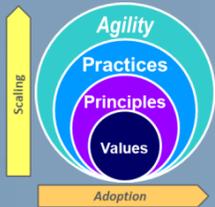
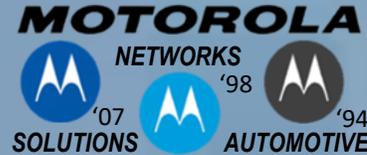
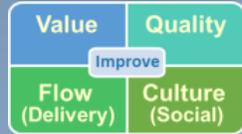
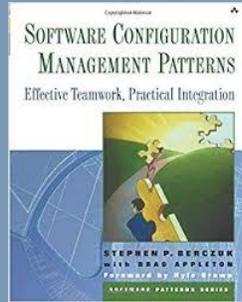


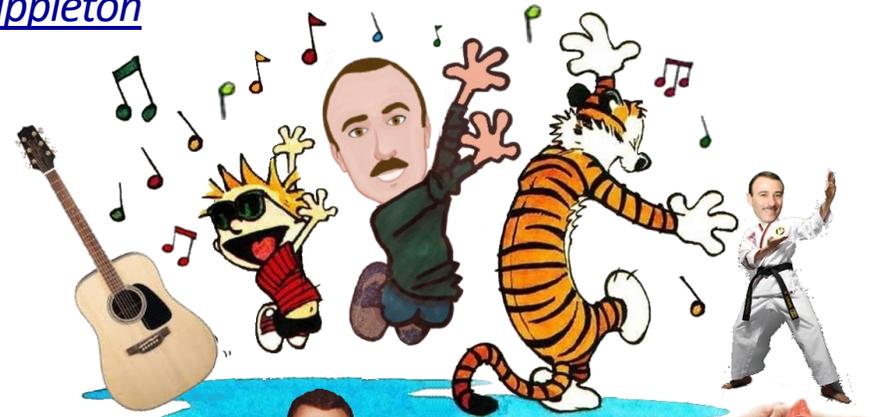
# Brad Appleton



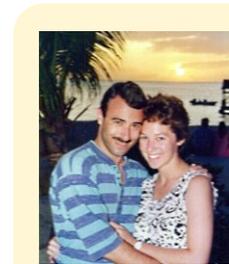
Enterprise DevOps+Agile Delivery Leader  
Arlington Heights, IL (NW suburban Chicago)



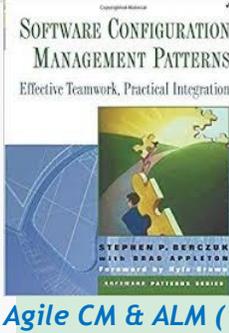
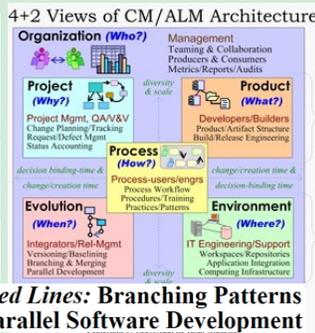
# Brad Appleton (he/him) | <brad@bradapp.net> | [linkedin.com/in/bradappleton](https://www.linkedin.com/in/bradappleton)



- **DevOps+Agile Leader, Manager, Coach, Solutions & Practices** (20+ years)
- **Author & Presenter:** Agile ALM/CM, SCM Patterns, Local Meetups
- **Husband, Father** (2 kids – college undergrads)
- **Cancer Survivor** (2020), **Kidney Donor** (2006)
- **Pets:** Cockatiels, Parakeets & Guinea Pigs
- **Hobbies:** DCU/MCU Movies & TV; jack-o-lanterns; singing & guitar
- **B.C. [Before Children]:** former dancer, martial arts (TKD), acapella



## Professional works



20+ years  
200+ Organizations

**Agile/DevOps Leader, Coach**  
**Developer**  
**Software Architect** **SCRUM MASTER**  
**AGILE CM/ALM PRODUCT** **Lean/Agile Coach**  
**Quality Manager** **OWNER** **DevOps Lead**  
**PROCESS IMPROVEMENT** **Organization**  
*Process Automation* **Design & Change**



# My DevOps/Agile Journey

- ▶ I've been an DevOps/Agile Engineering leader for *more than 20 years*, with a deliberate focus on software agility, tools & automation, and Agile CM/ALM (at enterprise scale)
- ▶ My Agile journey began in the mid-to-late 90's, as part of the *Software Patterns* community, where I participated in the creation/evolution of early agile methods/practices & mindset
  - **1995-2005**: Scrum, XP, Crystal, ASD, FDD, Grizzly, Refactoring, CI, TDD, Agile SCM, Branching Strategies  
*with: Martin, Beedle, Cockburn, Fowler, Beck, Cunningham, Coplien, Crocker, Sutherland, Highsmith, Seiwald, Wingerd*
  - **2005-2010**: Lean, Kanban, Agile ALM, Continuous Delivery, SAFe, LeSS, DAD, Agile Infrastructure, DevOps  
*with: Poppendieck, Andersen, Cohn, Shore, Ambler, Poole, Moreira, Duvall, Betz, Humble, Leffingwell, Larman, Vodde*
- ▶ I've always been *passionate* about improvement and craftsmanship in a highly collaborative environment where people care about what they do and enjoy doing it together (as a team, and an organization).
- ▶ For the past 12+ years my focus has been co-creating, leading & growing highly successful *Software Engineering Ecosystems* to accelerate & transform *Digital Delivery* in Enterprises.

# Social Media, Publications & Presentations

	 <a href="https://www.linkedin.com/in/BradAppleton">linkedin.com/in/BradAppleton</a>
	 <a href="https://slideshare.net/bradapp">slideshare.net/bradapp</a>
	 <a href="https://blog.bradapp.net">blog.bradapp.net</a>
	 <del>twitter.com/BradApp</del>
	 <a href="https://bradapp.net/BradAppleton-Publications.pdf">bradapp.net/BradAppleton-Publications.pdf</a>

# Books acknowledging me/my work

## Software Development, Architecture & Engineering

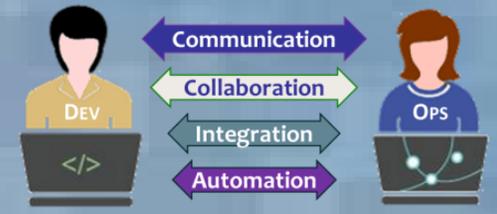
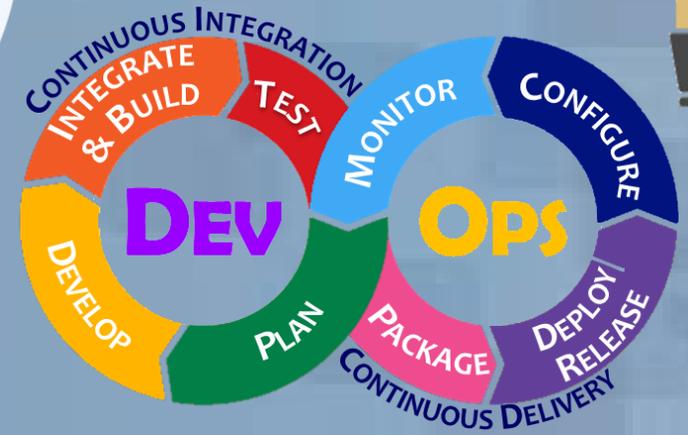
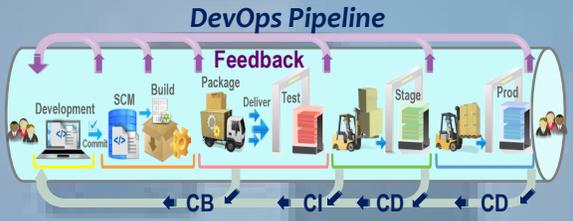
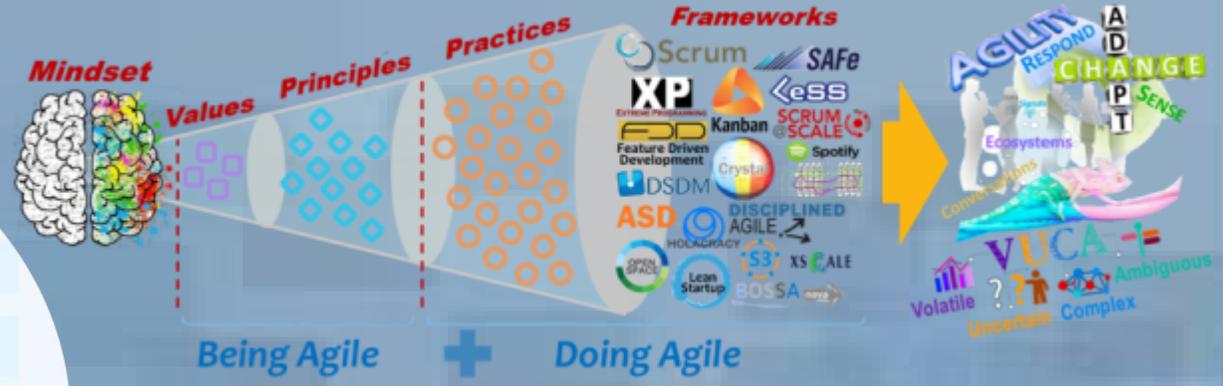
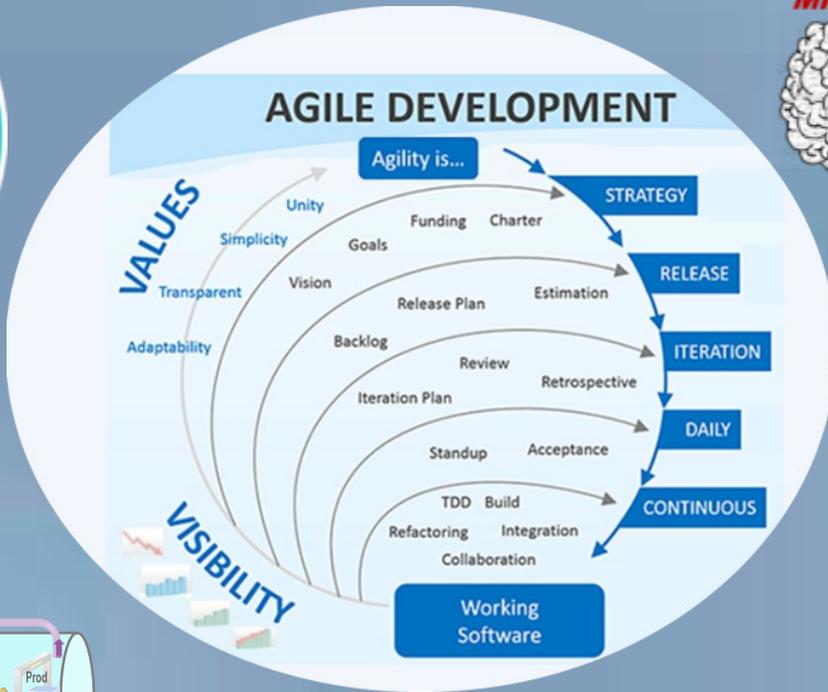
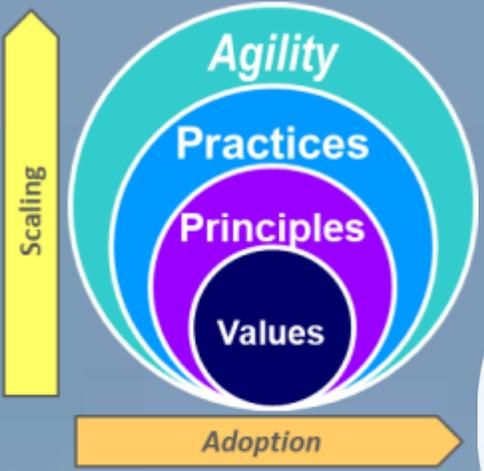


