

Welcome

KotlinConf 2017

SOLD OUT

KotlinConf 2018

SOLD OUT

GOLD PARTNER

Google

SILVER PARTNERS



BRONZE PARTNERS



60+

SPEAKERS

Program Committee



Svetlana
Isakova



Christina
Lee



Roman
Elizarov



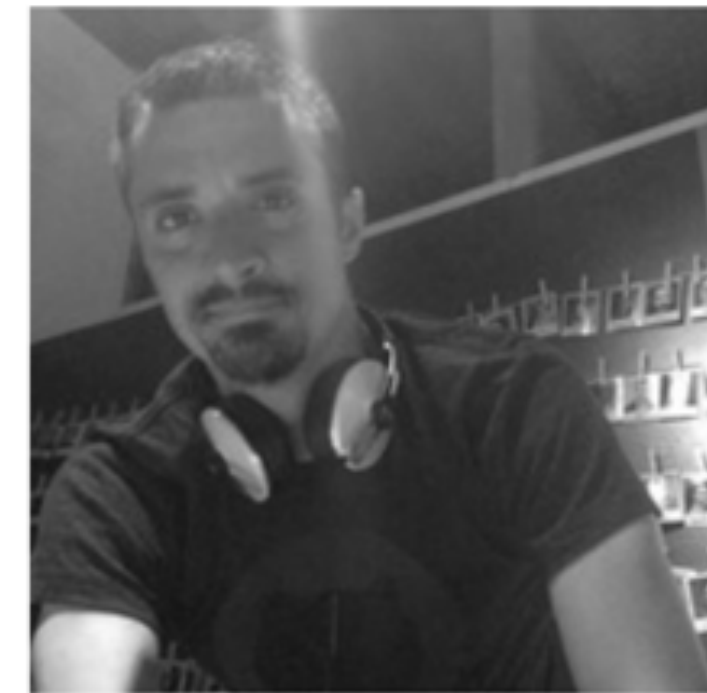
Maxim
Shafirov



Hadi
Hariri



Andrey
Breslav



Sébastien
Deleuze

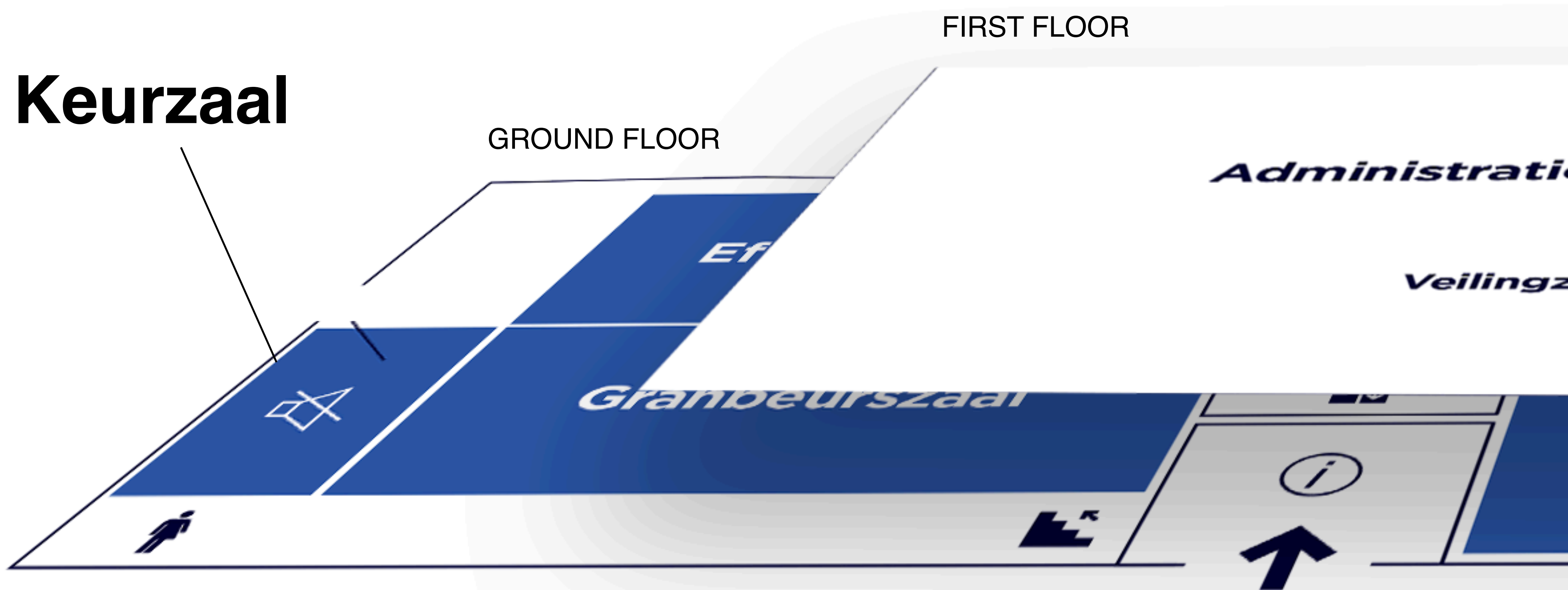
30+

**Volunteers
& Trifork**

Code of Conduct



QUIET ROOM

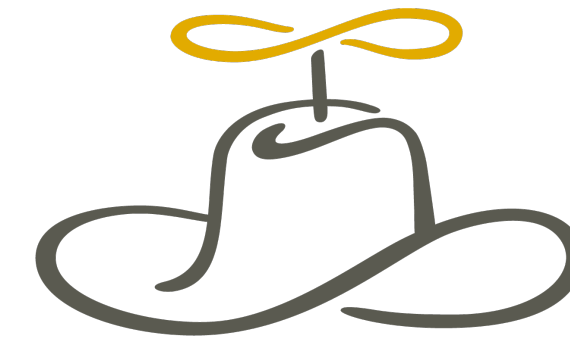


OVERFLOW ROOM

Vieilingzaal



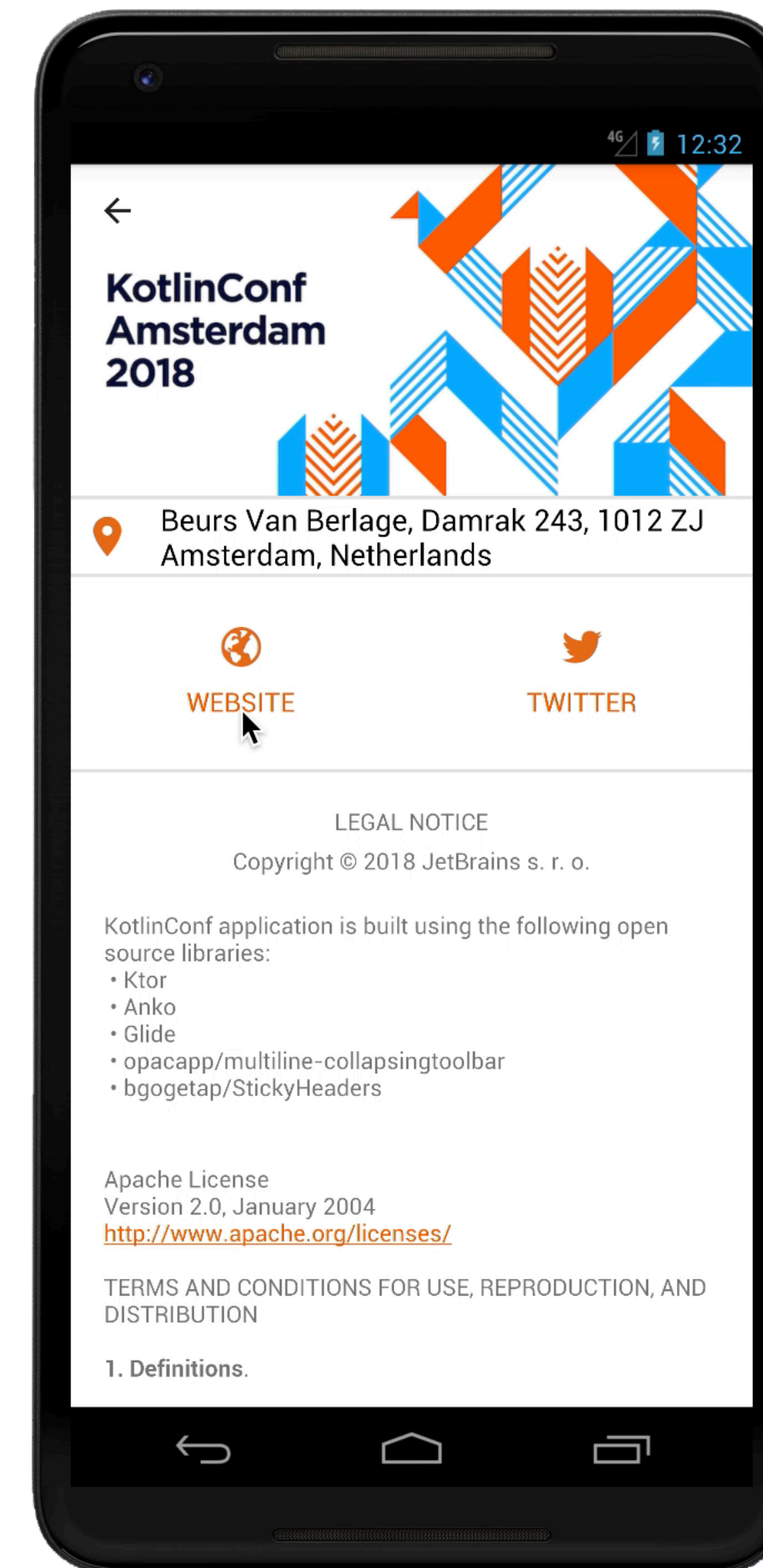
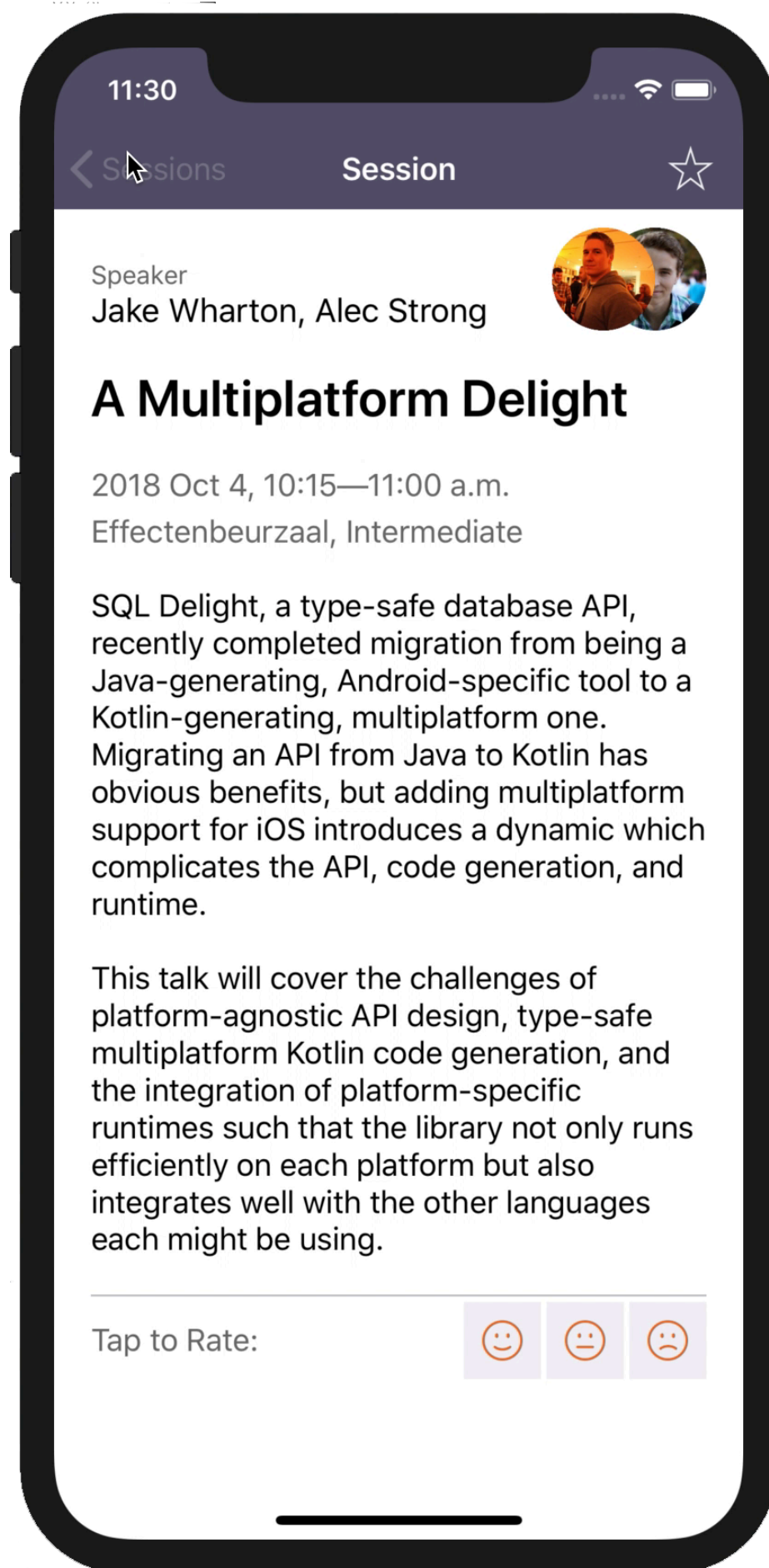
CODE LABS



