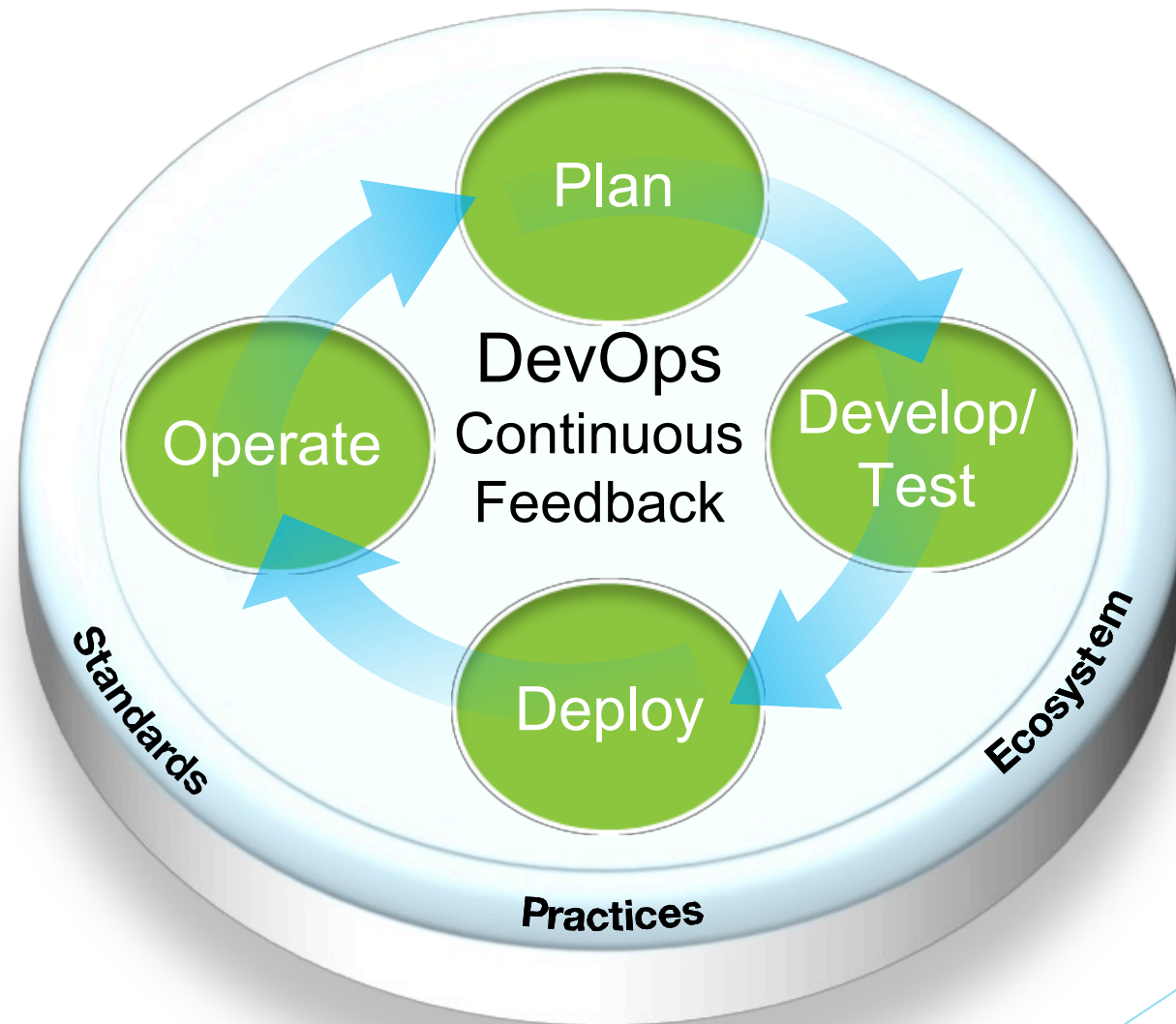
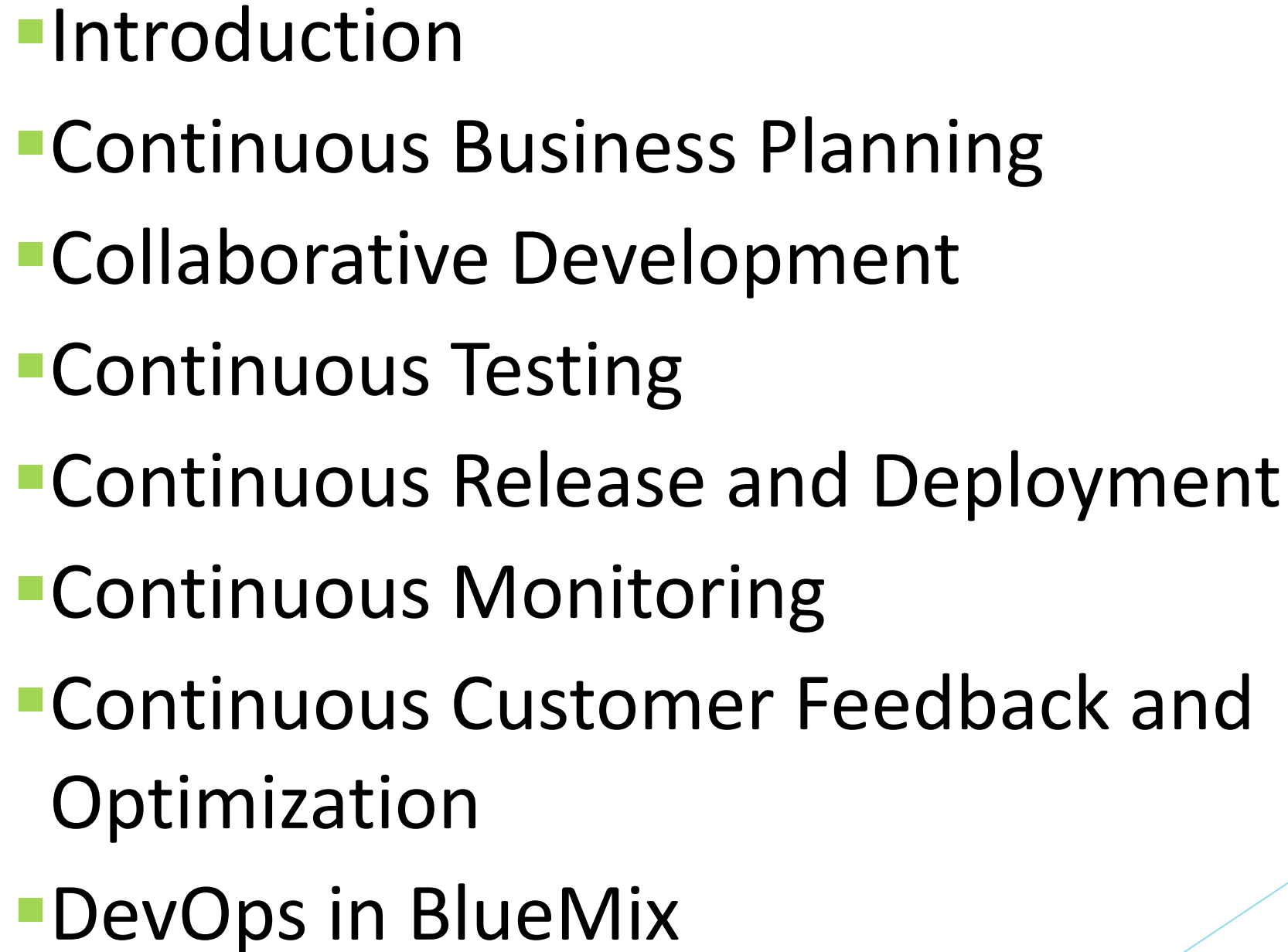


DevOps



radovan.stas@sk.ibm.com

- 
- Introduction
 - Continuous Business Planning
 - Collaborative Development
 - Continuous Testing
 - Continuous Release and Deployment
 - Continuous Monitoring
 - Continuous Customer Feedback and Optimization
 - DevOps in BlueMix

Issues with traditional software delivery methods

Businesses are challenged to meet time pressures with quality software.

Typical Software Delivery Pain Points:

34%

of all new IT projects are delivered late.

