Project Management

DR. GRACE LA TORRA, PMP

THE SEATTLE SCHOOL OF THEOLOGY AND PSYCHOLOGY

Terminology

A few terms:

- PMI: Project Management Institute (pmi.org)
- PMBOK: Project Management Body of Knowledge
- BABOK: Business Analysis Body of Knowledge
- Certifications:
  - CAPM: Certified Associate in Project Management
  - PMP: Project Manager Professional

Project Management Process Map (PMBOK Guide 5th Edition)

	Integration	Scope	Time	Cost	Quality	Human Resources	Communicaton	Risk	Procurement	Stakeholder	
Initiating	Develop Project Charter									Identify Stakeholders	Initiating
Planning	Develop Project Management Plan	Plan Scope Management Collect Requirements Define Scope Create WBS	Plan Schedule Management Define Activities Sequence Activities Estimate Activity Resources Estimate Activity Durations Develop Schedule	Plan Cost Management Estimate Costs Determine Budget	Plan Quality Management	Plan HR Management	Plan Communication Management	Plan Risk Management Identify Risks Perform Qualitative Risk Analysis Perform Quantitative Risk Analysis Plan Risk Responses	Plan Procurement Management	Plan Stakeholder Management	Planning
Executing	Direct and Manage Project Work				Perform Quality Assurance	Acquire Project Team Develop Project Team Manage Project Team	Manage Communications		Conduct Procurements	Manage Stakeholder Engagement	Executing
Controlling	Monitor & Control Project work Perform Integrated Change Control	Validate Scope Control Scope	Control Schedule	Control Costs	Control Quality		Control Communications	Control Risks	Control Procurements	Control Stakeholder Engagement	Controlling
Closing	Close Project or Phase								Close Procurements		Closing

proj·ect

noun

präj¸ekt/

an individual or collaborative enterprise that is carefully planned and designed to achieve a particular aim.

(Google)

CONTROL

communication

A project is:

- One-time effort
- Clear beginning and end

Triple Constraint:

- Time
- Cost
- Scope

Project Constraints:

- Time
- Cost
- Scope
- Risk
- Resources
- Quality

Stakeholders

A project is successful when it achieves its objectives and meets or exceeds the expectations of the stakeholders.

Adrienne Watt

Stakeholders

"an individual, group, or organization, who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project"

PMI

Types of Stakeholders

- Executive Sponsor
- Functional Lead
- Functional Resource
- Technical Lead
- Technical Resource
- Project Manager
- Customer

It is important to identify stakeholders before doing anything else!

Project Charter

What is a charter?

It provides a preliminary delineation of roles and responsibilities, outlines the project objectives, identifies the main stakeholders, and defines the authority of the project manager. It serves as a reference of authority for the future of the project.

Wikipedia, https://en.wikipedia.org/wiki/Project_charter

A project charter should:

- Contain the essence of the project
- Provide a shared understanding of the project
- Act as a contract between the project sponsor, key stakeholders and the project team

Wikipedia,https://en.wikipedia.org/wiki/Project_charter

Charter Sections:

- Stakeholders
- Scope
- Assumptions
- Dependencies
- Risks
- Timeline or Major Milestones
- Budget

Scope

- Describes what the project hopes to accomplish, including any deliverables
- Describes what the project is NOT going to accomplish
- Can also describe what may be included in future projects
- Clear boundaries

Assumptions

- Always explore and document your own and others' assumptions
- Reasonable assumptions:
  - Applications: We'll continue to use SalesForce
  - Physical location: We'll be in this building for another ~5 years
  - Personnel: Key staff will be available to complete the project

Dependencies

- It can also be useful to document what the projecting is depending on
- Dependencies can include the following:
  - Software applications
    - SalesForce
    - Word Press
  - Staff availability
  - Other projects

Risks

- Risks can be either positive or negative
- These are often caused by unknowns or the unexpected
  - We know what we know…
  - We know what we don't know…
  - The danger is in the things we don't know that we don't know
- Positive risks are often opportunities
- Always document and communicate as soon as known

A Project Charter communicates expectations between the sponsors, the stakeholders, and the project manager

