



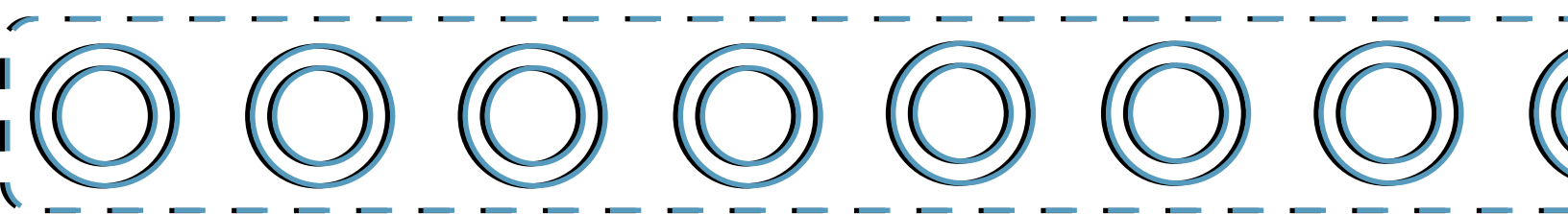
▲ A look at a continuous flow line in Balloon Catheters at Park 48. Photo by **Doug Wright** (Doug.Wright@CookMedical.com), an archival specialist for Corporate Marketing & Communications.

Continuously improving through continuous flow lines

In this section:

- ▶ A mission to modernize
- ▶ "You can make a difference."
- ▶ Go team!

• All continuous flow line stories are by **Ally Stanfield** (Alexandria.Stanfield@CookMedical.com) unless otherwise noted. Ally is an Editorial Content specialist in Corporate Marketing and Communications.



A mission to modernize

Managing change through growth and innovation

With a mission to modernize our manufacturing approach, Cook companies have continued to implement continuous flow lines within more areas of our manufacturing entities. Through this approach, Cook has been able to improve organization, development, and performance management within manufacturing, as well as other areas within the company. This approach has aided in linking manufacturing together, and resulted in increasing conversations on process development, and integrating systems to help support the team members performing the work.

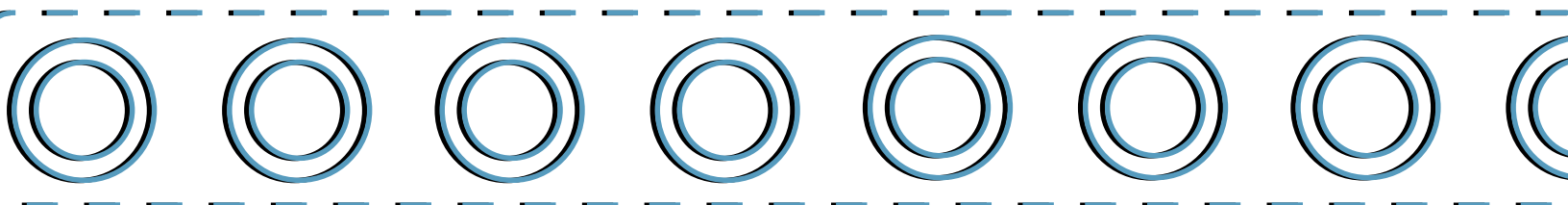
“Our use of continuous flow lines has created positive results for employees and safety and performance, along with the quality, delivery, and overall cost of particular products,” **John Enneking**, the director of Global Manufacturing Transformation, said.

Making the switch

According to John, the move to continuous flow lines was part of an overarching manufacturing strategy that involved segmenting product types, which are organized by volume and work content. The resulting groups are hand craft, continuous flow, and automation. John explained that the continuous flow group covers Cook's mid-to



▲ A look at a continuous flow line in Balloon Catheters at Park 48. Photo by **Doug Wright** (Doug.Wright@CookMedical.com).



high-volume products, which are not well suited to automation.

"The business need for continuous flow was centered on shortening our lead times to better serve our customers," John said.

He also explained that the switch at Park 48 was heavily impacted by the work that was being done in preparation for the Profile Park facility, which was put on hold due to the COVID-19 pandemic.

"The Profile Park transfers have set the expectation on continuous flow, process development, and systems integration that are now the centerpiece of our activity at Park 48," John said.

