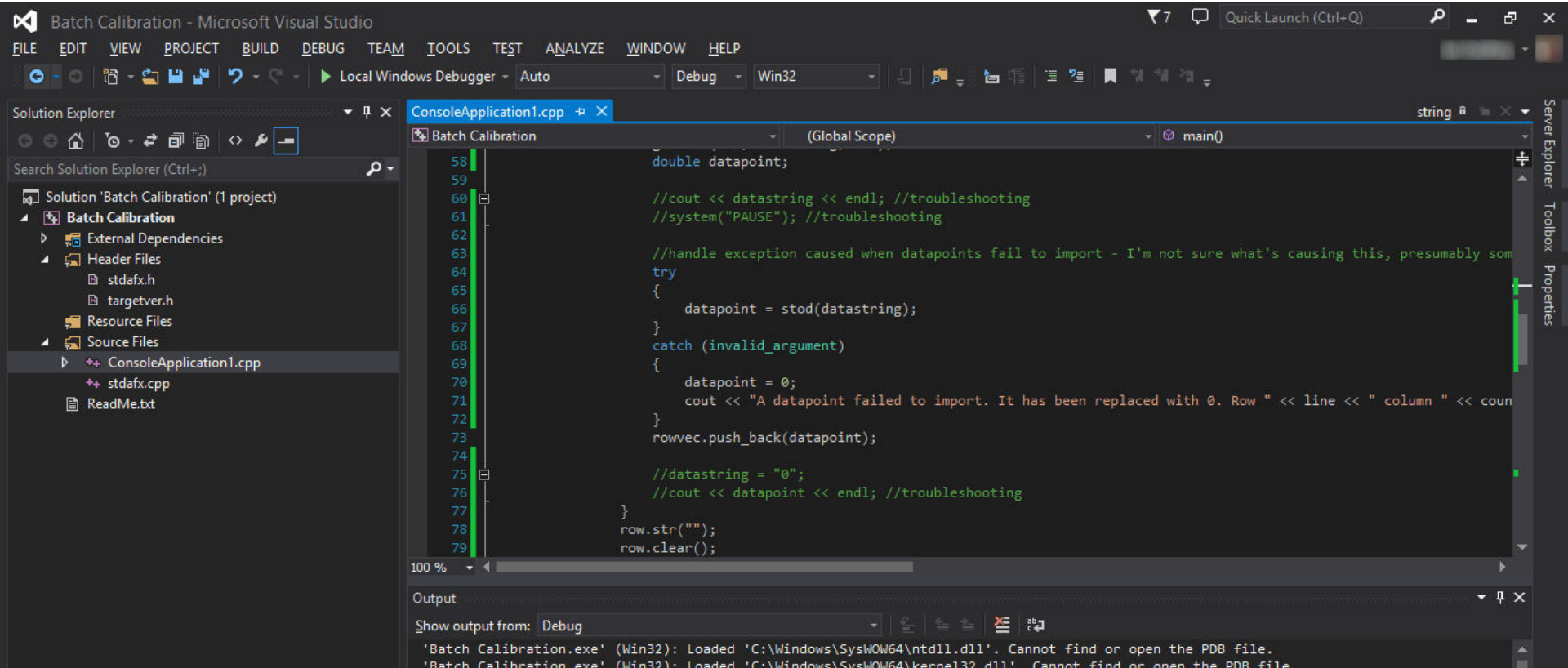
