Change-Driven Testing

Effektiv und effizient testen trotz immer kürzerer Release-Zyklen

Dr. Andreas Göb
Dr. Sven Amann

CQSE
Continuous Quality in Software Engineering

Praxis

Software-**Audits**

Kontinuierliche **Qualitäts-** und **Testkontrolle**

Teamscale

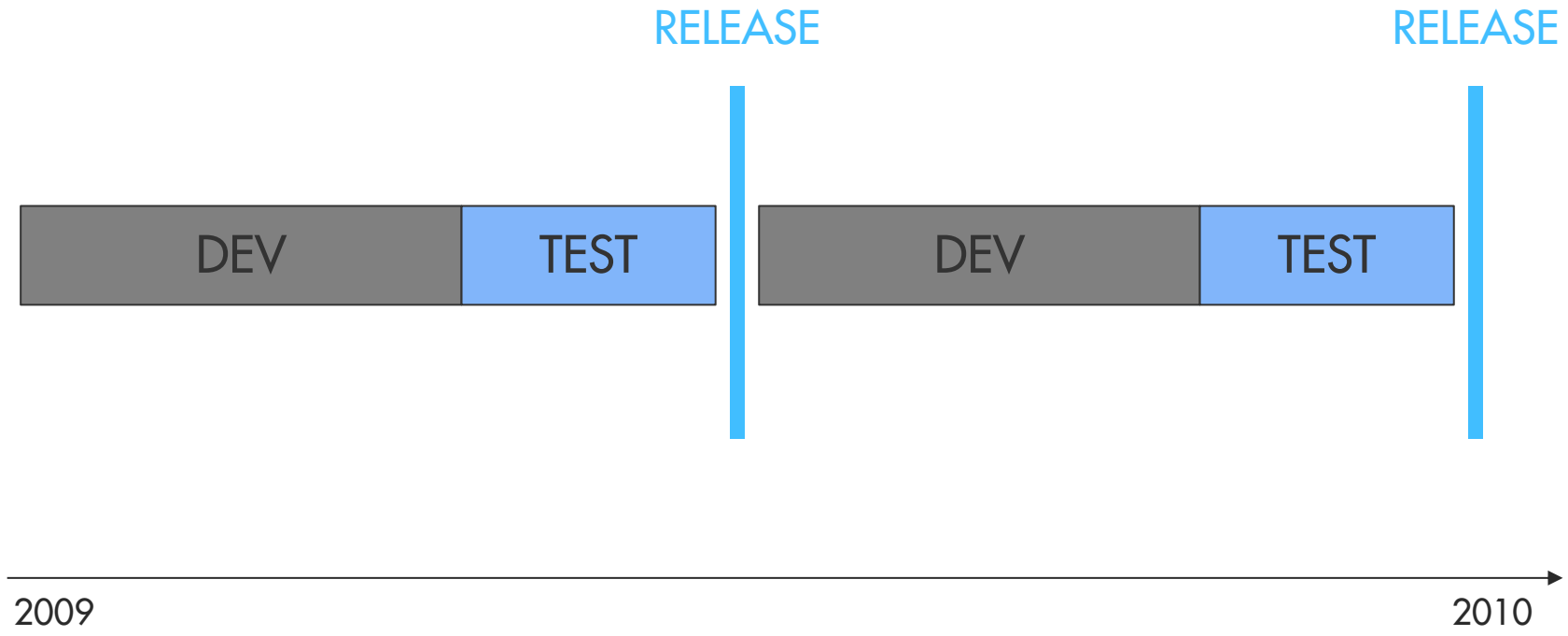
CQSE GmbH

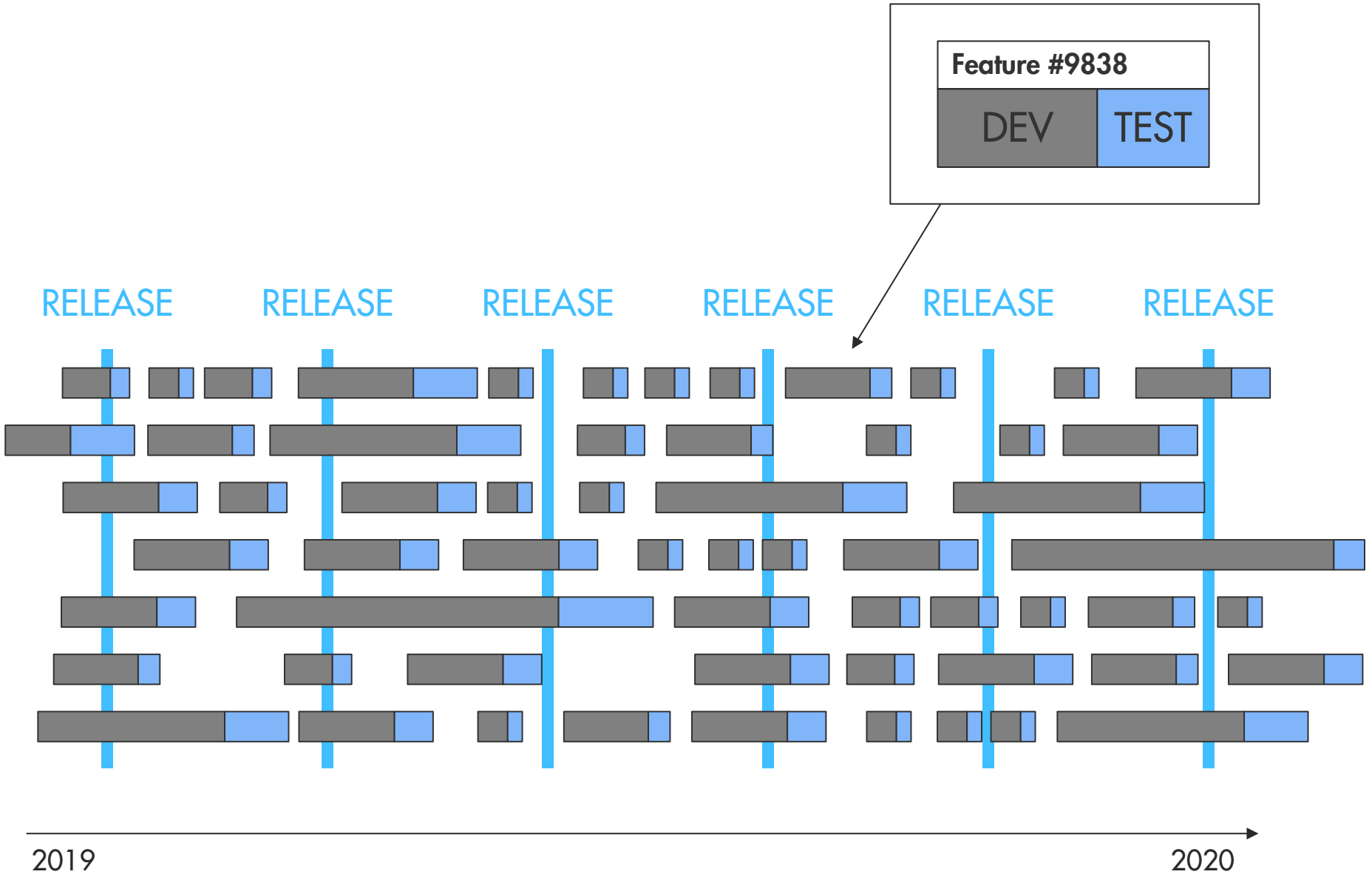
Forschung

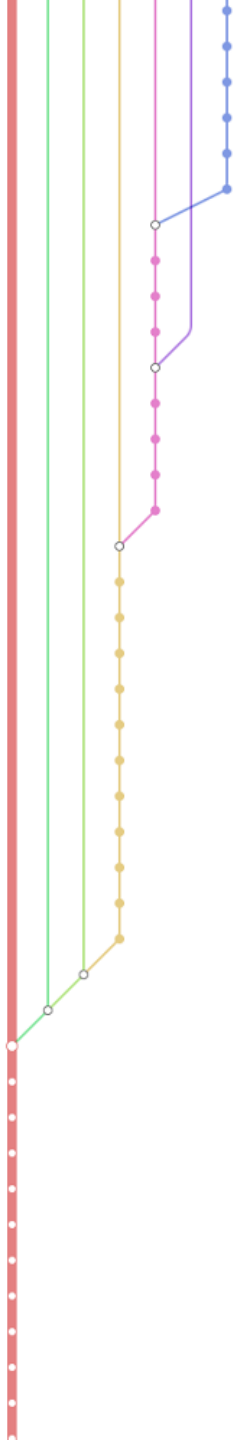
17+ **Promotionen** in Software Engineering

