Dashboard Options

Displaying data for management and reporting purposes

This document describes the various options TMP Systems suggest using as a Business Intellegent (BI) Dashboard for the data collected through the FMS. The options provided discuss strengths and weaknesses of the system and finally provides resources on how to use the System.

The 3 systems suggested were rated based on: ease of use, integration and looks, cost and resources available. These indictors have been scored out of 5 for each of the systems provided.

Introduction

The LEGEND project has developed systems that allow user to collect, manage and report on data. The data collected through the Field Monitoring System (FMS) has been collected for specific purposes that will allow the management of organizations to have readily accessible data to assist them in making better decisions.

To date, the data collected has been processed and viewed in three distinct ways, namely: SurveyCTO Monitoring Tool, Excel spreadsheet and QGIS. These systems, with limited training, allow basic data monitoring and data analysis that will provide insight for the high-level management. Although for many organizations these systems may be enough, the ability to automate the reporting process and to have an in-depth view of your organization is still lacking.

The systems selected will allow the data collected through the **FMS** to be uploaded to a unique user profile. The user profile will be customized to accept the data you are collecting, and automatically creating dynamic graphs, and providing a high-level analysis of the data. Once this has been set up, the organization can localize all their FMS data online that will ensure the safety of the data.

Dashboard options

The dashboard options will be explained below, and finally rated according to these 5 indicators:
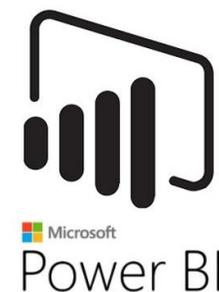
1. Ease of Use

2. Data Integration

3. Visualization capability

4. Cost

5. Resources

Microsoft Power BI

 Microsoft Power BI is a web-based business analytics and data visualization platform that is suitable for businesses of all sizes. It monitors important organizational data and also from all apps used by organizations. Microsoft Power BI provides tools to quickly analyze, transform and visualize data, and also share reports.

Ease of use
Microsoft Power BI has been developed very closely to Microsoft Excel. Power BI can be used online or offline and

setting up of your first dashboard can be as simple as uploading an Excel file, and selecting two parameters.

However, since its close collaboration with Microsoft Excel, if the user is not competent in Excel then they will find Power BI challenging. Due to there being such a wide range of options and tools within the product, Power BI can be seen as being quite complex. Power BI has so many components such as Power BI desktop, Power BI services, Power BI Gateway, etc. that it could be overwhelming to decide which component to use for your organization.

Data integration

The service provides an experience very similar to Excel, making the transfer from using your Excel based Dashboard to the PowerBI Dashboard easy and fast. The service allows data to be uploaded from various sources including the .csv files that SurveyCTO creates.

Additionally, Power BI is part of the Microsoft suite that has major business product brands available at its disposal. This makes uploading or linking data from a secondary source such as Azure or Office 365 extremely simple.

Microsoft BI connects to most types of on-premise databases and they have a large and growing list of cloud-based connection option as well.

Visualization capability

The service provides several tools that ensure data is correctly analyzed and shared with the correct colleagues. These tools include:

- Transforming data into stunning visuals such as table, graphs, maps

- Visually explore and analyze data both locally and in the cloud

- Create and share customized dashboards and interactive reports

Cost

Microsoft PowerBI has a free version that enable you with a wide range of capabilities. To upgrade your subscription, the Pro version cost $9.99/month.

Resources

Microsoft has also created a in-depth guided learning page with specific guidance on how to use PowerBI with Excel and can be accessed at: https://docs.microsoft.com/en-us/power-bi/guided-learning/index . Additional resources are available via webinars, training courses and YouTube as listed below:

Microsoft Webinars

1. https://docs.microsoft.com/en-us/power-bi/webinars

Udemy PowerBI training Courses

2. https://www.udemy.com/learn_power_bi_for_free/

YouTube

3. https://www.youtube.com/playlist?list=PL1N57mwBHtN0JFoKSR0n-tBkUJHeMP2cP&app=desktop

Qlik Sense

Qlik Sense is an end-to-end data analytics platform with many different tools that will help you better understand your data. The platform allows you to query your data to discover insights on your data effortlessly.

The Qlik Sense system offers data visualization and discovery for individuals and teams. The software's data discovery tool helps businesses of all sizes explore simple and complex data and find all possible associations in their datasets. With the drag and drop interface, users can create interactive data visualizations to present the outcome in a story form.

Ease of use

Qlik can seem to be fairly complex due to the multiple products available. However, once the correct tools are chosen and basic operation is understood, it is as simple as drag-and-drop to load your data and to interact with all the different visualizations.

