

DEVOPS AT SCALE

VICTOR GAJENDRAN

VICE PRESIDENT, TECHOPS PLATFORM

JAN 2016

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LESSONS LEARNED BY DOING DEVOPS AT SCALE

VICTOR GAJENDRAN

VICE PRESIDENT, TECHOPS PLATFORM

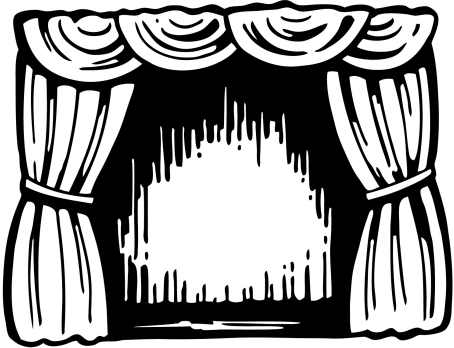
JAN 2016

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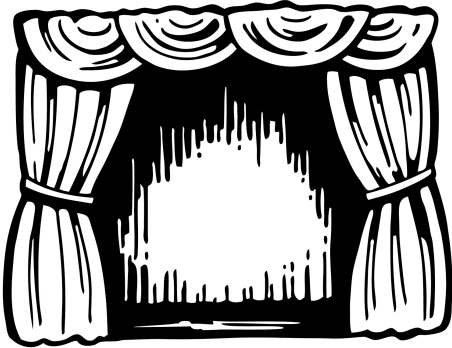
AGENDA

Set the
stage



AGENDA

Set the
stage

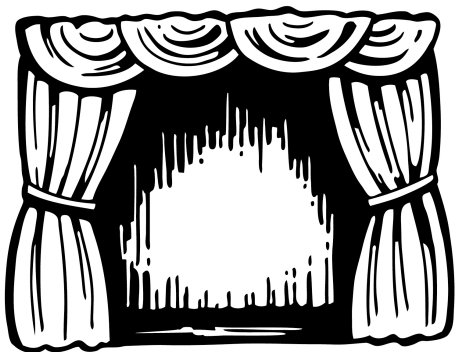


DevOps
Performance



AGENDA

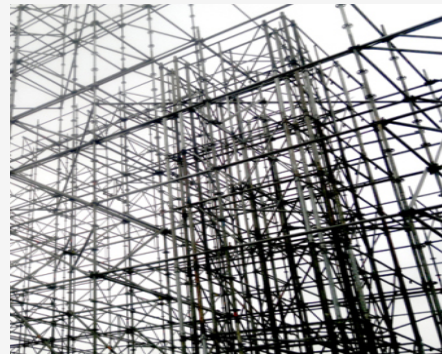
Set the
stage



DevOps
Performance



Backstage to lesson
learned



```

158- /**
159  * @see org.eclipse.ltk.core.refactoring.participants.RefactoringProcessor#
160  * checkInitialConditions(org.eclipse.core.runtime.IProgressMonitor)
161  * @generated
162  */
163- @Override
164- public RefactoringStatus checkInitialConditions(){
165     RefactoringStatus result = new RefactoringStatus();
166     // begin custom code
167     // initial check 1: the id value of the EAttribute must be 'false'
168     org.eclipse.emf.ecore.EAttribute selectedEObject =
169         (org.eclipse.emf.ecore.EAttribute) dataManagement.
170             getInPortByName(dataManagement.SELECTEDEOBJECT).getValue();
171     if (selectedEObject.isID()){
172         result.addFatalError("The selected EAttribute cannot be moved " +
173             "since it is used for identification purposes " +
174             "(its id value is set to 'true')!");
175     }
176     // initial check 2: the containing EClass must have at least one EReference
177     if (selectedEObject.getEContainingClass().getEReferences().isEmpty()) {
178         result.addFatalError("The selected EAttribute cannot be moved " +
179             "since its containing EClass does not have any EReferences!");
180     }
181     // end custom code
182     return result;
183 }

```

```

158 /**
159  * @see org.eclipse.ltk.core.refactoring.participants.RefactoringProcessor#
160  * checkInitialConditions(org.eclipse.ltk.core.refactoring.IProgressMonitor)
161  * @generated
162  */
163 @Override
164 public RefactoringStatus checkInitialConditions() {
165     RefactoringStatus result = new RefactoringStatus();
166     // begin custom code
167     // initial check 1: the id value of selected EAttribute must be 'false'
168     org.eclipse.emf.ecore.EAttribute eAttribute = (org.eclipse.emf.ecore.EAttribute)
169         (org.eclipse.emf.ecore.EAttribute) dataManagement.getSelectedEObject();
170     if (dataManagement.getSelectedEObject().getInPortByName("SELECTED").getValue());
171     if (selectedEObject.isID()) {
172         result.addFatalError("Selected EAttribute cannot be moved " +
173             "since it is used for identification purposes " +
174             "and its value is set to 'true'");
175     }
176     // initial check 2: selected EClass must contain at least one EReference
177     if (selectedEObject.getEContainingClass().getEReferences().isEmpty()) {
178         result.addFatalError("The selected EAttribute cannot be moved " +
179             "since it is contained in an EClass that has no EReferences!");
180     }
181     // end custom code
182     return result;
183 }

```

WHO ARE WE?