Big Nerd
Ranch



KotlinConf App



Closing Panel

Tomorrow at 17:15

Ask your question live or on Twitter using #kc18ask





ENJOY!

ANDREY
BRESLAV

2010



2018





PRAGMATIC

THOUGHTS



SOFTWARE

~~**Concision**~~

Readability

~~**Expressiveness**~~

Reuse

~~**Originality**~~

Interoperability

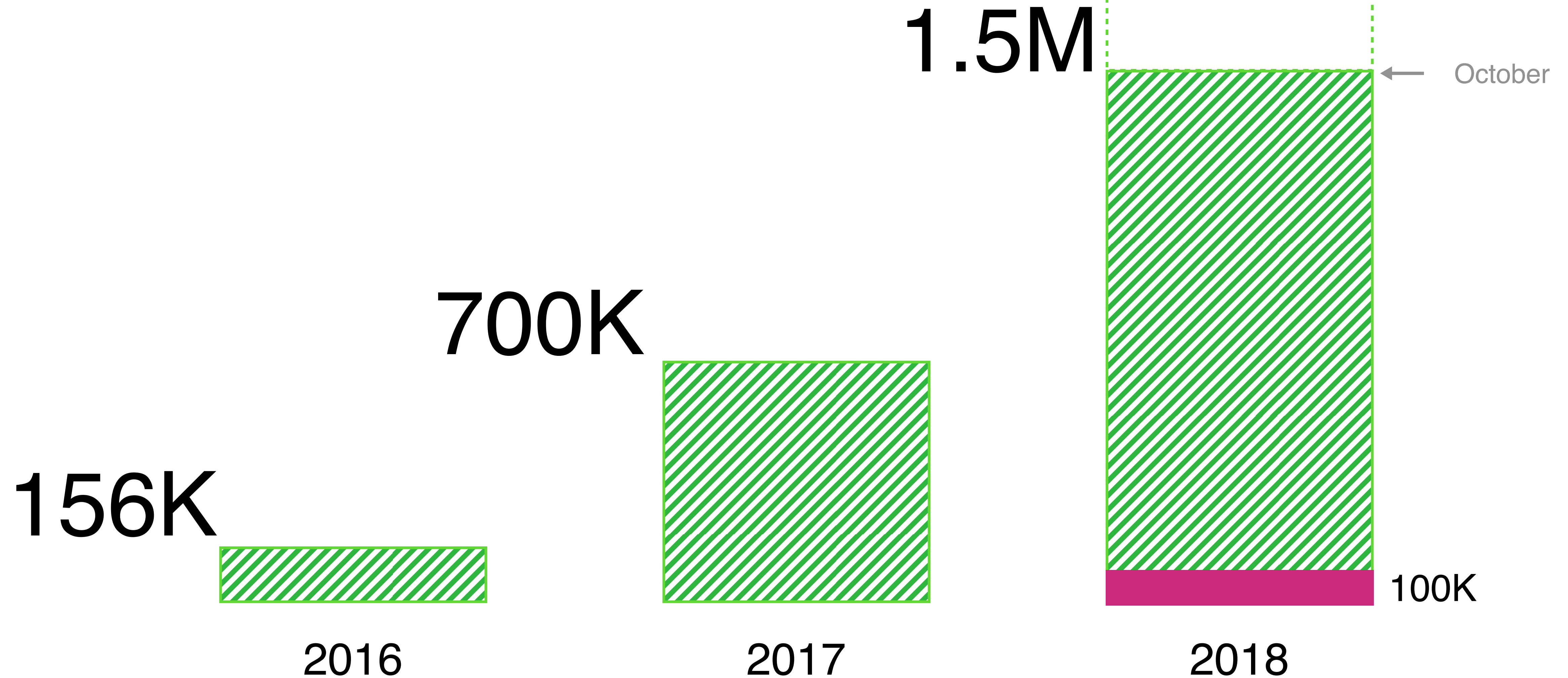
~~**Soundness**~~

Safety

Tooling

MOMENTUM

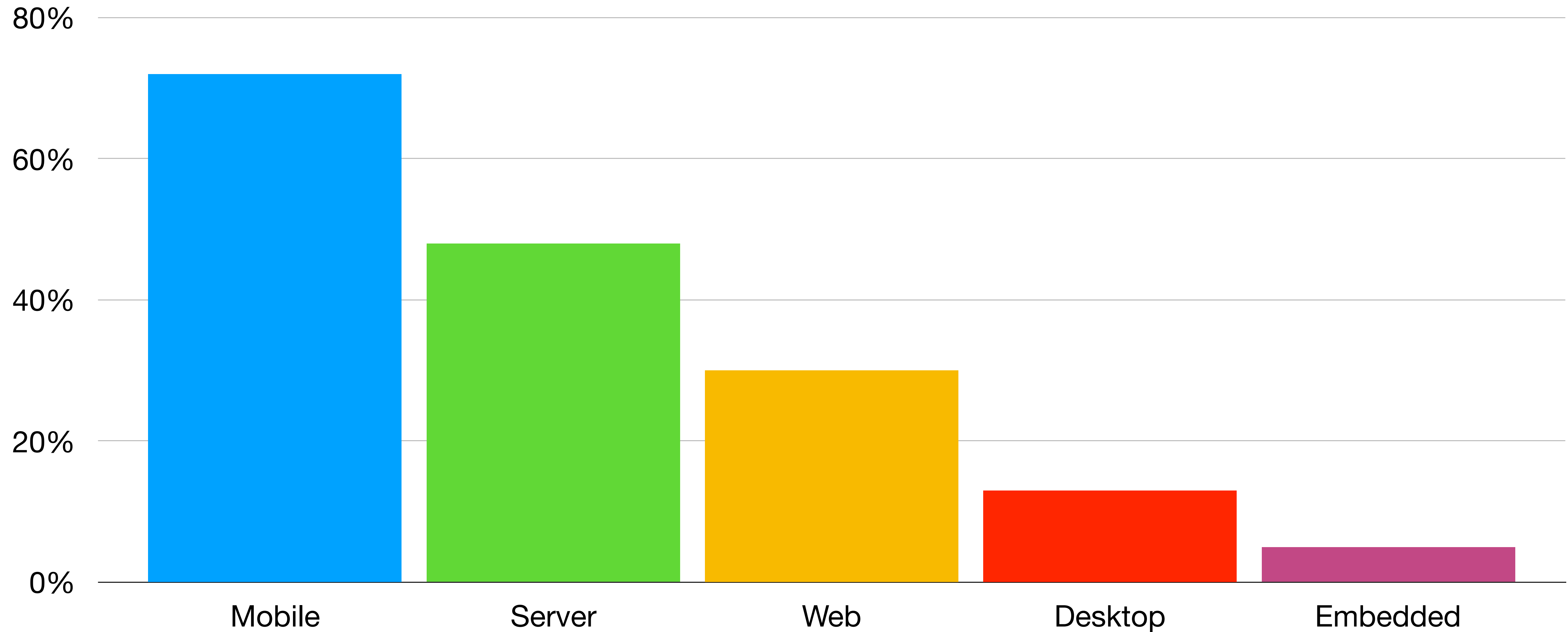
Kotlin Devs



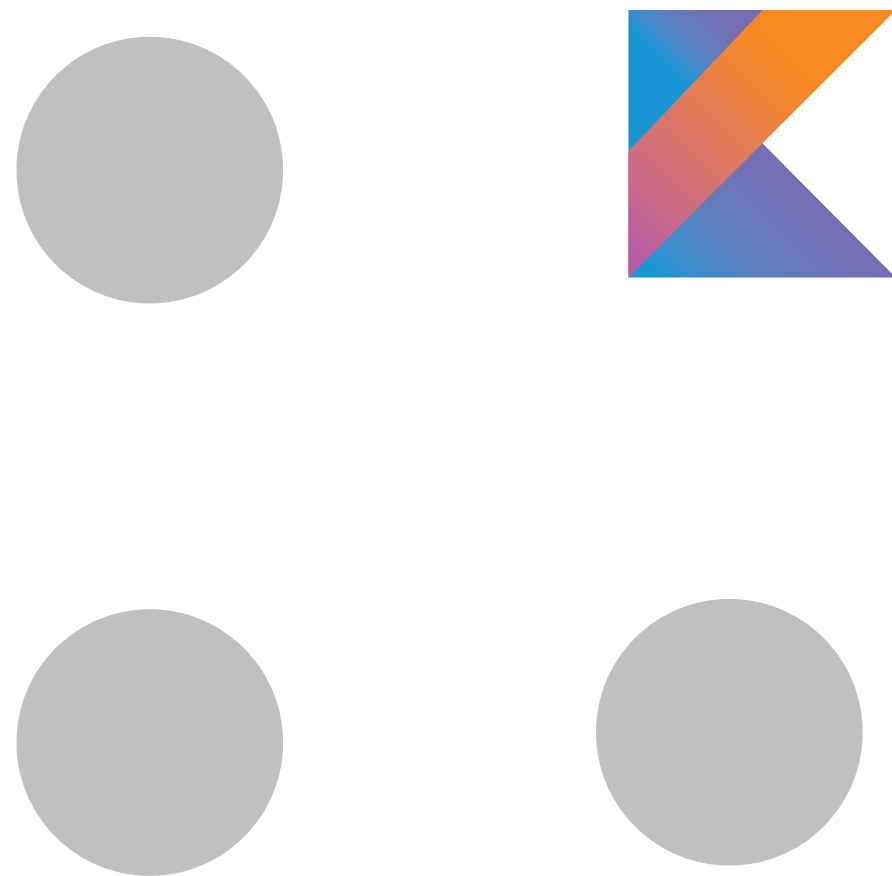


**FOR ALL
PLATFORMS**

KotlinConf Demographics



Android



ONE IN FOUR APPS USES KOTLIN
(out of TOP 1000)



