

Higher Education: Test Process Improvement



Service Background

- Many organisations are facing challenges in implementing an effective approach to testing that will result in high quality products being delivered in an efficient and cost-effective manner.
- Our Maturity Assessment service is based on the industry-standard Test Maturity Model integration (TMMi) which assess software testing at different maturity levels, with the starting assumption that all organizations start at TMMi level 1 of the maturity ladder.
- The model has a staged architecture for test process improvement and contains levels through which an organization passes as its testing process evolves from one that is ad hoc and unmanaged, to one that is managed, defined, measured, and optimized.
- Test process improvement efforts are focused on the needs of the organization in the context of its business environment with key benefits being improved software product quality with fewer defects.

Challenges:

- There are a number of common challenges we find across organisations with respect to their test maturity:
 - Lack of rigour around the test process including scripted test cases, and a clear test policy and organizational test strategy.
 - Lack of appropriate metrics and dashboards to measure test velocity and product quality.
 - Lack of managed test environments and test data.
 - Lack of test automation to provide a fast and cost-effective regression test base.
 - Lack of appropriate expertise and tooling to support effective non-functional testing.
 - Sub-optimal integration of testing with the SDLC

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Our Approach

- We can undertake a full TMMi maturity assessment or a TMMi health-check, which is shorter in duration with reduced scope in terms of numbers of interviews undertaken and artefacts reviewed.
- The maturity assessment will comprise the review of appropriate organisational and project documentation, together with interviews and workshops with key stakeholders, together with analysis of information held within relevant lifecycle tools and applications.
- The assessment will be based on the industry standard TMMi model for assessing Test Process maturity and will involve our practitioners collaborating with your team members to gather and analyse data, draft findings and establish recommendations.
- The assessment will conclude with the delivery of a Maturity Assessment Report and an Improvement Roadmap which will provide a clear, prioritised set of recommendations, together with a supporting business case.
- We can then help you and your team to deliver the plan and, if required, re-run the assessment at relevant time intervals to see how you are progressing towards the target state.

Service Features

- Uses industry standard Test Maturity Model (TMMi)
- Covers all test levels and methodologies
- Produces baseline report detailing current test maturity state.
- Produces detailed target state and process improvement plan.
- Reviews team skills for gap analysis.
- Assessment conducted over a short period.
- Deliver ROI based benefits.

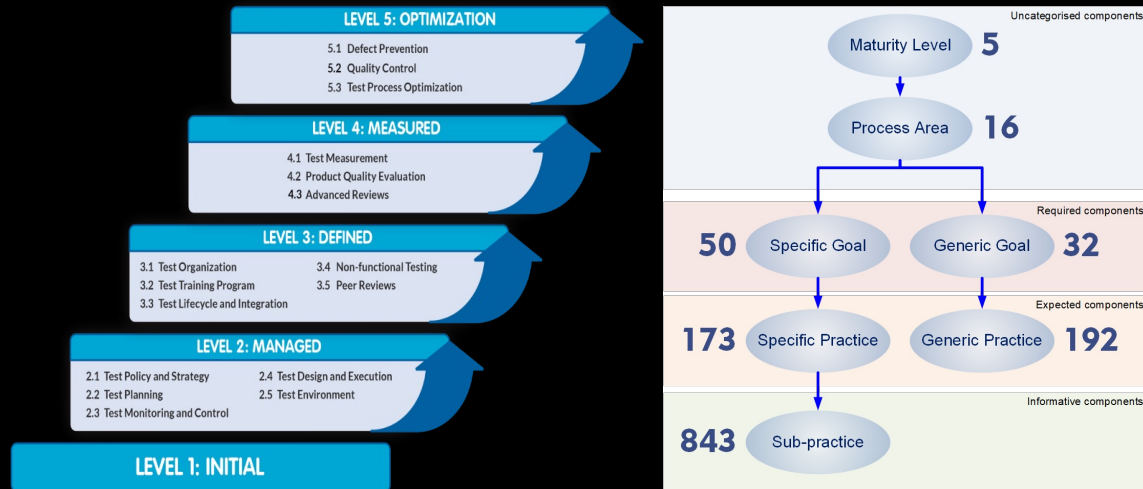
Business Benefits

- Higher quality software products with fewer defects.
- More efficient testing with reduced time to market and costs.
- Reduced operational risk.

