**SCOTT S. HARABURDA, Phd, PE, PMP, F.NSPE**

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| **DATA SCIENCE EXECUTIVE** |

Results-oriented with P&L responsibility. Expertise in manufacturing, operations, logistics, engineering, data science, design-build construction, and information technology. Core competencies include financial and human capital management, integrated business planning and execution, innovative change management, cross-cultural talent development, risk management and performance metrics, conflict management, team building, and problem solving with technical credibility.

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| **ACHIEVEMENTS** |

* Established data analyses capabilities (artificial intelligence, data wrangling, programming, visualization, modeling & simulation) within a diverse $150+ million manufacturing company.
* Built and led a strong coalition of business and universities that successfully persuaded Indiana lawmakers to repeal engineering legislation which hindered all businesses throughout the state.
* Slashed accidents by 80%, allowing us to celebrate four years without a Lost Time Accident after working almost three million hours as manufacturing and engineering director.
* Led delegation of U.S. executives and professionals to Germany to exchange critical analyses data.
* Top Secret security clearance.

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| **EXPERIENCE** |

**Director of Activity Support Jan 2018–Present**

**Crane Army Ammunition Activity (CAAA), Crane, IN**

Created directorate of 100 employees to support the logistics and manufacturing needs of the unionized Activity. Integrated its business systems, quality processes, non-destructive testing, safety program, enterprise resource planning (ERP) efforts, continuous improvement, internal audits, and data science/analyses processes. Presented clear and concise technical briefings to senior leaders such as reporting daily descriptive and predictive analyses of county, state, and national COVID-19 data to support decisions involving the protection of the Activity’s workforce during the pandemic crisis. Led teams to develop computational codes for algorithms in data wrangling (web scraping, data quality, missing data), modeling (supervised/unsupervised/reinforced machine learning), statistics (linear/non-linear regression), and visualization (Sankey graphs, heat maps). In 2020, I led a team of five data analysts in analyzing the Army’s real property inventory of 347 thousand facilities with a value of $8 billion to model the prediction of facility quality ratings, used by senior Army leaders in making financial decisions for facility modernization, disposal, maintenance, and replacement.

**Acting Technical Director Aug 2017–Dec 2017**

**US Army Materiel Systems Analysis Activity (AMSAA), Aberdeen Proving Ground, MD**

Led 250 data science and operations research analysts to conduct analyses applying advanced operations research, statistics, and computer science techniques to evaluate major programs in support of executive-level Army decisions through Senior Executive Service Candidate Development Program. Managed the accreditation program for nearly 100 modeling & simulation models using a detailed verification and validation process. Devised an effective business management systems improvement program to address key organizational gaps through my direct-report executives. Developed plans to address vital technical and financial risks for a multi-billion dollar program to destroy chemical weapons. These were to accelerate test schedules to reduce program costs, and to demonstrate 99.9999% destruction efficiency.

**Strategic Planner May 2014–July 2017**

**Crane Army Ammunition Activity (CAAA), Crane, IN**

Planned and managed organizational initiatives in a government-operated ammunition logistics and manufacturing unit with an annual budget of more than $150 million and about one thousand employees. I developed a balanced scorecard with metrics visibly linked to CAAA’s goals and objectives. These were performance-based metrics with aggressive benchmarking targets using the Supply Chain Operations Reference (SCOR) model. Next, I created a Supply Chain Management (SCM) maturity model, a structured diagnostic tool, to assess maturity levels in organizational functional areas. I used this to identify target areas for performance improvement projects. In one of these target areas, I established a Community of Practice for SCM professionals to enhance and capture organizational knowledge management within the supply chain fields. Then, I sought ways to leverage the Logistics Modernization Program, its new Enterprise Resource Planning system, which included developing a visualization tool to assess an entire organizational supply chain network using a database with thousands of logistical transaction data points. Finally, I led the efforts to establish the Supply Chain Security Management System for CAAA in accordance with ISO-28000 standards.