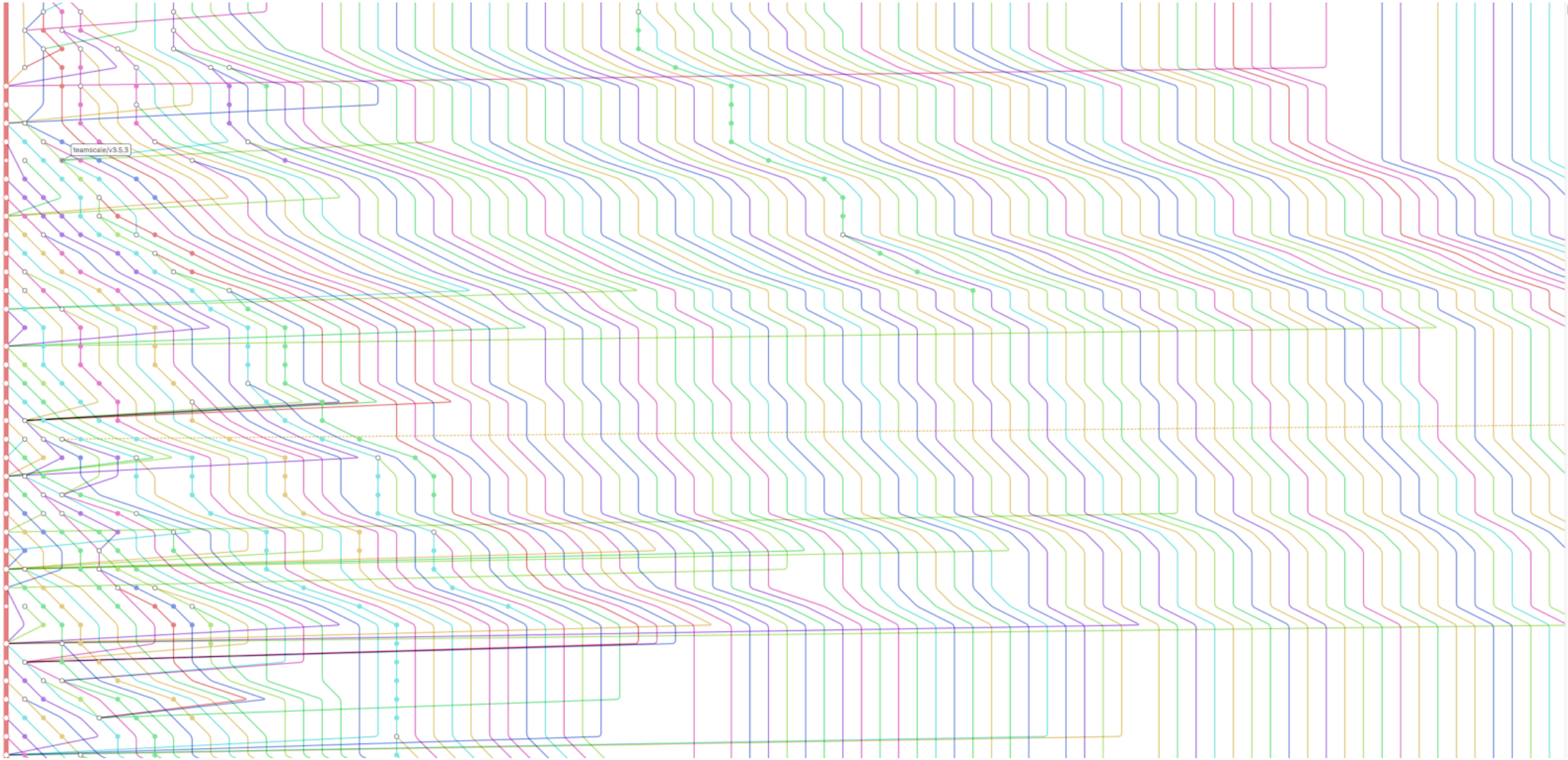
Eigene **Forschung**

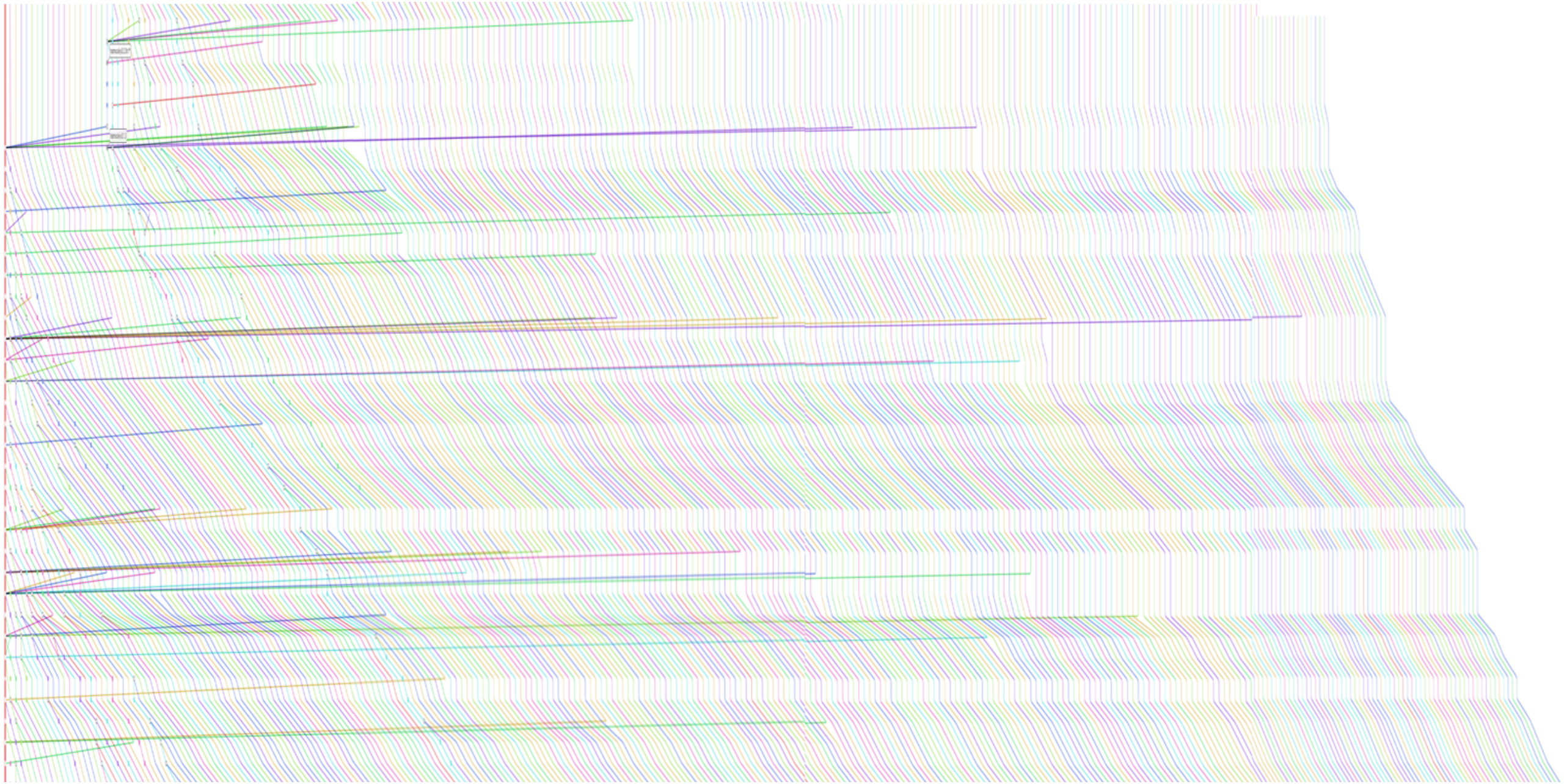
Enger Kontakt zu **Universitäten**


RELEASE
RELEASE
DEV
TEST
DEV
TEST
2009
2010


Feature #9838
DEV
TEST
RELEASE
RELEASE
RELEASE
RELEASE
RELEASE
RELEASE
2019
2020

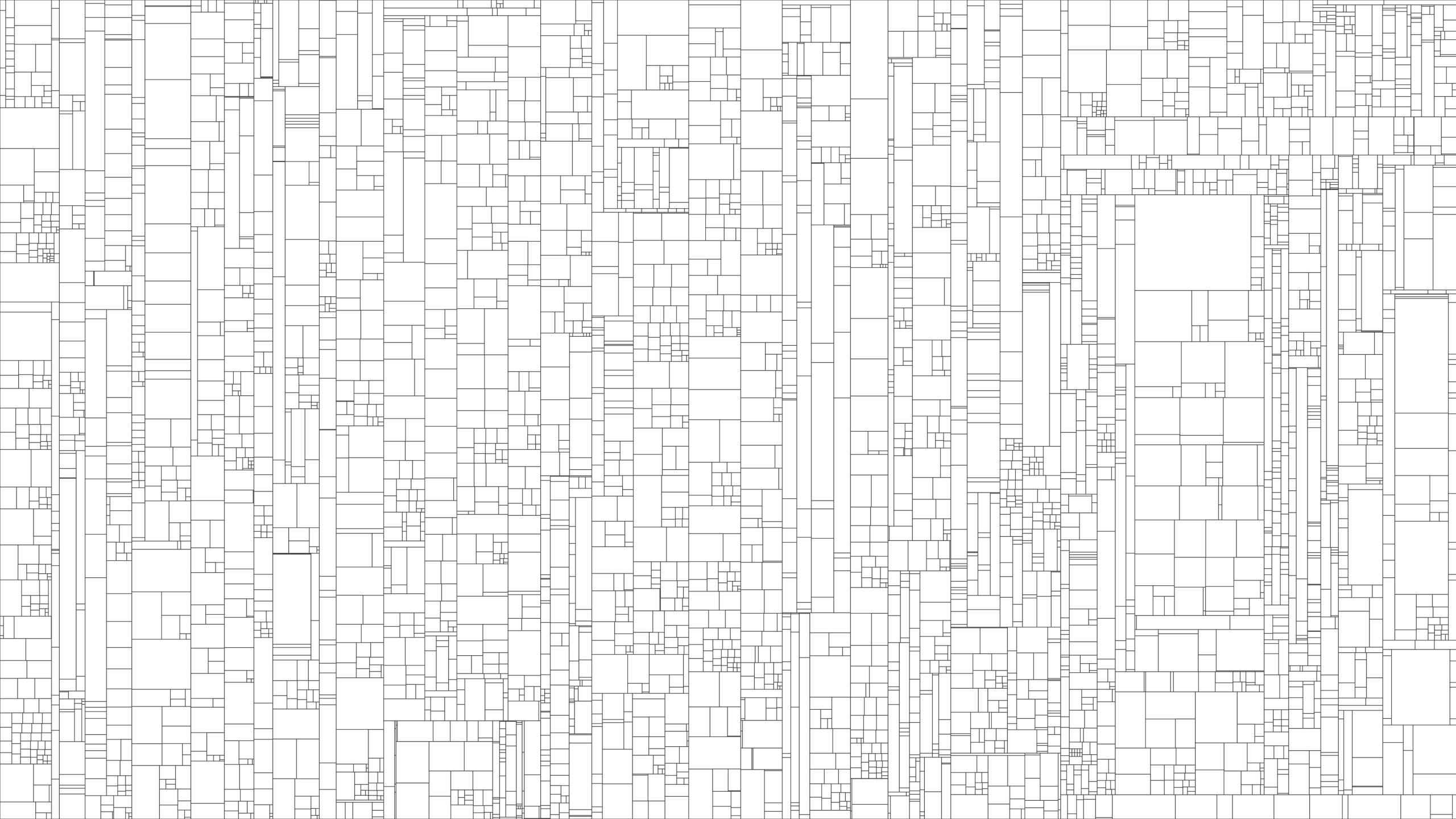


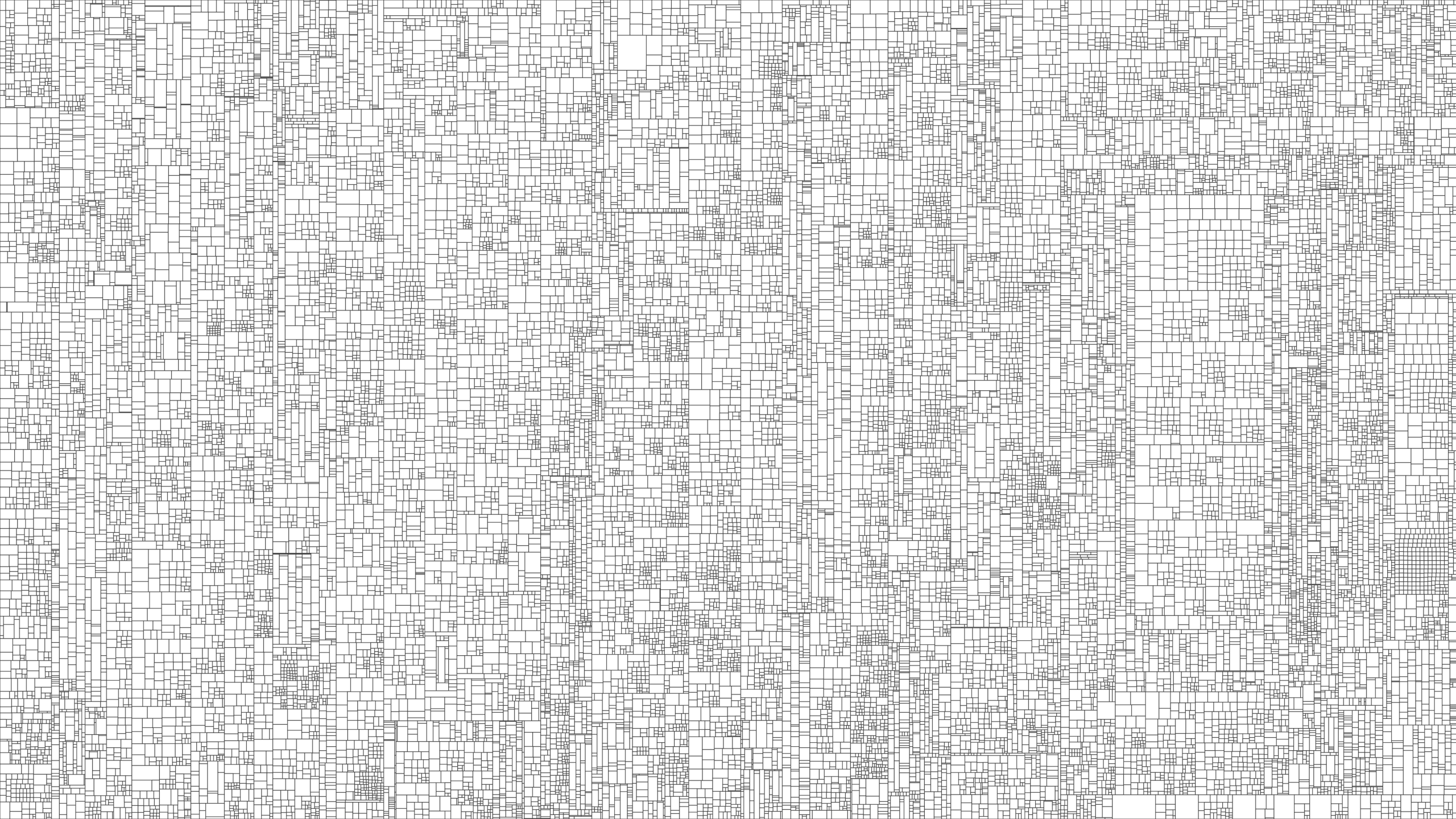

teamscale/v3.5.3

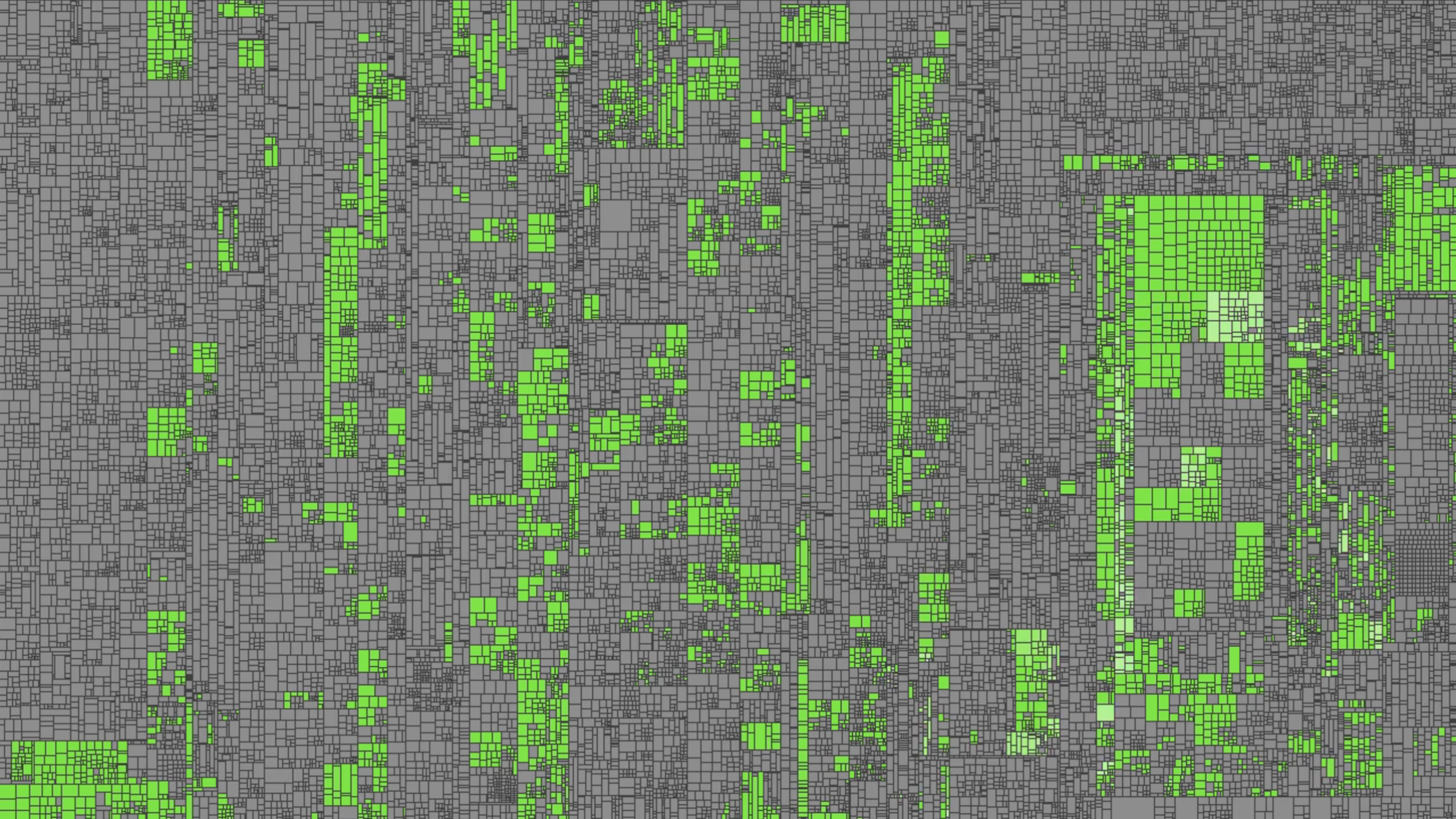


Mehr
Effektivität
&
Effizienz

Mehr
Effektivität
&
Effizienz







Teamscale / TS-10829

Data Flow Analysis can not handle java lambdas (logs many errors currently)

Edit | Comment | Assign | More | Back to New

Details

Type:	Bug	Status:	DONE (View Workflow)
Priority:	High	Resolution:	Green
Component/s:	Backend	Fix Version/s:	Teamscale 4.3
Labels:	dataflow java		
Affected Version:	master		
Merge Request:	https://git.cqse.eu/cqse/teamscale/merge_requests/2734		
PDash Task:	#4886		

Description

Analysis profile: Java
Repository: JabRef, start revision 9efd23b71871747fe5e18e915e637891d7e55b6d

```
ERROR : An error occurred while trying to construct a CFG for function 'null' in element src/main/java/net/sf/jabref/exporter/layout/format/DOI
[STATEMENT: lambda expression: null (lines 33-33)
]
Tokens: doi . getURL ( )
Occurred in src/main/java/net/sf/jabref/exporter/layout/format/DOICheck.java:32-32 (com.teamscale.index.dataflow.DataFlowFindingsSynchronizer.c
org.conqat.engine.core.core.ConQATException: Could not find any rule that applies to the following entity list:
[STATEMENT: lambda expression: null (lines 33-33)
]
Tokens: doi . getURL ( )
Occurred in src/main/java/net/sf/jabref/exporter/layout/format/DOICheck.java:32-32
        at org.conqat.engine.sourcecode.dataflow.heuristics.ControlFlowCreator.findApplicableRule(ControlFlowCreator.java:164)
        at org.conqat.engine.sourcecode.dataflow.heuristics.ControlFlowCreator.transformOneStep(ControlFlowCreator.java:139)
        at org.conqat.engine.sourcecode.dataflow.heuristics.ControlFlowCreator.transform(ControlFlowCreator.java:92)
[...]
```

