

Transformation agile & livraison continue

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Presentation objectives



Operational Decision Manager (ODM)

DevOps

ODM transformation towards continuous delivery

1. Operational Decision Manager (ODM)

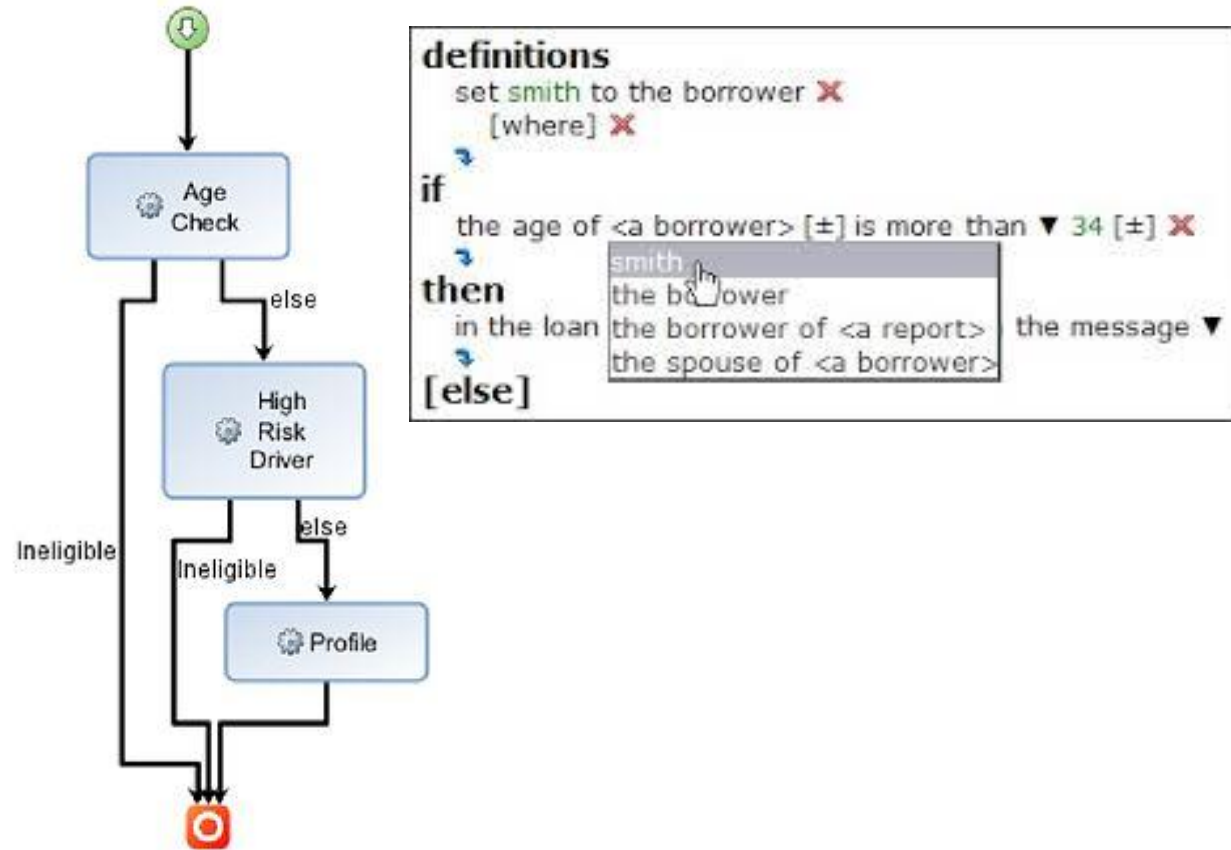


IBM Operational Decision Manager

ODM is platform for

- Capturing
- Governing
- Executing

frequent, repeatable business decisions

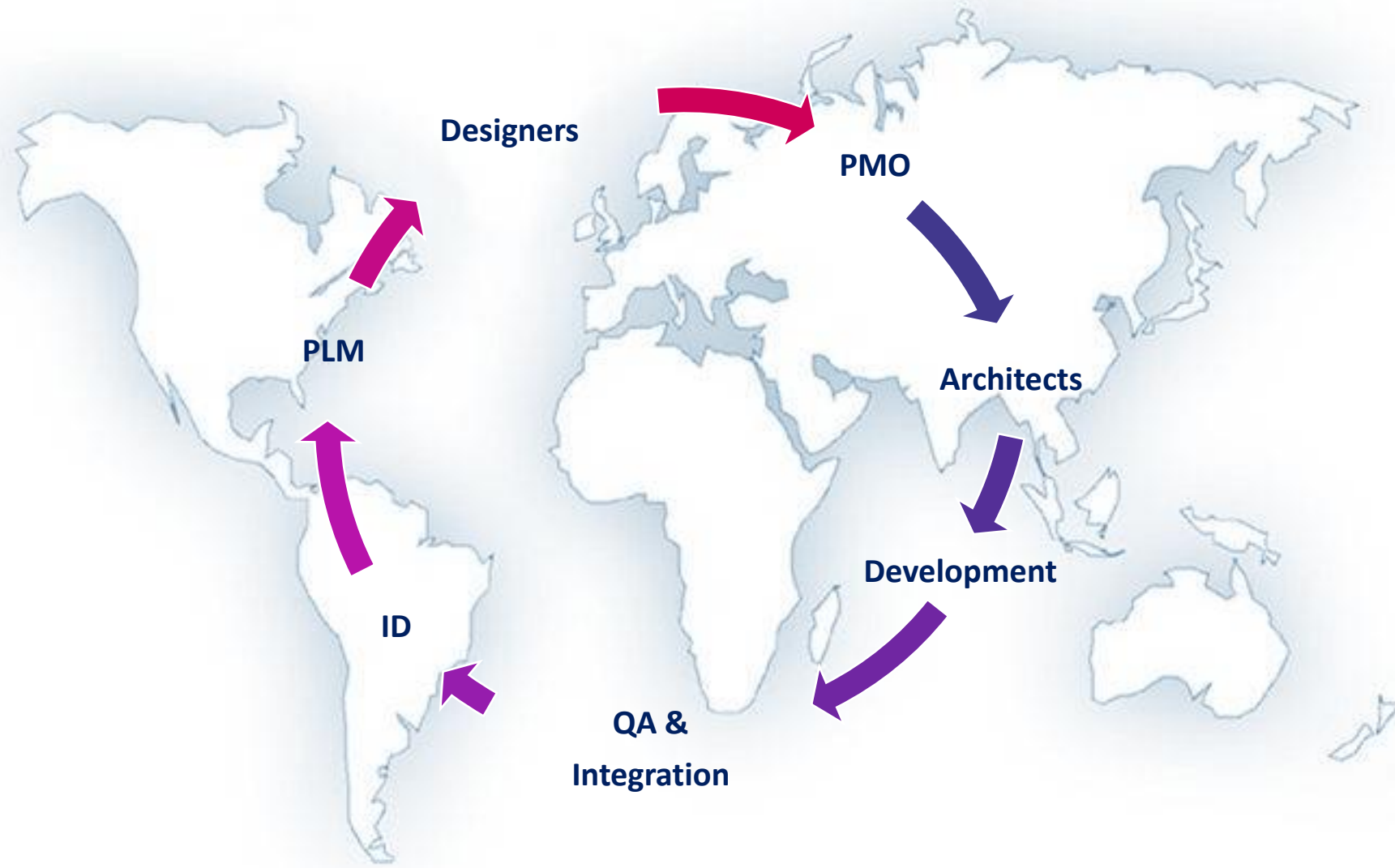


debt to income		credit score		message
min	max	min	max	
0	30	0	200	debt-to-income too high compared to credit score
		200	800	
30	45	0	400	debt-to-income too high compared to credit score
		400	800	
45	50	0	500	debt-to-income too high compared to credit score
		600	800	
