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INSIDE KNOWLEDGE

Professional Angular Testing

1 - Introduction

About Me...

- Rainer Hahnekamp

  ANGULARarchitects.io
- Trainings and Consulting

https://www.youtube.com/c/RainerHahnekamp

https://www.ng-news.com

@RainerHahnekamp

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Goal

- Cover major testing technologies and techniques
- Understanding trade-offs between unit and integration tests
- Try them out

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Organisational

- 4 Units per Day
- 15 minutes breaks
- 1 hour lunch break from 12.00 - 13.00

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Schedule

- 13.30 - 17.30
- 1 x 15 minutes break

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Agenda

Part 1
Unit Tests

- Introduction
- Asynchronity
- Mocking
- RxJs Marbles

Part 2
Component & Integration Tests

- Basics Test Bed
- Miscellaneous
  - Mocking Components
  - Test Setup
- PowerTools
  - Spectator
  - Testing Libraries
  - Harnesses
- Testing Strategies

Part 3
E2E & Visual Regression

- End-to-End Tests
  - Basic
  - Advanced
- Component Testing
- Visual Regression
- Storybook

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Repository

- https://github.com/rainerhahnekamp/2022-07-25-testing-public
  - npx yarn
- https://drive.google.com/file/d/1vq_l88Akitp5iWH8k9AL4A96c0N3t8K0/view?usp=sharing

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Office Hours
Today at 18.00

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Exercise-intensive workshop

Engage!

Introduction Round

1. Who are you?
2. What do you do (in your job)?
3. What topic(s) interests you the most?

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Outside-In Tests

Integration Tests

State-Driven Tests

Inside-Out Tests

Sociable Tests

Behaviour-Driven Tests

Isolated Tests

Laser Tests

Component Tests

Solitary Tests

Flashlight Tests

Unit Tests

Integrated Tests

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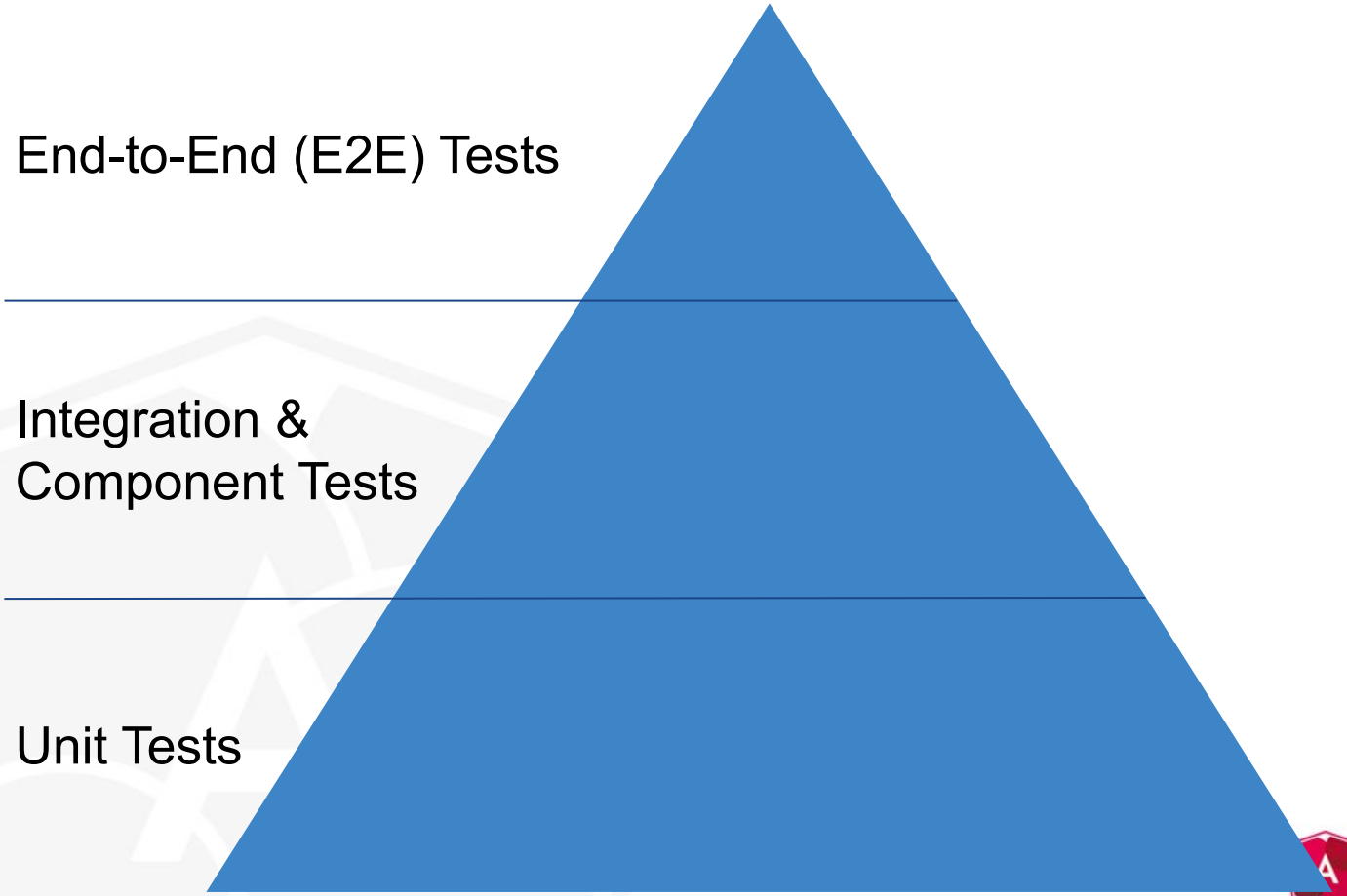

