knowledge17

WORK at LIGHTSPEED™

Almost DevOps?
Combining ServiceNow Ops and Agile App Dev

TROY DOWD
SUPERVISOR – WEB SERVICES
Owens-Illinois, Inc (O-I)

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servicenow

Speaker Introduction



NAME: Troy Dowd

TITLE: Supervisor – Web Services

FUNCTION: IT – Development

COMPANY: Owens-Illinois, Inc (O-I)

EXPERIENCE: Over six years at O-I in ServiceNow and Web Dev, Five year at University of Toledo in Web Dev

EXPERTISE: DevOps and Scrum, ServiceNow Application Development

ACHIEVEMENTS: Launched Agile development and maintenance processes for and on ServiceNow

CURRENT PROJECTS: Migrating Lotus Notes applications. Building more DevOps processes into ServiceNow

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My Company



NAME: Owens-Illinois, Inc. (O-I)

INDUSTRY: Glass Container Manufacturing

MARKET FOCUS: My company provides half of the world's bottles and jars that contain some of the best beer, wine, spirits, and food

COMPANY'S PRIMARY PRODUCTS/SOLUTIONS: Founded in 1903 by Michael J. Owens, World's leading maker of glass containers, $6.2 billion net sales in 2015, 27,000 employees worldwide

COMPANY-WIDE INITIATIVES (that I am involved in): Opex reduction via Lotus Notes shut-down, Low-cost Centralized Services Center, Orchestration and Automation

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Session Overview



Objectives

- To discuss the DevOps concepts we've applied to our ServiceNow development and support processes to streamline effort, increase transparency, and maximize quality.



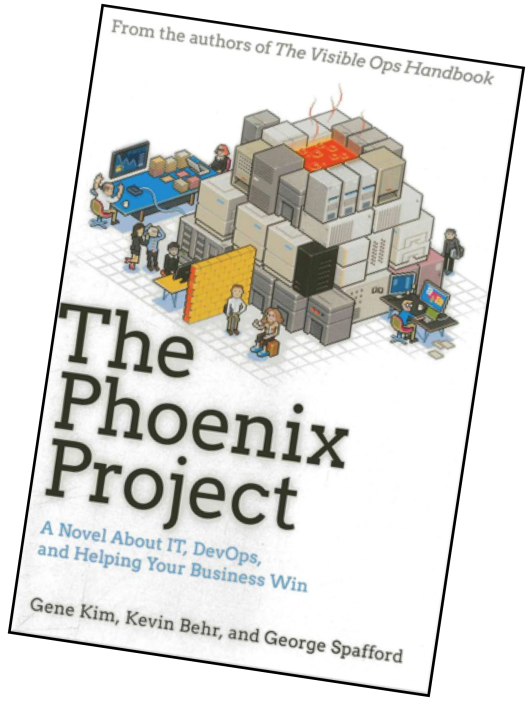
What You Will Learn

- How to know what you're supposed to be working on
- How to know what others are working on
- How to work on fewer things

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Industry Trends

- Agile Development Practices
  - Demands for MORE things FASTER
- DevOps
  - The Phoenix Project – Gene Kim (quote)
  - Run like manufacturing
  - Automation
  - Reduction in bottlenecks
- Modernization of the workforce
  - Younger employees communicate differently (reference)
  - Greater levels of turnover (reference)



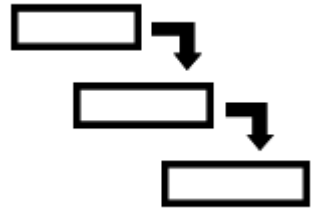
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Challenge 1

How do I know what I’m supposed to be working on?

