COUNCIL OF EUROPE

COMMITTEE OF MINISTERS

Recommendation Rec(2001)2
of the Committee of Ministers to member states
concerning the design and re-design of court systems
and legal information systems in a cost-effective manner

(adopted by the Committee of Ministers
on 28 February 2001
at the 743rd meeting of the Ministers' Deputies)

The Committee of Ministers, under the terms of Article 15.*b* of the Statute of the Council of Europe,

Considering that the aim of the Council of Europe is to achieve greater unity among its members;

Considering that modern information technology has become indispensable tool for the administration of justice and that it contributes thereby to the effective administration of the state, which is necessary for a well-functioning democracy;

Noting that among the European states a considerable number of countries are reorganising or re-placing both court management systems and computerised legal information systems, and that other countries are looking for expert advice on the setting up of new systems;

Realising that an up-to-date and cost-efficient organisation of systems will also lead to better and broader service at a reasonable cost in the justice system;

Realising that the recent changes in information technology have been, and continue to be, rapid and fundamental, and considering, therefore, that the state of the art concerning Information Technology systems in the legal sector should be ascertained;

Considering that the following principles and guidelines reflect the present status and a common denominator of the tendencies in this field in Europe;

Considering also that systems corresponding to the state of the art in the field of Information Technology and law will improve the quality, speed, efficiency and effectiveness of law and justice in the member states of the Council of Europe;

Considering, therefore, that the principles and guidelines can assist the competent authorities in the legal sector in their work,

Recommends to the governments of member states:

a.   to bring the general principles and guidelines set out in the report contained in the appendix to this recommendation to the attention of the persons and services responsible for the design and re-design of court systems and legal information systems;

b.   to take appropriate steps to ensure that these principles and guidelines are applied in the legal sector in their territory.

Appendix to Recommendation Rec(2001)2

*Report on the design and redesign of court systems
and legal information systems in a cost-effective manner*

Introduction

This report focuses on the contribution that Information and Communications Technology (ICTs) can make to the functioning of court systems and legal information systems. It considers the role of ICTs both as a support to the judicial administrative process and as an impetus for the revision of procedures and organisational practices.

Clearly electronic technologies have a powerful role to play in the modernisation of justice systems and of legal information systems, and the challenge is to harness the potential of ICTs to transform the associated processes to achieve improvements in both efficiency and effectiveness. This implies more than simply automating existing manual procedures and processes. It involves the redesign or re-engineering of processes and a significant commitment to exploiting the potential of electronically stored data to provide faster and better information with which to manage the dispensation of justice and the provision of services to users.

Besides the many technical issues to be resolved, a key challenge in this respect is to "manage the change process" which calls for dynamic and sensitive leadership. Technological developments should not necessarily be the main impetus of change, and we should be wary of adopting unquestioningly all the capabilities of modern ICTs into the legal sector, where particular requirements and conditions may need to be respected (for example, judicial independence and privacy/confidentiality). However, judges and other users of legal information systems need to be encouraged to explore the emerging possibilities that new technologies afford and to work with technical experts in modernising the legal processes in ways that better serve user requirements, promote public confidence, and which ensure an appropriate balance between the interests of justice on the one hand and cost effectiveness on the other.

The report is organised into two main sections covering:

1. strategic issues for ICT developments in the legal sector;
2. project management.

1. Strategic issues for ICT developments in the legal sector

1.1. Principles and strategic issues

It is important that the development strategy in relation to ICTs within the legal sector (as elsewhere) is based on a sound understanding of the particular circumstances, conditions and purposes of the sector in question. Thus, for example, an ICT strategy for the courts needs to take a careful account of the distinctive requirements and expectations of a judicial system. Decision-making, too, needs to be based on clear principles and aims that properly reflect those requirements and expectations. The following checklist regarding the investment in ICTs should be of particular relevance in the context of court systems/legal information systems (although it will not, of course, necessarily be the case that each aim will always be paramount):

-- *contextualisation*: adapting to the particular circumstances and requirements of the member state;

