



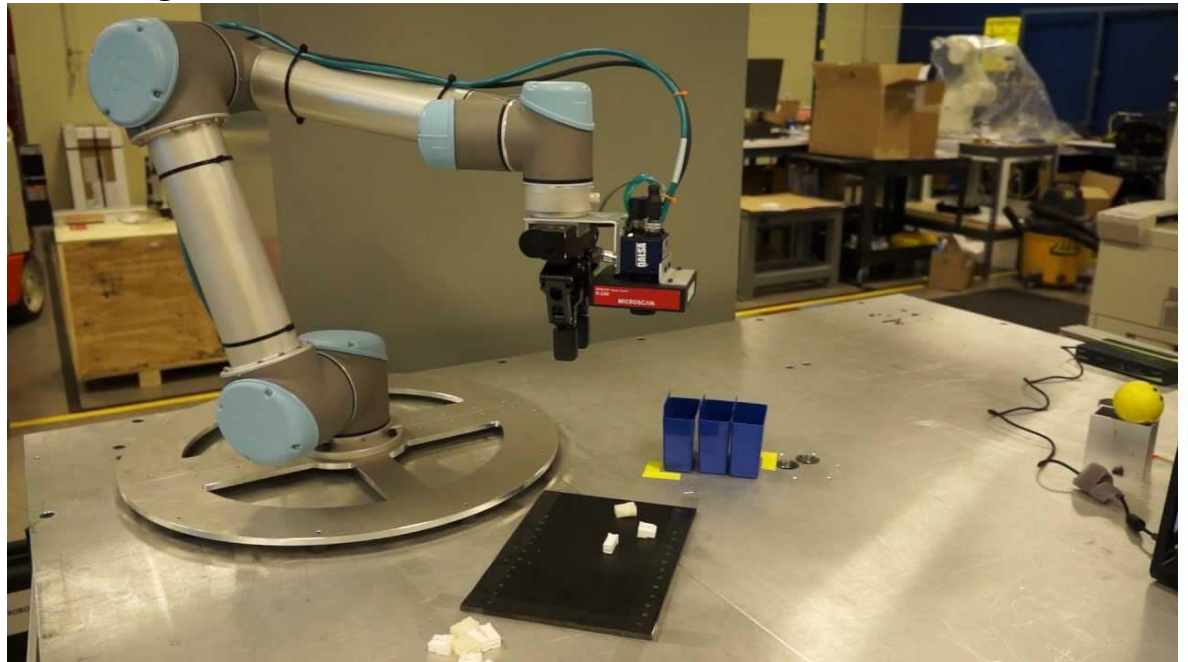
manufacturing
extension
partnership

The Fourth Industrial Revolution is Upon Us.



Automation Through Robotics is the Future.

- Automated Manufacturing via Robotics
 - Cobots
 - Industrial Robots
- The Internet of Things
 - Integrating robotics systems with manufacturing equipment
 - Robot vision
 - Machine tending





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Additive Manufacturing

Polymer 3D printing

- Cheap, quick, and easy prototyping
- 3D printers and materials get cheaper every day
- Full color models for proof of concept
- Some 3D printers can print nylon or carbon fiber composites. The carbon fiber composites can be stronger than aluminum

Metal 3D printing

- The capital investment keeps dropping, with some machines being under \$100k
- Useable parts can be printed in under two days in most cases
- Difficult to manufacture parts or assemblies can be printed as one piece.
- Legacy parts can be stored on a computer and printed on demand
- Unique advantage of easily being able to produce lattice structures that are strong and very light weight