

OBSTACLES AND PATTERNS TO MAXIMIZE FLOW IN H CLOUD OPERATIONS

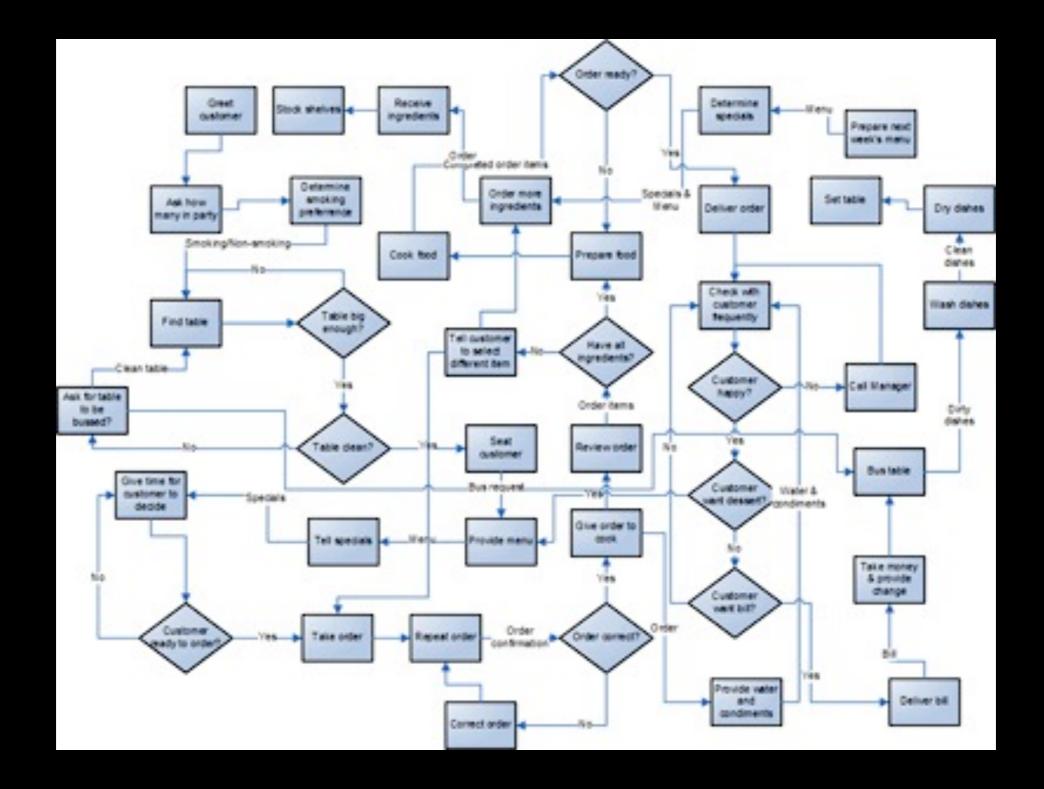
Ben Rockwood Joyent

SOFTWARE DEVELOPMENT

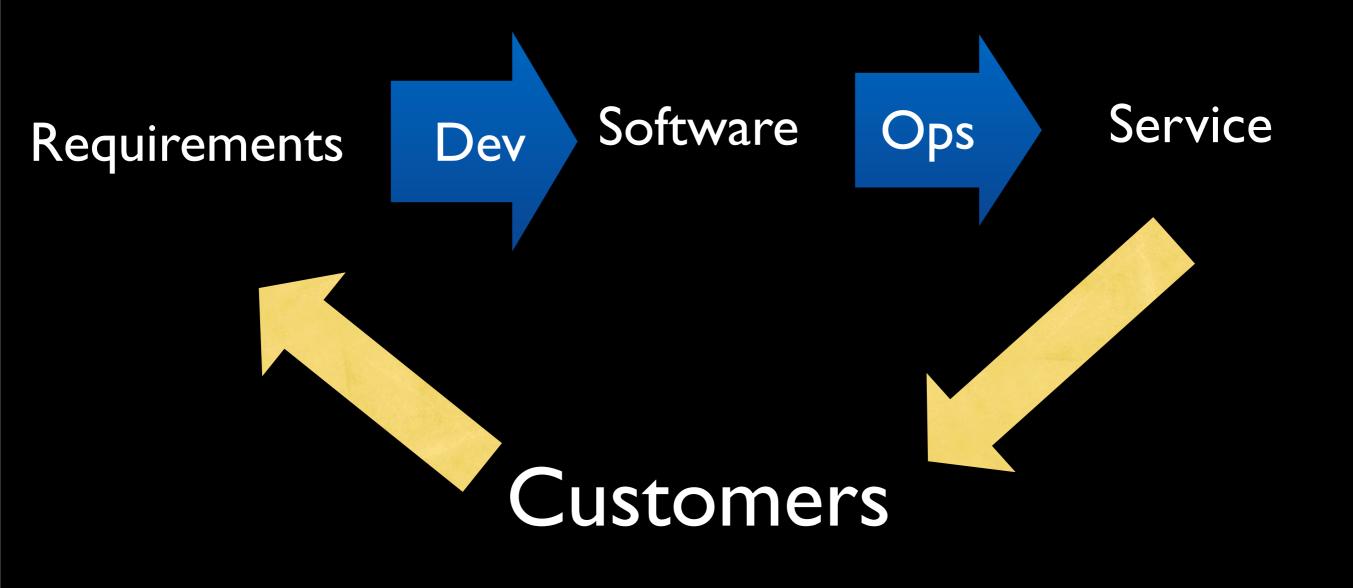
gotocon.com







