Project Planning & Management

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Project Definition

Wait. What is a project, anyway?

We all have a bad habit of thinking that the products we produce and that our audience interacts with, whether that's a paper, an article, a book, or a digital interface of some kind, is the project.

But the reality is that the project includes everything from your decision to pursue the answer to a specific research question, through the work to find (or create) and use a set of data, to the work to build the end product, and all the decisions that you make along the way.

What is project definition?

Defining your project is about looking at the work from the 5000 foot perspective.

In the end, the project definition will serve as the foundation for all of the work you'll do in creating the final products of that project. Additionally, having done this work, you'll have all the explanation and justification you require when seeking support and funding for work that you want to do.

The 5000 Foot View

What’s your “Why”?

What’s your research question?

What’s your project’s ethos, for you and your fellow scholars creating it and for the audience?

What ethical questions need to be explored?

The 1000 Foot View

Who else has done similar work in your field?

What other projects inspired your interest in this research? re: content, but also look and feel, for a digital product

Who is the audience for the products of this research?

What kind of data do you need? Does it exist already? Where is it, and how will you acquire it? Do you have to create it?

Diving deeper into ethics: how was previous data collected, who is the data about and what effect did the collection have on them, what effect did previous work in this space have on them?

The 500 Foot View

What is your project's goal?

What's the purpose of doing this work?

How does it add to your subject expertise or to a specific audience's knowledge about the topic of the research?

Ethical questions: if there are living people represented in the data, how will they be affected by your work? Who is part of the project team and how will working with the data affect them, how can any harm be mitigated?

Project Planning

The 100 Foot View

Now that your project is fully defined, you’re ready to set the project scope and plan the actual work tasks.

Project Scope

The project scope is based on the project goal.

What exactly does the project need to do to fulfill the stated project goal?

Data Management and Project Preservation

In the process of doing research, you're going to be collecting data. Many grants now require a data management plan, but even if you don't have grant funding for your work, it's best practice to know before you begin work, how you'll manage the data you're collecting, and in what form it will be stored.

Additionally, planning for project preservation should be done before starting work. What exactly do you plan to preserve, and how do you intend to make preservation possible?

Work Tasks

Defining and prioritizing the tasks required to fulfill the project's scope and goal starts here, and continues through the lifecycle of the project.

Some examples of tasks:

- Data collection
- Data cleaning
- Data manipulation
- Data analysis
- Design of the final product
- Content writing
- Coding, for a digital product
- Testing

Questions? Comments?

Project Management

Why do we use project management frameworks?

So we know when we’re finished.

really really. not even kidding.

A Little History

Waterfall method

Gather all the requirements, analyze them, design the project, create the project, evaluate and test the project, put the project into operation.

Shortcomings

- It depends on having all the information up front and none of that information ever changing while the project is ongoing
- If anything does change, it’s nearly impossible to change direction without incurring huge costs or delaying the project significantly.
- It loads all the risk onto the very end of the project, when you can’t do much of anything to mitigate it.

Along Comes Agile

Based on Lean Manufacturing principles.

1. Eliminate waste.
2. Build quality in.
3. Deliver fast.
4. Optimize the whole.
5. Learn constantly.
6. Keep getting better.
7. Respect people.

Agile Manifesto

We are uncovering better ways of developing
software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

That is, while there is value in the items on
the right, we value the items on the left more.