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TMMi Overview

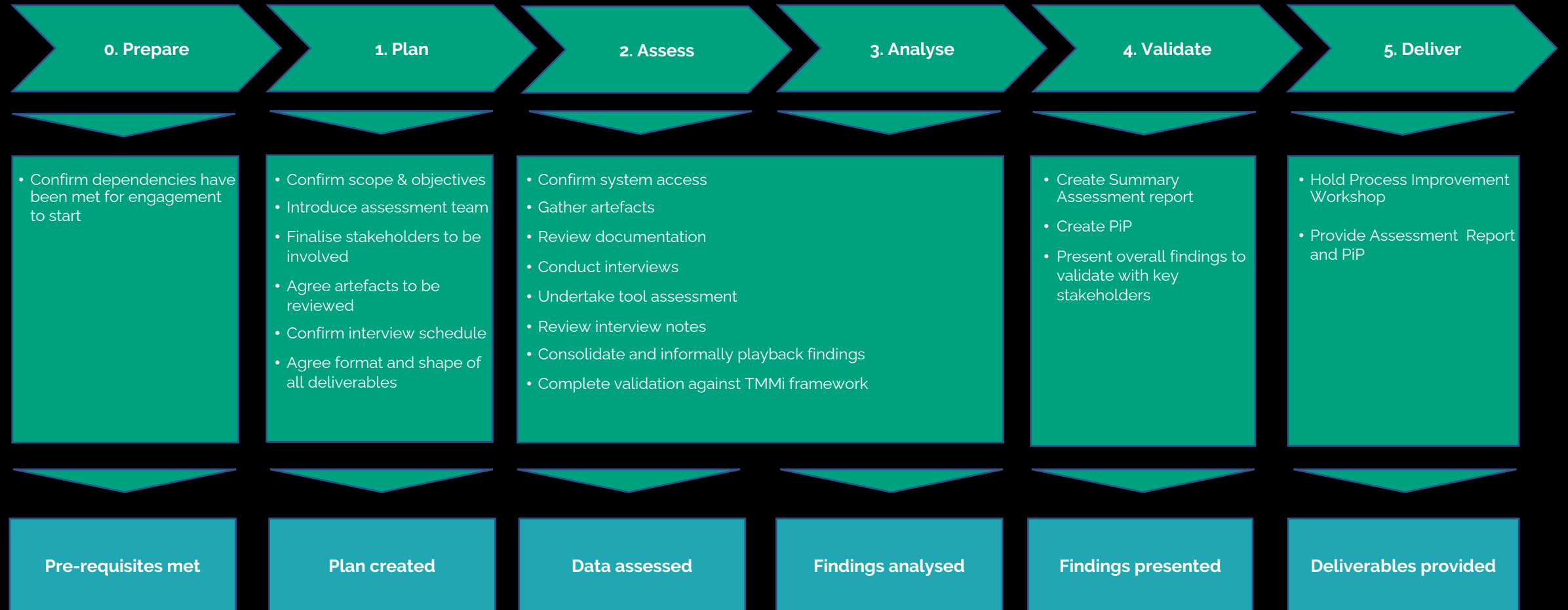
- The structure of TMMi allows process improvements to be identified at every level, from the highest to the very lowest level of detail.
- There are 5 Levels that are split into 16 distinct Process Areas.
- These are made up of Specific and Generic Goals, which are in turn made up of Specific and Generic Practices.
- At the lowest level, there are 845 Sub-Practices that can be assessed, giving an unrivalled view of an organisation's test process maturity and a basis for test process improvement.



