



4 Steps to Digitally Transform Your Factory Floor

SHOP FLOOR CONTROL technology is key to digital transformation of the fashion and sewn products factory floor.

There is information fashion, apparel and consumer goods manufacturers always need to know, such as:

- Product and order status
- Payroll expenses
- Work-in-process (WIP)
- Manufacturing variances
- Employee absenteeism
- Production bottlenecks and delays

This information and other key performance indicators (KPI) must be accurate, reliable and available right when you need to decide and act on important business matters. Without this knowledge, it's tough to keep customers informed, to plan, to see problems and tackle them head-on. It's hard to compete.

But how do you bring digital technology to the factory floor in a way that is truly transformative?



Step 1 Explore Shop Floor Control



Why shop floor control (SFC)?

SFC technology, also known as **production management, piecework payroll and manufacturing execution software**, offers fashion and consumer goods manufacturers a way to capture, track, analyze and benefit from valuable production information in real time. The latest generation of SFC runs over a wireless network, with touch-screen mobile tablets positioned at each production workstation. Sewing operators and production associates use these smart devices to clock in and out. They also use the tablets to scan products (bundles) to start tracking their individual productivity. Leveraging cloud-based app technology, supervisors, managers and executives access real-time information on production status, workforce utilization, quality

performance, payroll statistics and much more from any web-enabled PC, tablet or smartphone.

Armed with this up-to-the-minute information, businesses react quickly to challenges and opportunities. They are agile and responsive. Customers know they will get immediate and accurate answers about order status. Supervisors see at a glance where to focus their attention. Operators know exactly how they are performing against expectations and track progress toward productivity-based incentive pay in real time. Beyond immediate visibility, the newest SFC technology offers advanced analytics for solving complex problems, seizing opportunities, and optimizing factory efficiency and flexibility.

Step 2

Leverage Shop Floor Control's Many Benefits

There are myriad ways to use SFC to gain a competitive advantage and solve your toughest business challenges. These benefits originate from greater visibility, control and understanding of production variables, but their impact extends well beyond the factory. Valuable insights, faster speed and greater flexibility from SFC influence the customer experience, sales and overall supply chain.

KEY SFC BENEFITS INCLUDE

- Real-time process and KPI transparency
- Significant productivity gains
- Cost reduction and control
- Advanced analytics
- Workforce empowerment
- Quicker, more effective line balancing
- Bottleneck prevention or minimization
- Efficient machine maintenance and repair (MMR)
- Incentive payroll automation
- Responsive manufacturing
- Better business decision-making
- Faster identification and resolution of quality issues
- Support for sustainability, regulatory and compliance objectives

A compelling SFC advantage is the comfort level and confidence it gives retail customers and leading brands. With visibility to manufacturing partners' fair pay practices, retailers and brands have evidence and documentation of their supply chain's labor law compliance and corporate social responsibility (CSR).



Step 3 Measure How Shop Floor Control Delivers ROI



Return on investment (ROI) from SFC comes in many forms. There is increased output and the corresponding ability to earn more revenue in a shorter time period. There is less payroll overpayment due to errors with manual notetaking, gum-sheet tickets and tabulation. There is less non-productive, off-standard time.

Also, less WIP means more products are finished sooner, triggering earlier invoicing and payment.

Perhaps most importantly, when companies leverage SFC technology, they move quickly to evaluate capacity, plan and seize new business opportunities.

Manufacturers using SFC consistently report attaining ROI within six to 12 months.

TYPICAL SAVINGS INCLUDE

- Increase operator productivity by 5% to 25%
- Decrease excess labor costs by 10% to 30%
- Reduce Work-in-Process (WIP) by 10% to 30%
- Reduce payroll overpayment by 1% to 4%
- Reduce printing/ handling/ payroll costs

Plus, quality problems are exposed earlier, enabling manufacturers to nip them in the bud and keep shipments on schedule.

For many manufacturers, these opportunities include taking on a larger number of smaller orders.