A Project Charter
delineates healthy boundaries

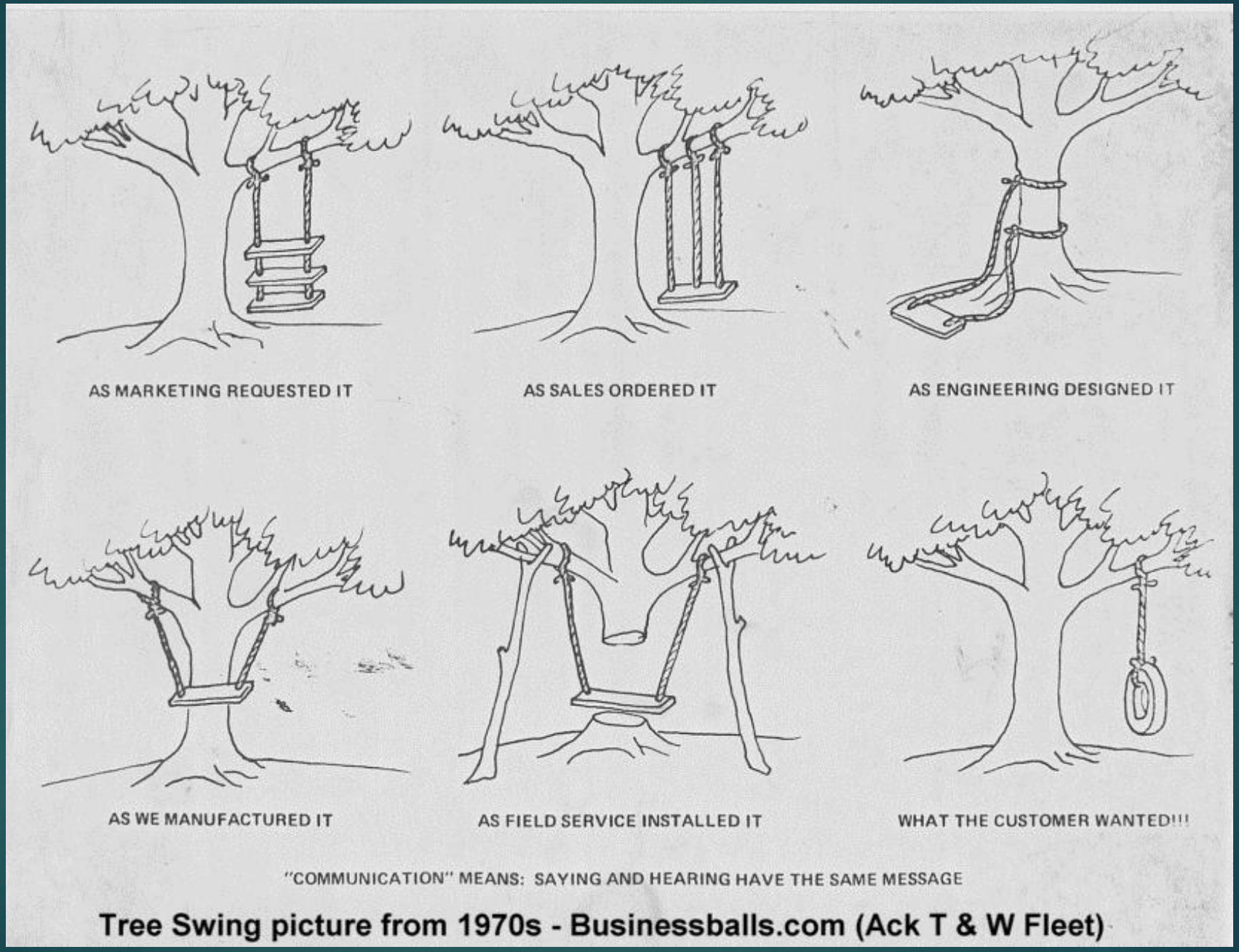
Requirements and Specifications

A requirement is an objective that **must** be met.

(http://philosophe.com/design/requirements/)

Specifications may take several forms. They can be a straightforward listing of functional attributes, they can be diagrams or schematics of functional relationships or flow logic, or they can occupy some middle ground. Specifications can also be in the form of prototypes, mockups, and models.

(http://philosophe.com/design/requirements/)



Tree Swing picture from 1970s - Businessballs.com (Ack T & W Fleet)

Questions to ask:

- Are these the “right” requirements?
- Are they complete?
- Are they compatible?
- Are they achievable?
- Are they reasonable?
- Are they testable?

Ways to Identify Requirements

- Brainstorming
- Focus Groups
- Interviews
- Observation
- Prototyping
- Requirements Workshops
- Survey/Questionnaire
- Document Analysis

(BABOK)

