



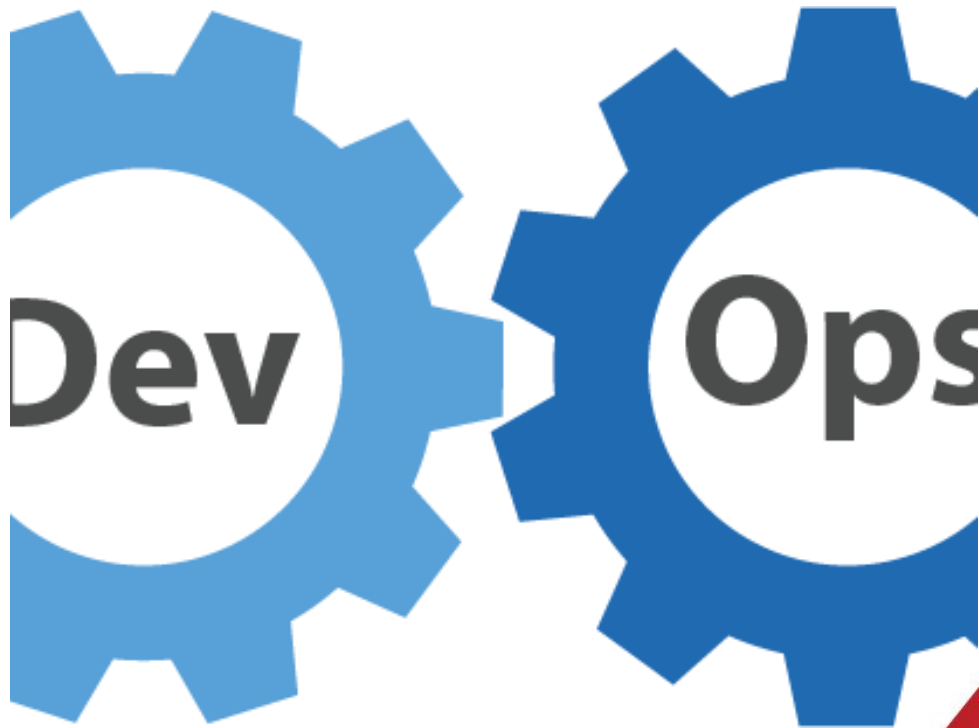
Safeguarding Our Data –

DevOps Friend or Foe

➤ “a ‘change’ is any activity that is physical, logical, or virtual to applications, databases, operating systems, networks, or hardware that could impact services being delivered.”

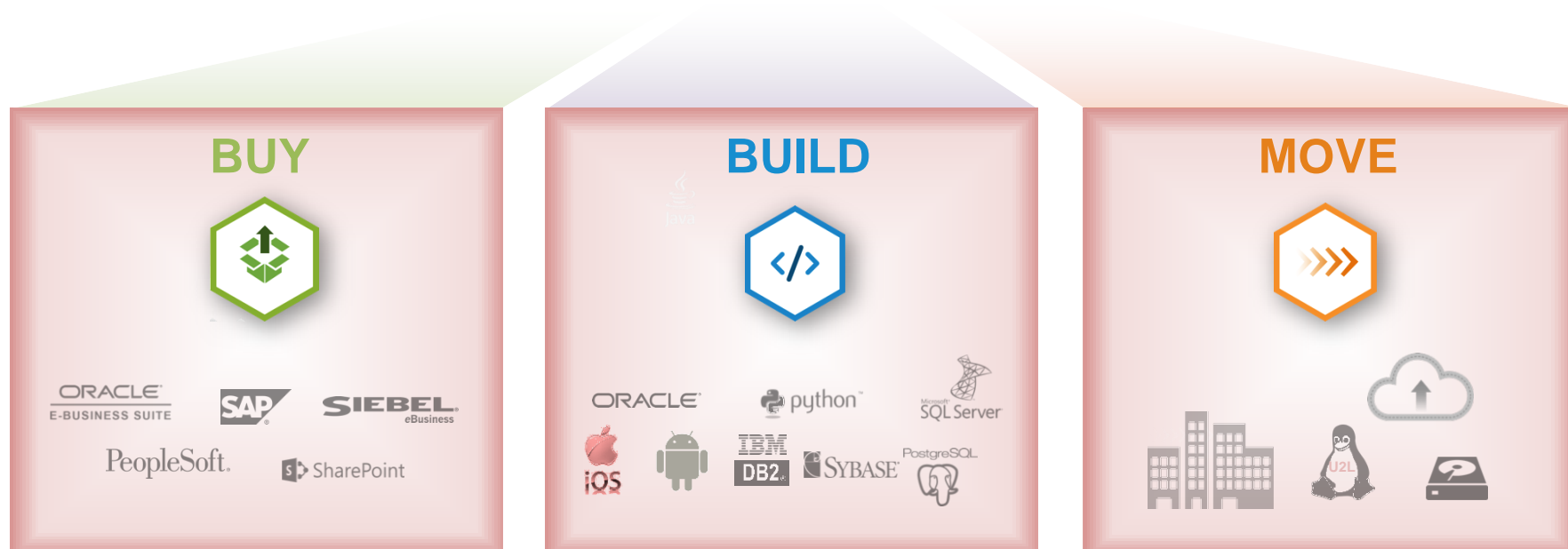
Gene Kim, The Phoenix Project: A Novel About IT, DevOps, and Helping Your Business Win

