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Test Maturity Model integration (TMMi): Test Maturity in the Financial Domain

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Erik van Veenendaal

- In IT & testing since 1985 working for many different clients and in many different roles
- Author “TMap”, “ISTQB Foundation” and “TMMi” and many other books and papers
- Former Vice-President International Software Testing Qualifications Board (ISTQB)
- TMMi Foundation Management Executive
- Winner European & ISTQB International Testing Excellence Award

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Finance Domain context

- **Digital economy**
 - Reliable, secure, operate without disruptive incidents
 - Public confidence, dependency
- **Domain requires high level software quality**
 - Testing a critical component
 - Compliance, auditability
- **Banking, Insurance, Stock Exchange, Pension funds**

Risk & Impact

Financial

Operational

Reputation

Regulatory

Legal

Security



Benchmark Financial Institutions

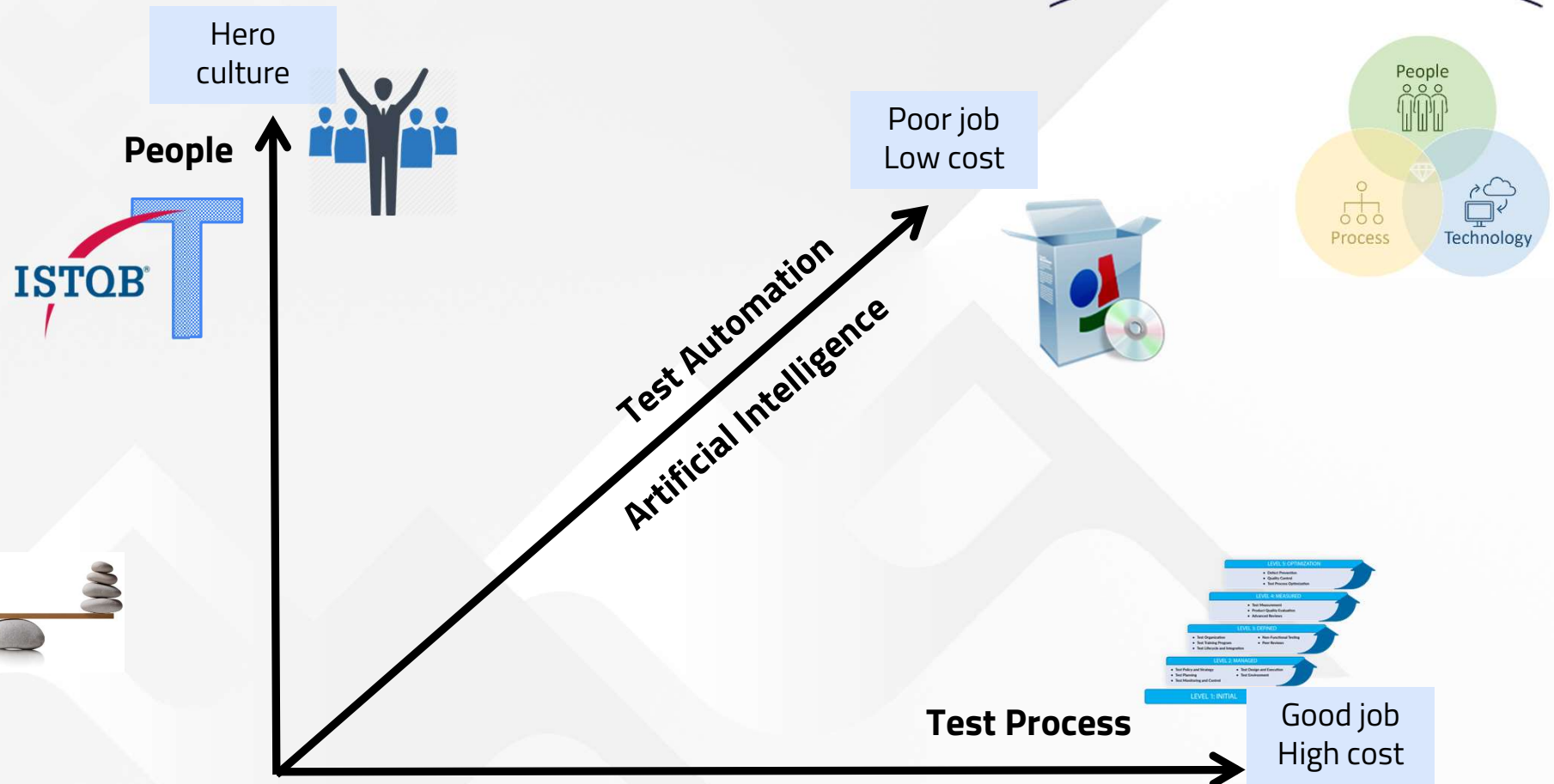
- **Finance 2nd largest TMMi user-base**
- **60 institutions participated**
 - Test maturity
 - Cost and benefits
 - Role of test automation
 - Which software lifecycle
 - Artificial Intelligence (AI)
 - Challenges encountered
- **Validate your performance against a wider industry**
- **Study how others are doing test improvement**

