THE PROBLEM

A contract manufacturer producing a range of sterile and non-sterile products for some 108 clients had struggled with their KPIs for some time. These were some of their pain points:

> 80 percent of indicators were lagging, 20 percent leading

> All measures had been introduced by the site leadership team with no involvement of process owners

> Many of their 47 KPIs were confusing, and difficult to understand and interpret

> Although KPI reports were on time, they were reported to senior leadership and rarely shared with process owners in manufacturing

The site quality head was concerned that the measures were no longer fit for use.

HOW WAS THE PROBLEM TACKLED?

Step 1: Recalibration of Site Leadership Team

Leadership had mixed views of KPIs. Many did not distinguish between leading and lagging, and none focused on behavior first, measure second. We emphasized that:

> They were all collectively responsible for business performance and for the KPI system, not just the site quality head

> Their existing KPIs, with a focus on lagging indicators, were making their reactionary firefighting culture worse

> That the existing measures were driving the wrong behaviors and exposing their business to risk

Step 2: Engagement of The Process Owners

Our workshop involved team leaders, supervisors, operators and subject matter experts from manufacturing, planning, procurement, engineering, QA and QC based on their process knowledge and frustration with the current KPI system.

Step 3: Focus on Systems and Behaviors

We started by focusing on what was in it for them: fewer, more accurate measures that waste less time and make their life easier. They then generated a process flow map listing all manufacturing equipment, plants, utilities and systems. We helped identify the desired behavior and outcomes (business benefits) (first three columns in the table in step 4).

Step 4: Identify Measures That Drive the Right Behavior and Outcome

We described what drives behaviors (for details on this step, view our webinar on Changing Behaviors in the Workplace, www.nsf.org/info/pbwebinars).
Step 5: Agree on Measures and Review Every Two Weeks

Responsibilities were allocated for data collection, interpretation and reporting using a simple traffic light system, and RED and AMBER performance measures were reviewed every two weeks in face-to-face meetings:

> **RED**: Failure to achieve desired performance
> **AMBER**: Process ‘in control’ but improvement required
> **GREEN**: Optimal performance achieved

<table>
<thead>
<tr>
<th>System</th>
<th>Desired Behavior</th>
<th>Outcome required</th>
<th>Leading Indicators</th>
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</thead>
<tbody>
<tr>
<td>Deviation &amp; CAPA</td>
<td>Better root cause investigations</td>
<td>Fewer repeat deviations</td>
<td>&gt; Time interval between incident and investigation</td>
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<td></td>
<td></td>
<td></td>
<td>&gt; Numbers of repeat incidents</td>
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<td>Equipment &amp; utilities</td>
<td>Timely review of performance</td>
<td>Fewer breakdowns</td>
<td>&gt; Review of equipment logs</td>
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<td>&gt; Daily plant inspections</td>
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<tr>
<td>SOPs</td>
<td>Better compliance</td>
<td>Fewer errors &amp; mistakes</td>
<td>&gt; 7th grade Flesch-Kincaid readability score</td>
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**THE SOLUTION AND RESULTS**

The site quality head called in NSF to design and facilitate a customized three-day workshop to remedy the situation, which generated this return on investment:

> Reduction in cost of goods creating savings in excess of $3.7 million in 9 months
> Levels of ‘work in progress’ reduced by 11 percent, generating savings of $475K
> Repeat deviations reduced by 35 percent
> Equipment breakdown reduced by 18 percent
> Plant utilization improved by 14 percent, allowing 36 additional batches to be manufactured

**ABOUT THE AUTHOR**

Martin Lush has over 30 years’ experience in the pharmaceutical and healthcare industry. He has held senior management positions in QA, manufacturing, QC and supply chain auditing and has conducted audits and education programs for many hundreds of companies in over 25 countries.

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