SAP Test Automation for S/4Hana Migration at Foodstuffs NI

28 July 2022

foodstuffs NORTH ISLAND

Agenda

- About the presenters
- About Foodstuffs & TTC
- Test Automation Approach
- Tool Selection & Technology Considerations
- Journey to date
- Recommendations
- Demo
- Q & A

foodstuffs NORTH ISLAND

Today's Presenters

foodstuffs NORTH ISLAND

ttc

Raj is a technologist and strategic leader with over 18 years of experience driving mindset shifts and increasing operational efficiencies via automation.

Raj is passionate about quality and people leadership, outcome oriented and focused on building high performing teams providing competitive edge to organizations. Currently Raj heads up the Testing Practice at Foodstuffs NI, New Zealand.

Raj Paul

Aleksey's experience is in Software Quality Assurance and Software Development including development for Windows (and Windows Mobile), Linux and Android.

This experience enables Aleksey to implement Test Automation solutions for even the most complex applications. Aleksey has excellent analysis and communication skills and enjoys working within a team.

Aleksey Agapov

foodstuffs NORTH ISLAND

About Foodstuffs

✓ New Zealand's largest grocery retailer, Est. 1922

✓ 330 stores and 24,000 Foodies across the North Island

✓ 100% New Zealand owned and operated – from local grocery stores to large scale supermarkets and wholesale
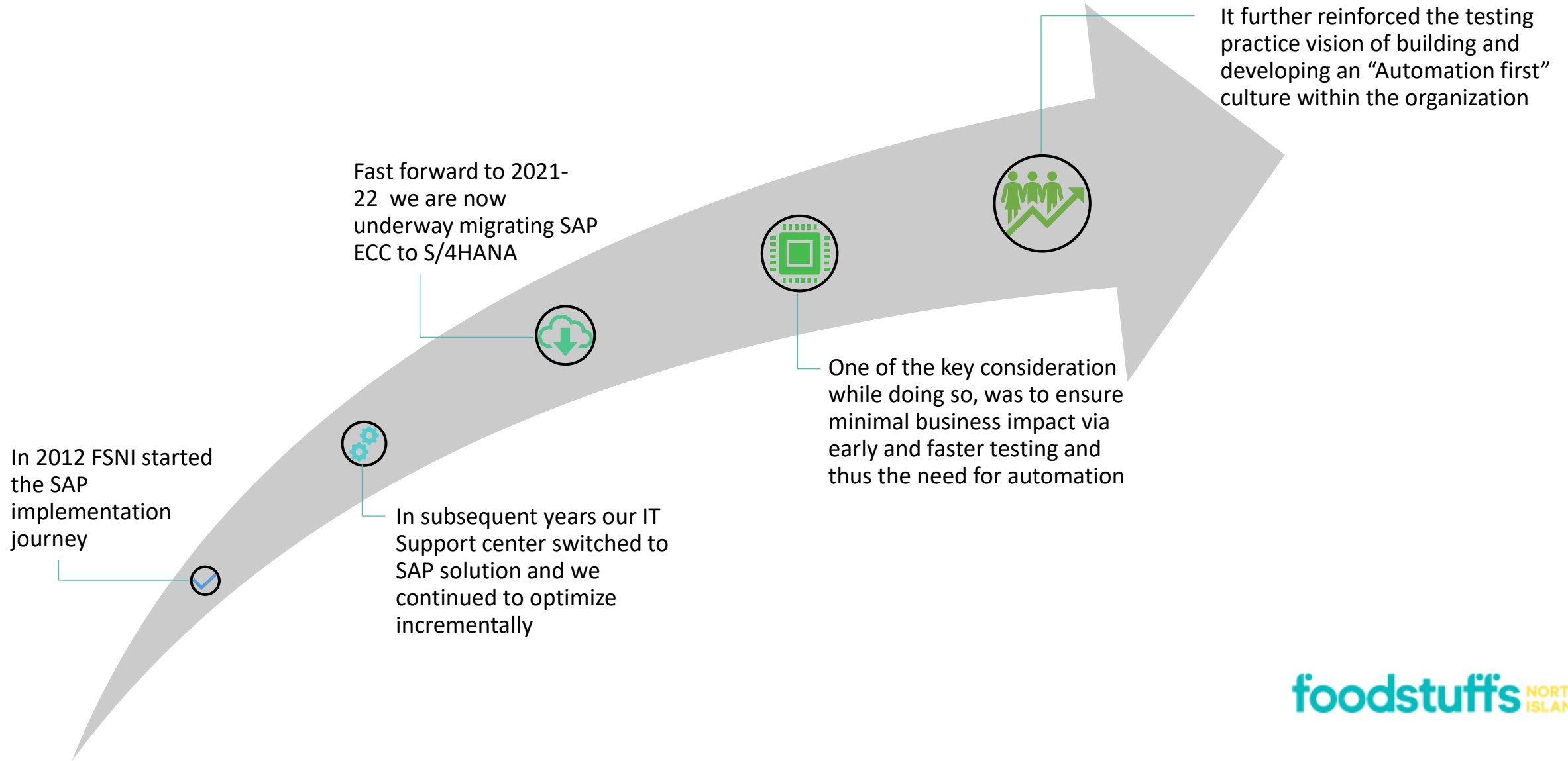
About TTC