We Connect Fans to Great Experiences

ticketmaster



WIDE RANGE OF TECHNOLOGIES



■ ■ ■



0 TO 40MM TRANSACTIONS IN MINUTES!

0 TO 40MM TRANSACTIONS IN MINUTES!

54MM Unique Web Visitors Per Month



0 TO 40MM TRANSACTIONS IN MINUTES!

54MM Unique Web Visitors Per Month



Ticket On-Sale Events



0 TO 40MM TRANSACTIONS IN MINUTES!

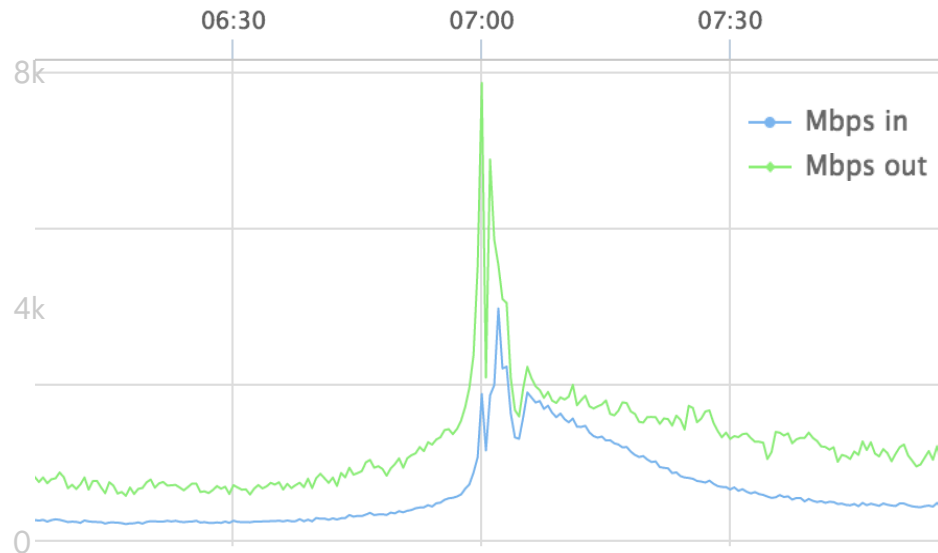
54MM
Unique Web
Visitors Per
Month



Ticket On-Sale
Events



Extremely Fast Traffic Ramp Up



0 TO 40MM TRANSACTIONS IN MINUTES!

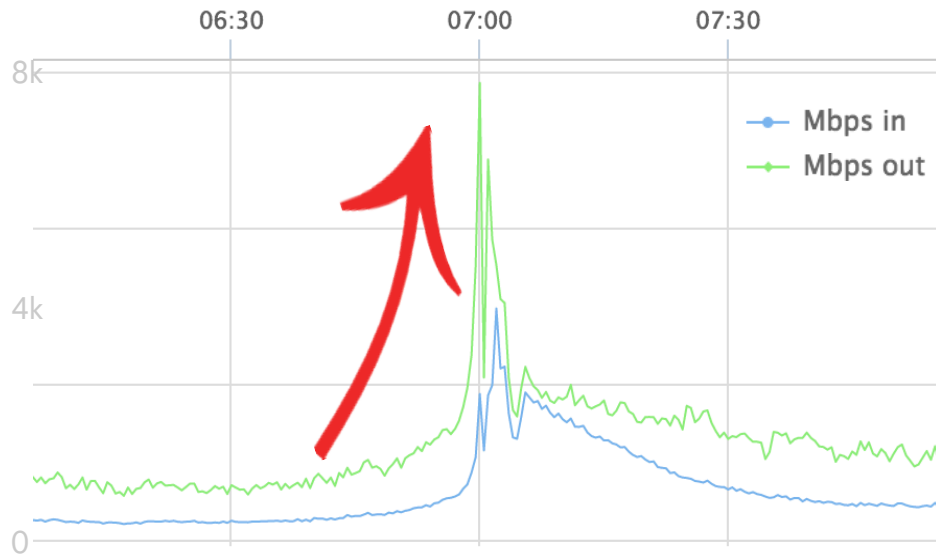
54MM
Unique Web
Visitors Per
Month



Ticket On-Sale
Events



Extremely Fast Traffic Ramp Up



0 TO 40MM TRANSACTIONS IN MINUTES!

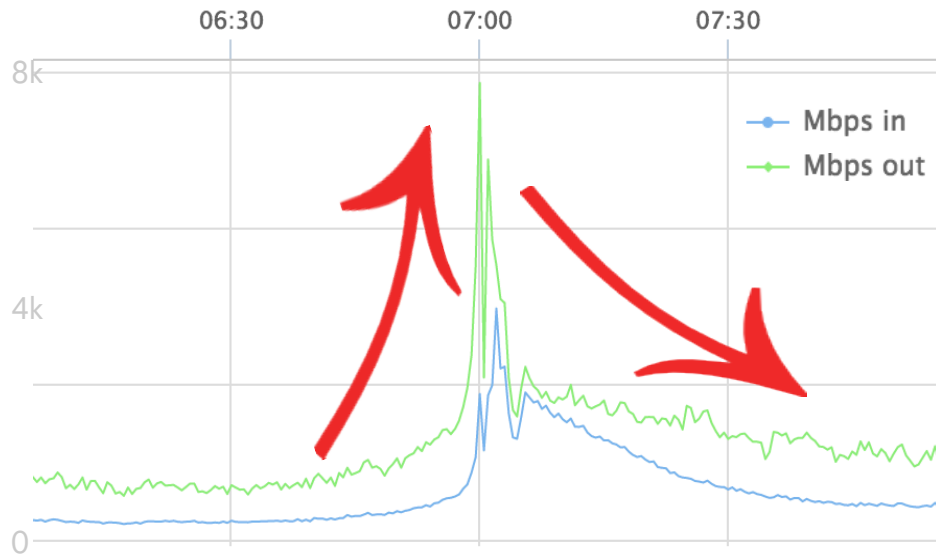
54MM
Unique Web
Visitors Per
Month



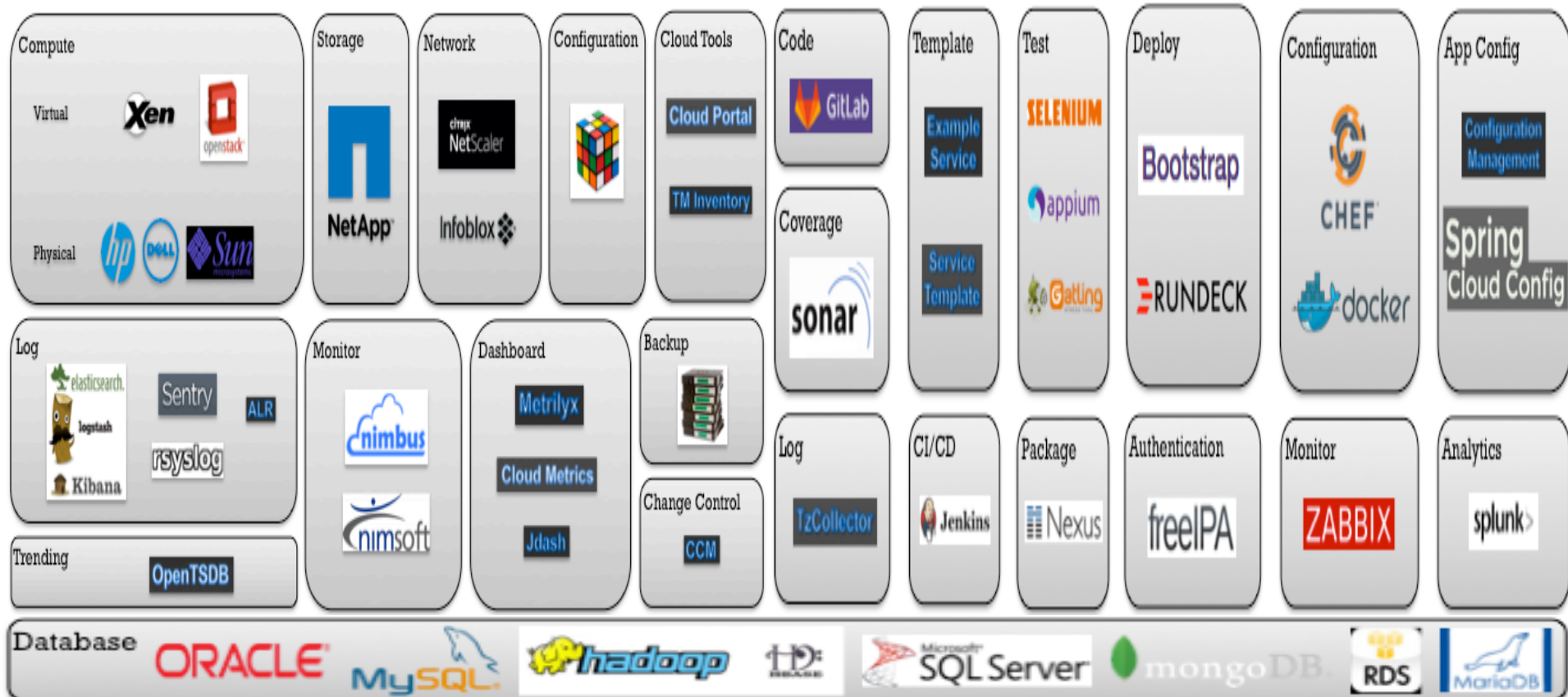
Ticket On-Sale
Events


























Extremely Fast Traffic Ramp Up



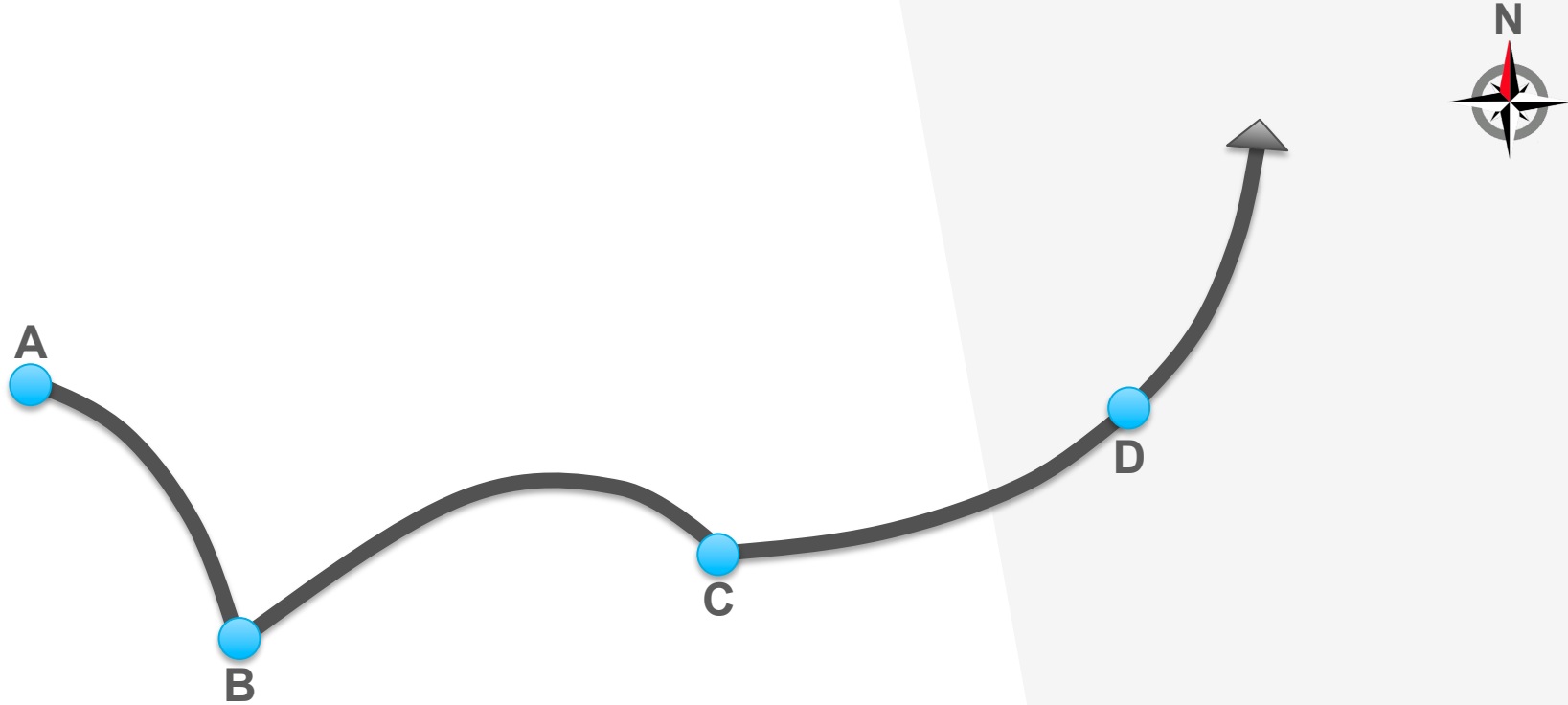
TECH STACK



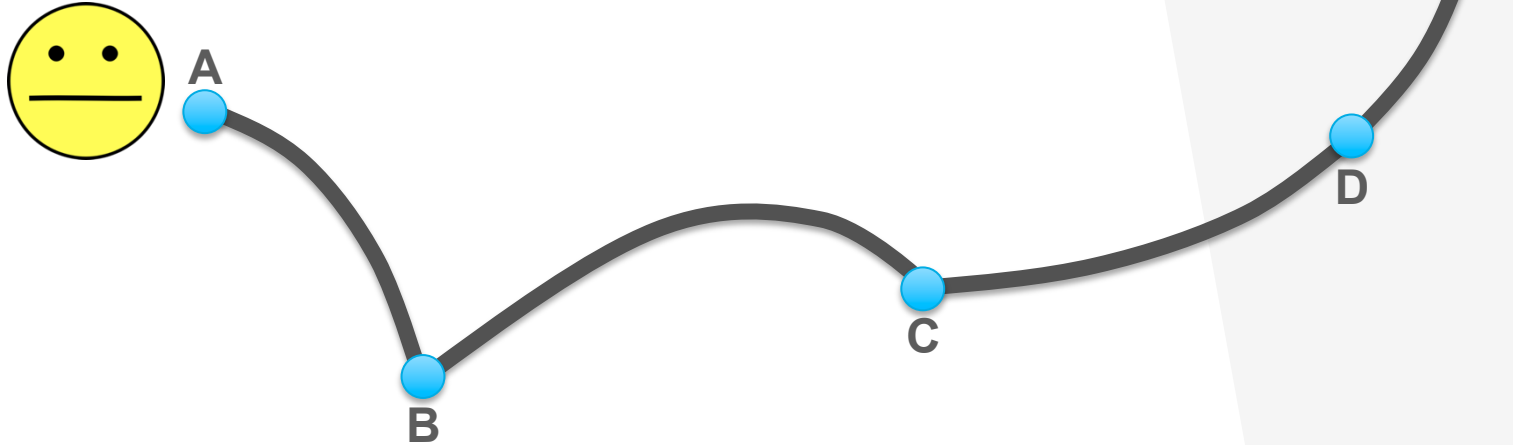
PRIMARILY AN OPEN SOURCE TECH SHOP!

