FUSION 17

DRIVING SERVICE MANAGEMENT FORWARD

ITSM DevOps: Beyond Standard Changes

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Session 805

About…

ITSM Academy

- Full service provider of IT Service Management (ITSM) and DevOps education and advice
- Accredited and sustainable education and training
  - ITIL®
  - Process Design (CPDE)
  - DevOps
  - Agile Service Management®

Donna Knapp

- Author
- Curriculum Development Manager
- Certified Process Design Engineer
- ITIL® Expert, ITIL Practitioner
- DevOps Foundation certified
- Certified DevOps Leader
- Certified DevOps Test Engineer
- Certified Scrum Master
- Certified Agile Process Owner
- Certified Agile Service Manager
- Certified in Knowledge-Centered Support (KCS) Principles

Agenda

- The promise of DevOps
- The reality of DevOps
- Adapting ITSM in support of DevOps


The Promise of DevOps
Speed – Agility – Productivity – Stability – Quality

The Reality of DevOps

Traditional IT
Big batch sizes
Skill-centric silos
Centralized scheduling
High-risk releases
Disseminated information
Failure is not an option culture
Cost and capacity metrics
My part is ‘Done’

Transformation

DevOps
Micro batches
Product teams
Decentralized and continuous
Non-event releases
Actionable information
Shift left, fail early
Cost, capacity and flow (time)
IT is ready to deploy

"With the shift to digital transformation, CIOs and IT leadership must transform their organizations and increase the balance between quality and speed by changing their mindset and operating principles."

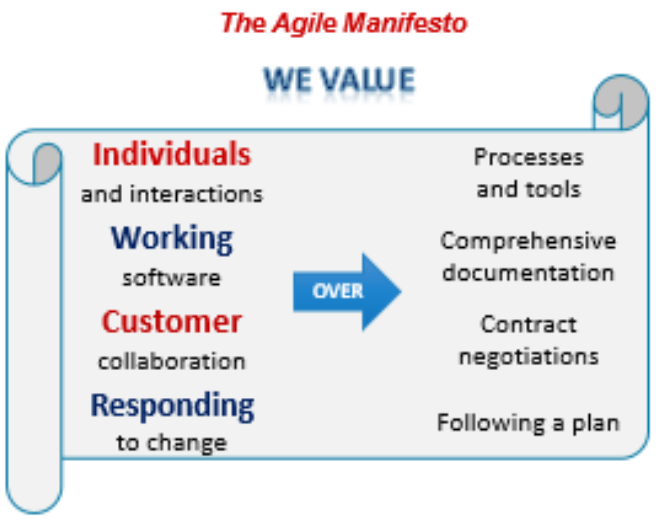
Stephen Elliot IDC

ITSM DevOps

- The what and the why of ITSM hasn't changed
- It's the 'how' that MUST change

DevOps represents a different way of thinking and working.

New(?) Ways of Thinking

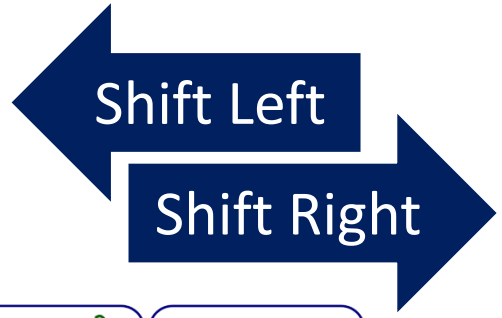


While there is value in the items on the right, we value the items on the left more.

