

PROJECT MANAGEMENT

A HIGH-LEVEL REVIEW OF ALL OF IT

Managing Projects



Terminology

- Project
- Project management
- Project manager
- Sponsor
- Stakeholder



Five Process Groups

- Initiating 启动
- Planning 规划
- Executing 执行
- Monitoring & Controlling 监控
- Closing 收尾

Characteristics of a Project

- It has a beginning and an end
- It creates a unique end result
- Projects involve:
 - People
 - Time
 - Budget
 - Interrelated tasks
- A project is not
 - Simple enough to be accomplished without a plan
 - Regular, repeated, routine work
 - An activity that has no result

A project is temporary, and it produces something.

Examples of Projects

Projects	Not Projects
Moving into a new home	Listening to a weather report
Writing a research paper	Brushing your teeth every night
Creating a website for a shop	Doing IT support

Project Manager

- The Project Manager is in charge of the project
- The Project Manager should
 - Plan the project
 - Make sure the project follows the plan
 - Respond to changes
 - Communicate with everyone involved

Take ownership of your project.

Project Management

- An approach to managing and controlling a project
- A set of knowledge, skills, tools, and techniques that help meet a project's goals

Follow a known approach that makes projects successful.

Sponsor

- Funds the project
- Might provide other resources
- Oversees the project manager
- Promotes the project

- Examples
 - Member of an executive management team
 - Chair of the Board of Directors
 - Executive Director of a community organization

Be accountable to someone who cares.

Stakeholders

- Can be people or organizations
- Can be involved or just interested in the project
- Can care about the project or the project's result
- Can be in favor of the project or against it



Your project impacts more people than you might think!

Managing Projects



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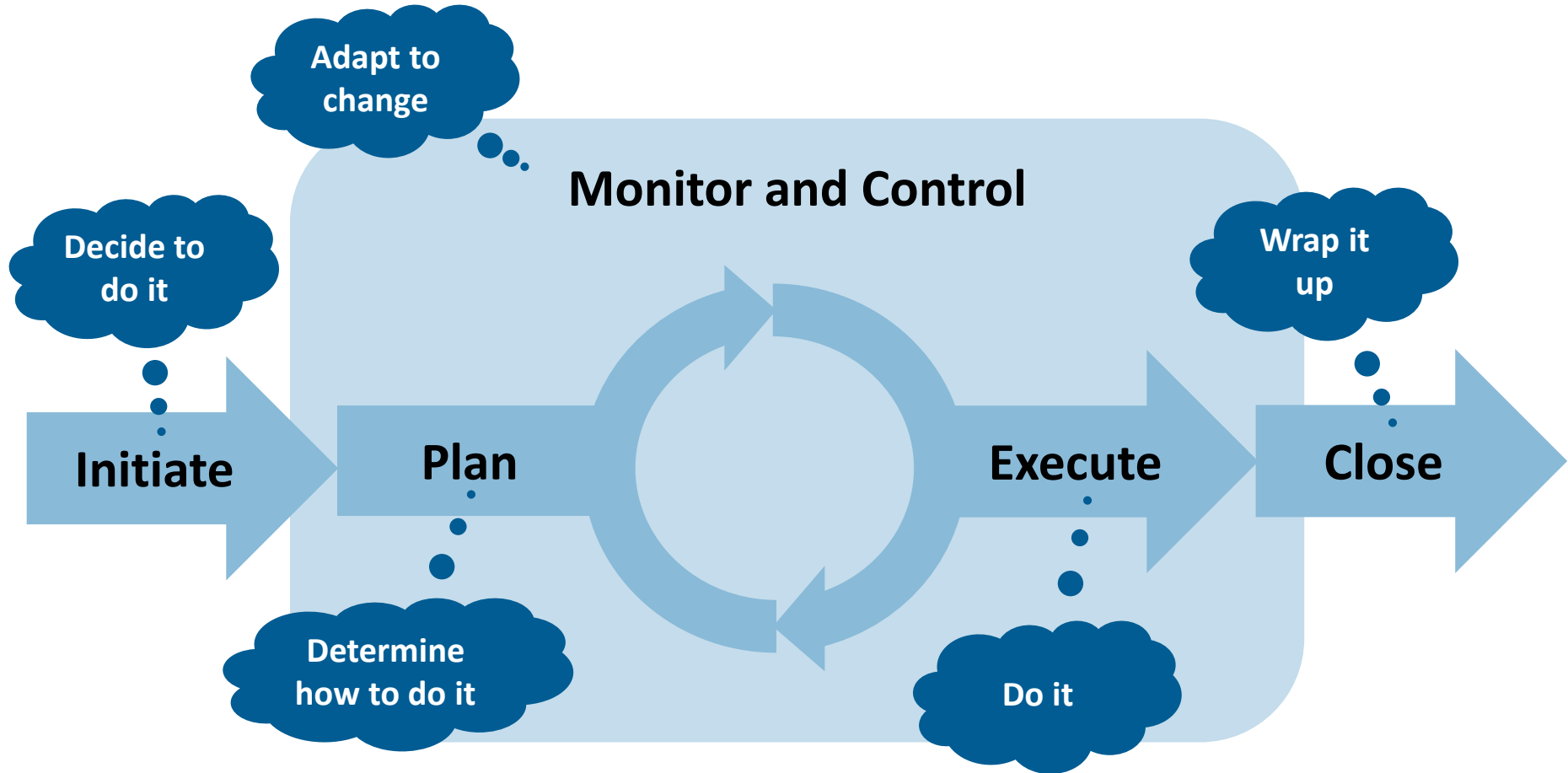
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Five Process Groups

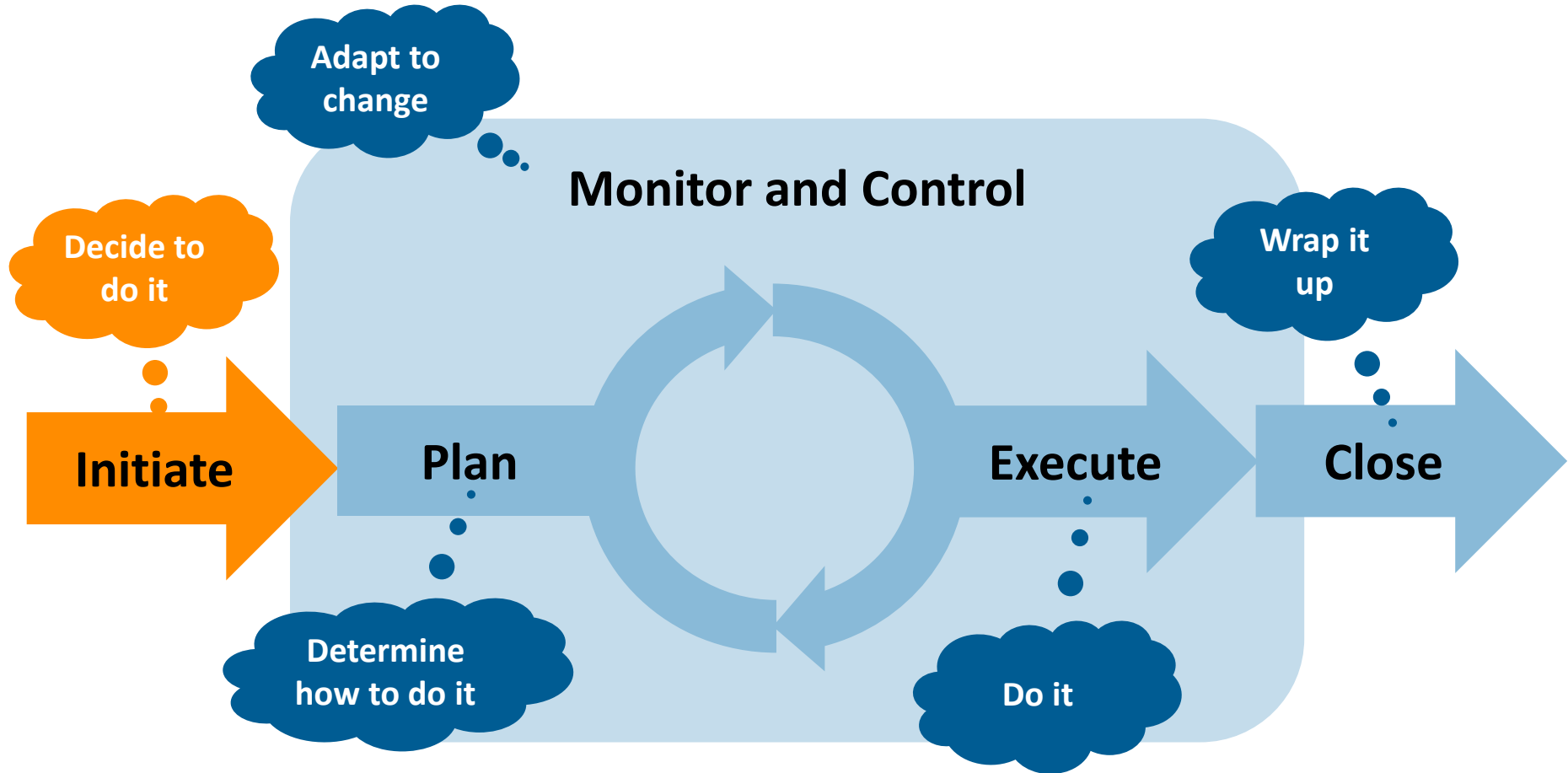
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Process Groups



Next, we will talk more about each process group.

Initiate



Initiating happens before you commit to the project.

Before you commit...



Think
about it

Write it
down

Reach
agreement

Make sure your project is worth doing.

