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CASE STUDY

ISL
International Supply Chain Organisation

Profile This International Supply Chain (ISL) touches many aspects of our daily lives; delivering business communications, food or petrol, or the household and personal goods indispensable to modern life. A household name, ISL operates across the globe, 24 hours a day, with an operational reach that includes 2000 locations in over 135 countries. ISL is a premier logistics solutions provider to 75% of the world's largest companies in the manufacturing, retail and consumer industry sectors.

The Challenge

As Logistics professionals ISL managers constantly aim to add value to the customer supply chain. Slow moving stock is not good business. It ties up capital that cannot make a good financial return.

Enterprise Resource Planning (ERP) applications integrate the different elements of the supply chain from sales and marketing through production and distribution to produce an optimum inventory plan. Ideally, demand and supply schedules would seamlessly rebalance across the complete supply chain, but in reality a clash of customer and production pressures is often exposed in the logistics operation. Managing this conflict by padding stock is not an option, so ISL constantly seeks to improve the customer value chain by maximising the efficiency of its distribution and warehousing operations.

Warehousing IT solutions are an integral part of the supply chain through their support of stock control and goods movement operations. Monitoring and management of warehouse performance is essential to ensure that these operations are working at maximum efficiency. ISL aims to add value by increasing **stock turns** whilst optimising the **delivery performance (on time/in full)**, balanced against an effective **cost & profit-based** operation.

The logistics manager needs a set of **Key Performance Indicators** (KPIs) to monitor current events and analyse past performance. These help to formulate both tactical responses to daily operation as well as initiatives to improve total supply chain performance.

In meeting the demanded improvement in business performance ISL faced a number of specific practical challenges related to their KPI-based applications.

Definition of terms

As there was no standard information system throughout the business, each distribution site had developed a slightly different format for reporting information. This led to different definitions of terms, introducing in turn an inconsistency in the analysis of performance.

Quality of information

Whilst large volumes of operational data existed, there was little usable management information. Monthly operational reports were very detailed, running to hundreds of pages. Because each site had its own reporting formats, there was little consistency between sites making overall global performance management difficult.

Relevance of information

The large "one size fits all" reports were inevitably hard to analyze and consumed large amounts of management time. There was no individual control over their format and organisation – much irrelevant data but little usable information.

Timeliness of information delivery

Data from hard copy reports had to be re-keyed into spreadsheets before they became meaningful. As well as being a costly and error prone process, the delivery of information was slow. As a consequence decisions were often based on experience and hunch.

Modeling of information

For better client management what was needed were timely answers to common business questions presented in an understandable format. Not being able to model information particularly during the prospect tendering process, and in servicing existing clients, diluted ISL's competitive edge. Past experience and future opportunity could not be effectively modeled with the existing information reports. This compromised a focus on client needs and on improving service.

Sharing of information

The absence of a high quality Analytical Application (BI solution) limited the opportunity to share insight with clients. Again this compromised the focus on client needs and did not maximize the relationship with the client base.

Quality of Reporting system

The reporting system itself had grown from the manual and automatic interfacing a number of different systems and processes. Detailed Financial Reporting was provided via data extracts taken from Financial Control application augmented by spreadsheets reflecting summary site financial performance. There was a clear need for a single and consistent delivery mechanism which linked financial and operational applications and showed performance against a set of KPIs.

The Solution

ISL chose **visuallogistics**, a BI-based solution from **visualmetrics** that gives logistics professionals an insight into warehousing performance by selecting, extracting and comparing critical KPIs.

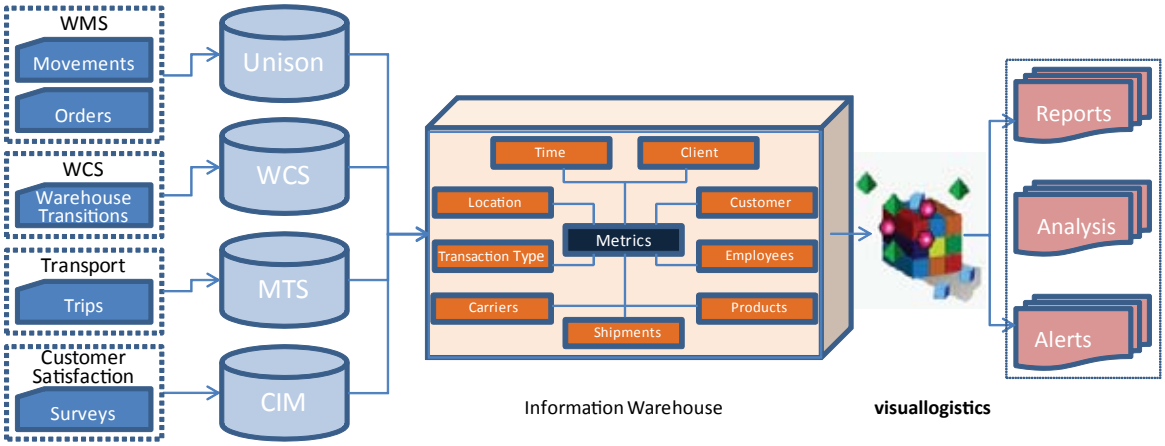
visuallogistics is a graphical and tabular application which brings financial and operational information from different ISL sources together to give managers multiple views of warehouse and inventory management effectiveness. Through **visuallogistics**, trends and patterns in warehousing performance became apparent in a set of ISL defined KPIs. Information is organised by subject area, reporting is configurable by the user, and key data is extracted and presented without the need to understand file names and database structures.

