

codecentric 

Agile JavaScript

Frameworks, Tools, Services

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Agile Software Development

Scrum

Kanban

Agile Manifesto

Respond to change

Customer collaboration

Deliver frequently

Ensure quality

Working software



Agile Practices

BDD

Continuous Integration

Static Code Analysis

DDD

TDD

Continuous Delivery

Code Reviews



Frameworks, Tools and Services



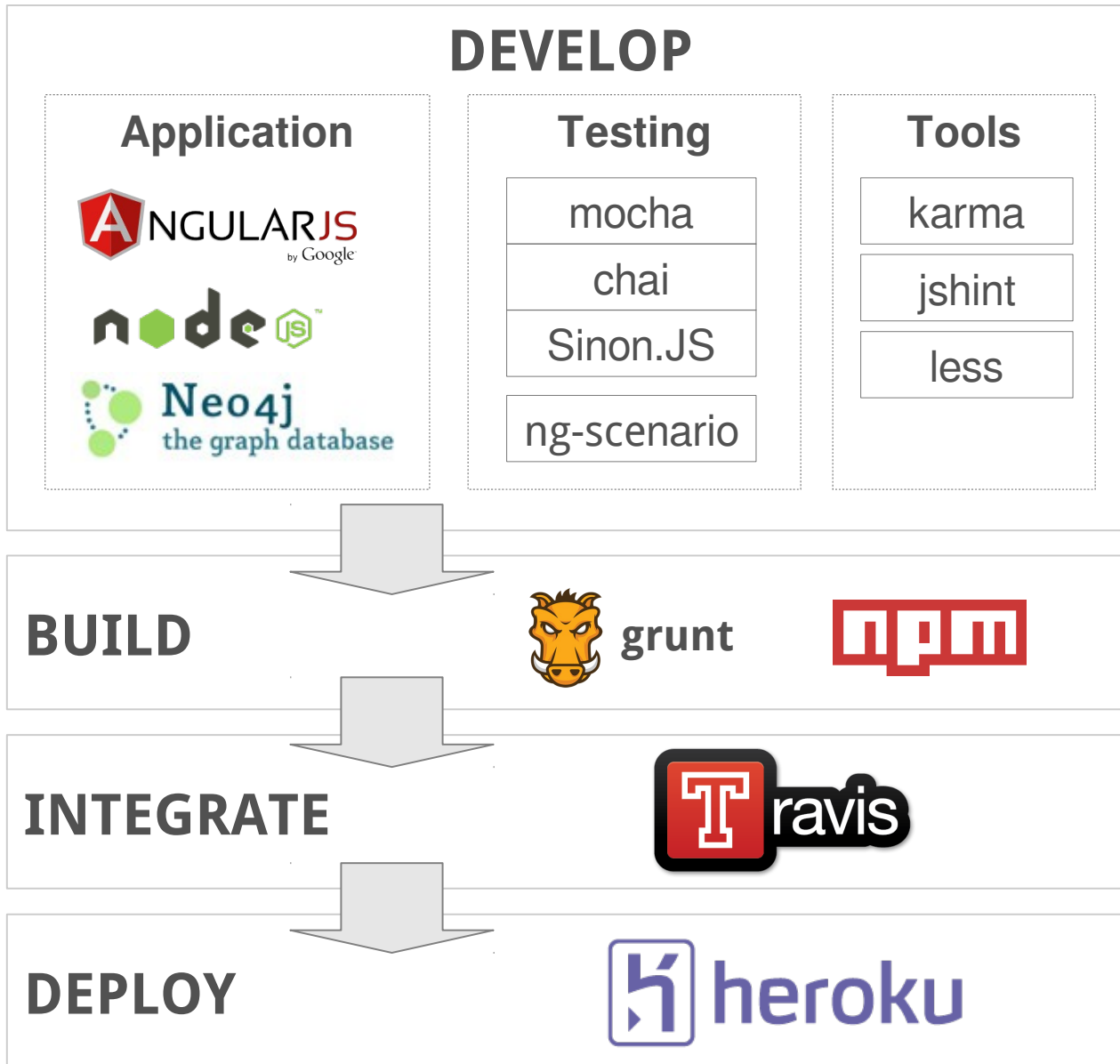
Everything together

BDD
Robot Scrum Cucumber Kanban
Agile Manifesto Continuous Integration mocha
Puppet Grunt Respond to change
Static Code Analysis Customer collaboration GitHub
Travis-CI karma
Continuous Delivery Ensure quality DDD
Deliver frequently JBehave Mercurial
Jenkins TDD Code Reviews
Maven Working software Jira

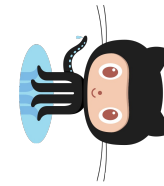


More structure please ...





COLLABORATE



GitHub



One step at a time...



