Attacking the Fuzzy-Front-End of Value Streams

John Ediger

DXC Distinguished Technologist
DevOps-Agile Transformation Principal

@halfmoondad
www.linkedin/in/DevOps4Leaders

© 2020 DXC Technology Company. All rights reserved.

What is DXC Technology?

DXC LISTED NYSE

23,000+
Agile/DevOps practitioners and Digital Engineers

250+
Scrum masters and Agile coaches

500+
additional SAFe certifications in FY19

14,000+
Cloud application migration per year

Industry DevOps and Agile Leader

NelsonHall NEAT Leader 2019 Agile & DevOps Services

8000+
Trained architects and consultants

Partner
DXC is a Gold partner with scaled agile

SCALED AGILE PARTNER GOLD

~$20B
global IT services leader

~138,000
employees worldwide

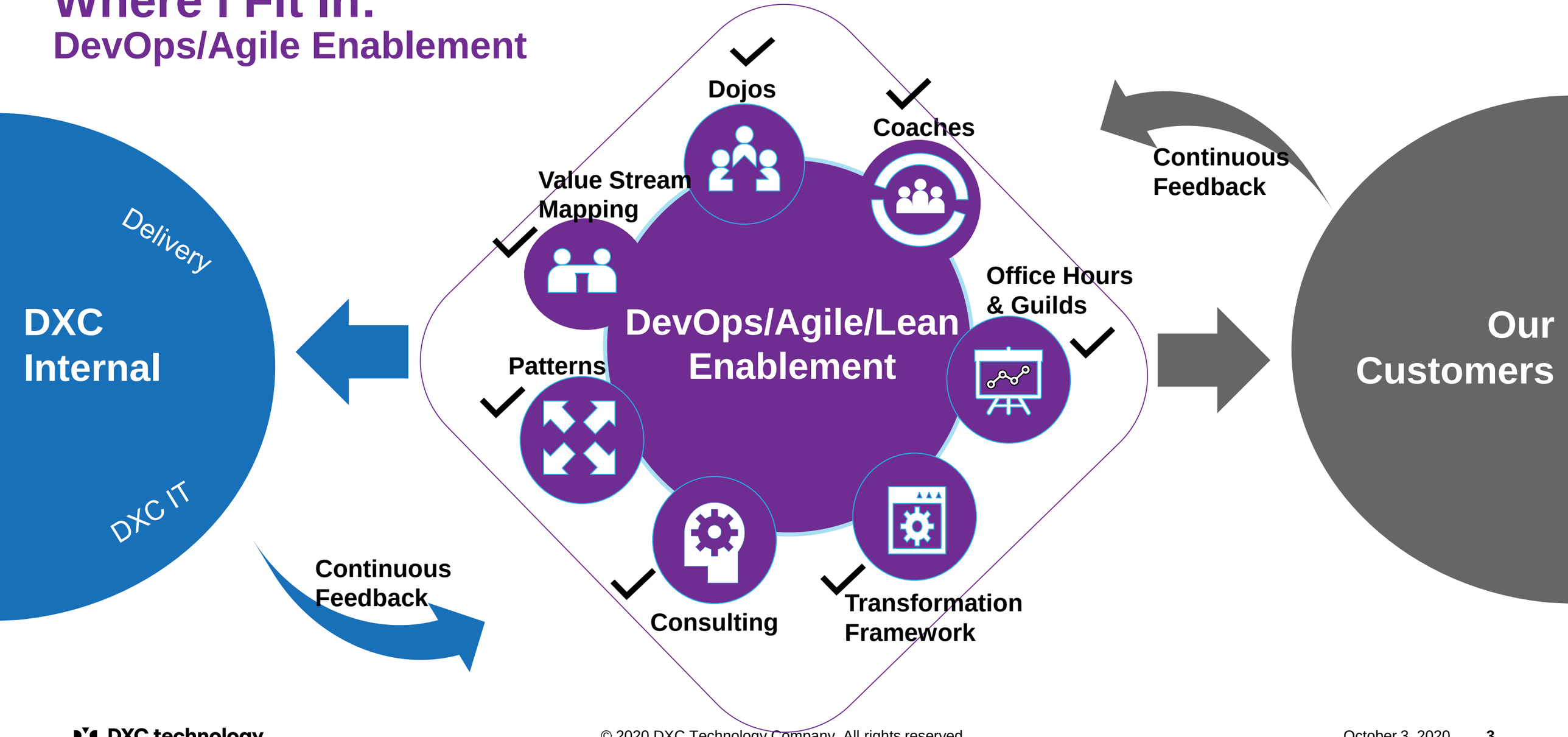
~6,000
Enterprise customers

200+ Fortune 500 companies

DXC is the only firm that has scored “Leader" in all Applications Development categories since inception of the ISG market survey.[1]

© 2020 DXC Technology Company. All rights reserved.

Where I Fit In:
DevOps/Agile Enablement



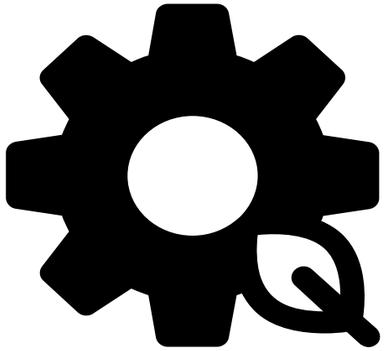
© 2020 DXC Technology Company. All rights reserved.

Gene’s Experience Report format

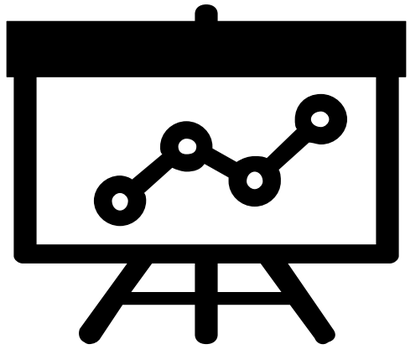
- My organization and the industry we compete in.
- My role and where I fit in the organization.
- The business problem that we needed to solve.
- Where we started and why.
- What we did, including tools and techniques.
- The outcomes that resulted.
- The challenges that still remain.

© 2020 DXC Technology Company. All rights reserved.

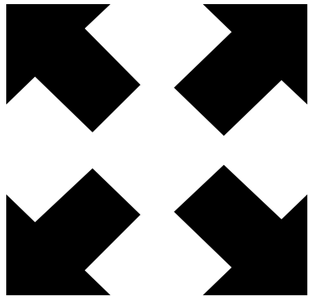
The business problem that we needed to solve



Faster Lead Time



Increase Quality



Scale Transformation Outcomes

Started with a key internal platform app focused on managing master data across IT systems

© 2020 DXC Technology Company. All rights reserved.

Agile/DevOps Transformation Anti-Patterns

https://www.linkedin.com/pulse/digital-transformation-antipatterns-john-ediger

MODERNIZATION FOR MODERNIZATION SAKE

DevOps and Agile are means to an end, not goals themselves. Successful transformations Goals and outcome driven for targeted and measurable business results

BIG BANG TRANSFORMATIONS

Successful Agile and DevOps transformations are done “agile-ly” - iteratively with feedback loops and adjustments and value achieved continually

TECHNOLOGY & METHODOLOGY ONLY

Successful transformations address the way teams work (culture), including ownership, kaizen model, team practices)