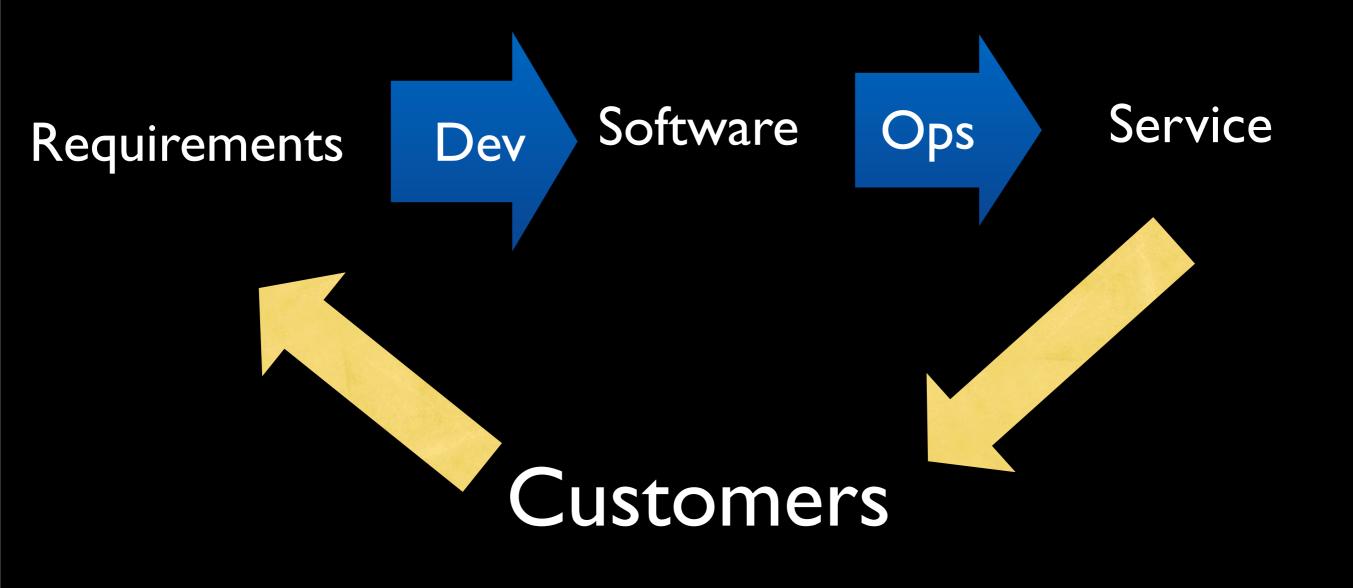
The DevOps Flow



Goods & Services

- Goods are things ("artifacts")
- Services are actions on behalf of another

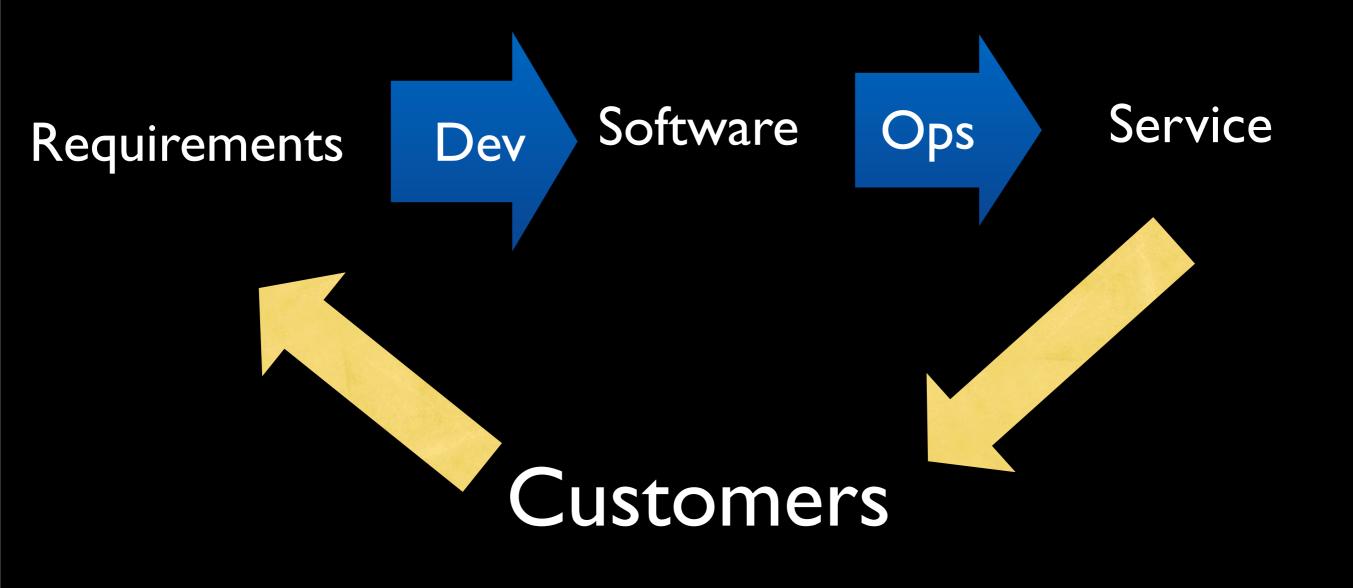
The DevOps Flow



Systems Thinking

- A system is a whole that cannot be divided into independent parts
- The essential properties of a system are those which none of its parts have
- A system is not the sum of the behavior of its parts, but its the product of their interactions