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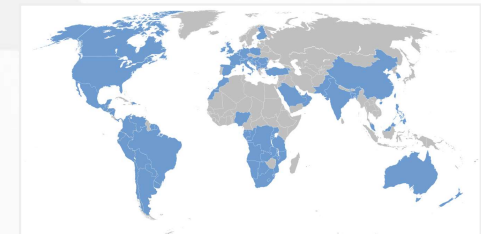
Test Improvement Directions

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TMMi Foundation

- **Founded 2005**
 - Develop the TMMi model
 - Framework TMMi assessments (ISO 33020), formal certification
- **TMMi model published in 2010**
 - ISO & IEEE std.'s, ISTQB, best practice surveys
- **Independent model**
 - Lifecycle, testing method
- **TMMi Local Chapters**
 - Local marketing, translations
 - Ensure assessment & training capability



31 LC's covering 85 countries

TMMi Process Areas

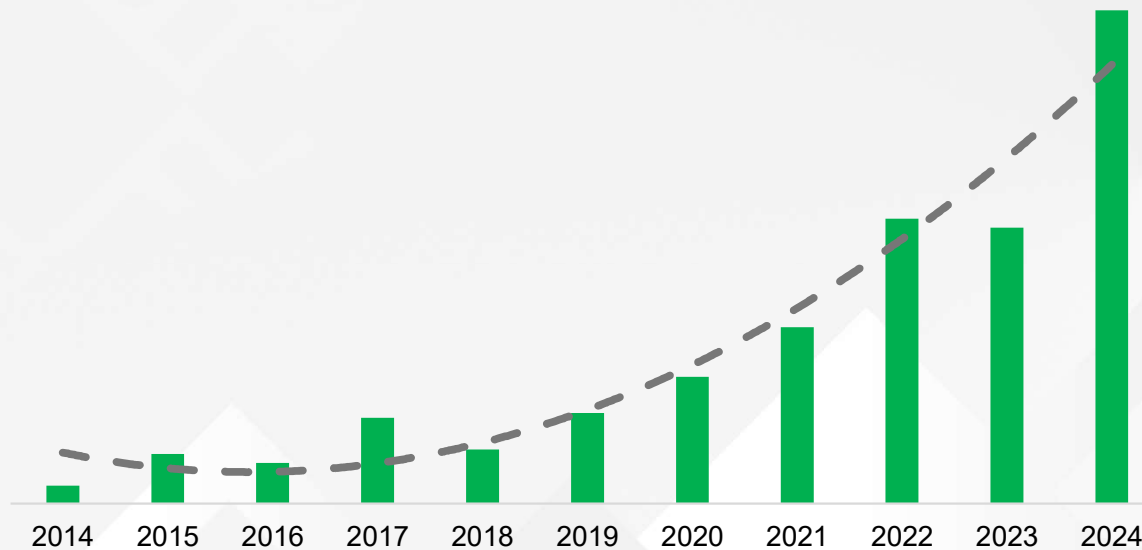
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priorities and focus the test improvement process



TMMi Trends

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TMMi certified organizations