Scientific Method

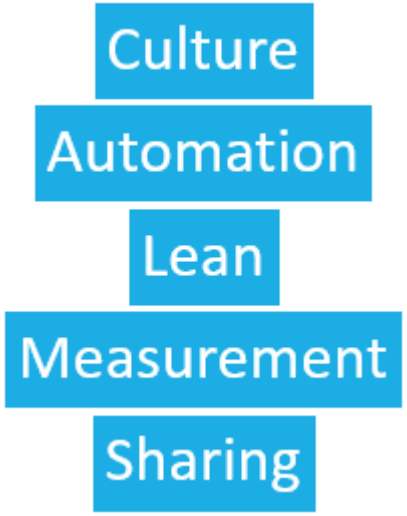
Socratic Method

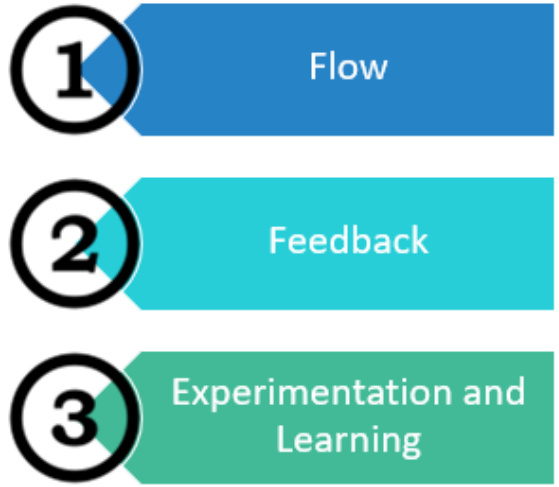
Define value from the perspective of the customer.