-- *cost efficiency*: improved cost efficiency and productivity in court and legal information systems;

– *speed of justice*: greater celerity in the judicial administrative process and in information retrieval/processing;

– *quality of justice*/quality of service: greater consistency of decisions etc., and in the provision of up-to-date and accessible information and other services to users;

-- *uniformity of service* (where appropriate): greater standardisation and consistency of approach and service etc.;

– *transparency of procedures*: increased openness and accountability concerning the status of cases, what procedures are being followed and other associated aspects;

verification of decisions: greater accuracy and validity of decisions/results;

– *management information*: more and better information by which to define priorities and guide the organisational management process;

– *deployment of personnel*: more efficient allocation of tasks between personnel (for example, freeing up judges from unwanted administrative functions; and allowing the delegation of tasks to the appropriate administrative levels);

– *staff workload management*: more appropriate distribution and control of workloads between staff, and ensuring the appropriate allocation of staffing resources to particular tasks;

– *simpler and more standardised systems*: more widespread use in different applications of standard components, and therefore enhancing compatibility and facilitating easier interchange of staff, etc.;

– *conformity with standards*: compliance with agreed protocols and international standards;

– *support to users*: improved service and support to users from other organisations;

– *capacity-building*: developing the capacity to handle an uncertain future (for example, ensuring stability through flexibility);

– *easy to learn and use*: facilitating the process of training and skill development and the transferability of knowledge;

– *security*: greater security of data/organisational systems, and protecting privacy and confidentiality where appropriate;

– *integrity*: high standards of probity, honesty and fairness in the way legal and associated administrative processes operate.

A fundamental strategic issue to be confronted in approaching the question of investment in ICTs for legal administrative processes concerns whether it would be better to review and redesign the fundamental (legal) requirements rather than simply the administrative procedures (change the requirements themselves rather than simply the means by which they are met). Beyond this question lies a set of further strategic issues to be addressed concerning the balancing of:

– *long-term and short-term interests*: for example, investing for an uncertain future or simply for the immediate circumstances, which raises questions about ability to forecast future needs and technical possibilities and the economics of short-term investment decisions;

– *standard and custom-designed systems*: for example, investing in standard easy-to use/learn systems that have similarities with other applications to facilitate user training and development, or in more purpose-designed and bespoke systems that are likely to be more demanding for staff to learn;

– *automating existing procedures and transformation* (redesign) of procedures: for example, investing in systems that simply replicate by electronic means the existing conventions and protocols or adopting a business process re-engineering approach and using the opportunity of the investment to rethink fundamentally the approach and detailed practices;

— *in-house and out-sourced development*: for example, investing in the expertise of design and implementation of systems within the organisation or contracting out the design, development and/or running of the system to expert consultants. If deciding upon an 'out-sourcing' approach, it may still be valuable to retain some in-house expertise, for example, for contract negotiation and monitoring;

- *centralised and decentralised responsibility*: for example, establishing where the responsibility should best lie for development, financing, and management – the ministry of justice or the individual court, for instance. While there may be procurement advantages and standardisation efficiencies with a centralised approach, a price may be paid in terms of loss of flexibility and responsiveness to local circumstances (though much here will depend on the size and population distribution of the country in question).

On each of these issues there are both advantages and disadvantages to be weighed up against one another (the key ones of which are summarised in the table below). At times it may well be appropriate to pursue elements of both strategies, for example, with some out-sourced and some in-house development simultaneously, or some centralised functional responsibility and some decentralised. The best choices with regard to these options may also vary depending on the circumstances of the particular member state (for example, geographical size, traditions and capacities).