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Challenge 1

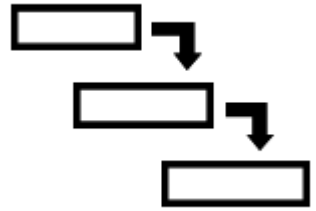


- How do I know what I'm supposed to be working on?
  - Changing priority
  - Too much work in flight
  - Excessive role switching (refer to http://www.apa.org/research/action/multitask.aspx)
  - Long wait times for defect resolution (Over 200 days)

- Goal: Adopt an iterative approach
  - Reduce time to market
    - Minimize impact of changing priorities
    - Reduce time to resolve defects
  - Work from a prioritized list, top to bottom
  - Align team to roles, commit to role for a period of time

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Iterative Approach



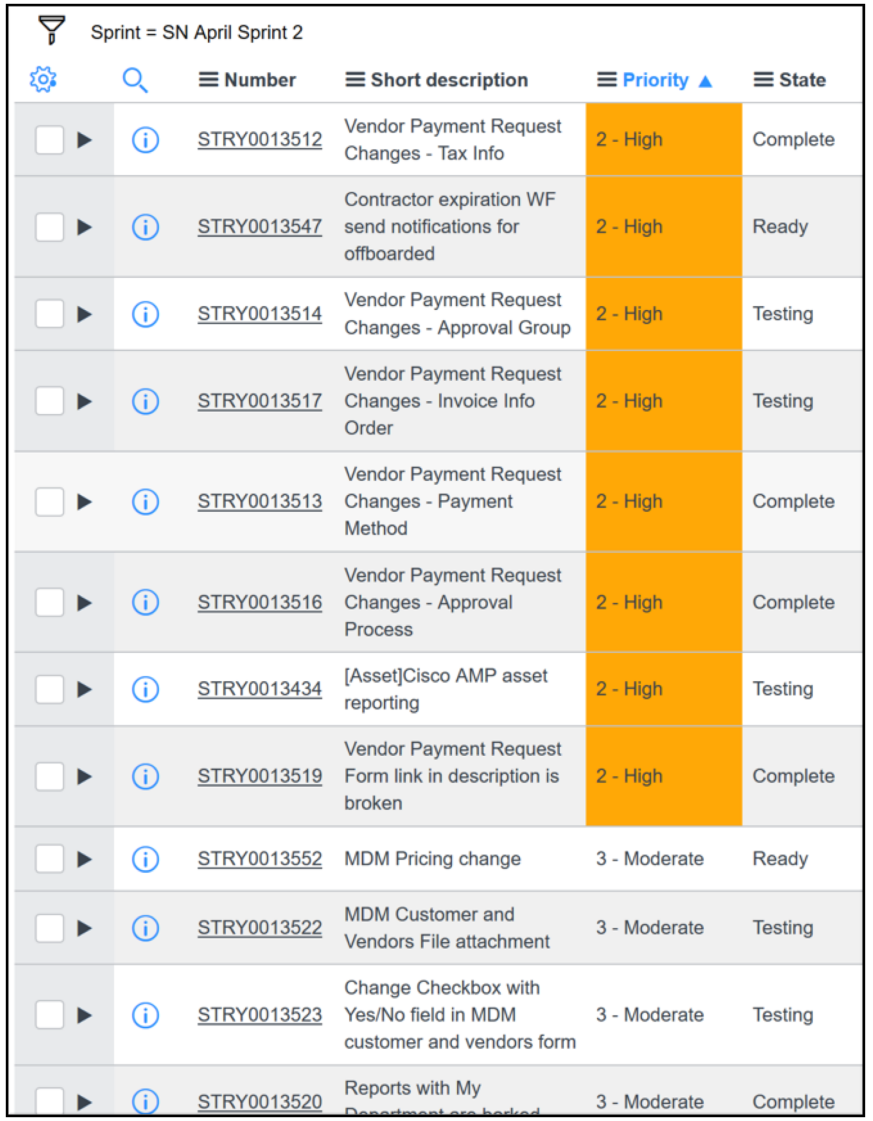
- Scrum
  - Team-up: Make a small, cross-functional delivery team
  - Backlog: Give them a prioritized list of stories (discrete, potentially-shippable chunks of functionality)
  - Sprint: Execute a focused development effort with a clear start/stop
  - Deploy: Deliver fully built tested features at the end of the sprint.
  - Repeat!

