

CAMBRIDGE SUSTAIN 8

Eight steps to sustainable,
continuous business improvement



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- How the programme works
- Why engage with the Sustain 8 programme?
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WHAT IS SUSTAIN 8?



Ian Bamford
Commercial Director, Industrial Sustainability,
Institute for Manufacturing, University of Cambridge

“Achieving the goals we have for a sustainable future is everyone’s responsibility. This programme provides the leadership and workforce of factories with the tools and motivation to convert their workplace into an engine for sustainable transformation. Aligning action with business and personal needs.”

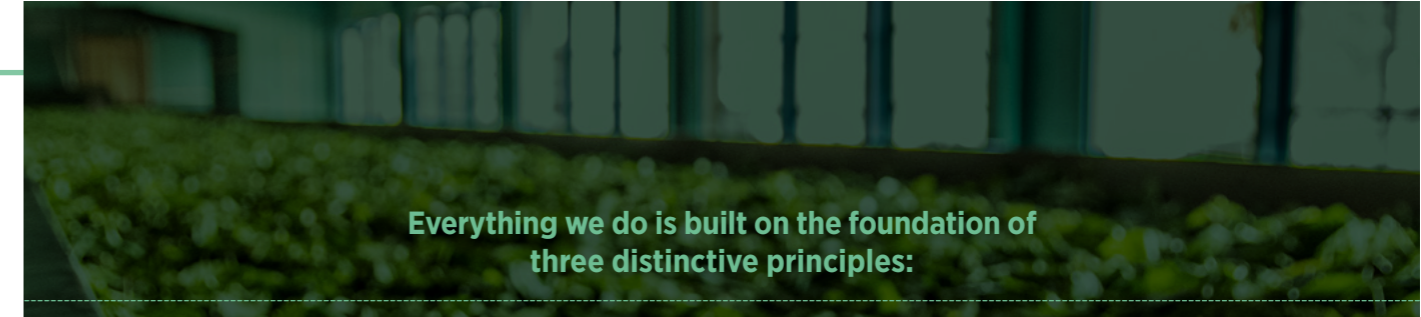
Sustain 8 is an organisational engagement programme developed by the Institute for Manufacturing (IfM) – a division of the University of Cambridge’s Department of Engineering. This revolutionary behavioural change programme focuses on making significant sustainability improvements with minimal investment. Developed at IfM, it follows eight simple steps.

Combating global climate change requires urgency, scale, high ambition and necessitates overcoming the sometimes complex language and calculations required for sustainability improvement.

As a result, there is immense potential for enhancing sustainability, though this is sometimes challenging to align with daily management processes and leadership objectives. Sustain 8 ensures this alignment.

Sustain 8 is designed to motivate factory floor personnel, thereby offering valuable opportunities for low and no-cost improvements.

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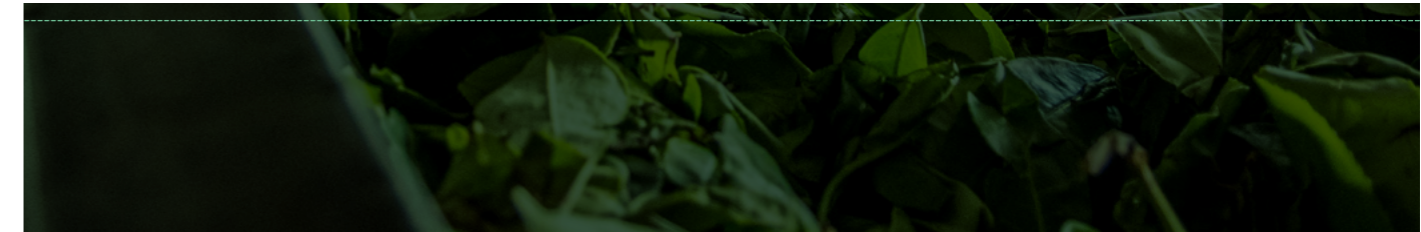
Aligns sustainability with business success.