TOTAL NUMBER OF APPS USING KOTLIN SINCE LAST YEAR

Server



Google Cloud Platform

cloud.google.com/kotlin

A community-supported project



spring

X2

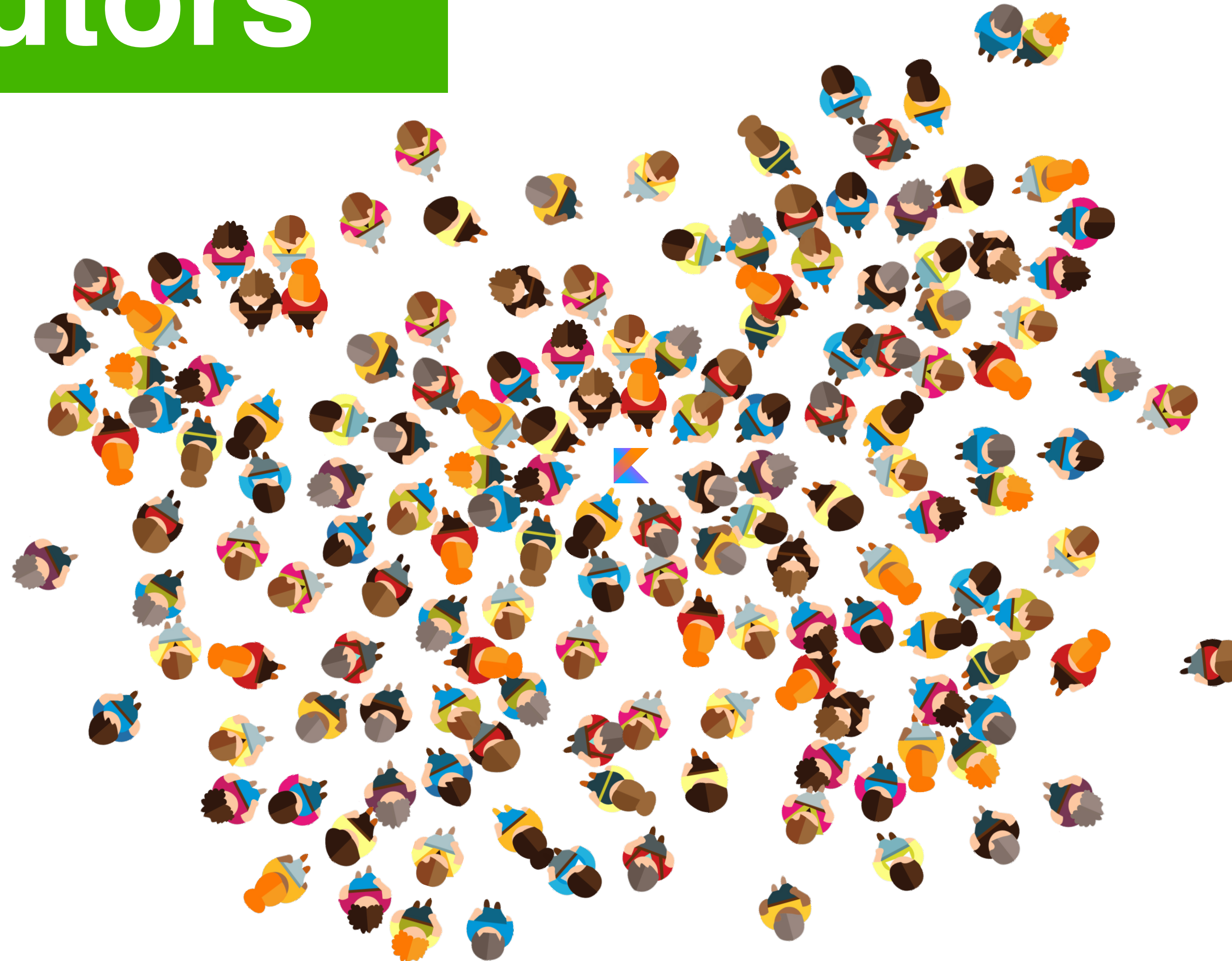
MONTHLY ACTIVE DEVS

Team



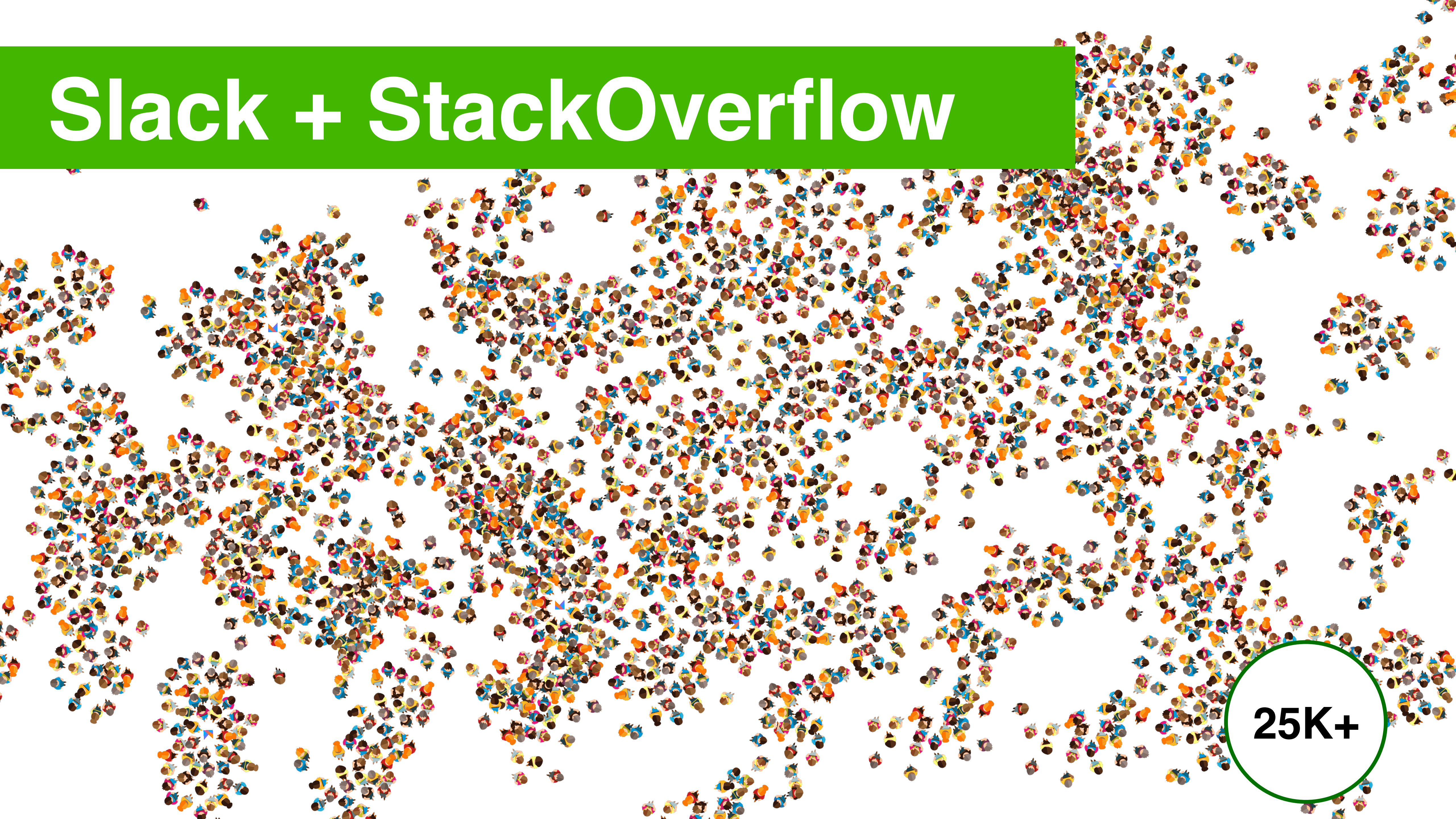
~50

Contributors



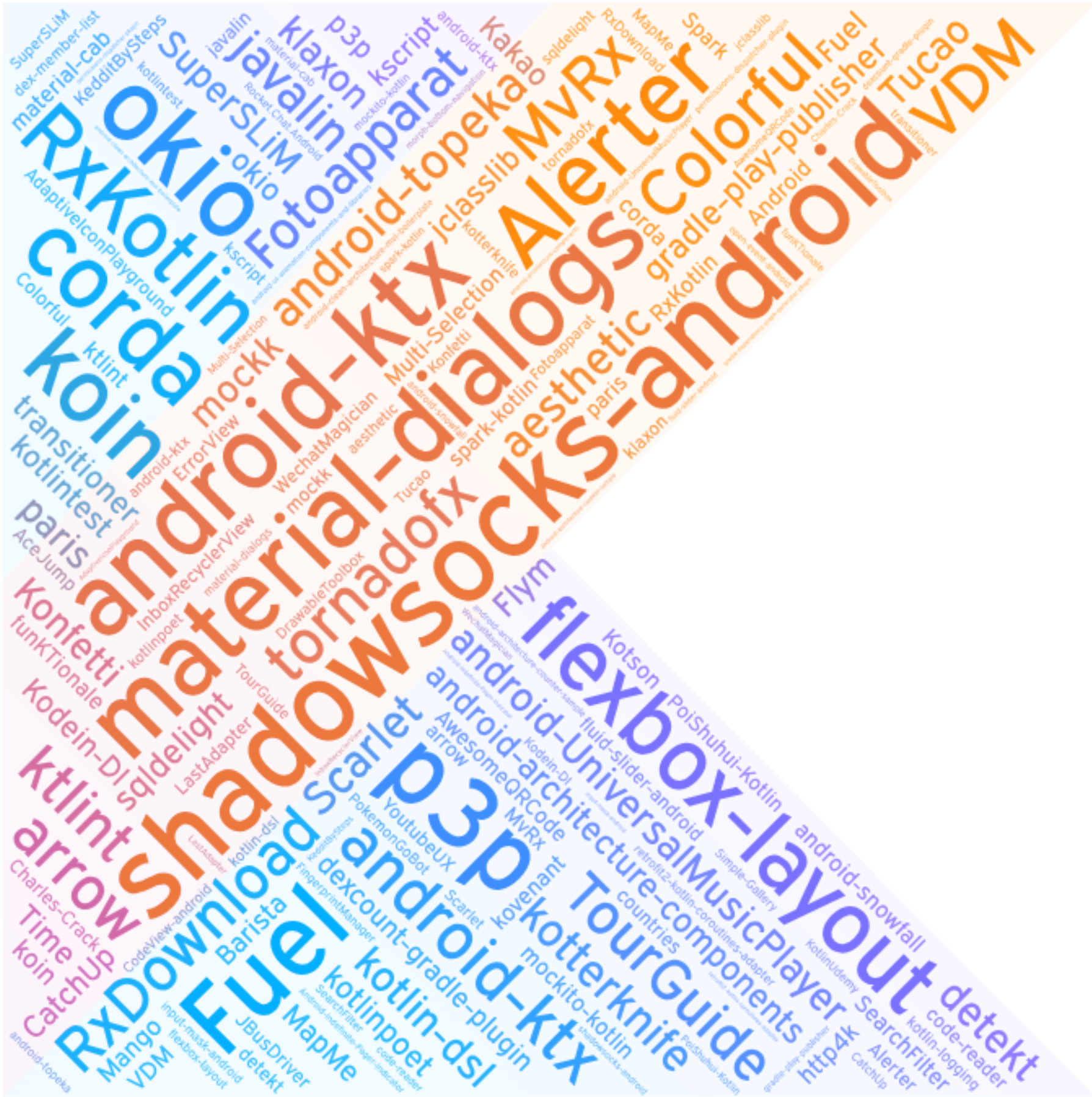
250+

Slack + StackOverflow



25K+

OpenSource



size ~ GitHub stars

> 96 000
GitHub repositories

> 100 000 000
Lines of Kotlin Code

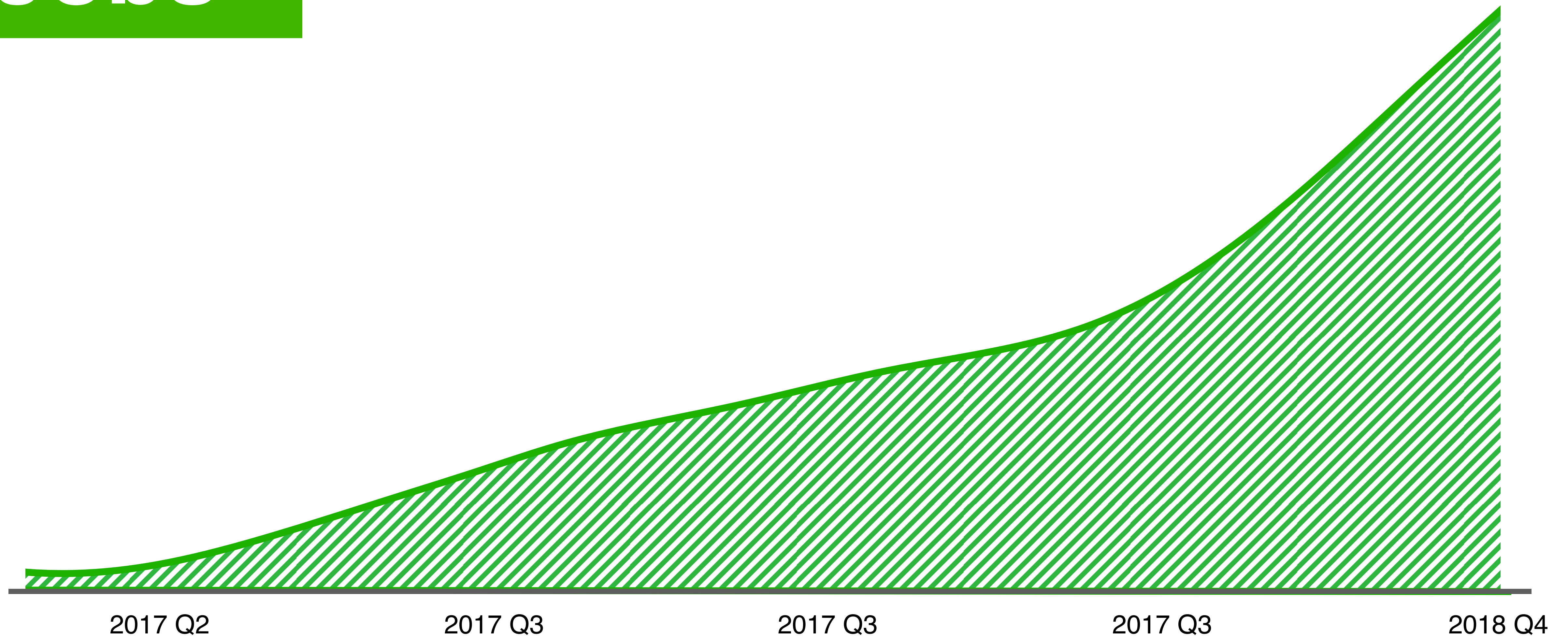


kotlin love



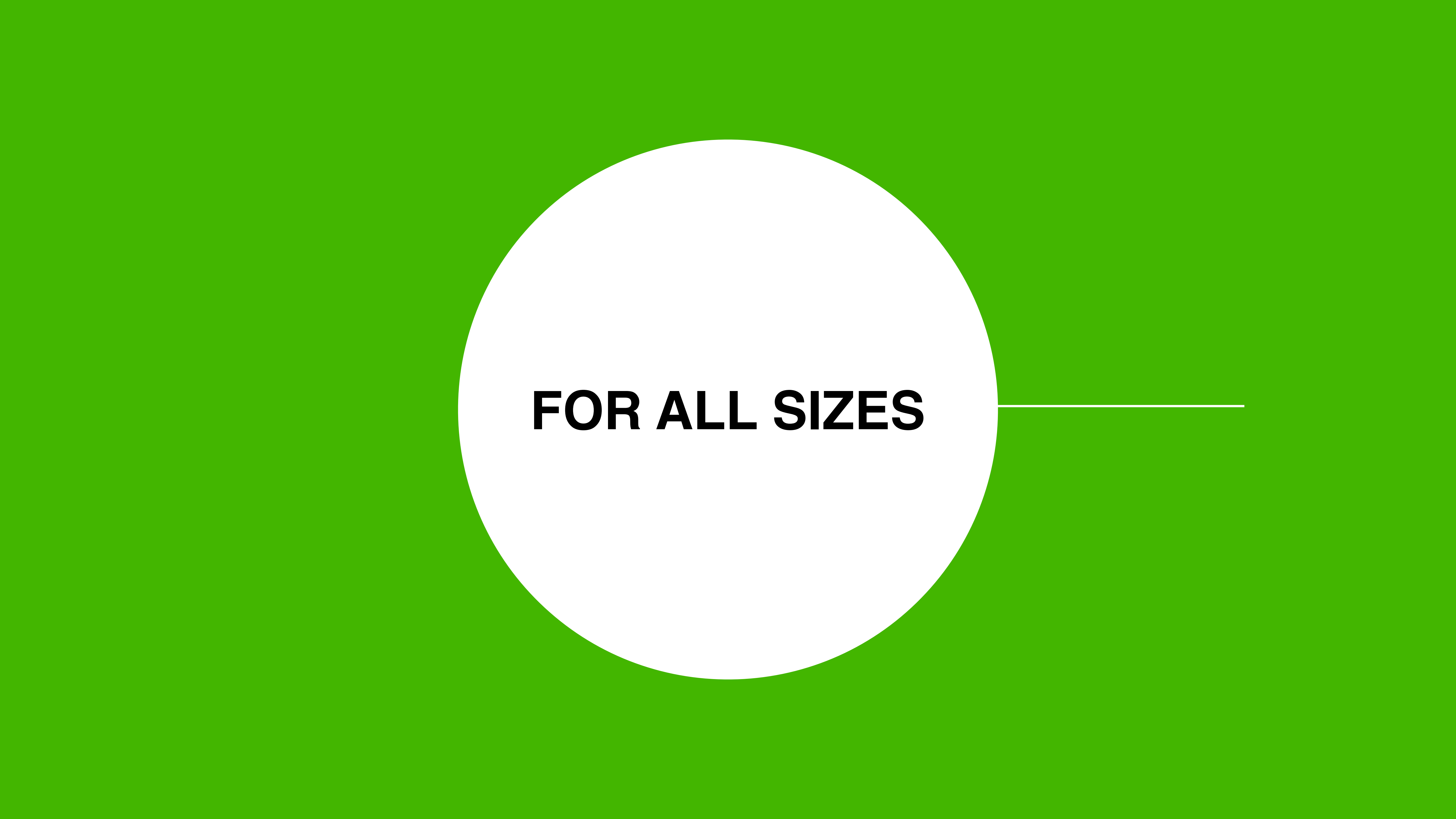
INDUSTRY

Jobs



All data pulled from the Dice jobs database

FOR ALL SIZES





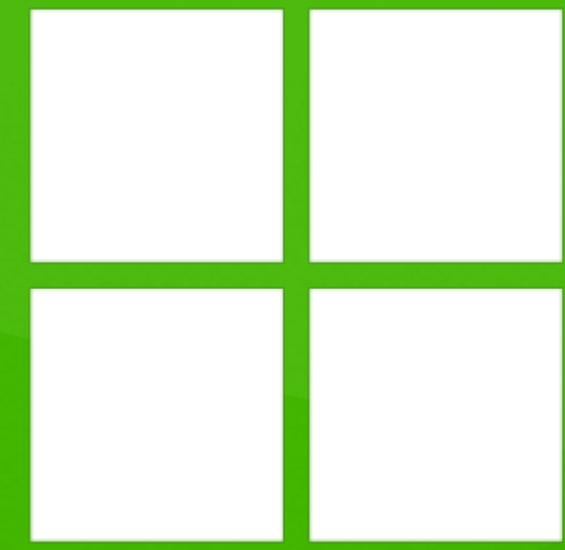