So what is a continuous flow line? According to John, it is a manufacturing strategy that incorporates linked manufacturing steps that are balanced to promote start-to-finish manufacturing of one lot on the same line. So rather than having one person working on a device from start to finish, an assembler on a continuous flow line will be focused on one part of a device's production and then pass it on to the assembler next to them to complete the next step, and so on until it is completed. He said that Cook is currently also incorporating process development improvements and integrated IT systems to support this manufacturing capability.

"There are some really great success stories about employees and teams who have embraced these improvement opportunities," he continued.

"As Cook strives to manage change and promote growth through innovation and improving processes, it's clear that we are all so lucky to have such good people on our teams helping to make it all possible."

*– John Enneking,
director of*

*Global Manufacturing
Transformation*



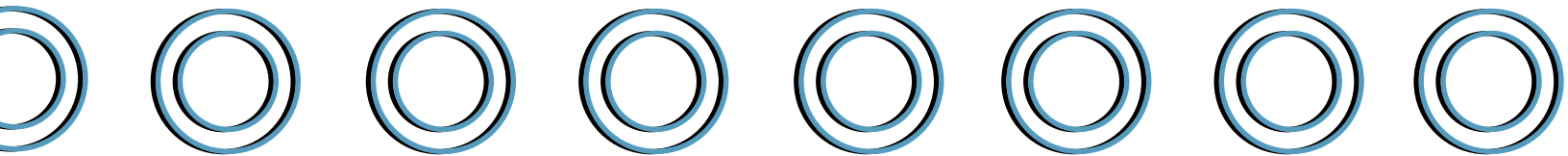
A resounding success

When Cook first started implementing continuous flow lines, members of the PTA5 Balloon department piloted two new manufacturing lines and tested the concept of including Quality Control and Packaging within the line's construction process. After taking a look at the numbers and chatting with some of the employees, it became clear that this practice was worth sharing.

Continued on page 33

What is a continuous flow line?

A manufacturing strategy that Cook uses for its mid-to-high-volume products. This strategy incorporates linked manufacturing steps that are balanced to promote start-to-finish manufacturing of one lot on the same line.



"You can make a difference"

Karissah and Amanda's continuous improvement success story

In a room full of group leaders, **Karissah Scherschel** fidgeted in her seat, excited and inspired during a continuous improvement activity.

Because she was the newest and least experienced group leader present, her nerves were running rampant, but her brain was abuzz with new ideas.

"We were working together to figure out ways to eliminate waste, and that's when I realized we could really make a difference," said Karissah, the leader for Special Sets Radiology at Park 48.

With adrenaline racing through her veins, she approached **Amanda Shields**, her manager, with her proposal.

Inspired and enthusiastic

After working as an assembler and line lead on some of the piloted continuous flow lines at Park 48, Karissah had some unique insights on how to implement more of these lines in different areas of manufacturing. When a group leader position became available in Department 90, she applied, was accepted, and started bonding with her team.

"I told Amanda about my idea of adopting the flow-line system for our area and how we could rearrange our setup to make things better for making products and working together," she said.

With unique flow-line experience under her belt, Karissah radiated enthusiasm to the team members on the other six lines in the department.

"Immediately, I thought it was an awesome idea," Amanda said. "I started making all of the necessary contacts with maintenance and engineering to make the tables and arrange them. I was really excited for her and the whole process."

In what felt like a very short period of time to the two of them, the pair brainstormed how to construct the ideal workstations and how they would build a team that could work well together. Before they knew it, they were ready to put their ideas to work.

"From day one, we knew there could be hiccups, but the group progressed and worked so well together from the start," Amanda said. "It has been so rewarding to watch them improve and succeed alongside one another."



