



A New Vision for Center-Based Engineering Research (2017)

Consensus Study Report

Overview

Contributors

National Academy of Engineering; National Academies of Sciences, Engineering, and Medicine; Division on Engineering and Physical Sciences(/author/DEPS); National Materials and Manufacturing Board(/author/NMMB); Committee on a Vision for the Future of Center-Based Multidisciplinary Engineering Research

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Description

The future security, economic growth, and competitiveness of the United States depend on its capacity to innovate. Major sources of innovative capacity are the new knowledge and trained students generated by U.S. research universities. However, many of the complex technical and societal problems the United States faces cannot be addressed by the traditional model of individual university research groups headed by a single principal investigator. Instead, they can only be solved if researchers from multiple institutions and with diverse expertise combine their efforts. The National Science Foundation (NSF), among other federal agencies, began to explore the potential of such center-scale research programs in the 1970s and 1980s; in many ways, the NSF Engineering Research Center (ERC) program is its flagship program in this regard.

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