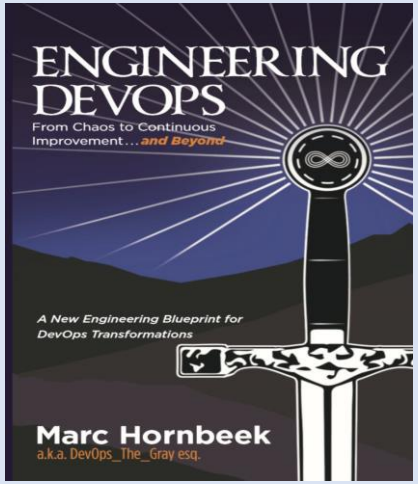


Continuous Testing

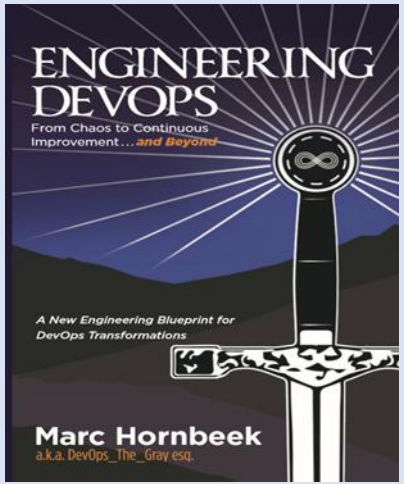
The Primary Key to Successful DevOps

Marc Hornbeek, *DevOps_the_Gray, esq.*
CEO - Engineering DevOps Consulting
Ambassador and author-DevOps Institute,
Author of book "Engineering DevOps"

DevOps Institute

engineeringdevops.com

Continuous Testing

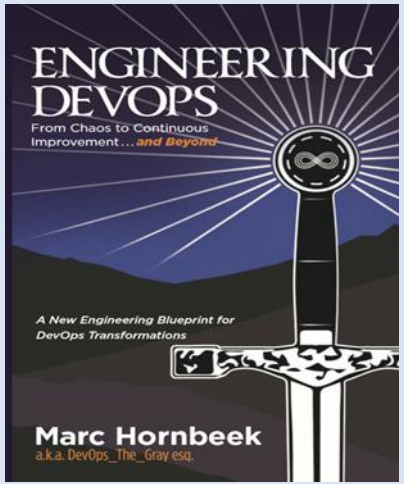


- What?
- Why?
- Blueprint
- Capability maturity model
- Self-assessment
- Accelerate and scale

Book "***Engineering DevOps***"

mybook.to/engineeringdevops

What is Continuous Testing ?



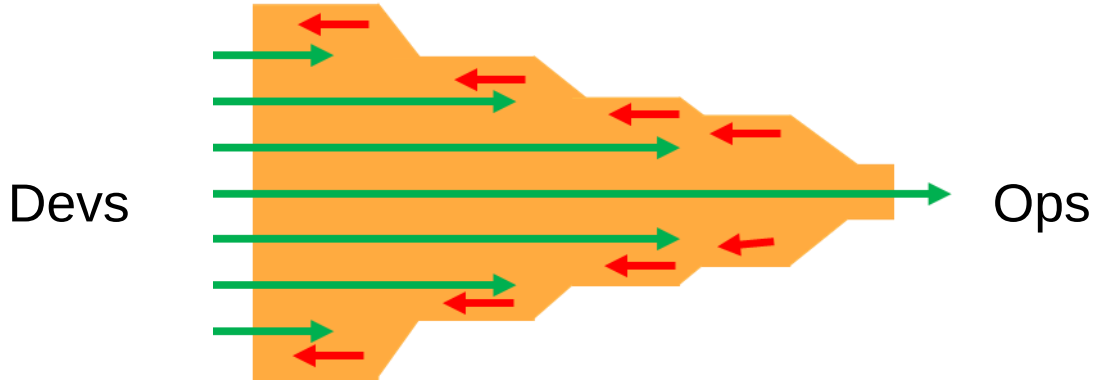
Quality assessment strategy in which most tests are automated and integrated as a core and essential part of DevOps.

