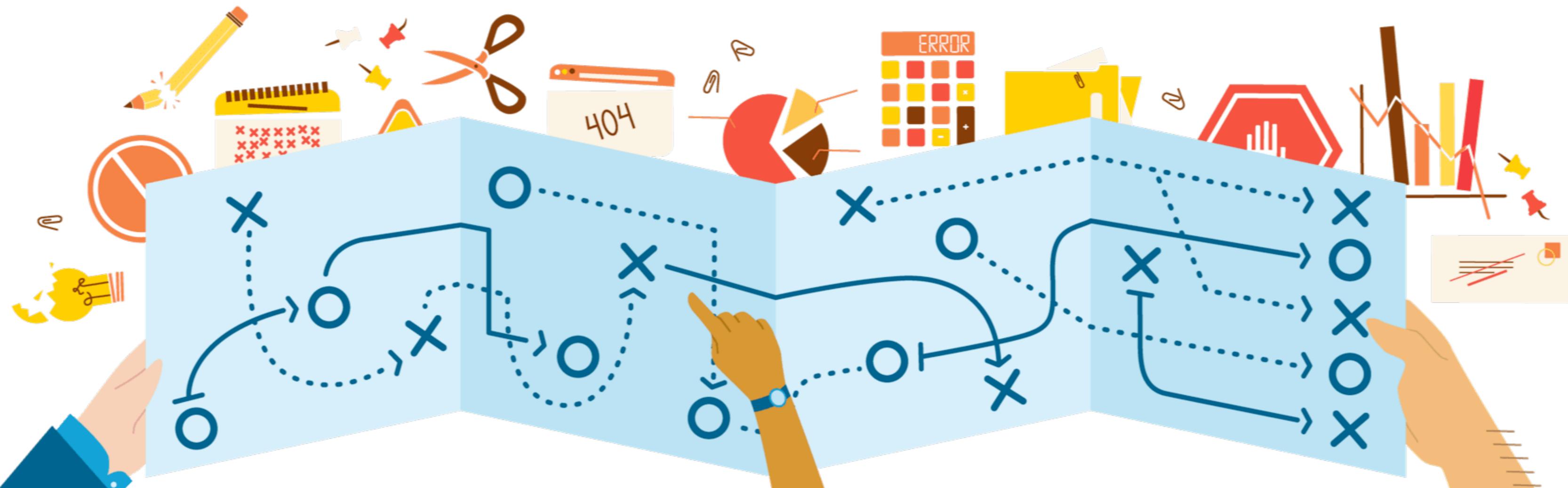# CHAPTER 03

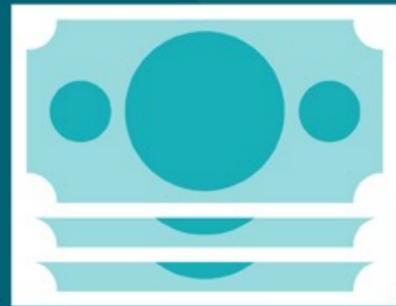Project Management and Teamwork Skills

# GOALS

- Your over-arching goal is always "Solve the problem," whatever the problem happens to be

- HOW do you want to solve it?

- Speed? Reliability? Durability? Are these all equally important? How do you decide what ranks higher?

- What grade do you want to achieve?