<Demo Release with multiple sprints and stories>

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Iterative Approach Outcomes

Clear set of prioritized short-term goals in the Sprint Backlog



Sprint = SN April Sprint 2

Number	Short description	Priority ▲	State
STRY0013512	Vendor Payment Request Changes - Tax Info	2 - High	Complete
STRY0013547	Contractor expiration WF send notifications for offboarded	2 - High	Ready
STRY0013514	Vendor Payment Request Changes - Approval Group	2 - High	Testing
STRY0013517	Vendor Payment Request Changes - Invoice Info Order	2 - High	Testing
STRY0013513	Vendor Payment Request Changes - Payment Method	2 - High	Complete
STRY0013516	Vendor Payment Request Changes - Approval Process	2 - High	Complete
STRY0013434	[Asset]Cisco AMP asset reporting	2 - High	Testing
STRY0013519	Vendor Payment Request Form link in description is broken	2 - High	Complete
STRY0013552	MDM Pricing change	3 - Moderate	Ready
STRY0013522	MDM Customer and Vendors File attachment	3 - Moderate	Testing
STRY0013523	Change Checkbox with Yes/No field in MDM customer and vendors form	3 - Moderate	Testing
STRY0013520	Reports with My	3 - Moderate	Complete

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Iterative Approach Outcomes

- Average number of open defects are down and trending down.
  - We've added ~50% more users



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Iterative Approach Outcomes

- Average age of defect when closed spiked and is trending down again
- Caused by the ability to close those older defects.



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Challenge 2

How do I know what others are doing and how my work impacts them?

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Challenge 2



- How do I know what others are doing and how my work impacts them?
  - Too much worrying about myself, which leads to poor decision making or clobbering others' work
  - No clear connection from user's needs and issues to the work we are doing
- Goal: Communicate!
  - Break down silos and reduce self inflicted defects
  - Provide better transparency to EVERYONE on what we are doing.

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Communicate!



- The Standup: Full product team morning meeting
  - What I did, what I am doing, and what stops me from doing the next thing.
  - EVERYBODY GET IN HERE!
  - Skype, Microsoft Teams
- Connect the stream of demand.
  - Incidents > Defects > Stories
  - Notifications to end users! Woah.
  - <Demo the connectors>
- Align the Products and features
  - Themes
  - <Demo the themes>

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Communicate! Outcomes



- More ad hoc conversations online and fewer “Work Session Fridays.”
- More peer conversations
- More multi-party conversations
- No more “Why’d you close my incident?” from end users
- No more “Who wants this, and where did it come from?” from our team members

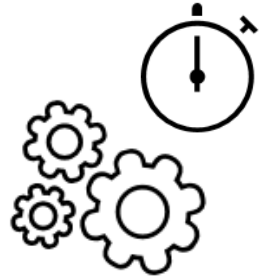
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Challenge 3

How do I do less busywork, so I can focus on the high-value work?

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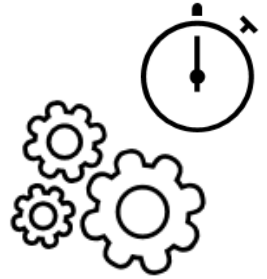
Challenge 3



- How do I do less busywork, so I can focus on the high-value work?
  - Too much paperwork, manual tasks, rubber stamping
  - Unsure of how many broken things, and how that impacts our ability to roll out new stuff especially workflows
- Goal: Process Improvement and Automation
  - Spend less time doing paperwork. Developers hate paperwork.
  - Measure the number of broken things, identify what things are breaking regularly, so we can fix them.

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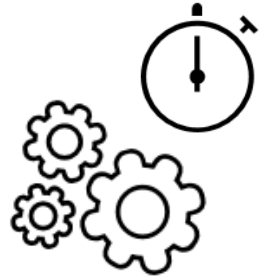
Process Improvement and Automation



- Reduce paperwork
  - Right-click UI Actions to convert Incidents in to Defects or Enhancement Requests.
  - UI Action and scheduled job to automatically request a change.
  - Closing a sprint automatically closes all of the related defect records, and notifies the appropriate parties.
  - Inbound actions to create Defects and Enhancement Requests from email.
- Capture broken processes and alert ops team members.
  - Fail gracefully in workflows and send a task to an admin to fix and try again, or to bypass
  - Send a task to admins when long running import processes fail.
  - Ops team creates defects to resolve frequent failers.

