Automation at a Large Government Department

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Introduction of Craig Moir

Over 15 years working in testing

Over 10 years focus on Test Automation

Established and managed an Automation team

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Overview

Automation Team Journey

Transition to Agile

Tools

Main Regression

Reduced from 1920+ hours testing effort to 160 hours

8 weekly to 2 weekly release process

Test Environment User Setup

Reduced from 2000 hours to 25 hours (Yearly)

Reduced Turnaround time from days to minutes

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Other Notable

Automated Environment Sanity tests (40+ environments)

Automated Windows 10 Update suite (100+ applications)

Automated Data setup jobs (self-service via Jenkins)

Ran/updated automation suites for multiple system upgrades, replacements over 8 years

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Organisation

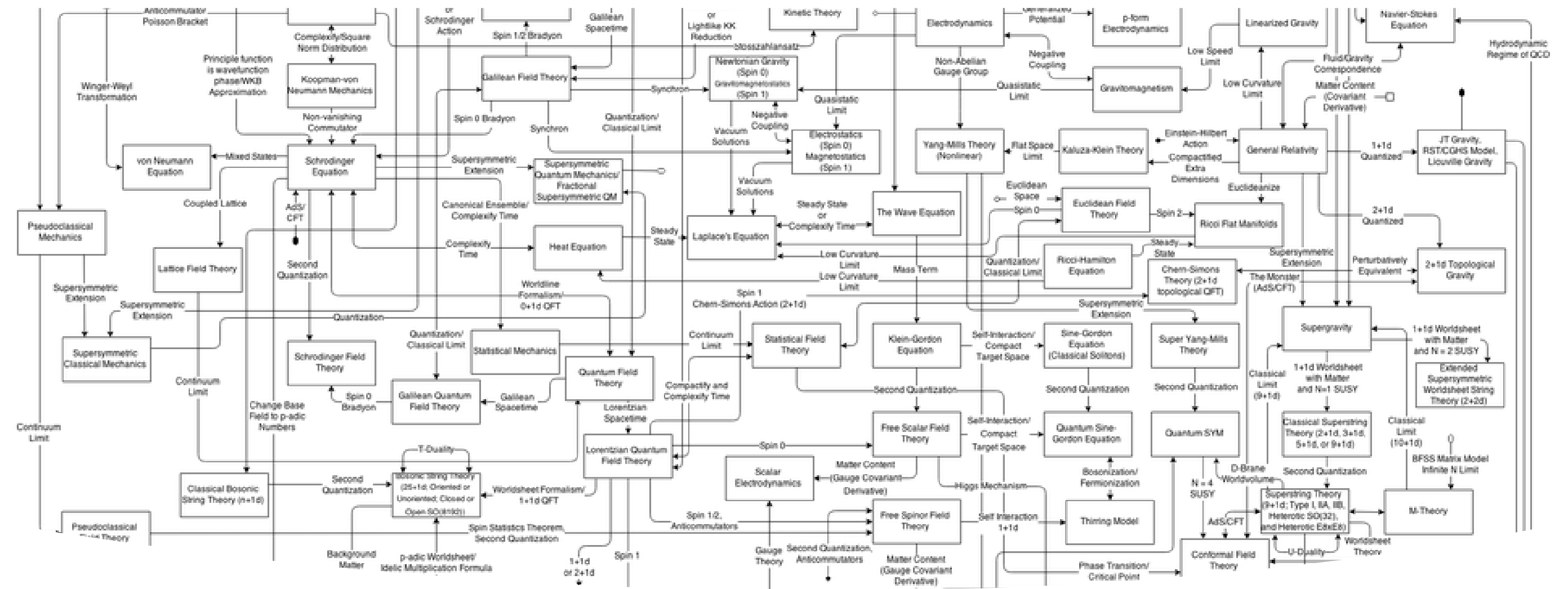Large Government department

Over 9000 staff

Large IT shop

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Complex Systems

Structure 9 Years Ago

Mostly waterfall, some Agilish teams

Centralised testing services, engagement to get testing recourses allocated

Project teams created for large pieces of work
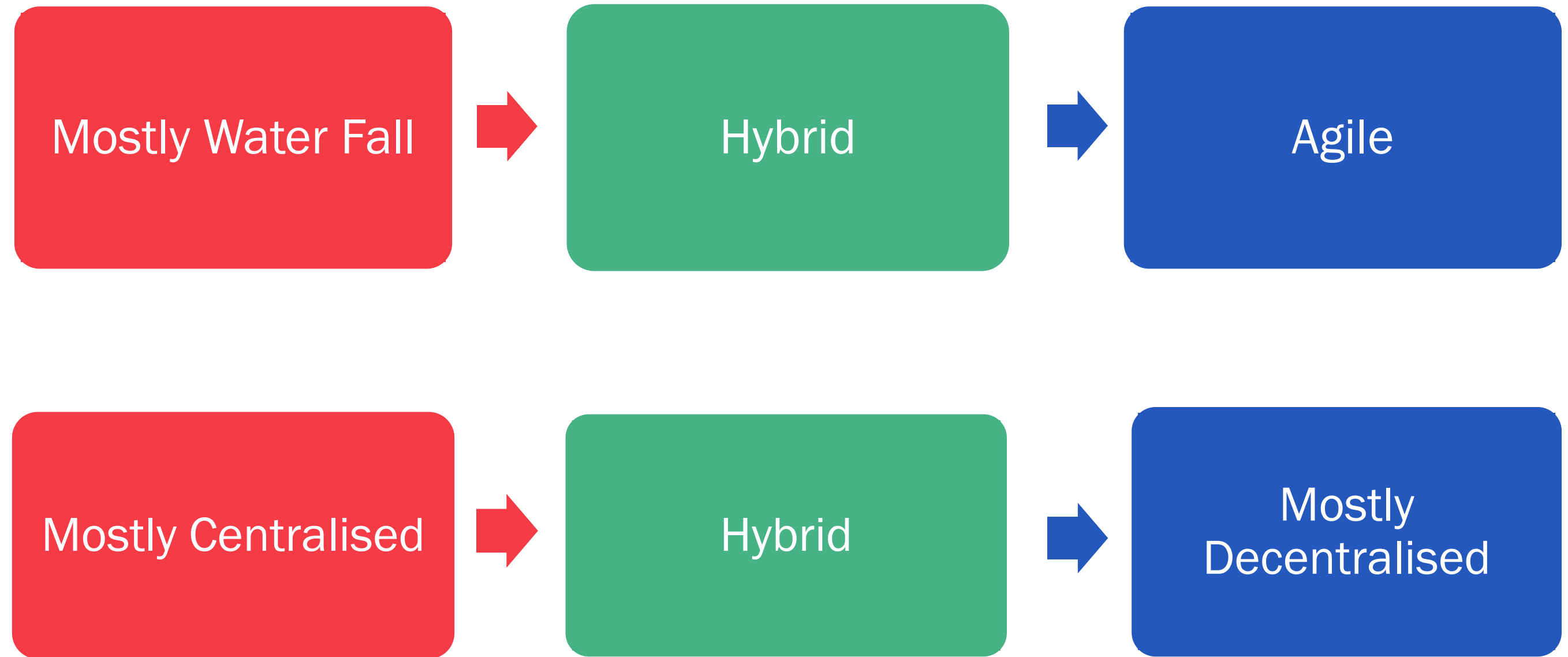
BAU teams for regular releases