≥ 50		0	800	debt-to-income too high compared to credit score




Team spread all over the world



Several functions



Operational Decision Manager (ODM) ?

-  Large size project
-  10+ years of history
-  Deployed on-prems, on Cloud, on Bluemix

Lines of Code	9,500,000
Platforms	On Prem's, Cloud, Bluemix
Samples & Tutorials	+90
2-hour self paced Getting Started	2
Live Branches	10
Continuous Builds Plans	~450 for trunk and branches
Defect Reports Created	~300/month
APARs	155/year

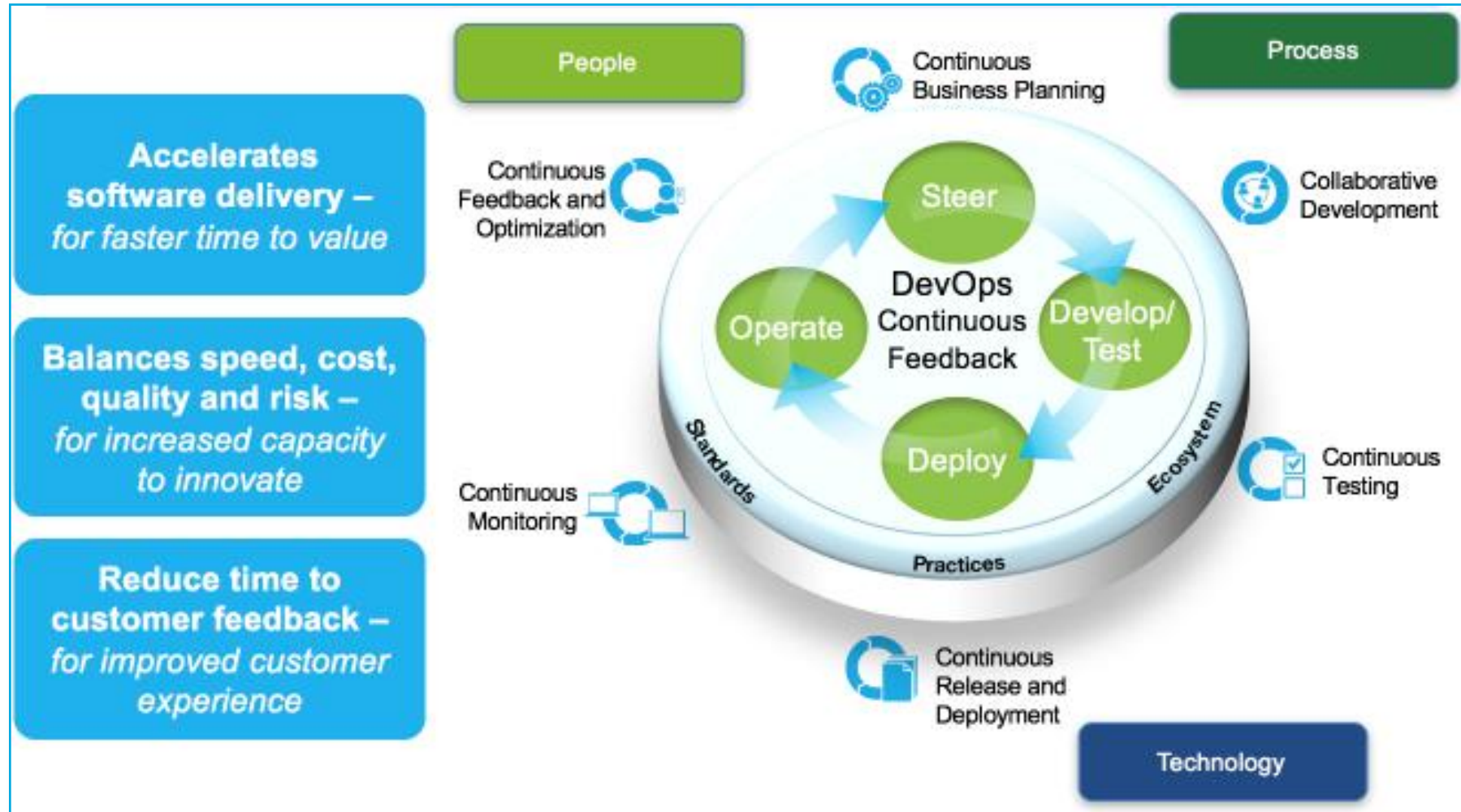
▸ JRules trunk
▸ JRules trunk SUN JVM
▸ JRules v75updates
▸ JRules v801updates
▸ JRules v80updates
▸ JRules v851updates
▸ JRules v86updates
▸ JRules v871updates
▸ JRules v87updates
▸ JRules v881updates
▸ JRules v88updates