Step 4

Achieve Your Factory of the Future — Today

SFC technology delivers factory digitalization. It connects people to mission-critical information about production, operator performance, products, plants and the overall manufacturing base. But how can you be sure your foray into SFC goes smoothly and returns the desired rewards? Here are a few selection criteria to keep in mind when looking for the best SFC solution and deploying it.

EASE OF USE

Look for KPIs, operator instructions and other actionable information provided in configurable dashboards and screen views users understand and like.

ENTERPRISE-SCALE SFC WITH CLOUD-BASED MANAGEMENT APP

Multi-plant businesses need enterprise-strength SFC with functionality to manage global factory locations. Ask about whether a SFC software provider offers a cloud-based management app, which gives users on-site or remote access to the solution.

WIRELESS INSTALLATION AND INDUSTRY 4.0 READINESS

Portability and mobility are essential qualities of modern SFC. Your SFC solution should move seamlessly with your evolving plant floor layouts and configurations. Talk with your software provider about Industry 4.0-level integrations and capabilities. For example, can the solution display 3D product images? Does it integrate with smart sewing machines?

SYSTEMS INTEGRATION

At a minimum, the SFC solution should integrate with costing, engineering and payroll systems and services. This way, engineers do not have to manually transfer or rekey standards from one system to another. Production associates save time by clocking in and out and scanning work tags on their smart devices. Their time, attendance and productivity information flows automatically to the payroll system. This eliminates manual compilation and calculation of hourly and incentive gross payroll. There also are advantages to built-in integration with ERP, PLM and business intelligence (BI) solutions. The SFC solution also should be capable of exporting production data in Excel, CSV and PDF formats.

ADVANCED ANALYTICS

Most SFC solutions lack advanced analytical capabilities. In your solution search, be sure to ask about the inclusion of BI tools to help you dig deeper into production issues, analyze variances, identify patterns, anticipate opportunities and respond to trends.

Key Takeaways

New SFC technology offers transformational benefits for digitizing the factory floor. Gone are the days when fashion, apparel, sewn products and other consumer goods manufacturers relied on guesswork, instincts and yesterday's data to make decisions. Instead, they have production data at their fingertips when they need it. As a result, companies implementing SFC gain:

- Real-time visibility to all production activities precisely as they occur
- Process and earnings transparency for production associates and management
- CSR compliance transparency for retailers and brands
- Increased productivity and efficiency and reduced off-standard and downtime
- Enhanced analytical capability to solve complex problems, identify trends and improve performance
- Greater agility and responsiveness to pivot with business changes and new opportunities

Are you ready to digitally transform your factory floor? Read on to learn how Star Garment Group, a full-service fashion apparel manufacturer, did just that through innovative use of SFC technology.



STAR GARMENT Advances Manufacturing Productivity and Efficiency

STAR
A Komar company



1.2M+
PIECES PRODUCED MONTHLY



14
MANUFACTURING PLANTS



8,000+
EMPLOYEES

Star Garment Group is no stranger to problem solving and transformation. Since 1978, this Sri Lanka-based business has been transforming ideas into products for leading brands. Star, which joined the Komar family of companies in 2016, is a full-service provider of fashion apparel across a broad range of product categories. In 2020, Star reached one of its brightest achievements yet: 14 factories were certified as carbon neutral, a first in Sri Lanka and an outstanding accomplishment on the global scale.

Along the way, Star has faced challenges, adapted and improved to stay competitive. Whether it's 3D design or the newest sewing machinery, Star continually invests in technology to ensure quality without

compromise. In recent years, Star invested in factory floor digitalization by adding the **CGS BlueCherry® Shop Floor Control (SFC)** solution. This case study will discuss how the SFC technology:

- Enables Star's management team to make informed decisions, faster.
- Delivers access to real-time shop floor information, leading to faster problem resolution, unproductive time reduction, better productivity and cost reduction.

