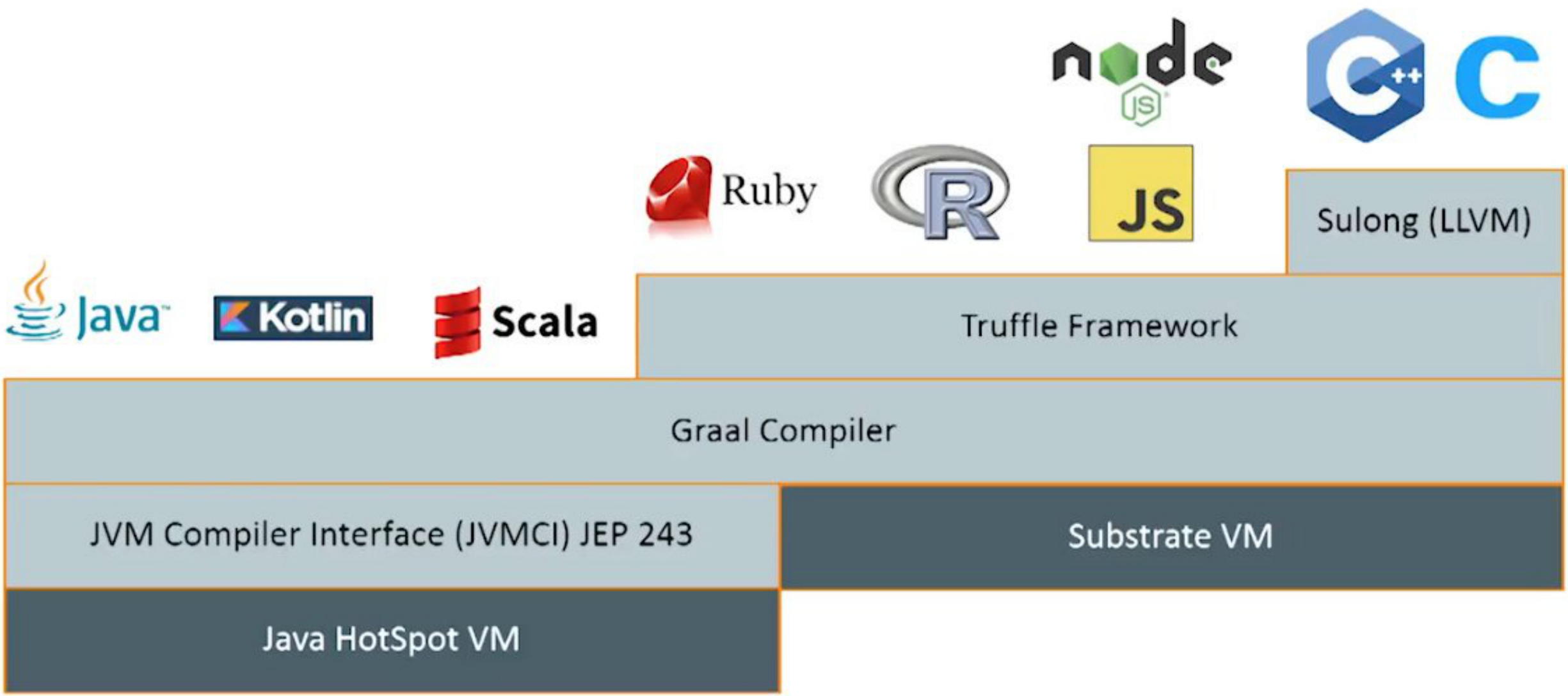
Hands on GraalVM


Ruby
JS
Sulong (LLVM)
Java
Kotlin
Scala
Truffle Framework
Graal Compiler
JVM Compiler Interface (JVMCI) JEP 243
Substrate VM
Java HotSpot VM

GraalVM in a Nutshell

- **Polyglot Runtime:** JVM Languages, R, JavaScript, NodeJS, Ruby, Python, C/C++ via LLVM
- **Ahead-of-time Compilation**
  - Memory management, thread scheduling via SubstrateVM
- **GraalVM as a Platform**
  - Embed and extend GraalVM with Truffle
  - Implement your own language and tools

Demos

Build CLIs with Picocli and GraalVM

- Picocli is a framework to easily build JVM command line apps.
- Support for ANSI colors, completion, sub commands, annotations and programmatic API.
- Good support for GraalVM AOT Compilation to Native Images via the `ReflectionConfigGenerator` utility.
- Native utilities and sidecar containers can now also be build using Java! **Golang is still cool.**

Polyglot Mayhem

- The Graal Polyglot API allows you to embed and use different languages with full bidirectional interop.

```
private static void helloR(PolyglotMessage message) {
    try (Context context = Context.newBuilder().allowAllAccess(true).build()) {
        context.getPolyglotBindings().putMember("message", message);
        context.eval("R",
                "message <- import('message');" +
                "message$invocations <- message$invocations + 1;" +
                "print(message$text);");
    }
}
```

- **This is not the same as with the Java Scripting API (defined by JSR 223)!**