



# Modern Skills for the IT Professional



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# About Me



CEO and co-founder of the DevOps Institute, co-founder of ITSM Academy, active trainer, ScrumMaster, ITIL® Expert and former IT Director. Author of the Agile Service Management Guide.



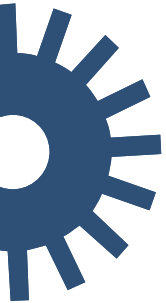
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# About DevOps Institute

The DevOps Institute (DOI) is the continuous learning community for emerging DevOps practices.

DevOps Institute's vision is to facilitate a community where learning is a lifestyle and members have access to the most innovative, inspirational and transformational DevOps content, courses and certifications. We strive to provide content that inspires discussion, collaboration and transformation.



# The Digital Transformation Is Real



- Software drives the world (literally)
- Every organization is now a digital technology business
- Your biggest competitor is a disruptive start-up
- Attention spans have been reduced to 1 min videos and 140 characters
- Migration to the cloud is accelerating
- Information is available at the speed of your connection

Moore's Law: Rates of improvement will increase exponentially over time.

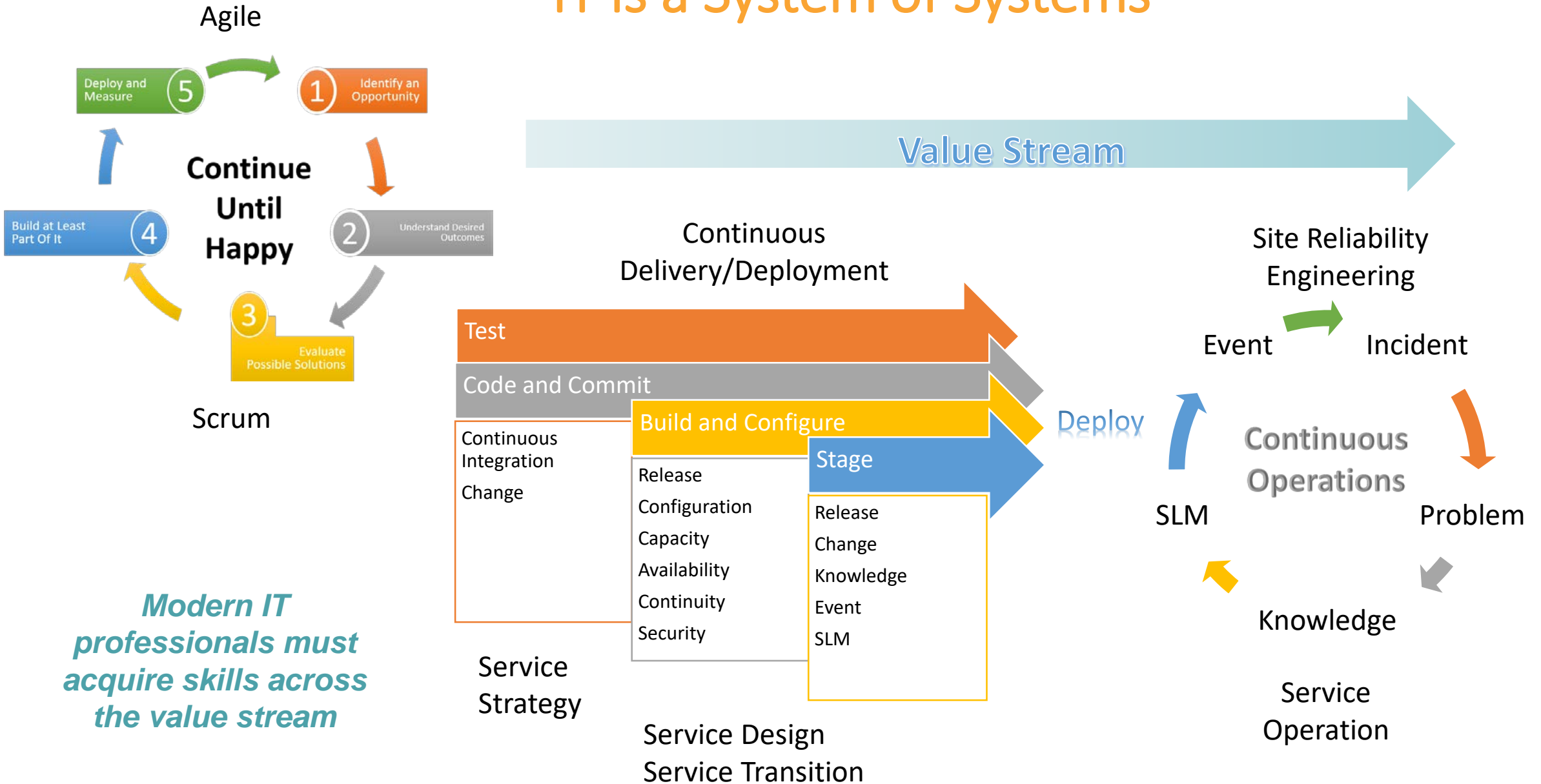
How does that affect IT systems?