# ROLES

- Not everyone needs to do everything
- It's usually not even possible
  - Who's good at what?
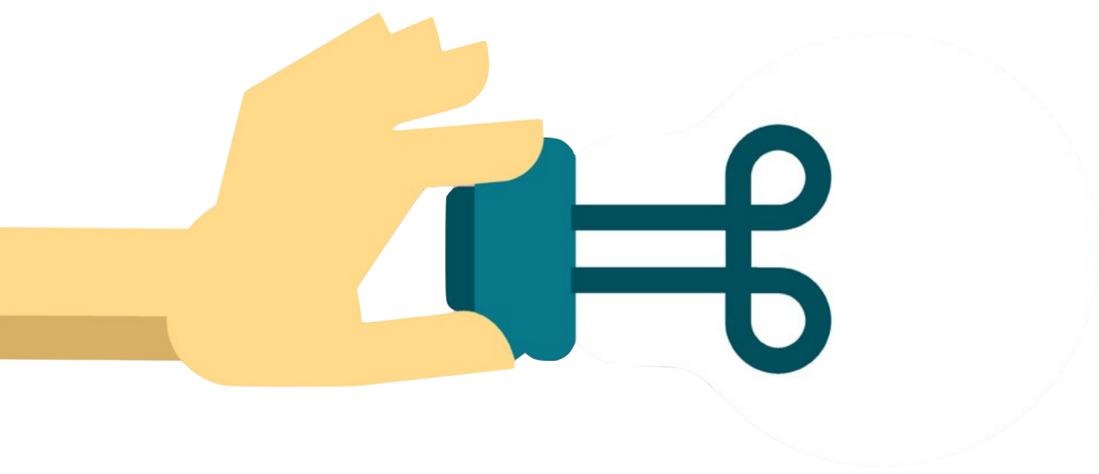- Overlappping responsibilities
- Nothing falls through the cracks!

- What's worse than everybody doing their own thing?

- Everybody doing their own thing and not letting anybody else know about it

- Not having established procedures results in either duplication of efforts or missed deadlines…or both

# PROCEDURES

# REDUNDANCY
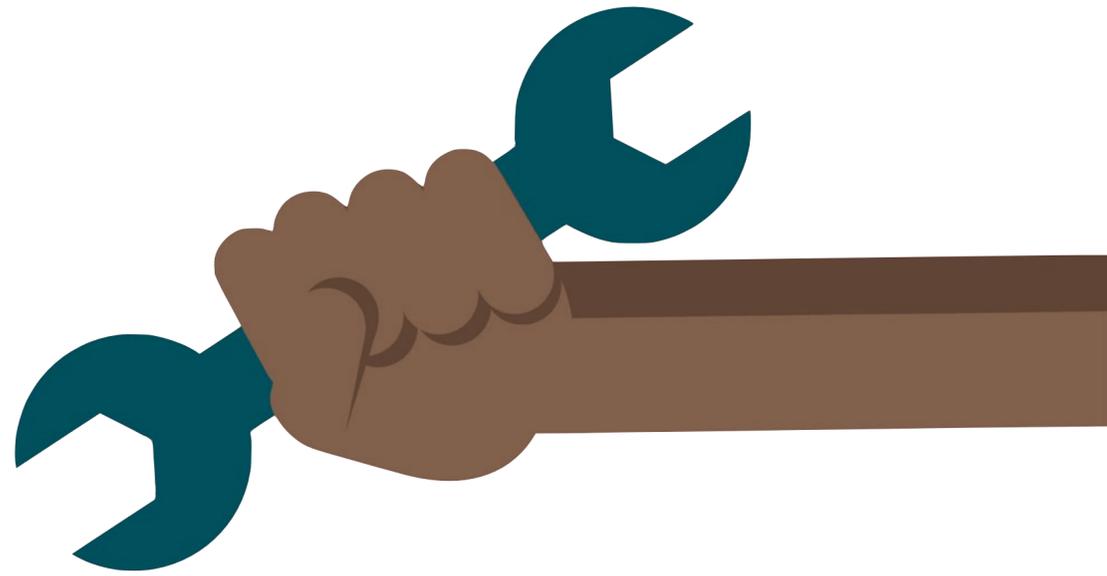
- Everyone can't just bring one thing to the table

- Everyone can't just be solely responsible for one portion of the product

- Plan for the worst-case scenario

# RELATIONSHIPS

- Make it work!

