RAYMOND KARRENBAUER

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INFORMATION TECHNOLOGY AND OPERATIONS LEADER

As a Chief Information Officer (CIO) *and keystone Chief Technology Officer (CTO)*, a strategic and disciplined thinker with a strong execution focus, pragmatic and hands-on in his approach to addressing challenges, and tenured in working in highly demanding environments. He has excellent communication skills and experience with building strong relationships at all levels of an organization, and seen as a true peer by senior business colleagues and other IT Executives. A proven track record of implementing a comprehensive set of programs, project management and risk management methodologies and tools, as well as a program management office to ensure near flawless delivery of program/project delivery. Areas of experience and subject matter expertise include, but are not limited to:

♦ Tactics, Strategy, Negotiation	♦ Knowledge Management/BI	♦ Competitive Vendor Management
♦ Engineering Management	♦ Cross-Cultural Diplomacy	♦ Process and Quality Methodologies
♦ Financial Modeling, Controls	♦ Software Engineering	♦ Middleware/Integration Technology
♦ Developing Hi-Perf Teams	♦ Infrastructure and Operations	♦ Information Security and Risk
♦ Enterprise Architecture	♦ eBusiness, eCommerce	♦ Emerging Technology, Innovation

CAREER ACCOMPLISHMENTS

- Research Fellow for META Group, 1998–2000. Fellow for Primary Global Research, LLC, 2004-5.
- Technical Advisor to the Executive Board of Directors for BP(London), termed "blue chalk", 2004-5.
- *former* Venture Capital Advisor for Charles River Ventures (Boston, MA), Sigma Partners (Boston, MA), Globespan Capital Partners (Boston, MA), Advanced Technology Ventures (Waltham, MA).
- A member of the Technical Advisory Board, providing strategic business and R&D advice for:

♦ IBM (2001/6)	♦ Microsoft (2003/6)	♦ Avaya (2003/6)	♦ CIO Magazine (2005-6,11)
♦ Hewlett-Packard (2002/6)	♦ Verisign (2002/6)	♦ Informatica (2001/6)	♦ Gartner Research (2005/6)
♦ Teradata (2004/6)	♦ WebMethods (2004/6)	♦ Oracle (2008/10)	♦ TTI/Vanguard (2005/6)

- Contributed to the forward and chapter sections of the best-selling "J2EE: Developer's Handbook", which includes the most up-to-date references for J2EE design in the context of practical applications.
- Keynote Presentations: Research Analyst Day (2004), CeBit Americas (2005), TDWI Annual (2006).
- Distinguished Industry Awards:

Professional Services Practice of the Year, 1999	#45 on Deloitte's Fast 50 (North America), 2000
DM Review, "World Class Solution Award," 2001	HBJ's Top 40 Executives Under 40 (Age), 2002
Computerworld Honors Laureate (Archived in the Smithsonian Institution), 2003	InfoWorld "25 Most Influential CTOs for 2004," 2004
Recipient of CIO Magazine's first ever "Ones to Watch" award (2005), the Intelligent Enterprise Award 2005, TDWI Enterprise Data Warehousing Award, 2005	Computerworld "Top 100 Award," 2006

ING GROUP:

- Yielded targeted investment returns of 100%-300% (IRR) and improved data quality and business intelligence by designing and inspiring the delivery of "award-winning" integration hubs to aggregate data across 21 countries in 27 business lines. Today, these numbers continue to improve under the leadership of the team he personally assembled and mentored.

CYBERIAN OUTPOST: Awarded the Bizrate.com "Circle of Excellence Award"

- Designed and inspired the delivery of a multi-channel cross-business client interaction platform that was named #1 in the industry and the top-rated consumer shopping experience on the web in 2000.