## DevOps / ALM / CM



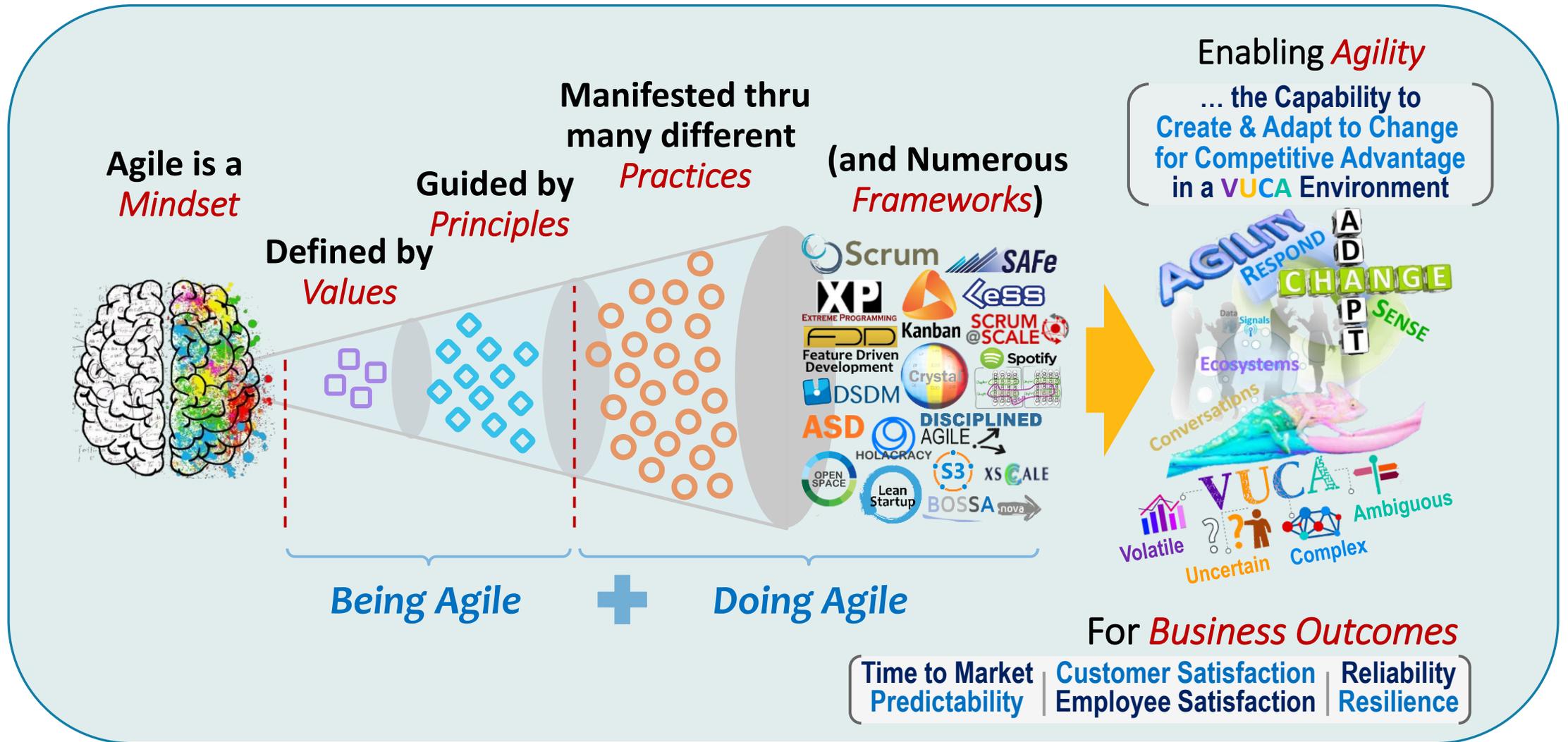
## Agile Development





# What is Agile? Agility? DevOps? (Intro & Overview)

# Agile is a *Mindset* ... Agility is a *Capability*



B

# Agile Development is ...

*“An iterative and incremental (evolutionary) approach to software development*

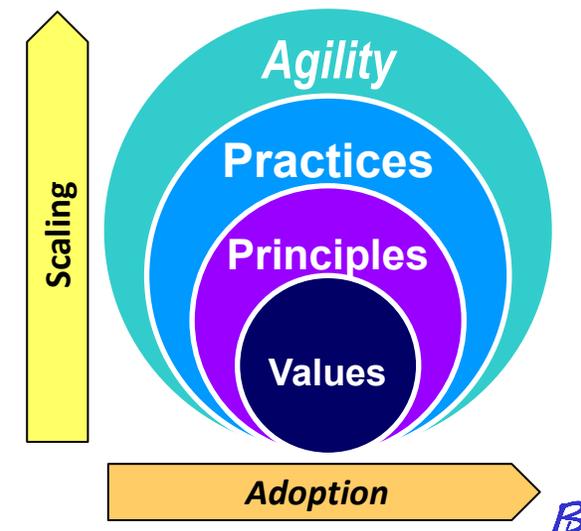
- *performed in a highly collaborative manner*
- *by self-organizing teams with “just enough” ceremony*
- *producing high quality software in a cost effective and timely manner*
- *to meet the changing needs of its stakeholders.”*

— *Scott Ambler, Disciplined Agile Delivery Practice Leader & co-Founder*

*“Ultimately, it is about:*

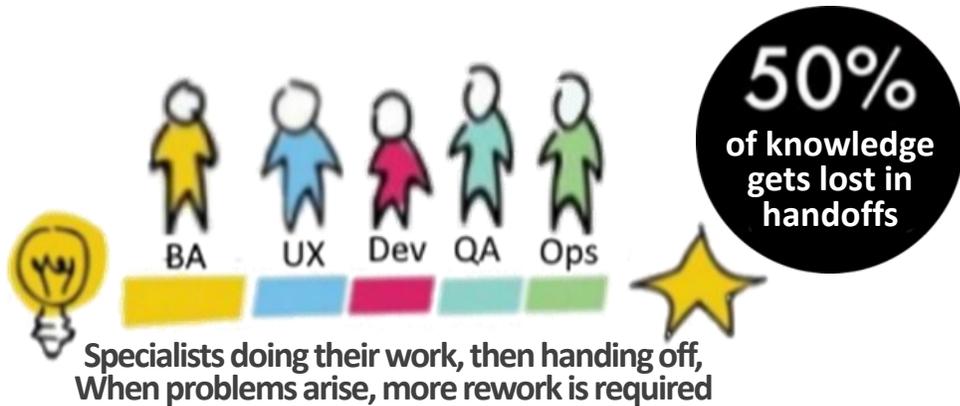
- *Embracing change rather than attempting to resist it*
- *Focus on talent and skills of individuals and teams.”*

— *James Highsmith, Cutter Consortium*



# The Problem with [Functional] Silos

## Waterfall Approach



*Functional silos optimize for resource utilization by role*



## Agile & DevOps Approach



*Cross-functional collaboration with small batch-sizes & fast-feedback optimizes for lead-time to market*