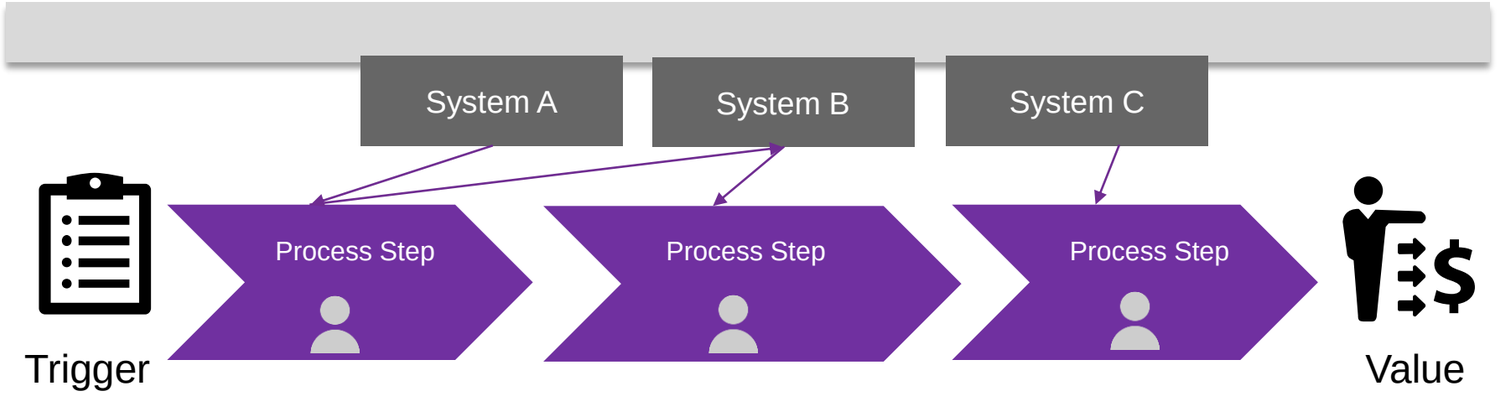
ONE SIZE FITS ALL

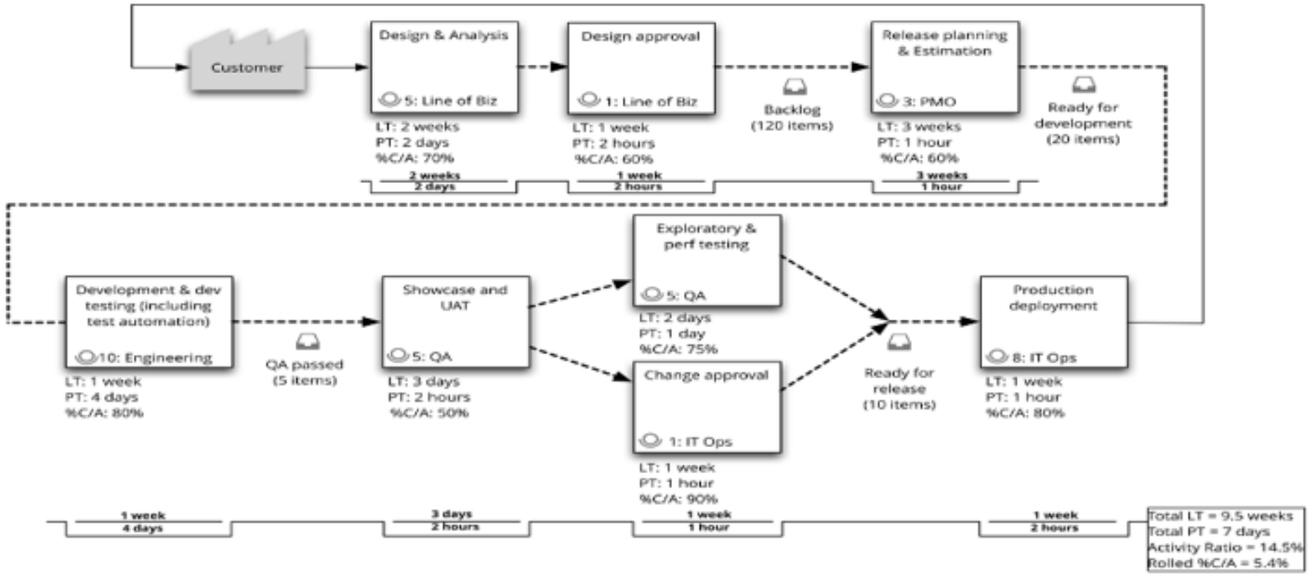
Successful transformations are Value Stream based

(custom, team-owned implementation to address specific value-stream goals and bottlenecks)

© 2020 DXC Technology Company. All rights reserved.

Value Stream Mapping



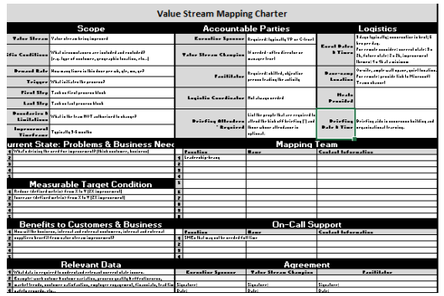


- Strategic, collaborative process to identify top improvement priorities
- Optimizes end-to-end flow of value
- Accelerates business outcomes
- Makes work visible and simplifies the process
- Focus on the customer and delivery of value

© 2020 DXC Technology Company. All rights reserved.

5-step Value Stream Mapping Workshop Process

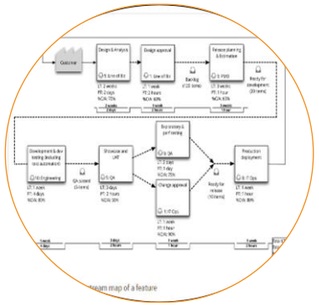
1 Charter
(Scope, Goals, Prep)


Value Stream Mapping Charter

Scope		Accountable Parties		Logistics
Value Stream	Value stream being improved	Executive Sponsor	Required (typically VP or C-level)	Kaizen Dates & Times
Win Conditions	What win conditions are included and excluded? (e.g. type of customers, geographic localities, etc.)	Value Stream Champion	Awarded value stream owner or manager-level	
Demand Rate	How many items in this future period: qty, mix, cycle?	Facilitator	Required skilled, objective person leading the activity	Room(s) Location
Trigger	What initiates the process?	Logistics Coordinator	Set always needed	Meals Provided
First Step	Task to first process Work			
Last Step	Task to last process Work			
Boundaries & Exclusions	What is the least BUT sufficient to change?	Briefing Attendees Required	List the people that are required to attend the kick-off briefing (1 set time when all workers in person)	Briefing Date & Time
Improvement Timeframe	Typically 3-5 months			Briefing title & room number (billing and organizational learning)

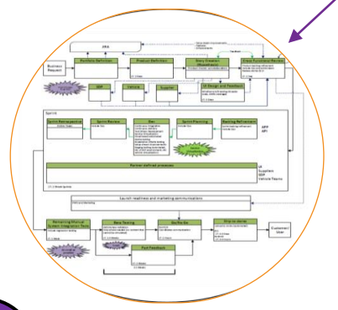
Current State: Problems & Business Need		Mapping Team	
	Function	Name	Contact Information
	Value Stream Manager		
	Process Owner		
	Process Owner		
	Process Owner		
	Process Owner		
Measurable Target Condition			
Reduce identified defect from 5% YTD (improvement)			
Increase identified defect from 75% YTD (improvement)			
Benefits to Customers & Business		On-Call Support	
What is the business and customer outcome, internal and external	Function	Name	Contact Information
Supplier benefit? How can value improve?	DRE Refactoring role needed full time		
Relevant Data		**Agreement**	
What data is required to understand current state issues	Executive Sponsor	Value Stream Champion	Facilitator
Should consider other metrics, sources and links to systems			
Useful Trends, workers' collaboration, walkers' required, Channels, Tool Use	Date/Init	Date/Init	Date/Init
Applicable rules	Date/Init	Date/Init	Date/Init

Couple weeks prior to workshop



2 Current State Value Stream Map

Created with cross functional end-to-end team identifying current steps, processes. measures & handoffs and identifying critical bottlenecks



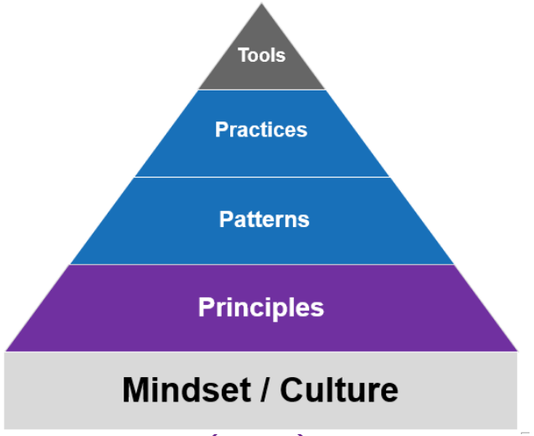
3 Future State Value Stream Map

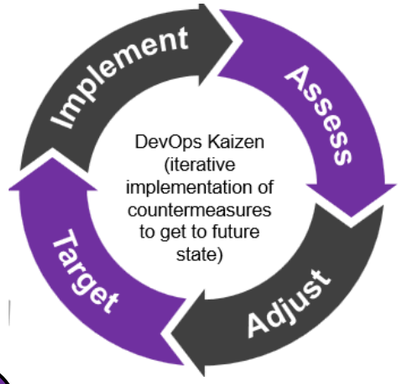
Leveraging Agile/DevOps/Lean Principles, Patterns & Practices

4 Prioritized Improvement Backlog / Roadmap

Specific list of countermeasures/hypotheses to achieve targeted goals toward future state.

