

Von **DAX-Konzern**
bis **Kirche**

Erfahrungen aus
10 Jahren Analyse
komplexer
Softwaresysteme

Nils Göde

COSE





10
Jahre



20
Auditoren



10
Länder



25
Sprachen



400
Interviews



3000
Seiten



Überblick **Softwareportfolio**



Investition



Migration und Umbau



Bewegung in die **Cloud**



Professionalisierung



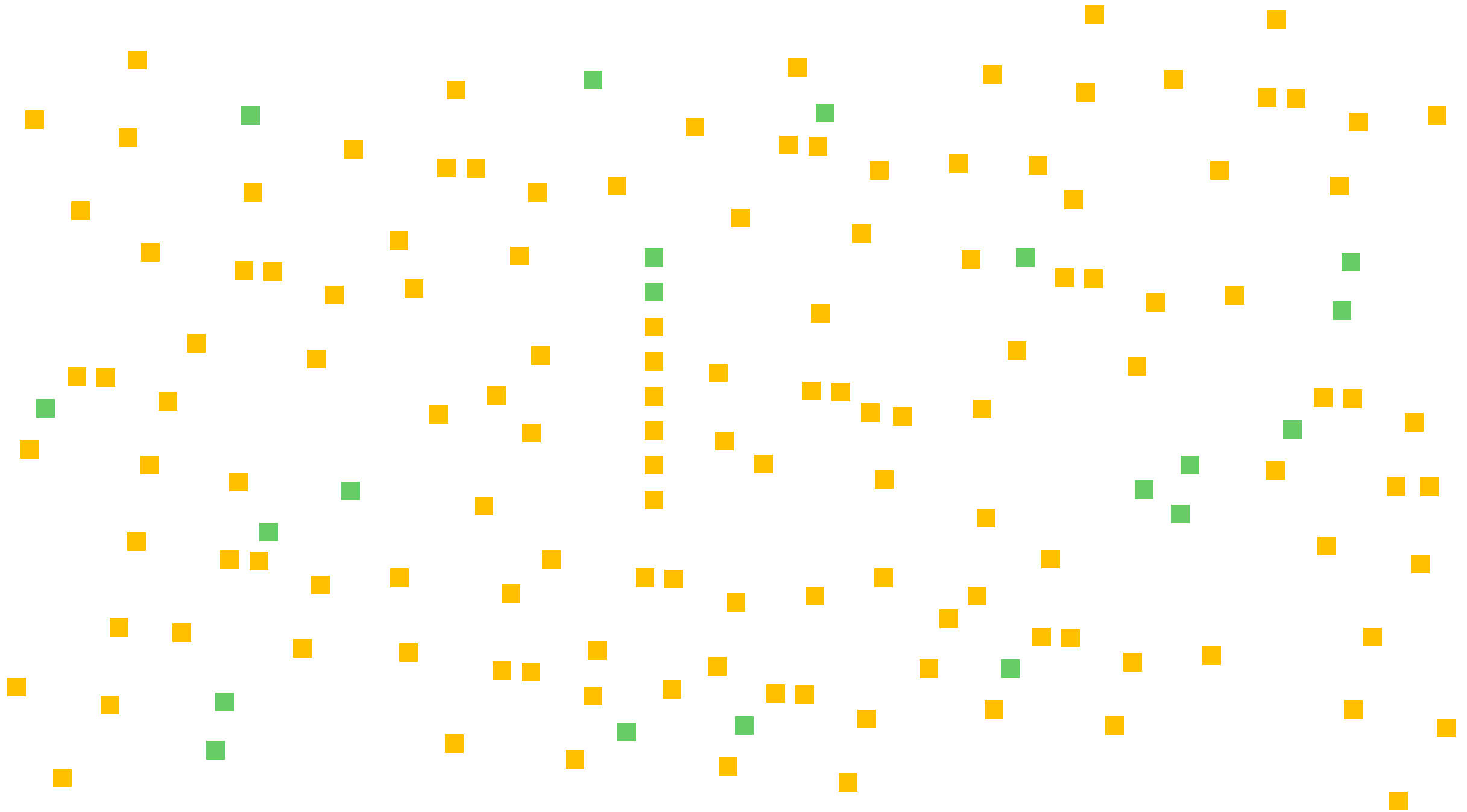
Abnahme Dienstleister



Integration von Systemen

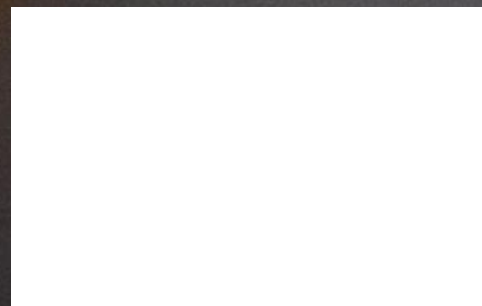
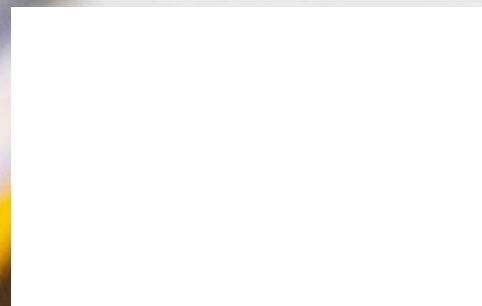
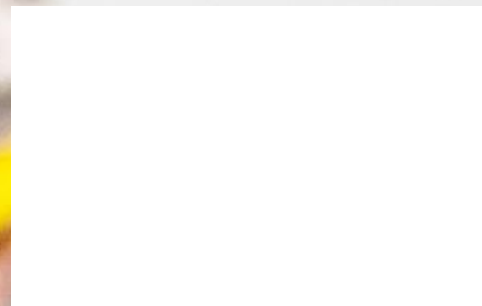


...





