


Crafting a robust deployment pipeline in finance

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Establish in-house development at a pension fund

A low-angle, upward-looking photograph of several tall skyscrapers against a clear blue sky. The buildings are arranged in a circular pattern, creating a sense of height and scale. The lighting suggests it might be late afternoon or early morning, with some windows reflecting the sky and others showing interior lights.

How does it feel inside
a financial institution?

Regulations & compliance

No errors allowed

Long release cycles

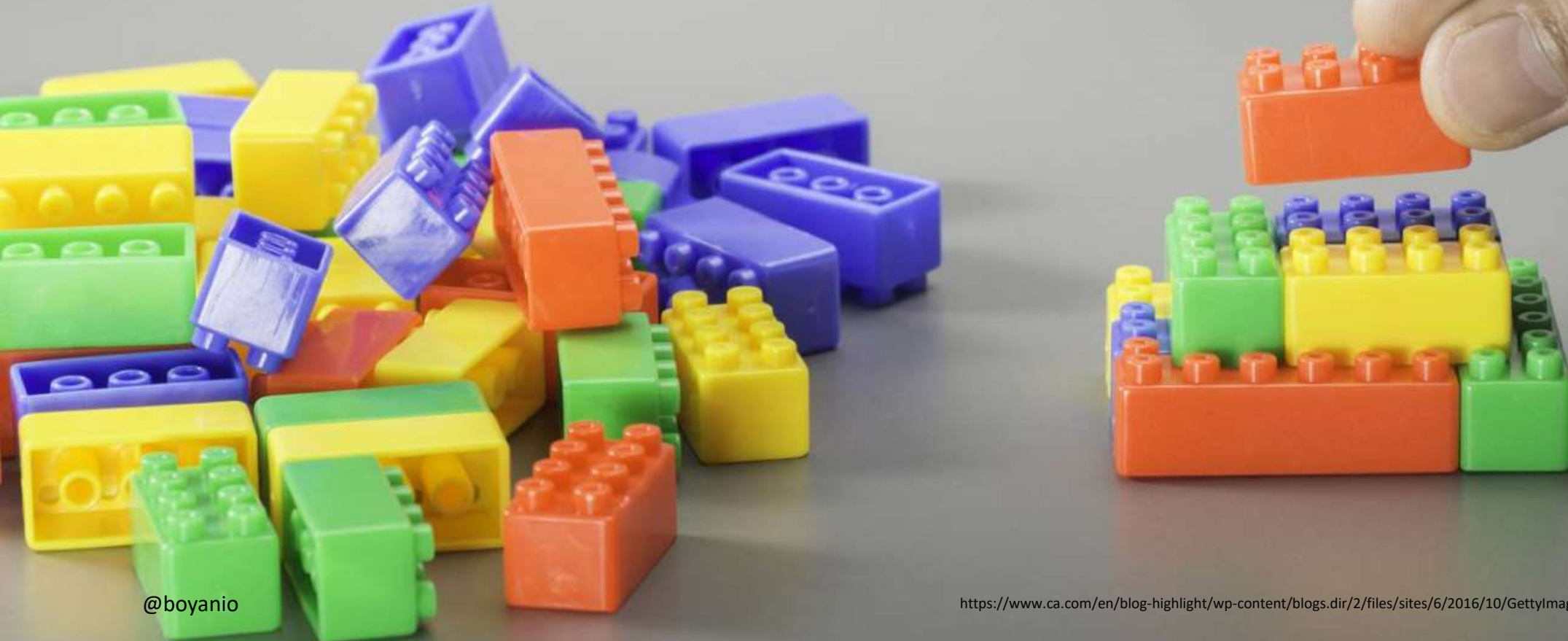


Finding the right piece could be a challenge

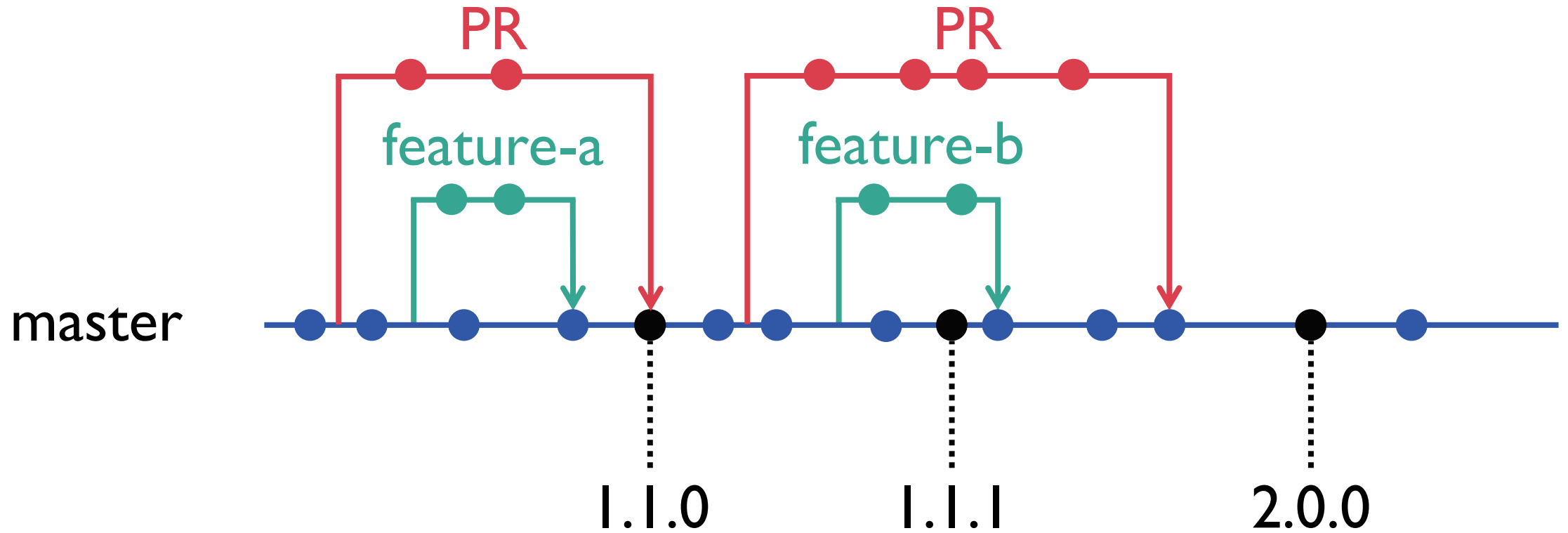
How does one create
a deployment pipeline
from the scratch?