2. DevOps

Teams doing DevOps take shared ownership of user outcomes



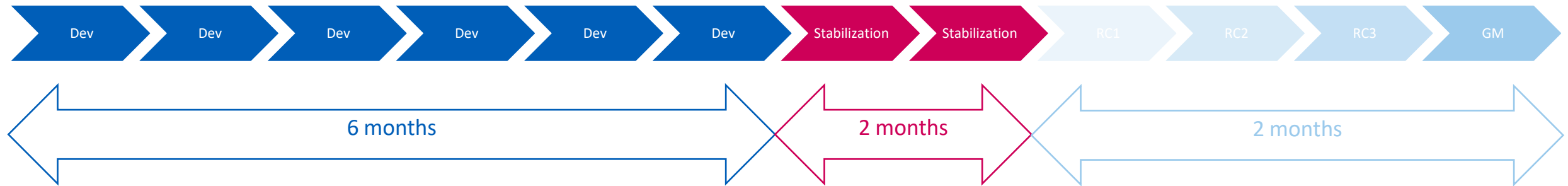
DevOps – A Global Picture



3. ODM Team Agile Transformation towards continuous delivery



Where are we coming from?



Functional silos (PLM, DEV, QA, DOC)

Waterfall process

- Release planning at the beginning of the 10 months cycle
- Sequential path through Dev, QA, Doc
- Painful integration and bug fixing (stabilization phase, multiple release candidates)

Objectives

Ideally: deliver when we want

- Product builds are performed continuously
- Product builds are automatically qualified from a quality perspective
- Delivery of a given build is a business decision (fixes, new features, better perf.)

ODM objectives: capacity to deliver at the end of each 4 weeks iteration

- Stable state at the end of each iteration, potentially delivered to customer as a on-prem beta, or a cloud/Bluemix refresh
- Release Candidate phase shorten to 1 week for a beta, 3 weeks for a release

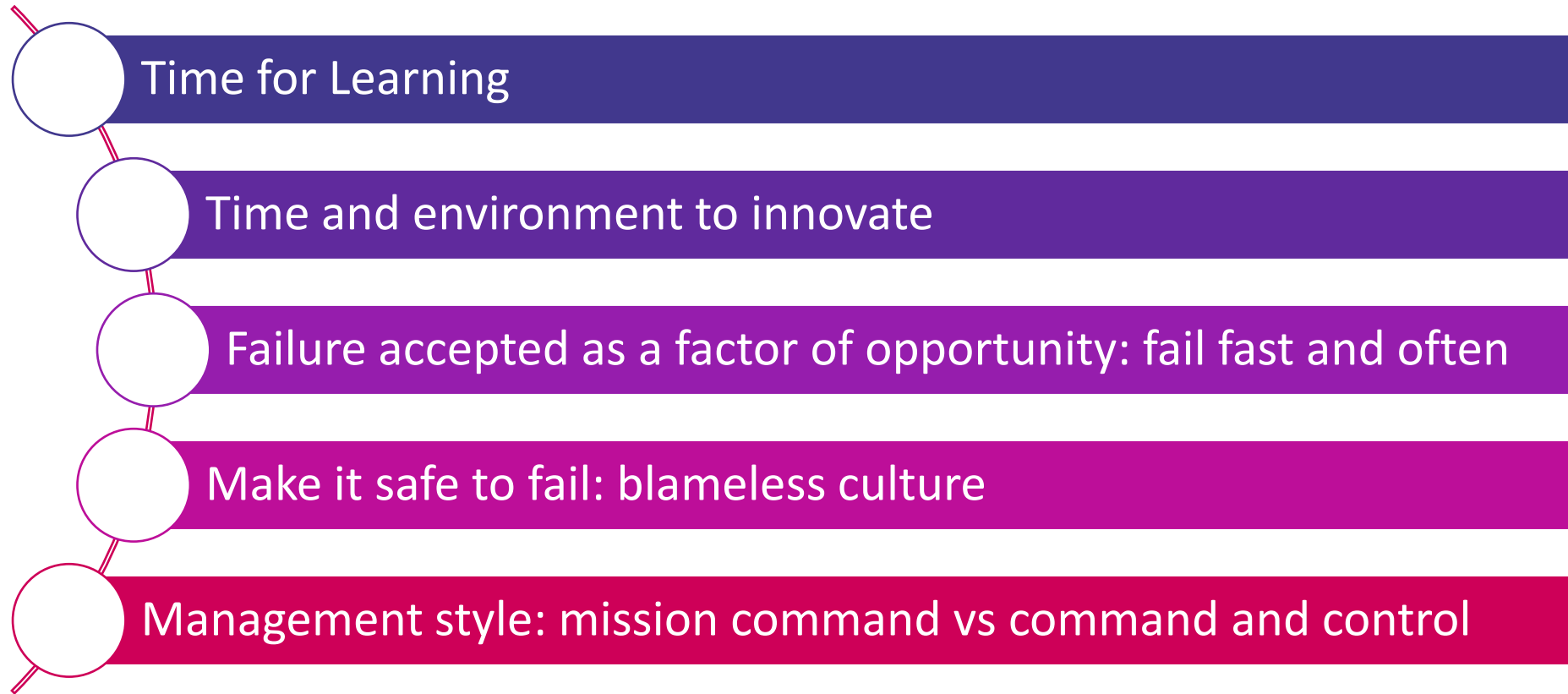
How do we started ?

