



Comparison guide

Table of Content

Sections

- 01** Key differences (if you're in a hurry)
- 02** Client-side vs Fullstack Frameworks
- 03** Vaadin and Angular in a Nutshell
- 04** Differences in practice
- 05** How users feel
- 06** Get in touch

Key Differences (if you're in a hurry)

01

Architecture

Angular is a client-side library, meaning UI logic runs in the browser and requires you to build and maintain a separate API for data and business logic. **Vaadin** is a full stack framework that keeps most logic on the server and manages a secure, built-in client-server connection.

02

Security

With **Angular**, security is left to the developer—handling API design, authentication, and communication. **Vaadin** integrates enterprise-grade security out of the box, with a single penetration-tested channel between client and server.

03

Development Model

Angular provides only the core view layer, so developers must assemble routing, data fetching, and components from 3rd-party libraries. **Vaadin** comes as a full-stack platform with built-in business-ready components and managed dependencies, simplifying development and maintenance.

04

Maintenance & Support

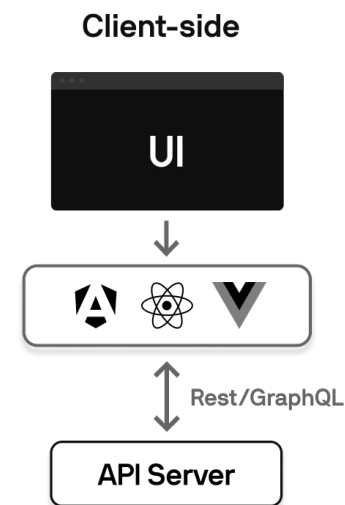
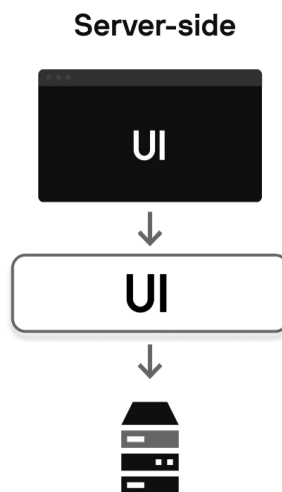
Angular is open source under MIT but has no long-term support, and fixes depend on Google's priorities. **Vaadin** is open source under Apache 2.0, with commercial options offering guaranteed maintenance, patches, and support for up to 15 years. **Vaadin** also offers services directly or its network of global partners e.g. for migration, modernization, theming, mentoring and turn-key development.

Client-side vs Fullstack Frameworks

There are two main architectures in web application development: client-side and server-side. The difference between them is where the UI logic runs.

Fullstack frameworks like Vaadin run the UI on the server and render it in the browser. Server-side applications are more secure due to the architecture, and often quicker to write and easier to maintain due to less complexity. The downside of the server-side architecture is that the server state requires a bit more server resources. Practically however one lightweight server (e.g. AWS EC2) with a large business app can run thousands of concurrent users.

With client-side frameworks/libraries like Angular, React, and Vue run in the browser. To build a complete application, you also need a separate API server to provide data, business logic, and persistence. Communication between the browser and server is up to the application developer, often over REST or GraphQL. This model is often used in cases where application performance and scalability is more important than security and productivity.



Vaadin and Angular in a Nutshell

vaadin }>

- > **Vaadin is a full-stack Java web framework** that includes UI components, data binding, client-server sync, and built-in security, reducing integration work and the number of moving parts
- > Ready made UI components **with accessibility and styling for business apps** (grids, forms, layouts, etc.) and also has 2,000+ community built add-ons
- > **One platform with internal dependencies managed by the core team** and with 25 years of backwards compatibility on the API level
- > **All communication between the client and the server goes through one managed connection** (incl. WebSockets push) that is pentested and built for Enterprise-grade security
- > **Vaadin supports the core technology both for free and with commercial agreements** guaranteeing 15 years of maintenance, support and security patches
- > **Vaadin is open-source** and Apache 2.0 licensed

Angular

- > **Angular is a more fully-featured framework** than React, including a structured component model, TypeScript, dependency injection, routing etc.
- > **Angular does not include components**, so it is often used with a 3rd party component library like Angular Material
- > **Angular only covers the browser application**, secure server communication is left to the developer.
- > **Angular is a client-side library**, secure server communication is left to the developer
- > **Angular users have limited influence over fixes** to the library from Google and there is no 1st party support available
- > **Angular is open-source** and MIT licensed

Differences in Practice

Both Angular and Vaadin address the challenge of building modern web UIs with components, routing, and backend integration.

The key difference lies in how much you need to build yourself. With Vaadin, your UI lives right next to your data and business logic — no need to expose it manually to the browser. Everything from communication to rendering is handled for you. Java developers can create rich, modern web apps with push, lazy loading, and more — all without writing JavaScript or CSS.

Vaadin

MainView.java

```
1 public class MainView extends VerticalLayout {
2
3 public MainView() {
4     add(new H1("Hello World!"));
5 }
6 }
7
8
```

Both are open source with permissive licenses, but Vaadin also offers commercial support, bug fixes, and direct help from the team behind the framework for 25+ years.

Angular

hello-world.component.ts

```
1 @Component({
2   selector: 'app-hello-world',
3   templateUrl: './hello-world.component.html',
4 })
5
6 export class HelloWorldComponent {}
7
8
```

hello-world.component.html

```
1 <h1>Hello world</h1>
2
3
4
5
6
```

How Users Feel About Vaadin



Enrico Pintonello

UX/UI Designer & Java Developer at Ifin Sistemi Srl

"Best Framework for develop App in java"

★★★★★ 5/5

What do you like best about Vaadin?

Documentation, support is good and fast. I'm a frontend developer and I use vaadin for develop and my team use it for front-end and back-end. Vaadin in this past years work very good to improve their



Omar Palaming

Founder CEO at PhillIT Systems Design Solutions Co.

"From Vaadin 6 to Vaadin 24.. You can do incremental upgrades... No full rewrites. We have been doing this since 2011.. Vadin has done a wonderful Job of Future proofing your code. True to the philosophy of Java Language to be backward compatible.."



Anuja K

Software Engineer

"Very friendly and quality service."

★★★★★ 5/5

What do you like best about Vaadin?

Quality-oriented skills and understanding about my issue Vaadin is designed to boost the productivity of full-stack teams. With full-stack type safety and seamless communication between the browser and server, you can focus all your efforts on building functionality.



Krasimir Dimitrov

CEO, IFD Engineering

Vaadin won us over with its full Java support—letting our Java-oriented team program, debug, and rely on Vaadin to handle JavaScript at runtime.z



Matt Davis

Project Manager, NWS

We love using Vaadin for web applications. The design structure is straightforward and intuitive, and it makes the vast Java ecosystem of tools available to us as well.



Lufthansa



Rockwell Automation

FESTO



PRIMERICA®

Johnson & Johnson



HSBC

Increase productivity.

Vaadin lets you build secure,
enterprise web apps without the
frontend hassle, while Angular makes
you do the heavy lifting yourself.

Get in touch

E-Mail
sales@vaadin.com

Website
vaadin.com/contact