

QA Transformation Roadmap

90 / 180 / 360-Day Execution Playbook

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A complete, phased execution playbook to transform quality engineering from reactive manual testing to AI-augmented, metrics-driven continuous quality. Replace all [bracketed] placeholders with your organisation's specifics before distributing.

Phase	Days	Theme	Primary Output
1 — Foundation	1–90	Baseline, quick wins, core infra	Working framework + metrics dashboard
2 — Scale & Standardise	91–180	Coverage, shift-left, SLOs, SDET growth	Pre-PR gates on all PRs, CoE active
3 — Optimise & Evolve	181–360	AI testing, culture, thought leadership	Predictive quality + published case study

Organisation:	[Your Organisation]	Owner:	[QA Leadership Name]
Created:	[Date]	Last Updated:	[Date]

Executive Summary

This roadmap outlines a phased approach to transforming quality engineering from [current state] to [target state] across [X] teams and [X] product verticals. The transformation balances immediate quality improvements with sustainable capability building.

Transformation Pillars

01	Test Automation & Infrastructure	Scaling SDET capacity, tool standardisation, CI/CD integration
02	Quality Metrics & Visibility	DORA metrics, defect leakage tracking, full traceability
03	Team Capability	Skills development, SDET mentoring, community of practice
04	Process & Governance	Risk-based testing, shift-left practices, SLO enforcement
05	Technology & Tools	CI/CD integration, test orchestration, AI-assisted tooling

Current State Assessment

Baseline Metrics (T=0)

Complete the table below before starting Phase 1. These baselines anchor all improvement targets.

Metric	Current (Baseline)	Target	Gap / Goal
Test Automation Coverage (%)	[X]%	[Y]%	[Z]% increase needed
Defect Escape Rate (per 1000 runs)	[X]	[Y]	[Z]% improvement
Mean Time to Recovery (hours)	[X] hrs	[Y] hrs	[Z]% reduction
Test Execution Time (minutes)	[X] min	[Y] min	[Z]% faster
Manual Test Effort (% of sprint)	[X]%	[Y]%	[Z]% reduction
Flaky Tests (count)	[X] flaky	<[Y] flaky	[Z] to remediate
CI/CD Pipeline Pass Rate (%)	[X]%	[Y]%	[Z]% improvement
SDET / QA Ratio	1:[X]	1:[Y]	[Z] SDETs needed
Deployment Frequency	[X]/day	[Y]/day	DORA target
Lead Time for Changes (hours)	[X] hrs	[Y] hrs	DORA target
Change Failure Rate (%)	[X]%	<[Y]%	DORA target

Maturity Level Assessment

Level	Label	Description
1	Ad-hoc	Manual testing, no automation, reactive QA
2	Developing	Basic automation, limited CI/CD, inconsistent practices
3	Defined	Standardised frameworks, CI/CD gates, documented processes
4	Managed	Metrics-driven QA, shift-left, autonomous teams
5	Optimised	AI-assisted testing, continuous optimisation, predictive quality

→ **Current Level: [Level 1–5] | Assess dimensions: Automation / Infrastructure / Team Skills / Process / Org Alignment**

Phase 1: Foundation (Days 1–90)

Goals & Success Criteria

Goal	Success Criteria	Owner
Establish QA Leadership & Vision	Charter approved, comms plan launched, Town Hall #1 done	[Name]
Baseline All Metrics	Dashboard live, historical data collected, SLOs defined	[Name]
Identify & Deliver Quick Wins	Top 5 automation opportunities identified, 3 delivered	[Name]
Build Core Automation Framework	Reusable test libraries for [X] critical journeys in CI	[Name]
Secure Tooling & Infrastructure	Licences secured, environments provisioned, team access granted	[Name]

Workstream 1A — Leadership & Communication

- W1–2: QA Transformation Charter (vision, pillars, metrics, governance)
- W2: Stakeholder kickoff with engineering leads, product, leadership
- W2–4: Communication plan (newsletter, town halls, Slack, doc site)
- W4: Town Hall #1 — current state, vision, 90-day plan
- W8: Progress update | W12: 90-Day review & Phase 2 readiness

Workstream 1B — Metrics & Visibility

- QA Dashboard: DORA, defect, automation, team metrics — weekly cadence
- Test execution observability: result aggregation, failure trends, flaky quarantine
- Defect triage: tag all escapes by coverage, root-cause analysis, leakage report

Workstream 1C — Foundation Automation Framework

- Repo scaffold: POM structure, config, CI pipeline template
- Coding standards: naming, error handling, flakiness mitigation guide
- Automate top [X] critical user journeys across web / API / mobile
- CI/CD: trigger on PR & merge, result reporting, artifact storage
- Stack: Playwright (web), Appium (mobile), Supertest / REST Assured (API)

Workstream 1D — Quick Wins (Top 5)