Compute Virtual   Physical   	Storage  NetApp	Network  Infoblox	Configuration  Cloud Portal TM Inventory	Code  Coverage 	Template Example Service Service Template	Test SELENIUM appium Gatling	Deploy Bootstrap RUNDECK	Configuration  CHEF docker	App Config Configuration Management Spring Cloud Config
Log    Sentry ALR rsyslog	Monitor  nimsoft	Dashboard Metrilyx Cloud Metrics Jdash	Backup  Change Control CCM	Log TzCollector	CI/CD Jenkins	Package Nexus	Authentication freeIPA	Monitor ZABBIX	Analytics splunk
Trending OpenTSDB									
Database       									

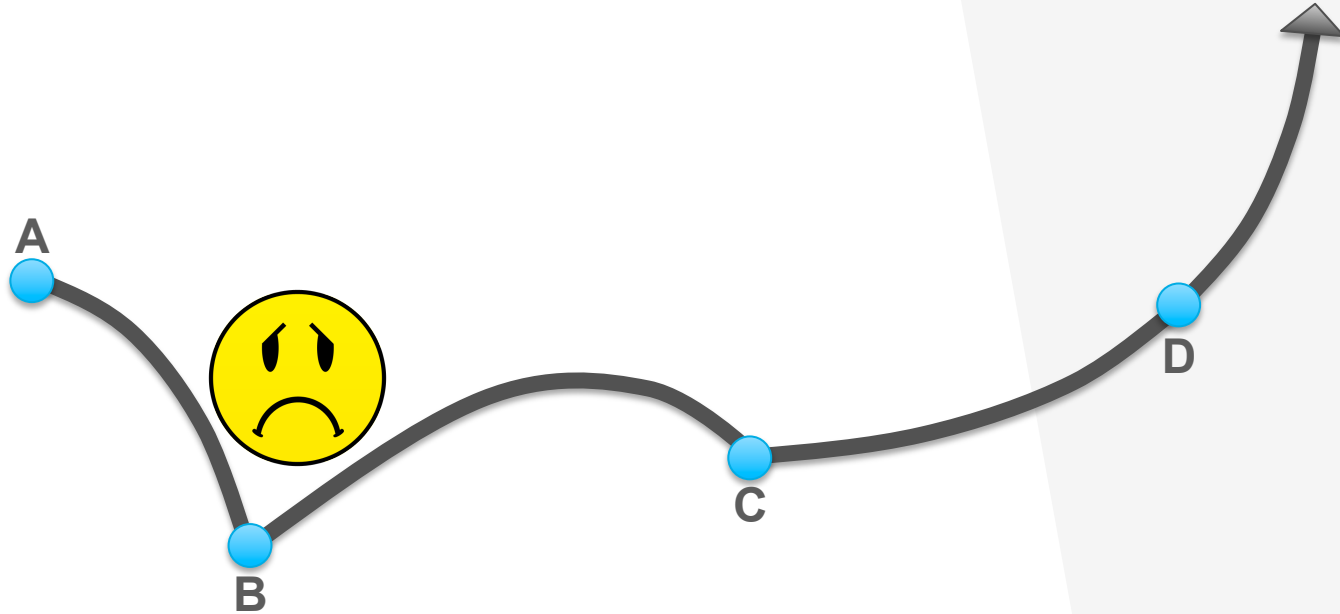
DEVOPS JOURNEY - SEEKING TRUE NORTH



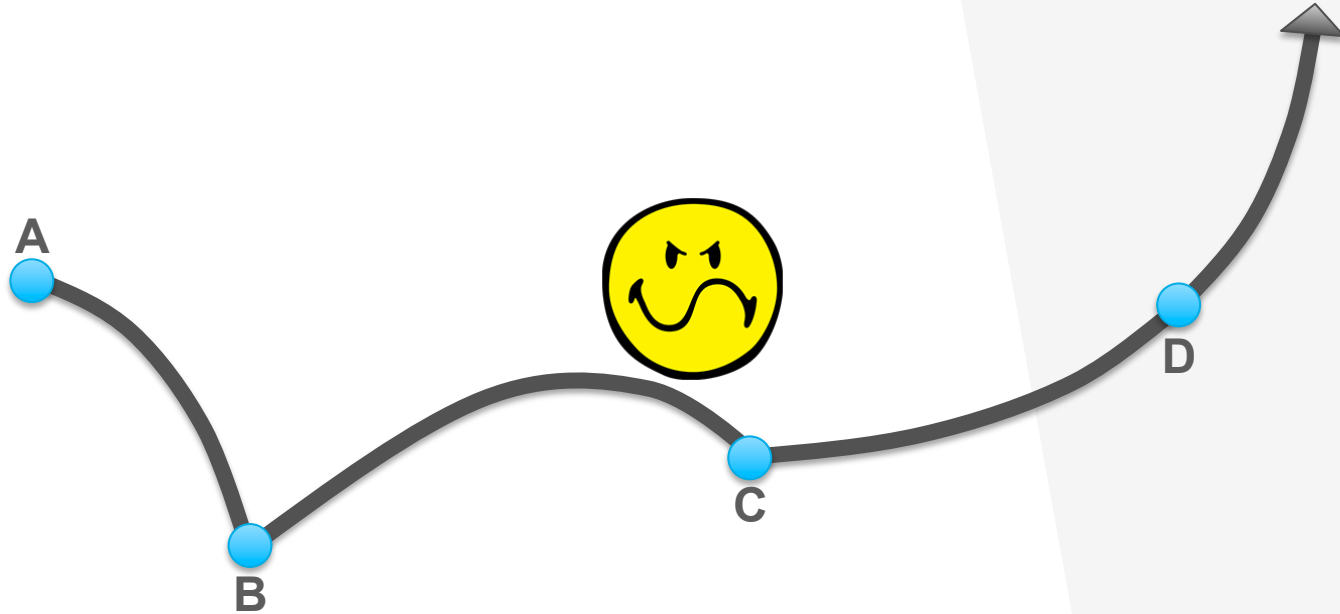
DEVOPS JOURNEY - SEEKING TRUE NORTH