- ODM Continuous Delivery initiative
- Inspiration from Jez Humble presentation at Spark 2013 conference “Adopting Continuous Delivery” (available on youtube)
- Working group with PLM, RM, Dev, QA, Doc representatives
 - Larger adoption of Agile methodology
 - 4 weeks iterations (2 weeks sprints)
 - Ranked backlog, iterative planning, small improvements (Toyota katas)
 - Delivery team model (PLM, Design, Arch, Dev, QA, Doc)
 - Continuous Integration (single trunk, feature toggles, build pipeline)
 - Iterative product builds (warmup builds on weeks 1, 2, 3)
 - Iterative Quality Assessment (no sev 1 and 2, no doubled-deferred)

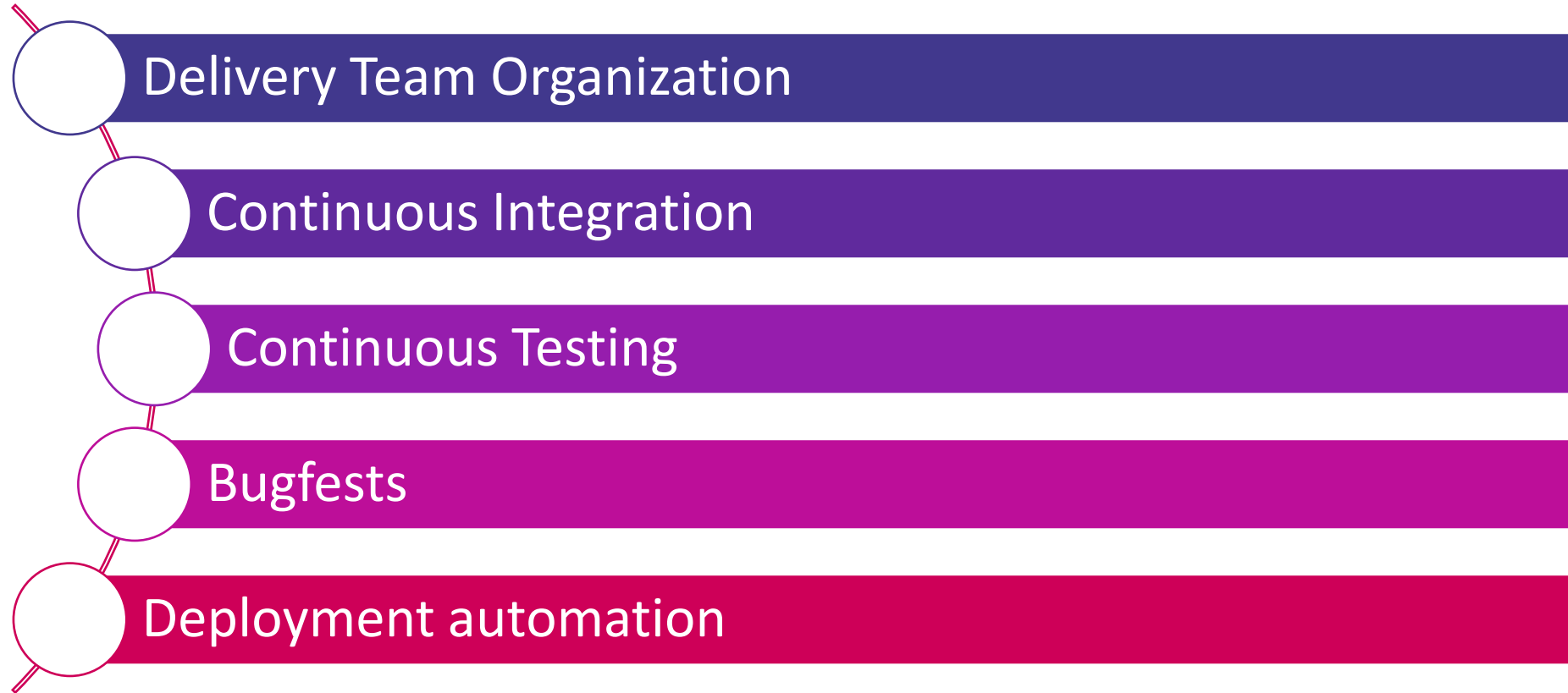
Key practices we have adopted or strengthened



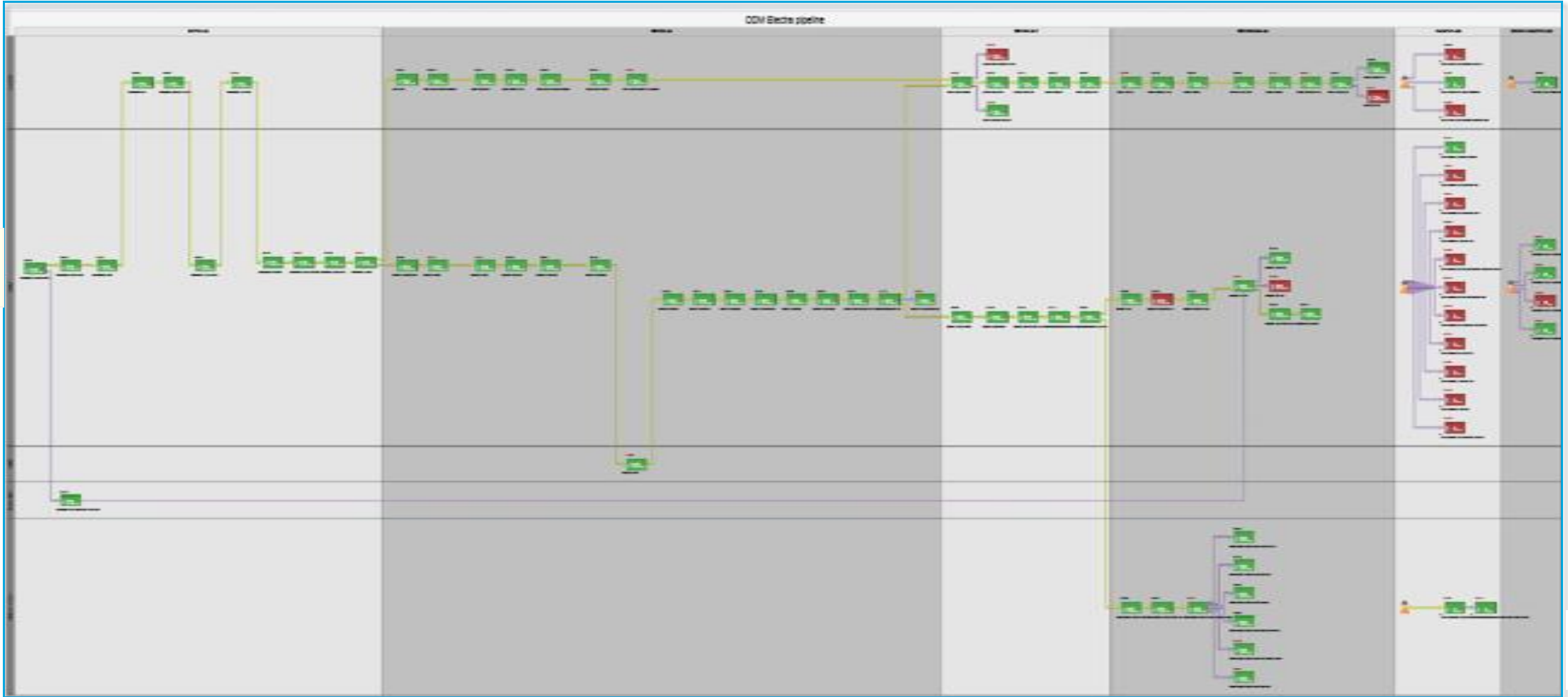
Support to organizational changes and innovation



