Use Gradle as build tool

Context and Problem Statement

Which build tool should be used?

Considered Options

- [Maven](#)
- [Gradle](#)
- [Ant](#)

Decision Outcome

Chosen option: "Gradle", because it is lean and fits our development style.

Pros and Cons of the Options

Maven

- Good, because [there is a plugin for almost everything](#)
- Good, because [it has good integration with third party tools](#)
- Good, because [it has robust performance](#)
- Good, because [it has a high popularity](#)
- Good, [if one favors declarative over imperative](#)
- Bad, because [getting a dependency list is not straight forward](#)
- Bad, because [it based on a fixed and linear model of phases](#)
- Bad, because [it is hard to customize](#)
- Bad, because [it needs plugins for everything](#)
- Bad, because [it is verbose leading to huge build files](#)

Gradle

- Good, because [its build scripts are short](#)
- Good, because [it follows the convention over configuration approach](#)
- Good, because [it offers a graph-based task dependencies](#)
- Good, because [it is easy to customize](#)

- Good, because it offers custom dependency scopes
- Good, because it has good community support
- Good, because its performance can be 100 times more than maven's performance.
- Bad, because not that many plugins are available/maintained yet
- Bad, because it lacks a wide variety of application server integrations
- Bad, because it has a medium popularity
- Bad, because it allows custom build scripts which need to be debugged

Ant

- Good, because it offers a lot of control over the build process
- Good, because it has an agile dependency manager
- Good, because it has a low learning curve
- Bad, because build scripts can quickly become huge
- Bad, because everything has to be written from scratch
- Bad, because no conventions are enforced which can make it hard to understand someone else's build script
- Bad, because it has nearly no community support
- Bad, because it has a low popularity
- Bad, because it offers too much freedom

Links

- GADR: https://github.com/adr/gadr-java/blob/master/gadr-java–build-tool.md