✓ Founded by Grant Borrie & Mike Ewart from New Zealand in 2004

✓ Today with offices in New Zealand, Americas, Australia, Asia, Europe, Middle East and India

✓ With over 200 employees serving clients across multiple industries

✓ Established as a global leader in Software Testing and Quality Assurance

✓ Committed to Quality of Service with client base of Fortune 500 clients

✓ A proven knowledge base with Methodologies, Tools, and Templates
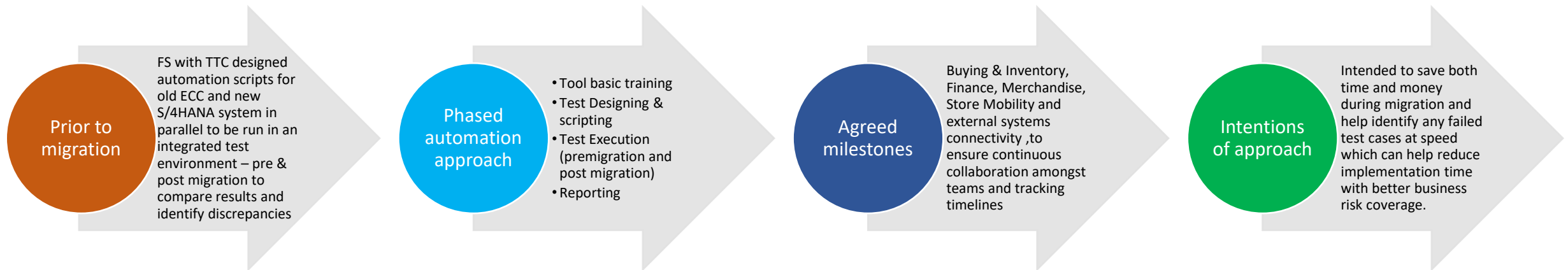
Awards & Certifications

Foodstuffs journey into the world of Test Automation for S/4HANA

It further reinforced the testing practice vision of building and developing an "Automation first" culture within the organization

Fast forward to 2021-22 we are now underway migrating SAP ECC to S/4HANA

One of the key consideration while doing so, was to ensure minimal business impact via early and faster testing and thus the need for automation

In 2012 FSNI started the SAP implementation journey

In subsequent years our IT Support center switched to SAP solution and we continued to optimize incrementally