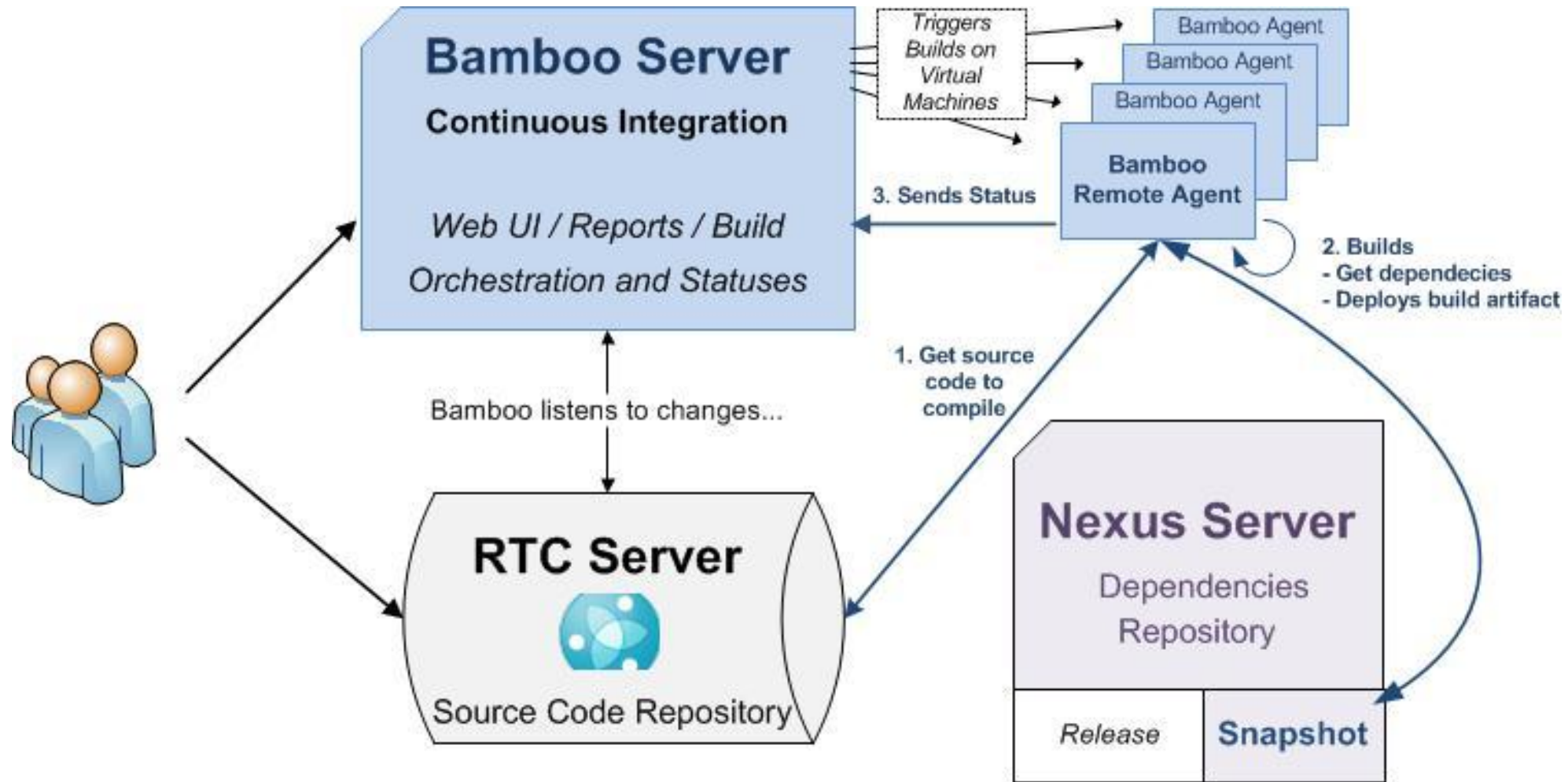
Key Elements



Build pipeline: automated from line of code to products



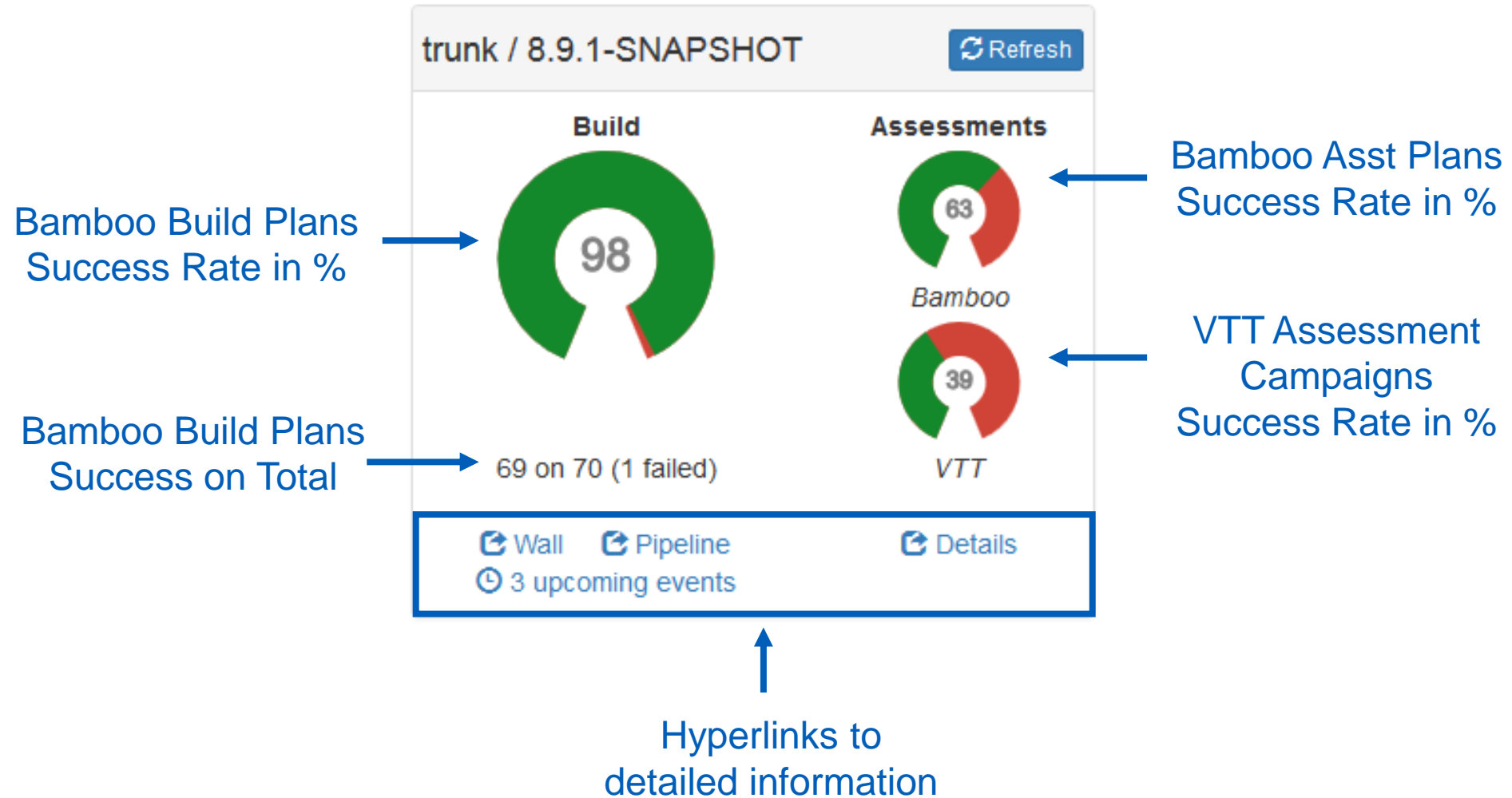
Continuous Integration Architecture



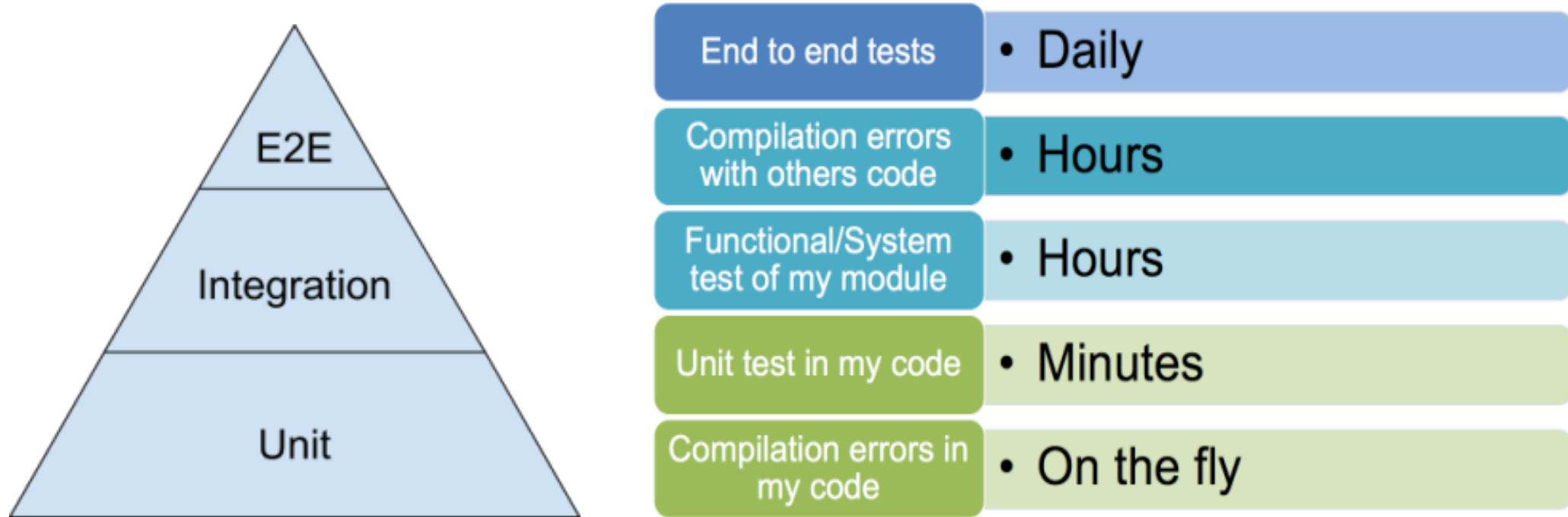
Build Wall

✓ bdsI JRules trunk 2 hours ago	✓ Cobol-base JRules trunk 2 days ago	✓ Cobol-support JRules trunk 2 days ago	✗ DVS JRules trunk 4 hours ago
Updated by	Dependant of TRUNK-ROOT-108	Dependant of TRUNK-COBOLBASE-1093	Manual build by
	✓ Engine JRules trunk 58 minutes ago	✗ executionserver JRules trunk 23 minutes ago	✓ Installers JRules trunk 16 hours ago
	Updated by POUI	Manual build by Laurent	Scheduled build
✓ Language JRules trunk 18 hours ago	✓ Launchpad JRules trunk 15 hours ago	✓ resuiservices JRules trunk 37 minutes ago	✓ Rules-sdk JRules trunk 17 hours ago
Dependant of TRUNK-STATICANALYSIS-4123	Dependant of TRUNK-INSTALLERS-596	Updated by Jear	Scheduled build
