

Mission Engineering®

Why Do Some IT Projects Fail?

In the past few years, organizations such as Standish, Gartner Group, INCOSE, and PMI have deemed many traditional IT projects unsuccessful. Some of the reasons for this lack of success are lack of user involvement in the engineering process, lack of visible executive management support for the program, and an unclear statement of requirements. In addition, many of these projects face one of today's most critical challenges: the transformation and integration of traditional stove-piped applications and organizations into a dynamic enterprise that includes shared and coordinated objectives, embedded legacy systems, interface to community services, synergistic business policies, and a common stakeholder vision and understanding. Unfortunately, the IT industry lacks the multi-dimensional relational framework necessary for analyzing and integrating both business and engineering architectures.

Booz Allen Value Proposition

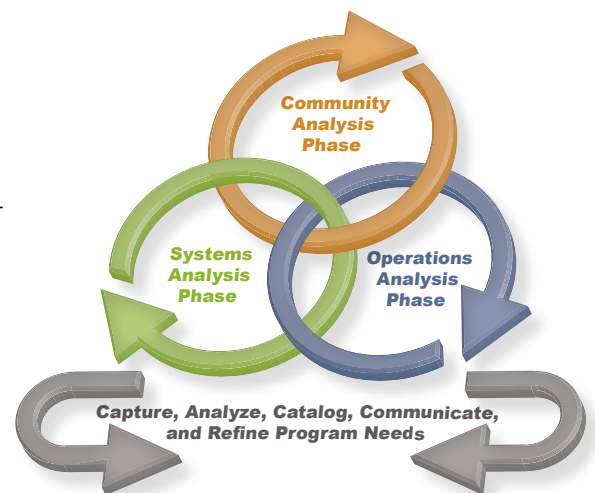
At Booz Allen Hamilton, a global strategy and technology consulting firm, our consultants created Mission Engineering® (ME), an innovation that bridges the gap between business and engineering by addressing each dimension of a customer's mission (or business) from both an operational and a technology perspective. Our clients across the federal government have benefited from ME, which provides a unified, graphically rich framework for rigorously and progressively analyzing and assembling a detailed description of business and technology architectures. ME-generated assets provide a

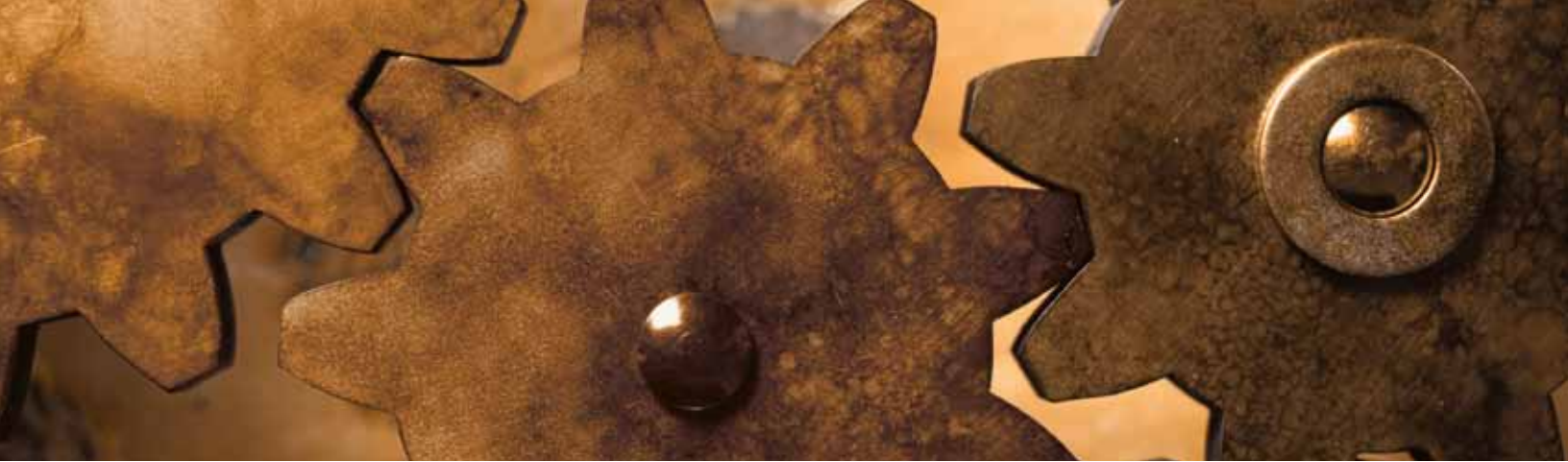
robust and detailed depiction of operational capabilities, concepts of operation, information exchanges, business processes, interface specifications, user roles, data models, and requirements specifications and allocations.

Our Approach to Mission Engineering

ME communicates operational and technical complexity in a language and set of deliverables that are understandable to all stakeholders. This clear understanding is crucial to the transition from enterprise need to actual system requirements, new business processes, technical evaluation criteria, and IT designs. Unlike other traditional approaches that fall short, ME focuses on "getting it right the first time" by driving deep enough into the enterprise business to capture the operational intent of the engineering technical requirement.

ME comprises three analytic phases: community analysis, operations analysis,





and systems analysis. These phases are used to capture, analyze, visualize, categorize, catalog, communicate, and refine program needs to produce deployable operational, system, and functional requirements; community and interface descriptions; design specifications; and program advocacy material.

Community Analysis Phase. The purpose of the community analysis phase is to understand the boundaries of the enterprise and to decompose the enterprise into its operational segments. During this phase we identify who's involved: customers, suppliers, and partners; what information, products, and services are exchanged; what legacy technologies are being used; what capabilities (current and future) need to be supported; and how the enterprise can be segmented. This phase's core assets are a visual model of the community, information transaction inventory, capability inventory, and user role inventory.

Operational Analysis Phase. The purpose of the operations analysis phase is to identify what operational work activities are being performed in each segment of the enterprise. Each work activity is assigned a set of defined attributes that allow the analysts to map technology, information flows, delivery cycles, capabilities, and user roles to each activity in a segment. This phase provides analytical and defensible traceability from business need to new technology requirements, providing mission (or business)-driven IT design.

Systems Analysis Phase. The purpose of the systems analysis phase is to identify the technical requirements and

business rules of the new architecture while maintaining the "intent" of the operational need. The primary asset of this phase is the multi-dimensional requirements view (MRV). The MRV features an integrated view of the operational workflow, applications, and data required for each operational work activity identified in the operations analysis phase. It blends requirements and business analysis with conceptual design to illustrate how the system will satisfy the expressed operational need. Systems analysis reduces the interpretation of textual requirements, identifies areas of technical and operational risk, and provides a visual tool to ensure users and developers fully understand the intent of the operational need.

Booz Allen Experience and Expertise

ME has successfully transitioned and transformed multiple client programs ranging from \$750,000 to \$7 billion across the intelligence community and defense, civil, and commercial markets:

- Office of Director of National Intelligence (ODNI)
- National Geospatial-Intelligence Agency (NGA)
- National Reconnaissance Office (NRO)
- Defense Intelligence Agency (DIA)
- Department of Homeland Security (DHS)
- Environmental Protection Agency (EPA)
- Federal Aviation Agency (FAA)
- Molson Coors
- Bay Area Rapid Transit

About Booz Allen

Booz Allen Hamilton has been at the forefront of strategy and technology consulting for 95 years. Providing a broad range of services in strategy, operations, organization and change, information technology, systems engineering, and program management, Booz Allen is committed to delivering results that endure. To learn more, visit www.boozallen.com.

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