**Appealing
to talent**

allegro Tech

N 26



OLX GROUP



Microsoft

Java to
Kotlin

-25%
LOC

Preserved
API

Kotlin Foundation

kotlin.in/foundation

KOTLIN 1.3

is coming soon



**Good for
scaling up**

Coroutines

```
import kotlin.coroutines.experimental.*
```

Coroutines Talks

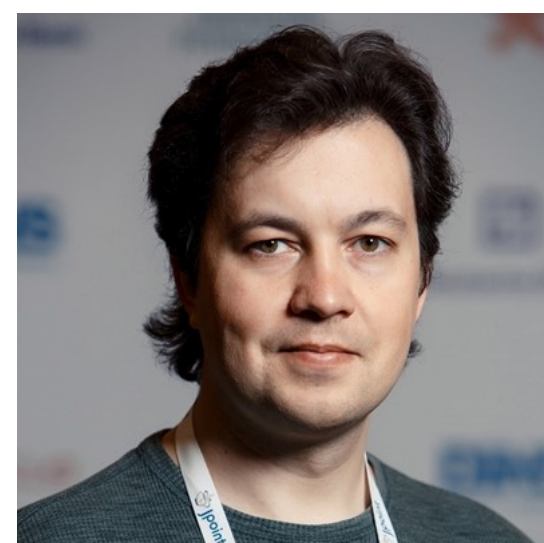
LIVE



Exploring Coroutines in Kotlin

Venkat Subramaniam

LIVE



Kotlin Coroutines in Practice

Roman Elizarov



Ktor 1.0 BETA

asynchronous framework
for connected applications

```
import ...

fun main(args: Array<String>) {
    embeddedServer(Netty, 8080) {
        routing {
            get("/") {