- If it's not working, you should be prepared to make it work anyway

- If everybody gets along, that's great

- But you need to decide at the beginning what your team will do if people disagree

- You need to know in advance what your team will do if someone does not fulfill their obligation to the team

# WHAT DO YOU DO?

- You're on a team with two other members

- The project is due next week

- Everyone has agreed-upon tasks to complete

- One team member has completely stopped communicating with the group

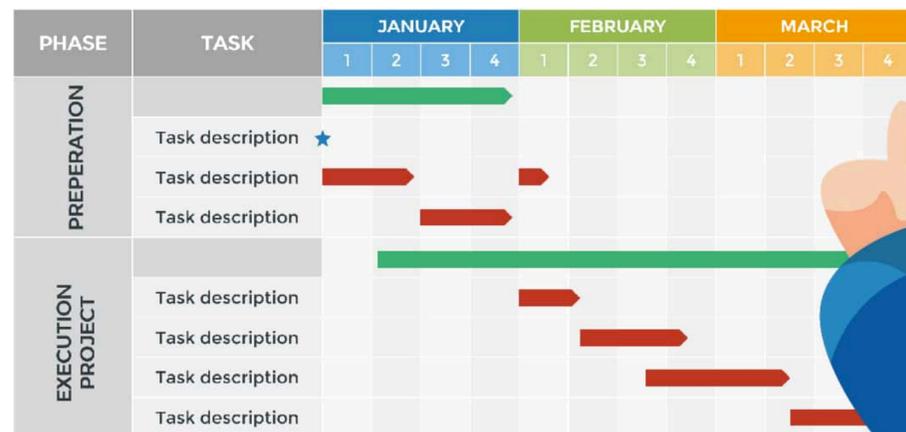- List two strategies for addressing this problem

# LEADERSHIP

- There are many ways to structure leadership

- Decide as a team what sort of leadership will be most effective

- When your team reaches a consensus, everyone needs to be on board with it
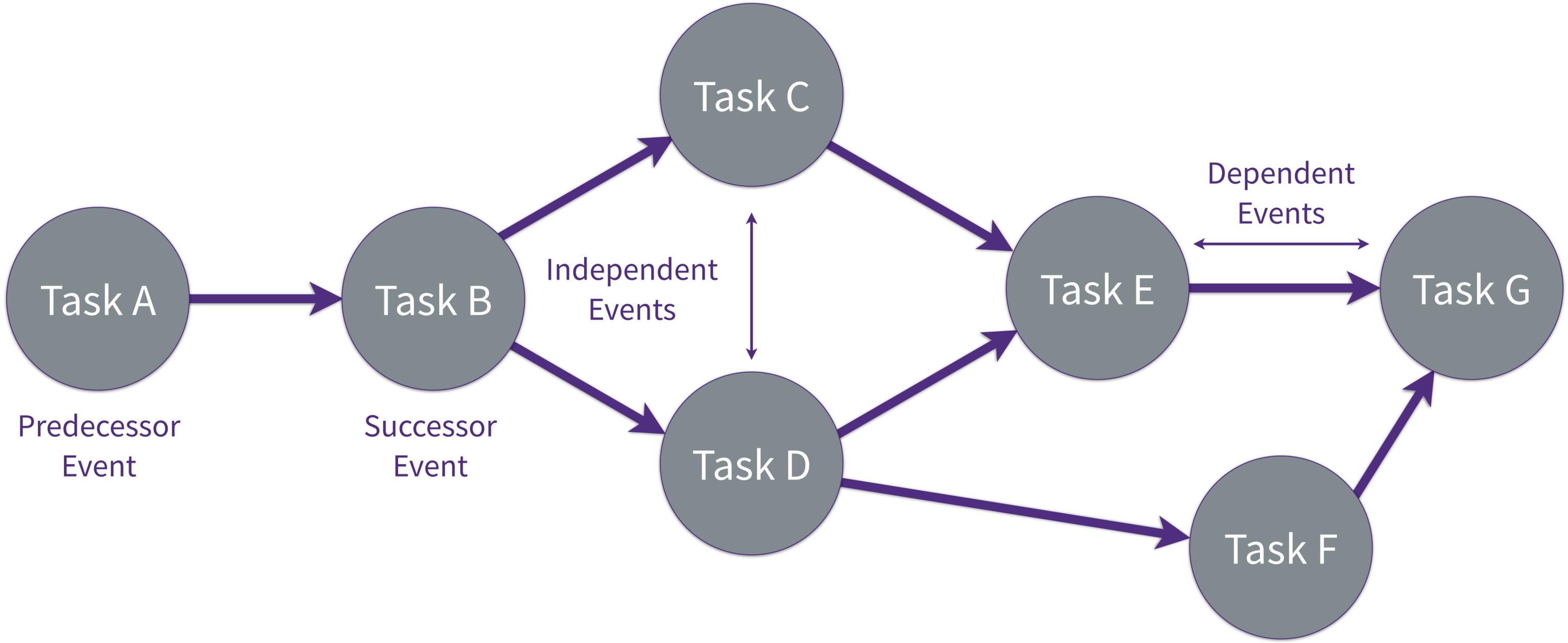
# GOLEMAN LEADERSHIP STYLES

