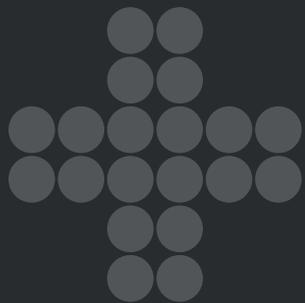


Waste & Hazard Walk Workbook

An outline of what you can expect to find
on one of our Waste & Hazard walks
- and what may surprise you



Section 1

Walk the talk



Walk the talk

Lean has transformed manufacturing. All over the world, organisations have stripped out unnecessary steps in production and eliminated sources of waste, to deliver greater value more efficiently.

But if you think all the fat has been trimmed, think again. There's a new front in the war on waste, and it centres on Lean supplies – where industrial provisioning and PPE can affect Lean performance.

The Waste & Hazard Walk is a major weapon.

This systematic facility tour looks for ways to improve productivity and safety, with a specific focus on industrial supplies and PPE. And it delivers.

We've done the Walk ourselves, and saved \$2.2 billion and 1.4 million hours of waste across 25 of our own factories.

We've also done it for plenty of other manufacturers – and we've never failed to help them discover significant opportunities for improvement.

What can you expect from this Workbook?

We'll look at the kinds of questions that get asked on a Waste & Hazard Walk. We'd like to whet your appetite and give you an idea of what you can expect from a Walk, and why you should take one.

Sleepwalking into expensive wastage

Most of us have completed a regular journey and been unable to recall any details. You've walked the shop floor many, many times. But are you still seeing what's actually there, or just what you expect to find?

A fresh pair of eyes can uncover opportunities that may be disguised by familiarity. Those are what our experts in Lean Supplies will be looking for – and that's why the Waste & Hazard Walk is so valuable.



1

2

3

4

5

6

Section 2

PPE:
Ask the right
questions



PPE: Ask the right questions

Misuse of PPE is a major source of injury or ill health. For example, 30% of workers experiencing hand injuries were wearing the wrong glove – and an average worker injury costs \$9,600 in lost productivity.

PPE can never be 'fit-and-forget'. It's only effective when suited to the task and worn properly.

When was the last time you conducted a PPE fit for purpose review? You'd be surprised what you can learn just by asking those who use PPE on a daily basis. Their input can have a major impact on your PPE decisions.

Sample questions:



Are workers taking off their PPE for any tasks?

Why is this?

For how long?

Not sure?

Dexterity loss often causes people to take their gloves off. Fogging and misting often causes people to remove eye protection. Restrictive clothing can tear, or hamper task-completion. PPE must fit, as well as be fit for purpose.

What are the risks?

Are there downtime/productivity penalties in removing/replacing PPE?

How often do they fail to put the PPE back on?

Comfort is a major factor in PPE adoption:

Have your people created workarounds to avoid cumbersome or ill-fitting PPE?

What risks or productivity penalties are involved?

Look beyond the obvious

Asking “Why” at the right points can result in great insights and actionable countermeasures.

Here are some examples from people who have taken our Waste & Hazard Walk:

Scratched protective eyewear is ineffective. But instead of straightforward like-for like replacement, this aerospace company dug a little deeper. They discovered that constant wiping to clear misting caused by inefficient air conditioning was the real problem. The solution was better-fit, anti-mist glasses.

Welding helmets protect the eyes and face but many have to be taken off to allow workers to read or complete tasks that don’t require the visor.

The only way to replace the visor involves jerking the head forward, which is straining and inefficient – 3% of a welder’s day is spent lifting and nodding their helmet. A better solution for this metal manufacturer? A visor with an Auto Darkening Filters (ADF) which is light reactive, so it could be worn continuously.

3%



of a welder’s day is spent lifting and nodding their helmet.



1

2

3

4

5

6

Section 3

Assessing the risks: Dispensing and disposal



Assessing the risks: Dispensing and disposal

Chemicals and solvents can pose a high risk to health and safety. The emphasis needs to be on protecting workers and the environment.

But beyond this duty of care, dispensing and disposal of chemicals offers real opportunities for enforcing Lean principles. The right supplies with the wrong dispensing methods can cause productivity loss and safety risks. Inefficient or unsafe disposal of supplies can cause accidents or lost time. And the right dispensing and disposal is especially important for VOCs and any dangerous chemicals.

Sample questions:



Where are solvents, chemicals and cleaners stored?

How do workers access them?

Does it cause downtime or added risk?

Are containers closed between use or left open?

What risks are associated with this?

Do you use any pre-saturated wipes or are substances always applied to the wiper?

Have workers been trained on the different disposal requirements for solvents and used rags/wipers?

Is this supported by visual communications/clear signage?



Ready to go through the full list? [Request a Waste & Hazard Walk now](#)



1

2

3

4

5

6

Look beyond the obvious



1

2

3

4

5

6

Asking “Why” at the right points can result in great insights and actionable countermeasures. Here are some examples from people who have taken our Waste & Hazard Walk:

Re-work is expensive, whatever the sector.