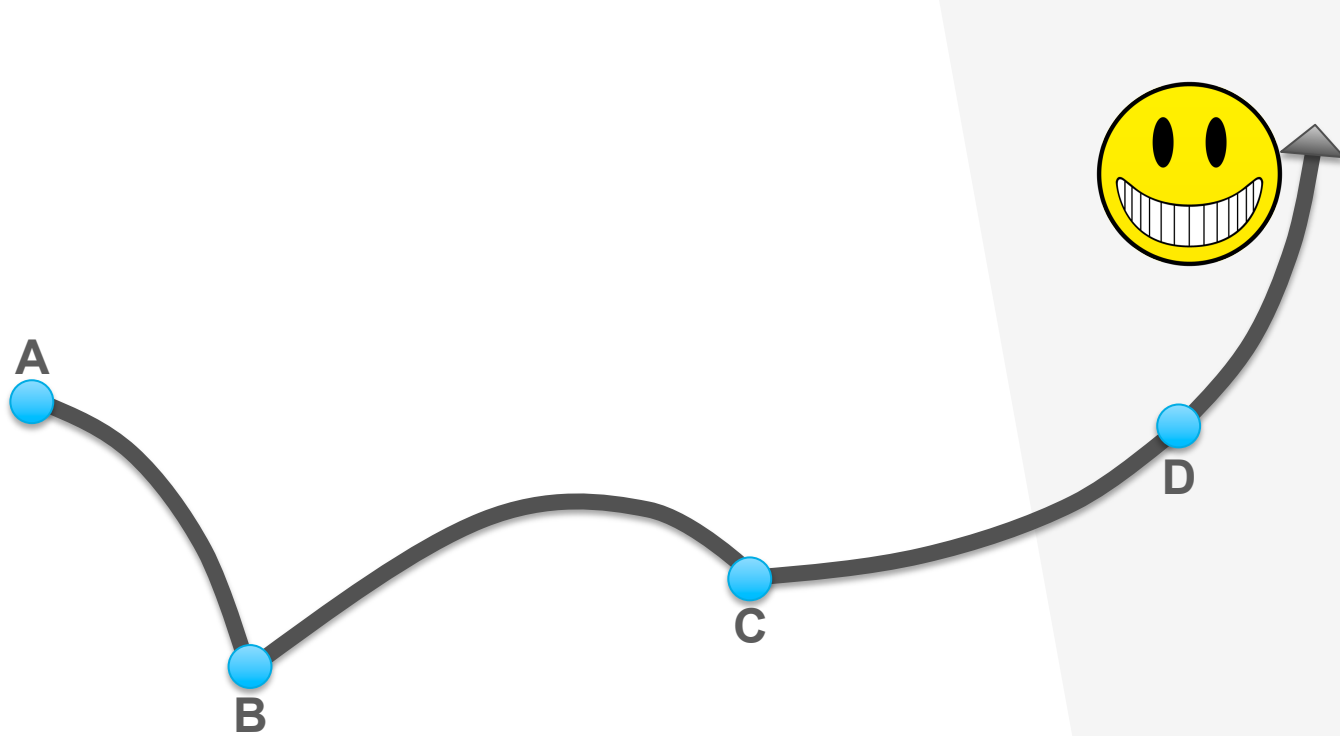
DEVOPS JOURNEY - SEEKING TRUE NORTH



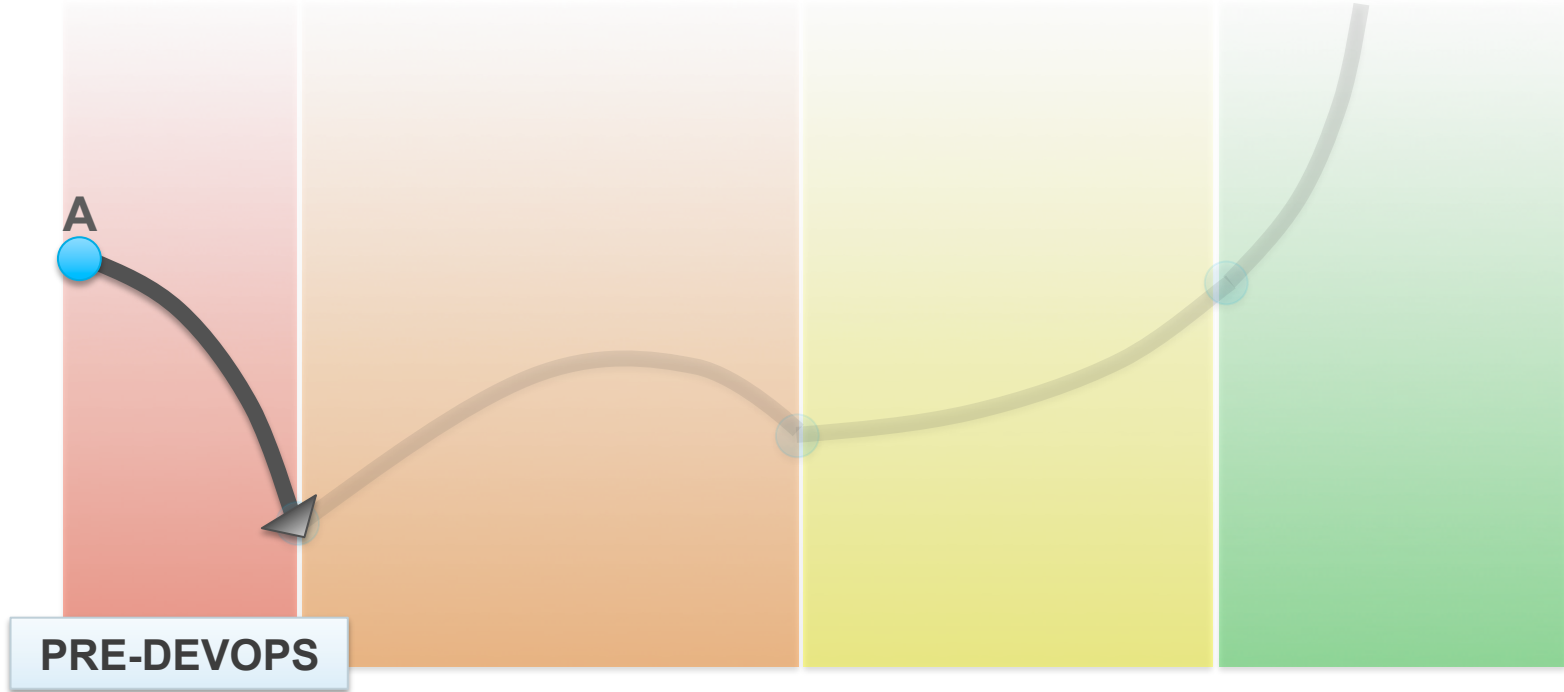
DEVOPS JOURNEY - SEEKING TRUE NORTH



DEVOPS JOURNEY - SEEKING TRUE NORTH



DEVOPS JOURNEY - SEEKING TRUE NORTH



PRE-DEVOPS

Multiple Silos



PRE-DEVOPS

Multiple Silos



Tech Debt



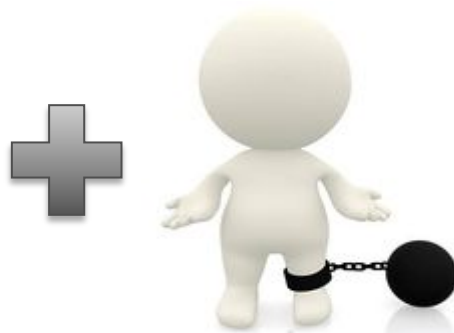
PRE-DEVOPS

Long Cycle Times

Multiple Silos



Tech Debt



PRE-DEVOPS

Lose to Agile Competitors

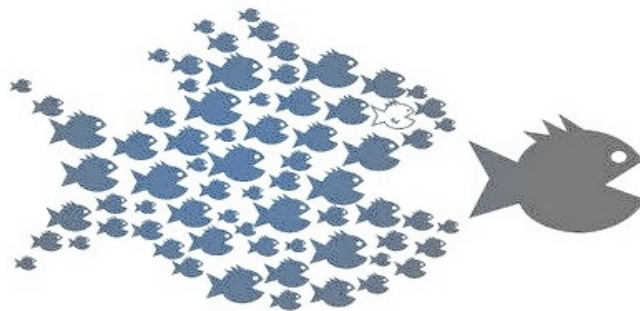
Multiple Silos



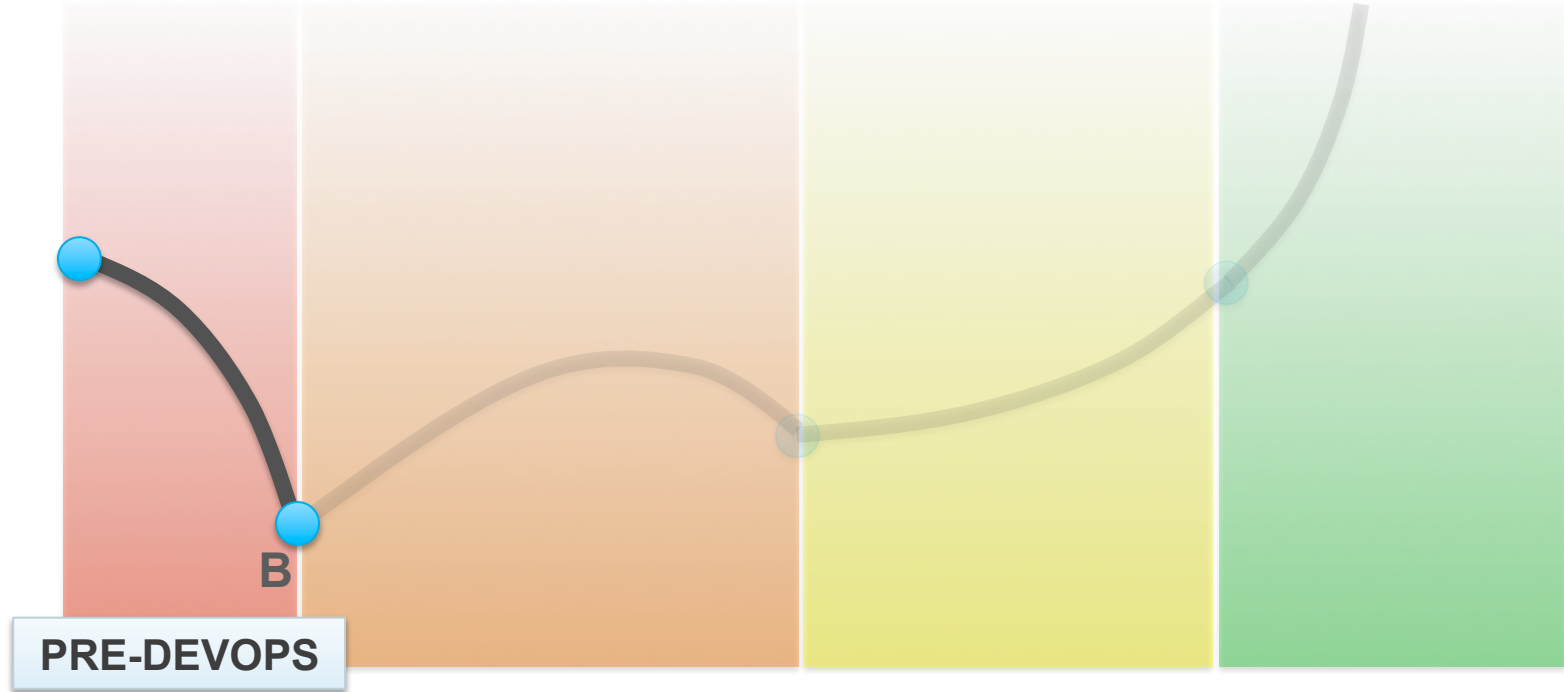
Tech Debt



Long Cycle Times



DEVOPS JOURNEY - SEEKING TRUE NORTH



FIRST ATTEMPT AT DEVOPS

Multiple Silos



FIRST ATTEMPT AT DEVOPS

Multiple Silos



Cross-functional Team