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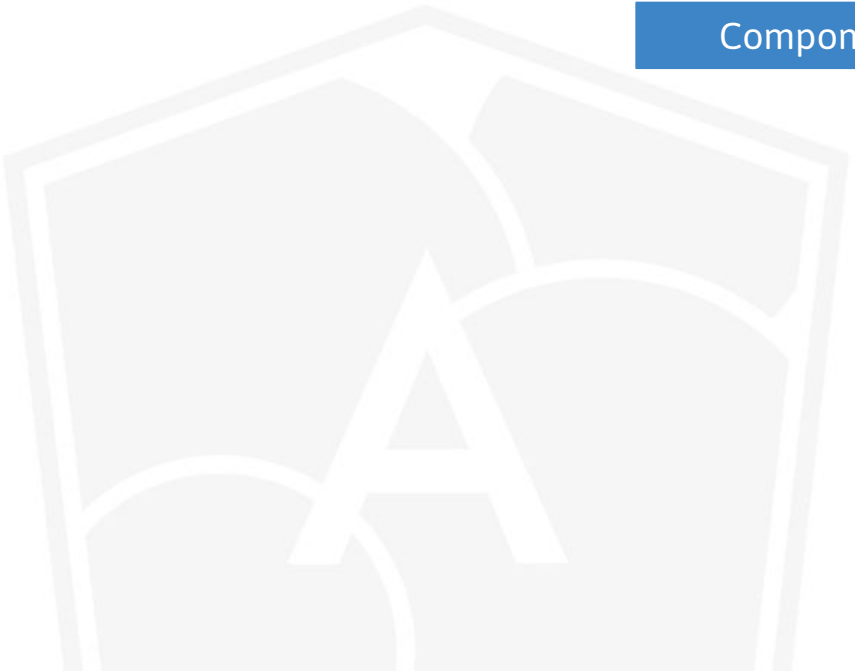
Component



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Component

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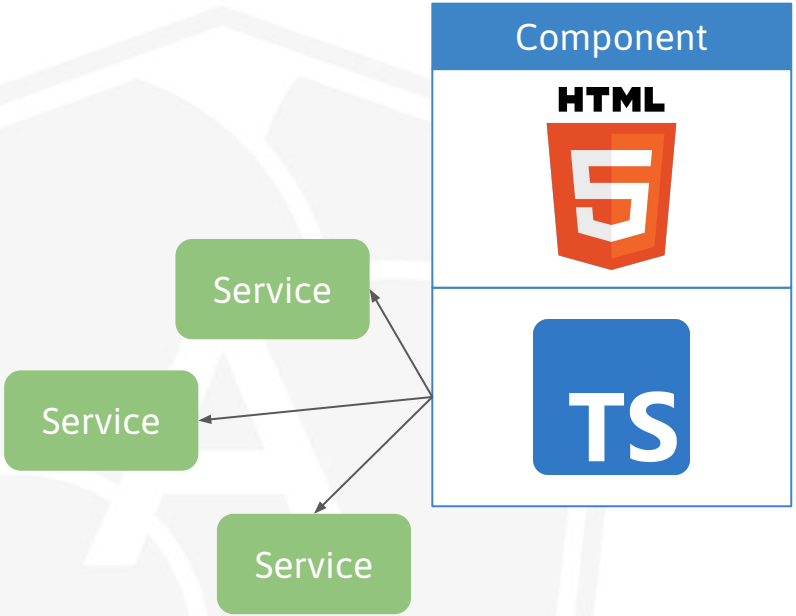