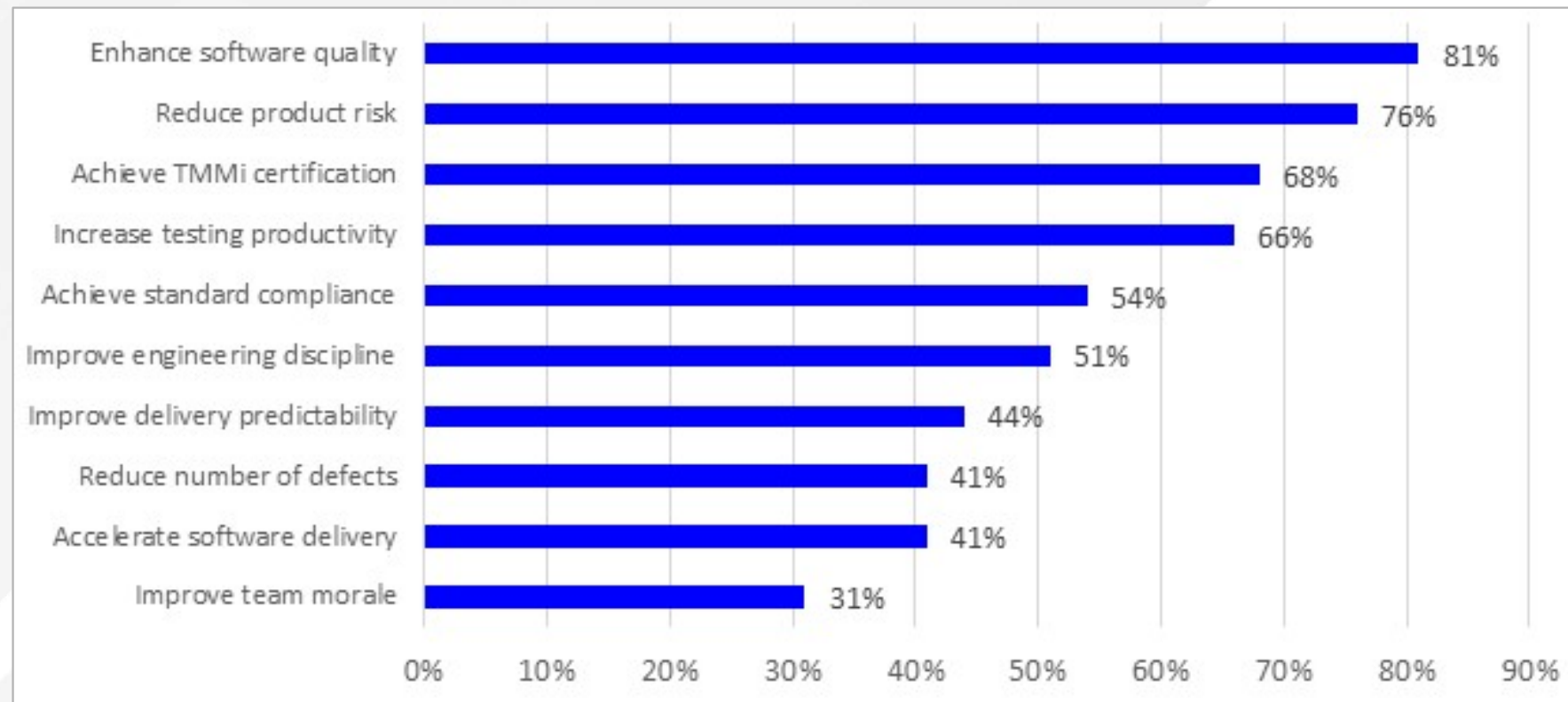
world-wide
leading model

12.500!!



