

Executing a Project

You've done the planning. Now it's time to execute. This section covers the full spectrum of management and leadership activities required to direct project work – from acquiring resources and conducting procurements to leading teams, assuring quality, and managing risk responses. Everything you need to move from blueprint to delivery.

ISO 21502 FRAMEWORK

Section Overview

What We'll Cover in Section 3

01

Acquire Resources

Obtaining the right human and material resources at the right time.

03

Authorize Work Packages

Delegating, executing, and formally approving completed work packages.

05

Assure Quality & Manage Change

Implementing standards, responding to deviations, and managing risks.

02

Conduct Procurements

Selecting suppliers, choosing contract types, and awarding agreements.

04

Lead & Develop Teams

Motivating people, navigating team stages, and coaching effectively.

06

Learn & Improve

Capturing lessons learned and improving processes through retrospectives.

3.1 – Execution Overview

The Big Moment Has Arrived

From Planning to Doing

All planning effort now converts into action. The project management plan is your guide – it describes what needs to be done, who does it, when, and at what cost. The creation of the project's main deliverable begins here, and this is where the majority of the project budget is consumed.

Key Activities in Execution

- Acquiring human and material resources
- Managing procurement and contracts
- Authorizing and approving work packages
- Leading, managing, and developing teams
- Ensuring quality and managing changes
- Implementing risk responses
- Capturing and applying lessons learned

3.2 – Resource Acquisition

Acquiring Project Resources

Acquiring resources means **obtaining the right resources at the right time** – the individuals responsible for work packages, team members, technical equipment, space, and raw materials. Failing to do so on time directly threatens the performance baseline and can cause project failure.

Pre-Assignment

Scarce or critical skills are reserved early – even during project charter preparation – to ensure availability when needed.

Negotiation

The project manager negotiates with functional managers, other project teams, and external suppliers to secure necessary resources.

Virtual Teams

Modern collaboration tools allow access to talent not available locally. Good communication planning is essential for remote teams to function effectively.

Multicriteria Decision Matrix

When choosing between candidates, weight criteria such as availability, cost, experience, knowledge, attitude, and cultural fit.

3.2 – Resource Acquisition

Projectized vs. Matrix Organizations

Projectized Organization

Key resources are allocated **full-time** to the project. The project manager is their sole hierarchical superior. Priority conflicts with functional managers are minimal — but negotiations are still required for part-time staff, equipment, space, and external resources.

Matrix Organization

Resources continue working in their operational functions alongside project work. **Priority conflicts are more common**, especially for part-time resources shared between functional managers and the project. The project manager's influence and negotiation skills become critical.

- 📄 The resource management plan clarifies how resources will be acquired. The schedule baseline tells you when, and the cost baseline tells you the budget. Always rely on your plan.

3.3 – Procurement

Make, Buy, or Rent?

One of the earliest and most consequential procurement decisions is determining what the project will produce internally versus source externally. Cost is an important factor – but not the only one.



Make It

Preferred when the work is part of core competencies, intellectual property protection matters, or internal resources are available and control of progress is critical.



