



## Mark Wouters

44 years old The Hague • The Netherlands

### Entrepreneur, web guru en JavaScript lover

Freelance front- and backend architect and development lead, that creates distributed always-on systems. Experienced in Angular, React, NextJS, NodeJS, GraphQL. [Web technology and user experience](#) is all I breathe.

● AVAILABLE FOR 16-36 HOUR/WEEK

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## ABOUT

- When I was 8 years old I created my first computer program, and since then I never stopped coding.
- Since 1996 I work with Web technology, from Perl to NodeJS, from jQuery to React
- After graduating as MSc in Business & IT I worked in several project- and product management roles.
- Started Veeds in 2012, one of the first JavaScript-only web apps. Veeds is a web scale content aggregator, and it offers a unique opportunity to build a performant web app, manage huge data volumes, and keep a realtime data processing system running. Soon to be relaunched (mid 2023).
- Experienced Frontend developer with an eye for user experience, data visualization and performance. On the backend experience with huge databases and stream processing.
- Mostly working in the Financial Industry and in Content Management

### VISION ON SOFTWARE DEVELOPMENT

In software development the primary goal is to create a **product that customers love**. I believe that a great user experience makes a difference, and I will challenge the designs to achieve this. I am a big advocate of simplicity, consistency, accessibility and responsiveness.

It also needs to be a **maintainable product** with least cognitive overhead for developers. This entails shared coding practices, efficient reuse, libraries, continuous reviews, coaching and knowledge transfer.

## ROLES THAT SUIT ME

As **DEVELOPMENT LEAD** on a project you are responsible for the technical team success. You lead by example, take technical decisions, resolve barriers for the product manager, and support and coach developers. In a team I naturally take the lead.

I am aware of the bigger picture, the goals, resources, timeline, budget and bottlenecks of a project. I love to partner with management to deliver the best product at the right time.

For a project a typical task distribution is:

- **50% Development:** Programming UI - Backend - Data Layer - Component libraries - Migrations - Performance
- **25% Technical Feasibility:** Review Designs - Requirements Analysis - PoC
- **25% Developer Coaching:** Code Review - Pair programming - Knowledge Transfer

Recently as **CHAPTER LEAD** I introduced and embedded the Frontend Chapter to standardize and improve the quality of frontend development.

As a **WEB ARCHITECT** I cover frontend, backend, databases and the cloud. I have a strong opinion on and experience with distributed software patterns, data modeling, state management patterns and performance. A faulty architecture can slow down a project for years.

For a greenfield project I typically set up the initial architecture, and during the project I am the development lead.

## LET'S MEET

If you have a challenging role where I can take responsibility and **deliver results**, then let's meet to discuss and build trust.

EXPERIENCE

2012 - now



**Founder — Full Stack TypeScript Developer**  
Livlap — The Hague • NL  
Veeds is a web scale content aggregator processing 20M+ items per day. Developed in Angular, React, NodeJS, GraphQL, Redis, Elasticsearch.

2021 - 2022




**Frontend Developer**  
Ortec Finance — Rotterdam • NL  
Improved state management and forms for large financial planning app in Angular. Created new OPAL Wealth in Material UI with rich data visualizations.

2020 - 2021



**Staff Software Engineer**  
CERN — Geneva • CH  
Developed business applications for safety, tunnel maintenance and workflow in Java and React. Responsible for the department wide frontend framework selection process.

2017 - 2019



**Frontend Architect and Chapter Lead**  
Ortec Finance — Rotterdam • NL  
Created large financial app in Angular. Responsible for the frontend architecture, and developed data driven UI components. Set up company wide processes and standards for frontend development.

2016 - 2017




**Frontend Developer**  
Aegon — Took initiative for the company wide pattern library with Angular components. Developed interactive widgets to give customers insight in financial products.  
  
WoodWing — Refactored, optimized and extended an Angular JS digital asset management application. Also created a Vue management interface.

2009 - 2013



**Project Manager**  
Dyade — Nieuwegein • NL  
Responsible for development of a financial web app for Planning and Control. Fully digitized the inbound invoice process.

2008 - 2009



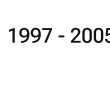
**Product Manager**  
Backbase — Amsterdam • NL  
Backbase offers a web platform for banks to streamline customer interactions. Responsible for positioning and marketing of the portal product.

2006 - 2008



**Information Management Consultant**  
Accenture — Amsterdam • NL  
Responsible for ECM projects for HR, legal and sales, including digitization of the patents department at ASML.


1997 - 2005



**Software Engineer**  
Hexon — Nijmegen • NL  
Web- and Windows software engineer. Developed Wheeler Delta, the largest car stock management system in The Netherlands.


EDUCATION

2008




**ASML PMBOK Training**  
ASML — Veldhoven • NL  
ESI International certified project management training

2007




**Accenture Core Consultant school**  
Accenture — Milton Keynes • UK  
Prince2 based project management training program

2006



**MSc Business and IT**  
University of Twente — Enschede • NL  
Covers Enterprise Architecture, IT management, data science and business. Graduated in Knowledge Management and Human Computer Interaction

1986



**Started coding**  
Home — Pey-Echt • NL  
Created the first program in BASIC on the C64. Later bought an 80386, learned Pascal, and coded in Delphi on Windows, until the Web arrived.

PROGRAMMING



HTML CSS



TypeScript



JavaScript



Angular



React



NextJS



NodeJS



NestJS



GraphQL



Expo Apps



Material UI



Tailwind

LANGUAGES

Dutch

English

German

French

PERSONALITY

**INTJ-A • Architect — Myers-Briggs**  
People with an INTJ personality type tend to be confident, analytical, and ambitious in their behavior. They love to pursue knowledge and tend to be very logically minded. They are independent thinkers.