EDUCATION

UNIVERSITY OF FLORIDA, Gainesville, Florida
Bachelor of Science in Nuclear Engineering, 1992

CORNELL UNIVERSITY, Ithaca, New York
Master of Business Administration, 2006

CERTIFICATIONS: ♦ ISACA-CISM (Certified Information Security Manager)
♦ Carnegie-Mellon SEI-CSAP (Certified Software Architecture Professional)
♦ Order of the Engineer (Distinguished)

PROFESSIONAL EXPERIENCE

AXIS CAPITAL, Hamilton, Bermuda   2007 - Present
A Forbes Global 1000 company providing insurance, re-insurance, and comprehensive risk management services

Executive Vice President and Chief Information Officer (global)

- **General Responsibilities:** architecture, standards, strategy, planning, technology procurement, negotiation, vendor management, application delivery and maintenance, process optimization, data, contact center, help desk and end-user services, telecommunications and infrastructure services, innovation, quality assurance, and information risk management for all business lines, world-wide. Served as the senior IT executive for the corporation; as such, experienced in dealing with a business ecosystem of internal and external stakeholders (e.g., the Board, business units, the press, community and political affiliations, etc.) on various types of issues, conducted briefings, and gained cooperation from others to accomplish goals.
- Direct accountability: 300+ global resources. Manage several budgets cumulative value $60M non-discretionary (labor, consulting costs, global infrastructure backbone), $40M global discretionary. $250k sig authority and approve technology spend globally for the organization.
- Identified business priorities, governance, cost drivers and the dynamics of "total cost of ownership" for the IT function. Translated the business models, dynamics, trends and requirements, and demonstrated how the IT function linked to and supports the business strategy. Drove continuous innovation and continuous improvement as a change leader, including an emphasis on fact-based measurement. Delivered subject results and value in a very cost-effective, capital planned, controlled, and financially structured manner.
- Developed, gained buy-in and executed an IT strategy, architecture, standards and a prioritized road-map including both long-term and short-term plans and the associated investment levels.
- Implemented a comprehensive set of programs, project management and risk management methodologies and tools, as well as a program management office to ensure flawless delivery of program/project delivery.
- Recruited, motivated and developed an outstanding team of IT professionals around the globe. Ensured that IT professionals acquired or had the skills and knowledge necessary to meet Axis' objectives and needs.
- Organized the deployment of IT resources to provide optimal service to Axis' business units (BUs) and group functions consistent with Axis' operating philosophy. Leveraged technical acumen and leadership to grow and develop the application development and infra teams to higher levels of capability, delivery and accountability.
- Managed major outsourcing and vendor relationships. Created a flexible on-shore/off-shore resource model.
- Infused a "team sport" culture; intense, collaborative and transparent, ethical, caring, supportive and tolerant where open communication and relationship investment and building are the norm.
- Maintained awareness of broad trends in the IT world, evaluated their implications for Axis and, together with internal clients, designed market responses. Actively looked for and introduced new technology platforms such as social media, consumer mobile devices, and Software-as-a-Service (SaaS) into the group portfolio.
- Provided oversight of large, complex systems across a multitude of functions and business lines. This personally included a high attention to detail and design, process model, quality, software reuse, and metrics.
- Modernized the global business application portfolio (2008-2010) to include Oracle Financials (with FAH integration), Oracle Hyperion for financial reporting, CSC SICSnt Reinsurance platform, Oracle Documaker for automated insurance forms production and issuance, Oracle Adminserver policy administration, Salesforce.com CRM, FirstBest underwriting management system, RMSv11 (with EGC) risk modeling, Remetrica modeling (enterprise risk), GRC Paisley for audit/risk management, and other solutions for IM, commissions, claims, etc.

(divested) ING GROUP, N.V., Amsterdam, Netherlands   2005 - 2007
A Fortune 20 and Forbes Global 20 company providing a comprehensive array of financial services

Group Chief Architect, Office of Operations and Information Systems

- **General Responsibilities:** architecture, standards, strategy, planning, technology procurement, negotiation, vendor management, innovation, and information risk management for all business lines, world-wide.
- Matrixed accountability: 1,000+ employees (corporate-level). Manage several budgets cumulative value $75M non-discretionary (labor, consulting costs, global infrastructure backbone), $xB global discretionary. $1M sig authority and approve technology line items in LOB budgets. Mentor the global top twelve IT talent candidates.
- Authored and globally institutionalized a comprehensive architecture blueprint, *recorded in the Smithsonian Institution*, for the organization of ING's disparate systems environments and interconnected data centers.
- Under the objective of innovation, lead ING Europe's IT Transformation Program ($1.2B) which involved 2,700 infrastructure employees, the consolidation of 15,000 sq-m of data centers into a twin data center model, new ESM solution to manage the operation of > 95,000 batch jobs per day, rationalizing 2+ PB of disk storage

to improve utilization, bringing 60% of the operating systems into currency with negotiated VMI life cycle, rationalizing 5,000 applications, developing application standards for infrastructure, honing ITIL change processes, redeploying a pan-European backbone for data and telephony services, and selective sourcing tactics.