**DANDY  
PEOPLE**

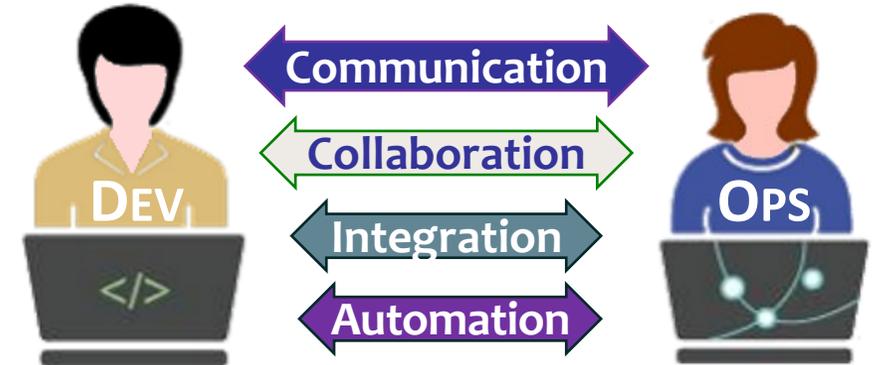
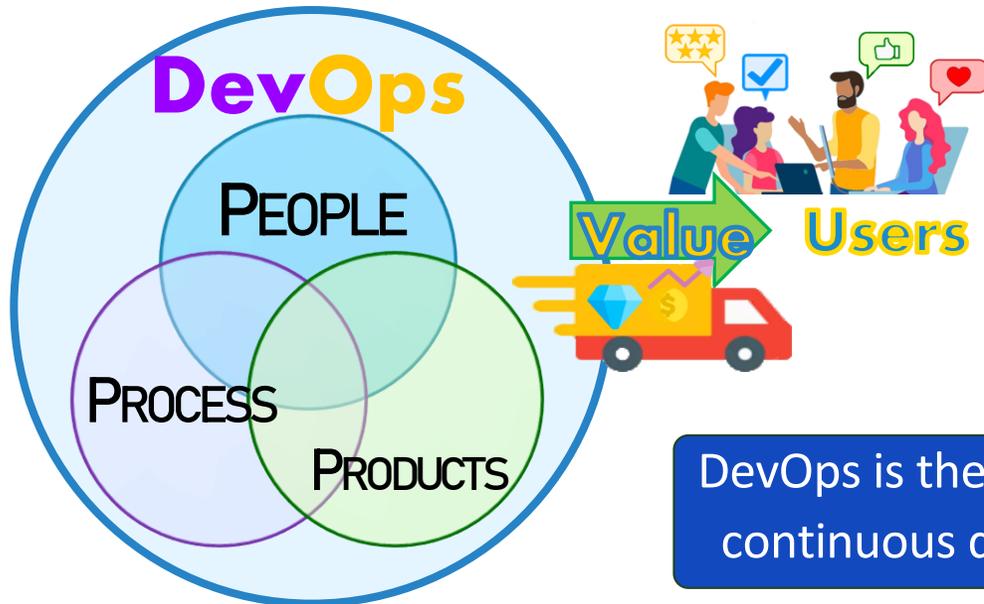
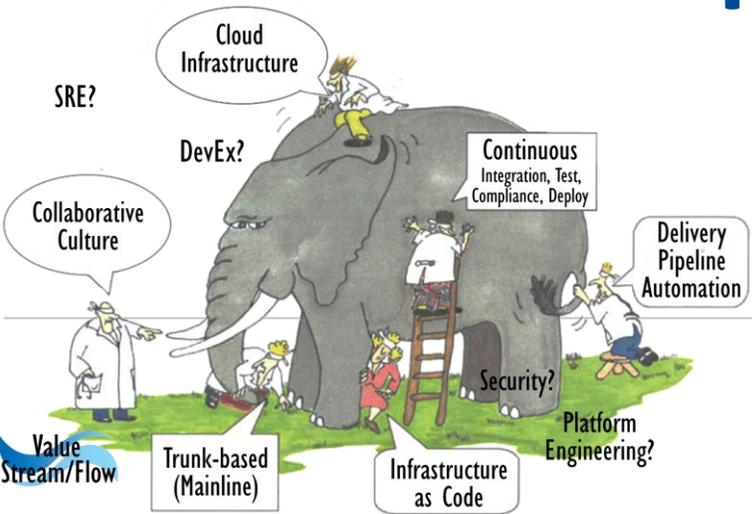


Source: [dandypeople.com/posters](http://dandypeople.com/posters)

# What is DevOps?

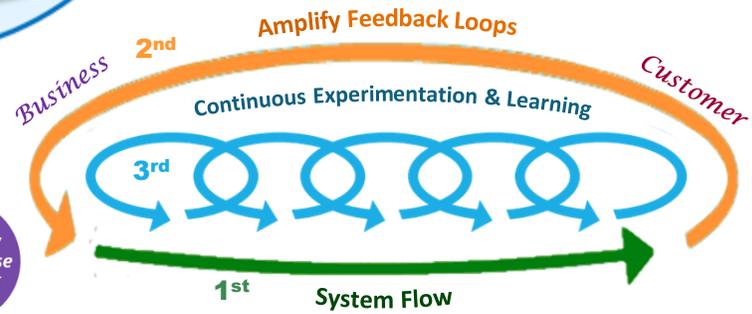
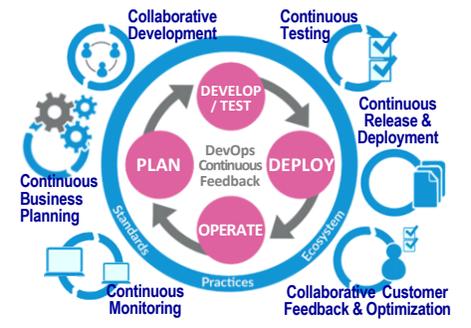
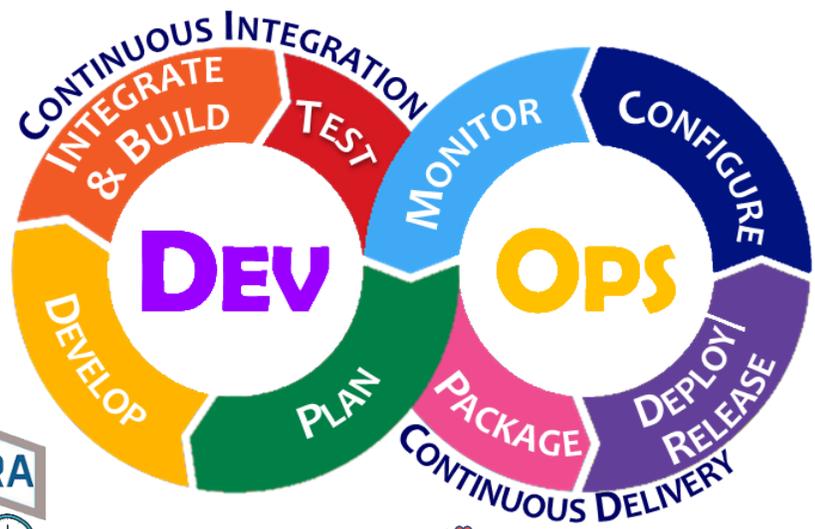
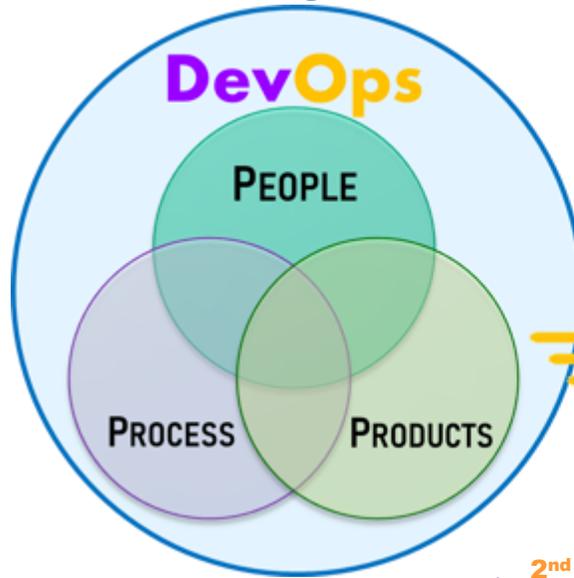
A professional IT movement, mindset & practices emphasizing ...

- ❑ Culture of close collaboration between development & operations
- ❑ Automated pipelines for continuous integration & delivery, working in small-batches, with shorter lead-times (frequent deployment), and low failure-rates.
- ❑ Agile practices (coding & automation) applied to infrastructure, CM, release/deploy, operations & monitoring.



DevOps is the union of people, process, and products to enable continuous delivery of value to end users. — *Donovan Brown*

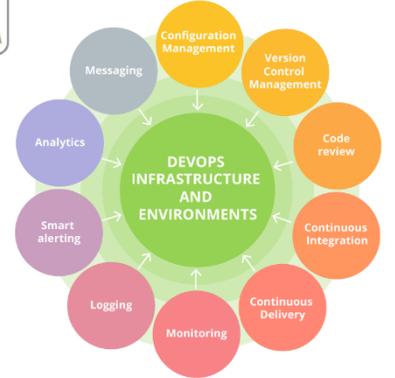
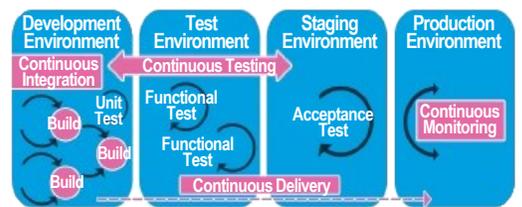
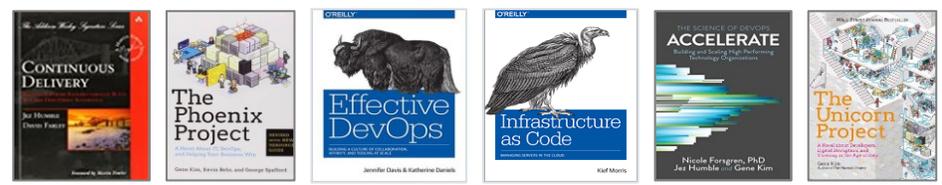
# DevOps is about ...