Systems Thinking

Theory of Constraints

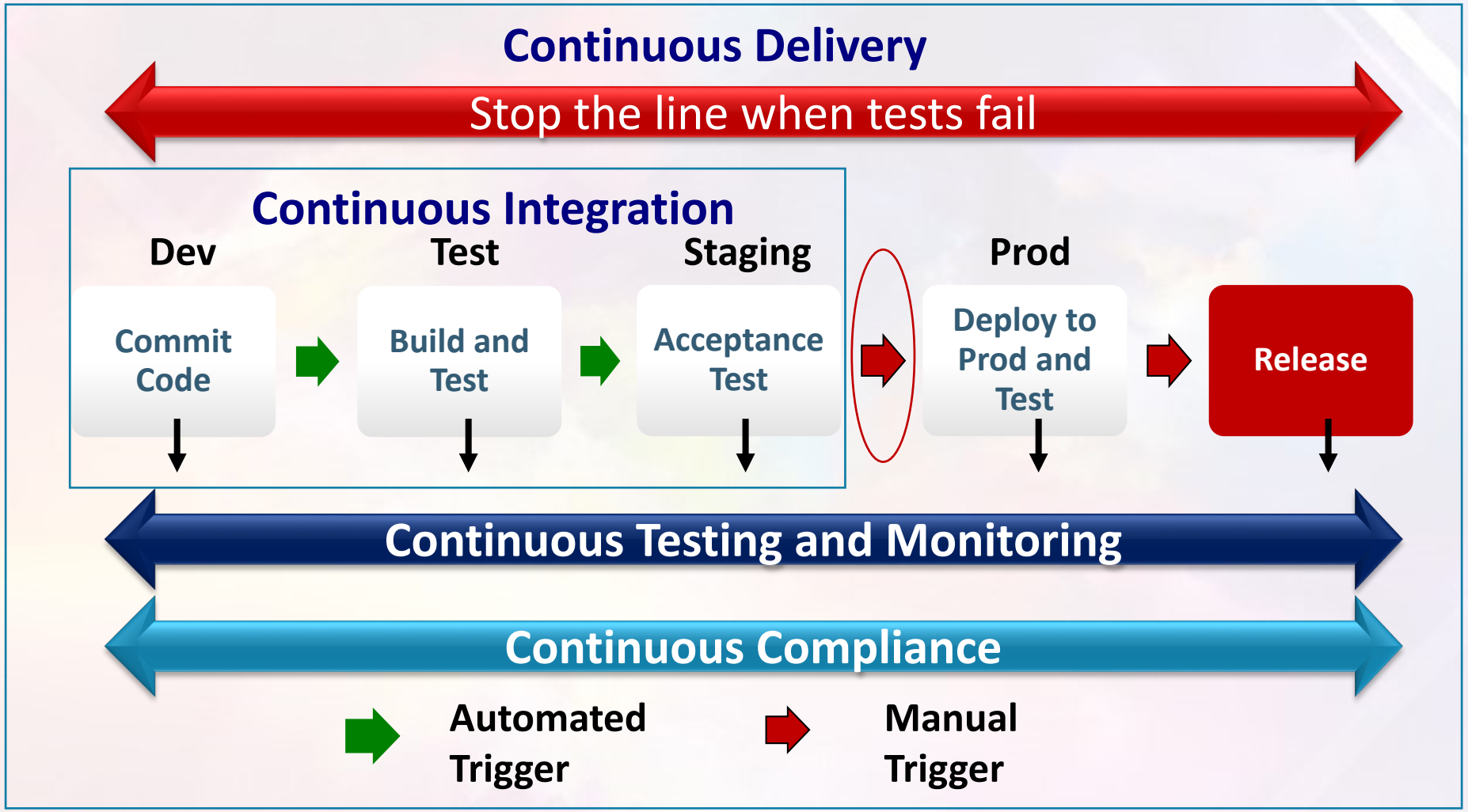




Words without actions are meaningless but…

…actions without words are confusing.

New(?) Ways of Working



What It All Means

Frequent Deployments are Key to Success

- If you can deploy hundreds of times per day, you can recover from mistakes almost instantly
- If you can recover from mistakes almost instantly, you can take on more risk
- If you can take on more risk, you can try wild experiments
- The results of your wild experiments might turn into your next competitive advantage

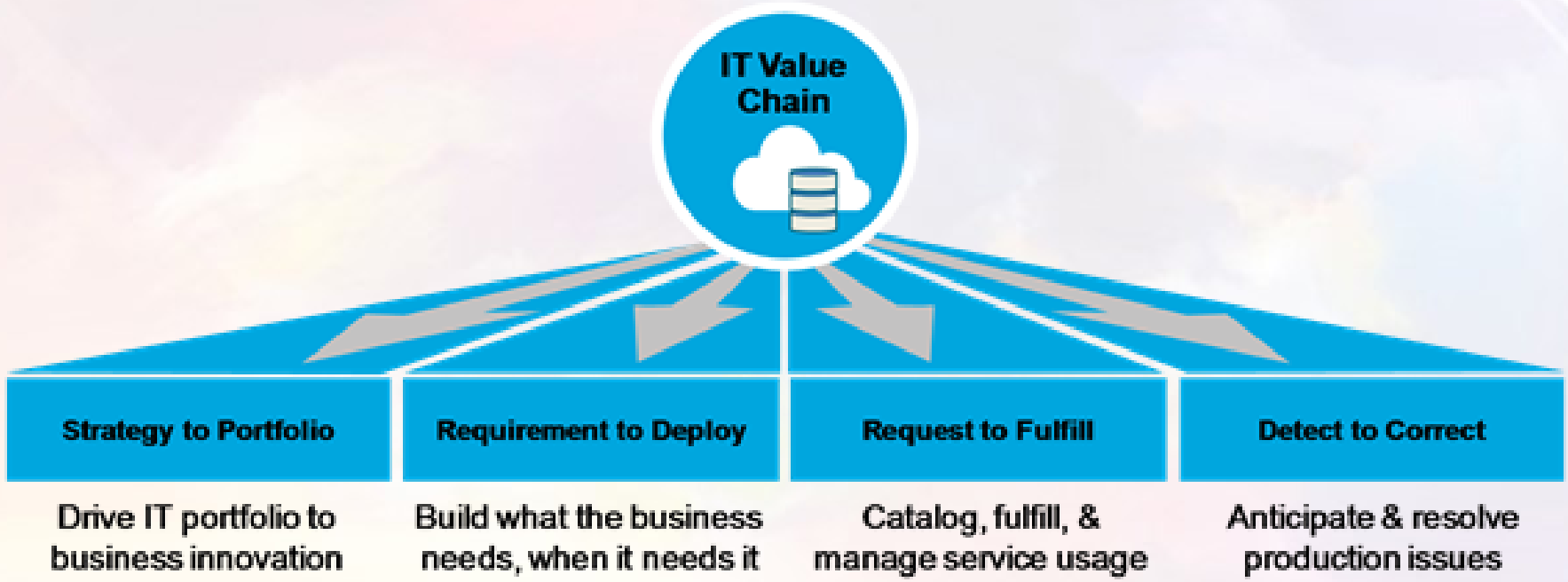
The fastest learner wins!