Requirements Documentation

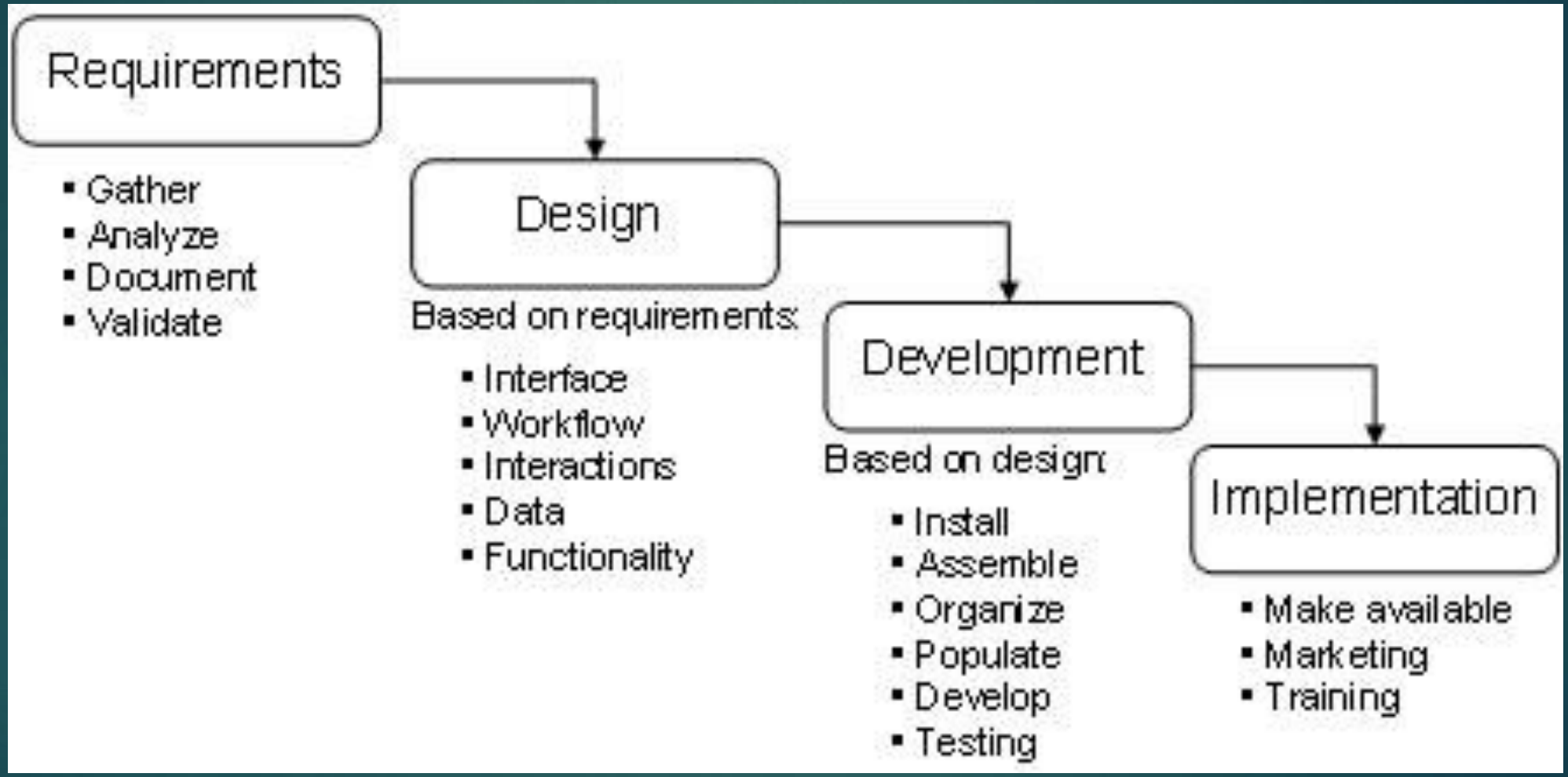
- Can live within the project documentation if not too extensive
- Can be listed in a spreadsheet
- Can be described as user stories

  "As a _____ I want to be able to _____ in order to _____"