People

Assignee:	Andreas Sewe
	Assign to me
Reporter:	Rainer Niedermayr
QA-Contact:	Alexander von Rhein
Votes:	2 Vote for this issue
Watchers:	3 Start watching this issue

Dates

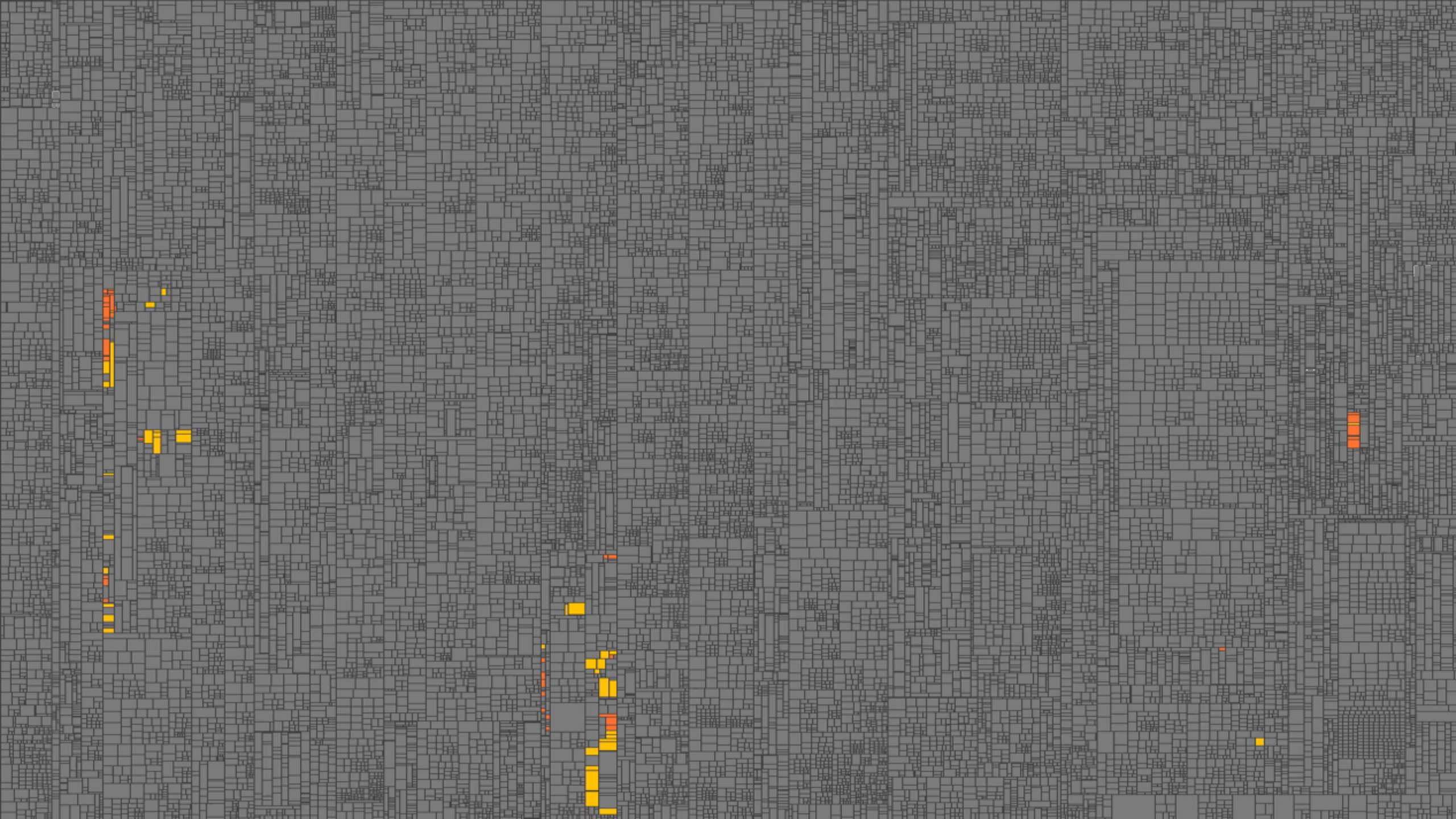
Created:	24/Nov/16 8:35 AM
Updated:	4 days ago
Resolved:	08/May/18 12:42 PM

