Mike Luck

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Personal Profile

Technology leader with over 20 years of experience in high impact roles working on complex critical national infrastructure systems most recently in Cloud Architect and Chief Engineer roles.

A proactive and self-motivated performer with excellent problem solving capability, wide ranging technical knowledge. Experienced in driving innovation, aligning technology strategies with business goals, and leading complex projects from initial concept through to delivery into live service. Experienced in Architecture, Design, Cloud, Hardware, Software, Systems, Security, and Test. Actively researches new and emerging technologies.

Successfully completed a three year Lockheed Martin Engineering Leadership Development Programme (ELDP) including study at Johns Hopkins University and the University of Maryland culminating in an MSc in Engineering and Management in 2009. Awarded Chartered Engineer (CEng) status with the UK Engineering Council in 2015. Became AWS Solutions Architect Certified in 2018.

Current Role

Cloud Architect *– Home Office Biometrics*

Leidos, Whiteley, Hampshire *Oct 2019 – Present*

Cloud Architect for the Home Office Biometrics programme successfully delivering cloud migration, transformation, and modernisation of the UK's national biometrics systems in support of law enforcement, immigration, asylum, and border security to the AWS public cloud achieving agility and performance goals.

Technical Design Authority from strategy and discovery, through architecture and design, implementation and test, to successful cutover of live service in 2024 while exceeding high Security requirements and Service KPIs. This included extensive collaboration with the Home Office, AWS, and National Cyber Security Centre (NCSC).

Qualifications and Training

CEng Chartered Engineer	**2015**
MSc Engineering & Management Masters	***2009***
BSc Computer Systems Engineering Degree	*2002*
HND Computer Systems Engineering	*2001*
GNVQ Advanced Engineering	*1999*
GCSEs including Electronics, Maths, & Science	*1997*

SysML with Cameo Systems Modeller	2019
AWS Solutions Architect Certification	**2018**
AWS Technical Professional Accreditation	2016
Agile SCRUM Training	2014
System Architecture Fundamentals Training	*2014*
PM101 Programme Management Training	*2008*
Learning Tree ASP.NET Workshop	*2007*
PM100 Team Leadership Training	*2007*
LM21 Lean Process Green Belt Training	*2006*
Texas Instruments MPEG4 DSP Conference	*2004*
Microchip PIC18F ASM Workshop	*2003*

Previous Work Experience

***Chief Engineer** – Integration: Highways England, NATS, and Leidos internal project*

Leidos, Whiteley, Hampshire *Jan 2018 – Sept 2019*

Chief Engineer of Integration included two key roles while also achieving AWS Solutions Architect certification:

- Design of the Application Performance Management (APM) monitoring solution for Highways England through integration of the Advanced Traffic Management System for Smart Motorways with CheckMK.
- Design authoring and technical leadership of an Internal Research and Development (IRAD) to create a capability to accelerate adoption of integration and mediation of systems using AWS cloud hosted containerisation of open source Apache ServiceMix (ActiveMQ, Camel, CXF, and Karaf) targeted at airports.

***Chief Engineer** – NATS Enterprise Integration Service (SESAR)*

Leidos, Whiteley, Hampshire *May 2015 – Jan 2018*

Chief Engineer providing technical leadership of the Design, Development, and Test teams for next generation Air Traffic Control System Wide Information Management. EIS comprised Enterprise Service Bus, Messaging Middleware, and secure API Gateway layers each configured for mission critical and safety related high availability usage in support of Air Traffic Management. Awarded CEng Chartered Engineer.

Using SysML Model Based Systems Engineering to capture the design with full requirements traceability, an AWS cloud based Development and Test environment, and Continuous Integration based Test Automation.

***Research and Development Chief Engineer** – Lockheed Martin Airport Operations Centre (APOC)*

Lockheed Martin, Whiteley, Hampshire *Feb 2015 – May 2015*

In preparation for contract award for Copenhagen Airport systems integration and modernisation created a sixty day start-up plan and established key Engineering and Leadership roles to enable strong project startup.

Captured and elaborated the system architecture for an Internal Research and Development for a browser based Airport Operations Centre to provide a single pane of glass overview and actionable business intelligence. Implemented a Material Design User Interface, and coded navigation and notifications elements.