                call.respondText("My Example Blog", ContentType.Text.Html)
            }
        }
    }.start(wait = true)
}
```


kotlin.in/coroutines



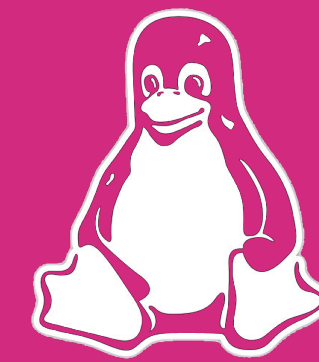
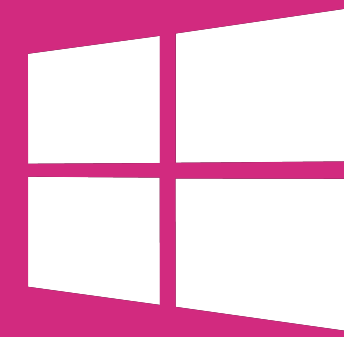
**Kotlin
for everyone**

Kotlin/Native

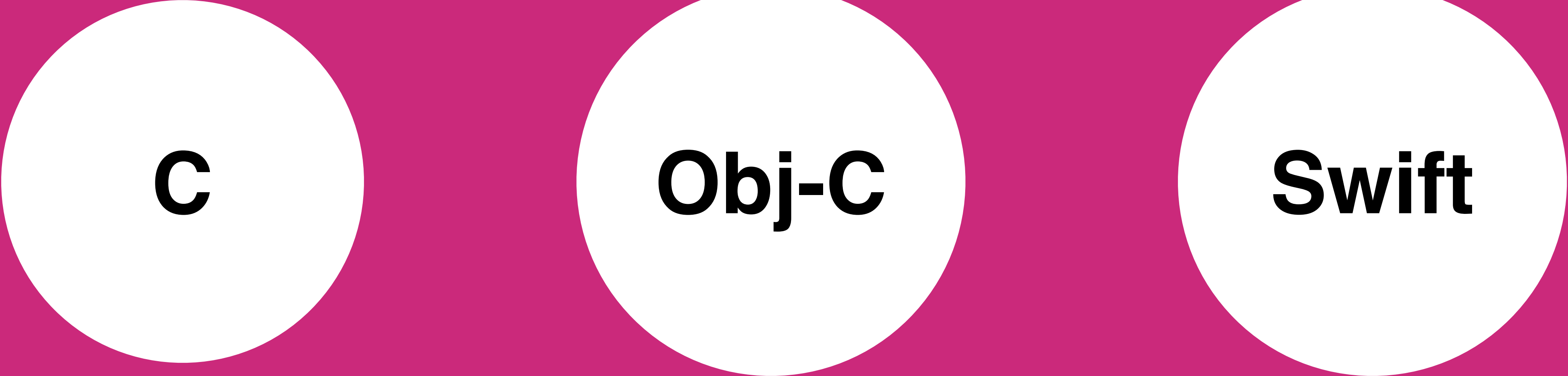
BETA

iOS

macOS



Interoperable



C

A diagram illustrating interoperability between three programming languages. At the top, the word "Interoperable" is written in white. Below it, three white circles are arranged horizontally. The first circle on the left contains the letter "C". The middle circle contains "Obj-C". The third circle on the right contains "Swift".