Goal: delivering **value** to our
members on a **frequent basis**

Start simple,
stay simple
as long as possible



Trunk-based development

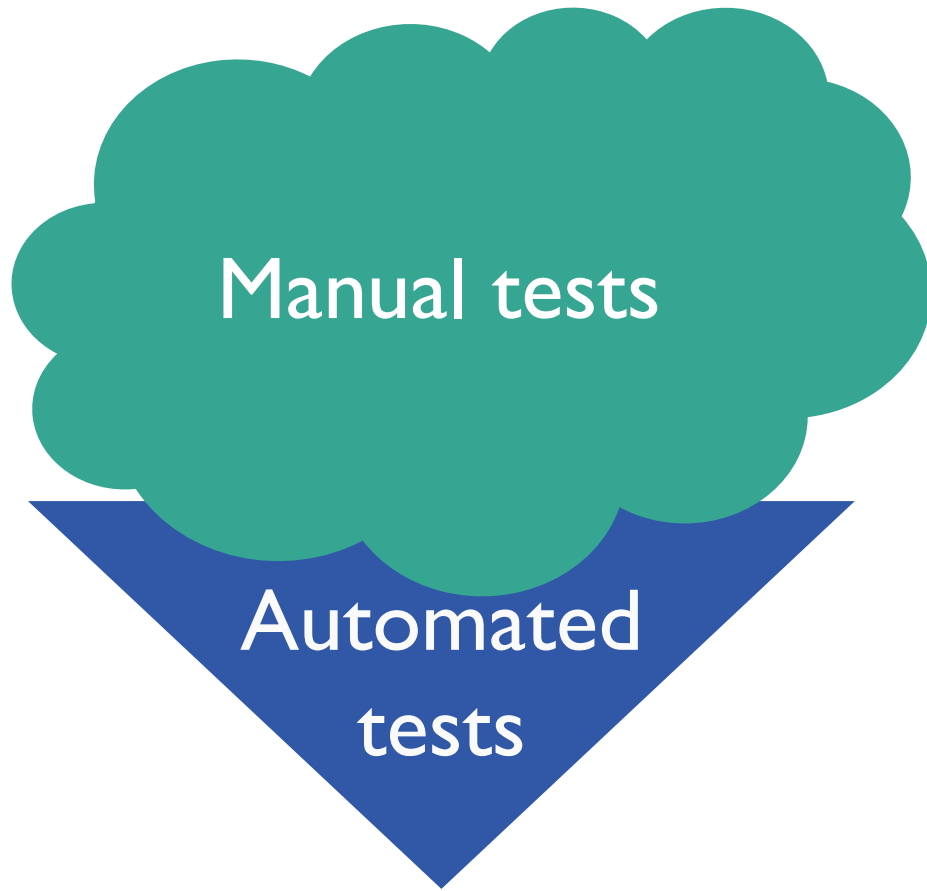




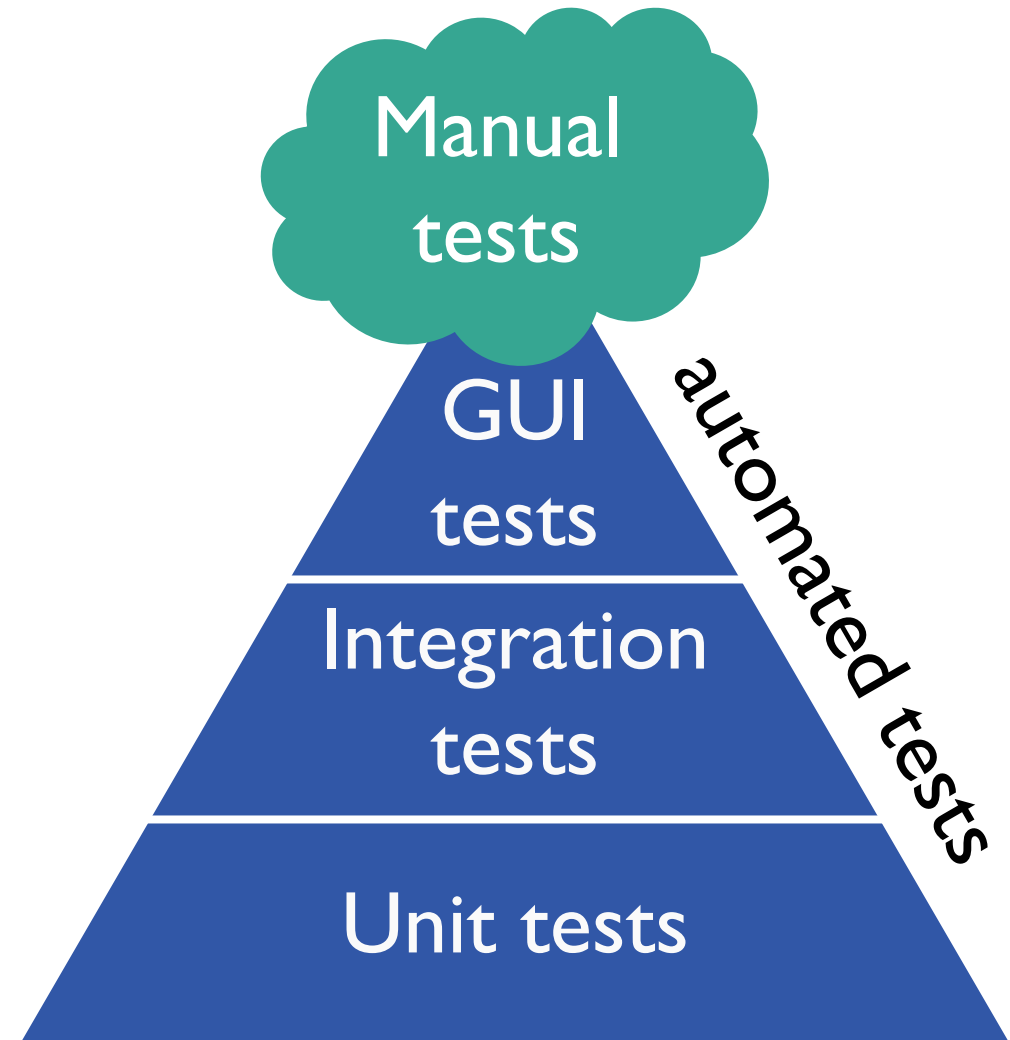
Long-lived branches disguise the big picture



Building trust



vs.



Steps to perform:

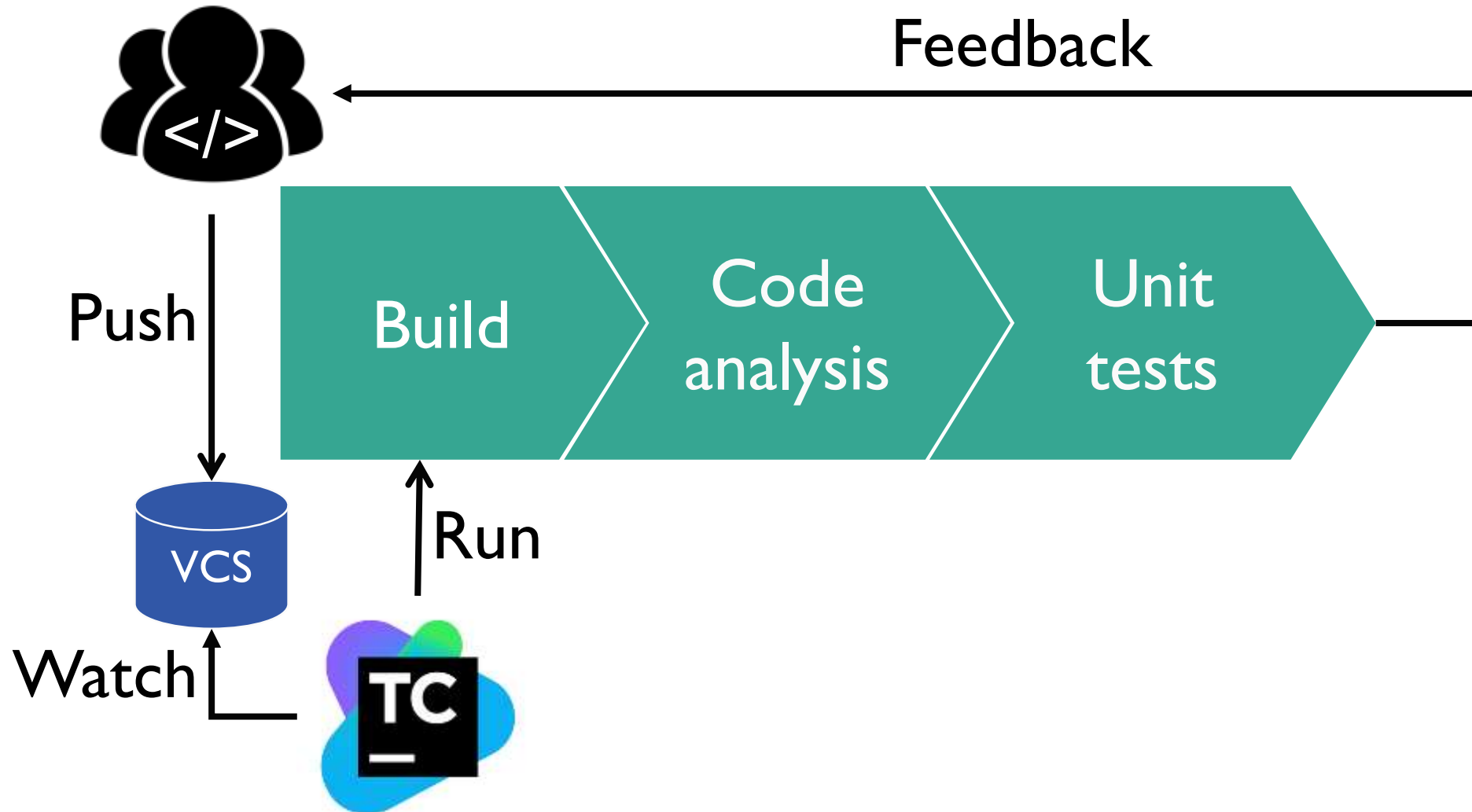
1. Go to the homepage
2. Log in as a member with test NemID
3. Go to the retirement page
4. Go through the online retirement process
5. Sign with test NemID

Confirm:

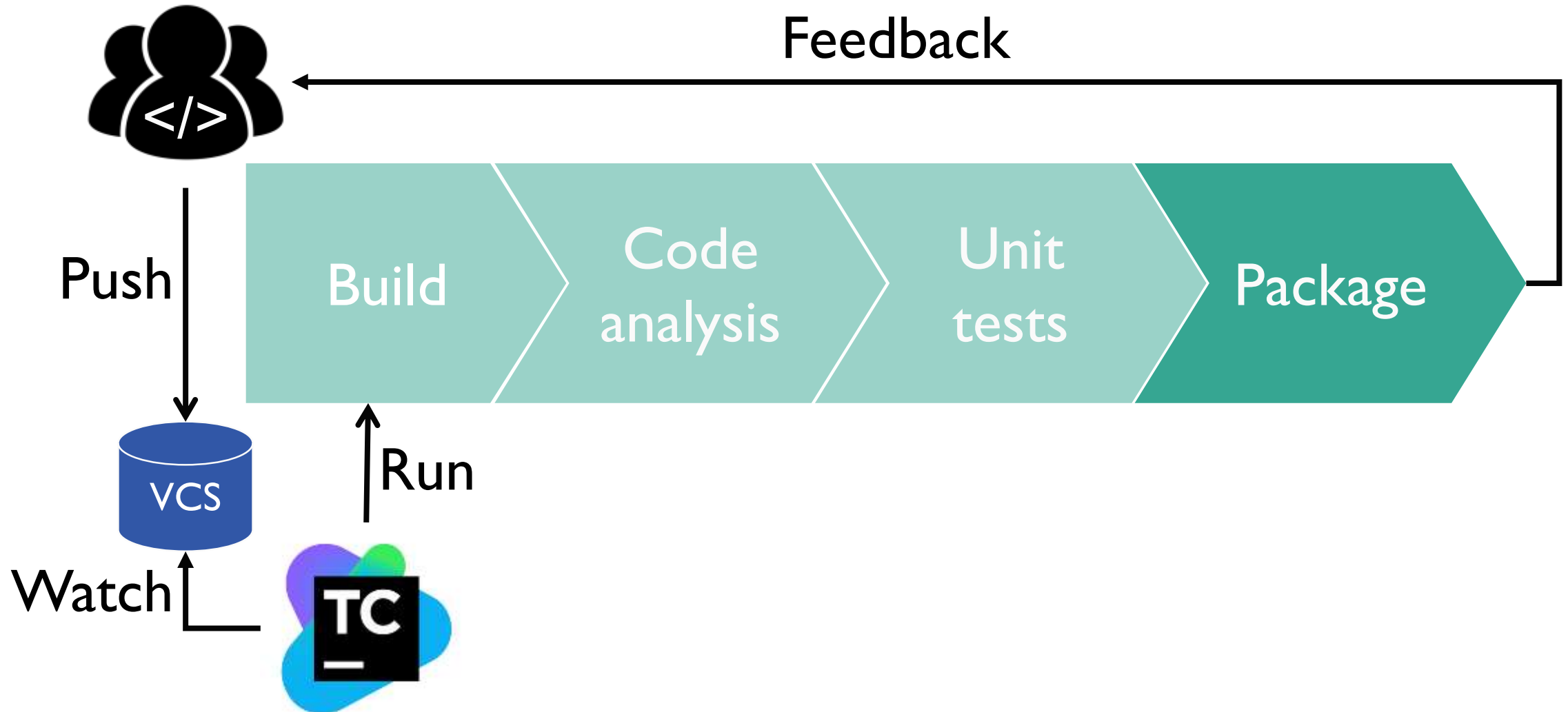
- you got a confirmation e-mail
- there is a summary document in the archive
- there is a update request in the core system



Continuous Integration



Continuous Integration



Always
deployable



Building a development team
means building
a development culture

 auchenberg / volkswagen

 Watch ▾

52

★ Star

5,986

 Fork

115

↔ Code

! Issues 9

 Pull requests 38

 Projects 0

 Wiki

 Insights



Volkswagen detects when your tests are being run in a CI server, and makes them pass.

volkswagen

ci-server

cheat

defeat

javascript

nodejs

continuous-integration

 94 commits

 39 branches

 15 releases

 12 contributors

 MIT

Branch: master ▾

New pull request

Create new file












Upload files

Find file

Clone or download ▾



Manual deployment
considered dangerous

Name	Date modified	Type	Size
 _bin_old	12-Nov-13 13:03	File folder	
 bin	20-Dec-14 14:10	File folder	
 UI	12-Nov-13 13:03	File folder	
 Global.asax	12-Nov-13 13:03	ASP.NET Server A...	1 KB
 ReadMe-before-updates.txt	20-Dec-13 15:24	TXT File	11 KB
 ReadMe-remember-to-enable-log.txt	02-Jan-14 13:10	TXT File	11 KB
 Web.config	23-Jan-14 09:15	XML Configuratio...	6 KB
 Web-before-log.config	02-Jan-14 11:45	XML Configuratio...	6 KB
 Web-no-http.config	20-Dec-13 14:12	XML Configuratio...	6 KB
 Web-old - Copy.config	17-Nov-13 14:11	XML Configuratio...	6 KB
 Web-old.config	12-Nov-13 13:03	XML Configuratio...	6 KB

