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Integration – the Way Forward

by Bernard Barnes, BIS Banking Systems

The concept of the middle office has been described as little more than media hype. But there is no denying that information management – which is what the middle office boils down to – is now of prime concern to financial institutions. They have not slowed the search for technological solutions to their problems despite the cutbacks, but an acute cost-consciousness now prevails throughout the industry. Software suppliers are having to square up to the new regime by building more bang per buck into their banking systems.

In the financial sector, automation has made market data available to all-comers. But the pressures of market innovation (often itself technology driven) have considerably upped the ante in respect of the minimum amount and quality of the information needed to compete effectively. Large sums of money have been invested in the development of transaction processing capabilities, but financial institutions today are focusing their attention on information management.

Central to the latest thinking in dealing technology and information management is integration. In recent years, the plight of settlement offices the world over has highlighted the need for integration between the front and back office. The term 'middle office' was coined to describe this new emphasis on active management. In the time-critical global markets which are the norm, delivering the right management information at the right time is becoming crucial for competitive success.

Without the sort of integration this requires, bottlenecks develop, penalties for late payment pile up and response times deteriorate to unacceptable – and ultimately, costly – levels.

For the vast majority of banks, information planning is now fully integrated into policy formation; and for some it is becoming their single most important objective. Senior managers are now much more vocal in specifying the capabilities that they would like to see built into their ideal system. There is a strong demand for the means to provide accurate and timely information for a whole range of managerial tasks – from internal and external compliance, monitoring cashflow and liquidity, to controlling overall risks and capitalising on arbitrage opportunities.

Overall risk is managed most effectively when it is coordinated from the top, a fact well understood in financial institutions if the ever-increasing emphasis on global risk management systems is anything to go by.

In order to implement a risk management programme, the relevant exposures must first be identified. Many banks remain unable to consolidate all their exposures properly because of the interdependence and complexity of financial markets. An overall view of all risk-related transactions can be provided at the systems level by means of a common data platform. Commonality of data calls for all a bank's transactions to be logged in the same place and in a consistent way.

But for many banks, their existing systems do not operate in this way. What the trader is often left with is a plethora of keyboards, screens and printouts from a variety of systems – all providing different information – none of which is integrated to the other. This lack of uniformity has made it extremely difficult to combine positions so that total risk can be assessed.

The quantitative techniques already employed by financial engineers provide the basis of a strategy to help correct this situation. Their requirements for managing

risks globally and across markets have triggered the adoption of different skills as they have accepted new types of exposure. They have developed generic ways of looking at complex financial transactions. By stripping deals down to their basic ingredients in terms of event – future cashflows, their timing and probabilities – it becomes possible to look at financial projections for all instruments in a uniform fashion.

With BIS Banking Systems' international banking software package, BIS Midas ABS, the financial engineers' 'unbundling' methodology can be applied to the common data platform making it possible for banks to view their overall risk in a coherent way. Using BIS' strategic risk management simulation software with digital feed and a database link, senior managers get a window on the bank's net exposures to currency and interest rate movements and can work out what they want to do about them.

But although managing overall market risk is a desirable end in itself, any such capability has to fit in with the information management strategy. In order to make sensible strategic decisions, managers need information on the relative performance of their various activities.

In order to do this, distinct profit centres must be established. Management needs to institute a set of clearly defined rules for transferring positions between dealers that apportion profit and loss fairly and consistently.

While many banks have accepted the concept of profit centres, senior managers in the past judged – and rightly so – that the heavy administrative burden of initiating a thorough-going transfer pricing regime was too high a price to pay for the potential benefits.

But today, in the age of information management, this can create new pitfalls. While many banks are trying to concentrate their activities by focusing on what they do best, they nonetheless need to be able to identify these completely separate, distinct profit centres to enable them to make fully considered decisions.

It is important to be able to monitor the net effect of many different kinds of transaction in the same place. Some of the narrower product based systems may well not survive this requirement. Banks will certainly need a greater measure of control over all the systems they employ to ensure that they are supportive of their chosen structure and policies.

Because monitoring and operation of individual profit centres will result in large numbers of internal deals, the solution has to be made available automatically at the systems level. Banking systems that cannot handle such large-scale requirements effectively will fall by the wayside. But banking software also needs to be responsive to changing user needs – for a system to be able to meet this requirement, it must also have the capacity to evolve and develop.

