[LLOYD W. MANGNALL](http://www.linkedin.com/in/lloydmangnall), CHCIO, CISSP

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Pragmatic Agilist and Innovative CTO

“Transformational Delivery through Personal Performance and Leadership”

#### Personal PROFILE

A results-driven senior technology executive and certified cybersecurity expert (CISSP) with a long history of leading successful, high ROI product engineering teams in developing, releasing and maintaining commercial cloud-based software products and solutions. A recognized visionary and authority in Cloud Computing, Agile Product Development, and Advanced Analytics & Machine Learning. A pragmatic agilist also highly skilled in the dark arts of ISO 9000/13485/27000, FDA CFR Title 21 (11, 807, 814, 820-22, 860), NIST 800, HIPAA/HITECH and HITRUST controls. Highly skilled at managing near-shore and off-shore agile product development from initial concept through release, while providing strategic product management direction. A welcome addition to any leadership team willing and able to wear any hat necessary to ensure overall success.

#### Professional Experience

## SVP-Information & Technology (CTO) [AbleTo](http://www.ableto.com)

**New York, New York:** October 2017 to present

Leading provider of technology-enabled behavioral health care, with >700 licensed practitioners in all fifty states. Evidence-based care, coupled with a convenient and secure telehealth approach, supports individuals facing emotional and behavioral challenges brought on by medical events and life transitions.

Executive responsible for commercial SaaS product engineering, technology operations, cybersecurity and quality assurance through sustained rapid growth from $12M to $40 CAGR in FYs 2018 & 2019.

* Develop and implement coordinated product roadmaps to optimize delivery of value to customers and patients.
* Refine and implement a scaled Lean|Agile SDLC to support secure development of a commercial-grade SaaS clinical analytics and mobile tele-health platform on the Google Cloud Platform (GCP).
* Established SecDevOps continuous integration & delivery (CI/CD), and automated infrastructure as code (IaC) using Docker, Terraform, and Ansible on Google Kubernetes Engine (GKE) microservice container infrastructure for high scale and resiliency.
* Redefine and implement Standard Operating Procedures (SOPs) around IT Service Management (ITSM) based on ITIL v4 and deployed SaaS service system development and management tools.
* Managed high-volume omni-channel contact center (NICE/InContact), customer relationship management (Salesforce) and digital marketing (Braze) system operations across multiple outbound patient engagement centers.
* Led HITRUST security self-assessment, remediation, implementation and validation of standard security policies, procedures and tools and successfully achieved formal HITRUST certification January 2019.

## CIO / CTO [Imaging Advantage](http://www.imagingadvantage.com)

**Scottsdale, Arizona:** September 2016 to September 2017

The nation’s largest evidence-based radiology physician services company providing comprehensive professional radiology solutions to health centers and radiology groups around the world.

Executive responsible for technology strategy and operations, regulatory compliance, enterprise architecture, and commercial SaaS product management, engineering and quality assurance.

* Key member of executive team responsible for positioning the company for acquisition and successful transition.
  + Positioned the company with multiple large international private equity and strategic industry buyers, ultimately completing the acquisition by Envision Healthcare Corporation (EVHC) in March 2017.
  + Led technology and regulatory due diligence activities related to valuation and transition planning.
  + Led post acquisition IT transition activities.
* Redefined and implemented technology standard operating procedures (SOPs) around ITIL v3 good practices.
* Consolidated IT and clinical support personnel into a single cohesive Customer Service organization.

## CIO / CTO / CISO [AMC Health](http://www.amchealth.com)

**New York, New York:** January 2014 to January 2017

Full-service patient engagement and telehealth organization delivering sophisticated remote management of large chronic patient populations and virtual clinical trials around the globe

Executive responsible for all aspects of technology strategy, product management, regulatory compliance, security, architecture, engineering, quality assurance and production operations. Completely rebuilt the people, process and technology infrastructure supporting product management, software engineering and IT operations in a highly-regulated environment.

* Key member of executive team that drove a >200% CAGR in FYs 2015 & 2016.
  + Positioned the AMC telehealth platform within the Veteran’s Health Administration and secured a prime vendor contract for the $1.1B VA Home Telehealth Program.
* Established a global Product Management and Information Technology support organization with resources working in a completely virtual office environment.
* Led the development of an FDA class 2 cleared SaaS IoT tele-monitoring and mobile patient engagement platform on Amazon Web Services (AWS).
* Led the design and deployment of a comprehensive ISO Quality Management System (QMS) to support an FDA cleared Class 2 medical device used in registered clinical trials:
  + FDA CFR Title 21, Part 820.30, Quality System Regulation: Design Controls
  + FDA CFR Title 21, Part 11, Electronic Records; Electronic Signatures
  + FDA General principles of software validation; Final guidance for industry and FDA staff
  + FDA Guidance for the content of premarket submissions for software contained in medical devices
  + ISO 9001:2008 Quality management systems, Section 7.3 – Design and development
  + ISO 13485:2003, Medical devices – Quality management systems
  + ISO 14971:2007, Medical devices – Application of risk management to medical devices
  + IEC 62304:2006, Medical device software – Software lifecycle processes
* Led the effort to achieve FedRAMP Authority to Operate certification as a Service Provider for the VA.