Verzeichnisorganisation





» In welchen **Programmiersprachen** ist das System implementiert? «

» **Java**, aber auch **JBoss** «



» **JSON** «



» Die Clients sind in **AJAX** «



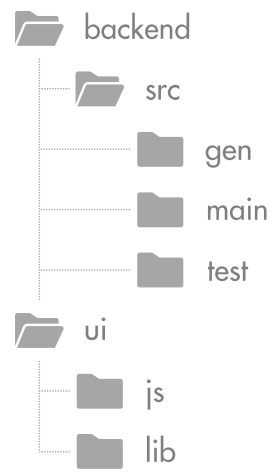
» Bei uns basiert alles auf **APIs** «

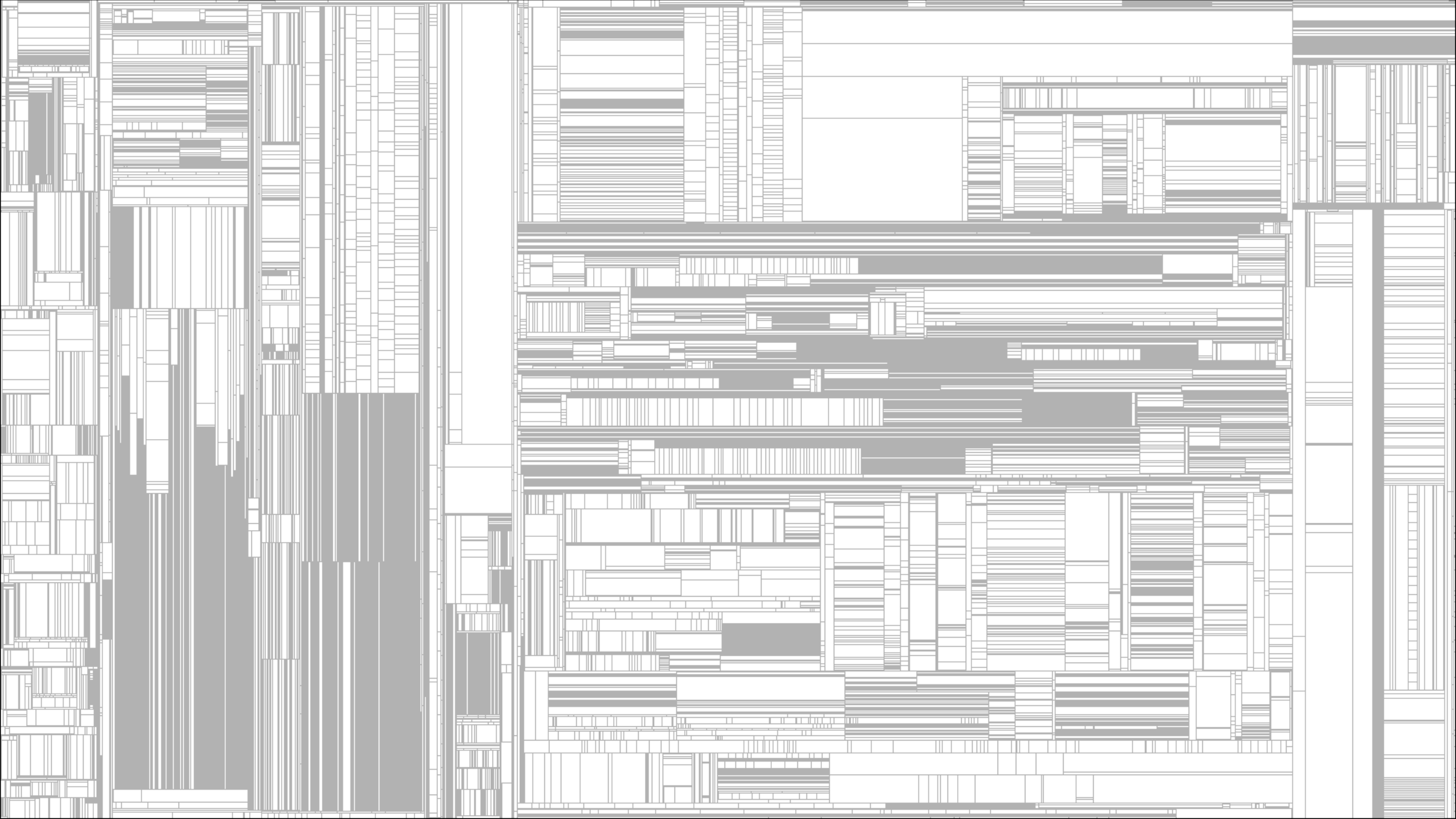


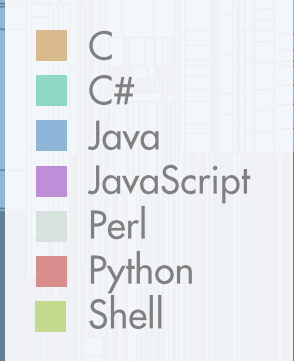

```
> find . -type f | sed -n 's/.*\.\./p' | sort | uniq -c
  50 c
 861 class
  12 cs
  97 h
9416 java
 303 js
  64 jsp
  32 pc
  75 pl
  24 py
 588 sh
... ..
```

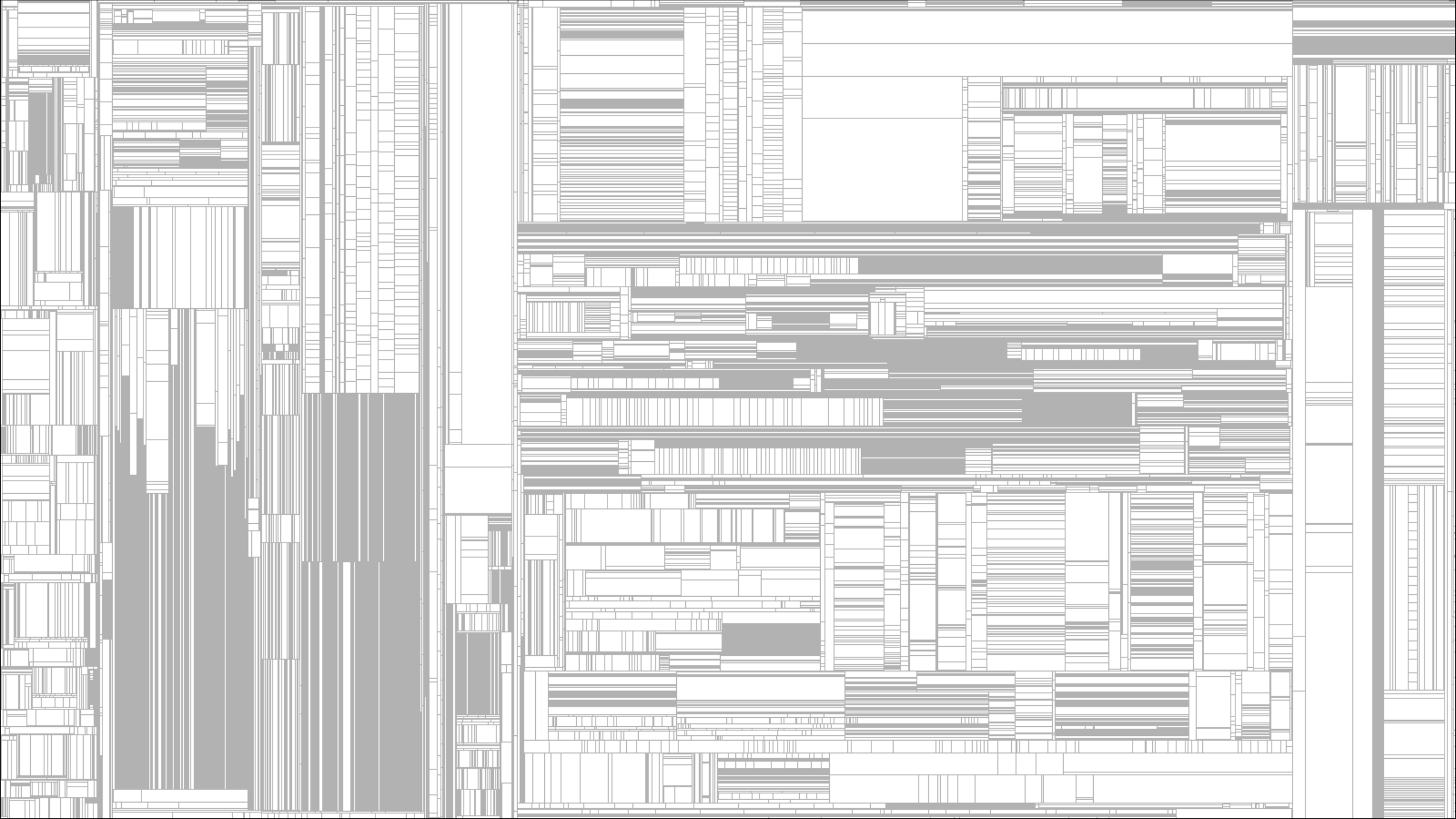
```
> find . -type f -print0 | xargs -0 -n100 wc -l | awk -F ' +|\\.' \
    '/\./ { sumlines[$NF] += $2 }
    END { for (ext in sumlines) print ext, sumlines[ext] }'
```

c	8142
cs	1232
h	5562
java	1494397
js	254088
pc	8528
pl	23894
py	9321
sh	35607
...	