Automated deployment to any environment



Identical environment set-up

Build once, deploy everywhere



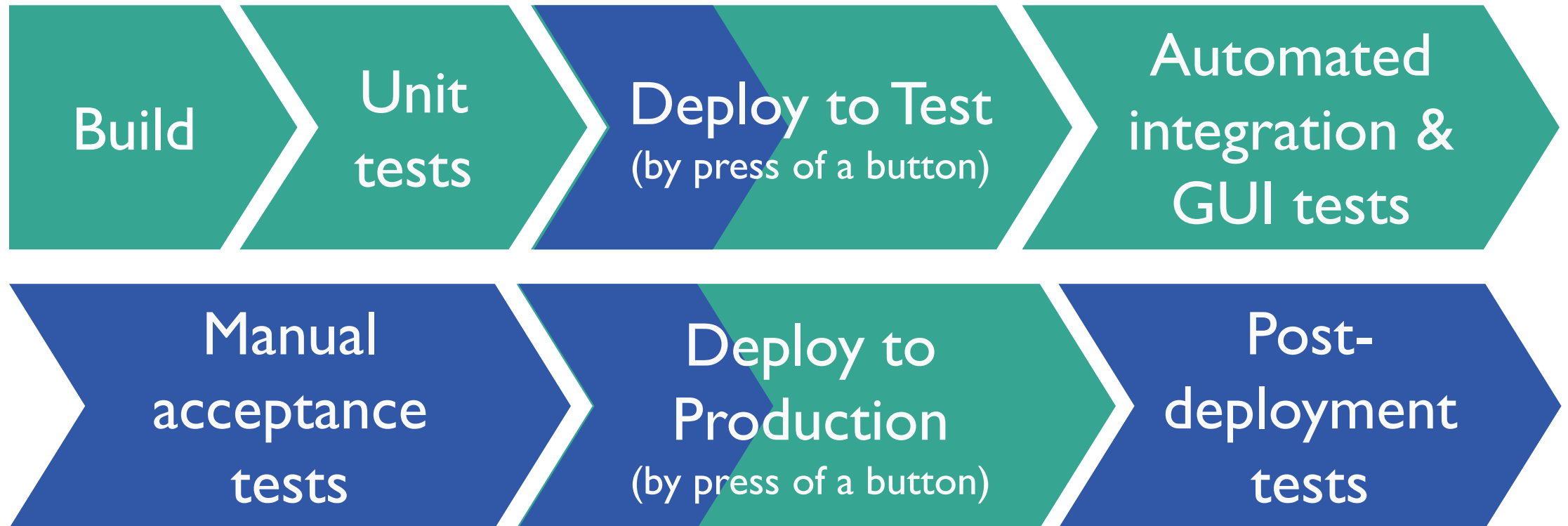
Octopus Deploy

TM-E	TM-C	TM-D	PreProd	Production
				✓ 1.3.2 September 20th 2017
		✓ 1.1.6 October 4th 2017		✓ 1.1.3 July 26th 2017
	✓ 1.6.23 September 11th 2017	✓ 1.6.23 August 16th 2017	✓ 1.6.23 August 23rd 2017	✓ 1.6.23 August 23rd 2017
✗ 3.4.13 November 7th 2017	✓ 3.4.5 October 6th 2017	✗ 3.4.15 November 6th 2017	✓ 3.4.12 November 1st 2017	✓ 3.4.12 November 1st 2017
✓ 1.2.0 September 13th 2017	✓ 1.2.0 September 13th 2017	✓ 1.2.0 September 13th 2017	✓ 1.2.0 September 13th 2017	✓ 1.2.0 September 20th 2017
✓ 2.0.6 September 28th 2017		✓ 2.0.6 September 28th 2017		✓ 2.0.6 October 3rd 2017
	✓ 1.7.5 September 14th 2017	✓ 2.0.1 October 4th 2017	✓ 1.7.5 September 12th 2017	✓ 1.7.5 September 12th 2017
✗ 2.50.15 November 7th 2017	✓ 2.50.4 October 6th 2017	✗ 2.50.17 November 6th 2017	✓ 2.50.11 November 1st 2017	✓ 2.50.11 November 1st 2017
	✓ 2.0.0 March 2nd 2017	✓ 2.0.0 March 1st 2017	✓ 2.0.0 March 2nd 2017	✓ 2.0.0 March 2nd 2017
✗ 1.14.20 November 7th 2017	✓ 1.14.9 October 6th 2017	✗ 1.14.20 November 7th 2017	✓ 1.14.17 November 1st 2017	✓ 1.14.17 November 1st 2017
✓ 1.4.4 September 20th 2017				
	✓ 1.0.0.2 October 24th 2017	✓ 1.0.0.2 October 24th 2017		

pro•duc•tion [pruh-duhk-shuhn] (n)

I. This complex system of application code, distributed services, servers, networking gear, etc., upon which we are going to try to carefully apply a complicated set of changes and hope that nothing goes wrong. Cross your fingers...here goes.

Production deployment



How often shall we
deploy to Production?

The fear of deployment



When you fear something,
you should do it often enough.
Then it becomes trivial.