FIRST ATTEMPT AT DEVOPS

Ignore Feedback



FIRST ATTEMPT AT DEVOPS

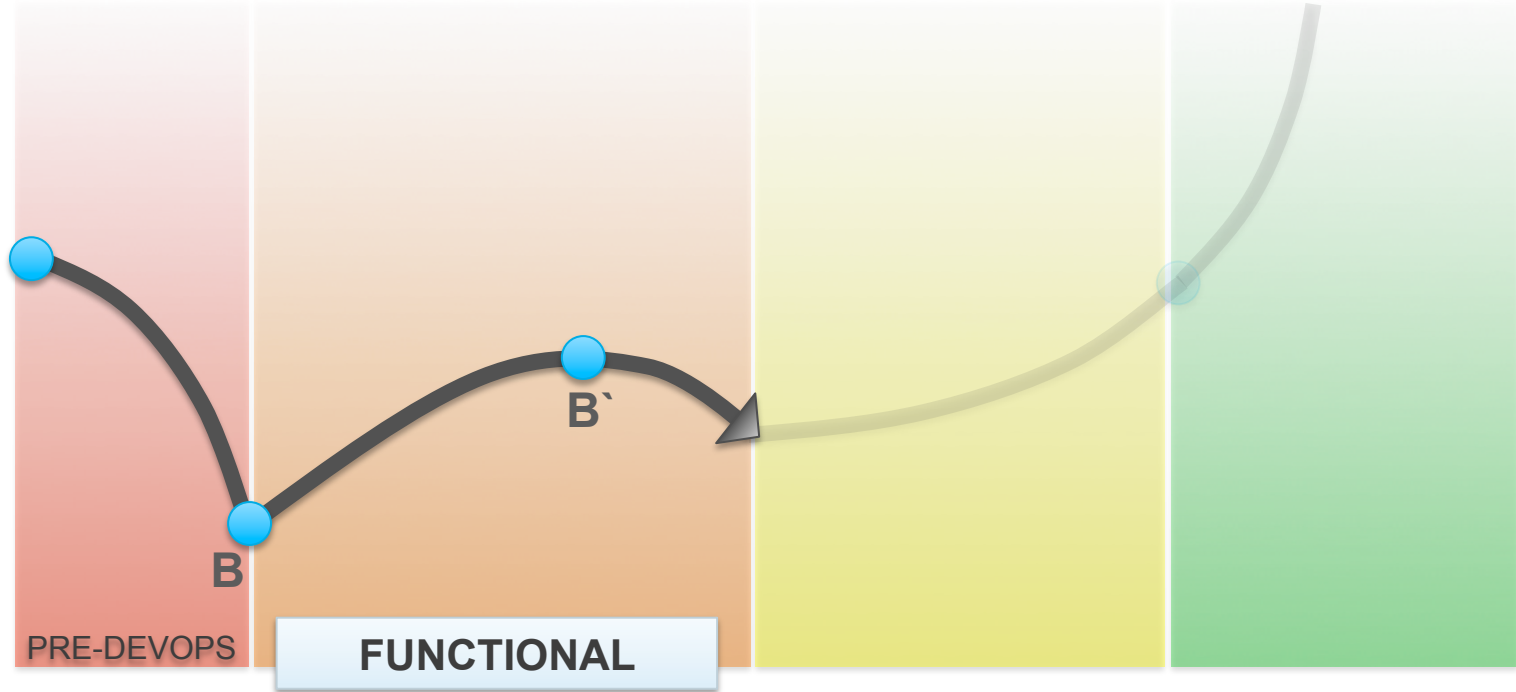
Ignore Feedback



Listen to Diverse Perspectives



DEVOPS JOURNEY - SEEKING TRUE NORTH



FIRST ATTEMPT AT DEVOPS

Cross-functional Team



FIRST ATTEMPT AT DEVOPS

Cross-functional Team



Mega Team



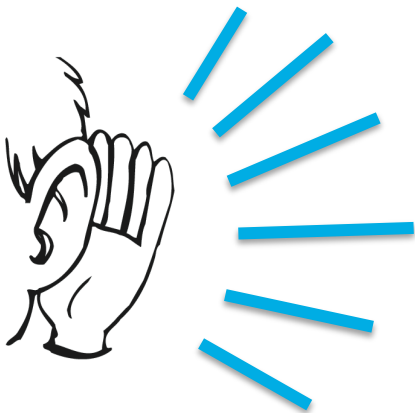
FIRST ATTEMPT AT DEVOPS

Listen to Diverse Perspectives



FIRST ATTEMPT AT DEVOPS

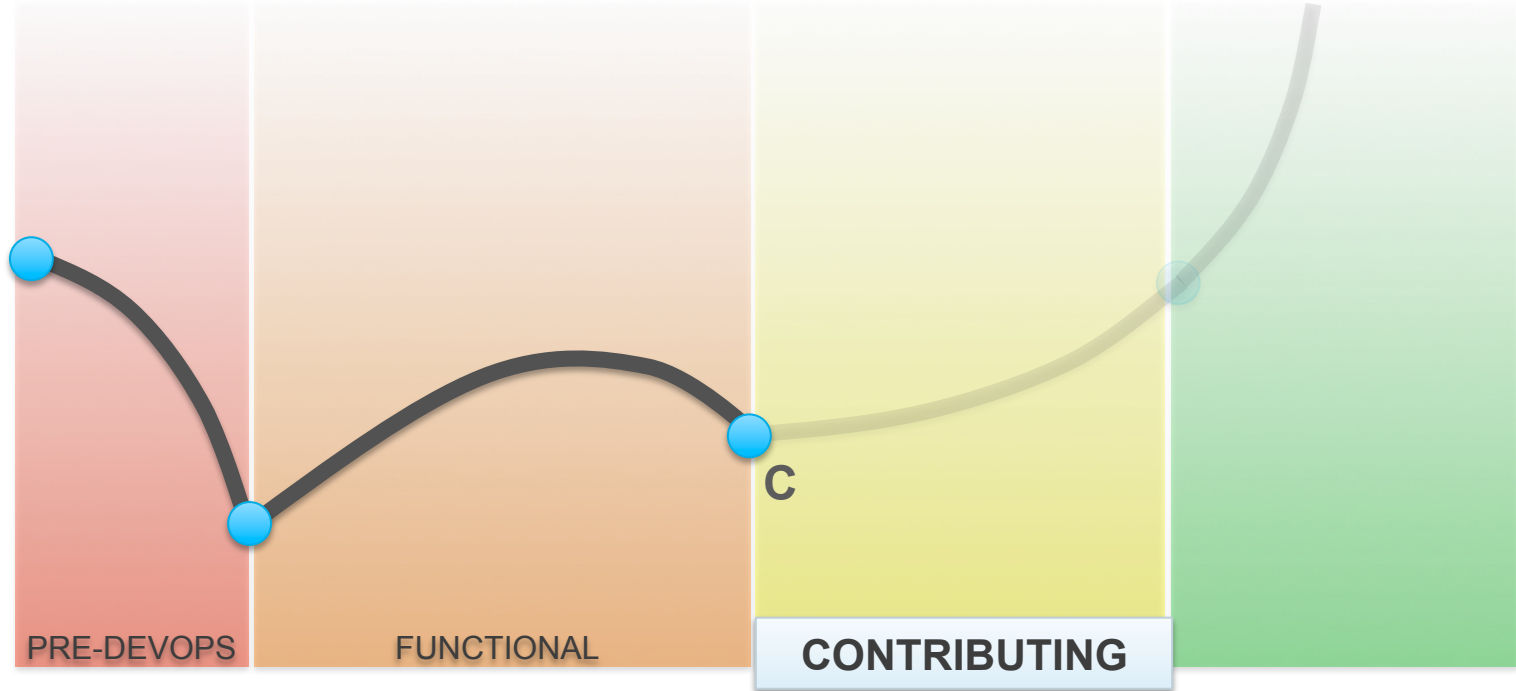
Listen to Diverse Perspectives



Solve it for ALL



DEVOPS JOURNEY - SEEKING TRUE NORTH



HOW MUCH TO CHANGE?



HOW MUCH TO CHANGE?



HOW MUCH TO CHANGE?

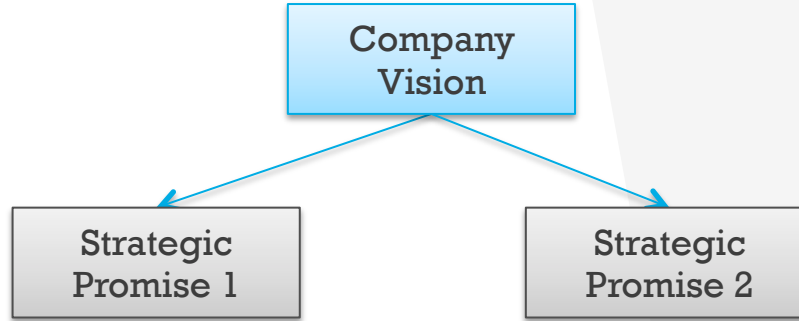


MINOR TWEAKS DON'T PRODUCE MAJOR RESULTS!