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continued on p. xvii

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Front Cover

The Digivision AUTOSYNC monitors from Westward Technology Ltd of Tewkesbury, Glos are widely installed in dealer rooms and financial institutions throughout the world.

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Contacts: Sue Blakemore, Product Manager
Tom Hanley, Sales Manager

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Investing in Quality Procedures Documentation

Well trained staff working to high standards of operational and financial procedures are essential in all businesses which claim to offer financial services to the public.

To paraphrase a certain building society's advertisement: 'remember that it's someone else's money!'

Gordon Grant from TMS Computer Authors Limited argues the case for effective documentation and believes that without such documentation it is difficult to audit the quality of the procedures to train or retrain staff, or to cover for staff absence. Investment in high quality documentation can reduce risk and heighten awareness of the procedures themselves.

If you haven't already recognised a need to document procedures in your organisation, it's likely that before long your auditors or financial advisors will persuade you otherwise. This is as true for businesses offering financial services (who must now operate in the regularised climate that followed in the wake of the Financial Services Act) as for the wider business community intent on improving the quality of their operations.

On the face of it 'procedures documentation' conjures up images of large bulky manuals which nobody reads, are time consuming to prepare and impossible to keep up-to-date. This is unfortunate because well-written and well-designed procedures documentation can provide real benefits in many areas, such as training, job flexibility, audit control and general risk reduction. Procedures documentation is especially useful in the financial services sector where the ever increasing range and complexity of instruments and transaction types is placing a larger burden on administrative staff and operational back offices.

Why have Procedures Documentation?

Procedures documentation is an important pre- and post-training tool which lessens a company's dependence on 'experts' and improves the quality of operations by standardising the way in which staff carry out company procedures. For example, consider the plight of a trainee settlements clerk, who, every day, processes a range of money market deals. Each time he comes across a deal he doesn't understand he asks his supervisor, who probably has higher priority tasks to perform, or may not be available at all. Either way the trainee would waste a lot of time searching for a simple piece of information. Without good supporting documentation he can't work effectively, and will probably hinder others as well. Important company objectives could be placed at risk (such as the timely settlement of deals), and there's a danger that tasks will be carried out in unapproved ways. The same inefficiencies and risks can occur when staff 'stand-in' for others or are relocated from one department to another unless they have complete reference documentation near at hand.

Even where formal training has been given, staff placed in unfamiliar situations need as much support as possible in the early stages of their new job – good procedures documentation is one of the most cost effective ways of providing it. They need accurate reference documentation; easy-to-read and accessible manuals which explain in clear crisp steps how to carry out each activity in their particular work area. Technical terms should be carefully introduced and explained in an unambiguous way. The information should be well structured and easy to find. Tasks should be described in the context of the wider

company objectives so that the reader understands not only how to carry out a task, but also why it needs doing in a particular way.

But staff training and job flexibility aren't the only reasons for maintaining up-to-date procedures documentation. Internal (and external) auditors will find that good documentation about the organisation's procedures will assist them in their tasks of evaluating whether or not procedures satisfy audit requirements, and whether or not staff are performing the procedures effectively. The documentation is part of the evidence that all activities (often involving someone else's money!) are up to the standards set by the auditors. The Financial Services Act places a responsibility on companies whose financial activities fall under the Act, to prepare and maintain a 'Compliance Procedures Manual' – comprehensive procedures documentation can serve to demonstrate that your company is meeting its responsibilities under SRO rules.

What is Good Procedures Documentation?

In addition to the features we mentioned earlier, good procedures documentation can be characterised by:

- An integrated set of Procedures Manuals, each covering the tasks and processes in a major work area
- Each manual should be designed both as a training document and as a reference document for experienced users
- Each procedure described in the manuals explains tasks in a clear, step-by-step fashion. Procedures should be self-contained so there is no doubt over who performs the tasks or where procedures start and finish
- The style should be non-technical, easy-to-read and approachable
- Diagrams should be used as much as possible to describe work-flows and the organisation of the company
- The procedures documentation should be designed to fit within a company-wide information strategy

How To Do It

So – who's going to write the procedures documentation? How much will it cost? Where do I start? What should a procedures manual contain? Where do I get the information from? How can I design and develop the manuals to meet training, audit and SRO compliance requirements? Once written how can they be printed and distributed? How do I keep them all up to date? Most importantly what skills do I need to produce the documentation?

continued on p. xvii

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Dealerboard Technology Going Digital Eventually

It was once said that any dealer worth his salt should be able to trade with just a pen, paper and telephone. Today such a simplistic view of trading has been largely overtaken by global financial trading systems based on rapid worldwide communications and access to up-to-the-minute market data at the touch of a button.

