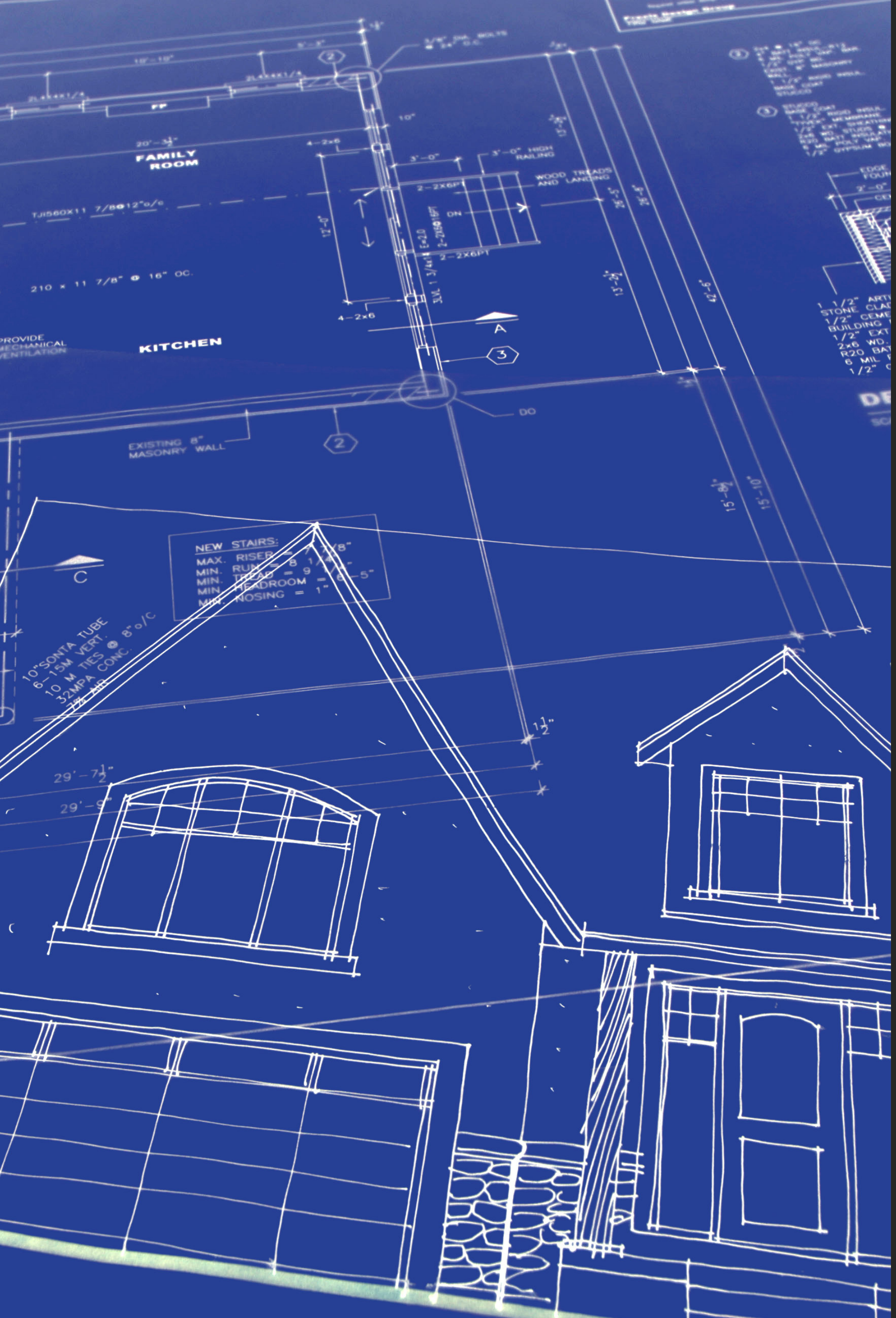

How-To: A Quality Strategy Guide

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What is Quality?

“the standard of something as measured against other things of a similar kind; the degree of excellence of something”. - Oxford Languages

“Quality is value to some person”. - Gerald M. Weinberg

What is a Quality Strategy?

“Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives.” ~William A. Foster

Elements of A Quality strategy

- Executive summary
- Purpose
- Principles
- Goals
- Strategy
- Draw-backs
- Anti-patterns
- Leading and Trailing top indicators
- Open Questions

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Executive Strategy

- Short Elevator pitch
- Usually written last

Purpose

What is this strategy intended to accomplish?

Why should readers care?