## Vice President–Enterprise Architecture (CTO) Vizient

**Irving, Texas:** June 2007 to present

Largest healthcare general purchasing organization serving thousands of acute care hospitals and affiliate organizations throughout the United States

Lead enterprise technology strategy, architecture and engineering for Vizient.

* Developed multi-year strategic plan and led information technology transformation from a traditional application centric culture to a modern cloud-centric service oriented (SOA) component ecosystem.
  + Led transformation of hundreds of legacy applications to a service-oriented component architecture and cloud-based (SaaS) modular component application platform.
  + Led design and implementation of hybrid public/private cloud technology platform utilizing Amazon Web Services (AWS) infrastructure as a service (IaaS).
  + Pioneering disruptive model-driven generative software techniques using domain specific languages and meta-ontologies that are producing orders of magnitude reduction in cost and time to market for new software product development.
  + Led transition of software product development methodology from outdated waterfall to a modern agile process.
* Led the strategic transformation of enterprise analytics offerings to a comprehensive ‘outcomes optimization’ platform expanding the core supply chain analytics product suite with clinical, financial and operational information to provide innovative new patient-centric analytic products to members.
  + Led design and transition to a hybrid cloud-based, petabyte-scale polyglot ‘big data’ analytics platform using multiple SQL and NoSQL technologies.
  + Led Enterprise Information Management (EIM) and Master Data Management (MDM) and chaired the data governance board.
* Led transformation to Scaled Agile Product Development process utilizing SCRUM and SAFe.
  + Redefined roles and activities to enable the rapid scaling of development lifecycle to enhance business agility.
  + Led ongoing maturity of software development organization per CMMI-DEV.
* Established and led the Enterprise Architecture leveraging the TOGAF framework.
* Designed & led implementation of a comprehensive resource reorganization plan to align and retrain product development resources around a scalable shared services model that integrates specialized near-shore and off-shore resources.
* Led design & implementation of IP voice, video, messaging, web conferencing and collaboration across the national network of Vizient offices.

## Corporate Director - Applications [Vanguard Health Systems](http://www.vanguardhealth.com)

**Nashville, Tennessee:** February 2003 to April 2007

$5.3 billion Integrated Healthcare Delivery Network that owns and operates hospitals in multiple metropolitan markets throughout the United States

Direct enterprise business applications initiatives across the organization. Develop & execute strategic and operational plans in accordance with overall corporate strategic intent. Establish and implement operating policies and procedures and plan, approve & audit budgets managed by regions.

* Developed long-term enterprise application strategy and 5-year $65M deployment plan for McKesson's Horizon Clinical application suite across all Vanguard hospitals.
* Established application integration Center of Excellence and deployed Sun’s J2EE Java Composite Application Platform Suite (Java CAPS) to implement an Enterprise Service Bus infrastructure as an evolutionary step to a Services Oriented Architecture (SOA). The first healthcare organization in the world to bring ICAN/CAPS to production in a large-scale deployment across the U.S.
* Developed enterprise portal strategy and established a collaborative Intranet for ~20,000 employees. Deployed Microsoft's .NET, SharePoint and Office Server technologies to facilitate knowledge management, collaboration and business intelligence across the organization.
* Established Program Management Office (PMO) and deployed Microsoft's web-based Enterprise Program Management tools across the organization.

## Vice President - CTO [The Aegis Group](http://www.aegisgrp.com)

**Seattle, Washington**: August 2000 to February 2003

Full-service Technology and Product Development Company providing Capital Investment, Business Consulting, Industrial Design, Electrical/Mechanical Engineering and Embedded/Enterprise Software Development to initial-stage startup technology companies

Evaluate venture investment opportunities and manage associated product development initiatives. Develop and direct the enterprise software and professional services arms of the company. Oversee quality assurance, risk management and client relationships. Develop annual operating plans. Establish and implement operating policies and procedures and manage group P/L. Recruit and train staff members, define group culture and maintain morale.

