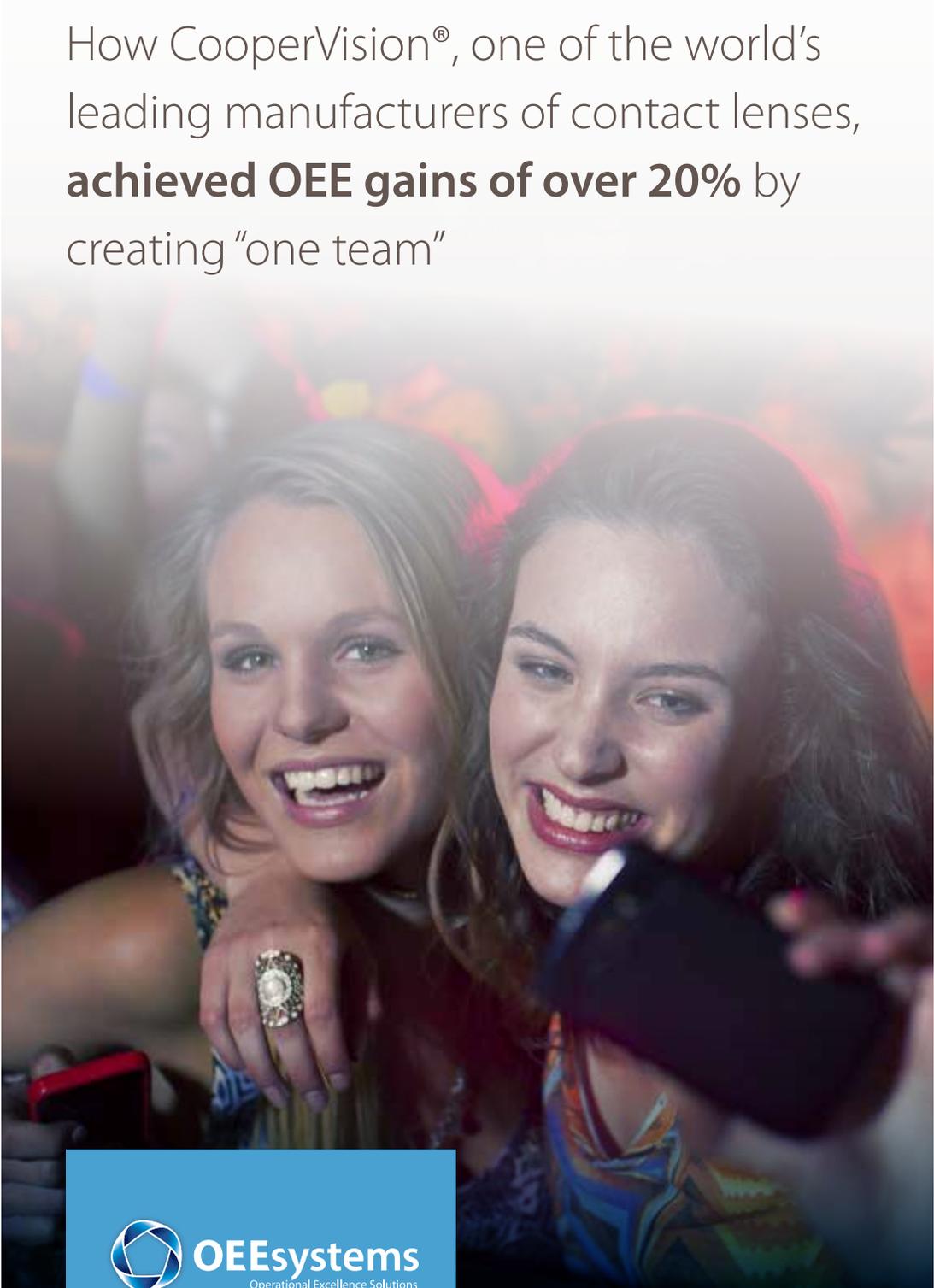


ONE TEAM

How CooperVision®, one of the world's leading manufacturers of contact lenses, achieved **OEE gains of over 20%** by creating "one team"





ROB GEORGE

Asset Care Manager, CooperVision

Part of the Cooper Company, Inc. (NYSE: COO), headquartered in Pleasanton, California, CooperVision is a \$1 billion dollar global business with 7,800 staff and sales in over 100 countries. It is one of the world's largest contact lens manufacturers.