visuallogistics delivered tangible business benefits to the business managers who were accountable for the control of inventory and the overall logistics process. **visuallogistics** was deployed in a real time reporting environment and delivered business value to the business community. ISL managers could identify and then redress areas of concern ensuring a secure smooth and efficient logistics operations.

KPIs used to monitor warehouse operations include:

• **Inventory Adjustments**	% Adjustments against lines dispatched
• **Pick Confirmed**	% Pick confirmed within agreed timescales
• **Dispatch Confirmed**	% Dispatch confirmed within agreed timescales
• **Complaint Response**	% of complaints answered within agreed timescales
• **Complaints**	% Complaints against orders dispatched
• **Picking & Shipment**	% Errors during assembly against total lines dispatched
• **Warehouse Damage**	% lines damaged in the warehouse against lines received inbound

Analysis & Reporting



visuallogistics provides a summary level view of KPIs also utilising traffic lighting techniques. This shows by exception where targets are being missed, achieved and exceeded. The ability to drill down through the detail of the KPIs across varying time periods makes it simple to identify the key factors driving good and bad performance.

Standard reporting used by ISL include:

Stock Level Management	Analysis of stock levels and value by warehouse location, by product type and supplier. Review of the minimum stock levels needed by trending shipping and inventory volume levels over time.
Operations Cost Management	Optimisation of warehouse layout by trending shipping volumes and frequency against storage locations over time.
Returns/Damages Management	Review of the reasons for goods returns by quantities, product, carrier or warehouse to identify and rectify the source of problems e.g. shelf life expiry, inadequate packaging or transit damage.
Productivity Improvement	Monitoring of the goods in, goods out and goods returned processes at each warehouse to identify areas for improved efficiency, eg. low manpower resource, inadequate storage space, high turnover of deliveries and shipments.
Client Performance Improvement	Reviewing average length of time from placement to delivery to improve client performance.

ISL's **visuallogistics** solution utilised **visualintegrator** whose configuration allows for simple expansion, administration and reconfiguration in line with changing business requirements. Investment in ISL's legacy systems was therefore protected as these did not need to be materially changed to feed data to the Data Warehouse. On a pre-determined time basis **visualintegrator** selectively imports, cleanses and organises data before updating the Data Warehouse, while the **visuallogistics** Analytical Application through which the data is viewed is refreshed from the Data Warehouse. Analysis and reporting occurs against the Data Warehouse so there is no degradation of performance to the operational feed systems caused by heavy user reporting demand.

Business Effectiveness

ISL immediately increased their competitive edge by having improved historical information. During the tendering process contracts could be costed more accurately so maximising revenue opportunities. Customer service to the existing customer base was improved through a better understanding of their performance to the client. Efficiency and cost reductions were gained in warehouse operations and transport scheduling through better warehouse layouts, labour usage and transport planning.

Information Integrity

The loading process for data into the Data Warehouse from the operational logistics and financial accounting applications enforces controls on the checking and validation of data and removes the need for manual manipulation of data by spreadsheet. The result is that there is more accurate and unambiguous information being shared by warehouse managers, vehicles planners and client managers.

Uniformity of Terms

The problems of not having a common understanding of the issues that arose from the different terminologies used by isolated developed reporting systems has been replaced by a common set of KPIs in use across the business. A common understanding has resulted in greater effectiveness.

Relevance of Information

Information is now built specifically for the needs of the user. Functional Directors take a high level summary view with the ability to drill down to the underlying detail for exceptions. Client Account Managers get service level reports which allow detailed analysis to the client by geography, warehouse, carrier and product. Security controls will ensure that a user can only view their own data.

Independence of Users

By having easy to use tools to manipulate the standard views designed for them, functional and customer managers can independently drill down to greater detail. They can examine the impact that events in the supply chain are having on their own areas of responsibility, whether it be logistics efficiency performance, customer satisfaction or financial performance.

Ease of Use

Easy to use tools for interactive reporting now allow users to manipulate the standard views designed for them, and independently manage their own custom built reporting. The **visuallogistics** application also allows them to apply formatting so creating a company or site look and feel.

Communication across the Organisation

Being able to access warehouse and delivery performance by site in a near real time basis allows Site Managers to intervene to maintain high service levels. Equally Client Managers, by receiving fast and focused performance status on their accounts, can alert site management to any impact caused by variations in logistics performance.

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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