The answer to the question, what are dealers and communications managers looking for in a dealerboard, reveals an overall agreement on the technology issues, though they may differ over their cost-effectiveness.

Communication with the market is the dealer's lifeline. Typically a dealer in a financial institution, whether he is working with equities, gilts or commodities, will have a repertoire of contacts all over the world. He will work at his dual handset dealerboard for perhaps 12 hours a day. In an environment where a few seconds delay can cost a dealer millions his voice systems need to be reliable, flexible, and provide high levels of functionality, yet be simple to program and easy-to-use. A recent survey of City communications managers was conducted by Burson Marsteller on behalf of Contel IPC to establish system selection priorities. It revealed that 70% of managers put flexibility first and the reputation of the supplier second, followed by cost and size.

Flexible and Reliable Flexibility in the provision of dealerboard facilities is reflected in the trend towards modular based systems. The dealerboard is assembled around a central communications console to which may be added a variety of modules such as intercoms, flexible trading speakers, programmable speaker systems, hoot'n'-hollers, paper copy displays, electroluminescent line displays, handsets, keypads and touch sensitive screens. Dealers are thus encouraged to mix and match from the module range to suit their individual trading needs.

A commitment to lifelong system support and maintenance is the key to a supplier's reputation. When a trading system goes down the dealer is not only out of touch with the market but he may also be unable to clear his position. Thus banks and trading houses expect a rapid response level of support and maintenance. In the event of the communications system going down they expect it to be up again in minutes not hours.

High levels of Functionality Recent developments in dealerboard technology have been aimed at improving the flexibility through increased functionality, while at the same time preserving reliability.

The safest approach to ensuring reliability is through a distributed microprocessor architecture which avoids reliance upon a central CPU. All system functions are separated or distributed into independent subsystems, giving the system all the advantages of electronic intelligence without the dependence on centralised control. External to the dealerboard most suppliers provide uninterruptible power supplies as an emergency backup following a power loss.

The communications system must also be cost-effective. Thus many dealerboard system suppliers include a telecoms management information system providing meaningful management reports on line usage and control costs. They contain details on each group, position and line used and its designation.

Ergonomic acceptability is a major feature in the design of dealerboards. With space at a premium, communication managers are looking for boards with a small footprint yet high in functionality. Different methods have been used to achieve this objective. Pagination is one approach in which a bank of 40 buttons can be used to access up to 400 lines by switching selections from a separate feature button.

Integrated Services The functional integration of voice and data services is the ultimate goal for trading system suppliers. It is this area which more than any other which is going to have the greatest impact on dealerboard technology. To a limited extent such integrated services are already available. Contel IPC's Data Link represents the first step in voice and data integration. As the dealer places a call to a client, the client's record and relevant market information are automatically displayed on a PC or another market data screen. Similarly, Contel IPC can provide a facility where a host computer can generate activity or post information on the dealerboard itself.

Another approach to integration is touch sensitive screens where the dealers 'touch' the screen to set up the call. Replacing traditional keyboards, such systems have still to find a place in the market. Early systems suffered from a slower response than button systems and soon found themselves out of favour with dealers. While this fault has been largely overcome there is still a resistance by dealers who prefer the 'feel' of placing a call which is experienced with button keyboards.

Digital Technology Digital technology is having a major impact on financial institutions in the City. It promises smaller back-rooms, wider line selection, direct 2 mwgabyte line feeds and greater networking capabilities.

The only question facing communication managers is which company and technology to choose from. Most manufacturers have leapt into the dealerboard market utilising off-the-shelf PABX technologies, which usually means reliance on a centralised processor. Even though today's dual processors are extremely reliable, there is always potential for software bugs. A serious software flaw in a centralised system creates greater risk of failure than that of a distributed system.

The downside to this approach rests not only with a potential single point of failure but also with the processor's call handling capabilities. In addition, most early digital dealerboard entrants are relying on traditional E-1 technology. These entrants must separate the data and voice channels. This will negate the ability to deal effectively with the ISDN primary rate. It is Contel IPC's belief that the most advanced financial institutions will be demanding packet switching capabilities as part of their dealerboard systems by early 1992.

