

# Vom Schminken wird die Sau nicht schön

Warum wirkliche UX-Verbesserung fundamentale Änderungen der Software erfordert

Dr. Elmar Jürgens

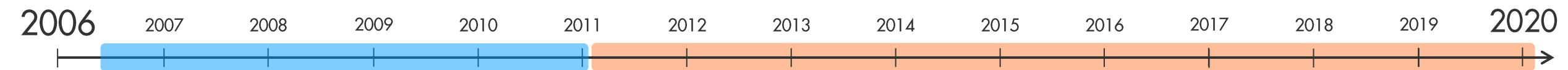
CQSE



**TUM**



**CQSE**

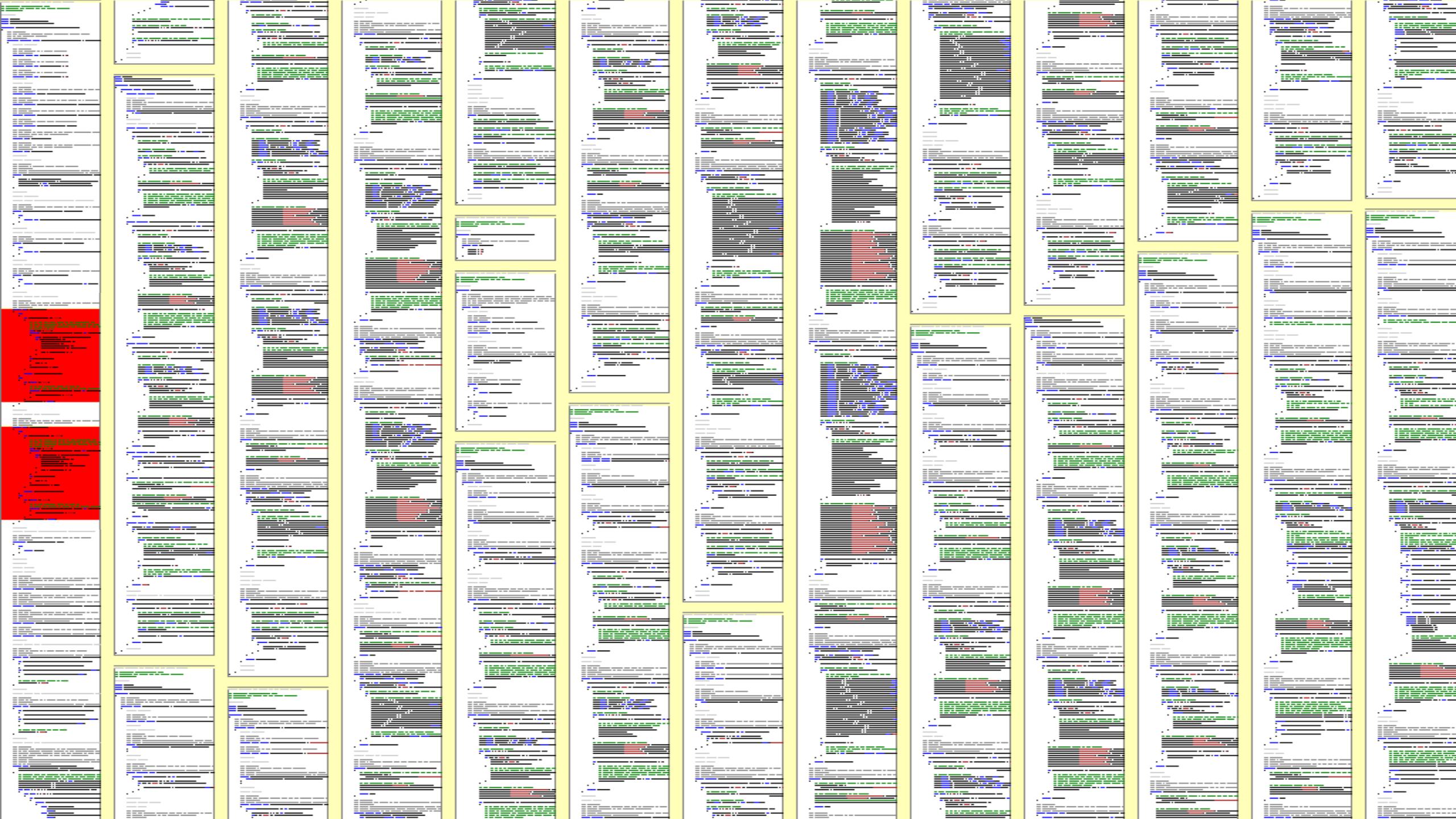


```
// Utilities for arrays of elements
public String showElements(ModelElement[] elements, String nomsg) {
    boolean found = false;
    StringBuffer res = new StringBuffer();
    if (elements != null) {
        Index.getInstance().setCurrentRenderer(
            FlatReferenceRenderer.getInstance());
        for (int i = 0; i < elements.length; i++) {
            ModelElement el = elements[i];
            res.append(showElementLink(el)).append(HTML.LINE_BREAK);
            found = true;
        }
        Index.getInstance().resetCurrentRenderer();
    }
    if (!found && nomsg != null && nomsg.length() > 0) {
        res.append(HTML.italics(nomsg));
    }
    return res.toString();
}
```

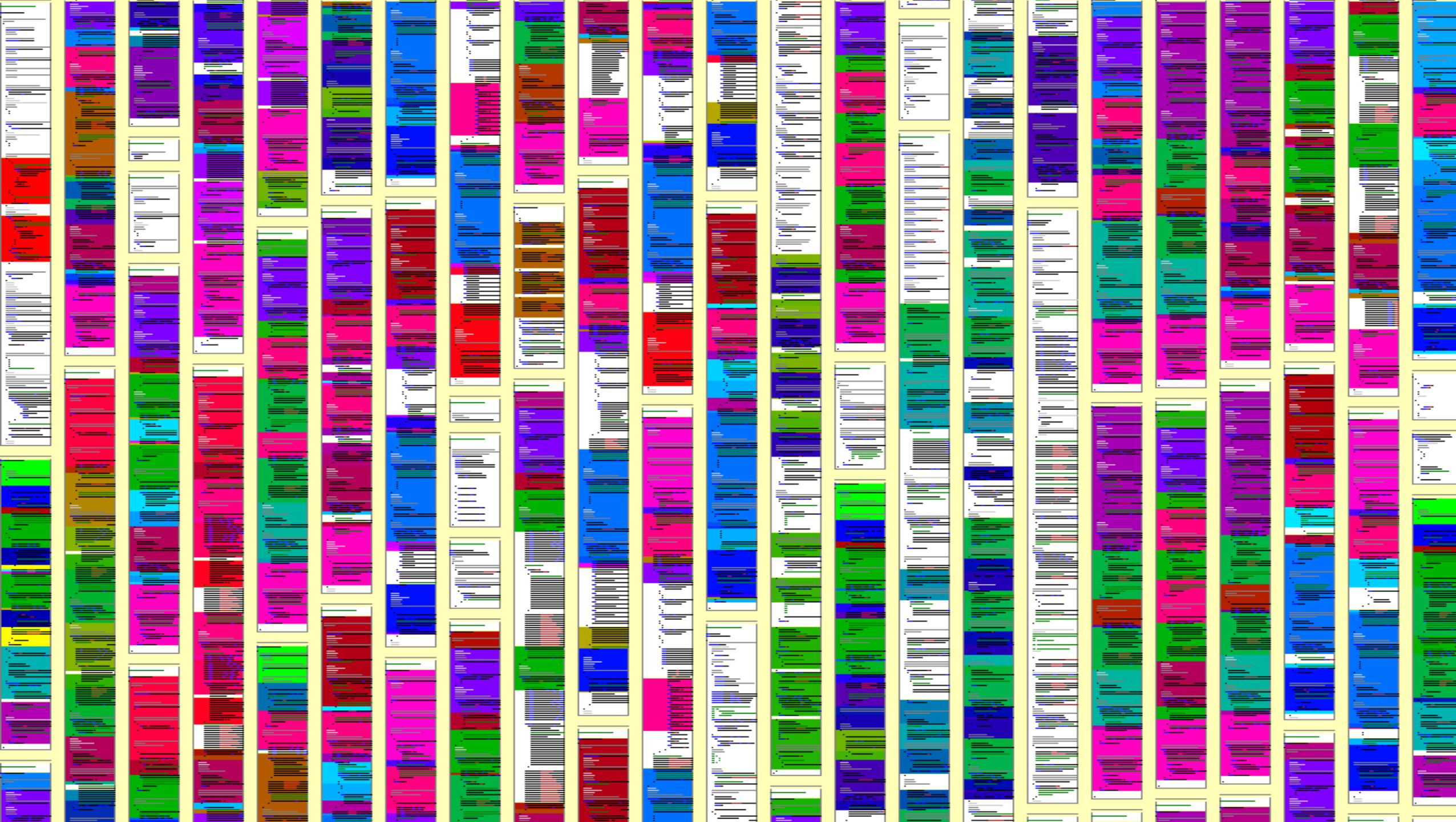
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    StringBuffer res = new StringBuffer();
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            FlatReferenceRenderer.getInstance());
        for (int i = 0; i < elements.length; i++) {
            ModelElement el = elements[i];
            res.append(showElementLink(el)).append(HTML.LINE_BREAK);
            found = true;
        }
        Index.getInstance().resetCurrentRenderer();
    }
    if (!found && nomsg.length() > 0) {
        res.append(HTML.italics(nomsg));
    }
    return res.toString();
}
```

```
// Utilities for arrays of elements
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        for (int i = 0; i < elements.length; i++) {
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            res.append(showElementLink(el)).append(HTML.LINE_BREAK);
            found = true;
        }
        Index.getInstance().resetCurrentRenderer();
    }
    if (!found && nomsg != null && nomsg.length() > 0) {
        res.append(HTML.italics(nomsg));
    }
    return res.toString();
}
```









- Dashboard
- Activity
- Findings
- Metrics
- Tests
- Issues
- Tasks
- Architecture
- Delta
- Projects
- System
- # Admin

## jenkins/test/src/main/java/org/jvnet/hudson/test/HudsonTestCase.java

(revision 12d96a56...)

```
if (lhs==null && rhs==null)      return;
if (lhs==null)      fail("lhs is null while rhs="+rhs);
if (rhs==null)      fail("rhs is null while lhs="+lhs);

Constructor<?> lc = findDataBoundConstructor(lhs.getClass());
Constructor<?> rc = findDataBoundConstructor(rhs.getClass());
assertEquals("Data bound constructor mismatch. Different type?",lc,rc);

List<String> primitiveProperties = new ArrayList<String>();

String[] names = ClassDescriptor.loadParameterNames(lc);
Class<?>[] types = lc.getParameterTypes();
assertEquals(names.length,types.length);
for (int i=0; i<types.length; i++) {
    Object lv = ReflectionUtils.getPublicProperty(lhs, names[i]);
    Object rv = ReflectionUtils.getPublicProperty(rhs, names[i]);

    if (Iterable.class.isAssignableFrom(types[i])) {
        Iterable lcol = (Iterable) lv;
        Iterable rcol = (Iterable) rv;
        Iterator ltr,rtr;
        for (ltr=lcol.iterator(), rtr=rcol.iterator(); ltr.hasNext() && rtr.hasNext();)
            Object litem = ltr.next();
            Object ritem = rtr.next();

            if (findDataBoundConstructor(litem.getClass())!=null) {
                assertEqualsDataBoundBeans(litem,ritem);
            } else {
                assertEquals(litem,ritem);
            }
        }
        assertFalse("collection size mismatch between "+lhs+" and "+rhs, ltr.hasNext() ^ 
    } else
        if (findDataBoundConstructor(types[i])!=null || (lv!=null && findDataBoundConstructo
            // recurse into nested databound objects
            assertEqualsDataBoundBeans(lv,rv);
        } else {
            primitiveProperties.add(names[i]);
        }
    }

// compare shallow primitive properties
if (!primitiveProperties.isEmpty())
    assertEqualsBeans(lhs,rhs,Util.join(primitiveProperties,","));

*
    Makes sure that two collections are identical via {@link #assertEqualDataBoundBeans(Objec
/
public void assertEqualDataBoundBeans(List<?> lhs, List<?> rhs) throws Exception {
    assertEquals(lhs.size(), rhs.size());
    for (int i=0; i<lhs.size(); i++)
        assertEquals(lhs.get(i), rhs.get(i));
}
```

## jenkins/test/src/main/java/org/jvnet/hudson/test/JenkinsRule.java

(revi

```
if (lhs==null && rhs==null)      return;
if (lhs==null)      fail("lhs is null while rhs="+rhs);
if (rhs==null)      fail("rhs is null while lhs="+lhs);

Constructor<?> lc = findDataBoundConstructor(lhs.getClass());
Constructor<?> rc = findDataBoundConstructor(rhs.getClass());
assertThat("Data bound constructor mismatch. Different type?", (Constructor)rc, is((Cons

List<String> primitiveProperties = new ArrayList<String>();

String[] names = ClassDescriptor.loadParameterNames(lc);
Class<?>[] types = lc.getParameterTypes();
assertThat(types.length, is(names.length));
for (int i=0; i<types.length; i++) {
    Object lv = ReflectionUtils.getPublicProperty(lhs, names[i]);
    Object rv = ReflectionUtils.getPublicProperty(rhs, names[i]);

    if (lv != null && rv != null && Iterable.class.isAssignableFrom(types[i])) {
        Iterable lcol = (Iterable) lv;
        Iterable rcol = (Iterable) rv;
        Iterator ltr,rtr;
        for (ltr=lcol.iterator(), rtr=rcol.iterator(); ltr.hasNext() && rtr.hasNext();)
            Object litem = ltr.next();
            Object ritem = rtr.next();

            if (findDataBoundConstructor(litem.getClass())!=null) {
                assertEqualsDataBoundBeans(litem,ritem);
            } else {
                assertThat(ritem, is(litem));
            }
        }
        assertThat("collection size mismatch between " + lhs + " and " + rhs, ltr.hasNext()
            is(false));
    } else
        if (findDataBoundConstructor(types[i])!=null || (lv!=null && findDataBoundConstructo
            // recurse into nested databound objects
            assertEqualsDataBoundBeans(lv,rv);
        } else {
            primitiveProperties.add(names[i]);
        }
    }

// compare shallow primitive properties
if (!primitiveProperties.isEmpty())
    assertEqualsBeans(lhs,rhs,Util.join(primitiveProperties,","));

*
    Makes sure that two collections are identical via {@link #assertEqualDataBoundBeans(Objec
/
public void assertEqualDataBoundBeans(List<?> lhs, List<?> rhs) throws Exception {
    assertEquals(lhs.size(), rhs.size());
    for (int i=0; i<lhs.size(); i++)
        assertEquals(lhs.get(i), rhs.get(i));
}
```

Java

larger/source/.../PriceElementUtil.plsql (revision default:1... )

```

223     AND NVL(t.valid_from, Database_SYS.Get_First_Calendarday(contract_));
224     AND NVL(t.valid_to, Database_SYS.Get_Last_Calendarday(contract_));
225
226 BEGIN
227     OPEN get_price_interval;
228     FETCH get_price_interval INTO valid_from_, valid_until_, valid_date_;
229     CLOSE get_price_interval;
230     IF valid_from_ > Site_API.Get_Site_Date(contract_)
231         valid_date_ := valid_from_;
232     ELSE
233         valid_date_ := LEAST(NVL(valid_until_, TRUNC(Site_API.Get_Site_Date(contract_))), valid_from_);
234     END IF;
235
236     -- only calculate unit base (False) but no metal surcharge
237     temp1_ :=0;
238
239     OPEN get_pl_currency_code;
240     FETCH get_pl_currency_code INTO pl_currency_code_;
241     CLOSE get_pl_currency_code;
242
243     FOR rec_ IN get_all_conn_unit_base_false LOOP

```

larger/source/.../PriceElementUtil.plsql (revision default:1... )

```

346 BEGIN
347     OPEN get_price_interval;
348     FETCH get_price_interval INTO valid_from_, valid_until_, valid_date_;
349     CLOSE get_price_interval;
350     IF valid_from_ > Site_API.Get_Site_Date(contract_)
351         valid_date_ := valid_from_;
352     ELSE
353         -- Change for Ticket #1234 (START)
354         --valid_date_ := LEAST(NVL(valid_until_, TRUNC(Site_API.Get_Site_Date(contract_))), valid_from_);
355         valid_date_ := LEAST(NVL(valid_until_, Site_API.Get_Site_Date(contract_)), valid_from_);
356         -- Change for Ticket #1234 (FINISH)
357     END IF;
358
359     -- calculate only metal surcharge without unit base
360     temp3_ :=0;
361
362     OPEN get_pl_currency_code;
363     FETCH get_pl_currency_code INTO pl_currency_code_;
364     CLOSE get_pl_currency_code;
365
366     FOR rec_ IN get_all_metal_surcharge LOOP

```

```

if i_kart-life_value < 0,
  write '50'          to it_down-newbs.
  i_kart-life_value = i_kart-life_value * -1.
  write i_kart-life_value      to it_down-wrbtr
                                currency i_kost_ges-currency.
endif.
it_down-xblnr      = w_xblnr.
it_down-zuonr      = w_zuonr.
it_down-sgtxt      = w_sgtxt.
it_down-kostl      = i_kost_ges-fi_life_cost_center.
it_down-zzyber      = '10'.
it_down-bukrs       = i_kost_ges-booking.