TMMi Features

- Customisable based on requirements from a full maturity assessment to a shorter healthcheck.
- An independent model.
- Integrated best practices derived from over 14 quality and test models.
- Addresses all test levels and methodologies.
- Focused on moving organisations from defect detection to defect prevention.
- The International Standard to measure test maturity

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Partners & Clients

Our Higher Education Clients



Our Partner Ecosystem



A Selection Of Our Higher Education Projects & Benefits

Client	Project Brief	Infuse Services Provided
University College London	Tribal SITS-to-Cloud project to manage, plan, implement testing strategies, tools, automation and frameworks around functional, non- functional testing across the test lifecycle. Enhance the UCL team Benefit: Automate 90% of testing and reduce regression testing on SITS to under 5-hours	Test Management, Functional Test Delivery, Continuous Testing, Performance Engineering and NFT
King's College London	Managed services across several projects: VLE, ERP, Access systems,, R&D, Curriculum, LMS, CRM and Student lifecycle. Benefit: 40 projects since 2018; saving 35% on testing costs since start of work	Development Lifecycle Review, Test Management, Functional Test Delivery, Continuous Testing, Performance Engineering and NFT
University of East Anglia	Managed services across several projects: Admissions, Curriculum, Tribal SITS, Tribal SITS-to-Cloud and Test Strategies. Benefit: Automated 200 tests across SITS and reduce regression testing to 3 hours	Test Management, Functional Test Delivery and Continuous Testing,
London Southbank University	Architecture and Test Lifecycle support for LSBU's LEAP programme encompassing the rollout of Salesforce, ESB, Identity management and a new cloud-based student record system since 2020	Architecture Review, Full Stack Development, Test Management, Functional Test Delivery, Continuous Testing, Performance Engineering and NFT
Queen Mary University of London	Re-architecture of the Moodle environment on Azure and performance testing of the clearing process and telephony systems (functional and non-functional) simulating 400 call agents since 2020. Testing of WiFi network throughout the university Benefit: Mitigated issues that would have stopped 75% of calls getting to the clearing agents 2 years in a row	Architecture Review, Performance Engineering and NFT
Edinburgh Napier University	DevOps maturity with recommendations in process of being implemented	ICM Assessment, DevOps roadmap, business case and transformation roadmap
University of Exeter	Performance Testing projects across VLE migrations and upgrades Benefit: Mitigate issues related to Moodle during enrolment and exams during the Pandemic	Performance Engineering and NFT
University of Aberdeen	DevOps (ICM) transformation assessment, test automation POC and tool chain assessment for Applications Management team	Infuse Capability Modelling/TMMi Model for DevOps
Anglia Ruskin University	Enterprise architecture consultancy around recommending integration roadmap of 100+ subsystems using Event Streaming	Architecture Review
University of Bristol	myERP the new integrated Finance, HR, Payroll and Procurement system Student Lifecycle Support Programme which will transform how students interact with the university Save over £1m in testing costs across the programme	Test Management, Functional Test Delivery, Continuous Testing, Performance Engineering and NFT
University of Bradford	Bradford are re-implementing Tribal SITS and have no test process, team or tools.	Test Management and Functional Test Delivery