Why ITSM/ITIL is Considered a Constraint

- Promotes silos
- Requires comprehensive document
- Establishes overly-complex processes
- Insists on ceremonies (CAB meetings)
- Relies on mass inspection
- Decouples accountability for quality and work effort
- Focuses on longer-term planning
- Relies on meaningless metrics
- Uses different vocabulary

We Don't Need No Sticking Processes!

Processes Underpin the IT Value Chain



Source: http://www.opengroup.org/it4it/about

Processes are essential but they must be adapted.

What ITIL Actually Says

- **Adopt**
  - Commit to adopting a service-oriented, customer-focused culture
  - Incentivize and reward behaviors that reflect this commitment

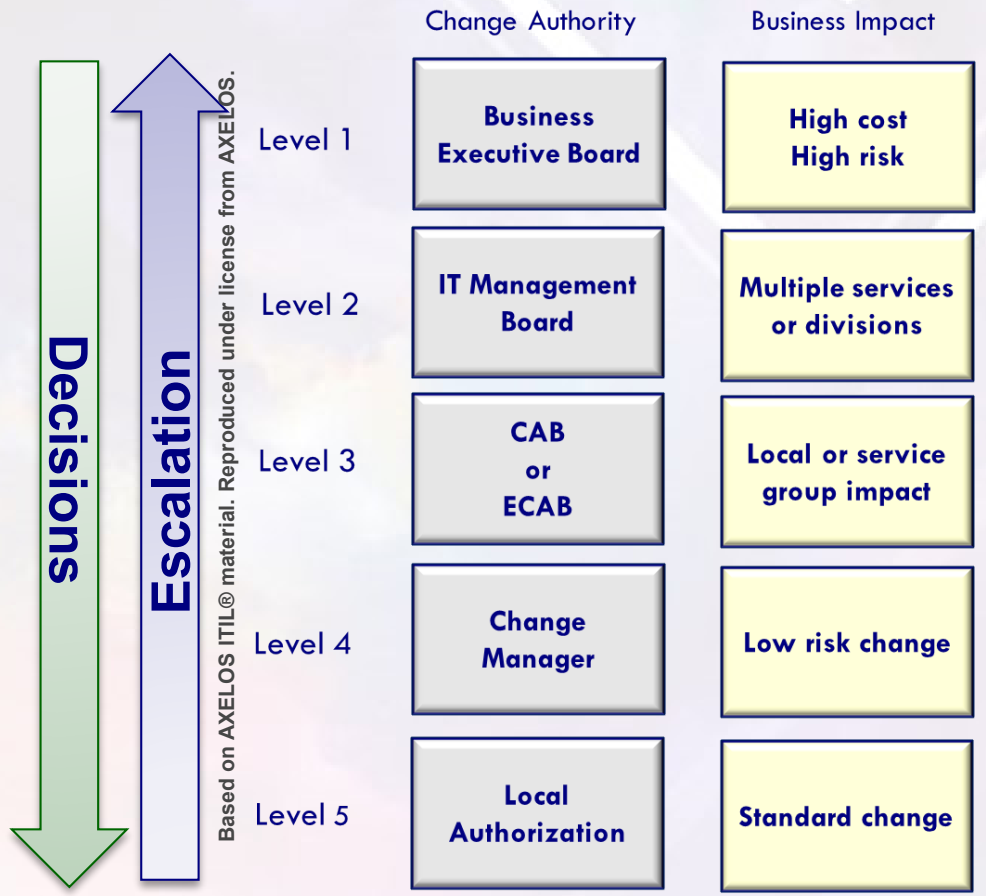
- **Adapt**
  - ✓ Understand ITIL best practices
  - ✓ Understand why they are recommended
  - ✓ Apply critical thought to adapting best practices to your organization's circumstances, needs, goals and objectives

ITIL is only as valuable as the results it helps to achieve. How the practices are applied is critical.