Think about it

Decide	Project Management terminology
What you are going to do	Scope and Requirements
Why you are going to do it	Vision and Purpose
What it means to finish	Success Criteria
What you will need	Budget and Resources
How long it will take	Milestone Schedule
Who is affected	Stakeholders
Who will run the project	Project Manager
Who will pay for the project	Sponsor

Write it down

- Develop a common understanding among stakeholders
- Give people a sense of ownership
- Remember what the team decided
- Pass the vision to new team members

- Keep it high-level
- Keep it concise

- It's called the "Project Charter"

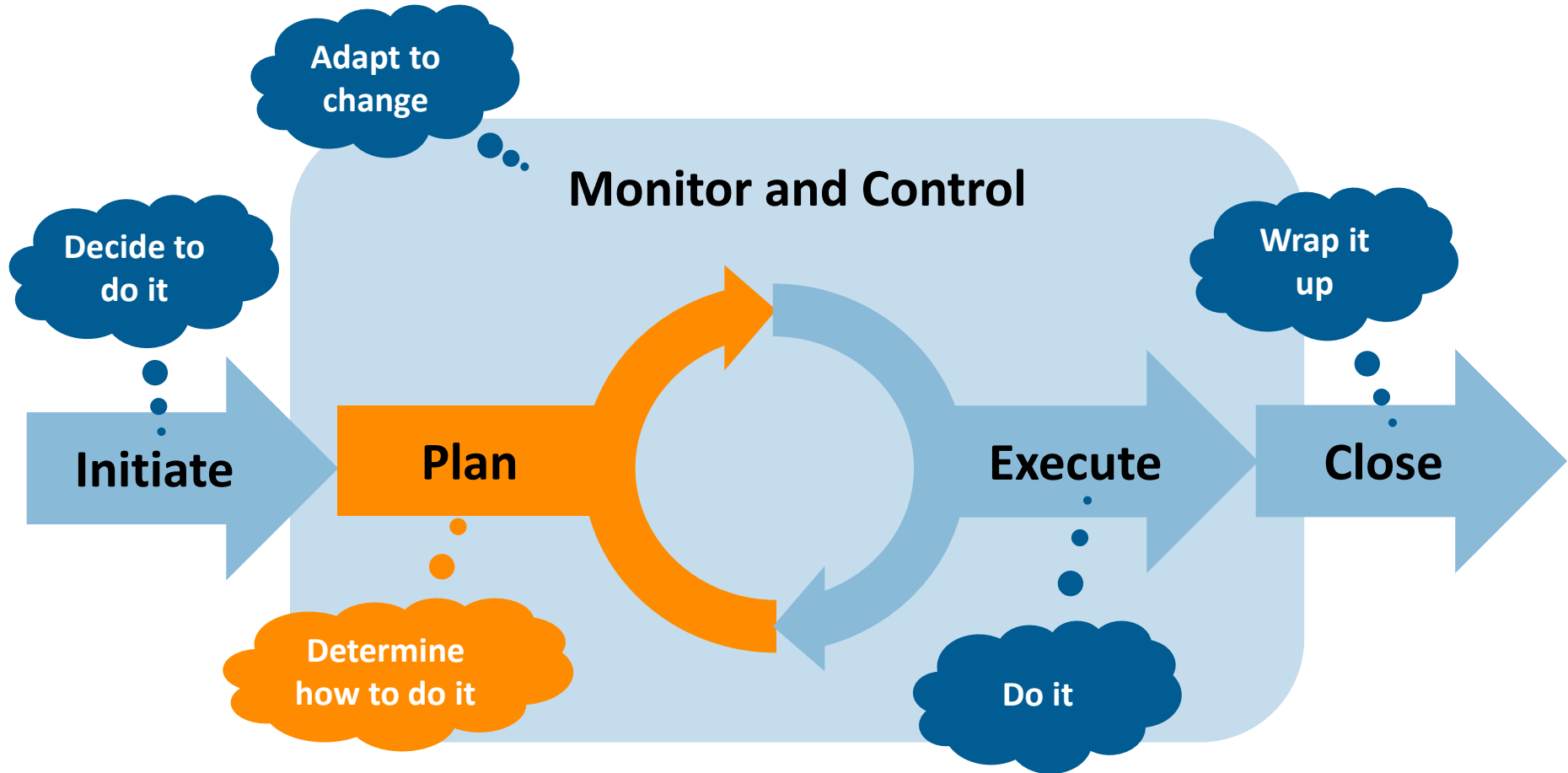
If it's worth doing, it's worth writing down.

Reach Agreement

- Promote the project to the sponsor and other stakeholders
- Modify the charter if needed
- Get agreement on the charter
- Get commitment for resources
 - Money
 - Supplies
 - People
- Get authorization to start

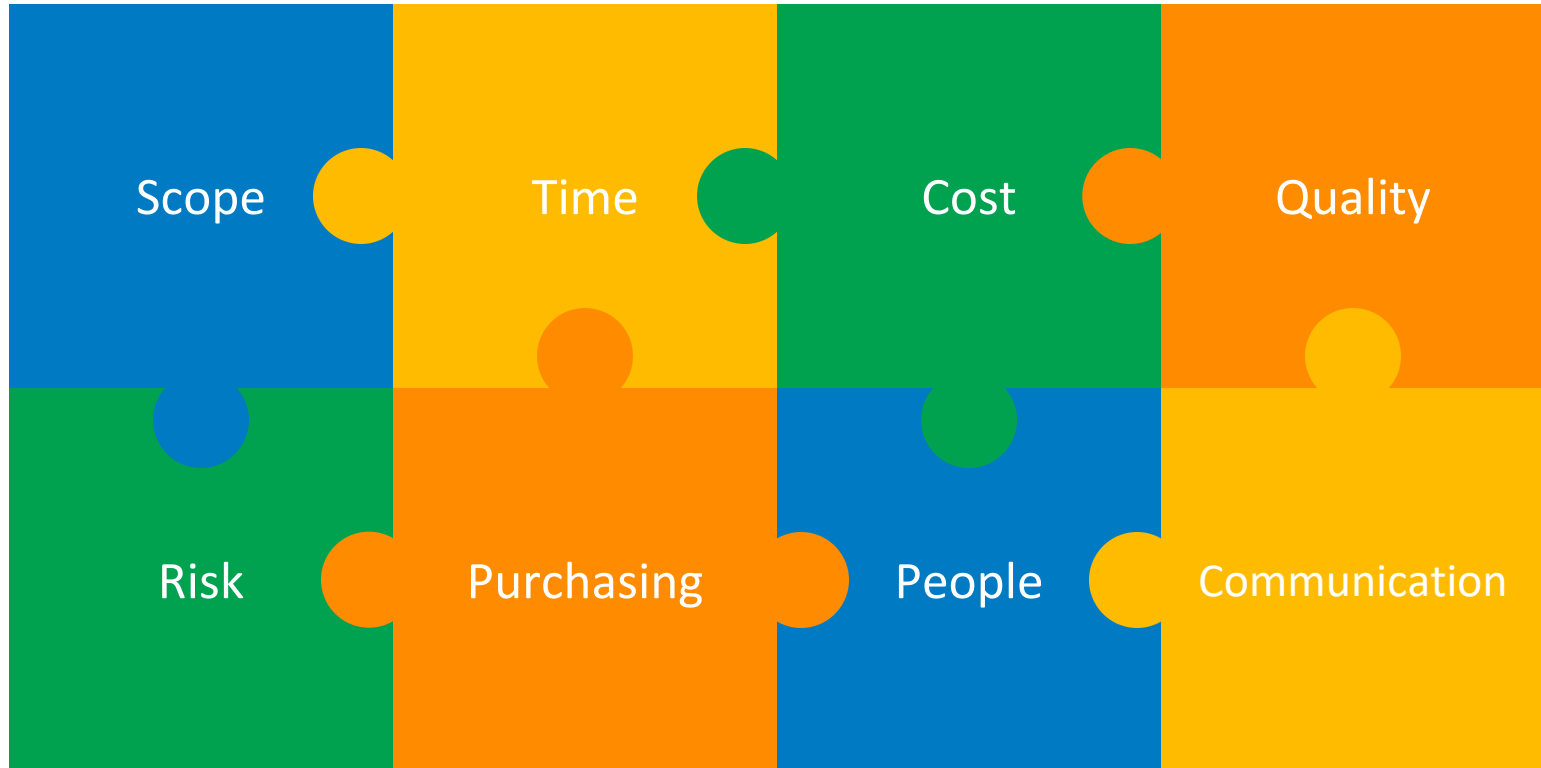
Start with agreement – a solid foundation for your project.

Plan: Determine How to Do It



Before you do it, determine how you are going to do it.

Plan: Determine How to Do It



A plan fits the pieces of your project together

Plan Scope

Define the project's output in detail

- Answer these questions:
 - What are the outputs?
 - What characteristics does each output have?
 - What does each output do?
 - How good does each output need to be?
 - What are the constraints on how the work must be done?
- Get input from your stakeholders
- We call this “collecting requirements”

Organize the work

- List the high-level work elements to produce the outputs
- Define the inputs, work, and outputs for each work element
- We call this a “Work Breakdown Structure (WBS)”

Define your end result.

