

STEPHEN TODD

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Stephen has 30 years experience working with technology-driven businesses, ranging from start-ups to global companies. Projects he has worked on have generated quantifiable benefits worth over \$100 million. He has worked with companies across a wide range of sectors including: aerospace & defence, automotive, computers, electronics, healthcare, industrial, government, semiconductors, software, telecommunications and transport. His business experience includes:

- Setting up new ventures and establishing partnerships
- Developing and implementing business and operations strategies
- Driving step-change improvements in operational performance
- Turning around major projects.

Prior to founding Operations Management Research in 2003, Stephen worked for seven years with management consultants PRTM (now part of PwC). Prior to joining PRTM, he spent ten years with Hewlett-Packard and five years with GEC-Marconi.

Stephen started his career as a research scientist specialising in the application of artificial intelligence in defence and healthcare. He worked at the GEC Marconi Research Centre, the University of Edinburgh's Department of Artificial Intelligence, Hewlett-Packard Laboratories and Hewlett Packard's Medical Products Group.

At PRTM, he helped leading technology companies (such as Nokia, 3Com and SAP) transform their product development and supply chain performance. He also acted as the interim Chief Operating Officer for a major telematics Joint Venture and led the successful turnaround of a £600 million industrial project.

Over the last ten years, Stephen has had a major focus on understanding the support early-stage and SME companies need to help them unlock growth. For Scottish Enterprise, he designed and delivered innovative business support services in areas including: product development, supply chain management and marketing & sales. For Goldman Sachs, he helped design and deliver innovative programmes for entrepreneurs in the UK and China as part of their *10,000 Small Businesses* and *10,000 Women* initiatives.

Stephen is an experienced educator who has designed and delivered innovative curricula in a number of areas of business and management. He has been an Associate Fellow at the University of Oxford's Saïd Business School for the last ten years and is a Visiting Professor at Zhejiang University's Global Entrepreneurship Center.

He has been a lecturer on MBA, Executive MBA and MSc programmes at the Saïd Business School, London Business School, Warwick Business School, Warwick University Engineering Management Centre, Zhejiang University, Sun-Yat Sen University and the University of Electronic Science and Technology of China.

Stephen has an MA in Mathematics from the University of Cambridge, an Executive MBA from the London Business School, a Master of Studies in Creative Writing from the University of Oxford and is a Fellow of the RSA.

EDUCATION

- 2007-2011** **UNIVERSITY OF OXFORD**
Master of Studies in Creative Writing
- 2004- 2006** **UNIVERSITY OF OXFORD**
Diploma in Creative Writing (Distinction)
- 1994-1996** **LONDON BUSINESS SCHOOL**
MBA (Executive MBA Programme)
- 1979-1982** **UNIVERSITY OF CAMBRIDGE**
MA in Mathematics
Entrance Exhibition. Sponsored by GEC Marconi Research Centre

CURRICULUM DESIGN

2013 **UNIVERSITY COLLEGE LONDON**
Management Science BSc/MSci

Developed design for a new 4-year BSc/MSci in Management Science. The design includes: academic rationale for the programme; programme structure and assessment methods; educational aims of the programme; programme diet; and associated market research. The design has been approved by the Management Science & Innovation (MS&I) Teaching Committee and by the External Examiner (Professor Zeger Degraeve, Dean of the Melbourne Business School).

The focus of the new programme is on high-growth companies and complex, innovation-intensive, data-driven environments and it is unique in the UK - the closest equivalents are the programmes at Stanford and MIT. It will provide students with a rigorous, practical foundation in the relevant principles of mathematics, engineering and science that underpin the practice of management and enable them to develop strong quantitative and analytical skills and an in-depth understanding of how companies work.

2010-2012 **SAÏD BUSINESS SCHOOL, OXFORD UNIVERSITY**
Silicon Valley Comes to Oxford (SVCO)

Silicon Valley Comes to Oxford (SVCO) is an innovative part of the Saïd Business School's MBA programme. The programme is one of the highlights of the Saïd Business School year and is a transformational experience for many students and alumni. SVCO is a key part of how the Saïd Business School differentiates the entrepreneurship element of its MBA programme and is an important factor in MBA recruitment. The programme takes place over three days in the weekend and Monday before Thanksgiving each year.

