M ICHAEL L. GONZALES, PH.D.
Director of Research and Advanced Analytics

CHIEF ARCHITECT, SENIOR SOLUTION STRATEGIST AND INDUSTRY ANALYST
A determined problem-solver impassioned about success, discovery, and innovation

- An accomplished solution strategist with a strong record of delivering business and technical results across multiple industries and in notable organizations.
- Sought out for ability to create the structures and standards that make analysis and design repeatable, implementation components reusable, and change manageable.
- Practical knowledge of the challenges and critical success factors involved in building and managing extremely large databases for applications such as: data warehouses, enterprise-wide business intelligence (BI), and Social Media, and Advanced Analytics.
- A highly-credentialed individual who brings effective research methodologies into a corporate environment.
- Effective communicator with excellent oral, written, planning and organizational skills as well as the ability to lead, reach consensus, establish goals, and achieve results.

ROLES AND ACCOMPLISHMENTS HIGHLIGHTS

As an Advanced Analytics, Business Intelligence/Data Warehouse Consultant and Practitioner
- Established robust ecosystems to support data mining, statistical analysis and Big Data as integral components of a broad decision-support system that also includes data warehousing and Business Intelligent.
- Developed multidimensional strategies, including five core views: Business, Analytic Architecture, Data Architecture, Technical Architecture, and Implementation (Roadmap).
- Developed statistical models for complex, multi-criteria, unbiased decision-making and risk mitigation.
- Evaluated current and future needs to design technical platforms that enable growth and are resilient to change.
- Optimized current technology for maximum return on investment by leveraging existing contracts, licenses, training, and experience.

As a Researcher
- Initiated the Business Analytics Center of Excellence at the University of Texas at El Paso. Selected as one the Executive Director and one of its first information scientists. Primary research focuses on the optimum data and technical architecture for large scale, in-database, advanced analytics.
- Applied the disciplines and practices of rigorous academic research in practical ways to drive clarity and confidence in business and technical decision making processes while reducing risk.
- Applied best-fit methods and models to requirements gathering, priority setting, and problem solving.

As a Business Owner
- Conceived and built DSS42, offering assessments and strategies for an IT-enabled competitive advantage. Sold business to leading Information Management consulting company and fulfilled exit strategy.
- Conceived and built HandsOn-BI, developing a new, interactive approach to experience-based learning. Successfully grew the business, becoming a favored instructor who continuously received high performance scores and had the most "sold out" courses of any conference offerings. Negotiated sale of successful business to leading BI consulting company to fulfill exit strategy.

As an Educator
- Authored numerous practitioner books and articles, covering multiple dimensions of IT and BI.
- Authored several academic conference papers.
- Designed a comprehensive data warehousing and BI curriculum, developing courses ranging from fundamental concepts to advanced analytics.
- Teach data warehouse and BI courses to an international audience of practitioners through leading training and conference providers.

Michael L. Gonzales

- Teach Executive MBA and Accelerated MBA graduate courses in IT competitive strategy at The University of Texas at El Paso.
- Teach undergraduate courses in statistics, business analytics, and systems analysis at The University of Texas at El Paso.

EDUCATION

Ph.D., Information and Decision Science, University of Texas at El Paso, 2012
Dissertation: Competitive Advantage Factors and Diffusion of Business Intelligence and Data Warehousing
Post Graduate Work, Software Engineering, Southern Methodist University, 2005
M.A. Computer Resource and Information Management, Webster University, 1993
B.B.A. Market Research, New Mexico State University, 1980

PRACTICE WORK EXPERIENCE

Stream Integration	2012 - Current
Independent Consultant	2009–2012
Claraview, A division of Teradata	2007–2009
HandsOn-BI, LLC	2001–2006
The Focus Group, LLC	1994–2006
Independent Consultant	1985–1993

Key Clients: Disney, Goodyear, EMC, Toyota, United States Postal Service, The Gap, U.S. Mint, IBM, Boeing, Hyperion, Oracle, Teradata, Capital One, General Motors, BMW, OnStar, Discover Financial

For a description of key projects please refer to the Practice Project Summary section.