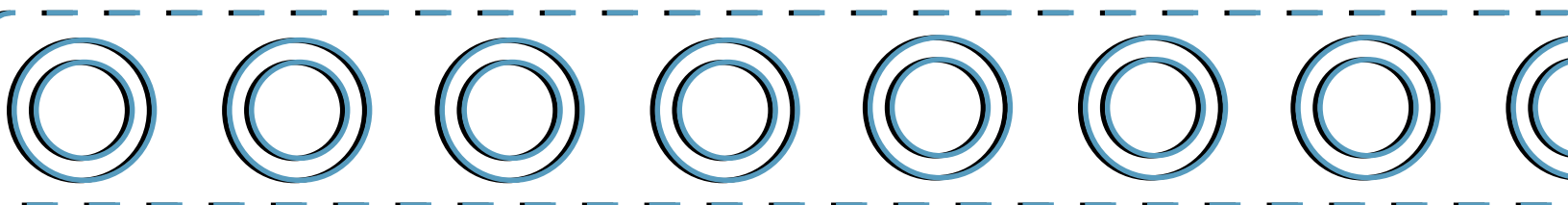
▲ Karissah Scherschel



▲ Amanda Shields

"We were working together to figure out ways to eliminate waste, and that's when I realized we could really make a difference."

– Karissah Scherschel, group leader for Special Sets Radiology at Park 48



“For anyone looking to embrace change, don’t be afraid to reach out to Continuous Improvement team members. They are understanding, here to listen, and excited and ready to help.”

– Amanda Shields, manager for Special Sets Radiology at Park 48

Initiative and improvements

Since taking the initiative and implementing the continuous flow line, the team has consistently seen major improvements. With an increase in their outgoing daily numbers, a decrease in their nonconformance stats, and an overall boost in team morale, Karissah and her group created their own continuous improvement success story.

“I am so proud of my team and all of the hard work that they do,” Karissah said. “At the end of the day, when we see our numbers—see that we are getting better and that we are capable of doing awesome things—it’s just amazing.”

With Karissah at the helm of this project, and Amanda aiding in keeping the transition smooth, the two have helped pave the way for more employees to embolden themselves and take the initiative.

“For anyone looking to embrace change, don’t be afraid to reach out to Continuous Improvement team members,” Amanda said. “They are understanding, here to listen, and excited and ready to help.”

“And don’t forget to be patient,” Karissah added. “Getting everything up and running and trying to figure out all of the processes can be difficult, but from my experience, and with the help and support of my team, I definitely think it is worth it to stick with it and share your ideas.

“You can make a difference,” she said with a smile.

Continued from previous page

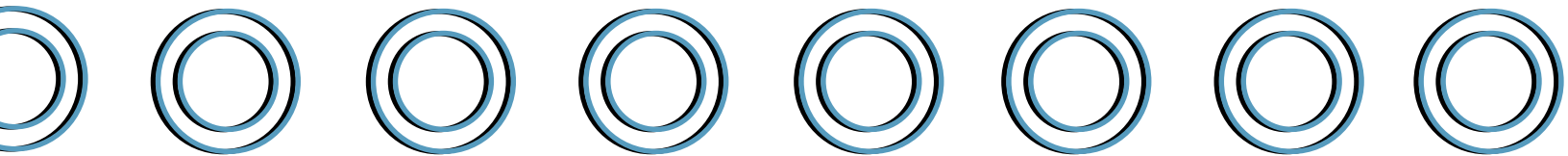
A mission to modernize

On average, the lead time of their products was reduced from 30 days to 7 days, and their productivity quickly improved by 40%, which was found by measuring units per hour by team member. With a decrease in nonconformance numbers and scrapped products, they were also able to boost their overall quality rates. By having team members supporting the new system as line leaders, teams were able to improve team-based performance while increasing opportunities for teamwork and development. Overall, the trial was not only a step in the right direction, but a resounding success in terms of learning and progress.

Proving it out

“My advice to other teams that might have a tougher time with this transition is to prove it out,” John said. “You’ll want to give things a chance. Try it, and if there are issues, bring those to the surface, and try brainstorming new ways to approach them.

“By coming together and working through trial and error, we will be able to create new processes and improve as individuals, as teams, and as a company,” he continued. “As Cook strives to manage change and promote growth through innovation and improving processes, it’s clear that we are all so lucky to have such good people on our teams helping to make it all possible.”



Go team!

Continuous flow improvements build teamwork across the AWG2 and etching post-end lines at Cook Winston-Salem

Norma Tilley, an assembler in the Wire Guide department at Cook Winston-Salem (CWS), is busy welding, running the heat shrink machine, tipping, buffing, and scoring as she helps produce the Acrobat® 2 Calibrated Tip Wire Guide along the AWG2 (Acrobat Wire Guide 2) manufacturing line. She has worked for CWS as an assembler for 20 years. She has witnessed many changes in her work during that time, but nothing like what she is experiencing now.