Purpose Example

This document captures the quality strategy for delivering software product to our customers. It is intended to clearly describe our goals, principle, approaches, and tools. This include concepts and ideas around quality that will be implemented throughout the organization.

We the People

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and our Posterity, do ordain and establish this Const

Article 1

Principals

We hold these truths to be self-evident….

Principles examples

- Quality is owned by everyone and not a single team.
- There is no silver bullet to quality.
- Quality is more than testing.
- Quality is not a religion.

Goals

“Without goals, and plans to reach them, you are like a ship that has set sail with no destination.” — Fitzhugh Dodson

Goals Example

- Prevent defects from impairing the delight of customers
- Establish the standard by which all product development teams in within the organization deliver products
- Establish a single strategy for the organization instead of a series of disjointed practices.

Strategy

Who

What

When

Where

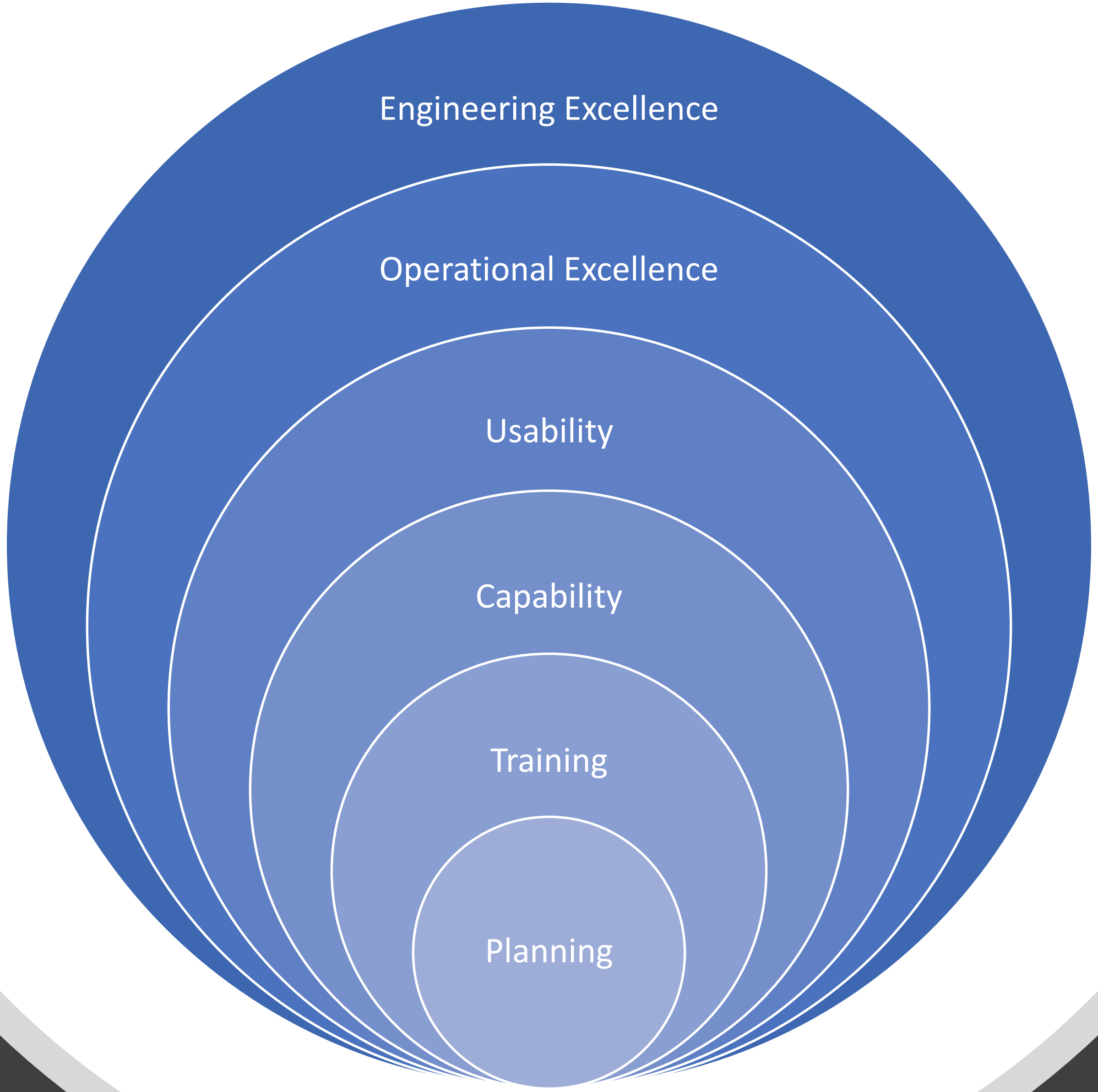
Why

How

What is Quality?