Days between deploying to Production



Release

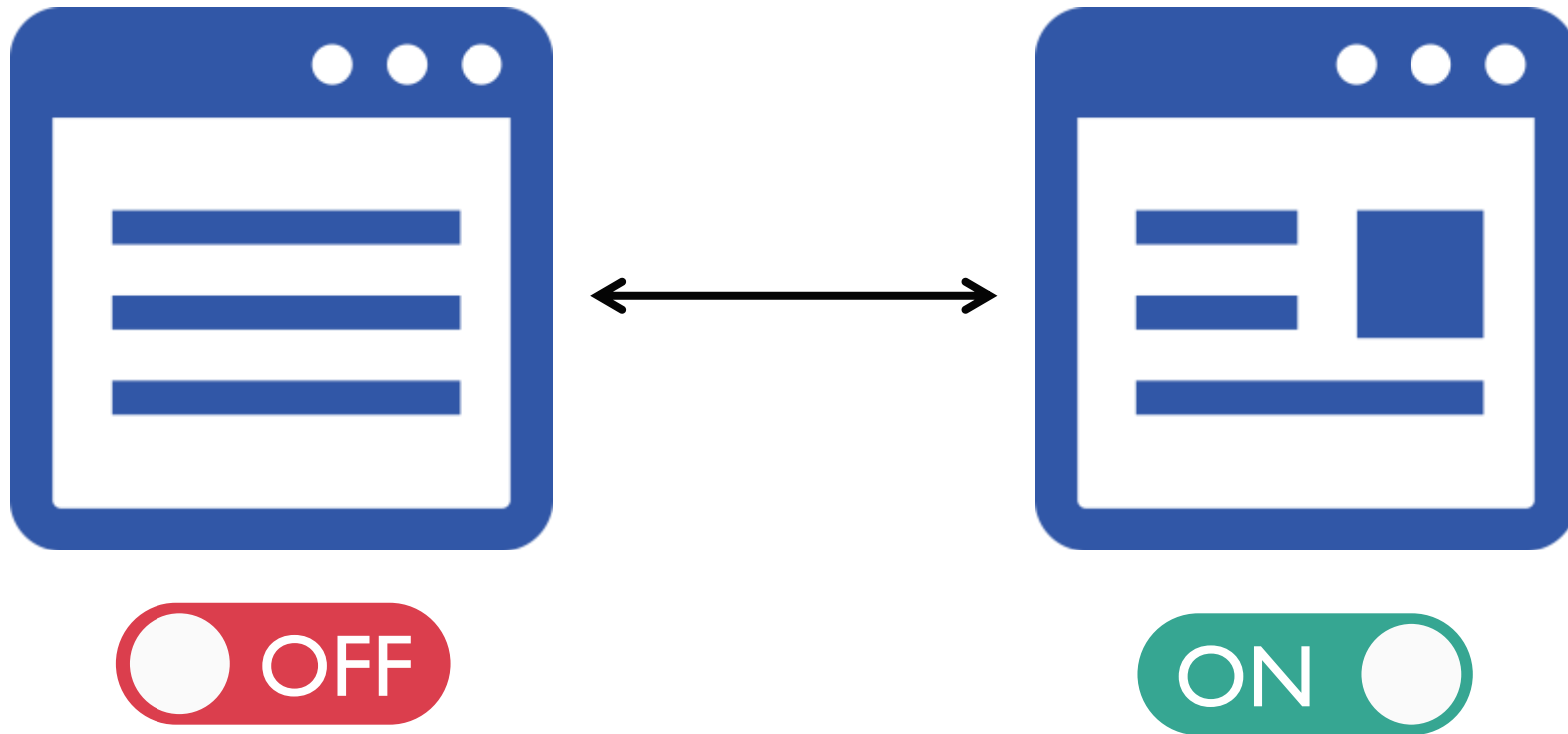
The act of making single or multiple features available to a wider audience

