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Manual Testing

"Slow and expensive, often the bottleneck"
"Not tested properly"

Pros	Cons
 Exploratory testing	 Test execution takes time
 Combining testing elements	 Testing is experience-dependent
 Code under construction	 Repetition is problematic

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Automated Testing

"Automate everything!"
"Less prone to human error"

Pros



Useful for regression testing



Reusability



Speeds up test execution

Cons



Expensive to set up



Requires ongoing maintenance



Requires a stable environment

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Manual testing

- 💡 Perceived as bottleneck
- 💡 Very flexible
- 💡 Unsuitable for repetitive tasks

VS

Automated testing

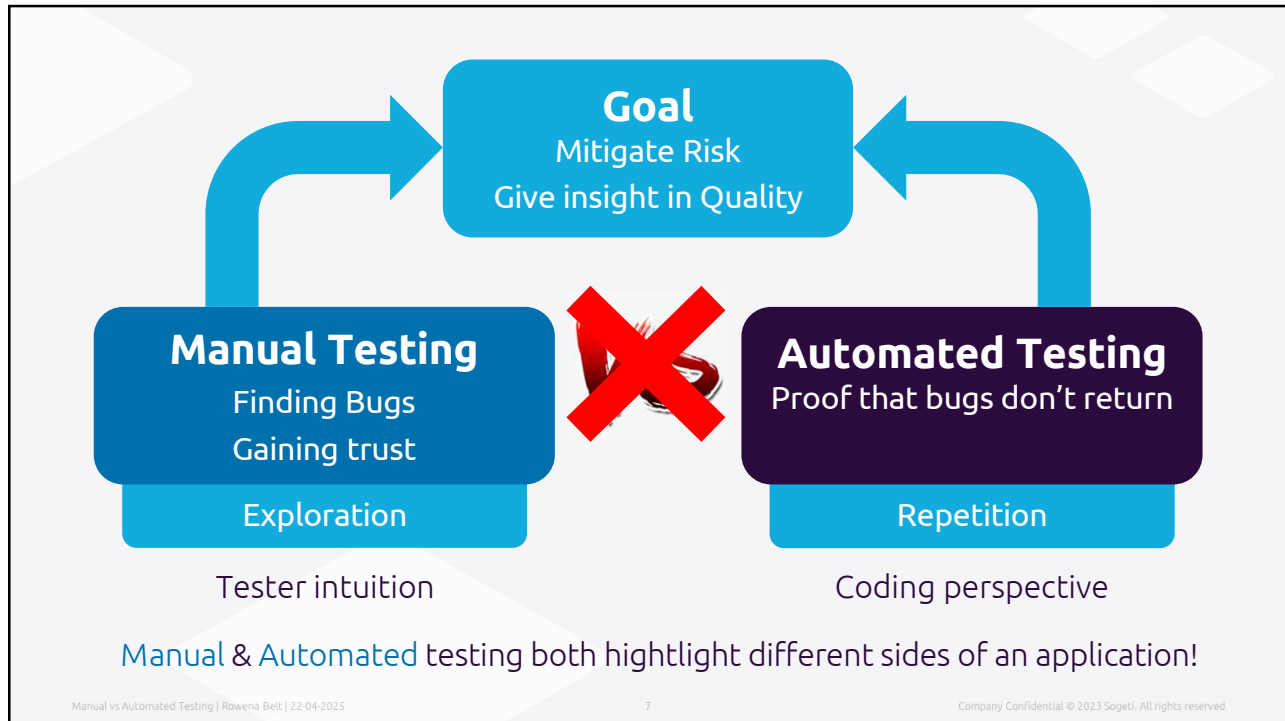
- 💡 Automate everything!
- 💡 Fast & reusable
- 💡 Continuously expensive