What does quality mean in your organization?

Quality Layers



How do you plan for quality?

Planning

RACI

Responsible	• Who is responsible for doing the work?
Accountable	• Who is accountable for the work being done?
Consulted	• Who needs to be consulted?
Informed	• Who needs to be informed?

Planning

- Agile Maturity
- JIRA Flows
- PDCL + SDLC

Responsible	Technical Project Management
Accountable	Technical Project Management
Consulted	Product, Development
Informed	Development

> “The more that you read, the more things you will know. The more that you learn, the more places you’ll go.”
>
> – Dr. Seuss

Training

Training

- BDD Testing
- Example mapping
- Testing + CI/CD Strategy
- How to write good test automation
- Monitoring and alerting
- Observability
- How to effectively use feature flags

Can our product perform the required functions?

Capability

Capability

- Functional testing
- Example Mapping
- Code Reviews
- Architecture Reviews
- Etc.

Responsible	Development
Accountable	Product
Consulted	Product, Sales, Support, DTSO Squad
Informed	Development

How does the product align with the product experience?

Usability

Usability

- Non-Functional testing
- UAT (External & Internal)
- Performance testing
- Security testing
- Etc.

Responsible	Engineering - UX, Product - Technical Writing, Product - Design, Quality Leadership
Accountable	Product
Consulted	Product, Engineering, Sales, Support
Informed	Product, Engineering

Operational excellence embraces standards and metrics that facilitate a culture of quality.

Operational Excellence

Operational Excellence

- Service Level Agreements
- Health Checks
- Shutdown Behavior
- Resiliency
- Recovery
- Dependencies
- Scaling
- Etc..

Engineering Excellence

Engineering Excellence examines how well we can create, test, and modify our software.

“The thing is, continuity of strategic direction and continuous improvement in how you do things are absolutely consistent with each other. In fact, they’re mutually reinforcing.”
-Michael Porter

Engineering Excellence

- Site Reliability
- CI/CD
- Observability
- Testability
- Etc..

Responsible	Development, DTSO Squad, Operations
Accountable	Engineering Efficiency Leadership
Consulted	Product, Operations, Support
Informed	Engineering

Questions to ask yourself

- Are you looking to move to a whole team model for quality?
- Will you have a quality center of excellence?
- Will there be one person embedded in each team that will be responsible for all of the tasks associated with quality?

Draw-backs

Are there any drawbacks to your strategy?

- Slow down development
- Cost
- Possible bottlenecks

Draw-back Example

With this strategy it can initially take longer for new code to be released. This is due to quality being a part of the development process and happening within the same sprint as the development work. Teams will not only be responsible for developing code but also for understanding the behavior driving new features, performing testing, creating any new documentation, and ensuring measures are in place for monitoring and observability. Training will have to occur which as well will slow down development efforts as testing is a different craft and mindset from development.

Anti-patterns

- Are there any alternate scenarios?
- How do they differ from the strategy you have chosen?
- Why did you choose the strategy that you did?