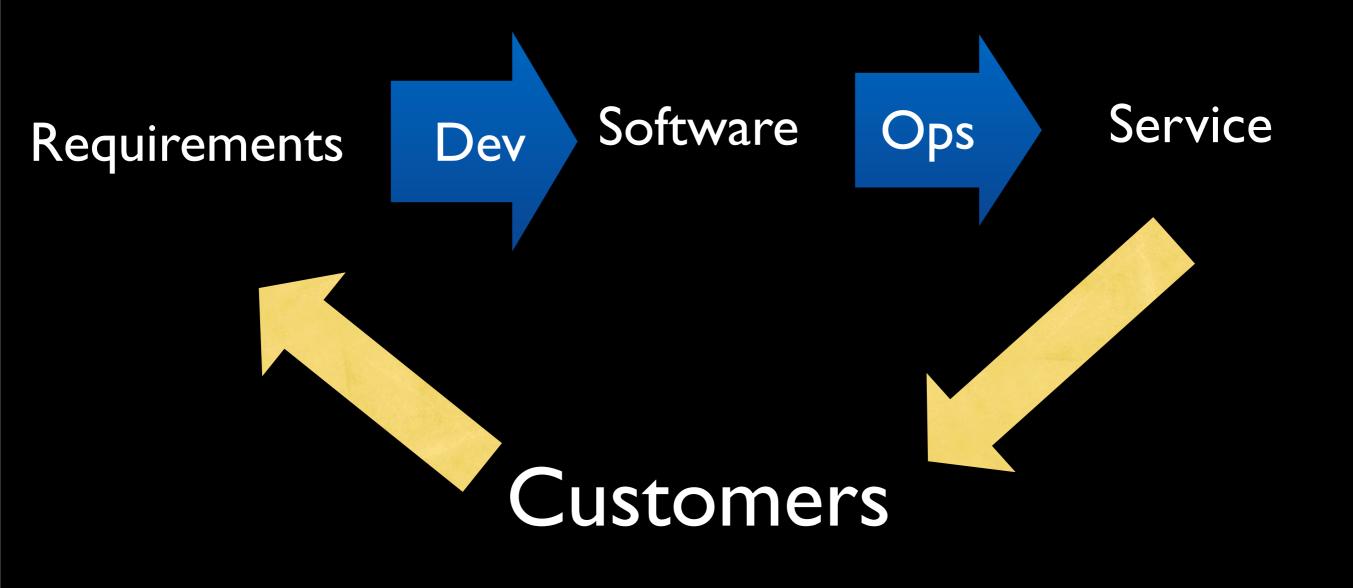
The DevOps Flow



DevOps Components

- Collaboration of People
- Convergence of Process
- Creation & Exploitation of Tools

The DevOps Flow



Flow in Action



They Came For A Great Adventure. They Discovered A New Purpose.

Beginning the Journey





Epiphary Productions Presents A David Keen Film JOURNEY TO EVEREST Narrard By BYRON WARNER Featuring ED SMITH MIKE YARBROUGH MARK BORTZ ANNE BORTZ DOUG PERRY and WAYNE COLE Music By BOB FARNSWORTH Encoutine Producer ED SMITH Written By DAVID KEERN Produced By MITCHELL GALIN and DAVID KIERN Directed by DAVID KEERN

Pattern : Start with why.

- The key to doing anything well is "intentionality"
- The means to become intentional is to have a singular set of goals and values
- To discover these, we must "Start with Why" (Sinek)
- "Systems" which are not designed are usually bad and broken systems.

Pattern 2: Build Trusting Relationships

- "When we're with people who believe what we believe, trust emerges." (Sinek)
- Have honest one-on-one discussions with peers outside the office
- Particularly import for leaders
- NOTE: You don't need to be "friends", but you must be peers and not enemies.

Pattern 3: Share the Vision & Align the Culture

- Spread the "Why", ensure they "get it"
- Extend personal trust and respect throughout the organization
- Propagate a flow based vision built on systems thinking that is customer focused
- Ensure every employee understand the customer your trying to reach
- If people aren't on board, trim them now

Pattern 4: Value Stream Mapping

- Fundamentally, we:
 - Start with resources
 - Value is added through a variety of phases
 - Provide it to a customer
- This is the internal "system", visualize it

Pattern 5: Standardize Work

- Document your processes for each stage of the value stream
- Employees should never struggle to know what to do
- If you don't do work in a standardized way, you'll never find flaws in the process