Engages the factory workforce and leadership.



Achieves in 12 months without big investments.



SUSTAINABILITY IMPROVEMENT IN EIGHT STEPS

Our eight-step process enables us to appreciate the priority issues that need to be solved, so we can work with you to build a plan on how sustainability can help the factory achieve success, giving the factory leadership the comfort that they are in safe and credible hands.

Here's an insight into our process:



1

DATA

Define a data collection plan to track performance improvement.

2

KPIs

Agree the efficiency metrics (KPIs) which will motivate improvement.

3

TARGETS

Factory leadership show their commitment to a successful programme.

4

ENGAGE

Engage frontline staff to develop improvement plans.

5

VISUALS

Visual management to bring the data to life in everyday terms.

6

REVIEW

Guide a review process to track improvement.

7

SUSTAIN

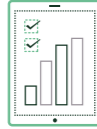
Sustain performance and recommend roll-out to other sites.

8

RECOGNISE

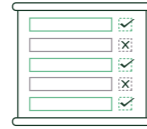
Recognition of hard work of all involved.

HOW THE PROGRAMME WORKS



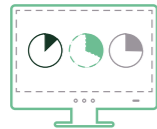
Motivating sustainability KPIs

Develop sustainability key performance indicators (KPIs).



Visual management tools

Bring data to life through visual management tools.



Transparent organisational reporting

Track and report progress towards sustainability goals.



Engaging frontline staff

Involve frontline employees in the development of improvement plans.



Scalable foundation for improvement

Establish improvement that can be replicated across multiple sites.

SUSTAINABLE FACTORY IMPROVEMENT – OUR EXPERIENCE

- We have successfully piloted and demonstrated our method in many sectors and geographies.
- We can guide your factory to adopt the change management methodology.
- Together, we will achieve significant sustainability improvement with minimal investment.
- We will work with you in your factory, using remote interventions to ensure you become proficient and effective in using the methodology.

We focus on the 'good days' in your factory



WHY ENGAGE WITH THE SUSTAIN 8 PROGRAMME?

We typically find that sustainability head office teams become frustrated because few people are listening to them. Factory leaders care about the planet, but see sustainability as a big, complex task to be added to the list of the many other problems involved in running a successful operation. As a result, despite big intentions and strategies, many companies struggle to achieve traction on the ground.

Our approach fully embraces the unique perspective of each factory. By making sustainability understandable, focused and motivational, we will help you to deliver real improvements at low cost.

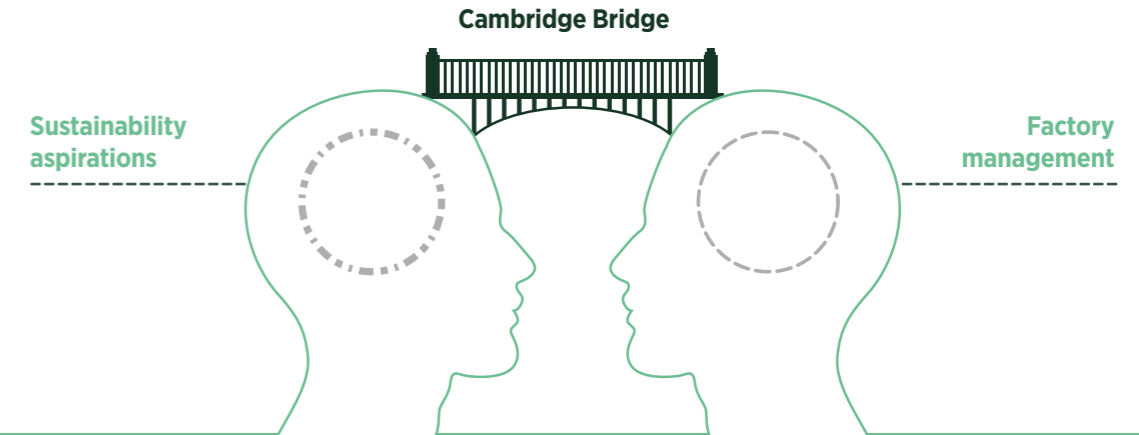
We understand that everyone involved in manufacturing businesses works under time constraints, which is why we believe that motivation is key. We build on the good things that you already do, tailoring our work to completely align sustainability with your business success.