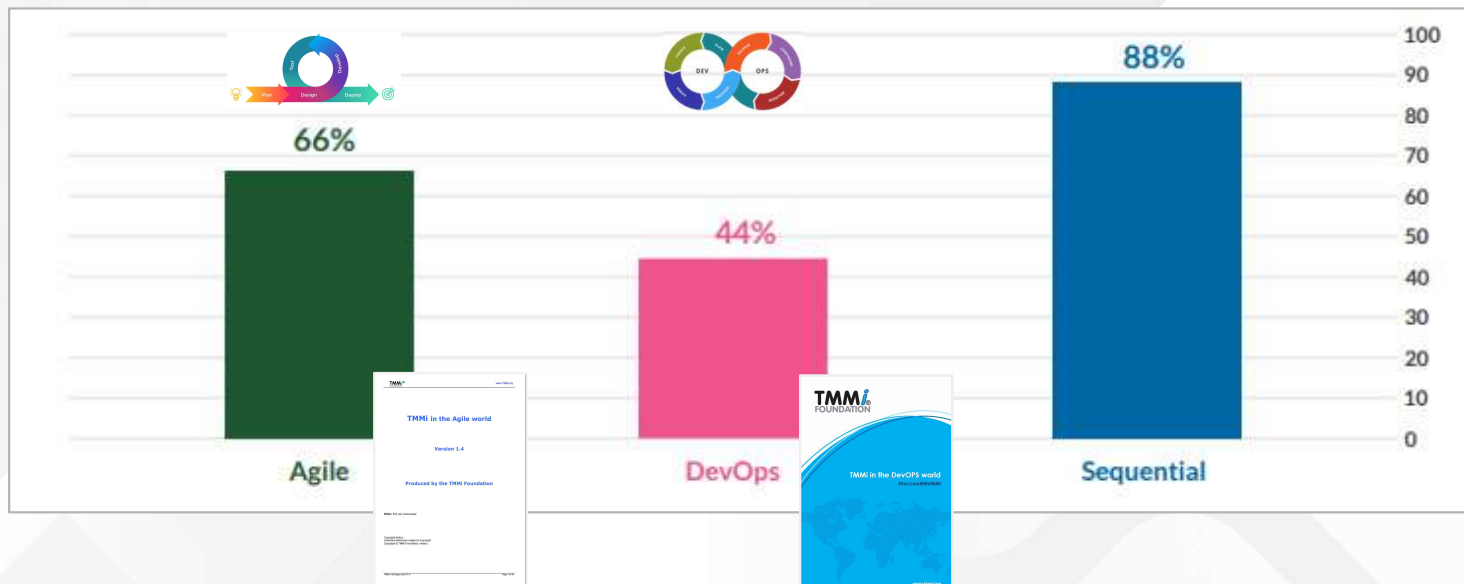
Motivations investing Test Maturity

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Software Life Cycle

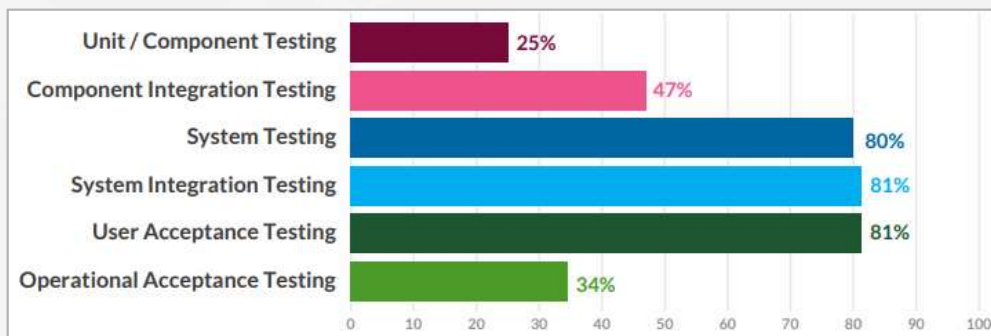
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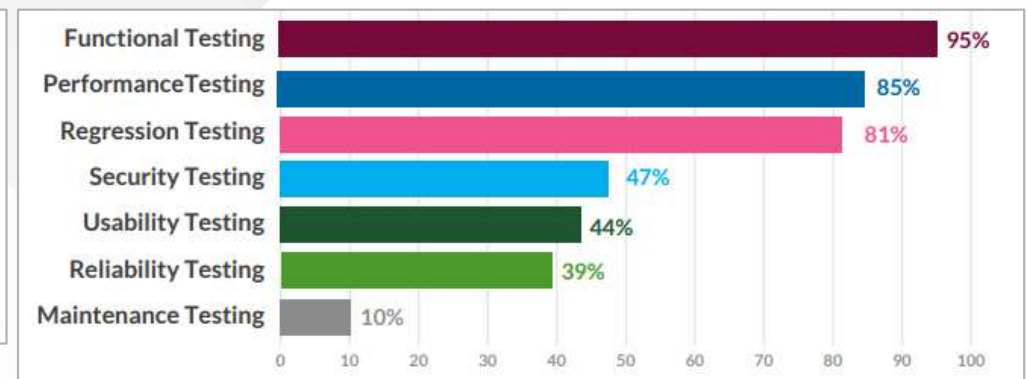
90% use multiple life cycle models!