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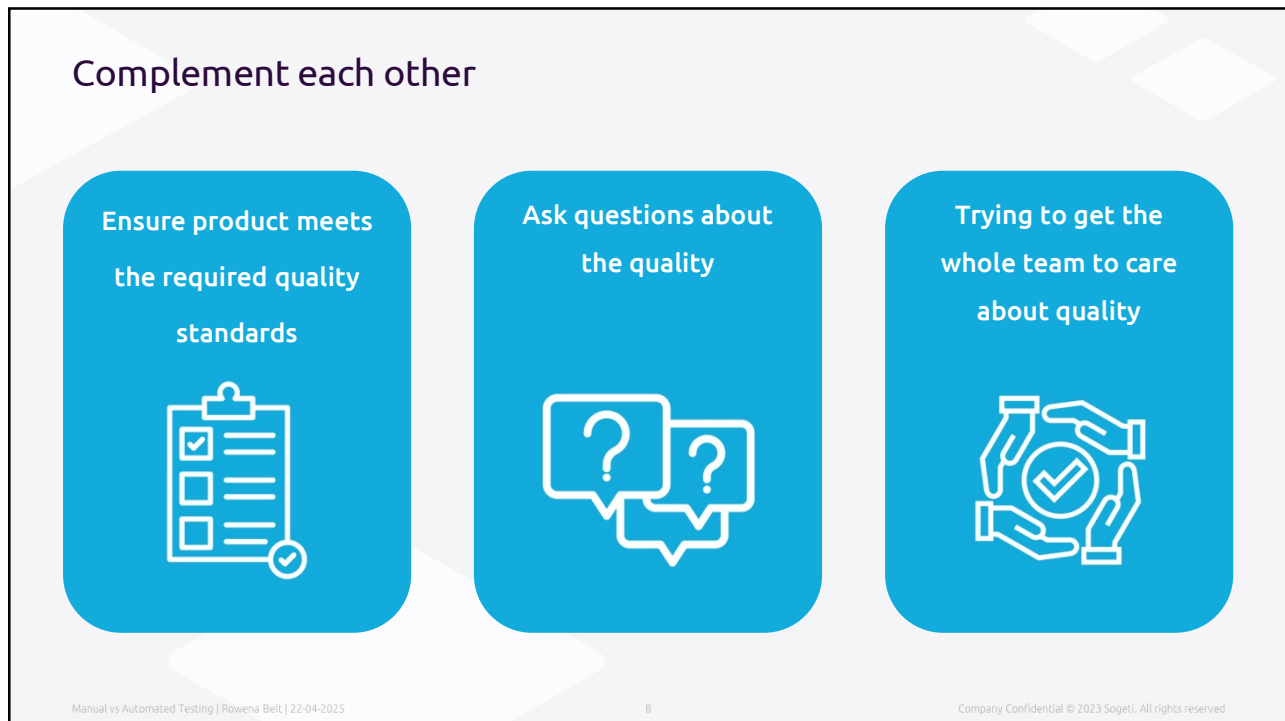
6

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Test strategy

- Risk based
- What you tests and why
- 4 steps
 - Overview
 - Scoring
 - Reflect
 - Strategy