Buy It

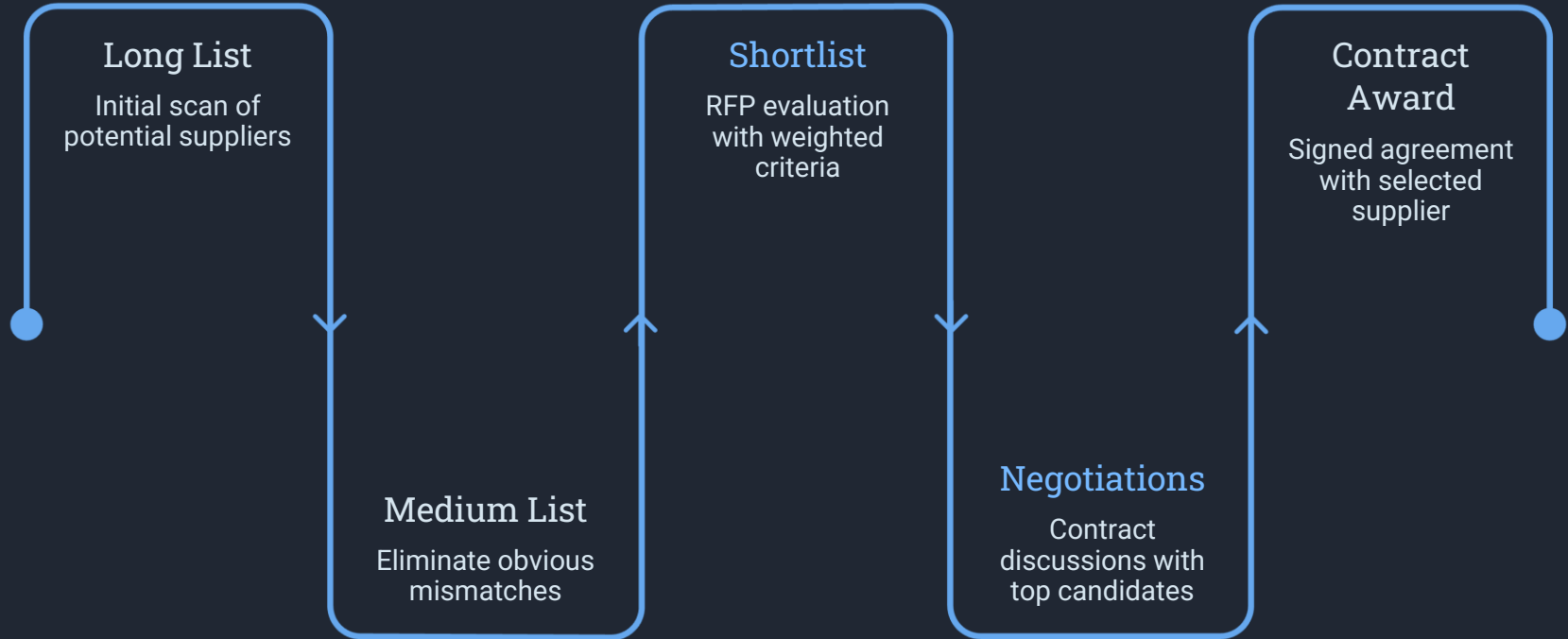
Preferred when the organization lacks skills or capacity, and the supplier can deliver more efficiently. Buying places the product on the balance sheet as an asset.



Rent It

Best for equipment or facilities needed temporarily. Like renting a car for a day – economical when frequency of use is low or duration is short.

Supplier Selection Process



The weighted decision matrix scores each candidate across criteria such as cost, technical approach, project management capability, experience in similar projects, references, and intellectual property rights. Price alone should never drive the decision – a low-cost supplier that underdelivers is far more expensive in the long run.

3.3 – Procurement

Types of Contracts

Fixed-Price


Detailed scope, predictable cost. Risk sits primarily with the supplier, who adds contingency reserves. Best when scope is fully defined. May include milestone incentives.

Cost-Reimbursable

Actual costs reimbursed plus a fee. Best when scope is not fully defined or expected to change. Supplier carries less risk. Often paired with performance incentives.

Time & Materials

Payment for time, associated costs, and materials. Ideal for staff augmentation or expert engagement when scope can't be precisely defined quickly. Project bears most of the risk.

 Contract type selection should reflect both cost predictability needs and the accuracy with which scope can be defined at the time of contracting.

3.3 – Procurement

Key Elements of a Contract

- Statement of work
- Timelines for delivery
- Progress reporting requirements
- Contracting parties, roles, and responsibilities
- Location of performance
- Pricing and payment terms
- Place of delivery
- Inspection and acceptance criteria
- Warranty and product support
- Limitation of liability
- Change request handling
- Termination and dispute resolution mechanisms

Signing a contract may trigger updates to the cost management plan, cost baseline, schedule baseline, scope baseline, requirements documentation, stakeholder register, risk responses, and communications management plan.