41%

experience delays are due to configuration and deployment.

51%

applications are rolled back due to quality issues escaping into production.



It takes **4 – 6 weeks** to complete a small release.

* Forrester/IBM Study: A New View of IBM's Opportunity for Integrated Optimized Systems Address , 2011

** Forrester "Five Ways To Streamline Release Management", 2011

Forces of change



Mobile and social are changing customer expectations.



Focus of IT is changing from “systems of record” to “system of engagement”.



Cloud and technology is blurring the traditional roles between the Dev and Ops teams.

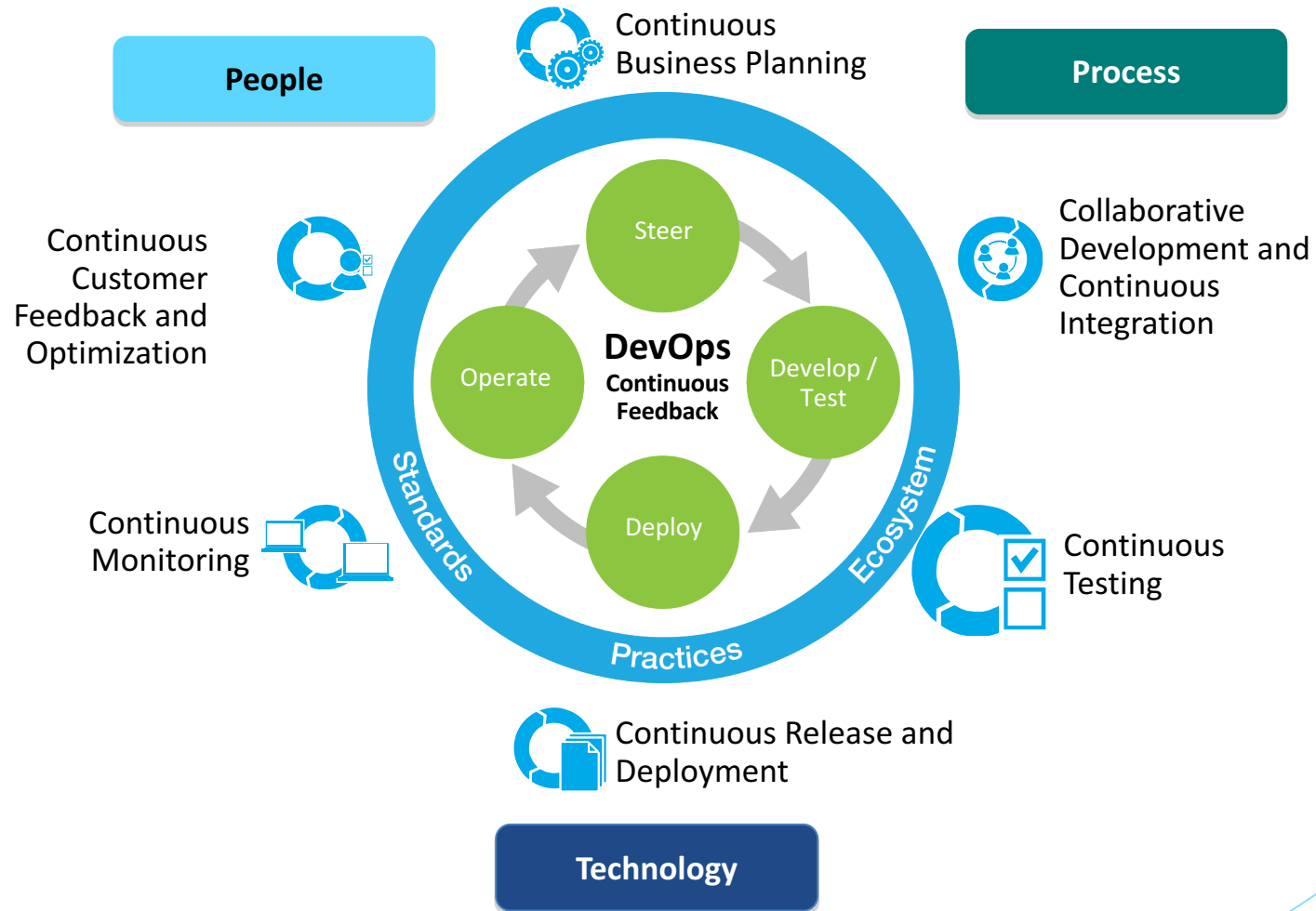


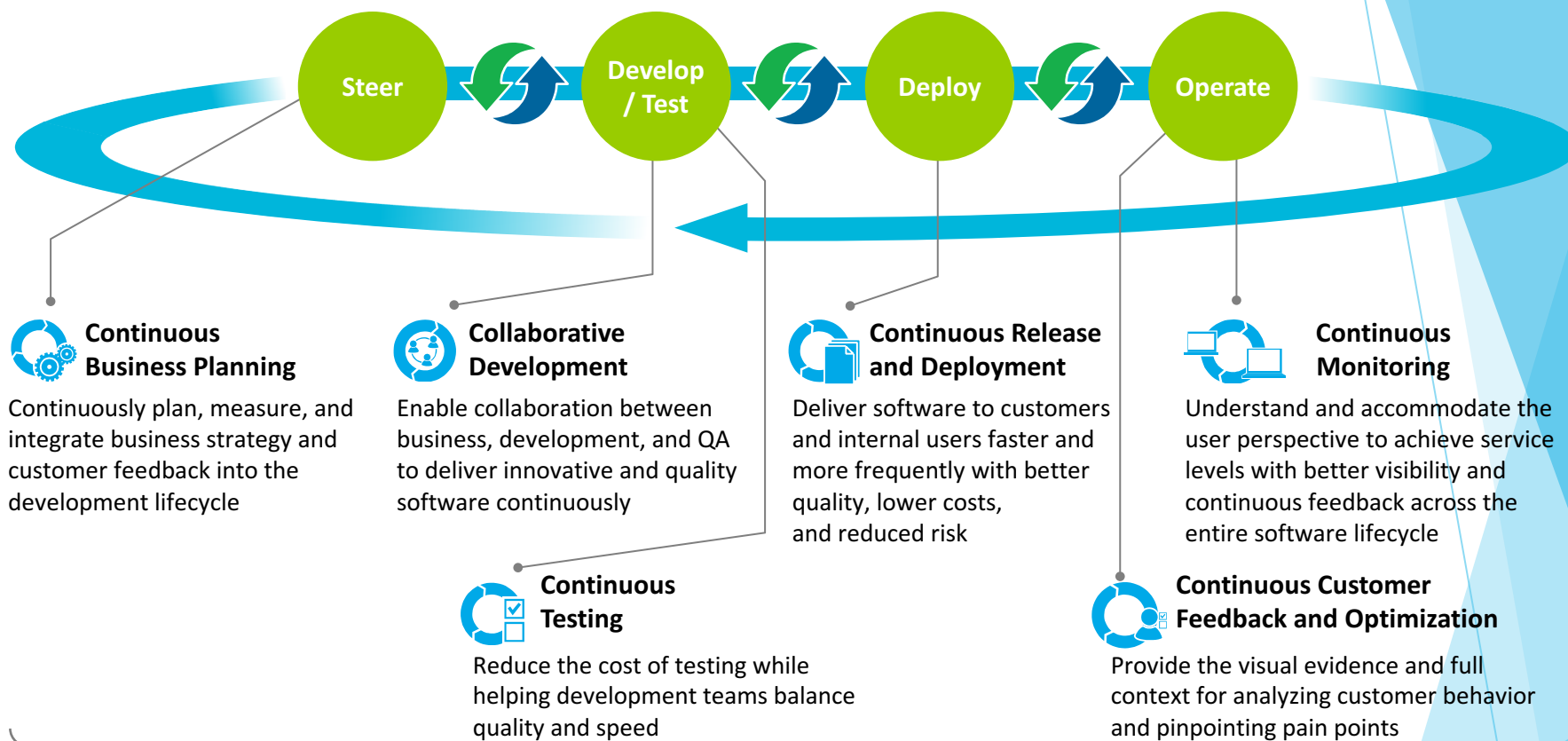


**Accelerates software delivery –
for faster time to value**

**Balances speed, cost, quality,
and risk –
for increased capacity
to innovate**

**Reduces time for customer
feedback –
for improved customer
experience**





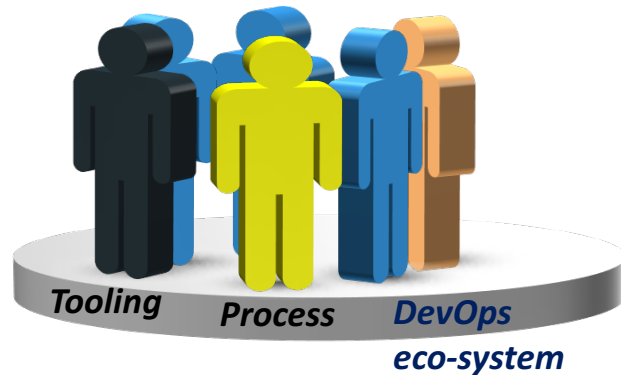
Bluemix DevOps Services

- Agile planning and tracking
- Application auto-scaling
- AppScan mobile analyzer
- Continuous delivery pipeline
- Git hosting
- Mobile application security
- Mobile data
- Mobile quality assurance
- Monitor and analytics
- Push
- RapidApps (beta)
- Server-side code
- Web IDE

Continuous business planning



- Helps continuously plan business needs
- Integrates customer feedback with business strategy