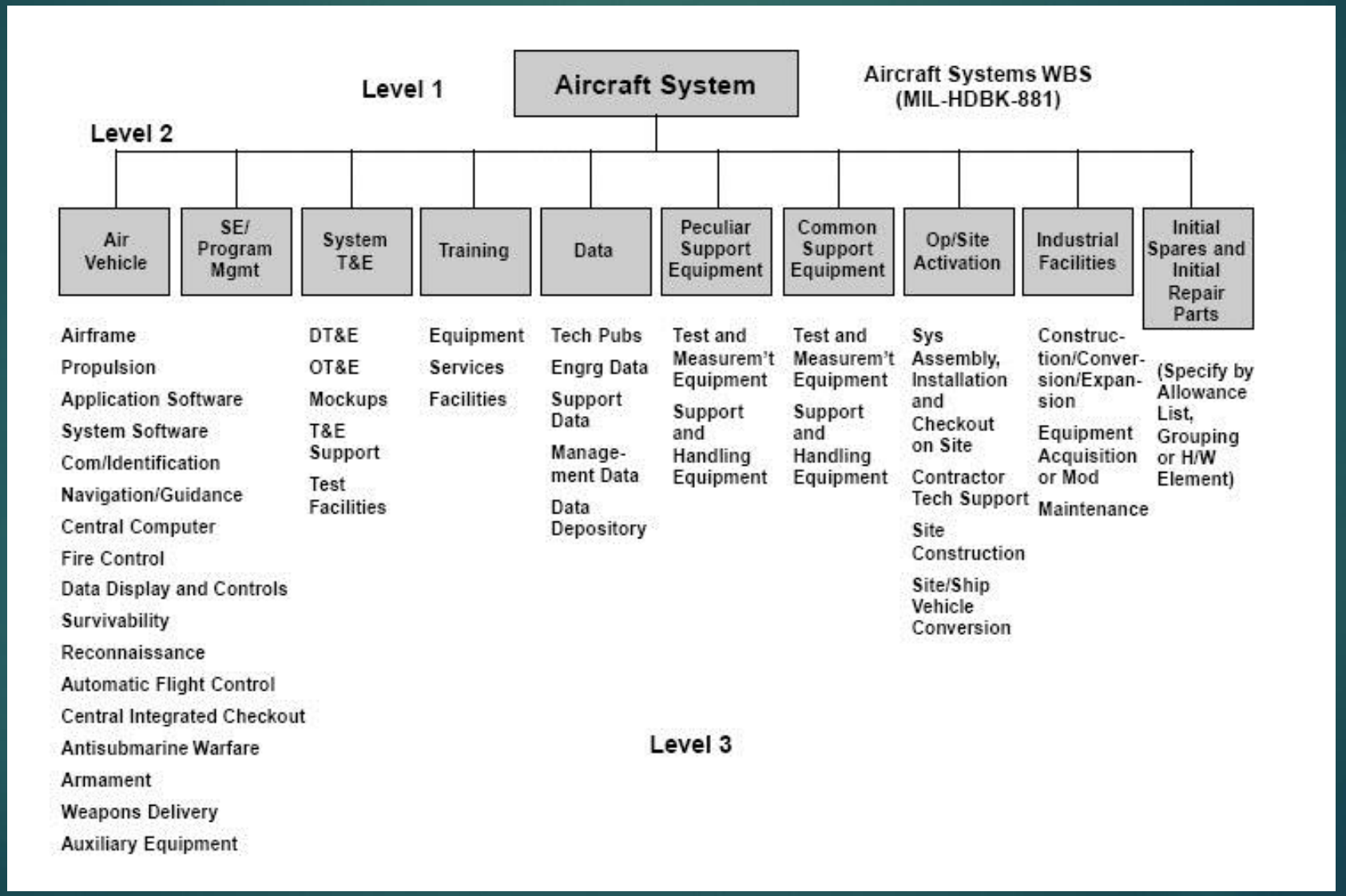
Managing Tasks

- Traditional Waterfall
  - Start and end dates for all tasks
  - Identifies dependencies
  - “Critical path”
- Kanban
  - Prioritized task backlog
- Scrum
  - Groomed backlog
  - Tasks selected by the team