✓ Scorecard JRules trunk 2 days ago	✓ Software Factory JRules trunk 58 minutes ago	✓ Static Analysis JRules trunk 4 minutes ago	✓ Studio JRules trunk 35 minutes ago
Dependant of TRUNK-ROOT-108	Updated by philippe.c	Dependant of TRUNK-ENGINE-3238	Updated by benjami
✗ Studio base JRules trunk 26 minutes ago	✓ Studio Samples JRules trunk 15 minutes ago	✓ Synchronization JRules trunk 18 hours ago	✓ TeamServer-Build JRules trunk 23 hours ago
Updated by Jean	Dependant of TRUNK-STUDIO-8518	Dependant of TRUNK-RULEARTIFACTS-3830	Dependant of TRUNK-RTSCRITICALTESTS-1119
amServer-Criticaltests JRules trunk 2 hours ago	✓ TeamServer-Web JRules trunk 2 hours ago	✓ ZOS JRules trunk 23 minutes ago	✓ Rule Solutions for Office Rules NET trunk (8.5) 1 week ago
Dependant of TRUNK-RTSWEB-5462	Updated by	Updated by Lau	Updated by

Build Dashboard



Continuous Testing



Key figures

- +250,000 automated tests executed each night
- 9 AppServers / DataBases combination automatically tested

Bugfests

Scoped (new product feature)

Time boxed (2 to 3 hours)