- [Journey 1]: Low effort — coverage +X%
- [Journey 2]: Medium effort — MTTR reduction
- [Journey 3]: High impact — defect escape reduction
- [Journey 4]: Sprint capacity freed
- [Journey 5]: Pipeline speed improvement

Workstream 1E — Tooling & Infrastructure

- Tool audit & selection — evaluate current stack, choose target tools
- Licence procurement — budget approval, vendor POC, sign-off
- Environment provisioning — CI runners, staging mirrors, credential vault
- Alerting: Slack alerts for pipeline failures, 30-day log retention

Phase 1 Success Metrics

Metric	Target	Tracking
Team Alignment	100% QA leads trained on roadmap	Survey
Automation Coverage	+[X]% (quick wins delivered)	Dashboard
Pipeline Pass Rate	[X]% first-time pass rate	CI/CD
Defect Leakage	Baseline set, -[X]% vs prior qtr	Dashboard
Flaky Tests	[X] critical tests fixed	Test suite
Team Velocity	[X] hours/sprint freed	Jira/Linear
Town Hall Attendance	100%	Sign-in

Phase 2: Scale & Standardise (Days 91–180)

Goals & Success Criteria

Goal	Success Criteria	Owner
Expand Automation Coverage	[X]% of critical journeys automated	[Name]
Shift-Left Testing	Pre-PR gates active on [X]% PRs	[Name]
Standardise Across All Teams	All [X] teams using common framework & standards	[Name]
Build SDET Capacity	[X] SDETs hired/trained, mentoring programme active	[Name]
Establish Quality Gates	SLOs defined and enforced in [X] deployment pipelines	[Name]

Workstream 2A — Scale Automation Coverage

- Coverage expansion roadmap: journey-by-journey, effort estimation, team assignments
- Framework enhancements: parallel execution, flaky quarantine, result deduplication
- Test data strategy: TDM automation, PII masking, data cleanup, contract/mock setup

Workstream 2B — Shift-Left & Pre-PR Automation

- Pre-PR suite: smoke tests (5–10 min), contract/API tests (mocked backends)
- Pipeline: Lint → Unit → Contract → Smoke E2E → Integration (on merge)
- Developer experience: local runner guide, IDE plugins, pre-commit hooks
- Docs: how to run/add/modify tests, troubleshoot flakiness, contribute to framework

Workstream 2C — Team Standardisation & CoE

- QA CoE: bi-weekly framework sync, monthly guild meetings, shared library maintenance
- Automation ownership RACI: Dev → unit/contract, SDET → E2E/infra, CoE → platform
- Quality standards doc: review criteria, naming conventions, flakiness SLO
- Mentoring: 4-week SDET onboarding, weekly office hours, pair programming

Workstream 2D — Quality Gates & SLOs

- SLO 1 (Pre-PR): 100% pass first attempt | SLO 2 (Regression): <[X]% flakiness
- SLO 3 (Defect leakage): <[X] critical/quarter | SLO 4 (Exec time): <[X] min
- Enforcement: automated pipeline gates, weekly reports, escalation path

Workstream 2E — SDET Hiring & Training

- SDET role definition: responsibilities, skills matrix, career path (IC1→Lead)
- Hiring plan: [X] SDETs by end of Phase 2 — internal promotions + external hire
- 4-week onboarding: setup → deep-dive → first PR → autonomous contribution
- Training: bi-weekly SDET Craft sessions, lunch-and-learns, optional certification track

Phase 2 Success Metrics

Metric	Target	Tracking
Automation Coverage	[X]% critical journeys	Dashboard

Pre-PR Pass Rate	>95% first attempt	CI/CD logs
Test Execution Time	<[X] min full regression	Dashboard
Flaky Test Rate	<[X]%	Test results
SLO Compliance	All teams >[X]%	Dashboard
SDET Team Size	[X] SDETs	HR system
Team Knowledge	100% trained on framework	Training records
Defect Leakage	-[X]% vs Phase 1	Dashboard

Phase 3: Optimise & Evolve (Days 181–360)

Goals & Success Criteria

Goal	Success Criteria	Owner
Advanced Automation Maturity	AI-assisted test generation, predictive quality signals active	[Name]
Continuous Quality Culture	Teams proactively improving metrics without prompting	[Name]
Autonomous Release Quality	Self-healing tests, auto triage, minimal manual QA	[Name]
Thought Leadership	QA transformation case study published, speaking engagement	[Name]
Sustain & Scale	Transformation embedded in team processes and culture	[Name]

Workstream 3A — AI-Assisted Testing & Predictive Quality

- LLM prompts for BDD scenario generation, auto-gen test cases from user stories
- Test case prioritisation by risk; integration with test management tools
- Predictive signals: failure prediction, defect prediction, coverage blind spots
- Intelligent triage: auto root-cause, flaky detection, owner notification & tracking

