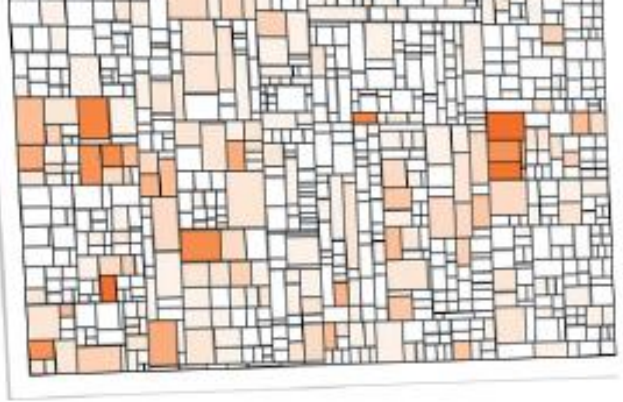
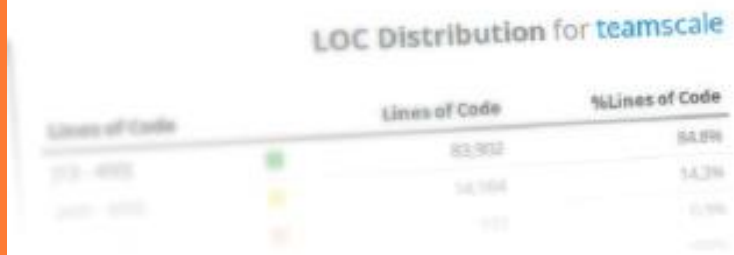
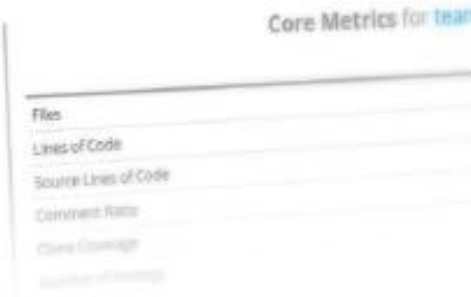