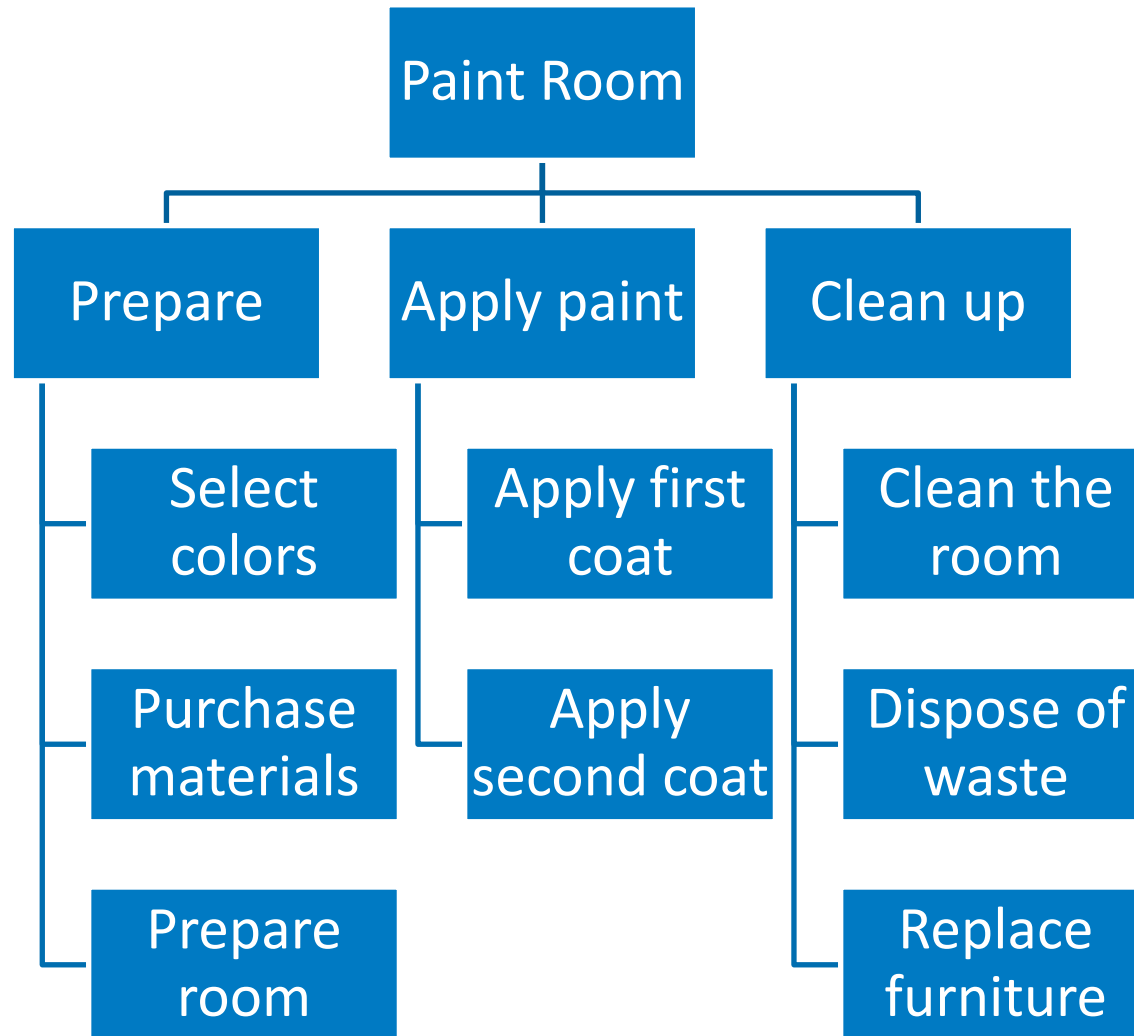
Example Requirements

- Project outputs
 - Paint the bedroom
 - Ceiling is white flat
 - Wall is blue satin
 - Trim is blue semi-gloss
 - There will be no holes in the walls

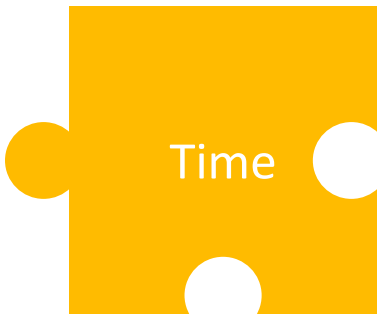
- Constraints on how the work must be done
 - Painting will occur between 8:00am and 5:00pm
 - Work will be completed in one week
 - Work includes disposing of empty cans
 - Left-over paint is to be saved for the owner

Define your end result.

Example WBS



Define the high-level work to be done.



Plan Time

- Define the detailed activities for each WBS element
- Put the activities in sequence
- Estimate the resources (labor and supplies) for each activity
- Estimate the calendar time (days or weeks) for each activity
- Create a schedule

Determine the order and duration of activities.

Example Activity List

Activities for the “Prepare Room” WBS Element

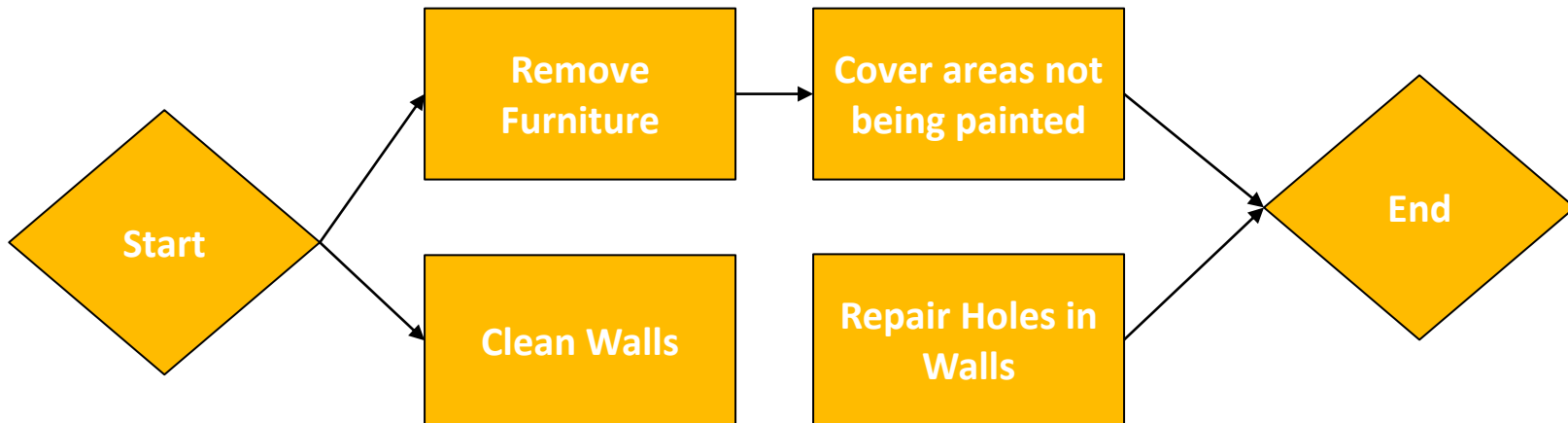
Activity	Labor	Resources
Remove furniture	1 hour	Space for furniture
Clean walls	1 hour	Bucket, sponge, soap, water
Repair holes in wall	2 hours	Spackle, sandpaper
Cover areas not being painted	2 hours	Tape, drop cloths

The activity list helps identify the resources you need.

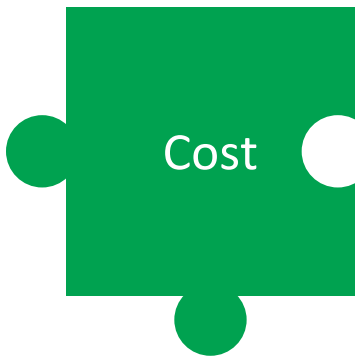
Time

Example Schedule

Activities for the “Prepare Room” WBS Element



A schedule shows the activity sequence and time.



Plan Cost

- Estimate how much each activity will cost
- Include the cost for
 - Labor
 - Supplies
 - Overhead (like office space and equipment)
- Add the estimates to determine the total cost of your project

Estimate the cost of your project



Cost

Plan Cost: Example

Activity	Labor	Resources	Labor Cost	Supplies Cost
Remove furniture	1 hour	Space for furniture	\$20	none
Clean walls	1 hour	Bucket, sponge, soap, water	\$20	\$5
Repair holes in wall	2 hours	Spackle, sandpaper	\$50	\$10
Cover areas not being painted	2 hours	Tape, drop cloths	\$50	\$70

Estimate the cost of each activity.

- Determine what quality means for your project
- Determine how you will ensure quality

Examples

- Quality means:
 - Walls are smooth
 - Paint covers the old color
 - Carpet is free of damage from paint
- How we will ensure quality:
 - Inspect spackled walls before painting
 - Inspect after each coat for coverage
 - Cover carpet and inspect at end of job

Ensure your project produces quality outputs.

- Risks are uncertain future events that can affect your project
- There are two types of risks
 - Threats have a negative impact on your project
 - Opportunities have a positive impact on your project

If you know about a risk, you can manage it.

Identify

- Talk to others
- Make a list

Assess

- Probability – How likely is it to happen?
- Impact – How big of an effect will it have?

Plan

- Include activities to change probability
- Include activities to change impact
- Include cost or time buffers

Take initiative to reduce threats and increase opportunities!

Plan Risk: Example

Risk	Probability	Impact	Owner	Action Plan
Paint does not cover well	Medium	High	Bob	Buy a paint sample and try it ahead of time
Paint gets onto carpet	High	High	Joe	Use drop cloths Get emergency cleaning supplies
Customer could order more work	Medium	High	Bob	Create a customer satisfaction plan
Might run out of paint	Medium	Low	Jane	Identify nearest paint store Have truck and credit card on-site
Painter could be injured	Low	Low	Joe	Carry liability insurance

Be proactive – stop problems before they happen!

Plan Purchasing

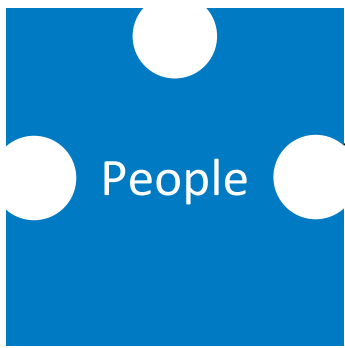
Purchasing

- Determine what goods and services you need
- Determine how you will acquire them

Examples

- What you need:
 - Ladder
 - Brushes and rollers
 - Paint
- How to acquire:
 - Rent a ladder
 - Buy brushes and rollers at Lowes
 - Buy paint at Sherwin Williams

Have what you need at the time that you need it.