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THE CAMBRIDGE BRIDGE

Connecting sustainable goals with production demands



HOW SUSTAIN 8 CAN MAKE AN IMPACT IN YOUR ORGANISATION



Connect your key business drivers and sustainability engagement on the factory floor

Many organisations have clear, strong sustainability strategies and plans, but often fail to link these to the day-to-day reality of the factory floor. Our methodology fills this gap by inspiring frontline staff to create improvement plans that resonate with their work and align them with key business drivers. This alignment is crucial for the sustained success of your sustainability initiatives.



Focus on success: harness the power of 'good days'

Our method highlights the achievements and practices that drive success on the best days in factories. This approach serves as a powerful motivational technique, increasing engagement and dedication to the project.



Achieve significant sustainability improvements in just 12 months

The initial steps of our engagement process focus on establishing a robust data collection plan, baselines and effective KPIs to drive improvement. Within four months, there are improvement teams set up and working on action plans across the factory. The result is that notable KPI improvements have been achieved within a year across diverse cultures and sectors.

“

By focusing on the strengths of factories on their best days, we can identify what sets them apart and replicate these practices more frequently. This leads to significant sustainability improvements. We have witnessed the positive and motivating impact of this approach.

**Gary Punter, Industrial Associate,
IfM Engage**

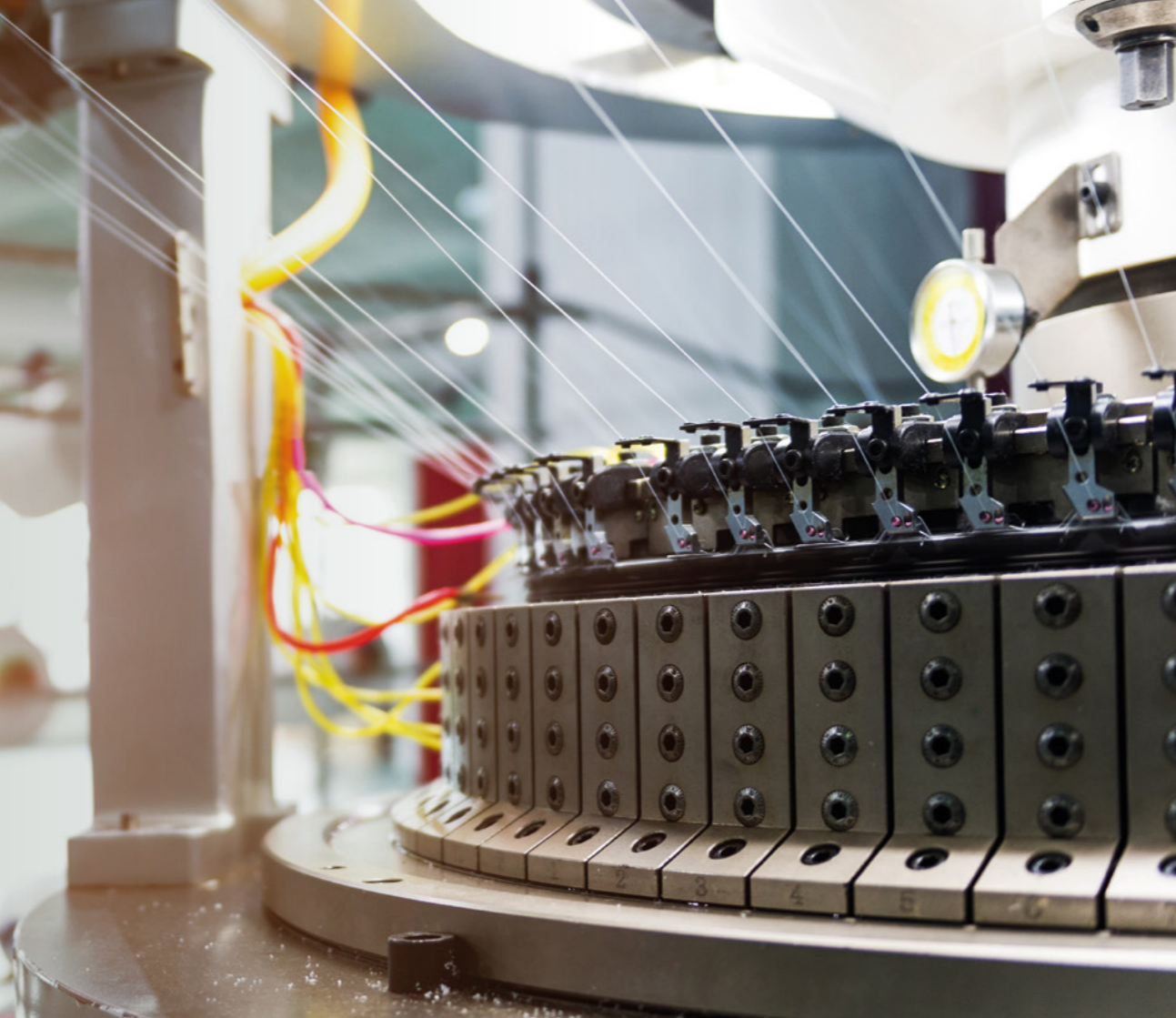
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The ability to ensure that the impact on sustainable performance is aligned to and drives standard business performance goals is really powerful. It is also exciting to find a programme that creates highly motivated workforces while reducing climate impacts.