- Lead ING Mexico's Ops/IT Transformation Program which involved 450 application and infrastructure personnel. This exercise was targeted toward the development of a "killer app" portfolio in the P&C personal lines domain (included rationalization of a portfolio of 300+ Progress-based applications).
- Performed an exhaustive analysis (cost, quality, time, and risk) of processing improvements (core, non-core) relative to markets for the online banking, traditional banking, insurance, asset and wealth management LOBs.

(promoted) ING AMERICAS, Hartford, Connecticut   2001 - 2005
Chief Technology Officer
- **General Responsibilities:** architecture, standards, strategy, planning, technology procurement, negotiation, vendor management, innovation, intermediate infrastructure, eBusiness and external web applications, channel management and telephony systems, middleware, all databases and information management systems, and information risk management for all business lines in the Americas.
- Directed 500+ employees (excluding consultants). Managed several budgets cumulative value $300M non-discretionary (labor, depreciation, infrastructure, sourcing costs), $100M discretionary. $500k sig authority.
- Transformed ING Americas infrastructure footprint by an average of 55% (as measured across an asset inventory and architectural baseline) over a period of three (3) years. The baseline environment consisted of no less than 100 non-integrated data centers with various permutations of technology in various states of product supported life cycle. The cumulative profile of this environment reflected uncommon IP schemes and DNS structure, several $1M+ print shops, 60k MIPS, 700 mid-range & 3,500 Intel-based servers, 2,500 database instances, non-connected PBXs, disparate email systems (incld. Goupwise), uncommon processes (incld. escalation/triage), and nearly 2,800 applications. The costs were prohibitive for a scaling organization and the user community demanded a more uniform view of ING and vice versa. The challenge was to culturally gain support through a grass roots effort in the technical communities, while communicating a consistent plan for execution. The desired result (% asset utilization, % cost reduction over baseline, and % legacy reduction) was accomplished through use of a balanced approach toward architecture, process engineering, education, and sourcing that allowed the business lines to absorb change at their own pace of prioritization (incrementally), without incremental expense or business disruption, and culturally sensitized. Once the credibility was achieved during the initial deliveries the subsequent percent improvement grew rapidly (yr1 8%, yr2 20%, yr3 55%).
- Transformed ING Asia's infrastructure footprint by 32% over eighteen (18) months. ING Asia subsequently adopted the approach he had campaigned and executed throughout the Americas. The Asian infrastructure baseline was similar to Americas with lesser scaling. Asia experienced a higher percent change over a shorter period due to their acceptance of risk. In this role, he mentored and placed a global successor.
- Implemented strategic paths for research and investment by "diplomatically influencing" distinct business departments to move in the same direction towards adoption of critical enterprise technology.
- Championed and created a business operations nerve center where various technologies were used to provide financial and market data for real-time analysis, allowing crucial business processes to be reengineered.
- Reduced operating costs in excess of $100M by creating a series of tactical and execution plans for nearshore/offshore sourcing, and ensuring readiness to keep pace with dynamic market conditions.
- Sustained a superior record of performance in concurrently delivering key technical solutions in a timely manner to large-scale projects that were completed on schedule, under budget, with expected functionality.