DEVELOP

Application



AngularJS

„Superheroic JavaScript MVW framework“

Node.JS

Server-Side JavaScript implementation with strictly asynchronous I/O

Express.JS

HTTP-Server framework

Neo4J

„The world's leading graph database“



Now...

... we can start developing the application.

But...

... what about collaboration in the team?

- Work on the same code simultaneously?
- Keep track of open bugs?
- Discuss and review code?



DEVELOP

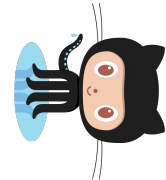
Application



GitHub is more than just a VCS

- Bugtracker
- Code Review Tool
- Wiki
- Documentation

COLLABORATE



GitHub



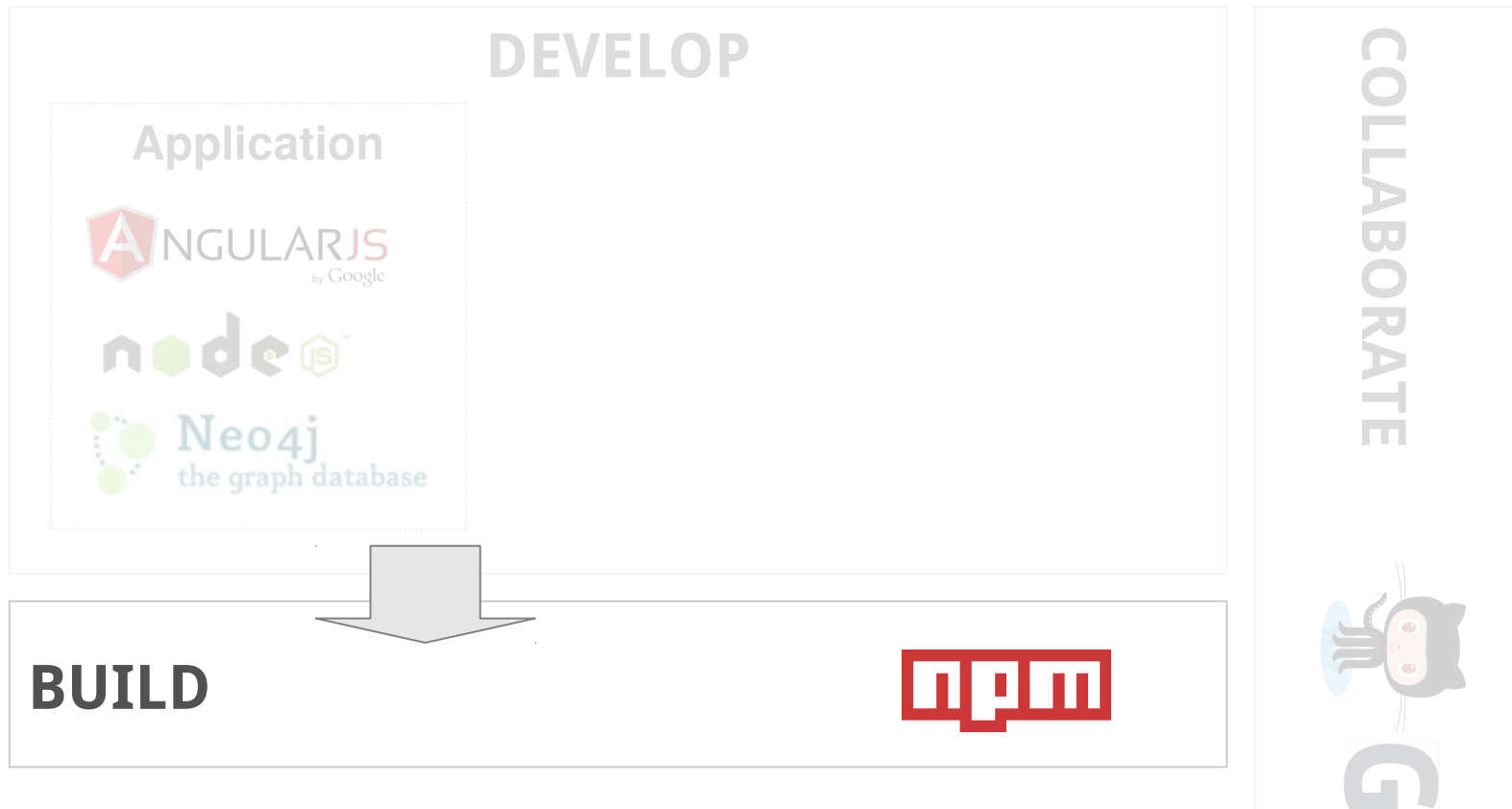
Now...

... we can work together on our project.

But...

... how can we ensure everybody uses the same versions of the necessary frameworks?





Node Package Manager

- Dependency management for JavaScript projects
- Is part of NodeJS
- Available Packages on npmjs.org



Now...

... we can deal with dependencies (even transitive ones).

But...

... what about testing?

- Unit-Tests?
- Integration-Tests?
- End-to-End Tests?