3.4 – Work Packages

Authorizing, Delegating & Approving Work Packages

Work packages are the fundamental units of project execution. The process of authorizing, delegating, executing, and approving them serves as the **critical connection between the project manager and the work package leaders.**

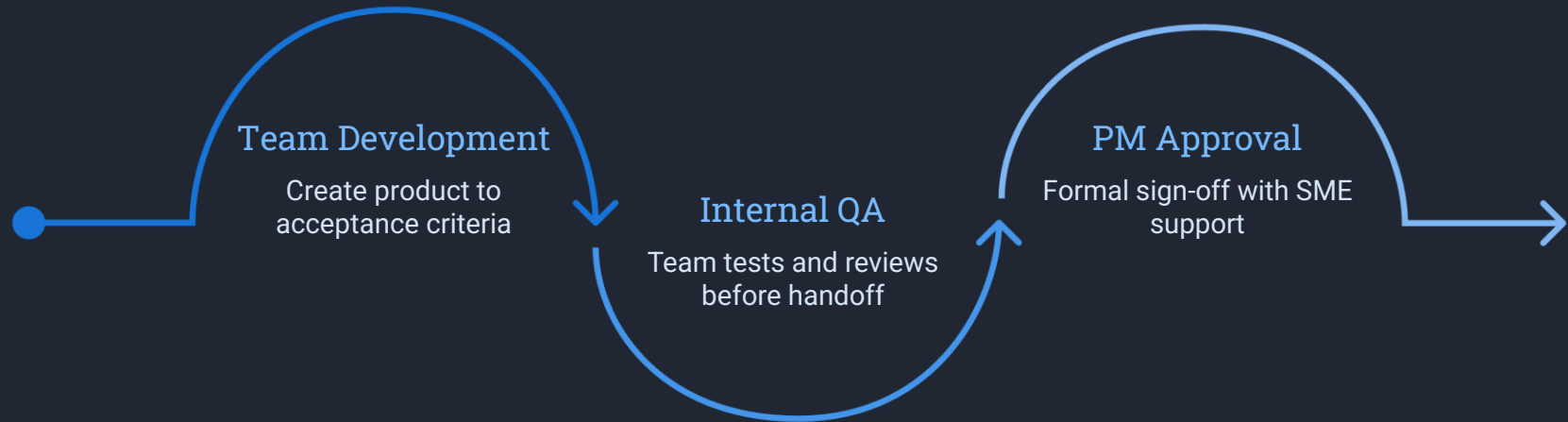
Project Manager's Perspective

- Authorize and delegate work package execution
- Monitor progress through regular updates
- Act as the escalation point for issues and change requests
- Formally approve the completed work package after quality review

Work Package Leader's Perspective

- Accept the delegation of the work package
- Lead detailed planning and execution with the specialist team
- Conduct internal quality assessment before external presentation
- Report progress and present the completed product for approval

Three Stages to a Completed Work Package



Each stage acts as a quality gate. Internal testing prevents defects from reaching the project manager's review, saving time and protecting team credibility. The project manager may bring in technical subject matter experts during Stage 3 to ensure rigorous, objective evaluation.

3.4 – Work Packages

Work Package Approval Outcomes

Accepted

The product is correct and complete. It fully meets the acceptance criteria defined in the work package. The work package is formally closed.

Conditionally Accepted

The product is nearly complete. Minor outstanding actions are recorded and agreed upon, but a second full quality review meeting is not required.

Rejected

The product is not correct or complete. It is returned for rework. A new quality review meeting must be scheduled after corrections are made.

In Agile projects or components, the final approval is carried out by the **product owner**. When the project manager also leads a work package team, an independent reviewer from outside the process must assume the reviewer role.

3.5 – Leadership

What Is Leadership?

"Leadership is the art of getting someone else to do something you want done because they want to do it."

– **Dwight D. Eisenhower**, Supreme Commander, Allied Forces Europe & 34th U.S. President

Leadership has different meanings across cultures and contexts. Four perspectives from thought leaders illuminate its core:

Peter Drucker

"A leader is someone who has followers."
– Grounded in the relationship between leader and led.

Warren Bennis

"The ability to turn vision into reality." –
Leadership as the engine of change.

Bill Gates

"Those who empower others." –
Leadership as an act of enabling people to achieve more.