foodstuffs NORTH ISLAND

Foodstuffs Automation Approach

The Foodstuffs Testing Practice Vision : To build an "Automation first" culture and develop a "Shift Left" testing approach.
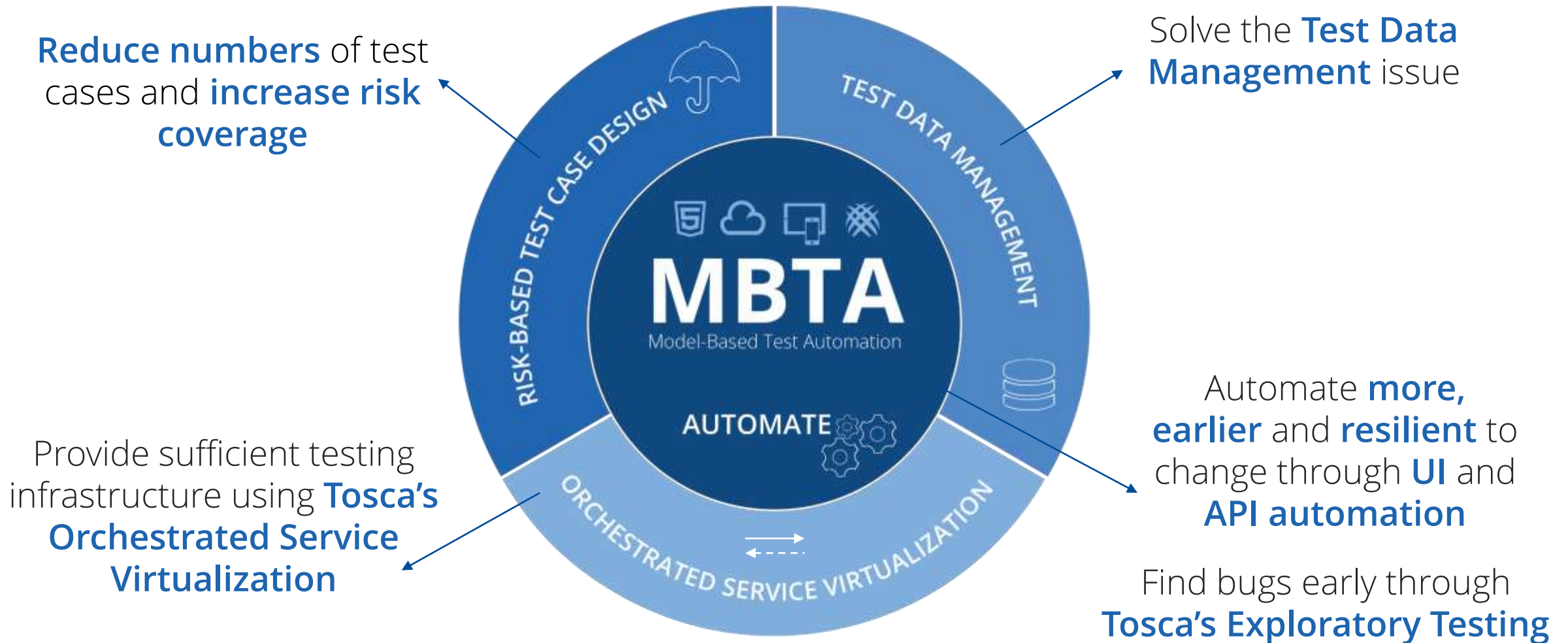
In line with our vision , we designed the below approach, to find issues earlier in the release cycle :

Prior to migration

FS with TTC designed automation scripts for old ECC and new S/4HANA system in parallel to be run in an integrated test environment – pre & post migration to compare results and identify discrepancies

Phased automation approach

- Tool basic training
- Test Designing & scripting
- Test Execution (premigration and post migration)
- Reporting

Agreed milestones

Buying & Inventory, Finance, Merchandise, Store Mobility and external systems connectivity ,to ensure continuous collaboration amongst teams and tracking timelines

Intentions of approach

Intended to save both time and money during migration and help identify any failed test cases at speed which can help reduce implementation time with better business risk coverage.

foodstuffs NORTH ISLAND

TOSCA – Automation Tool Selection

✓ SAP Tool of choice for Test Automation

✓ Delivers end-to-end business process testing spanning SAP and third-party applications.

✓ Offers Supports Fiori Apps, SAP ECC, API and Performance testing

✓ Enables continuous Testing

✓ Supports DevOps pipeline

foodstuffs NORTH ISLAND

Whats included in Tricentis Tosca?

Reduce numbers of test cases and **increase risk coverage**

Solve the **Test Data Management** issue

Provide sufficient testing infrastructure using **Tosca's Orchestrated Service Virtualization**

Automate **more, earlier** and **resilient** to change through **UI** and **API automation**

Find bugs early through **Tosca's Exploratory Testing**

RISK-BASED TEST CASE DESIGN

TEST DATA MANAGEMENT

ORCHESTRATED SERVICE VIRTUALIZATION

MBTA
Model-Based Test Automation

AUTOMATE

Tricentis

Tech Stack and Environments

- ✓ SAP tech stack:
  - ✓ SAP Fiori and SAP GUI
  - ✓ ECC (on premise) and S/4HANA (cloud) – same testing collateral is being used for both SAP architectures
  - ✓ SAP Environments: QA(ECC), Sandbox (S/4HANA) and Pre-Prod (ECC, Online only)