- Aligns customer feedback into the development lifecycle
- Focuses on “doing the right things”
- Focuses on business needs that add the most value

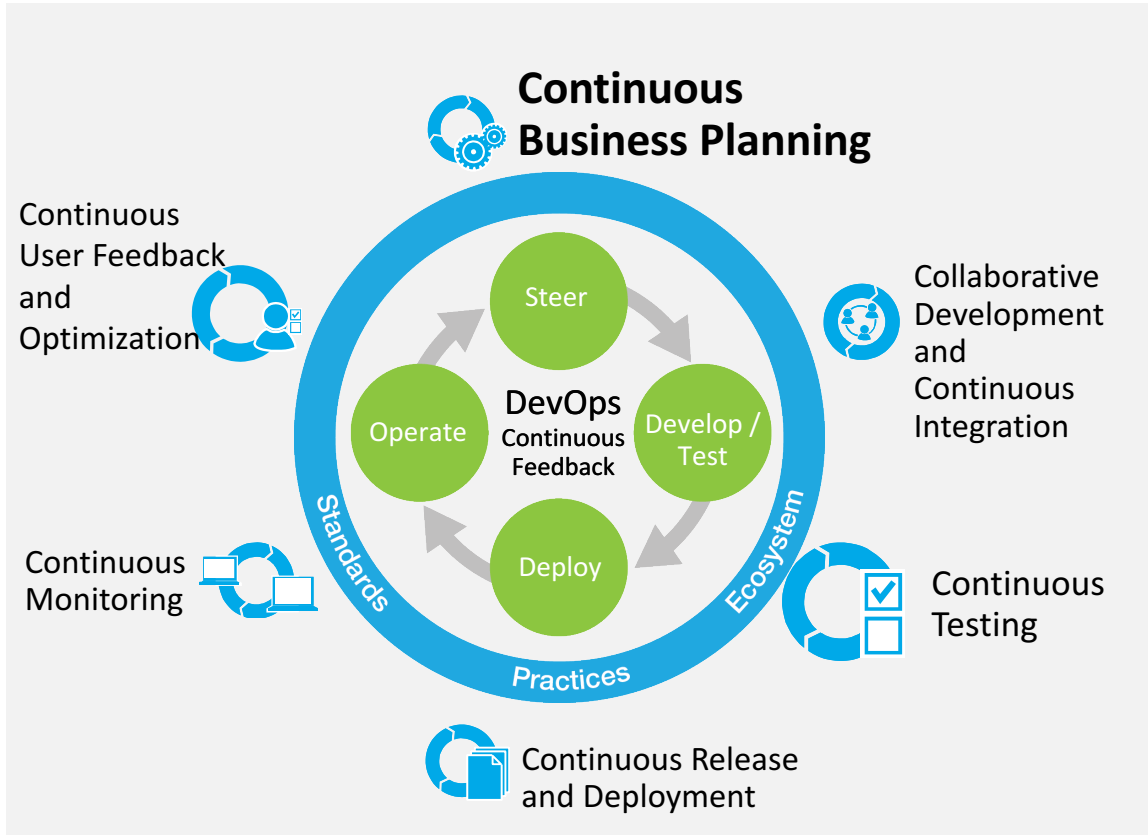


Focused on
business
planning

Continuous
steering



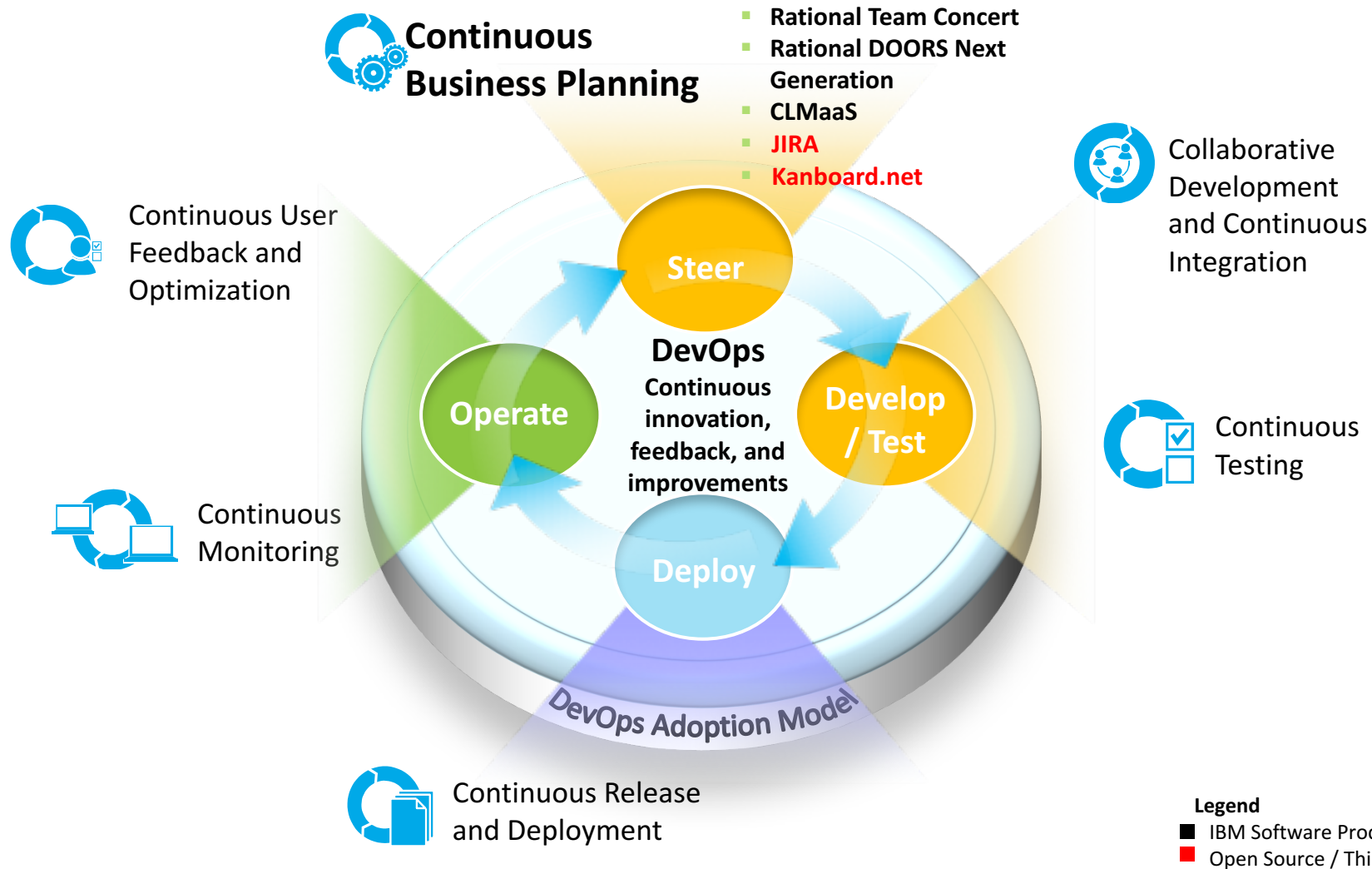
Continuous business planning



Helps organizations focus on activities where they will gain most value:

- Attacks the high value and high risk items first
- Predicts and quantifies the outcomes and resources
- Measures honestly with distributions of outcomes
- Learning what customers really want and steer with agility

Continuous business planning



Collaborative development



- Brings together customer and team stakeholders towards a partnered goal
- Works within a time-boxed scope
- Focuses on delivering a tangible and functional business outcome

Focused on accelerated outcomes



Continuous integration



- This refers to the best practice of integrating code of the entire team regularly to verify that it works well together.
- Each developer integrates daily, which leads to multiple integrations per day.
- Integrations are verified by automated builds that run regression tests to detect integration errors as quickly as possible.
- Small incremental frequent builds help with early error detection and less rework.
- Continuous integration is the best practice for successful global collaborative development.