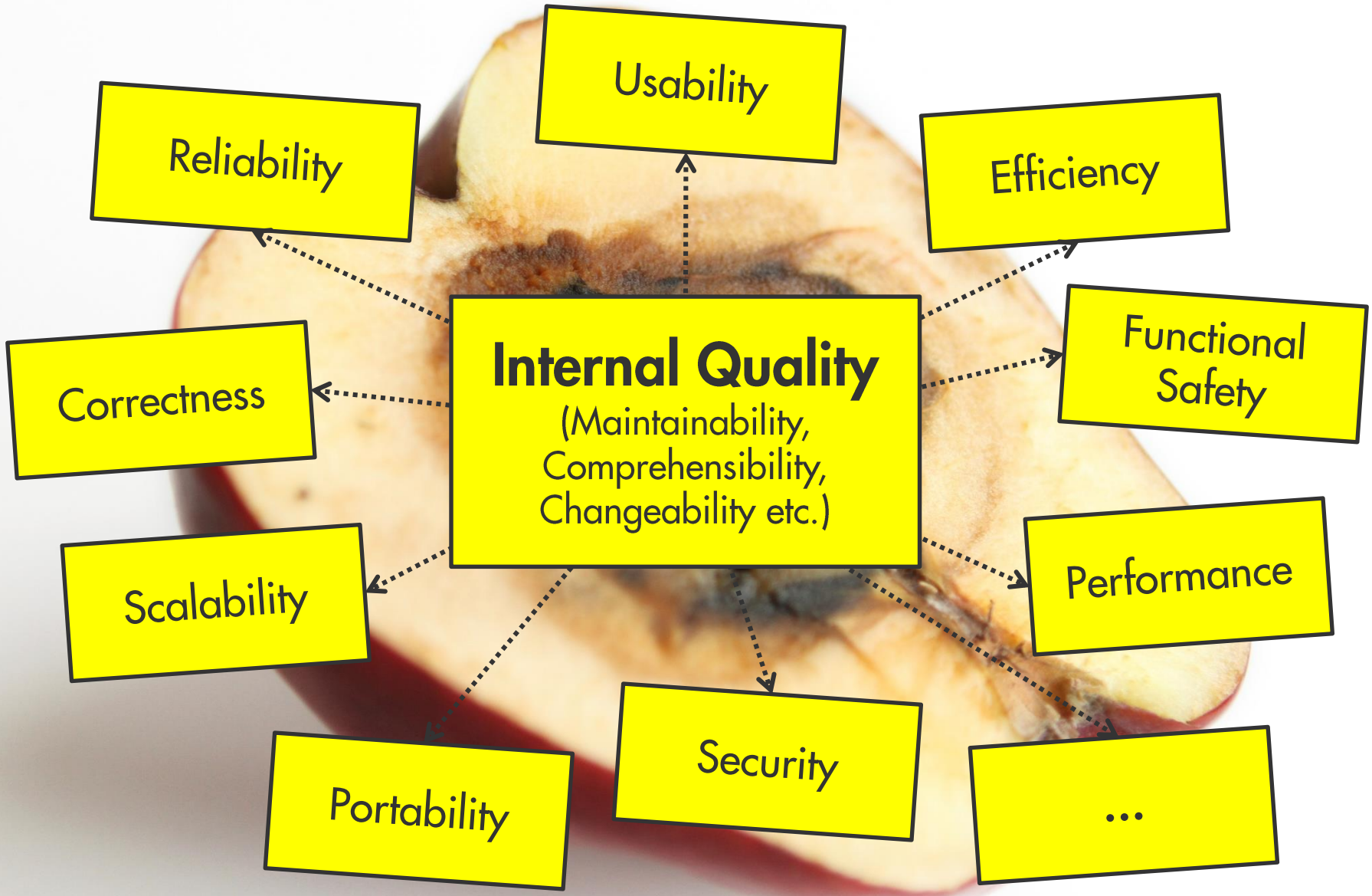




Quality Control in a Nutshell

Dr. Martin Feilkas
feilkas@cqse.eu, @feilkas

CQSE
Continuous Quality in Software Engineering


Usability
Reliability
Efficiency
Internal Quality
(Maintainability,
Comprehensibility,
Changeability etc.)
Correctness
Functional
Safety
Scalability
Performance
Security
Portability
...

```
