

Andrea Cole MEng

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Nationality British and Slovak

Engineering and digital product leader with cross-sector expertise spanning water technology, MedTech, industrial sensing, and digital platforms.

Currently leads digital product and technology strategy in the water industry, managing a 22+ person engineering and product team to deliver complex software solutions from concept to scale.

Brings strong technical depth (Python, C#, C++) and proven experience delivering AI and machine-learning projects, as well as applying AI to enhance engineering productivity and team performance.

Combines commercial acumen with systems-level engineering insight to turn customer challenges into commercially successful digital products. Focused on the interface between hardware and software, driving innovation across sensing technologies, SaaS platforms, and digitalisation.

Recognized for inclusive, collaborative leadership and the ability to build high-performance engineering teams.

Key Achievements

- Transformed the feature development approach from incremental changes to value-driven packages, designed and launched a new leakage service resulting in \$500K revenue in FY26, in the US.
- Built and led a high-performing department of 22 software developers and data scientists, achieving the highest employee engagement score across the organisation.
- Directed a team of 20 through a major organisational restructure, establishing new operational frameworks for a high-throughput software platform handling over 40 million data messages daily.
- Developed and launched the first digital roadmap, enabling the delivery of new software features on a consistent quarterly cadence.
- Led the AI and machine learning strategy, initiating data collection enhancements to create machine learning capability within data platforms generating a new revenue stream.
- Boosted adoption of the Customer Relationship Management system, increasing data entry volume by 90% and improving customer engagement tracking.
- Conducted market research that led to securing £95K in funding from a corporate accelerator programme to explore opportunities in the odour detection market.

Experience



HWM Global – Head of Digital Products

2022 - 2026

Responsible for the vision and strategy for HWM's digital product portfolio, ensuring solutions address critical customer needs and drive commercial growth in the water-monitoring sector. The role converts digital capability into scalable, revenue-generating products and services, while leading a 22-person cross-functional team of software and firmware engineers, data scientists, and testers. Accountable end-to-end for product strategy, delivery, and commercial performance across international markets.

Ensure product strategy is tightly aligned to commercial objectives and organisational priorities by working closely with board members and senior stakeholders across marketing, IT, sales, and customer-facing functions. Frequent presentations to the board and other key stakeholders. By balancing strategic direction with rigorous execution, financial discipline, and strong people leadership, I built high-performing teams and digital products that scale effectively, respond to market demand, and deliver measurable business value.



Proximie – Global Operations Manager

2022

Implemented and maintained data operations at a MedTech start-up, managing cross-functional initiatives to utilise platform data to measure and enhance business processes and performance. Automated workflows, built data models and connections, conducted in-depth data analysis and visualisation, and identified key performance metrics to drive strategic decision-making. This empowered the organisation to adopt a data-informed culture, enabling impactful operational improvements.



Ocean Optics – Commercial Operations & Analytics Manager

2018 - 2022

Improved commercial processes by providing leadership with actionable insights, increased CRM adoption by 90% through the introduction of monthly training calls and led a head office-level sprint on UV light disinfection alongside market insight sprints to assess new market viability. Implemented a central resource repository for commercial processes and data and worked closely with the Chief Commercial Officer to analyse product and customer trends that underpinned strategy decisions.



Halma Plc – Halma Future Leaders Scheme

6-month rotations, 2016-2018

Halma's global rotational programme, delivering high-impact technical and commercial projects across multiple international operating companies.

Crowcon (Gas detection) – Beijing, China & Abingdon, UK

2018

- Researched global odour sensing market, secured £95K funding from Halma to continue project. Translated odour sensing requirements to the China market and assessed market maturity.

Halma Finance (Finance) – Amersham Head Office

2017 - 2018

- Built a pilot financial reporting platform in Anaplan for the Medical Sector. Coordinated communication between consultants and finance group, contributing to the financial reporting roadmap.

Ocean Optics (Spectroscopy) – Orlando, Florida, USA

2017

- Calculated optimal Kanban size to reduce inventory levels. Researched PCB suppliers and sourced packaging for beta tests within budget.

Rudolf Riester (Medtech) – Jungingen, Germany

2016 - 2017

- Created marketing material for a medical monitoring device, RVS-100, launch, trained sales personnel and distributors. Managed software improvements and ensured HL7 messaging compliance.

Education & Early Experience



M.Eng. Biomedical Engineering – Fitzwilliam College, University of Cambridge

2012 - 2016

Biomedical Engineering – Cambridge University Engineering Department

2014 - 2016

Dissertation on **Printing high resolution biomaterial scaffolds – investigating bone marrow cell growth using 3D printing, electrospinning gelatine and cell culturing.**

General Engineering – Cambridge University Engineering Department

2012 - 2014

Placement Year – Cambridge Consultants

2011 - 2012

Developed a Python program for image analysis and contributed to a diagnostic device project featured in New Scientist.



Skills

- Software/Programming: Working knowledge of C, C#, C++, Python, and MATLAB, with practical exposure in engineering and data-driven environments.
- Highly proficient in Microsoft 365 Suite and AI platforms to support productivity and analysis.
- Experienced user of Salesforce CRM and HubSpot CRM, supporting customer engagement, data quality, and commercial insight.
- Languages: Fluent in English, Slovak, Czech, and Polish; conversational in German.

Interests & Achievements

- Strong interest in leadership and organisational behaviour literature, including Black Box Thinking, The Culture Map, and The Power of Habit, with a focus on applying these principles to high-performing teams and culture.
- Completed two marathons, a Half Ironman, and multiple half marathons.
- Won at Henley Regatta with Agecroft Rowing Club.
- Represented Cambridge University, Northern Ireland, and Ireland internationally in orienteering, earning a Cambridge Half-Blue.