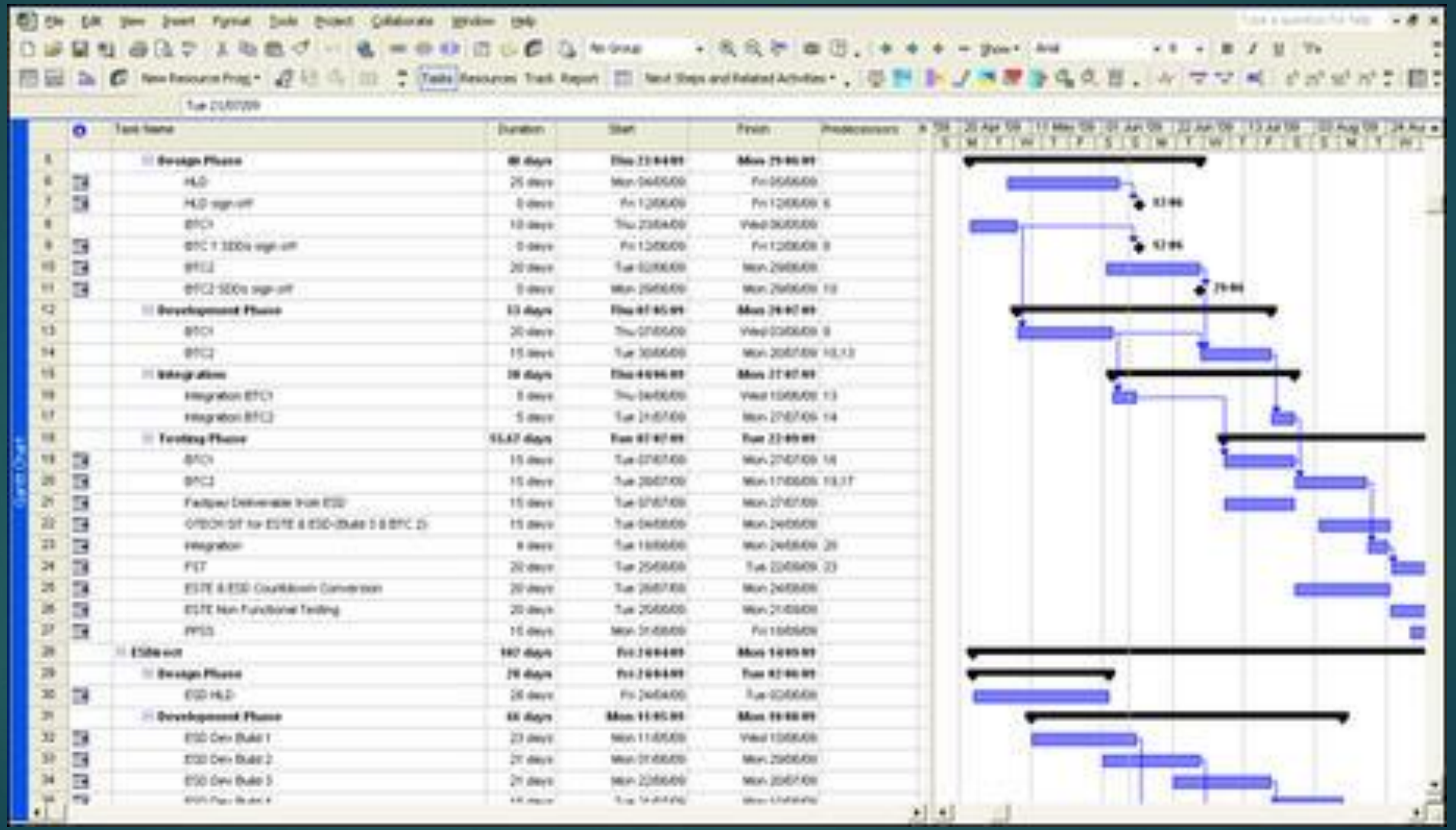
Waterfall


Requirements
▪ Gather
▪ Analyze
▪ Document
▪ Validate
Design
Based on requirements:
▪ Interface
▪ Workflow
▪ Interactions
▪ Data
▪ Functionality
Development
Based on design:
▪ Install
▪ Assemble
▪ Organize
▪ Populate
▪ Develop
▪ Testing
Implementation
▪ Make available
▪ Marketing
▪ Training

Work Breakdown Structure (WBS)



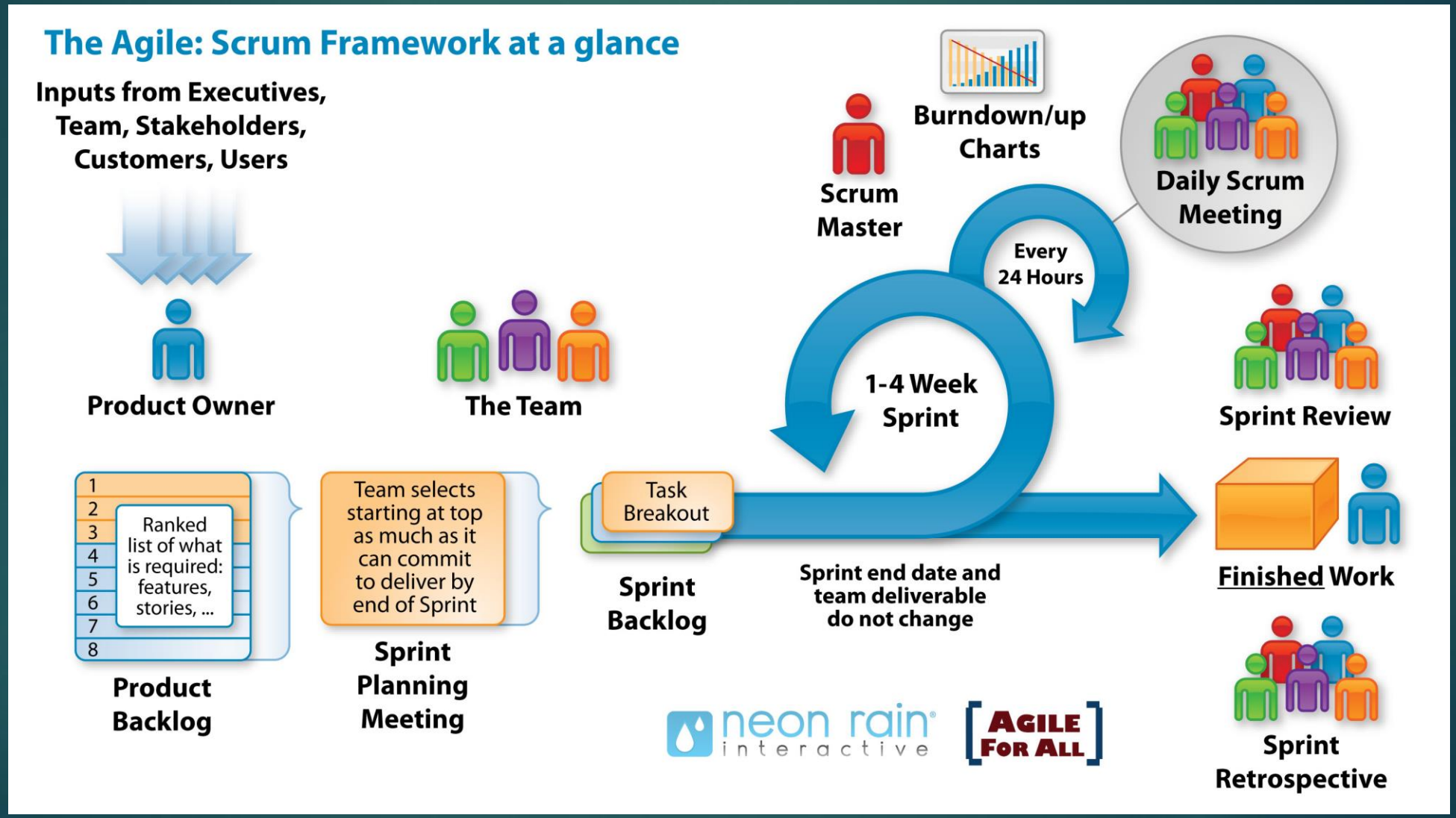
Project Plan



Kanban


Institutional Priorities:
Strategic Planning
The Rule
Budgeting
Backlog
Waiting
Working
Closing
Done
Marketing/ Communications
IT/ Institutional Support
Registrar/ Academics
Assessment/ Accreditation
Allender Center
OSA
Human Resources
/Development
430