Test Levels and Test Types

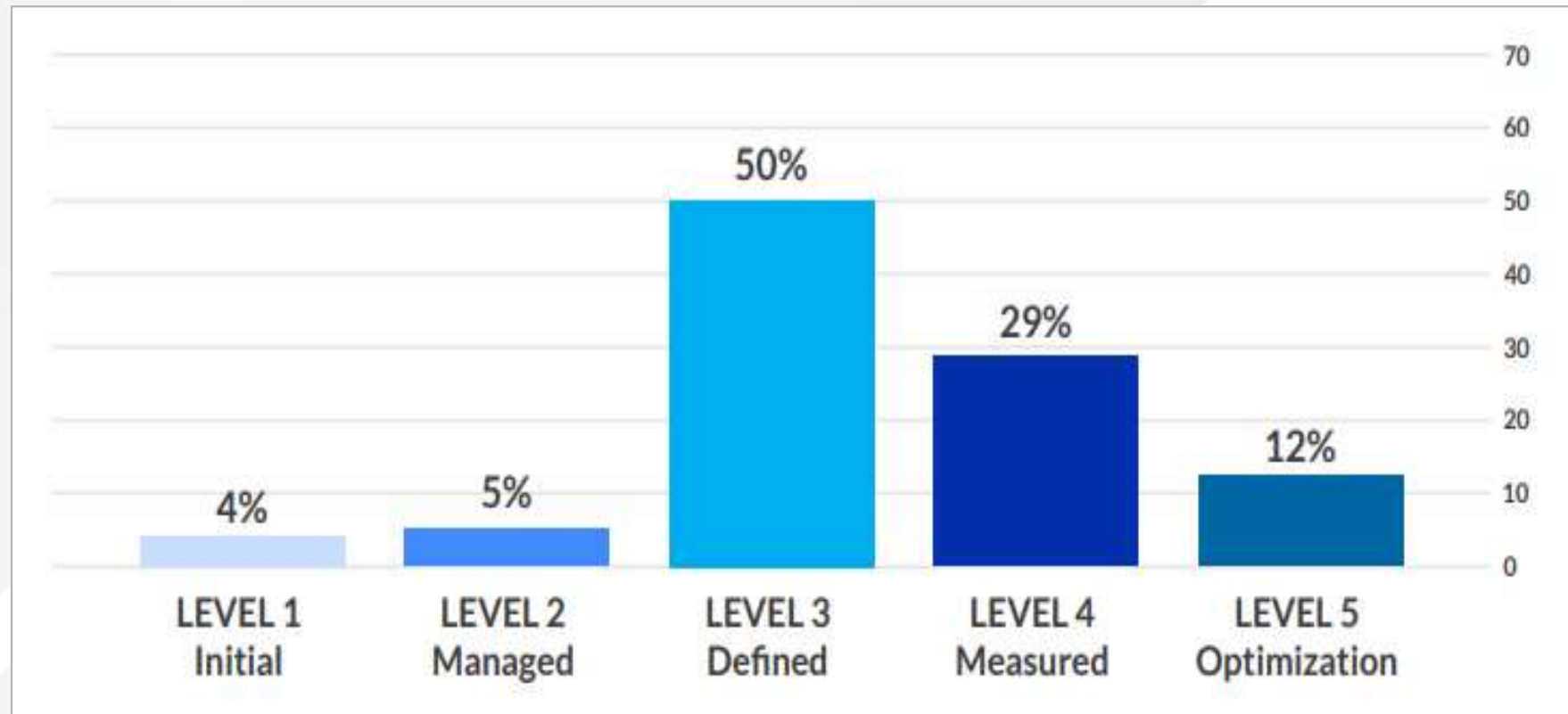
Test Levels



Test Types



TMMi Maturity Level

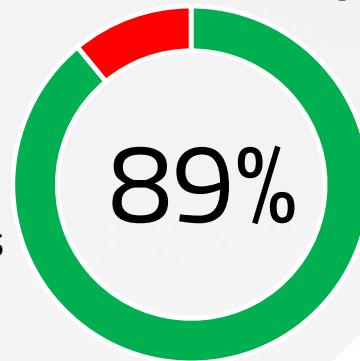


Benefits Achieved

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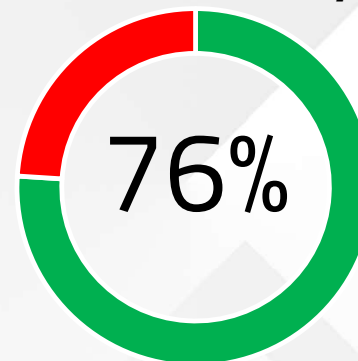
Product Quality

