



Can you afford not to improve testing?

Zsolt Hargitai



06OCT2022

Introduction

- Zsolt Hargitai
- Co-founder of TesterLab
- www.testeralab.io

- 3 methodology
- 5 industries
- 7 companies
- 70+ interviews
- 90+ interviewees

- There are a lot of options (methods)
- Choose a proven framework to improve your testing

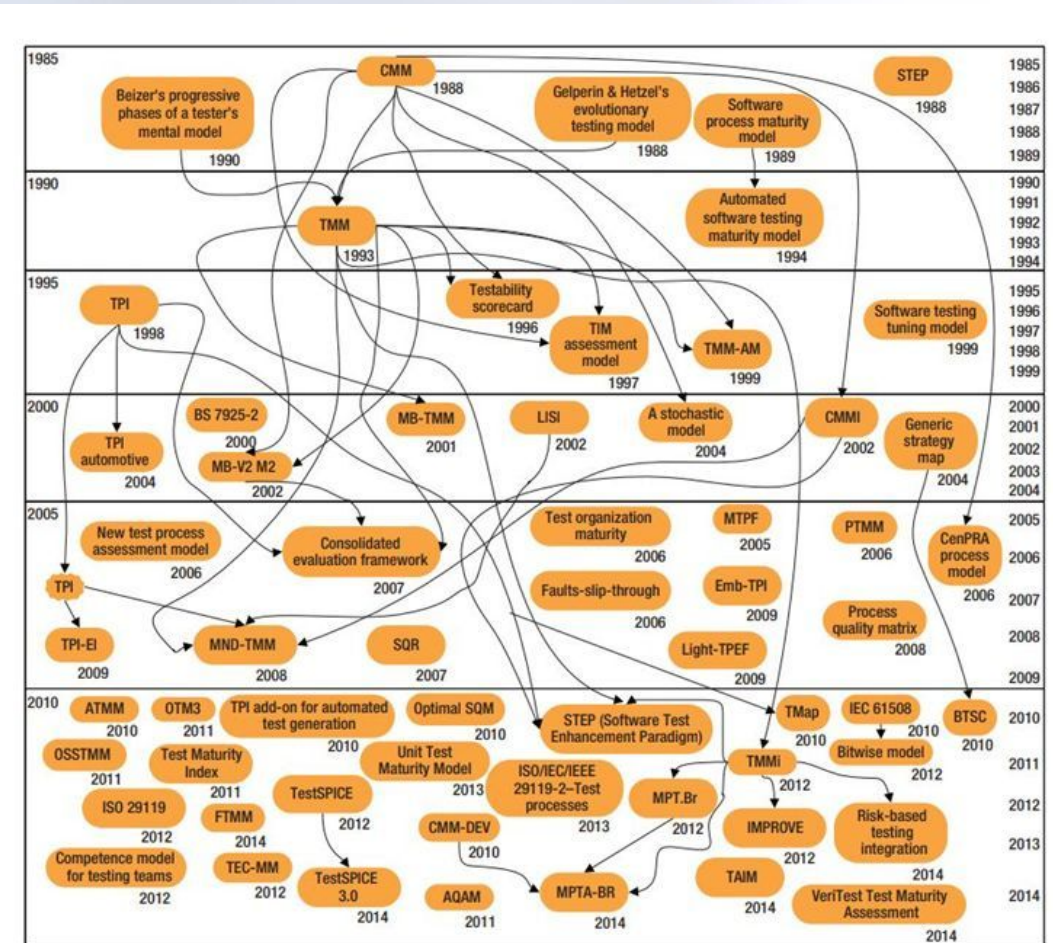


FIGURE 3. The evolution of TMA and TPI models and their relationships. New (original or extended) models have been proposed regularly since 1985.

<https://www.tmmi.org/tm6/wp-content/uploads/2018/01/What-we-know-about-software-test-maturity-and-test-process-improvement.pdf>

Why companies don't do an improvement process?

Before starting an assessment...