// 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().setCurrentRenderer();
    if (!found && nomsg != null && nomsg.length() > 0) {
      res.append(HTML.italics(nomsg));
    }
    return res.toString();
}
```

```
// Utilities for arrays of elements
public String showElements(ModelElement[] elements,
                           String nomsg) {
  boolean found = false;
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  if (elements != null) {
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    }
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    if (!found && nomsg.length() > 0) {
      res.append(HTML.italics(nomsg));
    }
    return res.toString();
}
```
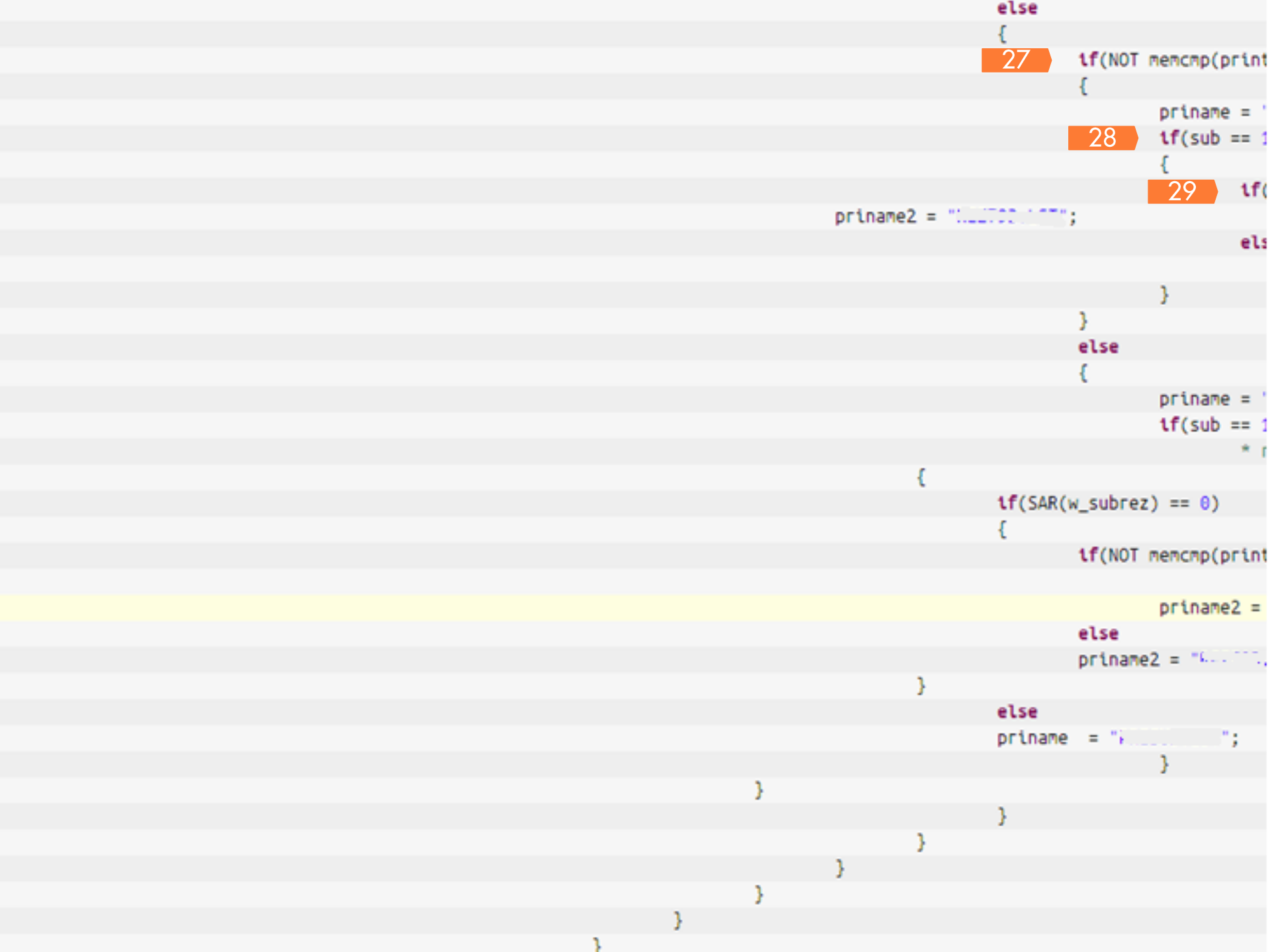
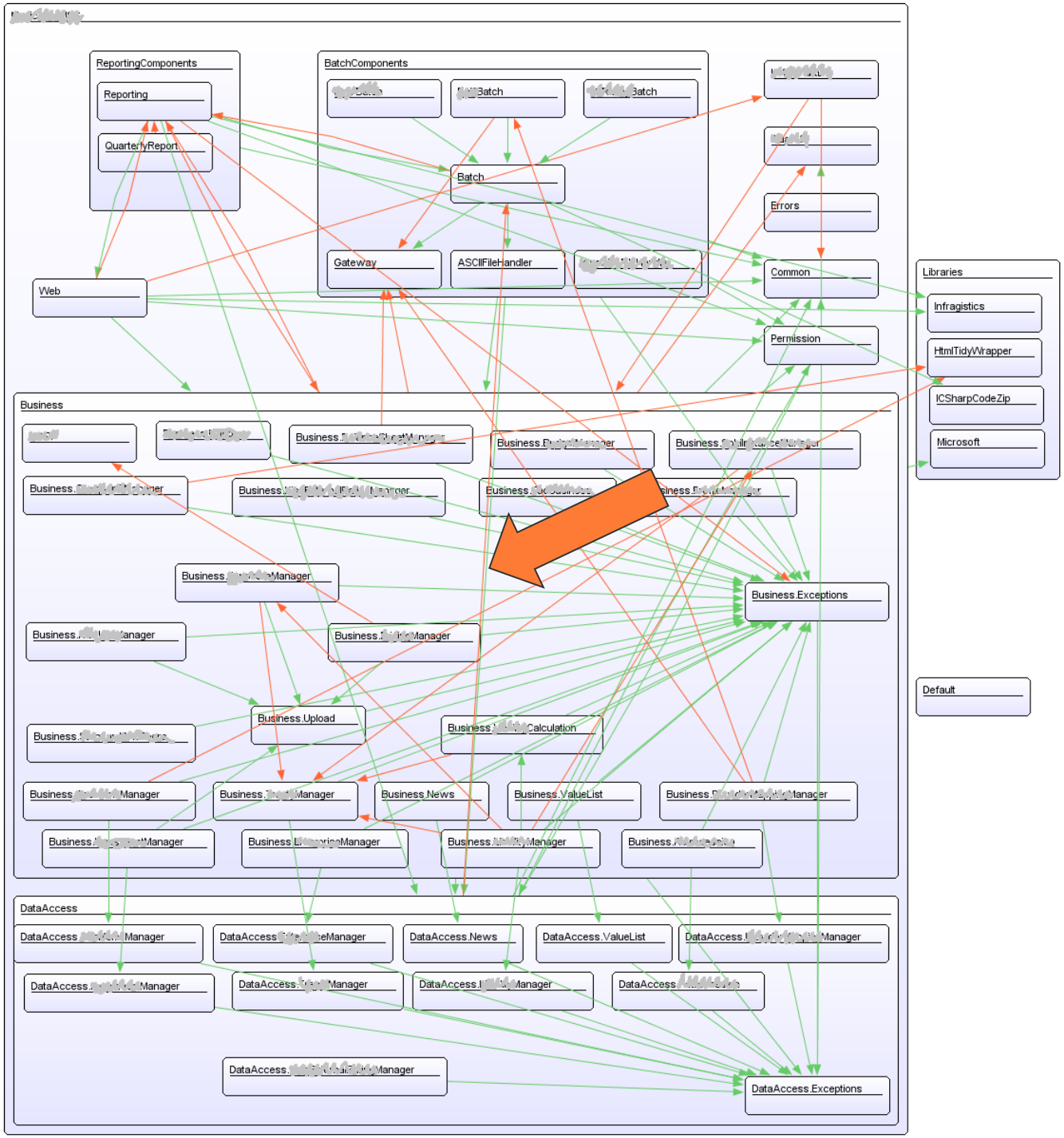
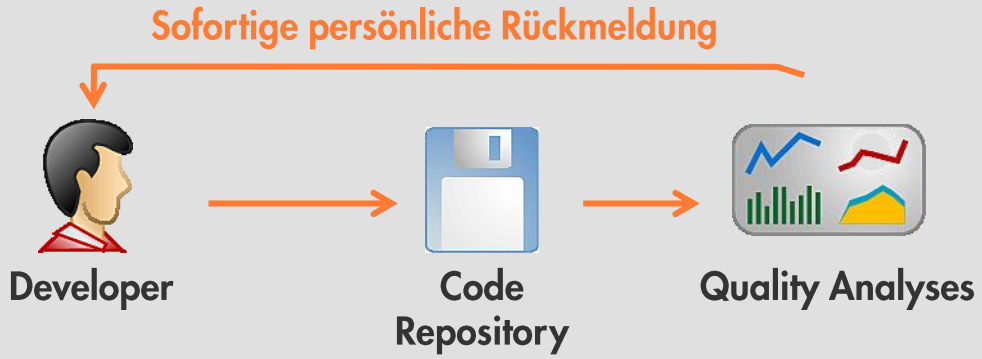