Plan People

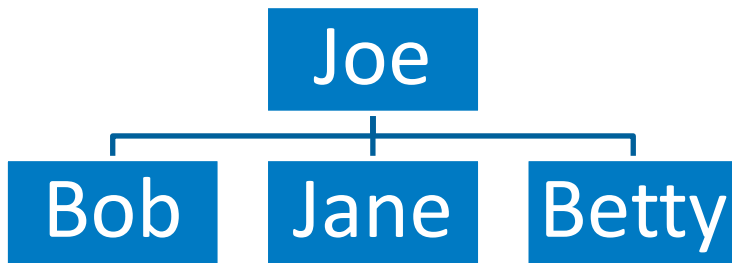
- Acquire your project team
- Assign your project team members to roles
- Assign your project team members to activities
- Train your project team
- Determine how you will motivate and reward your team

Your project needs a trained, organized, motivated team.

Plan People: Example

People

Organization Chart



Responsibility Assignment Matrix

Activity	Team Members			
	Joe	Bob	Jane	Betty
Clear Room	P	S		
Repair walls			P	
Tape				P
Paint	S	P	S	S
Inspector	P			

P=Primary Responsibility

S=Secondary Responsibility

Organize your team for roles and activities.

Plan Communication

Communication

- Communication is essential for project success
- Poor communication can cause:
 - Misunderstandings
 - Wasted time and effort
 - Low project team morale

Types of Communication

Internal and External

Vertical and Horizontal

Written and Oral

Verbal and Non-verbal

Formal and Informal

Official and Unofficial

90% of a project manager's time is spent communicating.

Communication Skills

Communication

Purpose	Skill
Hear what others are really saying	Active listening
Understand and uncover deeper meaning	Questioning and probing
Tell others what they can expect	Setting and managing expectations
Increase knowledge	Educating
Improve performance	Coaching
Convince others to act	Persuading
Encourage the team	Motivating
Minimize disruption due to conflicts	Resolving conflict

Use the skill to achieve the results you want

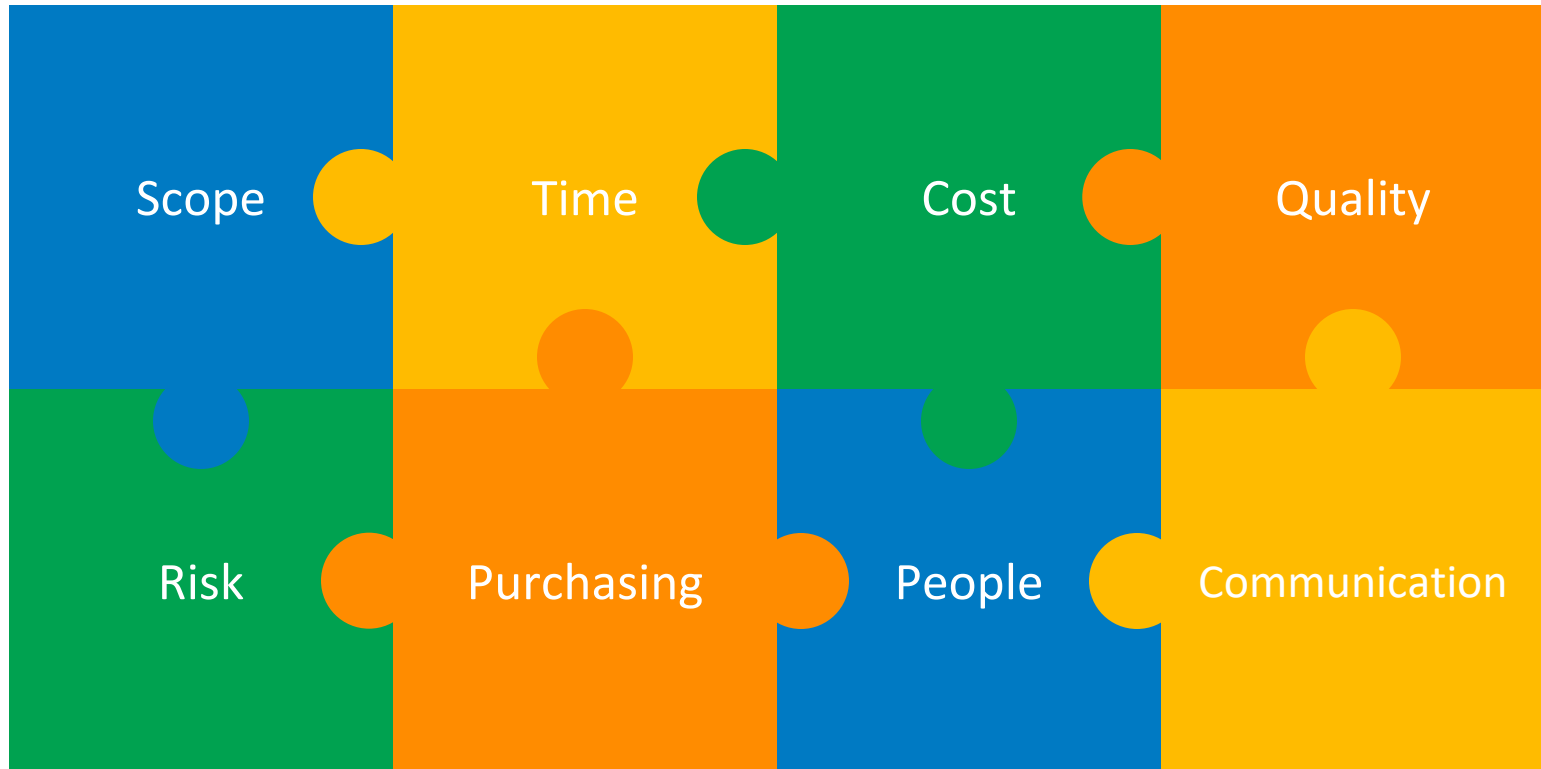
Plan Communication: Example

Communication

Stakeholder	Frequency	Type	Purpose
Home Owner	Once	Written	Provide a complete description of the painting job and what the end product will be
Team	Daily	Oral	Overall plan for the project and daily updates as project progresses
Team	Once	Demonstration	Instruct team on painting techniques for walls and trim
Home Owner	Daily	Oral	Provide updates on the progress of the project at the end of each day and if there are any issues with completion

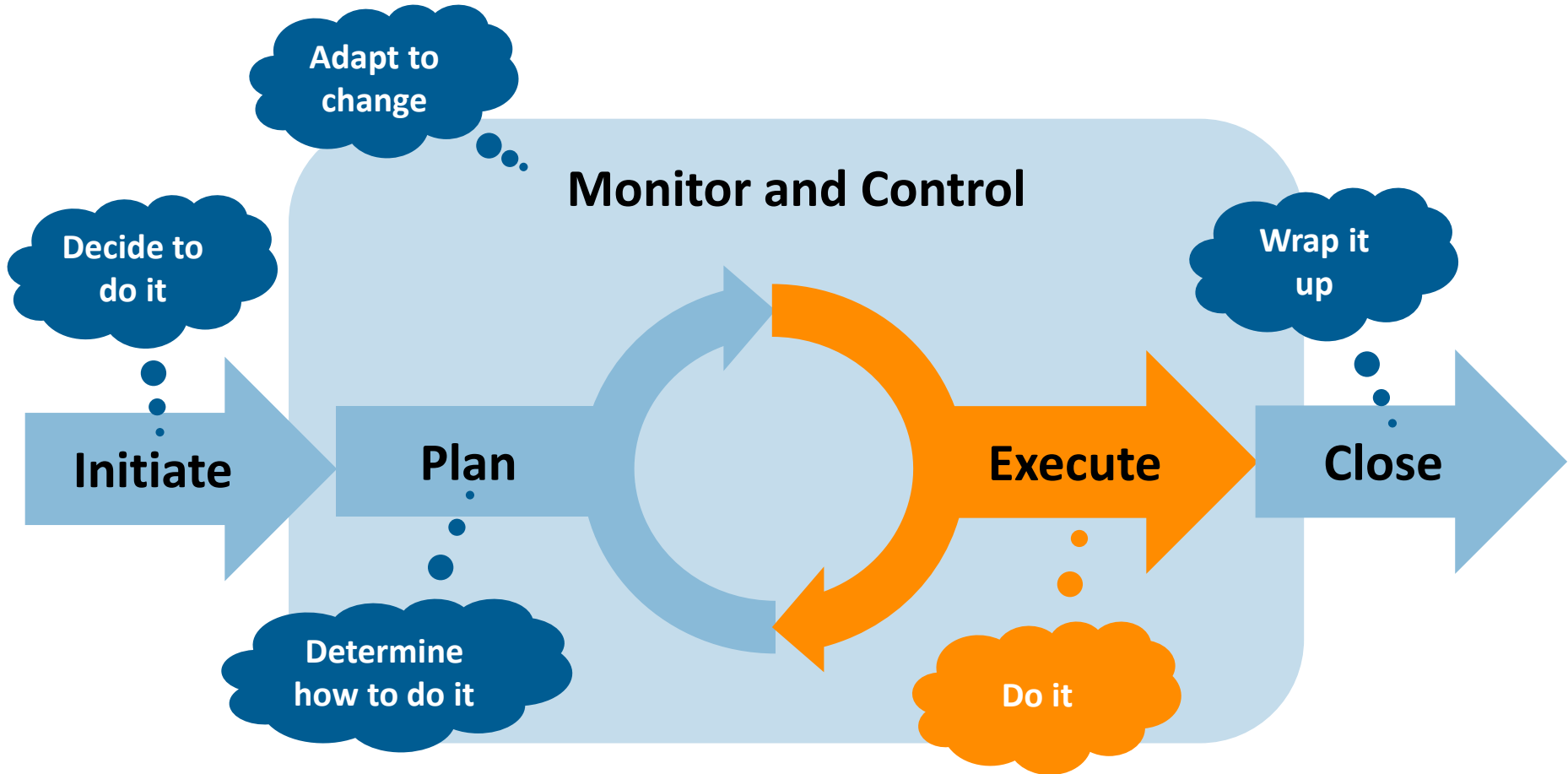
Plan to communicate – who, when, how, and why.