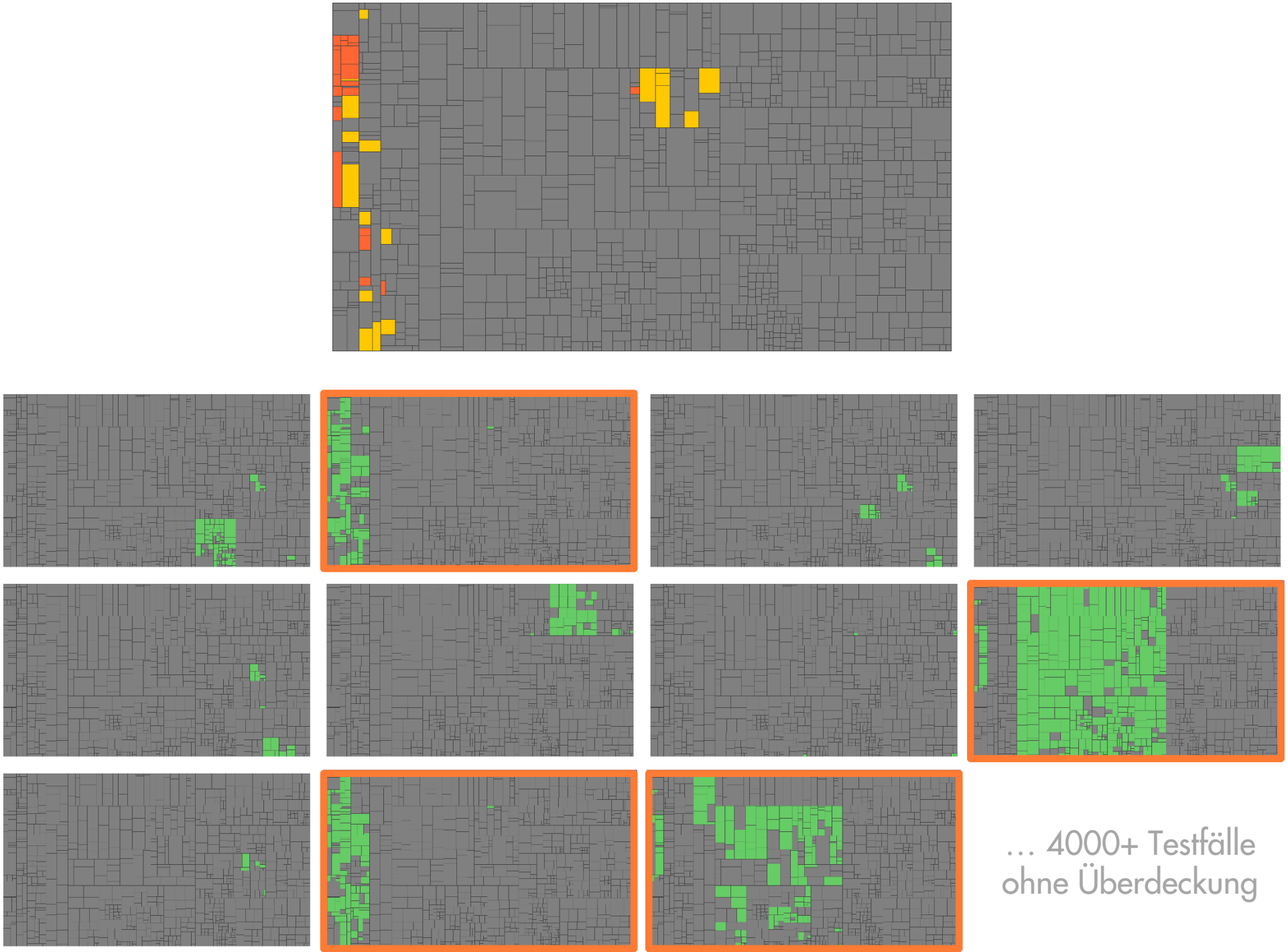
Time Tracking

Estimated:	Not Specified
Remaining:	0m
Logged:	4d 1h 57m

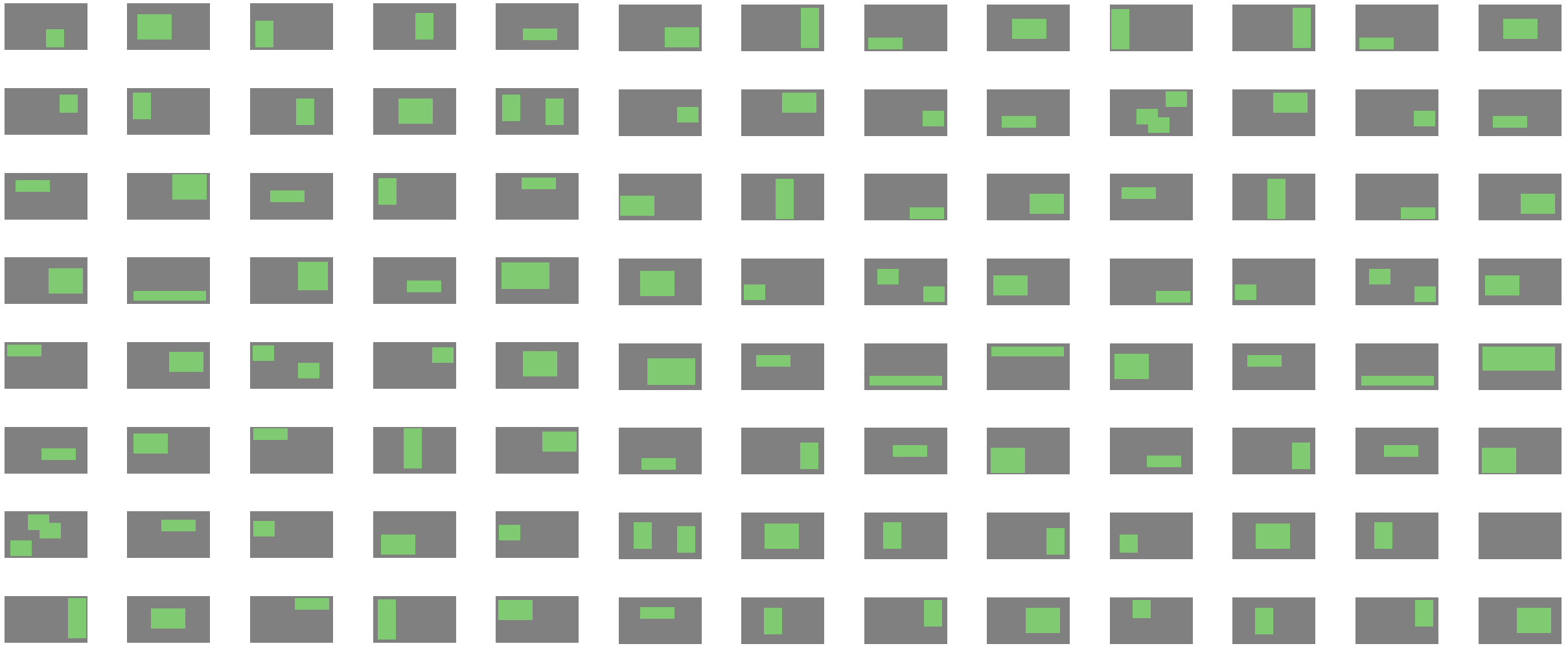
Agile

View on Board

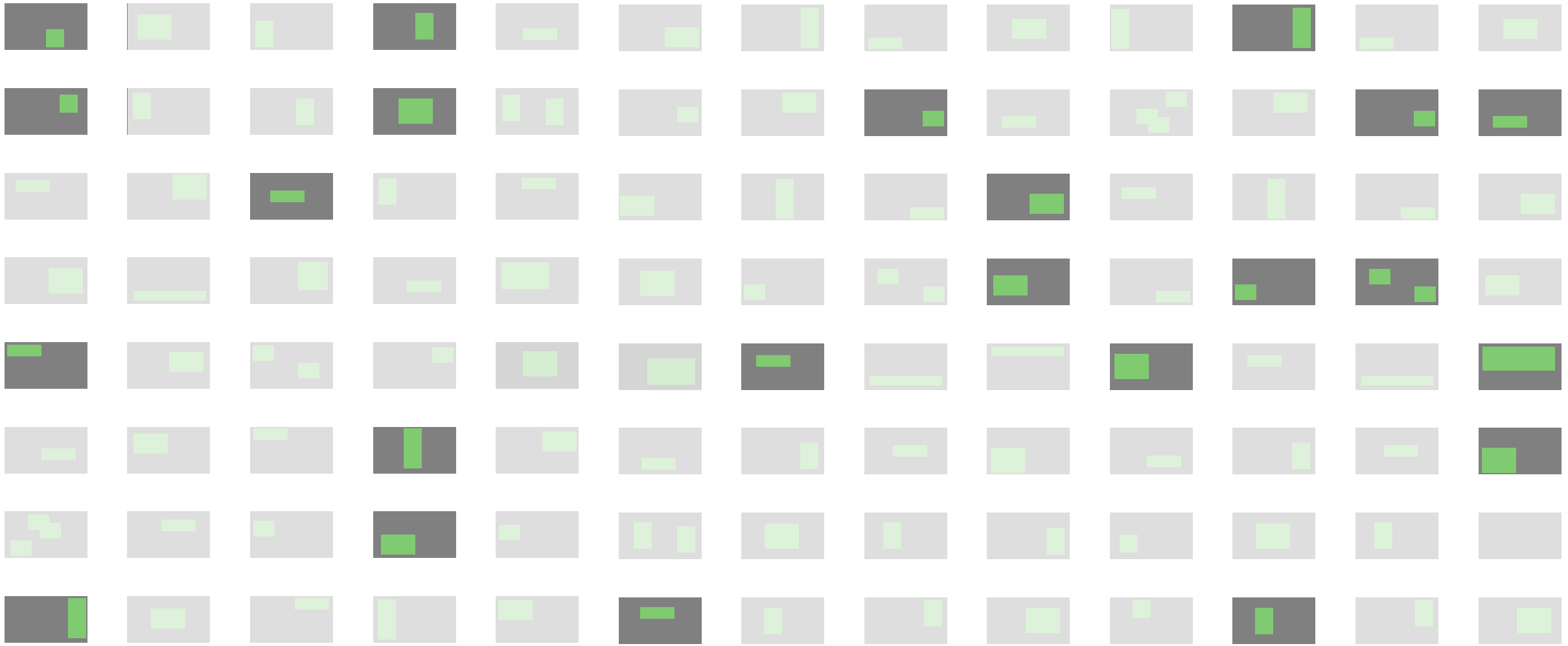




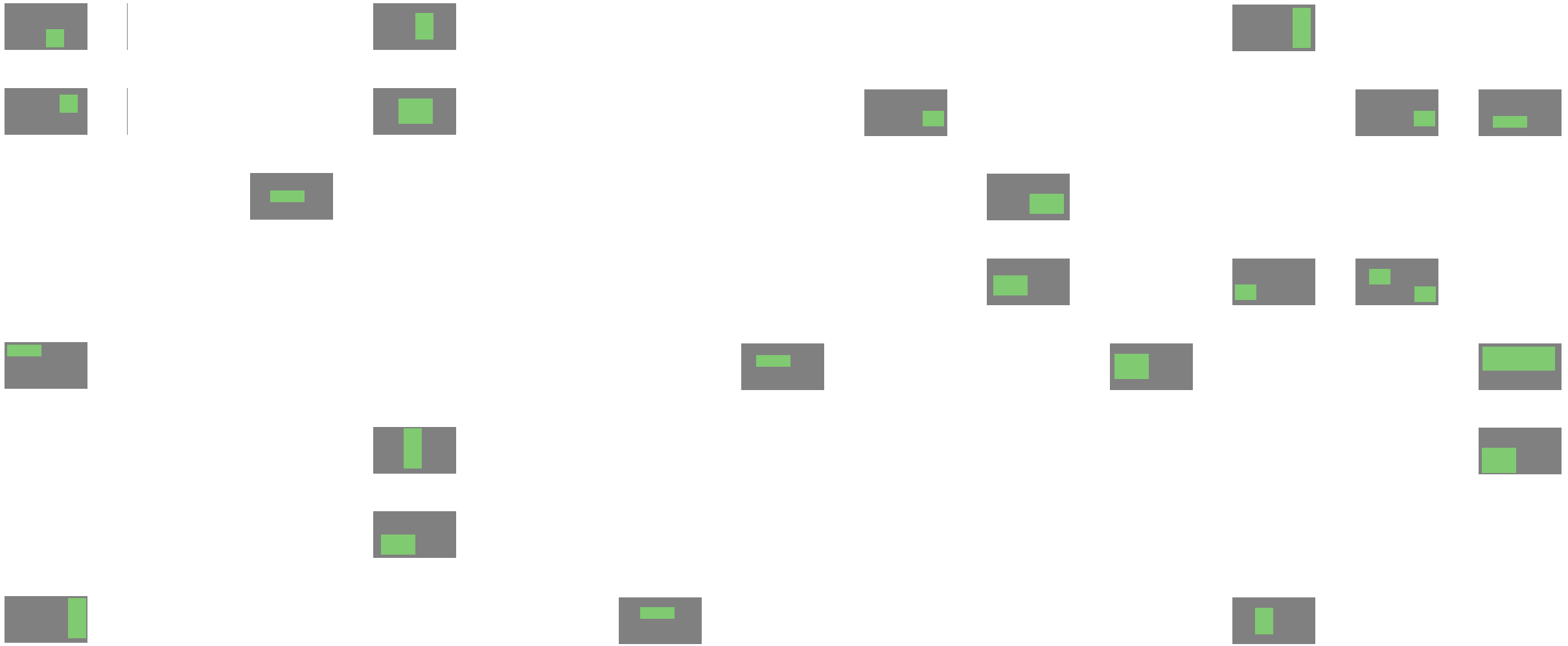
… 4000+ Testfälle
ohne Überdeckung



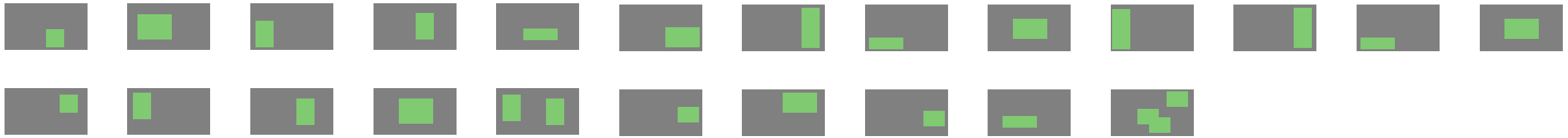
Schritt 1: Selektion betroffener Testfälle



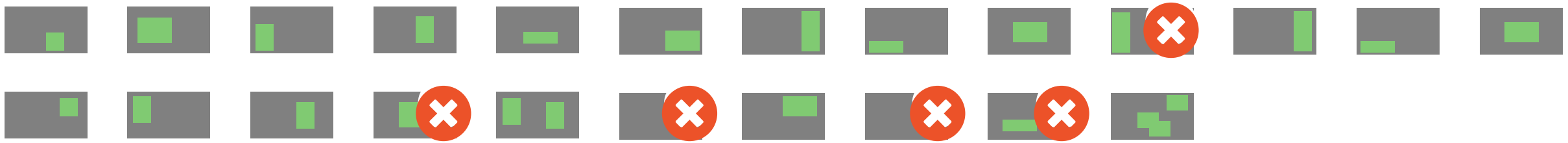
Schritt 1: Selektion betroffener Testfälle



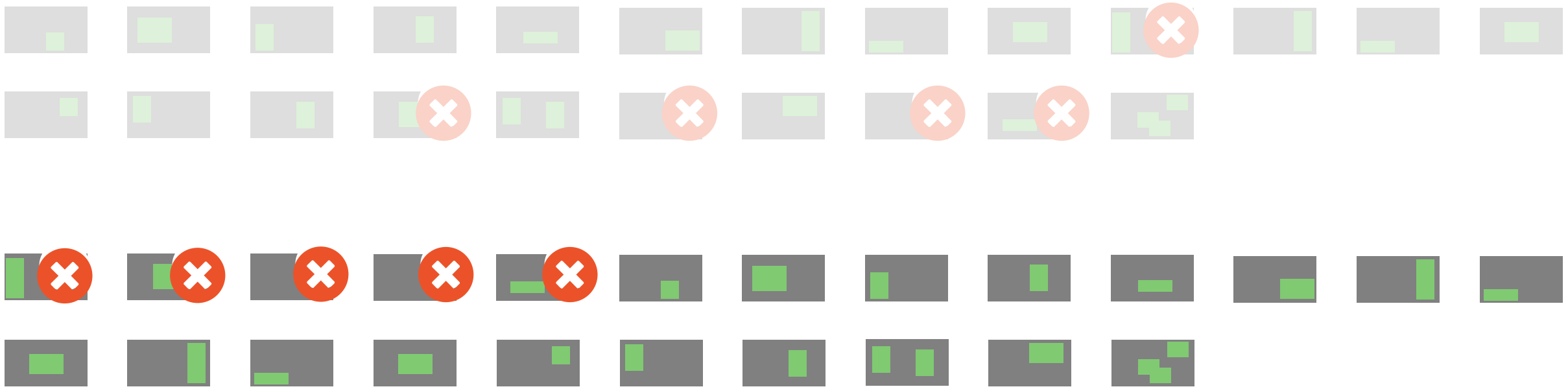
Schritt 1: Selektion betroffener Testfälle



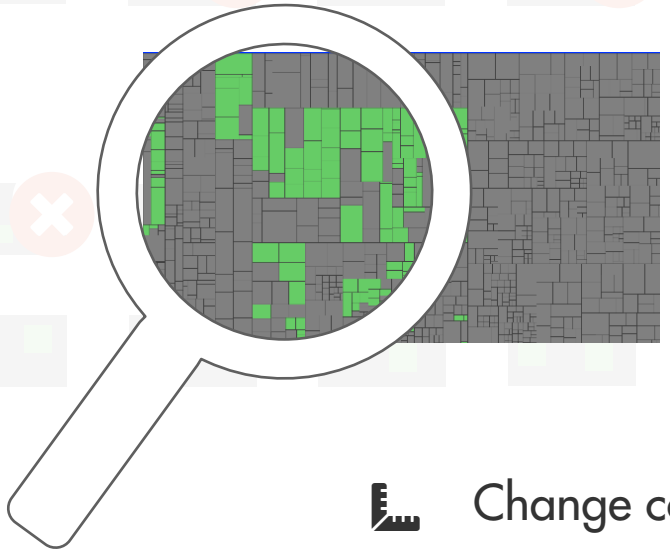
Schritt 2: Priorisierung selektierter Testfälle



Schritt 2: Priorisierung selektierter Testfälle



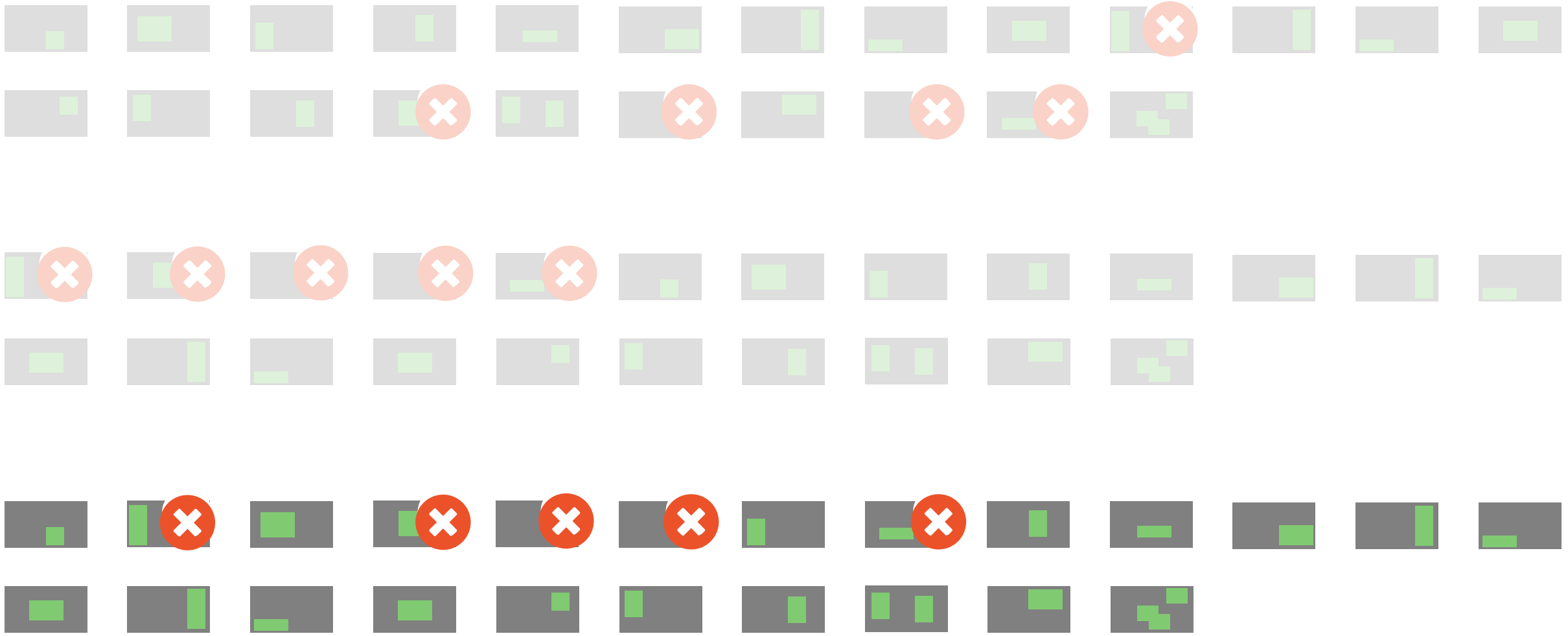
Schritt 2: Priorisierung selektierter Testfälle