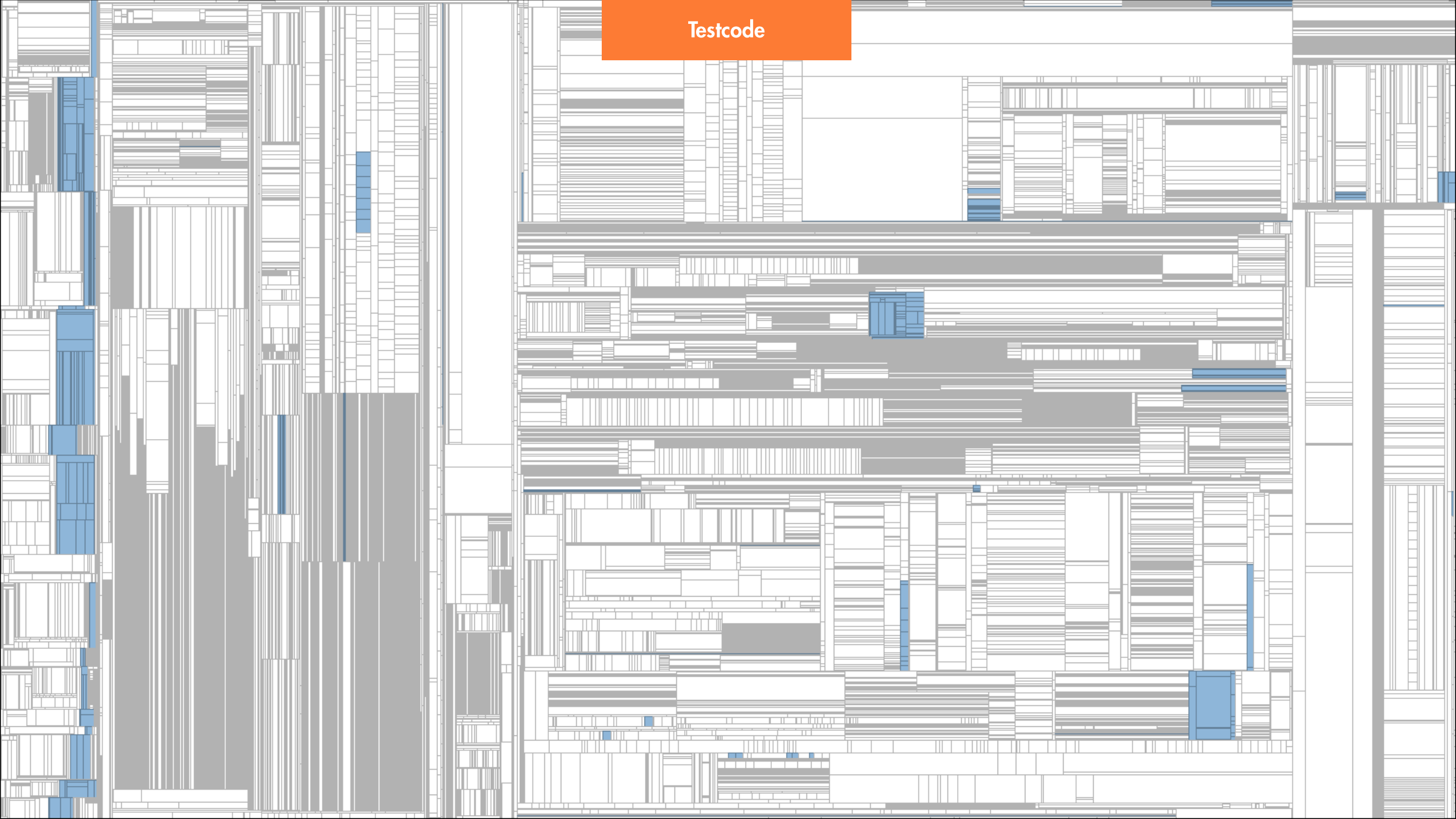




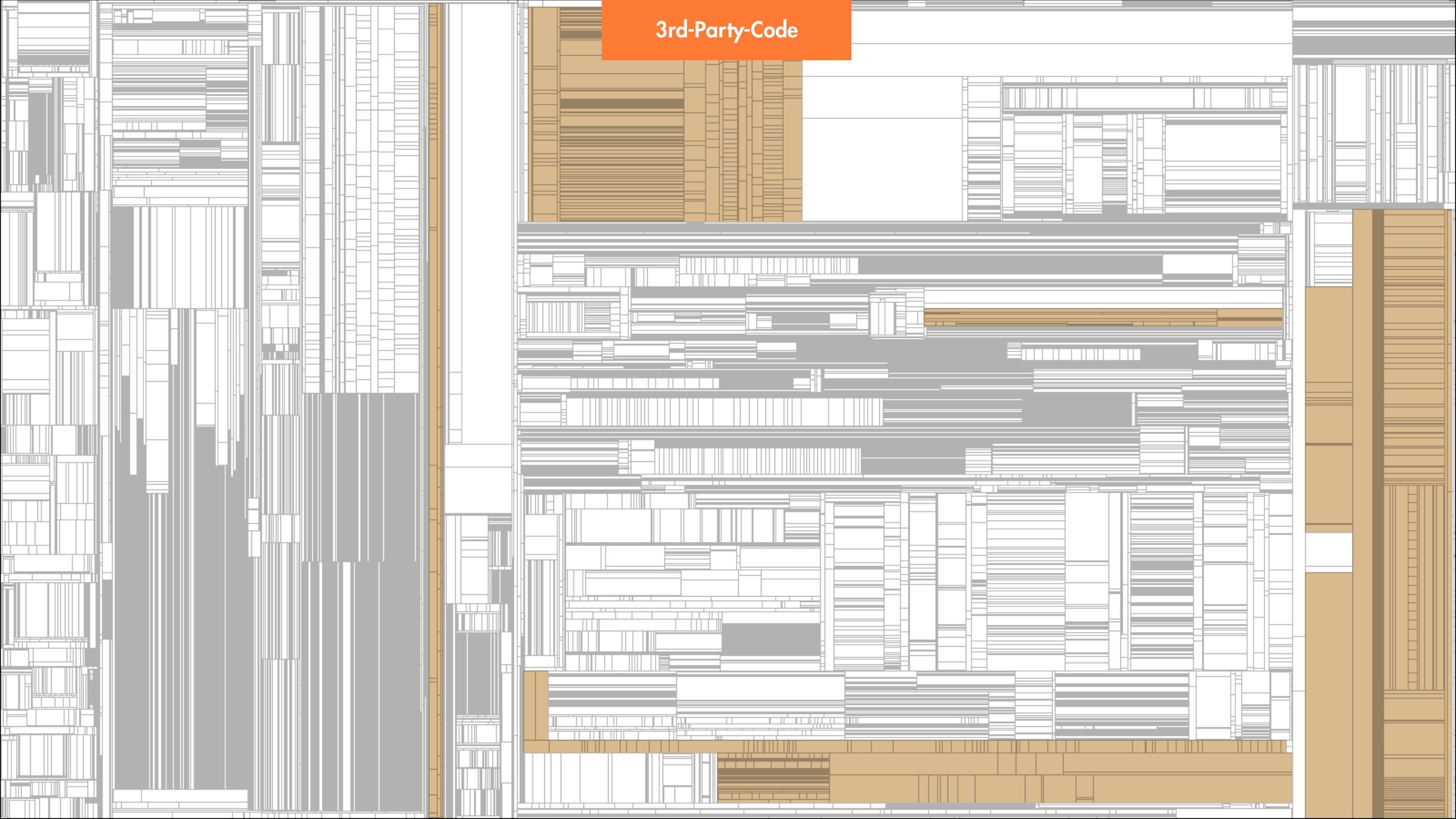




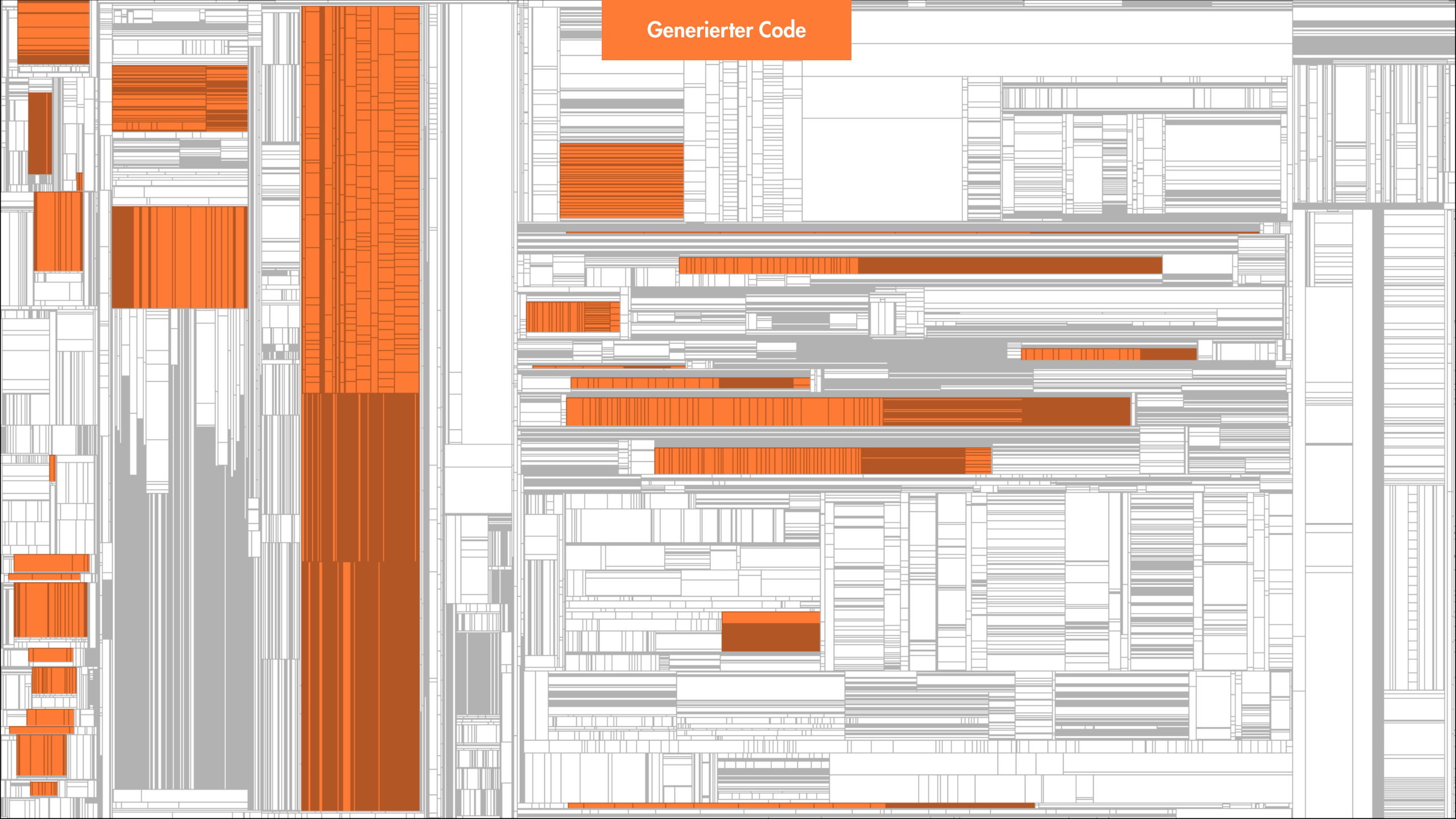
Testcode



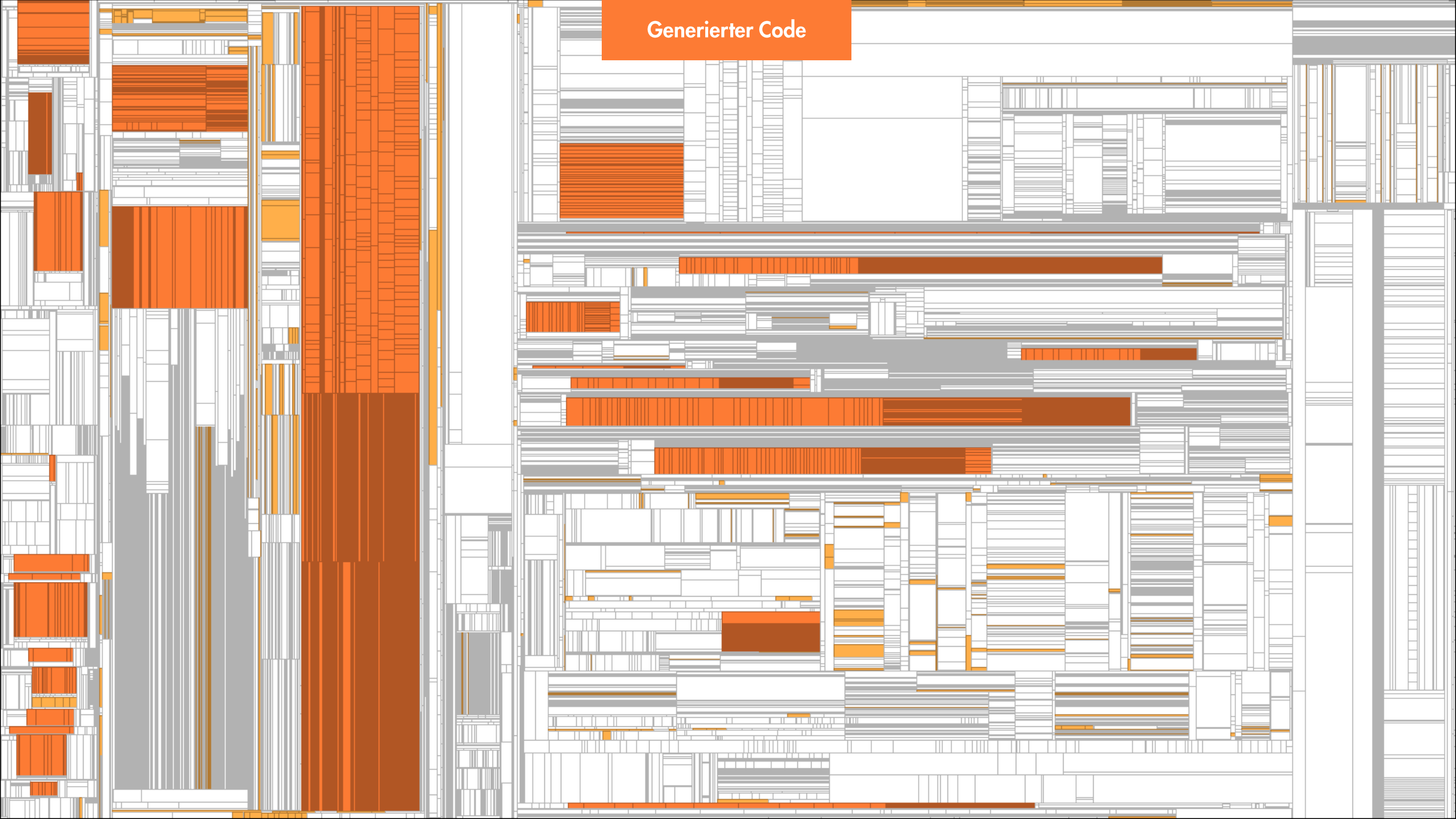
3rd-Party-Code

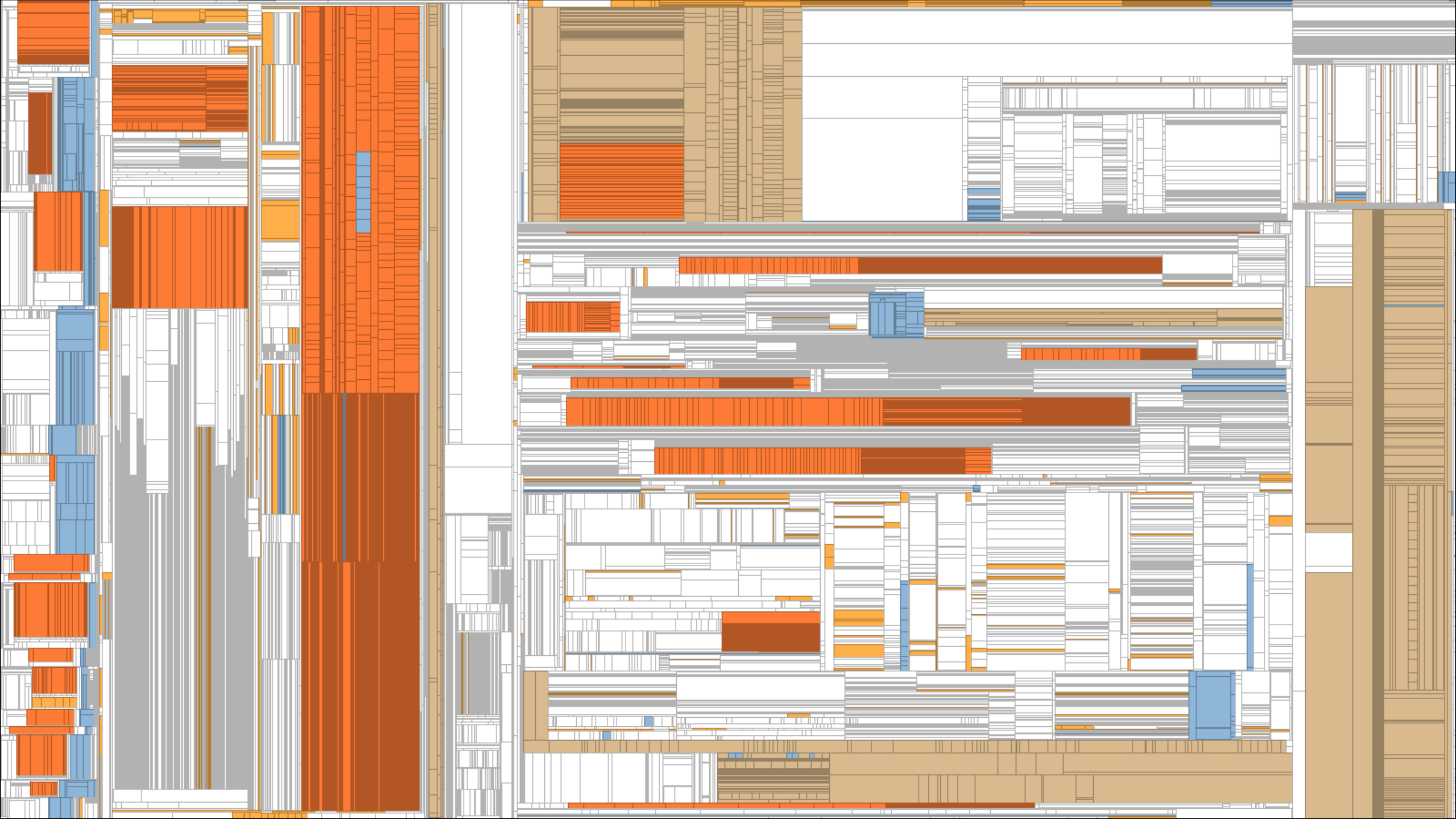


Generierter Code



Generierter Code







Verzeichnisorganisation



Technologien



Technologie	Version	Lizenz	...
Apache Commons	1.9.0	Apache 2.0	...
Angular	9	MIT	...
dom4j	2.1.3	Apache-style	...
...

```
dependencies {
    // Include all jar-files in the 'lib' folder as dependencies
    implementation fileTree(dir: 'lib', includes: ['*.jar'])

    implementation group: 'org.apache.commons', name: 'commons-csv', version: '1.9.0'
    implementation 'com.h2database:h2-mvstore:1.4.200'

    implementation group: 'org.apache.tika', name: 'tika-core', version: '1.24.1'

    // required for reading write-protected PDFs - see
    // https://github.com/JabRef/jabref/pull/942#issuecomment-209252635
    implementation 'org.bouncycastle:bcprov-jdk15on:1.65.01'

    implementation 'commons-cli:commons-cli:1.4'

    // For Java 9+ compatibility, we include a bundled version of the libreoffice
