

Lean Improvement Division

An Introduction to
Lean Visual Management

Maintenance

An Introduction to Lean Visual Management



Foreword

The global financial crisis, the UK budget deficit, the Comprehensive Spending Review, reductions in the Agency's capital spending budget and an increasing demand for travel.

The above list reflects the environment we find ourselves in and the challenges we face. In order to overcome these challenges, whilst continuing to deliver a high quality of service to road users, we will have to deliver more for less.

This is where lean comes in. The core principals of lean are the delivery of value - a recent report on behalf of HM Treasury has highlighted that the costs of infrastructure works in the UK are high in comparison with the rest of Europe - and the elimination of waste - one of the guiding principles of the Compulsory Spending Review was the elimination of waste.

Within the Highways Agency we have begun to embrace Lean philosophy and practices to enhance our intelligence as a client and reduce waste.

In embracing Lean philosophy we are concentrating on our physical network asset, through maintenance, renewal and improvement activities. However, we believe the same Lean principles can and should be applied to the management and delivery of our asset, increasing effectiveness and reducing waste to play a significant role in making a positive contribution to the overall goal.

We will further develop our role as an intelligent client and will expect and challenge our suppliers to make Lean efficiencies against which quantitative benefits can be realised. The Agency will also be looking for our suppliers to demonstrate their Lean capabilities. This demonstration, along with our Strategic Alignment Review Toolkit (StART), will form part of our supplier selection process.

Contents

About this Guidance Note	Page 1
What's in it for You?	Page 2
Lean Visual Management	Page 3
Visual Displays	Page 5
Performance Improvement	Page 10
Stand-up Meetings	Page 14
Implementing Lean Visual Management	Page 19
Enhancing Lean Visual Management	Page 22
Further Learning	Page 23
Appendices	

About this Guidance Note

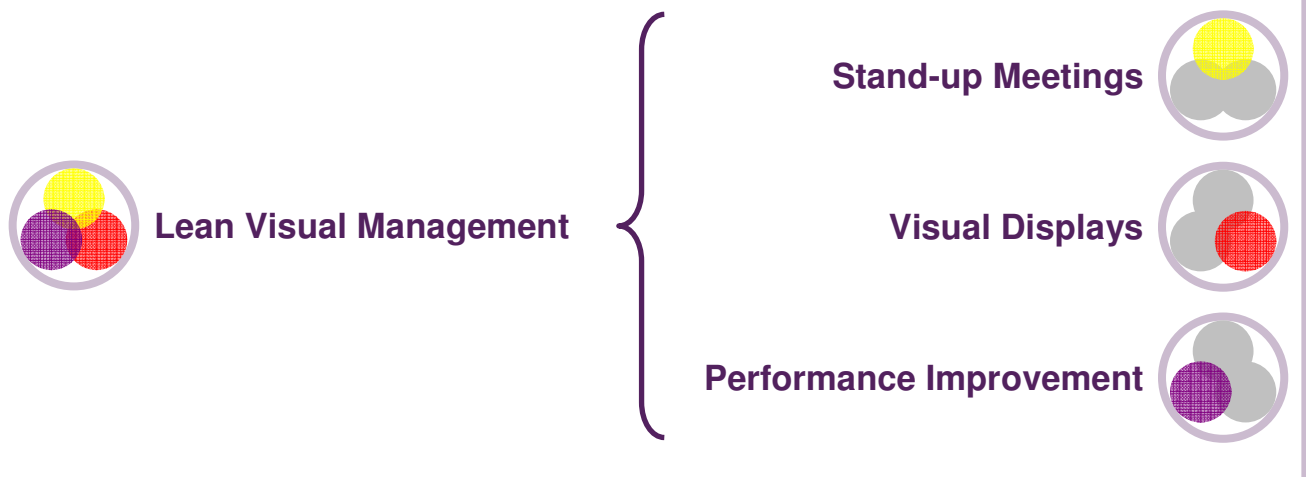
This guidance note is intended to provide an introduction to the concepts behind **Lean Visual Management**, a technique based on lean methodologies.

It is aimed at members of the highways industry that already have a basic understanding of lean principles and wish to implement the use of the **Lean Visual Management** within their own organisations.

Lean Visual Management complements other lean techniques including the **Collaborative Planning System** (see **Enhancing Lean Visual Management** on page 25 of this guidance note). More information on the **Collaborative Planning System** can be found on www.highways.gov.uk/ourpartners in 'An Introduction to the Collaborative Planning System'.

Navigating this Guidance Note

This guidance note uses colour coded page markers to easily distinguish between the different sections of the document. These correspond to Figure 1 on page 4 of this document and can be found in the top right hand corner of each page.



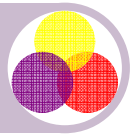
What's in it for You?

The benefits of Lean Visual Management

Successful **Lean Visual Management** can benefit teams by:

- Focusing on and establishing goals for continuous improvement
- Improving communication of key information
- Providing everyone in the team with the same picture
- Fostering collaboration, promoting teamwork and improving morale
- Providing a forum where all staff are able to raise any issues
- Helping the team identify and solve problems
- Measuring progress, identifying trends and analysing performance
- Providing performance information to validate the Highways Agency's MST (Motivating Success Toolkit) submissions



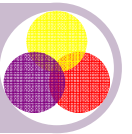


Creating the right environment

Lean Visual Management is based around communication, with teams working together to achieve clear shared goals. Subsequently, **Lean Visual Management** works best when:

- A collaborative form of contract exists that promotes improvement
- Leadership encourages and demonstrates working together
- Incentives are focused on improving the overall outcome
- Goals and the criteria for success are clearly defined
- A lean practitioner facilitates improvement
- All stakeholders contribute and are engaged in participation
- Teams are willing to positively embrace transparency
- Teams are prepared to be constructively honest yet direct with each other
- There is a commitment by all to learn
- A designated area is available to facilitate teams coming together
- Good facilitation skills are available to keep meetings concise and focused
- There is a willingness to jump in and learn by participation