- This is frequently used in the business world
- Is there one style that is always the best?
- Can a leader exhibit more than one style?

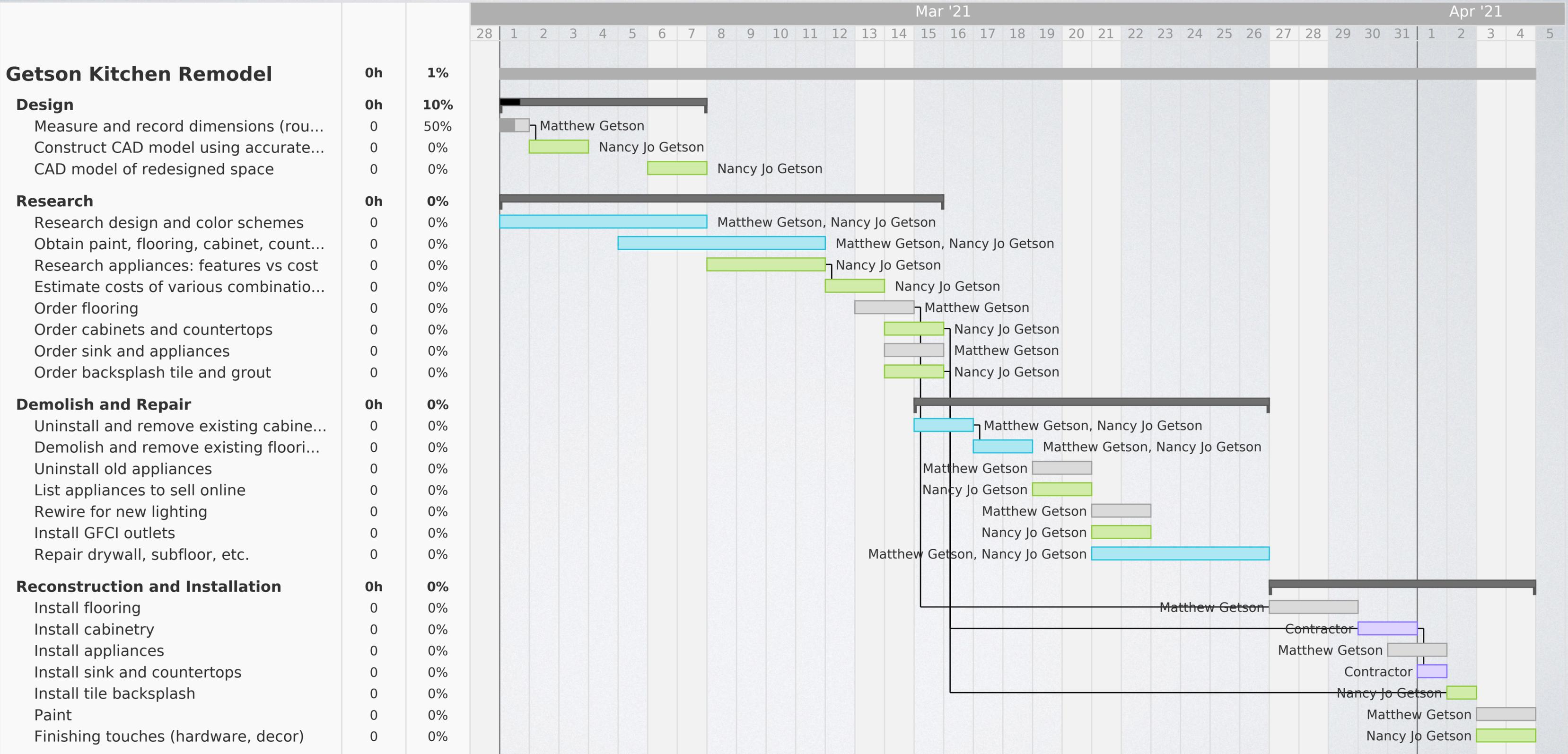| Style | Coercive | Authoritative | Affiliative | Democratic | Pacesetting | Coaching |
|---|---|---|---|---|---|---|
| • The leader's modus operandi | • Demands immediate compliance | • Mobilizes people toward a vision | • Creates harmony and builds emotional bonds | • Forges consensus through participation | • Sets high standards for performance | • Develops people for the future |
| • The style in a phrase | • "Do what I tell you." | • "Come with me." | • "People come first." | • "What do you think" | • "Do as I do, now." | • "Try this." |
| • Underlying emotional intelligence competencies | • Drive to achieve, initiative, self-control | • Self confidence, empathy, change catalyst | • Empathy, building relationships, communication | • Collaboration, team-leadership, communication | • Conscientiousness, drive to achieve, initiative | • Developing others, empathy, self-awareness |
| • When the style works best | • In a crisis, to kick start a turnaround, or with problem employees | • When changes require a new vision, or when a clear direction is needed | • To heal rifts in a team or to motivate people during stressful circumstances | • To build buy-in or consensus or get input from valuable employees | • To get quick results from a highly motivated and competent team | • To help an employee improve performance or develop long-term strengths |
| • Overall impact on climate | • Negative | • Most strongly positive | • Positive | • Positives | • Negative | • Positive |