    // See https://bugs.documentfoundation.org/show_bug.cgi?id=117331#c8 for bac
    // information
    // Use the task bundleLibreOffice to update the bundled jar
    // DO NOT CHANGE THE libreoffice PREFIX
    libreoffice 'org.libreoffice:juh:6.4.3'
    libreoffice 'org.libreoffice:jurt:6.4.3'
    libreoffice 'org.libreoffice:ridl:6.4.3'
    libreoffice 'org.libreoffice:unoapi:6.4.3'
}
```

```
package com.itextpdf.server.utility;

import java.io.ByteArrayInputStream;
import java.io.ByteArrayOutputStream;
import java.io.IOException;
import java.io.InputStream;


import com.itextpdf.text.Document;
import com.itextpdf.text.DocumentException;
import com.itextpdf.text.pdf.PdfContentByte;
import com.itextpdf.text.pdf.PdfImportedPage;
import com.itextpdf.text.pdf.PdfReader;
import com.itextpdf.text.pdf.PdfWriter;

public class MyPdfWriter {
    public static void write() {
```

- dom4j
- iText PDF
- Windows Forms
- Angular
- MySQL
- SAP Advantage Data Server
- TypeScript
- Java
- Visual Objects



EN ▼ 🔍


☰

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In den Einkaufswagen