Obj-C

Swift

Kotlin/Native Talks

Shared + Mutable =



Kotlin/Native concurrency model

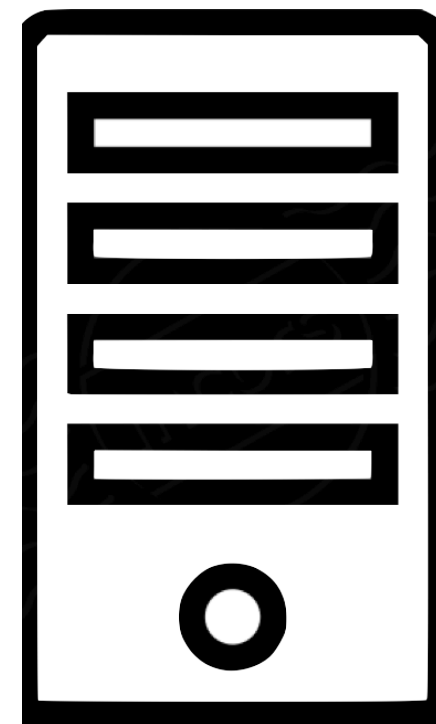
Nikolay Igotti

`kotlin.in/native`

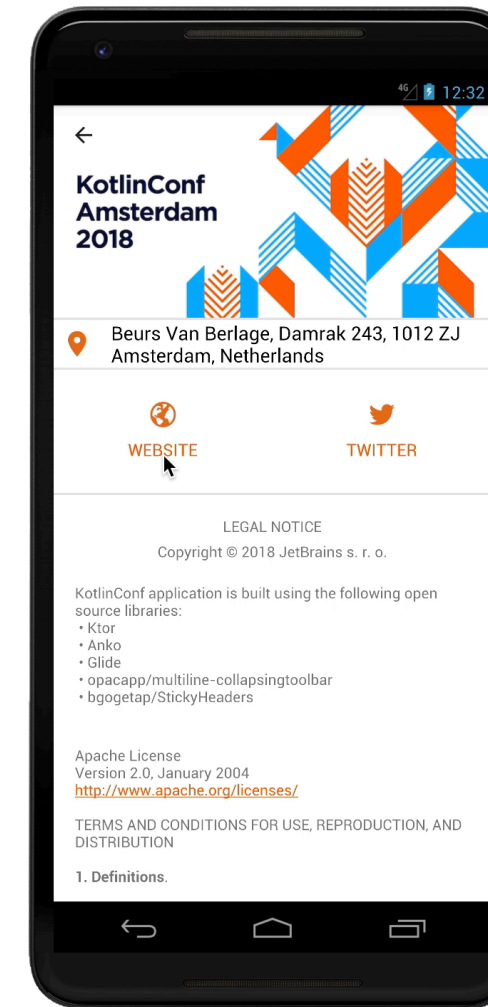
Kotlin/Native ≠ Multipatform

Multiplatform

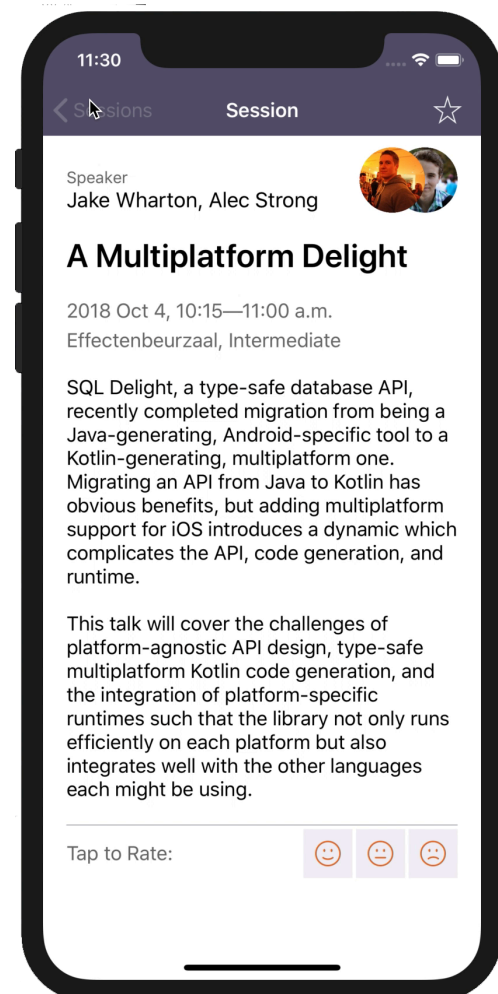
Server
Kotlin/JVM



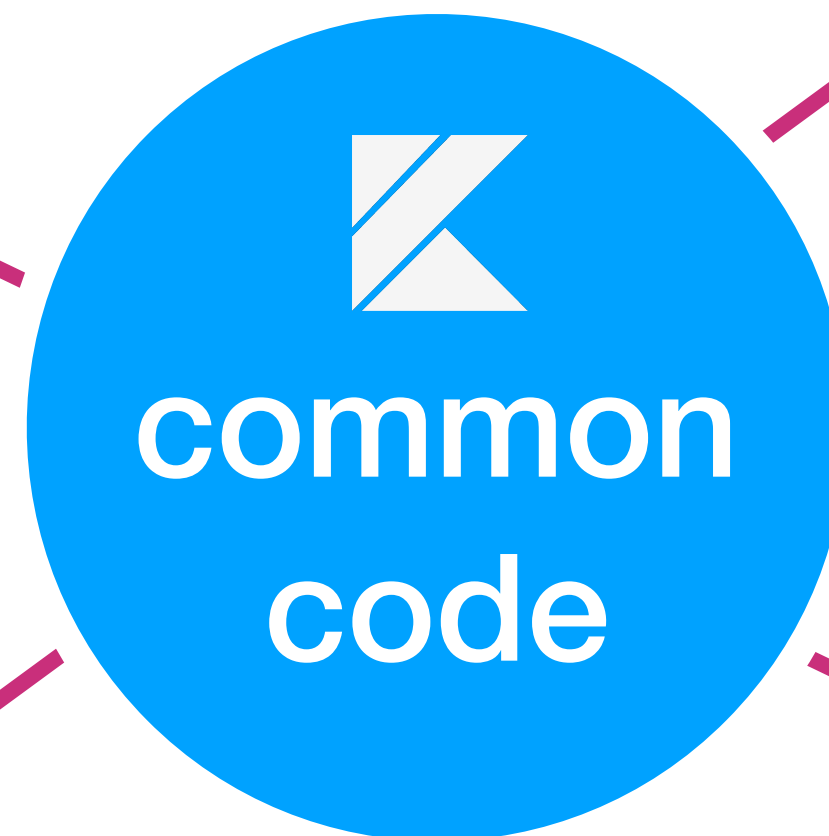
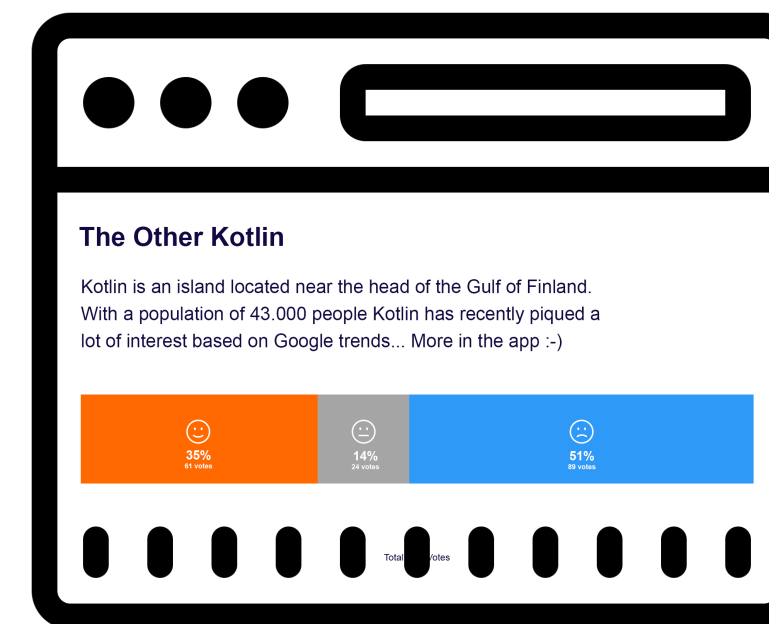
Android
Kotlin/JVM



