

Paulo Köch

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Head of Engineering at Trust Fractal – 2019 to 2020

Managed a team of 7 engineers. Redesigned engineering's workflow by **implementing Kanban across Product and Development** and isolating interruptions into their own flow. This made developers be more than ticket-takers, neutralized distractions, and created a consistent delivery cadence.

Designed and oversaw the implementation of a cross-microservice data system that **empowered everyone to build custom real-time reports** using PostgreSQL's **postgres_fdw**, while safeguarding user data by enforcing column-level sensitivity labeling. **Implemented features** to reinforce engineering capacity. Regularly **advised on infrastructure** issues. Automated recurring engineering problems that didn't fit in the roadmap (reports for vendors and partners, palliative measures, etc).

Kept security standards well balanced, kept known threats catalogued, coordinated with other financial institutions, aligned incident response procedures with vendors. Implemented a cold storage system for crypto-asset stewardship.

Part of top management. Used my position to **reach out to unengaged or distressed employees** to offer emotional support and mentoring. Finding myself less participative, I stepped down to encourage a more focused team.

Technical Project Manager at Fractal Launchpad – 2018 to 2019

Delivered the technical part of multiple crypto fundraising events. Coordinated security measures, **negotiated customization scope**, oversaw implementation and operation. These events had a high security profile (**moving thousands of dollars and sensitive PII**), uncertain traffic (**anything from 0.1 to 100 req/s**), and strict deadlines.

Oversaw a small team (2 engineers + 1 project manager). Implemented custom features (**React/Redux, Rails, PostgreSQL**) and led a redesign effort. Sourced, coordinated with, and integrated work from contractors. **Enabled a microservices architecture** by migrating from AWS Elastic Beanstalk to **ECS**. Reformulated networking, logs, alarms, etc.

Part of top management where, together with other managers, I **set direction and strategy** for both companies.

Managing Partner at Life on Mars – 2016 to 2018

Looking to explore a different way of doing engineering management, I **co-founded a company** focused on maximizing happiness, openness, and skill. We built a high-talent **small software agency (of 6 engineers and 1 admin)**.

Managed all 6 engineers and did development work. A representative sample would be:

- Built multiple **React/Redux** frontends and respective **Rails** or **Phoenix** backends
- Designed and built a **WordPress plugin** to sync entries from a no-code tool to blog posts
- Built **Rails** app for ALS patient prognosis, with **HIPAA-compliant infra**, codified using **Terraform** and **SaltStack**
- **Incident support**: some clients called us saying "this website is on fire, can you join this call and help us fix it?"
- Built a baccarat game using **Ethereum** and state channels, with a web frontend

Fractal became our largest client and invited us to be **acquired**, which we accepted.

Software Engineer at Yelp – 2013 to 2016

Full-stack development on Yelp's business owner features across a diverse technology stack (custom **JavaScript** framework, monolithic **Python** app, multiple **microservices**, **Mesos**, **MySQL**, **Kafka**, many **AWS** services, etc). Contributed to modernizing infra, performance, logging, monitoring, and automated error recovery.

Lead a small team (3 people) that designed and implemented Yelp Preview, which let you preview a business owner's back-office, powering thousands of sales pitches per day. Due to its architectural planning, **it required only a few tens of engineering hours in maintenance** since its introduction.

Helped trailblaze the introduction of Kafka company-wide, migrating two microservices to use it. Helped shape the packages that became company standard.

Worked on the Yelp Transaction Platform, an online ordering brokerage system. Implemented monitoring on our partners' conversion performance, improved on-call tools and procedures, and established cross-system error monitoring. These **made debugging issues near-instantaneous, drastically reducing on-call stress and errors**, and recovering ~\$10k revenue on a daily basis.

Spontaneously took ownership of legacy systems' issues, including subsystem re-writes that spanned several quarters. Many contributions to infra and release tools, from a 90% reduction in dropped connections during some deployments to test failure triage automation (going from 5 painful minutes of ticket hunting to 1 CLI call).

Older history is available at LinkedIn: <https://www.linkedin.com/in/pkoch/>

Education

- Certified Scrum Master
- Masters in Software Engineering at Faculdade de Engenharia, Universidade de Porto