The core of each year's SVCO are the Masterclasses. These are highly interactive sessions focused on the challenges of starting and growing technology businesses. The style is informal with minimal PowerPoint and the people running the Masterclasses talk openly about the issues and problems they are really passionate about and share their failures as well as their hard won successes. The programme also includes 1-1 mentoring sessions which give selected students the opportunity to meet speakers 1-1 to ask them questions that could help them launch their new businesses or get the job they want with an early-stage company.

The programme also includes Plenary Sessions which provide an opportunity to hear prominent entrepreneurs, innovators and investors discuss and debate key issues in entrepreneurship and innovation, and a debate at the Oxford Union. For SVCO12 the topics of the Plenary Sessions were: ‘Starting and Scaling Facebook’ and ‘Unlocking Data, Unlocking Growth’ and the Motion for the debate was: ‘This House believes that corporations are capable of safeguarding against the risks of Big Data’.

Took on leadership role for SVCO in 2010. Defined core purpose for the programme – ‘to create and share actionable insight on what it takes to start, scale and run great technology companies’ – and created new strategy focused on developing its core asset – a world-class ‘think tank’. Led active management of relationships with leading Silicon Valley entrepreneurs, innovators and investors to increase SVCO’s impact.

SVCO12 included 38 speakers, 28 Masterclasses (up from 12 in 2010) and over 50 hours of educational content. Worked with each of the speakers in advance to identify key areas of actionable insight and help them refine the content of their sessions. Speakers from SVCO10, SVCO 11 and SVCO 12 include:

Reid Hoffman (LinkedIn/Greylock), Biz Stone (Twitter/Obvious), Megan Smith (Google), Padmasree Warrior (Cisco), Andrew McCollum (Facebook/NEA), Jonathan Heiliger (Facebook/North Bridge), Patrick Chung (NEA), Micheal Chui (McKinsey Global Institute), Kal Patel (Best Buy/Vantage Point Capital Partners), Allen Morgan (Mayfield/IdeaLab), Brian Sager (Nanosolar), Julie Hanna (Scalix/Kiva), Kim Polese (Marimba/SpikeSource), Joichi Ito (Creative Commons/Neoteny Labs), Saul Kelin (Index Ventures), Rich Goldman (Synopsis), Tom Hayes (Marvell/Mepedia), Stephen Sorkin (Splunk), Tyler Bell (Factual), Bob Goodson (Quid).

SVCO12 had a special focus on Big Data and included a major new component – SVCO 20:20 which took place on the Sunday. During the day, ten big data experts shared their insight into the latest developments in the field in a series of high-impact 20-minute talks, designed to illustrate the landscape of opportunity, followed by 20 minutes of in-depth discussion. Participants worked during the day in small teams to develop ideas for new ventures enabled by big data in healthcare, energy, retail and new media.

2011-2012 GOLDMAN SACHS 10,000 Small Businesses – UK Core Curriculum Design

Developed the initial design for the UK Core Curriculum. The design identified the key elements of each module and supported flexibility in delivery across multiple locations. The module guidelines included: Topic Areas; Tools; Teaching Objectives; Behaviour Changes; Recommended Delivery Approach; Module Sessions; Pre-Work; and Follow-Up Work.

The design was based on material developed by Babson College for the US *10,000 Small Businesses* programme and experience gained from the initial pilot in Leeds (delivered by Leeds University Business School). Module guidelines and example timetables were developed for each of the modules: You and Your Business; Growth and Opportunities; Money and Metrics; You are the Leader; Connecting Financial and Social Value; It’s the People; Marketing and Sales; Strategic Growth Through Operations; Being Bankable; and Putting it all Together.

The guidelines were used to support the delivery of the *10,000 Small Businesses* programme in four locations: Leeds (Leeds University Business School); Manchester (Manchester Metropolitan University Business School); Birmingham (Aston Business School) and London (University College London/UCL Advances).

**2010-2011 GOLDMAN SACHS
10,000 Women Curriculum Task Force**

Part of a seven-person task force (with Maha El Shinnawy (The American University in Cairo), Peter Bamkole (Pan African University), Zhongming Wang (Zhejiang University), Patti Greene (Babson College), Rosangela Pedrosa (Fundação Dom Cabral) and Kavil Ramachandran (Indian School of Business)) convened by Goldman Sachs to develop a set of guidelines to help align the curricula from the different *10,000 Women* programmes worldwide, support the sharing of best practices and guide continuous improvement.

