AUTOVIRI
by Capstone Technologies

The Challenge

CapStone Technologies was asked to develop long-term, sustainable savings opportunities and capacity flexibility in operations, during both up- and downturns in the economy.

Requirements

- Reduce labor overhead
- Increase productivity of remaining labor resources
- Optimize throughput of existing technologies
- Minimize footprint to increase workable space
- Deliver less than 2-year payback with high IRR
- Decrease cost per piece
- Provide minimal production interruption during implementation
- Allow ease of use and maintenance

The Solution

AutoViri™ Robotic Mail Solutions was developed and patented to maximize process efficiency and optimize operational throughput by automating highly repetitive manual functions.

The Strategy

Initially developed for ValPak's $256 million facility in St Petersburg, Florida, CapStone implemented a robotic solution that presents empty USPS mail trays to multiple inserters, sweeps the mail into the tray and removes the filled tray from the inserter. With more than six years of uninterrupted service from this base solution, CapStone's AutoViri Robotic Mail Solutions was born.

CapStone expanded the use of robotics in mail processing to include AutoViri Sleeving and AutoViri Palletizing of completed mail trays. This modular solution allows mail to travel from inserter to truck without touching human hands. In full production today, what was once a four-day process has now been redesigned to four hours, with little human intervention in the entire print to mail process.

The project is managed and serviced by Böwe Bell + Howell, this state-of-the-art facility is the world's most advanced and automated mail processor. After seeing such sophisticated technology in action, the client asked CapStone to develop a business case to move their operation in the direction of ValPak's process with the addition of AutoViri Robotics.

The Business Case & ROI Model

CapStone developed multiple business case models as requested by the client, with an initial complete back-end solution suite.
The client's production floor consisted of 141 employees, 19 High Speed and dozens of Swing Arm inserters and 3 production lines for sleeving and palletizing 14,000 trays per day with a manual labor force at full capacity, excluding swing arm insert operators. The AutoViri Solution reduced labor by more than 50% to 70 employees, including increased throughput of existing inserters, elimination of manual Sleeving and Palletizing, level loading and increased quality control through the use of AutoViri Sleevers, Palletizers and Trayers.

CapStone also presented a business case for the "Postal Operations" area of the facility. This case centered on AutoViri Sleeving and Palletizing, and illustrated a 50% reduction in labor with a positive internal rate of return and a 16-month payback.

The third business case model was centered on AutoViri Sleeving. The manual sleeving operation required nine full-time operators in three shifts, with three conveyed production lines of manual stations. With a daily throughput of up to 14,000 trays, the client was frequently missing "cut-off" times to load daily output to meet internal SLA's and USPS requirements. Because a full service IMB implementation date was arriving, the time to implement a solution to address staffing and output needs was urgent. A typical "missed" SLA resulted in $20,000.00 in additional postage fees alone. The AutoViri Sleeving Solution reduced staff by more than 50%, increased capacity and level loaded back-end ZIP sort and palletizing needs.