Workshop





5 Continuous Transformation Execution

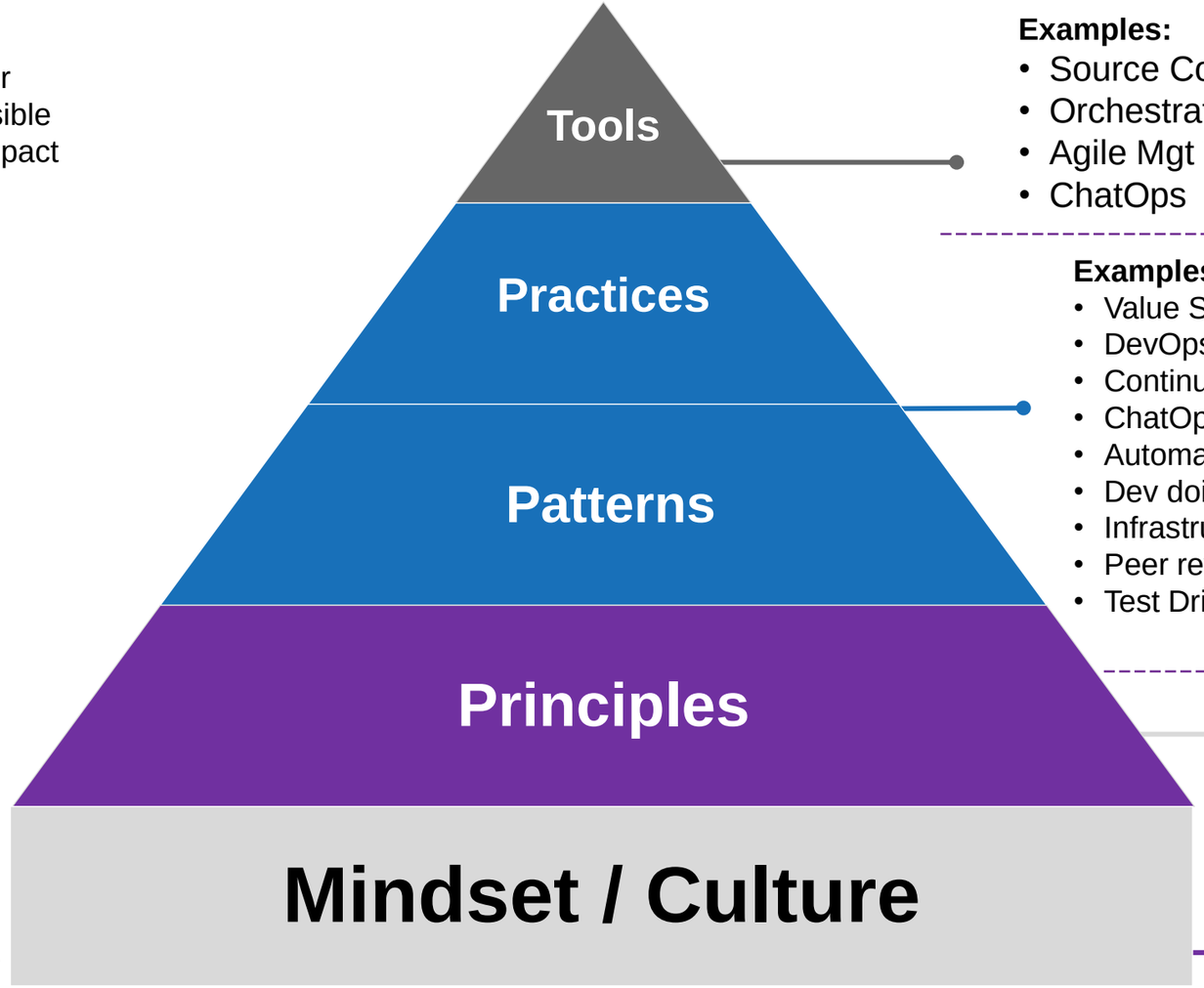
DevOps Kaizen leveraging DevOps/Agile enablement team, dojos, and/or other enablement capabilities

Continuously

© 2020 DXC Technology Company. All rights reserved.

Holistic View of DevOps/Agile

Easier
More Visible
Lower Impact



Harder
Less Visible
Higher Impact

Examples:

- Source Code Mgt
- Orchestrator
- Agile Mgt Tool
- ChatOps
- Dynamic Infrastructure Platform
- Server Config Tools (e.g. Ansible)
- Binary Repository
- Test Automation tools… (many others)

Examples:

- Value Stream Mapping
- DevOps Kaizen
- Continuous Integration / Continuous Delivery
- ChatOps
- Automated/Continuous testing
- Dev doing more Ops / Ops doing more Dev
- Infrastructure as code
- Peer review process
- Test Driven Development
- Pervasive Telemetry
- Shift monitoring & security left
- Lightweight Change Management
- MTTR analysis
- Minimal Viable Everything
- From doing Agile to being agile
- Learn Product Development
- Project to Product
- Team Topologies
- Team First arch, design, mindset, approach

- Fast Flow
- Feedback Loops
- Continuous Improvement
- Interactions over process/tools
- Working software over documentations
- Customer collaboration over contracts
- Responding to change over plan

- Autonomy / Ownership of Outcomes
- Global Optimization
- Collaboration, Automation, Continuous Improvement

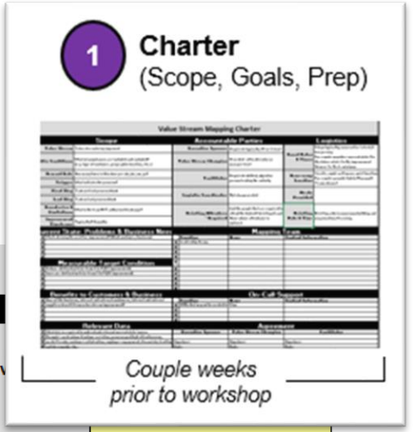
DevOps leverages Lean, Agile, XP, Theory of Constraints, Toyota Production System, learning organizations

© 2020 DXC Technology Company. All rights reserved.

Our Value Stream Charter

VSM workshop charter identified the key aspects of Data Management value stream, including:

- Current state process and problem identification
- Target conditions, with identifiable benefits
- Potential metrics and data to measure
- Scope, key boundary conditions and constraints, use case, trigger, first and last steps



Value Stream Mapping Charter

Scope		Accountable Parties			
Value Stream	Data Management	Executive Sponsor	OCIO SLT	Ev	
Specific Conditions	Master Data consolidation, domain onboarding, self service, and reporting data catalog automation.	Value Stream Champion	Beoisdf Rawerty		
Demand Rate	How many requests (circle with Matt/Dan)	Facilitator	John Ediger	Base-camp Location	Houston, TX
Trigger	New master data incorporation request from users				
First Step	Architecture evaluates data incorporation request	Logistics Coordinator	Memebn Vimwog	Meals Provided	
Last Step	Move To Production and Handoff to support				
Boundaries & Limitations	Activity funding and portfolio selection will not be addressed in the Value Stream	Briefing Attendees ** required *optional	** Yeka Ezocivc, Et0oiwi Yxjgkieo, Uxnxnv Rwqpwiks	Briefing Dates &Times	Jan 27-29, 2020 Time: TBD
Improvement Timeframe	3 months (March 31st, 2020)				

Current State Problems & Business Needs	
1	Extended approval process delays start and resource provisioning
2	"Project" model leads to big bang releases at conclusion
3	Architectural and Security review are not "agile friendly"
4	Losing experience and consistency because hire>release>hire cycle
5	Communication issues from dev team to support to new dev team

Measurable Target Condition	
1	Create new OCIO agile process framework
2	Migrate key OCIO projects from "Project" to "Product" Management
3	Pilot Product Management with OCIO Delivery Partners
4	Provide iterative business value on a three weeks sprint cycle
5	Provide agile environment role model for DXC external customers

Benefits to Customers & Business	
1	Reduce time to deliver & increase quality
2	Streamline Product development
3	Minimize risk through reliable results
4	Assess business value additions in small increments
5	Improve consistency of product development, operation & support

Relevant Data	
1	Time to deliver - measure requirement to production cycle time
2	Process eficiency - measure process start to process end cycle time

Mapping Team			
	Function	Name	Contact Information
1	Agile Coach	John Ediger	
2	Process Framework		
3	Portfolio Scrum Master		
4	Information Assurance/Cyber		
5	Architecture Review Board		
6	Product Owner		
7	Scrum Master		
8	Delivery Manager		
9	MDM Delivery Manager		
10			

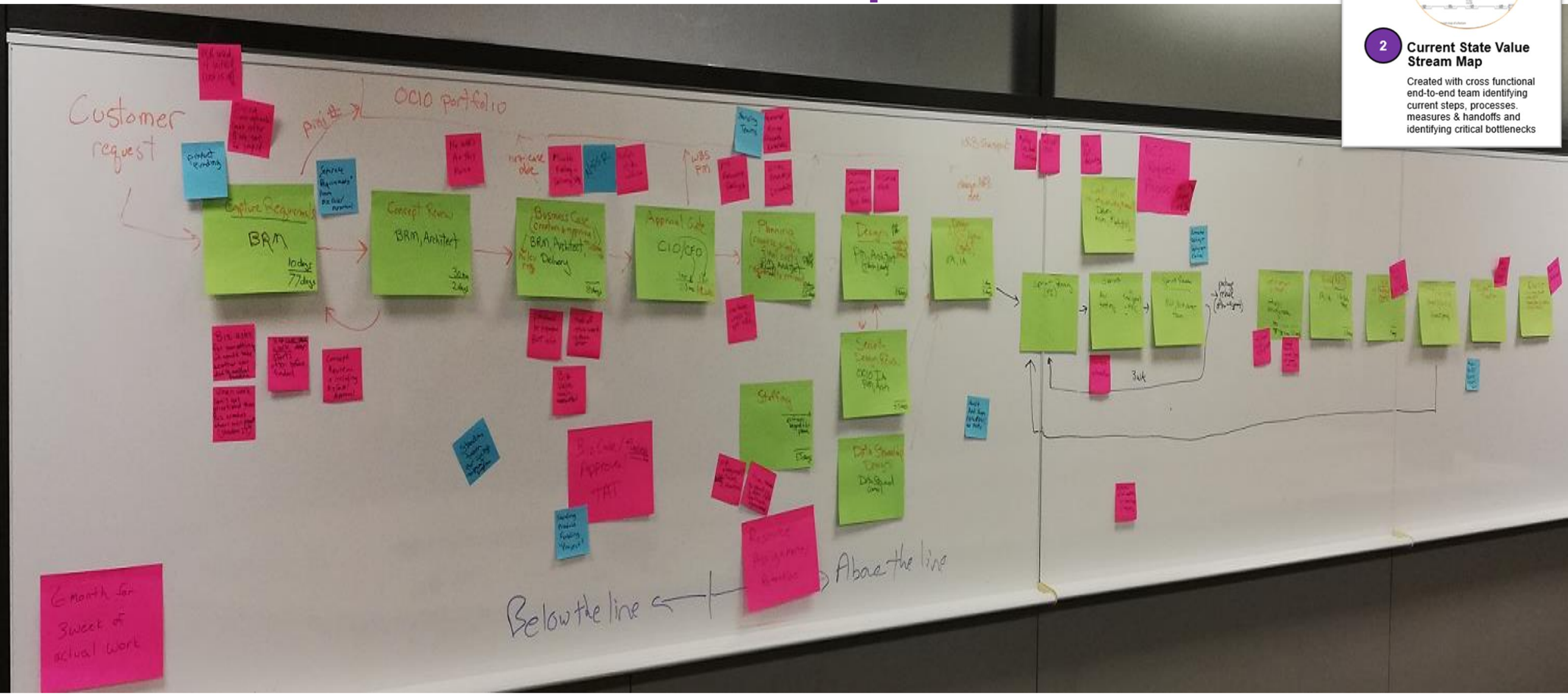
On-Call Support			
	Function	Name	Contact Information
1			
2			
3			
4			