■ CHALLENGES BEFORE SHOP FLOOR DIGITALIZATION

Before Star rolled out SFC technology, the company relied on a batch process to obtain plant floor data. There was a day's

lag time between when events occurred in the factory and when management received information about that day's production. Throughout the workday, supervisors and mechanics on the factory floor would troubleshoot problems and make decisions based on experience, instincts and informal processes. For example, they would notice work-in-process (WIP) building up at one workstation due to a machine problem at the workstation next in the production line. Or they would discover at shift change that an operator would be absent that day. In either situation, they would have to drop everything and rearrange sewing associates on a line to ensure all essential operations are performed and bottlenecks are resolved. ►

Then the next day, the management team would receive the prior day's production report and see how manufacturing progressed against forecasts. But they were always looking in the rear-view mirror, and there was only so much they could do at that point about lost productivity and broken machines. With reliance on informal processes to notice and address issues such as bottlenecks, Star was aware of the reasons for manufacturing setbacks, but it had no quantifiable data available to accurately measure the size and causes of the problems. As the saying goes, you can't manage what you can't measure.

■ RESULTS AFTER SHOP FLOOR CONTROL TECHNOLOGY

Today, Star knows immediately when a machine goes down and a sewing operator goes into non-standard time. It knows

precisely how long it took to repair that machine and get the operator back to work. When they learn an operator is out sick, supervisors can consult the SFC solution on hand-held tablets to get quick recommendations for how best to rebalance a line. They also can plan ahead for scheduled absences. Operators see a real-time view of their own throughput and that of their production line, including whether their pace is on track to hit pay incentives.

All of this newfound visibility and capability is made possible by Star's implementation of **CGS BlueCherry® Shop Floor Control**. Unlike before, the management team now has visibility into all this data, from their offices or remotely, in real-time, as it's happening on the plant floor. Leaders are more engaged and aware of critical issues and can better analyze recurring issues to get to the root causes of persistent problems, such as why some styles take longer than expected to make. ▶

The real-time data enables people at various levels, from production workers to supervisors to management, to make informed vs. informal decisions,” said Star Managing Director Arumugampillai Sukumaran. “Now we can solve issues as they happen. When you make decisions quickly, obviously your productivity goes up. It’s a chain reaction. Real-time decision-making allows us to make quick decisions in real-time. That allows us to solve problems on the spot. That on-the-spot problem solving ends up reducing off-standard hours. That ends up with higher productivity, and obviously that higher productivity ends up in a reduction of costs. It’s a chain.

Before using **CGS BlueCherry® Shop Floor Control**, Star did not know exactly how much off-standard time occurred during a shift or day. After the company started measuring this time, it was shocked by how it added up. “It was unbelievable — the number of off-standard minutes and hours every day,” Sukumaran said. By gaining greater visibility to this non-productive time, Star’s team jumps on solving the causes of the problems much more quickly. **Since rolling out SFC, Star has eliminated 90 percent of off-standard time while gaining double-digit productivity increases.**

The SFC solution integrates seamlessly with General Sewing Data (GSD) standard values for every garment operation Star associates perform. Information about individual operator skill levels also is stored in the system. **Shop Floor Control** automatically synthesizes this data to help managers plan production and balance manufacturing lines for optimal output. During the planning stage, before a production run starts, they can identify skills gaps likely to lead to line imbalances, such as WIP buildup at certain operations. In this way, Star proactively prevents these issues by rearranging associates and/or operations for a more efficient manufacturing flow. For example,

while one style makes its way down the line, Star leverages SFC to plan how each line will be setup for the next three styles. Star now has clearer, real-time visibility to order status, by individual products or batches. Managers can see at a glance how much of an order has been cut, sewn, inspected, bagged or packed for shipment. This prevents last-minute surprises. Said Sukumaran, “It helps with transparency. You can see exactly where the order is from your office.”

If a quality problem is identified during an inspection, management can quickly trace the issue back to specific operations and associates, assign rework and catch errors before hundreds are made.