ACADEMIC TEACHING EXPERIENCE

Ph.D. Faculty, University of Texas at El Paso, 2013
- Business Intelligence and Security Information
- Strategic Information Systems
- Researcher in IT-enabled Competitive Advantage

Ph.D. Student Lecturer, University of Texas at El Paso, 2009 to 2010
- Fundamentals of Business Statistics to undergraduate students

Ph.D. Student Lecturer, University of Texas at El Paso, 2010 to 2012
- Advanced Business Application Programming to undergraduate students
- Systems Analysis and Design to graduate students

PRACTICE SEMINAR AND SPEAKING ENGAGEMENTS

- Keynote Speaker: BI Adoption and Maturity: Real Success Factors, TDWI, May 2012.
- Faculty Member, University of Texas at El Paso, 2010-2012
- Faculty Member and Instructor, TDWI
- Guest Speaker, Teradata User Groups
- Conference Speaker, IBM's Developers User Group
- Guest Speaker, Data Management International (DAMA)

ACADEMIC CONFERENCE SPEAKING ENGAGEMENTS

- BI Factors for Competitive Advantage, Decision Sciences Institute, November 2011. Selected as one of the best conference papers.
- Diffusion of Business Intelligence and Data Warehousing: An Exploratory Investigation of Research and Practice, Hawaii International Conference on Systems Science, January 2011. Selected as one of the best conference papers.
- Risk and IT Factors that Contribute to Competitive Advantage and Corporate Performance, Americas Conference on Information Systems, August 2009
- Technology-enabled Competitive Advantage: Leadership, Skill and Infrastructure, Decision Sciences Institute, November 2009

PRACTICE PUBLICATIONS (complete list available upon request)

Recent Technical Books

- BI Strategy: How to Create and Document, HandsOn-BI, 2005
- IBM Data Warehousing, Wiley Publications, 2003
- Informix Handbook, Prentice Hall, 2000 (contributing author)
- Informix Stored Procedure Programming, Prentice Hall, 1996

Recent Articles

- The Impact of Effective BI Assessment, BI This Week, Q2 2012
- Success Factors for Business Intelligence and Data Warehousing Maturity and Competitive Advantage, BI Journal, March 2011
- Strategic Intelligence Framework, Teradata Magazine, Q2 2008

ACTIVE ACADEMIC RESEARCH FOCUS

Critical Success Factors for a BI-Competitive Advantage - Using Principle Component Analysis, Confirmatory Factor Analysis, and Structured Equation Modeling, coupled with years of practical experience, this researcher is actively investigating and quantifying the key factors of success for BI/DW initiatives.

BI Project Risk Assessment - The uncertainty of investment payoff (value) and the irreversibility of the investment are two factors that have a direct impact on BI investments. Pilots, proof-of-concepts, and multi-phased implementation plans offer an opportunity to examine the BI investment at several stages, affording management the flexibility to adjust their course of action based on the cost of initiatives and the value they afford. Leveraging Real-Options and Agency Theory, this researcher continues to refine risk assessment models for real-world IT implementations, including BI/DW.

Effective BI for Extremely Large Data Warehouses - Modern organizations face two forces that are straining the capabilities of classic BI/DW environments: Scale of Data and Latency of Analysis. This researcher examines innovations such as Swarm Theory, Large Scale Stratified Statistical Sampling, and Artificial Intelligence for efficiently analyzing extremely large datasets in a timely manner.

PROFESSIONAL DEVELOPMENT

- American Mensa Member
- IBM Certified SPSS Modeler
- IBM Certified BigInsights
- IBM Certified BI Solutions Expert
- SAS Programming
- Certified Business Intelligence Professional (CBIP), Mastery Level in Data Management

- Data Warehouse, Iterations Lifecycle (Inmon)
- Advanced Dimensional Modeling (Kimball),
- Advanced Data Warehouse Development (IBM)

TECHNOLOGY PROFILE

Databases	Teradata, IBM DB2 UDB, Microsoft SQL, Informix, Oracle, SAS Data Sets, Oracle (Hyperion) Essbase
Analytic Tools	IBM SPSS Statistics, IBM SPSS Modeler, SAS Programming, SAS Enterprise Miner, Teradata Miner, IBM SystemT (specifically AQL), Provalis WordStat, MicroStrategies, IBM Cognos, SAP Business Objects, Microsoft Analytic Services, ESRI Business Analytics

PRACTICE PROJECT SUMMARY

$12B Telco Company (2012)
Job Role: Advanced Analytics Analyst
Conducted a comprehensive study to identify opportunities for improving an existing Churn model. To that end, the following study was executed:
- Exhaustive review of existing best practices and leading alternatives to increase Churn model predictability.
- Conducted gap analysis between existing Churn model and best/leading practices.
- Exhaustive review of data available for possible inclusion in Churn model prediction.
- Provide statistically significant opportunities to improve existing Churn model predictability based on alternative learning models and the incorporation of social network modeling.

Environment: SPSS

$64B Manufacturer (2012)
Job Role: Advanced Analytics/BI Consultant
A comprehensive study of the manufacturer's market research, predictive/exploratory analytics, and BI/DW ecosystem in an effort to establish a roadmap forward, including:
- Establishing an Advanced Analytics database using Netezza in order to provide a more effective platform for predictive analytics and Propensity to Purchase algorithms.
- Streamline the existing data warehouse process and environment to address the lack of responsiveness to changing business requirements.