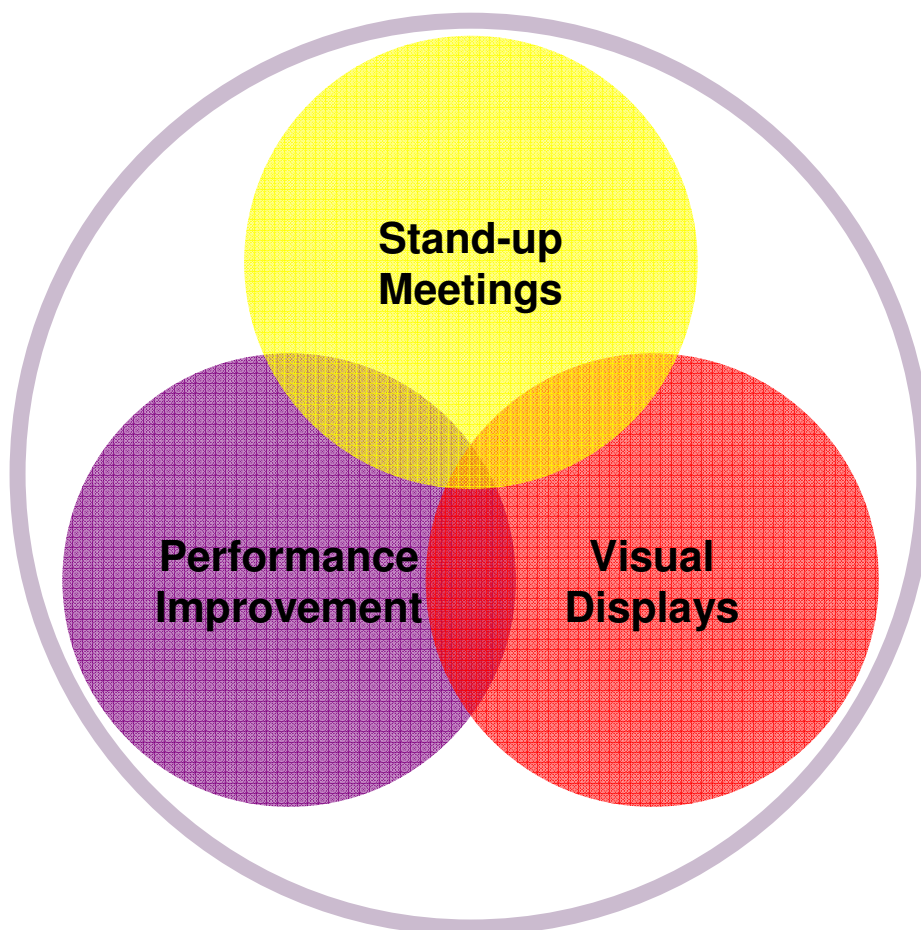
What is Lean Visual Management?

Lean Visual Management is about communication and enabling teams to deliver performance improvement over time. It involves doing three things:

- Using **Primary Visual Displays** (see **Appendix B** of this guidance note)
- Having **Stand-up Meetings**
- Seeking continuous **Performance Improvement**; by measuring, monitoring and reviewing team performance

Together, these three actions provide a foundation upon which teams can begin to continuously improve.

Figure 1 Lean Visual Management



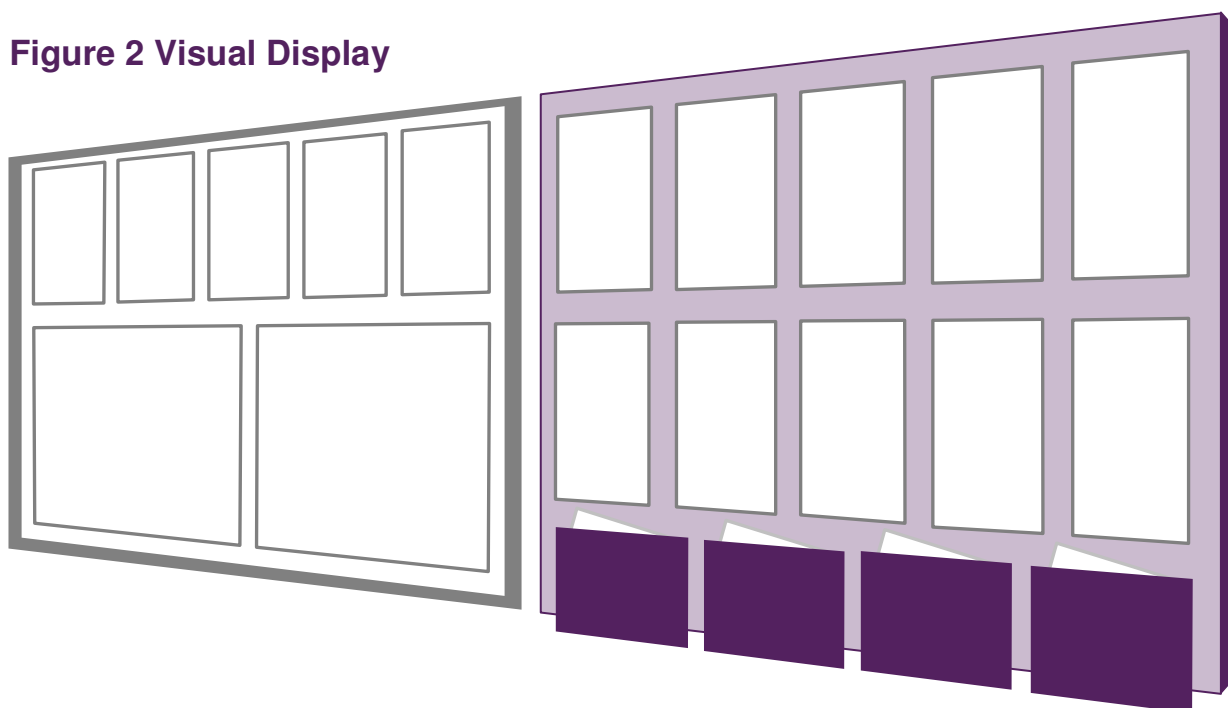


What are Visual Displays?

Visual Displays are central communication points with sections of People, Performance and Continuous Improvement, that displays up to date team-specific information and measures, and is focused on continuous improvement activities.

Typically, wall-mounted pin boards are used in combination with magnetic or dry wipe boards. This allows regularly reported information, normally updated on a weekly or monthly basis, to be displayed alongside more dynamic information, which is updated daily. Examples of both dynamic and regularly reported information are provided in the figure below.

