

L2S2 Outsourced Data Management

Collecting, managing and reporting on data is a specialist field encompassing numerous technical and administrative disciplines. L2S2 have years of experience in managing data and have invested in tools and personnel to provide an end to end data service that enables its customers to concentrate on their core activities with confidence that their data is being managed securely, safely and generating maximum added value for their companies.

Data Life Cycle



Data Acquisition

L2S2 are expert at collecting data in numerous formats including XML, HL7, proprietary formats and most databases. The UK Health Protection Agency has chosen L2S2 to be its

partner to collect emergency medicine data from hospitals for the UK Syndromic Surveillance programme that monitors for potential pandemic disease threats. L2S2 has interfaced to most current and legacy hospital data systems and runs its own government approved secure data networks. In addition to interrogating existing and legacy systems L2S2 produce hardware and licensed designs to allow data to be collected from instrumentation anywhere in the world.

Data Validation

Wrong data is dangerous data; it can lead to false conclusions and wasted time. In certain circumstances, it can be life threatening. A thorough understanding of the context of the data and the rules it must obey is needed to apply context sensitive validation at source. L2S2 take responsibility for data validation and governance and use broad experience and expertise to improve the quality of collected data.

Data Transfer

L2S2 have many years of experience in designing, building and hosting data transfer systems. Our expertise ranges from secure transfer of huge files over the internet for DHL, medical records over our own certified NHS N3 connection for NHS hospitals and the UK Health Protection Agency, retail stock information for intelligent point of sale systems to the collection of instrumentation data from around the world. L2S2 uses industry standard encryption and compression techniques to preserve the integrity of the data and to minimise bandwidth costs. L2S2 host dedicated servers and hosting at their own premises and as appropriate use third party external hosting depending on security requirements and bandwidth.

Data Security

Data can represent intellectual property in the form of results obtained from experiments and instrumentation, medical data on which diagnoses and treatments will be based, or for example technical data on which costly decisions to provide remote maintenance will be made. If data is being collected and transferred from one place to another it is valuable and its security must be considered. Data security is a broad topic and covers everything from ensuring that the data is not corrupted accidentally, to ensuring that data is never lost if contiguous records are required, to the prevention of unauthorised access, to guarantees of privacy in the case of medical records. L2S2 staff contracts define working practices for handling data and preserving its security and the company is certified to transfer and store medical data in the UK. Proper data security procedures require the construction of a security plan, identified roles and responsibilities, staff training, continuous monitoring and audit. L2S2 are able to provide a complete service to remove this burden from its customers.

Databases

L2S2 operate and maintain secure databases for many customers both on customer premises with remote management, for example is several UK hospitals, as well as in our own hosting facilities. Our engineers have extensive database programming experience.

The company has developed major applications that require synchronisation between small, local databases and large master databases. This works well in applications that require data capture from multiple low cost sites where the order of updates cannot be guaranteed. A project of this type is fraught with difficulty could easily overrun if tackled by an inexperienced team.

L2S2 have developed applications to act on databases to trigger alerts, perform maintenance tasks, calculate statistics and manage workflow. Using these libraries it is often possible to provide advanced, required functionality with minimal new effort.

Data Analysis and visualization

Collecting, transferring and storing data is costly and all too frequently only a tiny part of the value contained in the data is realised due to inexperienced or cursory analysis. Data collected for technical information on a process may be of significant value to sales and marketing but only once processed and filtered for a particular context. This requires specialist skills and is often of no interest to the technical team that required the data to be collected. L2S2 have both scientific and technical experience and are able to work closely with customers to maximise the value of data that can be obtained through analysis.

Even after analysis, it is almost always necessary to selectively present data to the user to communicate results clearly. L2S2 produces an advanced dashboard product that enables context sensitive views to be produced for different users with minimal effort. The same data may be used to drive appropriate displays for management, sales, customers and the technical team. The L2S2 Dashboard uses up to date technology and provides high quality graphics that can be used in Microsoft SharePoint or in L2S2's template web pages allowing new reports to be created with minimal new work.

L2S2 also make extensive use on Microsoft Reporting Services and provide report generation for many products and services.

Data Monitoring

L2S2 offer a full service for monitoring data and taking predetermined actions on events. Examples may be arranging maintenance of remote equipment to summoning refuelling to issuing advisories of changes in trend. This service allows customers who don't have people full-time dedicated to monitoring systems to be confident that problems occurring in the background are monitored in a timely fashion.

Improvement

Even when L2S2 take complete responsibility for data handling from collection to display our customers gain the advantage of our years of scientific and technical expertise through regular review sessions. L2S2 have worked with external scientists and medical specialists to develop complex computer models based on data analysis and several major products have been developed in partnership.