Environment: SAS, Pure Data System for Analytics

$9B Retail Company (2012)
Job Role: Advanced Analytics Consultant
Conduct a Proof-of-Concept with the following objectives:
- Examine data in order to identify necessary rules for data cleansing and integration
- Establish data mining algorithms for executing market basket analysis, promotion analysis, and member segmentation.
- Create a roadmap to implement an ecosystem that contains Data Integration Hub, MDM, EDW, Advanced Analytic Database, and a Cognos semantic layer.

Environment: SPSS, Mainframe zOS, Pure Data System for Analytics

$40B Entertainment Company (2011-2012)
Job Role: BI Consultant
Need: Audit current BI/DW global initiative to confirm that contractors are delivering according to agreement and the company is investing in those areas that best achieve its objectives.

Actions: In-depth examination and active participation in all development areas, including back-end data warehouse platform and front-end architectures. The review is currently spanning audits and controls to spatial models and analysis, and from Teradata to Business Objects.
Instruments/Methodologies: Teradata SQL, SPSS, WordStat Text Miner, Embarcadero, Business Objects
Value:

- Ensure the next generation of BI/DW is effectively implemented and is aligned with the long-term strategic objectives of the firm.

$20B Manufacturer (2011)
Job Role: BI Consultant
Need: Enhance BI/DW global platform performance and establish enterprise semantic layer standards.
Actions: Research included three dimensions: 1) identified best-practices to support target technical architecture with a Teradata warehouse and Cognos front-end, 2) analyzed physical and logical data models for the warehouse, and 3) examined front-end reporting requirements via Cognos.
Instruments/Methodologies: Teradata SQL, SPSS, and WordStat Text Miner
Value:

- Established performance upgrades implemented in phases to ensure maximum performance and adherence to enterprise standards.

$65B Consumer Products (2011)
Job Role: BI Consultant
Need: Establish global enterprise semantic layer standards.
Actions: Research included three dimensions: 1) identified best-practices to support target technical architecture with a Teradata warehouse and Microsoft front-end, 2) analyzed physical and logical data models for the warehouse, 3) examined front-end reporting requirements via Microsoft including OLAP, reporting and SharePoint.
Instruments/Methodologies: Teradata SQL, Teradata BI Optimizer, and MS Analysis Services
Value:

- Formal semantic layer design standards guide all development to ensure enterprise consistency and BI delivery across the globe.

$60B Logistics Provider (2010)
Job Role: BI Consultant / Chief Architect
Need: Identify short and long-term opportunities for advanced decision support services.
Actions: Examined current technical architecture, data architecture, database and reporting activity, and user decision processes. These findings were evaluated against formal requirements to expose opportunities for improvement.
Instruments/Methodologies: SQL Performance Monitoring and Analysis, SPSS Pattern Search and Statistical Analysis, User Sentiment Surveys, Gap and Best-Practice Analysis, Infrastructure Analysis, Process Analysis, and Governance Assessment.
Value:

- Short-term opportunities were identified for immediate improvement of the BI/DW program value.
- Quantified analysis and discovery of previously unknown or misunderstand usage patterns.

$4B Logistics Provider (2010)
Job Role: BI Consultant / Chief Architect
Need: Establish a multiyear BI/DW strategy and implementation roadmap that addresses global requirements and drives business value.
Actions: Formal, in depth requirements gathering process was initiated. Thorough and methodical examination of current technology, data, and skill assessment was conducted. All findings were evaluated against industry best-practices and competitive analysis.
Instruments/Methodologies: Structure Executive Interviews, User Sentiment Surveys, Gap and Best-Practice Analysis, Infrastructure Analysis, Process Analysis, Governance Analysis, and Diffusion and Adoption Capacity.
Value:

- Effective and feasible implementation roadmap was established for a BI-enabled, global competitive initiative that supports the business strategy.

$15B Manufacturer (2009–2010)
Job Role: Executive Mentor / BI Expert & Advisor
Need: Define enterprise metrics and Key Performance Indicators (KPIs).
Actions: Identify consultancy to define strategy; monitor development to ensure robustness and compliance with project requirements; plan implementation processes and service providers.
Instruments/Methodologies: Linear Regression, Principle Component and Factor Analysis, KPI Value Map Assessment.
Value:
- Improve business effectiveness and efficiency through measures-based performance management.
- Align enterprise KPIs with the strategic direction of the organization.

