Exceptional Item Request: Cyber Advanced Manufacturing Initiative

Requested Amount: $8 million

Description: The Cyber Advanced Manufacturing Initiative will transform manufacturing into a “cloud-based service” to produce high value components by combining information technology with adaptive manufacturing technologies (e.g. 3D printing). This initiative will develop a network of small and medium scale businesses spread across the state of Texas, accessing an intelligent, centralized database of manufacturing “applications.” Similar to how a company’s branch offices electronically access a corporate office document and tailor it to optimize its impact on local customers, this initiative creates a distributed, virtual manufacturing ecosystem with the capability to translate clients’ needs into a product that can be immediately produced locally. To grow this capability, the initiative will also include workforce training and a knowledge development structure for the intelligent applications. This is manufacturing “when you need it, where you need it and how you need it.”

Background: Manufacturing is facing a revolution. Traditional, limited-use manufacturing plants require capital-intensive investments (a large physical plant) that can quickly become outdated. To stay competitive, manufacturers need to provide more responsive, less costly processes, which in turn will create opportunities for a more highly trained workforce. This initiative will position Texas as a leader in the development of a new industry approach to manufacturing in which high-quality products can be customized and delivered locally with the cost structure of a mass-manufactured product.

Benefits to the State of Texas

- Establish Texas as a technical leader in cyber manufacturing that will attract new industries to the state, and stimulate local and state economies.
- Enable Texas manufacturing to become a transformational industry by generating the need for a sustainable and highly paid manufacturing workforce.
- Equip Texas manufacturers to compete globally by trading the burden of traditional manufacturing infrastructure for the ability to respond at the speed of cloud computing.

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