

Christopher Crowhurst

8935 Wood Hill Drive,
Savage, MN 55378

Telephone: (952) 428-9141
Email: christopher.crowhurst@gmail.com

Technology Executive

Application Development, Architecture, Infrastructure, Operations

Leading a high performance team to help drive innovation, agility, transformation and operational excellence.

Technology Executive with proven track record of driving top and bottom line growth. A change agent, specializing in solving business challenges with innovative sustainable solutions. Verifiable history of designing, developing and managing highly scaling enterprise applications and virtualized infrastructure, while building and developing high performance technology teams. Rich experience of transforming business models, applications and infrastructure to the Cloud.

Exceptional leadership experience including executive relationship and vendor management; employee coaching, mentoring and development; complemented by deep technical knowledge and experience. Excellent presentation skills and a scientific product research and development background.

Professional Experience

LOGISTICS PLANNING SERVICES, Woodbury, MN

Chief Technology Officer,
May 2016 – Present

Reporting to CEO, Responsible for the technology strategy, infrastructure, application development.

- **Technology** – Establishing customer facing technology strategy; SaaS application portfolio, rapid integration platform, information cross dock, carrier and customer data management. Enabling CRM and Business intelligence platforms to drive sales growth and visibility.
- **Data Center** – Migration and consolidation from legacy datacenters to Azure cloud using IaaS and PaaS models to decrease operations costs and enable expandable on demand capacity capabilities.
- **Application Development** – Establish agile development processes. Instill Test Driven Development, SCRUM methodologies, and micro-service architectures to drive business agility. Growing team rapidly and integrating outsourced and insourced resources to create burstable capacity.
- **Business Strategy** – Assist in the due diligence process for acquisitions and partnerships. Establishing road map for customer facing capabilities.

MARKETING ARCHITECTS, Hopkins, MN

Chief Technology Officer, Executive Vice President & Partner
June 2010 – Feb 2016

Reported to owner and CEO, Responsible for the technology, product design, manufacturing logistics, and digital media strategy.

- **Technology** – Established an agile development organization. Brought rigor of test driven development, quality control, and change management to an operationally immature organization. Led substantial cost savings through right sizing teams, leveraging blended resource models, and changing previous culture of capital intensive asset ownership by driving virtualization of infrastructure and migration of applications to the Cloud. Established high performance, highly converting, scalable, cloud based, secure ecommerce platforms. Designed and implemented multivariate and A/B testing platform and statistical results analysis. Drove increased revenue through improved web conversions for clients.
- **Data Center Operations** - Migrated office technology and application hosting to the cloud. Large scale telephony infrastructure management for direct response call aggregation and conversion. Both near and far shore resource balancing, and managing 24x365 incident response. Delivered 4 9's uptime. Established PCI policies and oversaw changes to ensure compliance.

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- **Product Design, Manufacturing and Logistics** – Drove collaboration on product ideation. Led engineering and design of physical products. Established DFM (Design for manufacturing) best practices. Established both onshore and Asia (China, Taiwan, Vietnam) based manufacturing contracts and production. Liaised with patent attorney for intellectual property protection. Established FDA medical device quality control and incident reporting systems. Managed operations and logistics from Asia to fulfilment warehouses in USA, 3PL partners to fulfil the B2B and B2C orders and shipments of direct response products.
- **Digital Strategy** – Establishing digital strategy and managed execution of corporate move from terrestrial broadcast media to digital media. Recruited and built team. Established scalable systems and procedures for client engagement and execution. Developed media and creative testing strategies that exceeded goals within first quarter. Liaised with clients to migrate to digital platform and establish digital testing strategies. Managed and maintained numerous client executive relationships. Developed strategies and measurement approaches for content development, SEO services, SEM buying and testing methodologies. Established Social media marketing and testing strategies for Facebook, Twitter, Instagram, Pinterest. Including text, image and video media. Successfully drove 20% growth in revenue through expanding use of Facebook marketing during 2015 holiday sales cycle.

THOMSON REUTERS, Eagan, MN

Vice President, Corporate and Internal Systems

October 2009 – March 2010

Reporting to Senior Vice President Technology and Operations, Responsible for the global operations of the division's internal IT.

- **Operations** – Leading the global data center operations teams responsible for supporting the corporate and internal systems, Storage, LAN, Virtualization, Middleware, DBA, Unix, Windows and Application support. Both near and far shore resource balancing, and managing 24x365 incident response.
- **Regional Campus Support** – Driving standards and process efficiencies across the 300+ regional offices support organization, leveraging desktop virtualization, and deployment automation. SharePoint, LCS, MS Office, develop migration plan to Windows 7, global VMware VDI initiatives. Manage vendor negotiations and licensing challenges of virtual desktop environments.
- **Global Communications** – Responsible for managing global IP telephony and call center technology regionally. Managing the world wide WAN, legacy PBX, Video and Audio conferencing and implementing Telepresence in major campus locations. Supporting consolidation of global mobile telephony and mobile data support and contracts.
- **Messaging & Directory** – Transforming the disparate global email and active directory into a unified enterprise resource, supporting the mailboxes for 27,000 employees worldwide. Develop migration initiatives for Exchange 2010 to leverage enhanced resiliency and lower cost infrastructure. Establish proofs of concept with SAAS models for cloud email.