**Sustainability director,
leading global fashion brand**



Chris Ballard | Technical Director, Eastern Produce Kenya

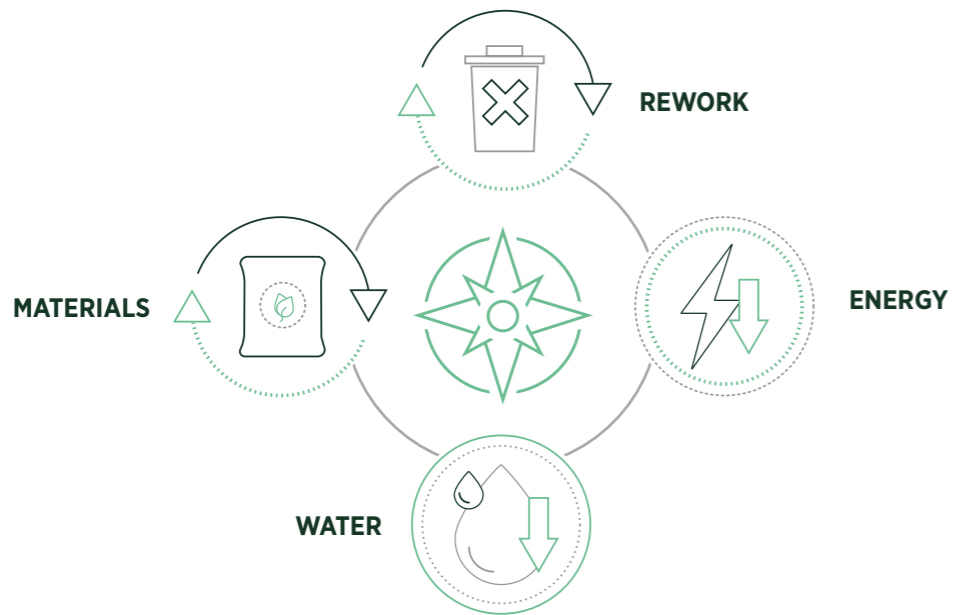
“Since working with IfM, everything we implemented has been continued. Shop floor workers now own the energy-saving culture. Some team members have now moved to other factories and are implementing these ideas in these factories. So, the ideas and what we have learnt are spreading. We’re working together effectively and committed to bringing our customers tea that has a minimal impact on the environment.”

