CI @ ERICSSON TV
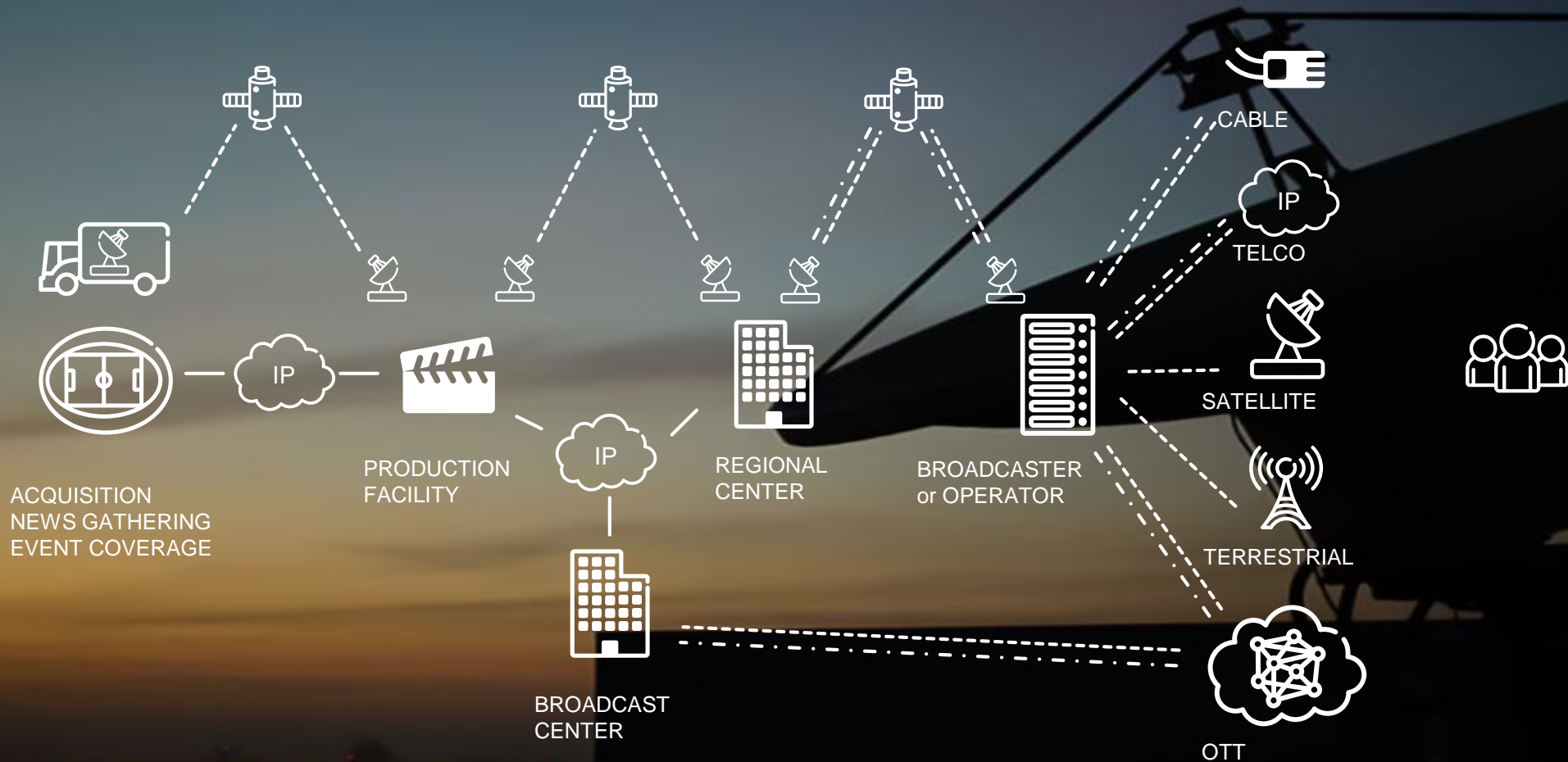
Daniel Laird
Head of Software Control / Processing

WHAT DO WE DO?