Scrum


The Agile: Scrum Framework at a glance
Inputs from Executives, Team, Stakeholders, Customers, Users
Product Owner
The Team
Scrum Master
Burndown/up Charts
Daily Scrum Meeting
Every 24 Hours
1-4 Week Sprint
Sprint Review
1
2
3
4
5
6
7
8
Ranked list of what is required: features, stories, ...
Product Backlog
Team selects starting at top as much as it can commit to deliver by end of Sprint
Sprint Planning Meeting
Task Breakout
Sprint Backlog
Sprint end date and team deliverable do not change
Finished Work
Sprint Retrospective
neon rain interactive
AGILE FOR ALL

Challenges in Gathering Requirements

- Improper stakeholder analysis
- Wrong language (should be written for the stakeholders and not the tech team)
- Jumping to design before the requirements are complete
- Not building trust with stakeholders

(https://www.batimes.com/articles/the-top-8-mistakes-in-requirements-elicitation.html)

Timelines

Establishing a Timeline
(Traditional Waterfall)

- Identify tasks
- Order tasks
- Estimate time
- Build a project timeline
- Identify critical path

Build a Project Timeline

- MS Project/Gantt Chart
- Indicate task dependencies
- Assign resources

Critical Path

- Identify the critical path
- Pay special attention to the tasks on the critical path during the life of the project

Project Team Meetings

- Review Scope
- Review Timeline
- Review budget
- Review deliverables

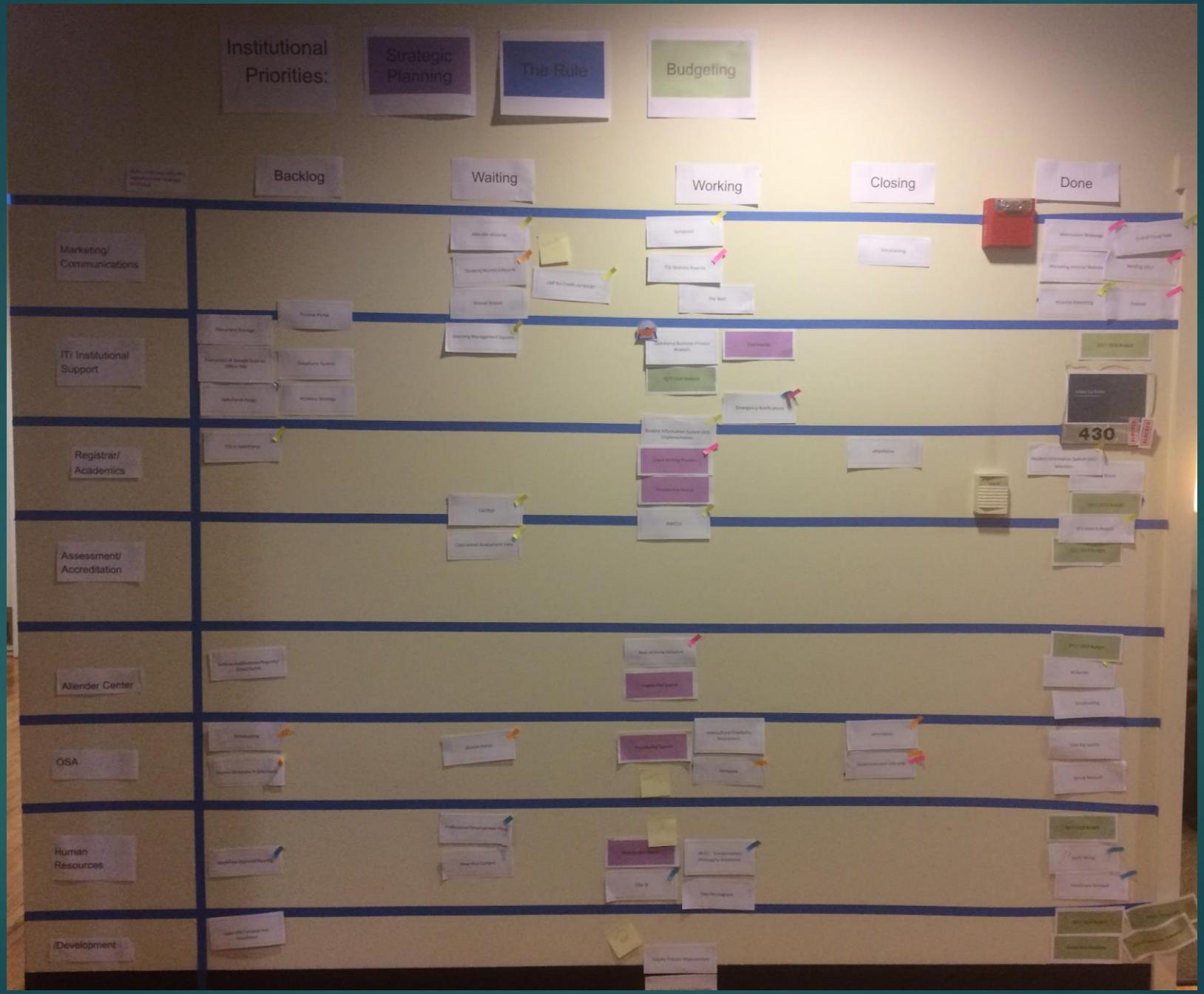
Establishing a Timeline
(Agile or Scrum)