**Director of Manufacturing and Engineering Feb 2009–May 2014**

**Crane Army Ammunition Activity, Crane, IN**

Led more than 350 employees and managed an annual budget of about $50 million. My unionized employees manufactured a variety of military munitions, such as pyrotechnic devices, bombs, aircraft decoy flares, and explosive projectiles. This included manufacturing of engineered metal parts with state-of-the art CNC machinery, lathing machines, laser welding, and immersion plating. My biggest challenge involved the directorate lacking a director for about two years before my arrival. Because of this lack of senior leadership, this directorate was segmented with limited interactions between subordinate units, with no clear channel for implementing sound business decisions. To quickly resolve challenges from the leadership void and to understand them better, I conducted an organizational review using performance excellence criteria that I used as a two-time Malcolm Baldrige National Quality Award examiner. With this review, I concluded that the directorate lacked critical workforce capabilities and was plagued with ineffective processes. Then, I reprioritized my tasks to improve organizational performance, freeing up my staff and limited resources to overcome these challenges. To address workforce shortcomings, I worked closely with my subordinate managers to realign my directorate to improve its flexibility and competencies, while improving upward mobility of my workforce. To address the organizational improvement needs, I tasked my subordinate managers to identify key organizational processes that were complex, vague, or unduly restrictive. After reviewing their recommendations, I prioritized my focus to quickly improve safety and acquisition certification processes. Improving safety, I implemented proven safety processes and trained my managers to enforce the change in their units. Lastly, improving acquisition certifications, I developed a monthly metric and held my senior managers directly accountable for obtain the required level of certifications within their divisions. As a result of these efforts, my organizational realignment allowed me to exceed my demilitarization requirements by about 40%, freeing up more valuable ammunition storage space than originally planned. Next, I reduced the accidents within my directorate by 80%, allowing us to celebrate four years without a Lost Time Accident after working almost three million hours. Also, the Secretary of the Army awarded CAAA an Explosives Safety Award, citing my directorate’s improved safety performance as part of its justification. Finally, I increased defense acquisition certification from 10% to 86% after four years, improving the capabilities of my workforce.

**Senior Logistics Support Officer Nov 2007–Jan 2009**

**Army Sustainment Command, Camp Arifjan, Kuwait**

Led several military / civilian teams of logistics and contracting professional to provide airfield, construction, firefighting, food service, IT, maintenance, munitions, power generation, public works, sanitation and transportation services throughout Kuwait. The combined value of this support, provided to the U.S. military and multi-national joint units located on all camps and ports throughout the country, exceeded $1 billion annually. Also, I supported many contracting actions through oversight of the contractors, the development of cost estimates, the establishment of realistic required delivery dates, assessing the quality of contracting services, and supporting the amendment of contracts. I provided military interface between supported units and the contractors. I advised combat commanders on the proper use of the Logistics Civil Augmentation Program (LOGCAP) managed contracts to sustain service members, enhance war fighting capabilities, and improve quality of life. From my leadership, my dedicated team saved nearly $150 million in cost avoidance and several million dollars from disallowances of fees to defense contractors through definitization of contracts.

**Deputy Site Project Manager for Operations Jun 2000–Nov 2007**

**Newport Chemical Agent Disposal Facility, Newport, IN**

Through the Chemical Surety Program, I oversaw design-build efforts to safely destroy its entire stockpile of VX nerve agent, an extremely toxic synthetic organophosphorus compound. This was a major defense acquisition program, designated with Acquisition Category (ACAT) 1D with costs exceeding $1 billion. Environmental laws mandated successful 99.9999% destruction of VX, the standard for incineration. This required detection less than 20 ng/ml in the hydrolysate, the main byproduct of the neutralization process, a measurement capability that didn’t exist when the project began. As chair of the Test and Evaluation Working Integrated Product Team, I assembled an interdisciplinary team to develop an analytical method to detect the presence of a few VX molecules in a murky and highly caustic byproduct solution. To provide credibility of our efforts, I periodically provided updates and experimental results to the National Research Council, part of the National Academies. With their endorsement, we presented our findings to other external stakeholders, the Centers for Disease Control & Prevention (CDC) and the Environmental Protection Agency (EPA), for their support. My actions contributed substantially to the resolution of this difficult issue, which allowed us to demonstrate safe destruction of the entire VX stockpile, meeting required non-detect target. This allowed for the safe transport of its byproduct waste. It was also a key factor behind the Army prevailing in a federal lawsuit brought by concerned citizens under the Resource Conservation and Recovery Act (RCRA) that sought to halt shipments of the VX byproduct to another location for final disposal.