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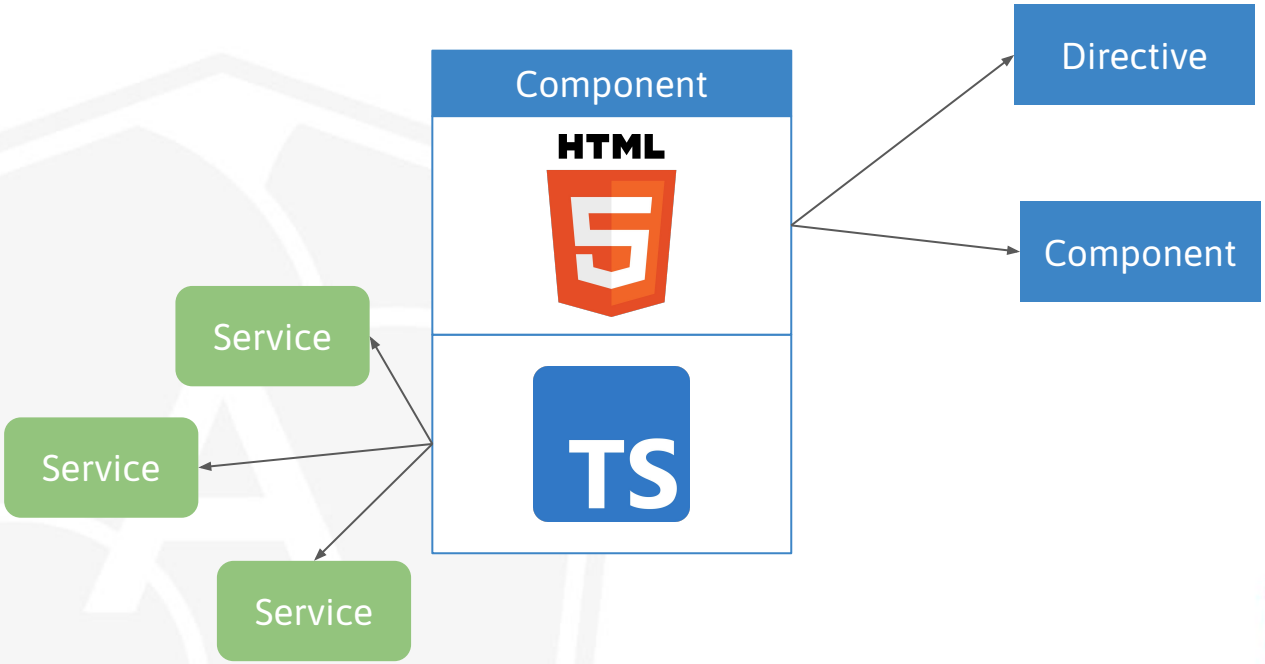