ACQUISITION
NEWS GATHERING
EVENT COVERAGE

PRODUCTION
FACILITY

REGIONAL
CENTER

BROADCASTER
or OPERATOR

BROADCAST
CENTER

CABLE

IP
TELCO

SATELLITE

TERRESTRIAL

OTT
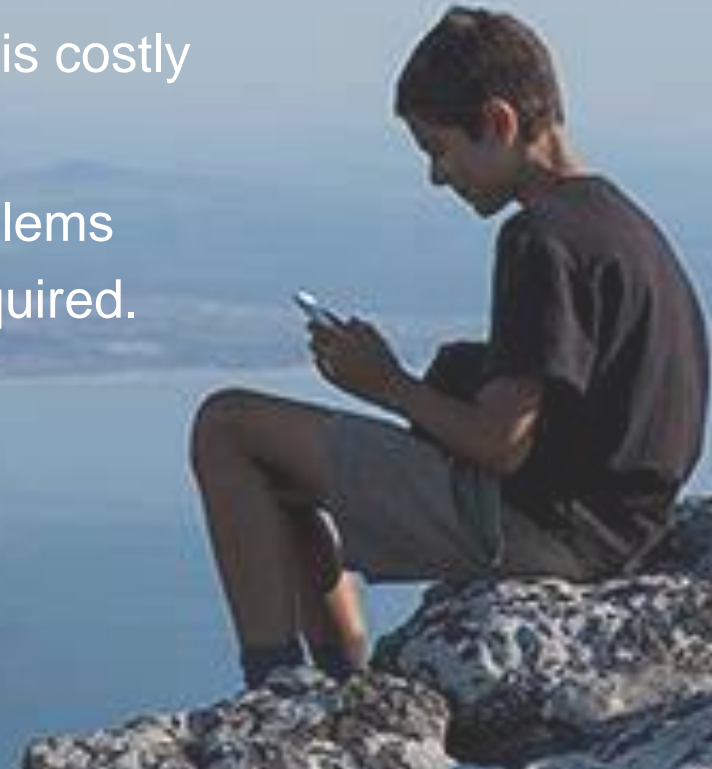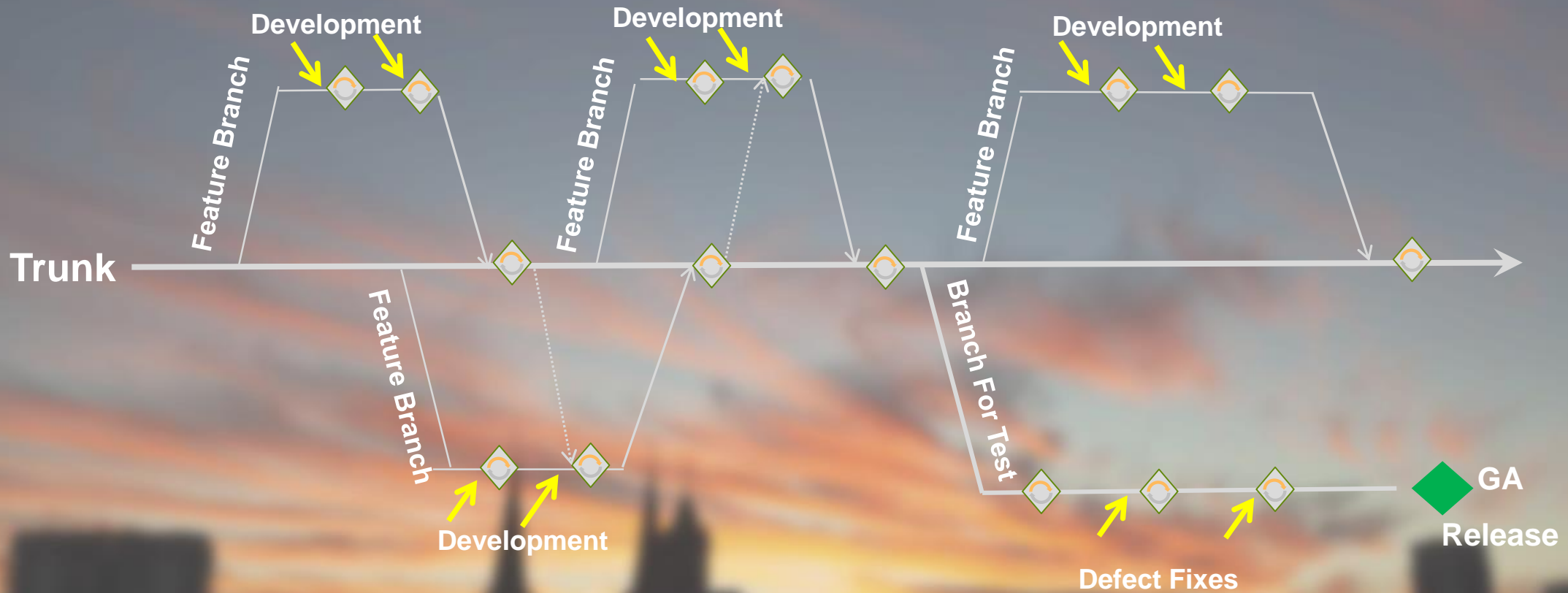
KEY CHALLENGES

› Branch based Development
- Not true CI, but a commercial necessity
- Engineering 'Agility' is not the same as 'Customer Agility'

› Bespoke Test Environment generation
- Engineers building bespoke infrastructure to test features is costly