(acquired) CYBERIAN OUTPOST, Kent, Connecticut   2000 - 2001
A leading provider of online, kiosk, contact center and logistics services for major brands and retailers
Chief Technology Officer
- Profitably advanced the business from $200M in revenue to $1.2B in revenue during his tenure
- Provided strategic leadership and mentoring, supported negotiations pertaining to mergers and acquisitions, and directed operations for an alliance between major retail partner's (Brookstone, Tweeter Home Entertainment, Wolf Camera, Omaha Steaks, Swiss Army, Orvis, etc.) call centers, logistics systems, and online businesses.
- Directed 450+ employees. Responsible for all IT and operations management including the warehouse logistics (WMS, half of the Airborne Express facility owned and operated by Cyberian Outpost), 5,000+ POS stations, the core ERP system and business applications, 50+ "top rated" major retailer web environments, five (5) advanced call centers supporting over 600 agents, twin + 1 data centers that processed > 500,000 transactions per day, kiosks, mobile communications, payment processing, fraud control and investigative services.
- Innovated, developed and deployed a world-class application architecture which provided a reusable J2EE-based platform that streamlined "getting online" for clients, affiliates, and partners at significant cost-advantage.

(transitioned to IT "buy" side) META GROUP, Stamford, Connecticut   1997 – 2000
A leading provider of IT research, advisory services, publications, and strategic consulting
Vice President, Professional Services

- Increased demand to a 90% proposal hit rate pioneering techniques, producing original technical research, providing impeccable delivery, and cultivating client relationships.
- Stabilized financial control and led the consulting business from severe financial losses to 66% net profitability, benchmarked as the highest for any professional services practice in the sector.

(fixed-term engagement) ORIGIN TECHNOLOGY, Tampa, Florida   1997
The second largest provider of information technology professional services in the AMEA
Vice President, Professional Services

- Directed technical operations for IT projects that had expenditures of several hundred million dollars, and whose clients included Shell Oil, Phillips Magnavox, Halliburton, and Northern Telecom.
- Significantly improved the enterprise systems architecture of USAA (the largest ATM switched network in the world) by designing and implementing a radically advanced communications and network infrastructure.

(acquired) DIGITAL SECURED NETWORKS TECHNOLOGY, Tampa, Florida   1996 - 1997
A specialty provider of information security research, advisory services, products, and professional services
Vice President, Professional Services

- Directed 300+ employees and consultants. Managed elite emergency response teams with the objective to detect and resolve anomalies on client communication and network infrastructures, some with transactions in excess of $15M USD per hour. Launched a private labeled information security consultant practice for IBM.
- Provided guidance to TechData in deploying the largest eCommerce presence on the Internet (50,000+ VARs), and influenced the Defense Sciences Board's development of information warfare technologies.

(acquired) PLANT TECHNICAL SERVICES, Dallas/Ft. Worth, Texas   1994 - 1996
The second largest provider of information technology professional services in the U.S. energy and utility vertical
Vice President, Professional Services

- Directed 300+ employees. Advanced the business from $150M to $600M in revenue during my tenure.
- Significantly improved corporate growth by developing line-of-business software applications for clients and directing short and long-term (avg. project $10M) technology projects from requirements to institutionalization.

(acquired) EG&G ENGINEERING CORPORATION, Las Vegas, NV   1992 - 1994
A Fortune 500 company providing a comprehensive array of professional services and technology products
Vice President, Professional Services

- Provided oversight of their environmental radiological program of over 1400 square miles in area and managed a wide variety of information assignments for the Department of Energy (DOE), Department of Defense (DOD), and Defense Nuclear Agency (DNA), including the implementation of a five (5) million dollar Ingres/SQL software based Laboratory Information Management System (L.I.M.S.).
- Authored several commercial software applications including COBRA (nuclear) and ESADS (modeling).

PREVIOUS EXPERIENCE, Engineering Manager, Software and Systems Engineering   1981-1992

(xxx) – rationale for transition of role.