Agreement		
Executive Sponsor	Value Stream Champion	Facilitator

Template from the great Martin and Osterling book: Value Stream Mapping (ksmartin.com)

© 2020 DXC Technology Company. All rights reserved.

Current State Value Stream Map

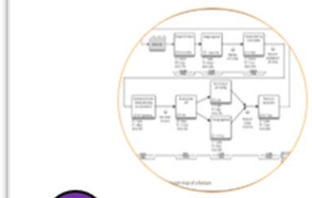


2 Current State Value Stream Map

Created with cross functional end-to-end team identifying current steps, processes, measures & handoffs and identifying critical bottlenecks

© 2020 DXC Technology Company. All rights reserved.

Current State Value Stream Map



2 Current State Value Stream Map

Created with cross functional end-to-end team identifying current steps, processes. measures & handoffs and identifying critical bottlenecks

Portfolio Repository

Customer Request

CAPTURE REQUIREMENTS — BRM — 10 DAYS / 77 DAYS — 30%
- Cost estimate occurs after funds approved
- Requests can wait Up to 1 year for funding
- Business Case/planning /design often start before funded
- Biz create their own Project (shadow IT)
- Separate Requirement from Business Case / Approvals
- Product Funding

CONCEPT REVIEW — BRM, ARCH, DELIVERY — 30 MIN / 2 DAYS
- No available WBS at this time.
- Concept Review is including Business Case Approval

CREATE BIZ CASE — BRM, ARCH, DELIVERY — 30 MIN / 2 DAYS
- Biz Value rarely measured
- Multiple Stakeholders
- IA not engaged
- Hard to find Deliivery SME
- Much of this work is done prior

APPROVE PROJECT — CIO, CFO — 1 HR / 2-3 MNTHS

STAFF PROJECT — PM, PGM, DELIVERY — 5 DAYS / 55 DAYS
- PM assignment can take 2 months
- Time taken to stand-up & down staff, training & knowledge
- Resource assignment / retention challenges
- Standing Team

PLAN PROJECT — PM, ARCH, DELIVERY — 10 DAYS / 55 DAYS
- Resource hiring process extended – no bench; long delays
- WBS can take weeks
- Initial resource demand
- PM resource delays

DESIGN — PM,ARCH,IA, TECH LEAD — 5 DAYS / 24 DAYS
- Disconnected Solution Architect & Tech Lead
- No Tech Lead assigned

(2)

(1)

APPROVE DESIGN (ARB) — ENTERPRISE ARCH (EA), INFORMATION ASSURANCE (IA) — 1 DAY / 3 DAYS
- Muddy document repository

PROGRAM INCREMENT PLANNING (PI) — SM, PO, DELIVERY
- No available WBS at this time.
- Concept Review is including Business Case Approval

SPRINT — SM, DELIVERY — 3 WEEKS / 3 WEEKS
- No full resources
- No test automation
- NCS Request process
- Align this process with audit
- Resources pulled abruptly for escalations in delivery

SPRINT REVIEW — SM, PO, BO, DELIVERY

CERTIFICATION & ACCR (ANTIVIRUS & SECURITY REVIEW) — IA — 2 DAYS / 5-10 DAYS
- Not aligned with Agile process
- Managed Security Services (MSS) not involved until here

BUILD REVIEW (ARB) — EA, IA — 30 MIN / 2-3 DAYS

OPERATIONAL READINESS REVEIRW (ORR) — PM, PGM — 30 MIN / 2-3 DAYS
- Hard to identify a Service Manager

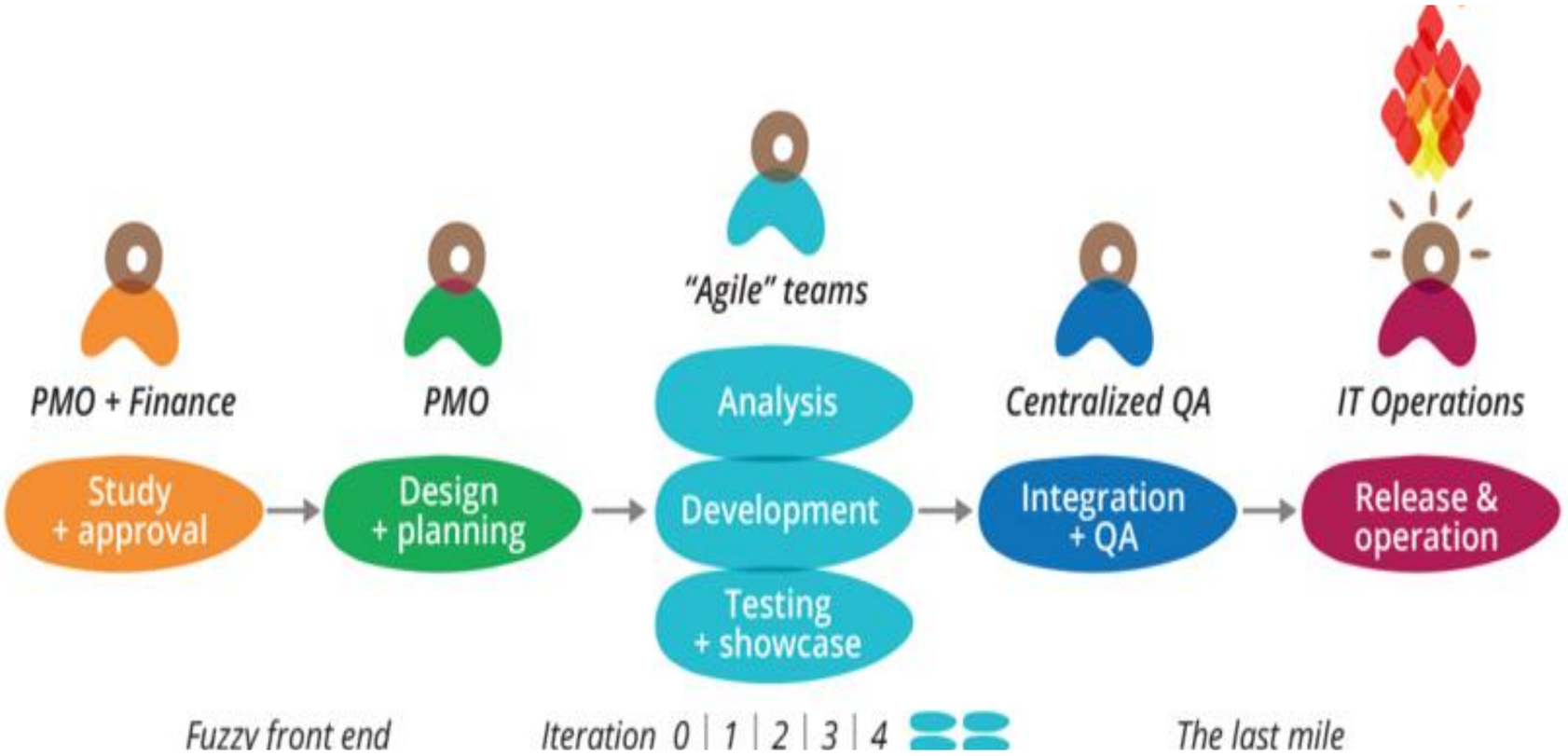
MTP GO LIVE — 30 MIN / 0-2 WEEKS*

*Variance based on black out periods

SUPPORT TRANSITION — SM, DELIVERY — 1 WEEK / 1 MONTH
- Difficulty in finding Support Services