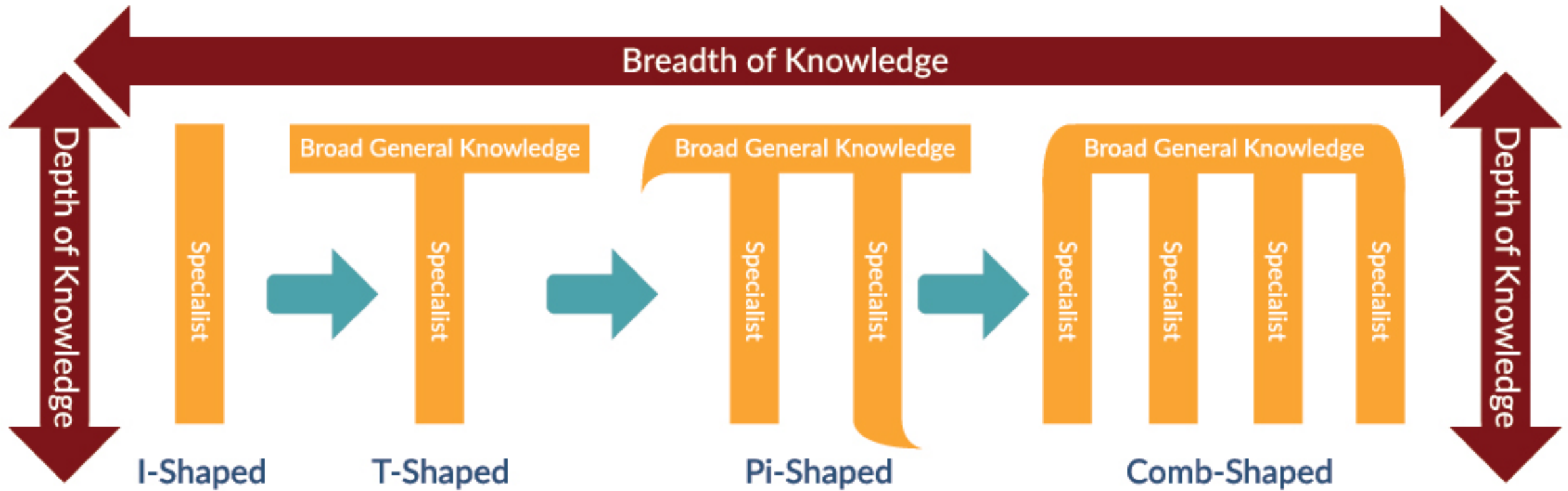
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# IT is a System of Systems



# Systems Thinking Requires Multi-Dimensional Professionals

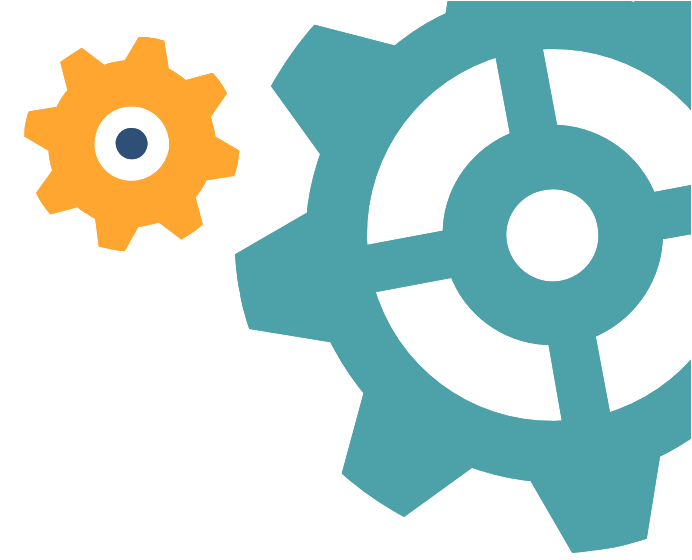


# Breadth of Knowledge is as Important as Depth

- Business strategies
- Principles, processes and practices
- Technology and automation
- Cultural considerations



*Skills modernization requires a holistic approach that encourages cross-functionality and higher level thinking.*