Technology designed for its own sake will never be widely accepted. Technology designed to meet specific business applications, however, will always succeed.

Reid Meintzer
Sales Director
Contel IPC (UK)

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BIS continued from p. v

stringent of processing needs. BIS Midas ABS software takes full advantage of this compatibility to deliver information to networked workstations. The architecture of the system is designed to maximise functionality, processing power and system security without compromising flexibility. Core processing needs are satisfied on the AS/400, while more specialised capabilities may be addressed using familiar PC based applications linked into the main system.

This host-plus-PC approach benefits users by enhancing their control over the capabilities of their system and helps protect them from the vagaries of changing market

conditions. With BIS' strategic risk management software, it becomes possible for the users themselves to specify the data they want and commission or build their own programs using familiar, PC-based software such as 1-2-3, Symphony, dBase or Excel.

The process involved in putting into place such an information strategy involves major changes, and inevitably it will be a time-consuming and often difficult process. But those banks that are successful in the creation of a structure which provides separately identifiable and manageable profit centres are the ones that will reap the benefits of greater profitability and improved performance.

TMS continued from p. xiii

These are just a few of the many questions which might deter you. Fortunately there are documentation specialists who have experience in this field and can provide advice and author resources. Before employing such a company, or doing it yourself, it's important to establish a methodology early on in the development process.

The best way to start is to carry out a broad investigative study of the whole organisation; what activities it performs, how it does them and the degree of complexity. Find out which areas within the organisation are driven mainly by formal procedures and which areas are not. Note the interfaces between work areas within the organisation and between the organisation and the outside world. It's best to begin at a high level (at director level) and work down progressively through divisions, branches, departments etc. until you reach the point where the basic unit of work is carried out. The study should identify those areas of the organisation which need procedures documentation, estimate the size of the documentation task in terms of time and cost, establish priorities, identify sources of information, and identify who will approve the procedures once they're written. The most effective procedures documentation is often produced as a result of close collaboration between the documenters and the selected 'support' staff in your company. Try and identify some in-house writing resource to work on the project.

Examine any existing procedures documentation – many forward thinking departments do write down important procedures, although often in a non-standard and ad-hoc fashion. This is all good source information and shouldn't be ignored. The study should also examine what other (non-procedural) reference documentation is available to the staff; job descriptions, staff handbooks, computer documentation, external publications and so on. The procedures documentation must fit into a coherent documentation strategy so that everyone knows where to find the information they need.

The investigative study will cover most of the strategic and planning work and therefore the results should be reviewed by company directors (especially the finance director and company secretary) and senior managers in charge of the departments affected by the proposed documentation – the next stage will be to write the Procedures Manuals.

Start with a Pilot

Early on in the study a number of key areas in the organisation will have been identified, for example areas where failure to carry out a task properly could mean loss of revenue, late payment or unreconciled accounts.

Choose one of these areas to carry out a pilot scheme prior to documenting procedures throughout the organisation. The documentation process will require time and effort from many staff; in supplying information (in written form or by interview), reviewing synopses and drafts of the manuals and in laying down specific procedures if none exist. Documenting procedures will inevitably lead to re-evaluation of the procedures themselves and the new documentation may well provoke discussion between parties with conflicting interests. The pilot scheme will be a good test of how time-consuming all these tasks are and will help formalise the full implementation.

The writing of the documentation is by far the largest part of the whole exercise and should never be underestimated. The main activities are:

- Gathering source information from the 'experts'
- Preparing and issuing synopses
- Establishing a format and style
- Writing draft procedures and issuing them for comment
- Preparing final copies for approval

Appoint someone to control the progress of the documentation and to decide on production and distribution methods (eg. which word processing package to use, where the manuals are to be printed, etc.).

If you do decide to seek professional help from documentation specialists you might consider training your staff in author skills during the implementation stages so that they can keep the documentation up to date in the future.

To summarise good procedures documentation will:

1. Support your new and relocated staff with effective and easy to understand procedures documentation
2. Protect training investment by making sure that your staff, once trained in a particular set of activities, always have a complete set of procedures documentation to refer back to
3. Help your auditors to monitor both the quality of your procedures and your staff's adherence to them
4. Help your compliance officer, if you are an SRO member, meet the requirements of the Financial Services Act

In short make sure that you have a complete set of procedures manuals and keep them up-to-date. If you don't have the right skills don't do it alone – get professional advice and trained author resource from a documentation specialist.