1.2.   Typical advantages and disadvantages of different options

	Long-term interests	**Short-term interests**
Advantages	Planning is more structured	Use of more up-to-date technology
	Control is easier	Quicker results/impact
	Potential for overall greater cost-effectiveness	Managers likely to be more interested and committed
	Possibility of more tailor-made solutions	Easier to respond to uncertainty (progress in small, manageable steps)
		Potential for lower costs of known technologies
Disadvantages	Danger of chosen technology becoming outmoded	Possibility of mistakes
	Problem of motivating interest by managers	Reliance on ready-made existing solutions
	Increased complexity involved	Greater reliance on out-sourcing

	Standardised systems	**Customised systems**
Advantages	Easy to use/learn and maintain	Purpose-designed
	Cheaper to buy and maintain	
	Likely to support greater inter-organisational communication	
Disadvantages	May be less appropriate for the application	Costly
	Users may have specific needs that cannot be met	Higher training requirements
		Making changes is likely to require re-employment of specialists (at extra cost)

	Automating existing procedures	**Redesigning existing procedures**
Advantages	Understood by users	More cost-effective in the long-run
	Minimal resistance from staff	More suitable for users in the long-run
		Opportunity to build in appropriate controls
		Opportunity to think of whole system and co-operative links
Disadvantages	Procedures may not lend themselves to automation	Takes more time and causes disruption
		Staff may be dissatisfied with new ways of working
		May be dependent on higher order decisions (for example, changes in legislation)

	Centralised management	**Decentralised management**
Advantages	Overall planning and control is made easier	More responsive to local circumstances
	Efficient use of staff in a flexible manner	Encourages local competition and greater productivity
	More specialist advice can be provided	Closeness to end users
	Capacity to deliver/provide the same service everywhere	Incentives to local managers to exercise responsibilities

Disadvantages	Risk of over-concentration in one place (for example, large-scale failure)	Labour-intensive/duplicative and costly
	Remoteness from end-users	Risks loss of common standards and compatibility
	Dependence on good communications	Loss of staff flexibility
Responsibility	Low discretion, and therefore motivation, for local managers	Requires sufficient experience for development at decentralised level
	Insufficient understanding of local needs/expectations	

	In-house project management	Out-sourced project management
Advantages	Maintains control (especially important in case of design)	More capacity for innovation in private sector (at the outset)
	Having expertise available may be cheaper in the long-run	More/wider experience with technology
	Ability to compare/compete with outside providers	Potential for greater R&D and investment resources
		Transfer of administrative burden/risks to another party
Disadvantages	Build-up of specialist "capacity" that is hard to shed/adapt	Loss of innovation once in service delivery mode
	Lack of expertise on newer technologies and innovation	Loss of in-house expertise (and growing dependence on external suppliers)
	Administrative overheads	Loss of in-house control
		Extra costs of undertaking contract compliance
		Extra costs of paying VAT and a profit margin to a private supplier
		Risk of over-dependence on the provider

2. Project management

2.1. Introduction

An effective system of project management should ensure:

– control of the project's progress;
– transparency of financing arrangements;
– clear structure of responsibilities;
– user participation .

The management of large-scale IT-based projects in the legal field (for example, case-management systems for courts or other legal information systems) can be best described in terms of seven major stages (discussed below in chronological order):

- project management arrangements;
- needs assessment;
- architectural design;
- programming and installation;
- user testing, acceptance, training and implementation;
- use and maintenance;
- system evaluation.

Often private sector companies will be involved on an out-sourcing basis in the development of the systems. But it is important that principal responsibility for the first three phases of the project (strategic planning, needs assessment and architectural design) should remain on an in-house basis (albeit undertaken with the benefit of experience of external consultants where appropriate skills are unavailable in-house). Principal responsibility for the latter stages – programming and installation, user testing, implementation and training, and use and maintenance phases may be out-sourced, provided that comprehensive specifications are drawn up for the contractors and good systems of quality control are in place. It is also important that the project is rigorously evaluated from the earliest stages, and ideally by an independent body, to check compliance with the agreed specifications and that the intended standards and objectives are being met. In many instances, a project management partnership between an in-house team and external consultants, arranged on a suitably long-term basis, is likely to represent an effective way of working, balancing the interests of in-house control on the part of the "purchaser" with the innovation-mindedness and wider experience of those from the outside.