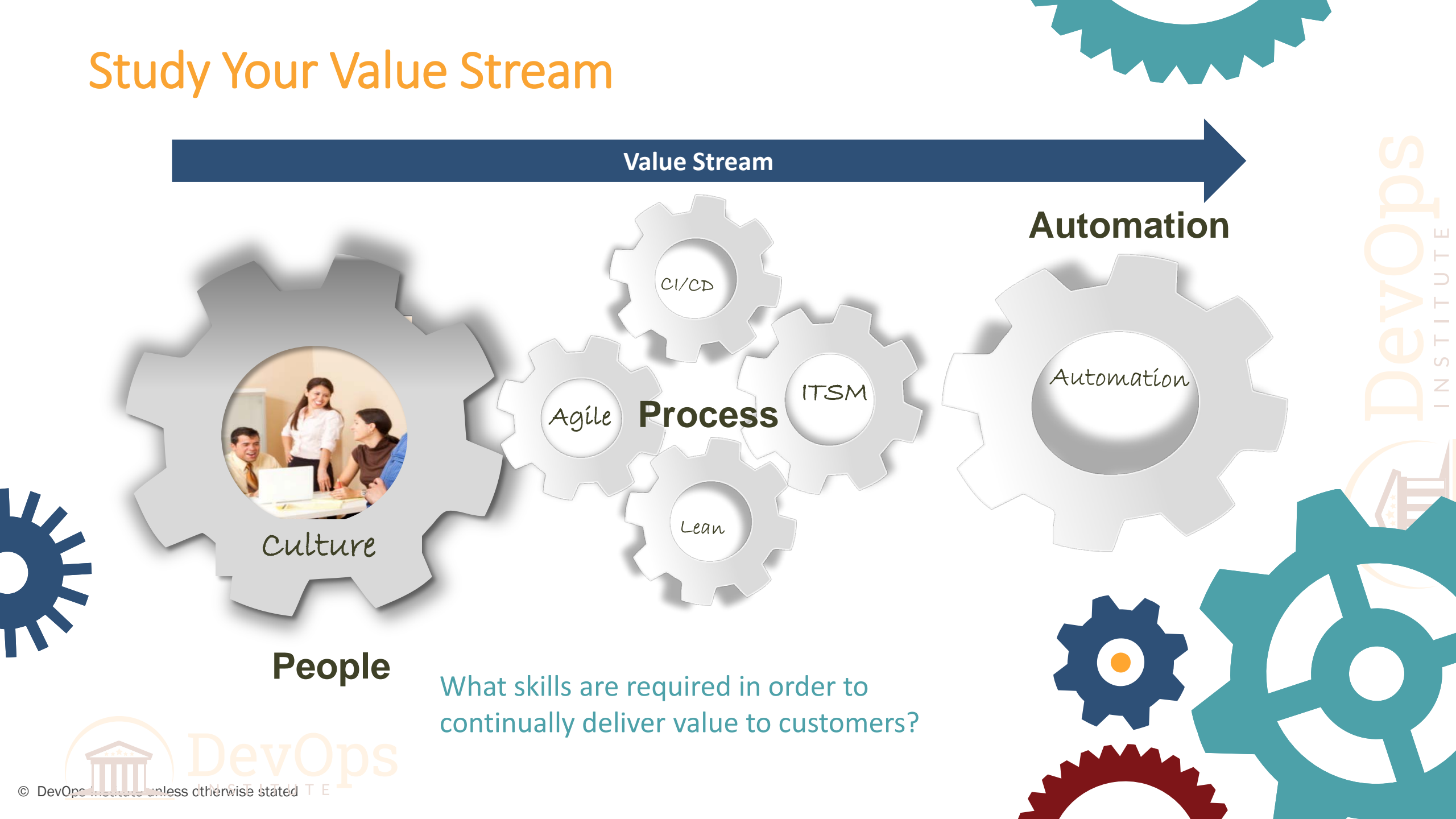


# Skills for the Digital Age





# Study Your Value Stream



Value Stream

Automation

Culture

People

CI/CD

Agile

Process

ITSM

Lean

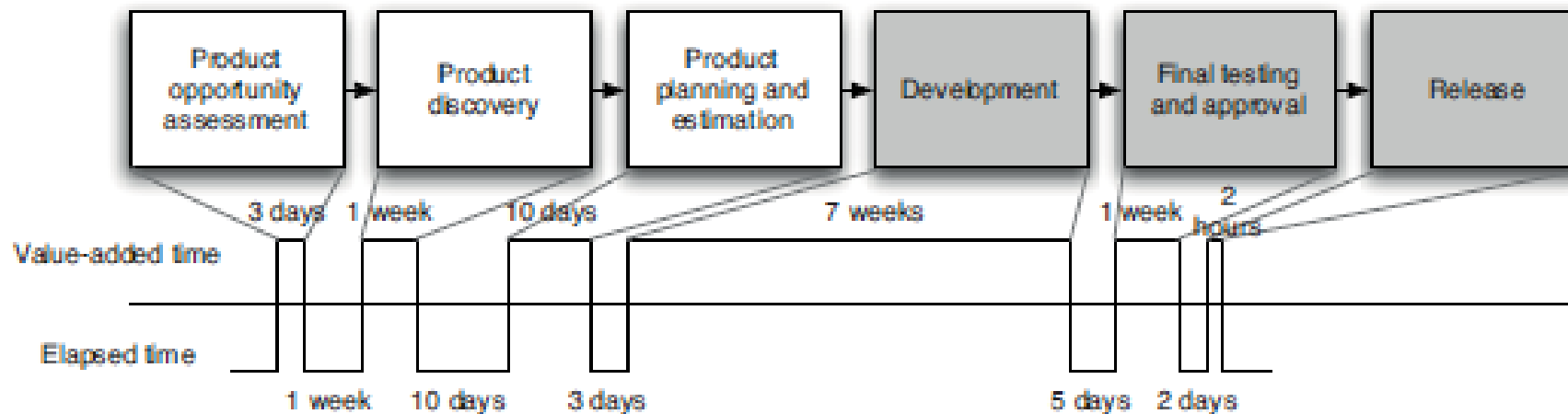
Automation

What skills are required in order to continually deliver value to customers?