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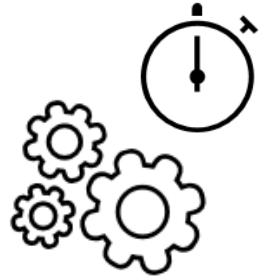
Process Improvement and Automation Outcomes



- In the last year we estimate this has saved us:
  - 5 Hours of defect creation
    - -60s * 300 defects
  - 15 Hours of enhancement creation
    - -90s * 600 enhancement requests
  - 1.5 Hours of Change Request creation with 0 Missed CRs
    - 4 Missed or late CRs in the previous 3 years
    - -3.5m * 26 change requests

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Process Improvement and Automation Outcomes



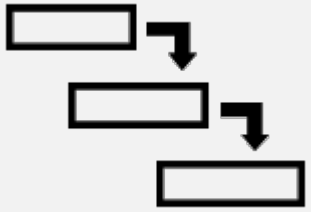
- WF automation caught two major potential issues before they impacted users
- Offboarding process began bypassing regional compliance processes
  - Automation caught a data issue and raised it to the admins to resolve
  - Allowed us to implement a specific fix for this
- SharePoint external user configuration was corrupted
  - Automation caught this and passed the issue to an admin to fix
  - Allowed us to put in specific checks and the ability to rebuild the configuration on the fly

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Top Takeaways

1

Take an iterative approach



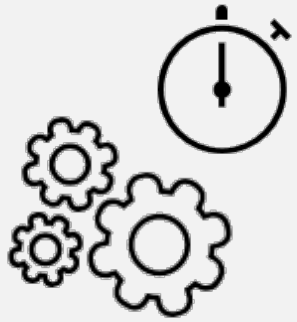
2

Communication!



3

Process improvement and automation



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Thank You

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Q & A

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Take the Survey

Please take a moment to complete a session survey in the Knowledge17 app.

Thank You

<Troy Dowd>

<Supervisor – Web Services>

<Owens-Illinois, Inc (O-I)>

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Development

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Managing the Development

Scrum – An Agile methodology for managing development teams and their work.

Core concept

Small, cross-functional teams work together to deliver **discrete chunks of potentially-shippable functionality, incrementally**, during a **fixed period of time**.

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Small, cross-functional teams work together to deliver **discrete chunks of potentially-shippable functionality, incrementally**, during a **fixed period of time**.

- Release
  - Defines the beginning and end of the work, typically driven by a specific end goal.

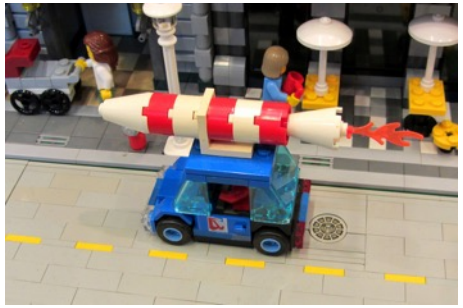


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Small, cross-functional teams work together to deliver **discrete chunks of potentially-shippable functionality, incrementally**, during a **fixed period of time**.

- Goal: Create a tool to get from point A to point B






Start

End

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Small, cross-functional teams work together to deliver **discrete chunks of potentially-shippable functionality, incrementally**, during a **fixed period of time**.

- A sprint is a timebound increment of work
- Our sprints are typically two weeks

Design



Build

Sprint 3



Test

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Small, cross-functional teams work together to deliver **discrete chunks of potentially-shippable functionality**, **incrementally**, during a **fixed period of time**.

- Stories
  - Discrete chunks: Small, self-contained “things” that provide value.
  - Potentially-shippable: tested and ready for production.

- The who, what, and why

- THESE ARE NOT TASKS OR ACTION ITEMS.

