CONTINUOUS INTEGRATION

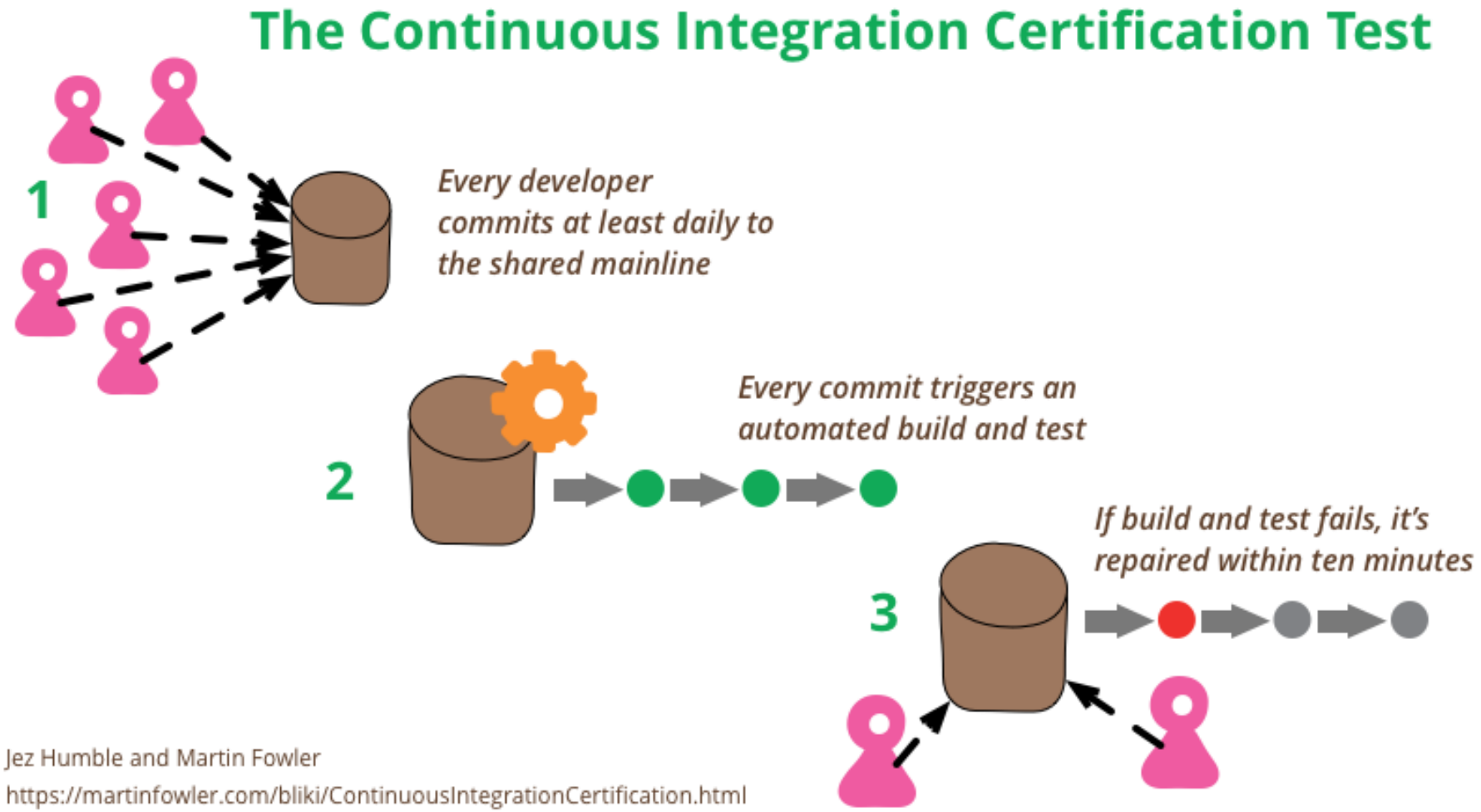
Agenda

- What is Continuous Integration?
- CI keys
- Continuous Delivery
- Continuous Deployment
- Flow
- CDMM
- Demo

Qué es Integración Continua? (Continuous Integration)

- Práctica de desarrollo
- Integrar frecuentemente código en un repositorio común
- Cada integración se verifica por un *build* automatizado

Qué es Integración Continua?



https://martinfowler.com/bliki/ContinuousIntegrationCertification.html

Qué es Integración Continua? (Continuous Integration)