A Few Examples

Adapting Change Management

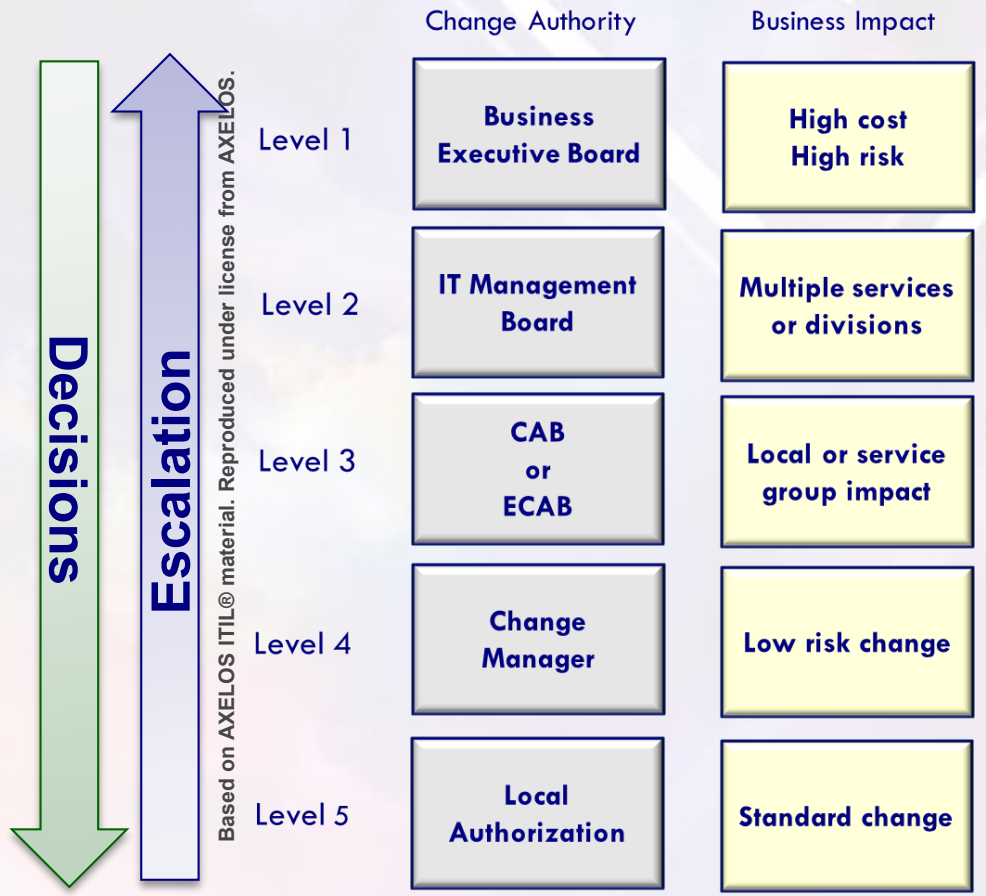
- Error budgets (Site Reliability Engineering)
- Compliance as code (policy as code)
- Hardened, secure and auditable configuration management environments and CD pipelines
- Automated and continuous testing
- Electronic approvals
- Automated change records
- Peer reviews
- Changes authorized prior to development
  - RFCs as user stories
- Change models



Change type, size and risk influence the level of authorization.

Adapting Change Management

…and oh, yeah, standard changes



Change type, size and risk influence the level of authorization.

About that CAB…

2014 STATE OF **DEVOPS** REPORT

W. Edwards Deming

- ***"We found that when external approval (e.g., change approval boards) was required in order to deploy to production, IT performance decreased. But when the technical team held itself accountable for the quality of its code through peer review, performance increased."***