Enhanced product quality
Reduced product risks
Reduced number of defects



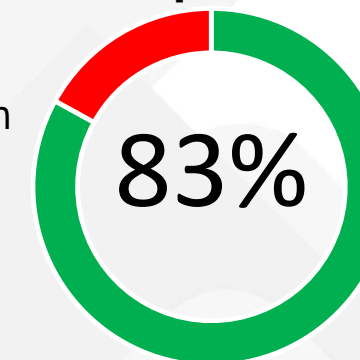
Test Efficiency

Increased test productivity
Accelerated software delivery
Reduced project costs



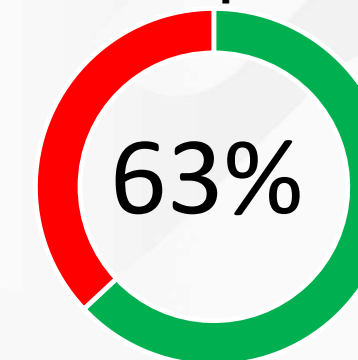
Compliance

Achieved TMMi certification
Achieved standard compliance



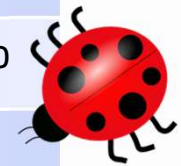
People

Improved test engineering discipline
Improved team morale



Individual Benefits Reported

Institution Type	TMMi level	Software Quality benefits reported
Bank	3	A 22% increase in defect detection effectiveness
Insurance	3	Production defects (related to testing) close to zero
Bank	3	Defect leaking to production decreased by 15%