- ✓ SAP modules (About 200+ E2E critical business scenarios covered)
  - ✓ Finance
  - ✓ Merchandising Buying and Inventory
  - ✓ Store Mobility (inhouse development)
  - ✓ Online – Picking App (inhouse development)

foodstuffs NORTH ISLAND

Test Data Management approach

✓ Test Data Management

- ❖ Use of CRUD and Data mining

- ❖ Intensive use of TDS (Test Data Service) to store and exchange the data

- ❖ Data preparation scripts to deal with regular environment data refresh
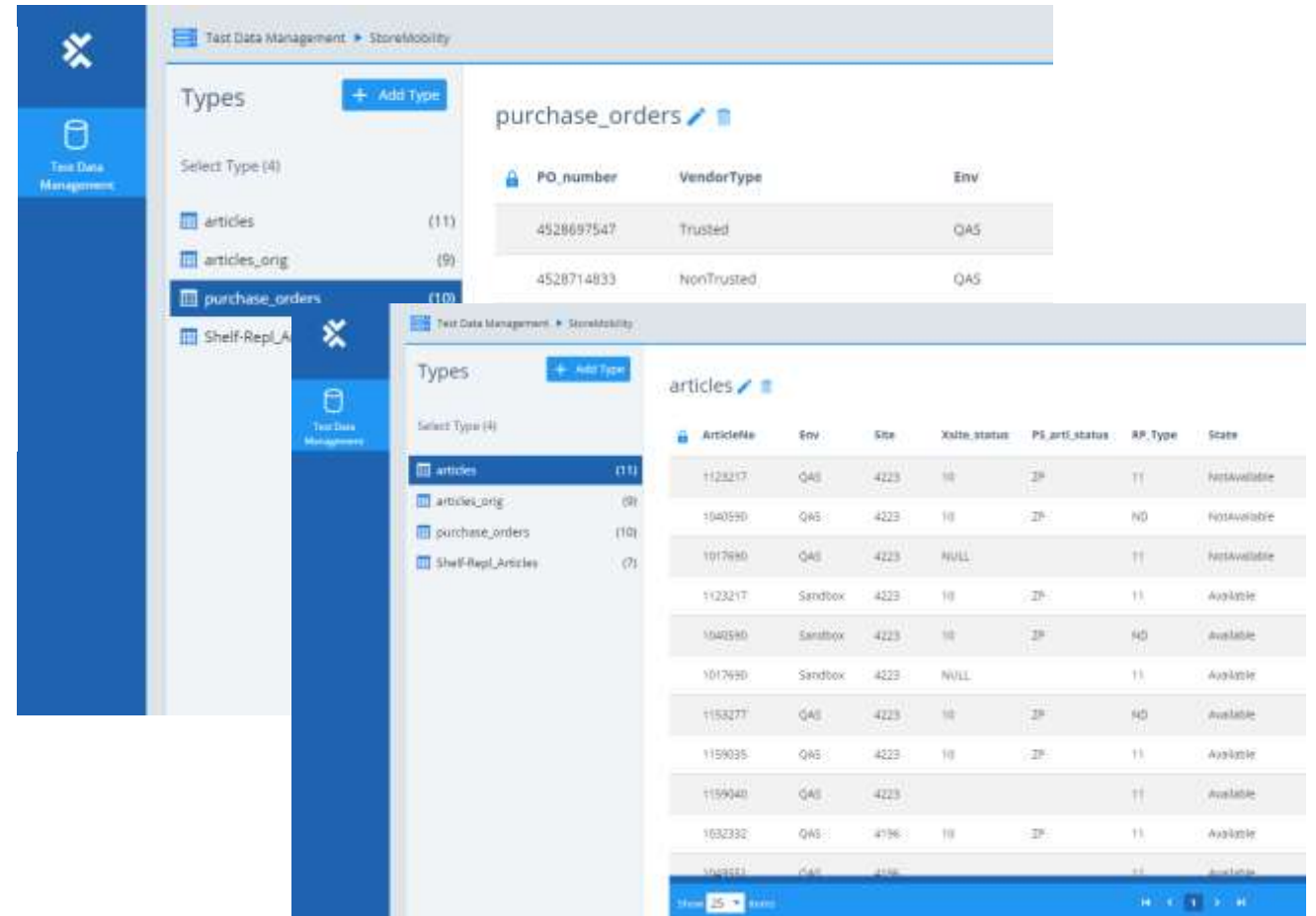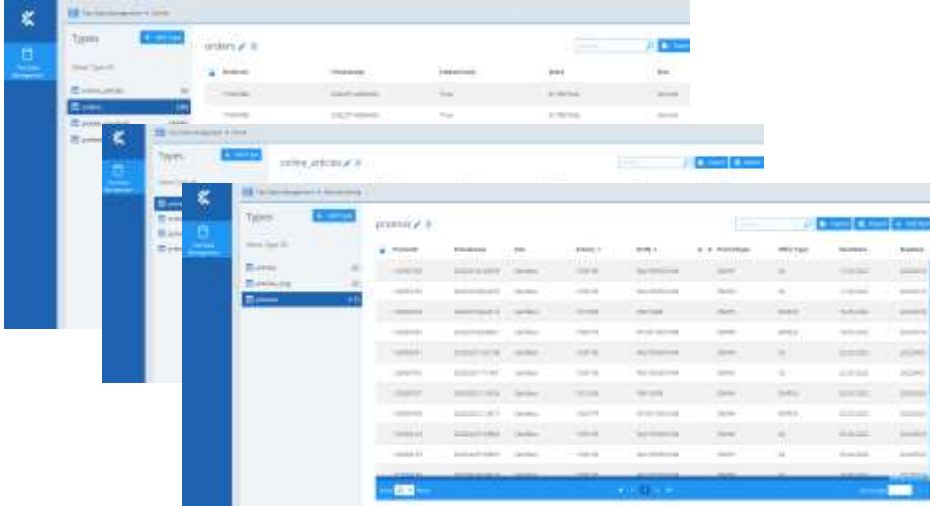
Test Environment Configuration approach