- 1 Culture
- 2 Automation
- 3 Lean
- 4 Measurement
- 5 Sharing



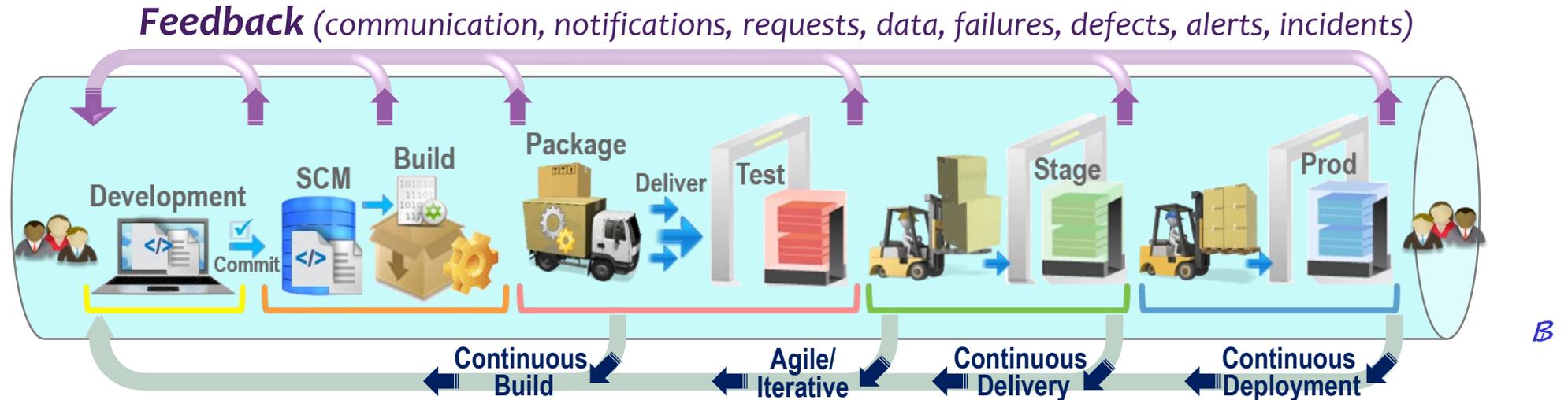
- INFRASTRUCTURE as a FLEXIBLE RESOURCE
- FLOW of CUSTOMER VALUE
- Team Autonomy & Enterprise Alignment
- EVIDENCE gathered in PRODUCTION
- BACKLOG refined with LEARNING
- PRODUCTION-FIRST Mindset
- MANAGED Technical Debt



“Shift Left” - Operational Concerns  
“Test early and often.”

# The DevOps Pipeline

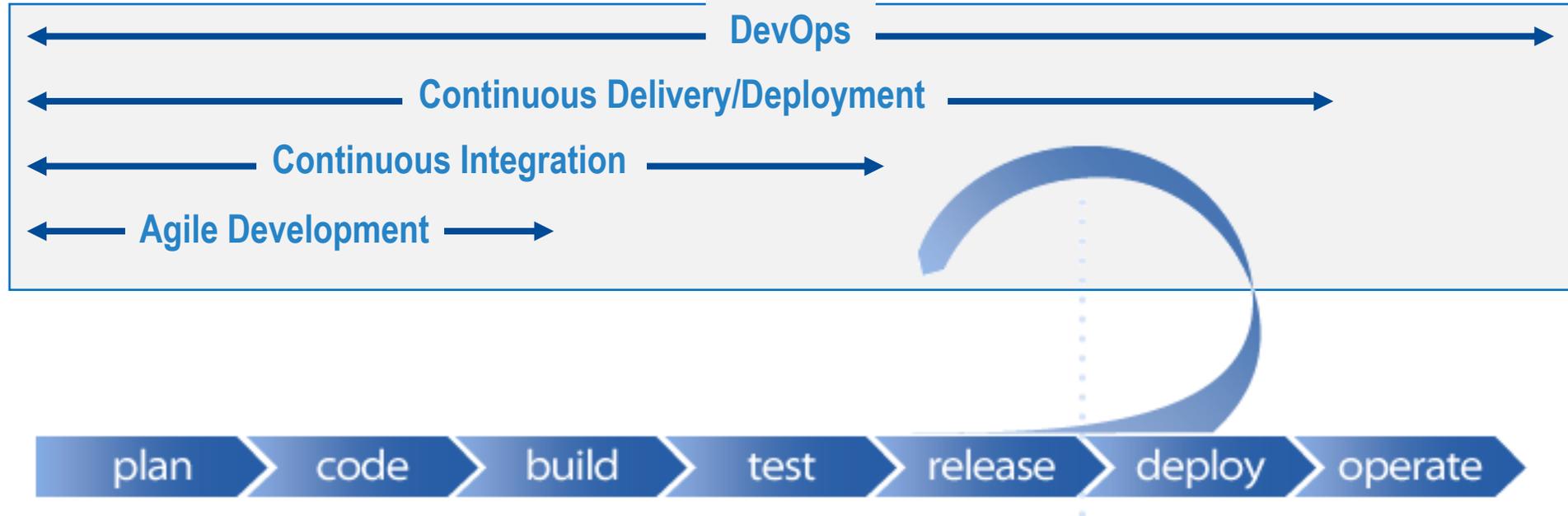
A **DevOps Pipeline** is a set of integrated software tools (toolchain) that help automate the development, deployment, management and support of digital products *throughout the development+delivery lifecycle*, as coordinated by an organization using DevOps principles & practices.



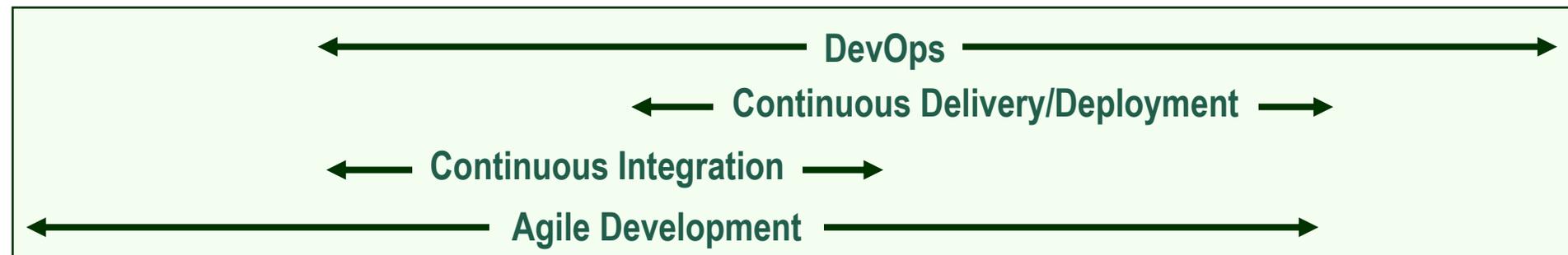
*“DevOps, in a sense, is about setting up a value delivery factory – a streamlined, waste-free pipeline through which value can be delivered to the business with a predictably fast cycle-time”* –Mark Schwartz, *The Art of Business Value*

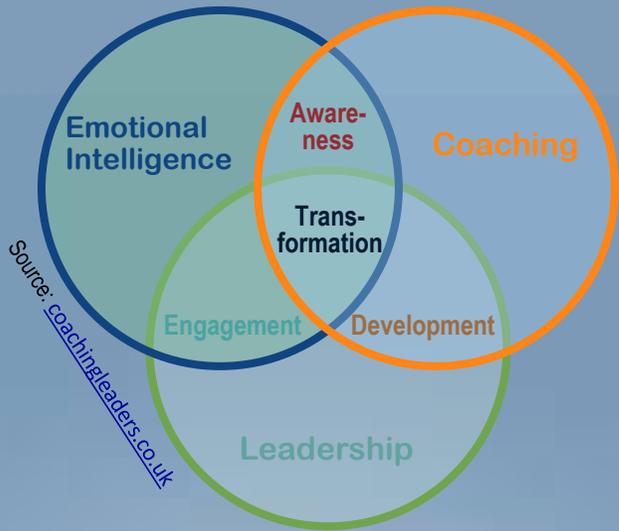
# Relationship between Agile & DevOps

## *DevOps Perspective of Agile Development*



## *Agile Developer's Perspective of DevOps*

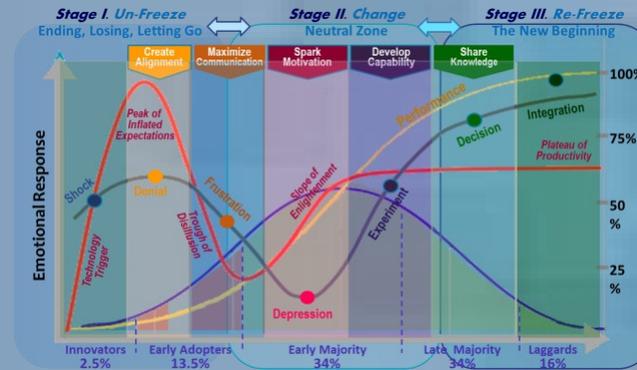
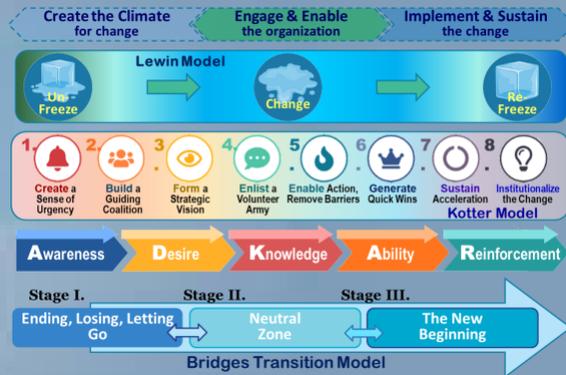
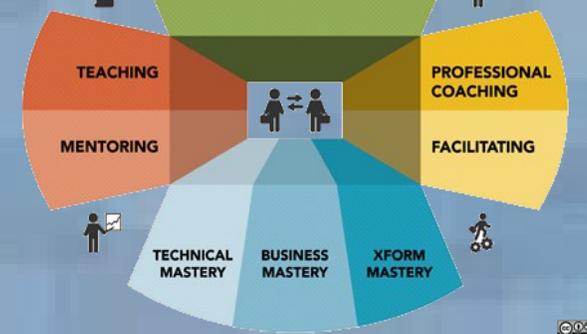




### Organizational Culture



### Agile Coaching Competency Framework



# Digital+Agile+DevOps Transformation (Organizational Leadership & Change)

# Shift Happens! (What are we Transforming from/to?)

## From (Traditional Projects)

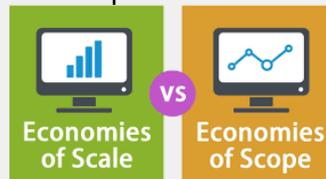
**Six Sigma & Mass Production**  
(optimize resource *utilization* & minimize *variation/change*)



**Stage & Gate**  
(program *compliance*, process *control*)



[Physical] **Economies of Scale**  
(one size [process/tool] fits *all*)

