

# cluetec technology stack

Backend, frontend, mobile apps,  
working method & team

# Backend

## Applications with Spring

- ✔ Spring framework
- ✔ Spring boot
- ✔ Spring data (hibernate, MongoDB abstraction)
- ✔ Spring security
- ✔ Spring batch
- ✔ Spring actuator
- ✔ Netflix stack – service discovery (Eureka), circuit breaker (Hystrix), Intelligent routing (Zuul)
- ✔ Tomcat, Jetty

## Applications with JEE

- ✔ JBoss, Wildfly, Wildfly swarm
- ✔ JPA, Hibernate, JMS, etc.

## Message queues

- ✔ ActiveMQ
- ✔ RabbitMQ

## Stream processing

- ✔ Apache Kafka
- ✔ MQTT
- ✔ Spark, Flink (basics)

## Databases

- ✔ **SQL**  
Oracle, PostgreSQL, MS-SQL, SQLServer, MySQL/Maria-DB
- ✔ **NoSQL**  
MongoDB, elasticsearch, Redis, Cassandra, InfluxDB, Druid

## Deployment

- ✔ Docker as a container platform (Compose, Swarm)
- ✔ nginx als Proxy
- ✔ Ansible for the automatic orchestration of services and containers
- ✔ Kubernetes
- ✔ Microsoft Azure cloud computing (e.g. AKS – Azure Kubernetes service)

## Monitoring

- ✔ Graylog
- ✔ Grafana
- ✔ icinga
- ✔ Logstash
- ✔ Tick-Stack

## Tools

- ✔ Maven
- ✔ Eclipse
- ✔ IntelliJ
- ✔ Git
- ✔ GitLab CI
- ✔ Jenkins 2

# Frontend

## Frameworks

- ✓ Angular
- ✓ TypeScript
- ✓ RxJS
- ✓ ReactJS
- ✓ nginx as a container
- ✓ ng-Bootstrap (Responsive Design)
- ✓ SCSS

## Tools

- ✓ Node.js / npm
- ✓ Webpack
- ✓ Karma
- ✓ Protractor
- ✓ Mocha
- ✓ Selenium

# Mobile apps

## iOS

- ✓ Swift
- ✓ Objective-C
- ✓ SQLite
- ✓ Core Data
- ✓ RxSwift
- ✓ Alamofire
- ✓ Xcode
- ✓ Carthage
- ✓ CocoaPods

## Android

- ✓ Java
- ✓ SQLite
- ✓ RxJava
- ✓ Gradle
- ✓ Android Studio

# Working method

## Agile methods

- ✔ Scrum and Kanban as methodologies
- ✔ Principles: KISS, YAGNI, DRY
- ✔ Joint definition of done – e.g. reviews, performance, automated tests, etc.

## Continuous integration / delivery / deployment

- ✔ CD staging pipeline with GitLab CI for all areas (backend, web and mobile)
- ✔ Automatic tests (Unit, Integration, System)
- ✔ Code reviews via GitLab merge requests
- ✔ Static code analysis with SonarQube
- ✔ Automatic packaging (e.g. Docker images)
- ✔ Automatic deployment (develop, staging, production)
- ✔ Nightly builds

## Architectures

- ✔ cloud native
- ✔ Client-Server
- ✔ Pub-Sub Pattern (e.g. MQTT)
- ✔ Reactive
- ✔ RESTful
- ✔ Domain-Driven design
- ✔ Microservices

# Team

## People & skills

- ✔ Development team – diploma, bachelor, master KIT, HSKA, HFU
- ✔ UX and graphic design
- ✔ Analytic and technological excellence
- ✔ T-shape skills: specialised with broad base of knowledge
- ✔ Excitement for technology and complex tasks
- ✔ Certified Scrum master and POs
- ✔ Strong softskills