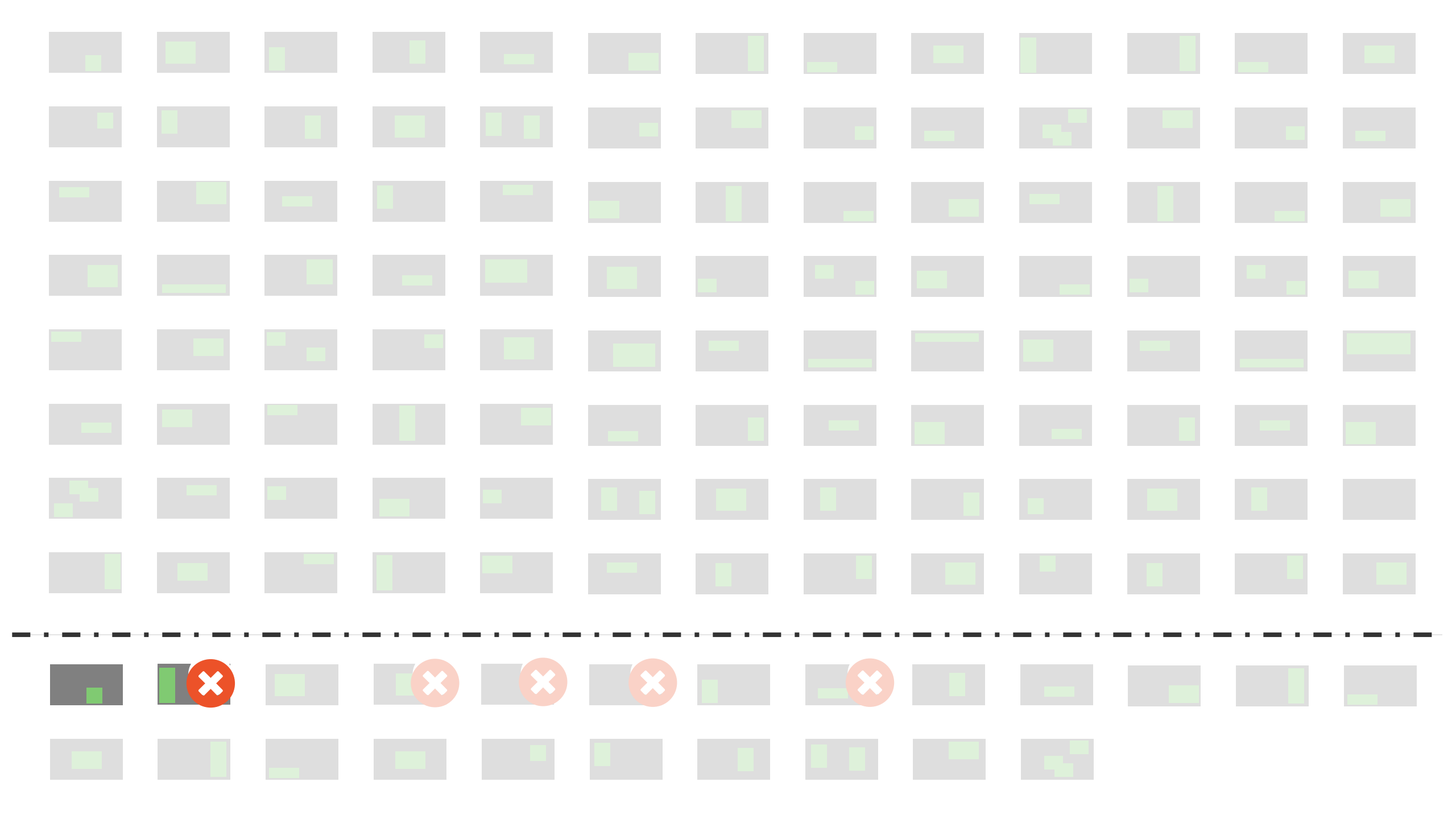


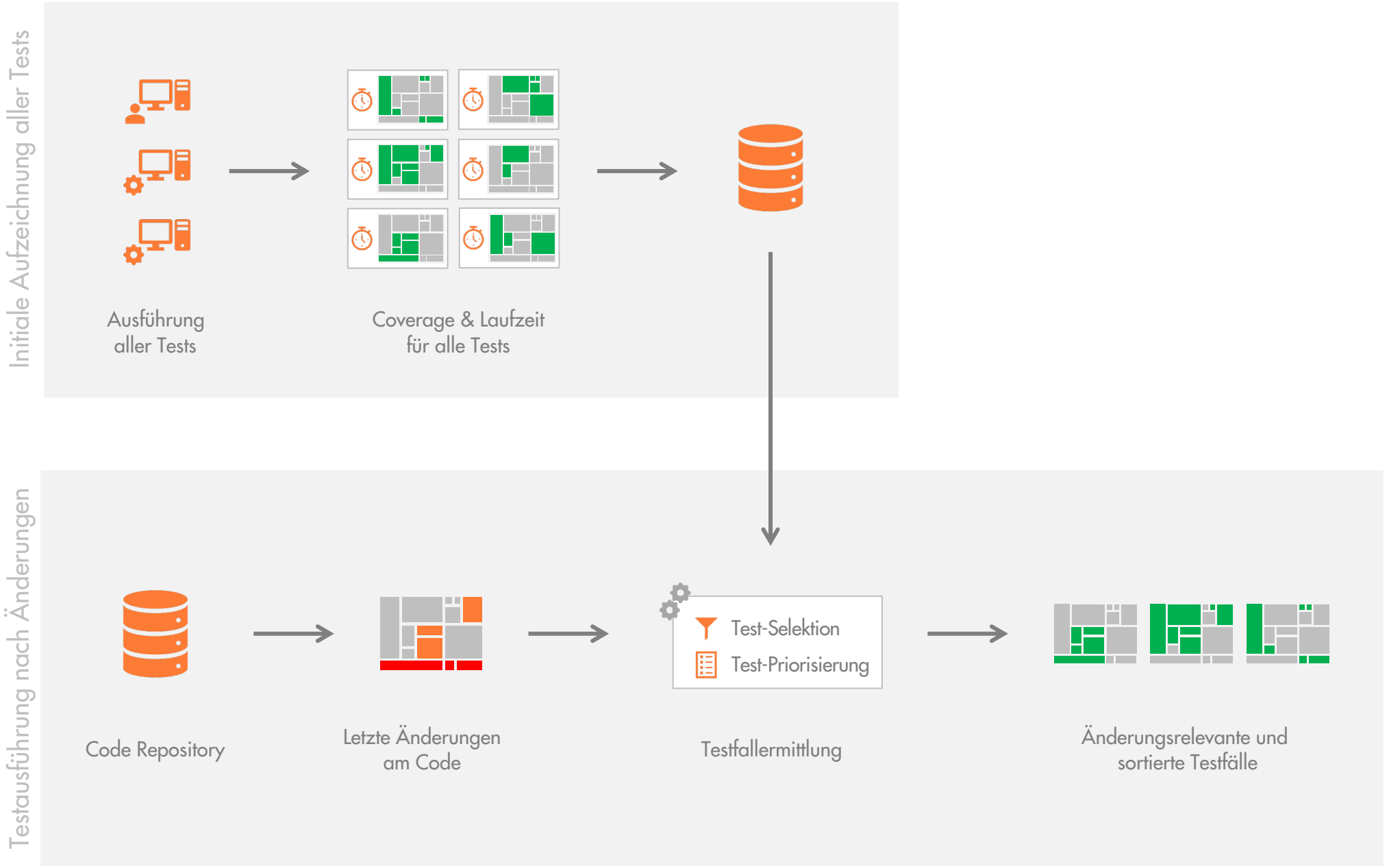
Change coverage

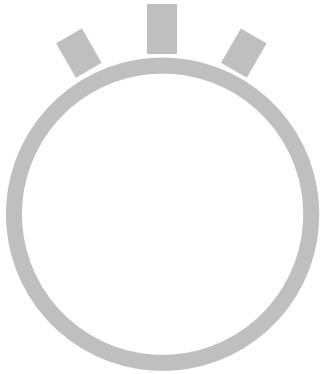
Execution time

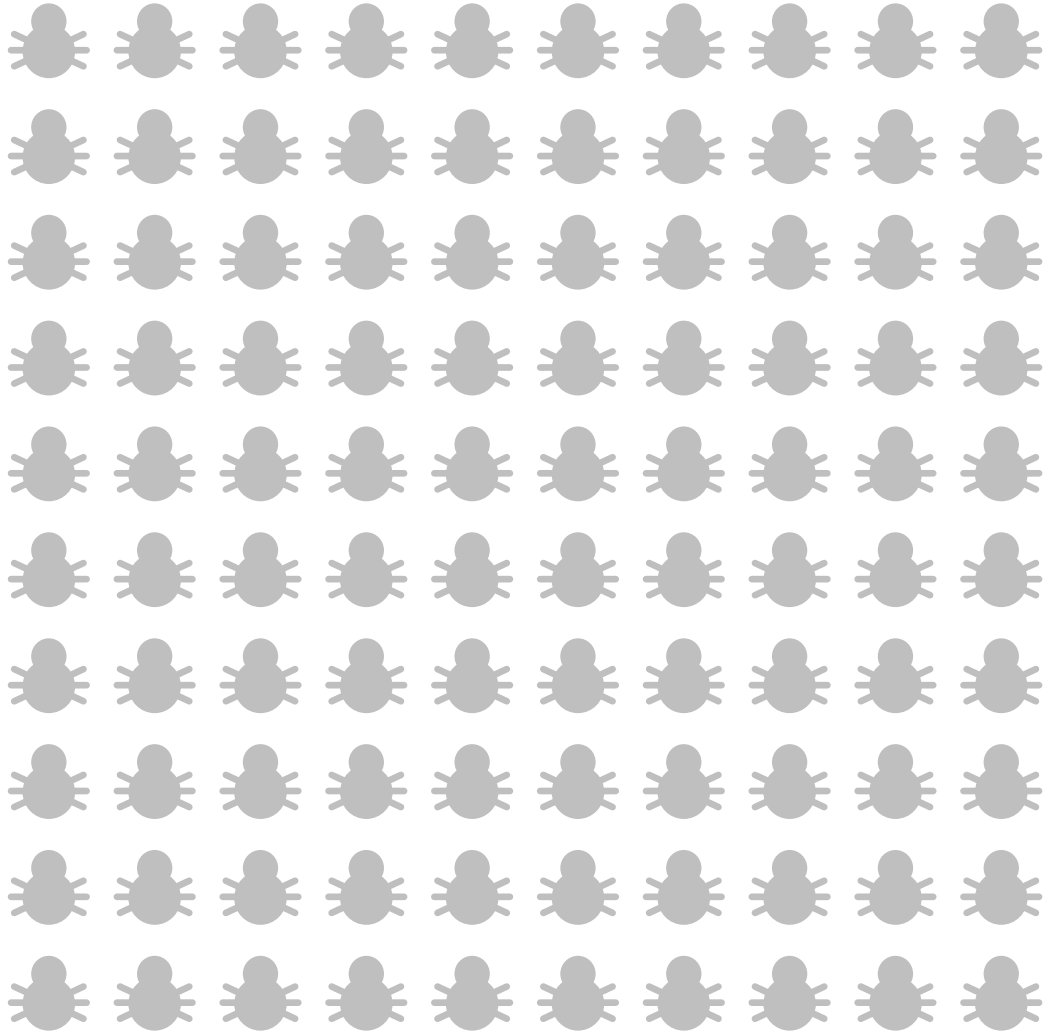
Schritt 2: Priorisierung selektierter Testfälle

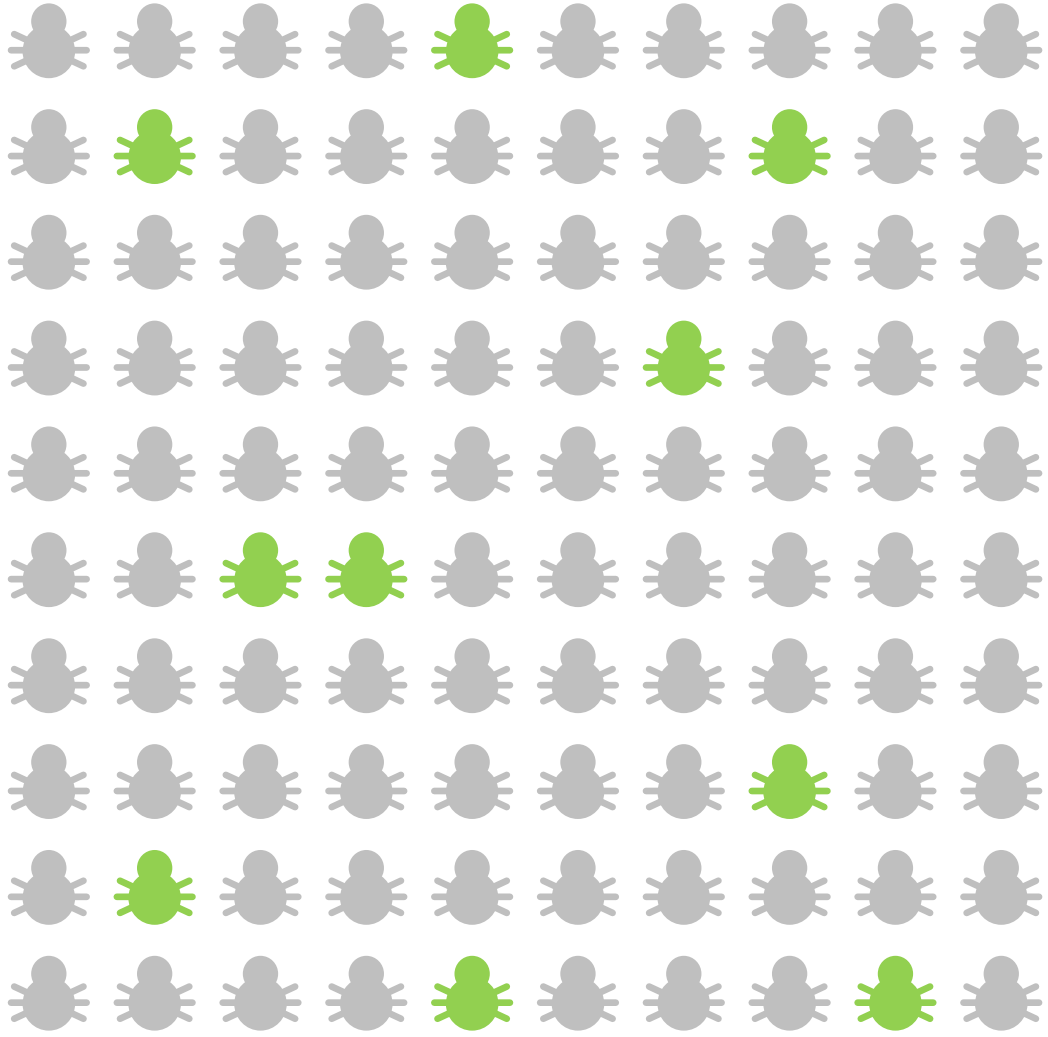


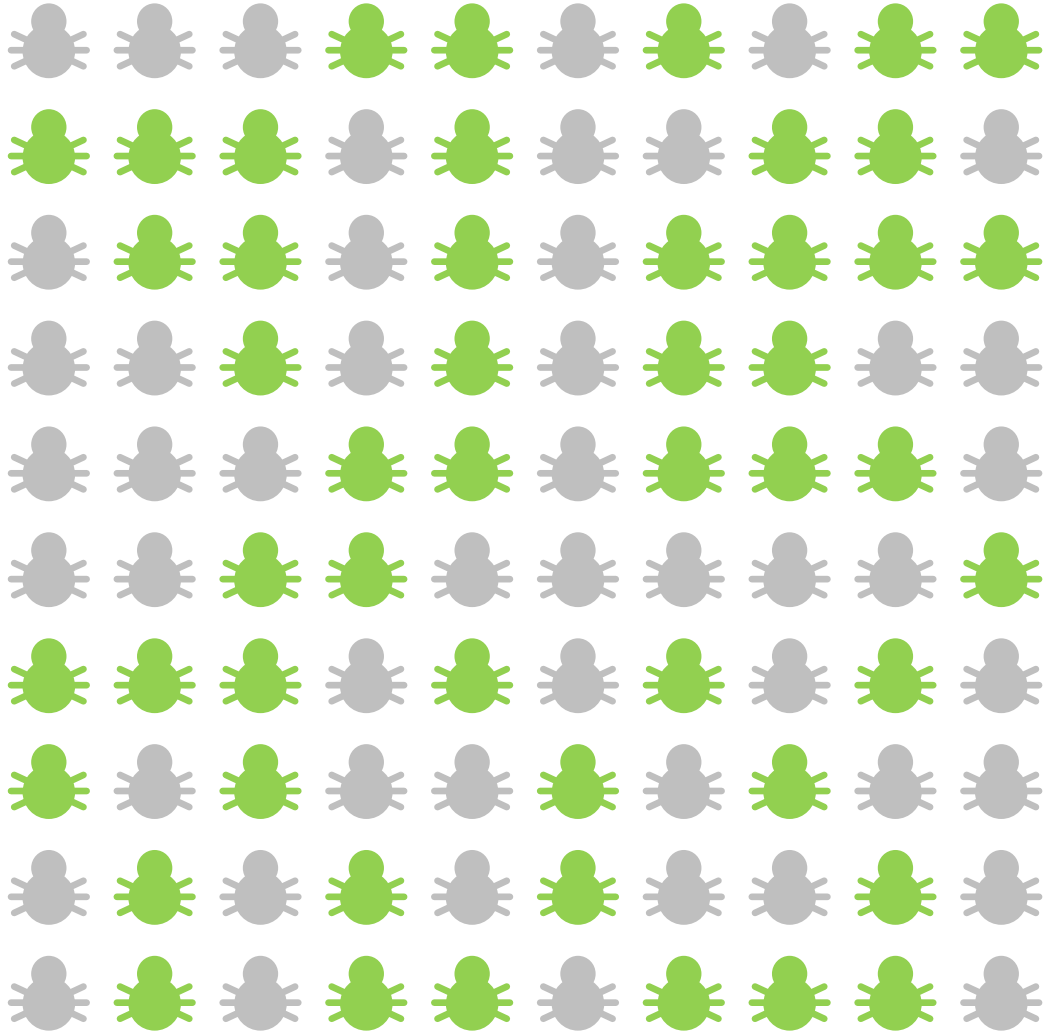


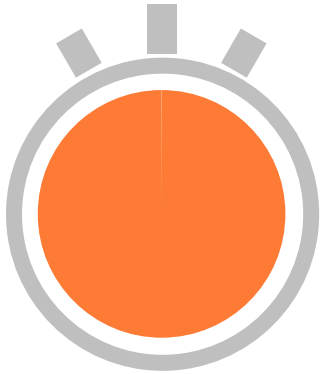

Initiale Aufzeichnung aller Tests
Ausführung aller Tests
Coverage & Laufzeit für alle Tests
Testausführung nach Änderungen
Code Repository
Letzte Änderungen am Code
Test-Selektion
Test-Priorisierung
Testfallermittlung
Änderungsrelevante und sortierte Testfälle