Worked with Prof Maha El Shinnawy (The American University in Cairo) to develop a draft set of guidelines that identified: Topics, Teaching Objectives, Behaviour Changes and Recommended Delivery Approach. Guidelines were developed for each of the main curriculum areas: Entrepreneurship, Growth & Writing The Business Plan; Financial Management; Marketing & Sales Management; Negotiation Dynamics; Accounting; Strategic Management; Operations Management; Leadership; Human Resources; Organisation.

These draft guidelines were further developed by Babson College and used to assess the curricula used in each of the *10,000 Women* programmes worldwide.

**2009 SAÏD BUSINESS SCHOOL, UNIVERSITY OF OXFORD
MBA Operations Management Core Course**

Part of a three-person team (with Dr. Steve New and Professor Alastair Nicholson) responsible for a radical redesign of the MBA Operations Management core course. The new course design focused on the key operations issues relevant to CEOs, Entrepreneurs, Investors and Consultants.

Responsible for teaching the new course to one of the three MBA streams.

**2009 GOLDMAN SACHS
Oxford-Zhejiang 10,000 Women Entrepreneurship Certificate
Programme – Curriculum Design**

Worked with Zhejiang University to design the core curriculum for a 20-day programme (5 x 4-day modules) designed for Chinese women entrepreneurs. Initial curriculum design structured around: Core Business and Management Concepts; Core Entrepreneurship Concepts; and Management and Entrepreneurial Skills.

This curriculum was subsequently used as the basis for the Oxford-SWUFE 10,000 Women Entrepreneurship Certificate Programme delivered by South Western University Of Finance And Economics (SWUFE) in Chengdu.

TEACHING EXPERIENCE

- 2013 UNIVERSITY COLLEGE LONDON/UCL ADVANCES**
Module: “It’s The People”,
Goldman Sachs 10,000 Small Businesses Programme.
Module: “Strategic Growth Through Operations”,
Goldman Sachs 10,000 Small Businesses Programme.
- 2012 OXFORD UNIVERSITY**
Lecture: “Frontiers of Healthcare Innovation”,
Quality Improvement Science and Systems Analysis Module,
MSc in Surgical Science.
- 2012 ZHEJIANG UNIVERSITY/OXFORD UNIVERSITY**
Lecture: “From Business Planning to Business Model Innovation”,
Oxford-Zhejiang 10,000 Women Entrepreneurship Certificate
Programme.
- 2012 SOUTHWESTERN UNIVERSITY OF FINANCE AND ECONOMICS/OXFORD UNIVERSITY**
Lecture: “Operations Management”, Oxford-SWUFE 10,000 Women
Entrepreneurship Certificate Programme.
- 2011 ZHEJIANG UNIVERSITY/OXFORD UNIVERSITY**
Lecture: “Business Planning”, Oxford-Zhejiang 10,000 Women
Entrepreneurship Certificate Programme.
Mentor Training: “Mentoring Business Plans”, Oxford-Zhejiang
10,000 Women Entrepreneurship Certificate Programme.
Lecture: “Operations Management”, Oxford-Zhejiang 10,000 Women
Entrepreneurship Certificate Programme.
- 2011 SOUTHWESTERN UNIVERSITY OF FINANCE AND ECONOMICS/OXFORD UNIVERSITY**
Mentor Training: “Mentoring Business Plans”, Oxford-Zhejiang
10,000 Women Entrepreneurship Certificate Programme.
Lecture: “Operations Management”, Oxford-SWUFE 10,000 Women
Entrepreneurship Certificate Programme.
- 2010 SUN YAT-SEN UNIVERSITY/OXFORD UNIVERSITY**
Lecture: “Industrial Upgrading: Building High Performance
Companies and Clusters”, EMBA Module (Leadership Programme for
China, Oxford University Department for Continuing Education).
Lecture: “Using Operational Insight to Develop New Concepts
EMBA Module (Leadership Programmes for China, Oxford University
Department of Continuing Education).
- 2010 UNIVERSITY OF ELECTRONIC SCIENCE AND TECHNOLOGY OF CHINA/OXFORD UNIVERSITY**