Figure 2 Visual Display



Dynamic information

- Safety issues
- Weather forecasts
- ISU movements
- Contact details
- Activity schedules
- Traffic Management booking
- Shift handover notes
- News / Reminders

Regularly reported information

- Health and safety information
- Programme / Cost information
- Permitted route working times
- Recent incidents
- Area Performance Indicators
- Continuous improvement activity
- Lessons learned
- Cause, concern and countermeasure



Using Visual Displays

Teams should use their **Visual Display** as:

- The focus point for **Stand-up Meetings** and team interaction (see **What are Stand-up Meetings?** on page 18 of this guidance note)
- A central communication point
- A place where improvement activity takes place (see **Performance Improvement** on page 10 of this guidance note)

It is important to remember that **Visual Displays** are the focal point for team interaction and the two-way flow of information. Subsequently, it is important that **Visual Displays** are created by the team, for the team, and that the information they display is relevant, accurate and timely.

Visual Displays should be vigorously maintained so that the most up-to-date information is available. Subsequently, it is recommended that you nominate a person or persons who will be responsible for updating **Visual Display** information.

Location

Visual Displays should be located as close as possible to the team's working area. This is important for a number of reasons:

- It helps to create a sense of ownership within the team
- The **Visual Display** can be easily and regularly updated
- The close proximity to the team ensures that new information is communicated in the most efficient way

In a maintenance environment **Visual Displays** should be located in an area where teams regularly convene before they go to their point of work. This may be an existing meeting point, the depot canteen, or another specifically designated area within the depot.

The location of **Visual Displays** is an important consideration and every effort should be made to locate them as close to the working area as practically possible.



Content

Your **Visual Display** should contain team-specific information related to the following areas:

- People
- Performance
- Continuous improvement

People

Resource-orientated information is a key part of **Lean Visual Management** because it facilitates day-to-day project delivery. Subsequently, it is vital that your **Visual Display** contains up to date information about the team.

Information should cover areas such as:

- Who is in the depot?
- What are they scheduled to be doing?
- When are they scheduled to be doing it?
- Are there any issues currently preventing them from successful completion?
- Are there any hazards / risks that people should be aware of?

Displaying this information on a **Visual Display** provides everyone with the same picture of what everyone else is doing at all times. This helps the team to identify potential problems early and thus mitigate any associated time, cost and safety implications.

Performance

Visual Displays play a key role in communicating up to date performance information to the team. Displaying this information focuses team members on their immediate targets and helps them to understand how their individual performance can contribute to overall success.



A team's **Visual Display** is a reflection of that team. It is therefore important that team members are able to easily relate their individual performance to the information on display. This leads to greater ownership and commitment. Teams will also take more pride in their performance when they can see the impact of 'a job well done'.

On this basis, information should be relevant to the team and communicated in a way that allows the team to see the contribution they are making. One of the simplest ways to achieve this is through the use of regularly reported performance measures.

The importance of performance measures

In order to understand the importance of performance measures, it is useful to understand why we produce these measures in the first place.

Put simply, performance measures help to answer the question: "How are we doing?". Without performance measures you can't fully understand how well you are doing because there nothing to tell you if your performance is good or if your performance is bad. Subsequently, you have no way of measuring whether or not your performance has improved over time because you have nothing to compare your performance against - you will have no **baseline for improvement**.

Choosing the right performance measures

It is very important that the right performance measures are chosen if improvement is to be achieved. When choosing suitable measures for your team it is useful to consider the following questions:

- Is the measure important to the customer?
- Is the measure easy to understand?
- Is data available that will allow the measure to be updated on a regular basis?
- Can the team relate to it? Will they gain satisfaction from improvement?
- Can improvements be tracked and captured easily?
- Can I use the measures to understand how processes and off target performance need to be improved?



Examples

Examples of performance information that might be used to develop measures, and which are aligned with the Agency's Motivating Success Toolkit, are:

- **Product:** CAT 1 Defect response time
- **Product:** Lane availability
- **Product:** Incident response time
- **Service:** Number of maintenance interventions
- **Service:** Number of complaints
- **Right First Time:** Number of defects
- **Cost:** Actual cost against cost forecast
- **Time:** Actual time against time forecast
- **Safety:** All Accident Frequency Rate

Continuous Improvement

Visual Displays provide information and tools that facilitate continuous performance improvement at a team-level. Continuous improvement activity is a key part of **Lean Visual Management** and team performance is unlikely to improve without it. Information and tools include:

- Current performance measures
- **Improvement Suggestion Systems**



Improvement Suggestion Systems

Improvement Suggestion Systems are continuous improvement tools that support **Visual Displays** and **Stand-up Meetings** by providing teams with a structured approach to realising performance improvements.

What do they involve?

Improvement Suggestion Systems involve the capture of any practical improvement suggestions that are generated by the team. These suggestions will normally be driven by off-target or static performance measures identified by the team and highlighted at daily **Stand-up Meetings** (see example agenda on page 21 of this guidance note).

It is recommended that suggestions are focused on simple, low-tech solutions that can be implemented by the team without the intervention of senior management.

Suggestions that are implemented by the team can be considered as 'banked', providing a platform for the next improvement. By continuing to capture and 'bank' small incremental gains teams will begin to see that it is possible to realise significant improvements in performance.



There are various methods teams can employ to capture improvement suggestions and teams are encouraged to try various methods in order to ascertain those that work best for them. However, two of the most common approaches are:

- **Concern, Cause & Countermeasure (3C)**
- **The Four Folder Approach (4FA)**



Concern, Cause & Countermeasure (3C)

Concern, Cause & Countermeasure is a simple, table-based approach to capturing improvement suggestions generated by the team. An example **Concern, Cause & Countermeasure** table that can be used on a team's **Visual Display** is provided in Appendix A of this guidance note.

Where do I start?

Initial suggestions submitted under **Concern, Cause & Countermeasure** are normally aimed at addressing concerns raised by the team at the stand up meeting. These may be concerns about specific issues, such as a recent accident or incident, or from concerns arising from off-target Performance Indicators. All ongoing or recurring off-target performance measures should be raised as a concern on the Concern, Cause & Countermeasure form and subsequent appropriate action taken.

The first column of the **Concern, Cause & Countermeasure** form is used, example in Appendix A, to provide a reference number for each concern raised while the second column, is used to provide a brief description of the concern in question. The third and fourth columns are used to record the date the concern was raised and the name of the person who raised the concern, allowing progress to be tracked. These columns will normally be populated at the Stand-up meeting when they are raised.

The fifth column is used to record the perceived cause behind a specific concern. For example, a concern about a rise in slips, trips and falls in a depot might be perceived to be caused by untidiness. This column is also normally reviewed by the team at the Stand-up meeting once a week. The team are encouraged to add their ideas as to the root cause of the Concern in the Cause column as they are likely to have first hand experience of the causes when compared to those of supervisors and senior management. If the team cannot identify root cause easily then simple problem solving tools should be used.