Our Education Community Contributions

Event	Content Title/Link	Summary
UCISA CISG Dec. 2023	<u>Learn how Southampton Solent University (SSU) recently delivered a challenging student transformation programme on time and on budget</u> Aaron Tyler, SSU Programme Manager, Southampton Solent University	In this video (presented at UCISA CISG-2023), SSU Programme Manager Aaron Tyler presents how SSU rescued a challenging Student Record transformation programme that went live successfully in August 2023.
UCISA Webinar Nov., 2022	<u>UCISA Webinar - Why Non-Production Environment Management (NPEM) is critical to Digital Transformation success.</u> Jessica Roberts, Head of Transition & QA, King's College London	Learn how King's College London (KCL) approach Non-Production Environment Management (NPEM) using the Infuse NPEM model., giving them long term benefits in terms of time, cost, and better quality.
UCISA CISG Dec. 2022	<u>Learn how King's College London is leveraging the power of Cloud and Automation to deliver software continuously</u> Jessica Roberts, Head of Transition & QA, King's College London	Learn about KCL's continuous testing journey covering 35 projects across Testing, Non-production environments, Development lifecycle consulting, Test Automation, Performance Engineering
UCISA Leadership Mar 2022	<u>Are you ready for Clearing ?</u> Rupa Dey, Deputy CIO, Queen Mary University of London	Learn how QMUL handled clearing in 2021 and plan to handle clearing in 2022
UCISA CISG Nov. 2021	<u>Having your cake and eating it!</u> Ian Robotham, Assistant Director, University of Aberdeen	Learn how the University of Aberdeen plan to reduce cost, improve productivity, and improve student/staff UX through streamlined enterprise architecture
UCISA CISG Nov. 2020	<u>Storming and Performing with Covid-19</u> Richard Young, Assistant Director, Queen Mary University of London Jessica Roberts, Head of Transition & QA, King's College London Mark Sanders , Program Manager, University of Exeter	Learn about how University of Exeter (UoE), King's College London (KCL) and Queen Mary University of London (QMUL) successfully accelerated their digital transformation projects.
UCISA CISG Nov. 2019	<u>How King's College is utilizing Load and Performance testing on Moodle</u> John Newman, Senior Project Manager, King's College London	Learn how King's College London (KCL) approach Performance Testing on Moodle.
HE Strategy Forum Oct. 2019	<u>Streaming – A Field Report in partnership with Anglia Ruskin University</u> Paul Gallagher, Assistant Director, Anglia Ruskin University	Learn how Anglia Ruskin are transforming their system integration architecture to solve legacy point to point integration challenges.
HE Strategy Forum Feb. 2019	<u>Origami and Architecture in partnership with Anglia Ruskin University</u> Paul Gallagher, Assistant Director, Anglia Ruskin University	Learn how Anglia Ruskin are approaching innovation in Architecture
Video Case Study Nov 2018	<u>University of Bristol - Video Case Study</u> Nigel Summers, Test Manager, University of Bristol (SLSP Program)	Learn how the University of Bristol saved a significant amount in testing costs by using continuous testing

Why Infuse ?



Experience and Credibility

Established in 2002 with over 21 years of experience in software delivery and quality engineering consulting having helped successfully deliver over 500 projects around the globe.



Higher Education Specialists

We have successfully deployed test services on over 35 HEI clients so we understand your business drivers and ways of working. We have experience with systems such as Moodle, Tribal SITS, CourseLoop, SAP and have delivered services ranging from functional test delivery to test automation, performance testing, test environment management, and process optimisation.



Multi-disciplinary Team

We leverage experts across our practice to provide you with an end-to-end delivery capability from experienced test managers to scrum masters, agile coaches, architects, developers, and manual & technical testers.



Test Expertise & Team Integration

All our resource are ISTQB foundation certified and bring expertise in testing together with experience and energy to quickly integrate with your existing team. We have a history of enhancing existing test teams to accelerate progress and are comfortable delivering within and managing a mixed team including in-house, contractor and third-party resource.



Highly Motivated & Delivery Focused

Our team are highly motivated and delivery focused, and will go above and beyond expectations to ensure the successful delivery of the test workstream. We have demonstrated our commitment to success on numerous previous test engagements.



Competitive Delivery Model

We effectively deploy resource onsite, onshore and offshore on many of our engagements. Our experience of delivering from multiple locations provides you with a cost competitive proposition together with the ability to flex resource when required.



Technical Innovation

We have expertise across a wide range of innovative products from our own script-less test automation tool – useMango™ – to leading enterprise and open-source tools, through to our delivery accelerators.

Company Overview

Who We Are

- We are a team of 90+ engineers and consultants spread globally with a passion for modern software design, engineering and delivery.
- We possess deep expertise across Architecture, Agile, DevOps, Cloud Transformation, Quality & Performance Engineering.
- Since 2002, we have been helping companies of all sizes design, develop and deploy high quality software.
- Since 2018, we have been focused on supporting HEIs resolve their technology challenges as part of their digital transformation and cloud migration agenda.

Our Areas of Market Eminence

Consulting

Development
& DevOps

Quality
Engineering

Test
Environment
Management

useMango™
Test
Automation

Our Vision and Values

Be the first choice for our clients for their
technology delivery challenges



Be at the forefront of technical innovation

Champion and empower our
people



Build long term, trusted adviser relationships with
our clients



Act with honesty and integrity in all we do



If you would like further information on our service, please contact us.



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