***Operational Engineering Team Leader** – Ministry of Justice*

Lockheed Martin, Westminster, London *Jan 2015 – Feb 2015*

A short secondment as the Operational Engineering Team Leader during the first deployment phase to transition Ministry of Justice IT to an ISAM managed service tower model. Established daily business rhythms such as stand-up meetings, internal and external status reporting, and incident closure.

***Systems Engineering Team Leader** – Metropolitan Police Command and Control*

Lockheed Martin, Whiteley & London *Aug 2014 – Jan 2015*

Systems Engineering Team Leader of the of the Metropolitan Police programme to replace the legacy Command and Control system. Provided leadership to a team of 5 Systems Engineers, technical oversight to the Software Engineering team, and refinement of requirements and authoring of the system design.

Collaborated with the customer and incumbent supplier to document all of the system interfaces and then designed mediation rules to translate messages to the protocols and data structures required by the new system. Designed a legacy interface simulator to support testing, training, and transition. Introduced the Sparx Systems Enterprise Architect tool for SysML which formed the design baseline.

***Systems Engineer** – MOD Marshall Proposal*

Lockheed Martin, Whiteley, Hampshire *Sept 2013 – Aug 2014*

Systems Engineer on the Ministry of Defence (MOD) Marshall/JMATS proposal to provide 22 years of air traffic management capability for the MOD tactical deployed operations.

Authored the design and proposal sections for all Tactical and Deployed elements of the bid solution. Decomposed customer requirements, authored partner Statements of Work, and defined a Bill of Materials of ~£2.7M with ~£400K of scheduled labour. Exploiting new and advancing technologies such as LED based lighting for landing aircraft on temporary landing strips to reduce size and weight while extending expected life in harsh transportation and operating conditions. Introduced the Sparx Systems Enterprise Architect tool for MODAF which formed the technical baseline.

***Software Engineering Team Leader** – NATS New En Route Centre*

Lockheed Martin, Whiteley, Hampshire *Sept 2009 – Sept 2013*

Software Team Leader of 24 staff (including 4 remote in Maryland, USA) delivered significant change to the NATS Air Traffic Control system. Tasks included planning, scheduling, technical risk management, technical performance, task prioritisation, workload balancing, and Earned Value Management.

Managed reviews and quality control of all customer deliverables including design documentation, software code change, test documentation and evidence, and user manuals.

***Software Engineer** – NATS New En Route Centre*

Lockheed Martin, Whiteley, Hampshire *Sept 2005 – Sept 2009*

Software Engineer provided significant new system functionality through code changes to the NATS Air Traffic Control system. Initially on the Record and Replay System, and then the Workstation Display Manager team on the most visible part of the system that the Air Traffic Controllers continuously interact with.

In parallel completed a 3 year Engineering Leadership Development Programme (ELDP) with study at Johns Hopkins University and the University of Maryland culminating in an MSc in Engineering and Management.

Research and Development Software Engineer

Wood & Douglas Ltd, Tadley, Hampshire *July 2002 – Sept 2005*

After University fulltime employment started as a Research and Development Software Engineer working on a range of radio products running on Microchip PIC Microcontrollers running embedded C firmware as follows:

- **Down Converter:** An intelligent antenna mast mounted frequency down converter from the 2.4GHz L-Band microwave frequency range to VHF to reduce loss in cables and allow use of standard tuners.
- **Digital Video for Moving Objects:** Secure, robust, and ultra-low latency video, audio, and data encoder with COFDM 2.4GHz L-Band transmitter used for law enforcement surveillance and remote bomb disposal.
- **Dräger PSS Merlin:** A telemetry system used in the USA to remotely monitor Firefighter distress signals, oxygen cylinder pressure, and various stats using a custom self-organising and adapting mesh network.

Other Interests

- **Family:** Walking and other family adventures with wife, two boys, and a Sprocker Spaniel.
- **Projects:** Home Automation, PCB design and code for an MP3 player (pre-iPod), and AWS hosted websites.
- **Sport:** Formula One Lewis Hamilton supporter. NBA Milwaukee Bucks basketball fan.
- **Home:** All aspects of home renovations with a long term goal to buy land, architect, and self-build.