….Continuous testing is much more than simply “automating tests.”

Why is Continuous Testing Important ?

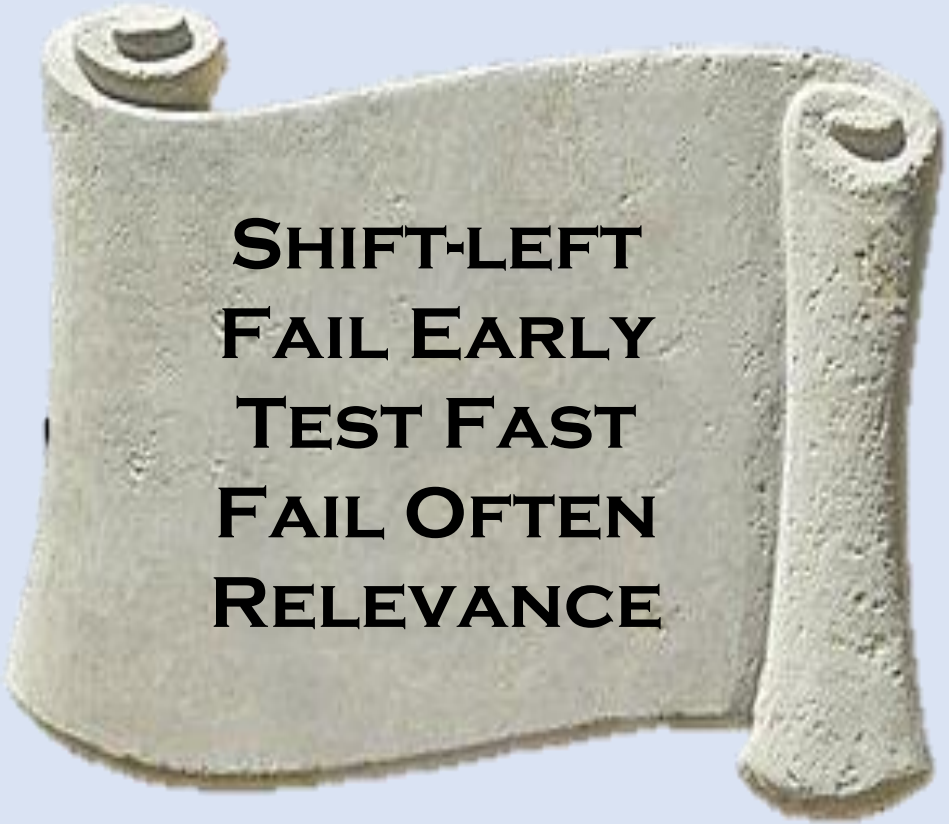
"Software quality is underpinning key business drivers of every major enterprise – business growth, user satisfaction, cost, and security"
- World Quality Report

Testing can bottleneck flow.