Workstream 3B — Self-Healing Tests & Resilience

- Self-healing framework: XPath/selector auto-recovery, retry with exponential backoff
- Dynamic wait strategies, graceful degradation for non-critical assertions
- Anti-flakiness library: async handling, network resilience, failure playbooks

Workstream 3C — Continuous Quality Improvement

- Quarterly quality reviews: exec dashboard, deep-dive by product, improvement prioritisation
- Monthly test debt reduction sprints: flaky remediation, suite trimming, exec optimisation
- Quality culture: Test of the Month award, open-source contributions, speaking proposals

Workstream 3D — Thought Leadership & Case Study

- Transformation case study: baseline → results, key decisions, ROI, replicable practices
- Public visibility: LinkedIn/Medium article, conference talk proposal, podcast appearance
- Internal playbook: QA transformation guide, decision log, onboarding for future QA leaders

Phase 3 Success Metrics

Metric	Target	Tracking
Automation Coverage	[X]% stretch goal	Dashboard
Defect Leakage	<[X] critical/quarter	Dashboard
Test Execution Speed	<[X] min full suite	Dashboard
Test Reliability	<[X]% flakiness	Test results
Team Satisfaction	>80% engagement score	Survey
DORA — Deployment Frequency	[X] deploys/day (elite/high)	Dashboard
DORA — Change Failure Rate	<[X]%	Dashboard

Cost Savings	[X]% reduction in manual testing labor	Finance audit
Thought Leadership	1+ case study, 1+ speaking engagement	External links

Change Management & Risk

Stakeholder Communication Plan

Stakeholder	Frequency	Channel	Message Focus
Executive Leadership	Monthly	Dashboard + review	Progress vs milestones, business impact
Engineering Leads	Bi-weekly	Sync + Slack	Blockers, roadmap updates, support needed
QA Team	Weekly	Town hall + Slack	Celebration, learning, roadmap clarity
Developers	Weekly	Newsletter	How-to guides, framework updates, SLOs
Product Managers	Monthly	Metrics review	Quality trends, defect leakage, SLOs

Risk Register

Risk	Impact	Probability	Mitigation
Tool/licence procurement delays	High	Medium	Early procurement, vendor POC, budget approval
SDET hiring challenges	High	Medium	Start early, internal training, contractor SDETs
Flaky test epidemic	High	High	Resilience patterns investment, team training
Developer resistance to change	Medium	Medium	Early involvement, quick wins, clear benefits
Test maintenance burden	Medium	Medium	Ownership model, tooling, automation-for-automation
Scope creep	High	High	Clear prioritisation, exec governance, scope control
Loss of executive sponsorship	High	Low	Regular comms, ROI measurement, visibility
CI/CD environment instability	Medium	Medium	Dedicated runners, SLA with DevOps team

Templates

Template A — Team Automation Scorecard

Score each dimension 1–5 weekly. Use trend arrows: ↑ improving → stable ↓ declining

Dimension	Score (1–5)	Trend (↑→↓)	Comments	Owner
Framework & Standards	[X]	[↑/→/↓]	[Notes]	[Name]
Test Coverage	[X]	[↑/→/↓]	[Notes]	[Name]
Code Quality	[X]	[↑/→/↓]	[Notes]	[Name]
CI/CD Integration	[X]	[↑/→/↓]	[Notes]	[Name]
Team Capability	[X]	[↑/→/↓]	[Notes]	[Name]
Infra & Tooling	[X]	[↑/→/↓]	[Notes]	[Name]
OVERALL MATURITY	[Level 1–5]		[Summary]	[Name]

Template B — Defect Escape Root Cause Analysis

Field	Value
Defect ID	[DEF-XXX]
Severity	[Critical / High / Medium]
Product / Feature	[Product Name / Feature Name]
Description	[What went wrong in production]
Reported by	[Customer / Internal / Monitoring]
Root Cause Category	■ Coverage gap ■ Flaky test ■ Missing test ■ Env issue ■ Other
Why wasn't it caught?	[Requirement ambiguity / Low risk assessment / Complex setup / No budget / Other]
Action Item 1	[Create test for scenario X] — Owner: [Name] — Due: [Date]
Action Item 2	[Fix flaky assertion in test Y] — Owner: [Name] — Due: [Date]
Process Change	[How to prevent similar escapes systematically]
Reviewed by	[QA Lead] — Closed: [Date]

Template C — Weekly Status Report

Field	Value
Week of	[Date]
Overall Status	■ On Track / ■ At Risk / ■ Blocked
Highlights (3 wins)	[Win 1] [Win 2] [Win 3]
Blockers	[Blocker description Owner Target resolution]
Metrics Snapshot	Coverage: [X]% Pass Rate: [X]% Flaky: [X] Leakage: [X]

Upcoming (2 weeks)	[Milestone 1 — Owner — Date] [Milestone 2] [Milestone 3]
Decisions	[Decision Rationale Owner Effective date]
Prepared by	[Name] Next update: [Date]

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