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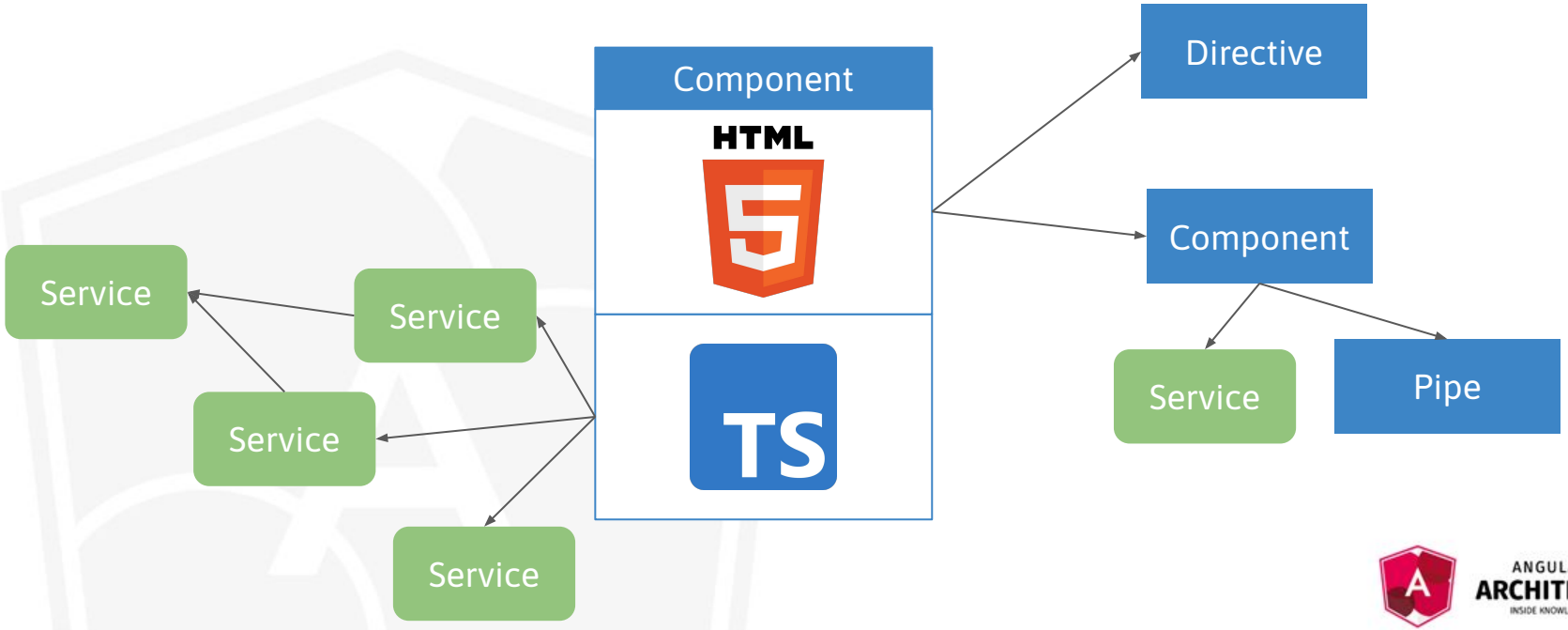
Component
HTML
TS
Directive
Component
Service
Pipe
Service
Service
Service
Service
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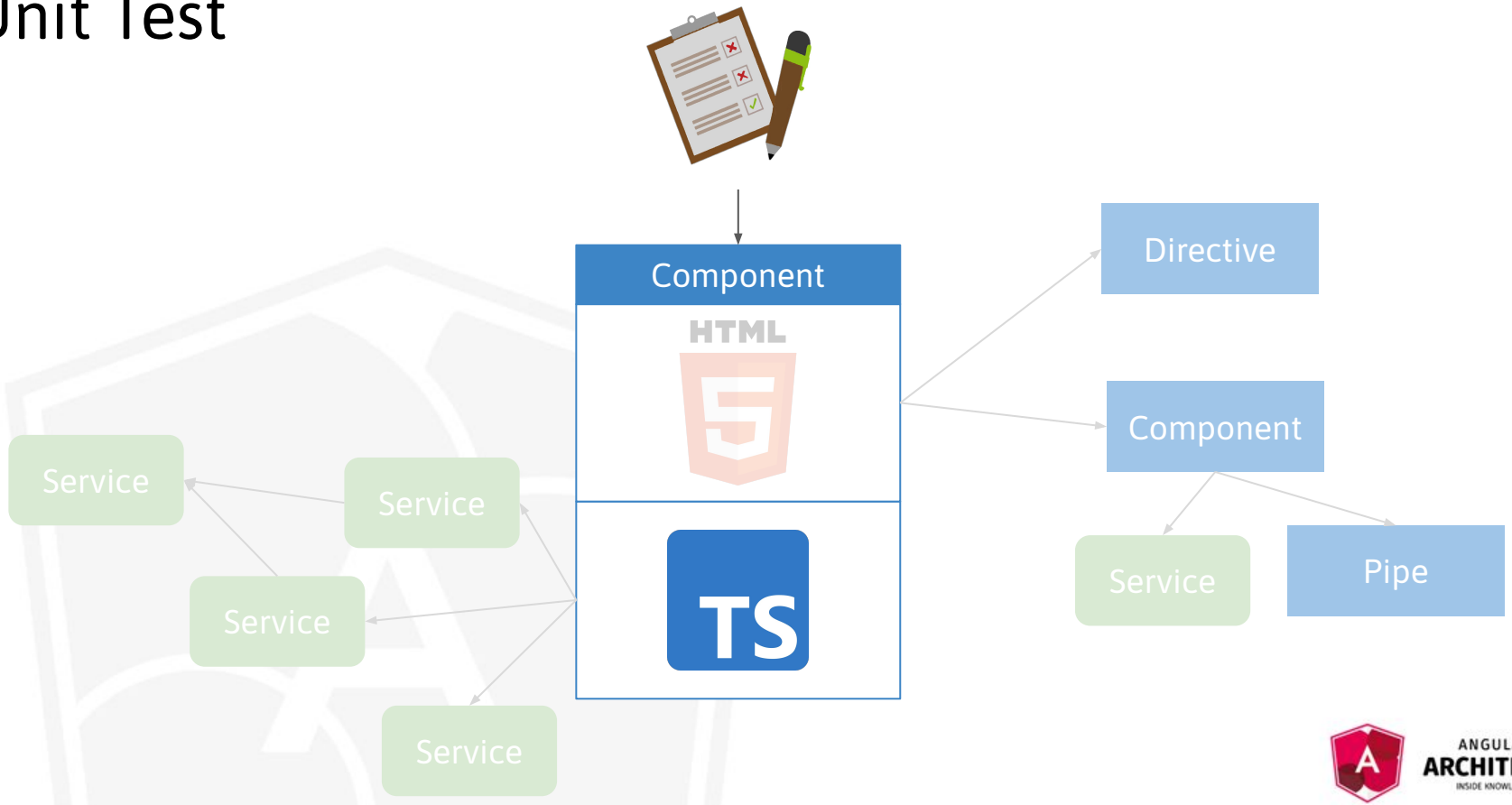
Unit Test