- Identify user stories

  As a _____ I want to _____ in order to _____.
- Groom user stories
- Assign ‘story points’
- Prioritize stories
- Scrum team selects stories to work on

Stand Ups

- Daily or Weekly
- 15 minutes
- Literally stand up
- Focus on tasks that are blocked or struggling
  - In-depth discussion moved to a separate meeting
- Help to coordinate work and remove bottlenecks
- Can be done with Kanban board

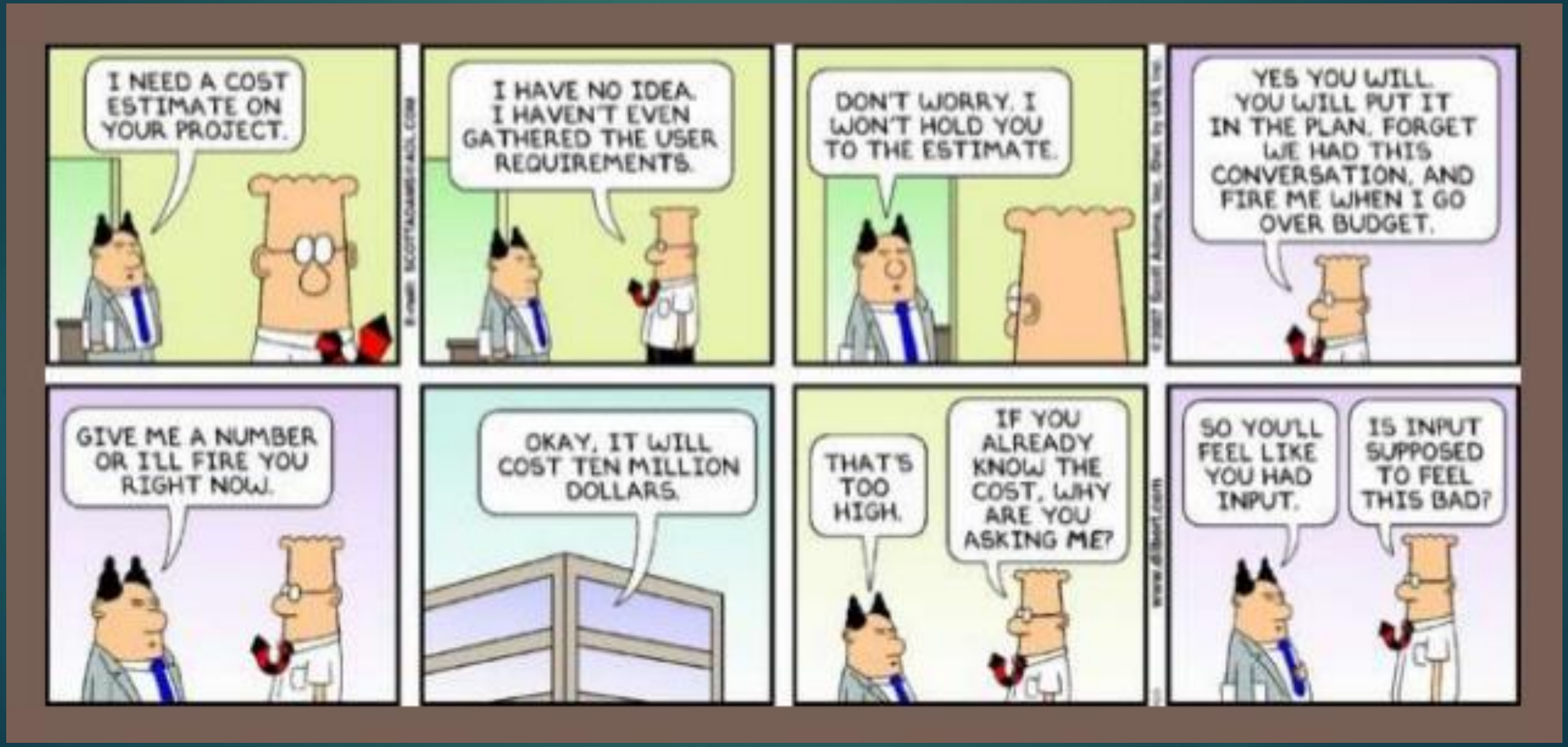

Institutional Priorities:
Strategic Planning
The Rule
Budgeting
Backlog
Waiting
Working
Closing
Done
Marketing/ Communications
IT/ Institutional Support
Registrar/ Academics
Assessment/ Accreditation
Allender Center
OSA
Human Resources
/Development
430

Waterfall or Agile/Scrum/Kanban?