*
if it_down-bukrs ne '0001'.
  write 'SA'          to it_down-blart.
  clear it_down-zzyber.
endif.

*
replace all occurrences of '' in it_down-wrbtr with ''.
append it_down.
endloop.

*
describe table it_down lines l_it_down.
it_down-blkz = 'E'.
modify it_down index l_it_down transporting blkz.
endloop.

*
*--- Non-Life Quartal
loop at i_kost_ges where period_type = 'q' and
  non_life_value ne 0.
*      and fehler ne 'X'.
if i_kost_ges-fibu_type = '1'.
  d_fibu_type = text-k01.
*
if i_kart-non_life_value < 0,
  write '50'          to it_down-newbs.
  i_kart-non_life_value = i_kart-non_life_value * -1.
  write i_kart-non_life_value      to it_down-wrbtr
                                currency i_kost_ges-currency.
endif.

*
it_down-xblnr      = w_xblnr.
it_down-zuonr      = w_zuonr.
it_down-sgtxt      = w_sgtxt.
it_down-kostl      = i_kost_ges-fi_non_life_cost_center.
it_down-zzyber      = '10'.
it_down-bukrs       = i_kost_ges-booking.

*
if it_down-bukrs ne '0001'.
  write 'SA'          to it_down-blart.
  clear it_down-zzyber.
endif.

*
append it_down.
endloop.

*
describe table it_down lines l_it_down.
it_down-blkz = 'E'.
modify it_down index l_it_down transporting blkz.
endloop.

*
*--- Monatlich Health
loop at i_kost_ges where period_type = 'm' and
  health_value ne 0.
*      and fehler ne 'X'.
if i_kost_ges-fibu_type = '1'.
  d_fibu_type = text-k01.
*

```

3 Clone class (46 token-sequences) with 2 instances found at  
D:/Source/ [REDACTED] /Gui.Dialogs/UserControls/NavigationTrees/Trees/TreeAdministrationQuarterly.cs (94)  
length: 145 lines; transformed length: 46  
D:/Source/ [REDACTED] /Gui.Dialogs/UserControls/NavigationTrees/Trees/TreeAdministrationYearly.cs (107)  
length: 145 lines; transformed length: 46

4 Clone class (43 token-sequences) with 2 instances found at  
D:/Source/ [REDACTED] /Gui.Dialogs/UserControls/ [REDACTED] /UserControlGeneralMainSegment.cs (889)  
length: 128 lines; transformed length: 43  
D:/Source/ [REDACTED] /Gui.Dialogs/UserControls/ [REDACTED] /UserControlGeneralMainSegmentCMC.cs (654)  
length: 122 lines; transformed length: 43

5 Clone class (42 token-sequences) with 2 instances found at  
D:/Source/ [REDACTED] /Gui.Dialogs/UserControls/NavigationTrees/TreeAndFilter/TreeAndFilterAdministrationQuarterly.cs  
(127)  
length: 98 lines; transformed length: 42  
D:/Source/ [REDACTED] /Gui.Dialogs/UserControls/NavigationTrees/TreeAndFilter/TreeAndFilterAdministrationYearly.cs  
(130)  
length: 98 lines; transformed length: 42

6 Clone class (35 token-sequences) with 2 instances found at  
D:/Source/ [REDACTED] /AppCore.BusinessObjects/BackEndObjects/BeoBranchHistory.cs (130)  
length: 34 lines; transformed length: 35  
D:/Source/ [REDACTED] /AppCore.BusinessObjects/BackEndObjects/BeoHistory.cs (117)  
length: 34 lines; transformed length: 35

7 Clone class (33 token-sequences) with 2 instances found at  
D:/Source/ [REDACTED] AppCore.BusinessObjects/History/BranchHistory.cs (582)  
length: 68 lines; transformed length: 33  
D:/Source/ [REDACTED] /AppCore.BusinessObjects/History/History.cs (488)  
length: 70 lines; transformed length: 33

8 Clone class (33 token-sequences) with 2 instances found at  
D:/Source/ [REDACTED] /Application/ [REDACTED] (250)  
length: 69 lines; transformed length: 33  
D:/Source/ [REDACTED] /Gui.Test/TestForm.cs (1080)  
length: 69 lines; transformed length: 33

## *TreeAdministrationQuarterly.cs*

```
93  /// </summary>
94  protected override bool DoLazyLoading(
95      UltraTreeNode node)
96  {
97      // Some types of segments always have the
98      // expand icon
99      if ( node.Tag is GaSegment ||
100          node.Tag is MainSegment ||
101          node.Tag is GeneralMainSegment ||
102          node.Tag is Branch )
103          return true;
104      // All others only if there are child nodes
105      return false;
106  }
107  /// <summary>
108  /// Structure segments return only loss or
109  /// premium segments according to
110  /// the mode.
111  /// </summary>
112  protected override IList GetChildSegments(
113      ISegment parent, ref bool alreadySorted )
114  {
115      if ( parent is StructureSegment )
116      {
117          // Show either premium or loss beyond
118          // structure segment
119          StructureSegment strucSeg = (StructureSegment)
120              parent;
121          if ( (TypeOfSgmtEnum) GetFilterValue( typeof(
122              TypeOfSgmtEnum) ) == TypeOfSgmtEnum.Loss
123              )
124              return strucSeg.GetLossProcessingSegments();
125          else
126              return strucSeg.GetPremiumProcessingSegments()
127          ();
128      }
129  }
```

## *TreeAdministrationYearly.cs*

```
106  /// </summary>
107  protected override bool DoLazyLoading(
108      UltraTreeNode node)
109  {
110      // Some types of segments always have the
111      // expand icon
112      if ( node.Tag is GaSegment ||
113          node.Tag is MainSegment ||
114          node.Tag is GeneralMainSegment ||
115          node.Tag is Branch )
116          return true;
117      // All others only if there are child nodes
118      return false;
119  }
120  /// <summary>
121  /// Structure segments return only loss or
122  /// premium segments according to
123  /// the mode.
124  /// </summary>
125  protected override IList GetChildSegments(
126      ISegment parent, ref bool alreadySorted )
127  {
128      if ( parent is StructureSegment )
129      {
130          // Show either premium or loss beyond
131          // structure segment
132          StructureSegment strucSeg = (StructureSegment)
133              parent;
134          if ( (TypeOfSgmtEnum) GetFilterValue( typeof(
135              TypeOfSgmtEnum) ) == TypeOfSgmtEnum.Loss
136              )
137              return strucSeg.GetLossProcessingSegments();
138          else
139              return strucSeg.GetPremiumProcessingSegments()
140          ();
141  }
```

```

if i_kart-life_value < 0,
  write '50'          to it_down-newbs.
  i_kart-life_value = i_kart-life_value * -1.
  write i_kart-life_value      to it_down-wrbtr
                                currency i_kost_ges-currency.
endif.
it_down-xblnr      = w_xblnr.
it_down-zuonr      = w_zuonr.
it_down-sgtxt      = w_sgtxt.
it_down-kostl      = i_kost_ges-fi_life_cost_center.
it_down-zzyber      = '10'.
it_down-bukrs       = i_kost_ges-booking.

*
if it_down-bukrs ne '0001'.
  write 'SA'          to it_down-blart.
  clear it_down-zzyber.
endif.

*
replace all occurrences of '' in it_down-wrbtr with ''.
append it_down.
endloop.

*
describe table it_down lines l_it_down.
it_down-blkz = 'E'.
modify it_down index l_it_down transporting blkz.
endloop.

*
*--- Non-Life Quartal
loop at i_kost_ges where period_type = 'q' and
  non_life_value ne 0.
*      and fehler ne 'X'.
if i_kost_ges-fibu_type = '1'.
  d_fibu_type = text-k01.
*
if i_kart-non_life_value < 0,
  write '50'          to it_down-newbs.
  i_kart-non_life_value = i_kart-non_life_value * -1.
  write i_kart-non_life_value      to it_down-wrbtr
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it_down-zuonr      = w_zuonr.
it_down-sgtxt      = w_sgtxt.
it_down-kostl      = i_kost_ges-fi_non_life_cost_center.
it_down-zzyber      = '10'.
it_down-bukrs       = i_kost_ges-booking.

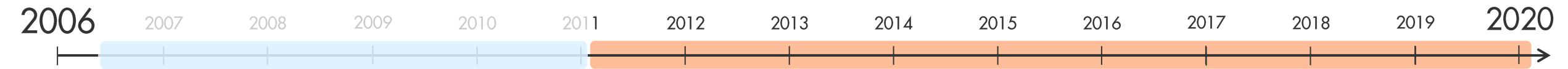
*
if it_down-bukrs ne '0001'.
  write 'SA'          to it_down-blart.
  clear it_down-zzyber.
endif.

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endloop.

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describe table it_down lines l_it_down.
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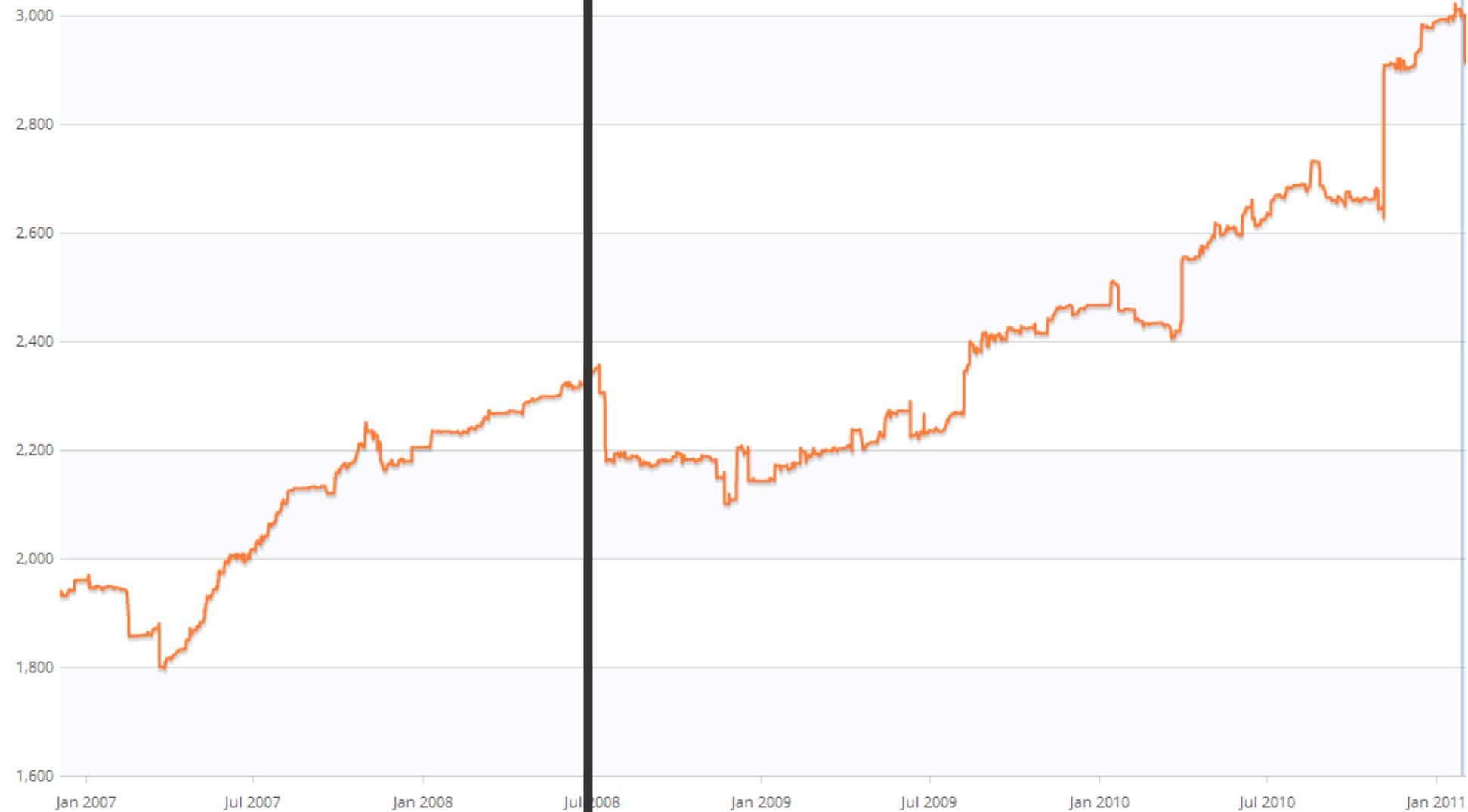
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*--- Monatlich Health
loop at i_kost_ges where period_type = 'm' and
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*      and fehler ne 'X'.
if i_kost_ges-fibu_type = '1'.
  d_fibu_type = text-k01.
*