The sixth column of the **Concern, Cause & Countermeasure** form is used to record the agreed, sustainable countermeasure which will eliminate the root cause.

The seventh column is used to record the name of the person, or persons, who are responsible for instigating, undertaking and completing the actions associated with the agreed countermeasure.

The eighth column should be used to identify an agreed target date for completion of countermeasure actions and the ninth column should be used to record the status of the countermeasure actions in relation the target date.

The tenth and final column should be used to record the results of the countermeasure and the information provided in this column should be aimed at answering the following questions:

- Was the countermeasure successful? If not, why not?
- What was the result of implementing the countermeasure?
- Did performance increase? If so, by how much?
- Did performance increase in areas other than those expected? If so, why?
- Were there any lessons learnt? If so, what were they and how are they being communicated?

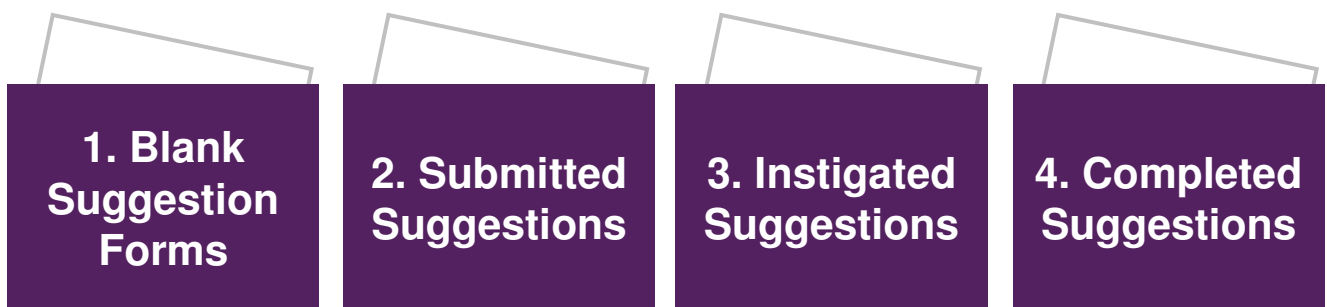
Example of 3Cs table is found in Appendix A.



The Four Folder Approach

The **Four Folder Approach** is also aimed at capturing improvement suggestions generated by the team. Using the **Four Folder Approach** allows teams to:

- Capture ideas that fall 'below the radar' of other organisation-wide initiatives
- Provide team members with an opportunity to influence the way that they work
- Provide a means of identifying and capturing small changes that help eliminate waste at its source



Key points

Improvement Suggestion Systems:

- Form part of a team's **Visual Display**
- Are discussed at daily **Stand-up Meetings**
- Are driven by team performance measures and suggestions focused on raising areas of underachievement
- Focus on solutions that can be implemented by the team
- Use simple problem solving tools to support continuous improvement

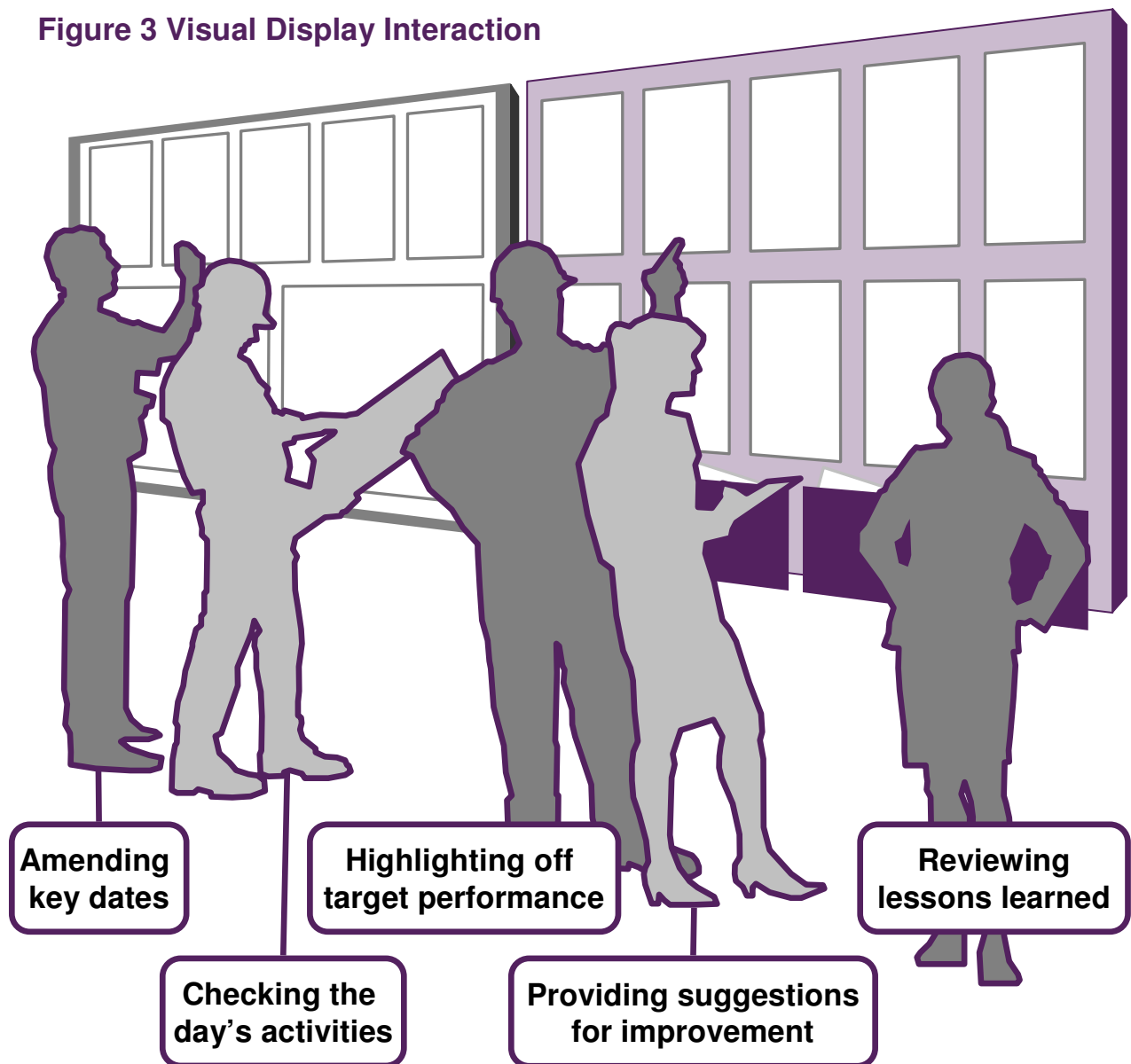


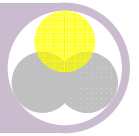
More than a notice board

It is important to remember that **Lean Visual Management** is much more than simply having a **Primary Visual Display** that simply displays information in the same way a notice board would.

