# The U.S. Navy Mantech B2PCOE and the Lead Free Manhattan Project

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## Abstract

The mission of the Navy Mantech Benchmarking and Best Practices Center of Excellence (B2PCOE) is to identify, validate, and disseminate best in-class practices, processes, methodologies, systems, and best practice technologies with the end objective of improving the level of competitiveness of the defense industrial base and the affordability of performance of defense platforms and weapons systems. Examples of projects that the B2PCOE is engaged in include shipbuilding manufacturing affordability, energy use, open systems architecture and tool use. An overview of the B2PCOE will be presented with a brief discussion of B2P methodology. A recently completed B2PCOE project, the Lead Free Manhattan Project (LFMP) will be then be discussed more fully. The LFMP was driven by the European Union ROHs directive and the associated WEEE directive, both of which have spurred commercial manufacturers to phase out the use of lead in electronics manufacturing. This has led to a number of critical issues for the Aerospace, Defense and other industries as well as a high degree of uncertainty as to what practices should be used in lead-free electronics manufacturing. The LFMP brought together 15 of the leading experts in the area of lead-free electronics for a focused two-week project. The objective of the project was to develop a report that outlined baseline or best practices in lead-free electronics manufacturing. The purpose of this case study is to describe the background, planning and organization for the project, to describe some of the important aspects of the project from a process point of view and discuss the key factors that led to the development of a high performing team and a successful outcome. Several key factors led to the success of the project. These included clarity of vision, leadership , team selection, effective collaboration, knowledge management, a structured development process and a good technical support system. Future plans for the LFMP will also be discussed.