Anti-pattern example

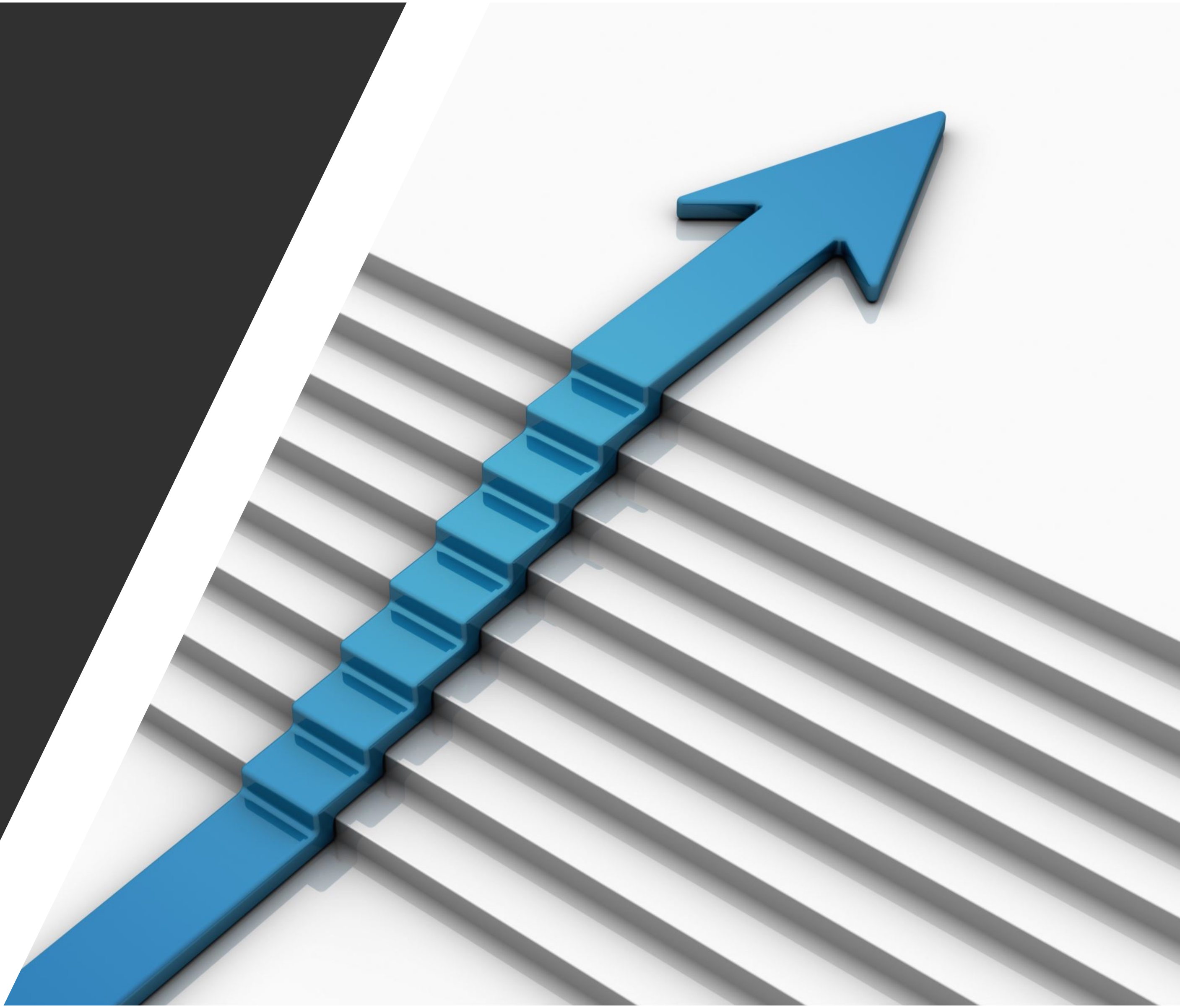
Testing as the sole responsibility of one group outside of CI/CD: In this approach testing is considered the sole responsibility of one group, whether that be a specialized testing group, developers, product, or operations. With this approach:

- Silos can develop between different groups, causing bottlenecks in the software development life cycle
- There is a lack of fast feedback, causing developers to frequently context-switch between work items and bugs
- More testing tends to happen only in production, which is shown to be expensive
- There is a lack of accountability due to context being lost between groups
- This strategy is known industry-wide to lead to a higher count of bugs and for those bugs to be more expensive to fix

This is not an approach that we will accept or promote in this organization.

Leading and Trailing Top Indicators

- How are you going to determine success?
- What are some metrics you can use to determine whether you are headed in the right direction?



Leading and Training Indicators Example

- [**leading**] 90% of services are covered by at least 1 smoke test in production
- [**leading**] 95% core functionality of software functionality use case based tests are running in CI/CD
- [**leading**] 95% of work is tested with test documentation in sprint
- [**leading**] Time to review quality standards decisions is less than 5 business days 90% of the time
- [**trailing**] Achieve defect escape rate of 4 per week max
- [**trailing**] 50%+ of “decision” reviews can be completed async (signals that early planning, knowledge sharing, and design quality are all high enough)

Open Questions

- Is the product team aligned with the expectations we have of them?
- Is engineering ready for a cultural change?
- Are there any other leading/trailing indicators that would help us measure success?

Executive Summary Example

The quality strategy is to embrace a culture of quality through a series of layers. In this approach, everyone involved with delivering software is responsible for its quality. This includes having processes in place to support effective testing that leads to confidence in the quality of our software. This is accomplished through a layered approach to quality where everyone has a clear understanding of the layers, as well as how each person has an impact on quality.

Putting it all together

Quality Strategy Template

- https://tinyurl.com/qualitystrategytemplate

Quality Strategy Example

- https://tinyurl.com/qualitystrategyexample

Thank You

Questions?

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