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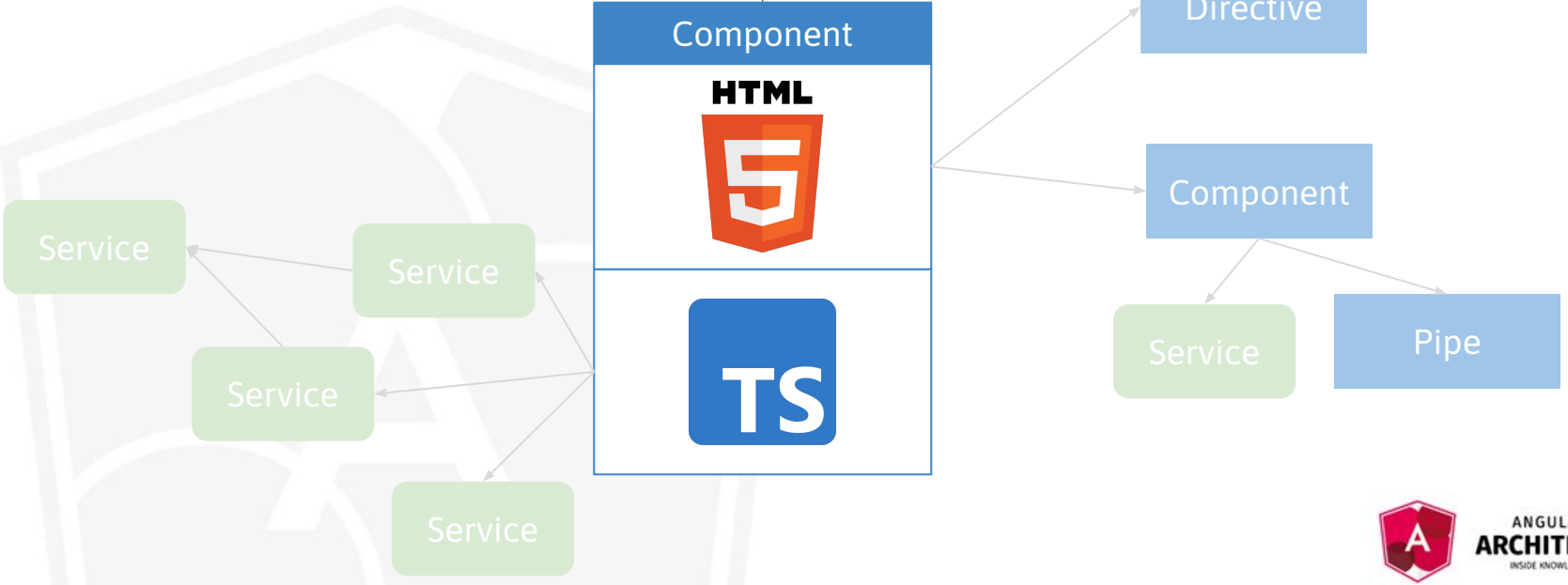
~Component Test



