

As of April 25, 2019

This is a course about managing complexity to achieve audacious goals. From Apollo, and from the contemporaneous Soviet Space Program, we see many things that affect this process:

Some things that help:

- Clear goals
 - A longer term vision is needed to go beyond initial foals
- Clear communication
- Urgency
- Predictable outcomes
- Complicated problems sometimes have simple solutions
- Planning has many benefits, although planning along is not enough

Some things to be overcome:

- You need to be able to pay for it -- no bucks, no Buck Rogers
 - a. Things will go wrong, and you will also need resources to deal with that
- The project management triangle: you can control at most 2 of capability, cost, schedule
- Things involving people are harder to predict
- Unknown unknowns are much bigger problems than known unknowns

Decisions are not simple things:

- Nobody knows everything, and you need more than knowledge to make good decisions
- All decisions are political, not just the political ones
- All decisions are practical, not just the practical ones
- The circumstances very strongly influence the decisions that can be made
- The structure of the organization(s) working on the task has serious consequences
 - Checks and balances can help to minimize the number of bad decisions
- Who is making the decision matters

This list is still incomplete!