

# Thomas Bock, Ph.D.

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## GENERAL BUSINESS SERVICES

### Business and Systems Analysis

- Developed and documented information technology requirements and data processing procedures.
- Analyzed functional issues to identify feasible techniques and solutions.
- Met with clients to gather, define, and validate system and process requirements.

### Business Process Mapping

- 10+ years' experience in business process mapping and reengineering.
- Conducted business process analysis and systems architecture design in DoD contracting environments.

### Continuous Process Improvement

- Identified improvement opportunities using available data and analytical capabilities to guide decisions.
- Created and managed project implementation schedules and aligned processes to organizational goals.

### Operations Research & Statistical Analysis

- 10+ years' experience conducting quantitative and qualitative analysis for naval projects and joint tests.
- Defined Measures of Effectiveness (MOE) and Measures of Performance (MOP); developed data collection and analysis plans.
- Applied Design of Experiments (DOE) and Statistical Process Control (SPC) using classical and Taguchi methods.
- Trained in modeling orthogonal designs to optimize product design and test performance.

### Process Reengineering

- Provided reengineering support to enterprise IT and DoD programs.
- Resolved complex process issues with minimal direction; delivered results in both team and independent roles.
- Aligned reengineering efforts with evolving digital transformation initiatives.
- Earned Ph.D. in Engineering Management from Old Dominion University.

### Project Management

- 10+ years' experience serving as Data Manager for Joint Test & Evaluation (JT&E) and naval acquisition programs.
- Led legacy-to-target system integration for Risk Management Information (RMI) systems.
- Established knowledge management frameworks, tools, and templates to manage digital project assets.

### Requirements Management

- 10+ years' experience in functional requirements analysis and information systems design.
- Developed innovative technical solutions to enhance productivity and quality.
- Created test and project plans aligned with structured System Development Methodologies (SDM).

### Test & Evaluation

- Developed methods and tools to support DOT&E initiatives for system-of-systems evaluations.
- Authored full test documentation (test plans, evaluation strategies, analysis plans, final reports) for five joint tests: JTEM, JDI, J-FLaME, JLaSE, JADE.
- Applied structured T&E framework including developmental, operational, and integrated testing phases.

### Training Facilitation

- Designed and delivered technical training for all management levels.
- Provided instruction to staff and senior military officers, including up to 2-star flag officers.

## DATA MODELING AND MANAGEMENT

### Data Modeling

- Led data mapping and modeling efforts from project inception to implementation and support.
- Developed IDEF0 models and data flow diagrams for as-is/to-be system analysis phases.
- Delivered modeling artifacts using CA ERwin® Data Modeler and Microsoft Visio.

### Data Science & Digital Transformation

- Used ALTERYX Analytics Automation Platform to automate analytics, machine learning, and data workflows.
- Earned ALTERYX credentials in: Foundation, General Knowledge, Machine Learning, Data Preparation, Data Manipulation, Data Transformation, Designer Core, Designer Advanced.

### Database Development

- 10+ years' experience in relational database design and VBA development, including GUI design.
- Designed normalized schemas (3rd Normal Form) and delivered full lifecycle MS Access applications.

### Digital Asset / Data Management

- 10+ years' experience managing data architecture, data quality, governance, and integration.
- Mentored teams on data stewardship, structuring, semantics/syntax, and mapping schemes.

### Extraction-Transformation-Loading (ETL)

- Designed custom ETL pipelines to move large datasets into centralized warehouses.
- Standardized ETL processes and automated reporting functions, reducing manual effort significantly.
- Developed and documented ETL tools; implemented RegEx algorithms to parse millions of syslog messages into matrix form.

### Information and Knowledge Management

- 10+ years' experience in knowledge management (KM), supporting TRADOC HQ's Chief Knowledge Office.
- Facilitated KM processes and developed plans, guidelines, and policies for enterprise IS usage.
- Contributed to digital governance policies and SharePoint KM architectures.

### Modeling & Simulation

- Earned M.E. in Modeling & Simulation and M&S Certificate from VMASC at Old Dominion University.
- Designed, integrated, tested, and validated simulation models across various domains.
- Authored technical documentation (test plans, ICDs, support plans) for target simulation systems.
- Research areas included data model validation, virtual simulations, and homeland security M&S.

### Systems Engineering

- Diagnosed and resolved customer business and infrastructure challenges using systems engineering.
- Implemented interoperability and integration (I&I) solutions across distributed systems.
- Recommended and deployed improved processes, technologies, and system configurations.
- Contributed to DoDAF-compliant architecture development and MBSE model updates

## SYSTEMS INTEGRATION

### Balanced Scorecard

- Implemented a Balanced Scorecard (BSC) for NATO HQ (Allied Command Transformation).
- Developed a customized Commander's Dashboard for TRADOC leadership to monitor organizational performance and detect anomalies.

### Legacy Systems Conversion

- 8 years' experience as a data integration consultant on enterprise system migrations.
- Led ETL efforts for two international ERP conversion projects, optimizing performance and cost.
- Created reusable, automated tools to support ongoing Risk Management Information (RMI) data migration needs.
- Executed data cleansing processes to validate, correct, and standardize legacy-to-target transformations.

### Software Development

- Designed and maintained C++ libraries for AJCOM simulation software, supporting multi-platform development.
- Defined standards and delivered products within cost, quality, and schedule constraints.
- Developed system interfaces for secure and scalable customer applications.

### Systems Integration

- Conducted full lifecycle verification & validation (V&V) of software and database systems.
- Coordinated organization-wide systems integration efforts (e.g., Balanced Scorecard rollout).
- Collaborated across disciplines to ensure subsystems functioned as part of a cohesive whole.
- Supported multi-domain integration in joint/coalition environments and service transition planning.