Project Title:

*Enabling Technologies for Lean Manufacturing of Hardened Steel Applications*

Joint Venture Partners:
- Delphi Automotive Systems
- Torrington Co.
- Georgia Tech
- Hardinge Inc.
- Kennametal
- Third Wave Systems
- Masco Tech
- Ohio State Univ.

Total Project Value: $11,747K

Project Duration: 4 years, Starting Oct. 1, 2000
**NIST ATP - Objectives**

- Development of predictive models of the hard turning and precision forming mechanics, part quality, and integrity.
- Development of new tooling and fixturing technologies.
- Development of process monitoring and control of part quality, integrity, and tool life.
- Design and development of advanced machine tool technology.
- Development of an integrated lean manufacturing cell.
- Comprehensive process and product validation of the integrated system.
NIST ATP - Expected Highlights

- Systems approach to the solution of problem manufacture of hardened steel components
- Hard turning process simulation software
- Advances in machine, cutting tool, and workholding design
- Advances in part quality sensing monitoring technology
- Accelerate use of hard turning technology in functionally-critical applications