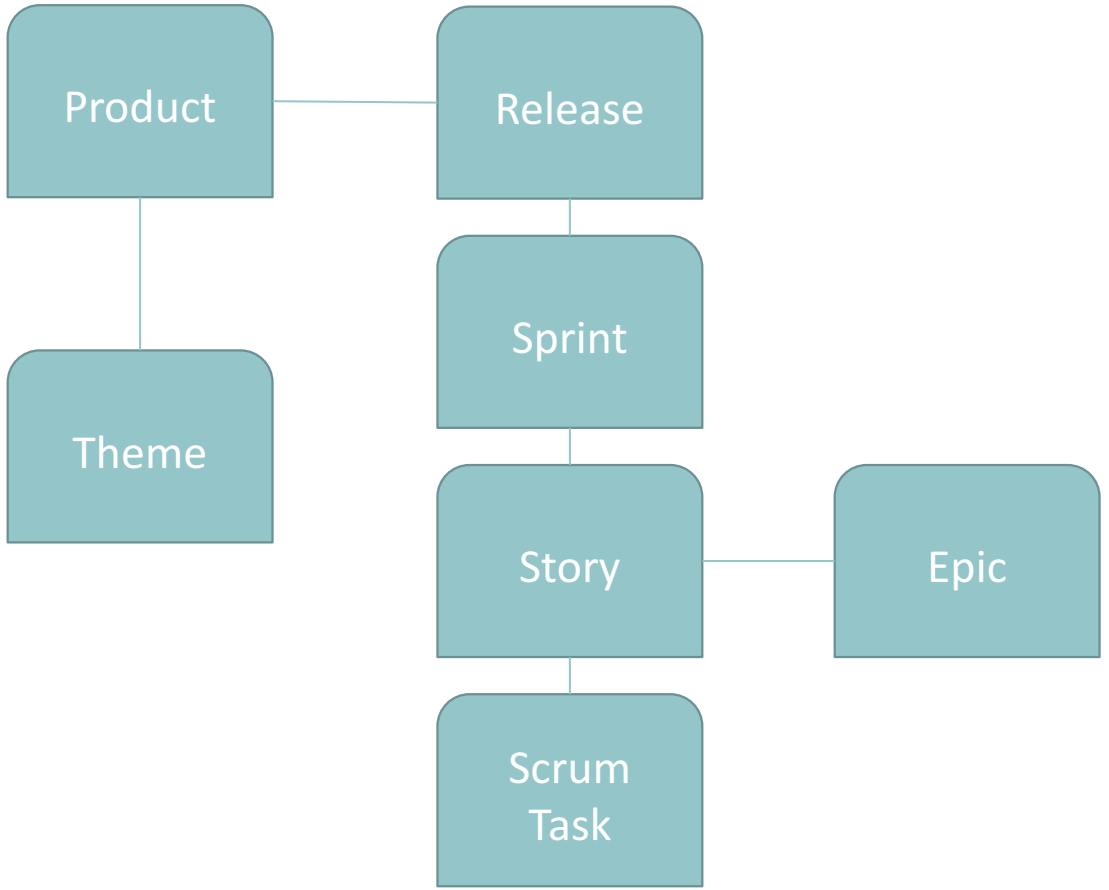
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Small, cross-functional teams work together to deliver **discrete chunks of potentially-shippable functionality, incrementally**, during a **fixed period of time**.

- Scrum team
  - Analysts
  - Developers
  - Product Owner
  - Scrum Master

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How does ServiceNow track this work?