- Lecture: “Using Operational Insight to Develop New Concepts”,
EMBA Module (Leadership Programmes for China, Oxford University
Department of Continuing Education).
- 2009 ZHEJIANG UNIVERSITY/OXFORD UNIVERSITY**
- Lecture: “Implementing Strategy: What CEOs Need to Know About
Operations”, EMBA Module (Saïd Business School, Oxford
University).
- Lecture: “Operations Management”, Oxford-Zhejiang 10,000 Women
Entrepreneurship Certificate Programme.
- 2009 SAÏD BUSINESS SCHOOL, OXFORD UNIVERSITY**
- Lecture: “Operations”, MBA Entrepreneurship Project Core Course.
- Lecture: “Finance”, MBA Entrepreneurship Project Core Course.
- Supervised eight MBA Entrepreneurship Project teams and assessed
sixteen MBA Entrepreneurship Project Business Plans.
- 2008 SAÏD BUSINESS SCHOOL, OXFORD UNIVERSITY**
- Supervised EMBA Dissertation and assessed two EMBA
Dissertations.
- 2001-2007 WARWICK UNIVERSITY, ENGINEERING MANAGEMENT
CENTRE**
- Lecture: “Supply Chain Performance Management”,
Supply Chain Management Module, M.Sc. Programme.
- Lecture: “Supply Chain Performance Management”,
Defence Logistics Organisation (DLO) Supply Chain Programme.
- Lecture: “Operations Management in Lean Supply Chains”,
AstraZeneca Manufacturing Professionalism Programme.
- Lecture: “NPI Supply Chain Management”,
BAE SYSTEMS Supply Excellence in Business Programme.
- Lecture: “Supply Chain Performance Measurement”,
Fulfilling Customer Needs Elective, Marconi Masters Programme.
- 2000-2002 LONDON BUSINESS SCHOOL**
- Lecture: “Driving Supply Chain Performance Improvement”,
Supply Chain Management Elective, MBA Programme.
- 2002 WARWICK BUSINESS SCHOOL**
- Lecture: “Implementing Breakthrough Operations Strategies”,
Operations Strategy Elective, MBA Programme.
- 1986 EDINBURGH UNIVERSITY**
- M.Phil. External Examiner. Department of Artificial Intelligence.
- 1982-1990 CHELSEA/KINGS COLLEGE, LONDON UNIVERSITY**
- M.Sc. Lecturer/External Examiner. Dept. of Electronic Engineering.

TEACHING CASES

Todd, S. “Zhejiang University Global Entrepreneurship Research Center”, 2010. Case developed with funding from the Goldman Sachs Foundation.

Todd, S. “Hangzhou Synteam - Growing a Successful Electronic Instrumentation and Control Components Company”, 2010. Available in English and Mandarin. Case developed with funding from the Goldman Sachs Foundation.

Todd, S. “Liang Baby – Developing a Botanical Baby Skin Care Cream”, 2010. Available in English and Mandarin. Case developed with funding from the Goldman Sachs Foundation.

Todd, S. “Zoombu – Building an Innovative “Travel 2.0” Company”, 2009. Available in English and Mandarin. Case developed with funding from the Goldman Sachs Foundation.

CURRENT ACTIVITIES

2003-Present OPERATIONS MANAGEMENT RESEARCH LIMITED

Director

Operations Management Research (OMR) helps entrepreneurs and CEOs design and build companies that can scale. It helps companies achieve breakthrough results by implementing operations best practices. And it helps companies understand complex markets and develop new concepts for breakthrough products and services using outcome-based innovation techniques.

OMR helps Regional Development Agencies design and implement new business support services that can have a measurable impact on the performance of companies in their region. And it helps universities design and deliver innovative management courses.

Clients include:

- 4i2i; Albacom; Abelon Systems; Codyne; CRL Opto; ECS Technologies; Electronics Scotland; ePOINT Technology; Freescale Semiconductors; Ice Robotics; IRC Scotland; ITI Techmedia; Justfone; Motorola; Nallatech; PRTM; Raytheon; Scientific Generics; Scottish Embedded Software Centre; Scottish Enterprise; Seven Layer Communications; Trak Microwave; University of Oxford; Warwick Business School.

Example projects:

- Developed an open innovation strategy and operating model for a major semiconductor company to enable them to work effectively with early stage companies and SMEs.
- Developed a growth and divestment strategy for a Business Unit of a major defence company that had diversified into multiple product areas.
- Developing new concepts for traffic management systems and personalised travel information services as part of a collaborative project on intelligent transport funded by the Technology Strategy Board. Partners include Transport for London, Kent County Council, City of York County Council, QinetiQ, and a number of SMEs and universities.