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Overview

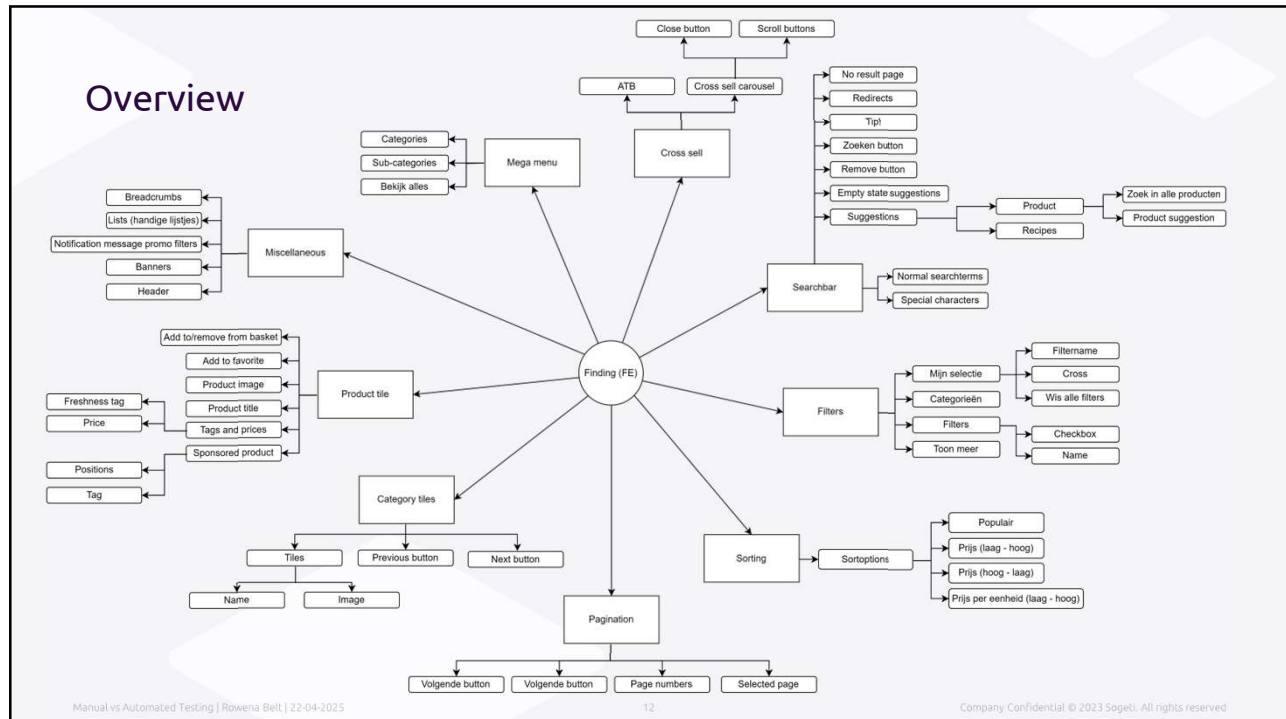
What do we have?

Are we missing anything?

Why?

You can't determine coverage if you don't know the 100%

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Overview

Test cases	Search	Mega menu	Category tiles	Categories	Filters	Sorting	Pagination	Why not automated
TC1	●			X				Covered by other TC
TC2	●				X			Covered by other TC
TC3	●					X		Covered by other TC
TC4	✓						X	
TC5	✓			X	X			
TC6	✓			X	X	X		
TC7	●			X	X	X	X	Too complicated
TC8	●			X		X		Covered by other TC
TC9	✓			X		X	X	

- ✓ Automated
- Not automated
- X Elements that are part of the test case

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Scoring

What does it all mean?

How can I decide riskiness?

Why?

Because not all elements are as important

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Scoring

- How to determine risk?
- How much is it being used
- What is the impact if it's not working
- Recovery time if it breaks


- Test Heuristics

SSS Bug Review Heuristics



Some Similar Side Effect

SFDIPOT Product Elements Heuristics




Structure Function Data Interface Platform Operation Time

FEW HICCUPPS Consistency Heuristics



Familiarity Explainability World History Image Comparable Prod Claims Users' Desires Product Purpose Statutes

RRCRC Regression Heuristics



Recent Core Risky Cfg Sensitive Repaired Chronic

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TESTING MNEMONICS

Mnemonic data compiled from Karen N. Johnson's card deck, Lynn Hickey's QP webpage and Moodle.

