# MATRIX MATTERS

#### Unique Benefits of Matrix Gemini LIMS



Matrix Gemini is the fifth and latest version of Matrix LIMS, the series originating with Version 1 dating back to 1990. Throughout this time an upgrade path has been provided to existing users (no cost if the customer has a support agreement even if the new version is a complete re-write as is the case with

Gemini) – this is a firm and continuing policy of Autoscribe. This has resulted in several systems having lifetimes of around 20 years but to-day the users are able to benefit from the latest technology by making use of the upgrade path provided.

For example, Gemini is the first version of Matrix that provides web browser access to the system. Existing users of earlier versions upgrading to Gemini will be able to immediately access their desktop screens via a browser with no system modification whatsoever.

Matrix Gemini is configured to meet customer requirements and this process is used to create workflows, screens, menus,

terminology, language and much more. The configured screens will be instantly available via a desktop and a browser allowing the system to be used 100% web, 100% desktop or anywhere in between. This provides

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the ultimate flexibility and future proofing against external influences such as poor access to the internet.

The configuration tools mentioned above are covered in more detail on page 3.

However, it should be emphasised that very few, if any, LIMS are configurable according to the Autoscribe definition e.g. no coding, huge flexibility of workflow and screen design etc. These tools have to be seen to be appreciated – see Configuration Workshops on page 3.

Matrix Gemini can be further developed in two ways. The first is conventional coding (.net) resulting in a new release of the software, all controlled according to our operating procedures. The second method is by configuring the system to meet different laboratory applications or further niche market

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opportunities. In the latter category Autoscribe has released Feedback for complaint management, Training Manager for managing staff training records, Document Manager, Inventory Manager, Calibration Manager, Support Manager and Hazardous Waste Tracker. None of these products involved any code writing due to the power of the Autoscribe configuration tools. The same disk is shipped for all products with an appropriate label and a licence code. This results in easier support and system upgrades.

All of the above are unique benefits of Matrix Gemini.

For further details check MM 101.

#### **User Surveys**

A common misconception about LIMS is that the job is complete when the system goes live. This is only the first step in a process that must adapt and grow with the changing demands of the users, their workload and their business. Our goal is not a successful implementation but the implementation of a successful system.

To monitor our performance against this goal we conduct annual user surveys in both USA and the UK. The surveys include questions relating to the software quality, system documentation, system implementation, support response and accuracy and our training performance.

In addition the survey included the question "What do you like most about your Matrix system?" In the USA survey 71% of users voted for flexibility/system configuration and a further 13% for ease of use. The full analysis is included in the report.

All users of Matrix LIMS were invited to take part in the latest surveys, conducted in the USA by Zumatrix Inc., and directly by Autoscribe in the UK. All the results received are included in the surveys which include comparisons back to 2006, when the surveys were started, where relevant.

Autoscribe provides the survey results to potential users of the Matrix software as well as to existing users. We believe that this is the first time that surveys of this type have been made available by a LIMS company.

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For a copy of the UK survey check MM 102.

For a copy of the USA survey check MM 103.

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#### Biobanking

Specimen collection, banking and tracking is of increasing importance in areas such as pharmaceutical discovery, clinical operations, medical institutions, academic and biosciences research centres and contract research organizations.

The samples involved can range from patient DNA samples, frozen cell aliquots for screening, multi-sample libraries for translational studies, tissue biopsies for disease research and more.

Management of biobanking requires the registration of samples as collected and tracking their location thereafter including the recording of a chain-of-custody. It may also include the restriction of users to specific storage locations e.g. freezer 3, the use of storage maps, the need for parent-child sample relationships, donor details with consent and ethical approval processing and much more.

Matrix Gemini provides a management solution for biobanks that may be further tailored to individual requirements including future-proofing to allow for changing business needs. In addition, it will help an organization comply with the Human Tissue Act regulations.

For further details check MM 104.

#### PET (Positron Emission Tomography) LIMS

The Matrix Gemini PET Laboratory Information Management System configuration has been developed in collaboration with two hospital-based PET centres in Denmark. This affordable LIMS solution gives full traceability from incoming raw materials through to the production of PET radiopharmaceuticals to finished products for assistance with regulatory compliance.



It also manages sample inventories with expired materials flagged and unavailable for synthesis. An optional document management module ensures that the current authorized version of

SOP/Method is available electronically. The system may be used with touch screens, virtual keyboards and barcodes.

All actions on the system are audited and double sign-off can be implemented where appropriate.

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For full details check MM 105.

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#### Radio-Pharmacy Management System

The Matrix Gemini Radiopharmacy Management System configuration has been developed in collaboration with leading radiopharmacists from multiple countries.

The system provides full traceability from incoming orders through to production and transportation for regulatory compliance. Full management of batch processing records, generators, raw materials and sundries is included along with dose calibrator check records, generator elution logs and QC test results.

The system ensures that workflows, procedures and checklists are followed and recorded.

An optional Document Management module ensures that the latest authorized version of SOP / Method is available electronically.

For full details check MM 106.

