

BBUSL now have real-time visibility of performance by area, contract and gang, presented in the degree of detail required at different levels of the organisation. Mr Mathew Duncan of BBUSL commented.

...we now have a fundamental tool to help manage the business. There is no distraction any longer caused by concerns about reporting information. We can focus fully on our own performance. We have been very satisfied by the solution provided by **visualmetrics**...

Profile Balfour Beatty Utility Solutions Limited is a leading service provider in distribution asset management to the UK utilities sector undertaking repair, maintenance, asset extension, asset renewal and rehabilitation services to the UK's water, wastewater and gas industries. Balfour Beatty Utility Solutions Limited is part of Balfour Beatty, the second largest construction company in the UK.



The Challenge

Utilities play an important part in peoples' daily lives and Balfour Beatty Utility Solutions Limited (BBUSL) place total emphasis on first class customer satisfaction, service, safety and environmental care. BBUSL's mission is to gain recognition throughout the UK as the ultimate solution provider in the utilities service market. In a sector that has become increasingly competitive since privatisation, BBUSL knows that to achieve this mission it needs to focus increasingly on service excellence whilst maintaining share holder value. It set itself a number of goals:-

- Always recognise and act positively upon the needs and wants of customers
- Fulfill the financial expectation of the Balfour Beatty parent company
- Continue to develop processes to deliver optimum efficiency
- Provide a safe and satisfying environment for employees
- Work closely with suppliers to deliver added value

Quality of Reporting system

Data from disparate operating applications was captured and exported to spreadsheets in snapshot format, and presented to the costing team. Allocations and other adjustments were subsequently made before data was re-keyed back into the individual reports that made up a 'Reporting Pack'. Packs were saved, printed and distributed. This represented a slow, labour intensive and unreliable method of producing management information. Consequently it was costly and of limited quality.

Quality of Information

Owing to the high level of manual intervention the process of reporting was prone to error and not receptive to exception reporting. Information was not only costly but of limited quality.

Relevance of Information

There were also risks from information overload. Reporting packs could not be easily customised to the individual needs of users. A 'one size fits all' solution often resulted in a lowest common denominator approach, - weighty reporting packs with great detail to cover a large group of people.

Timeliness of Information Delivery

An immediate and unintended outcome of the slowness of the reporting process was information discrimination. Directors would receive cost reporting by end of day Monday, whereas Contract Managers often had to wait until the end of the week to receive their packs.

Modeling of Information

Exception reporting was not easily available. Users needed to sift, extract and collate information for their own specific tasks. This was both wasteful of time and so risked not being properly carried out. Users were not able to create reports and interrogate the data, answering "what if" and "why that" questions. Queries had to be referred back to the Costing Department.

Sharing of Information

The different timetables against which users received information impaired the dialogue between Contract Managers and Directors. In consequence remedial responses to deviations from plan risked being delayed. This threatened an adverse impact on margin, employee frustration and customer satisfaction.

The Solution

BBUSL required an open and flexible solution that would bring fast benefit by solving these problems, whilst providing for painless migration to the planned new Oracle operational applications. They realised that they had to explore the potential of a CPM application and recognised that partnering with a Business Intelligence solutions provider provided the most cost effective and risk managed approach. Old procedures collected data for Report Packs from a series of legacy systems that included Buying, Sales, Stores, Plant Hire, Payroll, Communications, Insurance, Fuel and Budget databases.

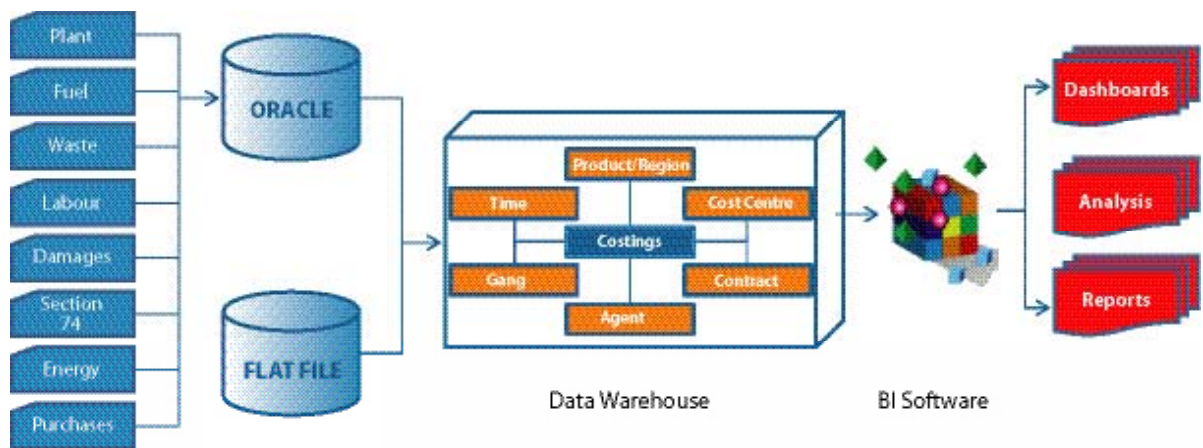
The solution identifies a set of KPIs through which business performance is monitored

- Sales
- Purchases
- Plant
- Payroll
- Other labour
- Communications
- Waste management
- Damages
- Fuel
- Sub Contract
- Miscellaneous
- Budgets

The Data Warehouse hierarchies reflect BBUSL required reporting structures

- P&L Main Group
- P&L Sub Group
- Area
- Agent
- Gang

Analysis & Reporting



visualmetrics proposed the development of a Data Warehouse that would capture data on a weekly basis from the existing databases, make maximum use of existing infrastructure, and provide an easy migration path to future developments.