Vice President Strategic Technology

May 2009 – October 2009

Reporting to Division CIO, responsible for sustainable IT infrastructure strategy:

- **Server Virtualization** - Responsible for the development of the business case and the execution of the projects to reduce infrastructure cost growth, power consumption and the growing need for data center capacity, including 7,500 x86 servers virtualized over three years, estimated cost avoidance exceeds 200M over 8 years
- **Storage**– Developed optimization program and leading implementation of SAN and NAS virtualization technologies to mitigate growth in storage foot print, projected savings 6-8M annually. Manage multi-petabyte SAN and NAS environment.
- **Data Center Strategy** - Managing the construction of cost efficient data center capacity using advanced cooling and power solutions, working to design next generation data center modules to allow for cash flow efficient expansion of existing infrastructure and product platforms. Mitigated short term power crisis and lead the development of the road map for data center expansion
- **Architecture** – Infrastructure and MIS application architecture, developed methodology for measuring compliance with division standards and establishing governance framework for standards development.
- **Global communications** – Managing the global WAN, VOIP, Wireless, and LAN for the division
- **External collaboration** - Member of many customer advisory boards, and a presenter at many industry conferences. Honored by the InfoWorld CTO 25 Award in 2009.

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Vice President Architecture and Business Systems Infrastructure

April 2008 – April 2009

Reporting to Division CIO, responsible for divisions IT architecture and business systems infrastructure:

- **Architecture** - Negotiated the adoption of shared infrastructure including networks, storage and virtual server platforms. Managed the communications between business units and operations team and assisted establishing a technology road map to support their product development needs. Responsible for complex vendor negotiations.
- **Business Systems Infrastructure** – Migrated employees to a global workforce leveraging best shore practices, successfully supported the infrastructure needs of large global SAP deployment and supporting systems
- **Project Management Office** – Established project pipeline detailing all active projects within the divisions MIS and hosting organization. Developed standard metrics to track project progress and enhanced solution design process to reduce delays. Optimized organization to reduce annualized operating expenses by 20%

THOMSON CORPORATION, Eagan, MN

Vice President Technology – Thomson Web

August 2006 – April 2008

One of the three founding executives responsible for an internally funded innovation incubator. The business unit reported to the corporation's CTO and was nominated as one of the best examples of innovation excellence within the enterprise.

- **Internet Search** - responsible for rapidly developing industry vertical specific Internet Search, leveraging cloud infrastructure service providers and patent pending techniques for content metadata enhancement.
- **Social Networking (Web 2.0)** – integrated social networking, collaboration and user generated content business models and technologies alongside search results
- **Advertising** – Established advertising technology and business model including warehouse of reporting metrics and click through analysis to monetize page views.
- **Agile development** – Drove the adoption of Agile as a product and an application development methodology, ensuring product design, executive management, and quality assurance team engaged with development in the solution. Established fully automated build/deploy to facilitate rapid development and promotion through to production.
- **Software as a service (Cloud)** – Search solution leveraged external cloud provider and acted as internal service provider to Thomson business units, integrated into three product platforms independently while maintaining central services agility.

THOMSON LEARNING, Stamford, CT

Vice President and Chief Architect

May 2004 – August 2006

Reporting to the Division's CTO, A member of the Thomson Learning CTO council, and chairman of the Thomson Architecture Council. Budget responsibility in excess of 8MM US and a staff of 120+ domestic and overseas

- **Architecture** - lead role in the creation of the SOA framework for digital information asset sharing. Assisting implement application composition strategy within a business unit using BPEL orchestrations
- **Shared Service SW development** - Responsible for managing the centralized technology development, including content management systems, learning management systems, rights access and control, and eCommerce.
- **Security Evangelist** spent time traveling to business units raising the awareness of application developers, as well as frequently presenting at conferences. Deep subject matter expert in Web Services Management technology and WS security protocols, with practical experience in assisting business units implementing both.
- **External collaboration** - Member of many customer advisory boards, a regular contributor to the computer press, and a presenter at many industry conferences. Honored by the CIO council as one to 2005's "One to Watch"

THOMSON PROMETRIC, Baltimore, MD

Vice President of Enterprise Architect

August 2003 – May 2004

Responsible for technology vision and strategy for Prometric, in addition to providing leadership for many corporate technology initiatives.