Focused on error free outcomes



Continuous integration

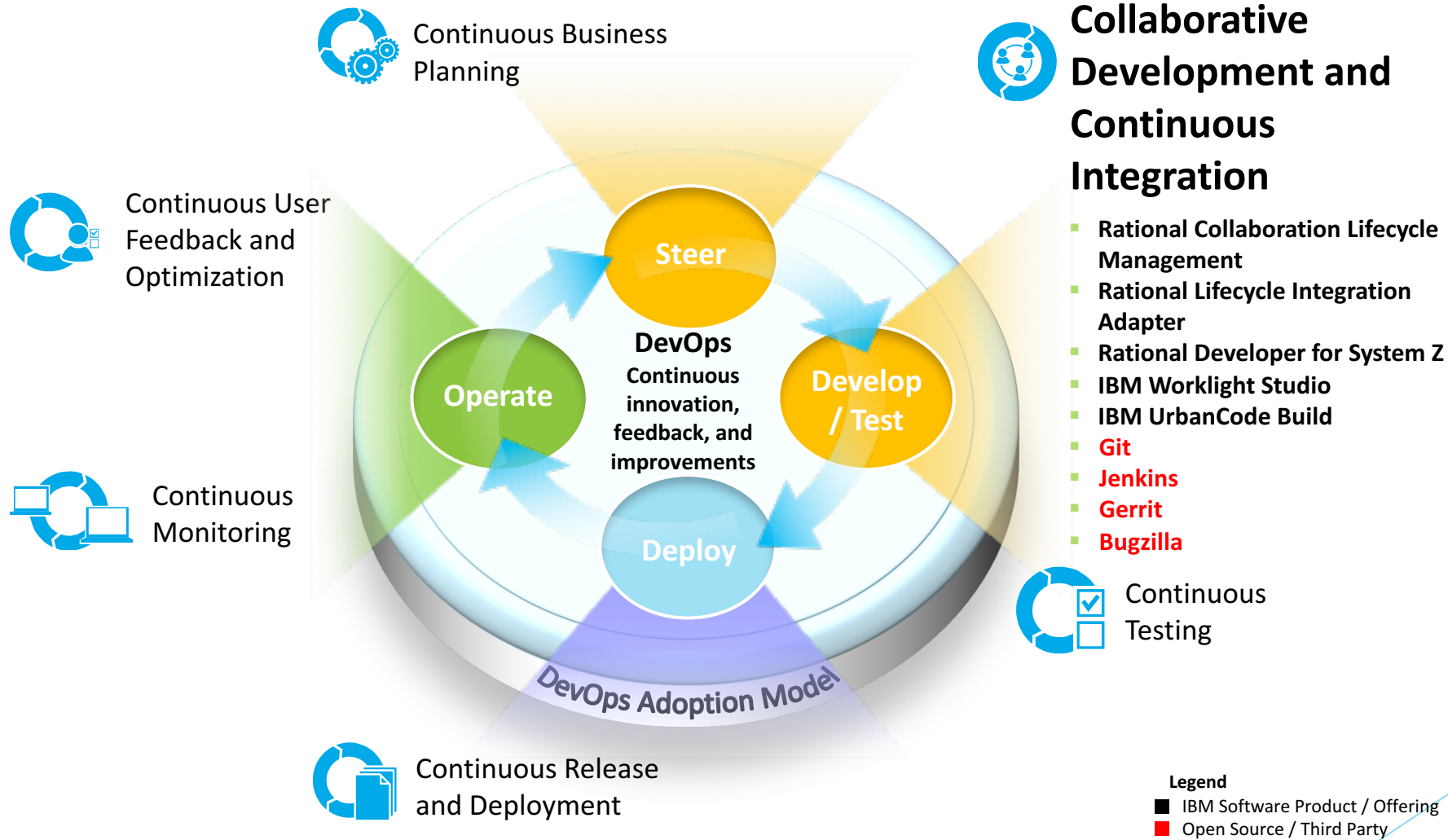


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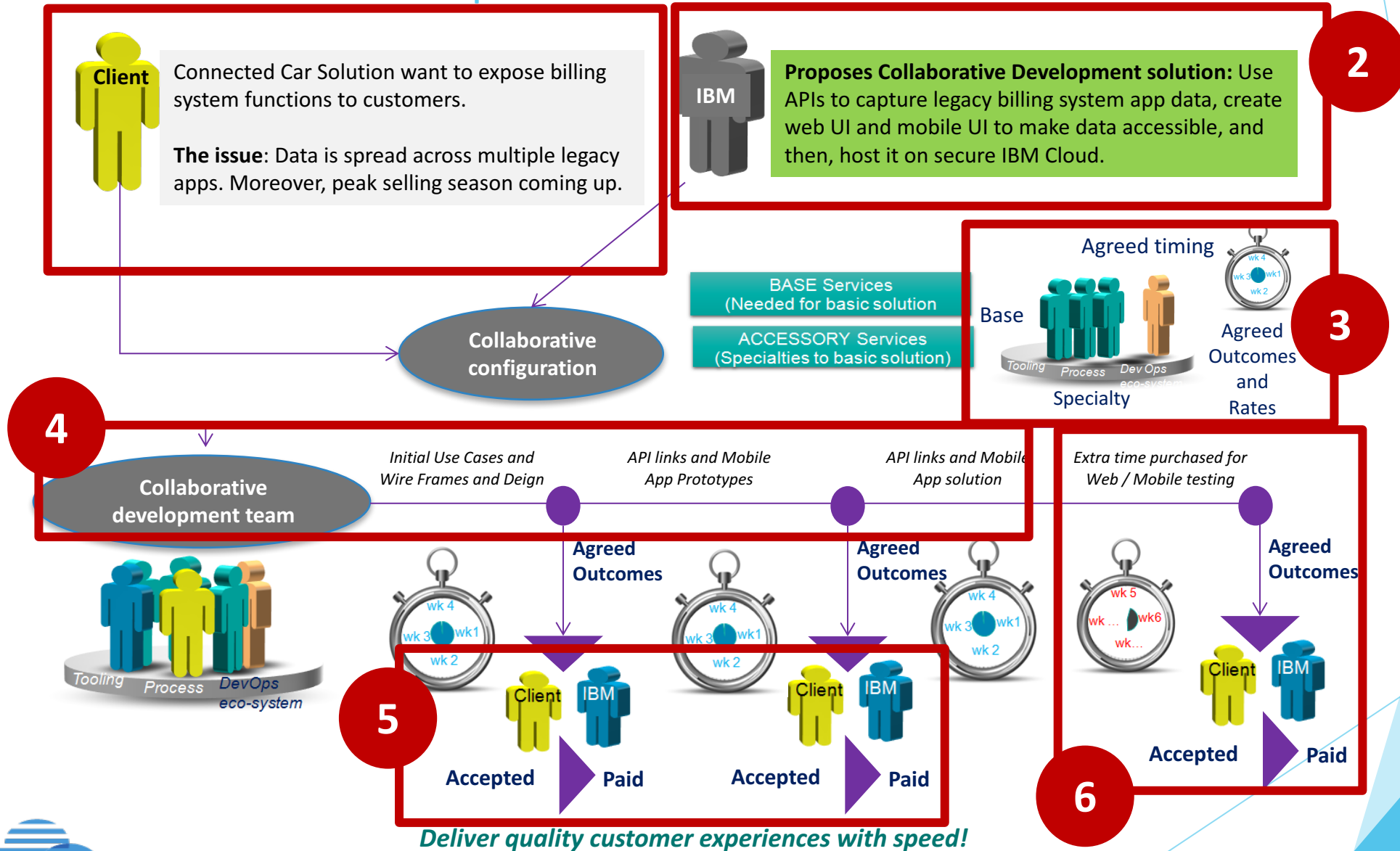
Focused on error free outcomes