The special characteristics and nature of different legal information systems and of the work of different courts impose a number of conditions upon the process of designing and implementing new computer systems. Data security, accessibility and ease of use are obviously especially important. In addition, however, these issues are often complicated by local organisational factors such as:

– geographical and organisational dispersion/access to the legal information service or courts;

  the scale and volume of work transactions undertaken in relation to the legal information system or courts;

– the nature of links and necessary co-operation with other organisations and existing information transfer/exchange arrangements.

In general, information technology enables greater uniformity in the design of legal information systems and in the administration of justice. This may have long-term benefits. But in the short term – in the implementation phase – there are often likely to be transitional difficulties as varying local practices adjust to comply with new, more widely applied, standards.

2.2.   Project management arrangements

The diagram below provides an illustration of the kind of management organisation typically required for a complex project in court automation. Inevitably, the model is of a generic nature and the details would need to be developed according to each country's particular circumstances and requirements. However, it does highlight some of the key issues to be considered in devising organisational arrangements for such a project, and it particularly highlights the importance of separation between the contribution of the steering group, the user group and the quality assurance group.

Schematic organisational model for project management

USER GROUP	STEERING COMMITTEE	QUALITY ASSURANCE GROUP
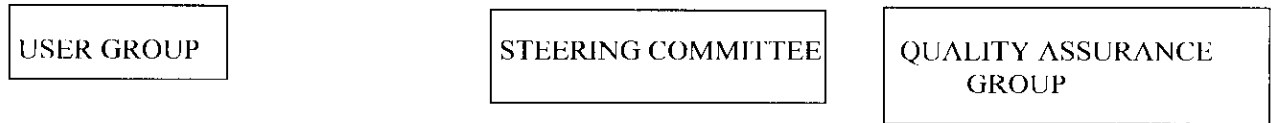
Chaired by a senior user
to serve user interests
by providing feedback on:
– the specification of needs;
· acceptance;
– evaluation;
– filter for any proposed changes;
– information on other requirements.

An influential chair appointed by government or supreme court.

High level authority to approve proposals.

An independent
consultancy service
to undertake an audit
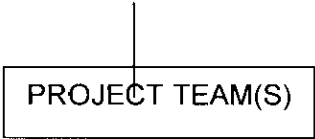function. Not
involved in supply
or commissioning.

Membership to include:
– judges;
– Bar associations;
· notaries;
– court presidents;
– civil servants.

PROJECT MANAGEMENT
Commissioning interests
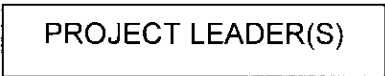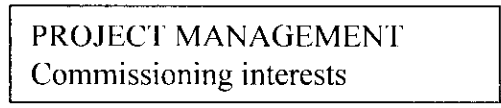
PROJECT LEADER(S)

Requires good organisational skills and knowledge of legal system (for example, a judge or a combination of a judge and an IT specialist).

Other project leaders could be appointed for particular tasks (for example, draft proposals for new laws or legal procedures or to redesign the legal framework).

PROJECT TEAM(S)

For day-to-day management and conduct of the work; comprised of representatives from all interested groups, *inter alia* user groups, with knowledge of ICT design principles and legal functions (including expert users such as: judges, prosecutors, clerks, legislators and system designers).

2.3. Needs assessment

This should involve a careful mapping and analysis of the existing systems and of requirements, including the following:

– the procedures which the new system is to cover, for example, the particular legal requirements and background (laws and bylaws);
– the organisational arrangements, for example, the existing organisational processes and routines through which the procedures are currently executed;
– the existing data record-keeping systems, for example, the manual legal information systems;
– the inter-connectivity with other organisational/agency systems;
– the prospects and potential for re-engineering the processes system.

It is often helpful to plan user requirements in diagrammatic form, for example, in a court context:

– the register of cases;
– the register of parties;
– auxiliary functions – scheduling, deadlines, statistics, money collection arrangements;
– templates and printing requirements;
– connections to other systems (for example, the transfer of register information and access to legal information).