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| **EDUCATION AND CERTIFICATIONS** |

* Doctor of Philosophy, Chemical Engineering, Michigan State University
* Master of Science, Chemical Engineering, Michigan State University
* Master of Strategic Studies, US Army War College
* Bachelor of Science, Chemistry, Central Michigan University (CMU)
* Senior Executive Service Candidate Development Program (SESCDP) – Office of Personnel Management’s Qualifications Review Board approved Executive Core Qualifications
* Professional Engineer (PE) since 1997: Indiana (PE19700365) and Michigan (6201070682).
* Certified Lean Six Sigma Black Belt, US Army
* Certified Project Management Professional (PMP), PMI number 2009806
* Defense acquisition certifications: Program Management, Engineering, Contracting, and Logistics.

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| **PROFESSIONAL AFFILIATIONS/HONORS/AWARDS** |

* Distinguished Alumnus, Grand Rapids Community College
* President, Indiana Society of Professional Engineers
* Fellow, National Society of Professional Engineers (NSPE)
* Chair, Professional Engineers in Government, NSPE
* Hall of Fame, CMU Reserve Officers Training Corps
* Legion of Merit, US Army
* Examiner, Malcolm Baldrige National Quality Award
* Order of the Dragon, Chemical Corps Regimental Association
* Member, American Society of Military Engineers

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| **KEY PUBLICATIONS AND PATENTS** |

Haraburda, Scott S. review of “Global Data Shock: Strategic Ambiguity, Deception, and Surprise in an Age of Information Overload,” by Robert Mandell, *Parameters* 50, no. 3 (2020): 148-149.

Haraburda, Scott S. “Thinking Smart: Analysts Crunch Data to Drive Better Decision-Making,” *Army* 68, no. 3 (March 2018): 46-48.

Haraburda, Scott S. “Supply Chain Management Maturity Level Assessment.” *Defense Acquisition Research Journal* 24, no. 4 (2017): 656-681.

Haraburda, Scott S. “Transforming Military Support Processes from Logistics to Supply Chain Management.” *Army Sustainment*. 48, no. 2 (2016): 12-15.

Haraburda, Scott S. and Zilafro, Lara E. “Developing a Continuous Improvement System,” *Defense AT&L* 41, no. 1 (2012): 29-32.

Irvine, Robert L.; Haraburda, Scott S.; and Galbis-Reig, Clara. “Combining SBR Systems for Chemical and Biological Treatment: the Destruction of the Nerve Agent VX,” *Water Science & Technology* 50, no 10 (2004): 11–18

Haraburda, Scott S.; Masterson, Rex E.; Clark, Angelika H.; Davis, Michael S.; Klein, Timothy R.; and McCarty, George E. *Method and System for Electronic Recycle Inventory Tracking*, US Patent 6,516,280, filed December 20, 2000, and issued February 4, 2003.

Haraburda, Scott S. *Method and System for Visualizing a Production Schedule*, U.S. Patent Application No. 09/456763, filed December 7, 1999; World Intellectual Property Organization Publication No. WO 01/41540, published June 14, 2001.

Haraburda, Scott S. “Transport Phenomena of Flow through Helium and Nitrogen Plasmas in Microwave Electrothermal Thrusters,” PhD Dissertation, Michigan State University, 2001.

Haraburda, Scott S. “Estimating Vapor Pressures of Pure Liquids,” *Chemical Engineering* 103, no. 3 (1996): 135-136.