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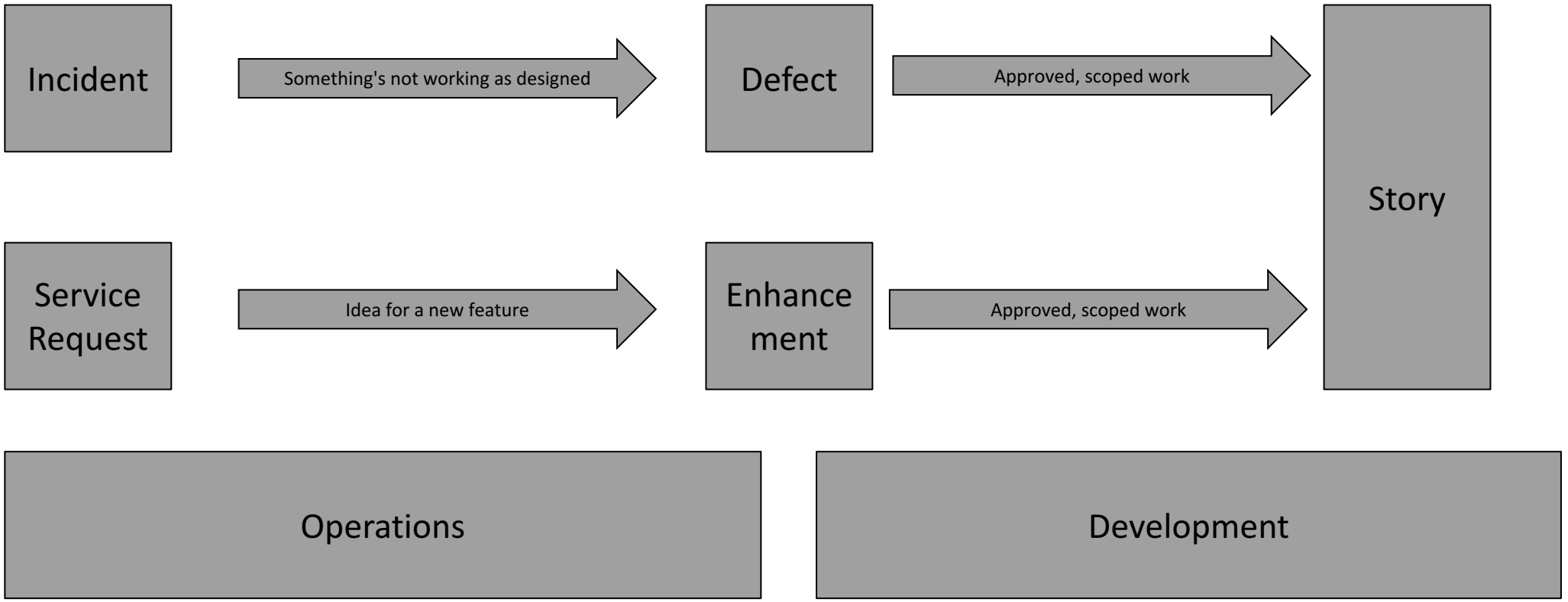
Demo

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Operations

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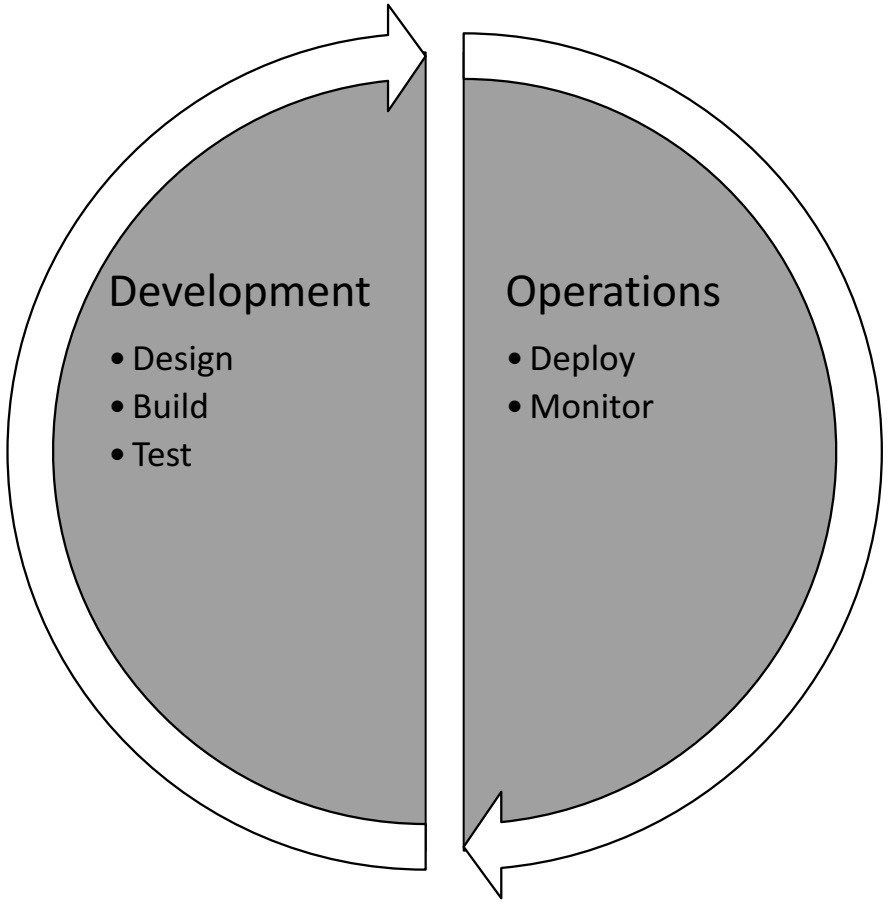
Operations