The approach was to retain the existing data capture programs against the legacy databases, but present the extracted data in a pre-defined form before loading it into the Data Warehouse.

One of the main tasks for the costing team was to apply allocations to the data extracted from the legacy databases, historically carried out by applying them against each data extract spreadsheet. This procedure was automated by introducing two fact tables, for pre and post activity allocations respectively, which allow allocations to be applied automatically against the Data Warehouse.

The Benefits

BBUSL is organised into Areas which reflect the functional and geographical operating units of the client. Contracts run across Areas and consist of Agents and (work) Gangs. Users include Directors and Contract Managers who are responsible for monitoring costs at different levels within the organisation.

Business Effectiveness

BBUSL now delivers an improved service to their clients by being better informed on contract financial performance. Management against parent company financial expectation is made easier. Costs can be reported in five key dimensions with actual and target measures shown against KPIs.

- **Profit and Loss** : Area costs are aggregated by Profit and Loss Sub Groups and Main Group
- **Director and Contract Managers**: Area costs are aggregated by Contract, Contract Manager and Director Level
- **Contract**: Area costs are aggregated by Contract
- **Department**: Area costs are aggregated by Department and reported as Budget v. Actual
- **Contract, Agent and Gang**: Costs by Area, Agent and Gang Costs are aggregated

BBUSL have not only benefited in delivering the corporate financial reporting they needed to grow the business, but have also significantly reduced the effort involved in generating financial reports. Opportunity cost to the Costing Department is removed. Quality is delivered at lower cost. The savings made for a short payback on the application, justifying the investment in the application. New cost control reports now meet requirements.

Information Integrity

The loading process for data into the Data Warehouse enforces controls on the validation of data and removes the need for manual manipulation. The result being accurate and unambiguous information is shared by Directors, Contract Managers and Agents.

Relevance of Information

The detail of information is now focused on the precise needs of the user. Directors take a high level summary view with the ability to drill down to the underlying detail for exceptions. Contract Managers get reports at Contract level with capability to perform detailed analysis directly at Agent or Gang Level. Security controls ensure that a user can only view their own data.

Independence of Users

The availability of information to all users simultaneously means Contract Managers can now react quickly to performance issues suggested by the reporting. They are now able to respond to queries from the Board quickly and decisively. This contrasts with the old situation where communication between Contract Managers and the Board was impaired by time lag in delivery and the inability to search and query by exception.

Ease of Use

Interactive reporting now allows users to independently manage their own custom built cost analysis reporting. The reporting software also allows them to apply formatting such as background colours, font size, renamed headings etc. Templates that have pre-defined backgrounds and fonts give reports a standard BBUSL look and feel.

Information overload is removed as they can use the application to order the specific analyses they require. Hard copy 'Reporting Packs' do not need to be retained for analysis over time.



The case for Business Intelligence

We are familiar with the maxim.

- We know what we know
- We know what we don't know
- We don't know what we don't know
- There is another dimension, just as important.

We don't know what we know

To quote a former HR head of Hewlett Packard "if Hewlett Packard knew half of what it knows, it would be twice the size" This was an eloquent way of saying that HP understood that realizing its untapped knowledge was the most productive singular step the business could take. This is a situation familiar to many organisations. They know that within the wealth of data they have is knowledge that would help to run the business better. They often know where to find this information but the time and cost it takes to make it coherent diminishes its usefulness. Worse, they know that there is business critical knowledge within this data, if it could be identified.

They don't know what they know.

This is the Business Intelligence challenge. To identify topics that are critical to business performance. To identify information within the data stores relevant to these topics. To mine the data and organize it in patterns that illustrate relationships. To manipulate this information to show the behaviour and trends which flow from these relationships. And finally to present the findings to decision makers in a time frame and form that allows insight to be drawn and action to be taken.

Business Intelligence (BI) answers this challenge through solutions based on a number of key principles.

One Version of the Truth

A common problem organisations face is that information used by different parts of the business is often collected from disparate sources of data. This can lead to inconsistency and conflict. BI applications developed by **visualmetrics** are based a single repository of data. There is always only one **version of the truth**.

Business Intuitive

Traditional reporting often delivered little more than large reports containing even larger volumes of data. Interpretation was left to the reader. A key characteristic of the BI solution is that it presents information in a multidimensional format that allows cause and effect relationships to be interactively explored. By being **business intuitive** a BI application quickly brings insight into how the business is working.

Fit for Purpose

Different members of an organisation will require information pulled from the same sets of data but pitched at differing levels of detail and scope. The needs of the Board will differ from that of the Functions even when the same topic is being examined. BI applications present information that is **fit for purpose** for its user.

Just in Time

A reporting solution should optimally present up to date performance information with sufficient time for effective consequential actions to be taken. BI applications are designed with this **just in time** concept in mind.

Self Service

While information is designed so it is fit for purpose, there is often the need to manipulate it further by drilling down to greater detail, or to look for behavioral relationships between other sets of data. This needs to be achieved quickly and cost effectively. BI applications provide for a high level of **self service**.

Information Supply Chain

None of the preceding benefits of a BI application are possible without there being the capacity to identify, capture and consolidate data from an organisation's functional applications. To do this in the required time frame, and without operationally impacting these applications, requires sophisticated automation. **visualmetrics' visualintegrator** software automates the **information supply chain**.



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