Automation Team Creation

Setup the Automation team (2013)
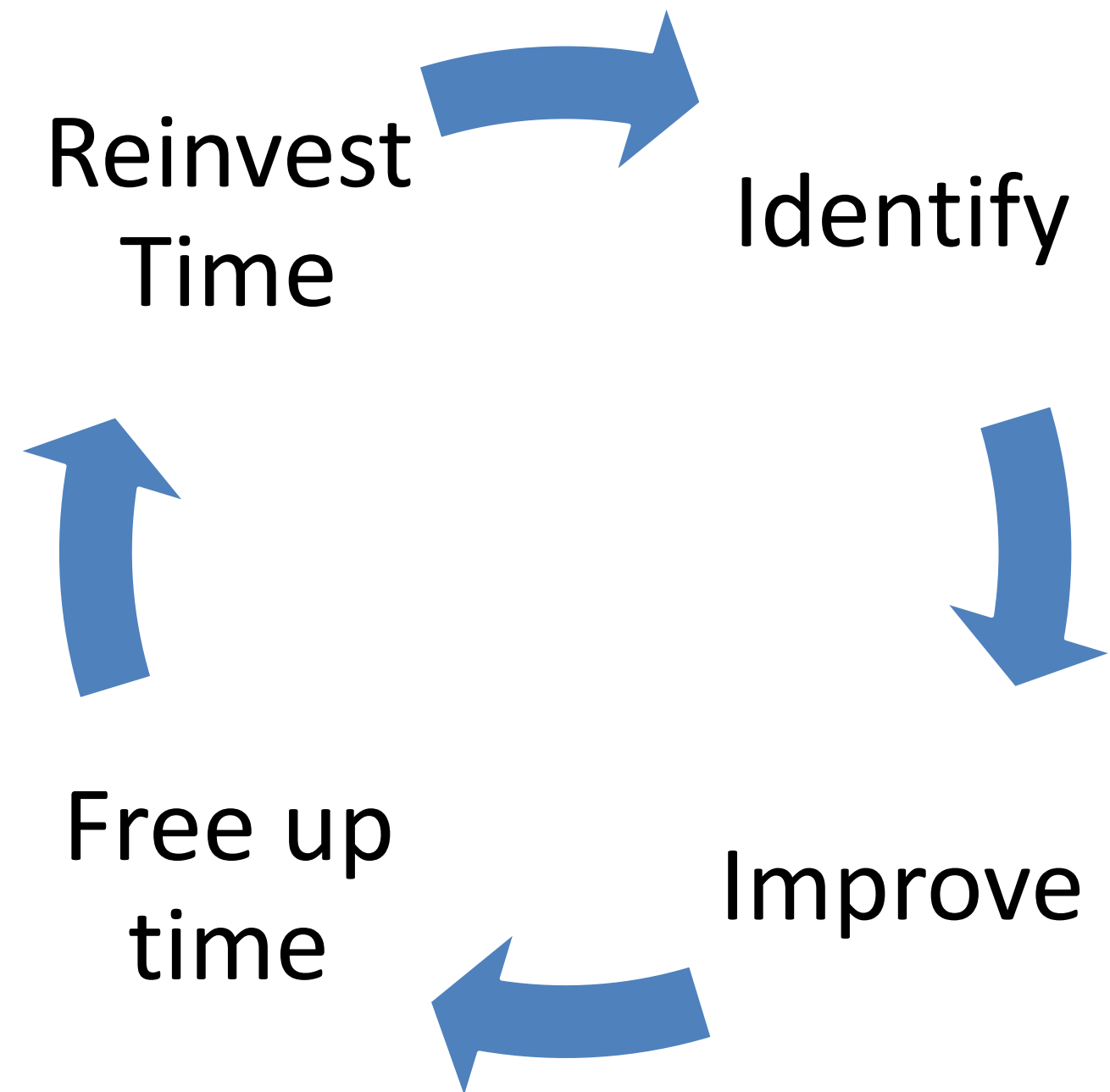
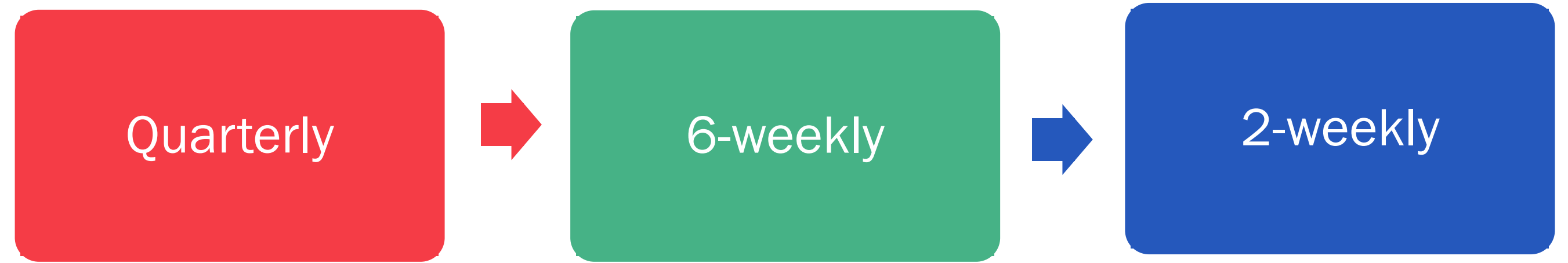Started with Sanity, Smoke, Core Regression

The types of tests were end to end, going across multiple applications

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Transition

Mostly Water Fall	→	Hybrid	→	Agile
Mostly Centralised	→	Hybrid	→	Mostly Decentralised

Continuous Improvement

Quarterly → 6-weekly → 2-weekly

Identify → Improve → Free up time → Reinvest Time → (Identify)

Current Team Structure

➢ The automation team operates as a shared service + capability support

➢ Embedded team members support the cross-application regression suites and the rest are imbedded in agile teams

➢ Additionally, the team supports manual testers who do some automation or want to learn automation.

Team Day to Day Operations

➢ Run and maintain regression for releases

➢ Run and maintain sanity tests and log defects for environments

➢ Maintain and execute User Setup scripts for environment access

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Tools

Tosca

- Jenkins
- Dex
- Tosca Reports

Selenium + Java

- Jenkins
- Selenoid
- BDD HTML reports (Jenkins)

Playwright + Python

- Jenkins
- pytest (xDist)
- pytest HTML reports (Jenkins)

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Tools (cont)

pDev

- Manual Testing
- Open Source
- Tosca on request

mDev

- Tosca 80%
- Open Source 20%
- Targeted manual Regression

Pre-Prod

- Tosca 100%

Take Away

▶ Dedicated Team

▶ Focus on tests with the best ROI

   ▶ Maintainable scripts

▶ Focus on improvements

   ▶ Free up our time to further improve

▶ Appropriate tools

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Thank You

If you have any questions, feel free to ask or contact me later.

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