Auf die Liste

SAP | Community | Topics | Answers | Blogs | Events | Programs | Resources | What

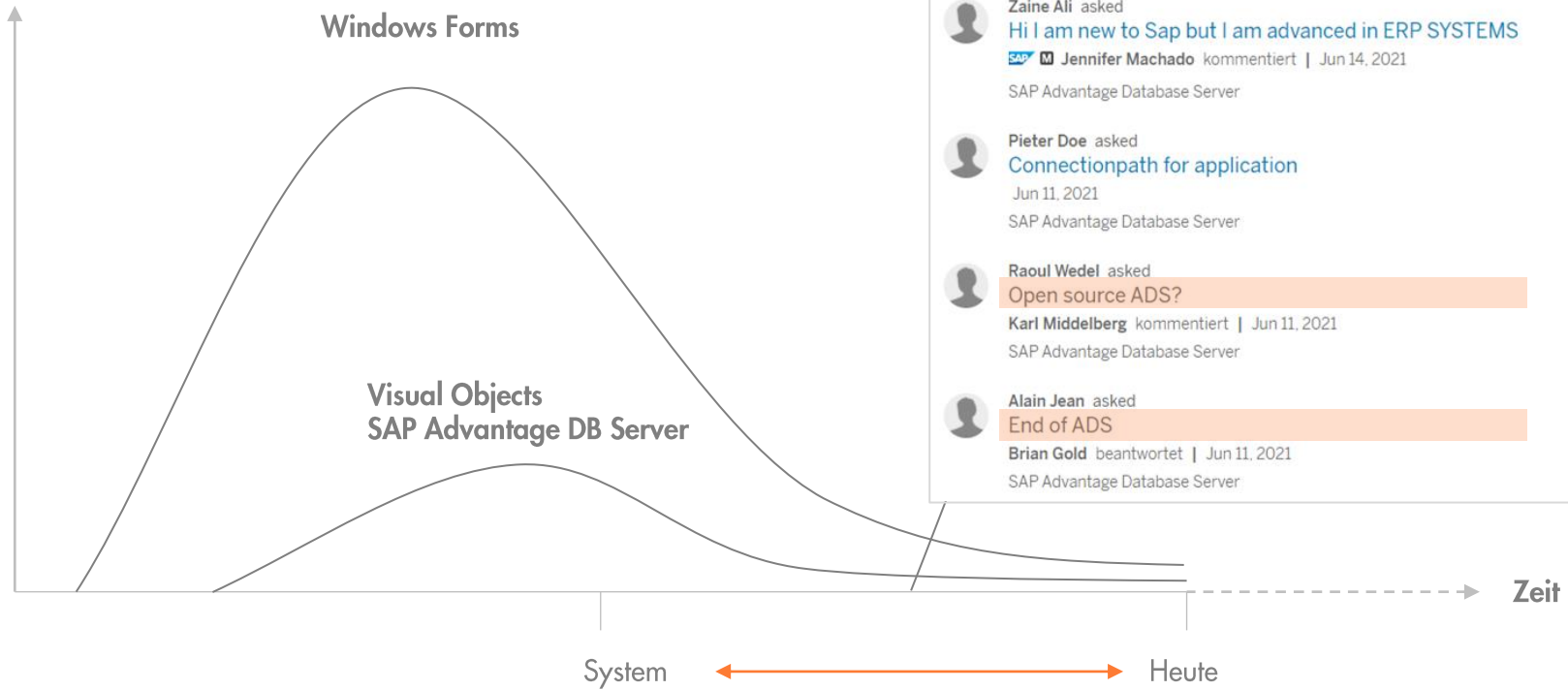
SAP Advantage Database Server

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	Jeri Scheere beantwortet Jun 24, 2021 SAP Advantage Database Server		
	Sebastian B asked How to back up indexes in Advantage Database Server?	1 Antworten	1 Vote
	Sebastian B kommentiert Jun 17, 2021 SAP Advantage Database Server		
	Zaine Ali asked Hi I am new to Sap but I am advanced in ERP SYSTEMS	0 Antworten	0 Votes
	Jennifer Machado kommentiert Jun 14, 2021 SAP Advantage Database Server		
	Pieter Doe asked Connectionpath for application	0 Antworten	1 Vote
	Jun 11, 2021 SAP Advantage Database Server		
	Raoul Wedel asked Open source ADS?	1 Antworten	3 Votes
	Karl Middelberg kommentiert Jun 11, 2021 SAP Advantage Database Server		
	Alain Jean asked End of ADS	3 Antworten	0 Votes
	Brian Gold beantwortet Jun 11, 2021 SAP Advantage Database Server		

Verbreitung
≈
Verfügbares Personal
Aktuelles Wissen
Integrierbarkeit
Werkzeugunterstützung
...