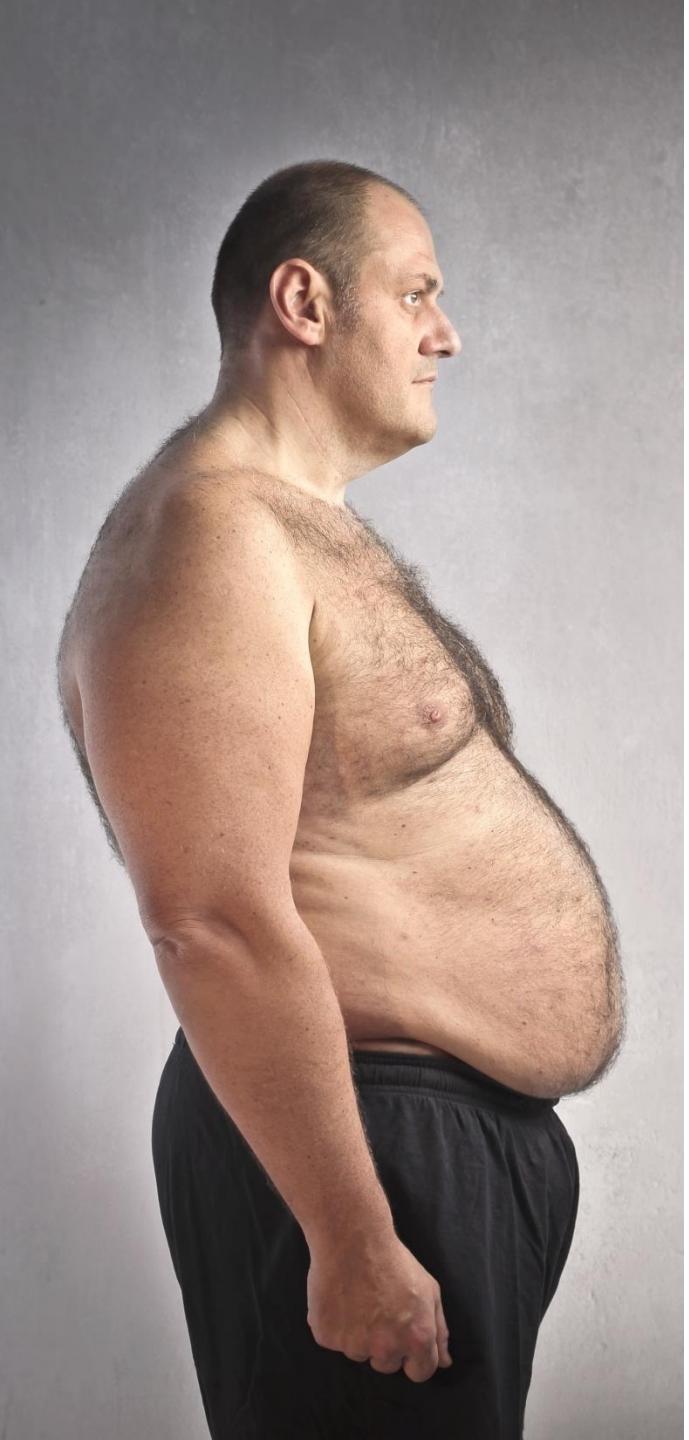
```











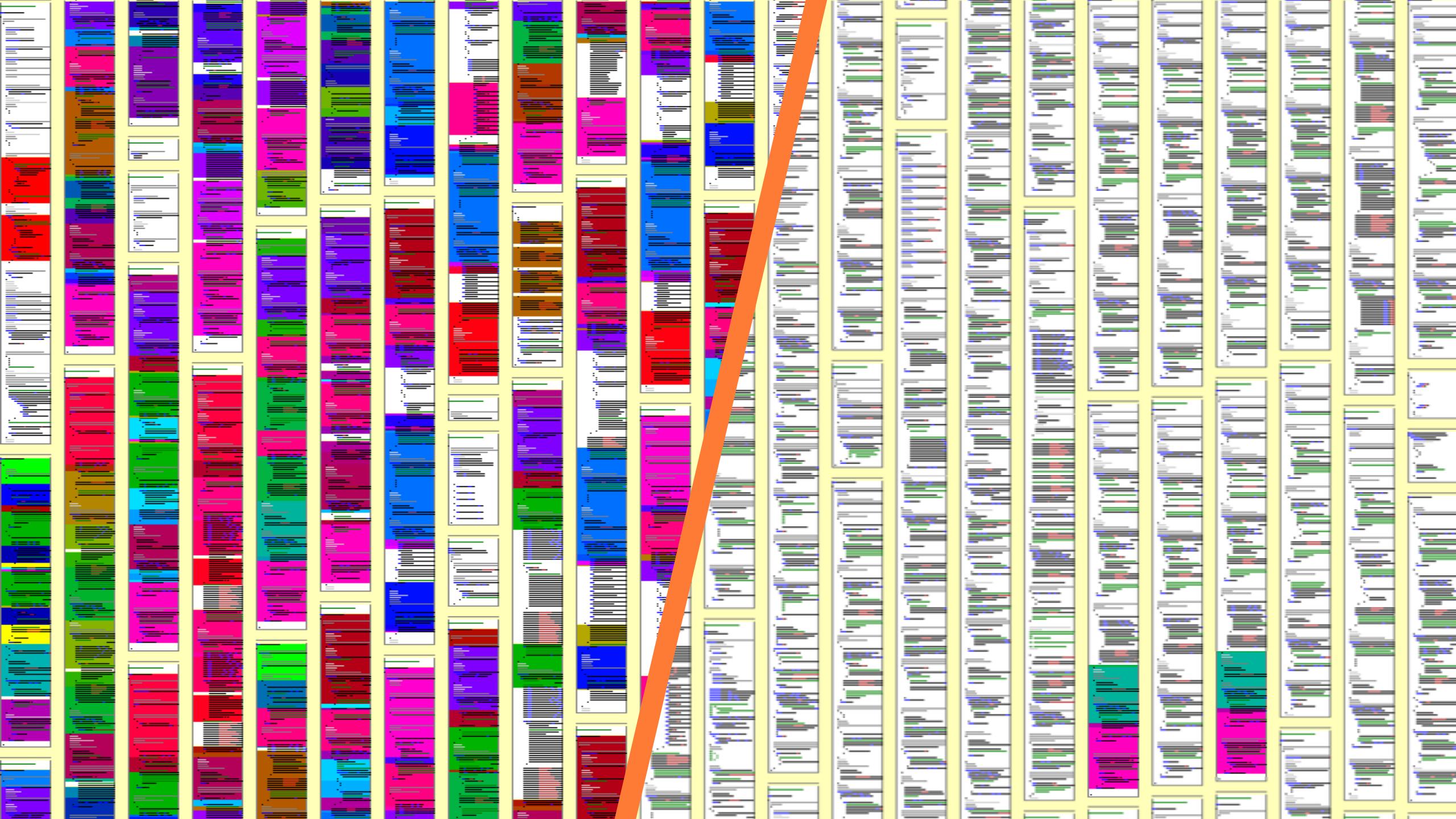
+

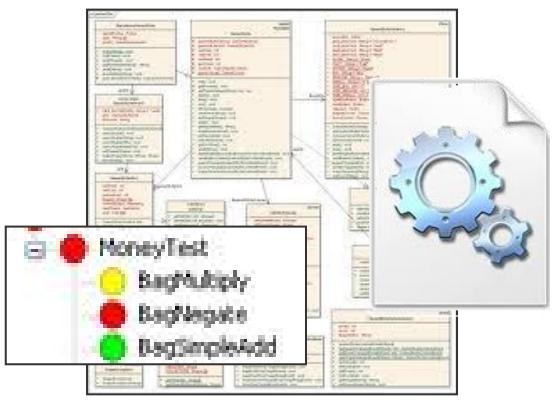


=

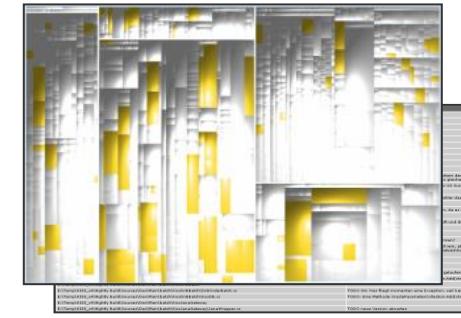








**conQAT**



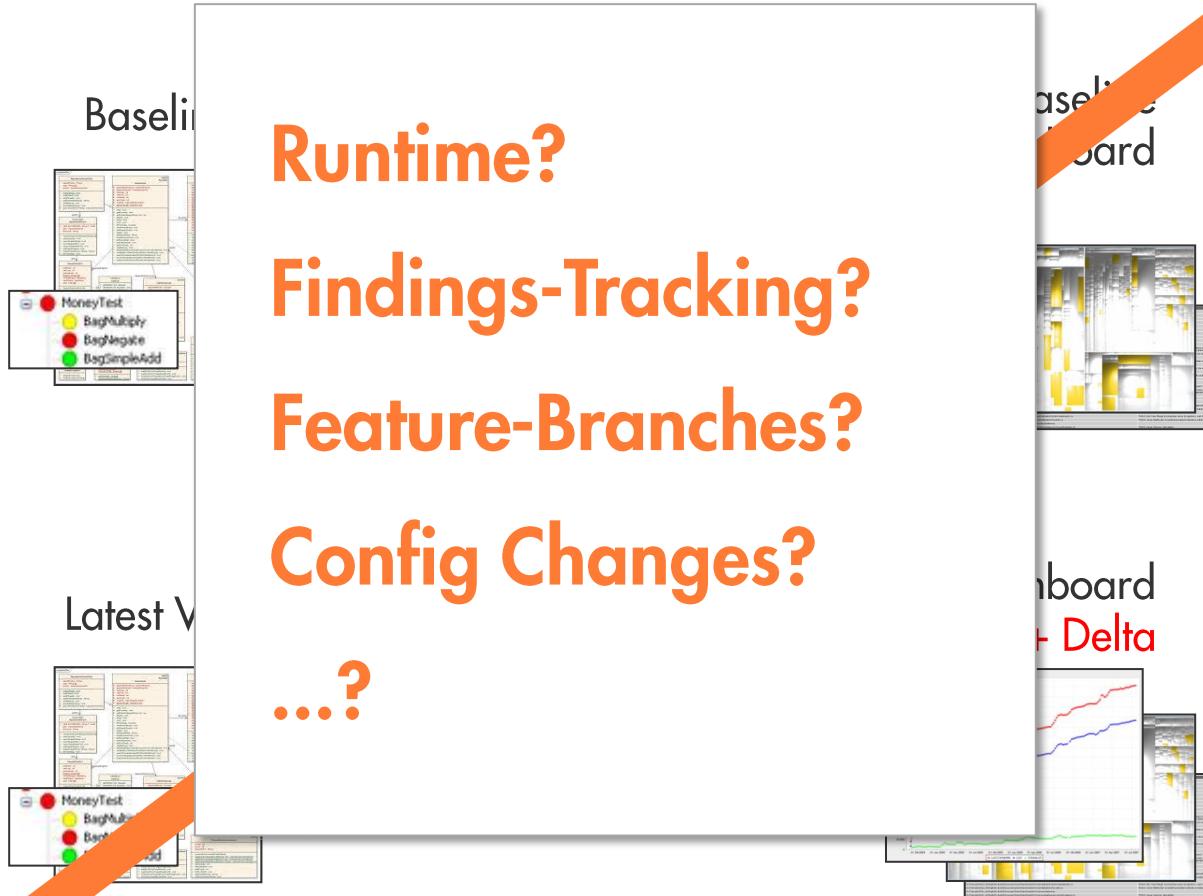
**Runtime?**

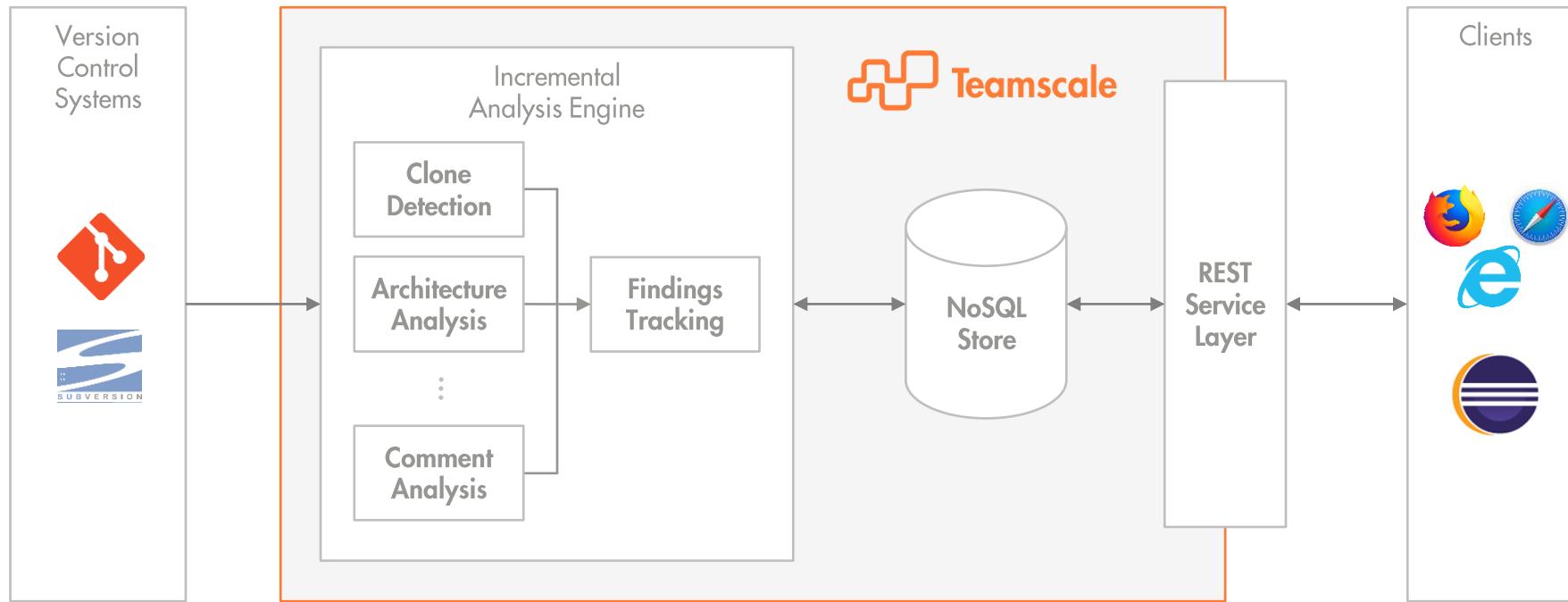
**Findings-Tracking?**

**Feature-Branches?**

**Config Changes?**

**...?**







Project:

CQSE All

Branch:

master

Timetravel:

@ All Commits.

**CR#14434 Fix Artifactory test**

by Andi Scharfstein in revision a32daf8a @ in branch cr/14434\_unify\_default\_branch (Gitlab)

Files: 2 changed

Issue: [TS-14434](#)

Findings: 0

Mar 13 2018  
14:15**Merge branch 'teamscale/v4.1.x'**

by Lars Heinemann in revision c4f01a6e @ in branch master (Gitlab)