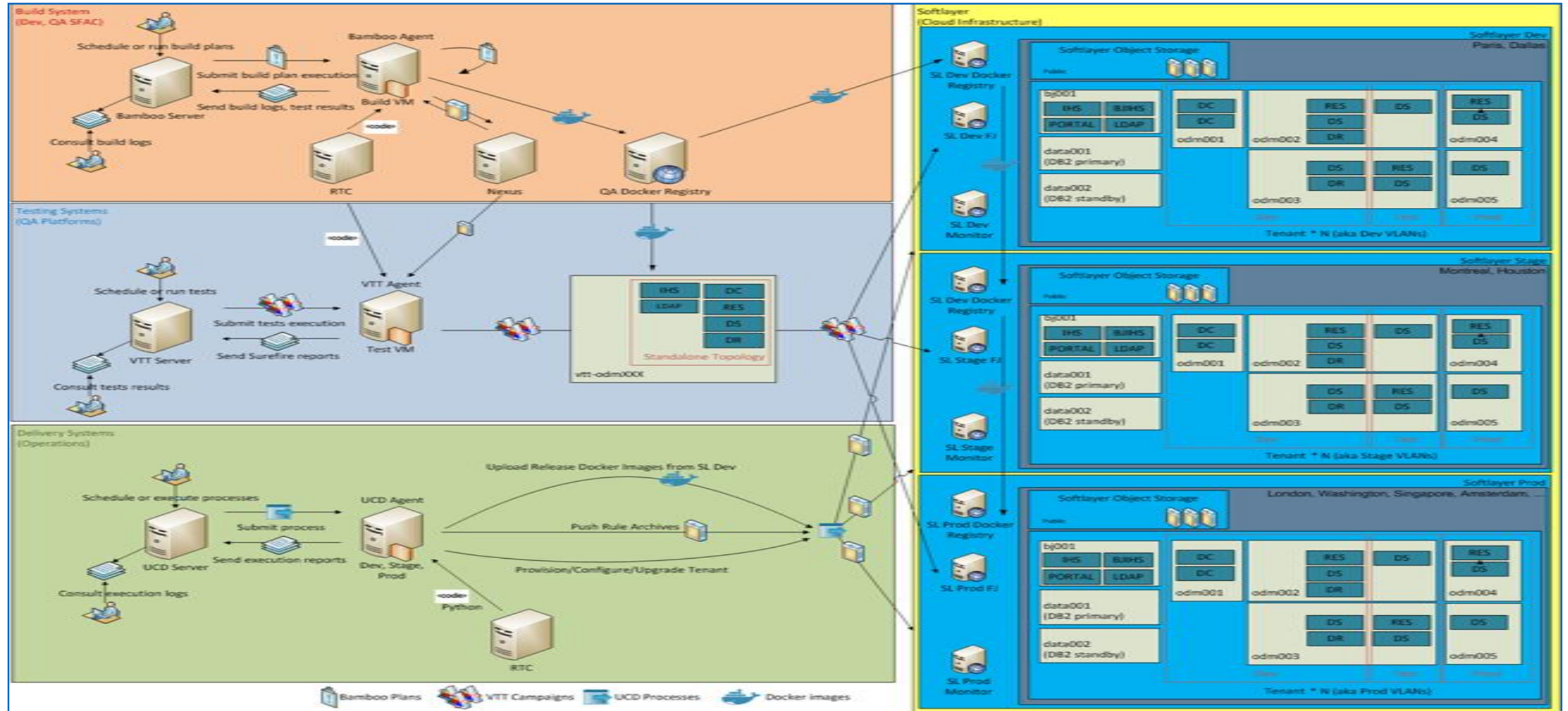
Test scenarios are proposed

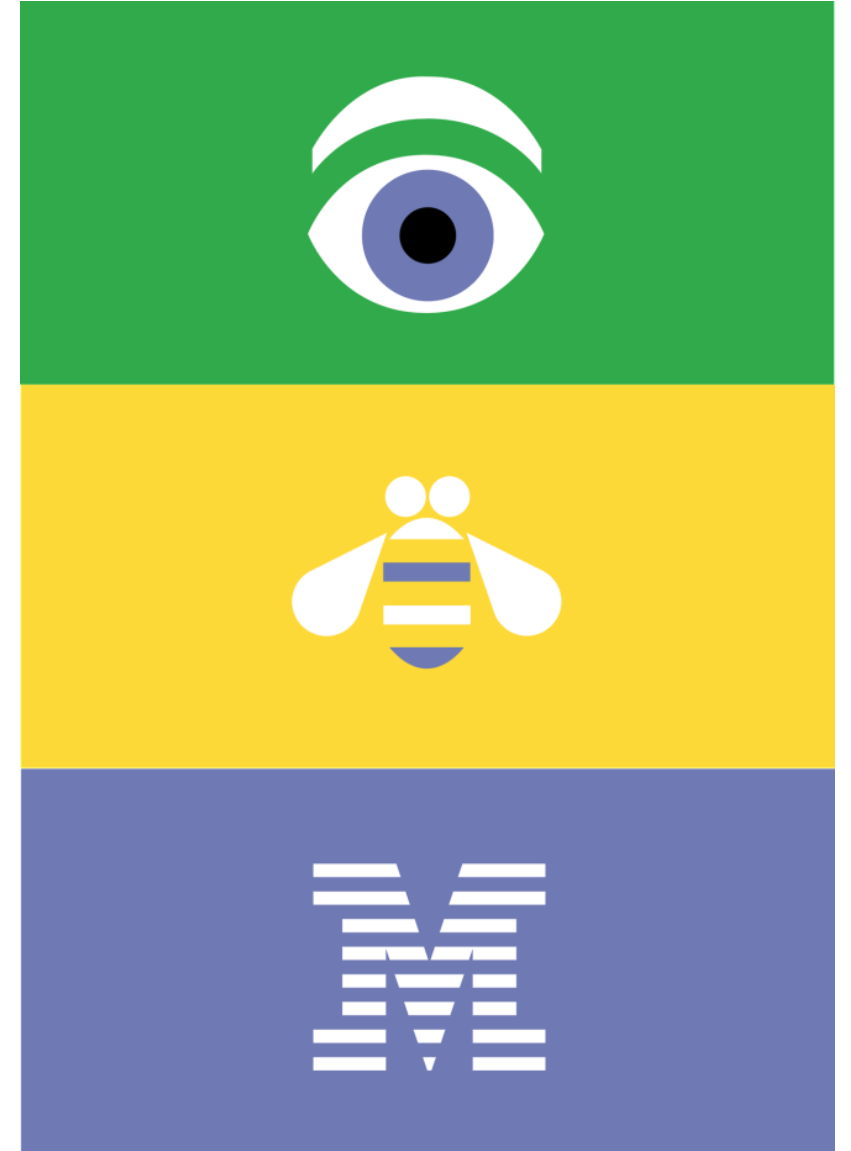
Every one is invited to participate (dev, qa, doc, om from any functional or delivery team)

Slack channel and conference call are open for guidance and support

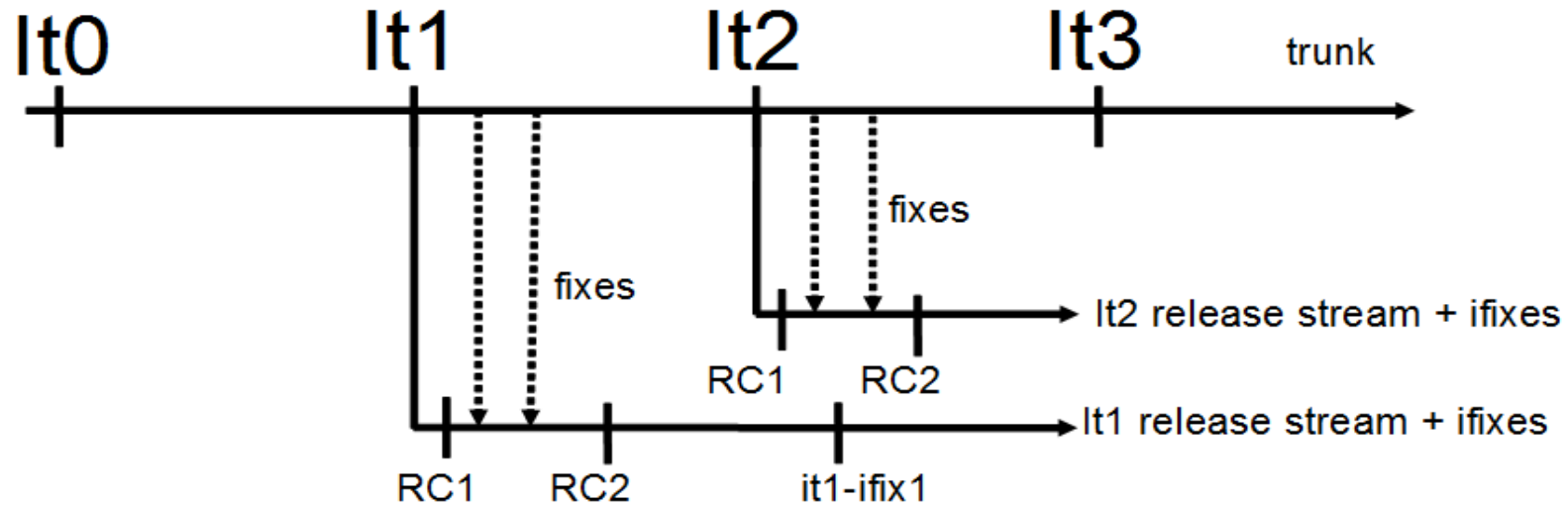
Defects are discussed and opened in RTC with reproducible scenario

Deployment automation





Iteration and release assessments



At the end of each iteration, we take some RTC snapshots, create new streams, and start a release build on these streams

For each release candidate, we run necessary MAT/RAT, IVT, SVT tests

Fixes on iteration / release stream are done in controlled mode