PERT AND GANTT CHARTS

# STRUCTURE OF A PERT CHART

|  |  |  | Mar '21 |  |  | Apr '21 |
|---|---|---|---|---|---|---|
| **Getson Kitchen Remodel** | 0h | 1% | | | | |
| **Design** | 0h | 10% | | | | |
| Measure and record dimensions (rou... | 0 | 50% | Matthew Getson | | | |
| Construct CAD model using accurate... | 0 | 0% | Nancy Jo Getson | | | |
| CAD model of redesigned space | 0 | 0% | Nancy Jo Getson | | | |
| **Research** | 0h | 0% | | | | |
| Research design and color schemes | 0 | 0% | Matthew Getson, Nancy Jo Getson | | | |
| Obtain paint, flooring, cabinet, count... | 0 | 0% | Matthew Getson, Nancy Jo Getson | | | |
| Research appliances: features vs cost | 0 | 0% | Nancy Jo Getson | | | |
| Estimate costs of various combinatio... | 0 | 0% | Nancy Jo Getson | | | |
| Order flooring | 0 | 0% | Matthew Getson | | | |
| Order cabinets and countertops | 0 | 0% | Nancy Jo Getson | | | |
| Order sink and appliances | 0 | 0% | Matthew Getson | | | |
| Order backsplash tile and grout | 0 | 0% | Nancy Jo Getson | | | |
| **Demolish and Repair** | 0h | 0% | | | | |
| Uninstall and remove existing cabine... | 0 | 0% | | Matthew Getson, Nancy Jo Getson | | |
| Demolish and remove existing floori... | 0 | 0% | | Matthew Getson, Nancy Jo Getson | | |
| Uninstall old appliances | 0 | 0% | | Matthew Getson | | |
| List appliances to sell online | 0 | 0% | | Nancy Jo Getson | | |
| Rewire for new lighting | 0 | 0% | | Matthew Getson | | |
| Install GFCI outlets | 0 | 0% | | Nancy Jo Getson | | |
| Repair drywall, subfloor, etc. | 0 | 0% | | Matthew Getson, Nancy Jo Getson | | |
| **Reconstruction and Installation** | 0h | 0% | | | | |
| Install flooring | 0 | 0% | | | Matthew Getson | |
| Install cabinetry | 0 | 0% | | | Contractor | |
| Install appliances | 0 | 0% | | | Matthew Getson | |
| Install sink and countertops | 0 | 0% | | | Contractor | |
| Install tile backsplash | 0 | 0% | | | Nancy Jo Getson | |
| Paint | 0 | 0% | | | Matthew Getson | |
| Finishing touches (hardware, decor) | 0 | 0% | | | Nancy Jo Getson | |