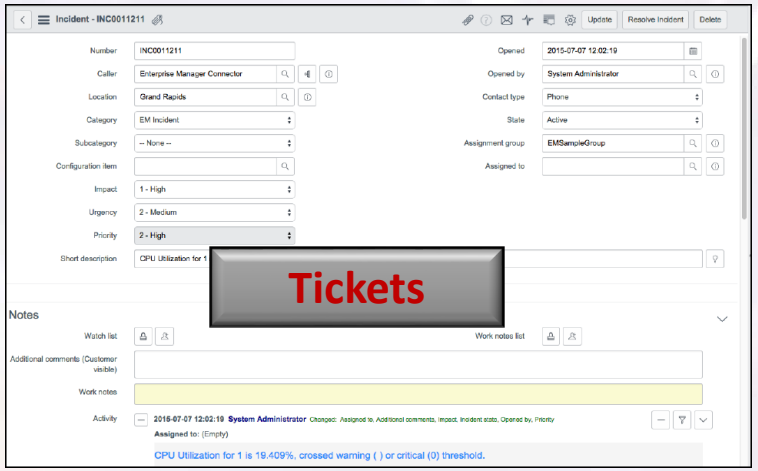
- ***"Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place."***

Adapting Incident Management

- Leverage swarming practices
  - Major incidents
- Conduct blameless, actionable post-incident reviews
- Rethink communication channels
  - ChatOps
  - Twitter
- Produce actionable alerts
  - Deliver to individuals/teams that have the permission and ability to act
- Establish operational level agreements (OLAs)
- Understand the flow of information

Source: Atlassian DevOps Maturity Model report

Incident and Problem Management



Just enough.
Just in time.

JIRA

servicenow

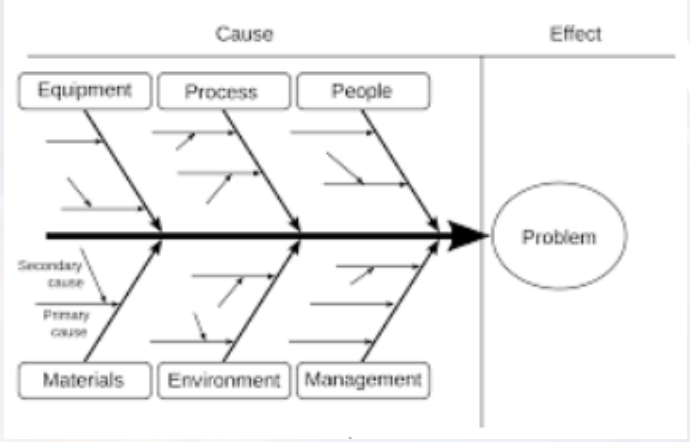
Understand how information is used and how work gets done.

Adapting Problem Management

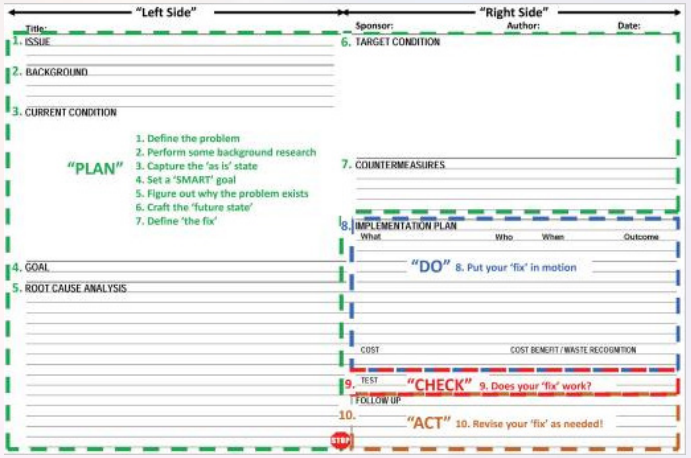
In complex systems, there is no single root cause.

Lessons from Site Reliability Engineers

- Learn from failure
- Conduct blameless, actionable reviews
- Use a common template for reviews
- Use a variety of techniques for root-cause analysis (provide coaching)
- Initiate (engineer) actions to improve or correct the situation
- Trigger failures proactively (Chaos Engineering) (identify and address weaknesses)



Ishikawa



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The Reality of DevOps

- DevOps practitioners are ‘doing’ ITSM
- They’re just not calling it that and they are redefining it as they go
- So let’s call it what it is….