# Value Stream Mapping (VSM)

*“Every successful DevOps transformation starts with a Value Stream”*

VSM is a tool that is used to evaluate processes to identify bottlenecks, waste, and ultimately improvement opportunities

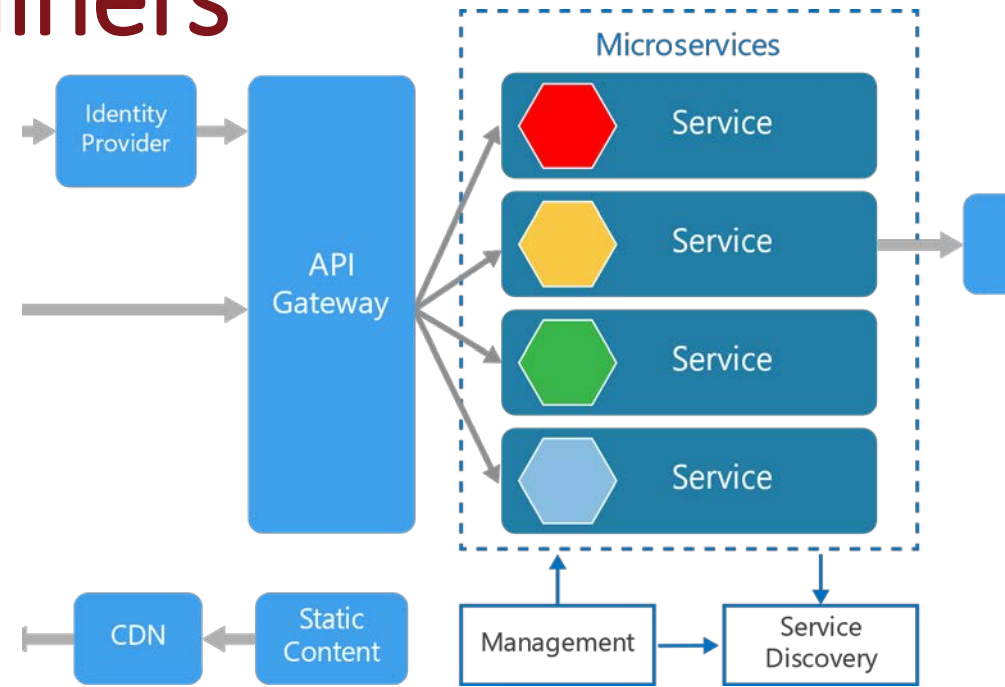


Source:  
Jez Humble -Continuous Delivery:  
Reliable Software Releases through  
Build, Test, and Deployment  
Automation

# Microservices and Containers

A microservices architecture consists of a collection of small, autonomous services.

Each service is self-contained and should implement a single business capability.

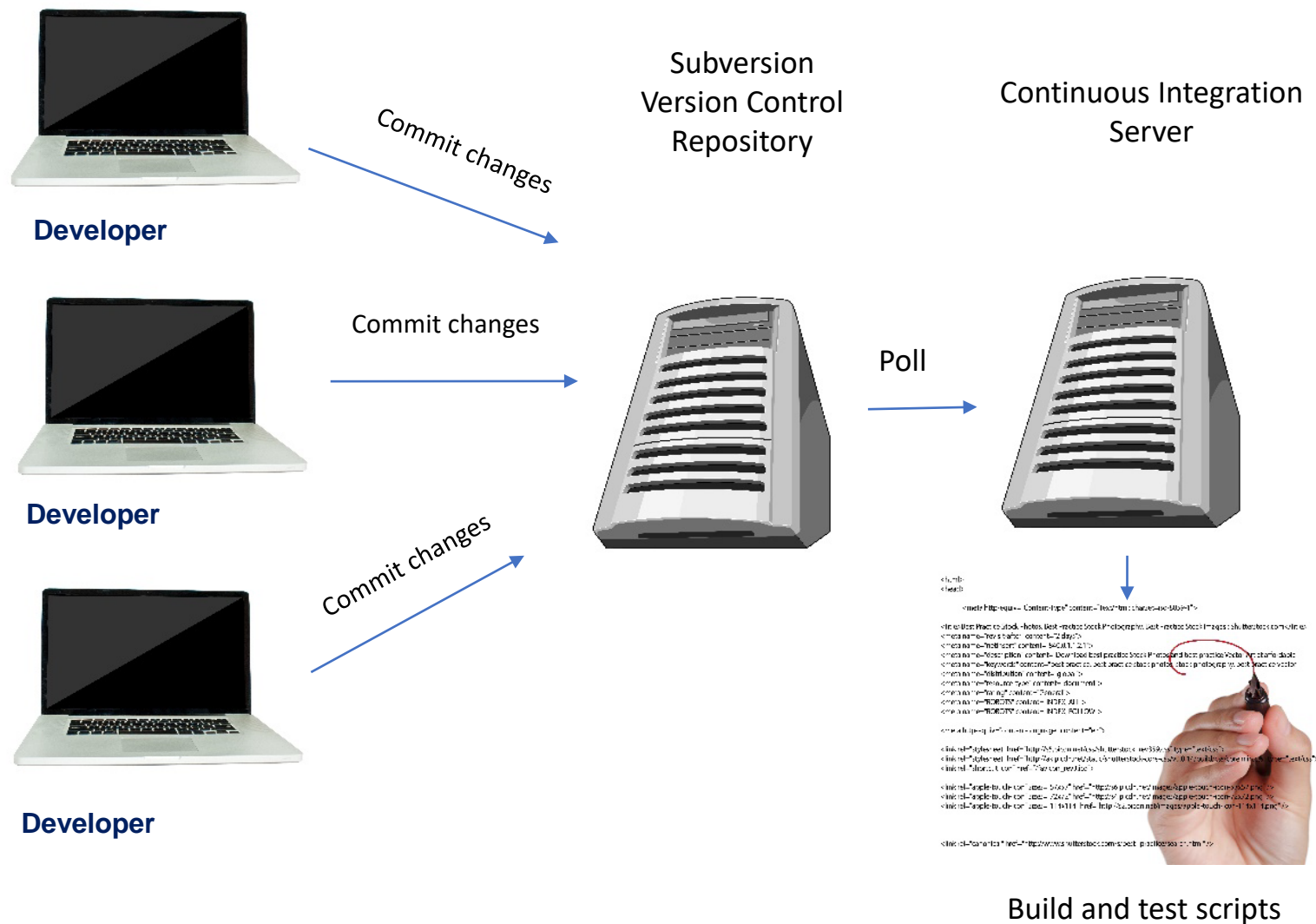


<https://docs.microsoft.com/en-us/azure/architecture/guide/architecture-styles/microservices>