Sustainability director | Leading global fashion brand

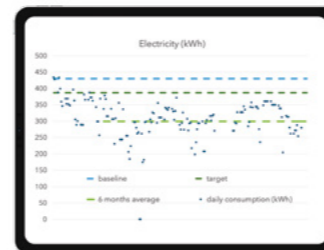
“We have been deploying the CSIM method in some of our supply chain factories over the past three years. We were initially a bit unsure if a university-based programme would have real impact. However the results have always been concrete and exceeded our expectations and those of the factory directors. The ability to ensure that the impact on sustainable performance is aligned to and drives standard business performance goals is really powerful. It is also exciting to find a programme that creates highly motivated workforces while reducing climate impacts. We are now looking at how to scale this across our wider supply chain.”

FREQUENT AREAS OF IMPROVEMENT

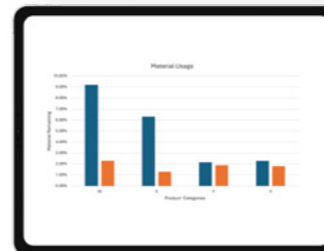
The Sustain 8 programme helps the factory leadership select sustainability KPIs that are aligned with wider business goals. Most frequently, these include the following four areas:



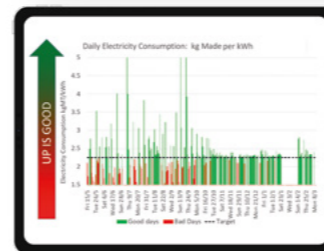
REAL EXAMPLES OF KPI IMPROVEMENT WITHIN 12 MONTHS



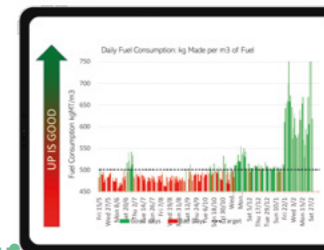
Electricity usage:
30% reduced
in Factory F



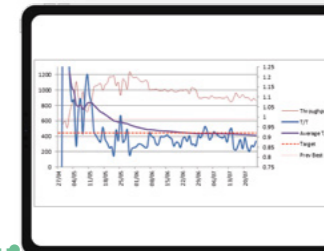
Material usage:
15-90% improved
in Factory F



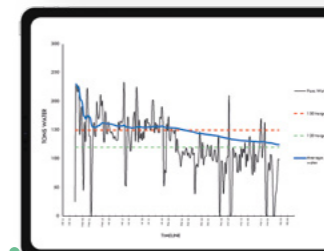
Electricity usage:
15% reduced in
Factory D



Energy usage:
28% reduced
in Factory C



Steam usage:
15% reduced in
Factory A



Water usage:
25% reduced in
Factory B

CASE STUDY: EASTERN PRODUCE KENYA DRIVING SUSTAINABILITY SUCCESS AT KENYAN TEA FACTORIES

The challenge

Kenya is one of the world's biggest producers of tea. The sector employs over 600,000 smallholder farmers, supporting over three million people. But drying, grading and packaging mean tea production is highly energy intensive. To produce one kilogram of tea requires approximately 3–6 kWh of thermal energy – supplied mainly from wood combustion – and 0.2–0.5 kWh of electrical energy from grid and diesel generators.

In 2020, Eastern Produce Kenya (EPK), one of the country's largest tea producers and exporters, invited IfM to apply the method to help refocus their efforts on reducing the amount of energy used at their Chemomi and Kepchomo tea factories.

The approach

Through online meetings and workshops over 12 months, the team worked with EPK to identify where energy could be saved and how to make sustainability relevant and understood by the factory workers.