DEVELOP

Application



Testing

mocha

chai

Sinon.JS

ng-scenario

COLLABORATE



AngularJS Scenario Runner for end-to-end-tests

Mocha for unit-tests (client- and server-side)

Utility-libraries:

- **Sinon.JS** for stubbing/mocking
- **Chai** for readable assertions



Now...

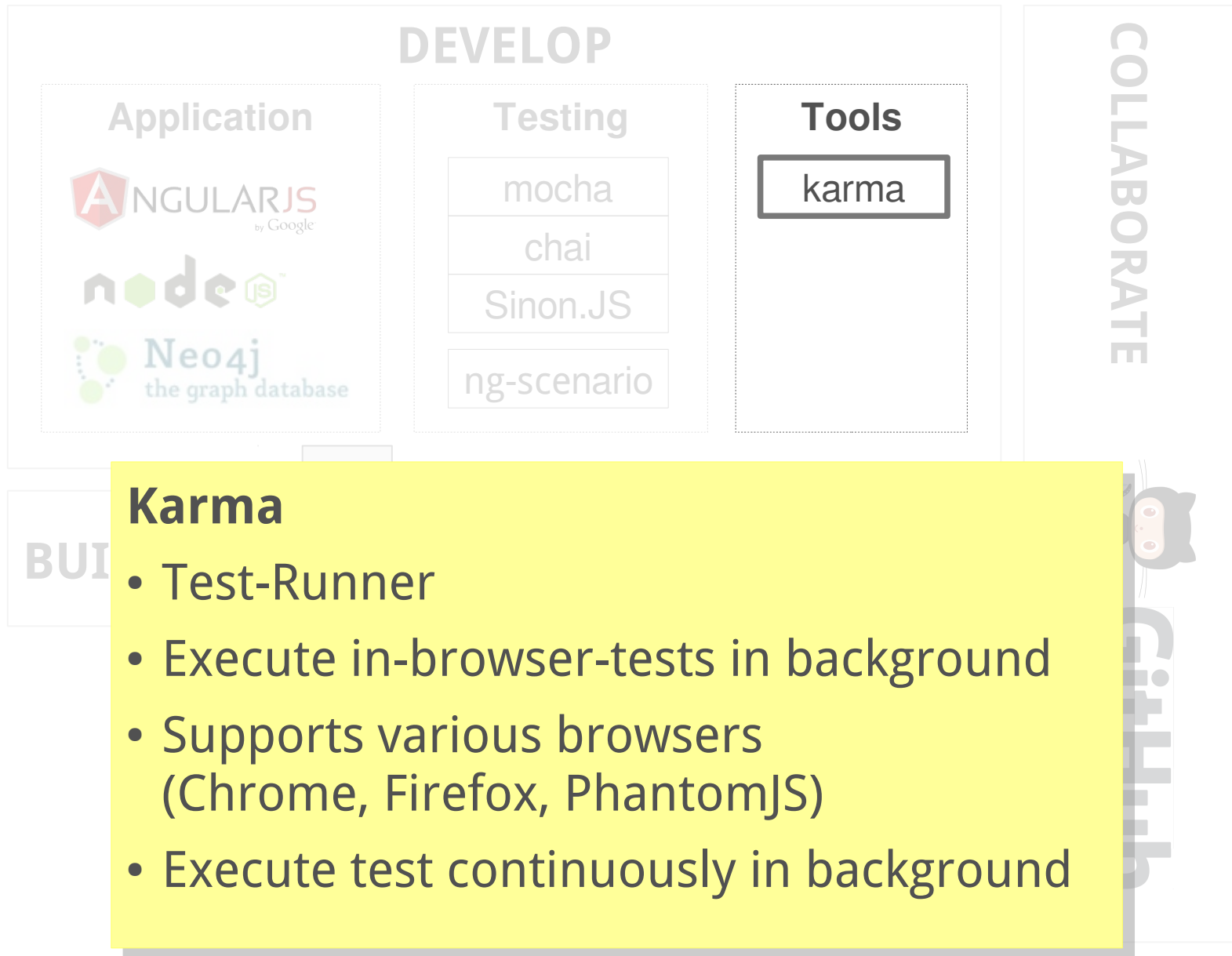
... we have tests to ensure high functional quality and prevent regression.

But...

... how can we automate test execution?

- Run client-side tests from command-line (without having to refresh the browser)?
- Automatically run tests whenever code changes?
- Get instant feedback when a test fails?





Karma

- Test-Runner
- Execute in-browser-tests in background
- Supports various browsers (Chrome, Firefox, PhantomJS)
- Execute test continuously in background



Now...