*A container consists of an entire runtime environment: an application, all of its dependencies, libraries and other binaries and configuration files needed to run it, bundled into one package*

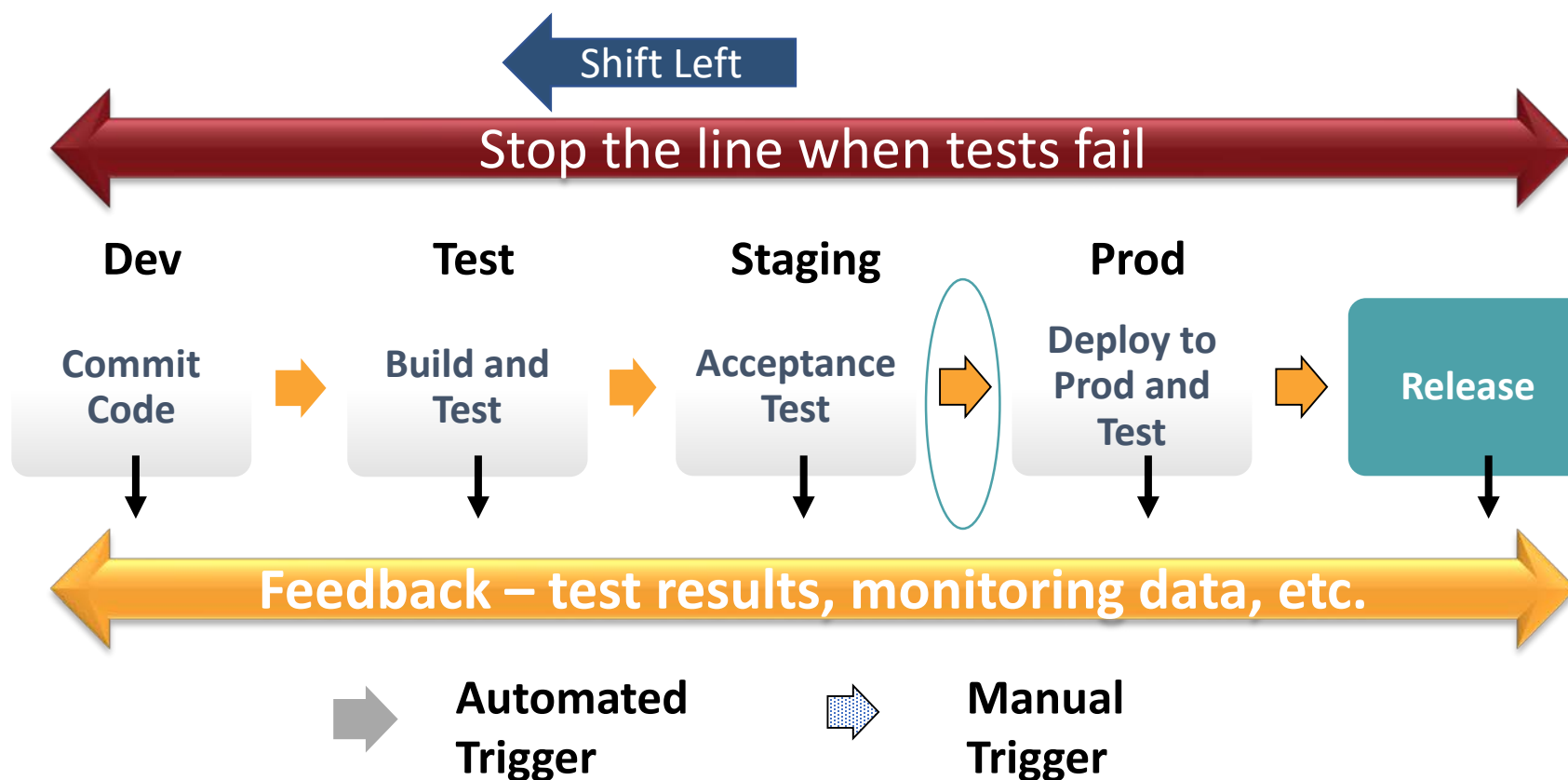


# Continuous Integration



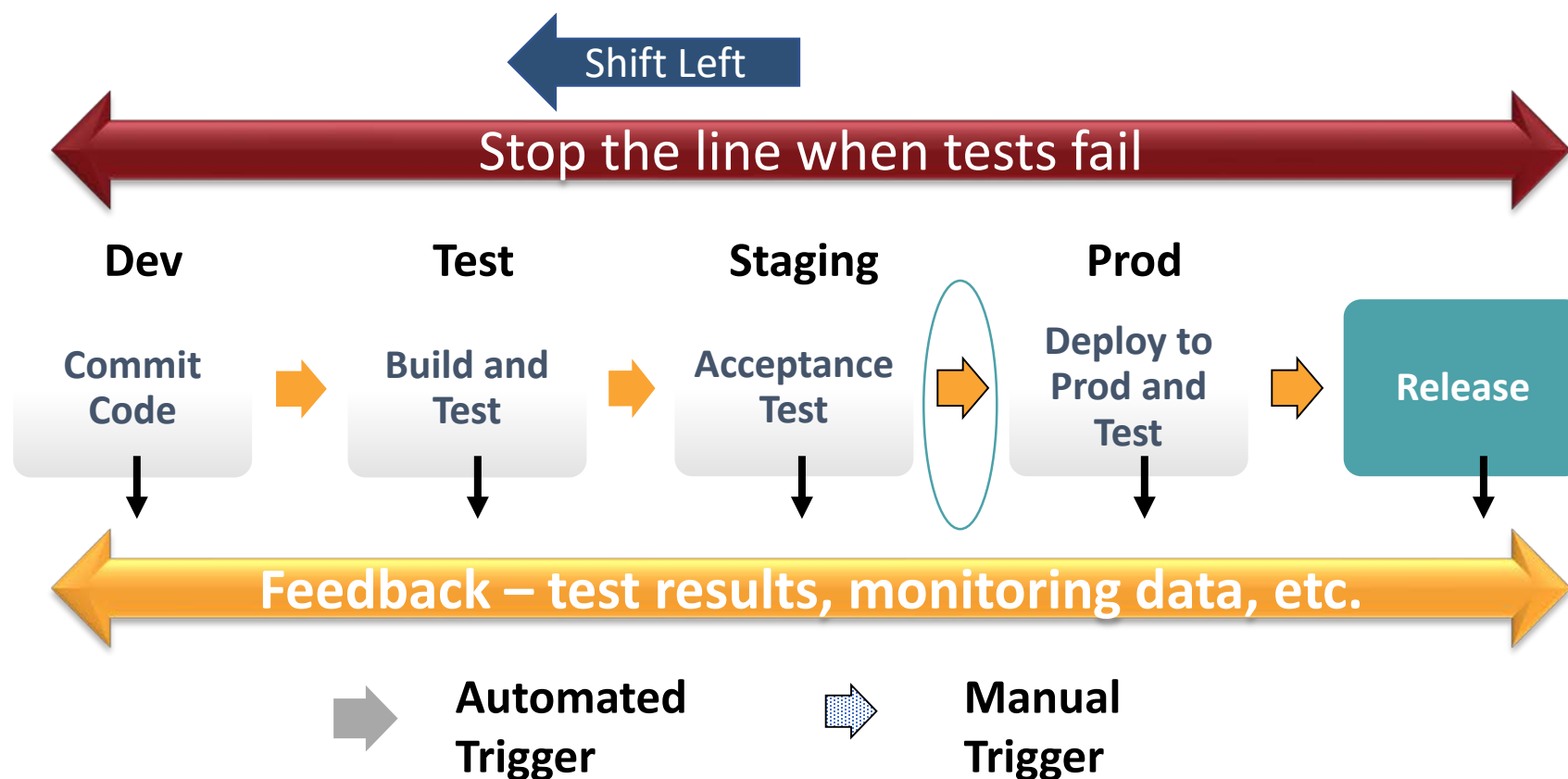
# Continuous Delivery

*Continuous delivery is a methodology that focuses on making sure software is always in a releasable state throughout its lifecycle.*



# Continuous Testing

*Continuous testing is the process of executing automated tests as part of the deployment pipeline