- Waterfall
  - Better for well-defined projects (building a house, road, etc.)
  - Does not handle incomplete requirements well
  - Better for traditional teams
  - More ‘control’ oriented
- Agile
  - Better for less well-defined projects
  - Able to respond to changes in requirements
  - Better for tech teams
  - More ‘creatively’ oriented

Budgeting

Budget


I NEED A COST ESTIMATE ON YOUR PROJECT.
I HAVE NO IDEA. I HAVEN'T EVEN GATHERED THE USER REQUIREMENTS.
DON'T WORRY. I WON'T HOLD YOU TO THE ESTIMATE.
YES YOU WILL. YOU WILL PUT IT IN THE PLAN. FORGET WE HAD THIS CONVERSATION, AND FIRE ME WHEN I GO OVER BUDGET.
GIVE ME A NUMBER OR I'LL FIRE YOU RIGHT NOW.
OKAY, IT WILL COST TEN MILLION DOLLARS.
THAT'S TOO HIGH.
IF YOU ALREADY KNOW THE COST, WHY ARE YOU ASKING ME?
SO YOU'LL FEEL LIKE YOU HAD INPUT.
IS INPUT SUPPOSED TO FEEL THIS BAD?

Budgeting

- Functional Budgeting:
  - Use previous year's actual costs
  - Estimate any changes
  - Create budget
    - Budgets tends to increase because they are based on last year's budget
    - Zero-based budgeting starts fresh every year in an effort to avoid this escalation
- Project Budgeting:
  - Often do not have any previous budgets so can't estimate off of those

Budgeting a la PMBOK

- Cost Estimating
- Cost Budgeting
- Cost Control

Project Budgeting

- Get an understanding of what the client wants (specifications)
- Identify all the work that will have to be done to produce what the client wants
- Try to identify the personnel who will be free to do the work
- Try to identify all the risks involved with doing the work
- Have each person give you their best guess as to the amount of time and resources they will need
- Try to anticipate any problems that could interrupt the project work once it has begun
- Calculate and publish project time and cost targets

(http://www.pmi.org/learning/library/project-budgeting-on-time-budget-2117)

The habit of the business community of expecting project teams to come up with accurate cost and schedule estimates before either requirements or specifications have been produced is self-defeating

(http://www.pmi.org/learning/library/project-budgeting-on-time-budget-2117)

Contingency Budgets

- Always include a contingency amount!
- At least 10-15% of the total budget
- Some projects also include a “management reserve” to be used by the manager as he or she sees fit

Risk

Risk

"an uncertain event or condition that, if it occurs, has a positive or negative effect on a project's objectives."

(PMBOK)

Sources of Risk – Project Management

- Top management not recognizing this activity as a project
- Too many projects going on at one time
- Impossible schedule commitments
- No functional input into the planning phase
- No one person responsible for the total project
- Poor control of design changes
- Problems with team members.
- Poor control of customer changes
- Poor understanding of the project manager's job
- Wrong person assigned as project manager
- No integrated planning and control
- Organization's resources are overcommitted
- Unrealistic planning and scheduling
- No project cost accounting ability
- Conflicting project priorities
- Poorly organized project office

Sources of Risk - External

- Unpredictable
  - Unforeseen regulatory requirements
  - Natural disasters
  - Vandalism, sabotage or unpredicted side effects
- Predictable
  - Market or operational risk
  - Social
  - Environmental
  - Inflation
  - Currency rate fluctuations
  - Media
- Technical
  - Technology changes
  - Risks stemming from design process
- Legal
  - Violating trade marks and licenses
  - Sued for breach of contract
  - Labor or workplace problem
  - Litigation due to tort law
  - Legislation

(https://bia.ca/risk-management-the-what-why-and-how/)

Risk Options

- Options for risk response:
  - Avoidance
    - eliminating a specific threat, usually by eliminating the cause
  - Mitigation
    - reducing the expected monetary value of a risk event by reducing the probability of occurrence
  - Transfer
    - Pay someone else to accept the risk (insurance)
  - Acceptance
    - accepting the consequences of the risk. This is often accomplished by developing a contingency plan to execute should the risk event occur

(https://bia.ca/risk-management-the-what-why-and-how/)

Risks

- Brainstorm possible risks
  - Look especially closely at your assumptions, dependencies, and any issues that have been identified
- Maintain a log of all identified risks
- Assess the risk
- Communicate risks regularly and factually to project sponsor and major stakeholders
- Develop a risk contingency plan

“Assessing and managing risks is the best weapon you have against project catastrophes”

(https://bia.ca/risk-management-the-what-why-and-how/)

Grace's translation:

Shit happens. Prepare for it.

Grace's Corollary:

The measure of a project is not whether or not there is risk, but how the project team responds to the risks as they occur

Teamwork

Team Stages

- Forming
- Storming
- Norming
- Performing
- Adjourning

Bruce Tuckman (1965)

Teamwork

- Teams pressured to deliver "faster" are often less productive and deliver less than those with reasonable expectations.
- Teams under stress get stuck in the 'Storming' stage and cannot perform to their potential.
- Trust team's estimates (and other decisions) and see them gain more ownership and performance.
- Work expands so as to fill the time available for its completion (Parkinson's Law)

Communication

- Create a communication plan as part of the project documentation
- How will you communicate (and how often) with different stakeholders?

Retrospective

Provide opportunities to identify what worked well and what didn't work so well

CELEBRATE!