Pattern 6: Manage Flow in the Value Stream

- Kanban is an excellent means of visualizing the flow of work through "work centers" (groups)
- Tickets alone are not enough!
- Can work in tandem with ITIL Change Management
- Will vary considerably from company to company depending on methodologies

* T000 GRAB BAG		 STAGING / BLOCKED 	 REVEW / RESEARCH 	· · DONG	1 + PIN 0	· · DOME
Standard Work	Interrupte/U	Den it	Ben 2	Ben 3	Cuelomer	Digging into Autor and Aust Start relating
Restricts Project Table II EAUT23 Colline EN227-6480- Internet on 2017 230 Internet and III Internet and III Internet internet Internet internet internet Internet internet internet Internet internet inte	ARE MERCOT ARET WEEK - EVECPE-E/26				Pahasha Taska	automains for provide partial provide partial
		Eljan d	Eljah 2	Eljah 3	BALL VALUE AND	se shel sole sortly the sortly follow or and the phenica particity. Name off
Cisk Hernal Popel Tasks		Serveral links for The Server		eter manie apieza scryf fra such wie die erniesie	CAR	NTE CE Migration - Participe - Constraint
a 6		EVECPERION EN	Trop 3	Suy 2	EVED-S ADAL	
Chara de parte de la constante		anning peer failure find demus Thing fi	aman dash in 10 Dashin Fahranina Vita Sandar an Minday 204 COS	BYECPE-4220 Insumfacture prov	ACTION IN LA CONTRACTOR	Che Lagrante for Data 10000 Lagrante Car
Planned Wink		Manta for Taxes (2) juntool alogia A2	Denu 2	Denia 2		
Randsaring af Castoneen Killing III in bran ta pada III akadi JBON per Litir bran ta pada III in bran OMA is Litir bran ta pada			Try to understand	Upstate BDC Join F		BirONE-448

Pattern 7: Muda (Eliminate Waste)

- Any effort which is not adding value to the value stream is "muda" (waste, in Japanese literally "futility")
- Don't do things just to do them
- Examples:
 - Insufficient change data supplied to Ops
 - Excessive Meetings
 - Excessively large changes
- Stamp out Muda using Kaizen

Pattern 8: Kaizen (Process Improvement)

- Kaizen literally means "change for the better"
- Use the PDCA cycle
- True Kaizen is driven by stakeholders and empowered by management; those doing the work know how best to improve it!
- We have a culture of personal responsibility and continuous improvement.

PDCA & A3

Background Current Condition	Suspected Cause 1. 2. 3. 4. 5. 6. 7. 8. 9.	Action Item	Responsible	Due	Findi	ng
Goal Goal Root Cause Analysis Act (or Adjust) A Check (or Study)	P D D D	`				
	Investigation Item 1. 2. 3. 4. 5. 6. 7.			Responsibility	Due	Status

A Kaizen Kaution:

"Efficiency is doing things right; effectiveness is doing the right things."

Peter Drucker

Pattern 9: Jidoka (Quality at the Source)

- Jidoka is "autonomous automation"
- A philosophy of built in fault detection facilitating faster recovery
- Practical examples:
 - Building idempotent tools
 - TDD, Automated Security Scanning, etc.
 - Clear error reporting & exception handling; fail-safes is possible
 - Monitoring, Alerting & Dashboards (Andon)

Pattern 10: Gemba ("Go and See")

- Managers: Don't live in an ivy tower
- Go spend time with other parts of the value stream, spend time using the product yourself, talking to customers
- Avoid assumptions, investigate the situation for yourself!

Pattern : Practice & Teach Kata (Form)

- "Practice Makes Perfect"
- We must repeat the patterns again and again, and especially as leaders, teach them to others
- "Kata Thinking" means not just leading your team using the Kata's of Kaizen, Standardized Work, etc, but teaching them to use them
- Kata is about building subconscious habits

Be Intentional! Use Science! Practice, Practice, Practice

Thank You.