I'm the Asset Care Manager at CooperVision UK. My core objectives are simple:



TO **INCREASE**
OUTPUT



TO **REDUCE**
COST PER UNIT



WHILE MAINTAINING WORLD
CLASS **QUALITY** LEVELS

Over the past four years I have taken the business on a journey that we now call "**The Science of Manufacturing**". OEEsystems International is a key partner on this journey. In 2012, we chose OEEsystems because of their expertise, experience and unique software solution **PerformOEE™**, which powers real-time performance improvement.

Hamble, Southampton is where we manufacture CooperVision's range of contact lenses.

We initially installed PerformOEE™ on just one production line.

THREE INITIAL IMPROVEMENT OBJECTIVES:

- 1 Measure and **establish the reason for significant variations** in our batch changeover times, while developing a **WIN culture** in our Production Teams.
- 2 Identify and deeply **understand the cause of bottlenecks** within our manufacturing process.
- 3 Improve the visibility of yield losses and unplanned downtime.



IDENTIFYING THE PROBLEM AND IMPLEMENTING THE SOLUTION

PROBLEM:

We couldn't supply our growing market share using current platforms. We had run out of space to install new platforms. We had to think differently. The baseline OEE metric demonstrated we didn't need new factories or lines.

SOLUTION:



Using **PerformOEE™**, in two years we achieved:



**29%
INCREASE**
Increase in Volume



**68%
REDUCTION**
in **Unplanned Downtime**,
falling from 13.7% to 4.4%.

**20%
INCREASE**
Increase in OEE

**18%
REDUCTION**
in **Cost per Unit**

**5%
INCREASE**
Increase in Yield

**14.2
DAYS PAYBACK**
Payback on PerformOEE™
every 14.2 days.

WORKING TOGETHER AS ONE TEAM, FOCUSSED ON COMMON GOALS

We initially installed PerformOEE™ on just one production line. The software immediately confirmed that we had huge variations in the time it took to complete a batch change.

Following the principle of **“One Team”**, we reorganized our teams and worked with them to remove the variation, setting a standard time for batch changeovers. This gave us an immediate increase in our overall equipment effectiveness (OEE) score and also improved our single minute exchange of dies (SMED) scores because of better monitoring.

The next step was to address issues with equipment performance. Again **PerformOEE™** delivered automated, accurate, intelligent, real-time data that gave us visibility into how our machines were actually performing. It was able to identify and provide a continuous stream of data on asset performance issues and root-cause losses for our teams to focus on and fix. When these basic issues were addressed, the result was another lift in our OEE score.

“ It was able to identify and provide a continuous stream of data on asset performance issues and root-cause losses for our teams to focus on and fix. ”



A further benefit was that the software provided a clear understanding and breakdown of unplanned downtime – by line, product and shift – so we could work out our capability. As a result we significantly reduced our unplanned downtime.

We were able to review the lines, compare them and work on them to keep the yields going. Applying the **“One Team”** principle led to better organization of our teams – the shift leaders for Production, MSE and Asset Care share a single Control Room, where critical modules and bottlenecks are monitored and highlighted in real-time. As a result we have had a significant decrease in yield loss.

Overall we have increased our OEE score by over 26% and the system pays for itself every 14.2 days – and we believe there is more to come. Working as one team has been key to this achievement. **PerformOEE™** is now being installed at other CooperVision sites worldwide.

“ Working with OEEsystems International has been a very positive experience for CooperVision UK. We have a great collaborative relationship and are working together to co-create the next generation of manufacturing excellence software. At the core of this is what we call **“The Science of Manufacturing”**. ”

Overall we have **increased our OEE score by OVER 20%** and the system is now **paying for itself every 14.2 DAYS** – and we believe there is more to come.