Merged from cr/14098\_connection\_profile\_branch 0 3

Files: 1 added, 20 changed

Findings: 0

Mar 13 2018  
14:08**CR#14434 Fix test cases**

by Andi Scharfstein in revision 2aa45de3 @ in branch cr/14434\_unify\_default\_branch (Gitlab)

Files: 6 changed

Issue: [TS-14434](#)

Findings: ✓ 1

Mar 13 2018  
14:00**CR#14448: disable flickering test**

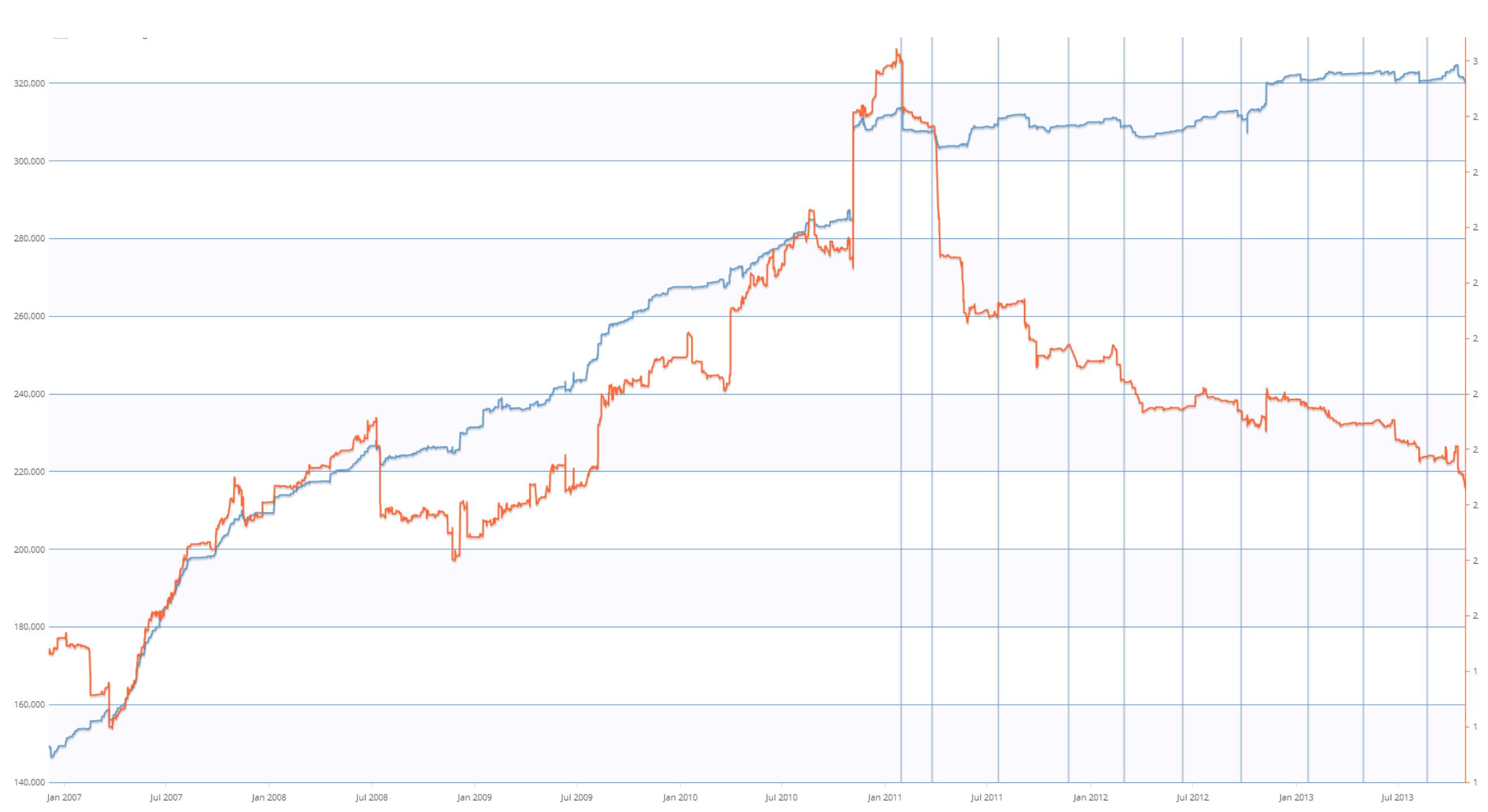
by Lars Heinemann in revision 47f12dde @ in branch cr/14098\_connection\_profile\_branch (Gitlab)

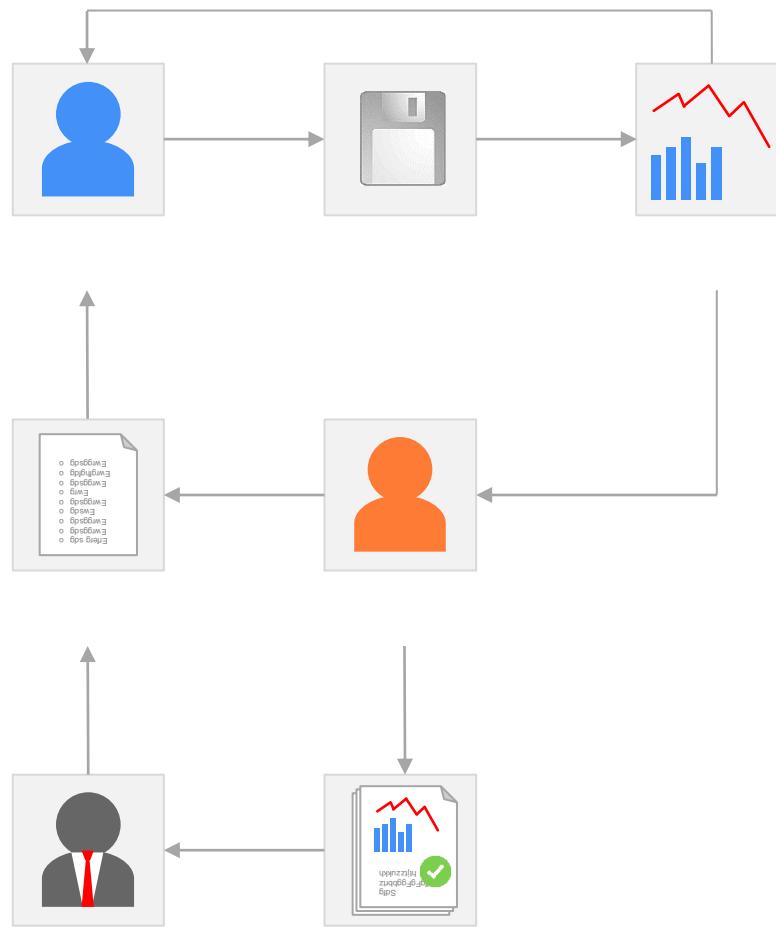
Files: 1 changed

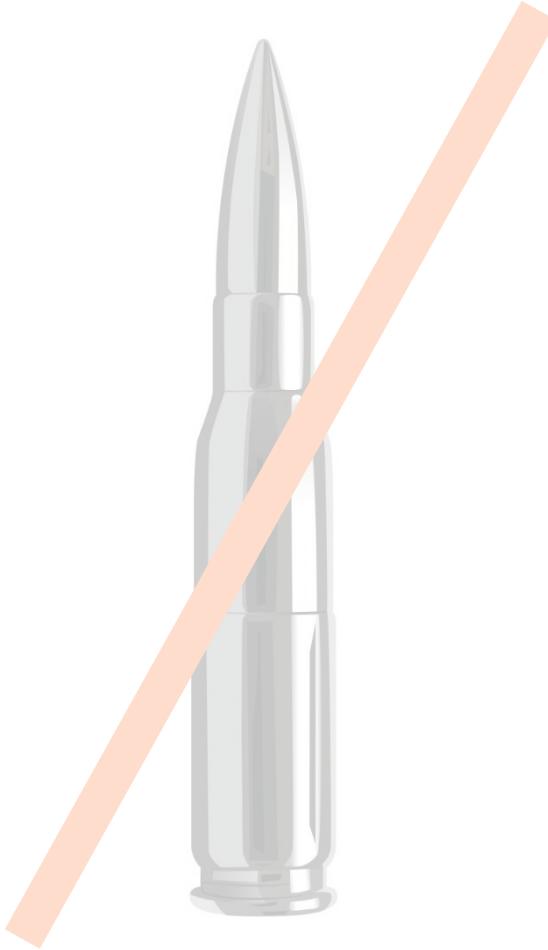
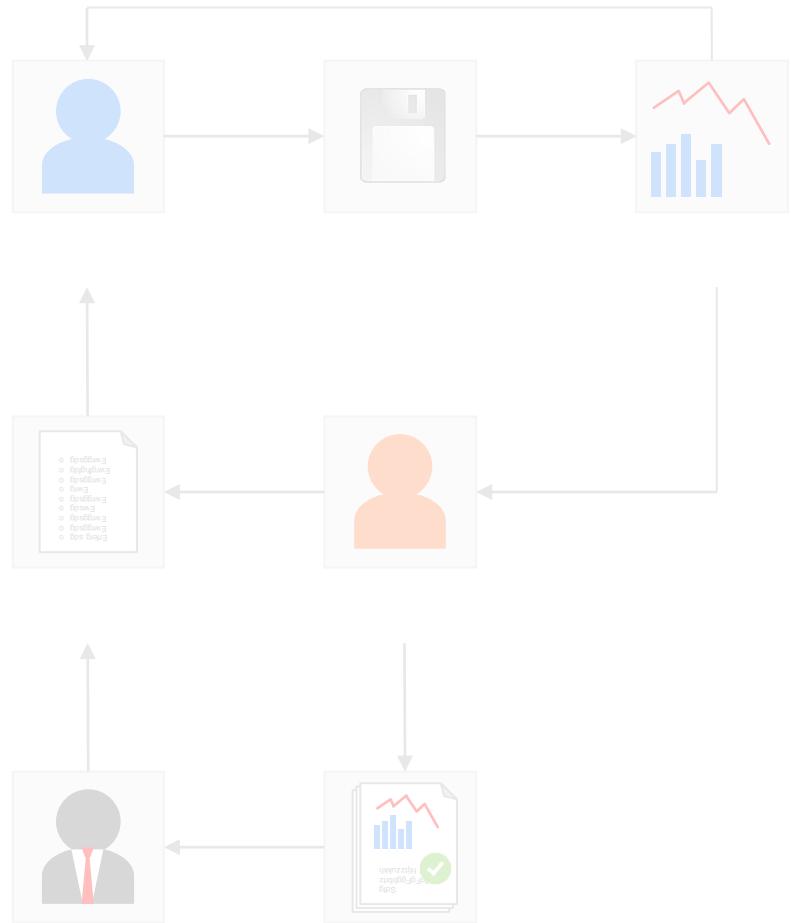
Issue: [TS-14448](#)

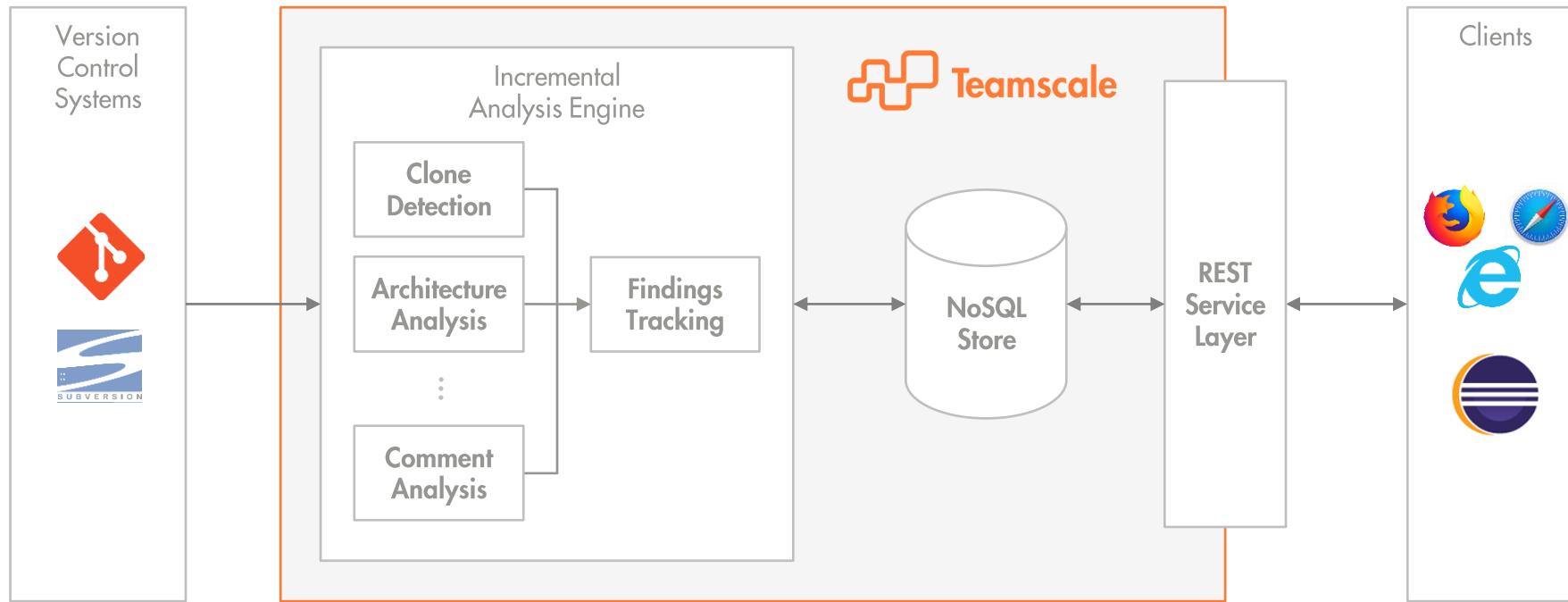
Findings: 0 1

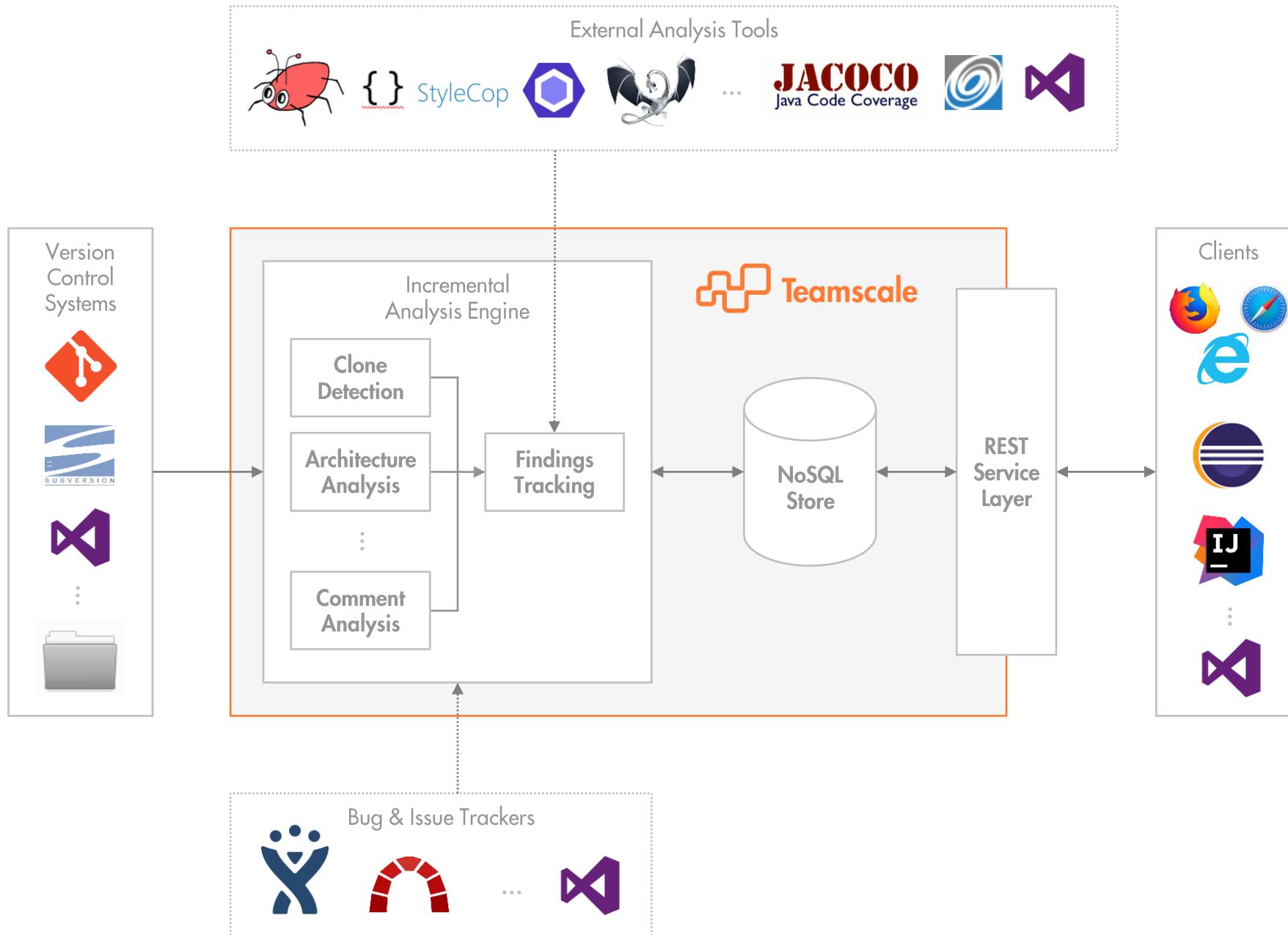