Plan: Determine How to Do It



An integrated plan shows you how to reach your goal.

Execute



Now that you have a plan, follow it.

Execute



Follow
your Plan

- Scope
- Time
- Cost
- Quality



Produce
the Output

- Product
- Service
- Result

A good plan makes executing easier.

Execute – Project Manager's Role

Project Manager

- Carry out your plan
- Organize and train the project team
- Assign work to the project team
- Direct and manage the team's activities
- Communicate with stakeholders
- Measure your progress against your plan
- Measure quality against your plan

The Project Manager has overall responsibility for the project.

Execute – Other Roles

Project Team

- Does the work

Sponsor

- Funds the project
- Promotes the project

Stakeholders

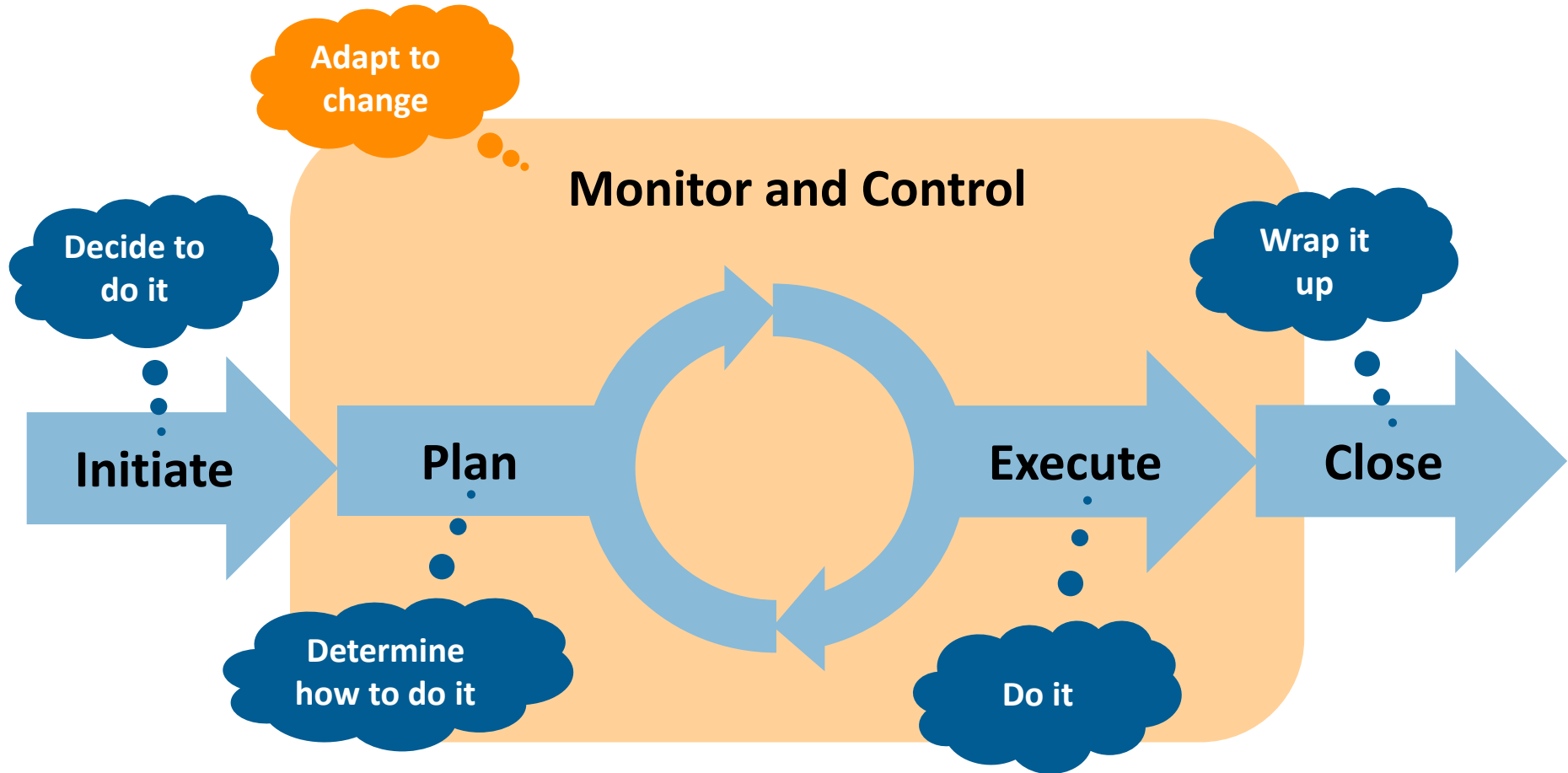
- Stay informed and engaged

People are the key to success!

Execute - Example

- Perform all of the planned activities:
 - Prepare
 - Apply paint
 - Clean up
- Execute risk mitigations
- Inspect for quality
- Communicate with stakeholders

Monitor and Control



When things change, adapt.

When Things Change ... Adjust



Change is a process that you can control.

Recognize Change



Recognize Change

Measure your results

- Look at your cost, schedule, and products
- Compare your results to your plan
- Departure from your plan is a sign of change

Listen to your stakeholders

- Listen to customers and others affected by the project
- Listen to the people doing the work
- Notice when they are talking about change

Recognize Change - Examples

Measure Results	Listen to Stakeholders	Recognize Change
Product deviates from requirements	I want something else I did unplanned work	Scope
Spending too much money	I need more money	Cost
Work is behind schedule	I need more time	Schedule
Product is defective	I don't like the product	Quality
No response to calls/emails	I didn't know	Communications
Mitigation not working	I'm worried about...	Risk
Supplies not received	I did not receive...	Purchasing
Stakeholders skip meetings	I haven't seen him/her...	Stakeholder Engagement

Recognizing change is the first step to controlling it.

Recognize Change - Communicate

Call it what it is

- Use the word “change”
- Distinguish “change” from your “plan”

Write it down

- Keep a list of changes
- Note the status of each change

Stay focused on your plan while you evaluate the change.

Recognize Change: Painting a Room

Measure your results

- 50% of the room is painted
- 25% of the paint is left

Listen to your stakeholders

- Someone says, “We’re going to run out of paint.”

Uncover the Cause



Uncover the Cause of the Change

Find out why change is happening

- Talk to the people who are closest to it
- Ask “why,” listen, then ask “why” again
- Focus on the cause, not on assessing blame

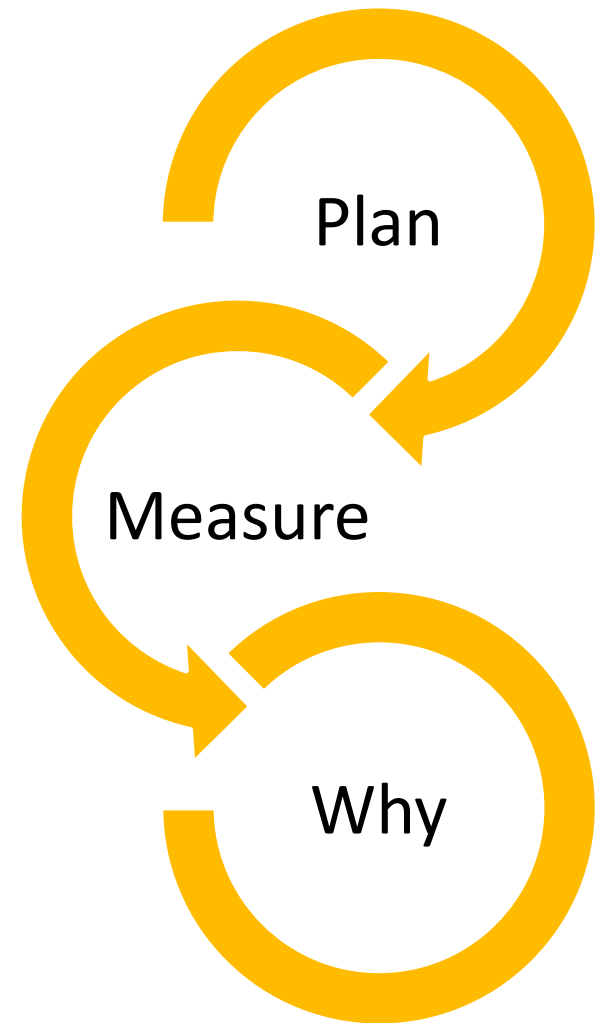
Convert data into usable information

- Data: We are two days behind schedule.
- Information: Three workers were out sick last week.

Get past the symptoms and find the root cause.

Uncover the Cause: Painting a Room

- Ask questions to find out why we are running out of paint.