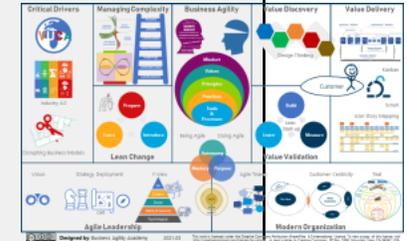


**CMMI & ITIL-based**  
process+metrics

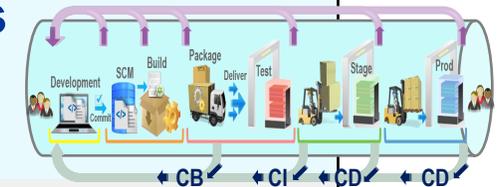


## To (Agile Product/Service Delivery)

**Agility, Collaboration & Learning**  
(optimize *knowledge-creation* & minimize *the economic impact* of variation/change)



**D2D [Discovery-to-Delivery] Pipelines**  
(streamlined/flexible *flow* to *adapt/pivot*)



[Digital] **Economies of Scope**  
(complex systems, product-lines, start-ups)

**Agile/DevOps & Lean/IT4IT**  
process/practice frameworks



# DevOps & Agility @ Scale: Dimensions of Complexity/Risk



## Team size+distribution

<10 developers, all co-located ↔ 100+ developers, many teams+sites



## Technical size+complexity

Number/size of repositories, #files/requirements levels+span of architecture & requirements, interdependencies



## Process complexity

Flexible workflows, minimal dependencies, few handoffs/approvals ↔ Rigid, complex workflows, strict roles & dependencies, many handoffs/approvals



## Distributed/Parallel complexity

Single focus ↔ Multiple releases, tiers, markets, channels, environments



## Partnerships/interfaces

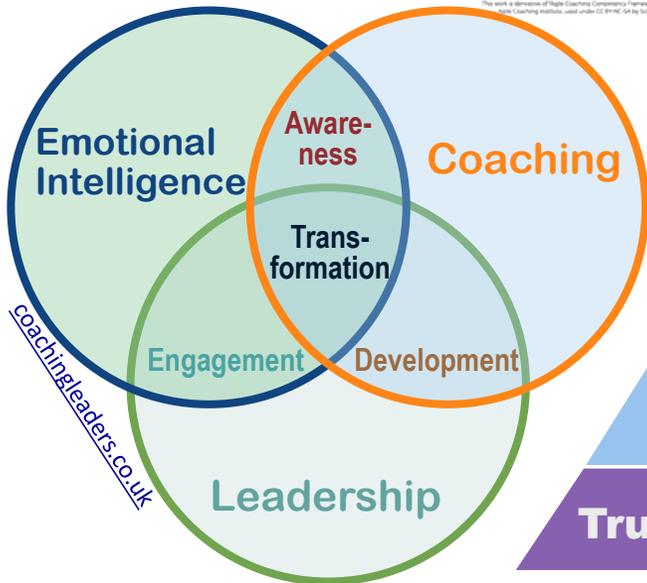
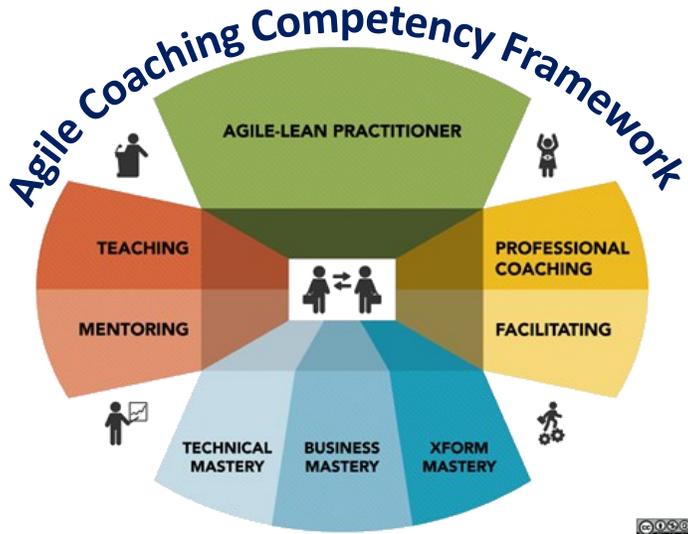
Isolated/decoupled, collaborative ↔ closely coupled, contractual



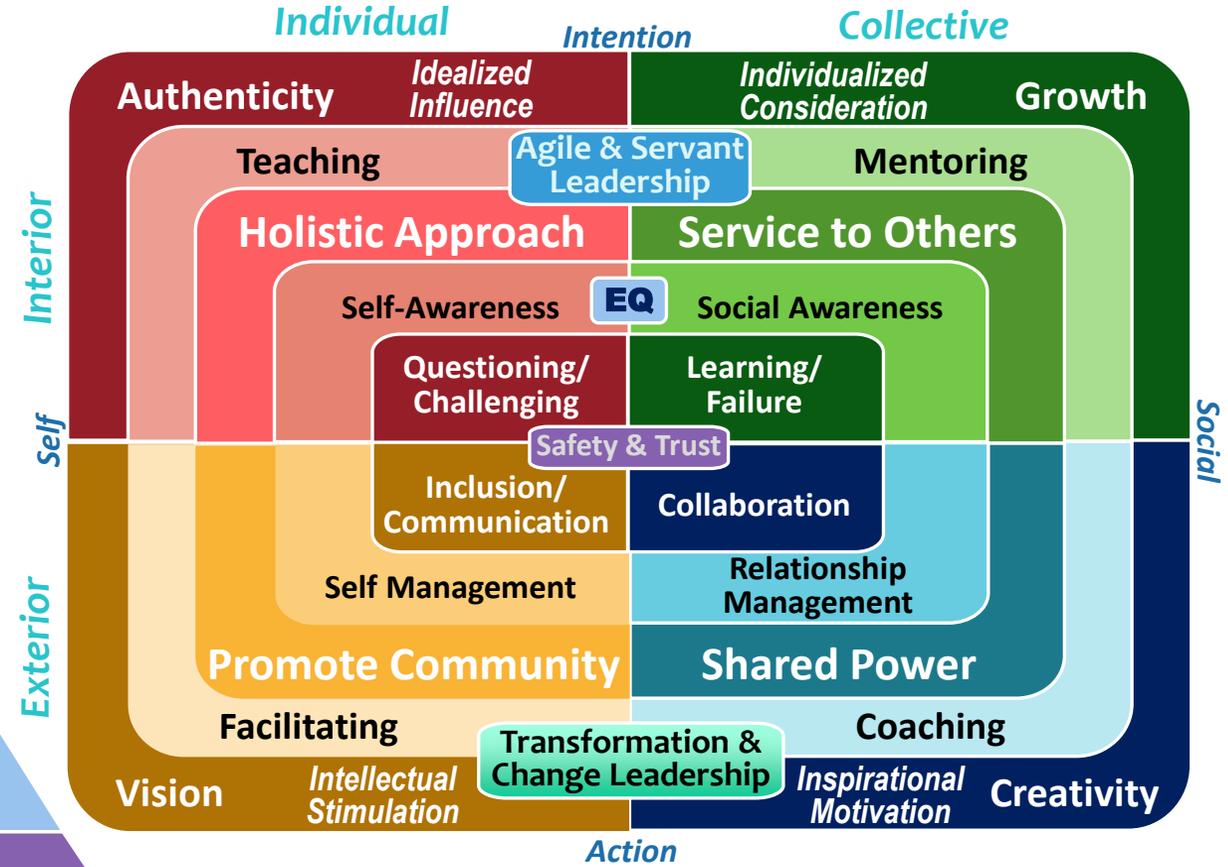
## Compliance/Criticality

Low risk ↔ Critical, audited

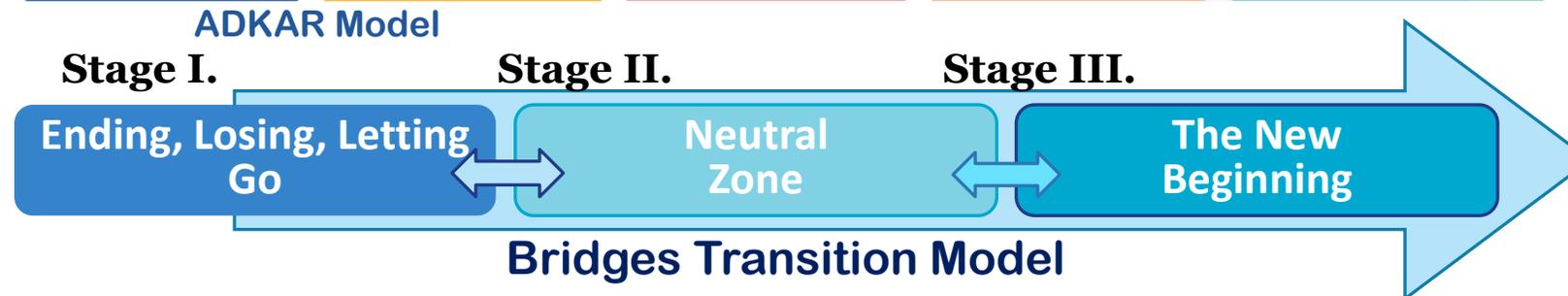
# Integral Agile Leadership & Coaching



This work is a derivative of Agile Coaching: Conceptual Foundations for Agile Coaching Institute, used under CC BY-NC. Set by Schuyler Long