Notice boards only provide a passive, one-way flow of information, from the board to the viewer. **Lean Visual Management** is different in that it requires teams to interact with their **Primary Visual Display** on a regular basis so that it becomes a focal point for team interaction and improvement activity. Under **Lean Visual Management** this interaction is facilitated by **Stand-up Meetings**.

Figure 3 Visual Display Interaction





What are Stand-up Meetings?

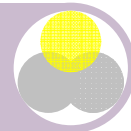
Stand-up Meetings are regular, mandatory meetings held in front of a team's **Visual Display**. The purpose of a **Stand-up Meeting** is two-fold:

- They provide a forum where teams discuss their progress on a regular basis and make work commitments
- They provide a forum where teams review performance measures and the progress of improvement actions

Teams are deliberately required to stand to ensure that meetings are kept short. In addition **Stand-up Meetings** should be:

- Attended by all members of the team
- Kept brief (ideally between 10 and 15 minutes long)
- Held at a regular time
- Follow a set agenda (see page 21 of this guidance note)





Visual Displays are an integral part of team **Stand-up Meetings**. A team's **Visual Display** therefore needs to present all of the information that needs to be addressed by the team.

Stand-up Meetings should be held daily. Where this is not feasible, or where work is intermittent (for example, where only weekend working is involved), less frequent (possibly longer) meetings can be held.

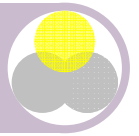
For example, a team that only works weekends would have a meeting on a Thursday or Friday in which they plan the entire weekends work. This will be followed by **Stand-up Meetings** on the Saturday and Sunday, which are followed up by another meeting on the Monday to review the entire weekends performance.

Where shift changes occur, handover notes on a team's **Visual Display** are an ideal way of updating the incoming shift in the absence of daily **Stand-up Meetings**. Notes may include progress made, any changes to the situation on site, or any potential safety issues.

The benefits of Stand-up Meetings

The benefits associated with **Stand-up Meetings** include:

- Bringing the team together and facilitating teamwork
- Providing every member of the team with the opportunity to contribute
- Providing every member of the team with same clear picture of what is happening
- Highlighting potential issues
- Focusing each member of the team on productivity and performance measures



What do they involve?

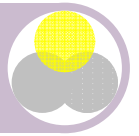
Stand-up Meetings require teams to do four things:

- Review the previous days performance
- Plan the current day's workload (assign and distribute work assignments)
- Identify obstacles to progress
- Discuss areas of underperformance, and any subsequent improvement actions

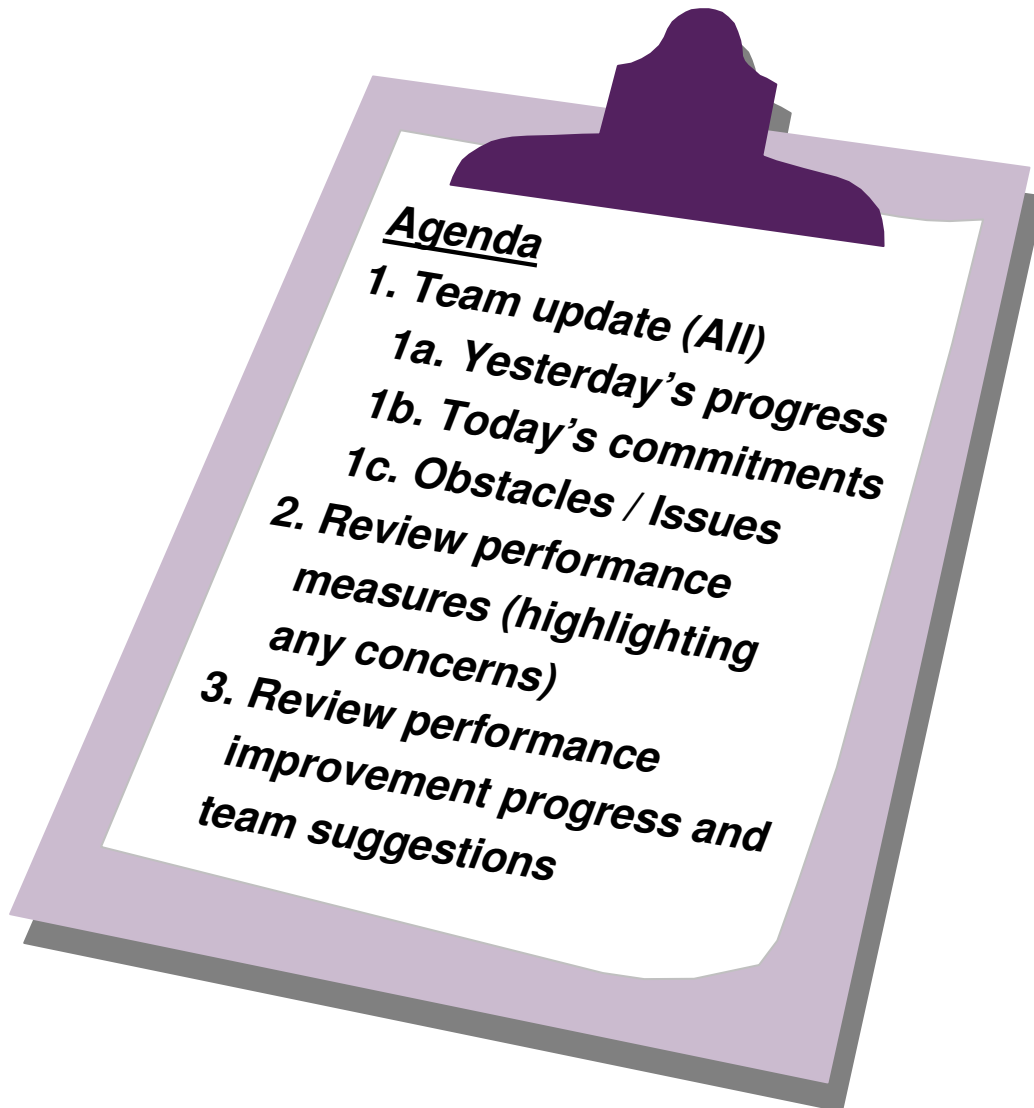
One way of doing this is to allow each team member to take turns in providing a progress update to the rest of the team. Updates should be kept brief and should answer the following three questions:

- What did I do yesterday? Or: Did I meet my commitments yesterday?
- What am I doing today? Or: What can I commit to today?
- What obstacles are preventing me from making progress? Or: What is preventing me from meeting my commitments?