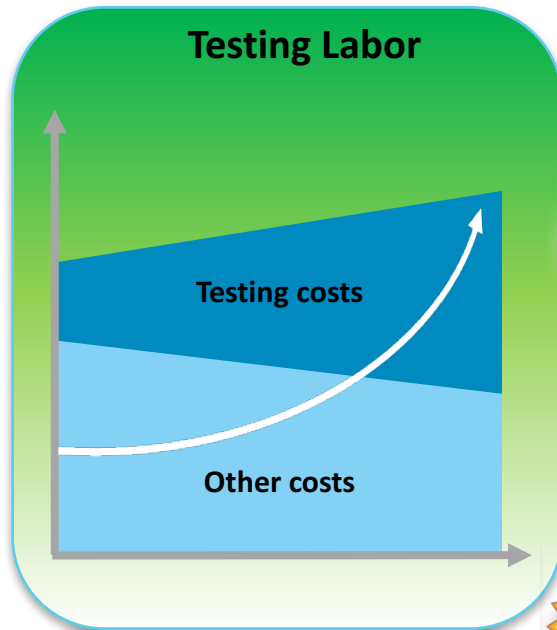
Collaborative development and continuous integration



Collaborative Development: Use case



The need for continuous testing

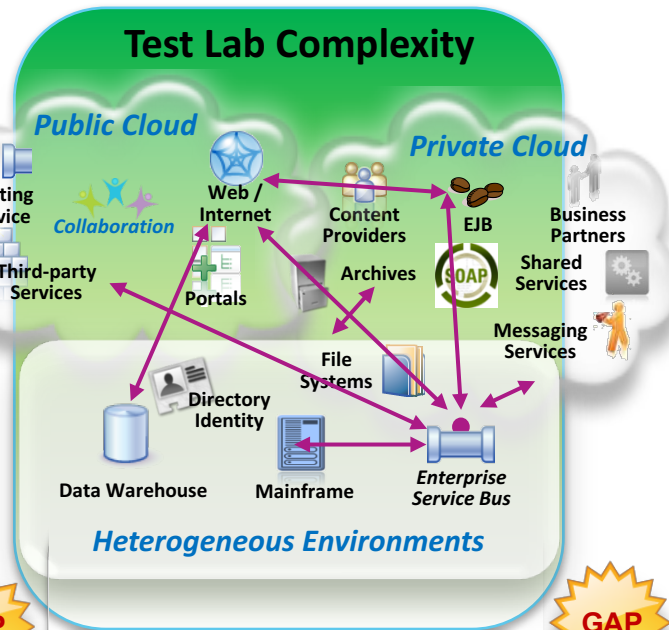


>60 %

of large organizations spend approximately 25%–30% of project budget on testing.



Poor alignment



Manual handoffs

~2-8 weeks

to deliver validated test environments.

Development Velocity

Traditional Testing



>45 %

of customers experience production delays.



Continuous testing

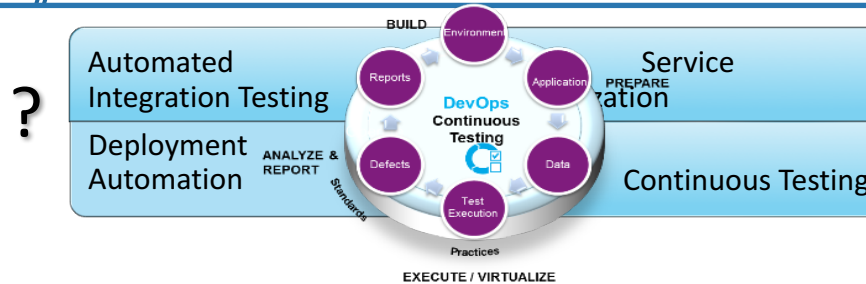
IMPACT

- Test delays and disruptions
- Higher risk of component failure
- Manual, inefficient, and inaccurate
- More unplanned IT work

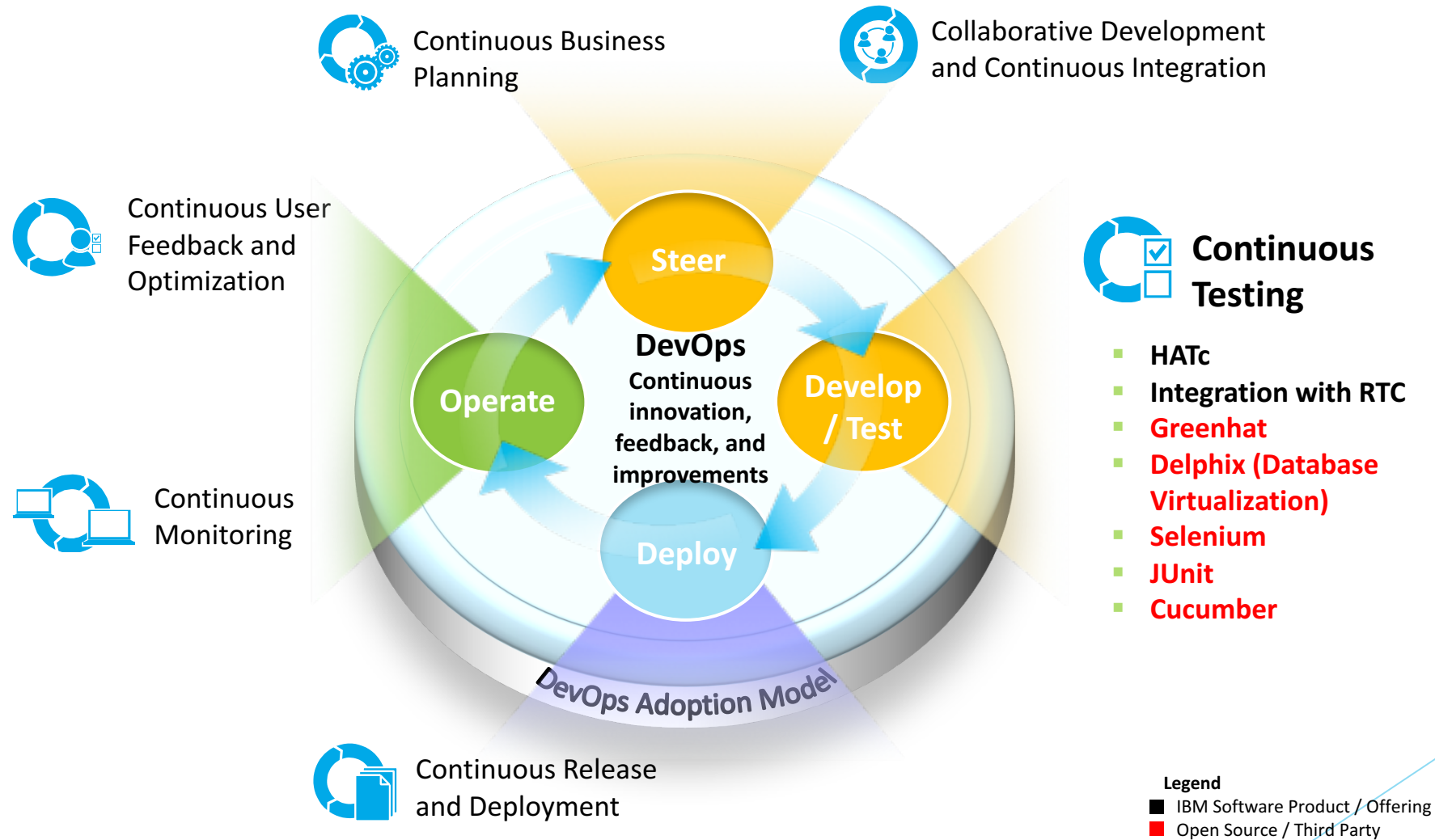
CAUSE

- Manual provision of test environments
- Manual gaps between automated processes
- Manual installation / configuration
- Manual test setup (backend providers, data setup, and resource dependency)

SOLUTION



Continuous testing



Continuous Release and Deployment: Continuous delivery



- This refers to the best practice of deploying code rapidly and safely into production-like environments.
- Deployments kick off automated tests to ensure components perform business functions as expected.
- Every change is automatically deployed to staging.
- Deployments are on-demand and self service.
- Applications can be deployed into production with a push of a button, when business is ready.