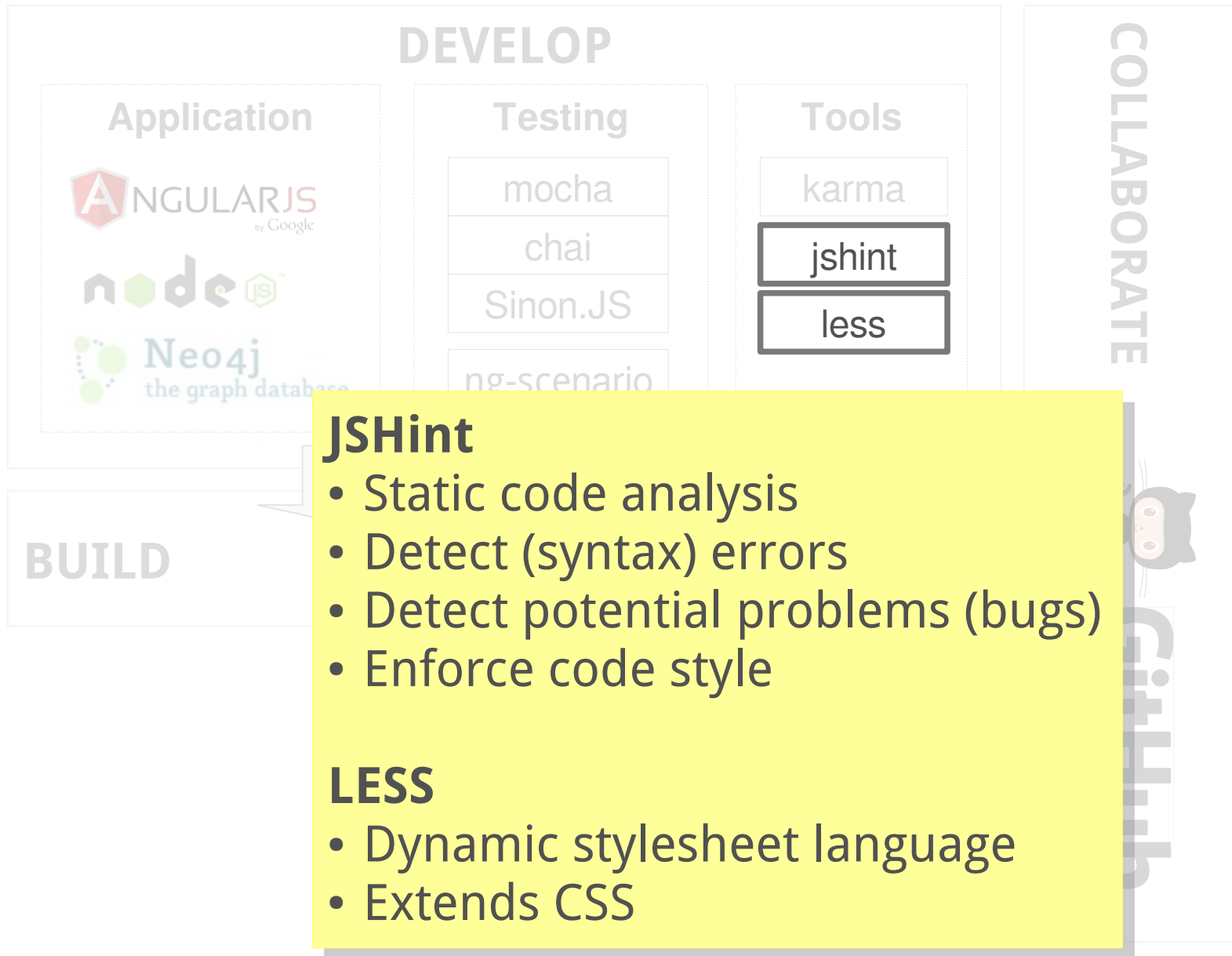
... test execution is easy.

But...

... are there other tools to support developers?

- Static code analysis?
- Enforce code style?
- Compile JS/CSS?





Now...