It is important that **Stand-up Meetings** focus on the main issues of the day. More detailed discussions, which may be required to resolve a particular issue, should take place outside the **Stand-up Meeting** so as not to interrupt flow. For this reason it is important that there is an agenda and that the team adhere to that agenda.



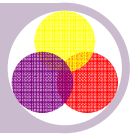
Stand-up Meetings follow the example agenda below:



Key points

Stand-up Meetings:

- Are held in front of the team's **Visual Display**
- Are short
- Review team performance against relevant performance measures
- Review continuous improvement activity
- Should end with a safety briefing

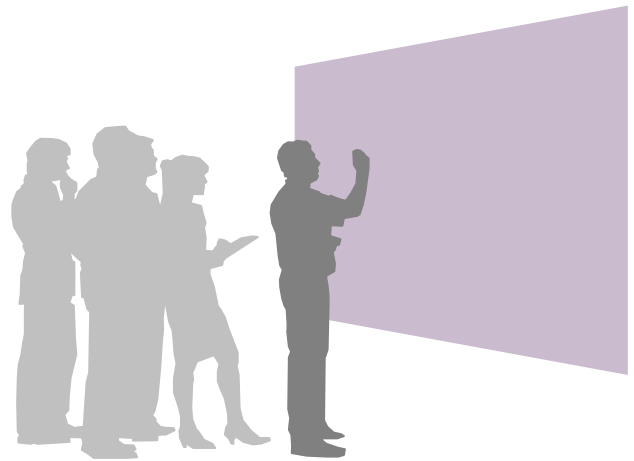


Structure

Lean Visual Management is based on the concept of teams. To ensure successful implementation of the **Lean Visual Management** you should give careful consideration to what constitutes a team with respect to your specific working environment. Generally, teams should comprise a group of 7 ± 2 individuals, working in close proximity, who share many of the same goals and objectives.

It should be noted that both **Visual Displays** and **Stand-up Meetings** have the ability to function across work of varying degrees of size and complexity and at various levels of management and seniority.

For example, if you have a small work package that only involves a single team, you will only need one **Visual Display**. In this case the team supervisor will be responsible for facilitating **Stand-up Meetings** and reporting progress to senior management on a regular and ongoing basis.



Larger and more complex work packages that involve substantial multidisciplinary interaction may require each team to have their own **Visual Display**. In cases like this a team's **Visual Display** is likely to be more discipline-centric, with each team having their own individual board that contains project information relevant to them.

The team supervisor will still facilitate **Stand-up Meetings** with their individual teams but they may also participate in meetings with other team supervisors in order to disseminate and discuss cross-management issues. This meeting may utilise a **Visual Display** that provides information more pertinent to senior management. Where this is the case, teams should be encouraged to also highlight issues that have the potential to affect colleagues or stakeholders outside the immediate team, so that these can be reported upward.

Structure is an important factor in **Lean Visual Management** and careful consideration should be given to this prior to implementation.



Implementing Lean Visual Management

The first step in implementing **Lean Visual Management** is the determination and measurement of appropriate team-specific performance measures so that the team can determine their **baseline for improvement**.

Once suitable performance measures have been determined, teams can begin to develop their individual **Visual Displays**. This development will focus on the agreement of the information that best informs the team and which will enable performance improvement activity.

When teams have their **Visual Displays** in place, they can begin to hold regular **Stand-up Meetings**. Teams will soon become familiar with **Stand-up Meetings** and their use will start to become second nature.

As the use of **Stand-up Meetings** matures, teams will find that they are spending less and less time reporting individual progress updates and more time focusing on performance measures and improvement activity - due to the increased efficiency of meetings over time.

When teams reach a position where performance measures and improvement activity are a part of their daily routine they need to ensure **Stand-Meetings** and **Visual Displays** are maintained and that performance improvement continues - teams should periodically review team performance against the original **baseline for improvement** to see what has been achieved to date.





Things you might hear

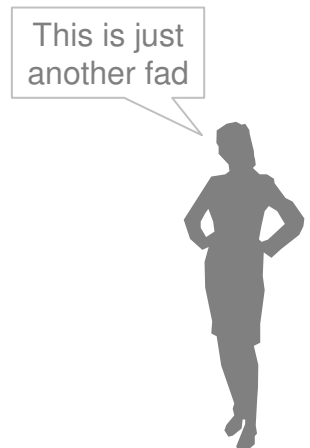
There are a number of phases that you might hear when first implementing **Lean Visual Management**. These are normally based on the perceptions (and misconceptions) of people before engagement, education and training (which is why these are so important to successful implementation). It is worth remembering that people normally have a healthy scepticism about new ideas that only manifests itself because they want to be sure that those ideas are sound.



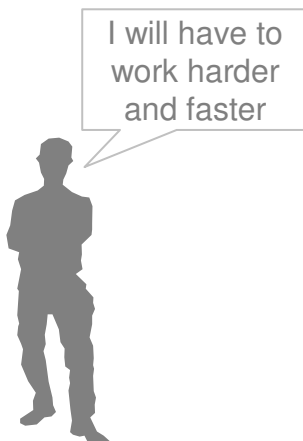
This won't work here

The idea that Lean is only suited to manufacturing processes is a common misconception. Since its inception, Lean methodology has been successfully adopted across a wide range of industries including aerospace, engineering, finance, research and development, and marketing.

Lean is not a new concept, but one which has been around since the early part of the 20th century. Many of the tools that are associated with modern Lean techniques were developed in the Japanese automotive industry at the end of the Second World War. Since then, Lean methodology has proven itself around the world.