› Works For Me……
- Bespoke Test Environments leads to 'Works For Me' problems
- Unable to replicate problems or easily scale testing as required.
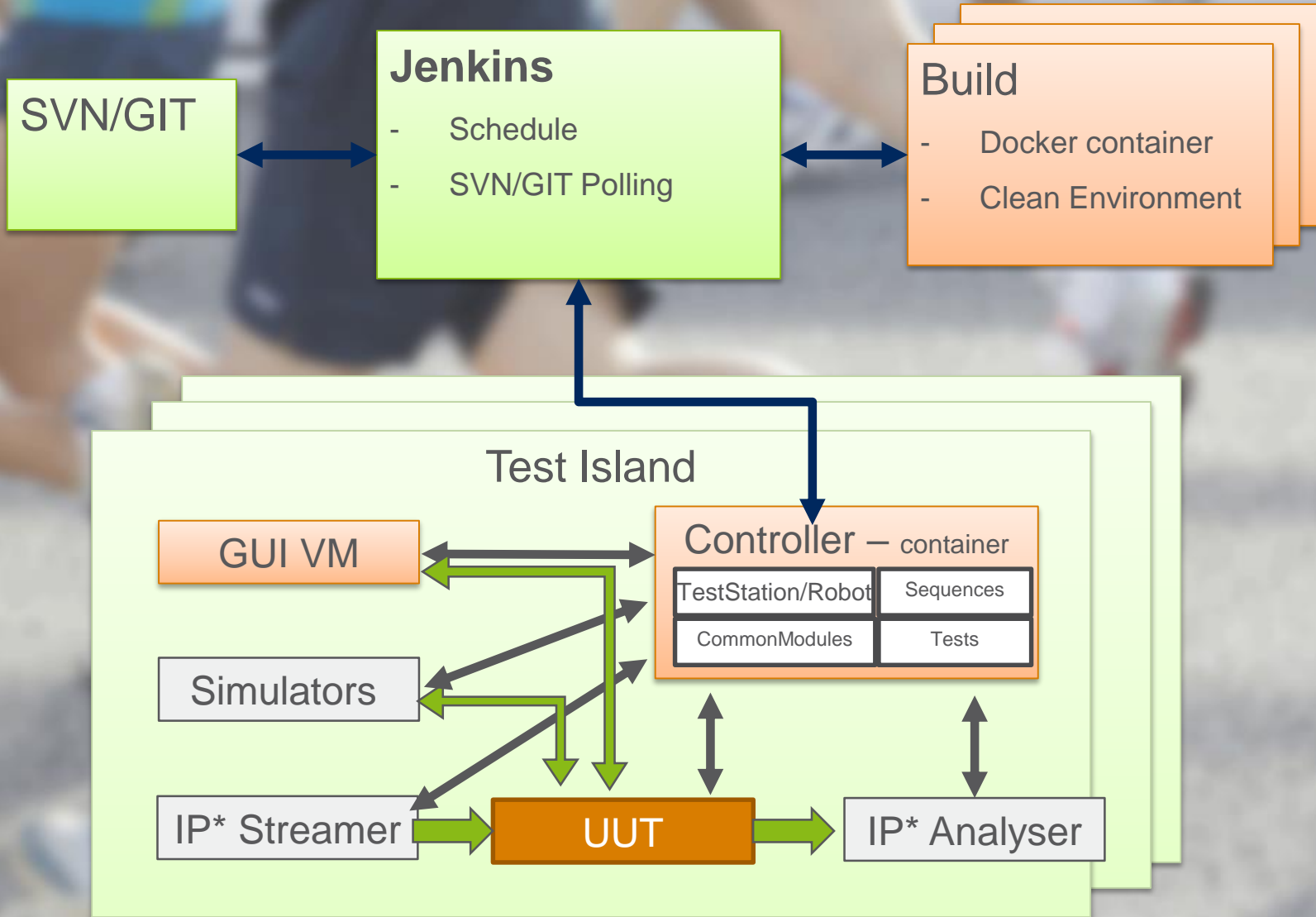
CI TESTING DURING DEVELOPMENT

Development

Development

Development

Feature Branch

Feature Branch

Feature Branch

Trunk

Feature Branch

Development

Branch For Test

Defect Fixes

GA

Release

CI Build and Test Run

ISOLATED TESTING − "ISLANDS"

› Multiple test nodes to allow testing in parallel

› All test nodes (islands) Isolated from each other

› All equipment in an 'island' is cleaned before test start

› Repeatable start condition

› Island equipment certified by "Commissioning test"

› Minimal configuration of test equipment (basic OS, IPs etc)

› Test Transport Streams (Source Material) is automatically deployed

› Jenkins Labels are used to specify the contents of the island.

– Could talk about Jenkins for a long time.

WHAT IS AN ISLAND?

SVN/GIT

Jenkins
- Schedule
- SVN/GIT Polling

Build
- Docker container
- Clean Environment

Test Island

GUI VM

Controller – container

TestStation/Robot	Sequences
CommonModules	Tests

Simulators

IP* Streamer → **UUT** → **IP* Analyser**

VALUABLE RESULTS

› Triage of test results from the Jenkins Web UI

› Most data captured and stored:

- Logs from tests
- Logs from unit under test
- Wireshark captures
- Transport streams
- Stream Analysis logs
- Videos of Web Browser when controlled by Selenium
- Serial debug
- Core dumps
- Unit Configuration debug
- Determined by Engineers

"MANUAL RUNS"

› Engineers can run their own builds with debug increased
  - Product code uploaded from user PC
  - Test code uploaded from user PC
  - Individual tests can be run
  - Debug levels can be controlled

› If test runs correctly 'manually on the rig', it will run when committed to source control.

› Solves the "works for me" problem