INTERESTS

User Experience

Information Visualization

Artificial Intelligence

Programming Languages

Philosophy

Burgundy Wine

Yoga

# SKILLS

## FRONTEND

Delivering pixel precise web- and mobile apps that are user friendly, performant and reusable.

JavaScript (Since 1997) TypeScript (Since 2017)  
Responsive HTML Angular JS-14 (Since 2012)  
React (Since 2018) NextJS Expo Apps Vue.js  
State Management RxJS Security • XSS  
UI-UX Patterns Accessibility BEM CSS Tailwind  
HighCharts AG-Grid Storybook Jest  
Cucumber • BDD Cypress • E2E Testing

Average experience with:

Web Components Lit Element

## BACKEND & CLOUD

Crafting distributed, efficient and reliable always-on systems that require nearly zero maintenance.

NodeJS (Since 2012) Express (Since 2014)  
NestJS (Since 2018) GraphQL Apollo (In NestJS)  
REST API WebSockets Microservices  
Custom Built ORM Stream Processing  
Social Network APIs CDN Docker NGINX  
Linux Bash

Average experience with:

Google Cloud AWS Cloud Azure  
Serverless Architecture Edge Computing JWT OAuth  
Grafana Spring Framework Machine Learning

## DATABASE

Designing, feeding and migrating multi-terabyte sized databases with over ten billion records

ElasticSearch Stack Redis Couchbase  
Cassandra MongoDB GraphQL CAP Theorem  
NOSQL SQL Data Modeling UML

Average experience with:

Graph Database RDF Vector Search Engine (Weaviate)  
Riak ScyllaDB Kafka RabbitMQ PostgreSQL

## SOFTWARE ENGINEERING

Designing large applications that last for over a decade, focused on code quality, security and maintainability.

Software Patterns KISS Principle  
Functional Programming Reactive Programming  
Cache Layer Test Driven Development (TDD)  
Refactoring Technical Debt  
Requirements Analysis Information Architecture

## TOOLING

Proficiency in the tools to create software

Atlassian Suite Miro VS Code JetBrains IntelliJ  
Azure DevOps (TFS) SonarQube Git GitHub  
BitBucket Monorepo

## MANAGEMENT

Managing €1M+ projects and optimizing work processes.

Agile Scrum Kanban SAFe Prince2 PMBOK  
ITIL Change Management

Skills listed are at expert level, unless indicated otherwise

# PROJECTS



## Veeds Content Platform

2012 - now   Livelap — The Hague • NL

Veeds is a content aggregator that collects web content and makes it fully text searchable. On the Livelap platform multiple mobile apps have been created. Mark envisioned and fully developed the concept, and it is running continuously for over 8 years now. In 2015 a €315K investment was secured to grow Veeds.

- Frontend in Angular and React, using WebSockets
- Backend written in NodeJS, GraphQL, integrating dozens of databases and web API's. Custom built AI models for topic- and fake news detection
- Processed 100+ billion web pages, currently storing 13 billion items in 100+ languages using Elasticsearch, Couchbase, Redis.



## Frontend Framework Selection

2020   CERN — Geneva • CH

The BC-FAP department at CERN is responsible for all business applications. The application landscape consists of hundreds of in-house developed applications, mainly written in Java, and every team picked their own frontend framework. Within the Community Of Practice Mark was responsible for the frontend selection project. With developers from every team evaluation criteria were defined and each framework was tested hands-on. Buy in from all members was important for the selected framework to succeed, and ultimately React was chosen unanimously.



## Pearl Web App

2019   Ortec Finance — Rotterdam • NL

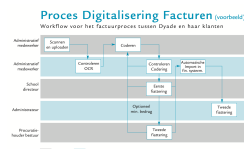
Ortec Finance provides technology and solutions for financial institutions across the world to help people manage the complexity of investment decision making. PEARL is a performance measurement and attribution solution for pension funds and insurance companies. Mark defined the front-end architecture, was frontend team lead, and developed advanced UI components.



## Aegon Experience Language

2017   Aegon — The Hague • NL

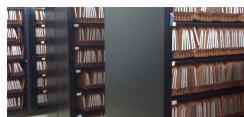
Aegon is one of the world's leading providers of life insurance, pensions and asset management. AXL is Aegon's shared design- and development pattern library. It enables the creation and reuse of consistent user experiences across all digital services. Kickstarted the initiative, got developers and designers on board, and together made it successful.



## Digitization Of Invoice Processes

2011 - 2013   Dyade — Nieuwegein • NL

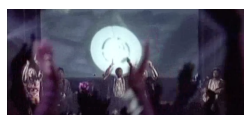
Dyade is the largest administrative office for primary schools in The Netherlands. Over 800.000 invoices are processed every year. Mark was responsible for the design and implementation of the digital workflow.



## ASML Patents Archive

2006 - 2008   ASML • Veldhoven • NL

ASML provides chipmakers with everything they need - hardware, software and services - to mass produce patterns on silicon. Patents are very important in the industry, and a single lawsuit can cost millions. The goal was to digitize a few kilometers of patents archives at ASML, and introduce a digital way of working. Mark was project lead and responsible for on time delivery within budget.



## Innovative Software

For me making software is an analytical, creative and rewarding activity that lets me change the world:

- **VJ software** — VJing is a broad designation for realtime visual performance. Created GPU accelerated Windows software in Delphi/DirectX to manipulate an incoming video stream in realtime, and sync it to the beat. Live visual performance at the Lowlands Festival in 2004.
- **Wheeler Delta** is the most used car ad-management software in The Netherlands. Responsible for the Windows program, written in Delphi, with a Javascript/HTML frontend for a better user experience (2003).