- Developed the technology strategy for a £5 million R&D programme on next generation Online Game Development platforms.
- Developed market requirements and new product concepts for a £5 million R&D programme on Machine-readable Security Tagging platforms.
- Developed market requirements and new product concepts for a £3 million R&D programme on Software Testing.
- Helped a high-performance FPGA computing company develop their product roadmap and establish a new product marketing team.
- Helped a developer of interactive kiosk and gaming technology implement product development and product management best practices.
- Developed and delivered innovative business support services for early-stage and SME companies for a Regional Development Agency in areas including: product development, supply chain management and marketing & sales.

**2003-Present SAÏD BUSINESS SCHOOL, UNIVERSITY OF OXFORD
Associate Fellow**

Supports the School across a range of activities including: Teaching, Careers, Development, Executive Education and External Relations.

- Led the development of the Silicon Valley Comes to Oxford (SVCO) programme since 2010. Defined core purpose for the programme – ‘to create and share actionable insight on what it takes to start, scale and run great technology companies’ – and created new strategy focused on developing its core asset – a world-class ‘think tank’. Led active development of relationships with leading Silicon Valley entrepreneurs, innovators and investors.
- Part of the Oxford team working with Zhejiang University and the South Western University of Finance and Economics (SWUFE) on the Goldman Sachs *10,000 Women* programme. Responsible for Oxford’s contribution to the initial curriculum design. Taught modules on Business Planning and Operations Management on the *10,000 Women* programmes in Hangzhou and Chengdu.
- Part of the Oxford team working on the Goldman Sachs *10,000 Small Businesses* programme. Responsible for the development of the initial design for the UK Core Curriculum and supporting the ramp-up of the programme in four locations – Leeds (with Leeds University Business School); Manchester (with Manchester Metropolitan University Business School); Birmingham (with Aston Business School) and London (with University College London/UCL Advances).
- Part of a three-person team (with Dr. Steve New and Professor Alastair Nicholson) responsible for a radical redesign of the MBA Operations Management core course. The new course design focused on the key operations issues relevant to CEOs, Entrepreneurs, Investors and Consultants. Responsible for teaching the new course to one of the three MBA streams.
- Career development support for MBA students and alumni, including 1-1 mentoring and organising workshops and panels with key industry speakers.
- Member of the Oxford Centre for Entrepreneurship and Innovation (OxCEI) and the School’s Operations Management Academic Area.

**2009-Present GLOBAL ENTREPRENEURSHIP RESEARCH CENTER,
ZHEJIANG UNIVERSITY**

**Visiting Professor (2011-Present)
Senior Visiting Researcher (2009-2011)**

The Global Entrepreneurship Research Center (GERC) is an interdisciplinary research centre of Zhejiang University. Based mainly in the School of Management, the centre brings together academics from a range of disciplines and experts from institutions and schools in China and abroad.

Supports GERC Director (Professor Zhongming Wang) with the development of strategic relationships with City and Regional Governments, including developing strategies for industrial upgrading and the design of new business support services.

2013 Hangzhou Professional Management Development Research Association (PMDRA) Launch

Lecture: “Business Model Innovation and Professional Management Development”.

2011 Guangzhou Intellectual Property Workshop

Lecture: “Unlocking the Value of Intellectual Assets: Key Lessons for CEOs”.

2011 China-Kunming Pan-Asia Entrepreneurial Talents Development Base Launch

Lecture: “Entrepreneurial Operations Management”.

2010 GERC Panyu Centre Launch

Lecture: “Strategies for Optimising Operations for a World Class Industrial Base”.

2013-Present NUMERICAL ALGORITHMS GROUP (NAG)

Non-Executive Director

The Numerical Algorithms Group (NAG) is a not-for-profit organization dedicated to applying its unique expertise in numerical engineering to delivering high-quality computational software and high performance computing services. For almost 40 years NAG experts have worked closely with world-leading researchers in academia and industry to create powerful, reliable and flexible software which today is relied on by tens of thousands of individual users, as well as numerous independent software vendors.

2013-Present EMERGE VENTURE LAB

Advisory Board

The Emerge Venture Lab’s mission is to support and scale early stage social ventures that seek to tackle social and environmental problems and have the potential for significant growth. Founded in 2010 by the Skoll Centre for Social Entrepreneurship at the University of Oxford’s Saïd Business School and Student Hubs, the Lab has supported 22 startups to date, of which 60% remain operational and 45% have raised further finance.