Continuous Improvement

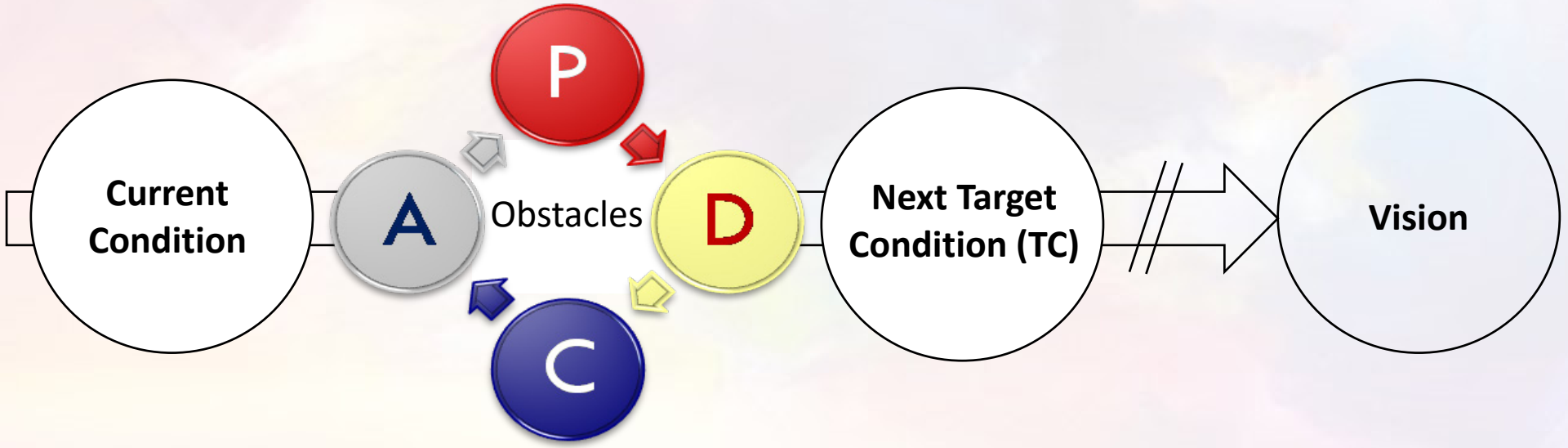
Mastering Continuous Improvement

2 **Grasp the current condition**

4 **PDCA and experiment toward the target condition**

3 **Establish the next target condition**

1 **Understand the long-term vision or direction**



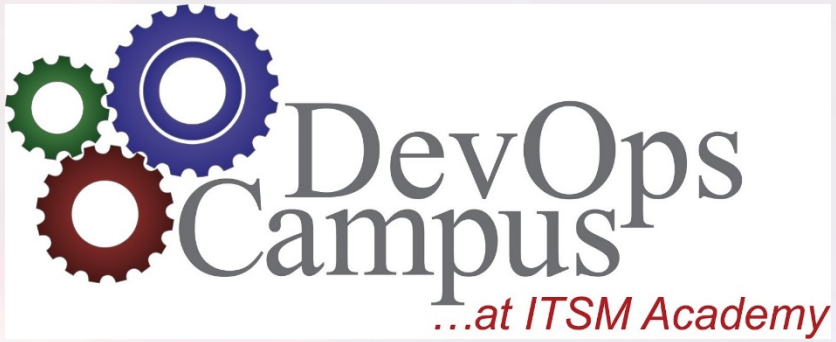
The Improvement Kata is a four-step process that focuses on learning and improving work. It considers the organization's long-term vision or direction.

Five Takeaways

- Go to Gemba – Go see. Ask why. Be respectful.
  - Don’t wait to be invited
- Honor and learn from the past, but don’t be bound by it
- Use guiding principles and values to shape the way you think
- Adapt your ITSM processes (the way you work) in support of DevOps
  - It’s ok to ‘break the rules’
- Allow time for experimentation, learning and – *gasp* – failure
  - To innovate you must be willing to learn… a lot!
  - To innovate you must be willing to fail

“The goal is not to be perfect by the end, the goal is to be better today.”

Simon Sinek



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DevOps Overview

Agile Service Management Overview

Minimum Viable ITSM

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