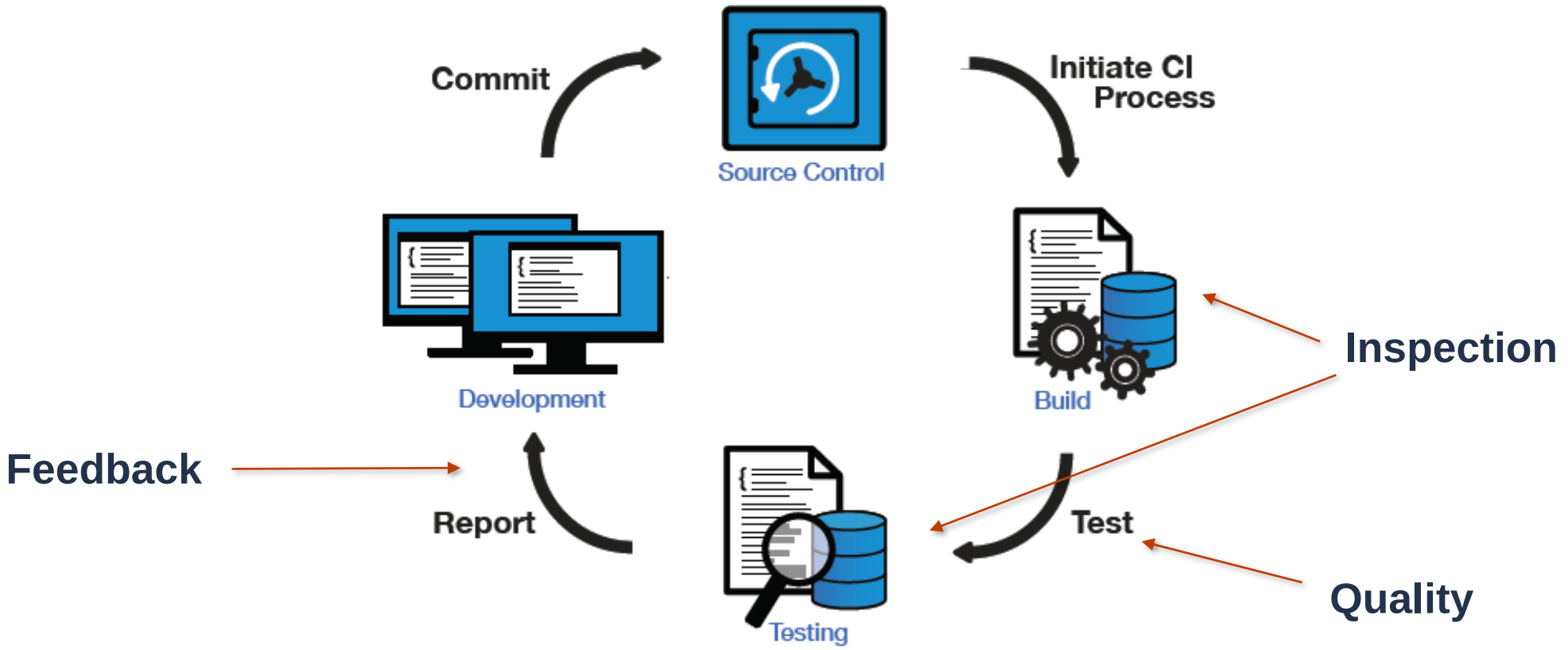
- Se considera un *best practice*
- Debería incluir tests automatizados
- Reduce riesgos, rutinas manuals (pro error)
- Ayuda a identificar problemas pronto

Qué es Integración Continua?
(Continuous Integration)

CI Keys

- Quality → Unit Tests
- Inspection → Compilation errors, code metrics
- Feedback → Fast notifications

CI Keys


Commit
Source Control
Initiate CI Process
Development
Build
Inspection
Feedback
Report
Testing
Test
Quality

Continuous Delivery

- Es una extension de CI
- Vamos a través de fases de testing en diferentes ambientes
- Tenemos un software confiable, listo para ser puesto en producción

Necesitamos:

- Buen manejo de ambientes
- Ambientes dedicados para cada fase

Continuous Delivery

READY TO DEPLOY TO PRODUCTION AT ANY TIME

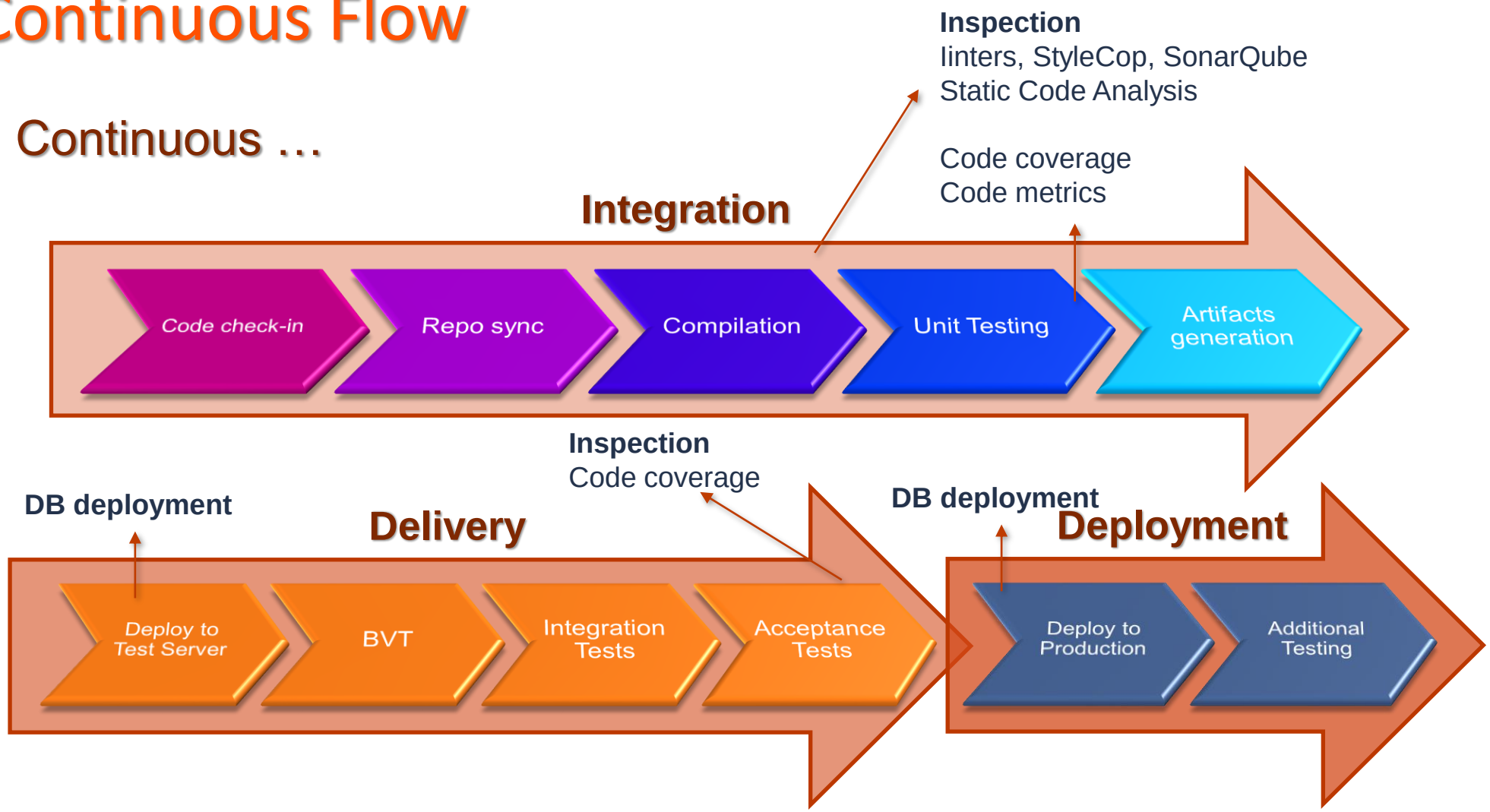
Continuous Deployment

CADA BUILD EXITOSO LLEGA A PRODUCCIÓN

- ✓ Retroalimentación rápida sobre *features*
- ✓ Fixes para defectos desplegados inmediatamente (excelente servicio al cliente)
- ✓ Respuesta rápida a situaciones extraordinarias

Continuous Flow

Continuous …



Continuous Delivery Maturity Model

PRAQMA

Continuous Delivery Maturity Model

	FOUNDATION	NOVICE	INTERMEDIATE	ADVANCED	EXPERT
	Platform has CD 3.0 available, however the development cycle is still poorly automated	CD 3.0 with basic automation on a reactive level	Average CD 3.0 technologies adopted with proactive elements	Advanced CD 3.0 technologies adopted, that are quantitively managed	Decision making and execution is increasingly handed over to machine learning algoritmst
INTELLIGENCE	- Customer behaviour and feedback server	- Basic monitoring of app usage and handling customer feedback	- Advanced customer monitoring - A/B testing in place	- All metrics and reports are predefined - Decision making based on detailed analytics	- Realtime data collection, analysis & reporting using AI
PLANNING	- Centralized backlog management server	- All work managed by means of digital backlog	- Automatic backlog item creation	- Automatic proposed backlog prioritization	- backlog creation and prioritization using AI
INTEGRATION	- Centralized versioncontrol - Centralized build server	- Nightly builds - Workflow Orchestrator - C-Integration reporting	- Automatic build on commit - One build for all environments	- Staged integrations - Usage of micro-services - Realtime integration reporting	- Continuous integration services are automatically up- and downscaled
TESTING	- Centralized unit-test server - Unit tests start manually	- Unit tests run in CD- pipline - Automated Integration tests that are manually started	- Integration tests in pipeline - Automated acceptance tests that are manually started	- Acceptance tests in pipeline - Automated performance and security tests that are manually started - Behaviour driven development	- Continuous Testing pipeline including end-2-end regression tests
DEPLOYMENT	- Deployment server	- Basic deployment scripts - Automatic deployment to test environment after succesful build	- Automatic deployment pipeline from build to production	- Zero downtime deployments	- Deployments on endless scallable platforms

DEMO