PREVIOUS BUSINESS EXPERIENCE

1996-2003 PITTIGLIO RABIN TODD & MCGRATH

Principal (1998-2003), Manager (1997-1998), Associate (1996-1997)

Results-oriented implementation consultant responsible for leading major strategy and operations projects for high-growth technology companies that delivered value in excess of \$100 million. Example projects include:

- Led successful turnaround of £600 million industrial project that was behind schedule and had no credible plan to complete. As a result the customer had lost all confidence in ability of the company to deliver. Formed Integrated Project Team (IPT) and facilitated development of integrated plan for delivering the project. Drove IPT to achieve “No Right Shift” execution and achieved critical end of financial year milestone that generated £30 million additional revenue.
- Acted as interim Chief Operating Officer for a start-up pan-European telematics Joint Venture between three European car companies (€200m planned investment). Responsible for leading the company’s Management Team through the development of its operating strategy and staged plans for building the business.
- Implemented project-centred development for a multi-billion dollar software company. Convinced Co-Chairmen and Board of need for change and demonstrated that the approach would work within their unique culture. Critical to the success of the implementation in this non-hierarchical organisation was achieving broad consensus on the plan across the Program Directors, a group of 50 senior managers, one down from the Board.
- Improved the New Product Introduction (NPI) performance of the supply chain operations of a major telecommunication equipment company. Reduced lead-times for prototypes by 50%. Defined the NPI supply chain operating model for its outsourced sub-assembly manufacturing operations. Quantifiable bottom-line benefits from this project exceeded \$30 million/year.
- Improved the Engineering operations of a major defence equipment company. Stabilised execution on two major programmes and avoided significant liquidated damages. Implemented improvements in engineering productivity worth tens of millions of pounds.
- Stabilised product development execution across the entire operations of a large electronic equipment manufacturer. Rationalised their product development pipeline to meet R&D spending commitments made to the Stock Market and implemented effective programme management and management decision-making. This project turned around the division and avoided the possibility of closure.
- Led feasibility and scoping study to investigate potential market failure in electronics sector and identify actions needed to stimulate electronics product development in Scotland. Developed new vision for electronics sector based on co-development and staged recommendations for implementation.

1991-1995 HEWLETT-PACKARD MEDICAL PRODUCTS GROUP (MPG)

R&D Business Development Manager

Manager, Standards & Technology Development Centre (STDC)

Part of world-wide cross-functional team working on Group-level strategy to develop new business areas in Healthcare Information Systems and Systems Integration. Worked on these ideas from their initial conception through to the implementation of the strategy and the formation of a new division - Healthcare Information Management Division (HMD). Dual reporting to World-wide R&D Manager (USA) and General Manager, HMD-Europe. Member of HMD-Europe Extended Staff. Invited member of MPG R&D Council. Managed team of 5 Project Managers/Consultants and an annual budget of \$900,000.

- Identified and led the development of technology strategy and R&D partnerships in Europe. Starting point for this was a broad description of potential new business opportunities in information systems from previous investigations. Initial strong resistance from several members of MPG Executive Committee.
- Turned this strategy into a portfolio of accepted and funded co-operative R&D projects involving over 50 external partner organisations (industry, healthcare organisations, universities).
- Led preparation of proposals for European Commission Advanced Informatics in Medicine (AIM) Programme. Identified and qualified potential partners and consortia. Led negotiations and development of shared vision within consortia consistent with HP business objectives. Detailed planning of R&D objectives, commitments and work packages for each project. Full responsibility for all aspects of contract negotiations with EC and business partners. HP co-authored proposals had an acceptance rate of 75%, compared with an industry average of 18%.
- Set up new European entity - Standards and Technology Development Centre- to acquire and/or develop required technologies. This organisation was unique in the way it bridged boundaries between traditional Divisional R&D, responsible for Product Development, and European Medical Project Centres, responsible for Systems Integration. Identified internal customers and negotiated funding from MPG Executive Committee and HP European Corporate Development. Recruited and led highly motivated world-class team.
- Responsible for developing exploitation plans including handling business negotiations with major international medical imaging company for STDC to develop critical teleradiology software components for their medical imaging workstation product family. Activities included joint market research and product definition, and negotiation of licensing terms and minimum volume agreement.
- Projects were successful in identifying key product functionality, in scoping and reducing technology risk, and for developing European reference sites for HP's vision of Integrated Information Management in healthcare.
- Projects achieved a very high leverage of HP's investment and significantly enhanced the company's reputation as an innovative solution provider with leading healthcare customers in Europe and USA.
- Participant - INSEAD Strategic R&D Management Programme, May 1993.