✓ Configuration of test environment

  ❖ Use of TCP (Test Configuration Parameters)

	QAS	Sandbox
ECC	✓	N/A
S4/HANA	✓	✓

foodstuffs NORTH ISLAND
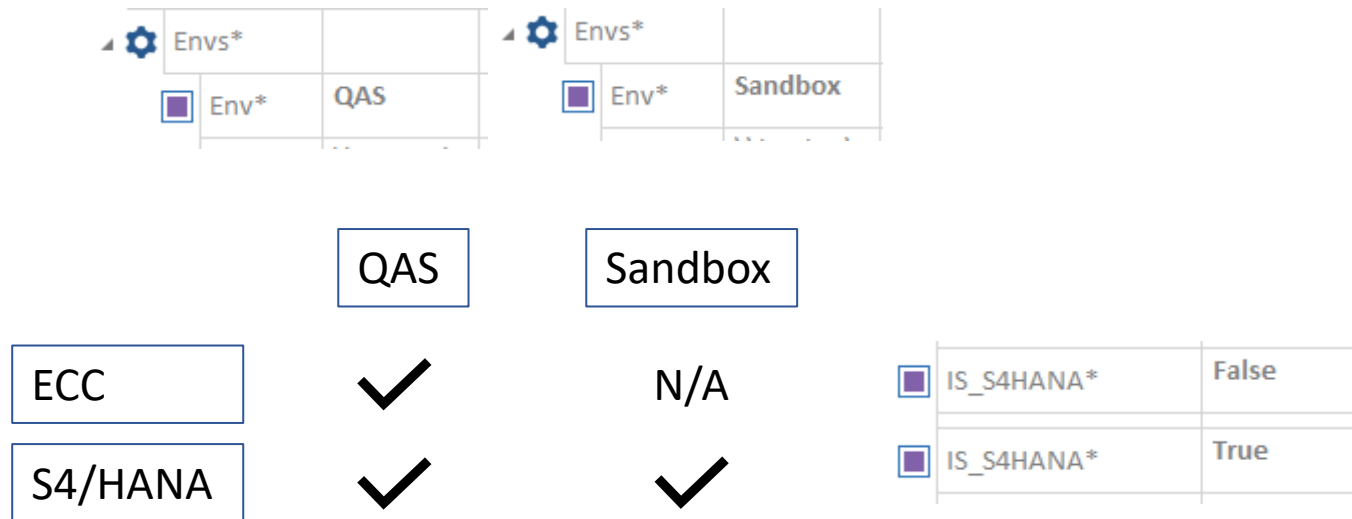
ECC vs S/4HANA environments

✓ ECC and S/4 environments differences

❖ Terminology: Retail vs SAP default (ex. *Article* vs *Material, Store/Site* vs *Factory* etc.)