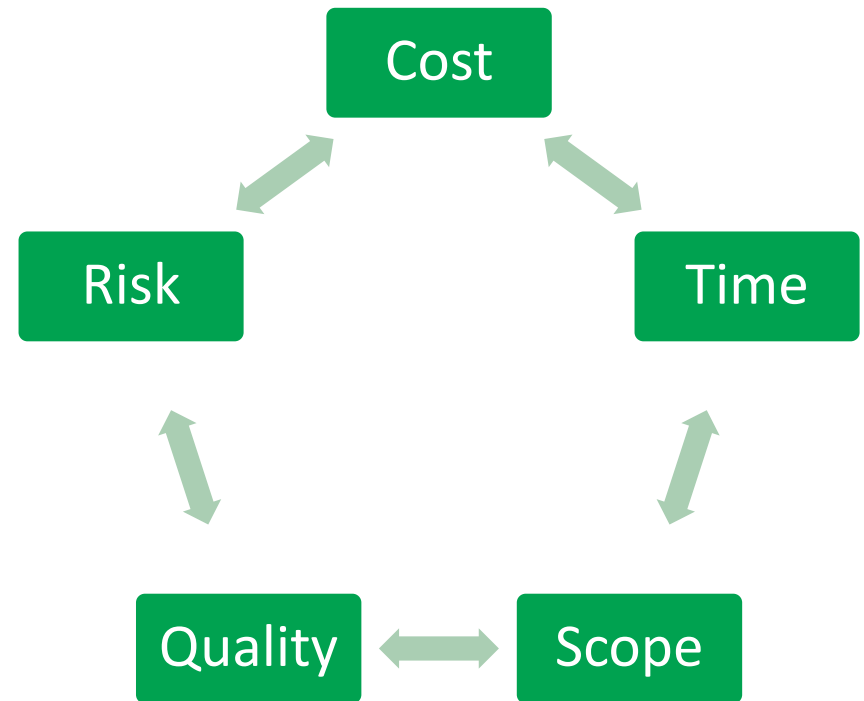
Get past the symptoms and find the root cause.

Decide What to Do



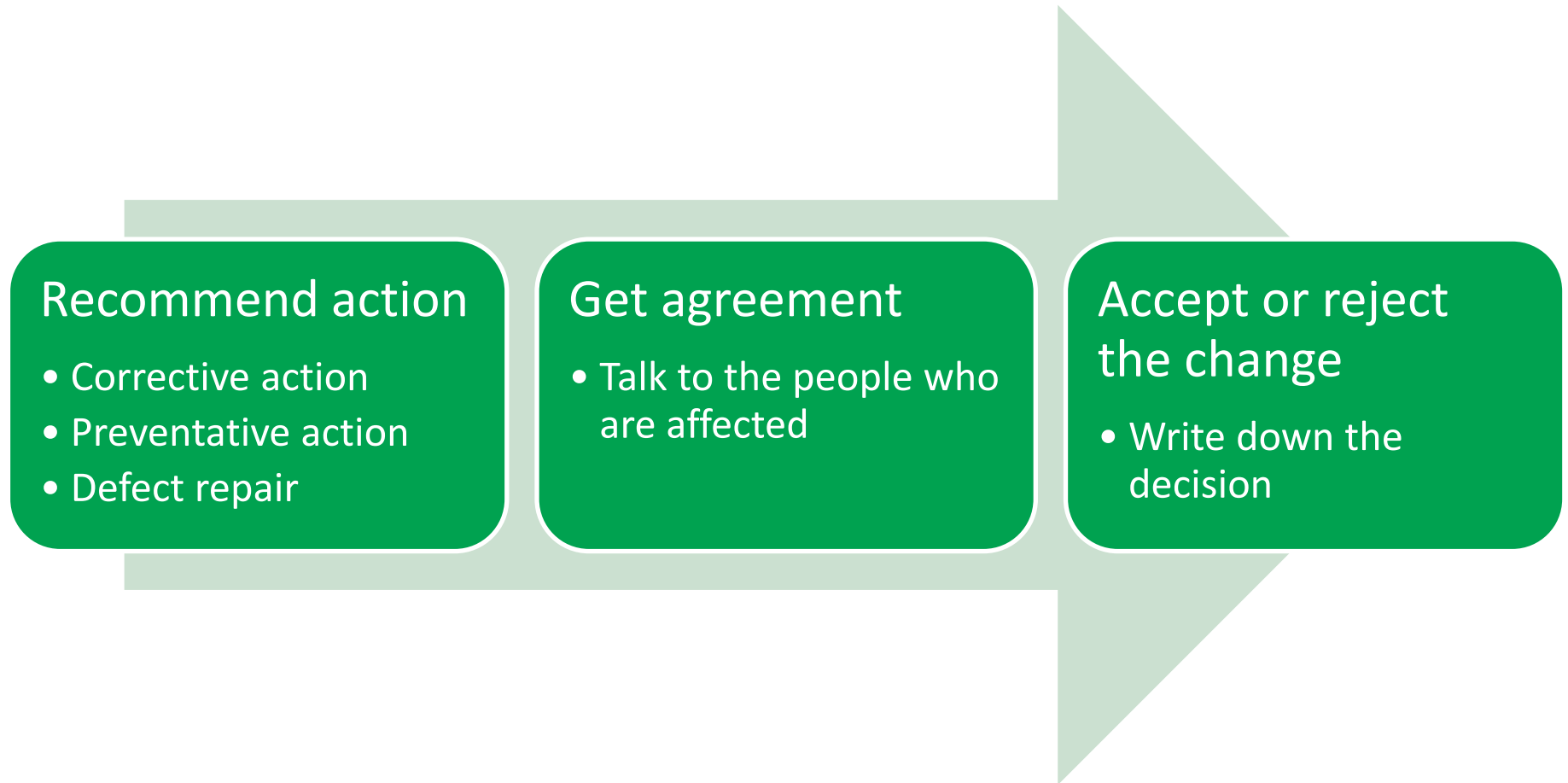
Decide What to Do

- Focus on the project's mission and priorities
- Consider interaction among constraints
- Weigh the pros and cons of the options
- Get input from experts



Think about the big picture before you act.

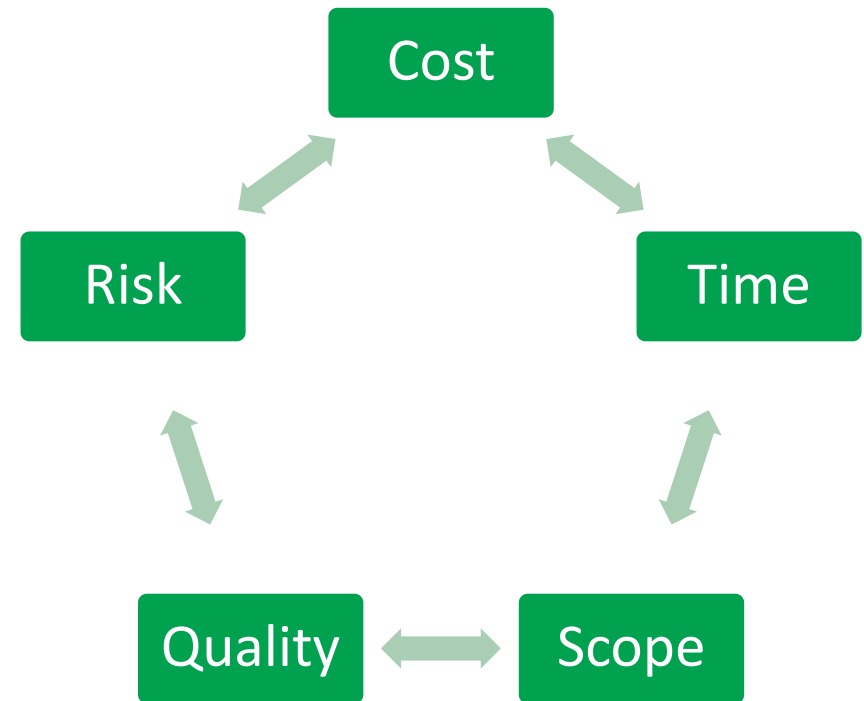
Making a Decision



Control the change – don't let it control you.

Decide What to Do: Painting a Room

- What are the possible solutions?
- How do they affect the project's constraints?
- Pick the best solution.



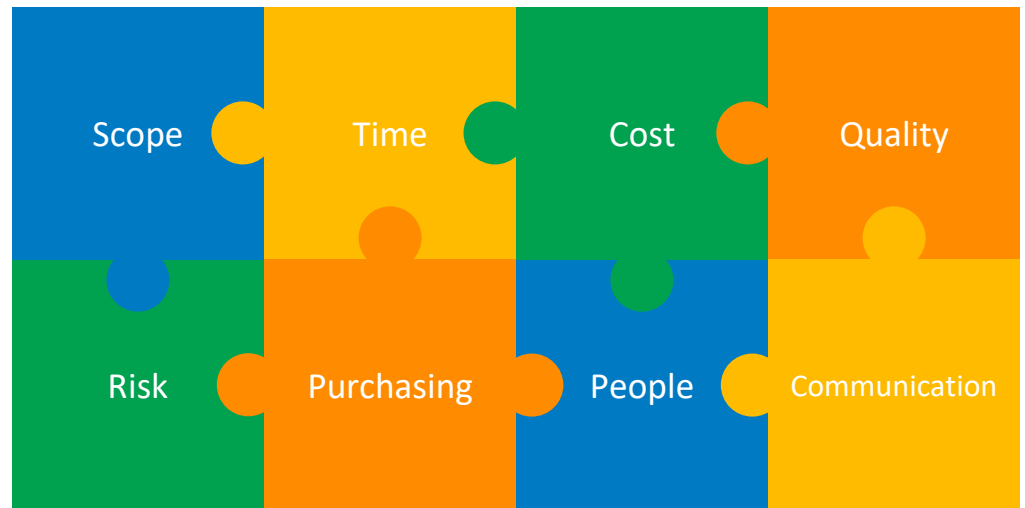
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Adjust Your Plan