#### Key objectives for implementing a LIMS at RCLCF

- Comply with current and future regulatory requirements and associated audits
- Improve the method for booking in samples
- Logging of booked out samples and their usage
- User friendly system that makes sample editing and auditing easy to use
- Integration with IBM System Builder Database
- Select a system that can easily be configured to meet current and future needs
- Select a system with a track record of backward compatibility and ease of upgrade
- Purchase a compliant system that RCLCF staff could configure themselves from a reputable supplier





For a full copy of this case study check MM 107.

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#### Why System Configuration?

Autoscribe's configuration tools guarantee a truly flexible LIMS with the following benefits:

- Easy to meet changing business requirements thus future proofing your investment.
- Configuring the system once for use with either desktop or web clients reduces implementation, validation and support time costs.
- Autoscribe will support all user developed configurations at no cost.
- Implementation and support risk reduced by not using custom code.
- Faster implementation and lower cost of ownership.
- The system is configured to precisely meet user and business requirements.
- Business management processes and reports can be included in addition to laboratory information and results.
- Scaleable from single user to multi-department to global system.
- Archived data is always available even after major updates.
- A seamless upgrade path to newer versions with protection of configuration and data files.

This flexibility has resulted in the same core code being used for very diverse applications - an oil laboratory uses the same code as a hospital laboratory etc. This also has implications with GAMP 5 - our approach means that our Matrix Gemini LIMS fits into Category 4 whereas our major competitors fit into Category 5.

The same code is used for all implementations of Matrix LIMS (and Matrix Tracker) which means that support is easier and faster for the customer and upgrade paths are preserved.

For a copy of the Configuration leaflet check MM 108.

#### **Configuration Workshops**

There is mystery and debate surrounding the word "configuration" in the context of LIMS. Most vendors claim that their systems are configurable but it is the method of configuration that is the key to fast implementation, long system lifetime and excellent return on investment and hence success.

For many years Autoscribe has led the way in providing configuration tools that require no programming skills and no coding but are still more powerful, whether used by Autoscribe or a customer, than the approaches used by many LIMS vendors. The Autoscribe approach builds in supportability and future proofing ensuring that the delivered system can readily keep pace with changing and expanding business needs. Autoscribe is embarking on a series of Configuration Workshops in several locations in the UK and Ireland. The workshops will include a demonstration of how the tools are used to define workflows, screens and menus, for example.

As part of the workshop different configurations will be presented to illustrate the scope for meeting individual customer requirements without a line of code being written – unmatched by other vendors.

Finally there will be an opportunity to take part in a Configuration Challenge. Bring your own requirements and we will show you how these requirements can be met using the unique OneTime Configuration Tools from Autoscribe.

For a workshop schedule check MM 109.

# Use Dashboards for a clearer view of laboratory activities and progress

Dashboards in Matrix systems can be created using the configuration tools – no coding required.

Dashboards make life simple by presenting important information in a read-at-a-glance interactive graphic environment that may be designed and configured by a qualified system user.



Register for our short web seminar by checking MM 110.

#### Implementation of LIMS - The Choices

The LiMS Journal of John H. Jones published an article on 17 January 2010 entitled "Which implementation process is right for you?"

It suggested that there are three approaches:

Packaged – involving a LIMS designed for a specific purpose with restricted flexibility.



Collaborative – involving a LIMS that can be adapted to user requirements.

Turn-key – involving a bespoke LIMS coded to meet specific requirements.

The full article can be made available by checking MM 111.

The Autoscribe approach is predominantly a Collaborative implementation technique with some differences compared to the description in the above article.

For example, we assess the requirements, create a functional specification and then quote a fixed number of days for the system configuration (no coding) and implementation resulting in a fixed price. Any requested changes to the specification are logged and if there is spare time they are done within the fixed price but if extra days are needed a supplementary quotation is issued. This approach finds great favour with customers but unfortunately some vendors do not fix the price and customers do find that the costs escalate dramatically - but only find that out well after an order is placed.

Autoscribe use a unique and powerful set of their own configuration tools – see page 3.

The remainder of this article is available by checking MM 112.

#### How to buy a LIMS

"How to buy a LIMS" is a free LIMS project guide that covers topics such as:

- The need for a LIMS
- Defining requirements

#### Consultants and specifications

- Finding and selecting a supplier
- Classes of software
- Reasons why LIMS projects fail
- Customer references and user groups
- Support and maintenance
- The hardware
- Checking up on the supplier
- Placing the order
- The implementation process

The Guide is based on decades of practical management experience of specifying and delivering successful LIMS and Sample Tracking software solutions.

It aims to help anyone considering purchasing a new system and provides some hard inside and honest information that will help avoid some of the pitfalls and myths associated with a LIMS project.

The guide is suitable for those looking for systems for small laboratories through to systems for enterprise/global operations.

The latest edition comes with a new supplement entitled "The questions you have to ask a vendor".

Request your copy by checking MM 113.

#### **Other Autoscribe Products**

Matrix Express – for the smaller laboratory MM 114 Matrix Gemini for the veterinary laboratory MM 115 Matrix Gemini for the nuclear industry MM 116 Matrix Gemini for the water industry MM 117 Matrix Tracker –track events, samples etc. MM 118 Matrix Waste Tracker MM 119 Matrix Stability Express – shelf-life study management MM 120 Matrix Document Manager MM 121 i-Planner – instrument booking system MM 122 Training Manager – manages staff training MM 123 Feedback – manages customer complaints MM 124 To remove your name from the mailing list MM 125

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