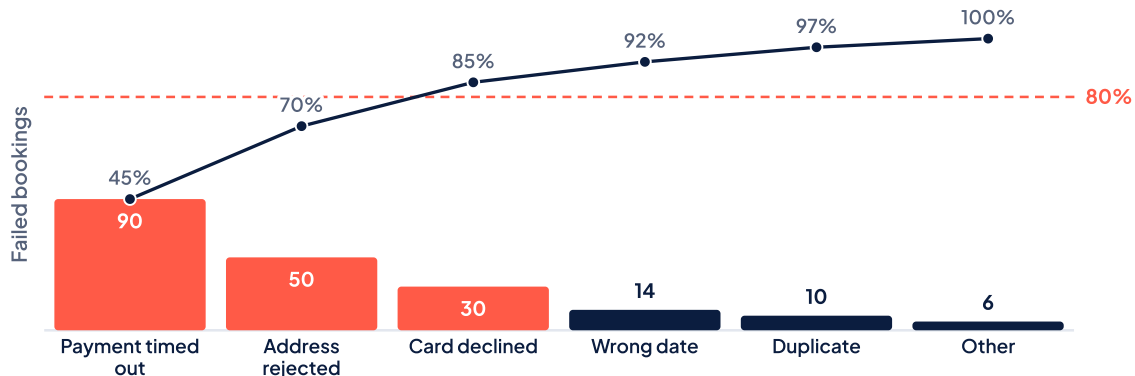


Pareto chart

Rank the causes of a problem by count, so the team fixes first the vital few that produce most of the effect.



Illustrative: 200 failed bookings in a month. Cumulative 45%, 70%, 85%: three causes of six give 85%.

WHAT IT IS

One bar per cause, largest on the left, and a line adding up their share. **Joseph Juran** applied the idea to quality (1951): a **vital few** causes produce most of the losses. He named it after the economist **Vilfredo Pareto**, then called that name his mistake (1975). '80/20' is a rule of thumb: fix where the line bends; weigh a rare cause by its cost.

HOW IT WORKS

- 01 Log each case with one cause from an agreed list.
- 02 Order the causes, the biggest first; draw the bars.
- 03 Cumulative share: running total ÷ total.
- 04 Fix the vital few first, then count again.

MID-LEVEL · WORKED EXAMPLE

Apply it well

The situation: A city team has moved resident parking permits online. In two weeks, the service desk logs 160 calls about online renewals, one reason each.

Login help (64), payment questions (40) and unclear zones (24): 40%, 65%, then 128 of 160, or 80%. Login help is fixed first; two more weeks check the drop.

In the exam: Show the counts, order and cumulative shares; name the vital few, what you fix first and how you check it.

SENIOR · WORKED EXAMPLE

Design and lead it

The situation: A city is joining 14 online services under one login over 30 months. Each service and supplier logs defects its own way.

The project manager agrees one list of causes for all. The steering board sees one Pareto per group of services, weighted by cost to residents as well as count, and decides where fixes are funded.

In the exam: Explain the shared categories, count against cost, and how the chart set funding priorities.

WHERE IT SITS

IPMA · ICB4

4.5.6: quality analysis tools and indicators (knowledge list, p. 119); 4.4.8.3: analyse data and trends (p. 90)

PMI · PMBOK® GUIDE 8 · PMP® EXAM

Guide: data shown as bar charts and histograms, p. 163. Exam outline: Process task 7

APM · BOK 8 · PMQ EXAM

BoK (APM's Body of Knowledge) §5.3.4: quantitative evaluation (gathering and analysing data) for continuous improvement. PMQ (APM's Project Management Qualification) 18b

Sources: Juran, Quality-Control Handbook (1951); Juran (1975), The non-Pareto principle; IPMA ICB4 (2015); PMI, PMBOK® Guide, 8th ed.; PMI, PMP® Examination Content Outline (2026); APM Body of Knowledge, 8th ed.; APM, PMQ handbook (v6, 2026)

Key: IPMA = International Project Management Association; ICB4 = IPMA's Individual Competence Baseline (4.5.6 etc.: its competence elements); PMI = Project Management Institute; PMBOK® Guide = PMI's body-of-knowledge guide; PMP® = PMI's Project Management Professional; APM = Association for Project Management. Unofficial study material for IPMA®, PMI® and APM exams. Not affiliated with, endorsed by or approved by IPMA, PMI or APM, and not an accredited or endorsed training provider. IPMA® and IPMA ICB® are registered trademarks of IPMA in Switzerland and other countries. PMI, PMP, CAPM and PMBOK are registered marks of Project Management Institute, Inc. APM is a trade mark of the Association for Project Management. Other marks belong to their owners. PMP® exam facts are from PMI's public PMP® Examination Content Outline (2026); check the current version on pmi.org. APM's qualifications are its own; this series is not an APM Accredited Provider or APM Endorsed. Examples use a fictional city and its projects. Levels (this series' labels): Mid-level = moderately complex projects (IPMA Level C, PMI's PMP®); Senior = complex projects and people (IPMA Level B, APM's Chartered Project Professional).

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