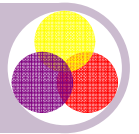


This is just another fad



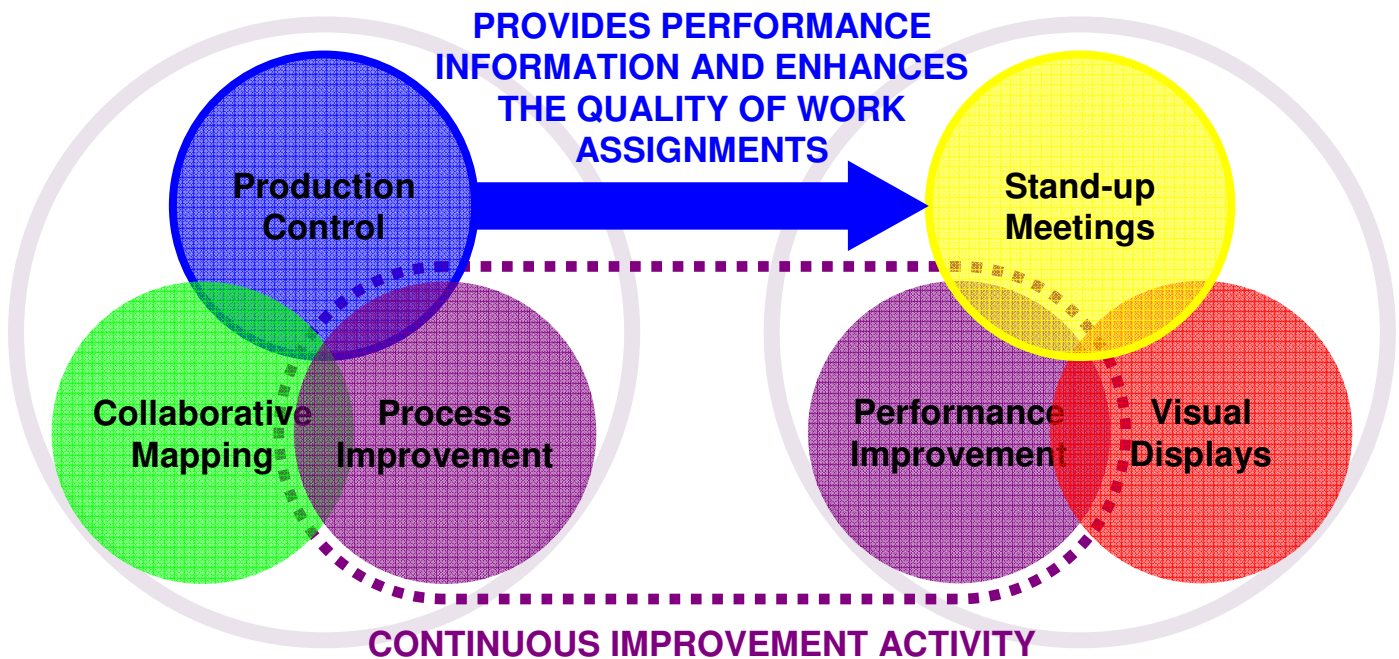
I will have to work harder and faster

Lean isn't about increasing the pace of work. It is about increasing productivity by establishing ways in which teams can work more efficiently, both individually and collectively.



While **Lean Visual Management** can be used as a standalone technique, the benefits it delivers can be enhanced by the **Collaborative Planning System**. The figure below shows how these two techniques complement one another.

Figure 4 Continuous Improvement Activity



At its core, the **Collaborative Planning System** is focused on **planning to do work**. Similarly, **Lean Visual Management** is focused on **putting people to work**.

The quality of work assignments distributed via **Stand-up Meetings** can be enhanced through the use of **Production Control** techniques by ensuring that all inputs, controls and resources required to successfully complete assignments are in place prior to starting work.

In addition, **Process Improvement** and **Performance Improvement** techniques work together because they are both focused on continuous improvement activity. Together, they provide teams with set of tools with which to add value and reduce waste.

Further Learning

Where can I get more information?

Additional information, including **Knowledge Transfer Packs**, can be found on the Highways Agency's Partners Website at www.highways.gov.uk/ourpartners.

Further information on the **Collaborative Planning System** can also be found on Highways Agency's Partners website as well as **HA Lean Success Stories** including:

- Lean Daily Management System
- Visual Management (See Appendix B)
- Collaborative Planning

Appendices

Appendix A: Example Cause, Concern & Countermeasure (3C) table

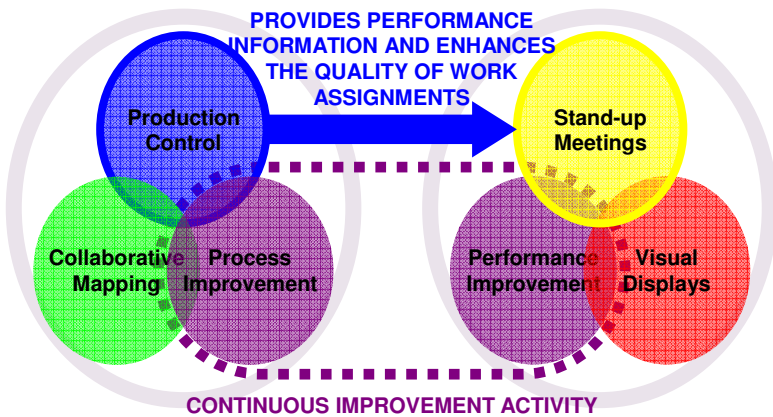
Concern, Cause & Countermeasure									
Ref.	Concern	Date raised	Raised by	Cause(s)	Countermeasure(s)	Responsibility	Target date	Status	Result
1									
2									
3									
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Appendices

Appendix B: LVM Guide Summary

What is Lean Visual Management?

Lean is about improving processes so that they are as efficient as possible. Good **Visual Management** enables the user to quickly understand the current state with any issues easily identified. Lean Visual Management brings these principles together, through Visual Displays and Stand-up Meetings resulting in **Performance Improvement**.



Integration with Collaborative Planning

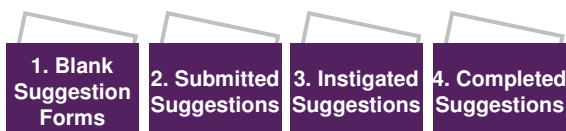
Both **Collaborative Planning** and Lean Visual Management focus in teamwork and improvement. By discussing key measures from the Production Control process in the Stand-up meeting and tracking those measures within the Visual Display, value is added to the planning process by reducing task failures and by increasing efficiency in task execution.