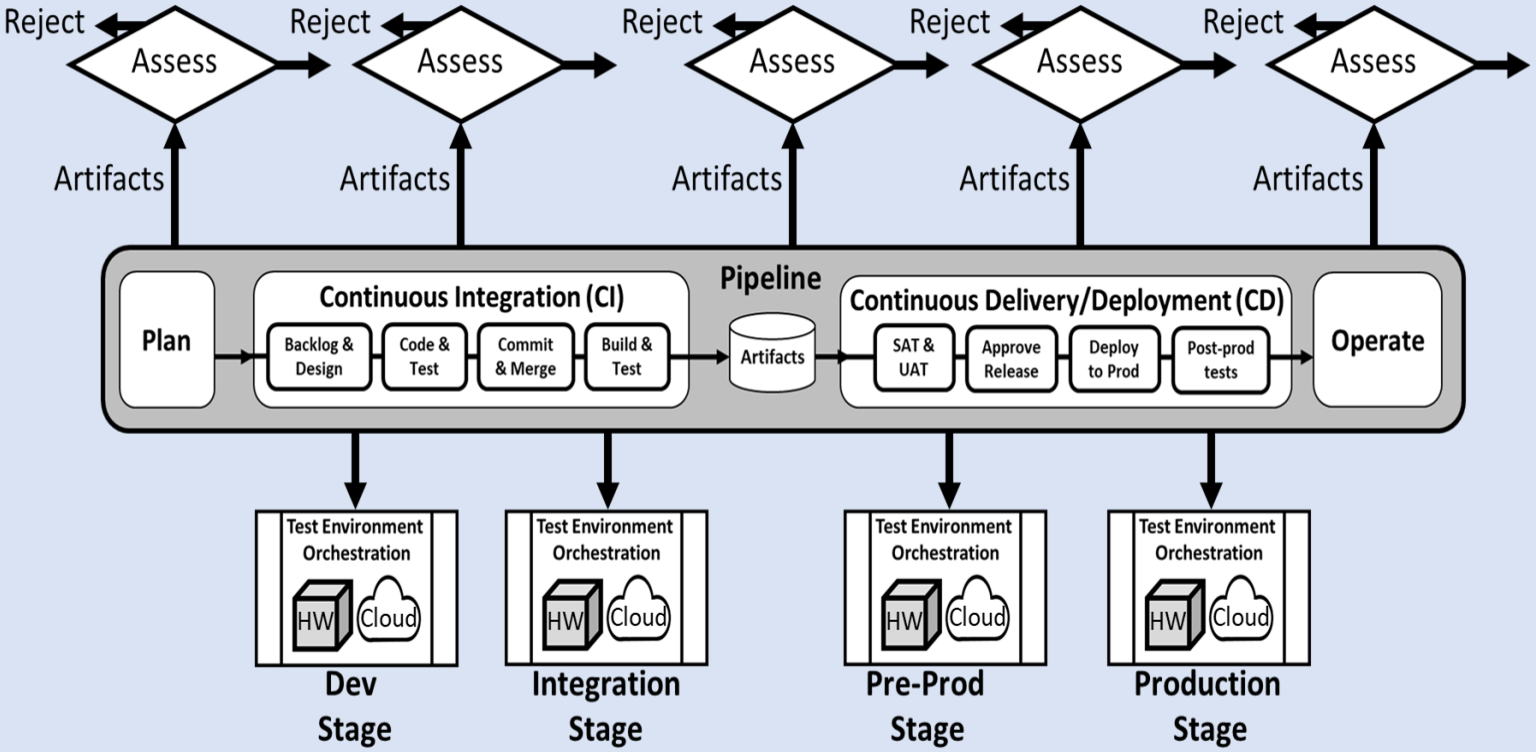


- Test creation
- Test environments
- Test configurations
- Test execution
- Test results
- Resolution retest