Verzeichnisorganisation

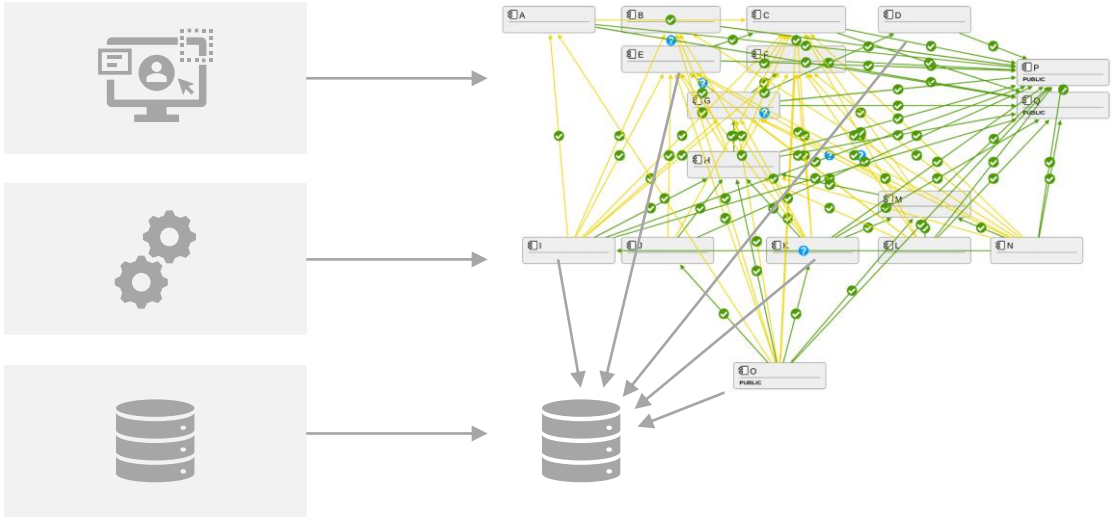


Technologien



Datenbank-Architektur

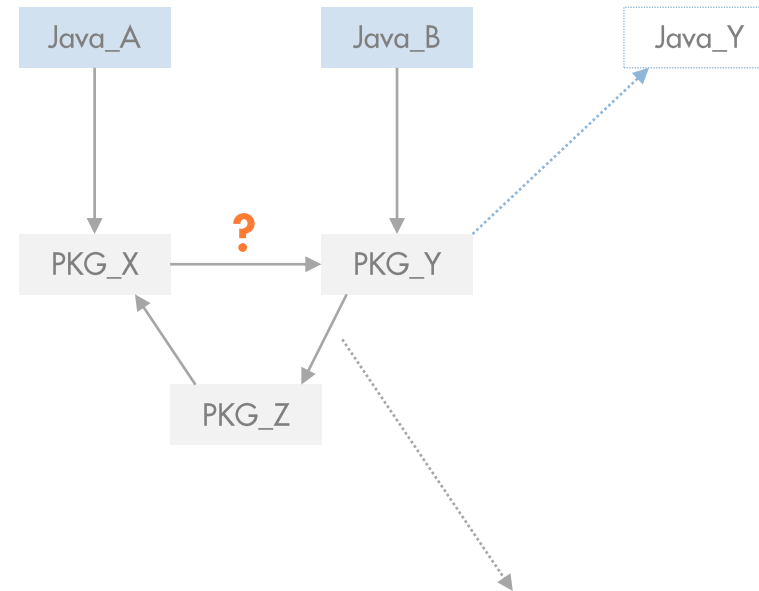




1.200.000+
Lines of Code



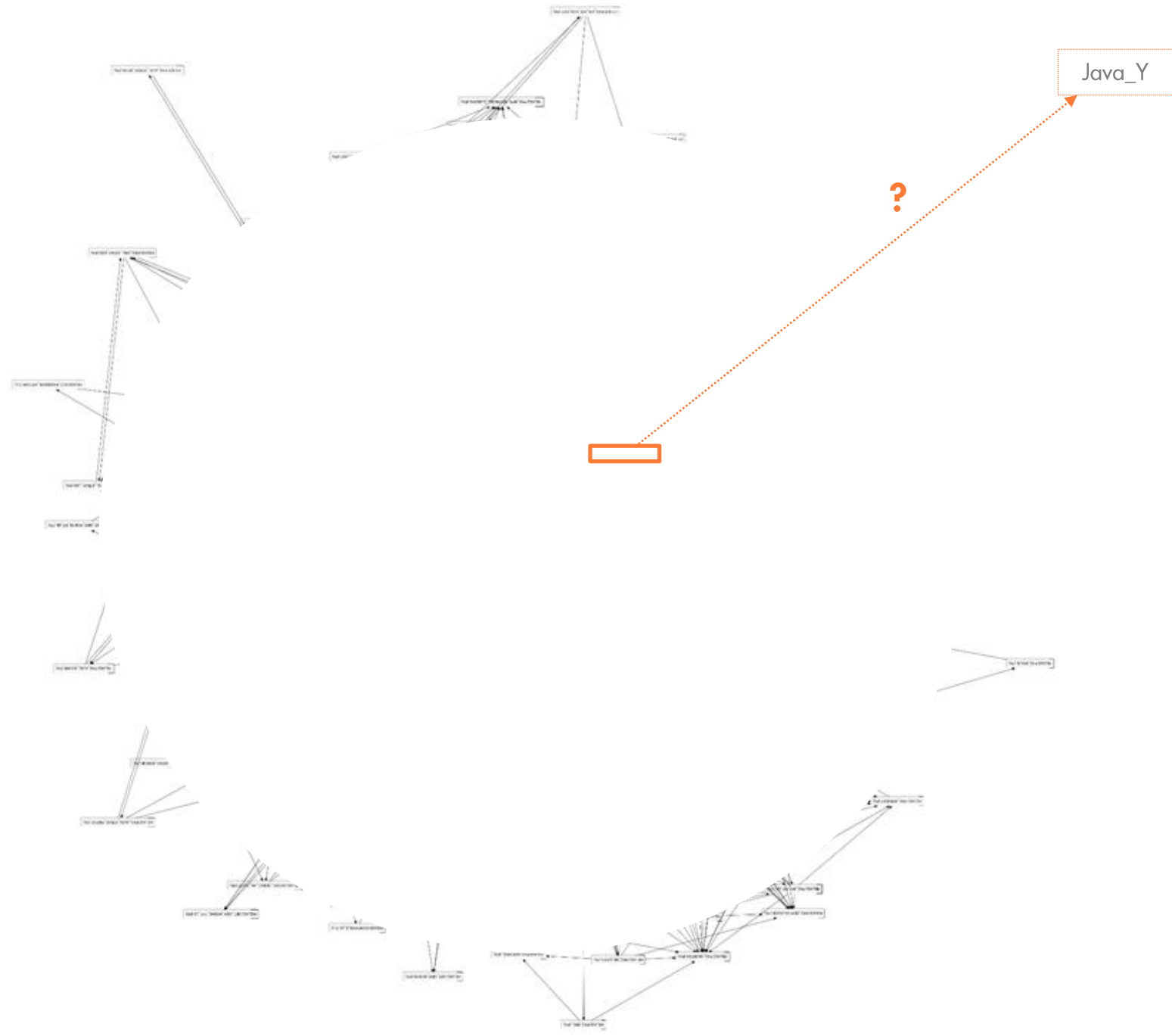
Oracle Database 12c



```
> SELECT * FROM DBA_DEPENDENCIES
```