Del Dewar, <http://www.findingdeefex.com/>

<p>CRUSSPIC STMPL QUALITY CHARACTERISTICS</p> <p>Capability, reliability, usability, security, scalability, performance, installability, compatibility, supportability, testability, maintainability, portability, localisability</p> <p>http://bit.ly/hstsm_m</p>	<p>MCOASTER REPORTING</p> <p>mission, coverage, obstacles, audience, status, techniques, environment, risk</p> <p>http://bit.ly/mcoaster_m</p>	<p>SPIES INTERNATIONALISATION</p> <p>special characters, pages & content, integrations, error messages, special events</p> <p>http://bit.ly/spies_m</p>	<p>SEED NATALI GUI STEP AUTOMATION</p> <p>synchronise, exists, enabled, displayed, number of arguments, types of arguments, log, investigate</p> <p>http://bit.ly/seednatali_m</p>	<p>FAILURE ERROR HANDLING</p> <p>functional, appropriate, impact, log, i/i, recovery, emotions</p> <p>http://bit.ly/failure_m</p>	<p>SACKED SCOWS LEARNING</p> <p>scouting obsessively, authentic probs, cognitive savvy, knowledge attracts knowledge, experiment, disposable time, stories, contrasting ideas, other minds, words and pictures, systems thinking</p> <p>http://bit.ly/sackedscows_m</p>
<p>RIMBEA BUG ADVOCACY</p> <p>replicate it, isolate it, maximise it, generalise it, externalise it, and say it clearly & dispassionately</p> <p>http://bit.ly/rimbea_m</p>	<p>FEW HICCUPPS CONSISTENCY</p> <p>familiarity, explainability, world, image, comparable products, claims, users' desires, product, purpose, statutes</p> <p>http://bit.ly/fewhiccups_m</p>	<p>DEED HELP GC API CONSUMABILITY</p> <p>domain specific names, examples, easy to learn, documentation, hard to misuse, easy to use, lead to readable code, principle of least astonishment, surprise, usability, consistency</p> <p>http://bit.ly/api_m</p>	<p>INECTRAS PERF. TEST CLASSIFICATION</p> <p>investigation or, validation of, end-to-end or, component response times and/or, resource consumption under, anticipated or, stressful conditions</p> <p>http://bit.ly/ivectras_m</p>	<p>COP FLUNG GUN MOBILE APPLICATIONS</p> <p>communication, orientation, platform, function, location, user scenarios, network, gesture, guidelines, updates, notifications</p> <p>http://bit.ly/copflunggun_m</p>	<p>DUFFSSCRA TEST TECHNIQUES</p> <p>domain, user, function, flow, stress, scenario, claims, risk, automatic</p> <p>http://bit.ly/hstsm_m</p>
<p>FIBLOTS MODEL WORKLOADS/PERF. TEST</p> <p>frequent, intensive, business critical, legal, obvious, technically risky, stakeholder mandated</p> <p>http://bit.ly/fiblots_m</p>	<p>PAPAS BE @ SFO API FUNCTIONALITY</p> <p>aging, authentication, parameters/query strings, authorisations, security, behave, error handling, state, filter, order</p> <p>http://bit.ly/api_m</p>	<p>TESTING MNEMONICS</p> <p>Mnemonic data compiled from Karen N. Johnson's card deck, Lynn Hickey's QP webpage and Moodle.</p> <p>Del Dewar, http://www.findingdeefex.com/</p>		<p>ICEOVERMAD API TESTING</p> <p>integration, consumers, endpoints, operations, volume, error handling, restful, idempotency, authentication, definitions</p> <p>http://bit.ly/iceovermad_m</p>	<p>SLIME TASK ORDERING</p> <p>security, languages, requirements, measurement, existing</p> <p>http://bit.ly/slime_m</p>