3.5 – Leadership

Leadership Styles



Participative

Involves contribution from others. Decisions reflect multiple viewpoints and build collective ownership.



Servant Leadership

The leader's primary role is to remove obstacles for self-managed teams. Authority is earned through service, not rank.



Autocratic

Emphasizes direction – not only *what* to achieve, but precisely *how* to achieve it. Useful in crisis or high-stakes moments.



Transformational

Inspires and motivates through vision, ethical values, open communication, coaching, and accountability.



Laissez-Faire

A relaxed style that allows teams to explore their own creative strategies. Works best with highly experienced, self-directed teams.

Sources of Power for a Project Manager

A project manager's authority rarely rests on positional power alone – especially when leading technical experts or senior stakeholders from other organizations. Understanding your available sources of power is essential.



3.5 – Leadership

The Cathedral Builder Story

Christopher Wren observed three masons working at very different intensities. When asked what they were doing, the first said: *"I'm a mason and I work to feed my family."* The second: *"I'm building a wall."* The third replied with pride: *"I'm a cathedral builder. I'm rebuilding the grand St. Paul's Cathedral."*

The third mason became the team leader — not because of rank, but because of the **vision of the future** he could convey. In project management, the project purpose and goal statements serve exactly this function: reminding everyone what we are building and *why it matters*. People who connect their work to a larger purpose are more motivated, more persistent, and more effective.

3.5 – Leadership

Leading vs. Managing

Leading the Team

The art of arousing in others the will to do what needs to be done – **because they want to do it**. These are interpersonal (soft) skills:

- Articulating a compelling vision
- Motivating and inspiring people
- Building trust through transparency
- Coaching individuals through challenges
- Resolving conflicts and building cohesion

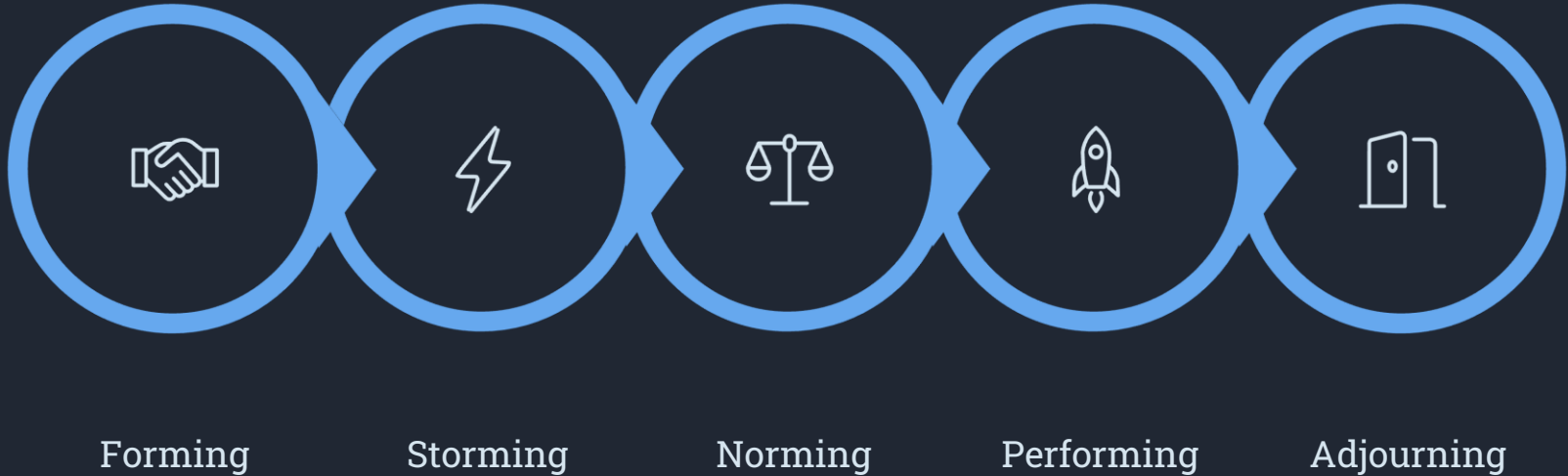
Managing the Project

The technical discipline of planning, executing, and controlling work. These are process management skills:

- Defining the problem and solution approach
- Creating and maintaining the action plan
- Monitoring progress against baselines
- Managing scope, cost, and schedule
- Controlling quality and managing risk

📄 Both leading and managing are essential. Great project managers develop both skill sets – neither alone is sufficient.