Such a diagram might usefully document:

a. *the existing systems in terms such as:*

the case definition;
– the parties;
– the procedural acts and decisions;
– the summary;
– the legal institutes;
– the legal base.

b. the information channels, i.e. connections between entities, for example:

– which parties are allocated to the case;
– which particular legal provision is a base for a particular case.

c. data migration required in the transfer from the old to the new system that shows how each element of data in the old system is to correspond with data in the new.

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2.4 Architectural design of ICT systems

In many states the development of information technology within court administrative contexts is now entering a more advanced phase characterised by greater emphasis on the exchange of information and support for the whole "working process". In terms of content, there are some common features about court procedures (despite differences in the ways different courts operate within and between states). These common features suggest that a common approach to the development of systems, both in terms of design, implementation and maintenance would be beneficial. For example, it is generally helpful for the architecture to involve the deployment of application servers between the clients and the database servers.

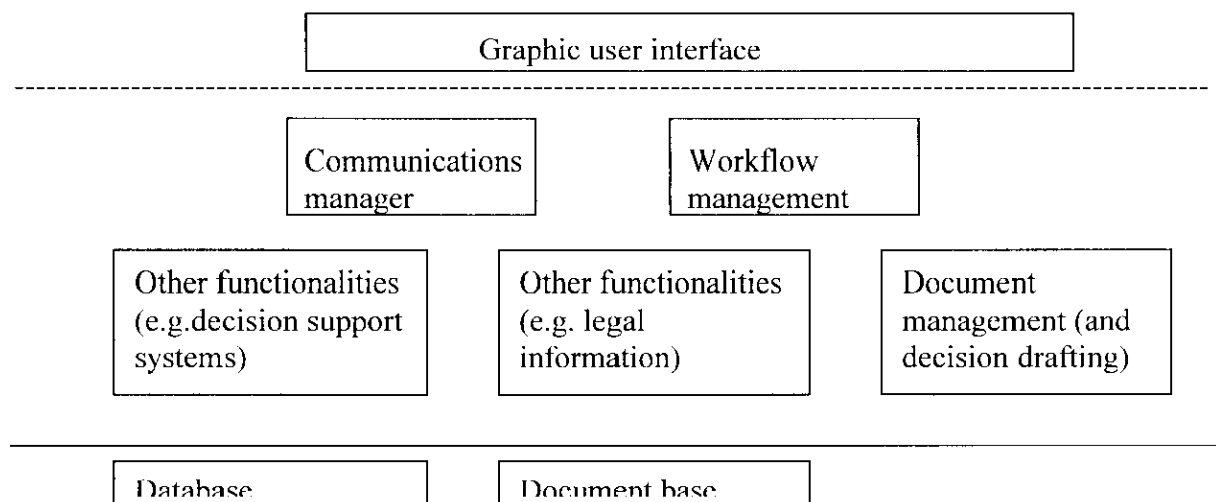However, the architecture should generally enable:

– the re-use of existing systems and integration of different types of application and technologies;
– the use of different types of equipment (for example, PCs, NCs, different operating systems);
– the use of internet technology;
– the installation of a system which is simple to use, secure, flexible and expandable;
– easy access of end-users (and minimum of confusion);
– reliable performance.

In terms of system design, it is vital to establish an appropriate architecture for the system which will distinguish between the key elements or components: communication manager function, (including Internet interface), database function, document files, workflow management function, document management function and graphic user interface. Thinking of each of these as a separate component is likely to facilitate good design in terms of security, flexibility, accessibility and potential for expansion/development. Access by end-users to the particular applications via servers is generally likely to be a good approach in that it reduces the potential for confusion (for example, over different versions), increases reliability and supports organisational and work integration.

2.4.1 Appropriate architecture

The introduction of common elements has important implications for the development of individual applications, and for the architecture of the whole information system (in terms of hardware and software). An appropriate architecture is likely to involve the use of a tier of application servers to ease the load at client level. This is likely also to increase security and reliability of operation. It is also likely to offer efficiency benefits in terms of reduced staffing levels for support and maintenance. It also makes for a more uniform environment for clients, and allows a level of supervision of the system not easily achieved in more distributed architectures.