Adjust Your Plan

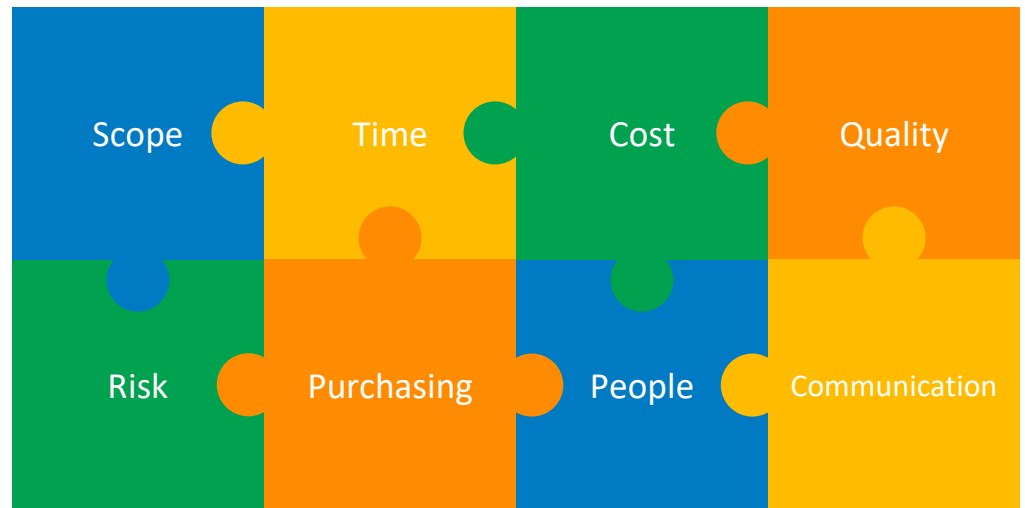
- Determine how your decision affects each aspect of your plan.
- Adjust your plan to reflect the change.
- Involve stakeholders in the process.



Keep your plan up-to-date with your decisions.

Adjust Your Plan: Painting a Room

- How does your decision affect your plan?
 - Scope?
 - Activities?
 - Time?
 - Cost?
 - Procurement?
 - People?



Changes often have more impact than originally thought.

Execute Your Adjusted Plan



Execute Your Adjusted Plan



Communicate

- Tell stakeholders about your adjusted plan



Execute

- Follow your adjusted plan

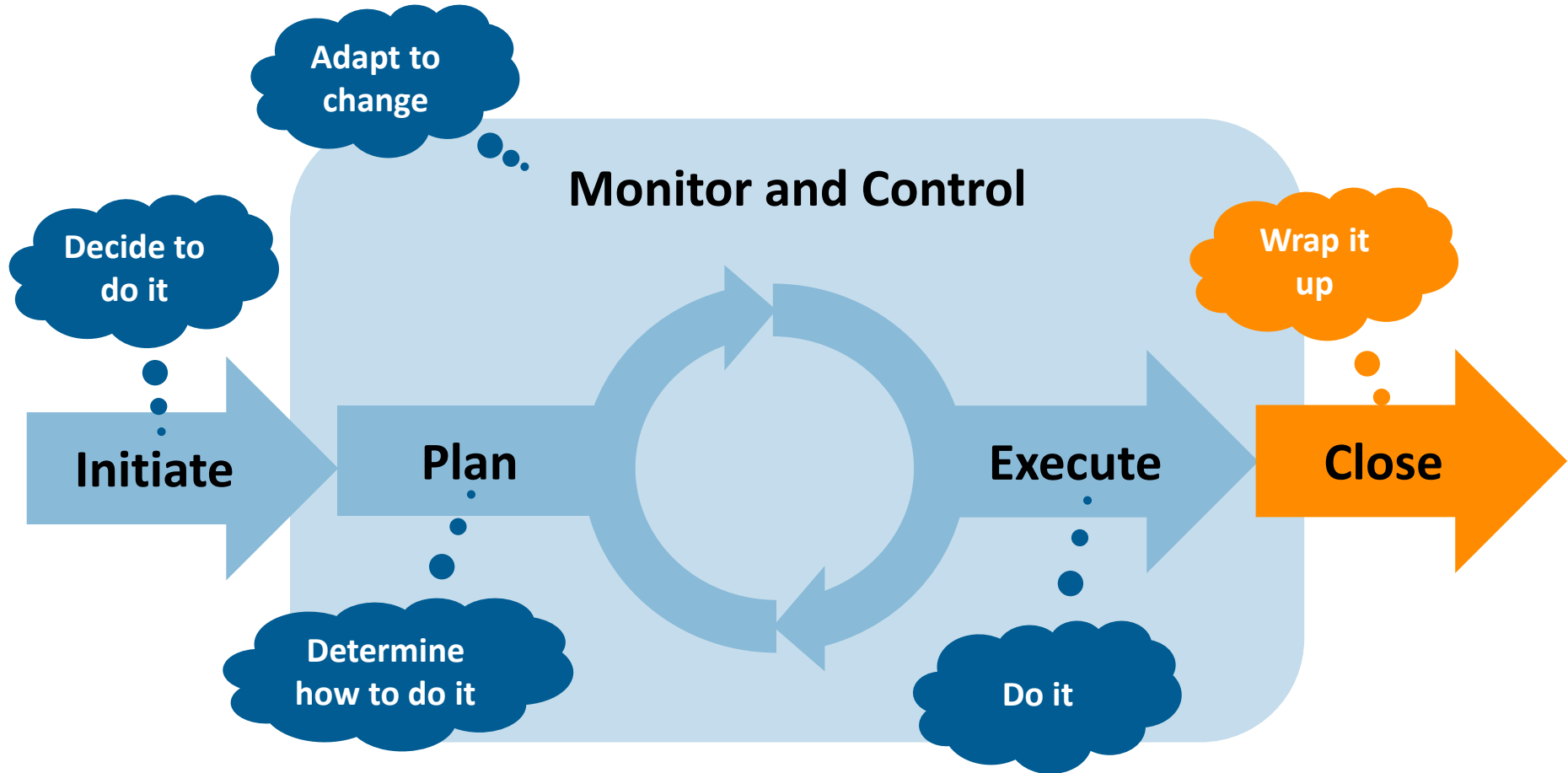
Follow through on your decision.

When Things Change ... Adjust



Don't panic. Follow the process and control the change.

Close



Cross the finish line!

Close: Wrap It Up

Confirm that the project is finished

- Make sure that the plan's scope is complete
- Make sure that the plan's activities are complete
- Make sure that the plan's outputs are produced

Collect records

- Save records that can help a future project
- Gather lessons learned and save them for the future

Satisfy stakeholders

- Turn over the project's output to whoever will use it
- Make sure bills are paid and subcontracts are closed
- Get agreement that everything is finished
- Celebrate and thank everyone!

Close: Lessons Learned

- Talk to everyone involved and get honest feedback
 - What went well
 - What you could improve next time
 - What you achieved
- Write it down so you remember it for the next project

“Those who cannot remember the past are condemned to repeat it”
- George Santayana

Close: Example

Confirm that the project is finished

- Make sure that the room is completely painted

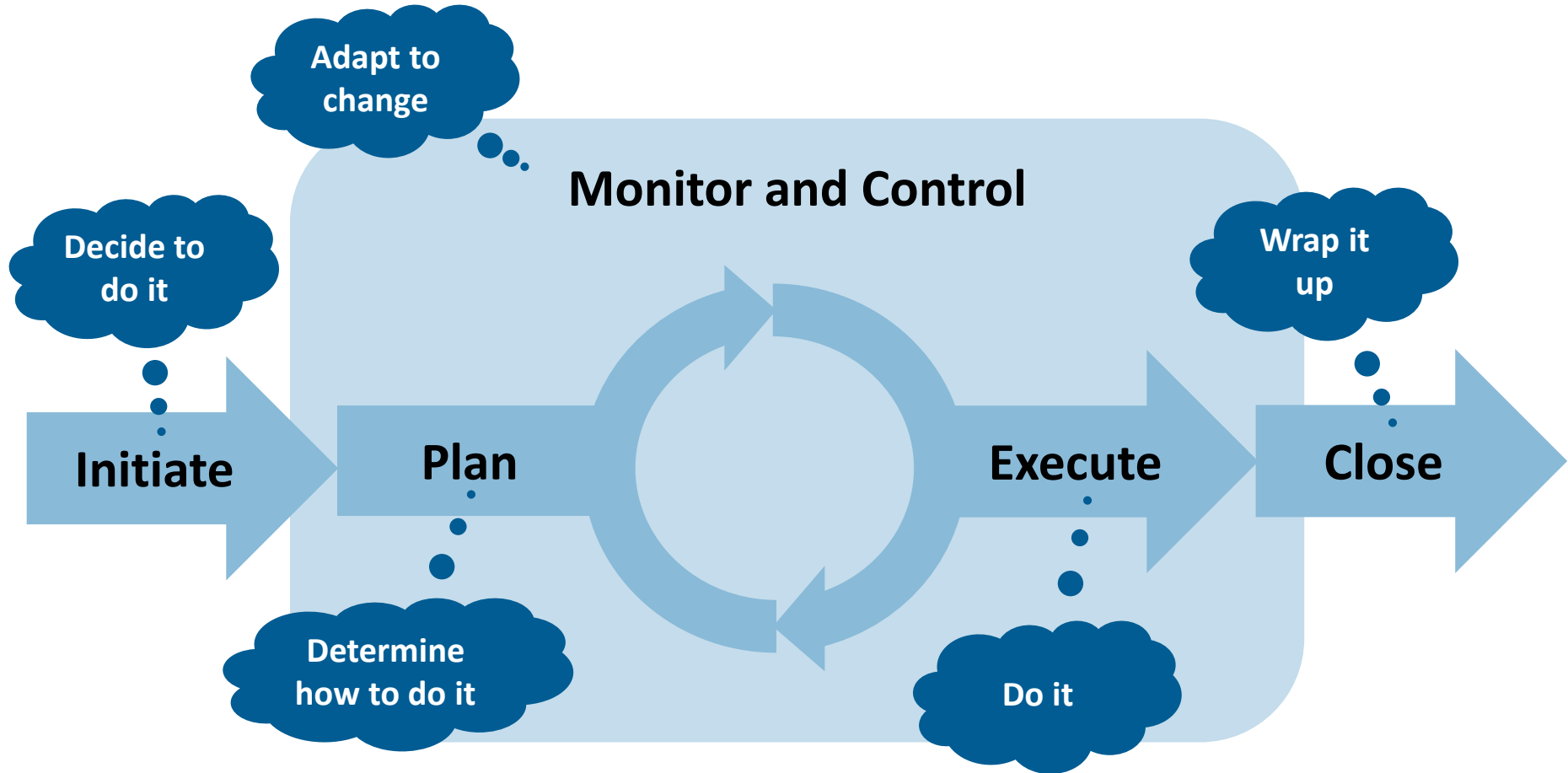
Collect records

- Write down how much paint you used, how long it took
- Take a note for next time - prime first if needed

Confirm that stakeholders are satisfied

- Give left-over paint to the room's owner
- Make sure you paid for everything
- Make sure the owner agrees that the room is painted
- Take the team out for dinner

Summary



Put it all together.