to obtain immediate feedback on the business risks associated with a software release candidate.*



# DevSecOps

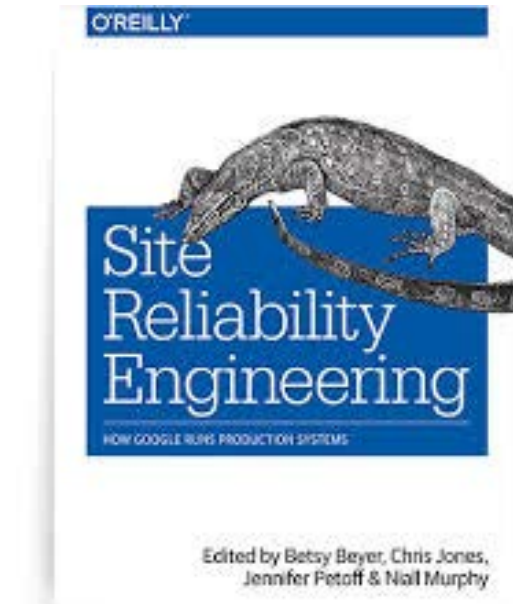


- DevSecOps implements security to be full integrated into the business by:
    - Making heavy use of **automation**
    - Moving **security earlier** and more often
    - Supporting organization **transformation**
  - DevSecOps supports security as code with the intent of making security and compliance consumable as a service
- 

# Site Reliability Engineering

An innovative approach to Operations as an engineering practice.

