Dashboard Workbook:

A tool for planning and designing the dashboard

VelocityEHS

Use this workbook as a tool to plan and design the dashboard. First, let's review the basics…

What is a dashboard anyway?

A dashboard is a visual display of the most important information needed to achieve one or more objectives, consolidated on a single screen so it can be monitored at a glance.

Effectively designing dashboards requires a basic understanding of how to present information so our eyes can take it in quickly and our brains can extract the most important meaning. Ultimately, the dashboard should help you do your job – your focus is on achieving specific objectives. The dashboard should help you monitor the information that is necessary for achieving your objectives. Dashboard users must be able to quickly and effortlessly absorb what they need to know.

In order to create a dashboard that provides the greatest value, it is important to follow these steps:

1. Plan the dashboard
2. Design the dashboard

Now, let's get started!

Plan the dashboard by asking some key questions. The answers will help you to provide useful information in a relevant way.

Sample responses are provided on Page 5.

What is the role of the person or type of person who will use the dashboard?

What is the focus of this role? (e.g. safety performance, environmental)

What span of data is needed? (e.g. corporate, divisional, regional)

What are the objectives of the person who will use the dashboard?

What key questions should the dashboard answer to support the objective?
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Which questions from your list are most important for achieving the objective?

Let's work through an example of planning a dashboard.

What is the role of the person or type of person who will use the dashboard?

Site EHS Manager

What is the focus of this role? (e.g. safety performance, environmental)

Safety & Environment

What span of data is needed? (e.g. corporate, divisional, regional)

Site level & departments

What are the objectives of the person who will use the dashboard?

Ensure the site is in compliance, meeting safety & environmental performance expectations, and engaging in risk prevention activities

What key questions should the dashboard answer to support the objective?

1 What are currently our most common types of injuries?

2 What are currently our most common root causes of injuries?

3 Are incident investigations completed in a timely manner?

4 Are inspections closed out in a timely manner?

5 Are corrective actions completed for the compliance program?

6 Is the # of near miss and hazard reports sufficient for preventing incidents?

7 What training requirements are coming due?

8 What permits are coming up for renewal?

9 Does our performance in waste water discharge align with expectations?

Now that you've planned the dashboard, let's design it!

Once the primary objective of the dashboard's user is clearly understood, and the questions that need to be monitored have been identified, the dashboard can be designed. A dashboard can support one of several layouts for displaying "web parts". Web parts are individual visual displays, including graphs, tables, numbers, images, etc., that collectively make up the dashboard. The dashboard is built by dragging webparts from the catalog, and using the settings on each to tailor the display to users' needs.

Select the web parts that are most appropriate for answering the questions that support the objective of the audience the dashboard is intended for.

To help you effectively design the display and arrangement of the dashboard, here are some tips:

Display data on a single screen

A dashboard should appear on a single screen. This means you shouldn't need to click around to different screens to monitor key performance. Ideally users shouldn't have to scroll to see all the information because this would mean not all information is within the viewer's eye span.

Do not display excessive detail

Dashboards should display fairly high-level information to provide a quick overview. Too much detail, or measures that are expressed too precisely, slow viewers down without providing any benefit. There are various ways you can control how extensive and specific the data is in the dashboard.

Use the most insightful period of time

This refers to the period of time your data represents. Does the web part display data from the past 30 days or the past 12 months? The most appropriate period will depend on the nature and volume of data in each webpart, and the objective you're supporting.

Display the best measure of time

In some cases you will have options for controlling the measure of time on the scale. An example is showing a count of days or weeks. Again, the selection that will support the most meaningful display will depend on the nature of your data.

Provide meaningful titles

The web parts come with default titles, mostly designed to provide meaning to the user selecting them from the menu. This may not be the most meaningful title for your end users, especially once you start making the webpart display more specific data. If you do not assign a title that reflects the specific type of data being displayed, or if the title does not use terminology that is meaningful in your organization, users will be confused and the value of the web part will be lost. An unclear title will cause users to ignore the web part, or worse yet, mislead them about the meaning of the data.

Design for monitoring

Design your data for monitoring, not just analyzing or traditional reporting. Dashboards are used as a window into ongoing activity. If you want to analyze the data you can do so through reporting. It's common to think that the same data should be displayed on the dashboard as what people are used to looking at in reports. Often this type of data is largely static, not changing in meaningful ways day to day. This type of data is important, but is not a good use of prime real estate on a dashboard that you look at very frequently for monitoring purposes.

Use current data

Focus on data that is representative of what is going on right now, information that can change from day to day, and that will draw your attention to what is needed to support your objective.

Use actionable data

You can best support your objective with data that is actionable – always ask yourself what you might do after looking at each piece of information. If the answer is 'probably nothing', there is likely more important information you should be monitoring on the dashboard, and you can leave the rest for reports.

Use an appropriate combination of lagging and leading indicators

As you know, lagging indicators let you monitor how you have been performing, and leading indicators give you visibility into how well your programs are working and the performance course you're on. The more you focus on leading indicators, the more current and actionable the dashboard will be.

Arrange data according to logical groupings and useful comparisons

The various webparts on your page should be grouped in some logical way to keep related data together, such as data related to incidents or environmental compliance. This influences the way the dashboard tells you the story of what is going on as you scan it. Measures of performance tend to come alive only when compared to other measures. A single web part usually tells you a piece of information, whereas a series of web parts together can tell a story.

Arrange data according to importance

The most important question a dashboard needs to answer to support the objective should be displayed in the top left corner where it will be seen first. The second most important one should probably be displayed in the top centre, depending on how your data is grouped to enrich its meaning.

Use this checklist to design a useful dashboard.

Designing the dashboard

- ☐ Identify the dashboard's audience
- ☐ Set the layout of the dashboard
- ☐ Ensure web parts are placed in a logical order
- ☐ Fit all dashboard web parts onto one screen

Set up each web part on the dashboard

- ☐ Assign concise and meaningful titles to each web part
- ☐ Set the location of data to be included in each web part
- ☐ Set an appropriate time period for data to be displayed in each web part
- ☐ Ensure data presented in each web part is actionable
- ☐ Set appropriate filters to display data
- ☐ Arrange web parts on the dashboard to enrich meaning