Tuckman's Team Development Model



Team development is not always linear. Changes in direction, objectives, roles, or team composition can push a team back to an earlier stage. The project manager's leadership role shifts at each stage – from directive in Forming to supportive in Performing. Not all teams reach the Performing stage.

3.6 – Team Development

Forming Stage

During forming, establishing clear objectives is the first priority. Project documents — including the project charter, management plan, phase plans, and work package definitions — already contain the key elements of a team charter. What may need to be explicitly agreed upon are **team values**.

"We prioritize timely communication and regularly share project status updates."

"We base our decisions on data and information rather than wishful thinking."

"We respect each other's opinions and actively listen without interrupting."

"Instead of making excuses, we focus on identifying and resolving the root causes of dysfunction."

Team-building outings, games, and virtual onboarding exercises also help foster unity and commitment during this stage.

3.6 – Team Development

Storming Stage: Coaching Through Conflict

Storming is uncomfortable – but necessary. It's where power struggles and disagreements surface. The project manager's role is to provide coaching and interpersonal support. **Coaching is not the same as advising.** A coach asks questions and listens actively rather than offering solutions.

Detect Opportunities

Watch for stress indicators, body language changes, or moments of unhelpful feedback in meetings. These signal a coaching need.

Offer – Don't Impose

Ask if it's a good time for a conversation. Coaching can happen informally – over coffee, after a meeting, or during travel.

Ask & Listen

Use questions like "How were you feeling?" and "What would you like to do about it?" Summarize what you hear. Let the person find their own answer.

3.6 — Team Development

An Informal Coaching Conversation

You: "Would you like to talk about what happened there? Not about the specifics, but from a coaching perspective — maybe over a coffee?"

Team member: "If you think it would be helpful."

You: "More so because you might find it beneficial."

You: "I understand. How were you feeling in that situation?"

You: "What would you like to do about it?"

You: "Let me make sure I understand — so you're saying... [summarize]. Can you see any other options?"

You: "Thank you for sharing. Is there anything else you'd like to discuss?"

The essence of coaching lies in helping the other person find their own answers — through questions, active listening, and reflection. Resist the urge to give advice or jump to solutions.

3.6 – Team Development

Norming, Performing & Adjourning

1

Norming

Differences resolve. Strengths are appreciated. Team members seek help, give feedback, and commit more strongly to shared objectives. Team-building activities reinforce cohesion.

2

Performing

High productivity with minimal intervention. The PM can delegate more complex work packages. Celebrate milestones – verbal recognition, shared accomplishments, team outings, or even a "hall of fame."

3

Adjourning

Team disbands as work packages complete. Some members find this challenging. Coaching helps. Praise accomplishments publicly, offer references, and acknowledge contributions.

3.6 – Team Development

Training: Building Team Competency

Training Methods

- Classroom sessions with in-house or external trainers
- Online courses and blended learning approaches
- On-the-job training with experienced team members
- Project management simulation games
- Coaching and mentoring by the project manager

Planning for Training

Scheduled training should align with the **resource management plan**. Unplanned training may arise from performance appraisals and observations. Training costs can be included in the project budget or covered by the organization if skills benefit future projects. A well-trained team makes fewer errors, detects problems earlier, and delivers higher quality – reducing costly rework.

Communication Is a Critical Success Factor

If key stakeholders don't feel informed, problems will follow.

Effective, proactive communication is not optional – it is a fundamental driver of project success. This applies at every level: team members reporting to work package leaders, work package leaders reporting to the project manager, and the project manager communicating with the full stakeholder landscape.

Small Projects

Basic status reporting. Weekly updates from team to PM. Bi-weekly reports to sponsor. Regular status meetings reviewing baselines, issues, and risks.