DevOps



Disrupt or Disrupted: Businesses Must Master Applications

ENTERPRISE APPLICATIONS



Modern Pressures



Traditional Software Development

➤ *Each Step is separate*

➤ *Each Step is siloed*



Along Came DevOps

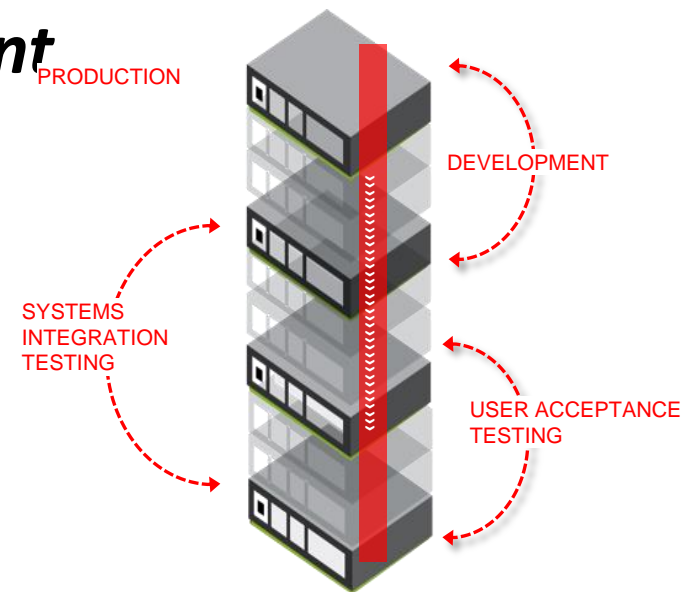
➤ *Born from agile development.*

➤ *Rapid Software Development*

➤ *Collaboration*

➤ *Automation*

➤ *Improved deployment frequency for Businesses.*



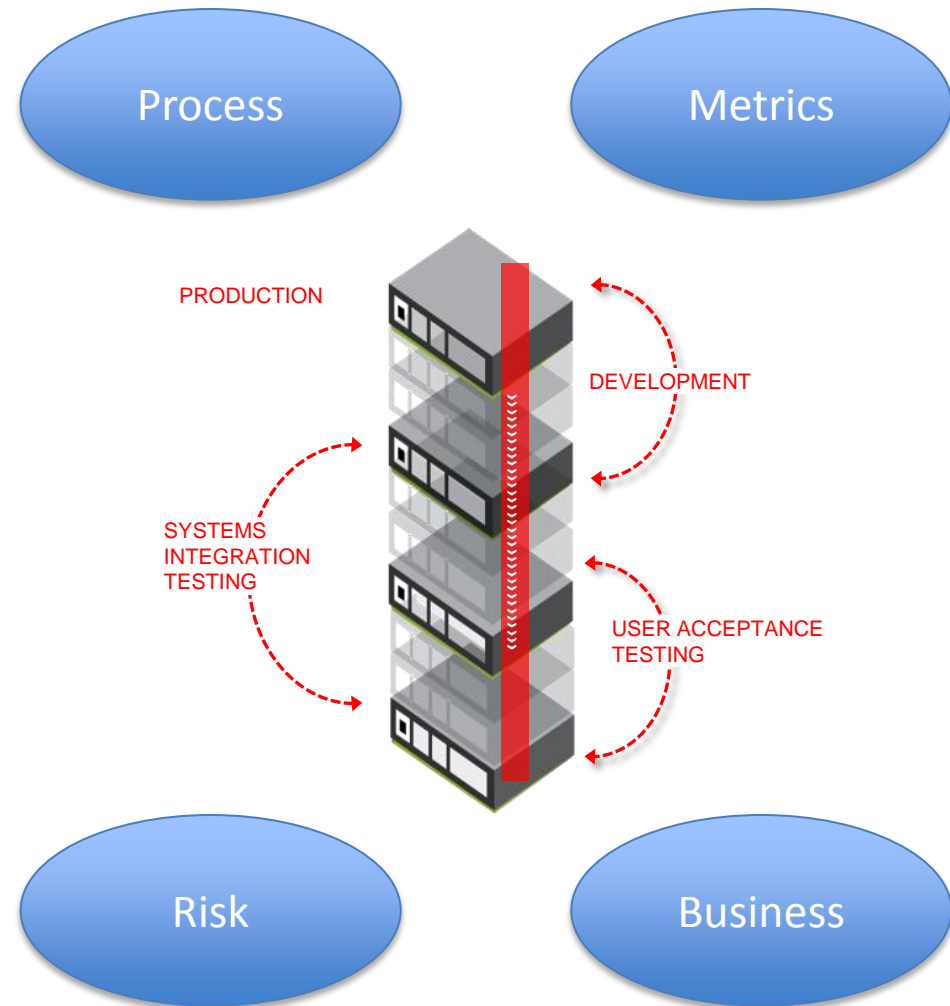
DevOps Market

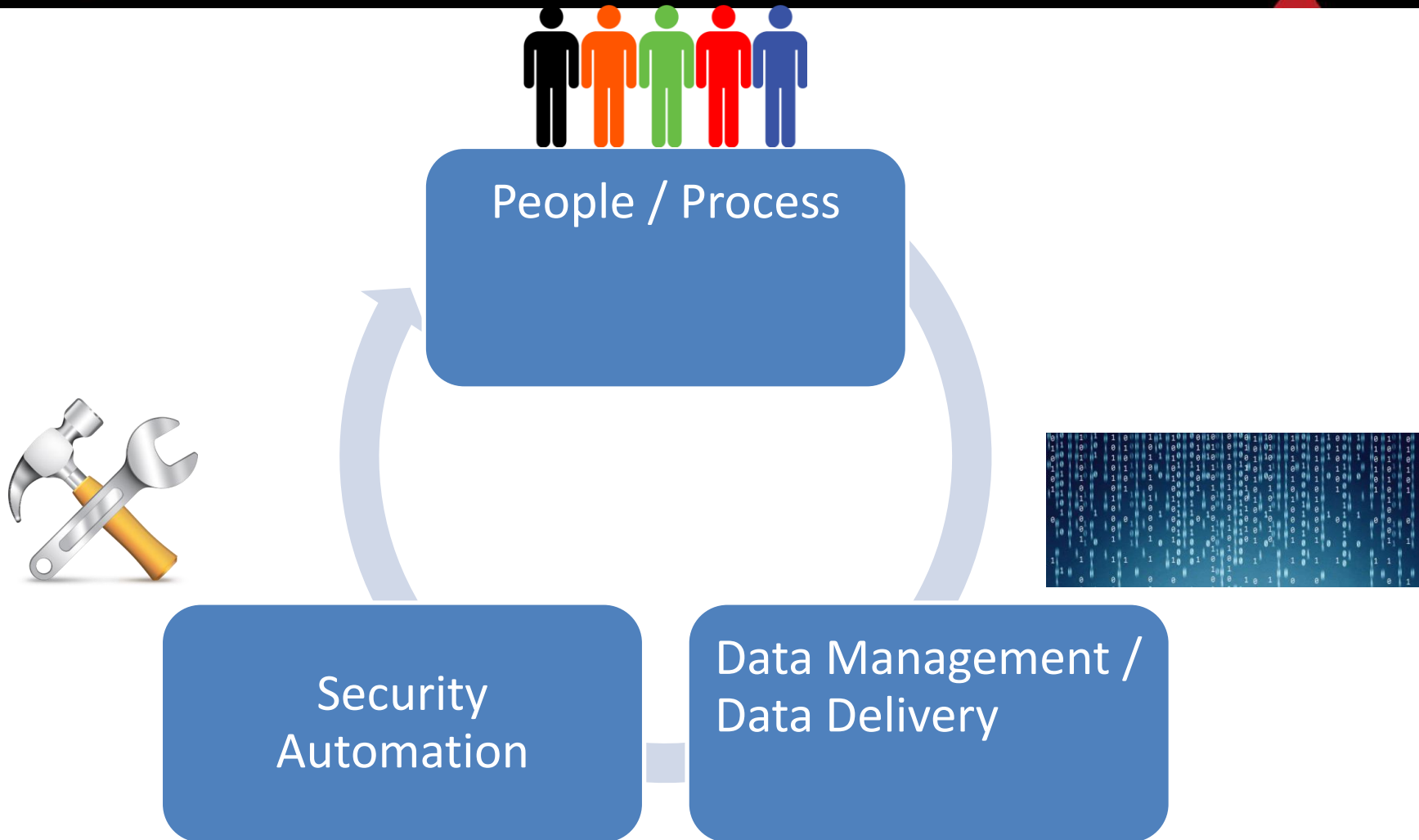
➤ ***Gartner Says DevOps Will Evolve From a Niche to a Mainstream Strategy Employed by 25 Percent of Global 2000 Organizations.***



DevOps Dangers

- ***Automating the wrong processes,***
- ***Poor metrics***
- ***Measuring risks & threats that are easy***
- ***Changes on business units to be Agile***







DevOps – People / Process






➤ **A great team doesn't mean that they had the smartest people. What made those teams great is that everyone trusted one another. It can be a powerful thing when that magic dynamic exists."**