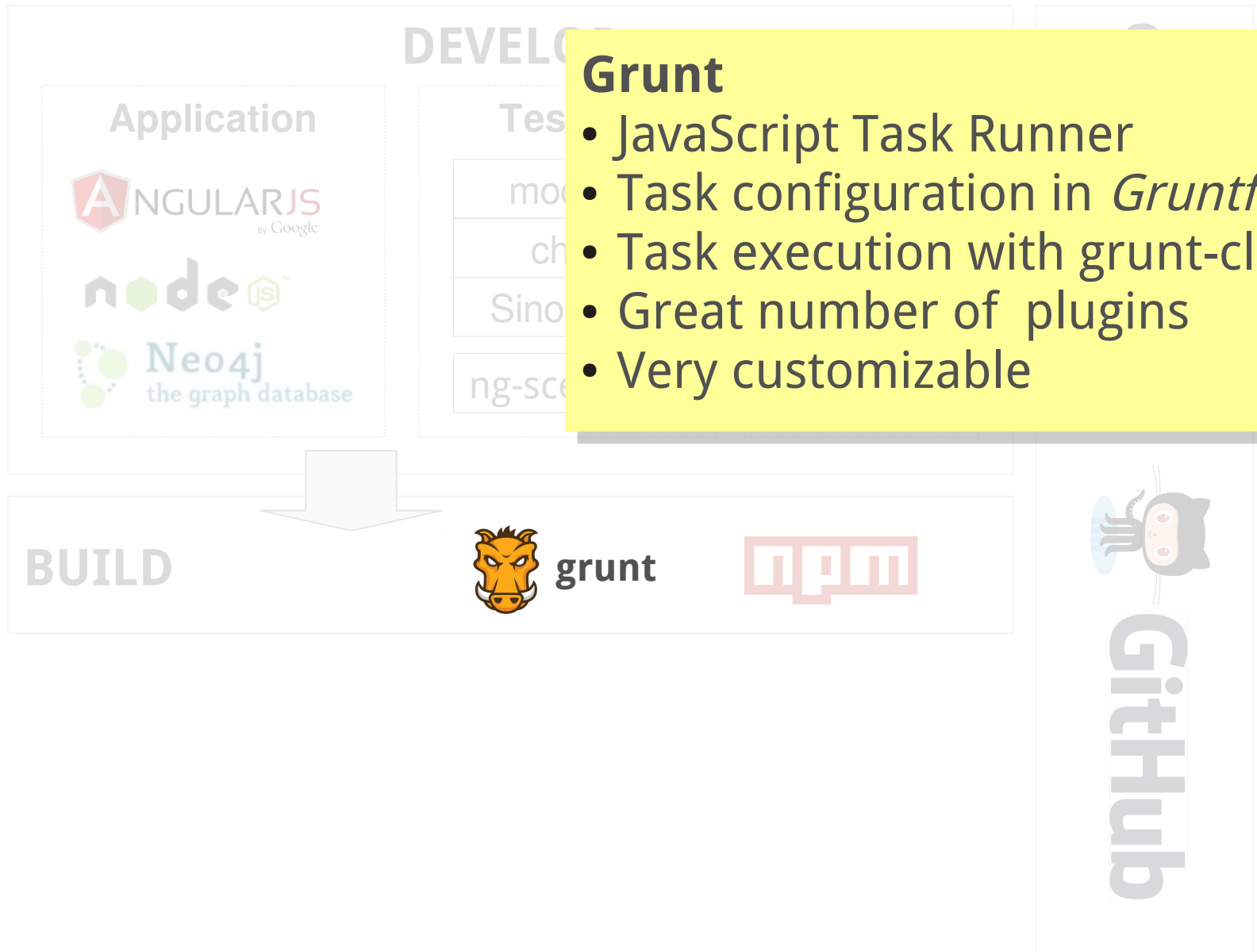
... we have plenty of tools.

But...

... all these tools have their own command line interface and configuration options.

We want one tool to rule them all!





Grunt

- JavaScript Task Runner
- Task configuration in *Gruntfile.js*
- Task execution with grunt-cli
- Great number of plugins
- Very customizable



Now...