Before the recent continuous flow improvements to the AWG2 line, Norma, like all the other employees on the line, would focus on the only process she knew how to do on the manufacturing line and would rarely be able to communicate with other team members down the line.

"Now, when I get my job done, I can help others, and others can help me," Norma said. "We can work more as a team. I've been cross-trained on other wire guide processes and can go somewhere



▲ AWG2 manufacturing line after continuous flow line improvements.

else to help and then go back to my job. I can see where I'm needed. Before the changes, I only did assembly, and never knew when others might need help."

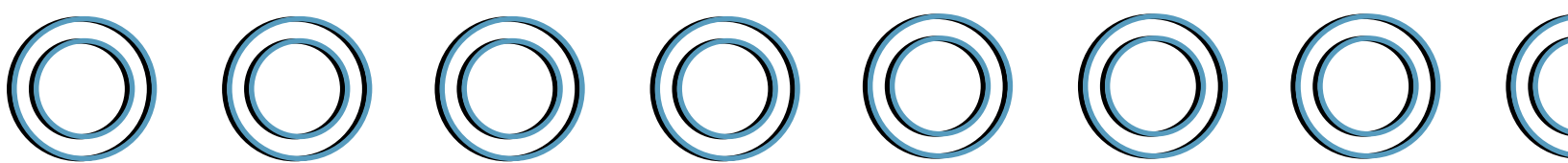
Transition and planning

The continuous improvement (CI) engineering team at CWS worked with employees on the AWG2 and etching post-end manufacturing lines to improve the flow of products by using the principles of continuous flow management, which includes moving people, machines, and processes closer together. COVID distancing guidelines continue to be applied to both manufacturing lines. CI engineers worked closely with AWG2 line employees for three months, configuring the layout of processes and machines and placing

"Now, when I get my job done, I can help others, and others can help me. We can work more as a team."

– Norma Tilley, an assembler in Wire Guides at Cook Winston-Salem

machines and workstations in close proximity to eliminate the need for employees to waste time and energy moving from machines to workstations. The changes were completed in Q4 of 2020, and the new layout of the manufacturing line has allowed employees to work more smoothly and communicate with each other



consistently, promoting teamwork within the line. The improvements also included cross-training on additional processes, allowing employees to have more variety in their work. The AWG2 line was the first of 17 product lines at CWS that will be reconfigured in the next five years.

Similar layout changes, which were completed in Q3 of 2020, were made to the etching post-end line to improve workflow. The etching post-end line includes three post-production processing departments required for completing sphincterotome work orders. The three departments are FQC Inspection, Label Control, and Packaging.

For **Sheila Tingle**, who has worked at CWS for more than 14 years as a label control associate on the etching post-end line, less stress and less lifting have been the key benefits of the recent line improvements.

"It used to be overwhelming looking at all the work that was bottlenecking on the racks, and it was harder to talk to team members about what to expect coming in on the racks because people were farther apart. Now we are nearer to each other and communication is easier. And, instead of walking around to other areas and sifting through work on the racks, we can access everything easily," Sheila said.

Positive outcomes

Besides encouraging teamwork and communication within the manufacturing lines, the other main goals for

"It used to take about 15 days to get an AWG2 work order out the door, and now it takes three days."

– *Pete Johnson, a CI engineer at Cook Winston-Salem*

the improvements were saving labor time and increasing units per labor hour.

"Because we have moved processes closer together and reduced work in process (WIP) on the line, work is not piling up at a workstation and being passed on to the next station. We now complete one work order at a time, shortening our lead time on both lines," explained **Pete Johnson**, CI engineer. "It used to take about 15 days to get an AWG2 work order out the door, and now it takes three days. Work orders on the etching post-end line are taking two days to complete compared to four days before improvements."

Additional goals for CI include not just aligning processes for efficiency on the lines but training team members in CI concepts.

"CI is a company-wide initiative for everyone to improve, not just in production," said Pete.

• **Terrie Nicodemus** (*Teresa.Nicodemus@CookMedical.com*) is a written content specialist in Corporate Marketing and Communications.



▲ *Pete Johnson*

