LUMIS PROJECT
SUMMARY OF FINDINGS AND RECOMMENDATIONS FROM PHASE 1

1. BACKGROUND

The Management Information (LUMIS)Project was initiated in September 2010 with the objective of improving the quality and availability of information to support the development of performance measurement processes and to ensure that leaders and managers across the University have the right management information to undertake their roles effectively.

The project consists of two phases:

- **Phase 1**: Review of capacity, capability and requirements in terms of people data and systems
- **Phase 2**: Implementation of specific system solutions including training and development of people

This document summarises the findings and recommendations of Phase 1.

2. FINDINGS

2.1 Introduction

Comprehensive, accessible and accurate management is of growing importance to the University for the following reasons:

- The increasing competitiveness between HE establishments in which information is key to maintaining a competitive edge
- The increasing need for high quality financial information and the ability to analyse trends and model scenarios
- The need to monitor progress against achievement of the Key Ambitions in the Strategic Plan

Although the requirements for Management Information cannot be met without investment in a technology-based solution, MI is more than an ICT project and comprises the following strands:

- People
- Data
- Systems

Phase 1 of the project gathered information on each of these strands as detailed below.

2.2 Findings from consultation

People

- There is a lack of understanding on the part of MI users on what is available and how to go about accessing it
- Individuals' roles in relation to MI are frequently unclear
- There is a lack of training and familiarisation in MI tools and techniques for both MI users and providers
- MI users feel excessively reliant on others

Data

- Data definitions are inadequate or non-existent.
- Data quality is regarded as an issue, but not a major problem.
- Non - availability of data to meet MI needs is of concern in some areas, e.g. to meet new reporting requirements.
- Data availability and analysis are of particular importance in relation to the Strategic Plan. As a result of work to develop the Core Data Set, data is available to allow reporting of progress against each KPI, but there are some issues with definitions, accessibility and timeliness.
- In the context of statutory returns, inaccurate, incomplete or poorly-defined data can prejudice the University's ability to receive funding to which it is entitled and may reflect poorly in league tables and other national comparisons.

Systems

- The University has a policy of investing in "best-of-breed" information systems with interfaces to allow data sharing and cross-system data analysis. However, there are limitations to the effectiveness with which different systems, even with well-designed interfaces, can handle and present shared data.
- TULIP provides an accessible interface allowing user access to a range of data, but there is a lack of an integrated approach to MI reporting within and across existing systems.
- The version of Business Objects at Liverpool is primarily used for day-to-day operational reporting and is limited by the lack of well-defined management information and a perception of user-unfriendliness.
- Users compensate for deficiencies in MI by using Excel spreadsheets and Access databases into which data is imported from corporate systems. This raises a number of issues including administrative overhead, inaccuracy and inconsistency.
- Corporate Planner has been identified as a valuable planning and forecasting tool for the purposes of the current year's budgetary and planning cycle. Its value for scenario planning has been particularly noted. It is also providing a useful insight into MI in more general terms, e.g. by giving MI providers and users a greater understanding of the functionality and capabilities that they can expect from this kind of system.

2.3 Survey of other universities

Contact was made with all other Russell Group universities and three from the 1994 Group to gain information about how they satisfy their MI requirements, lessons learned and examples of good practice. Useful information was obtained from 17 universities, of which:

- 9 already have an MI or Business Intelligence System in place
- 3 are at the early stages of planning or implementation
- 4 are seriously considering acquiring a system at some point in the future
- 1 has yet to be convinced of the benefits

2.4 Market assessment

A Request for Information was issued to several known companies to obtain basic information about ICT MI solutions on the market and their indicative prices.   Eight companies responded, representing a cross-section from niche suppliers of dashboard tools to comprehensive MI/Business Intelligence solutions. It is clear from this exercise that there are several organisations offering a range of products and services which potentially meet all or part of the University's requirements and have a track record in the Higher Education sector.

Indicative prices obtained from suppliers must be treated with considerable caution but they do provide an order-of-magnitude guide that a fully-functional solution including a Data Warehouse and dashboard will incur acquisition costs of around £250,000 - £275,000.