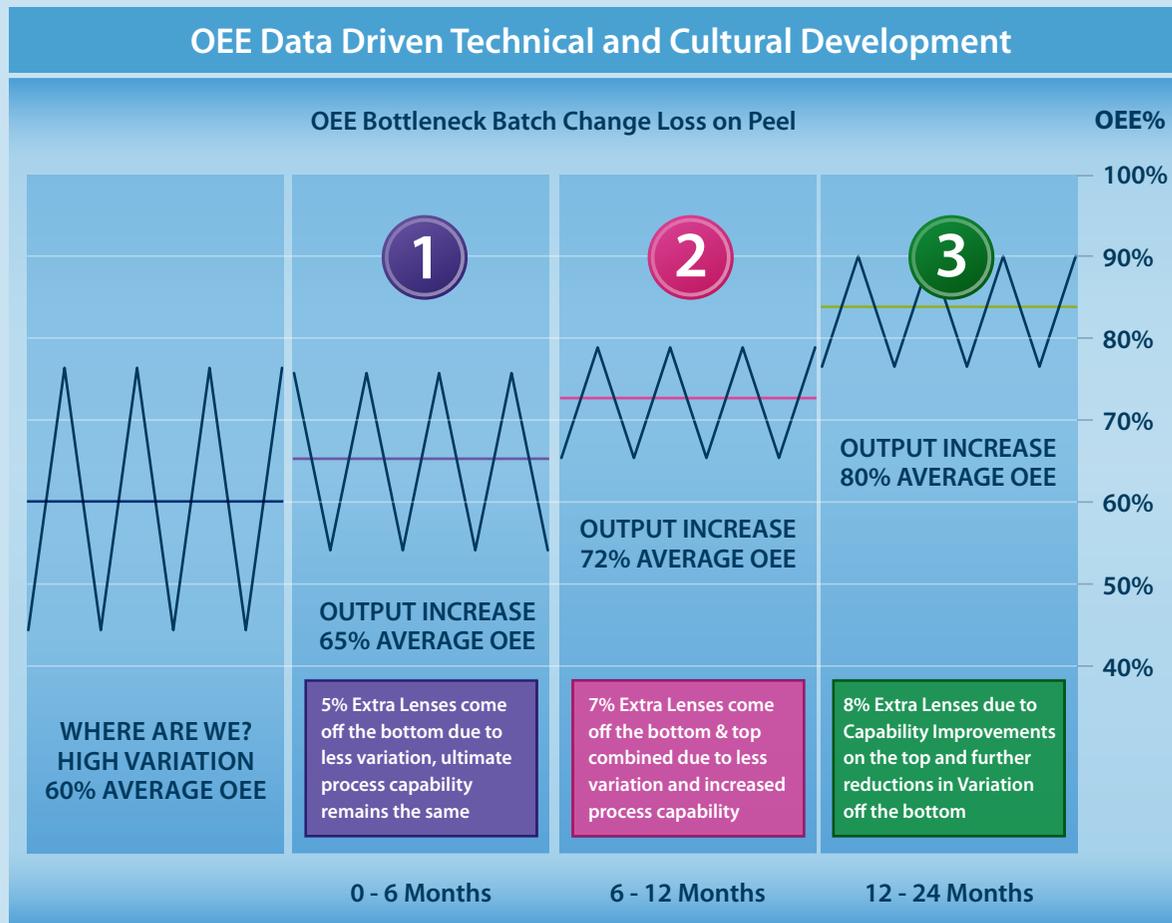


CooperVision®

OEEsystems
Operational Excellence Solutions



WHY IMPLEMENT PerformOEE?



PRINCIPLE: ONE TEAM

“One Team” is all about the people – supported by a world-class process monitoring system.

We all manage to do continuous improvement at home, without any consultants or tools. What happens to us when we go to work? Let me explain.

When you're painting a gate at home, it's simply common sense to get the paint and put it next to the gate before you start work. You do it without thinking. But, at work, it would take two workshops and the help of a kaizan consultant to come to the same conclusion.

Your people are your greatest asset. Allow them to act as they would at home.

“Your people are your greatest asset. Allow them to act as they would at home.”

- 1 By empowering and transferring accountability for batch changeovers to local teams, we got faster responses to breakdowns and less variation – resulting in 5% more lenses coming off the line. **OEE went up to 65%.**
- 2 Next we developed the Production and MSE teams, optimized the line set-up, put in local continuous improvement (CI) and started using reliability-centered maintenance (RCM). The results? A further 7% increase in output – from reduced variation and increased process capability – **bringing OEE to 72%.**

OEE SYSTEM AND CULTURE CHANGE – VISIBILITY OF PROBLEMS

- 3 As a final step in the pilot, we turned our attention to continuous improvements generated from using the Pareto of losses to prioritize actions. We achieved a further 8% increase in output – again through a combination of reduction in variation and improvement in process capability – **bringing average OEE to 80%.**

In all, we achieved a **29% increase in output and a corresponding 20% increase in OEE.** This success led us to implement PerformOEE™ across all our lines here in Southampton.



THE SCIENCE OF MANUFACTURING: PRINCIPLES

OEE is used as a business metric by the world's leading manufacturing companies to measure the effectiveness of their processes and / or equipment, to identify improvement opportunities and deliver increased capacity and reduced costs.

OEEsystems International's **PerformOEE™** achieves step-change business performance improvement through data-driven technical and cultural development, embodied in **"The Science of Manufacturing"**.



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