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Business Lives on Applications

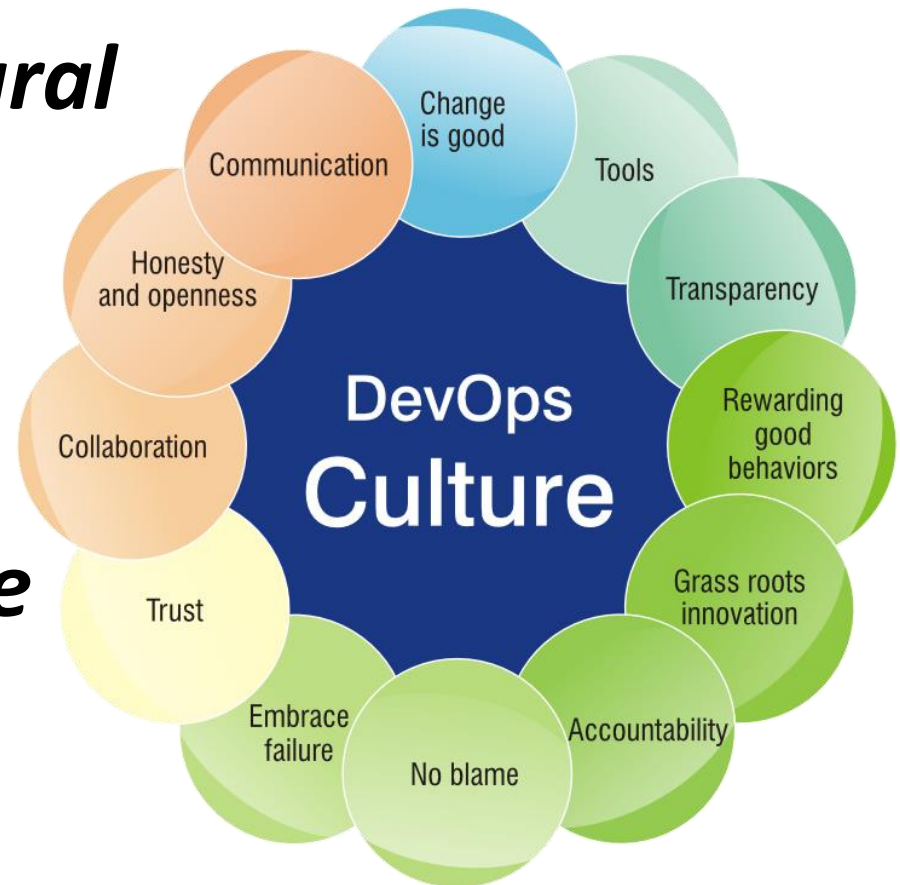
**For an enterprise to win markets,
enterprise apps must win on:**

| QUALITY  | SPEED  | COST  |
|---|---|---|
| <ul style="list-style-type: none"> • Mobile, web, e-commerce • Direct customer contact with apps • Code quality as business differentiator | <ul style="list-style-type: none"> • App time to market is business time to market • New regions, new LOBs wait on software • New standard: continuous development | <ul style="list-style-type: none"> • Hit continuous target with constrained budget • Meet growing needs of existing stack while accelerating delivery |

DevOps techniques and tools are the answer

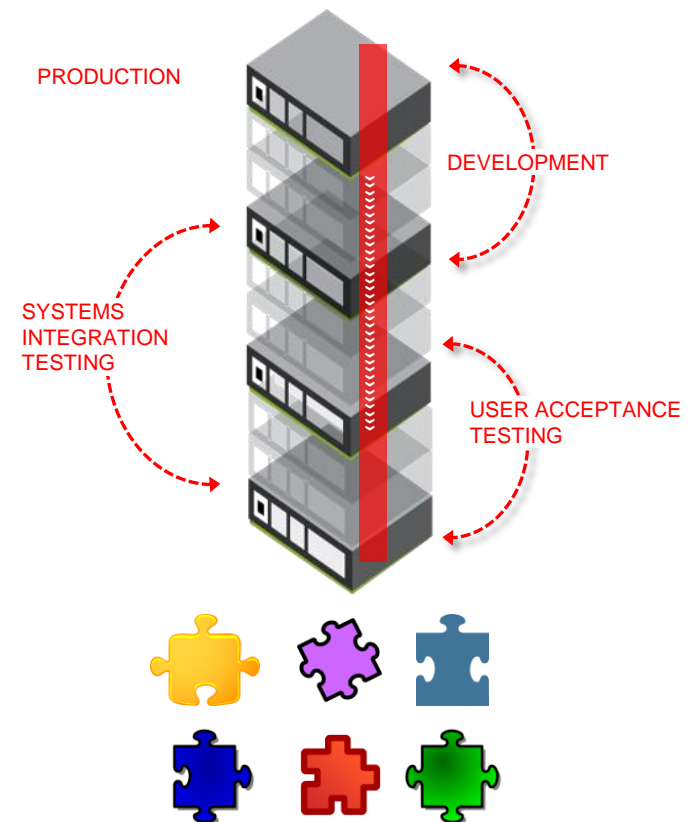
A Mindset

- ***Philosophy, a cultural shift***
- ***Trust, honesty and responsibility.***
- ***See the perspective of the other***
- ***Continual improvement***