3. RECOMMENDATIONS

3.1 People

- Introduce the concept of MI champions, comprising appropriately-trained individuals across Central Professional Services, whose responsibilities for MI are included in their Role Descriptions
- Ensure that formal MI providers are appropriately trained and that their identities and responsibilities are made widely known
- Institute regular meetings between MI champions and providers to learn from experience and share best practice
- Ensure that information requests are channelled to the appropriate providers
- Streamline the handling of ad hoc information requests by closer working between requesters and providers
- Consider introducing the concept of a virtual "Business Intelligence (or Management Information) Competency Centre" staffed from existing resources in CSD and official MI providers, including P&D, HR and SAS.
- Understand obstacles to self-sufficiency by means of a gap analysis and work towards increasing the degree of self-sufficiency of MI users in accessing and processing information

3.2 Data

The general and application-specific data issues and requirements identified during consultation should be individually assessed for addressing in Phase 2 by one or a combination of work streams, i.e.:

- Quick wins
- Data (definition, ownership, quality)
- Personnel and organisation (business processes, training, development, culture)
- Specification, procurement and implementation of the MI solution

3.3 Systems

- The findings of Phase 1 validate the outcome of an earlier options appraisal which recommended a data warehouse solution from the following options:

  - ➢ Maintain the current position
  - ➢ Acquire or develop technology to implement a data warehouse
  - ➢ Acquire an Enterprise Resource Planning (ERP) solution

- An additional option: *"Procure a dashboard or similar 'front end' tool to sit on top of existing systems to facilitate data analysis and reporting, but without a data warehouse"* has been considered. This is not recommended on the grounds that it is a partial solution offering poor value for money and continuation of poorly-defined management information sources.
- Terms such as "data warehouse" and "dashboard" should be avoided in the procurement exercise in favour of generic business-oriented terminology. This will allow suppliers to propose solutions without being constrained either by semantics or an impression that we have ruled out alternative approaches.

- The chosen technical solution must be capable of interfacing/integrating with existing source systems and have the flexibility to adapt to changes and replacements of source systems.
- With the introduction of the MI solution, users should be discouraged from developing and using Excel spreadsheets and Access databases to meet their MI needs.
- The use of Corporate Planner will remain under review and if a more appropriate system is identified, this will be considered as a replacement. The most appropriate systems solutions will be informed by the business needs of the University and the underlying principle to ensure an integrated and flexible MI tool
- The introduction of other proprietary systems to meet local MI needs should be discouraged pending the availability of the core MI solution.

3.4 Priorities

It is recommended that priorities are established for Phase 2 in terms of quick wins, KPIs and early adopters.

- The quick wins identified in Phase 1 should be addressed on a priority basis, dependant on the resource requirement and relative impact of providing a short-term fix.
- The priority focus for the recommended data work stream should be definitions, ownership, quality and availability of data to support the measurement of achievement of the KPIs that underpin the Key Ambitions in the Strategic Plan.
- The early adopters approach will involve implementing the MI solution initially on a pilot basis, focusing on a particular data type within a single Faculty. This approach will:

  - ➢ Keep the project manageable
  - ➢ Allow lessons to be learned to inform a wider roll-out programme
  - ➢ Provide tangible benefits to encourage uptake

- The recommended priority application is Research and the recommended pilot Faculty is Health and Life Sciences.

4. NEXT STEPS

- Formally establish Phase 2 and put project management controls in place
- Develop a detailed programme including staffing resource allocation and scheduling
- Establish a Working Group with nominees from Schools, Faculties and Professional Services and agree roles and responsibilities within the following work streams:

  - ➢ Data issues, detailed analysis and definitions
  - ➢ Personnel, organisational and business process aspects
  - ➢ Technical environment
  - ➢ Specification and procurement
  - ➢ Pilot implementation
  - ➢ Roll out planning
  - ➢ Opportunities for short-term improvements ("quick wins")

- Capture those aspects of the overall requirement that will involve a technology-based solution in the form of a Functional Specification for external procurement purposes and to assist in defining the scope of in-house development.

5. JISC BID

A bid for funding of £50,000 towards the cost of the project in 2011 has been submitted to JISC in connection with their Business Intelligence programme. The outcome will be known in late January 2011.