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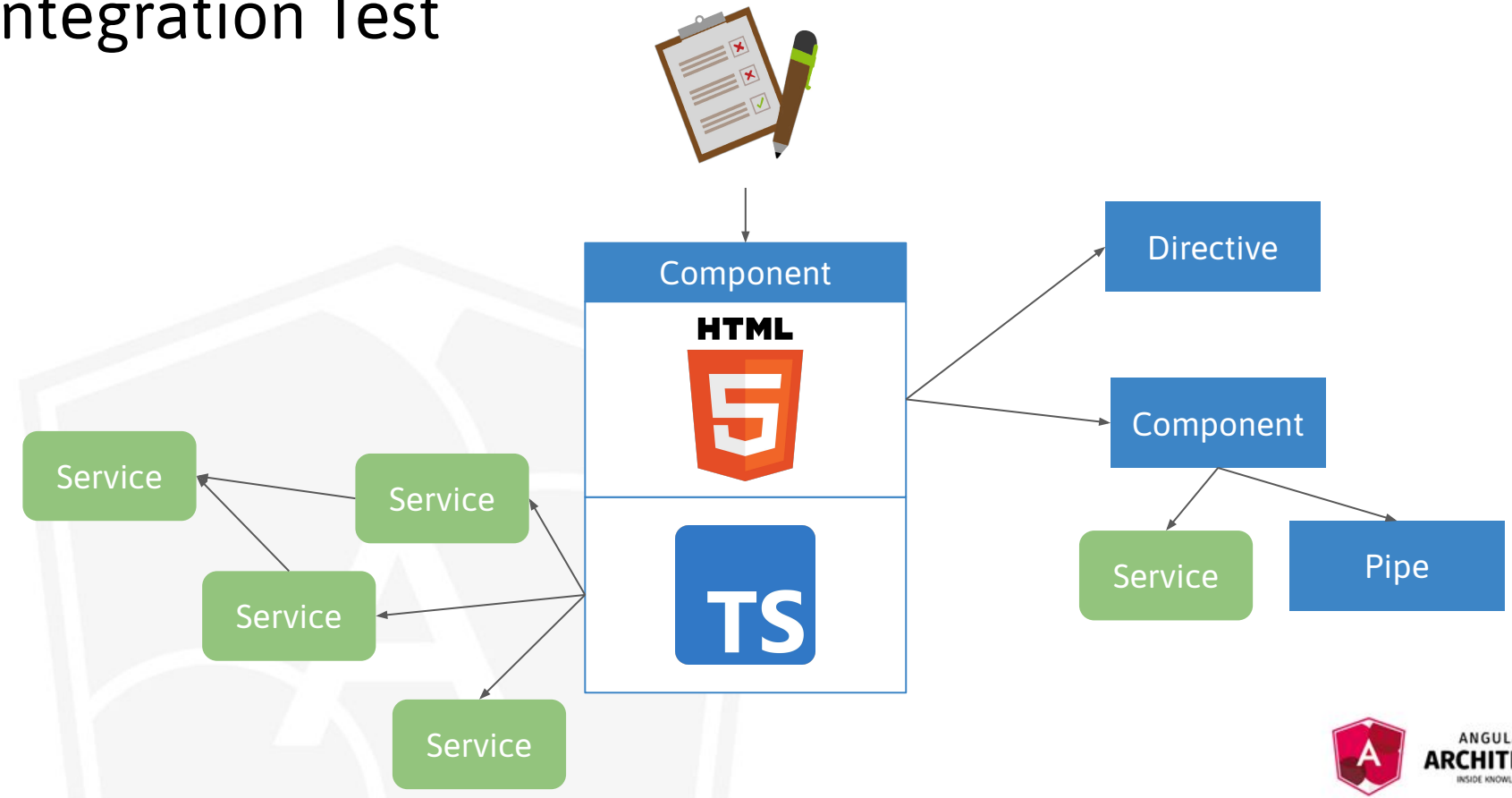
Integration Test