MicroServices vs. The Big Bang

- *Decompose application architecture*
- *Avoid the “big bang” release approach*
- *Small updates can be rolled out more frequently.*
- *Continuous Delivery*



The DevOps Stack

AUTOMATION

- Self service environment creation
- Continuous integration, release delivery

VIRTUALIZATION

- Virtualized runtime environment
- Instantiate base system image

CONFIGURATION MANAGEMENT

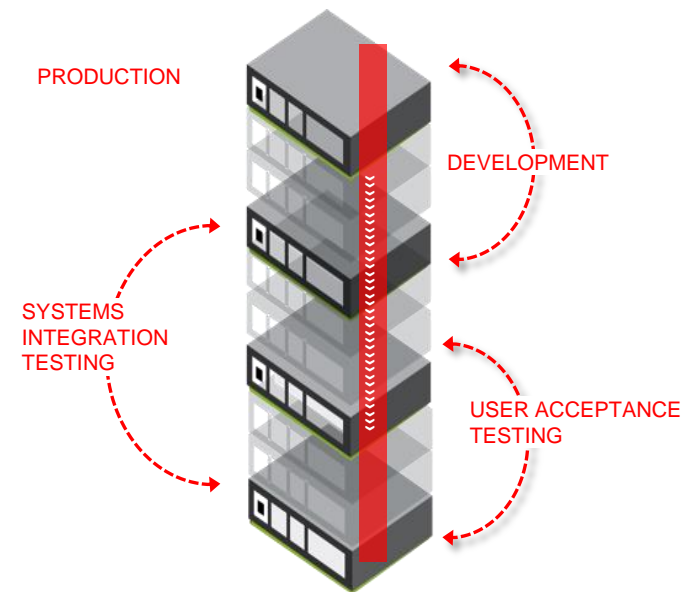
- Install and configure software
- Configuration as code

MONITORING

- Find and correct problems
- Analyze and tune performance

Automation is critical

- *Delivery at weekly and daily intervals.*
- *Inconceivable with manual processes.*
- *DevOps Tools Market Predicted to Grow 21% by Gartner.*



DevOps Automation

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Nagios®



DevOps – Data Delivery / Data Management



➤ “When the auditors found out that we couldn’t secure access to all the data, we spent weeks cobbling together something that satisfied them. “It’s like the free puppy,” I continue. “It’s not the upfront capital that kills you, it’s the operations and maintenance on the back end.”

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Data Governance

Regulations



IT Projects



Business Needs



- ★ Data Quality
- ★ Metadata
- ★ Data Destruction
- ★ Self Monitoring/Reporting
- ★ Compliance Roadmap
- ★ Data Provisioning

- *Creating or utilizing structures and routines to ensure policy compliance.*
- *Taking into account the organizational, technological and cultural changes that will need to take place.*

Find and Categorize Sensitive Data

- *Determines how valuable data assets are handled.*
- *Focus resources securing the most sensitive data.*
- *Determines who should have access.*
- *Defines when breach notification should occur*



Protiviti

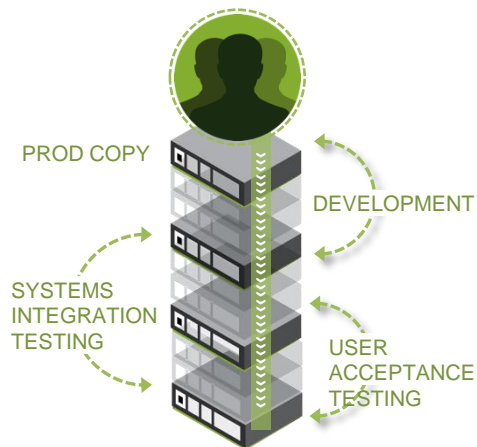


- **Protiviti's IT Security and Privacy Survey mentions that organizations:**
 - ***Lack confidence*** in their ability to prevent a breach.
 - ***Lack a data classification*** scheme.
 - Have limited or no knowledge of ***what constitutes sensitive data.***