- **Lack of management commitment** – long-term commitment is vital
- **Don't realise the value a process improvement** can provide them
- **Want to save money by NOT doing the improvement process** or doing it by themselves

After an assessment completed...

- **Stop after diagnosing** their actual situation
- People are **not engaged**



How methodologies help?

Why would someone **follow a methodology** and its processes?

Because it helps!

A world-wide user survey indicates, e.g.:

- *Test predictability increased by 70%*
- *Test estimation now 95% accurate*
- *87% of respondents stated that it meets or exceeds their expectation*

The good news: there are also **informal assessments**
(based on the objective of assessment)



A general improvement cycle

Improvement cycle is not only assessing the current situation.

IDEAL model – the whole cycle:

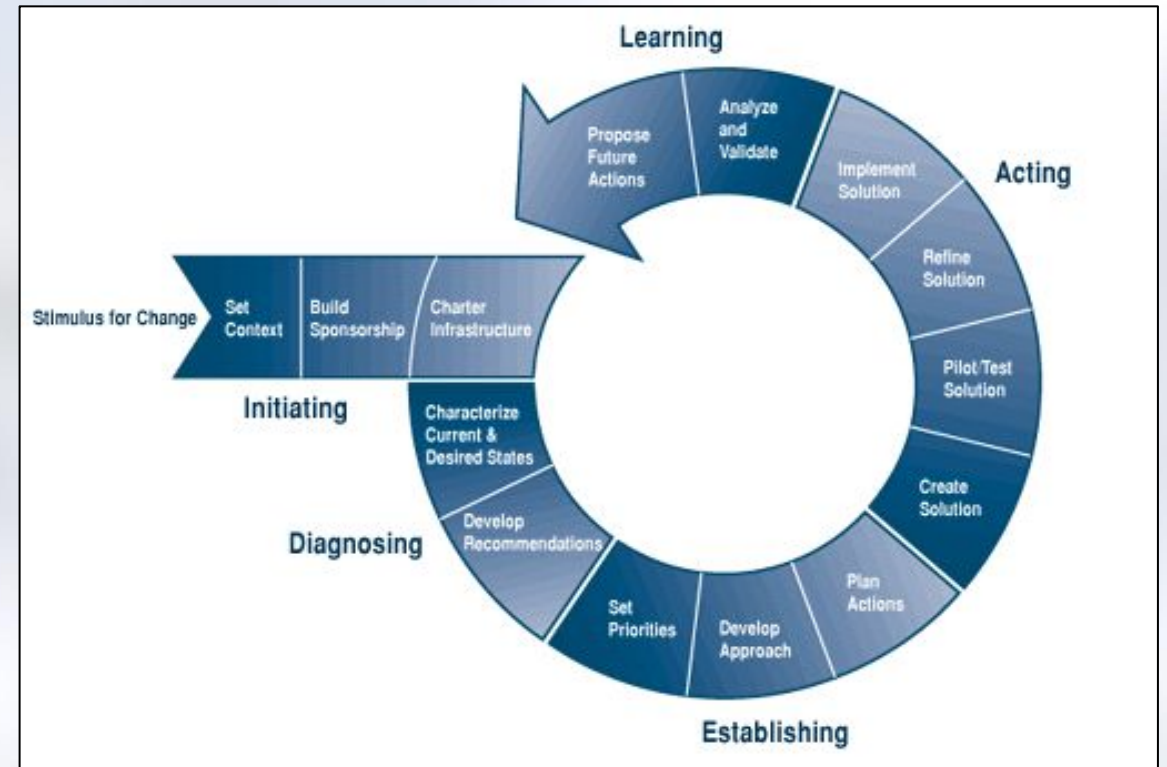
Initiating – setting the scene

Diagnosing – assessing the current status

Establishing – agreed content what to improve

Acting – making the processes actually better

Learning – result analysis



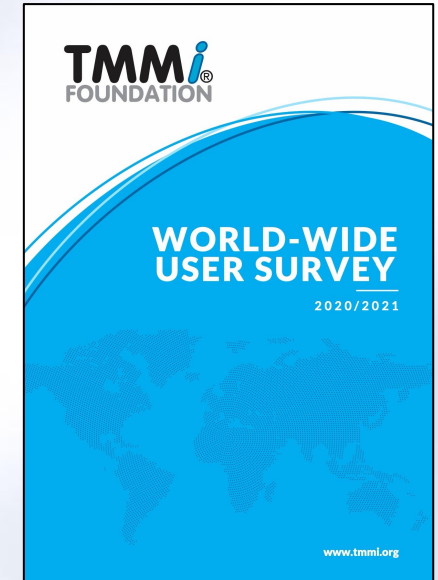
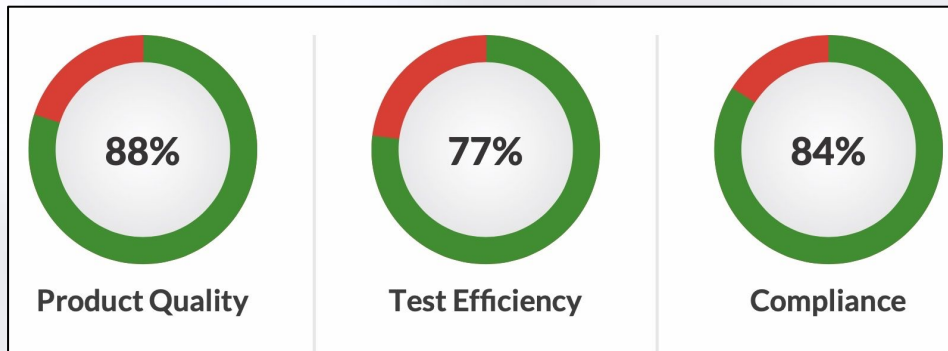


Real life examples

Companies worldwide

World-wide user survey

“What benefits have you experienced of adopting TMMi?”



Informal TMMi Assessment at DACHS

“The preparation for the assessment alone, brought huge advantages.”

“It was altogether a very positive experience, and a highly motivating foundation for our future improvements.”

Hungarian example: Balasys (I.)



About Balasys:

- Balasys is a Central-European leader in IT-security.
- Became known in 2000 with the world's first modular proxy firewall.

Trigger of the assessment