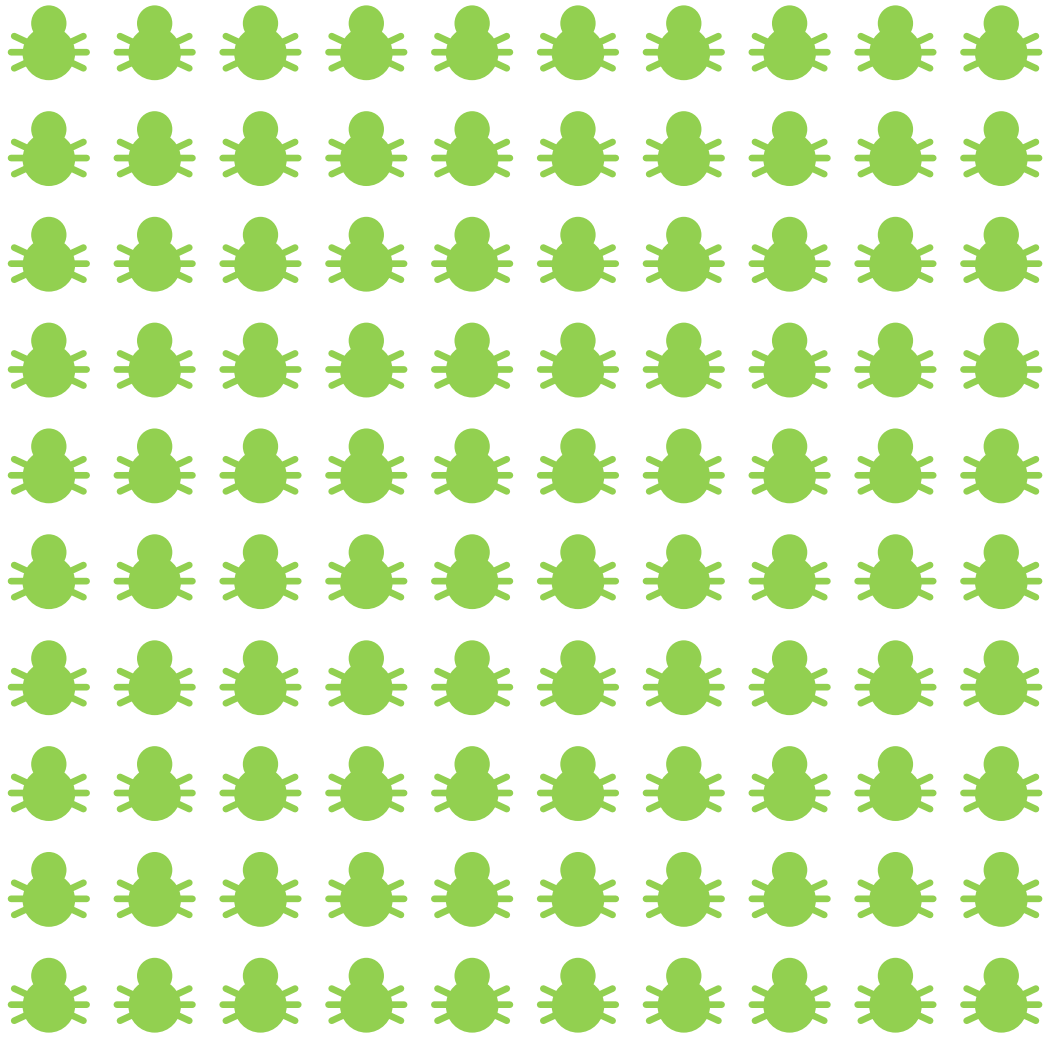




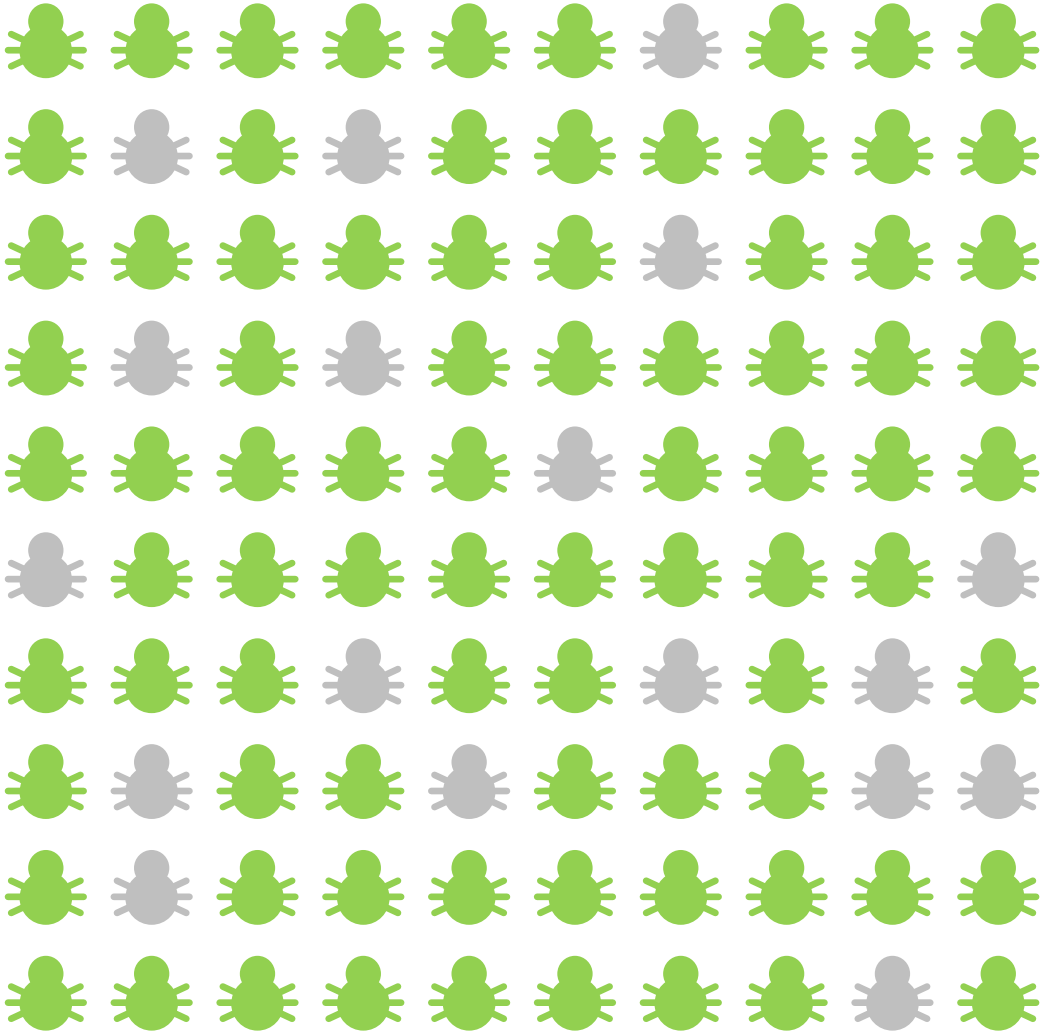








80 %



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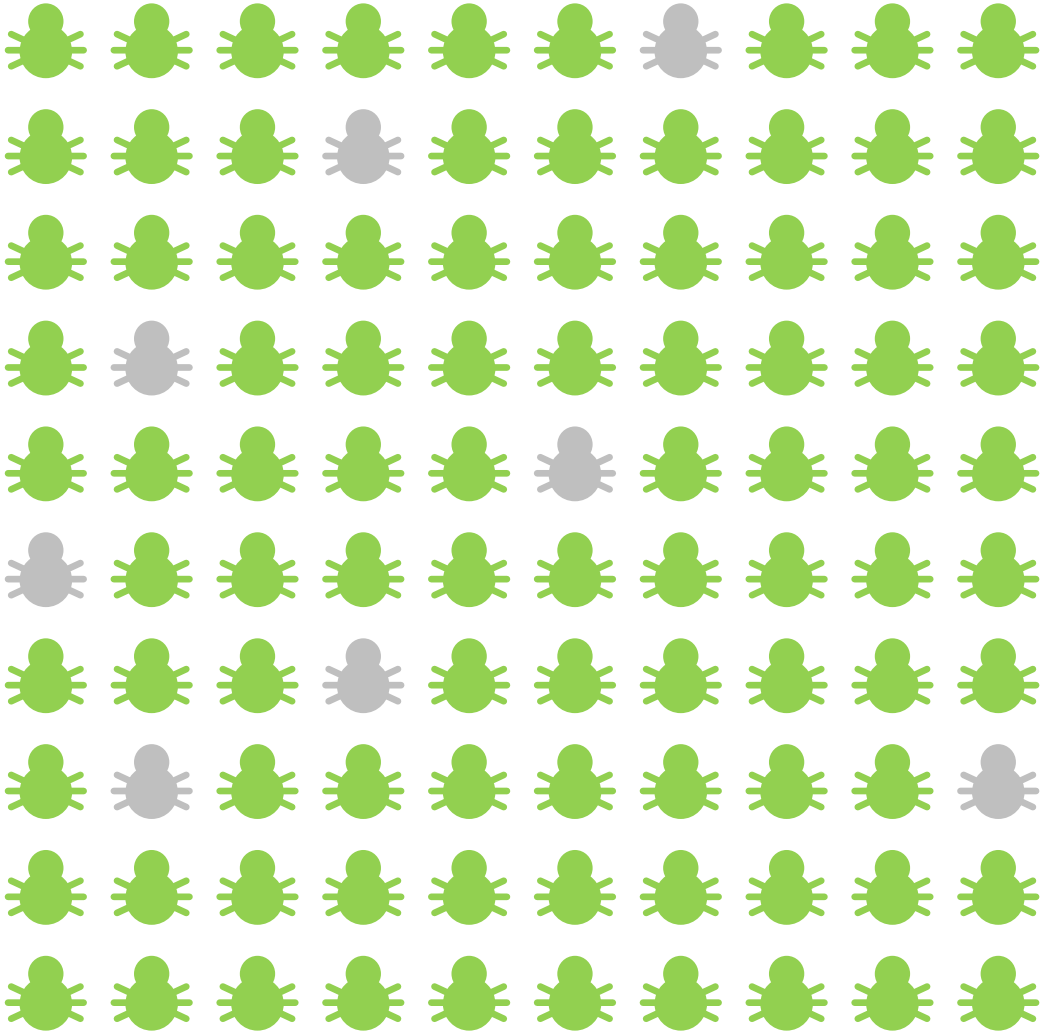