+ 1200 zusätzliche Zeilen


ReportingComponents
Reporting
QuarterlyReport
BatchComponents
Batch
Gateway
ASCIIFileHandler
Web
Errors
Common
Permission
Libraries
Infragistics
HtmlTidyWrapper
ICSharpCodeZip
Microsoft
Business
Business.Exceptions
Business.Upload
Business.ValueList
Default
DataAccess
DataAccess.News
DataAccess.ValueList
DataAccess.Exceptions



Continuous Improvement

Teamscale

ACT-1270 Fixing Inconsistent handling of serializable process variables
by Victoria King in revision e1aa41b4b133d269980fff3f81d008da8f21a109 (git)

Jun 29 2012
16:05

changed 2 files
-4 findings

ACT-1258 Merging Pablo's work into trunk
by Jacob Nelson in revision 9e664a1f0676cedcbe03415a253e8c3e4a58944c (git)

Jun 29 2012
14:41

added 3 files, changed 2 files
-1 findings

Fix for ACT-1059: Task#setDelegationState(DelegationState) was not saved in database
by Michael Harris in revision 1f48dcad04bc4a621e60af047fb121ae161bca30 (git)

Jun 28 2012
21:45

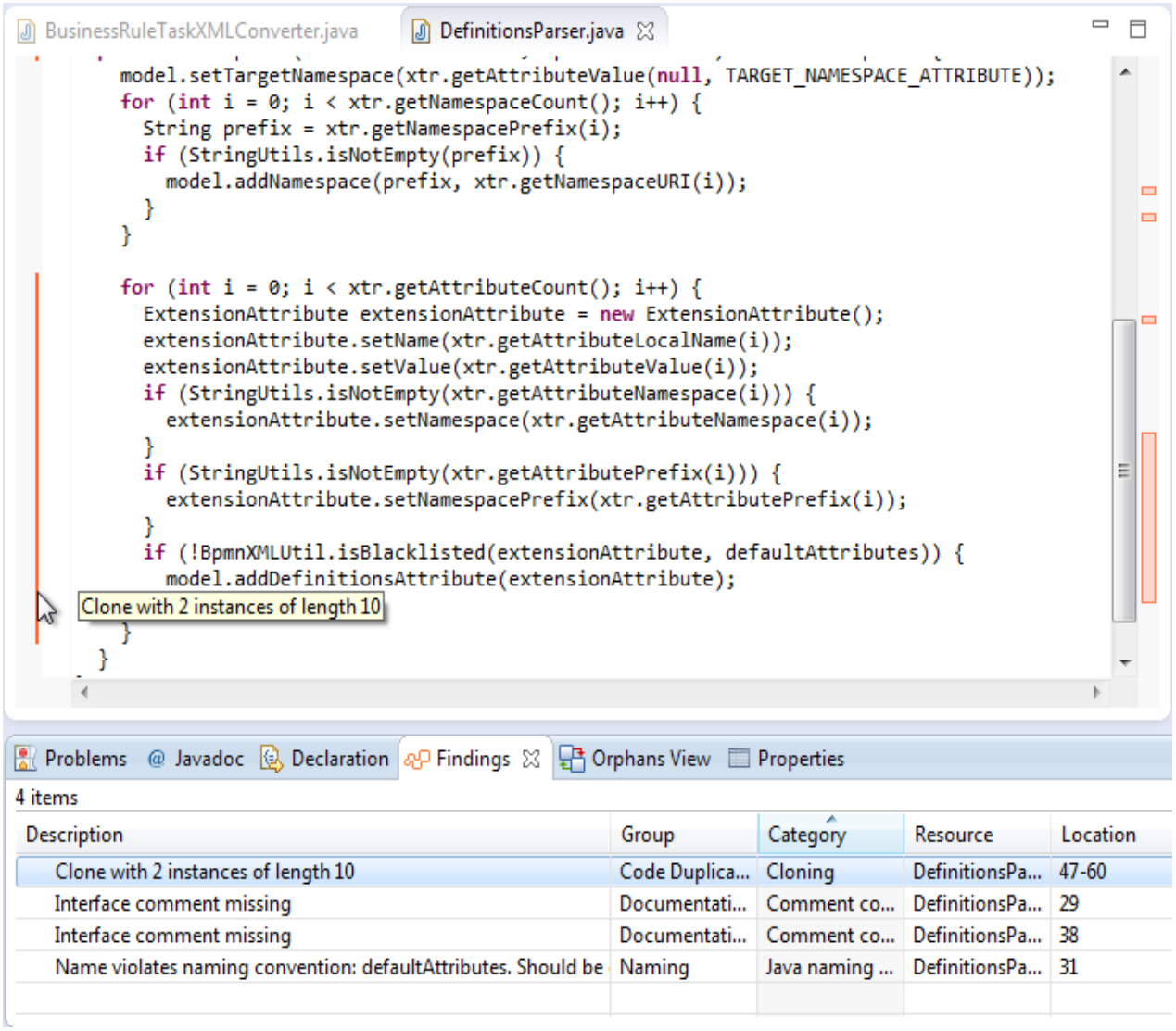
changed 3 files
+2 findings

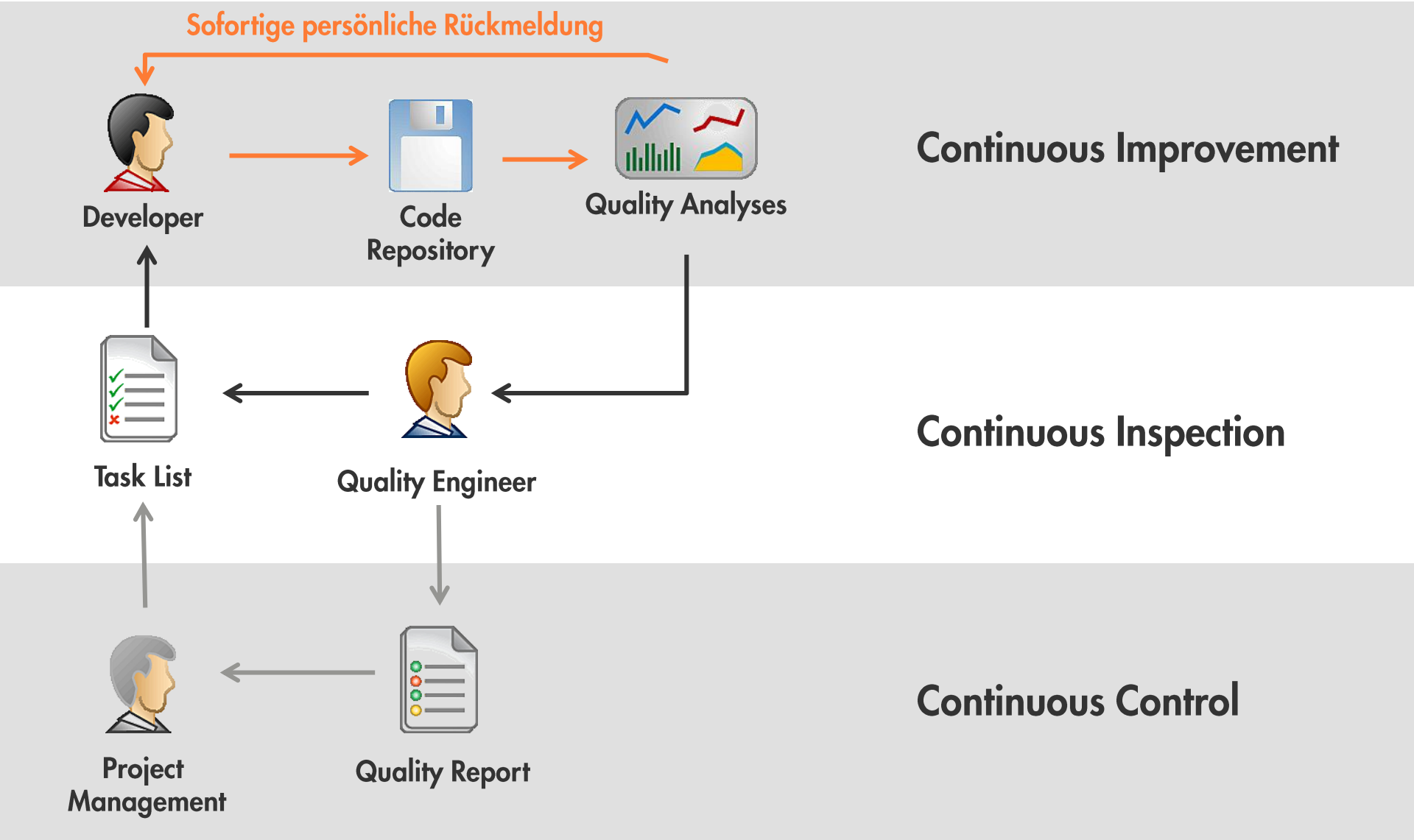
ACT-991 Removed user id from exception message in order not to leak sensitive information
by Michael Harris in revision e9a09424e6309c854c44ac5d08740a8ffb082fc9 (git)

