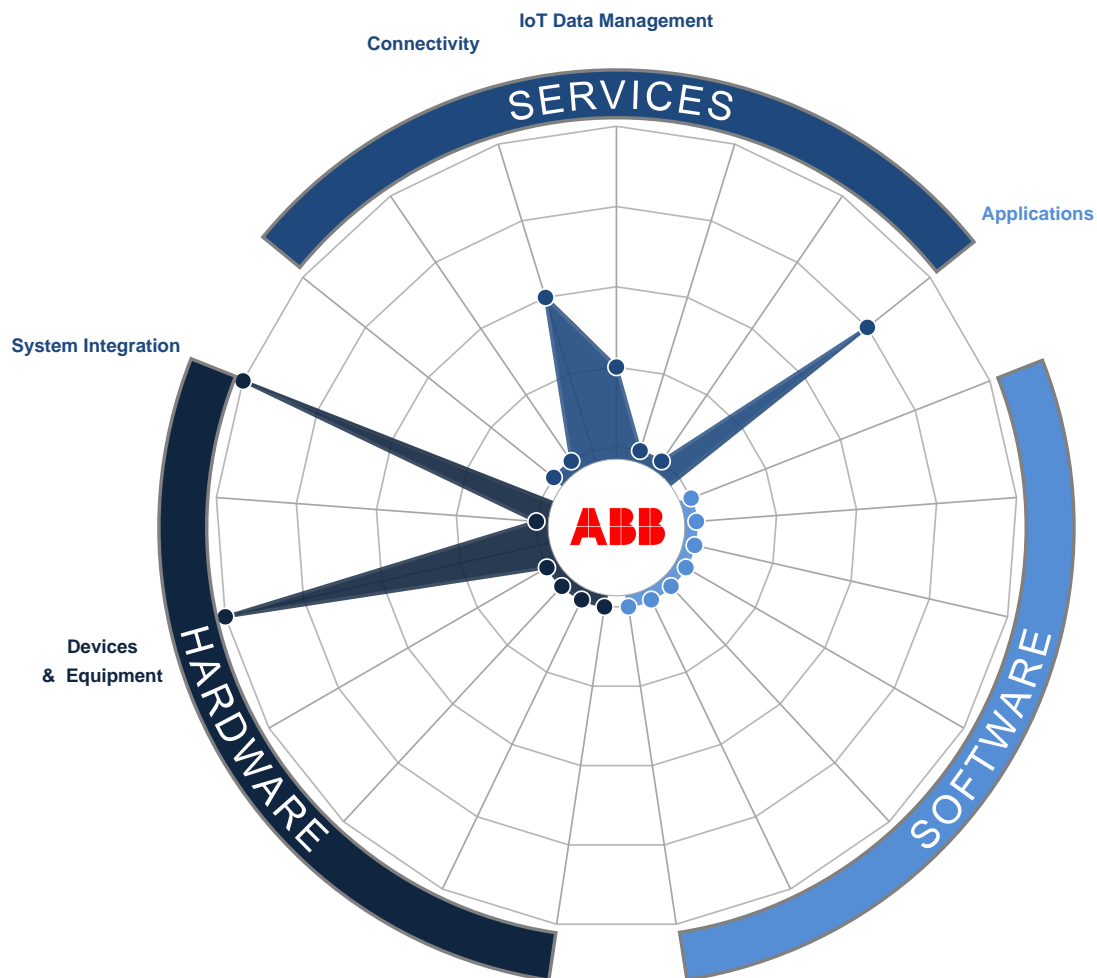


## Robot Saves Money and Time for U.S. Itech



# Overview

Applicable Industries



Plastics & Rubber



Medical Devices & Equipment

Applicable Functions



Production - Manufacturing

Challenge

Injection Technology (Itech) is a custom molder for a variety of clients that require precision plastic parts for such products as electric meter covers, dental appliance cases and spools. With 95 employees operating 23 molding machines in a 30,000 square foot plant, Itech wanted to reduce man hours and increase efficiency.

Customer

Injection Technology (Itech) is a custom molder of thermoplastics founded in 1987 in North Carolina. Itech has plants in Arden, NC and Westminster, SC. They have 40 injection molding machines ranging from 60-1000 tons.

Solution

The solution Itech adopted was an IRB 4400 robot with 6-axis arms. The robot's grippers can remove two spool halves from the 390-ton Toshiba injection molding machine, swing it around to an assembly table, flip it over and fit the two spool halves together. The robot then inserts the assembled spool into an ultrasonic welding machine that welds the halves together.

Data Collected

Production data, including molding time, cycle time, man hours

Solution Type

M2M

Solution Maturity

Mature (technology has been on the market for > 5 years)

## Operational Impact



Impact #1

Employee Efficiency - Reduction in employee fatigue created a safer working environment with fewer injuries.



Impact #2

Time-to-Market - Programming time, production time, and installation time are shortened during the introduction of new products.

## Quantitative Benefit



Benefit #1

With Abby it takes 27 hours to fill a tractor trailer instead of two and a half days, a 23% reduction in cycle time.



Benefit #2

The Return on Investment was 8 months.



Benefit #3

The system enabled Itech to achieve a growth rate of 9% in 2004 and 12% in 2005.

## Technology

### Hardware



#### IRB 4400 Robot

**ABB**

The IRB 4400 is a compact robot that can handle loads up to 60 kg.



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