1985-1991 HEWLETT-PACKARD LABORATORIES

1990-1991 Business Development Manager

Initiated business investigations for opportunities in the healthcare market that would exploit advanced technology in information management, networking and communications developed by HP Labs. Working with a wide range of Medical Products Group entities world-wide, including: Clinical Systems Business Unit, Health Care Information Systems Business Unit, Medical Project Centres and Medical Sales teams. Invited member of Clinical Systems Business Unit R&D Council.

- Provided consultancy to HP Labs project teams on relating their technology to healthcare customer needs.
- Supported UK Medical Sales team in developing relationships with key NHS executives and clinical opinion leaders.

1987-1990 Project Manager - Intelligent Alarm Technology Project

Responsible for strategic and technical direction of project. Recruited and led a highly motivated team of 4 Research Scientists and Engineers. Responsibilities included: budget management and salary profiling; performance evaluation and personnel development planning.

- Member of Knowledge-Based Programming Department management team. HP Labs Bristol was responsible for the long-range artificial intelligence research strategy for HP world-wide. Responsible for HP Labs work on knowledge-based planning, reasoning about dynamic systems and qualitative physics.
- Championed research on application of knowledge-based programming to patient monitoring to HP entities world-wide.
- Authored a detailed analysis of customer benefits from advanced patient monitoring functionality enabled by knowledge-based programming. Used this to build a shared vision of “Intelligent Monitoring” between Marketing and R&D within the Medical Products Group.
- Negotiated plan for technology transfer to Boeblingen Medical Division, Germany, with identified product contribution included in their Intermediate Range Plan.
- Established joint research programme on intelligent monitoring with Medical Department, HP Labs, Palo Alto and collaboration with leading clinical groups.
- Supported UK Medical sales teams on major deals, including \$2-3M deal for the National Heart Hospital/Royal Brompton Hospital; largest ever HP UK Medical order.
- Assisted team at Imperial College/St. Mary's Hospital with preparation of business case for transfer of new neonatal monitoring technology and championed work within HP for 2 years.

1985-1987 Member of Technical Staff

Developed business case to set up long-range research programme on application of knowledge-based programming to patient monitoring. Built technology base and links with leading groups in Europe and USA.

1982-1985 GEC MARCONI RESEARCH CENTRE

1984-1985 Research Fellow – Edinburgh University

Seconded to Edinburgh University Department of Artificial Intelligence to help them set up the research team for a major national demonstrator project on manufacturing applications of artificial intelligence.

1982-84 Research Scientist - Artificial Intelligence Group

Project Leader for research programme in knowledge-based planning. Responsible for feasibility and design studies for applications including: sonar sensor configuration, spacecraft management, VLSI design for self-test and signal interpretation.

PATENTS

BRAND PROTECTION MANAGEMENT SYSTEM

United States - US2009307032 (A1), Issued December 10, 2009

(with Raglan Tribe, Ken MacLauchlan and Colin Frey)

A product management system for monitoring the movement of products through a supply chain, the system being adapted to receive data from reader devices that capture data associated with the products as they move through the chain. The captured data is used to generate an event record for each product, at each stage in the supply chain. These records are used, together with at least one model of the supply chain, to detect anomalous events.

PRODUCT AUTHENTICATION SYSTEM

United States US2010019026 (A1), Issued January 28, 2010

(with Barry Hochfield, Raglan Tribe and Stephen McSpadden)

A system for authenticating articles comprising: an authentication manager for managing authentication information associated with the articles; a plurality of secure taggant reader instruments for reading machine readable taggants associated with the articles, the taggants including the authentication or related information, and an instrument configuration manager for secure on-line configuration of the instruments. Each taggant reader instrument is operable to securely process and send authentication information derived from a taggant to the authentication manager. The authentication manager uses the received authentication information to identify suspicious events. When suspicious events are detected, the instrument configuration manager is able to reconfigure at least some of the taggant reader instruments. Reconfiguration may also happen in the event of a product recall and/or taggant security compromise.