Mar 13 2018  
13:28

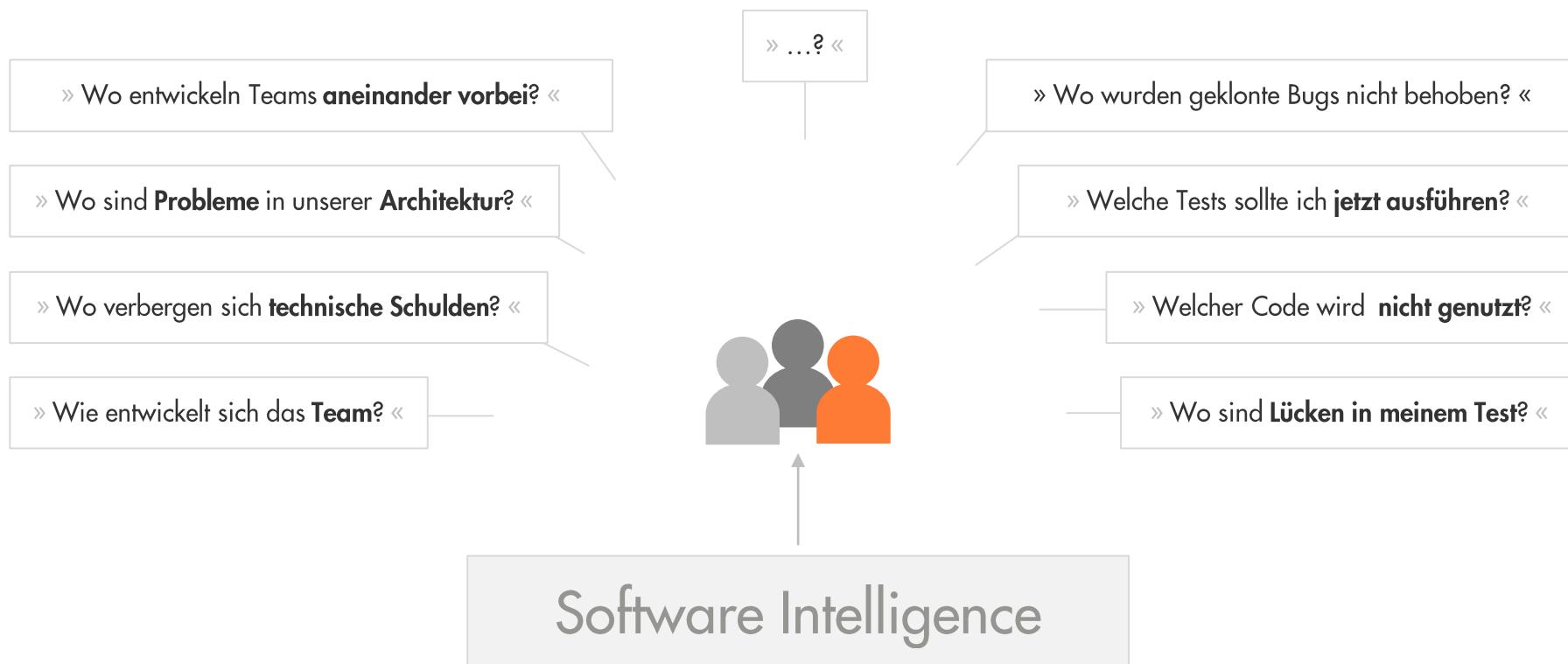
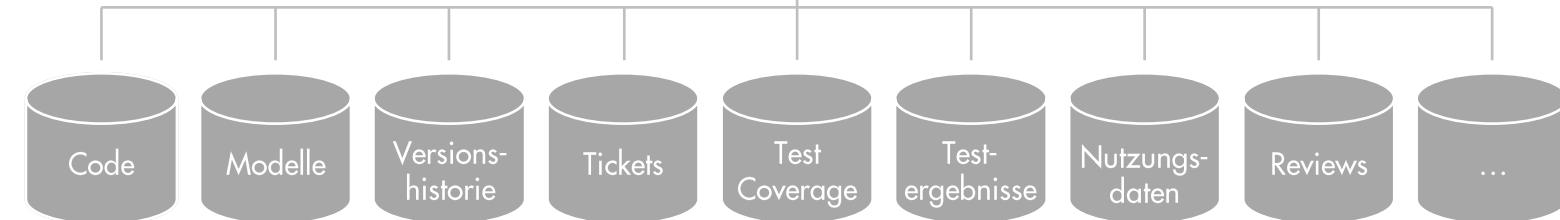


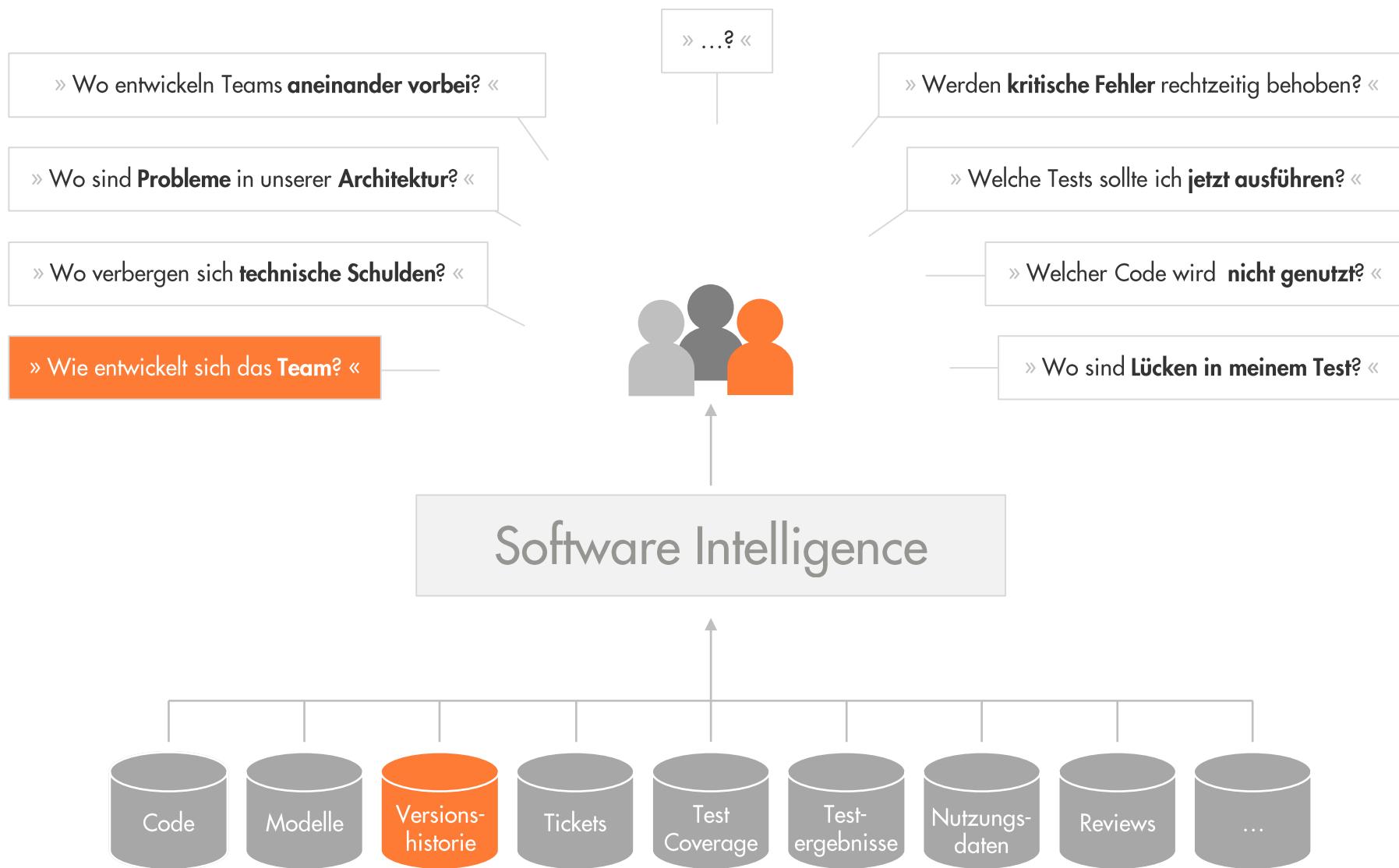




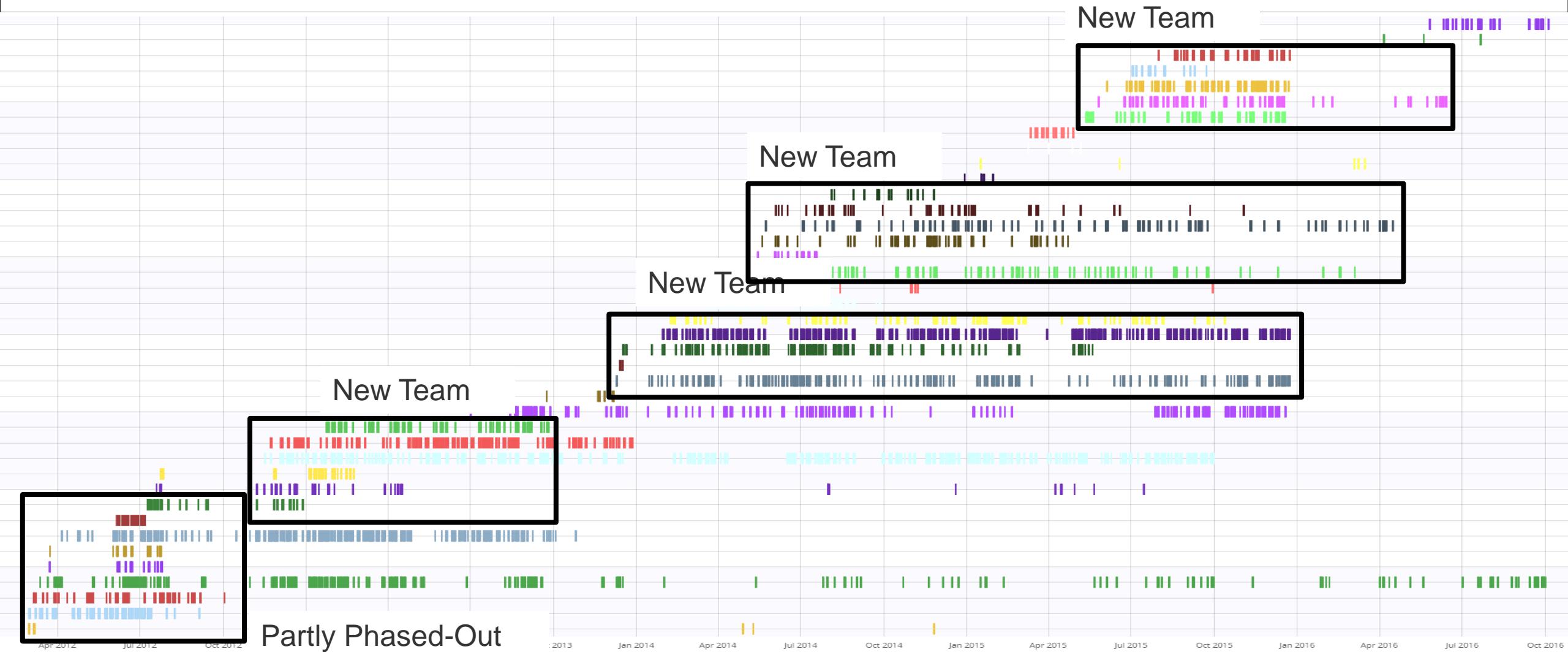




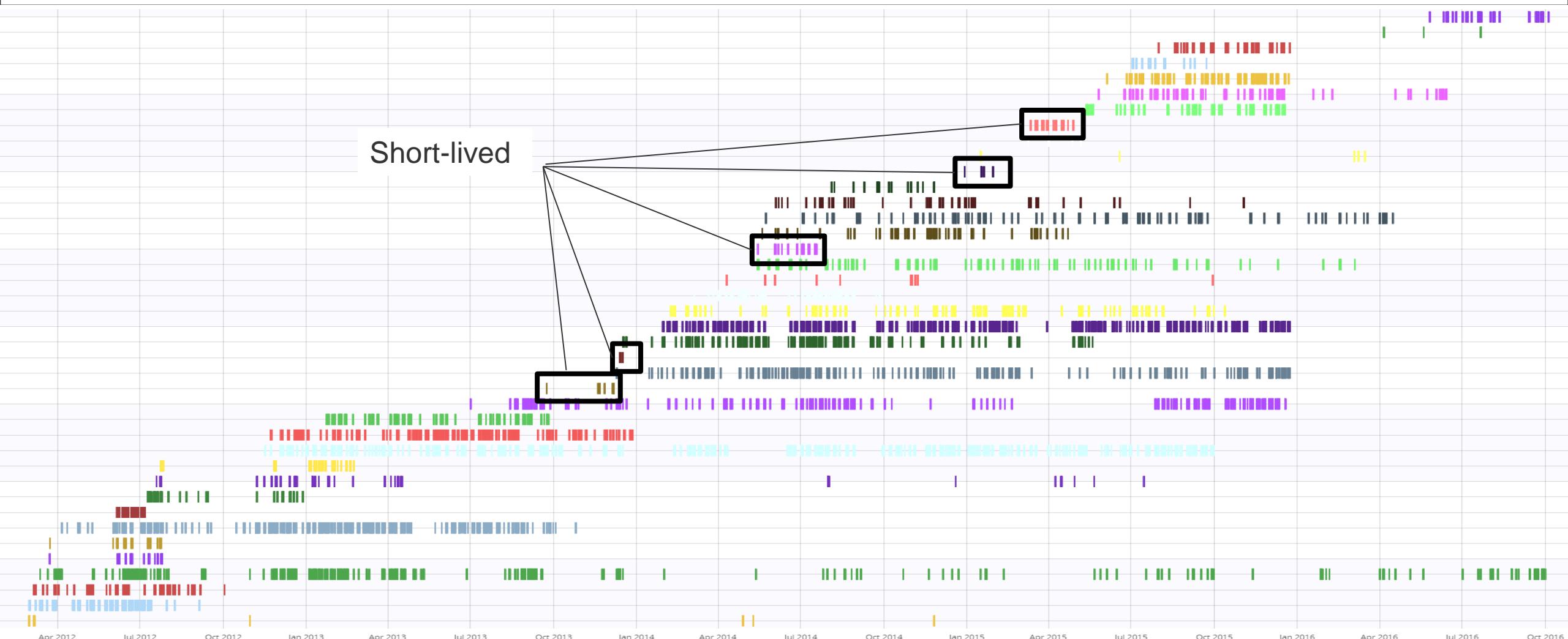


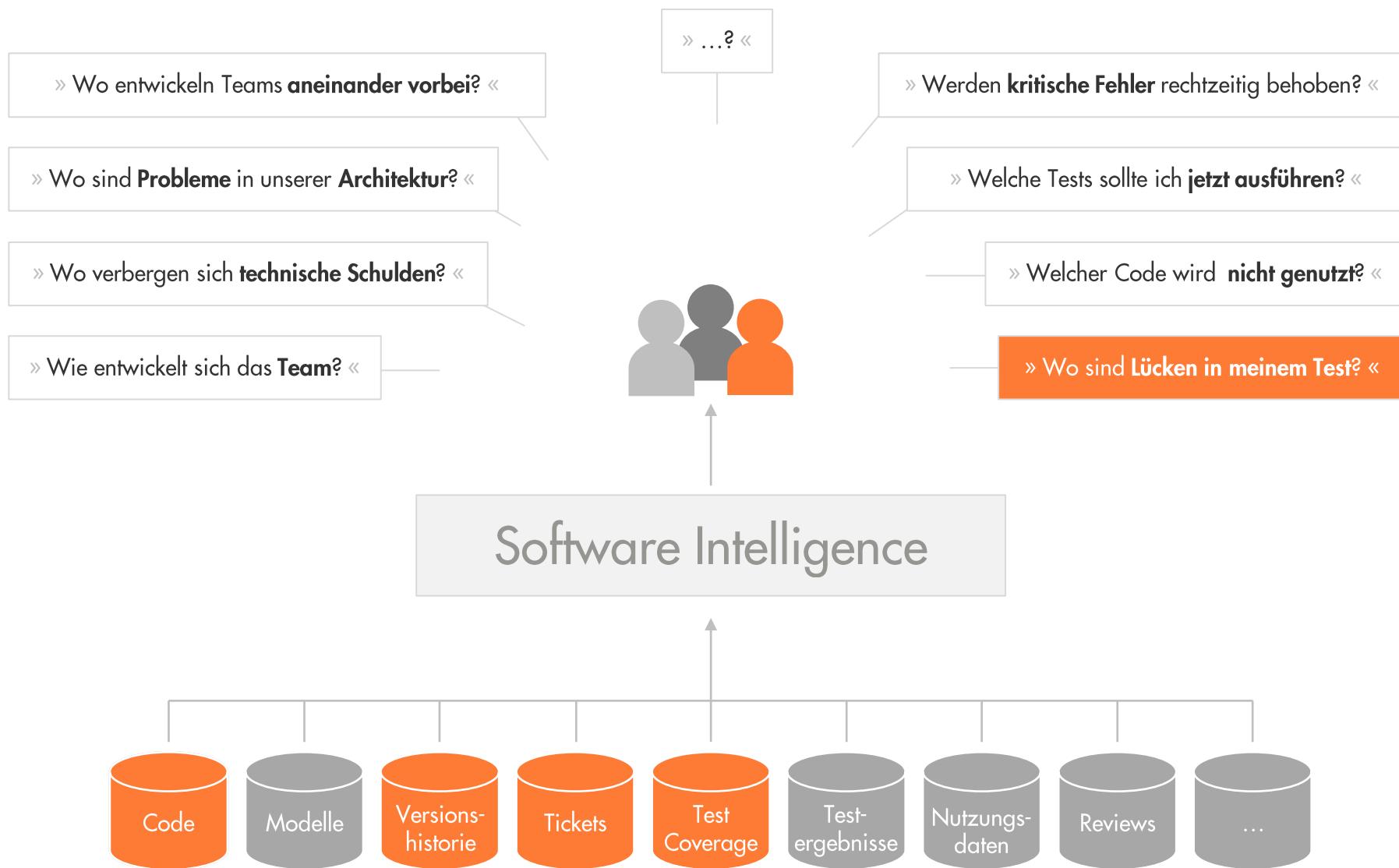


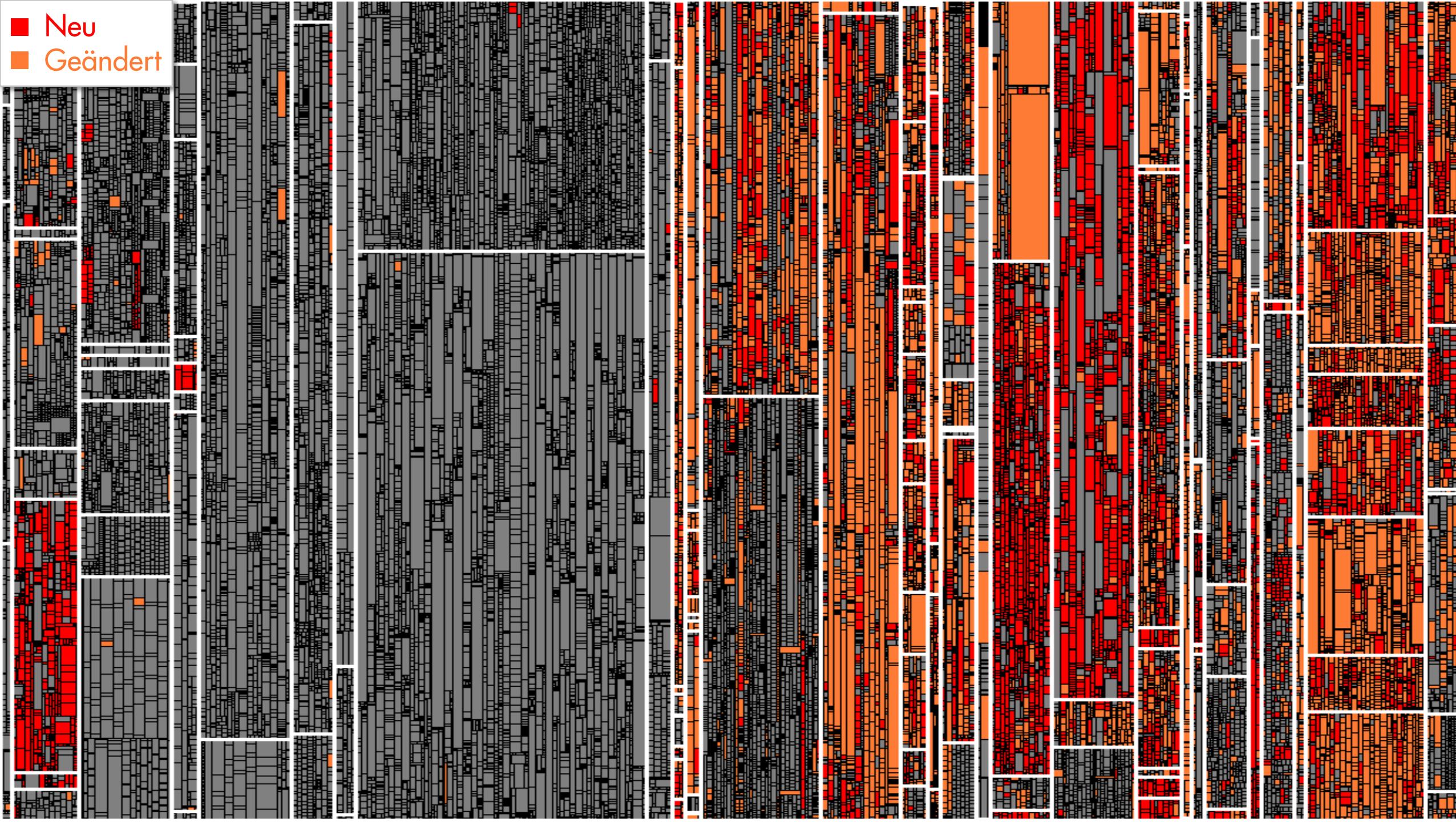




Short-lived

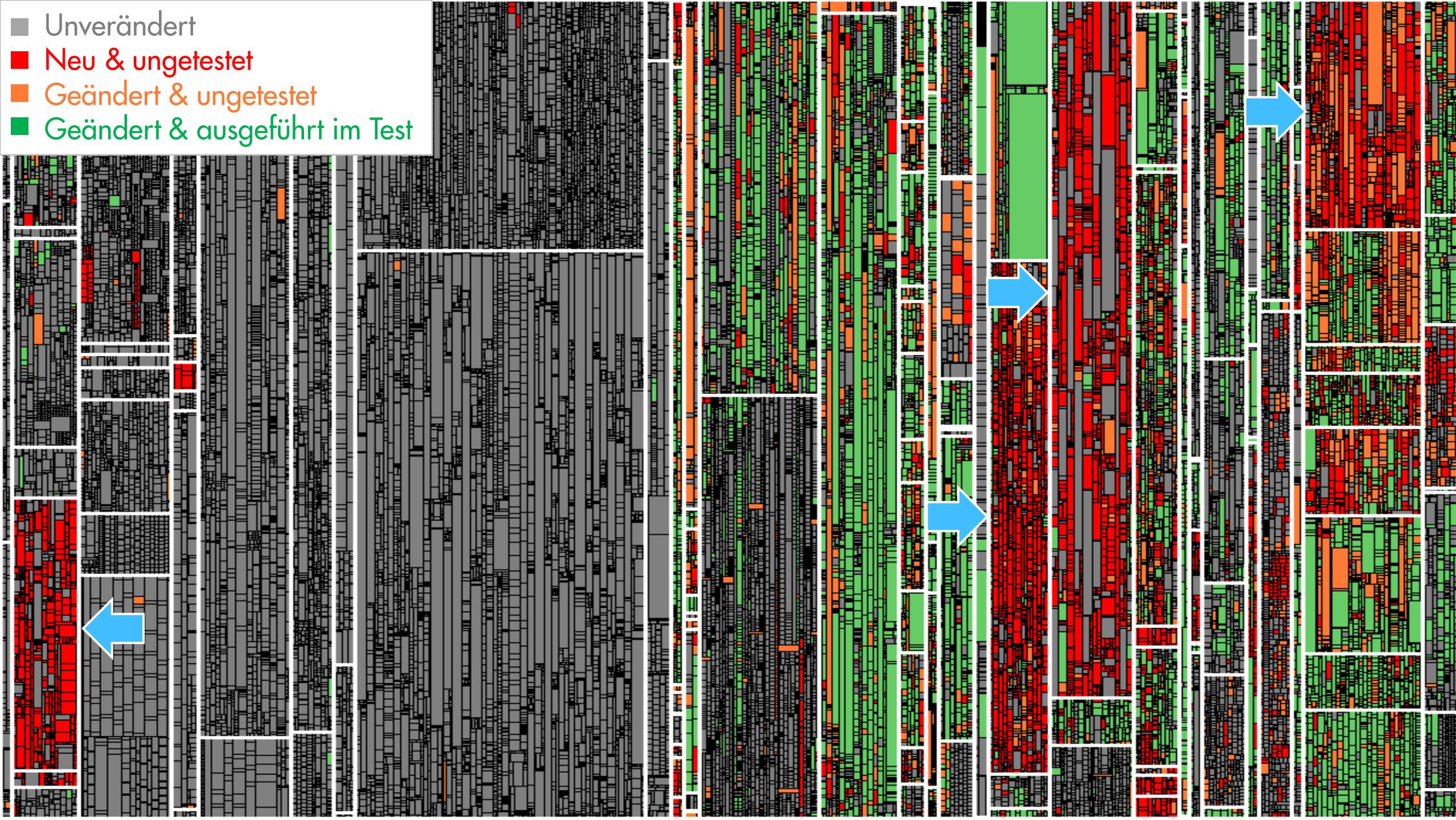




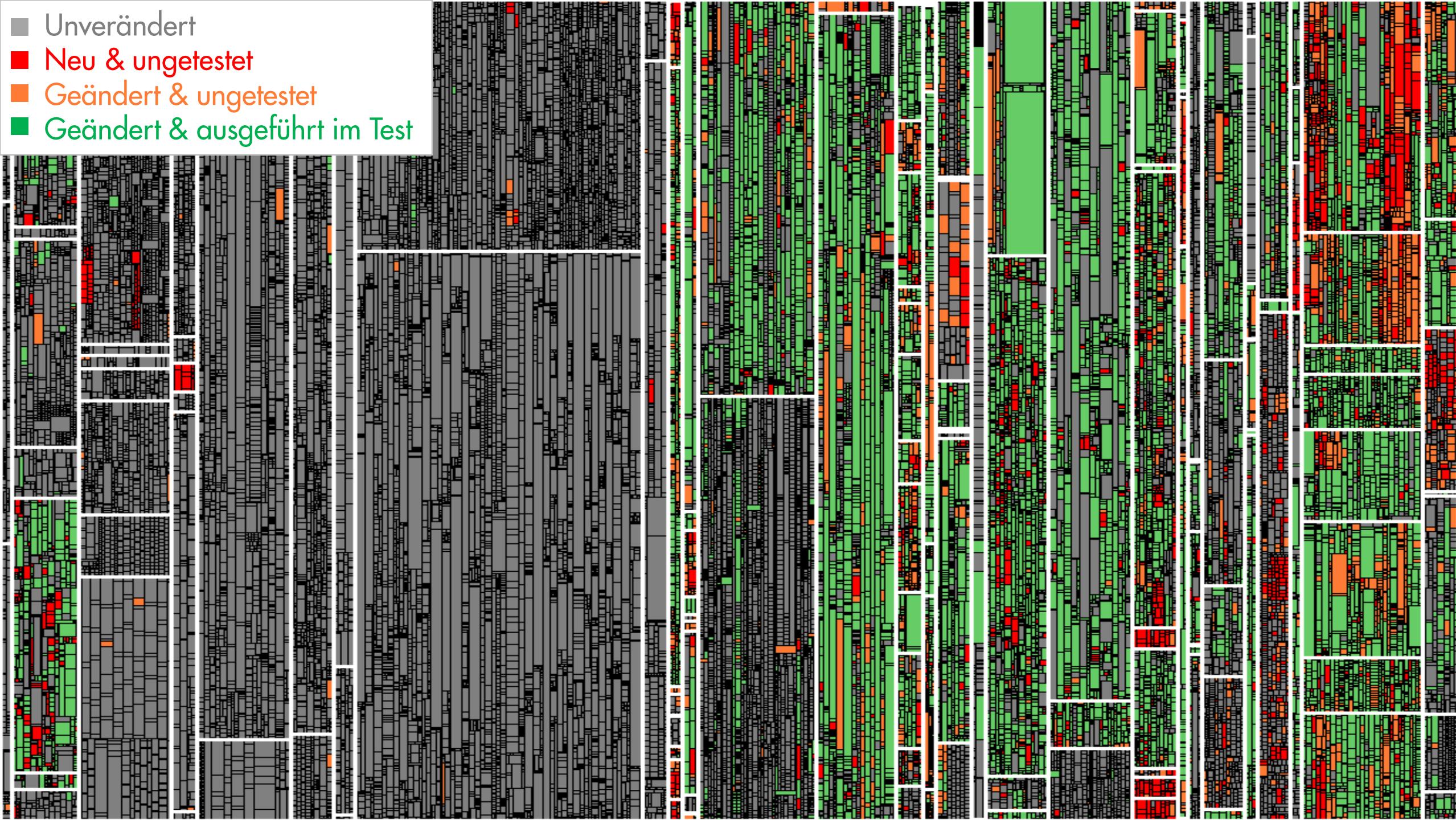


■ Neu  
■ Geändert

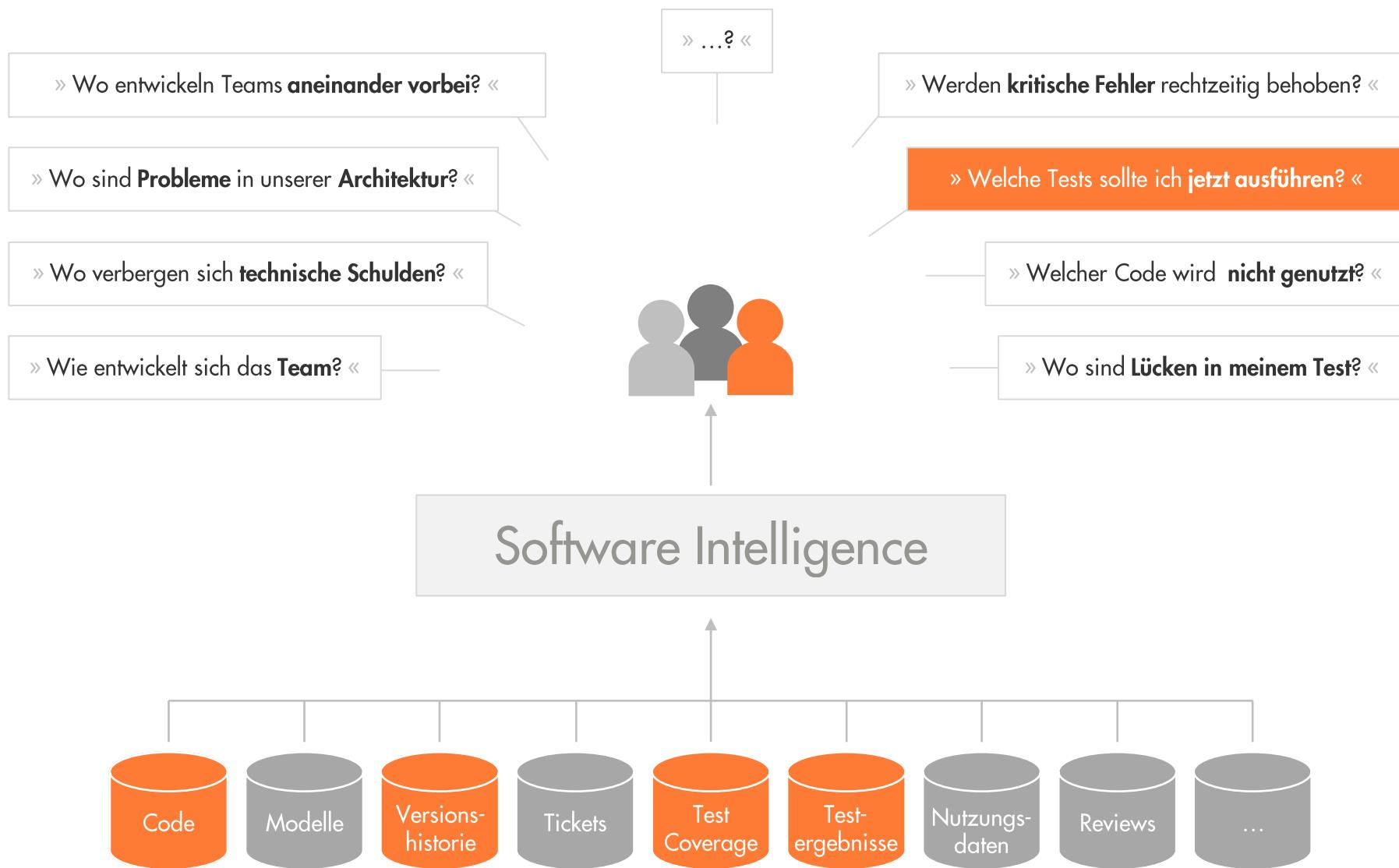


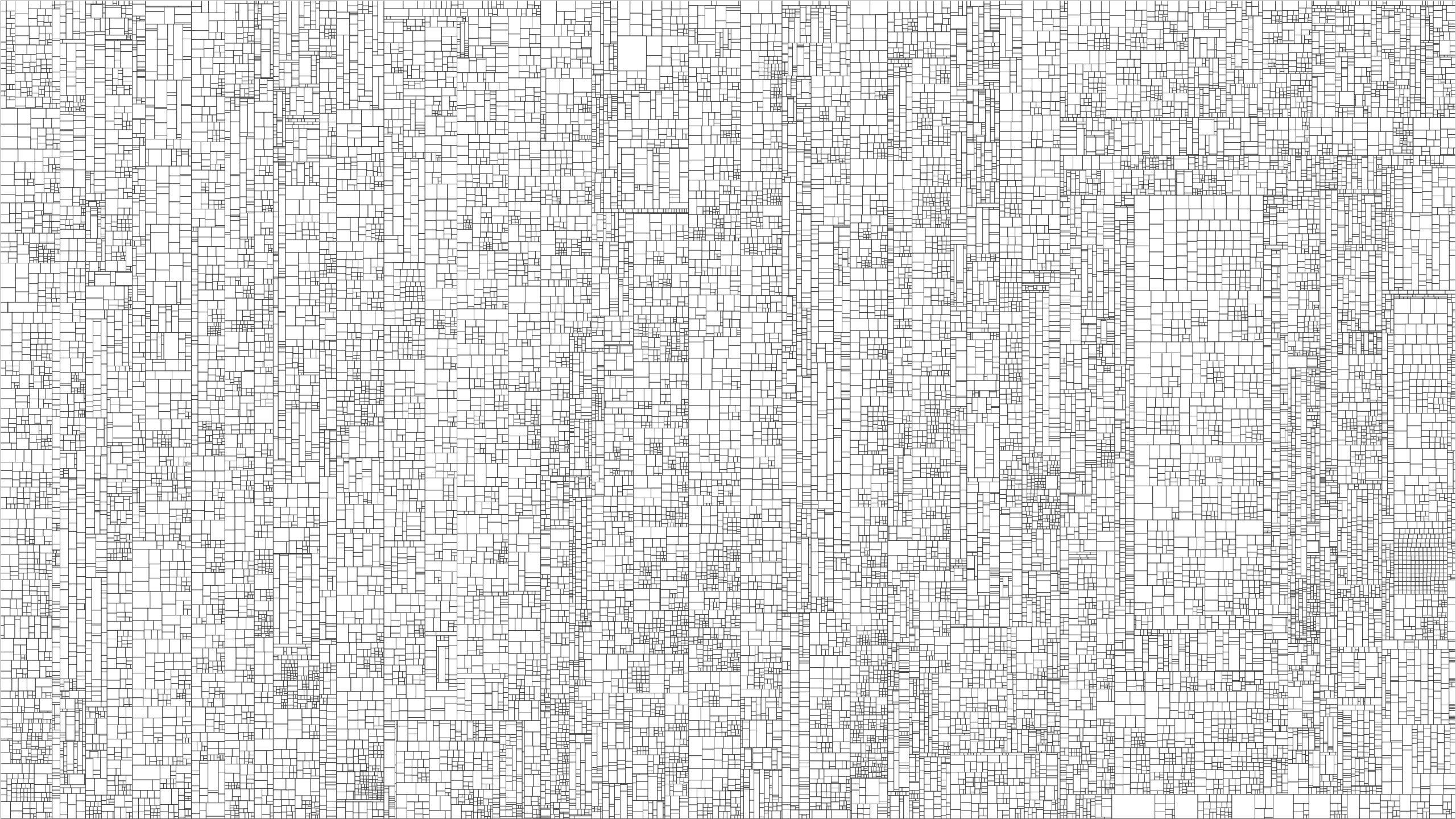


■ Unverändert  
■ Neu & ungetestet  
■ Geändert & ungetestet  
■ Geändert & ausgeführt im Test



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







Teamscale / TS-10829

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

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## 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](https://git.cqse.eu/cqse/teamscale/merge_requests/2734)  
PDash Task: #4886

## 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

## 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.org.conqat.engine.core.ConQATEException: 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)
[...]
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 31-31)
]
Tokens: doi . getDOI ( )
Occurred in src/main/java/net/sf/jabref/exporter/layout/format/DOIStrip.java:30-30 (com.teamscale.index.dataflow.DataFlowFindingsSynchronizer.org.conqat.engine.core.ConQATEException: Could not find any rule that applies to the following entity list:
```

