufficient data does not compute
- When logic fails, trust a hunch



Some Resources and Final Advice

- iDigBio maintains a Project Management Resources wiki page:
www.idigbio.org/wiki/index.php/Project_Management_Resources
- The most valuable and least said **word** in a project manager's vocabulary is "**No**"
- The most valuable and least said **phrase** in a project manager's vocabulary is "**I don't know**"



Thank you!



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