

# Full Speed Ahead at North State Flexibles

Flexible Packaging Leader NS Flexibles Increases Run Speed by 29% While Maintaining Quality With the Shoplogix™ Proof of Concept

"The Shoplogix POC was an enlightening experience for both operators and managers. Today we continue to leverage the knowledge we've gained during this process in our ongoing performance improvement initiatives."

- Tim Mages  
President, NS Flexibles

**29%**

INCREASED RUN SPEED

"As soon as the POC process started, we recognized that we had previously been making critical production decisions based on unreliable and inaccurate information."

"In just a few weeks, we uncovered bottlenecks in production that years of manual data had never revealed..."

- Willie Kea  
Process Engineering  
Manager



## PROOF OF CONCEPT

### THE COMPANY

North State Flexibles (NS Flexibles) provides flexible packaging solutions for maximum point-of-purchase impact serving diverse markets such as lawn & garden care, pet care, personal care as well as textiles and apparel. The company specializes in the printing, laminating and conversion of various films into unique consumer packages including stand-up pouches, gusseted bags, header bags, reclosable zipper bags, stretch sleeves and roll stock. At its Greensboro, North Carolina plant this ISO 9001:2000 certified company employs 150 workers.

### THE GOAL

As part of an ongoing continuous improvement effort, NS Flexibles evaluated production monitoring systems to automate the data collection process in the company's converting division. With more accurate data, the company's goal was to improve production performance by increasing run speed, reducing downtime and decreasing make-ready time.

### THE SOLUTION

NS Flexibles conducted a short Proof of Concept to prove the value of the Shoplogix Solution in its manufacturing environment.

During the Proof of Concept, the Shoplogix Plantnode solution was installed on NS Flexibles' high speed wicketer machines

which convert flexible poly sheeting to re-sealable plastic bags. The Plantnode-piloted machines operated for a few weeks, collecting data and interfacing with NS Flexibles' operators and managers to provide valuable new insights into its production process.

Commenting on the Proof of Concept implementation, Willie Kea, Process Engineering Manager, stated, "The Shoplogix manufacturing specialists had us up and running in a matter of days with only one hour of training over a six week period. Overall, very few resources were required from our end."

### THE RESULTS

During the brief Shoplogix POC period, NS Flexibles increased machine run speed, reduced downtime and decreased make ready time on all Plantnode-piloted equipment. On one of the high-speed wicketer machines, average machine speed improved by 29% and make ready time was reduced by 6%.

### Operator Visibility to Machine Data Drives Improved Productivity

"The visual nature of the Plantnode solution had an immediate and significant impact on the way our operator's performed their jobs. Our operators love working with Plantnode as it leverages their skills and

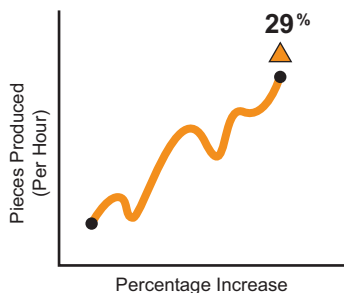
# Gaining Critical Production Insight and Realizing Significant Value in the Shoplogix POC Process

experience, enabling them to make an even bigger contribution," commented Kea.

Plantnode's connection to the equipment automated production and downtime tracking. With the LED displays streaming real-time

## Increase in Machine Speed

Source: North State Flexibles 2007



Average run speed increased by 29% during the Shoplogix POC process while maintaining product quality.

performance data above the assets on the plant floor, operators were far more aware of their machine performance relative to targets. As a result, the operators were able to take immediate action to ensure the machines were running at full capacity and at the right speed to maximize production efficiency.

## Machine Data vs. Manual Data - The Great Divide

The POC demonstrated the significant advantages of automating the data collection process over the previous manual approach. "We expected that there would be a difference, but we were unprepared for the huge disparity between the two," comments Kea. "Our paper-based system was prone to errors, missed events and our manual reports reflected a high degree of subjectivity. We found that the results varied widely depending on the operator that was

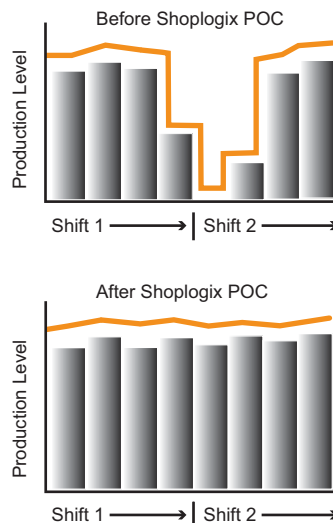
recording the information. As a result, make ready times, downtime durations and run times were inexplicably inconsistent. As soon as the POC process started, we recognized that we had previously been making critical production decisions based on unreliable and inaccurate information."

## Gaining New Operational Insight

During the POC, NS Flexibles gained critical insight into their production processes. "In just a few weeks, we uncovered bottlenecks in production that years of manual data had never revealed," commented Kea. For example, NS Flexibles discovered a drop in production during shift

## Production Between Shifts

Source: North State Flexibles 2007



The Shoplogix POC helped establish new production level standards and eliminated downtime between shifts.

changes. The company found that at shift starts, the incoming operator would stop the machine and reset it to their personal preferences, resulting in lost production time. Kea states,

"Plantnode identified the drop in productivity during shift changes and we immediately worked with operators to set new production standards that eliminated the unnecessary make ready time between shifts. Today we run continuously between shifts which has increased our overall output and average line speed."

## CONCLUSION

### Shoplogix POC Bottom Line: Proves Value - Improves Plant Performance

In just a few weeks, NS Flexibles proved the value of Plantnode in their manufacturing environment by increasing machine speed, reducing make ready time and decreasing downtime.

The LED displays improved plant floor visibility of equipment performance, and enabled operators to maximize throughput. The automated real-time data not only allowed NS Flexibles to gain critical insight into operations but also delivered results that increased overall production capacity.

Commenting on the initiative, Tim Mages, President of NS Flexibles stated, "In a short period of time, we gained a deeper knowledge about our existing processes that manual data could never reveal. More importantly, we extracted immediate value and significantly improved our plant performance. The Shoplogix POC was an enlightening experience for both operators and managers. Today we continue to leverage the knowledge we gained during this process in our ongoing performance improvement initiatives."



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