Application Projects Require Data Movement, Management

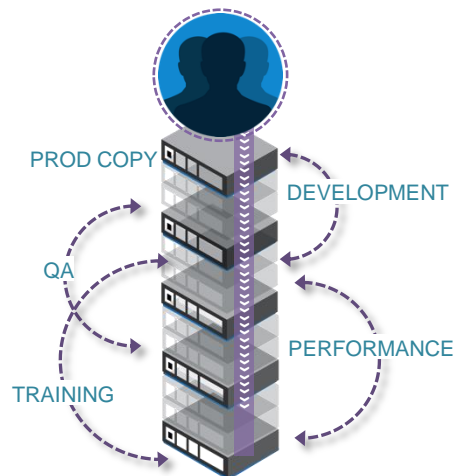
BUY

IMPLEMENT, CUSTOMIZE, UPGRADE



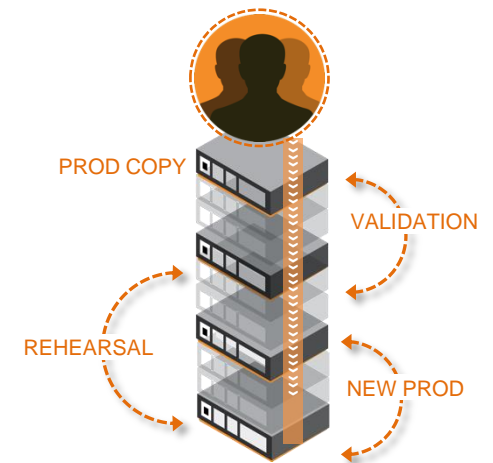
BUILD

DEVELOP & TEST

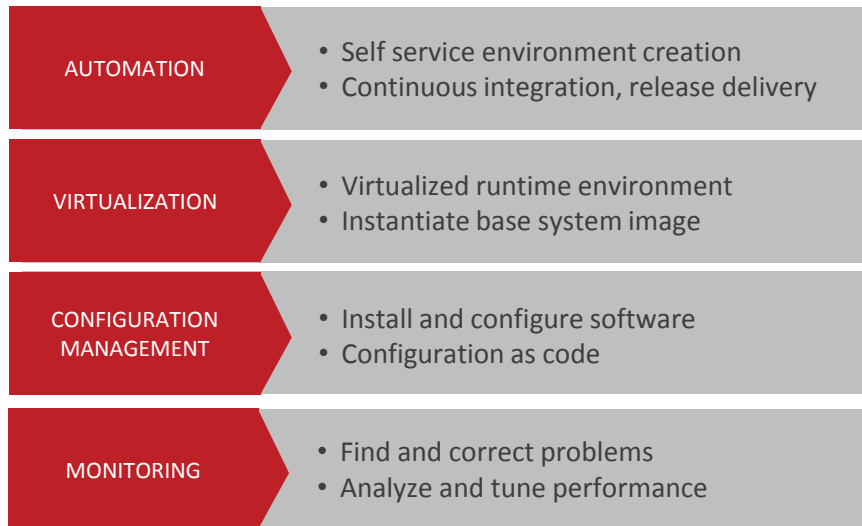


MOVE

MIGRATE & MODERNIZE



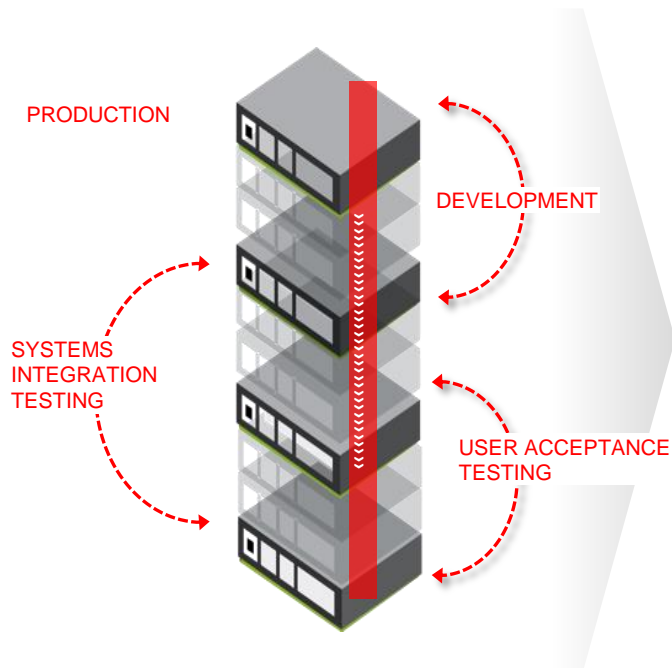
Automation of Data Delivery



DATA DELIVERY

- ▶ How do you supply production data?
- ▶ How do you share the data?
- ▶ How do you stand up data in new environments?

Data Delivery



- ▶ Core applications sit atop large data sets
 - ▶ App staff require full, fresh, independent copies of data sets for maximal speed and effectiveness
- Each new copy compounds ops time and infrastructure cost to deploy
- ▶ Each new copy must be secure.