# PREPARE A GANTT

- Use the templates in the shared Google drive
- Choose a template, then download it
- Or download them all, then decide
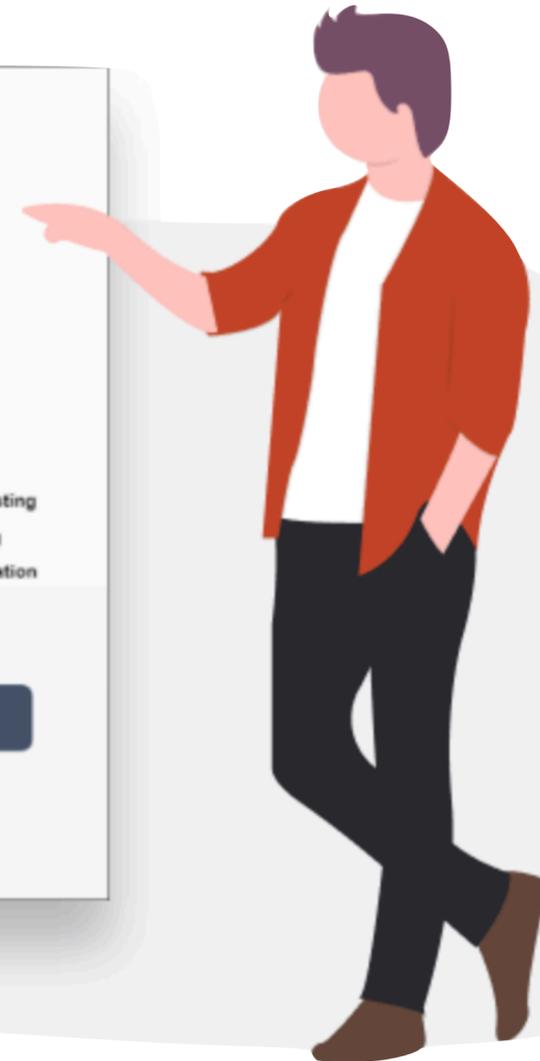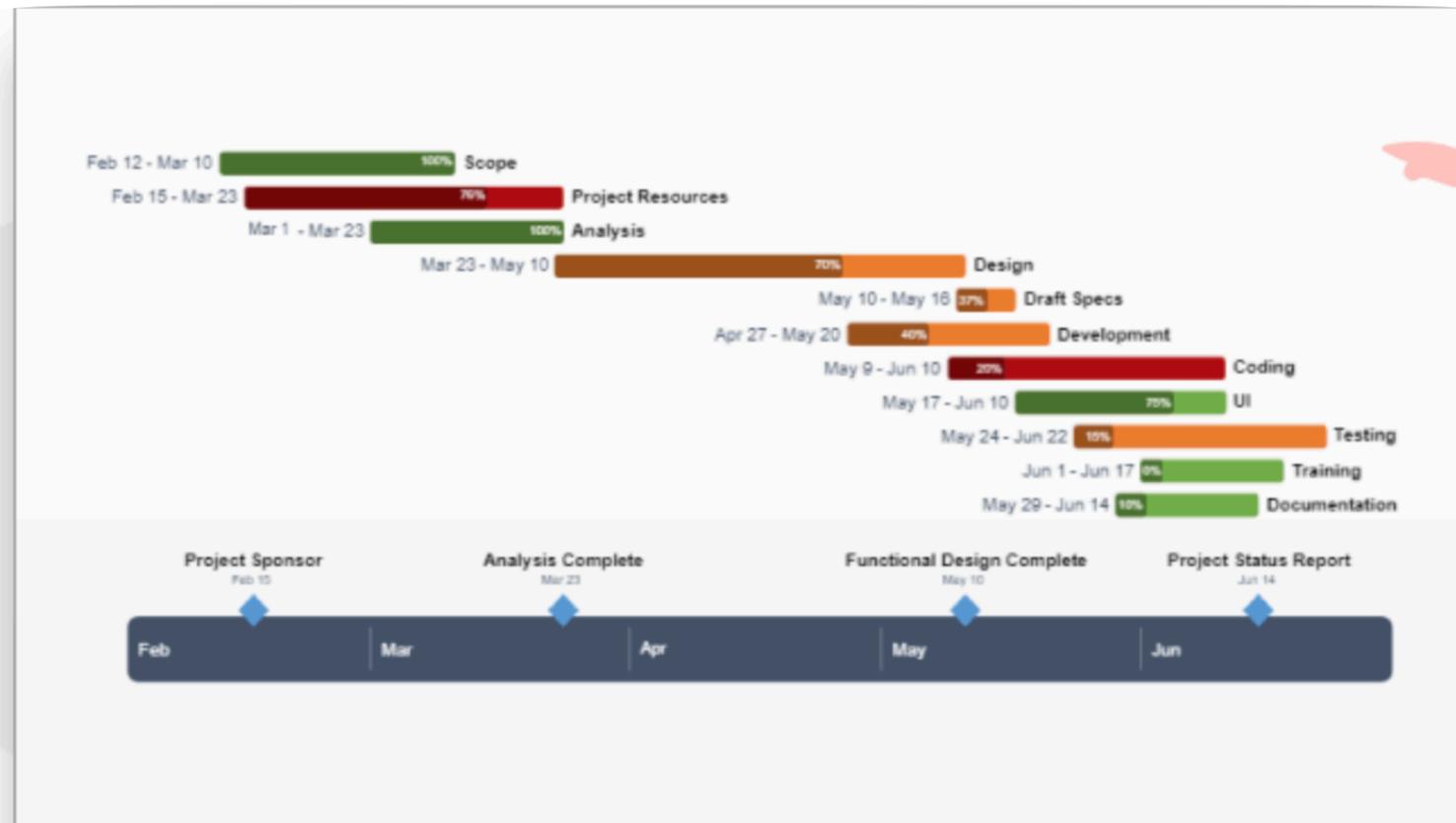
- Make a copy of the Google sheet template and save it to your own drive

