



## Management Consulting Services

MCS provides a broad range of engineering, manufacturing, and management consulting support services to meet short-term business needs. Services include:

- Technical proposals
- Grant applications
- Business plans
- Technology assessment due diligence
- Patent applications
- Lean manufacturing
- Value engineering
- Cost analysis and estimating
- Operations management
- Quality programs
- Policies and procedures
- Industrial security
- Project engineering
- Strategic planning
- Manufacturing analysis
- Business process re-engineering
- Contract phase-in/startup
- Program/Contract management
- Expert witness—Product liability and rights in data

The mission of MCS is to provide technical and business management consulting nationwide to businesses requiring specific, short-term services enabling them to improve performance, increase efficiency and maximize profits.

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Technical and Business Management

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## Management Consulting Services

Technical and Business  
Management

Operations  
Management

Technology Assessment  
Due Diligence

Engineering,  
manufacturing, and  
management  
support

"Providing technical and business management solutions for improved performance, increased efficiency, and maximized profits."



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### Technical and Business Management

Current economic pressures are forcing government agencies and industry to reduce technical and business management staff to the absolute minimum. Downsizing through attrition, layoffs or termination leaves voids in the organizations. When special projects, such as proposal preparation, business plans, market analysis or contract phase-in/start-up arise, the resources are not available to take advantage of these opportunities. Management Consultant Services (MCS) provides the solution to these short-term needs with experienced technical and business management consultants who can fill these voids by supporting your existing staff or providing complete turnkey services.

Many new business start-ups are craft-based or started by technical professionals. Each type is highly skilled in their respective profession and provides high quality products and services to their customers. These new businesses are usually started by a single individual or by a very small group of individuals who are usually similarly skilled. When the desire to expand or diversify the business arises, technical and business management consultants are an efficient and reliable way to implement the desired growth. Many contract opportunities come by way of Small Business Innovative Research (SBIR) Grants. These, too, require proposals with rigorous formats, which can be intimidating, and costly, to those who are not experienced in their preparation.

However, when the owners begin to try to expand their customer base and compete for larger commercial contracts and contracts from government agencies such as DoT, DoD, DoE, NASA, DARPA, etc., they often lack the expertise to prepare the necessary technical, management and cost proposals required to compete for these contracts. They also often lack sufficient financial

An observation made by bankers and venture capitalists of craft-based businesses and those started by technical professionals is their lack of skill or experience in preparing a properly developed business plan to support their request for a loan or an extension of their line of credit. While the financier may have confidence in the business and may be personally acquainted with those seeking financial assistance, he requires a well-documented plan to justify to the bank's board any loan or extension of credit to the business. The properly developed business plan should project, very accurately, revenues and expenses by month for the following business year and reasonably accurate estimates for the subsequent two years. The plan should be based on well-documented expense and revenue projections with revenue sources identified through market analyses.

As investors find opportunities in technology-intensive businesses, they often make investment only after performing a financial due diligence review of the business. Frequently, a technology assessment is not performed. MCS personnel can assist the potential investor by making a technology assessment due diligence audit of companies in the emerging technologies. We can assess the state-of-the-art of the respective technology trend and the ability of the company's management to implement the technology.

MCS offers a broad range of technical and business management services that can be provided by an experienced and dedicated group of consultants whose profiles reflect careers of successfully meeting the management challenges of today's business world. The resumes of these individuals demonstrate their success in growing small businesses to be leaders within their industry.

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Ray L. Knowis is the owner and principal of MCS. Prior to his early retirement Ray was a Senior Vice-President of a nationally recognized aerospace company specializing in the design and manufacture of experimental aerospace test articles. He held several positions of increasing responsibility including Design Engineer, Engineering Manager, V.P. of Engineering and Chief Engineer, Plant Manager, Strategic Business Unit (SBU), Group Vice-President and Senior Vice-President. Ray was responsible for the start-up of a number of new operations across the United States and one in Canada. He was also responsible for the turn-around in marginal performance at several operating divisions. He holds a B.S. Degree in Mechanical Engineering from Vanderbilt University and a M.S. Degree in Engineering Management from the University of Tennessee.