Sample projects included:

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- **Consolidation Strategy** - Migration to SOA from n-Tier, .NET Web-Services, BPEL, SOAP, WSDL, UDDI, WSS
- **Data Warehousing** - Provision of real time business intelligence
- **Thomson Learning Architecture Review Group** - Independent review and critique of critical business systems architectures other Thomson business units
- **Thomson Web Services Sub Committee** - Development of policies surrounding emerging web-services, specifically focused on security, and participation as Thomson corporate representative on OASIS technical committees.
- **External collaboration** - The Thomson Prometric SOA architecture was recognized by Info World as one of the top 100 most innovative IT projects in 2004.

Executive Director of Architecture

February 2002 – August 2003

Responsible for technology strategy, focusing on Component based Architecture and development of reusable objects and service based components.

Sample projects included:

- **Test Center File Management** - Design of highly available and disaster recovery solution for electronic content and software distribution.
- **Results Manager** - Design of Business Intelligence mining tool for browser based analysis of examinee results
- **GEE** - Design of Candidate management system for remote browser based data maintenance.

Director of Software Development

June 2001 – February 2002

Senior project manager responsible for overseeing software development, engineering and QC groups. Areas of responsibility included:

- **Management** - Direct multiple teams of developers and engineers. Responsible for departmental and project budgets in excess of \$3 Million. Act as mentor for Project Managers, and provide technical leadership for developers.
- **Client Liaison** Responsible for establishing and maintaining inter-corporate collaboration and co-operation on major projects. Create and deliver presentations to internal and external clients. Assist in technology assessment of prospective acquisitions.
- **Technology** - Responsible for delivering enterprise wide upgrade to test center software to over 450 locations, from design to deployment. Responsible for the integration of all third party software into test centers.

Technical Project Manager and Architect

January 2000 – June 2001

Responsible for software development team, as well as acting as systems architect for other teams.

- **Test Center Administration System** - Designing and developing an n-Tier highly Object Orientated administration system to replace all existing administration systems at computerized Testing Centers Worldwide.
- **Integrated Eligibility System** Architecting BizTalk based B2B XML data integration application for moving client data in Scheduling application.
- **Scheduling and Registration system** Architecting COM+ Data Layer and Business objects for High availability Call Center Application including Internet registration capability.

OBF LABS (UK) LTD. Malmesbury, Wiltshire, UK

Founding Development Director

June 1991 – July 1999

A founding **owner**, responsible for product research and development. Successfully took four medical products from initial concept designing through to production and end-user sales. A patent holder of a worldwide distributed product. Managed production purchasing budget. Contract negotiation with suppliers and sub-contractors. Just in time production optimization. Responsible for implementing and maintaining company-wide quality system to ISO9003. CE marking and obtaining FDA 510K approvals for medical products.

Designed and developed the software solutions including imbedded operating systems, device drivers and diagnostic product applications. Responsible for the circuit design and construction.

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Awards

- 2009 InfoWorld CTO 25 Award
 - 2007 Award of excellence honoree for Thomson Web SAAS solution
 - 2005 CIO Magazines, Ones to Watch honoree.
 - 2004 The Thomson Prometric SOA architecture was recognized by Info World as one of the top 100 most innovative IT projects in 2004
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Patents

Walking aid including a bendable puck coupled between a foot and handle
United States 9,084,458

Information retrieval systems, methods, and software with content-relevancy enhancements
United States 9,092,756

System and method for computer based testing using cache and cacheable objects to expand functionality of a test driver application
United States 8,798,520

Pneumatic pressure probe
United States 5,857,969

Improvements in and relating to a pneumatic pressure probe
United Kingdom GB2295460

Publications

Rat intraocular pressure using a miniaturized pneumatic tonometer.

Investigative Ophthalmology & Visual Science, 2001.

Pulsatile Ocular Blood Flow: A Population Study of Normals.

Investigative Ophthalmology & Visual Science, vol. 37, 1997.

The Ocular Blood Flow Tonometer: A new instrument for the Measurement of IOP in rabbits.

Experimental Eye Research, vol. 63, 1996.

Reliability of Pulsatile Ocular Blood Flow Values in Normal Eyes.

Quantification of Ocular Blood Flow in Glaucoma Workshop, Basle, Switzerland 1996.

Education and Training

Bachelor of Engineering, University of Bristol, UK. Computer Systems Engineering. (Including Computer Science, and Electronic Engineering curriculum) Graduated with honors.

S Levels – Distinction in Applied Mathematics, Merit in Pure Mathematics.

A Levels – Pure Mathematics, Applied Mathematics, Physics, all Grade A.

O Levels – Ten passes including 6 Grade A.

Thomson School of Executive Leadership