* Founded and managed Mexico City, Mexico offshore development operations and worked to establish SEI-CMM certified ‘Center of Excellence’ for software development.
* Leveraged geographically distributed development teams (~40 people) in the U.S and in Mexico City to productize a robust pharmacy unit-dose medication administration and nursing automation system for NextRx, Inc. Led development from prototype to product on a wireless robotic platform (BEA and Oracle) using J2EE SOA principles, JMS, EJB, XML/XSLT and JSP.
* Managed the outsourcing of Microsoft Windows CE.NET embedded software & driver development for Symbol Technology’s MK-2000 micro kiosk platform.
* Key strategic consultant at King County Metro Transit district. Led KCMT project managers in UML modeling of business &technology domains for the creation of a comprehensive Request for Proposal (RFP) for their new $25M On-Board Systems (OBS) ‘smart bus’ transit system.
* Designed and implemented a comprehensive enterprise HIPAA EDI solution for Patient Accounting Services Center (PASC) on SeeBeyond e\*Gate (HIPAAWare) to ensure all medical billing information managed by PASC adhered to the rules of HIPAA EDI portability.
* Led the judging of Visa’s 2002 Smart Visa Challenge smartcard application development contest.

## Practice Manager - Global ERP Computer Sciences Corporation

**San Bruno, California**: July 1998 to August 2000

$11 billion leading Global System Integrator focused on Information Technology outsourcing and consulting

Develop and manage the western region of the Global ERP consulting organization (~350 FTE/Contractors). Design architectural solutions and manage large-scale ERP implementations across vertical industries. Ensure execution of proposed business and technology solutions throughout project lifecycle. Develop strategic alliances with key technology companies to provide comprehensive business and technology solutions to CSC clients.

* Primary architect of the 7-year $650M outsourcing engagement for the County of San Diego. Led the application & technical architecture during the proposal process and together with business architects, designed the software, hardware, human & process infrastructure that supported the entire enterprise transformation initiative.
* Assumed chief architect role in the County of San Diego PMO to ensure that all project teams (~350 people) remained aligned with the overall program vision. Designed and implemented the Enterprise Application Integration (EAI) architecture utilizing ESB technology to support real-time integration of Oracle Financials, PeopleSoft HR/Payroll, numerous ancillary ERP and business intelligence applications. Developed the strategic SOA technology vision beyond the replacement of core business applications as they evolved to an ‘on-line vs. in-line’ delivery of county services through web user experience.
* Founding principal of the Services Oriented Architecture (SOA) practice within CSC. Forged alliances with strategic leaders in SOA marketplace (Sun/SeeBeyond, BEA, Microsoft, WebMethods, Tibco, and Vitria). Guest speaker at the 2000 Oracle Applications User Group (OAUG) conference on Service Oriented Architecture (SOA).

## Manager - Management Consulting Ernst & Young

**Irvine, California**: March 1997 to July 1998

$4 billion ‘Big 5’ management consulting firm that provides emerging business and technology consulting services

Manage development and integration of Oracle ERP and custom applications for E&Y’s Fortune 500 clients. Consult with client subject matter experts to determine business requirements for building and deploying enterprise software applications and data warehouse solutions. Identify and procure the software and hardware infrastructure components required for production deployment. Assemble highly skilled project teams and manage all phases of the project lifecycle.

* Managed development team of ~80 for the development of a $17M multi-tier client/server system that managed settlement of millions of hourly trades on the California-Independent System Operator (CAL-ISO) electric utility wholesale trading systems.
* Lead data architect & database administrator responsible for logical and physical database design and implementation of CAL-ISO Market Settlement application using Oracle.
* Lead data architect & database administrator responsible for logical and physical data warehouse and data mart design for the CAL-ISO Market Surveillance system using Oracle and SAS.
* Lead database administrator and architect of “five-9’s” business continuity architecture using Oracle Parallel Server on clustered Digital 8400 Alpha servers.
* Lead data architect of a large online data warehouse and the corresponding data marts necessary to support an Executive Dashboard for Atlantic/Richfield Corporation (ARCO).

## Application Specialist / Project manager Cerner

**Irvine, California**: September 1995 to March 1997

$1.7 billion leading vendor of comprehensive Clinical Information System software

Utilize PMI derived tools and techniques to efficiently direct project resources to provide on time under budget delivery of the Cerner Millennium clinical application solutions at numerous large healthcare organizations across the U.S.

## Manager - Information Technology Sprint Express

**Santa Ana Heights, California:** November 1987 to September 1995

Premier Southern California Same-Day Courier Company

Manage the day-to-day operations and enhancement of technology systems, desktops, networks, business applications and support personnel.

#### Education

**Bachelor of Sciences – Neuroscience**, University of California, Irvine, California - **3.65 GPA**

**Ongoing Executive Education**, Harvard Business School

* Value Measurement for Healthcare
* Competing on Analytics with Big Data
* Launching New Ventures

**Certified Healthcare CIO (CHCIO)**, College of Health Information Management Executives (CHIME)

**Certified Information Systems Security Professional (CISSP)**, International Information Systems Security Certification Consortium

**The Open Group Architecture Framework (TOGAF)**, v8.5, v9