Agile Projects

Daily 15-minute stand-up (daily scrum). Three questions: What did you do? What will you do? Any blockers? Product presentation to the product owner at end of each sprint.

Large Projects

Comprehensive strategies covering mandatory, informational, and marketing communication. Stakeholder engagement building measures tailored to each quadrant of the stakeholder matrix.

3.7 – Communications

Stakeholder Importance vs. Interest Matrix

After identifying stakeholders, classify them by **importance to project success** and **current level of interest/engagement**. This creates a 9-quadrant action map.

Importance / Interest	Low Interest	Medium Interest	High Interest
High Importance	⚠️ Priority 1 – Move to Q1 or Q2	Monitor – consider moving to Q1	✅ Ideal – maintain
Medium Importance	⚠️ Priority 2 – Move to Q3 or Q5	Maintain – no urgent action	Good – leverage support
Low Importance	Monitor – low action needed	Keep informed as needed	Useful in definition & testing

Focus energy first on high-importance, low-interest stakeholders. Disengaged critical stakeholders represent your greatest communication risk.

3.7 – Communications

Three Types of Communication

Mandatory Communication

Reports required by law, company regulations, or the communication plan. Sent without waiting to be asked – includes reporting to sponsor, steering committee meetings, and regulatory submissions.

Informational Communication

Access to information that requires active engagement from recipients. Examples: project website, FAQ page, shared document repositories. Recipients pull the information they need.

Marketing Communication

Proactively pushed to build enthusiasm and goodwill. Newsletters, roadshows, testimonials, milestone celebrations, project branding (slogans, merchandise). Think of it as a marketing campaign for your project.

- 📄 If the project is controversial or involves cultural change, marketing communication becomes critical. Opponents will be proactive – your communication must be equally proactive.

3.7 – Communications

What Goes in a Status Report

Report Contents

- Accomplishments vs. scheduled activities (with green/yellow/red indicators)
- Work that should have been completed but wasn't – and its impact
- Outlook on work scheduled for next reporting period
- Issues encountered and recommended courses of action
- Scope change requests
- Newly identified risks
- Miscellaneous updates and appendices

Status Meeting Rules

- Maximum one hour – problem-solving happens in separate meetings
- Standard agenda aligned to the status report format
- Start on time, regardless of latecomers
- Capture and track all action items
- Punctuality norms vary by culture – adapt accordingly

3.7 – Communications

Proactive vs. Reactive Communication

Reactive Communication

Responding when someone asks. This is the **minimum** acceptable standard. Some stakeholders interpret silence – no response – as an answer in itself. Waiting to be asked means you're always one step behind.

Document management also matters. Use initials and ISO date formats to track document versions – e.g., 2024.10.27_DocumentXY_MN_OC – clarifying authorship, review sequence, and consolidation. Use UTC for scheduling across time zones to eliminate ambiguity.

Proactive Communication

Informing stakeholders **before they ask**. By the time someone reaches out to ask about project progress, it may already be too late. Proactive communication maintains trust, manages expectations, and prevents surprises.

3.8 – Quality

What Is Quality?

"Quality is the degree to which a set of inherent characteristics fulfills requirements."

– ISO 9000

Quality ≠ Grade

A premium product with the wrong specifications has *low quality*. An egg graded XL that is cracked fails quality. A high-performance car consuming double the specified fuel fails quality. Quality is about **meeting requirements** — not about luxury or features.

Two Dimensions of Quality

- **Quality Assurance** — implementing standards and processes to *produce* quality throughout the development lifecycle
- **Quality Control** — measuring how well deliverables *meet* functional requirements and quality attributes

Both run in parallel during execution.

3.8 – Quality

Total Quality Management & Lean Thinking



Total Quality Management (TQM)

A management philosophy originating in Japan, striving for high quality at all levels through continuous improvement. Related to Kaizen – zero defects, do it right the first time.



Lean Management

Eliminate any activity that does not add value the customer is willing to pay for. Rework, disorder, blame, large inventories, and too many simultaneous tasks are all forms of waste.



Team Motivation

Motivated team members make fewer errors, detect more problems, help colleagues improve, and work more efficiently. Motivation is a quality assurance tool.