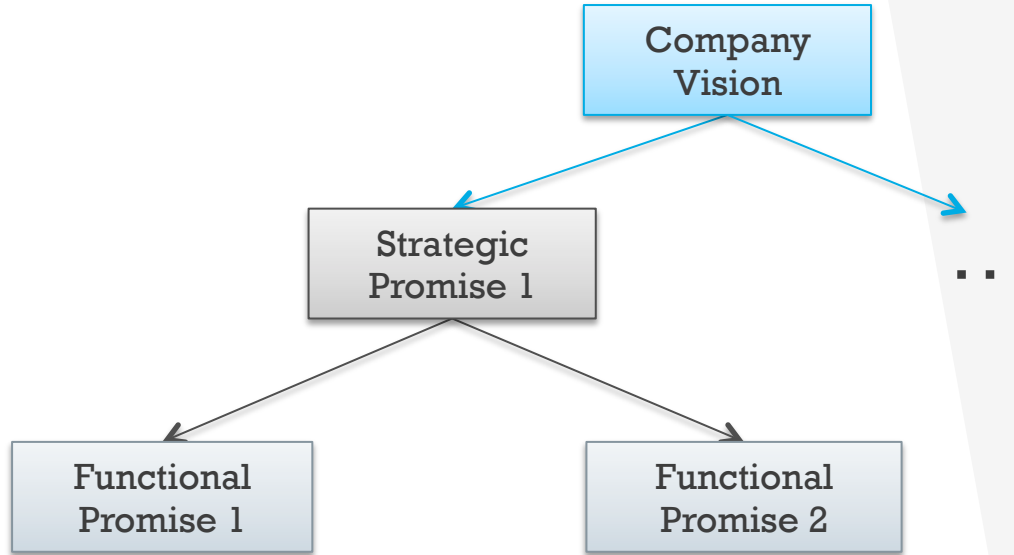
CULTURE OF PROMISES

Company
Vision

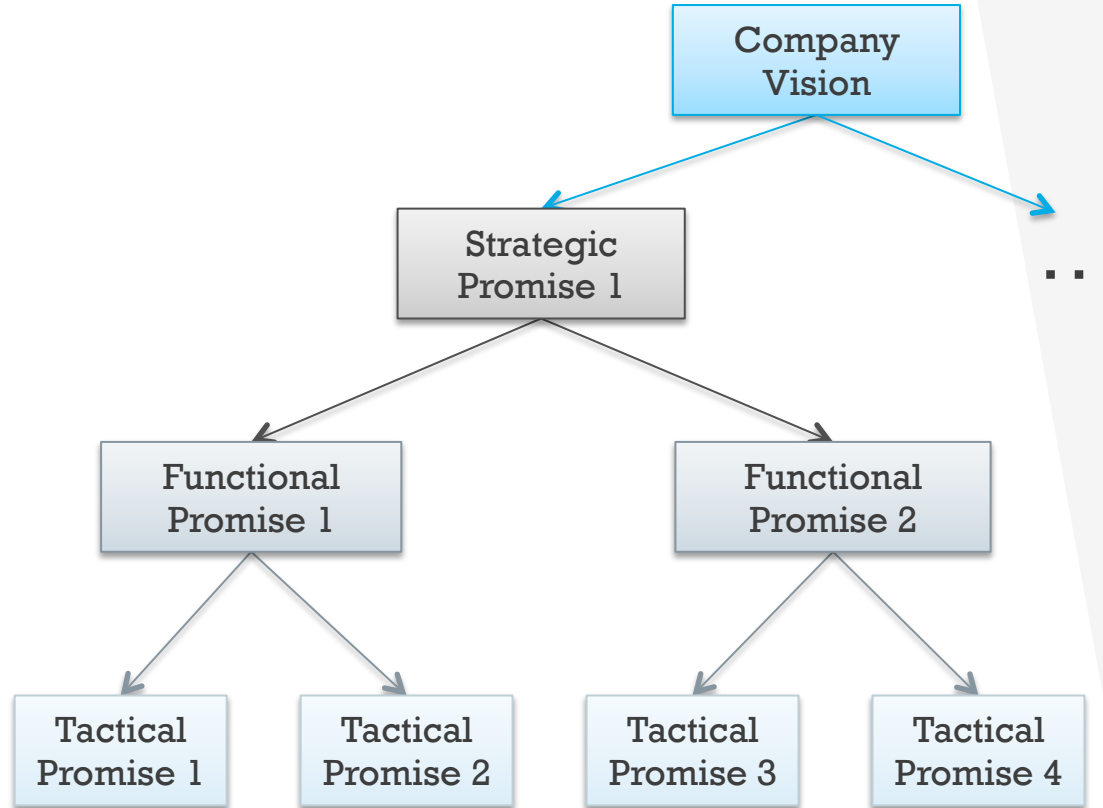
CULTURE OF PROMISES



CULTURE OF PROMISES



CULTURE OF PROMISES



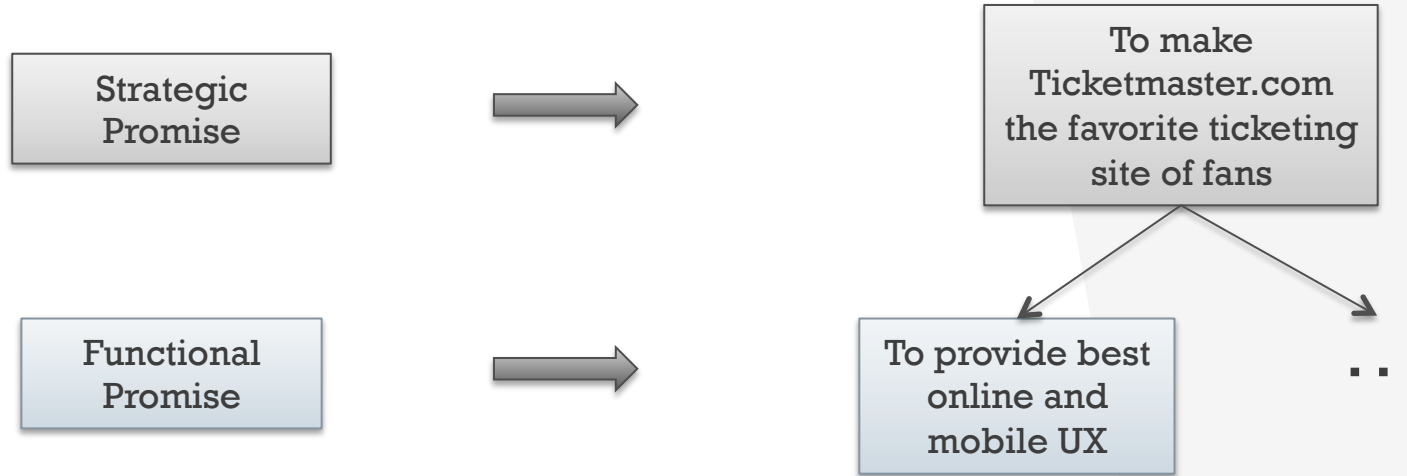
CULTURE OF PROMISES

Strategic
Promise

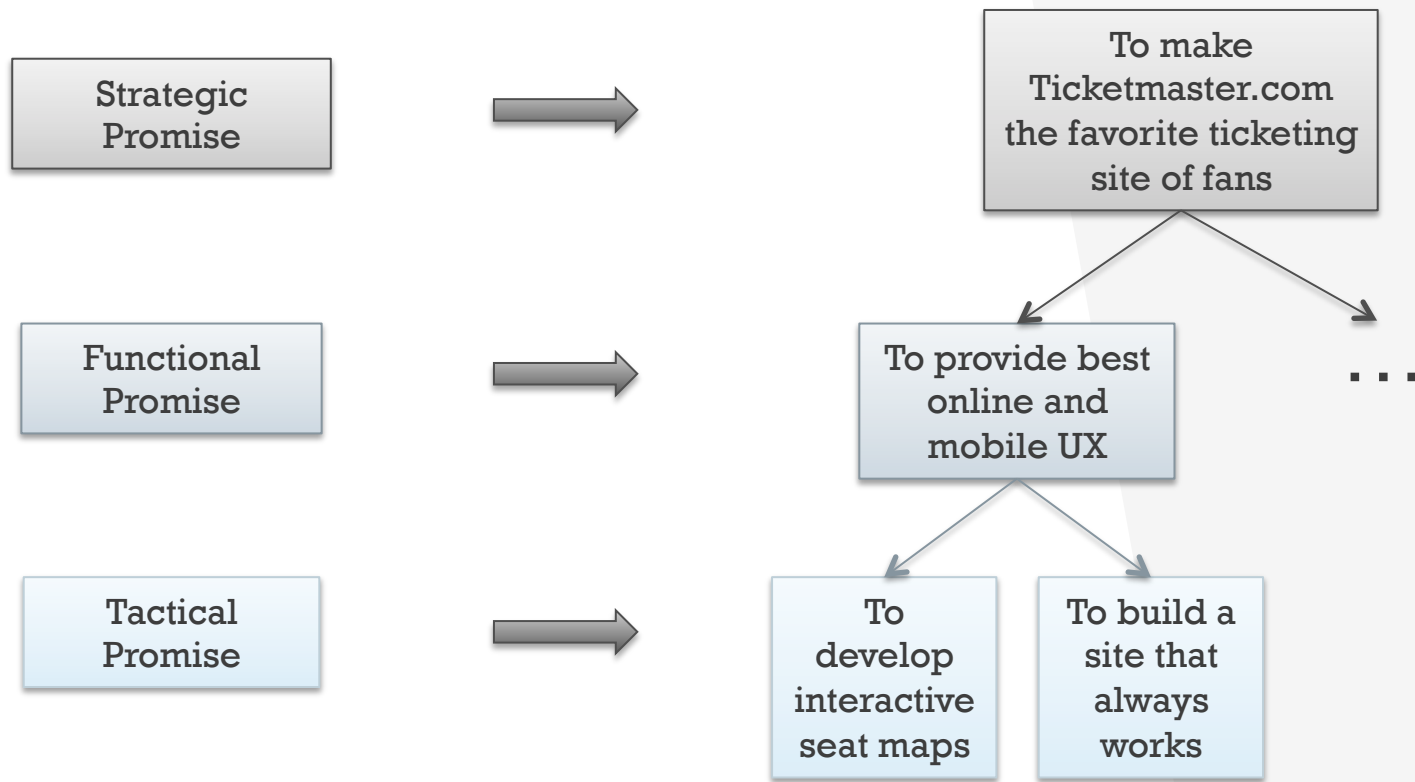


To make
Ticketmaster.com
the favorite ticketing
site of fans

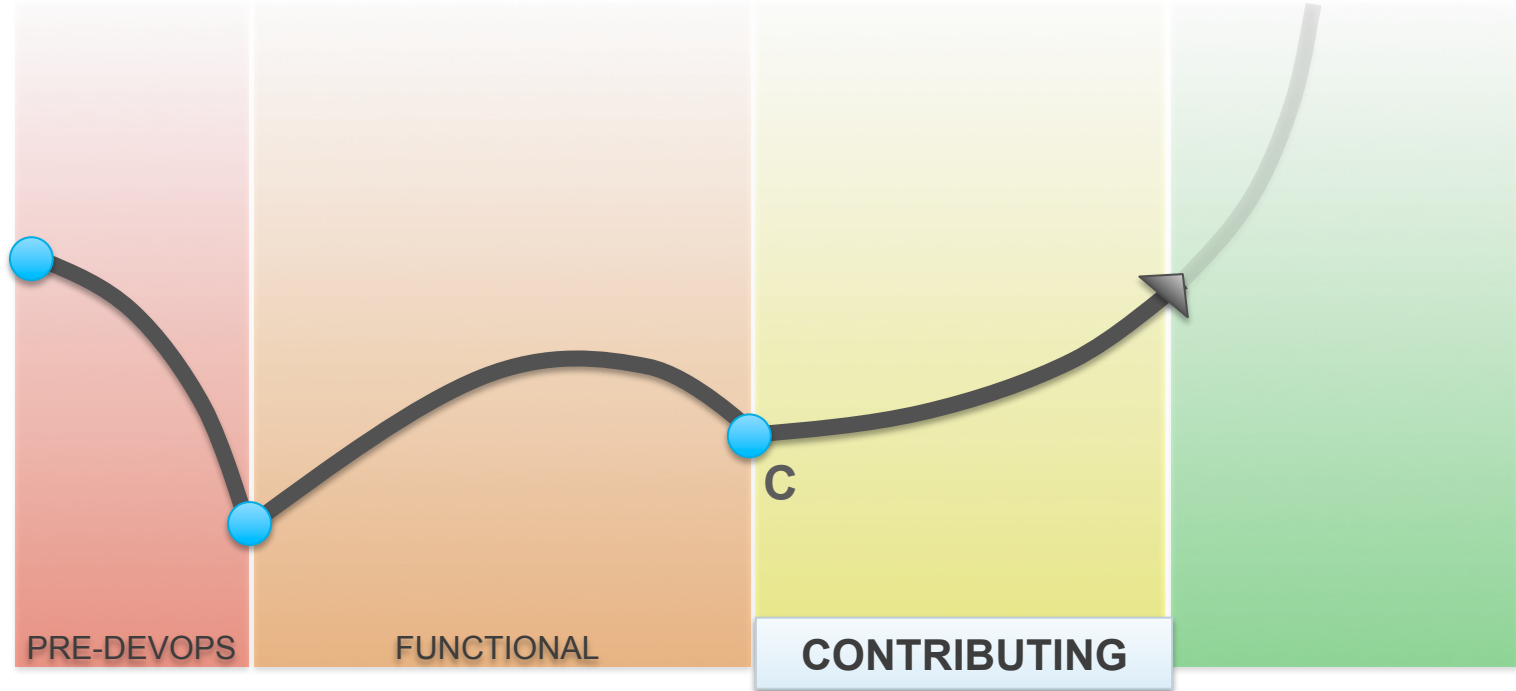
CULTURE OF PROMISES



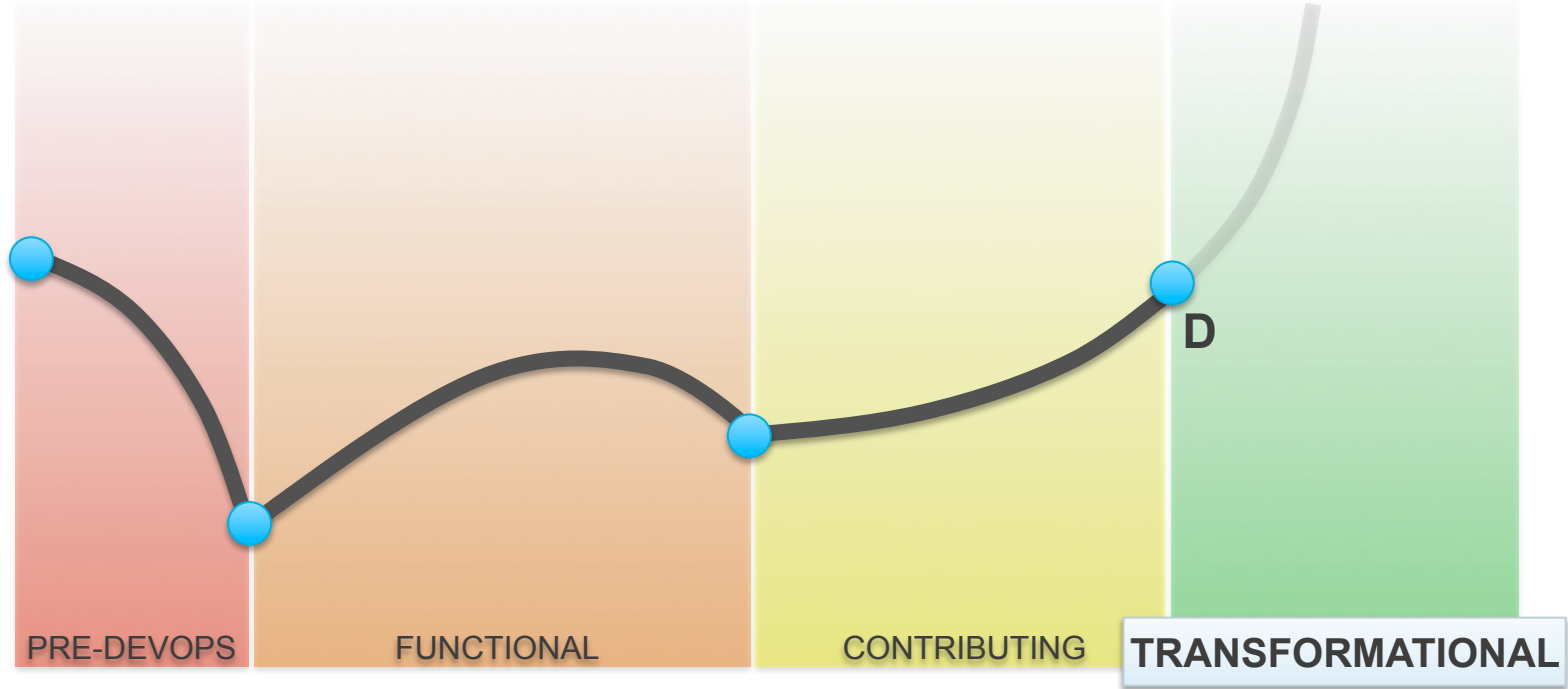
CULTURE OF PROMISES



DEVOPS JOURNEY - SEEKING TRUE NORTH



DEVOPS JOURNEY - SEEKING TRUE NORTH