TO REACH
CONTINUOUS
DELIVERY
NEW
TECHNOLOGY
IS NEEDED

Ernst & Young



- **Ernst & Young's Global Information Security Survey.**
 - The *perimeter* is no longer stable, and a *fence* no longer possible.
 - Need to *secure data* assets
 - ***AND Businesses still need to move fast.***

Automation of Data Management / Data Delivery

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DevOps – Security Automation

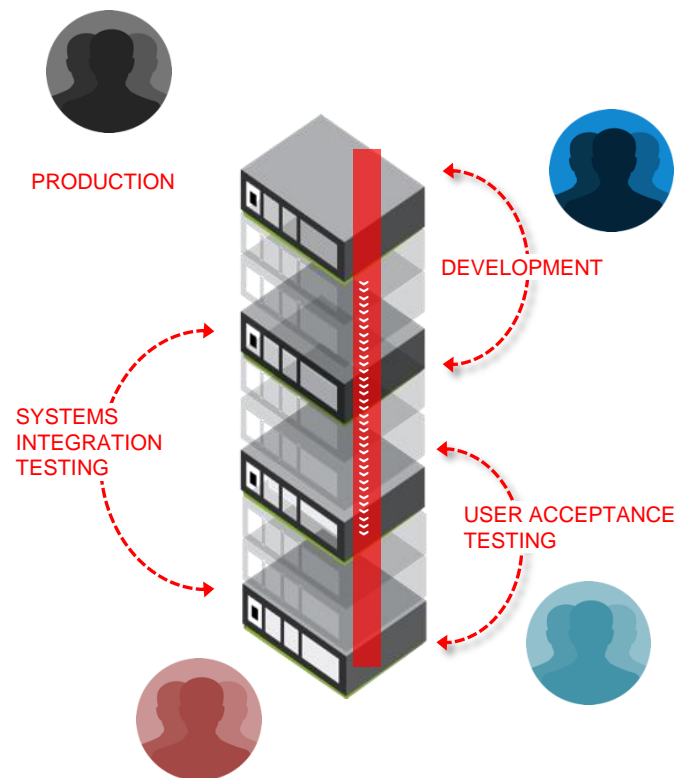


➤ **“The only thing more dangerous than a developer is a developer conspiring with Security.”**

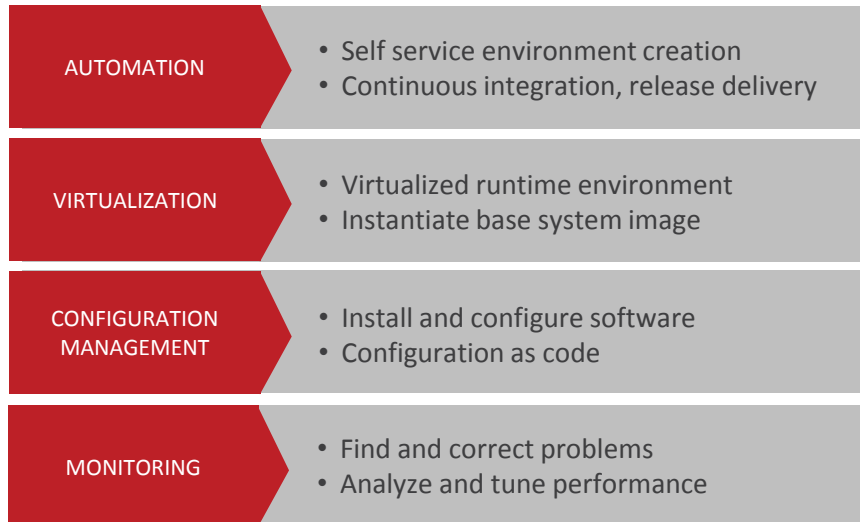
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DevOps Security Complications

- *Blurs the lines*
- *Segregation of duties*
- *No time to ensure the security is hardened.*



Automation of Security



DATA MANAGEMENT

- ▶ How do you supply production data?
- ▶ How do you share the data?
- ▶ How do you stand up data in new environments?

SECURITY MANAGEMENT

- ▶ How do we manage policies?
- ▶ How do we deploy and manage controls without human intervention?