SUPPLEMENTAL PROFESSIONAL INFORMATION

Mr. Karrenbauer has accumulated over thirty (30) years of *technical* and nineteen (19) years of *management* experience extending across several industries, including financial services, retail, manufacturing, technology, energy and entertainment. In 1984, he began building his *technical* expertise working in the field of computer engineering at SERDAC (Southeast Regional Data Access Center); three years later with NERDC (Northeast Regional Data Access Center) – nodes within NSFNet (the Internet). Mr. Karrenbauer continued along this career path subsequently receiving honors from the National Academy of Sciences, the National Security Agency's Information Systems Security Organization, and the prestigious CIO Magazine for his innovative accomplishments in the field of computer technology. He has authored numerous policies, standards, procedures, guidelines, and specifications, which include implementation and control plans that support the Committee of Sponsoring Organizations of the Treadway Commission (COSO), Sarbanes-Oxley Act (SOX), specifically sections 302, 401, 404, 409, 802 and 906, SEI-CMMI (Capability Maturity Model® Integration), ISACA-COBIT (Control Objectives for Information and related Technology), ISO/IEC 27002 Code of Practice for Information Security Management, ITIL (IT Infrastructure Library), local IT Run Books, and the IETF-RFCs (Request for Comments). A senior advisor to Forbes™ Global 1000 CIOs for much of his career, he has been published or quoted in most of the leading technical journals, trade literature, and industry periodicals (e.g., *eWeek, CIO, CIO Insight, InfoWorld, Information Week, Computer World, Wall Street Journal*).

In 1992, he entered into *management* directing technical organizations while developing his influential level of leadership, enhancing his cross-cultural diplomacy skills, and strengthening the development of his teams through "hands-on" mentorship. Mr. Karrenbauer has managed teams as large as 500 personnel, project budgets >$175M USD, and P&L centers >$600M USD. He is most often characterized as a perceptive and sensitive listener, a person skilled in assessing the needs of clients, intermediaries, employees, and peers. His communications are succinct as he can easily transcend discussions between business and technical audiences. By 2000, Mr. Karrenbauer's intensity contributed to Cyberian Outpost, a publicly traded corporation, cinching position 45 on the Deloitte and Touche's Fast 50 for North America and a Clio award. In 2001, he had completed his sixth (6th) corporate acquisition.

As the Chief Technology Officer (CTO) for ING Americas (the largest of three business regions which comprise ING Groep, N.V., a Fortune™ Global 20 and Forbes™ Global 20 Corporation), he has effectively proven his ability to perform fine-grained technical procedures, succeed in multi-national business despite challenging markets and organizational turmoil, identify pragmatic competitive goals, and deliver results against aggressive milestones. Through leveraging Mr. Karrenbauer's optimal balance of *technical* and *management* experiences, repeating past business results such as being consistently awarded the #1 online service in the industry by Forrester Research, Gomez, Jupiter MediaMetrix, ActivMedia, Nielsen NetRatings, Watchfire Keynote, and Harris Interactive are positively forecasted.

CROSS TECHNICAL COMPETENCIES

- CRM, ERP, Content/Document Management, Workflow, HCM, other commercial applications
- Six Sigma, Lean, PDCA, TQM, Shewhart, Crosby, Deming, and Juran methods, value-chain analysis
- ISO/IEC 15504 (SPICE), CMMi (-DEV, -ACQ, -SVC), ISO/IEC 27000-series (ISMS), ITIL (2011)
- COBIT v4.x, SAS70, Val IT 2.x, Risk IT, ERM (ISO 31000), PCI, HIPPA, and related audit/cert(s)
- Waterfall, Agile, Scrum, eXtremeXP, SUMMIT, Method-1, RUP/GS Method, Prince2, PMI-PMBOK
- Contact Center, CMI/CTI, Universal Messaging, SIP, VoIP, other telecommunications infrastructure
- Mainframe (MVS), Mid-Range (VAX/VMS, Unix: HPUX/AIX/Oracle-Sun), Linux, iOS, and Wintel
- Virtualization, VDI, mobile device management (MDM), WA file services, other ICT infrastructure
- Storage Area Network (SAN), XML/Metadata, Operational Data Store, Data Warehouse, Data Mart
- LDAP/Directory, Identity Management, Access Control/ID, Forensic, IP/IDS, other security services
- Middleware (bus, broker), web portal (.Net, J2EE), web services (SOA), other software infrastructure
- 4+1, RM-ODP, Service-Oriented Modeling Framework (SOMF), ISO/IEC 42010:2007, TOGAF

PROFESSIONAL AFFILIATIONS

Professional Society of Engineers	Gartner CIO Executive Council (EXP)
Junior Achievement of New England	Information Systems Audit and Control Association (ISACA)