Jun 28 2012
15:26

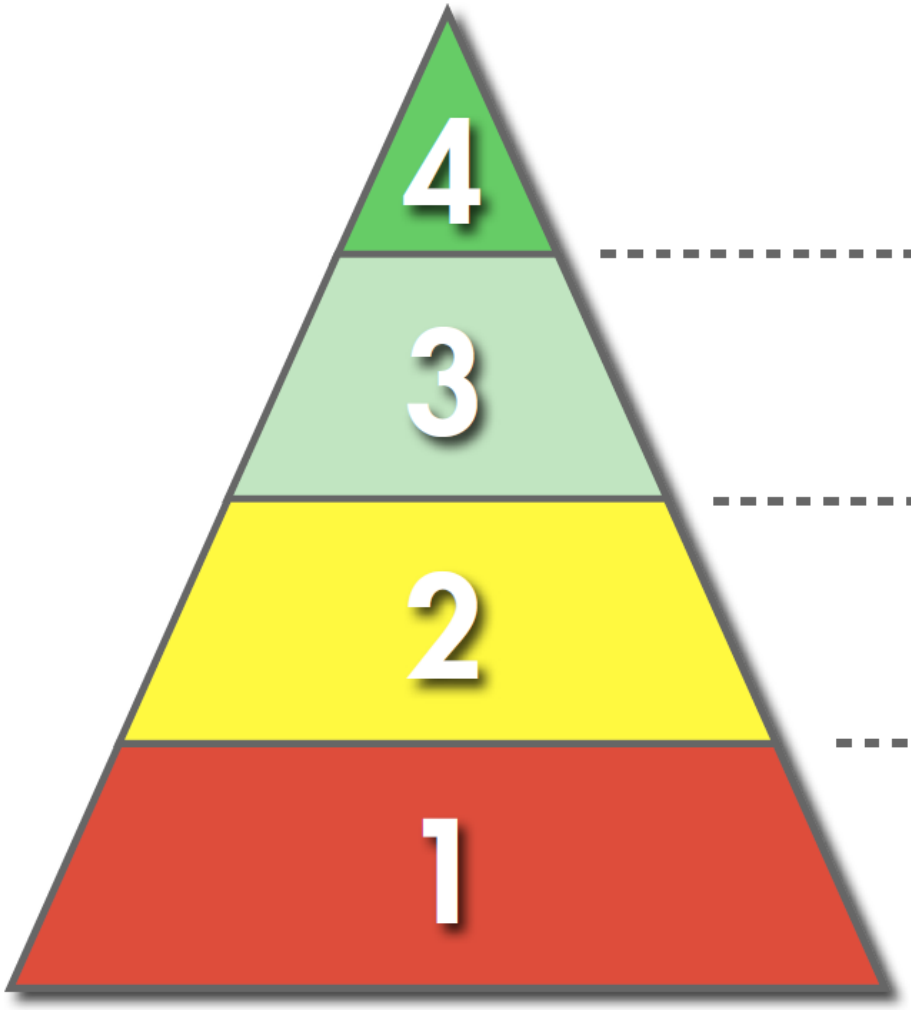
changed 2 files
-2 findings

Teamscale


BusinessRuleTaskXMLConverter.java
DefinitionsParser.java
model.setTargetNamespace(xtr.getAttributeValue(null, TARGET_NAMESPACE_ATTRIBUTE));
for (int i = 0; i < xtr.getNamespaceCount(); i++) {
String prefix = xtr.getNamespacePrefix(i);
if (StringUtils.isNotEmpty(prefix)) {
model.addNamespace(prefix, xtr.getNamespaceURI(i));
}
}
for (int i = 0; i < xtr.getAttributeCount(); i++) {
ExtensionAttribute extensionAttribute = new ExtensionAttribute();
extensionAttribute.setName(xtr.getAttributeLocalName(i));
extensionAttribute.setValue(xtr.getAttributeValue(i));
if (StringUtils.isNotEmpty(xtr.getAttributeNamespace(i))) {
extensionAttribute.setNamespace(xtr.getAttributeNamespace(i));
}
if (StringUtils.isNotEmpty(xtr.getAttributePrefix(i))) {
extensionAttribute.setNamespacePrefix(xtr.getAttributePrefix(i));
}
if (!BpmnXMLUtil.isBlacklisted(extensionAttribute, defaultAttributes)) {
model.addDefinitionsAttribute(extensionAttribute);
Clone with 2 instances of length 10
}
}
Problems
Javadoc
Declaration
Findings
Orphans View
Properties
4 items
Description
Group
Category
Resource
Location
Clone with 2 instances of length 10
Code Duplica...
Cloning
DefinitionsPa...
47-60
Interface comment missing
Documentati...
Comment co...
DefinitionsPa...
29
Interface comment missing
Documentati...
Comment co...
DefinitionsPa...
38
Name violates naming convention: defaultAttributes. Should be
Naming
Java naming ...
DefinitionsPa...
31


Sofortige persönliche Rückmeldung
Developer
Code Repository
Quality Analyses
Continuous Improvement
Task List
Quality Engineer
Continuous Inspection
Project Management
Quality Report
Continuous Control