$230B manufacturer (2009–2010)
Job Role: Executive Mentor and Coach
Need: Obtain enterprise level buy-in for proposed BI information system.
Actions: Develop enterprise metrics, value statements, and value maps for presentation and expectation management. Coach the Director of Information Management Systems who will serve as the catalyst to influence buy-in from upper management.
Instruments/Methodologies: Gap and Best-Practice Analysis, BI Maturity Assessment, KPI Value Map Analysis
Value:
- Achieve the right level of buy-in and sponsorship for the right reasons.
- Improve capability to plan, predict, solve problems, and make decisions, resulting in increased marketplace competitiveness.

$15B Retailer (2008–2009)
Job Role: BI Consultant / Chief Architect
Need: BI technology architecture and technical roadmap that centers on key technologies, builds for the future, and sunsets unnecessary tools.
Actions: Re-scoped technology assessment to include Microsoft which was originally out of scope despite large MS footprint. Quantitative research methods were used to develop the optimum technology roadmap.
Instruments/Methodologies: Structure Executive Interviews, User Sentiment Surveys, Gap and Best-Practice Analysis, Infrastructure Analysis, Process Analysis
Value:
- Created sustainable technology architecture for BI program.
- Delivered consensus on technology direction.
- Narrowed the gap between leading and trailing edge technologies that reduced Total Cost of Ownership (TCO).

HandsOn-BI (2001–2007)
Job Role: Business Owner / Educator / Technologist
Need: Conference industry need to overcome barriers to hands-on technical training.
Actions: Pioneered 'live laboratory' training in a conference setting by removing hands-on obstacles such as mobile lab logistics, cost effectiveness, volatile technologies, conflicting technologies, computer lab security, fail-safe computer labs, etc.
Value:
- Intensified learning by combining high-energy lectures with hands-on labs; changing the experience from passive to active, from listening to doing.
- Earned high interest and repeat customers, increasing revenues for The Data Warehousing Institute (TDWI) by differentiating it from other events.
- Established core line of business that became the major force behind the success of HandsOn-BI.

$2B US Government DoD Contractor (2006)
Job Role: Solutions Strategist

Need: Objectively determine and prioritize BI user requirements across the organization for the largest private contractor of engineers and scientists to the US government; select best-fit technology.
Actions and Value:
- The right requirements—Combined traditional interview techniques with independent (and anonymous) user community surveys to create a unique requirements gathering approach.
- The right priorities—Designed, developed, and implemented a statistical model using Analytic Hierarchical Processing (AHP) to analyze and evaluate data about BI requirements.
- The right technology—Researched, evaluated, and selected best-fit BI technology.

$7B Financial Service Provider (2006)
Job Role:
Need: Resolve significant reporting performance and accuracy problems caused by conversion to new vendor tool.
Actions: Assembled a top-notch technical team; examined all participating systems; identified and specified essential changes to data architecture, data model, and query code.
Value:
- Made a smooth transition to technology supported by upper management.
- Implemented recommendations, improving performance to expected levels.

$66B Manufacturer (2005)
Job Role: Solutions Strategist
Need: Replace legacy technology architecture for crucial project costing system.
Actions: Created a short list of technology alternatives based on research and industry knowledge. Quantified evaluation criteria and developed a statistical model to evaluate submitted prototypes using comprehensive and unbiased analytical reasoning. Made final technology recommendation based on data.
Value:
- Made confident decision to implement best-fit technology architecture.
- Implemented highly effective analysis and decision process as an organization standard.

Service Division of $178B Manufacturer (2001–2002)
Job Role: Senior Technical and Data Architect
Need: Develop strategy and architecture for an Enterprise Reporting System for DW and BI environments.
Actions: Crafted strategy; led team to analyze, plan and design the data architecture. Conducted a maturity assessment and a gap analysis (current versus future states) to determine needs. Identified absence of spatial data in the analysis process for an organization rich in GPS related data; demonstrated type of spatial analysis possible.
Value:
- Implemented adaptable and scalable data architecture.
- Expanded the vision to leverage abundant resource of spatial data.

Healthcare Chain (1998–1999)
Job Role: Technical Architect
Need: Resolve long-term medical records systems failures that led to massive data losses for a national health care chain.
Actions: Conducted comprehensive analysis of entire platform (not just applications), identifying unusual cause of failures.
Value:
- Resolved problem within 6 weeks that had eluded such major players as HP and Informix.
- Identified root cause of systems failures and devised a permanent solution.

Job Role: Interim CIO

Need: Facilitate an acquisition growth strategy to monitor revenue and costs on a near real-time basis during a period of rapid acquisitions.

Actions: Developed and implemented a data integration hub that reflected current economic status of acquired clinics using an intra-day review

Value:

- Established Information Technology infrastructure to collect and manage immediate information needs.
- Analyzed current acquisition information in a dynamically changing environment.