http://agilemanifesto.org/

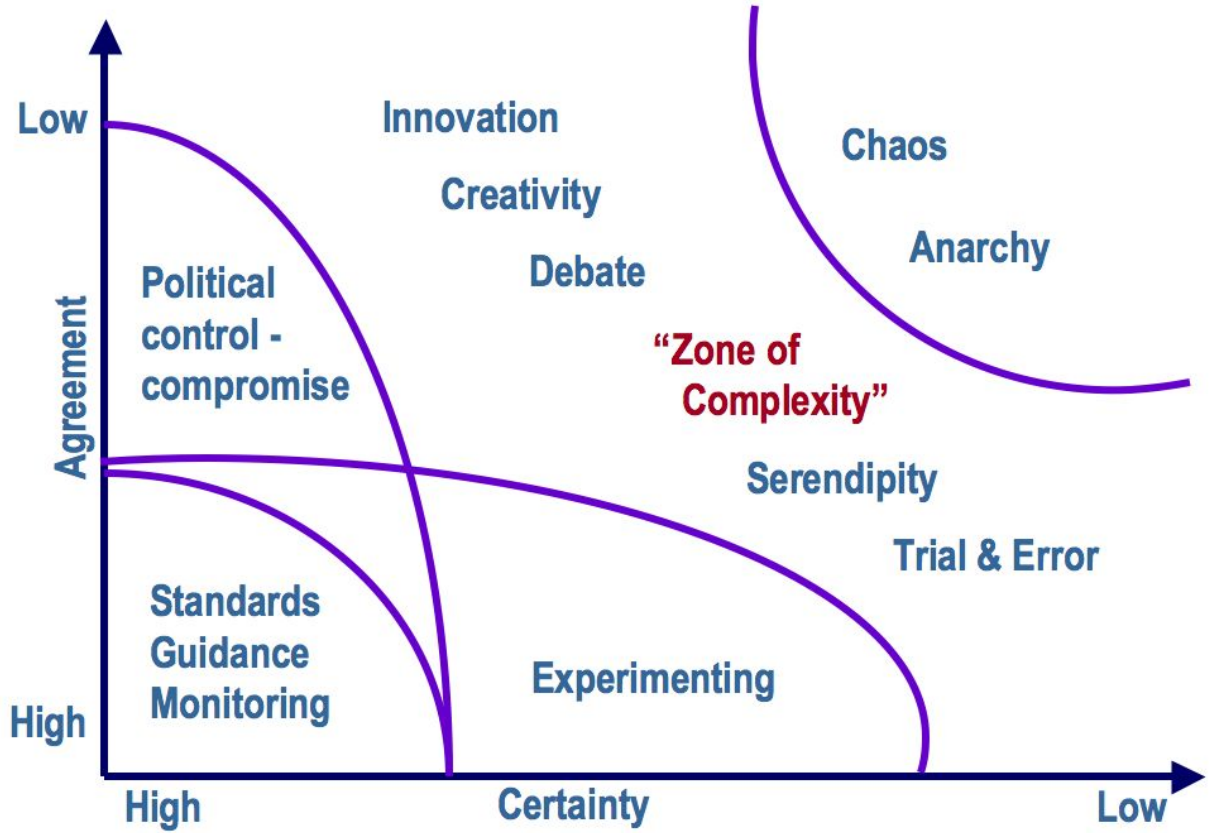
Translating from Programming to Academic Project

When applying agile methods to non-programming projects, the manifesto is still relevant.

Reduced to essentials, the manifesto is this:

- Projects are about people (creators, viewers, users), so communication needs to be weighted more heavily than adherence to a fixed project plan, which reduces flexibility.
- Projects must actually solve the design question defined as their goal and explicate the scholarly argument you intend, and that your viewers/users need for you to answer and/or explain.

Stacey Matrix



Created by Ralph Douglas Stacey, 2011

How to Use Agile (what you actually came here for!)

Define:

- **Project Goal** – Who's the project for? What is it supposed to do for that audience? What is its purpose?
- **Project Scope** – What exactly must the project do to fulfill its stated Goal?

Based on those two things:

- What are the tasks that must be done?
- How should those tasks be prioritized?
- Which tasks should be grouped together into working sprints of activity?

A Note About Tasks

Tasks should be as granular as possible.

Adults are really good at bundling up lots of small tasks and labeling the bundle as if it were a single task. But we're really horrible at remembering how many small tasks are in a bundle, and at how much time is required for each of those smaller tasks.

Tip: Find and break apart those bundles by explaining the tasks as if you were talking to an alien who doesn't understand anything, or as if you were talking to a 5 year old who doesn't yet mentally bundle up tasks.

Wait. What's a "sprint"?

Agile teams work in short blocks of work, usually 2-3 weeks in length.

The ideal for a sprint is to define a specific list of tasks that you'll do, ending the sprint with the next usable iteration of the project completed.

For example, if your project involves georectifying 10 maps so that you can include them in a Story Map, a sprint might be to get that georectification process completed for 5 of the maps and write the text that will provide context for those maps in the project.

Try your best to only select items for the current sprint that you can actually complete in the time box of the sprint.

Agile Workflow

It’s iterative. It allows changes without incurring huge costs in time and effort. You’re evaluating and reviewing as you go, so you find and solve issues sooner.