A project manager can introduce quality frameworks even in organizations with lower quality cultures – but without organizational endorsement, the battle becomes significantly harder.

3.8 – Quality

Quality Tools: Fishbone & Pareto

Cause & Effect (Fishbone) Diagrams

In a brainstorming session, the team identifies **potential causes** of a quality problem and organizes them into categories. The diagram visually maps the relationship between effect and contributing causes, making root cause analysis structured and collaborative. This is the foundation of mind mapping tools.

Pareto Analysis

Statistical analysis to identify the **critical few factors** responsible for the majority of quality issues. The 80/20 rule: 20% of causes drive 80% of problems. Pareto analysis directs improvement energy toward the areas with the greatest impact, rather than spreading effort evenly across all issues.

- ❏ Other useful quality tools include checklists, process analysis, decision-making frameworks, and audits – which can be performed by an audit department, PMO, or external auditor.

3.9 – Change & Corrective Actions

The Execution-Control Cycle

Planning, executing, and controlling are not sequential phases — they are **repeating, interconnected cycles**. As a project manager, you may experience this as a seamless mental flow.

Execution

Controlling



Implement
Decisions

Planning

The transition between modes happens continuously. A problem encountered during execution triggers controlling mode to evaluate options, then planning mode to schedule the response, then back to execution to implement it. Experienced project managers move through this cycle fluidly.

3.9 – Change & Corrective Actions

A Real-World Example: Work Package 4.7

During controlling, it's discovered that Work Package 4.7 (construction work) is 10% behind schedule after 2 of 20 planned weeks. The revolutionary materials chosen don't perform under high daytime temperatures – the team has been working only night shifts.

Option A – Change Materials

Resolves the temperature issue. Impacts quality attributes. Additional cost: €300,000. Requires change control board approval.

Option B – Controlled Environment

Continue with same materials. Build artificial temperature-controlled environment: 4 weeks, €200,000. Covered by the €1M contingency reserve. Selected option.

Option C – Continue As-Is

Work package extends to 40 weeks (on critical path). Contract penalties of €200,000/week of delay. 50% probability of compressing other critical path activities to compensate.

3.10 – Risk Responses

Implementing Risk Responses

Implementing risk responses is the natural culmination of the risk management process: plan → identify → analyze → respond → **implement**. Risk responses must be treated like any other deliverable — defined, planned, resourced, and executed.

Risk Name	Prob.	Impact	Criticality	Strategy	Measure
Sponsor engagement	5	12	60	Mitigate	Nominate delegated sponsor
Functional requirements	5	12	60	Mitigate	Requirements workshops
Tracking tool supplier	4	9	36	Avoid	Replace supplier
e-Payment	5	5	25	Transfer	Hire triangular payments supplier
Online help	3	7	21	Accept	Reserve: 2 weeks + €25K
Training sessions	4	4	16	Accept	Reserve: 1 week + €35K

3.10 – Risk Responses

Implementing Each Risk Response

1 Delegated Sponsor (Risk 6)

Negotiate with the sponsor. Clarify the sponsorship role. If the sponsor commits directly, the risk may dissolve. Otherwise, identify an appropriate delegate with a clear job description covering phase gate leadership, change approval, and project advocacy.

2 Requirements Workshops (Risk 1)

Plan and conduct stakeholder workshops. Select participants, book venues, engage a facilitator if needed. Analyze, align, classify, and rank requirements. Plan for multiple review rounds – these activities affect schedule and cost estimates.

3 Replacement Supplier (Risk 2)

Navigate carefully with the finance department. Involve the sponsor and purchasing department. Run the full supplier selection process – or shortlist from prior candidates. Build reserves for such risks during planning.

4 Triangular Payments Supplier (Risk 3)

Apply the standard procurement lifecycle: long list → medium list → RFP → evaluation → shortlist → negotiations → contract award. Time and budget should have been planned during the risk response planning phase.

3.11 – Knowledge Management

Managing Project Knowledge

The Goal

Knowledge management aims to achieve project objectives by **leveraging existing expertise** and **generating new knowledge** through collaboration. Knowledge lives in people's minds – the challenge is to surface, share, and apply it.