## Dates

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

## Time Tracking

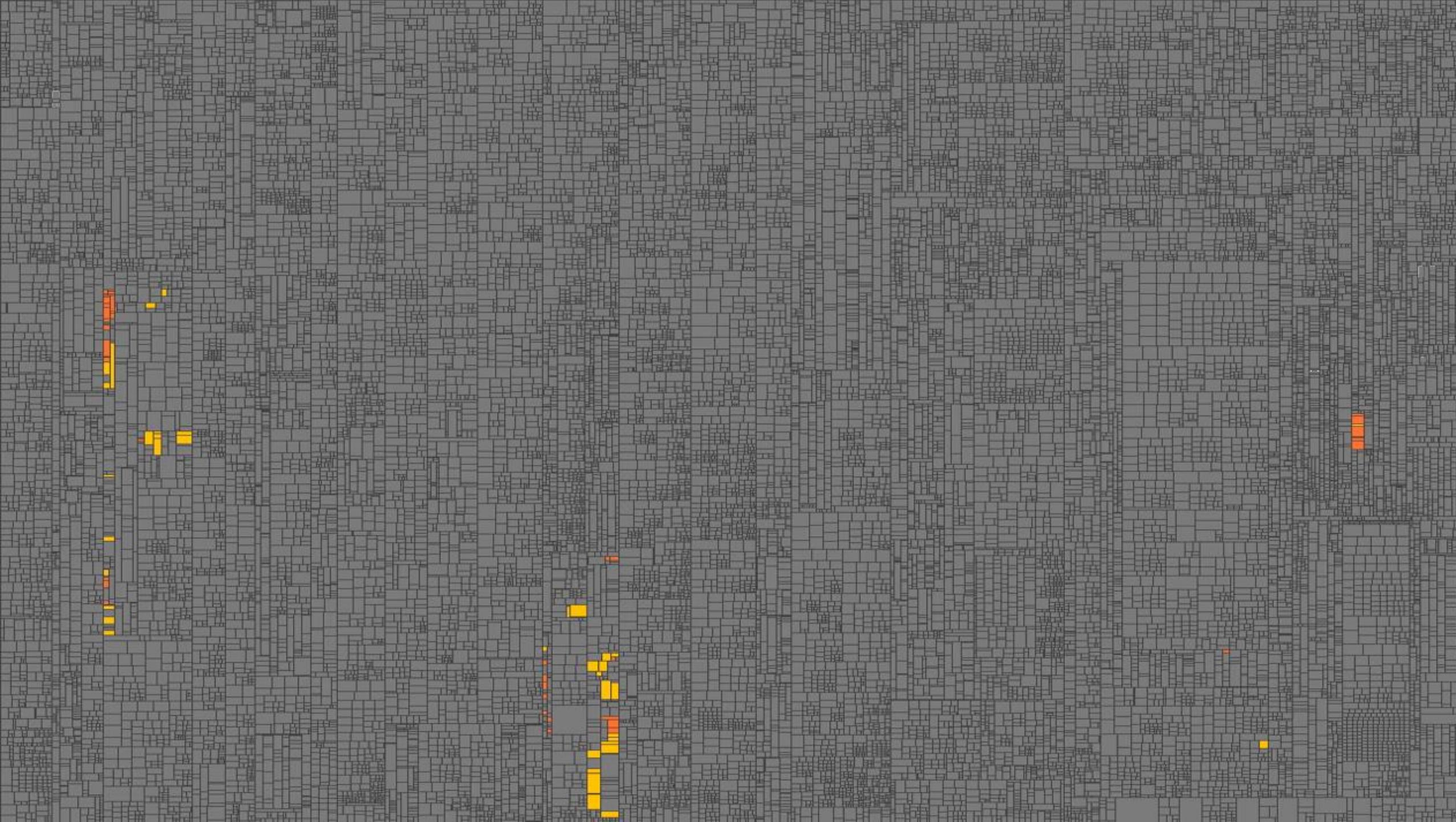
Estimated: Not Specified  
Remaining: 0m  
Logged: 4d 1h 57m

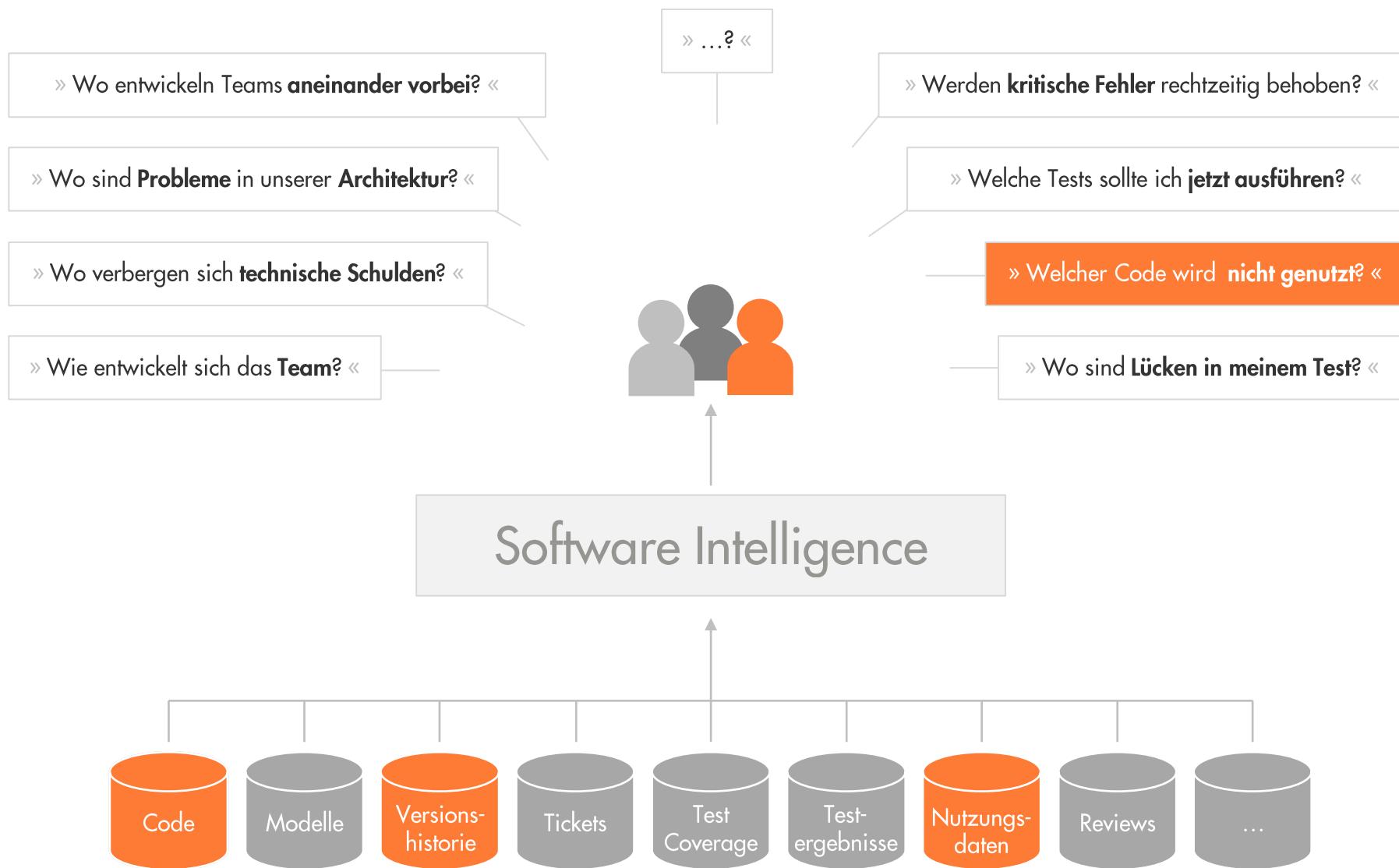
## Agile

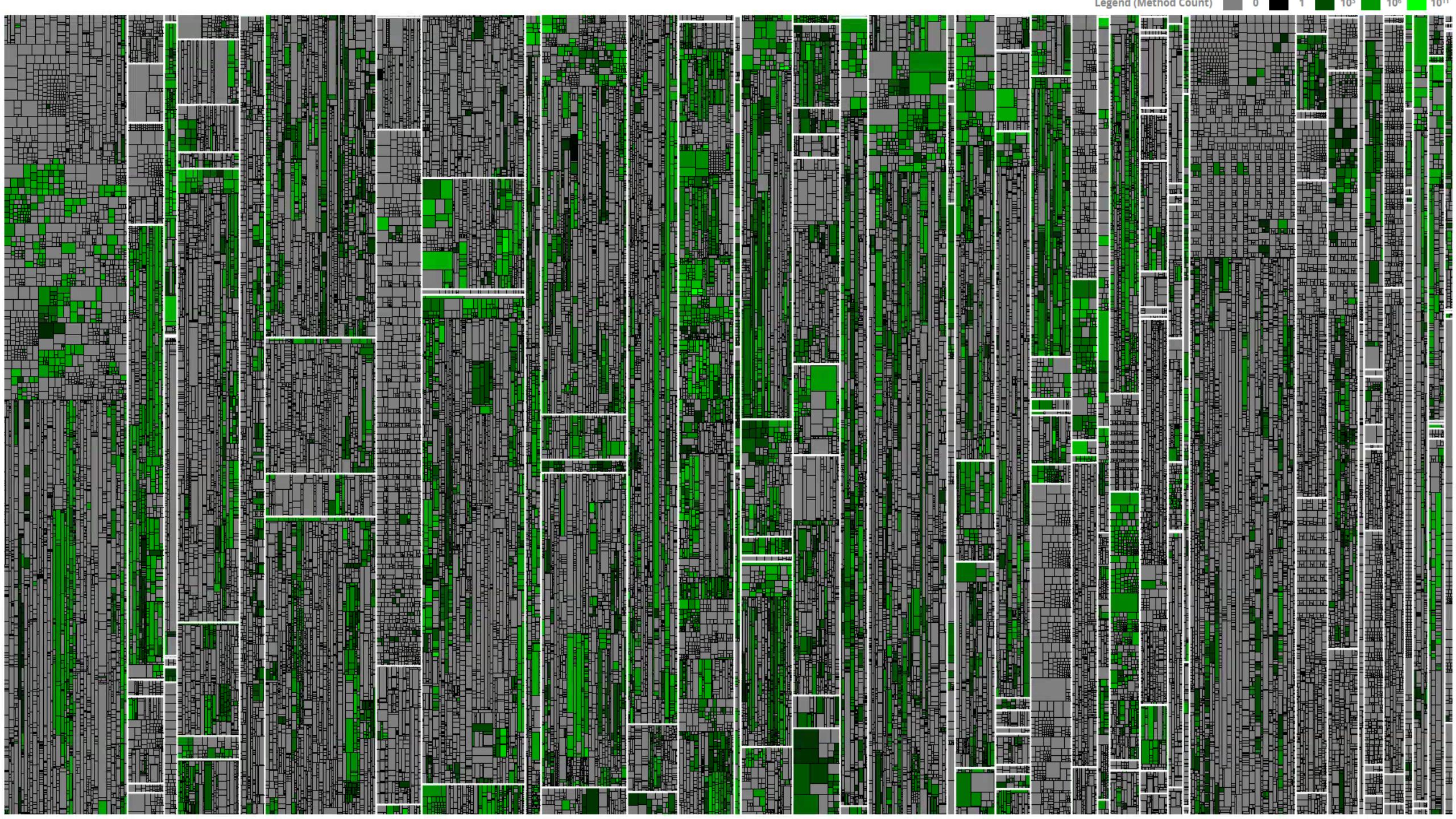
[View on Board](#)