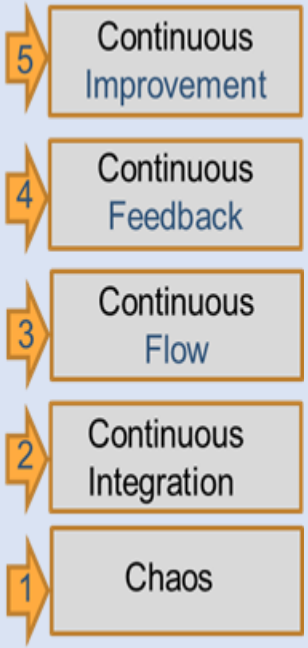
Continuous Testing Tenets

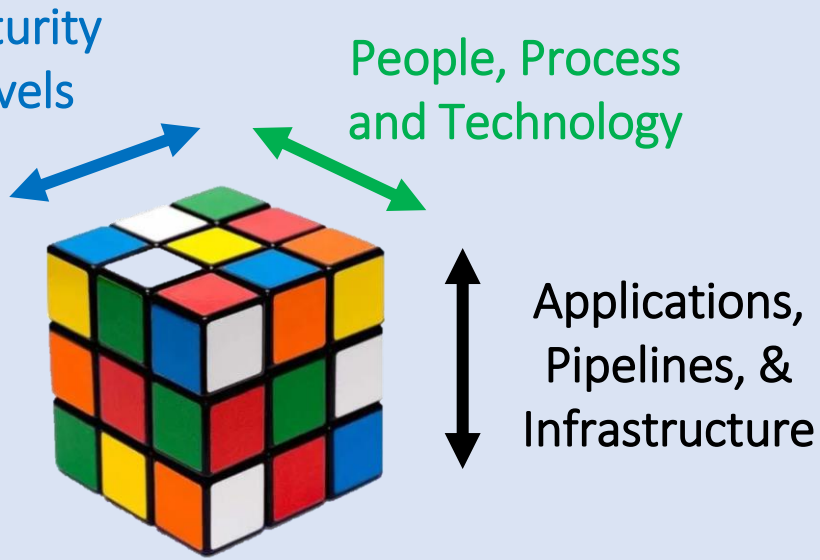


Continuous Testing Blueprint



Dimensions of Continuous Testing Maturity





Engineering emphasizes balanced solutions

Continuous Testing Maturity
Level 1 : Chaos

PEOPLE	PROCESS	TECHNOLOGY
❑ Silo team organization ❑ Little knowledge of Continuous Testing ❑ Blame, finger-pointing	❑ Testing not part of planning ❑ No test standards ❑ Few automated tests	❑ Missing tools to test performance of applications, pipelines and infrastructure

Typical Outcomes

“What failed today?”

Missing tests, slow response response, blame, and finger-pointing

Continuous Testing Maturity
Level 2 : Continuous Integration

PEOPLE	PROCESS	TECHNOLOGY
❑ Limited knowledge of CT, Ad-hoc training ❑ Some Dev/QA co-ordination	❑ Most tests other than build tests are manual ❑ Minimal test version management	❑ Version management ❑ Automated build tests ❑ Painful but repeatable releases

Typical Outcomes

“Why did that fail?”

Reaction to unknowns chaotic, no E2E pipeline test automation, test results are correlated manually

Continuous Testing Maturity
Level 3 : Continuous Flow *(1st Way of DevOps)*

PEOPLE	PROCESS	TECHNOLOGY
❑ CT skills and training program ❑ Risk management ❑ Dev/QA joint plan	❑ E2E CI/CD pipeline, tests visible ❑ Test/release standards ❑ Test management	❑ Most tests automated for app, infra, pipeline ❑ Release metrics use test results

Typical Outcomes

"Something failed!"

End-to-end test automation, test results are integrated into one place for analysis

Continuous Testing Maturity
Level 4 : Continuous Feedback *(2nd Way of DevOps)*

PEOPLE	PROCESS	TECHNOLOGY
❑ Collaboration using shared test metrics ❑ Goals: SLI/O/As, ❑ Mentors and Guilds	❑ E2E performance trends drive test design ❑ Focus on removing test bottlenecks	❑ Test environment orchestration ❑ Predictive testing

Typical Outcomes

“Something is going to fail”

Advanced systems, fast response.

High confidence in achieving SLAs in production

Continuous Testing Maturity
Level 5 : Continuous Improvement (3rd Way of DevOps)

PEOPLE	PROCESS	TECHNOLOGY
❑ Experimentation ❑ Integrated Dev/QA ❑ E2E user experience focus	❑ Risk based test design ❑ Automated test creation and test results analysis	❑ E2E value stream test analysis, orchestration and execution ❑ Intelligent test creation

Typical Outcomes

“Here is the test for the thing that will fail”