Totals: Typical Lead and Process Times
Total PT = 5-9 weeks
Total LT = 6+ months

Typical Enterprise Agile Attempts

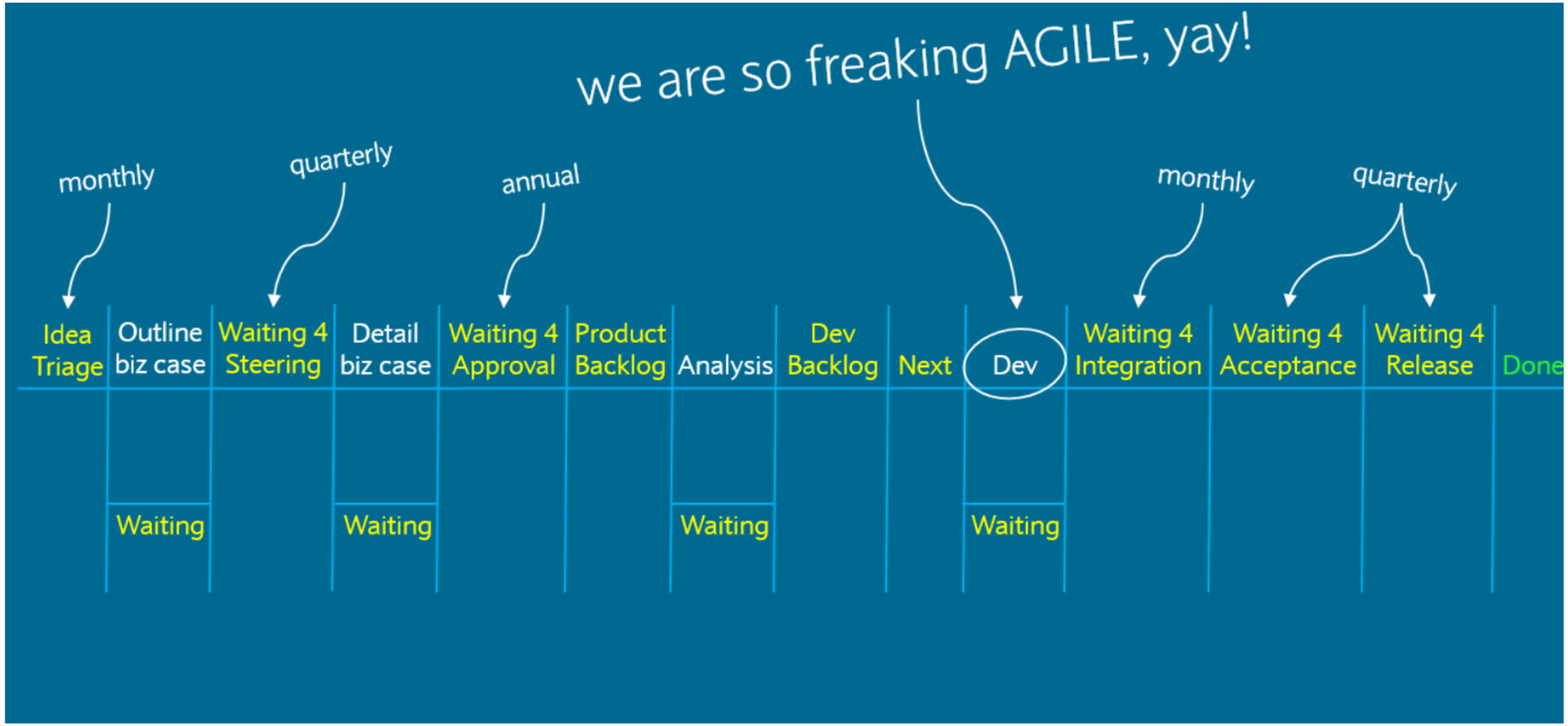


Water …….. Scrum ……..Fall

Source: *"Lean Enterprise", Jez Humble, Joanne Molesky, Barry O'Reilly*

© 2020 DXC Technology Company. All rights reserved.

“Well OK, not really so agile I guess”



© 2020 DXC Technology Company. All rights reserved.

credit: Klaus Leopold; presented at DOES 19 by Jonathan Smart

Future State Value Stream Map

Single Backlog

Jira (Product Backlog, PI Backlog, Sprint Backlog)

INITIAL SET UP
- PRODUCT DEFINITION
- PRODUCT TEAM

PMO, , DELIVERY

Full Stack cross-functional, Long-lived product team

Product team owns, builds, runs, maintatins

Customer Request

ANNUAL PRODUCT FUNDING WITH QUARTERLY REVIEWS

PMO, SLT

GROOM PRODUCT BACKLOG

BRM, PO

Product backlog epics focused on business outcomes & hypotheses

PROGRAM INCREMENT (PI) PLANNING

SM, PO

SOLUTION DESIGN

ARCHITECT, IA, PRODUCT TEAM

Definition of Done & Acceptance Criteria

SPRINT PLANNING

SM, PO, SCRUM TEAM

Sprint backlog contains improvements & tech debt items with features

SPRINT EXECUTION (DEVELOP, TEST, INTEGRATE, DEPLOY, IMPROVEMENT STORIES ...)

SM, PI, SCRUM TEAM

Automate RFC's

SPRINT REVIEW (DEMOS, ACCEPTANCE CRITERIA, FEEDBACK)

SM, PI, SCRUM TEAM, STAKEHOLDERS

SPRINT RETROSPECTIVE

SM, PI, SCRUM TEAM, STAKEHOLDERS

Continuous Integration

Accelerate feedback loops

Rigorous, disciplined adherence to continuous improvement stories

PT = 2 WEEKS
LT = 2 WEEKS

Enablement team model for DevOps, Agile, Security

Automate deploy and back-out

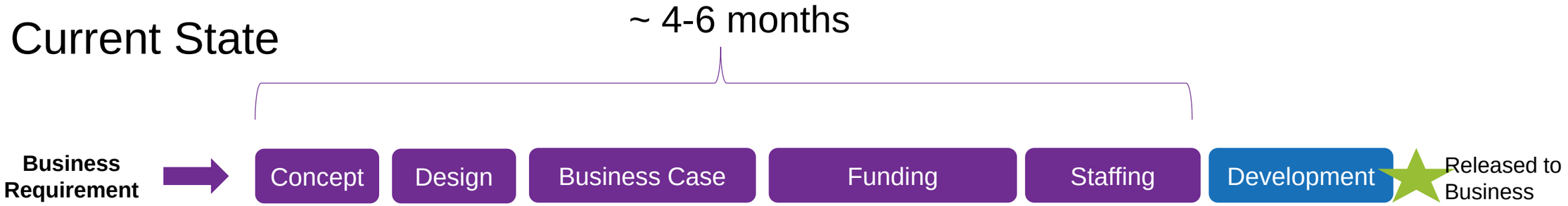
Totals: Typical Lead and Process Times
Total PT = 5-9 weeks
Total LT = 6-10 weeks

DXC.technology

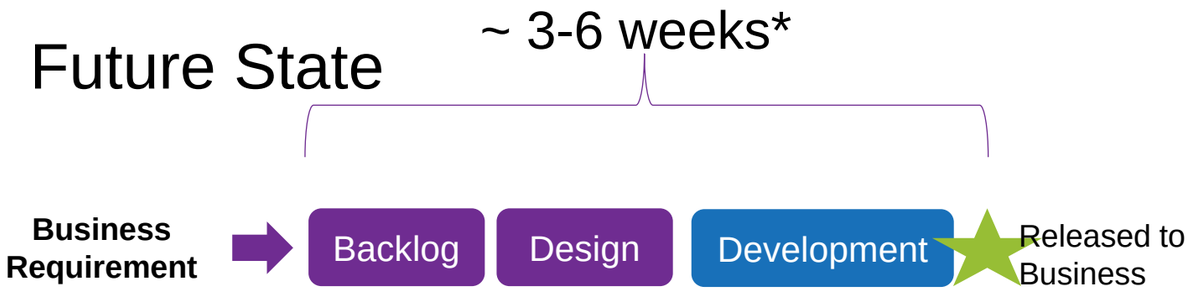
© 2020 DXC Technology Company. All rights reserved.