Some of the straightforward actions immediately impacted firewood and electricity improvements. Gary Punter, Industrial Associate at IfM Engage, explained: "Because woodpiles reduce wasteful moisture in fuel, we suggested improving firewood storage by expanding covered wood storage areas. Steam usage was also reduced by eliminating steam leaks and reducing dust from

radiators and heat exchangers. We also helped develop an energy dashboard to delve further into withering and drying.

One of the key success factors was **getting the local team engaged** in the changes and **making the sustainability gains relevant to their context.**

"To reduce electricity, we encouraged the simple actions of switching off lights and sockets and using natural lighting instead. At Chemomi, this has reduced consumption by 25%.

"In addition, we suggested tea reworking to avoid additional reprocessing energy, which damages KPIs and segregates dry and moist areas for the better withering of green leaf."

Gary added that one of the key success factors was getting the local team engaged in the changes and making the sustainability gains relevant to their context.

He said: "We engaged the factory workers on their terms and in their language. We did this by converting energy into something recognisable, not gigajoules, but 'how many cows can you buy with the savings?' This gave us all a laugh but effectively equated to how much energy had been saved. It brought understanding to the room – that energy wasn't something intangible. By the end of the project, they worked out that they had saved 2,000 cows – the size of the President's herd!"

Gary recognises that local efforts were mirrored by a strong commitment from EPK HQ to try something new, as well as supportive managerial and technical leadership on the ground in Kenya.

"The open and positive culture of the Kenyan factory management and factory staff, coupled with our empathy and understanding of 'real' factory challenges and simple methodology, meant we could see impactful changes almost immediately.

"This wasn't about us coming in and telling them what they need to do, then leaving. EPK had already been engaging in various energy-saving activities. This was about walking alongside them, listening to them, and getting them involved.

"For example, we encouraged the leadership team to establish their targets, to establish local improvement teams to undertake surveys and implement their action plans and provide recognition for all the hard work involved."

The results

After 12 months, teams reported a 15–30% reduction in thermal and electric energy consumption at both sites. There was also a significant increase in tea produced per unit of fuel (kWh/m³).

Chris Ballard, EPK's Technical Director, said: "Now, there is the controlled start-up of machines after a power outage. No machines are left idle or running when not in use. There is also proper

work output by employees who now understand that their work has a direct impact on energy savings. The shop floor teams appreciate the load-shedding regime and no longer see it as a limiting factor in withering operations.

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"We have also adopted a new way of covering firewood in the yard, resulting in high firewood utilisation efficiency compared to previous years. Data on electrical energy use is collected from each section of the factory. The data is compared between all factories, and this highlights inefficient sections of a factory that must be improved."

Chris added: "These actions have led to significant energy savings at both sites, and there has been an overall improvement of factory performance across all areas.

"Since working with IfM, everything we implemented has been continued. Shop floor workers now own the energy-saving culture. Some team members have now moved to other factories and are implementing these ideas in these factories. So, the ideas and what we have learnt are spreading. We're working together effectively and committed to bringing our customers tea that has a minimal impact on the environment."



About Eastern Produce Kenya

Eastern Produce Kenya Ltd (EPK) is one of the biggest multinational producers of tea in Kenya, with tea estates in the Nandi Hills area, west of the Great Rift Valley.

Through investment in the land, factories and human resources, EPK produces some of the highest quality teas in Africa in a sustainable way with particular emphasis on modern agricultural practices, improving factory energy efficiency, increasing use of renewable energy and reduction in carbon dioxide emissions.

Eastern Produce Kenya Ltd is part of the Camellia PLC group that has agricultural and horticultural operations in Kenya, Tanzania, Malawi, South Africa, India and Bangladesh.

TO SEE HOW SUSTAIN 8 CAN WORK FOR YOU:

Find out more

<https://engage.ifm.eng.cam.ac.uk/cambridge-sustainable-improvement-method/>

Contact us

IfM Engage Ltd
Institute for Manufacturing
17 Charles Babbage Road
Cambridge CB3 0FS

Telephone: +44 (0)1223 766141

Email: ifm-enquiries@eng.cam.ac.uk