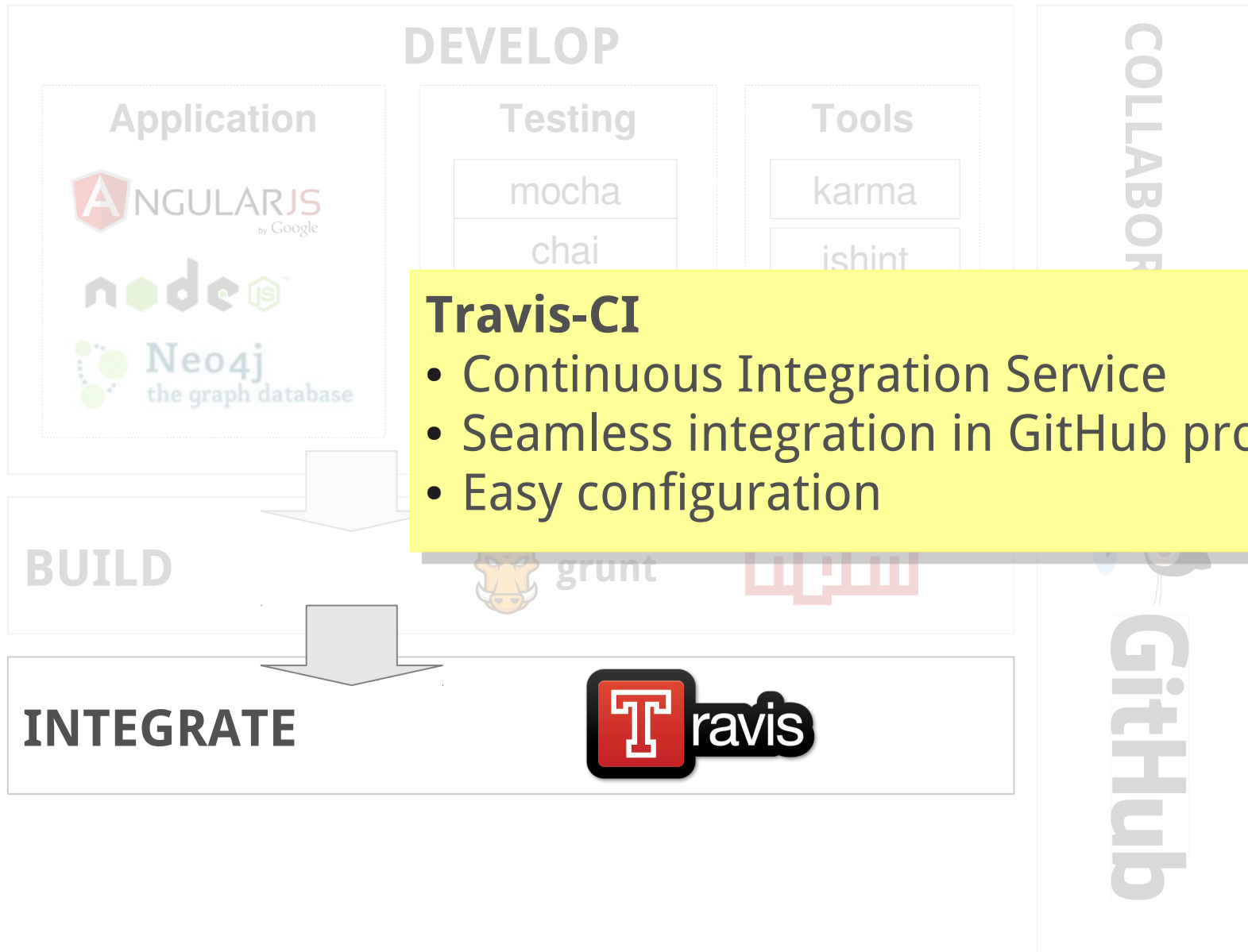
... the build chain is complete.

But...

... the build is only executed locally.

- Trigger build on each commit?
- Warn developers when build fails?
- Avoid works-on-my-machine problem?





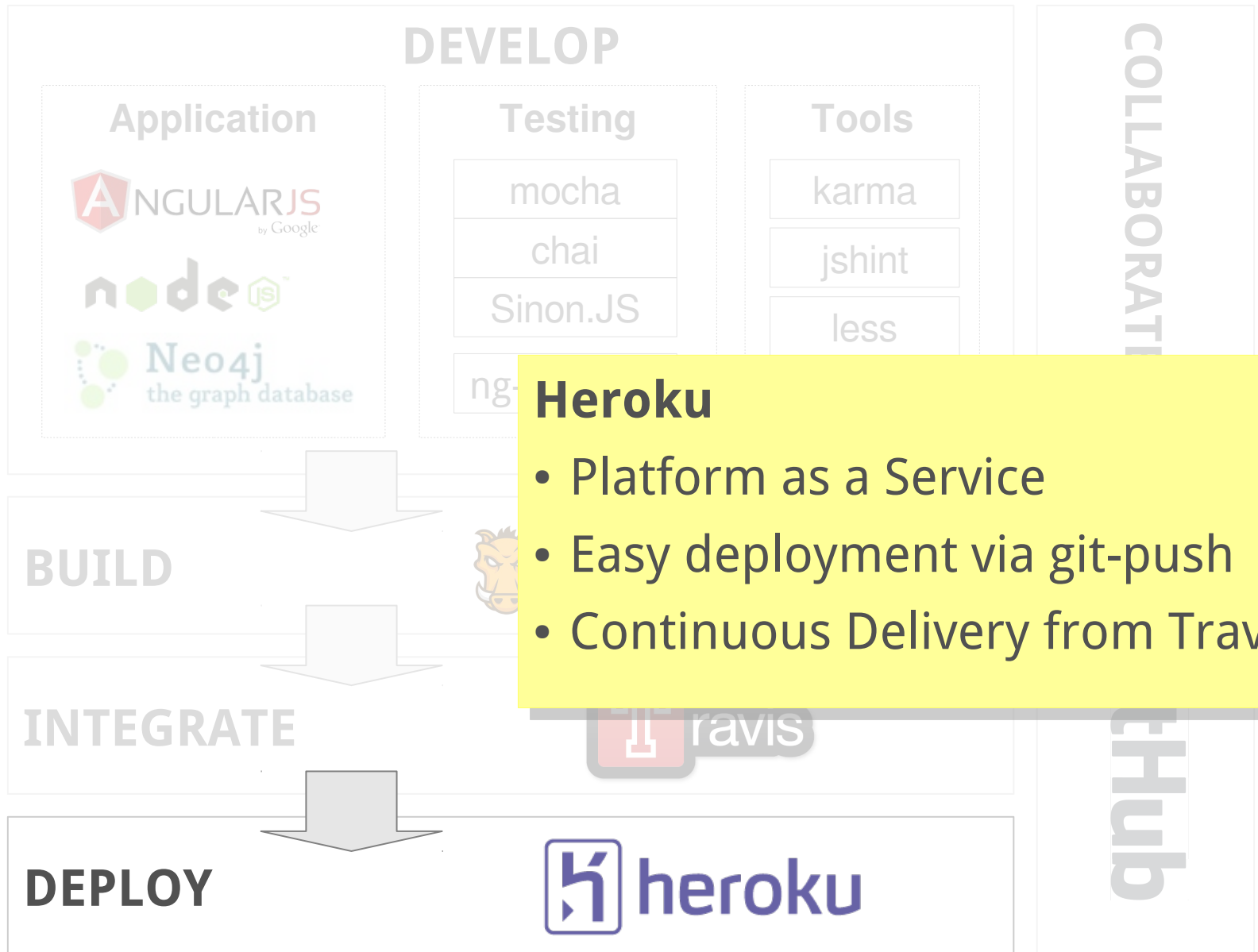
Is something still missing?