RECENT TRANSFORMATIONS

Promise

To free developers from
on-prem infrastructure
constraints



Technology



RECENT TRANSFORMATIONS

Promise

To free developers from
on-prem infrastructure
constraints



Technology



To reduce cycle time of
software releases



**Continuous Delivery
Pipeline**

RECENT TRANSFORMATIONS

Promise

To free developers from
on-prem infrastructure
constraints



Technology



To reduce cycle time of
software releases

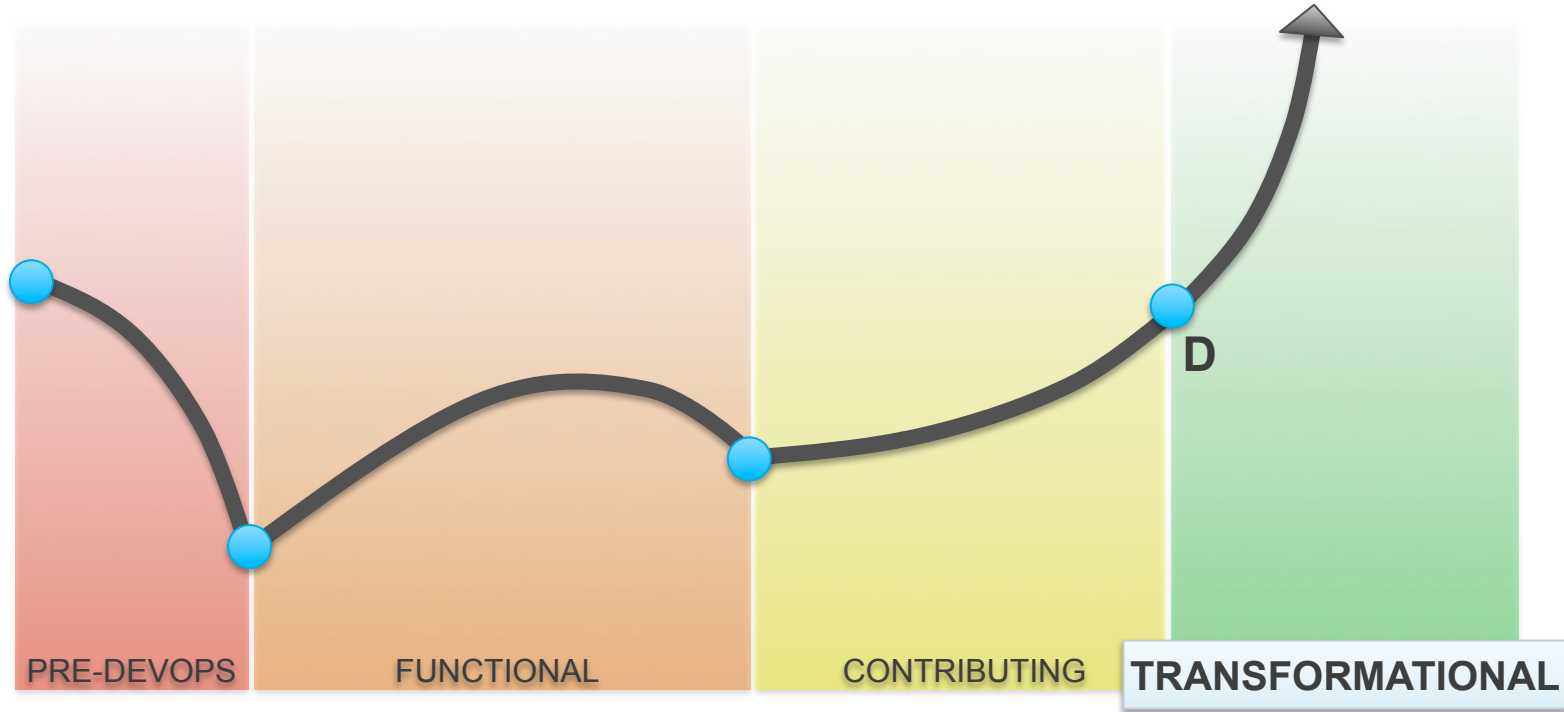


**Continuous Delivery
Pipeline**

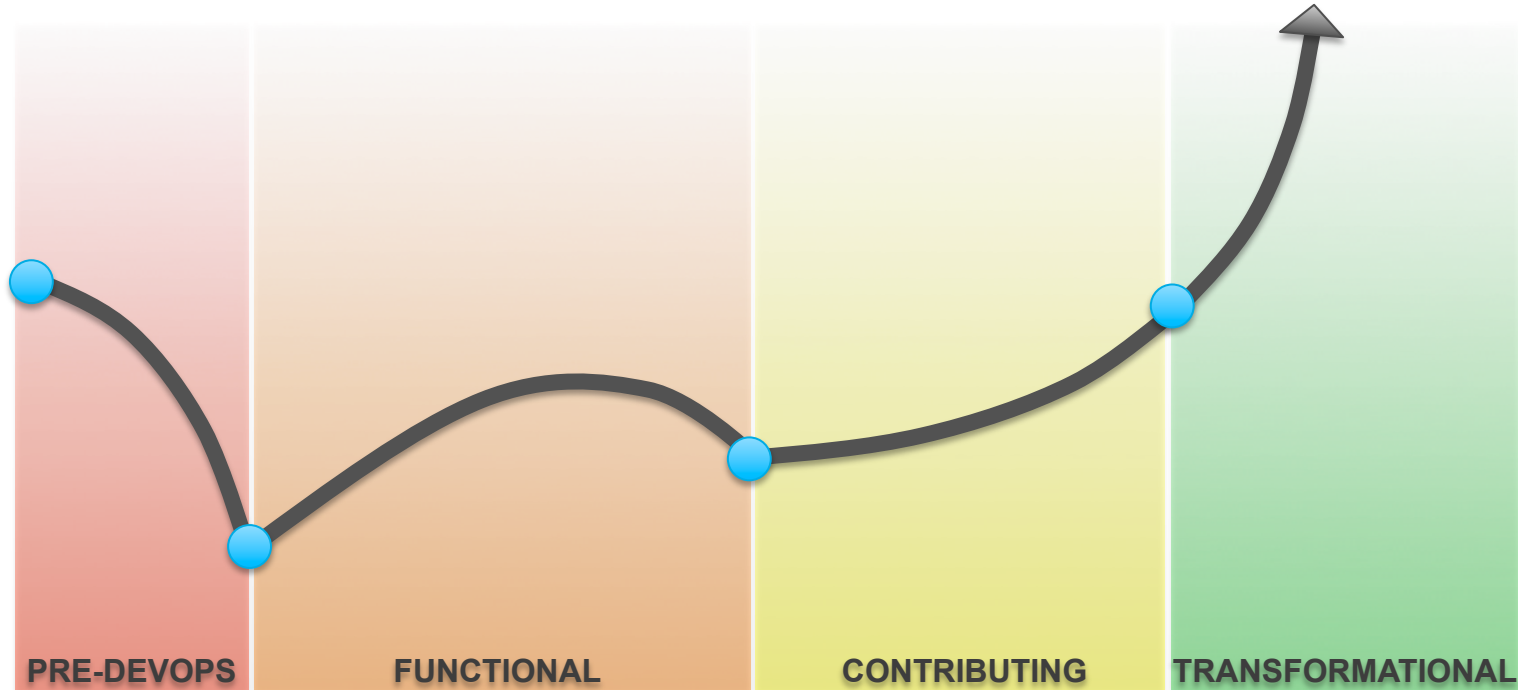
To eliminate environment