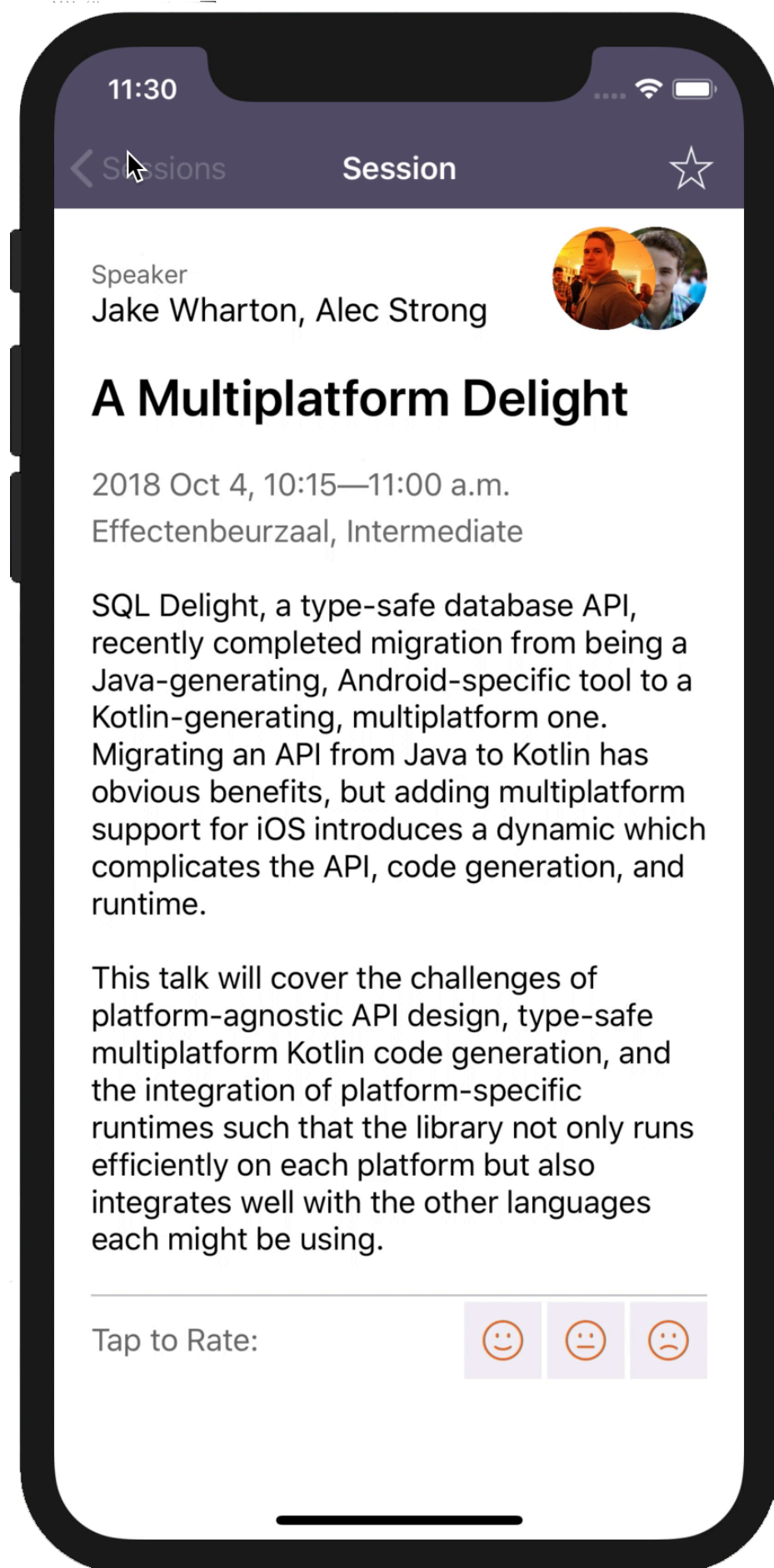
iOS
Kotlin/Native



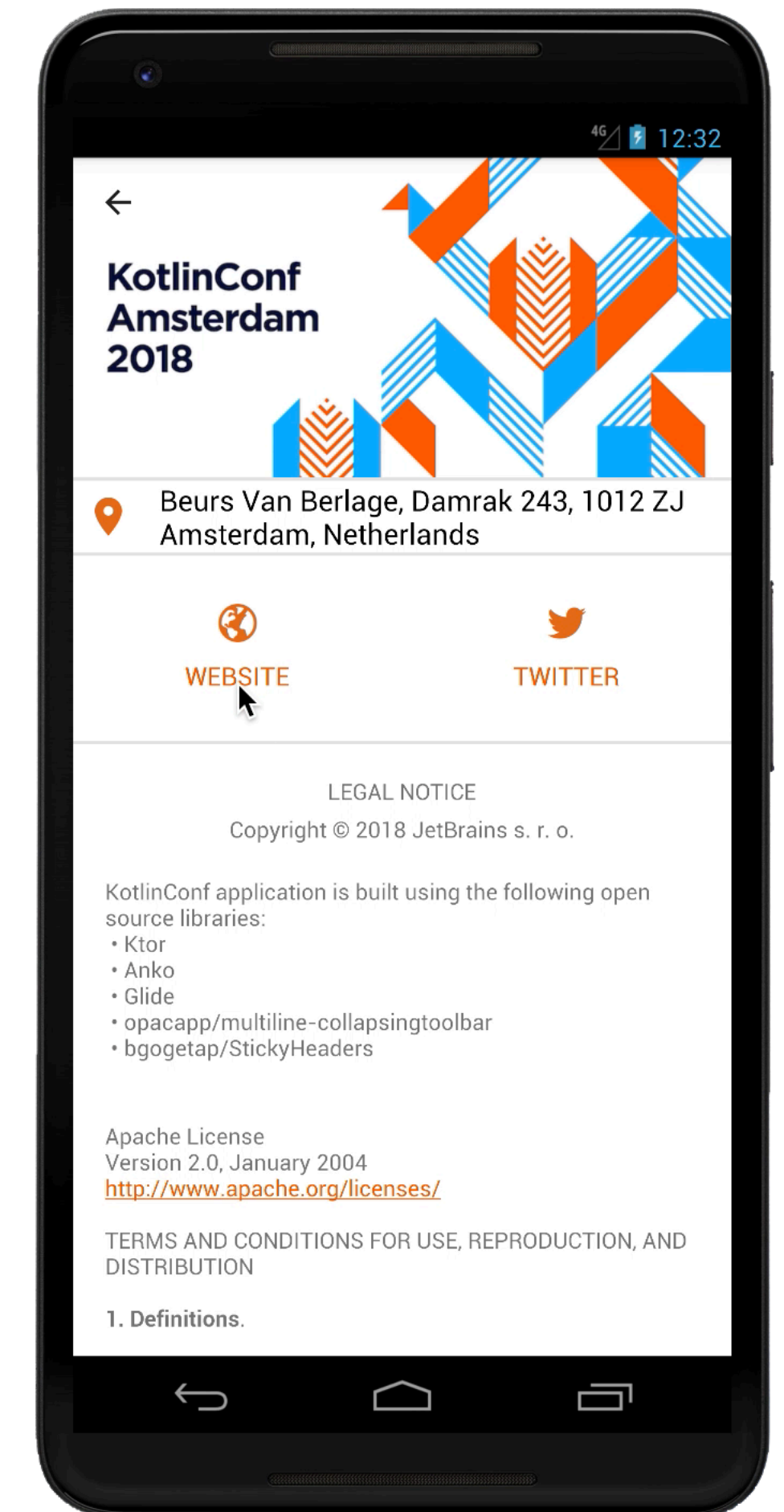
Browser
Kotlin/JS



Multiplatform libraries



http
serialization
coroutines
settings
logging



kotlin.in/multiplatform



**Tooling
matters**

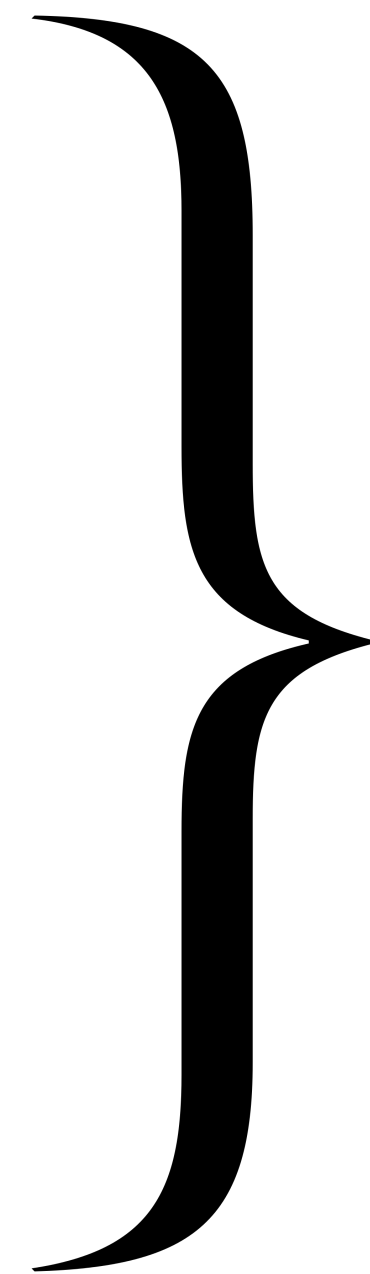
Unified tooling

Kotlin/JVM

Kotlin/JS

Kotlin/Native

Multiplatform



 **IntelliJ IDEA**

 **Android
Studio**

Gradle Kotlin DSL



Groovy



Kotlin

 build.gradle.kts

gradle.org/kotlin

```
buildscript {  
    repositories {  
        gradlePluginPortal()  
    }  
    dependencies {  
        classpath("org.springframework.boot:spring-boot-gradle-plugin:2.0.2.RELEASE")  
    }  
}
```

```
apply(plugin = "java")  
apply(plugin = "jacoco")  
apply(plugin = "org.springframework.boot")
```

Scratch files

scratch.kts x



Use classpath of module



user



Use REPL



Make before Run

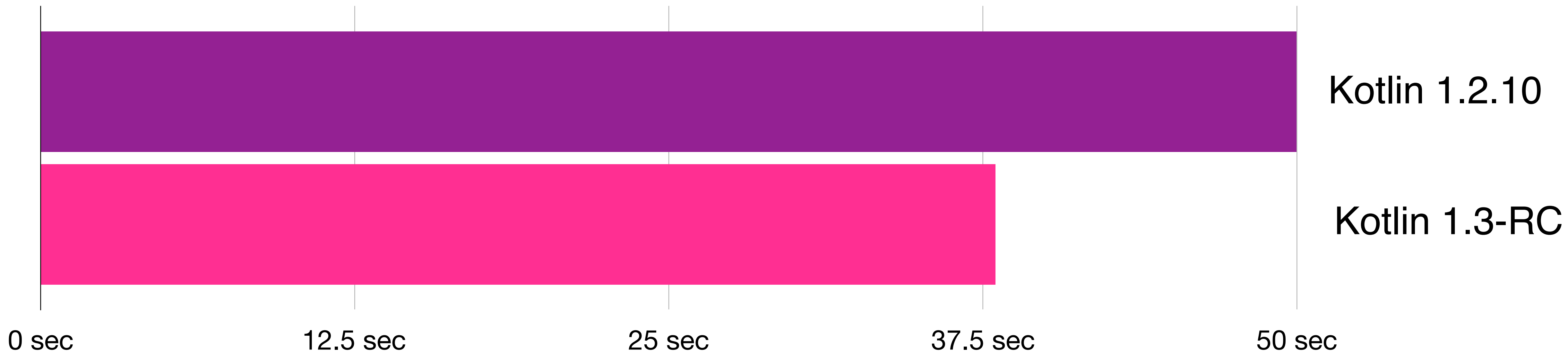
```
1  import org.kotlin.conf.User
2
3  val users = listOf(
4      User("Alice", 16, "UK"),
5      User("Bob", 35, "USA"),
6      User("Mike", 50, "UK")
7  )
8
9  users.filter { it.age < 18 }
10
11 users
12     .filter { it.country == "UK" }
13     .map { it.age }
14     .average()
```

val users: List<User>

[User(name=Alice, age=16, country=UK)]

33.0

Build Time



* average build time for github.com/hzsweers/CatchUp

`kotlin/1.3`

EVOLUTION

Language evolution



The diagram consists of three circles arranged horizontally. The first two circles have orange outlines and contain text. The third circle has a light gray outline and is empty. The text in the first circle is 'KEEP THE LANGUAGE MODERN' and in the second is 'COMFORTABLE UPGRADES'.

**KEEP
THE LANGUAGE
MODERN**

**COMFORTABLE
UPGRADES**

Phase out legacy

- Deprecation warnings
- Migrate in advance
- Compatibility mode



Kotlin Migration

Migrations for Kotlin code are available...