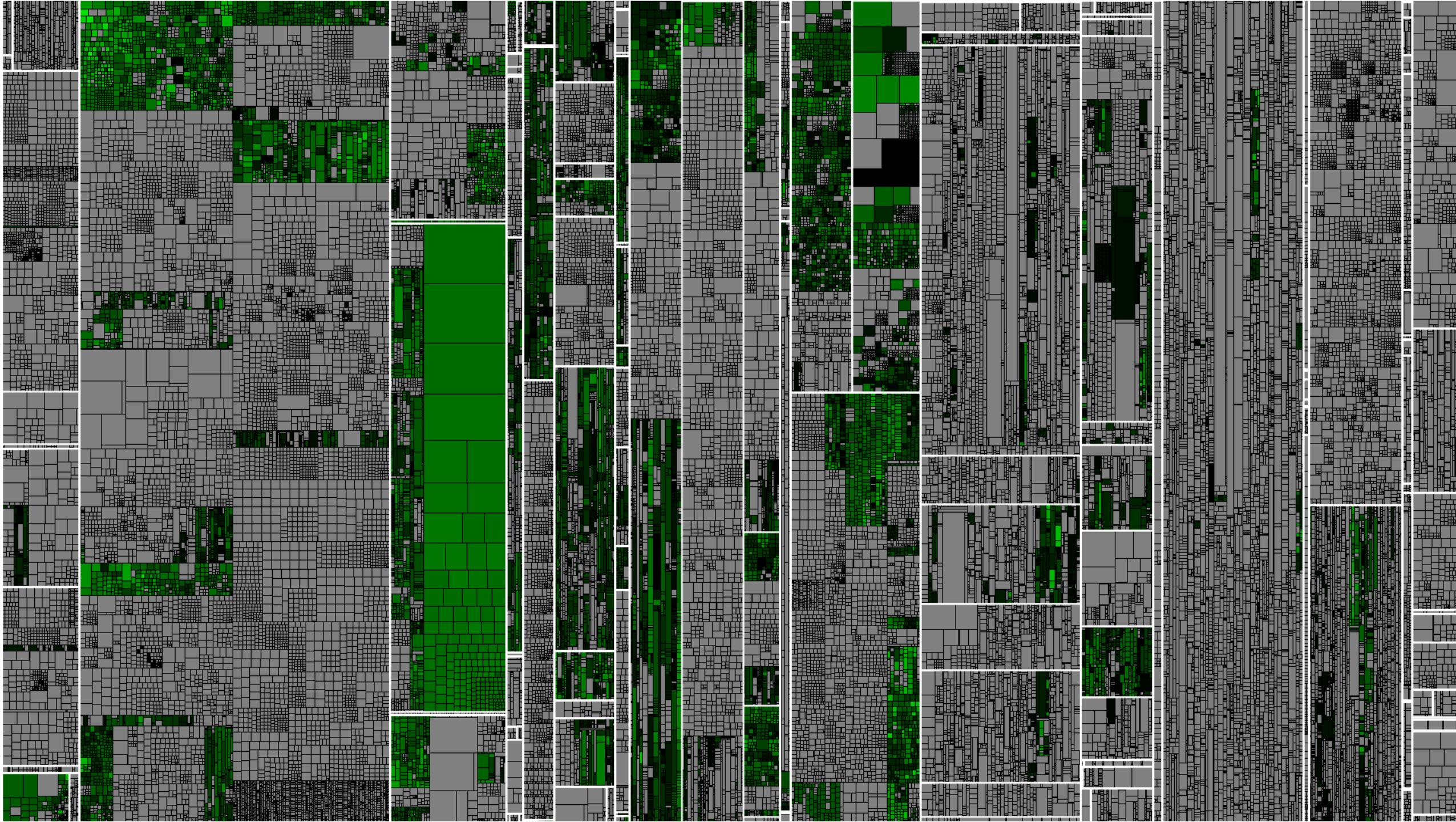
## Gitlab CI

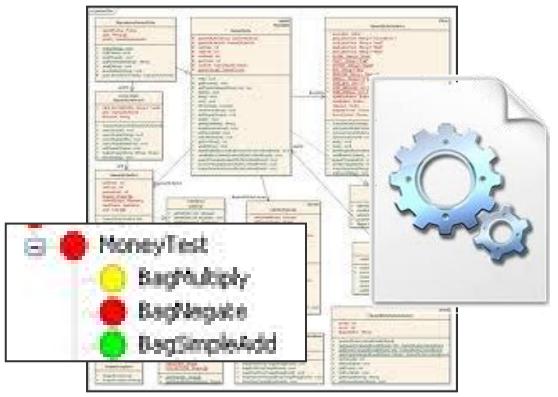
Projects ▾ More ▾



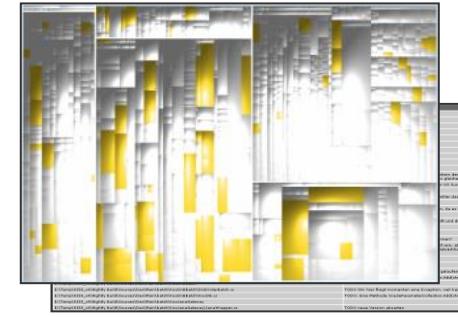


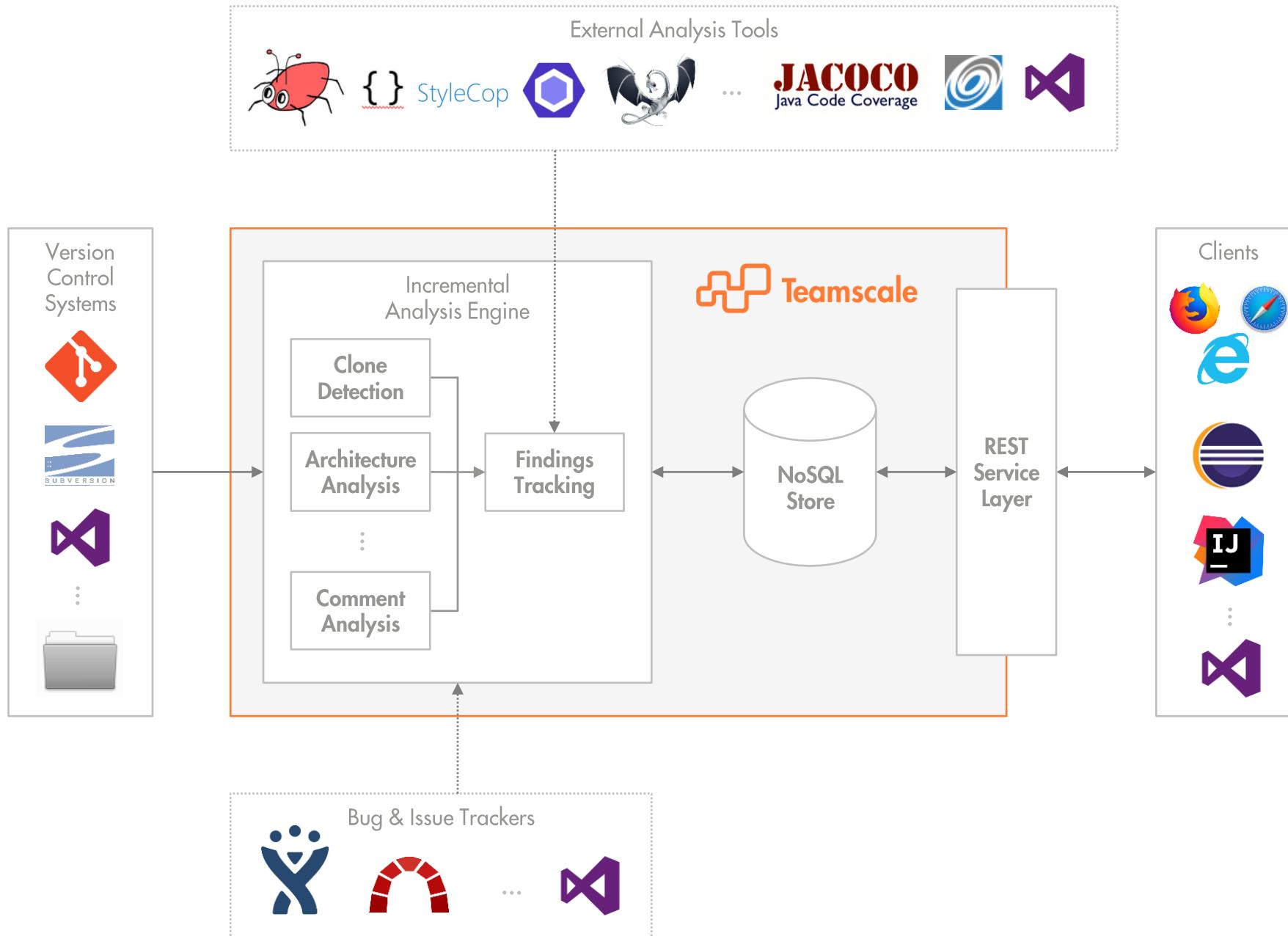


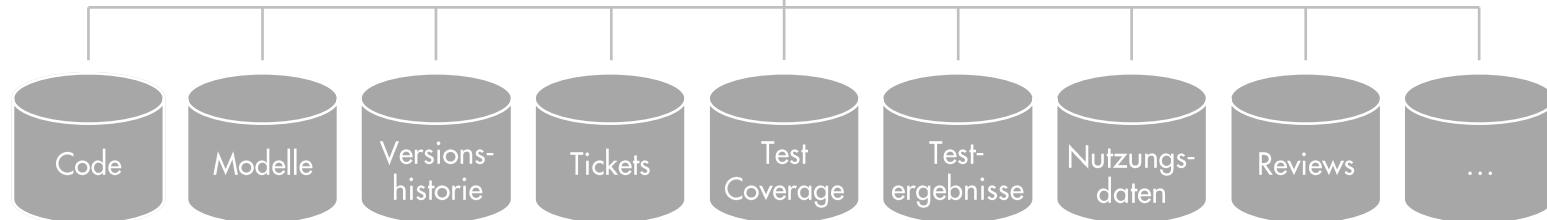




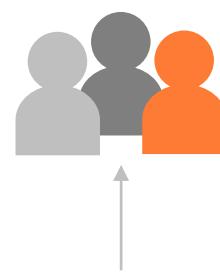
**conQAT**







## Software Intelligence



» ...? «

» Wo entwickeln Teams **aneinander vorbei**? «

» Wo sind **Probleme** in unserer **Architektur**? «

» Wo verbergen sich **technische Schulden**? «

» Wie entwickelt sich das **Team**? «

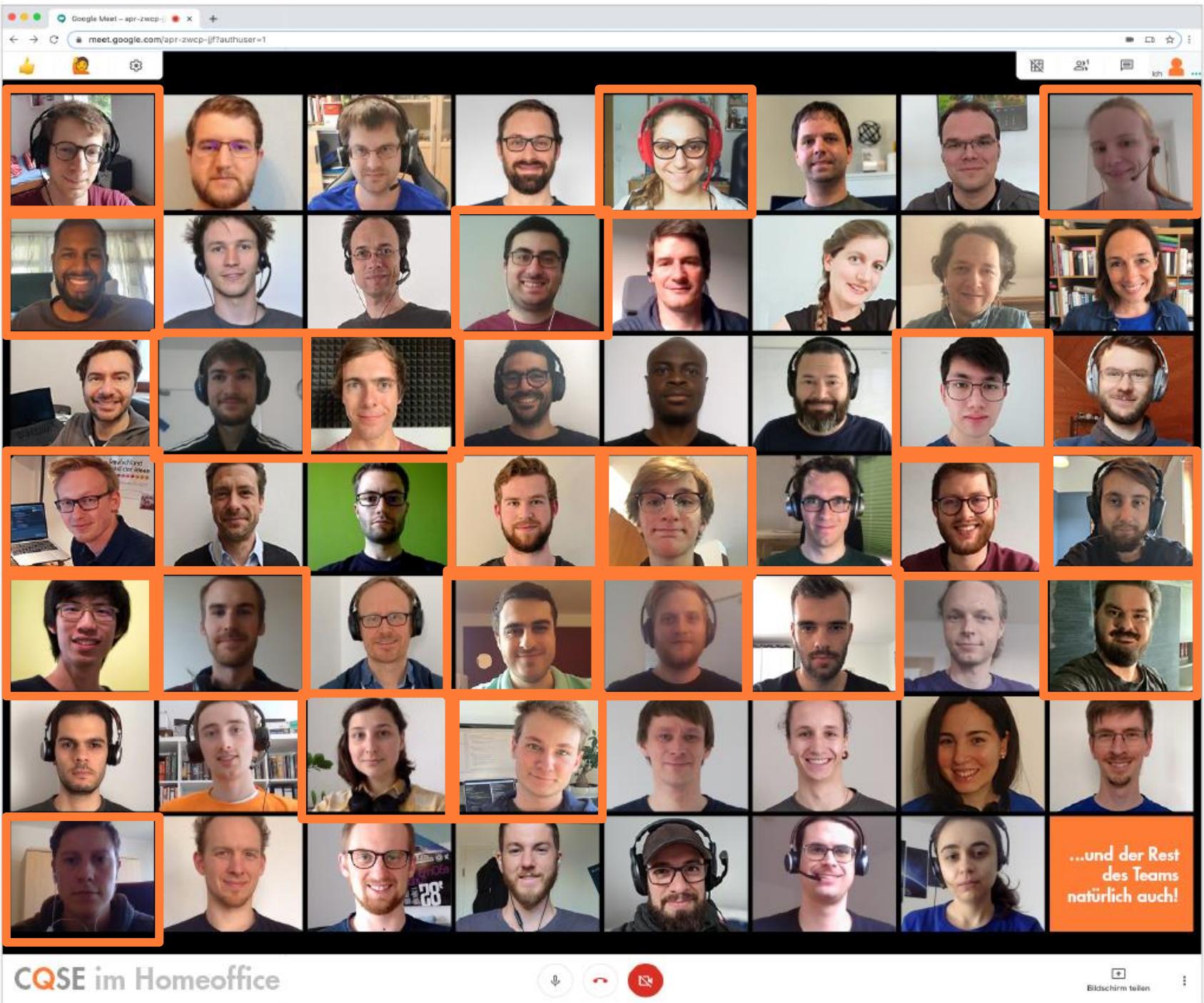
» Werden **kritische Fehler** rechtzeitig behoben? «

» Welche Tests sollte ich **jetzt ausführen**? «

» Welcher Code wird **nicht genutzt**? «

» Wo sind **Lücken** in **meinem Test**? «

**Teamscale** ist frei für Open Source, Forschung  
& Lehre ☺: [juergens@cqse.eu](mailto:juergens@cqse.eu)



CQSE im Homeoffice

Bildschirm teilen

# Kontakt – Ich freue mich auf Diskussionen 😊



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