<p>DVLA PC API MAINTAINABILITY</p> <p>diagnostic, versioning, logging, accessibility, purpose, concise</p> <p>http://bit.ly/api_m</p>	<p>FCC CUTS VIDS TOURING</p> <p>feature, complexity, claims, configuration, user, testability, scenario, variability, interoperability, data, structure</p> <p>http://bit.ly/fcccutsvids_m</p>	<p>GRATEDD SCRIPTS TEST STRATEGY</p> <p>goals, risks, approach, tradeoffs, environments, dependencies, data, stakeholders, coverage, models, resources, information needs, prioritisation, tooling, schedule</p> <p>http://bit.ly/grateddscripts_m</p>	<p>I SLICED UP FUN MOBILE APPLICATIONS</p> <p>inputs, store, location, interactions/interruptions, communications, ergonomics, data, usability, platform, function, user scenarios, networks</p> <p>http://bit.ly/islicedupfun_m</p>	<p>TERMS TEST AUTOMATION</p> <p>tools & technology, resolution, equipments & risks, maintenance, security</p> <p>http://bit.ly/terms_m</p>	<p>RSTLLL SMS TEXT APPLICATIONS</p> <p>reply, sender, timestamp, test, links, language, length</p> <p>http://bit.ly/rstllll_m</p>
<p>WWWWHKE REQUIREMENTS ANALYSIS</p> <p>who, what, when, where, why, how, knowledge, experience</p> <p>http://bit.ly/wwwwhke_m</p>	<p>PAOLO DEVICE ORIENTATION</p> <p>portrait, audio, objects, landscape, overlay</p> <p>http://bit.ly/paolo_m</p>	<p>MUTTI TESTING</p> <p>market, users, tasks, information, implementation</p> <p>http://bit.ly/mutti_m</p>	<p>PROOF SESSION BASED TEST DEBRIEF</p> <p>past, results, blockers, outlook, feelings</p> <p>http://bit.ly/proof_m</p>	<p>SPIFFY MICROTEST</p> <p>small, precise, isolated, fast, frequently run</p> <p>http://bit.ly/spiffy_m</p>	<p>CRUMBS TEST AUTOMATION</p> <p>confirmation, cov, criteria & complexity, risk, robustness & reliability, usefulness & usability, maintainability & manual effort, bias & bias, span, separation & security</p> <p>http://bit.ly/crumbs_m</p>
<p>MR Q COMP GRAB RGR EXPLORATION & TACTICS</p> <p>modelling, resourcing, questioning, chartering, observing, manipulating, pairing, generating, elaborating, refocusing, alternating, searching/ backtracking, conjecturing, recording, reporting</p> <p>http://bit.ly/mrqcomp_m</p>	<p>SFDIPOT TEST STRATEGY</p> <p>structure, function, data, interface, platform, operation, time</p> <p>http://bit.ly/sfdipot_m</p>	<p>GO DARE=M TEST PLANS</p> <p>"to go for", deliverables, activities, resources, estimates, - represents balance, milestones</p> <p>http://bit.ly/godareem_m</p>	<p>CCD IS EARI PERF. TEST CORE PRINCIPLES</p> <p>context, criteria, design, install, script, execute, analyse, report, iterate</p> <p>http://bit.ly/ccdiseari_m</p>	<p>CIDTESTD PROJECT ENVIRONMENT</p> <p>customers, info, dev relations, team, equipment & tools, schedule, test items, deliverables</p> <p>http://bit.ly/cidtestd_m</p>	<p>CRUMBS TEST AUTOMATION</p> <p>confirmation, cov, criteria & complexity, risk, robustness & reliability, usefulness & usability, maintainability & manual effort, bias & bias, span, separation & security</p> <p>http://bit.ly/crumbs_m</p>