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Dev/Ops

- Automation of hand off tasks (testing, release)
- Process innovation - Continuous improvement
- Better communication and collaboration between the teams
- Measurement



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How we are executing Dev/Ops?

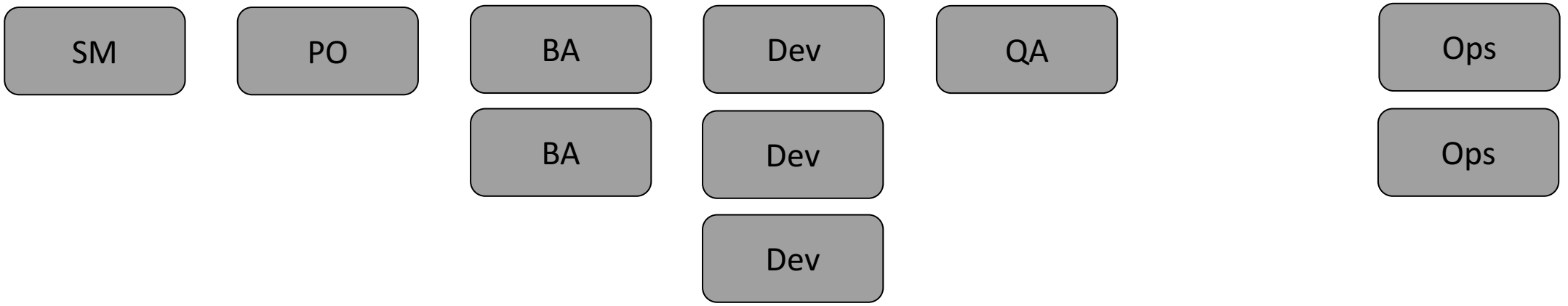
- Automation
  - Workflow error management to reduce operations risk
  - Semi-automated CR creation
  - > Istanbul: automated testing
  - > Tightly coupled update sets and stories
  - > Automated promotion of update sets
- Communication
  - Daily standup meetings with both dev and ops team members
  - Themes support
- Process Improvement
  - Better defined analysis and development process flows
  - Aligned team to provide more focus on their own tasks.
  - > Responding to changing team
- Measurement
  - Metrics and reporting

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Demo

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O-I's Dev/Ops team



Project 1

Project 2

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Measurement

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Measuring Ops

- Aging reports and PA trend charts
  - Incidents
  - Service Requests
- SLA for response and resolution
- Monitoring the number of open “Admin” tasks from broken automation

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Measuring Dev

- Stories
  - Points burndown
  - Points burnup
- Enhancement/Defect
  - Cycle Time
  - Lead Time
- Team
  - Velocity

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Visitor Kiosk
AP Inquiry
Vacation Manager
Preventative Maintenance
Manufacturing Issues

ISP
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