In the automotive industry, it’s estimated to cost an average of €300 per vehicle, which amounts to a European industry total of €153 million/year*. In this example, the defect issue was blamed on a cloth. It wasn’t actually the cloth, but the dispensing method that was the root cause. Lint was caused when tearing the sheet off a continuous roll, leading to defects. A pre-cut option was able to solve the problem immediately.

Could you save €62,900/year, just by replacing inconsistent-quality rags?

This aerospace OEM did, by introducing wipers that provided consistent size and quality (available in different formats per task) and enabled point of use dispensing.

This resulted in a 12% cost reduction, motion waste reduction through improved delivery systems, defect waste reduction due to consistency, an 88% reduction in disposal cost due to reduced wiper volume and elimination of unusable wipers.

€300



Estimated cost of re-work per vehicle.

*Source: ACEA 2012

Section 4

Training and Process: Going the extra mile



Training and Process: Going the extra mile

The proper use of supplies and PPE should be integrated into job and safety training. That much is obvious. But you're missing an opportunity if you don't enlist your workforce to inform the selection, evaluation and review of all industrial supplies and PPE. And what about temporary workers? Don't forget to include them in Lean Supplies and PPE training.

Sample questions:



How often are new processes, techniques, PPE or supplies trialed for continuous improvement initiatives?

.....
Are workers briefed on changes in PPE and supplies?

.....
Are they included in trials, evaluations and reviews?

Is visual management (signage, posters, video) used to reinforce messages?

.....
How does a temporary workforce get trained?

.....
Do they have the same level of training as the permanent workforce?

How often do people move between product/process lines and areas of the shop floor?

.....
Do they have to rely on the latent skills



1

2

3

4

5

6

Look beyond the obvious

Asking “Why” at the right points can result in great insights and actionable countermeasures. Here are some examples from people who have taken our Waste & Hazard Walk:

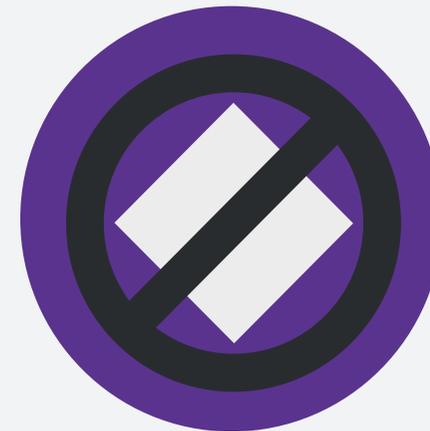
A 94% defect reduction is impressive by any standards.

The problem for the plastics operation division of this automotive manufacturer stemmed from chemical incompatibility. The pre-impregnated wipers containing isopropanol (IPA) and an additional solvent needed to clean specific colours to avoid watermarks were causing defects.

Introducing new solvent-specific wipers solved the problem, **saving over €11k/year.**

€11K

.....



.....

Introducing new solvent-specific wipers solved the problem, saving over €11K/year.



1

2

3

4

5

6

Section 5

Chemical application: Meeting the regs (by losing the rags)



Chemical application: Meeting the regs (by losing the rags)

The release of VOCs from industrial processes not only poses a potential threat to human health, but can also represent a risk of financial loss to the operator. The emission of VOCs from chemical and solvent use is often regulated and misuse or not meeting the regulatory requirements can result in fines for the operator.

The right industrial supplies and PPE are critical in the proper use and management of chemicals and VOCs.

This includes identifying the best dispensing system and wiper fit for the task of applying the solvent or chemical.

Rags – which can lead to over-application, wastage, spillage and linting defects – are almost never the best tool for the job.

Sample questions:



Has over-application and waste been analyzed and documented?

.....
Do workers know the cost of the chemicals in their operations?

.....
Are they fully trained on risks and regulations?

.....
Is this true of temporary workers as well?

.....
Are rags and cloths used in any processes?

How much time is wasted sorting them to find the right size and texture for the task?

.....
What is the risk of foreign items like zips, buttons, pins, etc often found in rags?



1

2

3

4

5

6

Look beyond the obvious

Asking “Why” at the right points can result in great insights and actionable countermeasures. Here are some examples from people who have taken our Waste & Hazard Walk:

Many solvents and chemicals are dispensed from aerosol cans because of the ease of use and transport from central storage. But aerosols can explode at ambient temperatures of 120 degrees Fahrenheit. The risk is very real and doesn't require extreme temperatures to pose a significant safety hazard.

Have you considered where cans are kept on the line while they are in use and their proximity to other machinery? What about the journey the worker takes to get the cans from storage – do they pass lines and equipment prone to overheating?

120 °F

.....



.....
aerosol cans can explode at ambient temperatures of 120 degrees F



1

2

3

4

5

6

Section 6

Let's talk the Walk.



Let's talk the Walk.

These are just a few of the questions asked during a systematic and comprehensive Waste & Hazard Walk.

Taking one will:

- Increase productivity
- Improve health and safety
- Support Lean and Continuous Improvement strategies
- Include the workers in process improvement

So why not invite us in and we will help you create specific counter-measures to combat waste and reduce safety risks in your production.

[Request a Waste & Hazard Walk today](#)



1

2

3

4

5

6