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Scoring

Group	Functionality	Recent	Core - customer	Core - client	Repaired	Configuration sensitive	Risk	Chronic	Priority	Risk	Score
Searchbar											
	Searchbar	4	5	5	5	1	3	2	14	22	308
	Cross	1	3	1	1	1	3	1	5	12	60
	Zoom button	1	5	2	1	1	3	1	8	12	96
	Product suggestions	4	5	3	1	1	1	1	12	8	96
	Recipe suggestions	4	5	3	1	1	1	1	12	8	96
	Empty state suggestions	4	5	1	1	1	1	1	10	8	80
	One result	1	1	1	1	1	1	1	3	8	24
	Zero results	4	5	4	1	1	1	1	13	8	104
	Redirects	1	1	3	1	1	1	1	5	8	40
Filterbar											
	My select - filter	4	5	5	1	2	1	1	14	10	140
	My select - cross	4	5	3	1	2	1	1	12	10	120

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Reflect

What is the value of my current test set?

Why?

If you don't know where the holes are,
you can't plug them

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Reflect

Searchbar	Filterbar	Sorting	Pagination	Mega menu	Cross Sell	Product page	Category Tiles	Miscellaneous
✓ TC1 Searchbar	✓ TC1 Mijn selectie - filter	✓ TC1 Single sortoptie	✓ TC1 Page numbers	✓ TC1 Categories	TC1 Product tile - name	✓ TC1 Tags	TC1 Image	✓ TC1 Breadcrumbs
✓ TC2 Cross	✓ TC2 Mijn selectie - cross	TC2 Multiple sortopties	✓ TC2 Next button	✓ TC2 Subcategories	TC2 Product tile - image	✓ TC2 Sponsored	✓ TC2 Name	✓ TC2 Terug breadcrumb
✓ TC3 Zoeken button	✓ TC3 Mijn selectie - Wis alle filters		✓ TC3 Previous button	TC3 Toon alles	✓ TC3 Quantity selector	✓ TC3 ATB	✓ TC3 Next button	TC3 Social Lists
TC4 Product suggestions	✓ TC4 Filters				TC4 Buttons	✓ TC4 Click productimage	✓ TC4 Previous button	✓ TC4 Header
TC5 Recipe suggestions	TC5 Checkbox				✓ TC5 Close button	✓ TC4 Click productname		TC6 Shelftexts
TC6 Empty state suggestions	✓ TC6 Filtername					TC5 Banners		TC7 Notifications
✓ TC7 Enter	✓ TC7 (sub)Categories							
✓ TC8 One result	✓ TC8 Toon meer							
✓ TC9 Zero results								
TC10 Redirects								

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Strategy

What are you going to test?

How much are you testing?

Why?

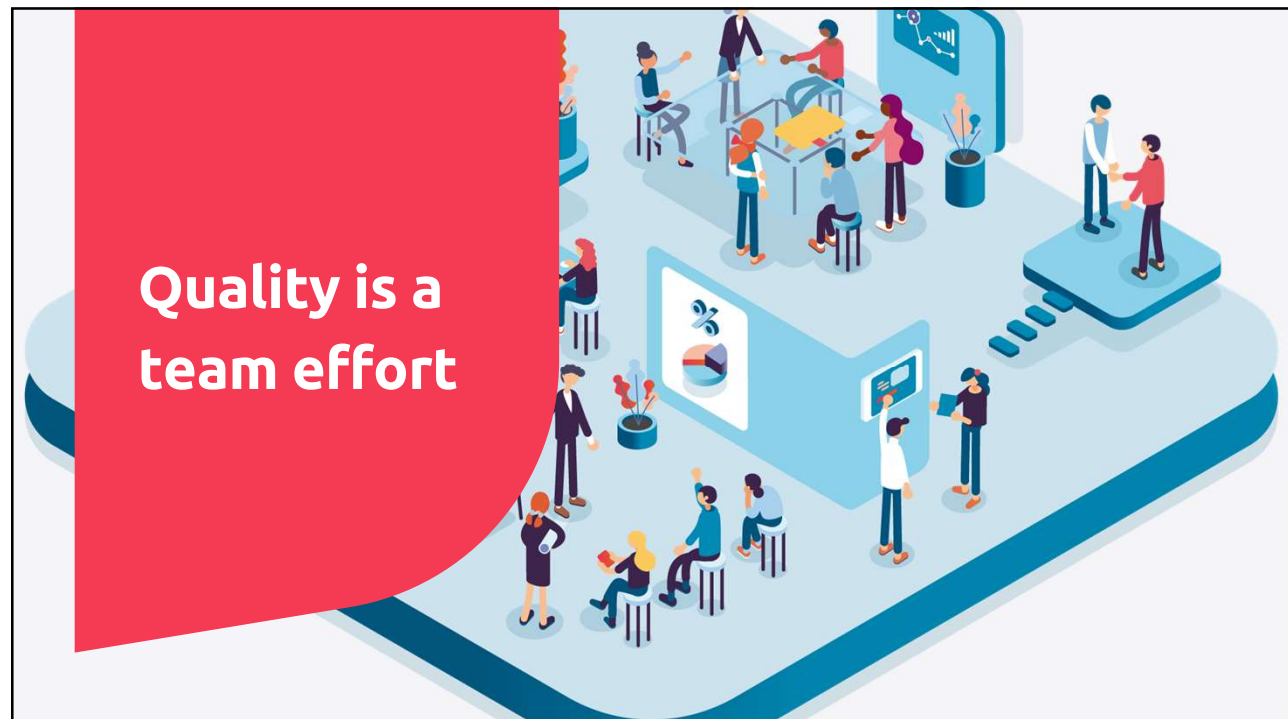
Because you can't test everything

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Strategy

Risk level	Activities
Low 0-100	Max 5 minutes of testing Max 1 Automated test cases for component Max 3 Automated test cases for E2E
Medium 101-150	Max 10 minutes of testing Max 2 Automated test cases for component Max 5 Automated test cases for E2E
High 150 +	Max 15 minutes of testing Max 5 Automated test cases for component Max 10 Automated test cases for E2E

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Why is Quality a Team Effort?