Yes, ...

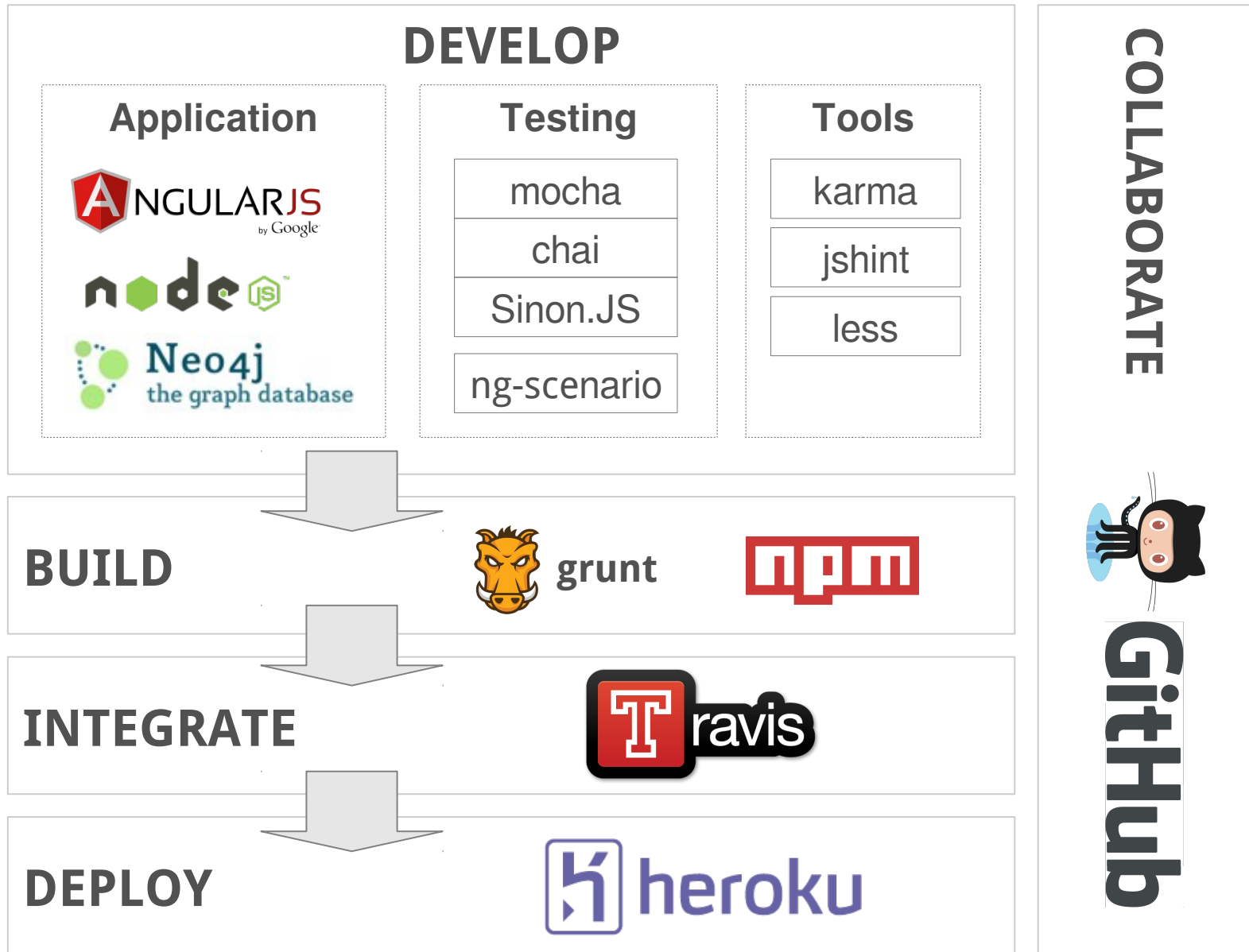
... we want to go live!