Visual Displays

- Central Meeting Point
- Wall mounted board
- Sections on **People, Performance** and **Continuous Improvement**
- Display Live / Current Information

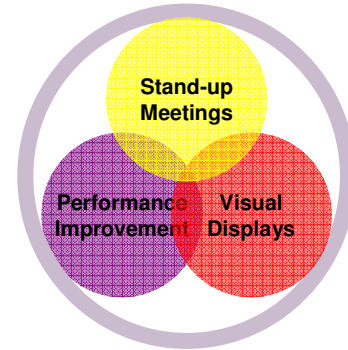
Improvement Suggestion Schemes

- Capture Concerns about performance and ideas suggested by the team during Stand-up meetings
- Suggestions recorded and reviewed
- Time allocated for generating Improvement ideas as a team
- Schemes such as **Four Folders** and **3 C's** are used to validate and action suggestions



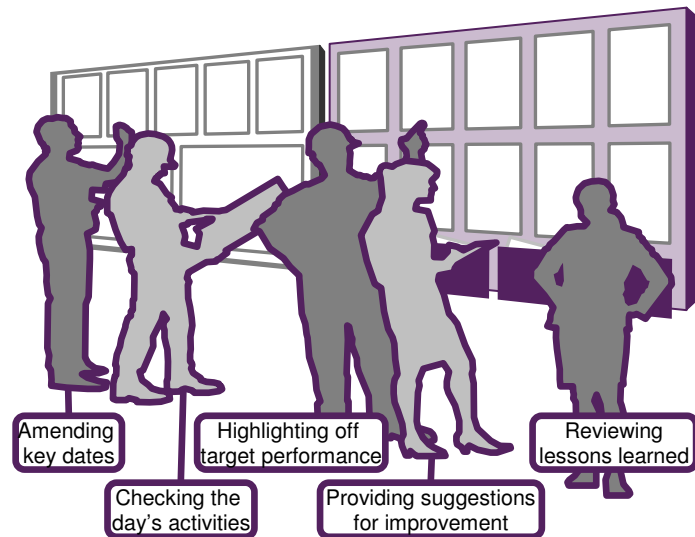
Stand-up Meetings

- Regular, Scheduled meetings
- Uses a Standard Agenda
- Interactive – not just a brief
- Reviews current information and performance on the Visual Display



Benefits of Stand-up Meetings

- Improved Communication
- Improved Teamwork
- Potential Issues highlighted



Benefits of Lean Visual Management

- More effective use of time
- Structure to resolve Problems
- Focus on Improvement

Additional information can be found at:

www.highways.gov.uk/ourpartners

Appendices

Appendix C: Implementation Check List

Initial Set Up Guidance

1 Primary Visual Display Set Up

Hold a workshop including all Stakeholders, **at all levels**, to review current metrics and evaluate ideas for new metrics

Ensure that the majority of the Metrics are relevant to the Attendees role and aims. Ensure that the majority of the Metrics will identify opportunities to improve issues in their roles through continuous improvement

Agree the Metrics with the Meeting Attendees before initially using the LVM. Review the metric with Stand-Up Meeting Attendees to simplify if necessary

Use a Metric Definition Document to establish the data sources, processes of collection and calculation and process owners

Establish processes for producing Metrics where more than one individual can produce the Metric

Establish processes for producing Metrics which use reliable data sources

Agree the LVM location in a prominent, but relatively quiet environment, away from distractions and not on a walkway / thoroughfare that can be used during the meeting

Agree an Owner of the LVM Board who has responsibility for updating the primary visual display with current information

Agree processes for the Metrics to be delivered to the Owner of the LVM Board prior to the update

Agree a Standard Agenda

Ensure use of Standard Guidance for initial training and briefing

Done / Agreed

2 Stand-Up Meeting Set Up

Ensure that all Stakeholders have representation at the LVM meeting

Agree time that has no clashes or time pressures of individuals needing to attend other meetings

Ensure that the time of the LVM Meeting is scheduled so that attendees have time to complete other commitments before attending the Stand-Up Meeting

Ensure that the time of the LVM Meeting is scheduled so that there are no time pressures to shorten the meeting

Ensure that the time of the LVM Meeting is scheduled so that there is not a situation where attendees would rather be somewhere else (end of day or a just prior to a break time)

Ensure that the time of the LVM Meeting is scheduled so that there is not a situation where the meeting can be drawn out by the attendees to fill time (end of day or just before a break time)

Agree the meeting is held at a known quiet time where call outs are infrequent. If not possible the add flexibility into the schedule of when the meetings occur to allow for this disruption

Review whether other meeting schedules and agendas need to change as a result of the LVM meeting

3 Initial Training and Briefings

Make Guidance available on the LVM Primary Visual Display

Ensure use Standard Guidance for initial training and briefing

Ensure that the Senior Management are engaged to ensure that meetings will be held as scheduled

Ensure that the Senior Management are scheduled to review the status of the Primary Visual Display on a regular basis

4 Stand-Up Meeting Rules

Meeting Rule #0 - Agreed start time is adhered to by all attendees

Meeting Rule #1 - only emergency phone calls / messages / radio messages are allowed - Leader cannot take any messages of any kind. If a call needs to be taken then the individual takes the call away from the Stand-up meeting

Meeting Rule #2 - only one individual can talk at any one time

Meeting Rule #3 - only emergency messages are allowed. If a message needs to be taken then the individual leaves the Stand-up meeting to take the message

Meeting Rule #4 - Rules of Continuous Improvement are followed

5 General

Use Laminated A4 Agenda as part of the LVM Display which can then be photocopied if required

Ensure that the Causes that are assigned to Concerns are looking at real root cause and are not blaming others for issues

Appendices

Appendix C: Implementation Check List

Lean Visual Management Metrics Definition Document
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If this document is used correctly it should allow any user to fully understand how Metrics of the LVM are produced. If they have the correct levels of access to information they should be able to use this document to update any of the Metrics

Required Information

ID	Metric	Background	Definition	Calculation	Frequency	Data Source	Accessed Through	Owner
#	What is Title of the Metric?	Why is the Metric useful?	What is measured and what is classified as success and failure?	What is the exact calculation used? What time period does the calculation span?	What Day of the month and time when the Metric is recorded and reported?	What are the names of fields used in documents, spread sheets or systems reports used in the calculation?	What are the file paths to spreadsheets, systems screens or reports used in the calculation?	Who is the Owner that is responsible for producing the Metric?

ID	Metric	Background	Definition	Calculation	Frequency	Data Source	Accessed Through	Owner
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Highways Agency Lean Improvement Division