Mehr

Effektivität

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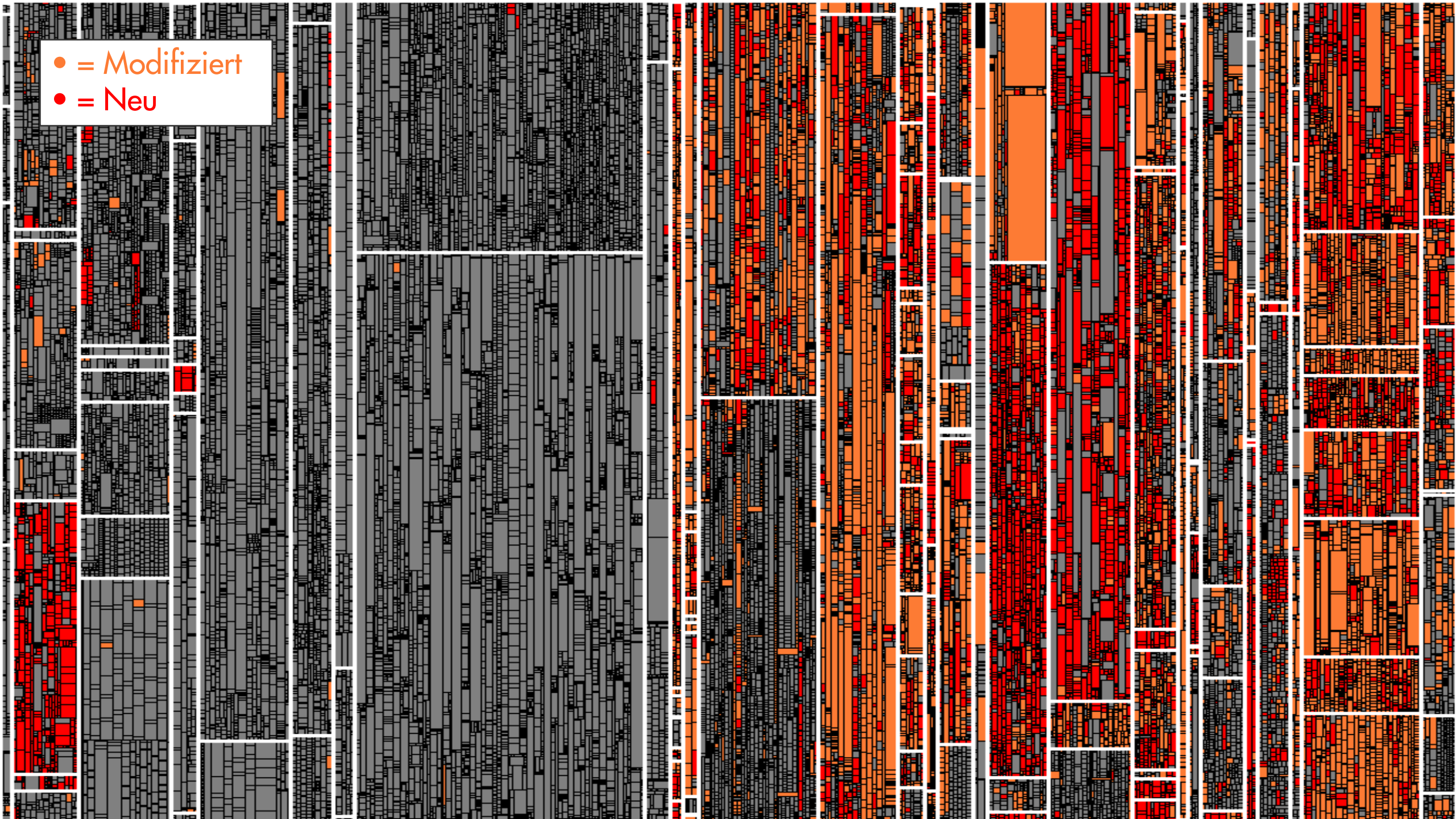
Effizienz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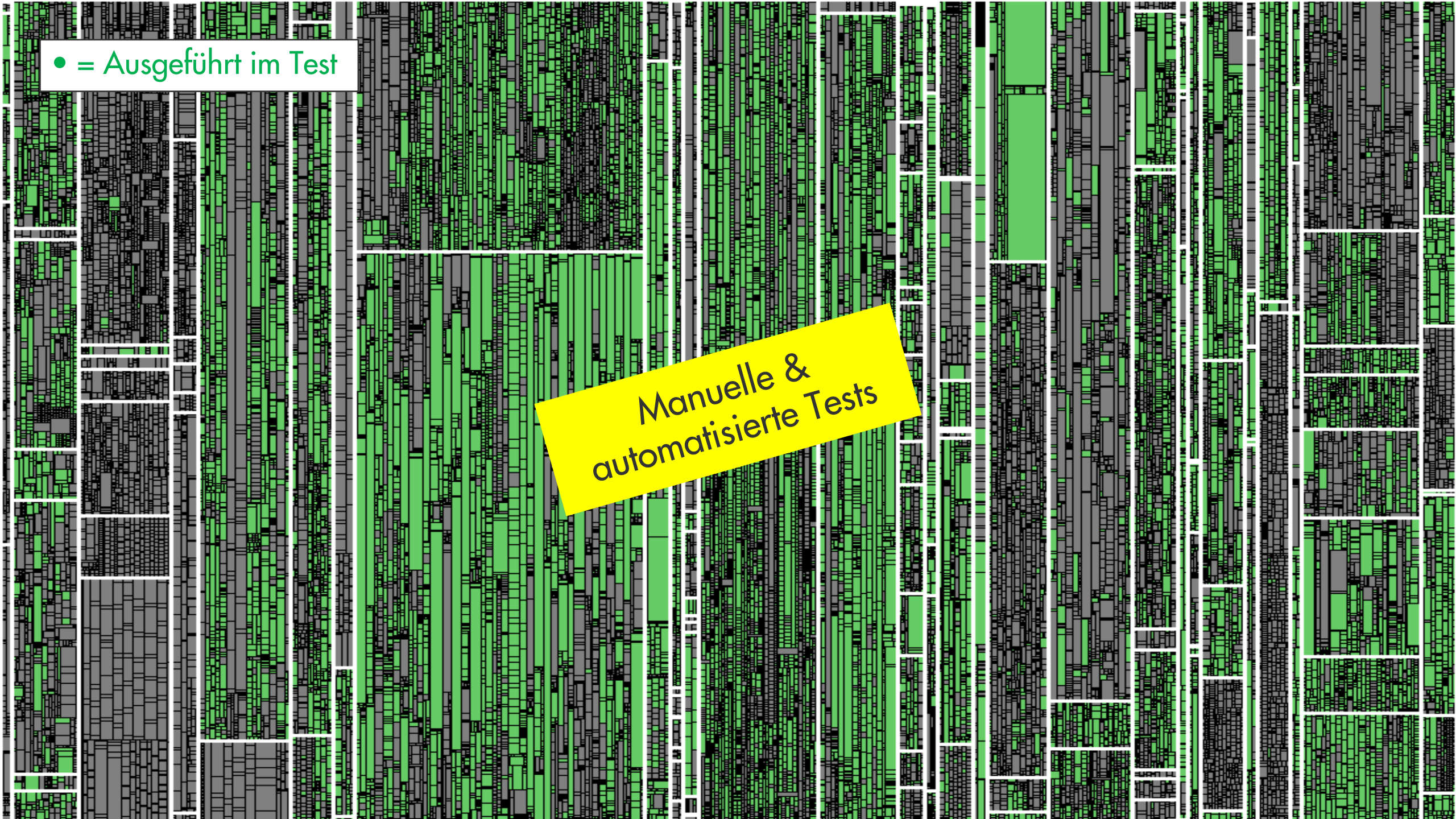
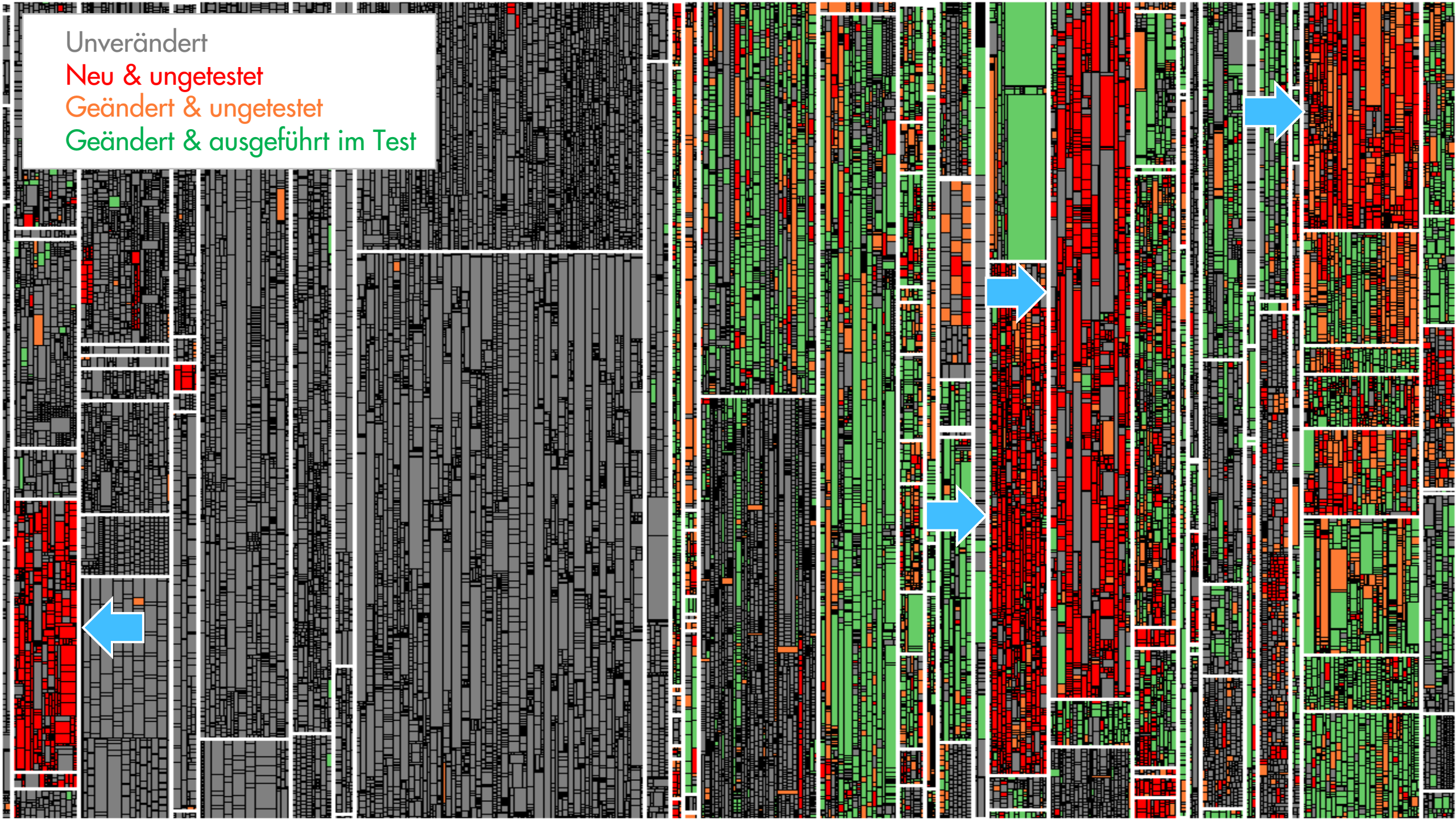
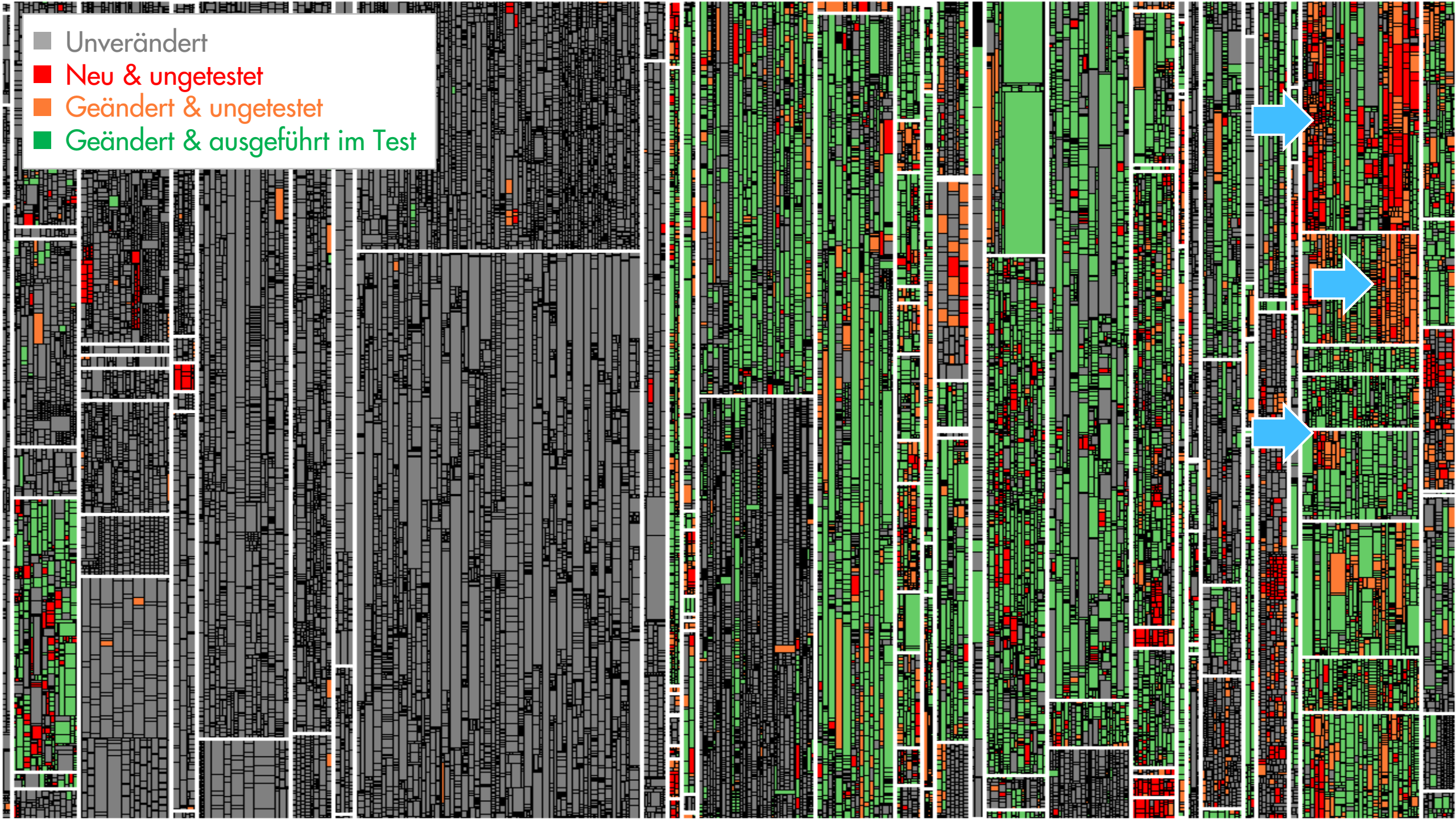
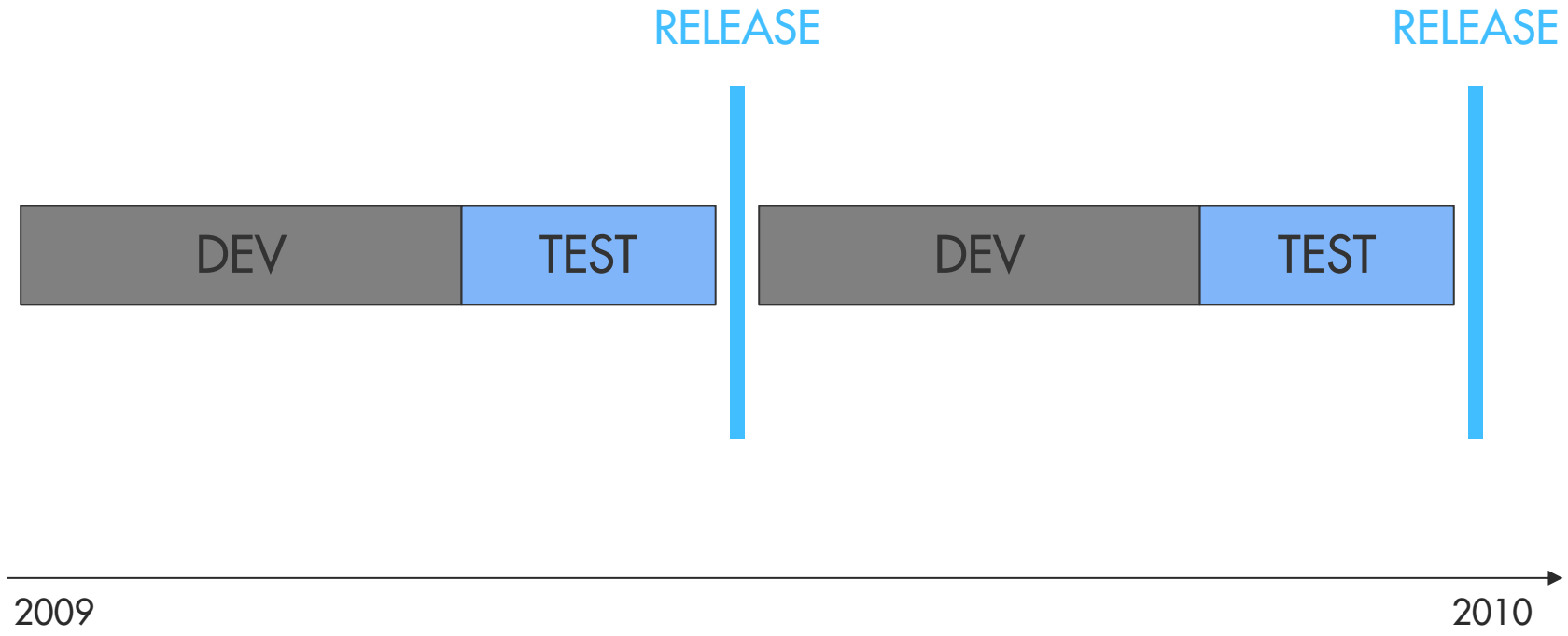
• = Neu


