1 Project Risk: Introduction

- Can't see future; project plan based on estimates/assumptions.
- Some estimates/assumptions will not turn out as planned.
- Goal of managing risk is:
  - not to avoid risk.
  - to know what risks to take,
  - and plan accordingly.
- Idea is to make risk management proactive rather than reactive.
- Crisis management/firefighting are reactive ways of handling risk.
- Mistakes in managing risk:
  - not understanding benefits of risk manamagent: making risky decisions without realizing the potential dangers.
  - not providing time for risk management
  - not using a standardized approach to accessing the risk.
- Successful risk management
  - commitment by all stakeholders
  - stakeholder responsibility:
    * risks should have owners,
    * someone who will monitor the project, and
    * make reports to project governance.
  - recognizing that different projects often have different types of risk.
- Effective risk management: project risk management process
  - Create a risk plan
  - Identify risks
  - Analyze risks
  - Develop risk strategies
  - Monitor and control risk
  - Respond and evaluate risk
- Creating a risk plan

    - Ensures everyone's aware of risk planning
    - Ensures everyone's on board and committed.
    - Ensures resources such as time/people/technology are available

- Identify risks/opportunities

    - Identify the risk, not the symptom.
    - the primary risk is that measurable-organizational-value is negative.
    - that can be result of budget, scope, schedule, quality.
    - each of those in turn could be due to technology, people, organizational, environmental, etc.
    - internal vs external risks
    - knowns-knowns (things we know we know),
    - known-unknows (things we know we don't know),
    - unknown-unknowns (thins we don't know we don't know).
    - mitigation to risk: end project, re-evaluate project process, etc.

- Analyze Risk

    - Goal is to place a dollar amount (or some other value indicator) on each risk.
    - Model the kinds of errors/problem we can encounter.
    - Long tails.
    - Expected value: weighted average of risk probability and value if the risk happens.
    - Decision tree: path to a value

- Develop risk strategies

    - risk analysis narrows the list to risks worth doing something about.
    - risk strategies document what should be done in case the scenario happens.
    - e.g. risk falling behind schedule: hire more people or cut scope?

- Monitor and control risk

    - have a mechanism in place to detect when things don't go right.
    - triggers
    - risk audits
    - risk reviews
    - risk status meetings

- Respond and evaluate response to risk
  - when a risk-trigger happens, risk owner is notified and may take appropriate action.
  - the outcome of risk response will either be favorable or unfavorable.
  - must learn from mistakes: lessons learned can lead to better analysis, detection, and response in the future.