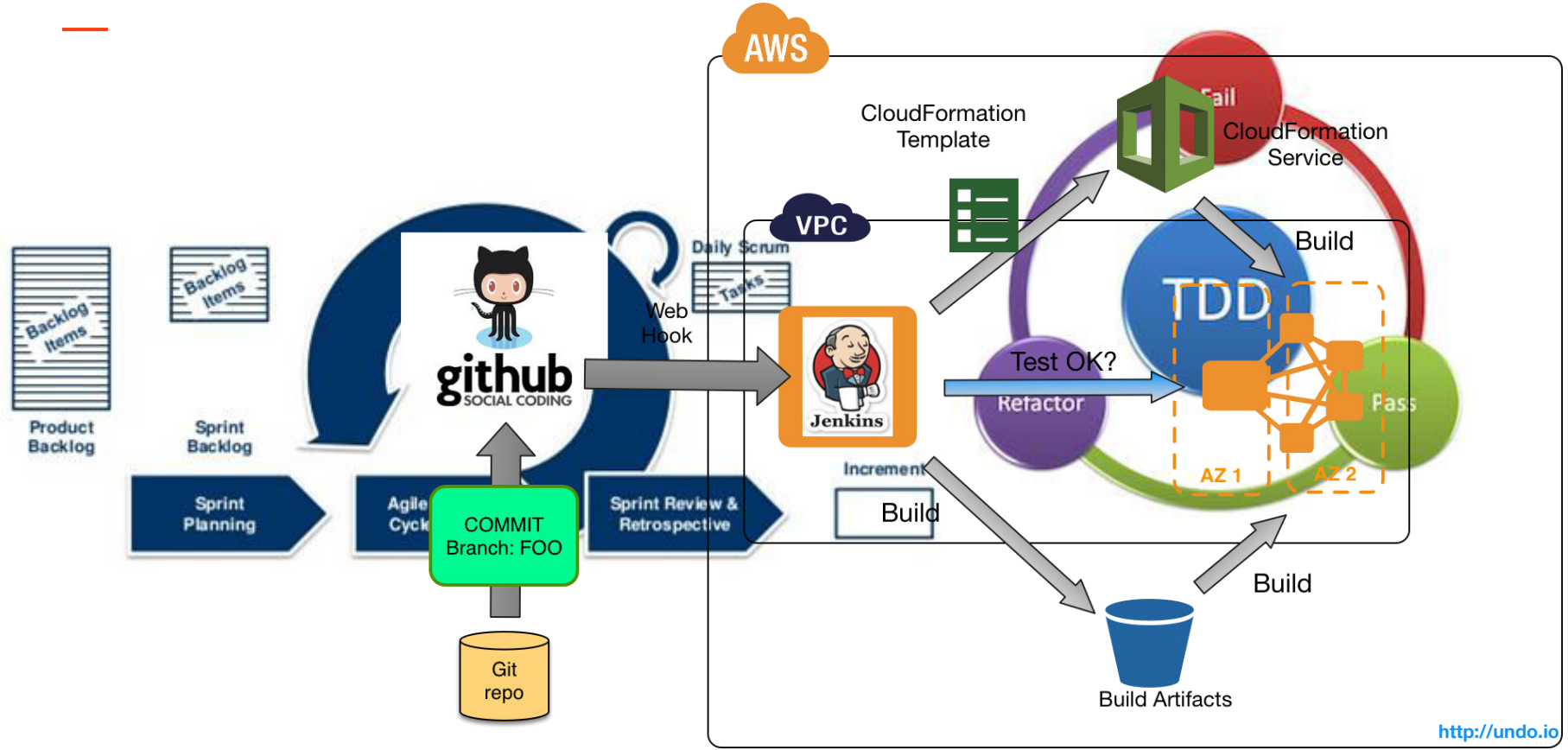
Continuous Integration