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PL/SQL-Pakete





Verzeichnisorganisation



Technologien



Datenbank-Architektur



Applikations-Klone



```

125     }
126
127     private static void addResourceFile(String name, String resource, ZipOutput
128         ZipEntry zipEntry = new ZipEntry(name);
129         out.putNextEntry(zipEntry);
130         OpenDocumentSpreadsheetCreator.addFromResource(resource, out);
131         out.closeEntry();
132     }
133
134     private static void addFromResource(String resource, OutputStream out) {
135         URL url = OpenDocumentSpreadsheetCreator.class.getResource(resource);
136         try (InputStream in = url.openStream()) {
137             byte[] buffer = new byte[256];
138             synchronized (out) {
139                 while (true) {
140                     int bytesRead = in.read(buffer);
141                     if (bytesRead == -1) {
142                         break;
143                     }
144                     out.write(buffer, 0, bytesRead);
145                 }
146             }
147         } catch (IOException e) {
148             LOGGER.warn("Cannot get resource", e);
149         }
150     }
151 }
152

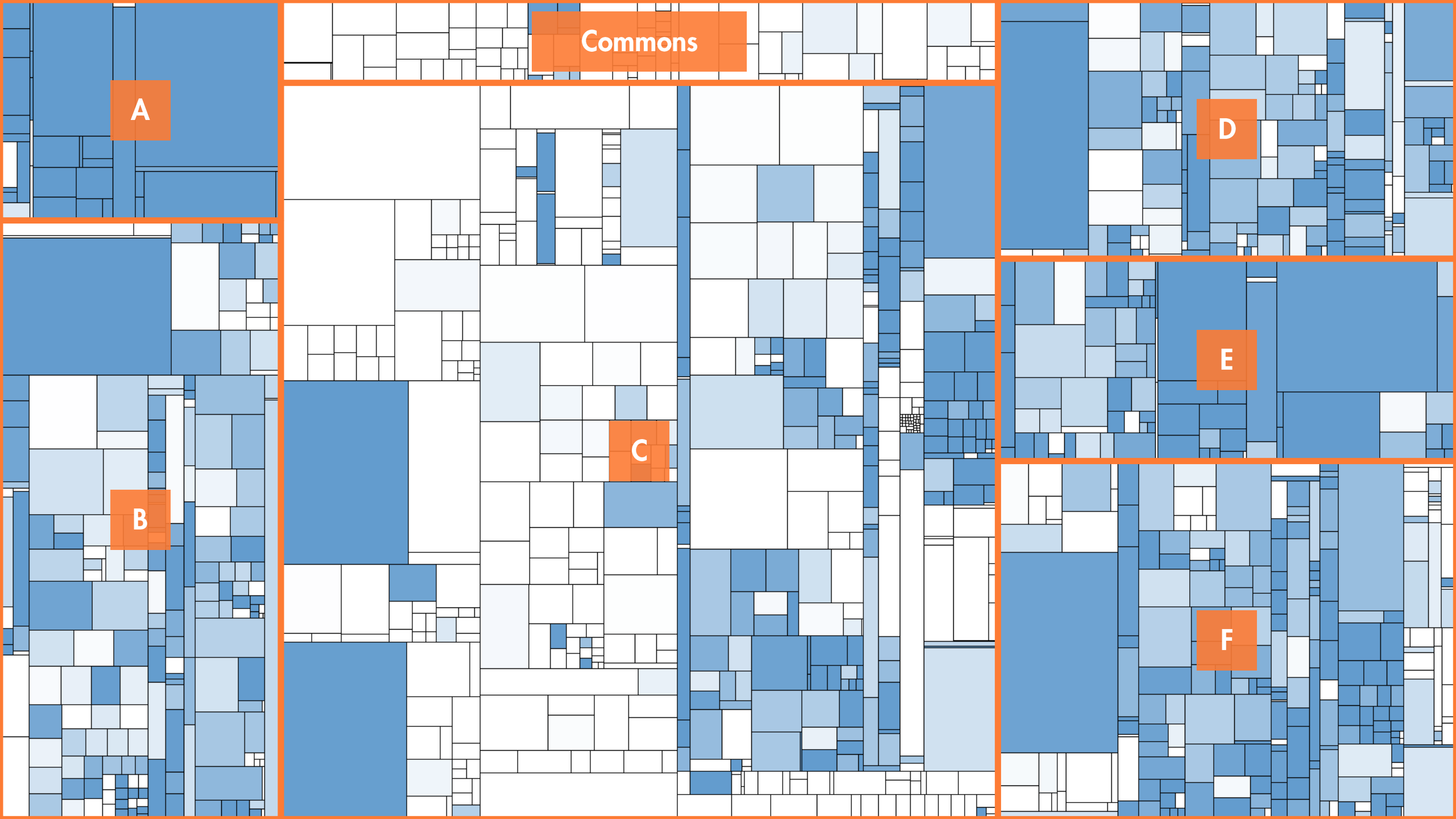
```

```

105     }
106
107     private static void addResourceFile(String name, String resource, ZipOutput
108         ZipEntry zipEntry = new ZipEntry(name);
109         out.putNextEntry(zipEntry);
110         OpenOfficeDocumentCreator.addFromResource(resource, out);
111         out.closeEntry();
112     }
113
114     private static void addFromResource(String resource, OutputStream out) {
115         URL url = OpenOfficeDocumentCreator.class.getResource(resource);
116         try (InputStream in = url.openStream()) {
117             byte[] buffer = new byte[256];
118             synchronized (out) {
119                 while (true) {
120                     int bytesRead = in.read(buffer);
121                     if (bytesRead == -1) {
122                         break;
123                     }
124                     out.write(buffer, 0, bytesRead);
125                 }
126             }
127         } catch (IOException e) {
128             LOGGER.warn("Cannot get resource", e);
129         }
130     }
131 }
132