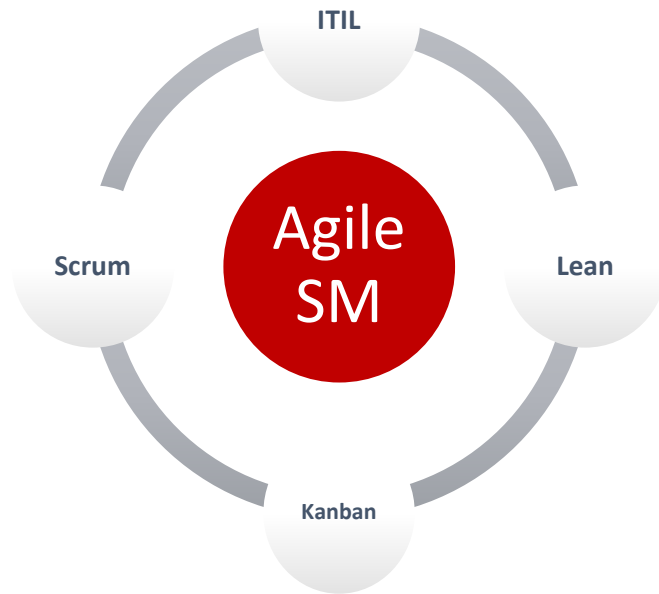
- Uses software engineers to design operational functions and automated systems
- Is responsible for availability, latency, performance, efficiency, change management, monitoring, emergency response, and capacity planning
- Integrates ITSM processes and practices



*Is SRE actually Continuous Operations?*



# Agile Service Management



*Agile Service Management (Agile SM) ensures that ITSM processes reflect Agile values and are designed with “just enough” control and structure in order to effectively and efficiently deliver services that facilitate customer outcomes when and how they are needed.*

*Agile Service Management Guide*

***Agile Service Management does not reinvent ITSM – it modernizes the approach.***

# Groom Your Cultural Skills

*You can't directly change culture.  
But you can change behavior, and behavior becomes culture."*  
Lloyd Taylor



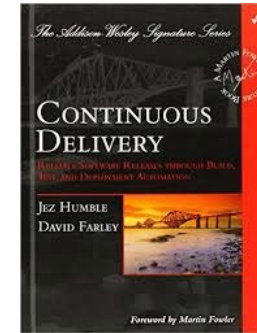
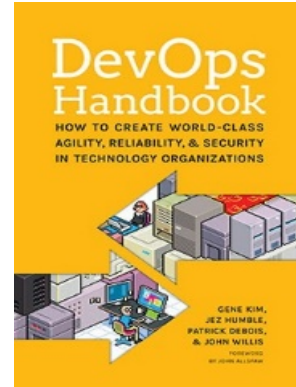
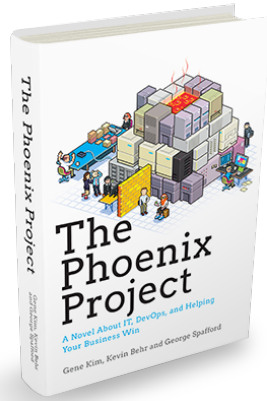
Westrum

LaLoux

## Transformational Leadership

## Squads, Tribes, Guilds, Chapters

# Optimize Best Practices



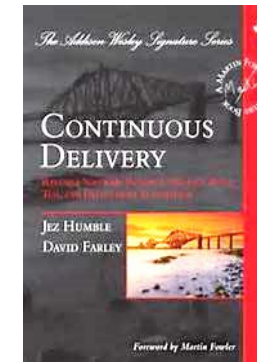
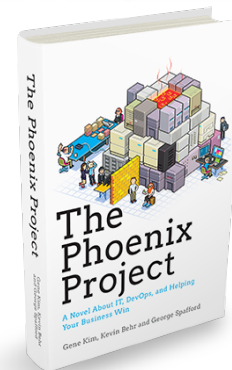
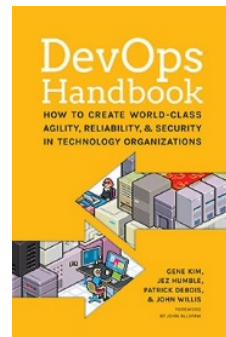
# Become Familiar with Key Tools and Tool Categories



and many more...

# Become a Continuous Learner

- True to its core values, DevOps is emerging through a shared and collective body of knowledge (CBok) including
  - Publications
  - Conferences
  - Videos and webinars
  - Blogs and articles
  - Case studies
  - Subject matter expertise



***The DevOps Institute actively researches and influences emerging DevOps practices so as to create meaningful certifications and content.***