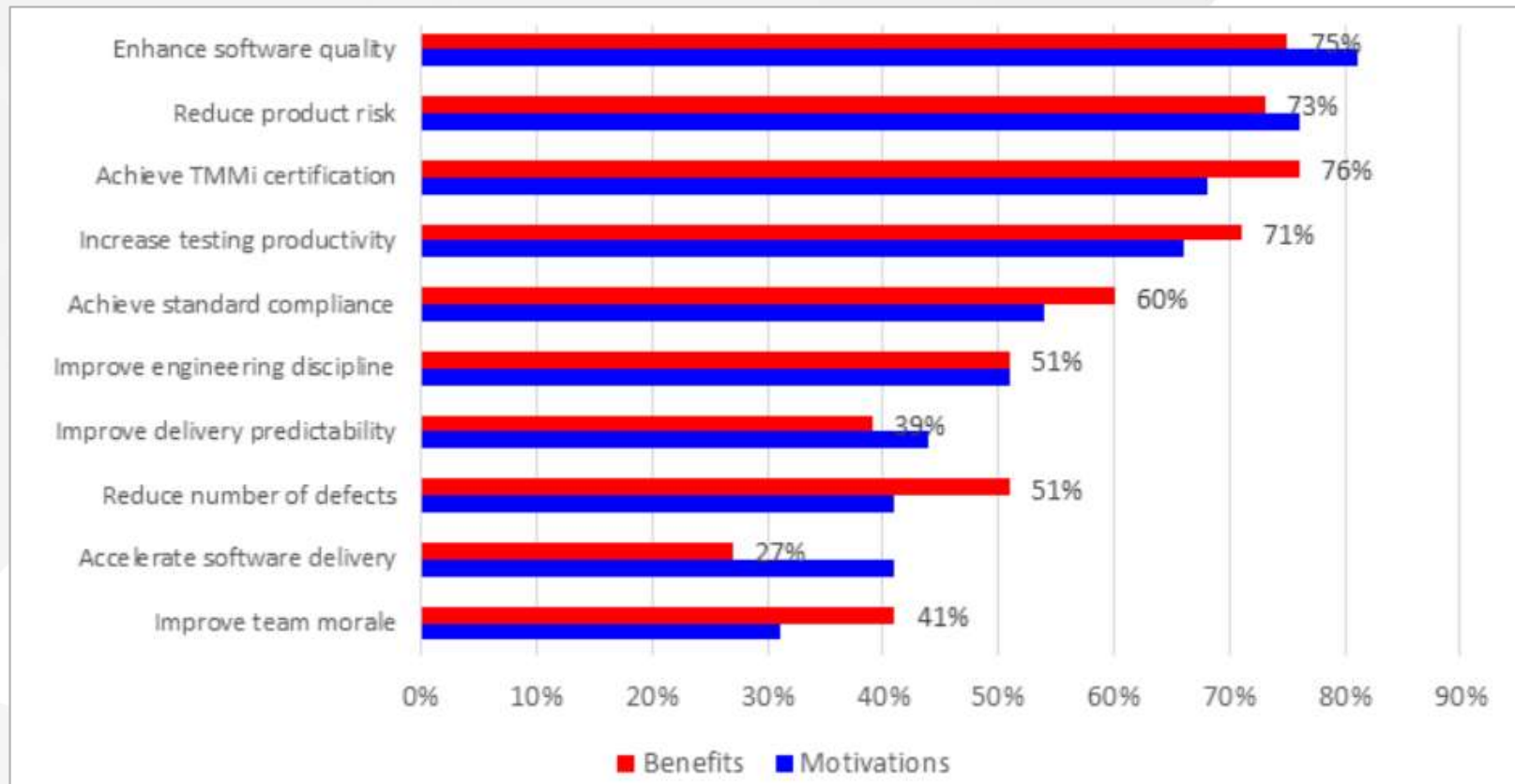


Institution Type	TMMi level	Testing Productivity benefits reported
Insurance	3	Production cycle time shortened from three months to less than one month
Bank	3	Test execution lead time reduction from 19 to 5 weeks (through early involvement and early testing)
Stock Exchange	3	Percentage of early defects found increased by 25%



Benefits of Adopting TMMi

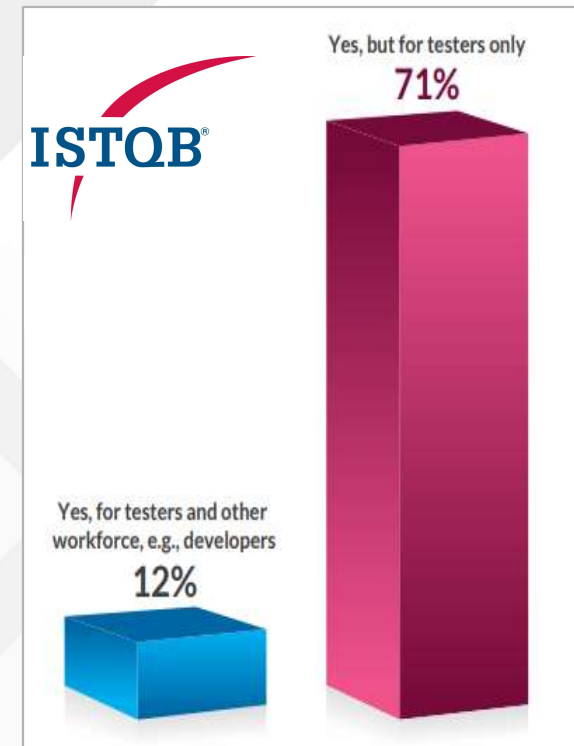
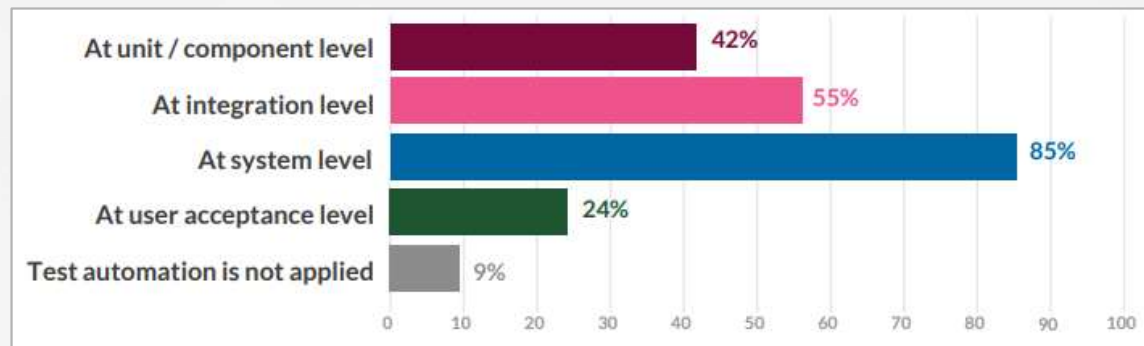
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PPT Model: Test Automation and ISTQB