Agile Product - Business Value Proposition

Current State



Future State

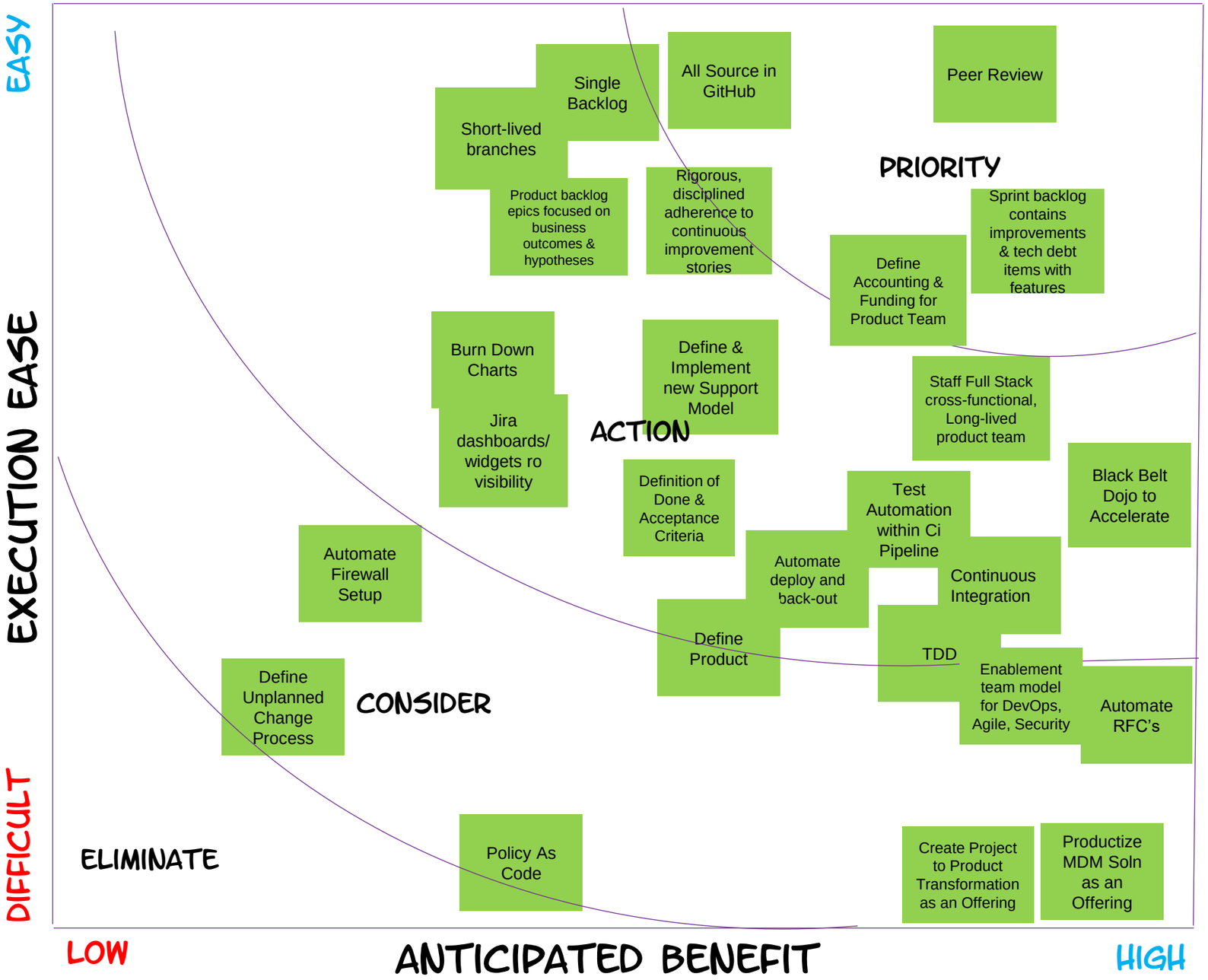


**Faster over time*

Business Value:

- Improved Quality and Outcomes from fast feedback loops
- Speed to market
- Consistency (non variable resources)
- Cost (non duplicative work with the business)
- Continuous Improvement of processes is “Built In”

© 2020 DXC Technology Company. All rights reserved.



4 **Prioritized Improvement Backlog / Roadmap**

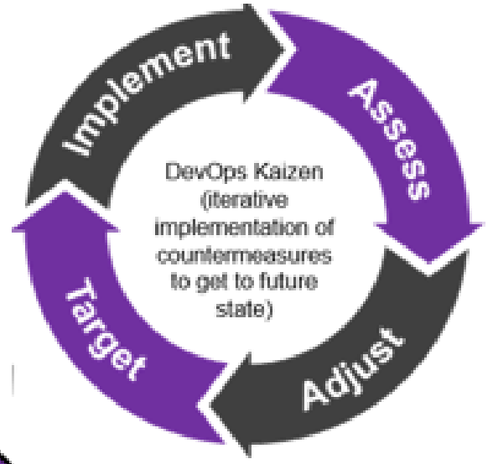
Specific list of countermeasures/hypotheses to achieve targeted goals toward future state.

© 2020 DXC Technology Company. All rights reserved.

Countermeasures to address top end-to-end Value Stream bottlenecks

- Project to Product
- Fake Agile to true agile
- Kaizen Process

- Shift to Git with peer reviews
- Test automation
- Automate Deployment
- True Continuous Integration
- Automate change management
- Test Driven Development



5

Continuous Transformation Execution

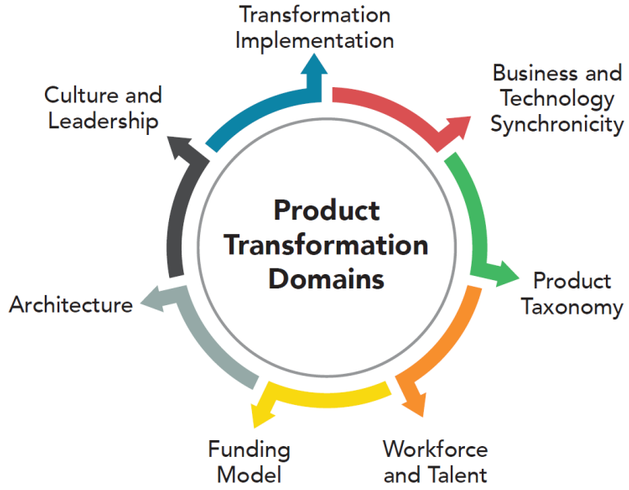
DevOps Kaizen leveraging DevOps/Agile enablement team, dojos, and/or other enablement capabilities

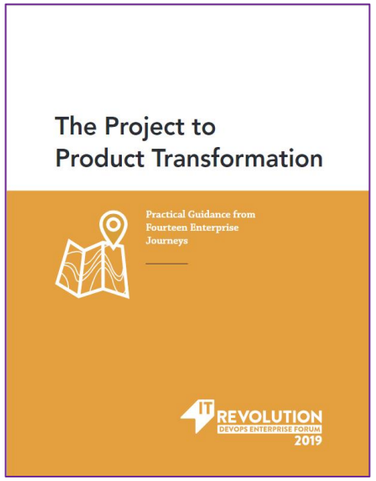
© 2020 DXC Technology Company. All rights reserved.

Project to Product Transformation

Success Patterns for Product Orientation

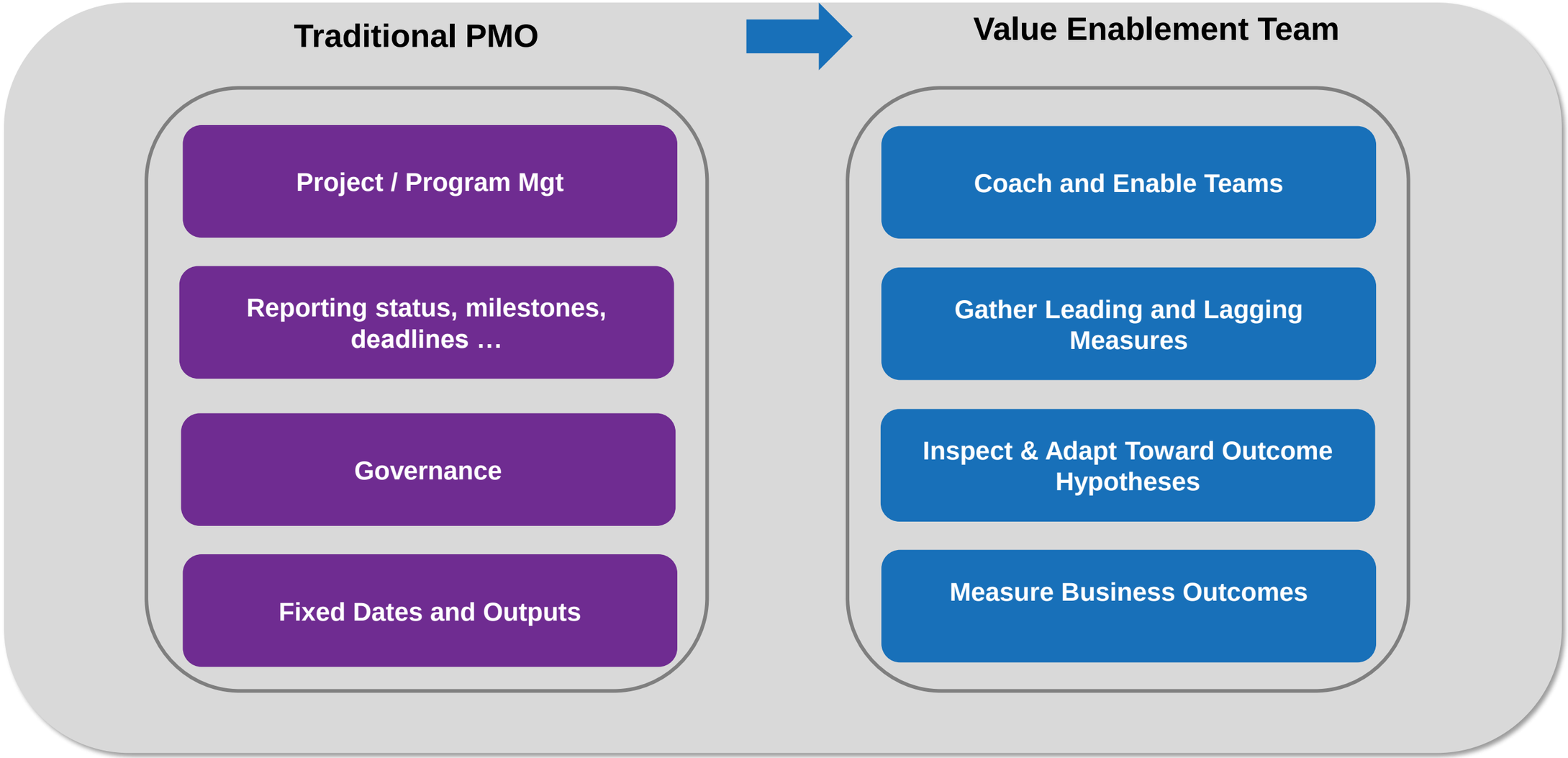
- ✓ Small cross-functional long-lived T-Shaped teams – properly resourced
- ✓ One backlog per product with PO as authoritative source of priorities
- ✓ Fixed funding with periodic reviews
- ✓ Leadership to honor the backlogs
- ✓ Pivot PMO Organization
- Clearly define product taxonomy aligned with value streams
- Shift from heavyweight PI planning to lighter-weight model of PO's committing to quarterly OKR's
- Continuous Improvement of Taxonomy
- Use OKR's and hypotheses at executive level





© 2020 DXC Technology Company. All rights reserved.