Initiate: Decide To Do It



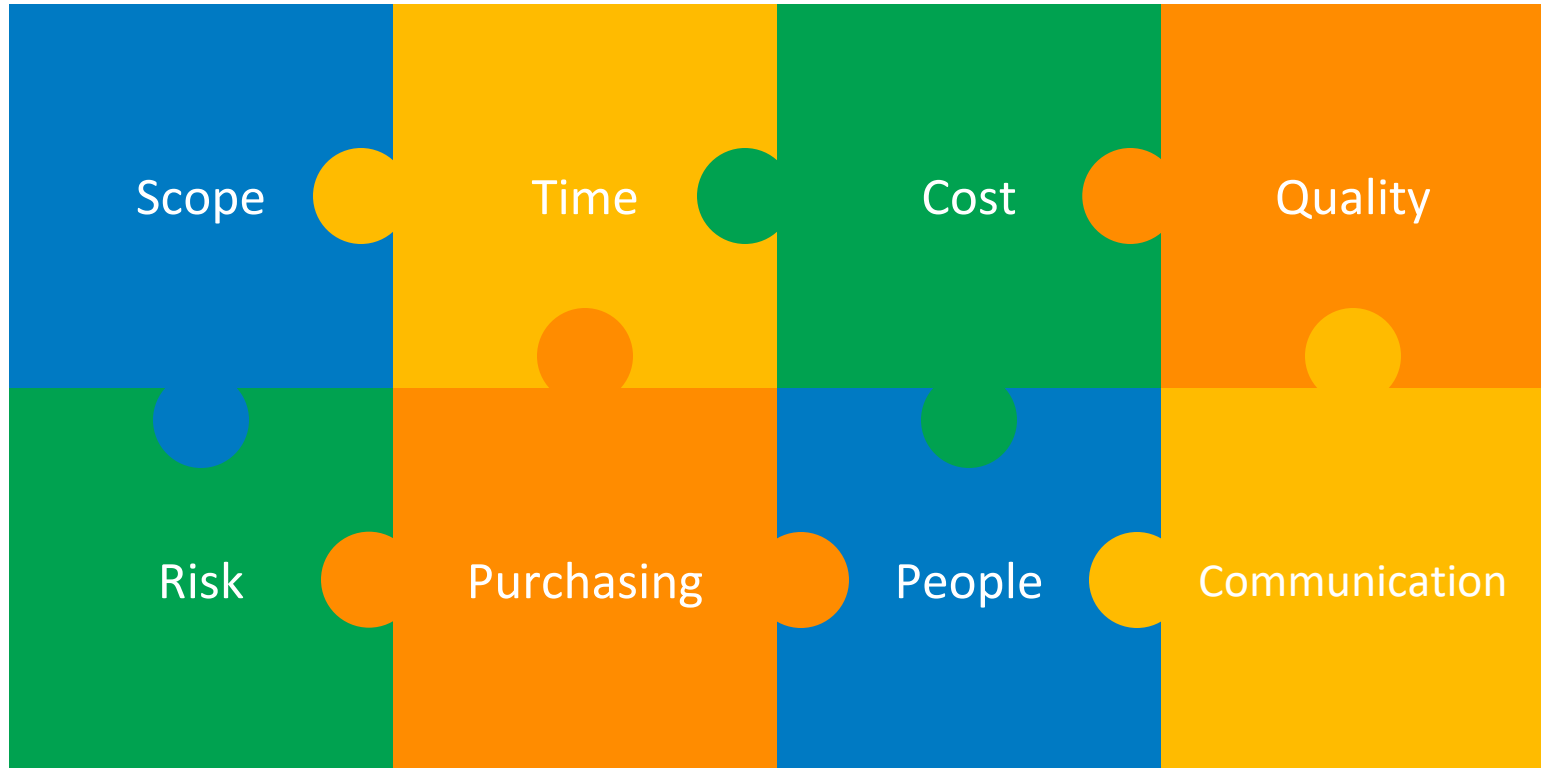
Think
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Reach
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Make sure your project is worth doing.

Plan: Determine How To Do It



An integrated plan shows you how to reach your goal.

Execute: Do It

Follow the Plan

Scope

Time

Cost

Quality

Do the Work

Project Manager

Project Team

Stakeholders

Produce the Output

Product

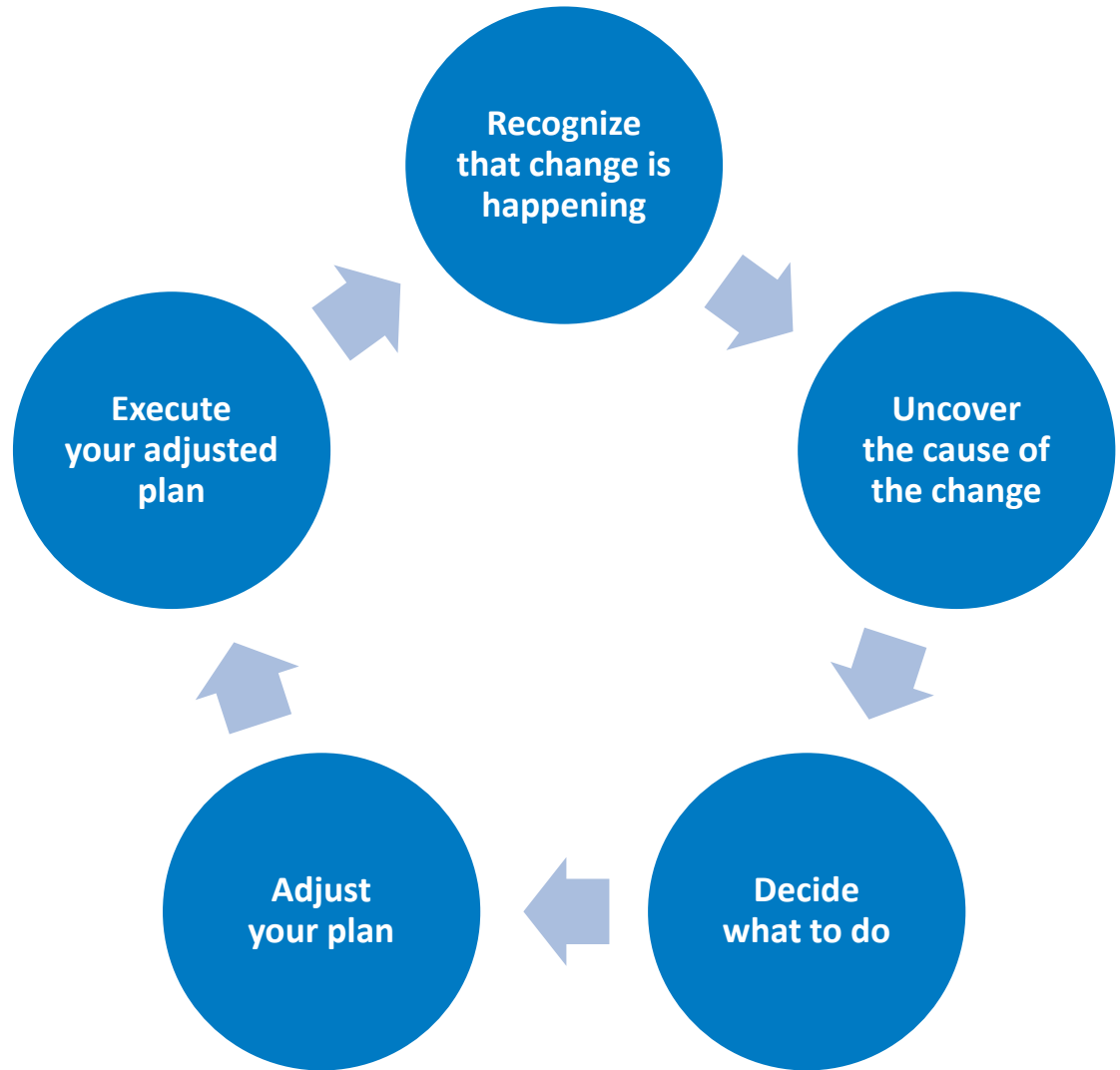
Service

Result

A good plan makes executing easier.

Monitor and Control

When things
change ... adjust



Change is a process that you can control.

Close: Wrap It Up



Confirm that
the project
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Collect
records

Satisfy
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Get agreement that the project is closed.