The Enablers

- An atmosphere of trust and psychological safety
- Project documents and information management tools
- Team development, coaching, and communication practices
- Regular retrospective meetings for process improvement
- A team culture that values learning over blame

Retrospective Meetings: Continuous Improvement in Action

Retrospectives allow teams to reflect on their work, identify what's working, and adjust what isn't. They are most valuable when held **regularly throughout the project** – not just at the end. Agile teams often run retrospectives at the end of every two-week sprint.

1

Review the Period

Examine the interactions, processes, and tools used during the previous working period. What actually happened?

2

Identify Successes & Gaps

Celebrate what worked well. Honestly identify areas with potential for improvement – using data, not assumptions.

3

Agree on Actions

Select 1–2 priority improvements for the next period. Define how success will be measured. Limit scope to avoid demotivating the team.

4

Measure Outcomes

In the next period, validate whether the chosen improvements delivered the expected results. Adjust if needed.

3.11 – Knowledge Management

Retrospective: Facilitation Tips

A retrospective is only as good as the participation it generates. Silence signals non-participation is acceptable – which defeats the purpose entirely.

→ Start with Engagement

Open by asking everyone to express their feelings about the past period in one or two words. Remind the group: there are no right or wrong feelings.

→ Use Facilitation Tools

Whiteboards, post-it cards, brainstorming, fishbone diagrams, and the Five Whys technique help structure discussion and draw out quieter contributors.

→ Reference Team Values

Refer back to the team charter. Values like "we use data, not wishful thinking" and "silence is not conformity" set the tone for honest dialogue.

→ Prioritize with Voting

If the list of action items is long, allocate voting dots to each participant. Focus the team on the two or three most impactful improvements.

Section 3 – Summary

Key Takeaways: Acquiring Resources & Procurement

Right Resource, Right Time

Pre-assign scarce resources early. Use negotiation, virtual teams, and weighted decision matrices to secure the best fit.

Make vs. Buy vs. Rent

Decide early. Cost is not the only factor – core competencies, IP, capacity, and control all matter.

Right Contract Type

Fixed-price for defined scope. Cost-reimbursable for evolving scope.
Time & materials for flexible, expert-based engagements.

Supplier Selection

Always use a weighted multicriteria matrix. Price alone is never sufficient. Involve legal, technical, and commercial experts.

Section 3 – Summary

Key Takeaways: Work Packages & Leadership

Work Package Management

- Authorization and delegation connect the PM to work package leaders
- Three quality stages: create → internally test → formally approve
- Outcomes: accepted, conditionally accepted, or rejected for rework
- Regular progress reporting is non-negotiable during execution

Leadership & Team Development

- Leadership is voluntary – build referent and expert power, not just positional authority
- Articulate a vision; people need to know why their work matters
- Guide teams through Tuckman's five stages with situational leadership
- Coaching is questions + listening – not advice-giving

Section 3 – Summary

Key Takeaways: Quality, Change & Risk

Quality = Compliance

Quality means meeting requirements — not grade or luxury. Run assurance and control in parallel. TQM, Lean, and fishbone/Pareto tools all help.

Change Is a Cycle

Execution → controlling → planning → execution. Corrective and preventive measures flow through this cycle. Document everything in logs, reports, and meeting agendas.

Risk Responses Are Deliverables

Define, plan, resource, and execute each risk response like any work package. Time and budget for responses must be planned before execution begins.

Learn Continuously

Hold regular retrospectives. Focus on 1–2 improvements per cycle. Measure outcomes. Knowledge management is a competitive advantage — not a formality.

Section 3 – Closing

Execution Is Where Projects Succeed or Fail

Planning creates the blueprint.

Execution builds the cathedral.

Every technique in this section exists to give you – the project manager – the tools to direct work with confidence, lead people with purpose, and respond to the inevitable surprises that arise. The frameworks are proven. The skills are learnable. The discipline is yours to build.

Coming Up Next

Section 4 will cover monitoring and controlling – measuring progress against baselines, managing issues and changes, and keeping the project on track through rigorous control processes.