[Run migrations](#)



Language evolution

**KEEP
THE LANGUAGE
MODERN**

**COMFORTABLE
UPGRADES**

**FEEDBACK
LOOP**

Kotlin 1.3 Experimental Features

Inline classes

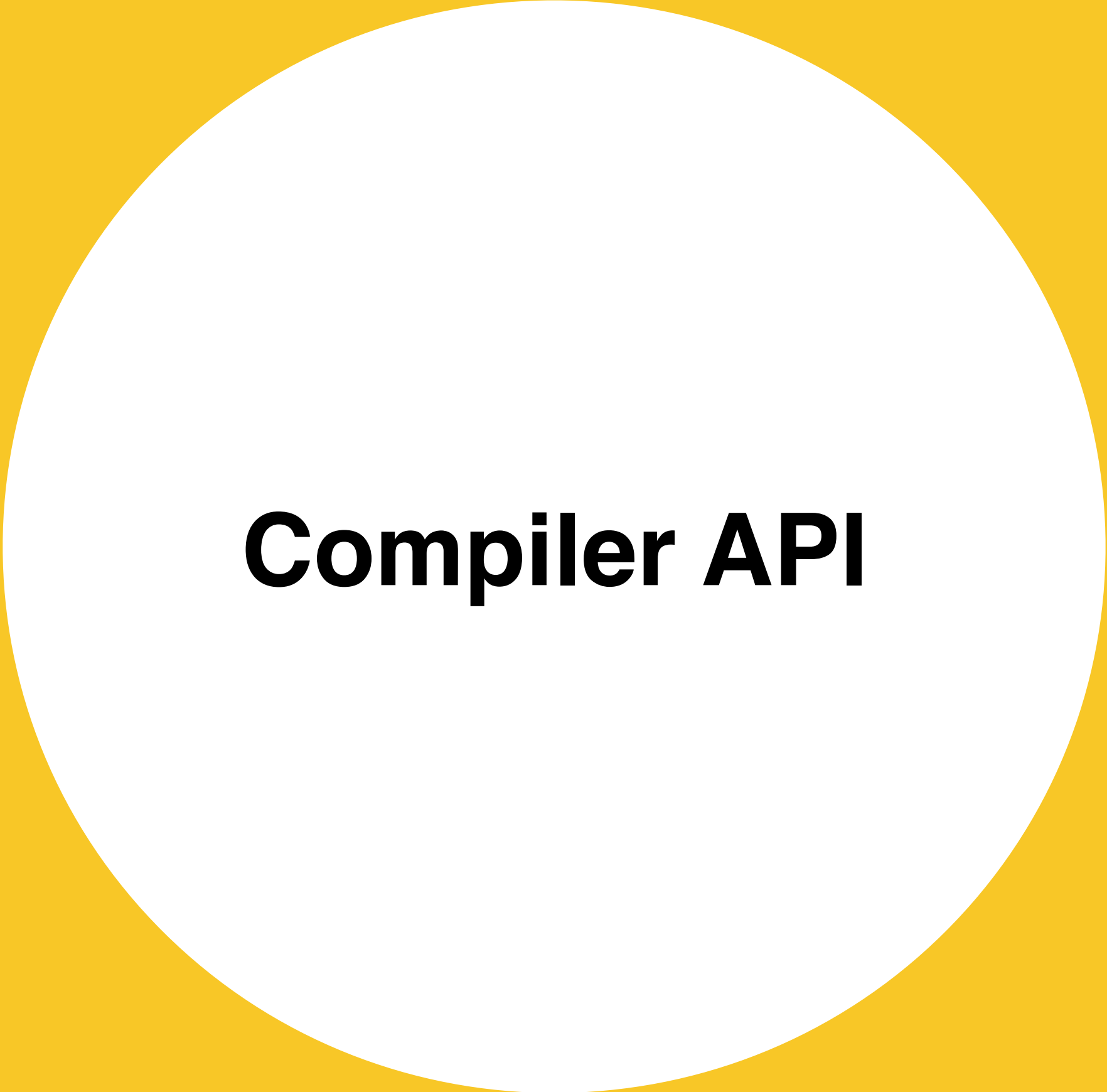
Unsigned arithmetics

Contracts & type inference



New Type Inference and
Related Language Features
Svetlana Isakova

FUTURE

A large white circle is centered on a solid yellow background. Inside the circle, the text "Compiler API" is written in a bold, black, sans-serif font.

Compiler API



**Improve what
we have**



**Saner
concurrency**

LEARNING

Coursera

Introduction to the course - Jel

https://www.coursera.org/learn/kotlin-for-java-developers/lecture/1bplV/introduction-to-the-course

☆ 🔥 🌱 📺 ⬇️ 📺 📺 📺 📺 📺 📺 📺 📺

Explore

What do you want to learn?

Roman

Viewing: Original Version / No session selected / Kotlin for Java Developers

Edit Course

Help

Back to Week 1

Lessons

This Course: Kotlin for Java Developers

Home

Next

Introduction

✓ Video: Introduction to the course
2 min

▶ Video: What is Kotlin?
4 min

✓ Video: History of Kotlin
3 min

✓ Video: Developing Kotlin
2 min

1.00

stepik

Kotlin

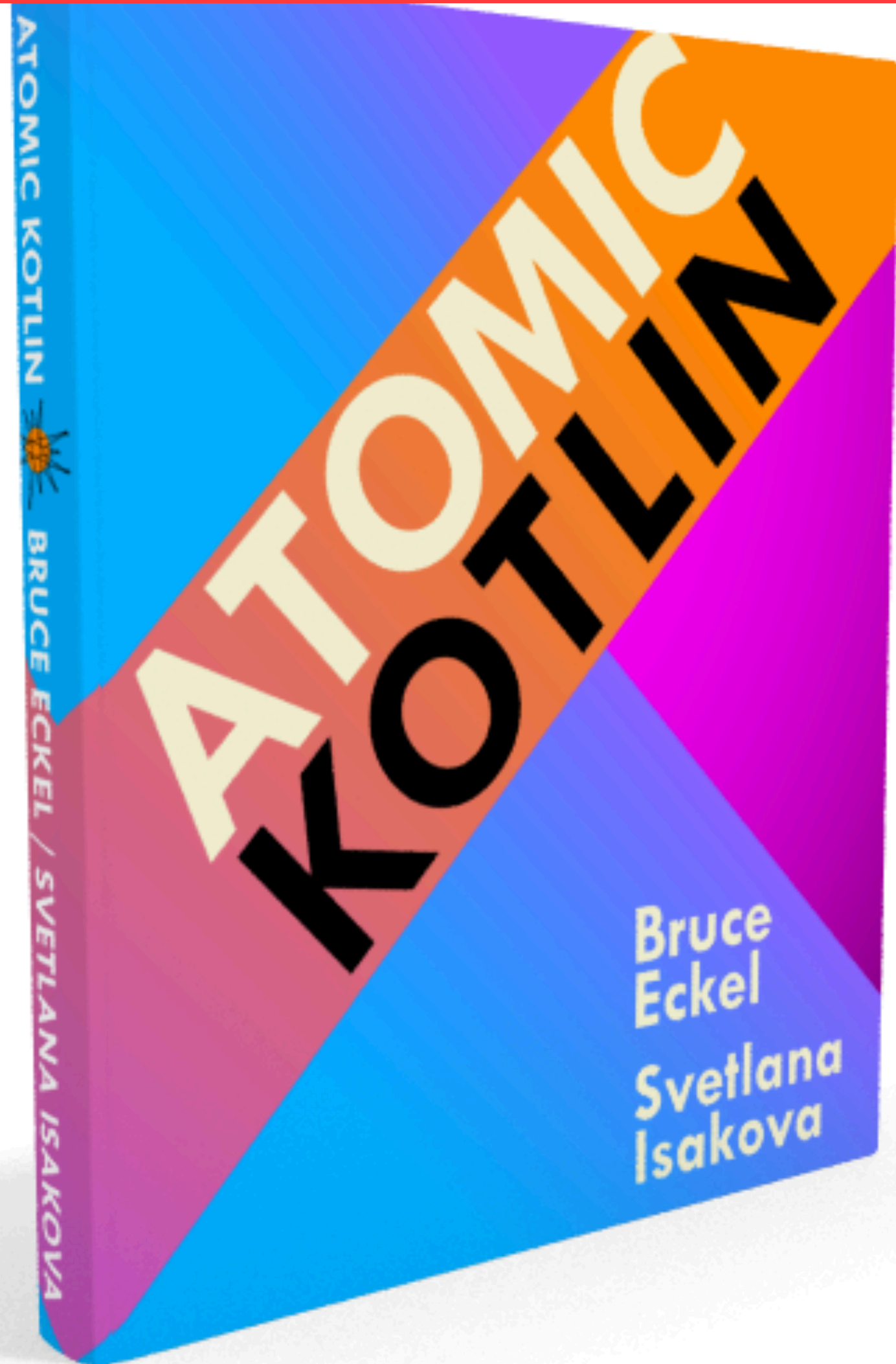
for Java developers

0:00 / 2:40

Introduction to the course



Atomic Kotlin



EduTools

Course

Kotlin Koans 7/42

Introduction

Hello, world!

Java to Kotlin conversion

Named arguments

Default arguments

Lambdas

Strings

Task.kt

Data classes

Nullable types

Smart casts

Extension functions

Object expressions

SAM conversions

Extensions on collections

Conventions

Collections

Properties

Builders

Generics

Task.kt

1

2

3

```
val month = "(JAN|FEB|MAR|APR|MAY|JUN|JUL|AUG|SEP|OCT|NOV|DEC)"
fun getPattern(): String = """"\d{2} $month \d{4}"""
```

Task Description

Strings

Read about [different string](#) Kotlin.

Raw strings are useful for w
need to escape a backslash
pattern that matches a date
a dot, two digits, a dot, four

```
fun getPattern() = ""
```

Using month variable rewri
matches the date in format
whitespace, a month abbrev

play.kotl.in

← → ↻ 🔒 https://play.kotlinlang.org/#eyJ2ZXJzaW9uljoiMS4zLVJDIiwicGxhdGZvcn0iOiJqYXZhliwiY...



Programming language
targeting JVM, Android, JavaScript and Native

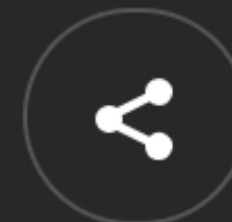
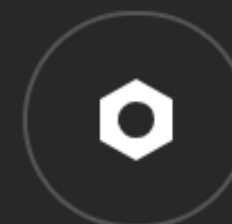
Playground

Examples

Koans

```
/**
 * You can edit, run, and share this code.
 * play.kotlinlang.org
 */

fun main() {
    println("Hello, world!!!")
}
```



Hello, world!!!



kotlin.in/learn

HAVE A NICE KOTLIN