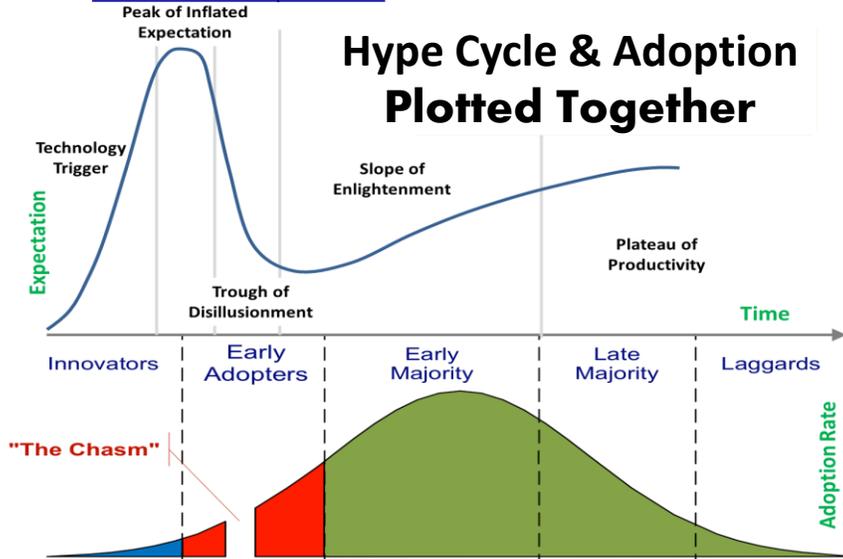


# Transformation/Change Models



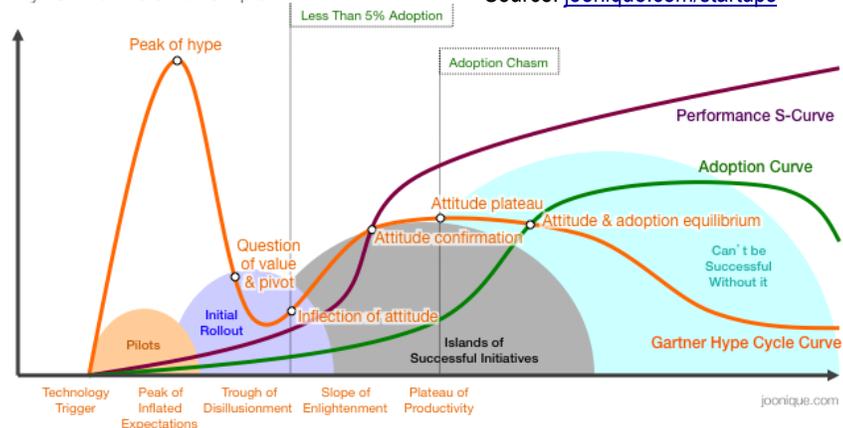
# Change & Adoption Curves

Source: [setandbma.wordpress.com](http://setandbma.wordpress.com)



Gartner Hype, Performance, Adoption, & Scopes  
Dynamic Relationships

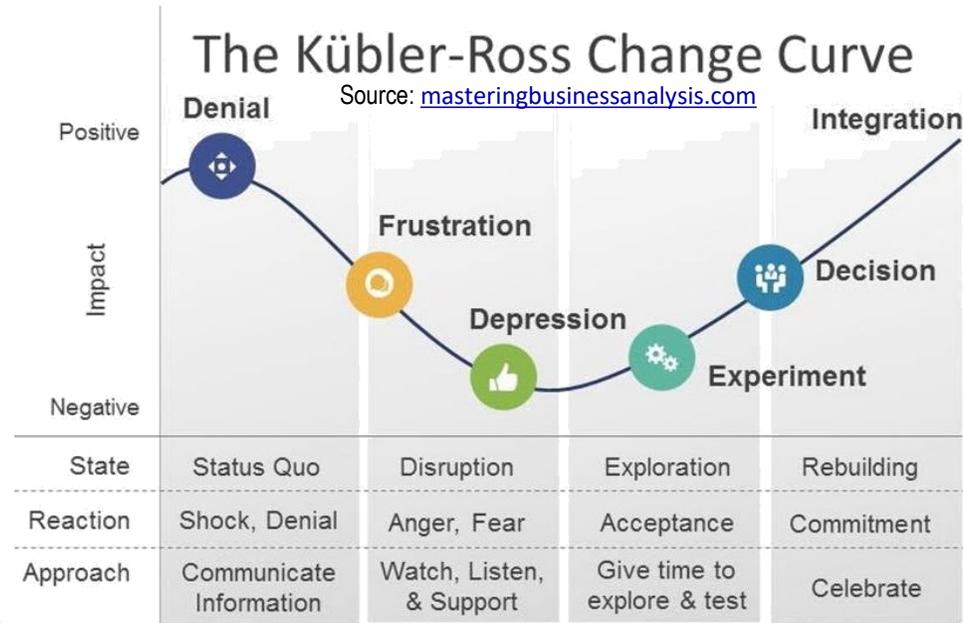
Source: [joonique.com/startups](http://joonique.com/startups)



See also: [weblog.tetradian.com/2016/08/09/tech-adoption-tech-evolution-lifecycle-mgmt](http://weblog.tetradian.com/2016/08/09/tech-adoption-tech-evolution-lifecycle-mgmt)

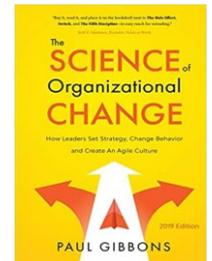
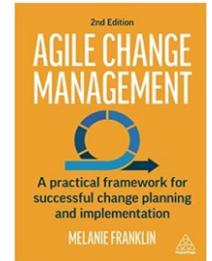
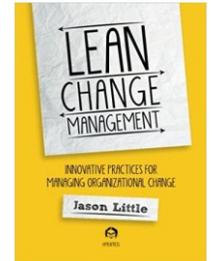
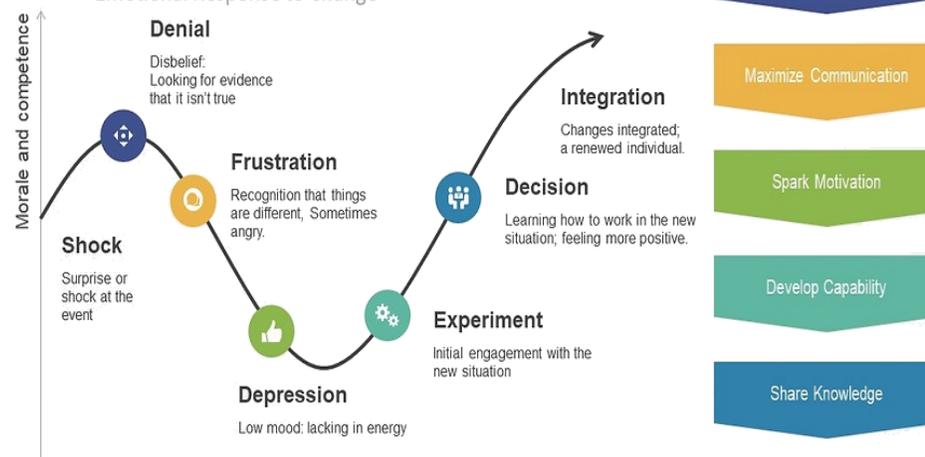
## The Kübler-Ross Change Curve

Source: [masteringbusinessanalysis.com](http://masteringbusinessanalysis.com)