## DEVOPS CERTIFICATION MODEL

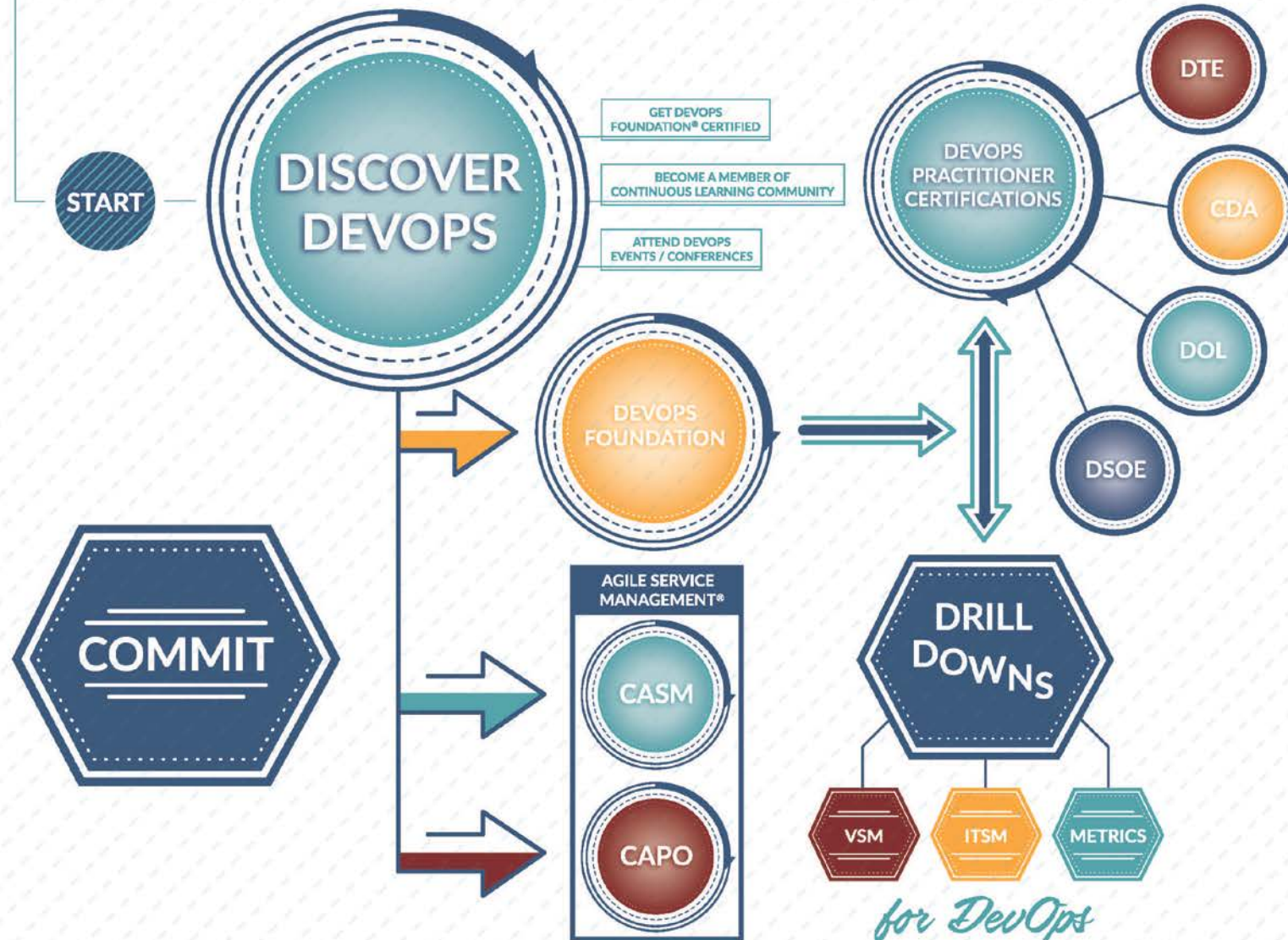
### At-A-Glance

#### Must Have IT Skills: DevOps Knowledge

##### The DOI Difference: Why Certifications Accredited by the DevOps Institute Matter?

We are the only Continuous Learning Community that offers 7 DevOps competency-based certification courses and 3 non-certification courses through our global network of Registered Education Partners. We have more than 160 Hours of Learning Materials (the most in the market) and a dedicated full-time staff 100% focused on the advancement of DevOps learning.

Our curriculum is based on research and the most up-to-date and relevant resources. Simply put, our role-based development approach focuses on the most modern competencies required by organizations adopting DevOps—these are actionable and hireable skills.

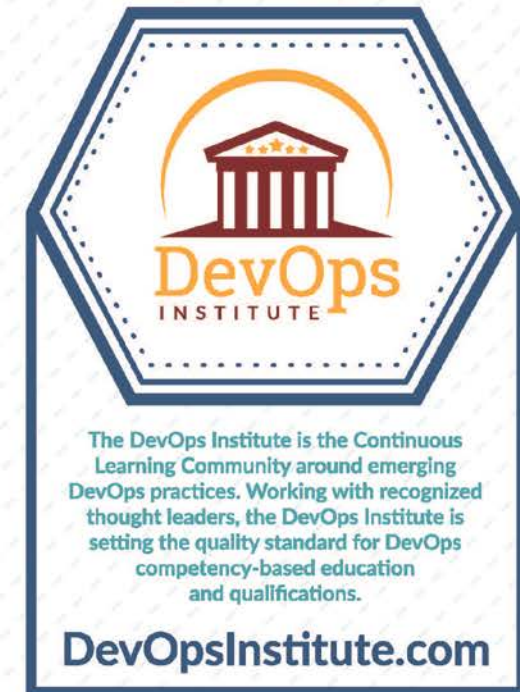


#### Certification Courses

DevOps Foundation®  
DevOps Test Engineering (DTE)®  
DevOps Leader (DOL)™  
Continuous Delivery Architecture (CDA)™  
DevSecOps Engineering (DSOE)™  
Certified Agile Service Manager (CASM)®  
Certified Agile Process Owner (CAPO)®

#### Non-Certification Courses

Value Stream Mapping for DevOps™  
ITSM for DevOps™  
Metrics for DevOps™



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