Deploy

The act of installing and configuring a software package onto a target system

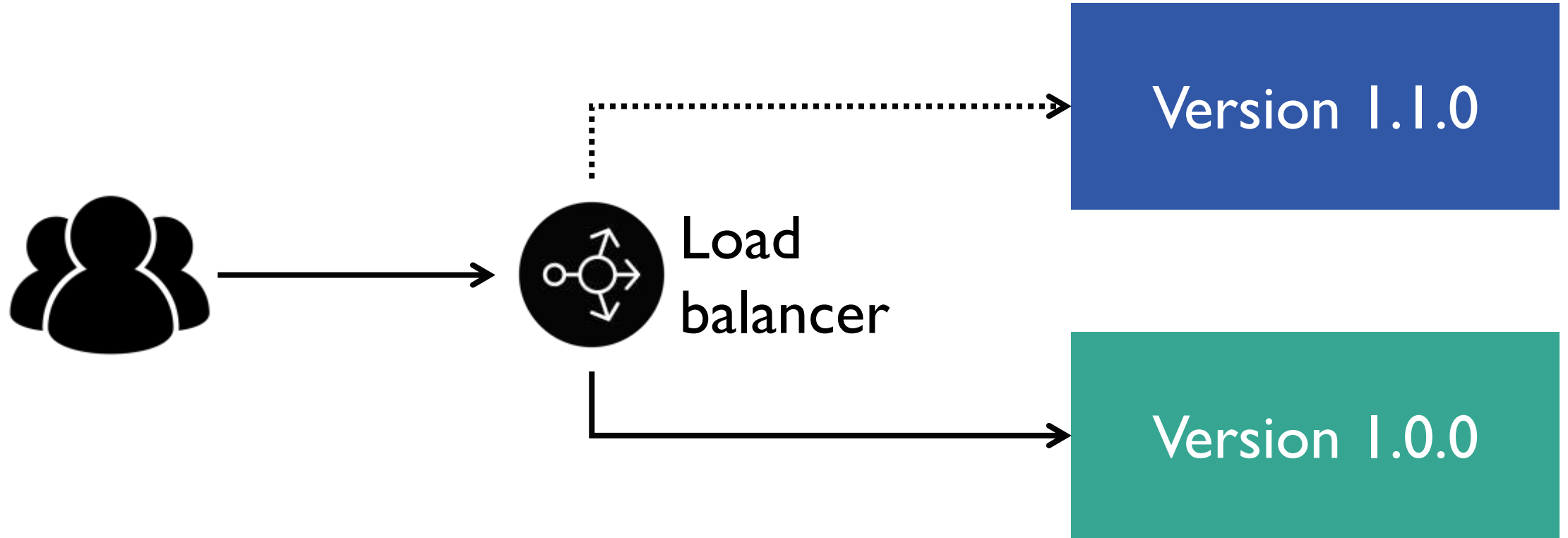
Feature toggles

let you deploy often without releasing immediately



Zero downtime deployment

using blue-green deployment approach



Continuous Delivery



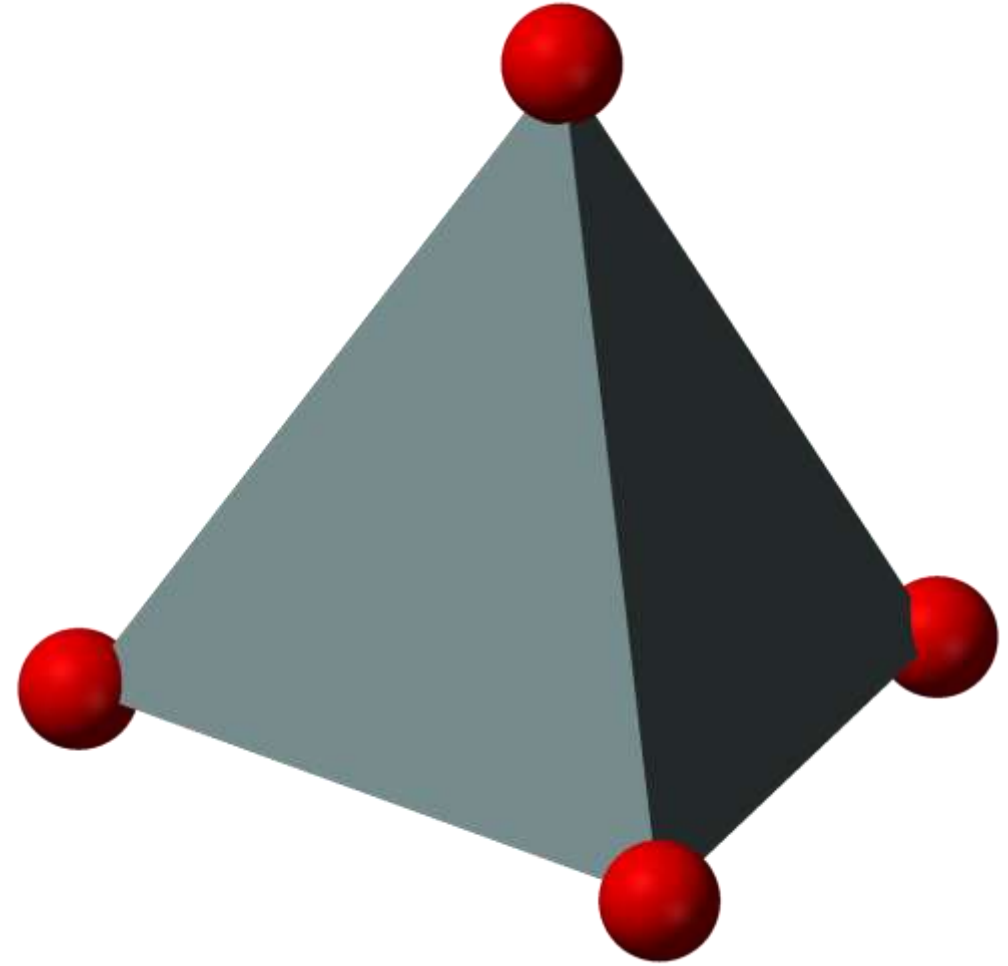
Continuous Deployment



Continuous Deployment?



How robust is the deployment pipeline?





The deployment pipeline supports the established agile practices and desired goals

Robust deployment
pipeline is about
confidence in your
value delivery



Deployment pipeline needs
constant reevaluation and
adjustment to increase your
confidence in the value delivery

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