Everybody has
impact on
quality



Everybody has a
perspective on
quality



Everybody has a
perspective on
risk



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Risk poker

Planning poker, but for risks

1

Pick a story

2

Estimate
together

3

Discuss
differences

Goal: create risk awareness!

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Pitfalls



No action after feedback

Description

Team members do not pick up the results of testing

Issue

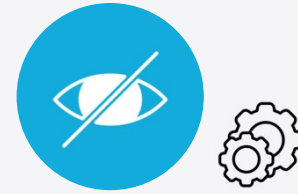
- Effort on testing is wasted
- Technical debt increases

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Ignoring the test results

Description

Team members do not look at the test results

Issue

- Tests becomes redundant
- Technical debt increases

Pitfalls



Entropy

Description

Test cases lose their meaning over time

Issue

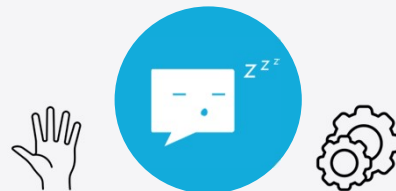
- Not clear what you are testing
- Results don't mean anything

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No reviews

Description

Team members do not evaluate their work

Issue

- Possibility of duplication

Pitfalls



Not reflecting on the strategy

Description

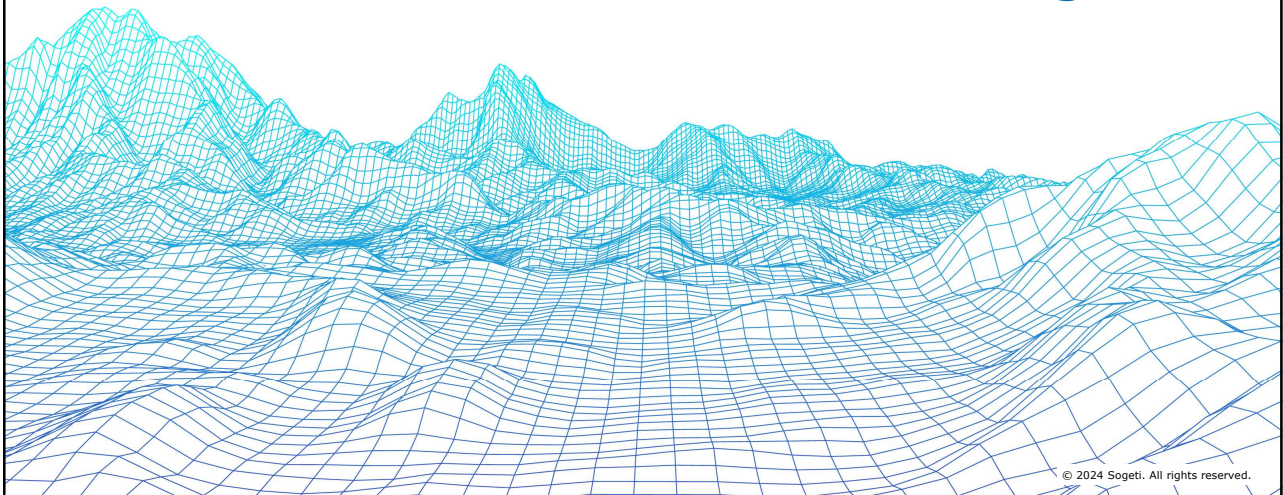
Team members do not evaluate the test strategy

Issue


- Strategy gets outdated
- Focus on the wrong test cases

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Manual & Automated Testing




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Manual testing		Automated testing
<ul style="list-style-type: none">• New features• Exploratory testing• UI/UX testing• Complexity		<ul style="list-style-type: none">• Stable features• Regression• Performance• Repetitive tasks• Consistency
<p>Manual and automated testing go together</p>		
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Bedankt voor jullie aandacht!



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