Pivot PMO



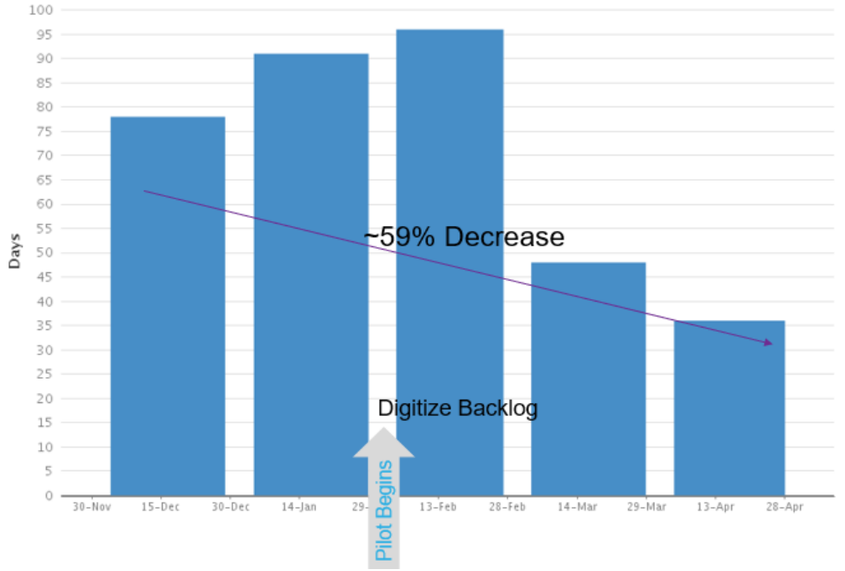
© 2020 DXC Technology Company. All rights reserved.

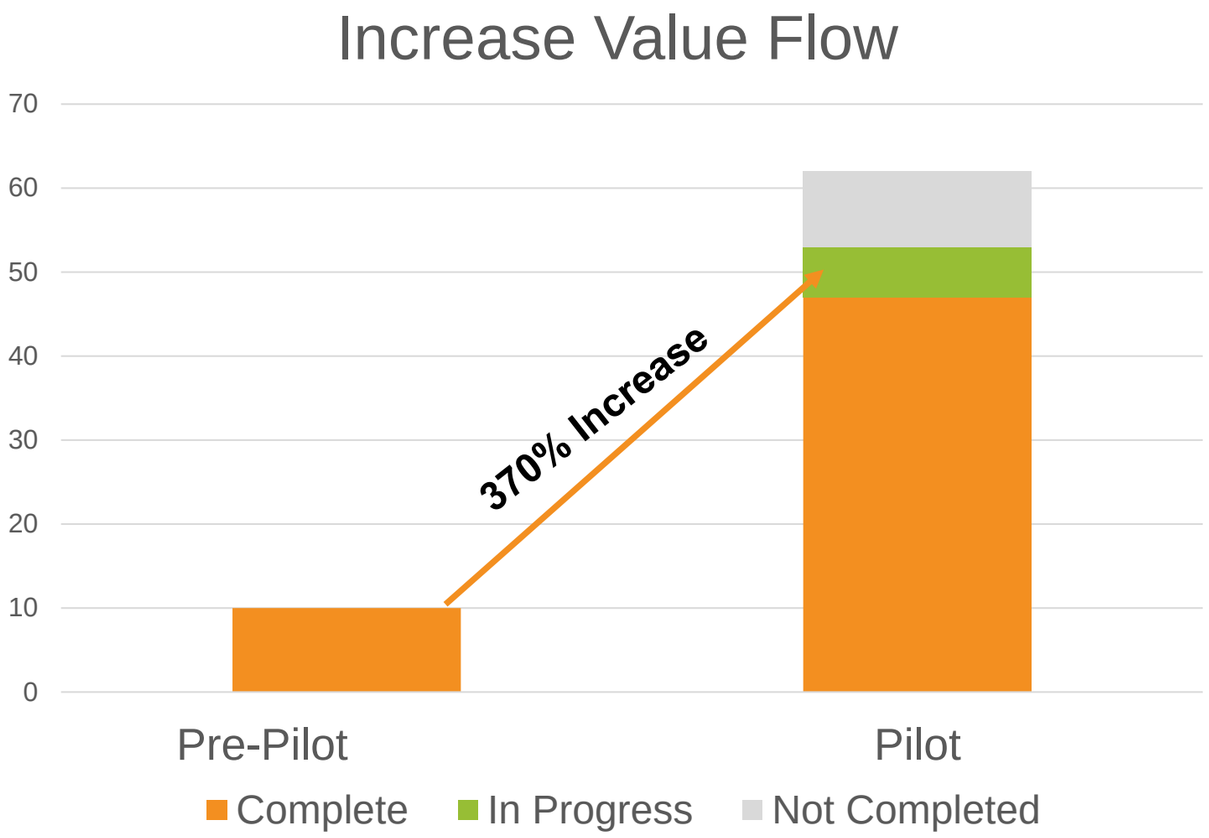
Resulting Outcomes

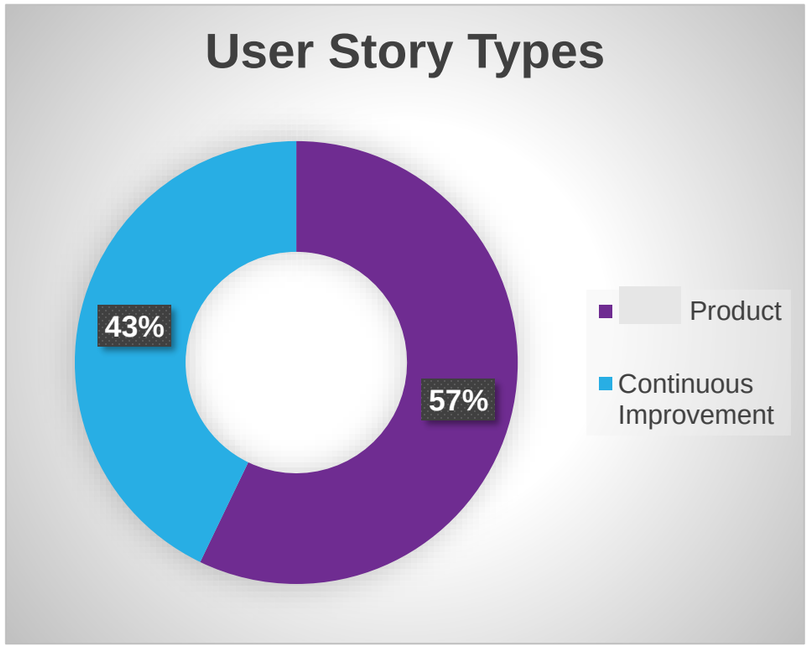
© 2020 DXC Technology Company. All rights reserved.

Resulting Outcomes

Over 50% Decreased Time to Delivery (down to 2 sprints)





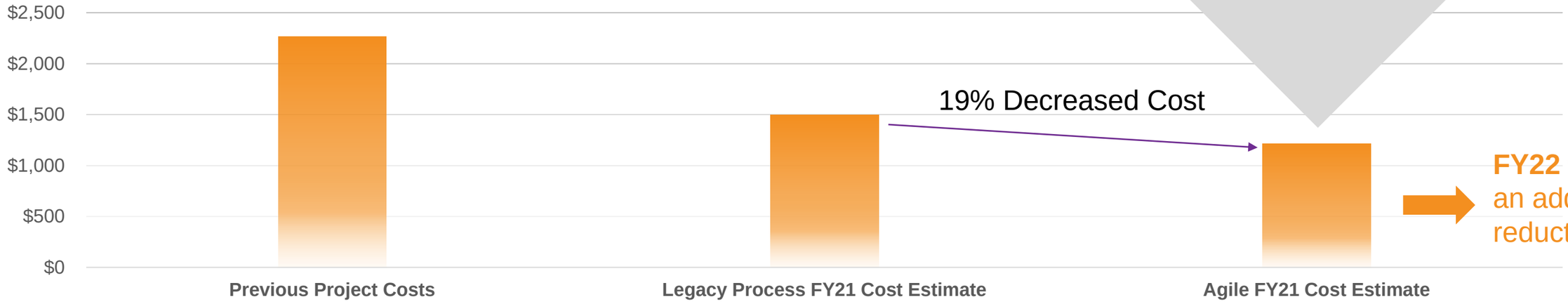


© 2020 DXC Technology Company. All rights reserved.