- Automated deployment after successful build?
- Deployment to different environments (production, staging, etc)?

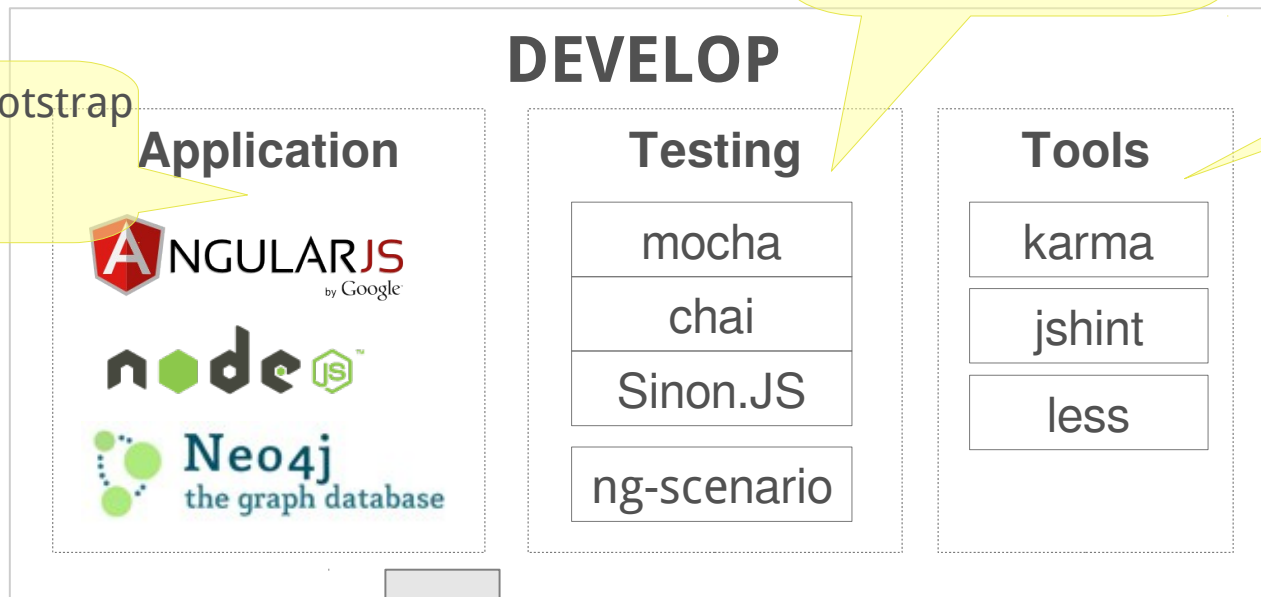




The final picture



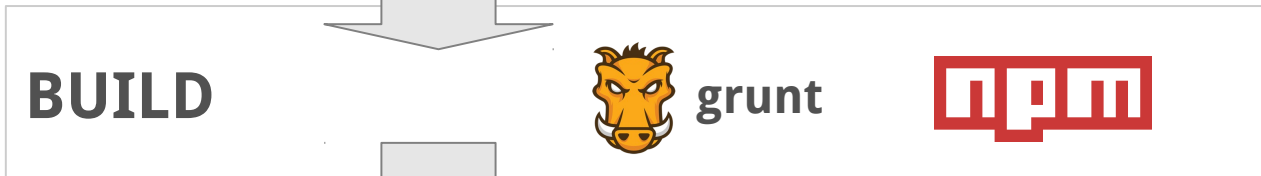
Anything else?



- Twitter Bootstrap
- D3.js
- ...

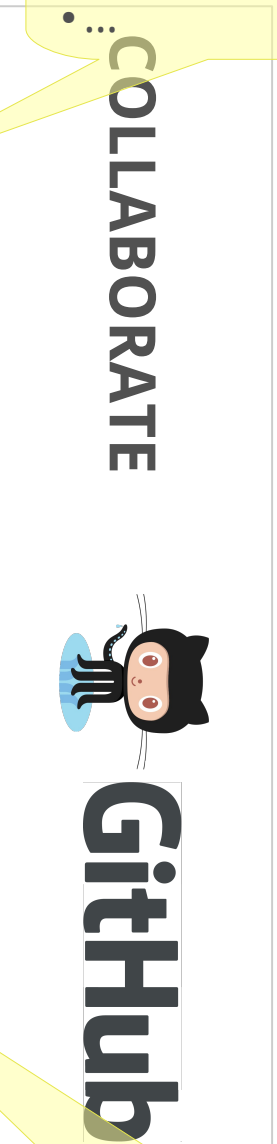
- cucumber
- nodejs-webdriver
- ...

- watchservice
- test-coverage
- ...



- rollback
- schema-migration
- ...

- artifact archive
- reporting
- ...



(Java) Alternative