- Whatever, please just do not try to edit the templates stored in the shared drive

# DOCUMENTATION

- Design Notes
- Lab Data/ Records
- Meeting Minutes
- White Papers
- Journal Articles
- Conference Proceedings
- Legal/Patent Applications
- Promotional and Marketing

# WORK IN PROGRESS

- Design Notes
  - Sketchbook
  - Engineering Paper
  - Note-taking or outlining software
- Lab Data / Records
  - Sketchbook
  - Bound lab notebook
  - Data collection software
  - Spreadsheet
  - Database software
  - The program you wrote yourself to analyze your data because there isn't a product available that does what you need to do!
- Meeting Minutes
  - Paper & pen; sketchbook
  - Bound notebook
  - Note-taking or outlining software
  - Video conferencing software
  - Shared multi-author documents

- White Papers
- Journal Articles
- Conference Proceedings
- You're going to need every communication tool in your toolkit, and you'll need to effectively and accurately include:
- Text: Clear, well-written and grammatically correct
- Figures: Photographs, technical drawings, charts, graphs
- Tables: Well-organized and clearly annotated
- Equations: Properly expressed using mathematically accepted notation
- Citations: Footnotes, endnotes, bibliography, using the standard format for the specific journal)

# PRESENTING

# YOUR WORK

# PROTECTING YOUR WORK

- Legal/Patent Applications

- Promotional and Marketing Materials

- Much of this is going to be out of your hands

- You are still responsible for the truthfulness and accuracy