• = Ausgeführt im Test
Manuelle &
automatisierte Tests


Unverändert
Neu & ungetestet
Geändert & ungetestet
Geändert & ausgeführt im Test


Unverändert
Neu & ungetestet
Geändert & ungetestet
Geändert & ausgeführt im Test


RELEASE
RELEASE
DEV
TEST
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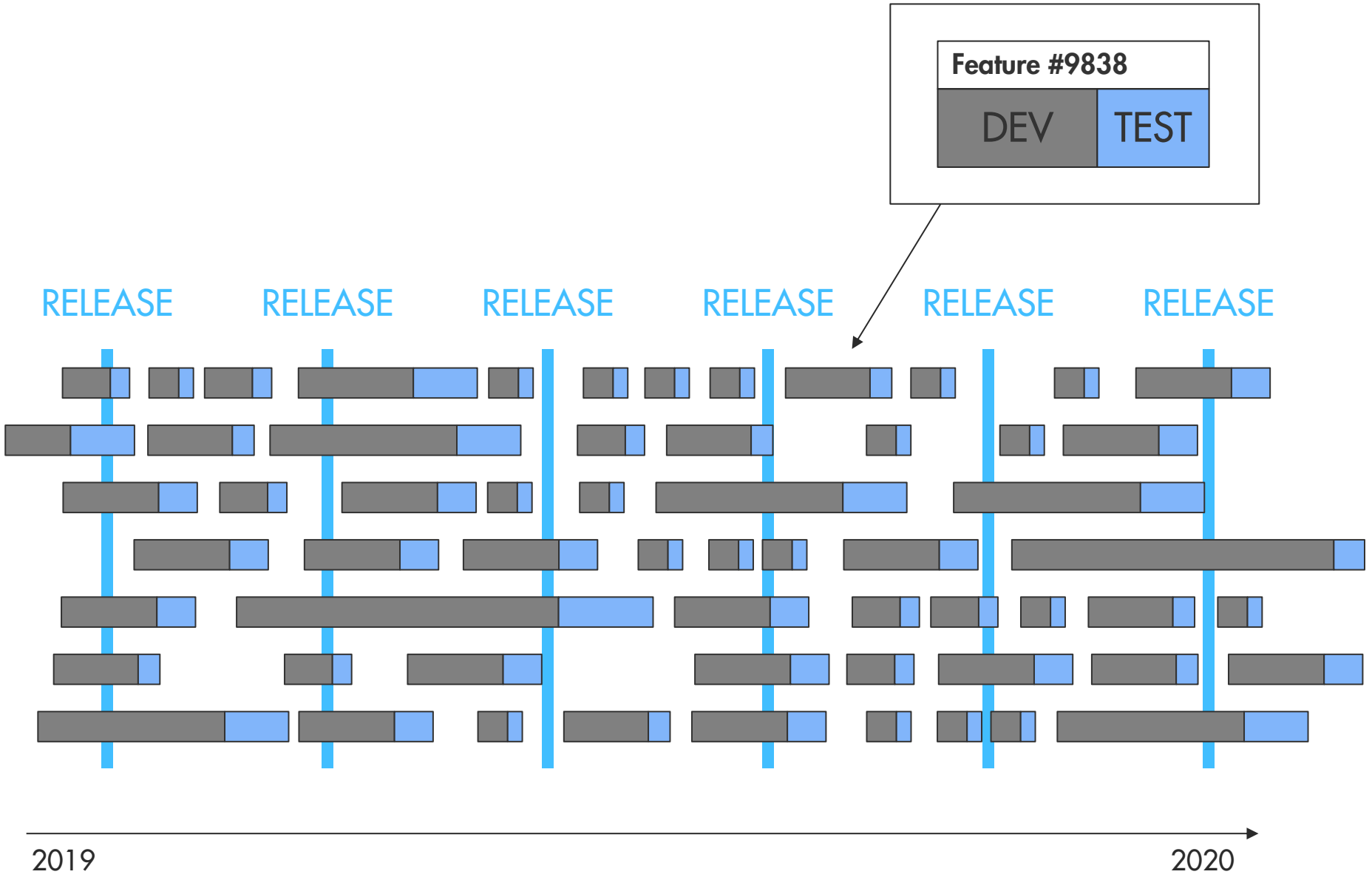
2009
2010


Feature #9838
DEV
TEST
RELEASE
RELEASE
RELEASE
RELEASE
RELEASE
RELEASE
2019
2020

Issue #	Subject			Test Gap
TS-10549	Undo/Redo for web-based architecture editor	Done		0%
TS-10784	Fix long method finding in TaintAnalysisRunner	Done		0%
TS-10923	Implement metric 'Nesting Depth' for Simulink	Done		29%
TS-11364	External findings are not registered during first upload	Done		14%
TS-11942	Manual test coverage upload during development	Done		43%
TS-12050	Tool for transferring findings blacklists and tasks	Done		50%
TS-12262	Cannot set or alter alias without reanalysis	Done		0%
TS-13151	Fetch parent relationship of TFS work items	Done		0%

Issue #	Subject			Test Gap
TS-14421	Get rid of TestGapSynchronizer block	Done		0%
TS-14733	Remove Dataflow blocks	Done		22%

Done **Issue TS-14733 - Remove Dataflow blocks**

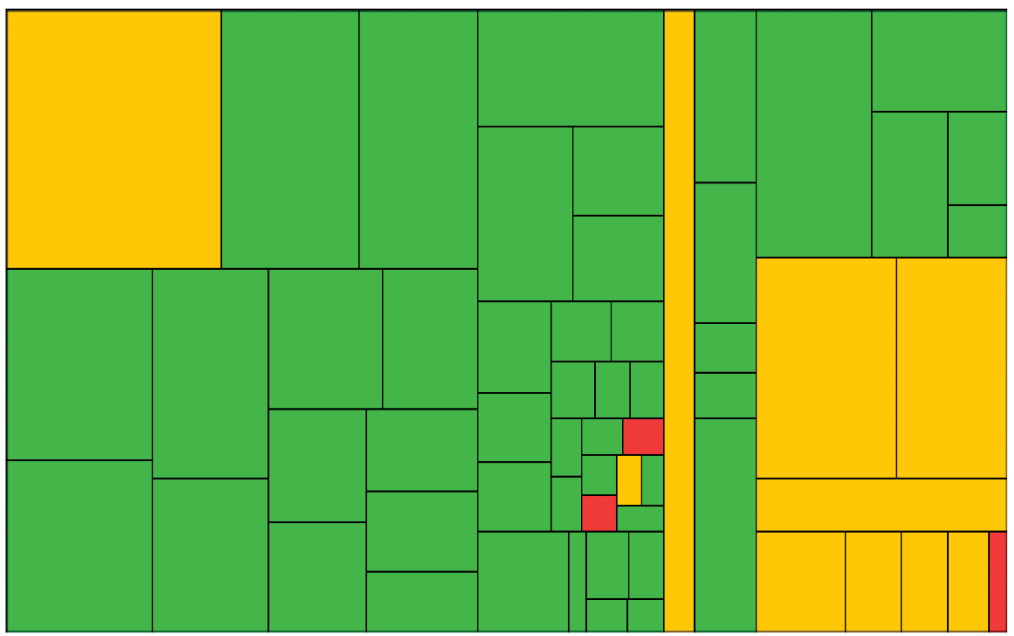
Creator:  (on Apr 06 2018 19:44)

Last update: Aug 24 2018 09:32

Assignee: 

Project	Type	Priority	Resolution	Fix Version
TS	Maintenance	Normal	Green	Teamscale 4.5
Component	**Labels**	**Affected Version**	**Customer**	**Customer Issue**
Backend	Performance			
Epic Name	**Freshdesk URL**	**Merge Request**		
		https://git.cqse.eu/cqse/teamscale/3621		

Aug 15 2018 12:37–Now | Test Gap: 22%



Mehr

Effektivität

&

Effizienz

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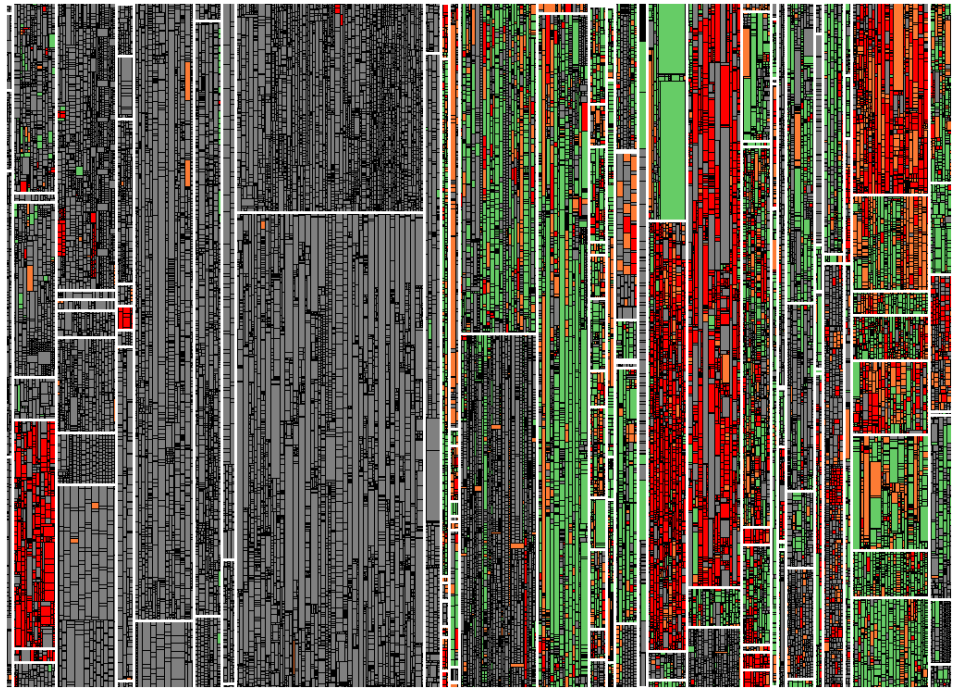
Immer kürzere Testphasen?
Mit *Ticket Coverage* verhindern, dass wichtige Features ungetestet bleiben

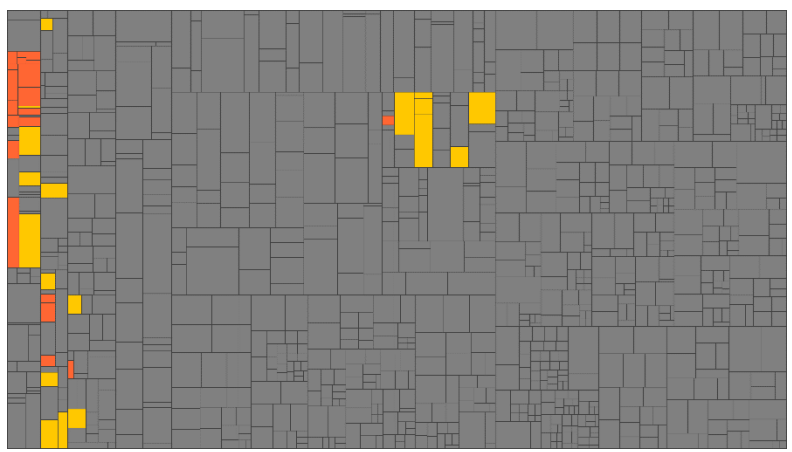


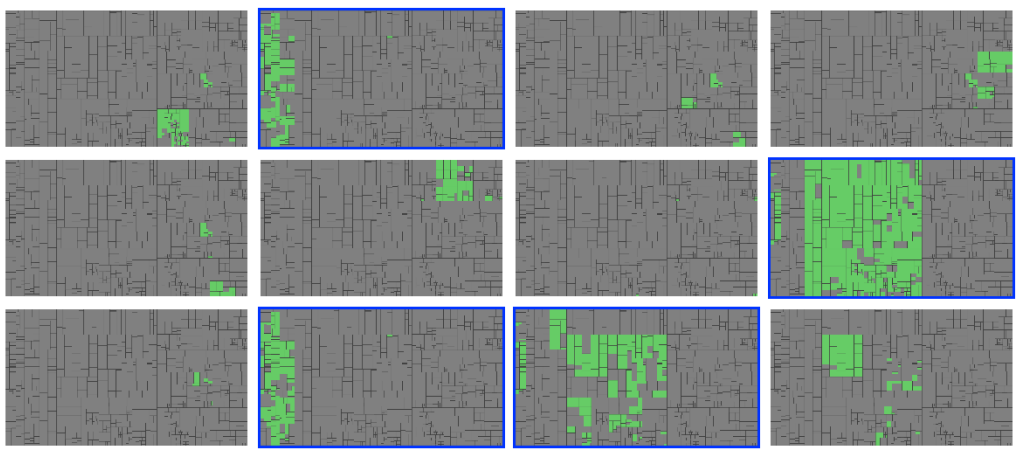
Code Structure | **Issues**

Issue Metric: Issues I have to test

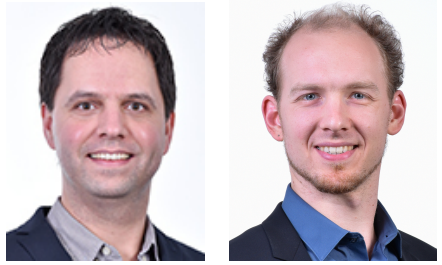
Coverage sources: All

Issue #	Subject	Ticket Coverage
TS-13689	Undo/Redo for web-based architecture editor	70%
TS-13701	Implement metric 'Nesting Depth' for Simulink	35%
TS-13704	Fix long method finding in TaintAnalysisRunner	100%
TS-13714	External findings are not registered during first upload	100%
TS-13727	Manual test coverage upload during development	100%
TS-13731	Tool for transferring Finding Blacklists and Tasks (w/ Findings) between instances	100%
TS-13734	Cannot set/alter alias without reanalysis	100%
TS-13735	Fetch parent relationship of TFS Work Items	100%
TS-13742	Show data timestamp in project analysis warning	100%
TS-13766	Get rid of ESLintFindingsSynchronizer and TSLintFindingsSynchronizer blocks	76%
TS-13769	Show summary row in test perspective > issue view	0%
TS-13772	Get rid of TestGapSynchronizer block	100%
TS-13775	Remove Dataflow Blocks	67%
TS-13778	Remove structuring block	100%
TS-13779	Get rid of Bootstrap Wells	100%





Kontakt – Wir freuen uns auf Diskussionen ☺



Dr. Andreas Göb · goeb@cqse.eu · +49 176 101 55225
Dr. Sven Amann · amann@cqse.eu · +49 172 1860063

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Centa-Hafenbrädl-Str. 59
81249 München

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Continuous Quality in Software Engineering