Focused on rapid and automated delivery



Continuous release and deployment

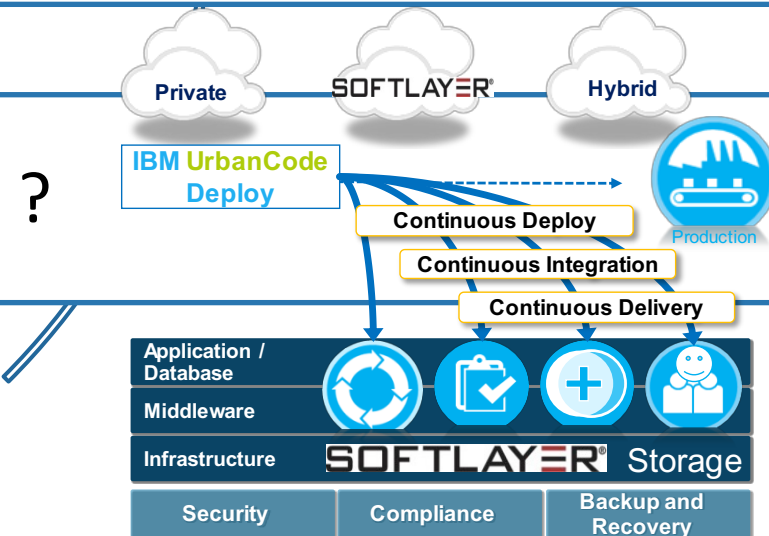
IMPACT

- Delayed environments delivery...
- Delayed turn around from dev to test... and back...
- Manual, inefficient, inaccurate, and long
- High level of re-work and errors
- Costs increased
- More unplanned IT work

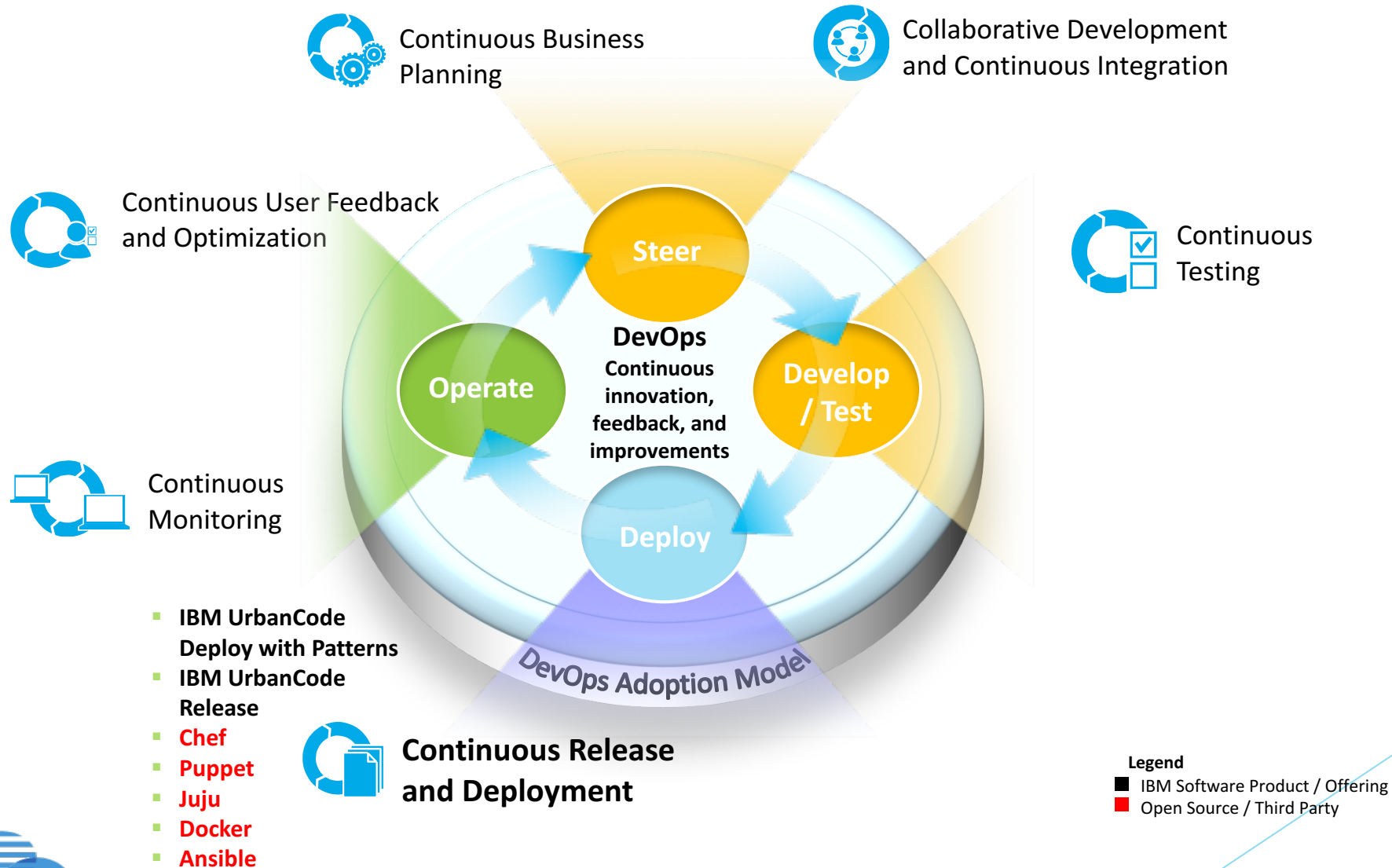
CAUSE

- Manual environments planning / delivery
- Manual provision of dev environments
- Manual installation / configuration of badly-documented OS / MW / APPS
- Manual integration (back end providers, data setup and resource dependency)

SOLUTION

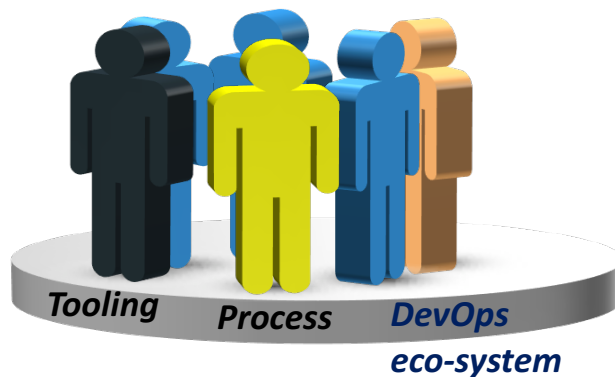


Continuous release and deployment



Continuous customer feedback and optimization

Focused on learning and fine tuning



- Efficient DevOps **allows faster feedback.**
- Continuous customer feedback and optimization provides visual evidence and full context to **analyze customer behavior, pinpoint customer struggles, and understand customer experiences** using web or mobile applications.
- Experimentation, learning through first-hand client experiences, and continuous feedback are **critical to being successful in this new world.**
- Delivering a minimal viable product, learning, and pivoting in a responsive way will **challenge the status quo.**
- Instrumented feedback along with sponsor users connected into cross functional feature teams can be an incredible combination.
- Evolve in a disruptive yet healthy way that enables the team to **innovate while remaining connected with the system of record team** where the data and transactions live.



Continuous customer feedback and optimization

Focus on user engagement and feedback

Organizations are challenged to apply new approaches to assessing the quality of their mobile apps.