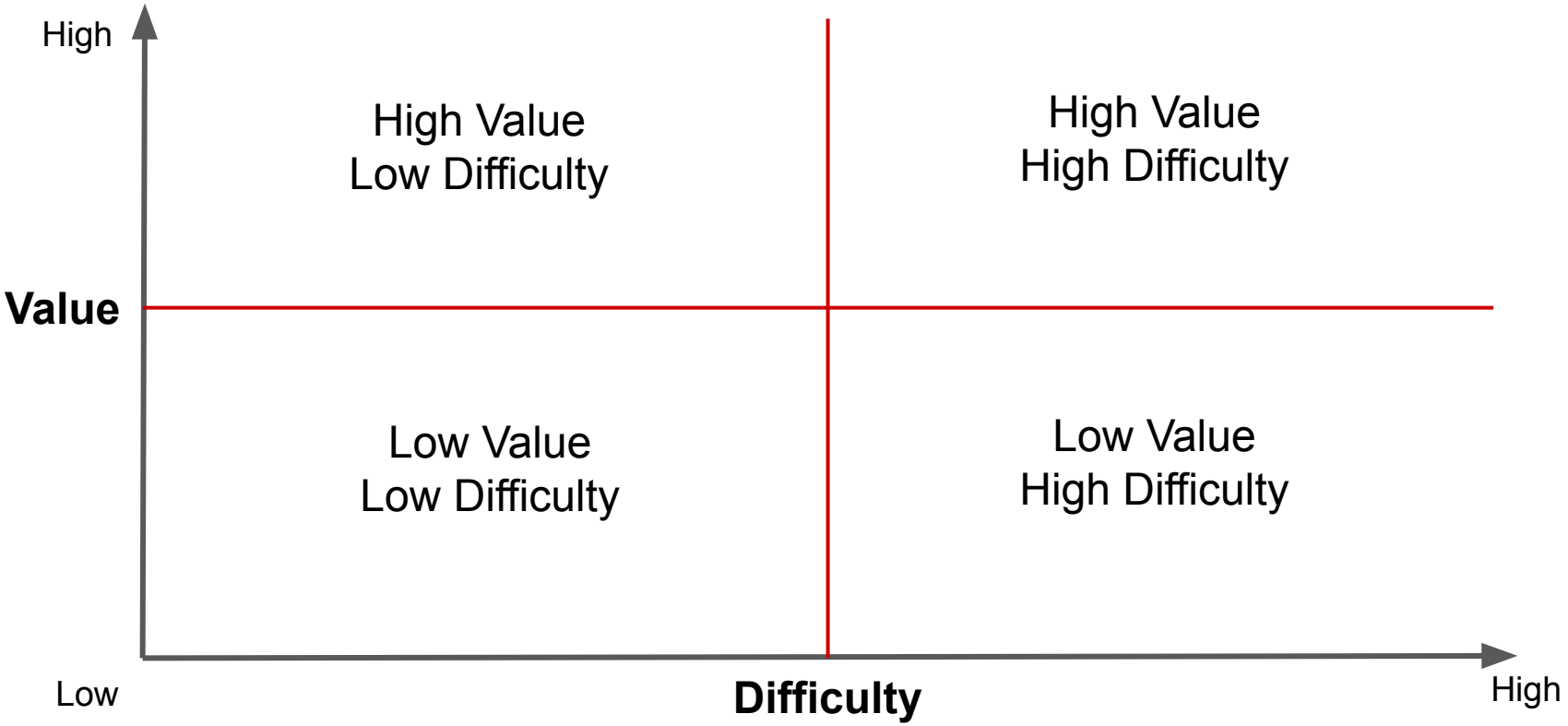
“Risk” Poker

This is one method to start building and ordering your backlog.

1. List project tasks on Post-It type notes or index cards, and as a group exercise, put them in order of easiest to hardest, ranked in relation to each other.
2. Label the tasks with your assigned difficulty ranking.
3. Decide on the number of hours or days your difficulty rankings define.
4. Group the tasks that need to be completed together.
5. Label the task groups with their priority value.
6. Put the groups in priority order, highest to lowest.

Your backlog will need further refinements as you work, and some tasks will turn out to be bundles that need to be separated.

“Risk” Matrix


High
Value
High Value
Low Difficulty
High Value
High Difficulty
Low Value
Low Difficulty
Low Value
High Difficulty
Low
Difficulty
High

Once you have your prioritized list, you have your starting place.

Time for

KANBAN!

Backlog	Current Sprint	Doing	Review	Done
The whole list of tasks	The tasks from the backlog you're working on this sprint only	The task you're currently working on	Tasks that are done, but you want to review	Tasks that are complete for this sprint
In priority order	Optional column, but I find it makes the work less overwhelming		Optional column, but helpful when a group is working together	
Most important at the top, ready to be worked on				

Tips and Tricks

1. Always be reviewing your backlog! Have requirements changed? Have priorities shifted? Are the backlog items granular enough? Do they have the right difficulty level assigned to them? At the end of EVERY sprint, check to be sure you're working on the next right thing.
2. At the end of every sprint, show someone what you've got so far. This could team members, other students in a class, advisors/professors/instructors, or friends. The point is build accountability in!
3. Always be on guard for the dreaded SCOPE CREEP*. It's the death of many a project. Once you've established the backlog, stick to the backlog. There's always Version 2.0, or a notes page in your project that outlines further work that could be done.
4. Project management is about managing THE WORK and PROCESS, not THE PEOPLE. At least for most of us.

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There’s one, and exactly one, caveat about scope creep.

As you work on your early project sprints, if you’ve genuinely discovered something that’s missing **and** is REQUIRED for your project to achieve its Goal, then you’ll need to figure out which tasks from the backlog, comprising an equal amount of work as the new tasks being added, will be dropped from the project. Not could be or might be dropped. Will be dropped.

Hint: anything at the bottom of the prioritized backlog is fair game for dropping from the project.

Questions? Comments?

Thank you!

Please let me know if you have any questions or would like to chat about project management. I'm happy to assist!

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