

4. Information: UNC Charlotte US MADE (US Manufacturing Advancement through Digital Engineering) Proposal ..... Chancellor Philip L. DuBois

**Situation:** This presentation will provide an overview of a campus-based federally funded proposal.

**Background:** This is part of an ongoing series of presentations related to federal grants and contracts on our campuses.

**Assessment:** Our campuses continue to work tirelessly to develop industry and government partnerships that have an educational impact on our students and an economic impact on our State.

**Action:** This is for information only.

## **UNC Charlotte: Staking Our Claim in Digital Manufacturing**

UNC Charlotte, along with regional academic, business, government, nonprofit and trade partners, is leading the charge to restore manufacturing as a profitable pillar of the United States economy. The University is competing for a major grant from the U.S. Department of Defense in order to become part of the National Network of Institutes for Manufacturing Innovation (NNMI), a planned \$1 billion federal initiative. A \$70 million award over five years would support the start-up of UNC Charlotte's proposed institute, US-MADE (U.S. Manufacturing Advancement through Digital Enterprise). The funding would be the region's largest-ever federal grant. The proposal currently exceeds \$170 million including matching funds from industry partners, state governments and academic institutions.

As manufacturing has evolved from a series of manual processes to complex digital design, sourcing, testing, production and maintenance, it is necessary to more efficiently collect, store, communicate, analyze and use data generated at each phase, in order to reduce costs and accelerate product development and launch. US-MADE will develop the technology that optimizes the information flow across the product lifecycle by concentrating on three major areas: advanced manufacturing enterprise technologies, intelligent machines and advanced analysis methods.

US-MADE will align its activities with industry partner needs. Defense, automotive, transportation, energy, construction, mining and aerospace companies will benefit from access to sophisticated facilities and unparalleled expertise, shared research and development costs, as well as savings incurred by implementing the knowledge and technology in their factories. Ultimately, the need to export labor and transportation costs associated with products made abroad will also be eliminated. In addition to technology innovation, workforce training will be central to the mission of US-MADE, with community college partners guiding that effort.

UNC Charlotte's researchers and their counterparts at North Carolina State University, UNC Chapel Hill, Virginia Tech, Clemson University, Georgia Institute of Technology, University of Florida, Florida State University, University of Central Florida, Florida International University, Vanderbilt University, Tennessee Tech, University of Cincinnati, and University of Dayton have unparalleled expertise in large-scale, high-precision and high-speed advanced manufacturing, data analytics and cyber security. Their discoveries have revolutionized the manufacture of a spectrum of products from the grandiose to the handheld, with applications in military aircraft construction and consumer electronics like the iPod, and savings estimated in the hundreds of millions.

US-MADE's hub will be located on UNC Charlotte's campus at the Charlotte Research Institute's (CRI) PORTAL building, with nodes at partner universities. TechSolve, Inc., a nationally-recognized expert in process improvement across manufacturing, advanced machining, aerospace & defense and healthcare industries, will manage the coalition.