Need for rapid response

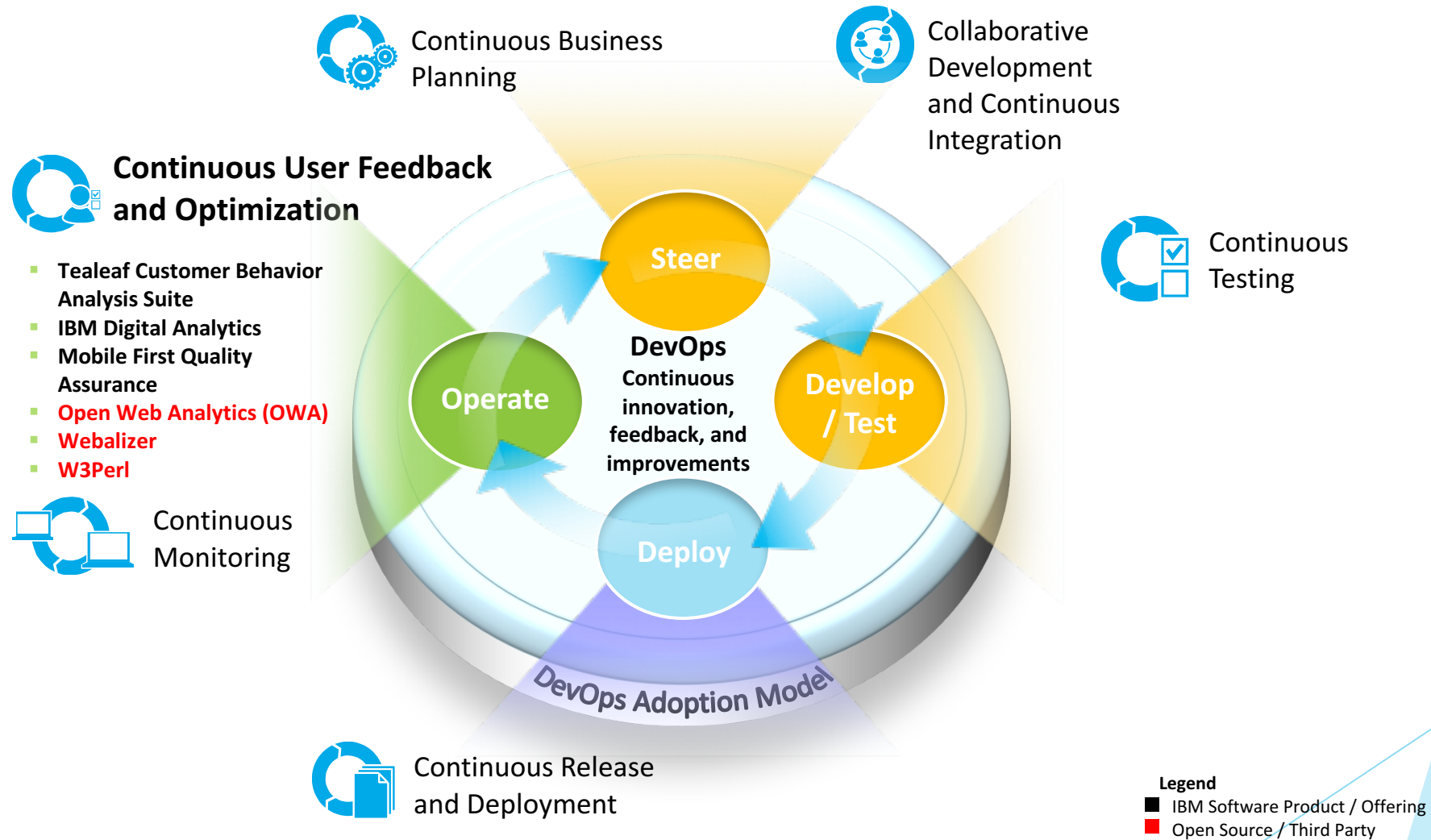
We must be much more efficient and effective in our testing and assessment of mobile app quality.