With SFC, each production line has two or three large-screen monitors that

display real-time information about the line’s absenteeism, off-standard time and status toward meeting incentive production targets. Production associates and supervisors work hand-in-hand to resolve issues as quickly as possible so that everyone has the best opportunity for higher earnings. “It creates a culture of helping each other,” Sukumaran said.

For Star Garment Group, **CGS Blue Cherry® Shop Floor Control** has shed a scientific light on causes and effects of time lost to bottlenecks, machine downtime, absenteeism and other issues, while giving management valuable real-time visibility to production status. **SFC is one of the tools that helps Star live up to its slogan: Sourcing and Manufacturing at Its Best.**

Your Shop Floor Reimagined with BlueCherry® Shop Floor Control Enterprise

Every business is unique, with different drivers behind factory floor digital transformation. Still, some priorities are universal. Apparel, sewn products and other consumer goods manufacturers are constantly challenged to improve productivity and efficiency, reduce and control costs, and improve product quality while meeting process transparency, sustainability and various compliance requirements.

The most widely used industry-focused shop floor control (SFC) solution in the world, **BlueCherry® Shop Floor Control (SFC)**, has been reimagined to empower sewn products and other discrete manufacturers to solve rapidly changing market and business demands. The all-new CGS **BlueCherry SFC Enterprise** couples the industry's richest production management capabilities with the latest cloud, wireless and analytics technologies. This powerful multilingual solution is easy to deploy, maintain, and use. Here are some key advantages:

■ REAL-TIME VISIBILITY AND RESPONSIVENESS - YOU CAN'T MANAGE WHAT YOU CAN'T MEASURE

Despite advances in today's connected, digital world, many sewn products factories still struggle with visibility to the myriad processes and moving parts on their plant floors. **BlueCherry SFC Enterprise** solves this challenge by collecting real-time data on every production activity and presenting users with up-to-the-minute views of the information they need most.

For example, sewing operators and production workers see earnings status, productivity pacing tools and instructions

for performing operations. Supervisors see alerts about brewing bottlenecks, with recommendations for how to remedy them. Mechanics see which machines need attention and can track and manage machine, equipment and parts inventories and maintenance records, including downtime and repair costs. Plant managers see at a glance how lines are performing against goals so they can plan for upcoming runs and answer order status questions. Executives see capacity and constraints across multiple locations and make informed decisions about where to place incoming orders. Retail and brand customers have clearer visibility to orders as well as important records demonstrating their suppliers' labor law compliance.

CGS SFC helped us solve the problem we were having, which was not seeing things in real time,” said Jeffrey Rosenstock, vice president and co-owner, General Sportwear, a leading manufacturer and importer of private brand denim jeans and woven bottoms. “Now, from the factory side, we just love the whole transparency part of it. Every transaction is recorded. Everything is in real time. Having all of this information in real time is a tremendous advantage for our company. We know where everything is.

■ PRODUCTIVITY GAINS AND COST REDUCTION - TIME IS MONEY.

Downtime and off-standard time — anytime production associates and teams are not working on products to ship to customers — are drains on revenue and profits. SFC enables factories to identify, understand and minimize non-productive time. In turn, they reduce waste and costs. For example, production associates can self-serve to answer questions about garment construction instead of signaling and waiting for a supervisor’s help. SFC terminals provide easy access to clear assembly instructions, in the operator’s own language, with 3D instructional images and videos.

With real-time BlueCherry SFC alerts, supervisors can better manage absenteeism, quality and off-standard time issues. They can visualize when and where production

line imbalances occur and prevent bottlenecks before they escalate. With instant insight into operator strengths and weaknesses, they are armed with information to resolve imbalances. For example, this advanced Shop Floor Control technology proposes solutions to imbalances, such as assigning high-efficiency employees to augment low-output jobs.