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Pros & Cons

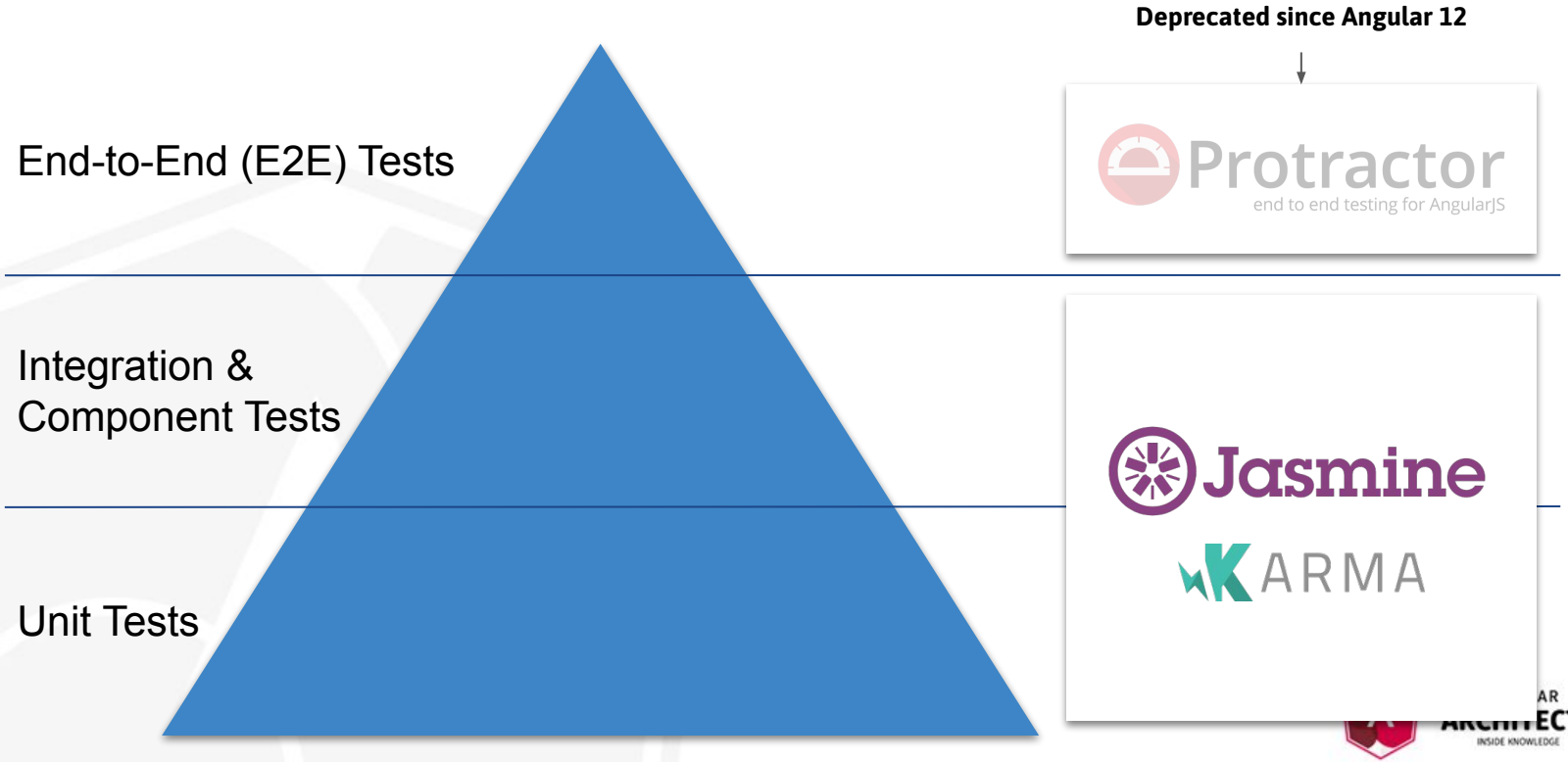
Unit Tests

- We test a **class**
- Mock everything except the class
  - Very tightly coupled to implementation
- Disadvantages
  - No refactoring
  - Lots of code for mocking
  - No interplay testing
- Advantages
  - Edge cases, finding bugs, exploratory
  - Great code quality (FP)
  - Fast