- Continuous growth of the company enforced the review of the existing processes, including testing.

Methodology:

TMMi

Time of the assessment:

2022 Q1

Current phase of the improvement:

„E” Establishing (of IDEAL model)

Original goals of Balasys

- **Increase testing productivity**
(efficiency and effectiveness in mind)
- **Improve delivery predictability**
(adequate planning of adequate testing)
- **Improve team morale**
(roles, resp, team hierarchy, development)

Results so far (after diagnosing)

- Now it is much clearer **what needs to be improved** and in **which order**
- Became clear that the solution for the problems is **optimization** (and not enlarge headcount)
- **Reviewed and finetuned basic test documentation**
(Test policy, Test Strategy, Test Plans...)

Hungarian example: Balasys (III.)

Quote

Zoltán Antal (Engineering Manager):

„Using TMMi methodology we can keep an eye and control our test processes, because our mid-term goal is to reduce defects early in the development cycle and on long term their prevention rather than detection.”

Next step

- “**Act**” expected in 2022Q4.
- Continue **working on focus points**
- **Re-evaluation** in 2023 Q3

Hungarian example: DGITSHU (I.)



About DGITSHU (DPDgroup IT Solutions Hungary):

- DPDgroup IT Solutions Hungary (DGITSHU) is a dynamically developing company, dedicated for DPDgroup. They are developing applications and supporting their customers.

Trigger of the improvement project

- An expanding European network made is necessary to focus not only on products but on the processes and teams.

Methodology:

AgileTPI

Phase of the improvement:

Executed a full improvement cycle (IDEAL)

Time of the improvement project: 2020-2021 (1,5 yrs)

Hungarian example: DGITSHU (II.)