Self-correcting, high confidence, innovative

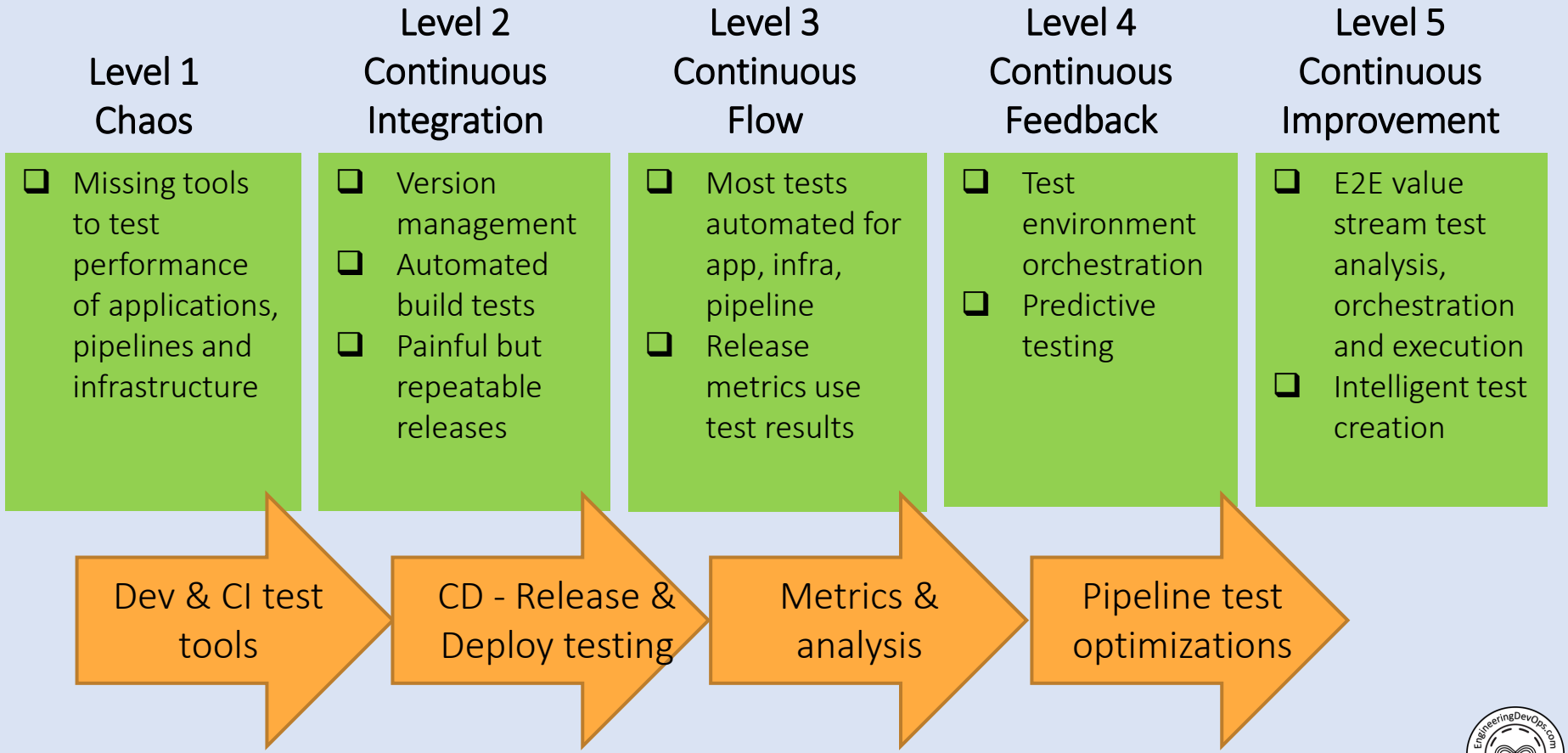
Platform for Autonomous Continuous Improvement