FEEDBACK

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by Getty Images



Continuous customer feedback and optimization



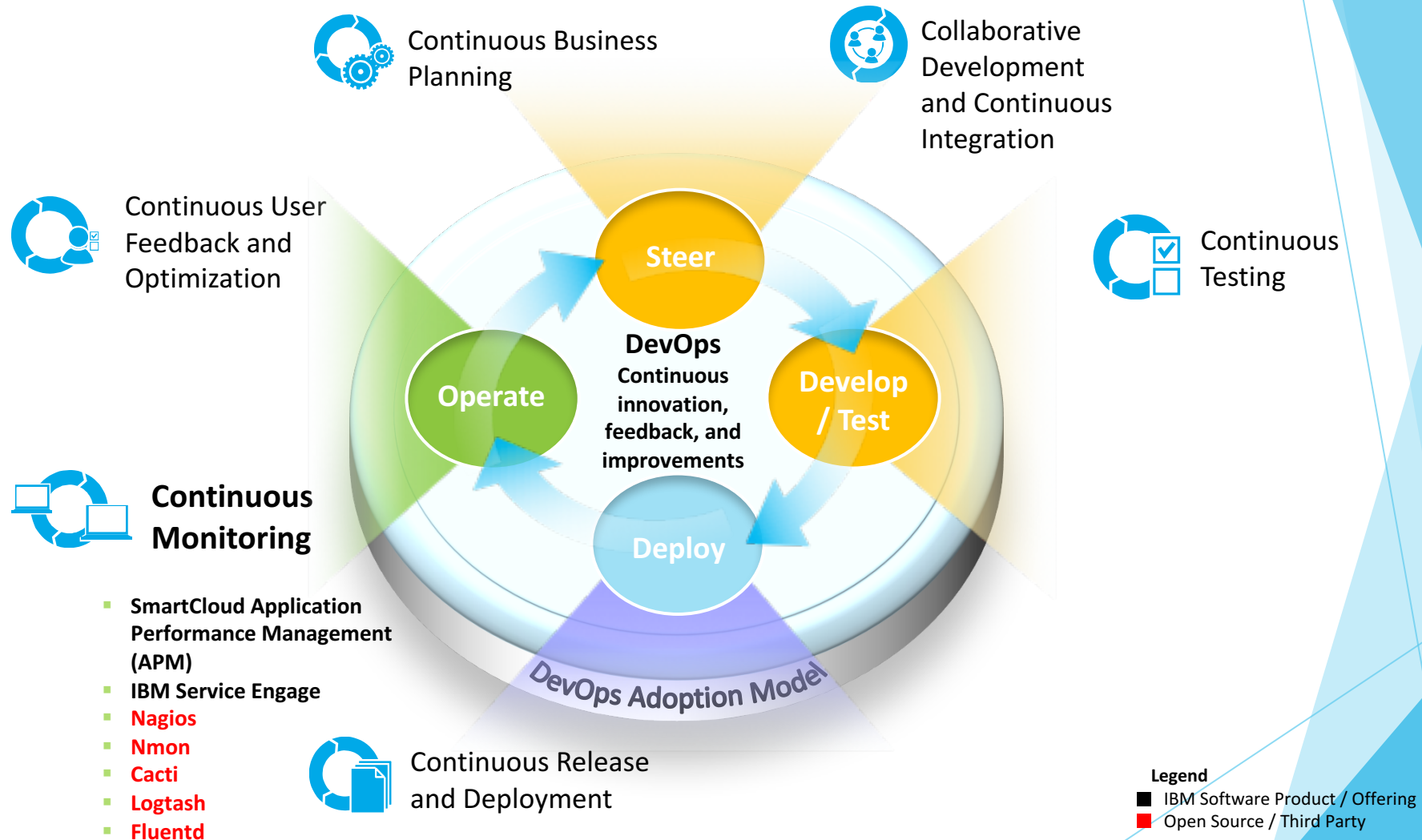
Continuous monitoring



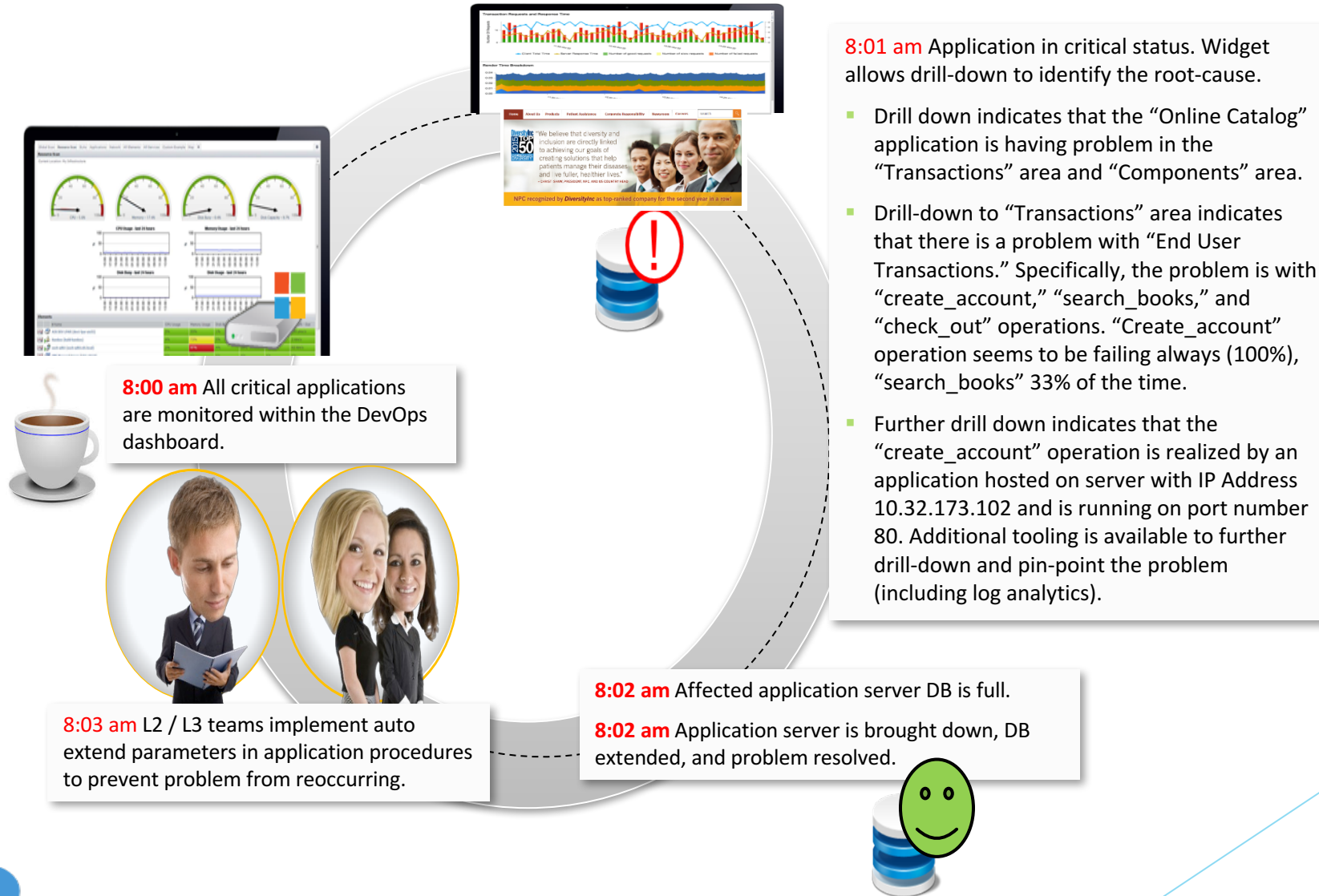
- Continuous monitoring offers enterprise-class, easy-to-use reporting that helps developers and testers understand the performance and availability of their application, even before it is deployed to production.
- In production, the operations team manages and ensures that the application is performing as desired and the environment is stable via continuous monitoring.
- Thresholds can be set for what is considered “optimal.”
- Any untoward incident triggers an automatic alert and / or remediation
- Monitoring logs are used for operational analytics.

Focused on operational efficiency

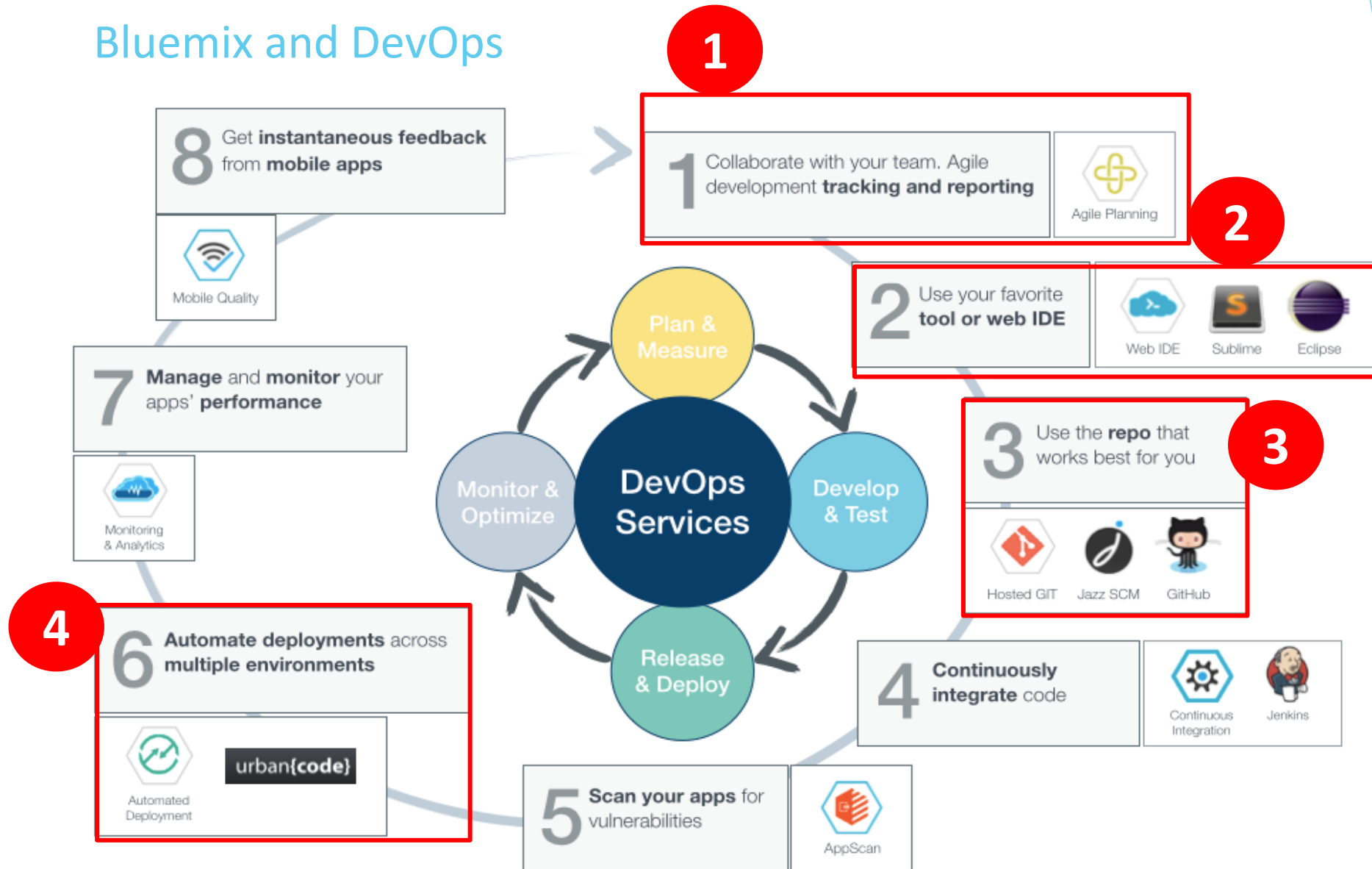
Continuous monitoring



With application performance management....



Bluemix and DevOps



תודה
Dankie Gracias
Спасибо شكرياً
Merci Takk
Köszönjük Terima kasih
Grazie Dziękujemy Děkojame
Ďakujeme Vielen Dank Paldies
Kiitos Tänname teid 谢谢
Thank You Tak
感謝您 Obrigado Teşekkür Ederiz
Σας Ευχαριστούμ 감사합니다
Бодхон Bedankt Děkuje vám
ありがとうございます
Tack