Original goals of DGITSHU

- **Increase product quality**
Reduce number of defects
- **Harmonize parts of testing**
Test environment, Test Data handling, etc.
- **Increase traceability**
Improved coherence of BA/DEV/TEST

Results so far (after a full IDEAL cycle)

- **Many improvement activities**
(Root Cause Analysis, Metrics, Test environments, Stakeholder Analysis, Automation ROI, Risk Analysis, etc.)
- **Improved test measurement**
(well defined metrics to each phases)
- **Advanced the test organization**
(trainings, workshops, regular testing board discussions, webinars, etc.)

Hungarian example: DGITSHU (III.)

2020 vs 2021 results shown below
Huge improvement in just one and a half years

Key area	Professional				Team			Organization			
	C	D	D		C	E		C	D		
01 Stakeholder commitment	C	D	D		C	E		C	D		
02 Degree of involvement	A	A	B	C	A			A	B		
03 Test strategy	A	B	C	D	A	C	C	A	C		
04 Test organization	D	E	F	G	D	F		D	G		
05 Communication	A		C		B	D		C			
06 Reporting	D	F	F		D	D	F	E			
07 Test process management	E	E	F		E	F	F	E	F		
08 Estimating and planning	G		F		G	F		F			
09 Metrics	C				C			C	E		
10 Defect management	C	D	E		C	E	F	G	D	E	
11 Testware management	F		G		G	F		F	G		
12 Methodology practice	D				D			D	E	F	G
13 Tester professionalism	A	B	B	D	A			B	C		
14 Test case design	C	D	E		C	D	F	F			
15 Test tools	A		A		A			A	B	C	
16 Test environment	A	A	C		B			B	C	D	

Key area	Professional				Team			Organization			
	C	D	D		C	E		C	D		
01 Stakeholder commitment	C	D	D		C	E		C	D		
02 Degree of involvement	A	A	B	C	A			A	B		
03 Test strategy	A	B	C	D	A	C	C	A	C		
04 Test organization	D	E	F	G	D	F		D	G		
05 Communication	A		C		B	D		C			
06 Reporting	D	F	F		D	D	F	E			
07 Test process management	E	E	F		E	F	F	E	F		
08 Estimating and planning	G		F		G	F		F			
09 Metrics	C				C			C	E		
10 Defect management	C	D	E		C	E	F	G	D	E	
11 Testware management	F		G		G	F		F	G		
12 Methodology practice	D				D			D	E	F	G
13 Tester professionalism	A	B	B	D	A			B	C		
14 Test case design	C	D	E		C	D	F	F			
15 Test tools	A		A		A			A	B	C	
16 Test environment	A	A	C		B			B	C	D	

Two key factors for success:

- **Constant management support**
- **Consistent focus** on the improvement program by the team

Hungarian example: DGITSHU (IV.)

Quote

János Ráti (COO):

"The assessment and the improvement program helped a lot and unambiguously accelerated our growth. Marked out the focus points supporting our parallel growth on multiple areas. The results exceeded our expectations."

Next steps

- Continue the improvement program
- Extend it to other divisions

Benefits of an improvement program

- **Efficiency** and **effectiveness** improve
- **ROI can be calculated**

Widely underemphasized:

- **Testers' satisfaction with their work improves**
(with better morale fluctuation reduces, they stay longer at the company)

SUMMARY

Key takeaways

1. **Not only of “BIG” companies** but, for all;
2. Have the **right knowledge** in place;
3. **Not only for testers**, but for all who are involved in software quality;
4. These models are **widely applicable**;
5. Use also in **Agile context**.



So, can you afford not to improve testing?

Thank you for your attention!

List of references



[1] Vahid Garousi, Michael Felderer, and Tuna Hacaloğlu (2018), What we know about software test maturity and test process improvement in: IEEE Software, vol. 35, no. 1, pp. 84-92, 2018.

[2] TMMi World-wide user survey:

<https://www.tmmi.org/tm6/wp-content/uploads/2021/07/TMMi-Survey-Report-v1.1.pdf>

[3] "The story of DACHS' Informal TMMi Assessment» - TMMi Foundation whitepaper, October 2021 (Laura Albert, Olga Mezeiné Szabó, Erik van Veenendaal and Zsolt Hargitai)