Continuous Testing Capability Maturity Assessment Model

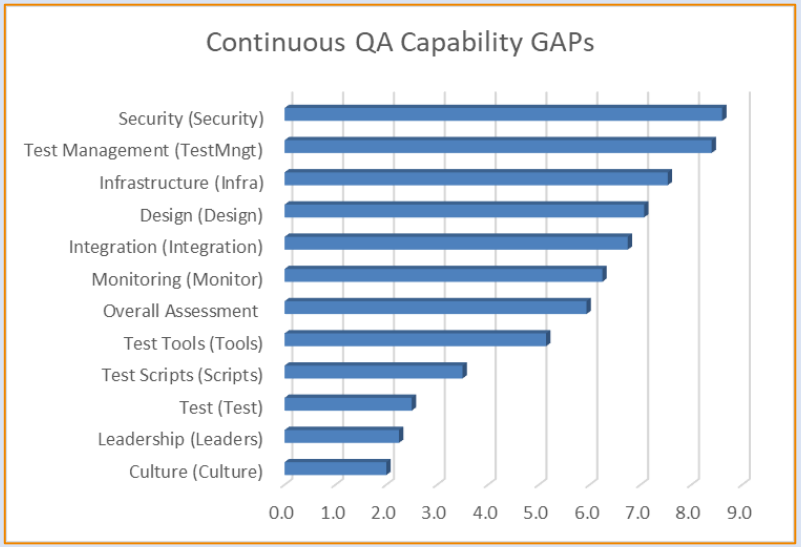
	PEOPLE	PROCESS	TECHNOLOGY
Chaos 1	❑ Silo team organization ❑ Little knowledge of Continuous Testing ❑ Blame, finger-pointing	❑ Testing not part of planning ❑ No test standards ❑ Few automated tests	❑ Missing tools to test performance of applications, pipelines and infrastructure
Continuous Integration 2	❑ Limited knowledge of CT, Ad-hoc training ❑ Some Dev/QA co-ordination	❑ Most tests other than build tests are manual ❑ Minimal test version management	❑ Version management ❑ Automated build tests ❑ Painful but repeatable releases
Continuous Flow 3	❑ CT skills and training program ❑ Risk management ❑ Dev/QA joint plan	❑ E2E CI/CD pipeline, tests visible ❑ Test/release standards ❑ Test management	❑ Most tests automated for app, infra, pipeline ❑ Release metrics use test results
Continuous Feedback 4	❑ Collaboration using shared test metrics ❑ Goals: SLI/O/As, ❑ Mentors and Guilds	❑ E2E performance trends drive test design ❑ Focus on removing test bottlenecks	❑ Test environment orchestration ❑ Predictive test analytics
Continuous Improvement 5	❑ Experimentation ❑ Integrated Dev/QA ❑ E2E user experience focus	❑ Risk based test design ❑ Automated test creation and test results analysis	❑ E2E value stream test analysis, orchestration and execution ❑ Intelligent test creation

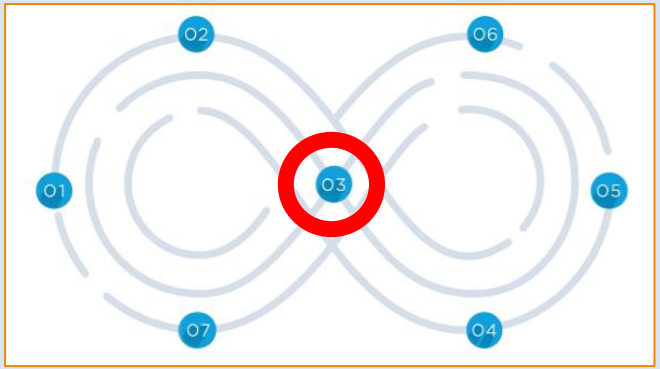
White papers and Self-Assessment tool available on www.engineeringdevops.com.

Continuous Testing Technology Roadmap



Accelerate and Scale Your Continuous Testing

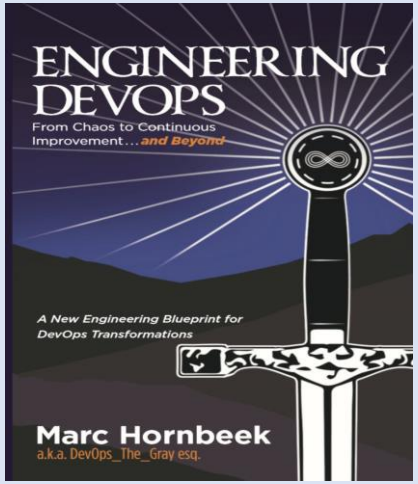




Continuous QA Assessment
9 Pillars + Test Management, Test Tools, Test Scripts

Seven-Step DevOps Transformation

1. Visioning
2. Alignment
3. Assessment
4. Solution
4. Realize
5. Operationalize
6. Expansion



Learn More
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