❖ Newer version of Fiori

Distributed Execution (DEx) CI/CD pipeline architecture
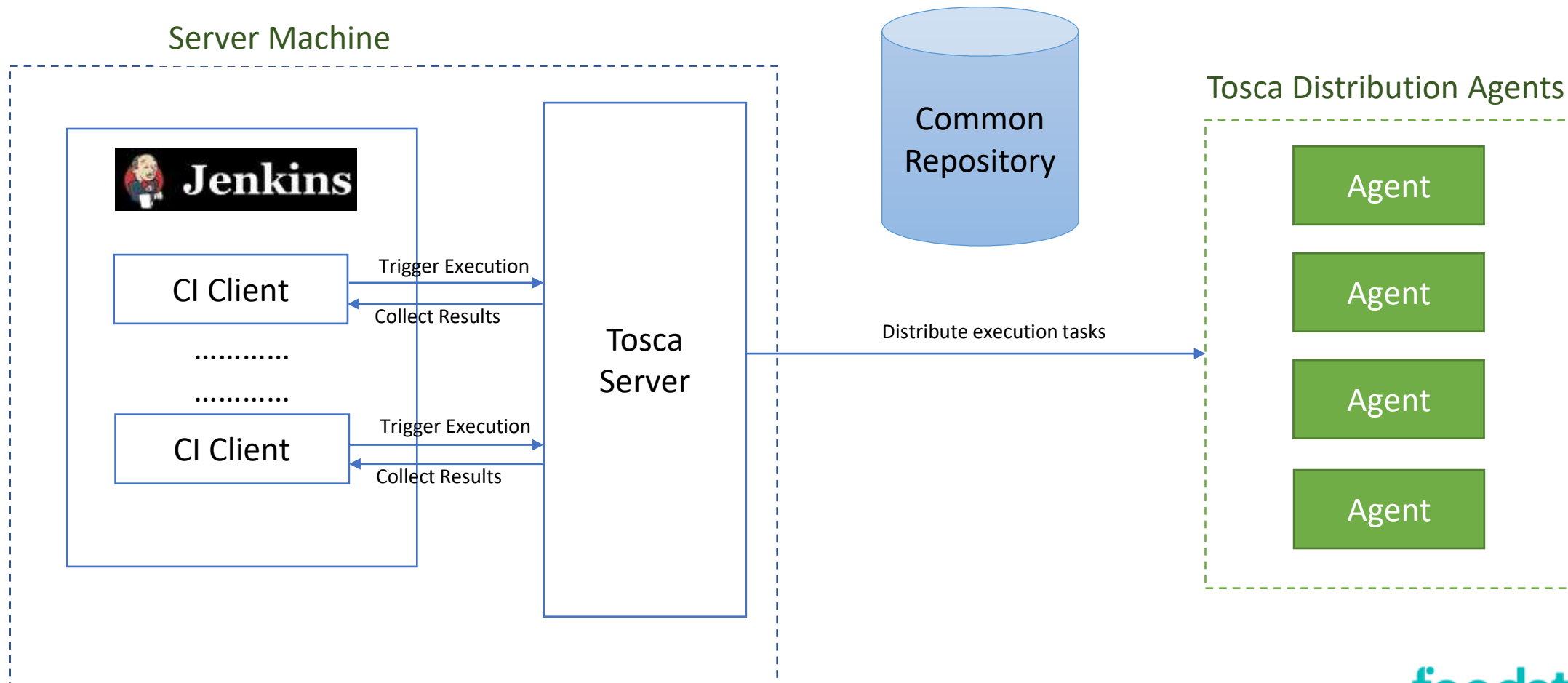
Journey to date

Automated close to 60% critical use cases of Foodstuffs implemented business modules

Tests executed daily, every night

Automation runs approx.
6 hours per SAP env. in distributed execution (4 agent machines)
200+ E2E scenarios

Unattended test automation for different business modules running after hours

ROI just on Regression at the end of every Sprint, 170 man-days per execution

foodstuffs NORTH ISLAND

Recommendations

- Strategize and plan your Test Data management well ahead of time

- Test Environment configuration and readiness

- Ensure integrated set up DEx infrastructure is in place

- Tosca Basic Training – evolve to T shaped testers

- Embed experts into your teams

- IP retention

- Collaborative approach

Questions

foodstuffs NORTH ISLAND

Interested to get in touch ?

TO KNOW MORE ABOUT TESTING
PRACTICE AT FOODSTUFFS CONTACT
RAJ.PAUL@FOODSTUFFS.CO.NZ

MOB +64 22 630 8008

TO KNOW MORE ABOUT TTC CONTACT

INFO@TTCGLOBAL.COM

Demo