It is really simple to navigate through the process of uploading data and converting the information table into a graph of your choice.

However, in order to become completely competent and efficient in using Qlik, you will need to understand how the different products, apart from Qlik Sense, works. This may require some coding experience and many hours of research on how to build and fully utilize Widgets and extensions.

Data integration

Qlik Sense enables you to combine all your data, from various sources into a single platform. The platform then allows you to ask any question of your data through queries and visualize them to put your data into perspective.

Visualization capability

The main data display objects are interactive visualizations including a comprehensive selection of charts, multi-layer maps and tables. Qlik Sense also has the function to produce heat maps from geo-spatial data provided.

Qlik has produced a function that provides you with chart suggestions from the type of data within the table. These suggested charts can simply be dragged and dropped onto the dashboard canvas.

Qlik Sense provides a dedicated feature for data storytelling. The data story is a developed and can be exported as a PowerPoint presentation on the data.

Cost

Qlik has various pricing optioins as there are various modules that can be used alongside to Qlik Sense.

However, Qlik does provide a free of charge Web- and Desktop version. For the upgraded version the price is $15/user per month.

Resources

For guidance on the use of Qlik Sense, there are several resources. Qlik has a community page and a blog that allow you to ask any question you may have. Additionally, there are YouTube webinars that explains the basics of Qlik Sense. Qlik Recourses are as follows:

Community page

1. https://community.qlik.com/?_ga=2.187635496.1238420913.1548757528-2054288495.1548757528

Blog

2. https://blog.qlik.com/?_ga=2.265124751.1238420913.1548757528-2054288495.1548757528

Training

3. https://www.qlik.com/us/services/training/qlik-sense-training

YouTube

4. https://www.youtube.com/watch?v=sYZ-7UG6UC8

5. https://www.youtube.com/watch?v=PEckcknNEts

6. https://www.youtube.com/watch?v=itDL0xA-0p4

Additional training

7. http://www.maxmunus.com/page/QlikSense-Training

ZOHO Analytics

Zoho Analytics is a self-service BI and data analytics software that lets you create appealing data visualizations and insightful dashboards in minutes. Previously known as Zoho Reports, this tool is upgraded into a robust self-service business intelligence, data analytics, and online reporting platform. It unravels hidden insights, identifies trends, monitors key business metrics, and determines outliers. The tool makes it easy for anyone in your organization to gain powerful reports without an IT's help.

Ease of use

Zoho Analytics has an easy-to-use interface that allows you to build a dashboard by using a variety of tools. The platform's dashboards give you a quick yet comprehensive glance at your key business metrics such as reports, rich text formats, images and KPI widgets, among others. Creating dashboards is also accomplished with Zoho Analytics' drag-and-drop functionality. Layouts are highly flexible with rich formatted text for URL links and images. Meanwhile, it also packs attractive themes to choose from or you can opt to build your own.

Starting a chart is simple and it can be found right on the platform's dashboard. It has a drag-and-drop interface that lets you easily create the chart you need by dragging columns and dropping them on the right shelf without any coding needed.

Data integration

Zoho Analytics allows you to upload data from a wide range of sources and blend them together to create functional dashboards for analysis and monitoring. Using an easy-to-follow wizard, Zoho Analytics lets you analyze data from various sources such as databases, cloud storage services, and offline or online apps. It streamlines syncing and importing data into the system for data merging, formatting, cleaning, splitting, and calculating feeds.

Visualization capability

You can choose from an extensive list of chart types available such as heat maps, line, bar, pie, geo maps, table, and stacked area, among others. Conducting exploratory analytics and drilling down data can be done with ease as charts can be configured with multiple Y-axis and robust filters.

Cost

The software has different pricing options. You are able to use the personal edition free of charge. This version does have certain limitations in terms of capabilities and volume. The Professional edition is billed at $30/month and allows all the functions and capabilities and unlimited volume.

Resources

In order to use Zoho to its full potential, you will require resources to assist you. The Zoho Analytics website has a dedicated resource page: https://www.zoho.com/analytics/help/ . The page provides several sources of assistance such as:

- User Guide

- Video Demos

- Webinars

- Forums

- Sample Reports gallery

- Community page

Summary

The table below has been developed to rate the various indicators of each Business Intelligence Dashboard system. The scoring is based on 0 being the lowest (worst) and 5 being the highest (best).

	Microsoft Power BI	Qlik Sense	Zoho Analytics
Ease of use	4	3	4
Data integration	5	4	4
Visualization capability	4	5	4
Resources available	4	4	4
Cost	4	4	3