## The Kübler-Ross Change Curve

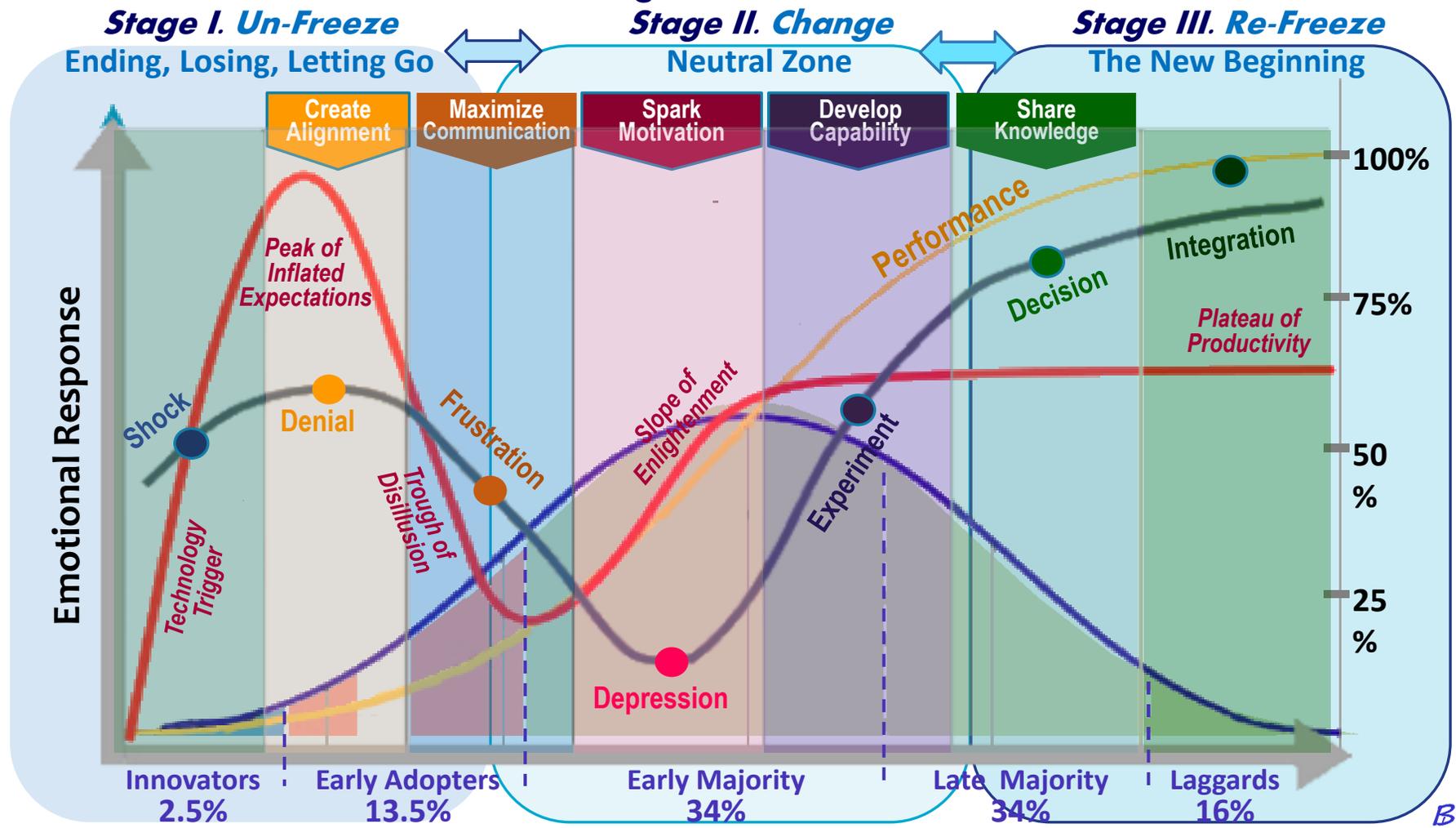
Emotional Response to Change



# [Combined] Transformation & Change Curves

Kübler-Ross + Adoption Cycle + Hype Cycle + Performance + Transformation Curves

Lewin + Bridges Transition Model

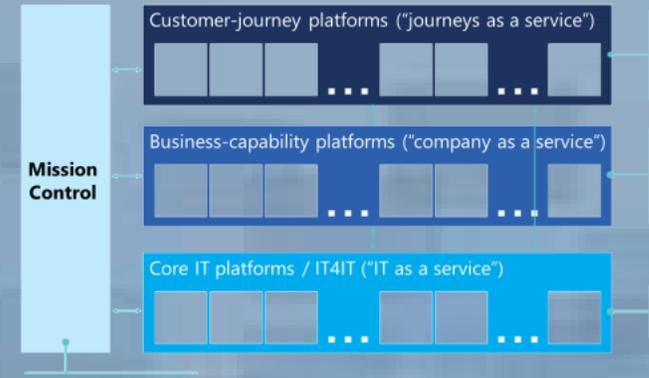


# Business Agility Transformation

DevOps Transformation

Agile Transformation

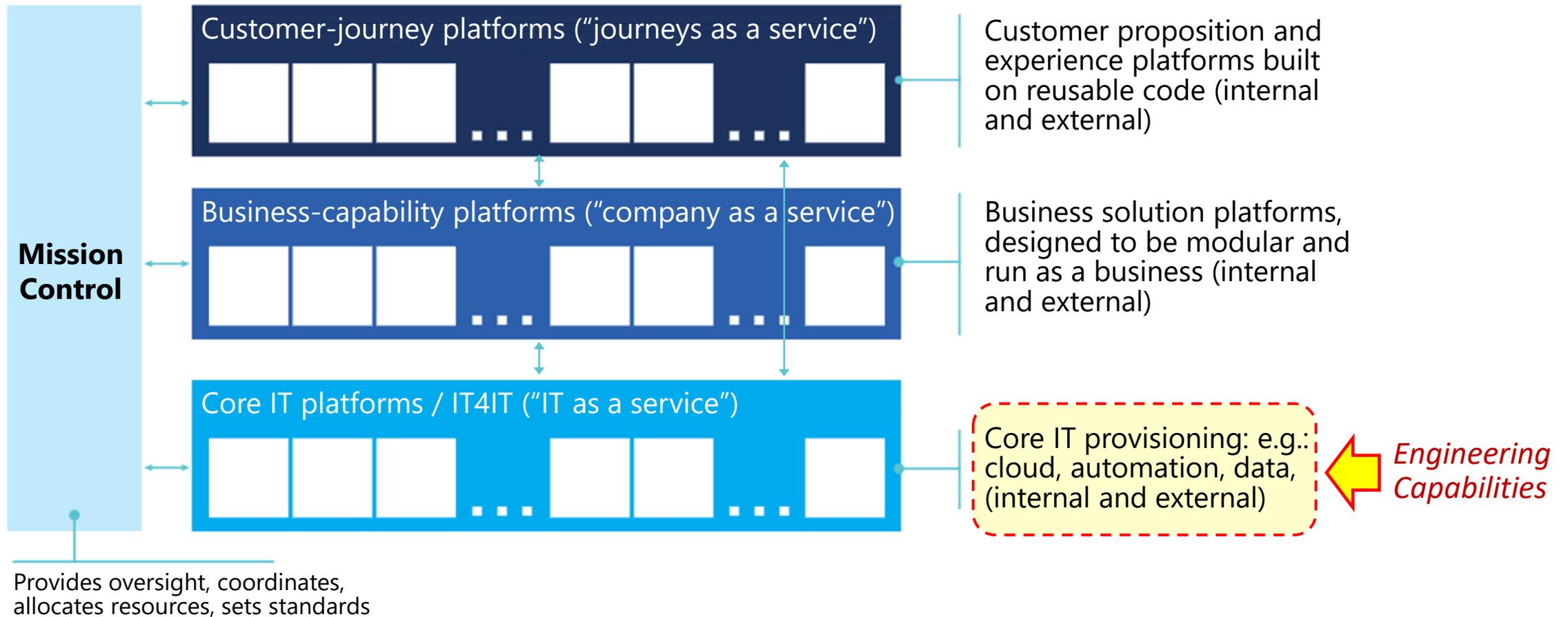
Digital Transformation



# Digital+Agile+DevOps Transformation (Operating Model & Framework)

# Digital Platform Operating Model – (Agile Business Ecosystems)

## Platforms are grouped into three broad areas



Source: <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/the-platform-play-how-to-operate-like-a-tech-company>

# Agile/DevOps IT Operating Model — Replacing Functional Silos with Cross-Functional Collaboration

FORRESTER RESEARCH

## The Transition From Silos To Product-Centric Teams

*DevOps: The CIO's Guide To Velocity*

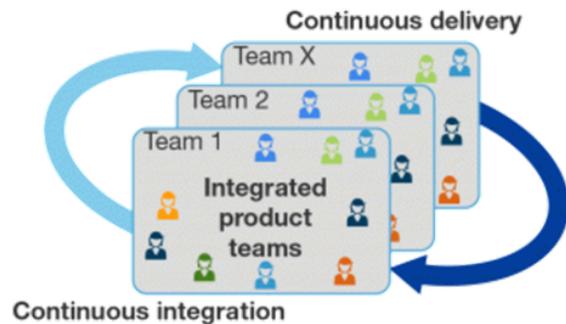
### Teams organized by function:

- Silo information.
- Stymie collaboration.
- Reduce customer focus.

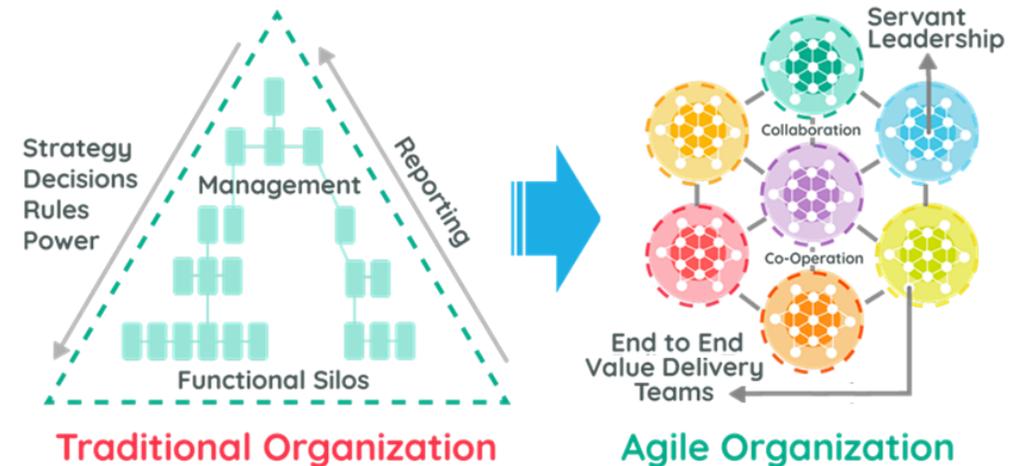
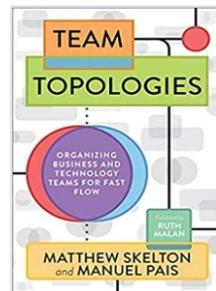
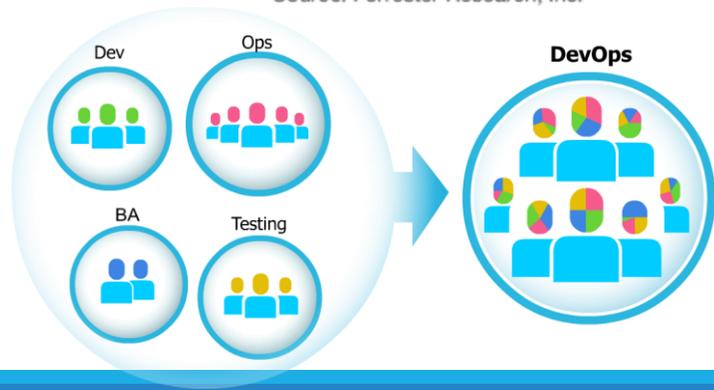


### Product teams:

- Ease information sharing.
- Improve response time.
- Maintain customer focus.

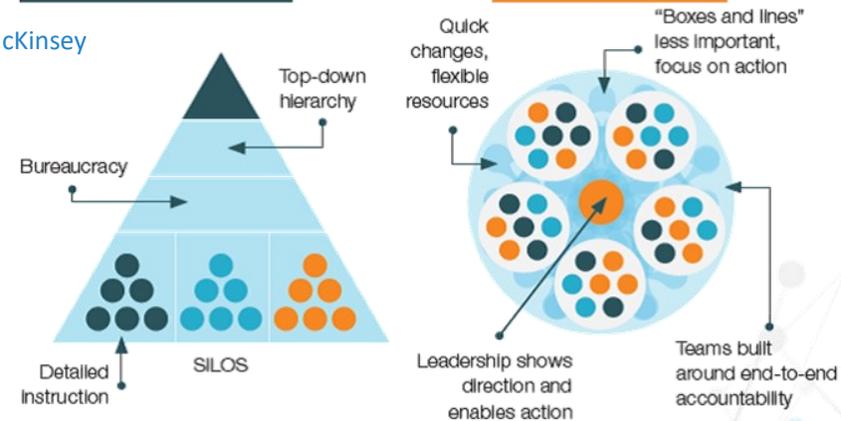


Source: Forrester Research, Inc.