Realising the full potential

From 1990 - 2005 development hardly changed



In the last ten years *everything* has changed



The intermittent test failures kill us

1000’s more tests every hour

Even 0.1% failure very bad news

Most of them probably don’t matter

So we’ll come back to them later

YEAH, RIGHT!

Sometimes they really matter

Some intermittent failures are serious issues

- Security breaches
- Production outages
- Unhappy users

Continuous Integration is great… 75% of the time

Mega Commit

Search space thousands of lines

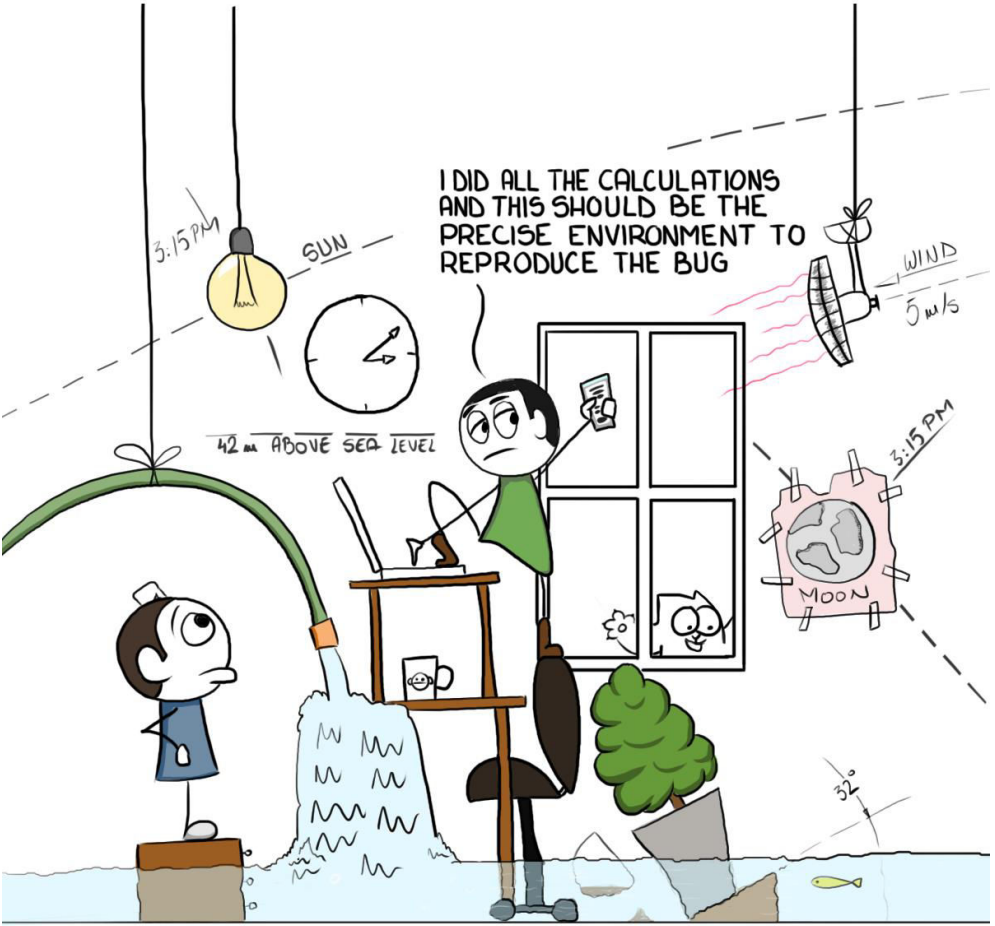
Exposing a dormant issue

Search space is entire code base.

New test case

Search space is entire code base.

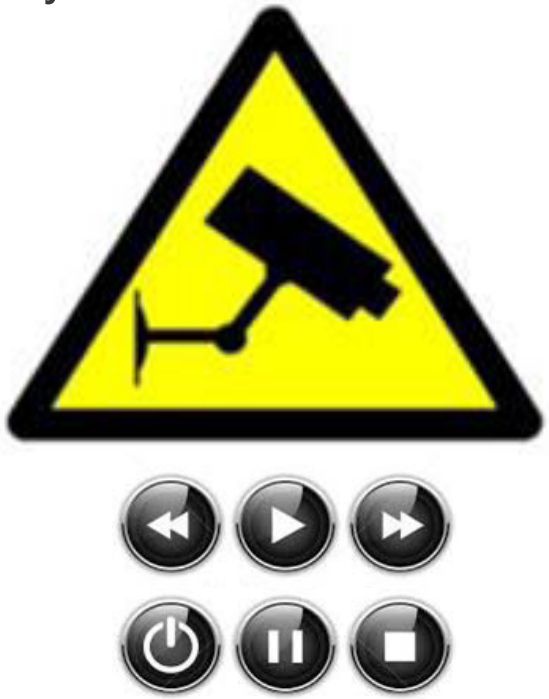
STEPS TO REPRODUCE



http://undo.io

Non-deterministic failures need deterministic replay

Linux: Undo Live Recorder, rr

Windows/.Net: Intellitrace, TimeMachineFor.Net

Java: Chronon