inconsistencies



DEVOPS JOURNEY - SEEKING TRUE NORTH



DEVOPS JOURNEY - SEEKING TRUE NORTH



KEY PRINCIPLES

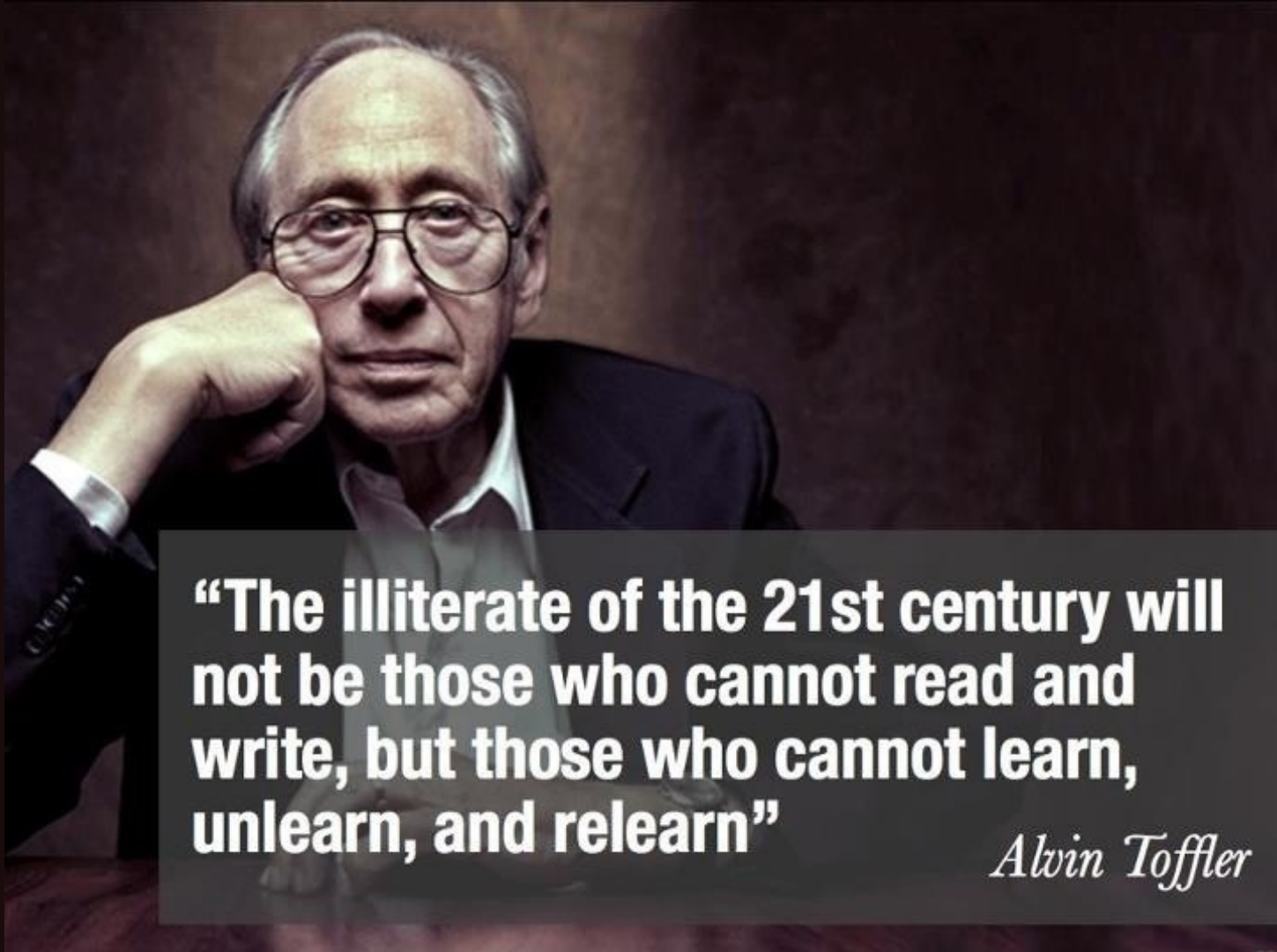
Automation  **Throughput**

KEY PRINCIPLES

Automation  **Throughput**

Feedback  **Quality**





“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn”

Alvin Toffler

TO SUM UP...

Create a **culture of learning** where teams feel safe to make honest, **new mistakes** while they push the boundaries of technology.



VICTOR GAJENDRAN

VICE PRESIDENT, TECHOPS PLATFORM

VICTOR.GAJENDRAN@TICKETMASTER.COM

@VICTORGAJENDRAN

Thank you!