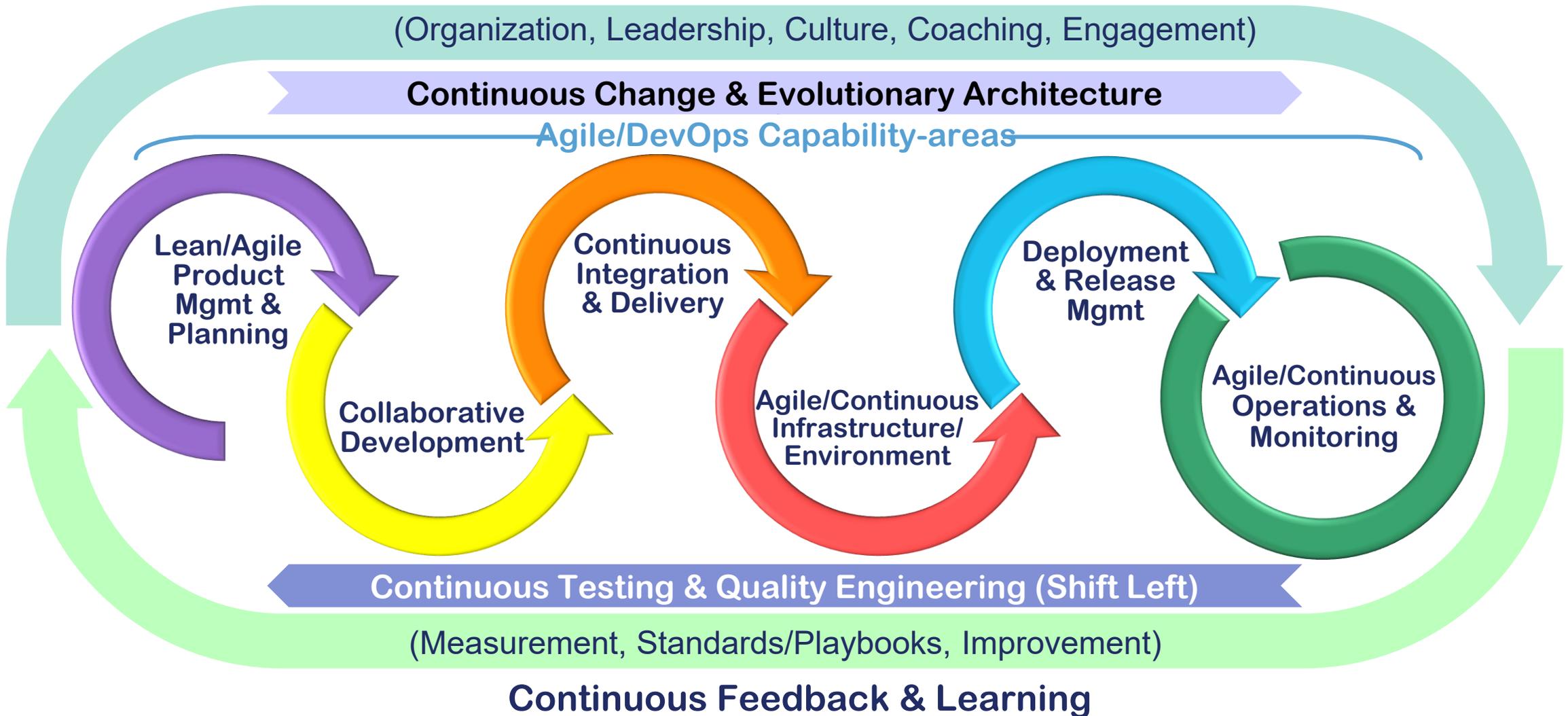


From organizations as "machines" ...  
... to organizations as "organisms"

Source: McKinsey

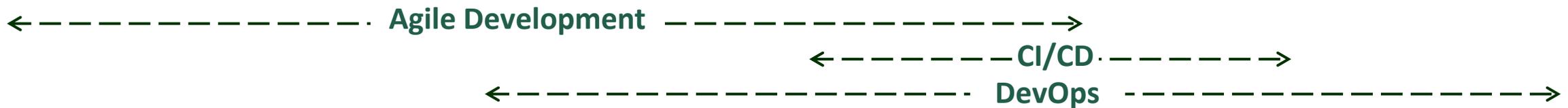


# Lean-Agile/DevOps Integrated Delivery Framework



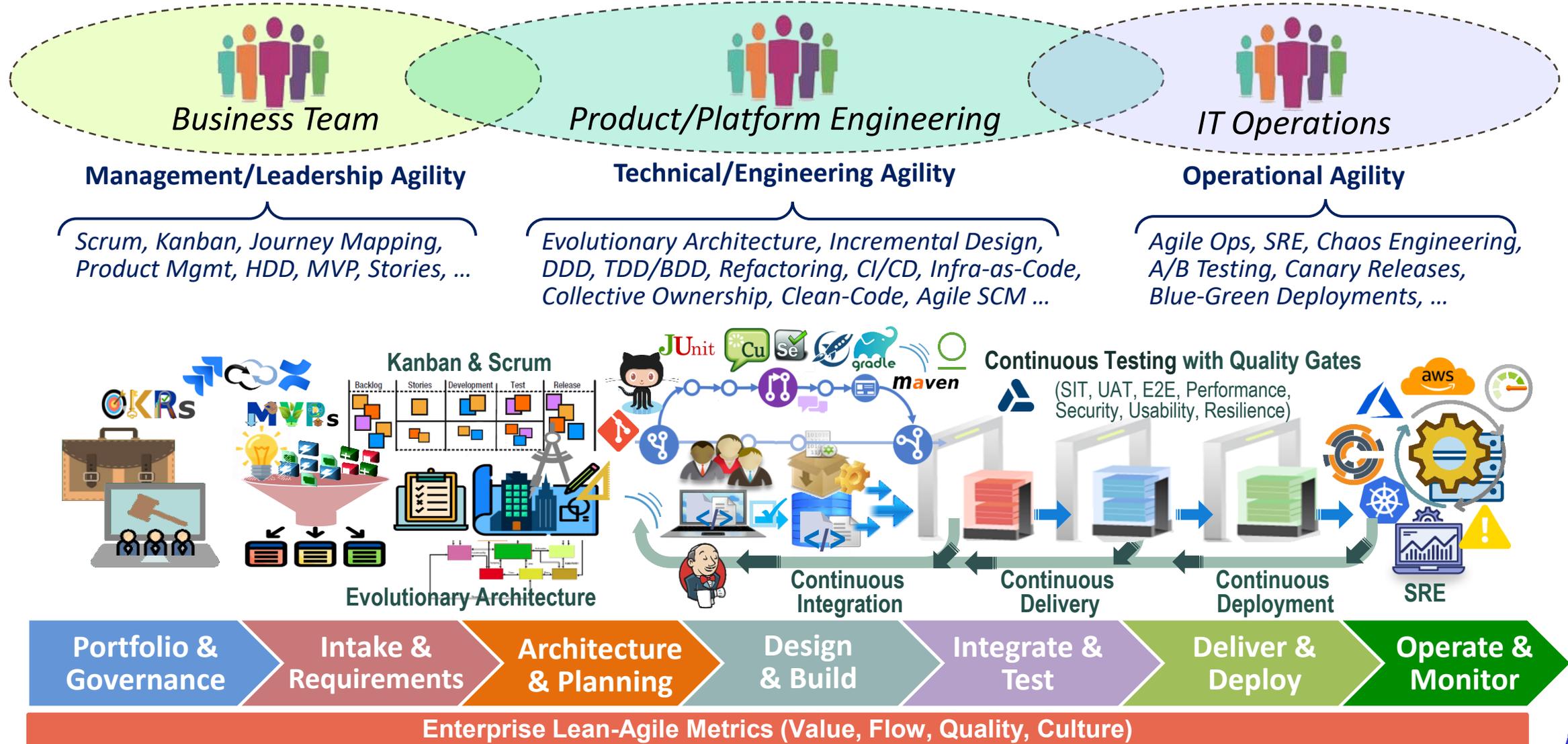
B

# IT Agility (across Mgmt, Engineering & Operations)



Enterprise Agility Metrics (Value, Flow, Quality, Culture)

# Lean-Agile & DevOps Enablement Services - Alignment



# LeAD CoDE -- Lean-Agile & DevOps Center of Digital Enablement

## Purpose

Lead, grow & transform an Agile & DevOps ecosystem and culture that digitally enables product-teams to maximize predictable, efficient delivery of customer-valued products & services utilizing standards, metrics, automation of solutions, and the processes, principles, and practices necessary for the deployment & support of those product & services.

- Lead adoption and transformation of LeAD mindset, methods, practices & pipelines
- Co-create and enable business & technical agility
- Continually advance & improve capabilities/products

## Benefits

Successful Lean-Agile & DevOps adoption and transformation has been correlated with high performing IT Organizations, resulting in:

- **5X** lower change failure rate
- **46X** more frequent deployments
- **96X** faster recovery from failures
- **440X** faster lead times
- More adaptive to change
- Increased employee engagement & retention

## DevOps Tools



## Frameworks & Practices



## Services/Capabilities

### Transformation/Adoption Coaching

- Agility @ Scale (SAFe, LeSS, DA, etc.)
- Agile/DevOps Organization Design
- Mindset, Principles, Behaviors & Culture
- DevOps, Scrum, XP, Kanban, etc.
- Agile Product Mgmt & Release-Trains
- Agile Roadmapping, Planning/Estimation

### Patterns & Practices Coaching

- Agile/DevOps Integrated Framework
- Agile Architecture & Design
- Retrospective/Standup Techniques
- Version Control, Branching & Toggling
- CI/CD, Release/Deploy, Agile Infrastructure
- TDD, BDD, ATDD, SBE, HDD, MVP & MVA
- Agile/DevOps Col, CoPs, and CoEs

### Metrics and Assessment

- Agile/DevOps Dashboard Metrics
- Team/Program Health & Technical Debt
- Assess Capabilities & Mastery/Maturity

### Tool Onboarding & Templates

- Atlassian & MS (Azure DevOps) tools
- Project Setup (workflows, fields, boards)
- Delivery Pipelines & Quality Gates
- Git Branching Models

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**Thank You!**