Qualitätsziele

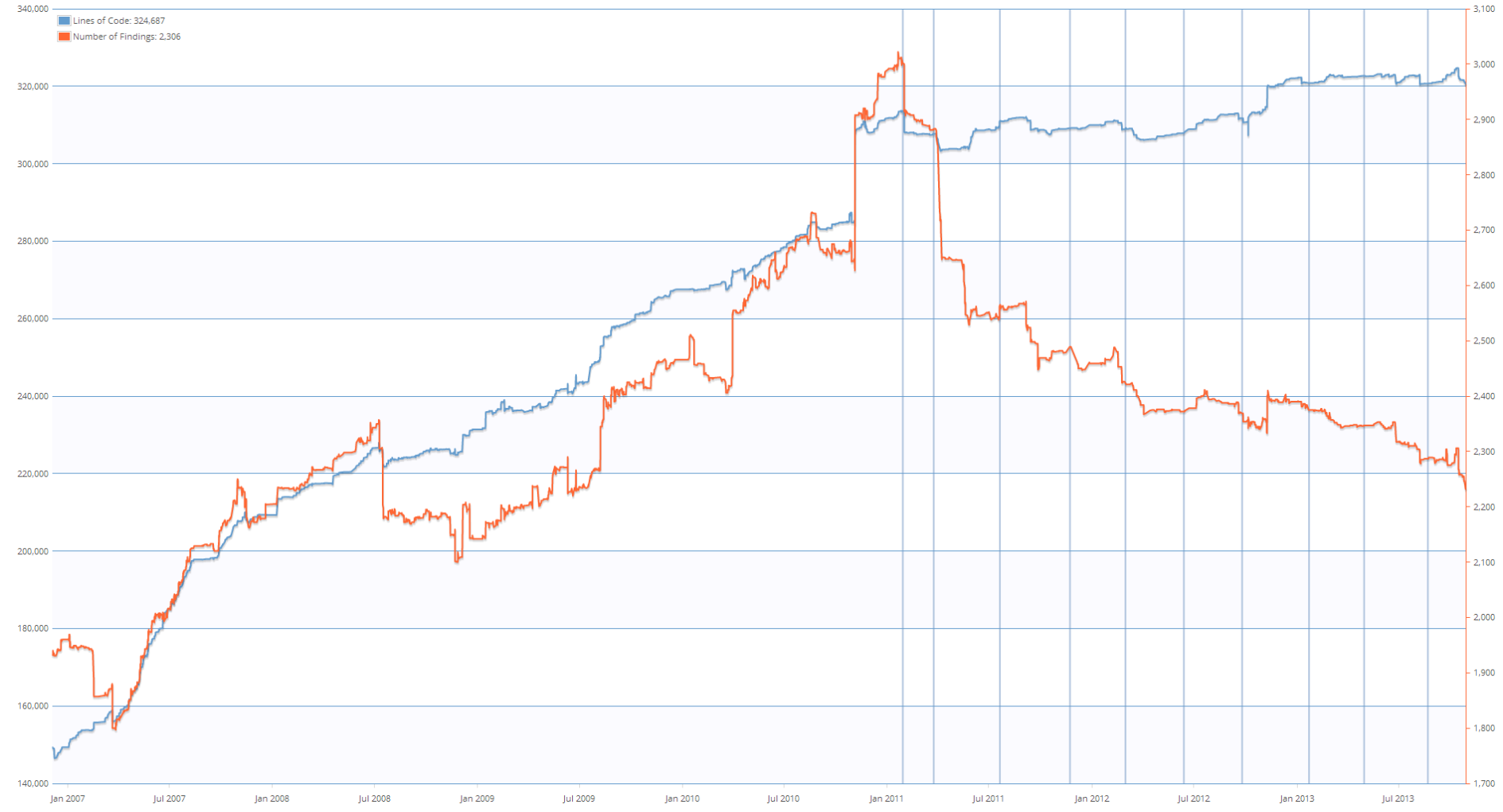


Keine Defizite

Keine Defizite in geändertem Code

Keine neuen Defizite

Egal



⇨ Steidl et. al: Continuous Software Quality Control in Practice,
IEEE International Conference on Software Maintenance and Evolution (ICSME'14), 2014

Ausblick: Prozessmetriken

Fragestellungen

- Schaffen wir die Abarbeitung aller Bugs bis zum Release?
- Gibt es noch Änderungen ohne Review?
- Fehlerstromanalyse: Finden wir die Fehler zu spät?

Ansatz

- Metriken und Findings auf Prozessebene
- Auswertung von Ticket-Daten und deren Kombination mit in Teamscale existierenden Daten
- Aber: Bewertung der Daten ist oft stark abhängig von der Prozessphase!

Anflugschneisen