```





Commons

A

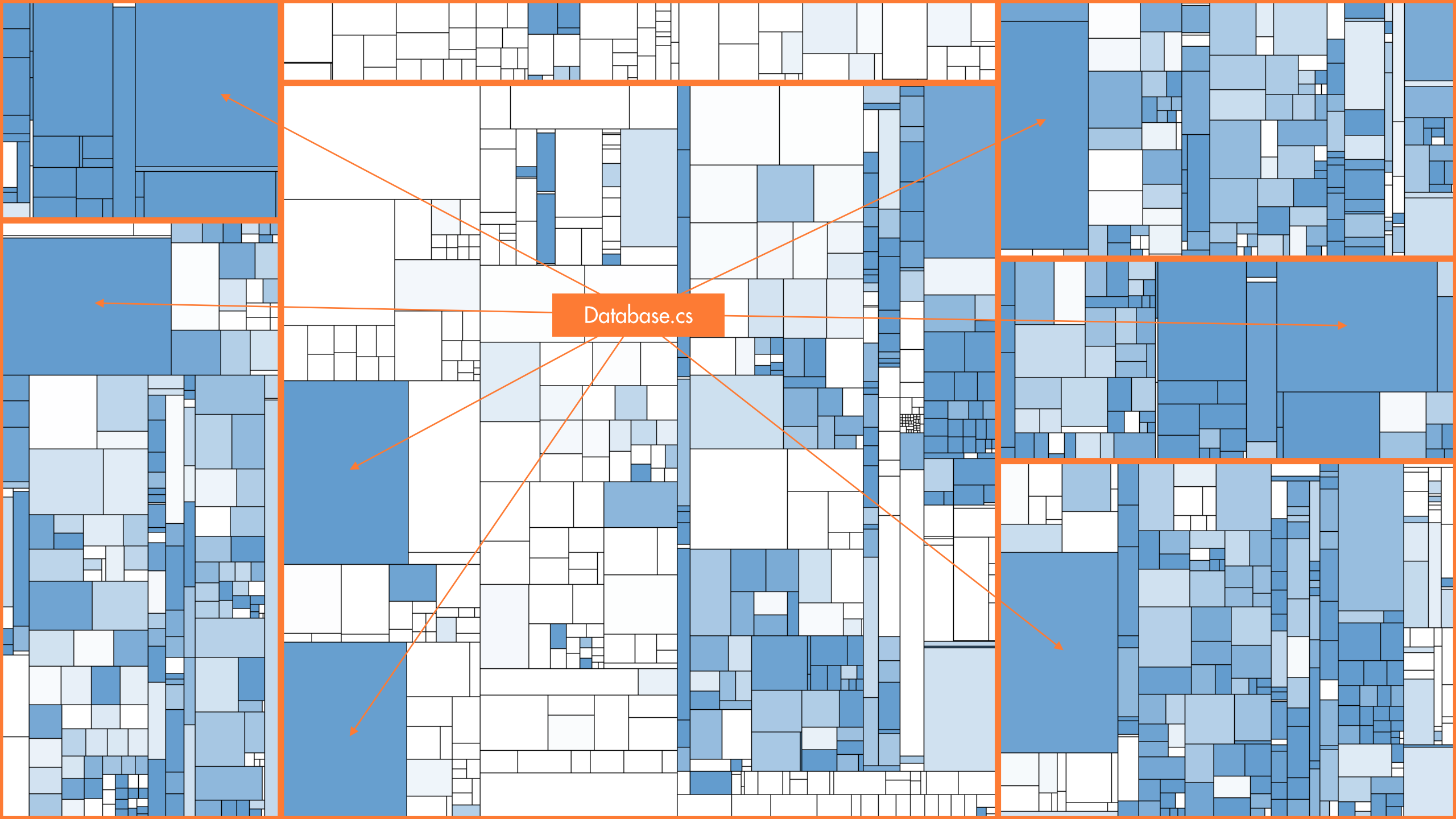
D

B

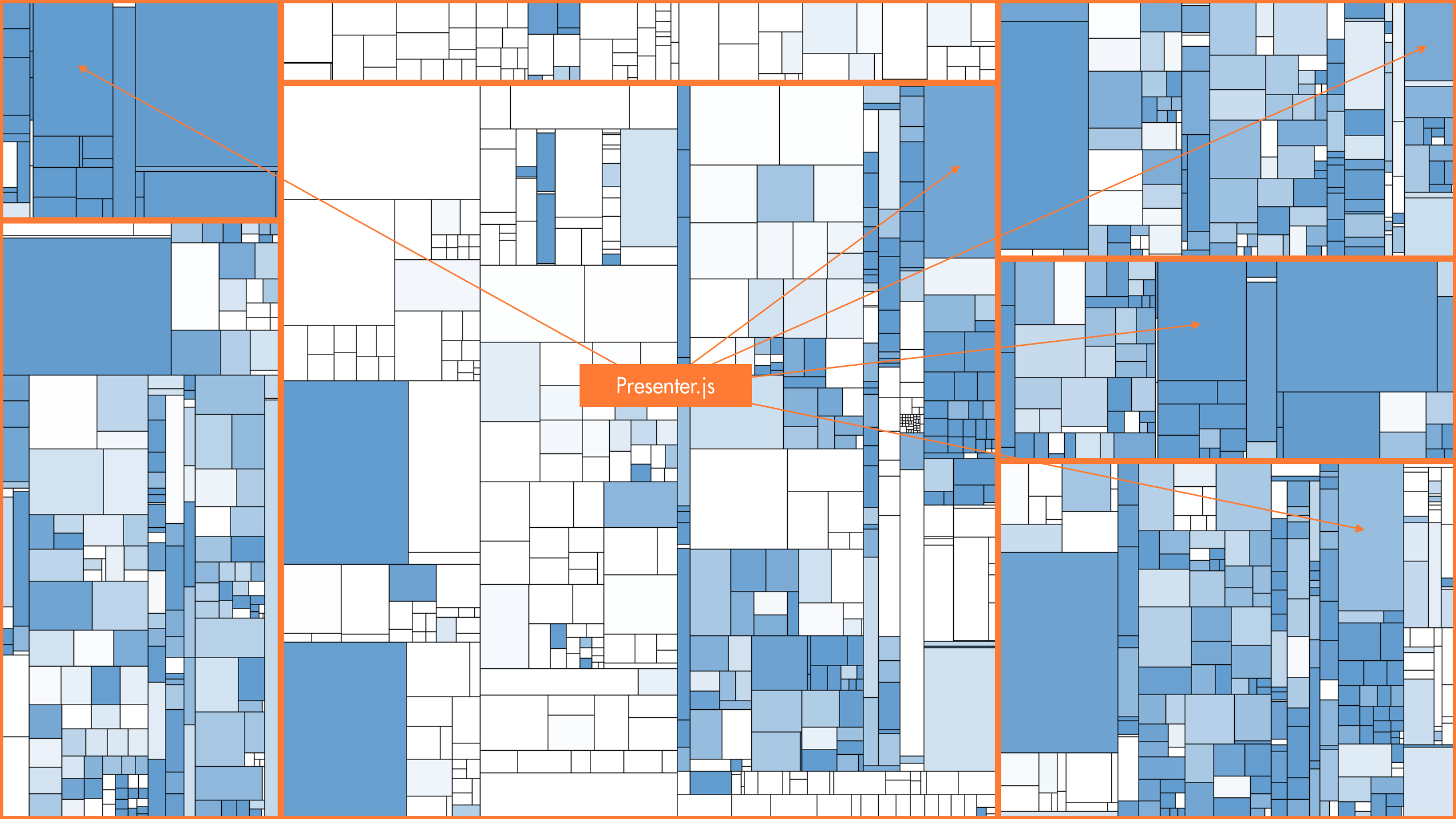
E

C

F



Database.cs



Presenter.js

Commons

A

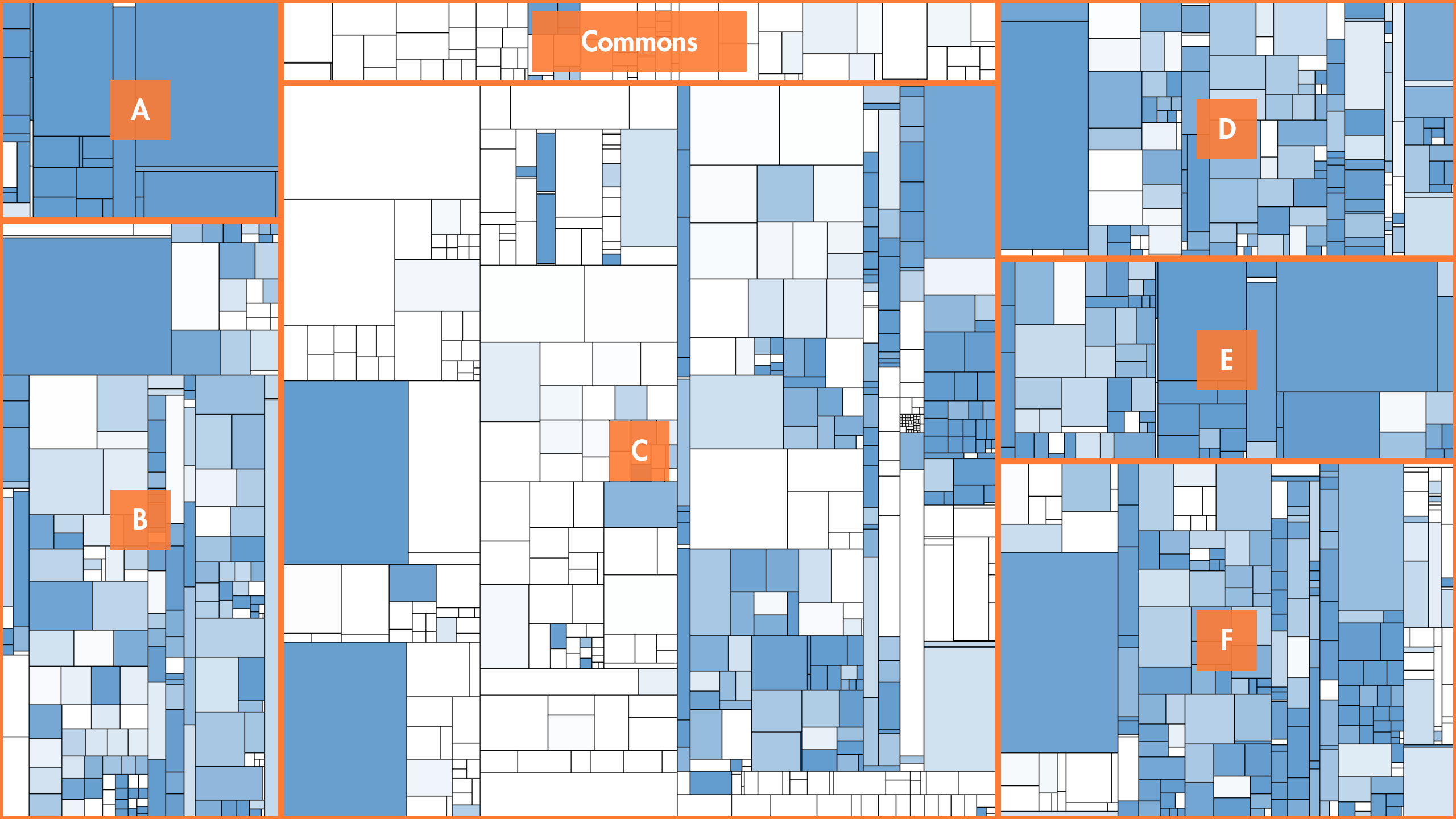
D

E

C

B

F



Commons

A

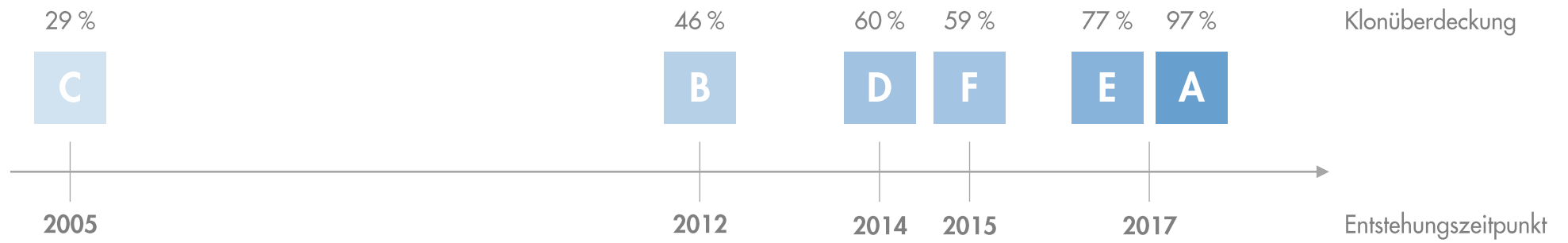
D

E

F

C

B



CQSE-Workshop

Softwareaudits: Qualität unter der Lupe

27. Oktober

cqse.eu/audit-workshop-saa-21

Verzeichnisorganisation



Technologien



Datenbank-Architektur



Applikations-Klone



CQSE-Workshop

Softwareaudits: Qualität unter der Lupe

27. Oktober

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