Automation – Security Orchestration



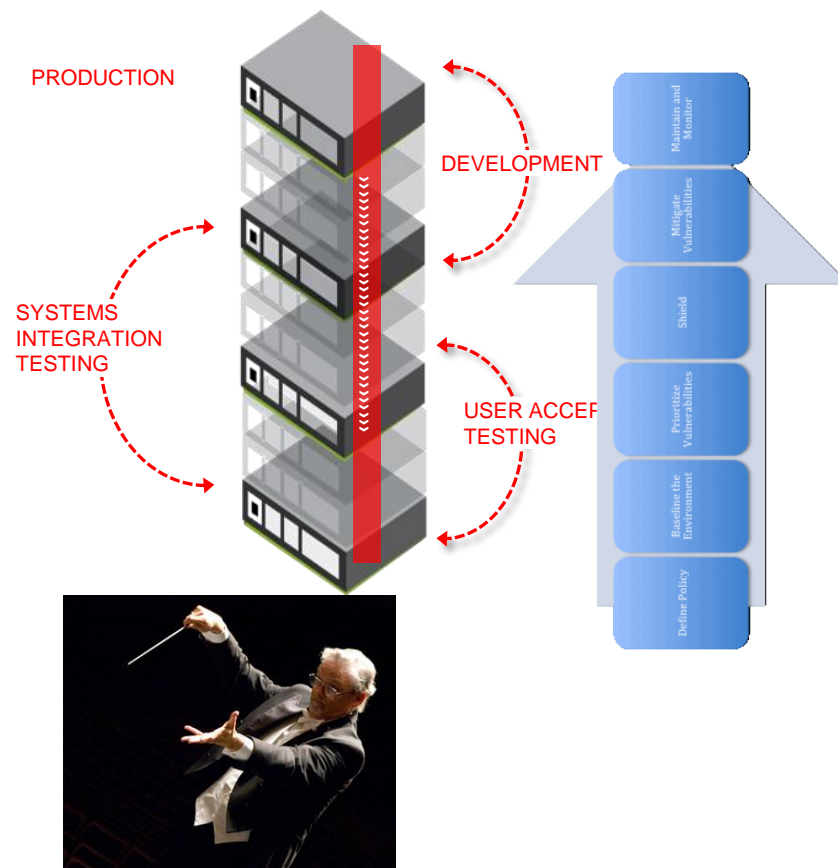
Built-in Automation – Security Orchestration

➤ *Flexible Policy Definition*

➤ *Layered Approach*

➤ *Automated Deployment Pipeline*

➤ *Orchestration Tools*



Security Automation is Critical

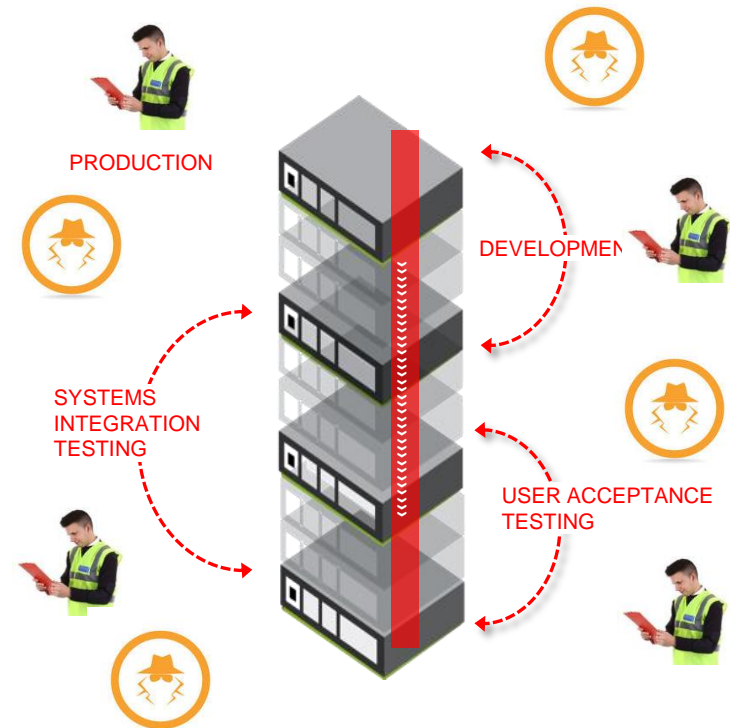


➤ *Security at Every Stage*

➤ *Centrally Manage*

➤ *Intelligent Agents*

➤ *Acceptance Tests*



Automation of Security

| | |
|--------------------------|---|
| AUTOMATION | <ul style="list-style-type: none"> • Self service environment creation • Continuous integration, release delivery |
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tufin

akana

CloudPassage

Dome9

conjur

SCAP
SECURITY GUIDE

SIMP

SECURITY MANAGEMENT

- ▶ How do we deploy and manage controls without human intervention?
- ▶ How do we manage policies?

Review

- **Keep Up or Risk Falling Behind**
- ***Have the Right People and the Right Processes***
- ***Automate, Measure, Re-Automate***
- ***Data is Critical to DevOps***
- ***Automate Security at each step***
- ***The Process of DevOps is a Project***

➤ **“IT is not just a department. IT is a competency that we need to gain as an entire company.”**

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Delphix at a Glance

- Enterprise software (on premise and cloud): radically improves data delivery & security of data
- Virtualizes data inside databases, data warehouses, applications and files
 - Continuously collects data from apps, versions all changes, and shares data blocks
 - Virtual data: 1/10th space of physical copies, 1/100th delivery time (minutes vs. months)
 - Accelerates business critical application projects by 50% on average
 - Secures non-production environments where 80% of sensitive data resides
- Founded in 2008, HQ in Menlo Park, California, with offices around the world
 - Acquired DMSuite Data Masking in 2015

Investors



Select Customers



Select Awards





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Safeguarding Our Data