“We are able to balance our production a lot better,” Rosenstock said. “We’re able to see where the bottlenecks are, and everything just moves a lot faster and more efficiently.”

■ WORKFORCE EMPOWERMENT - WORK SMARTER, NOT HARDER

Working at smart, connected manufacturing workstations and factories, operators are armed with tools and information they need to be their most productive. They can check their pace on their workstation touchscreen and see their line’s productivity toward goals on large digital displays within the plant. Connected and informed, these workers are motivated and recognize their ►

value in the workplace, resulting in greater teamwork and reduced absenteeism. Production associates often perceive value and take pride in their employers' investment in the latest manufacturing technology.

Rosenstock said his favorite aspect of BlueCherry SFC is “giving operators the opportunity to make more money.”

■ ADVANCED ANALYTICS AND BETTER BUSINESS DECISIONS - KNOWLEDGE IS POWER

In today's fast-moving, data-driven market, business intelligence (BI) is vital to every facet of the fashion company — including the factory floor. A major benefit of **BlueCherry SFC Enterprise** is its built-in analytical capabilities, thanks to native integration with advanced CGS BI tools. Now engineers and executives can easily manipulate shop-floor data to answer pressing questions and solve

Everybody is a winner. It helps operators challenge and pace themselves.

Jeffrey Rosenstock
General Sportwear

complex challenges. They don't need specialized information technology (IT) support or third-party BI software to analyze all types of production data. If the SFC solution collects it, they can crunch it. For example, perhaps the management team is grappling with why orders tend to run behind schedule for a certain style or on a particular line? **BlueCherry SFC Enterprise** enables dynamic grouping and sorting of the data, including virtually any production metrics by style, operation, work cell, production line, factory, operator, etc. In addition, users can leverage aggregate historic production data to develop

standards for new styles or for predictive analysis and insight into trends, strategies and opportunities.

■ CORPORATE SOCIAL RESPONSIBILITY AND COMPLIANCE - VERIFY AND VALIDATE

SFC technology also gives retailers and brands valuable visibility they need to ensure their supply chains are socially responsible. If they are researching new suppliers, they can request SFC data from prospective partners to ensure incentive compensation programs are managed consistently and equitably, based on fair standards and accurate information about exactly what is happening on the factory floor. **CGS BlueCherry® SFC Enterprise** automates complexities of implementing and managing incentive payroll. The solution helps to confirm associates are incentivized and paid fairly, and it encourages prompt, consistent handling of off-standard events and activities. SFC technology gives all parties clear visibility to and understanding of pay practices. This includes production workers, manufacturing managers, supervisors, mechanics, quality assurance personnel, sourcing executives, brands and retailers — **empowering everyone to make better business decisions.** ■

For over 35 years, CGS's BlueCherry® Enterprise Suite provides clients with a powerful, comprehensive set of tools to drive their fundamental business processes. With a community of 500+ customers, 250,000+ active users and implementations in more than 20 countries, we've built and actively facilitate a collaborative network of CGS experts and client users that's unmatched in the industry.

250,000+ 250,000+ users worldwide	20+ Present in 20+ countries	500+ A community of 500+ customers globally
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Focusing on the needs of high-growth organizations operating in the consumer lifestyle products and retail industries, our solutions have the built-in capacity to address the needs of all core management, planning, product development, manufacturing, logistics, finance and sales functions.

A flexible solution that is available in the cloud and on-premise, **BlueCherry Enterprise Suite** empowers omnichannel businesses globally with over 600 integration partners ranging from 3D product development, retailers, eCommerce, logistics, third-party warehouses, and manufacturing facilities.

With end-to-end capabilities, the BlueCherry Enterprise Suite includes:

- Product Lifecycle Management
- Enterprise Resource Planning
- Shop Floor Control
- B2B eCommerce
- Omnichannel Warehouse Mgmt.
- Omnichannel Merchandise Planning
- Business Intelligence
- Business Integrations

TRUSTED BY THESE AMAZING COMPANIES