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Test Automation

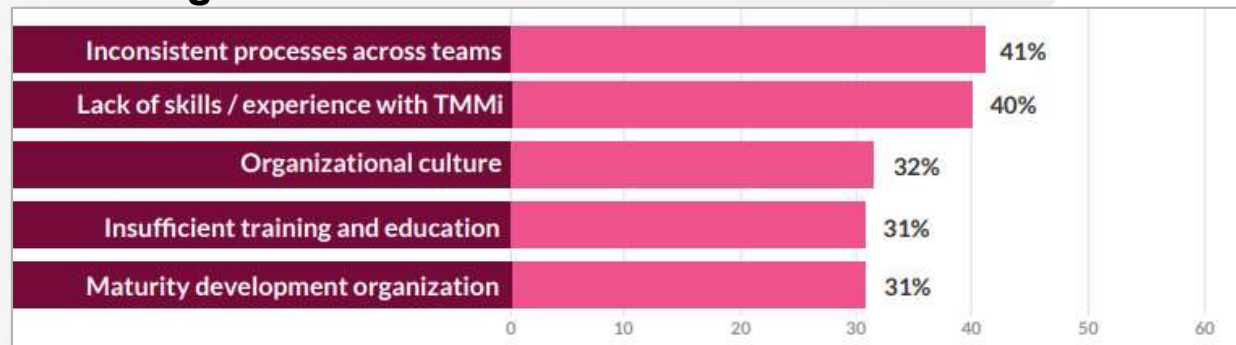


Remember the PPT Framework!

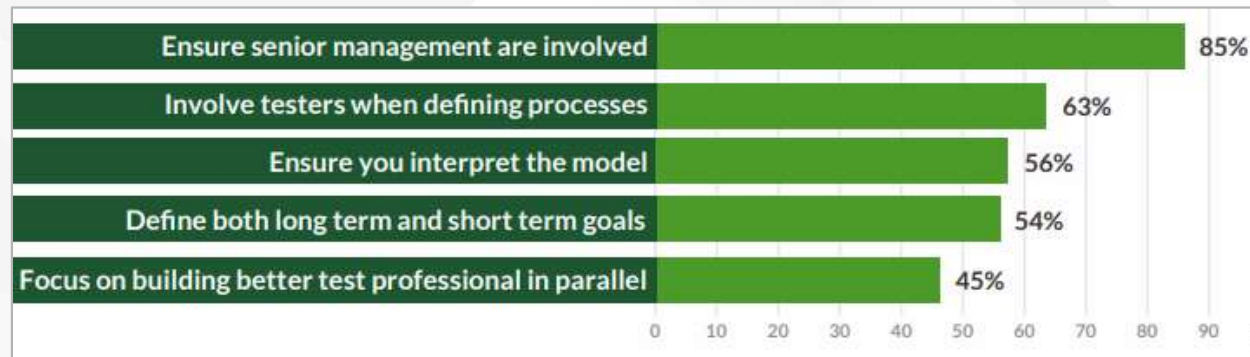


Challenges and Advice

Challenges



Advice



Summary

- **Motivations** for adopting TMMi and **benefits match**
- Improved **product quality** and **more efficiency**
- **TMMi levels 3 and 4** most popular
- Focus on **system** and **UAT testing**
- **Multiple** types of **lifecycles** are being used
- People: **ISTQB** a highly **popular scheme**
- Technology: **Test automation** at **system level** most popular

Sources

- **TMMi Benchmark Report Financial Institution (2024)**

<https://www.tmmi.org/download/tmmi-benchmark-report-financial-domain-2024-v1-0/?wpdmdl=7891&masterkey=660e6be75676b>

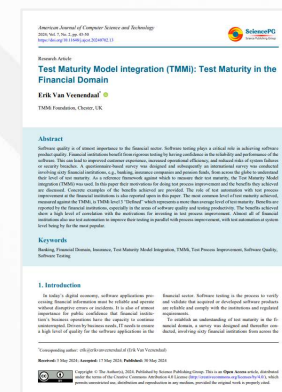
(also available in French and Korean)



- **Test Maturity Model integration (TMMi): Test Maturity in the Financial Domain**

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**THANK
YOU!**