More Productivity at Less Cost

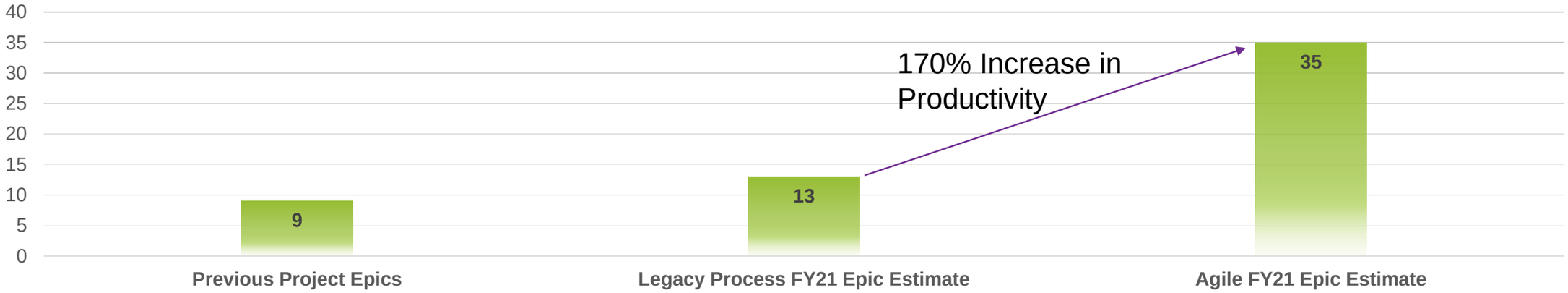
170% More User Stories at 19% Less Cost…

COST ESTIMATES* $/K



FY22 would expect an additional ~20% reduction in Cost

NUMBER OF USER EPICS

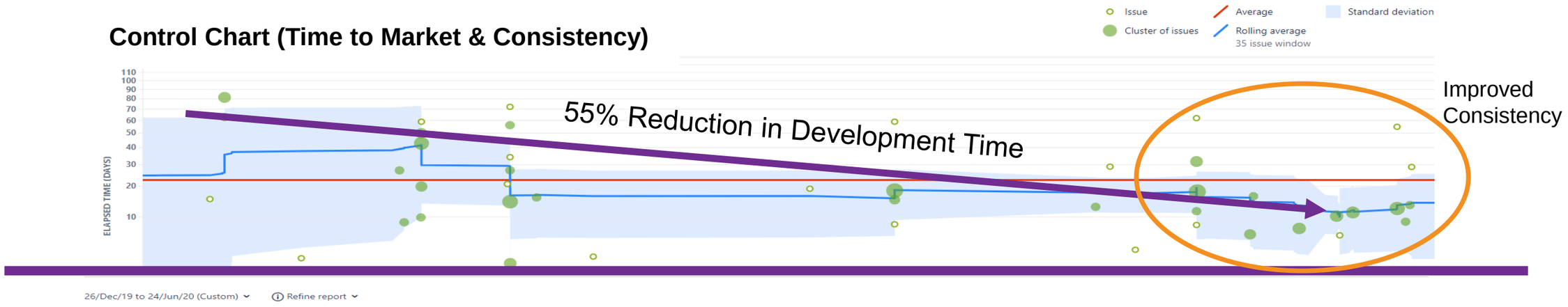


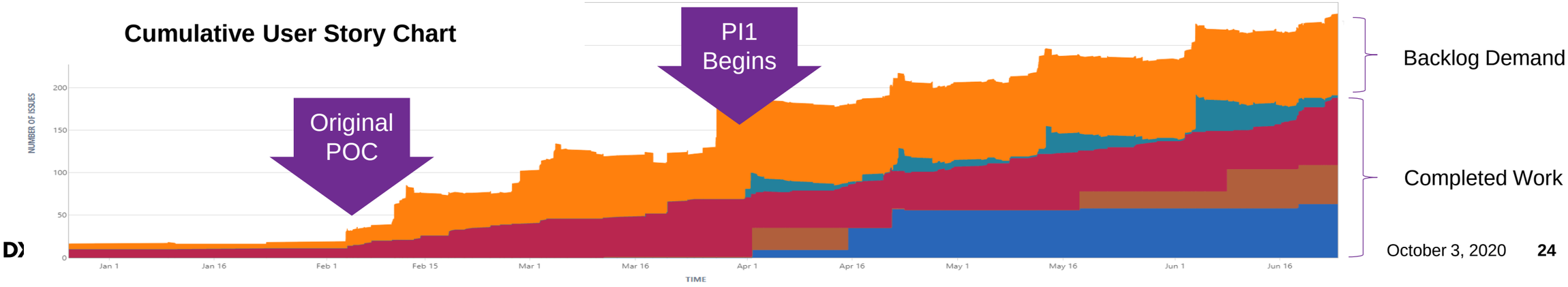
*Excludes Fixed License Costs

© 2020 DXC Technology Company. All rights reserved.

Velocity Increase

- Delivered **twice as fast** through 12 weeks
- Consistency vastly improved from beginning to end of Product Increment
- **15% Increase** in User Story Delivery per sprint
- Meeting backlog demand





Continuous Improvement accounted for 16% of backlog items

© 2020 DXC Technology Company. All rights reserved.

Take-aways

- Not a one-size-fits-all endeavor (no standard DevOps or Agile implementations)
- Know the baseline, use hypotheses and focus on outcome measures
- Leadership engagement is critical
    - Some un-learning is required
    - Role change from deadlines and red-yellow-green status to continuous improvement, value streams, removal of impediments
    - Create the ‘trusted system’ with the conditions for continuous improvement
- Look at end-to-end agility (the fuzzy-front-end might be the biggest bottleneck)

© 2020 DXC Technology Company. All rights reserved.

Value Stream Mapping is a means to an end

- The output is agreement and consensus from the cross-functional team of stakeholders on a transformational Improvement backlog. The mapping is a means to achieving this
- Don’t fall in love with Value Stream Mapping, fall in love with continuous improvement
- Value Stream Maps are NOT meant to be cookie-cutter, standard processes
- It’s about the whole team discovering and seeing, and then aligning on the way forward to better value delivery

© 2020 DXC Technology Company. All rights reserved.

DevOps/Agile/Lean Coach Development

Applicants

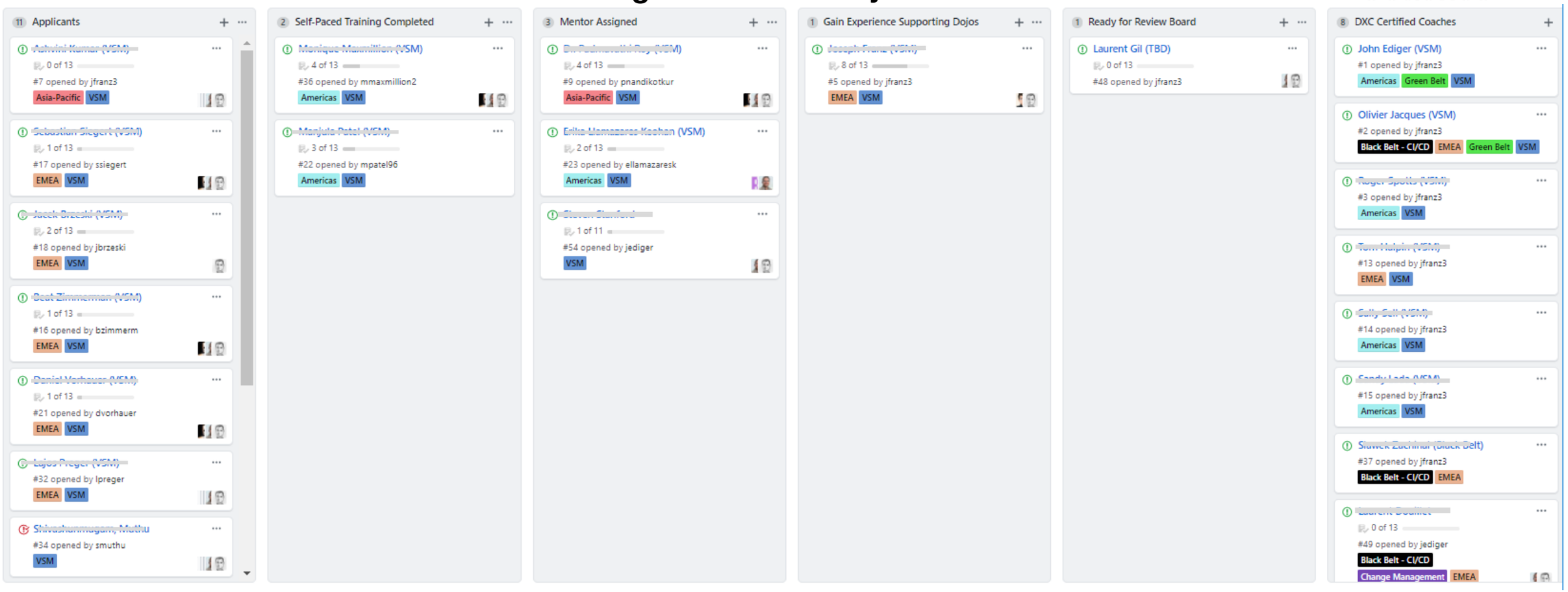
Training Completed

Mentor Assigned

Experience Supporting Dojos

Ready for Review Panel

DXC Certified Coaches



© 2020 DXC Technology Company. All rights reserved.

© 2020 DXC Technology Company. All rights reserved.