

Marcus Povey

United Kingdom & EU
marcus-povey.co.uk
marcus@marcus-povey.co.uk

Principal Software Engineer | Open Source Advocate | Decentralised Systems Expert

- 20+ years' experience delivering secure, scalable systems for academia, government, and private sector.
- Contributor to foundational decentralised tech (Elgg, Known), with deep expertise in privacy-first architectures.
- Principal Software Engineer and IT Head at a pan-European research organisation, driving EU Open Science infrastructure.
- Proven track record in cross-border collaboration, DevOps, leadership, and strategic IT consulting.

Experience

Instruct ERIC (2019 – Present)

Principal Software Engineer, Head of IT

- Instruct ERIC is a pan-European organisation which makes high-end structural biology research technologies and methods available to researchers.
- Extensively involved in setting direction regarding IT and data management strategy, was responsible for system architecture design, and was involved in high level strategy discussions, hiring, team management and mentoring. Wrote funding applications, research papers and scientific proposals.
- Involved in numerous high impact & strategically important European Science projects, including the EOSC-Life, EOSC-Future, BY-COVID, Infraserve Cancer, Fragment Screen, EOSC-Beyond, and COVID-19 protein research portal.
- Helped shape EU Open Science data sharing policy & represented Instruct at a high level, and was involved with multi-nation projects working with teams from numerous countries and worked to deliver Instruct's long term scientific data management strategy. Contributed to developing the wider European Open Science Cloud as well as development of the "Node" concept.
- Worked with scientific community to help develop standards for metadata interoperability for CryoEM, NMR, etc
- Delivered presentations at international scientific conferences, lead workshops and meetings, and represented Instruct and ARIA to high level stakeholders.
- Led development of modern microservice based architecture, including leading development of modern GraphQL based APIs, and integrated cross research infrastructure workflows which involved collaborating with expert teams around the world.
- PHP, ARIA, JavaScript, Node, GraphQL, REST, React, Java, Python, OAuth, OpenID Connect, DevOps, Docker, Kubernetes, OpenStack, Ansible, MySQL, KeyCloak, HAProxy, FAIR principles, Agile & Scrum.

Practical Alchemy Ltd (2007 – Present)

Founder & Principle Consultant

- Founded and operate a boutique consultancy delivering high-quality, secure, and scalable software solutions to clients across the UK, EU, and US.
- Delivered full-stack applications and platform strategy for a variety of sectors including media (KQED), cybersecurity (Sophos), and decentralised social networks (Minds LLC).
- Architected and deployed solutions ranging from lightweight web apps to large-scale distributed systems using modern DevOps practices.
- Extensive work with Elgg and Known platforms—co-founding Known's open collective and contributing significantly to its ecosystem.
- Provided consulting on privacy, decentralised technologies, and digital sovereignty—including blockchain-based payment integrations and data portability standards.
- PHP, JavaScript, Node.js, Elgg, WordPress, AWS, Docker, Kubernetes, Payment APIs, Bitcoin, Ethereum.

Latakoo (2010 – 2012)

Chief Information Architect

- Designed and built a platform to quickly transfer high quality video from journalists to TV newsrooms over any consumer internet connection, increasing flexibility and speed of reporting, while at the same time reducing costs.
- Designed and built a secure and performant mobile upload protocol that functioned in low bandwidth situations or areas with restricted and limited internet connections
- Built many aspects of the back end systems, including data storage and transfer infrastructure, and core APIs
- Platform used by customers, including NBC News, to send footage back from places like Syria, the Sochi Olympics, the Houston floods and Air Force One
- PHP, JavaScript, Linux, REST APIs, DevOps

Elgg (2008 – 2009)

Senior Developer, Technical Lead

- Designed and built open source white label social networking platform
- Used by the Australian, Dutch and Canadian governments, fortune 500 companies like Hill & Knowlton, organisations like Oxfam, and universities all around the world
- Developed novel data portability formats (which later contributed to the W3C Activity Streams format)
- Developed and maintained relations with some of the web's leading names in silicon valley
- Won InfoWorld award for best social networking platform in 2008
- Was a panel discussion member, and gave presentations at conferences
- PHP, JavaScript, Linux, MySQL, Shibboleth

Torex Retail (2006-2007)

Developer

- Point of Sales (POS) software development for flagship LUCAS products
- Main developer for Electronic Fund Transfer (EFT), Chip & Pin and PCI/DSS compliance
- Java, SolveSE, Linux, Windows

e-San Ltd (2003 – 2005)

Development Manager

- Start-up producing medical patient self-monitoring solutions for Diabetes, Asthma and COPD
- Senior project developer on e-San commercial and medical trial solutions
- Developed mobile Diabetes project client
- Developed unified server solution, and ran all back-office / DevOps
- Supervised small team of full time staff and contractors
- Made national press when doctors credited software for saving a child's life
- PHP, Java, MySQL, Linux, Apache, Java ME / MIDP, DevOps

Oxford Brookes University (2002 – 2003)

Researcher – Secure Email Project

- Designed and developed encrypted email software in Java for JISC funded project
- Wrote papers and reports related to the project
- Java, Linux, OpenPGP

Psion Teklogix (2001 – 2002)

Support Engineer

- Developed software to demonstrate functionality of a range of Psion hardware
- Provided third line technical support to clients
- C/C++, Psion SDKs

RAL Space Science (1999 – 2000)

Development Engineer – ATSR Project

- Created ATSR project portal to assist project scientists and customers around the world
- Built software tools to assist the project scientists
- Linux, HTML, VMS

Education

Oxford Brookes University (2001)

BSc (Hons) Computing and Software Engineering

Technologies

Elgg, Known, ARIA, WordPress, Symfony, Laravel, Zend, PHP, Python, Java, JavaScript, Node.js, React, React Native, Express, HTML/CSS, GraphQL, C/C++, AWS (EBS, EC2, RDS, Beanstalk, Route53, IAM), Elasticsearch, MongoDB, CouchDB, Cassandra, MySQL, Redis, IPFS, Linux, Git, Vagrant, Docker, Kubernetes, OpenStack, Ethereum (Solidity, Web3js).

Additional Information

Organised: *Barcamp Transparency conference, Oxford "Twestival" fundraising event. Co-founded Known Open Collective.*
Open Source contributions: *Elgg, Known, WordPress, HTTPSEverywhere, Bouncy Castle JCE, FandanGO, and more...*