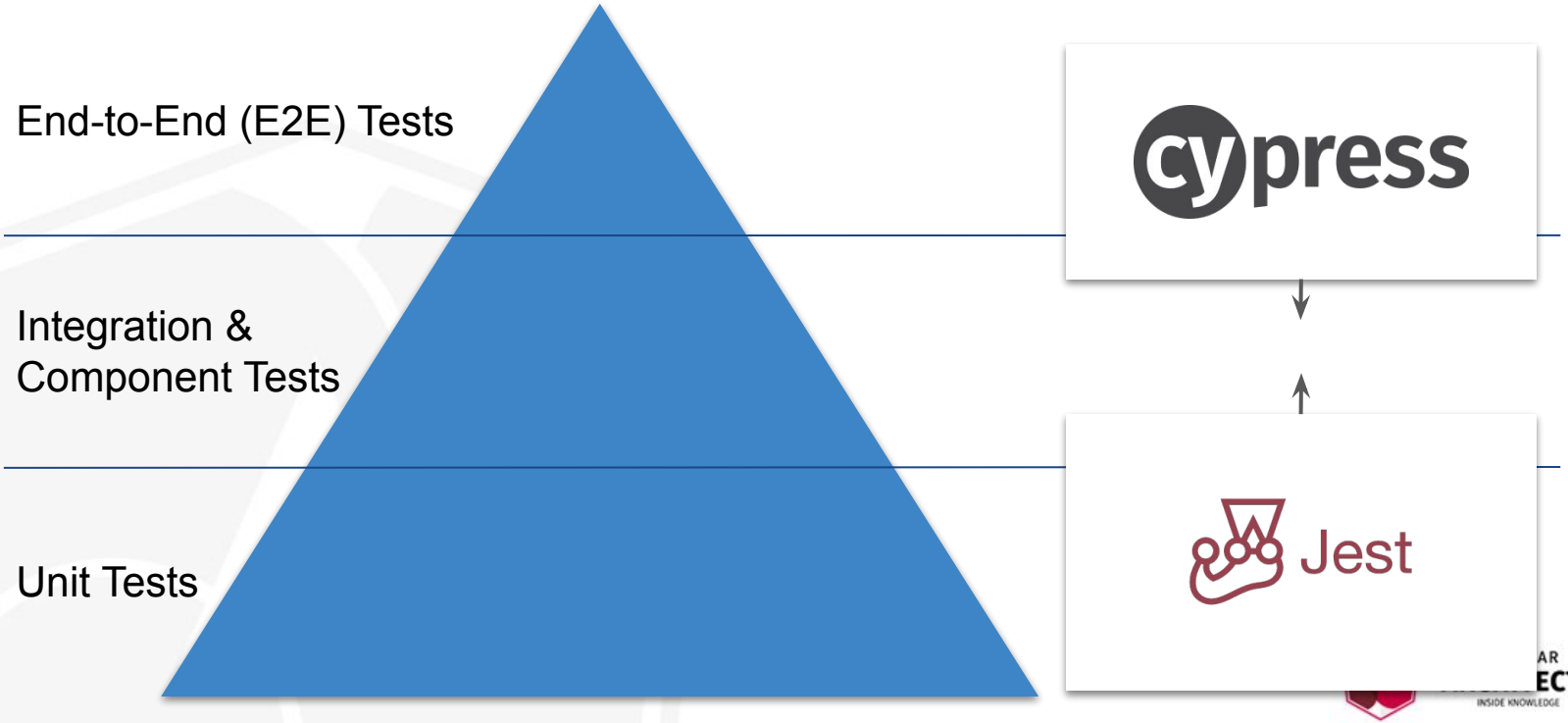
Integration Test

- We test a **behaviour**
- Mock out-of-system dependencies
  - Runs against an API (UI)
- Advantages
  - Great for refactoring
  - Efficient (coverage)
- Disadvantages
  - Large setup required
  - Slow
  - Hard (Async, Change Detection, DOM,...)
  - Code Quality is of no concern

The "Official" Version



The "Better" Version



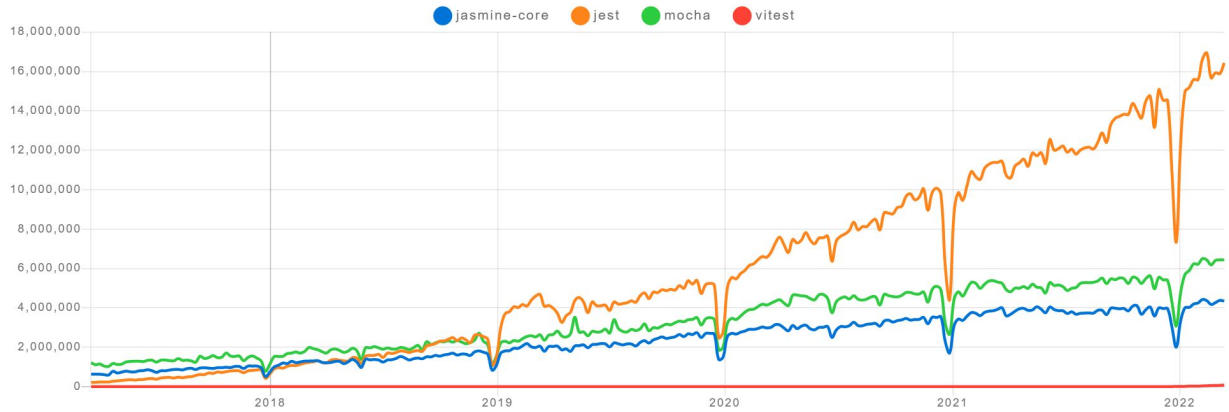
npm trends

jasmine-core vs jest vs mocha vs vitest

Enter an npm package...

jasmine-core × jest × mocha × vitest × + jasmine + qunit + ava + chai

Downloads in past 5 Years



Stats

	Stars	Issues	Version	Updated	Created	Size
jasmine-core	15,295	53	4.0.1	a month ago	8 years ago	minzipped size 26.5 KB
jest	38,190	1,590	27.5.1	a month ago	10 years ago	bundlephobia 429
mocha	21,204	262	9.2.2	11 days ago	10 years ago	minzipped size 63.5 KB
vitest	3,527	89	0.7.7	a day ago	4 months ago	bundlephobia 429

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