Schematic architecture for a court-based ICT project

Graphic user interface

Communications manager	Workflow management

Other functionalities (e.g.decision support systems)	Other functionalities (e.g. legal information)	Document management (and decision drafting)

Database	Document base

In defining the architecture of the court information systems, there are two levels of system definition to be considered:

a. organisational level – focusing on the needs and expectations of the organisation and their implications for the types of system and design;

b. technical level – taking account of new developments, trends and prospects in computing and information systems generally and the potential for establishing new functionality and different ways of operating.

At the first organisational level a strategic view should be adopted, starting from the uniform internal logic of existing court procedures (which often follow a common pattern despite detailed differences in individual cases). The information needs of users, and the particular security and reliability requirements, probably demand systems that process data in a "distributed" manner. There is also likely to be the need to monitor the operation of the courts (and their subdivisions) in terms of performance and in relation to other management information (for example, relating to personnel, finances and costing). Whatever the particular jurisdictional responsibilities and caseloads, there are almost always common tasks to be undertaken, such as the allocation of courtroom space/time, assignment of judges to cases, scheduling of cases, production of public records and other documents such as the court registers, summonses, lists of parties attending, etc. These can thus often be standard packages within an otherwise tailored system. The following diagram provides an example of a case management system and emphasises the importance of considering the process as a whole and all the parties who have parts to play.

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2.4.2.   *Use of common elements of the case management system*

Persons participating in court procedure
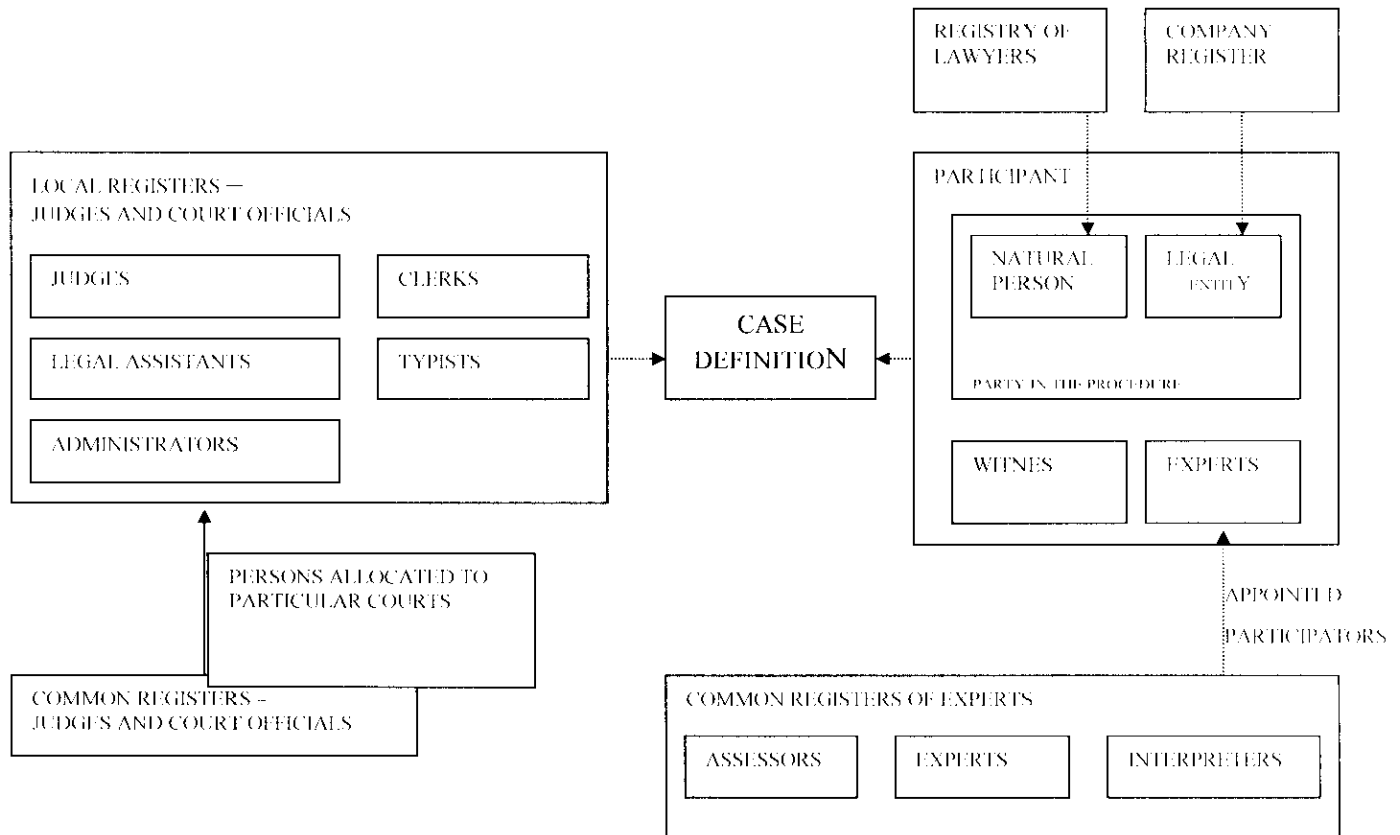
At the technical level, it is necessary to start from the given circumstances and particular conditions which restrict and define the selection of the architecture of the information system, such as:

– the particular geographical dispersion of courts;

– the particular infrastructure (LANs, WAN, operating system, e-mail);

– the scale of the operation (for example, the number of staff likely to be using the system);

– the particular needs for security and reliability of the system;

– the particular requirements for access of the system (for example, by internal and external users);

– the particular volumes of transactions anticipated on each of the individual subsystems.

2.5. *Programming and installation*

The programming and installation phase is obviously a particularly important one to manage effectively. This involves careful consideration of the development of the component parts and of the changing state of the art of programming. It calls for a thorough review of the tools now available and for account to be taken of a number of other factors and possibilities including the list below (which experience suggests will be especially important to bear in mind).

2.5.1. *Programming*

– It is likely to be worth adopting a state of the art programming language (such as JAVA).

– The possibilities for reusing existing software, however, need to be explored.

– It will be important to stick as closely as possible to the structured plan and sequencing in undertaking the analysis, design and coding.

– It is vital that sufficient staffing resources are available at all stages from the outset.

– Possibly the duration of this phase of the project may be reduced by using more programmers.

  For larger projects (with more than four programmers), it will be helpful to organise programmers in teams.

– The implementation of good quality control procedures at the outset is important.

– Similarly, attention should be given from an early stage to the production of training materials (manuals, examples and so on).

– Clear procedures need to be instituted from the start for approving any changes to the specification (for example, ensuring that there is documentary evidence of changes to made, an estimation of effects in terms of time and cost).

2.5.2.. *Use of structured standard formats*

– Use of formats such as XML is to be highly recommended.

– It enables the relatively easy exchange between in-house systems (for example, with word-processing) and those outside (for example, electronic filing).

– The use of data fields within text is recommended to facilitate the production of electronic forms, easy navigation, data entry from word processor, document-printing on local PCs from the server as well as the host and for good display on monitors.

2.5.3. Installation/roll out

– There needs to be a detailed roll-out plan with arrangements made for backups and contingencies for dealing with foreseeable difficulties.

– The process is best done in the shortest time possible (to minimise the complications of operating with dual systems).

– A standard installation set should be designed and developed (if necessary, different sets may be used for different hardware).

– Similarly, a standard installation procedure needs to be defined and developed.

– A good system management process must be instituted.

– Staff training should be co-ordinated with actual rollout (and if the number of users is high, for example, above 500, it may be worth considering computer-aided training).

2.5.4. Migration/transfer of data between systems

– Migration/data transfer between the old and new systems will need to be carefully planned as part of the installation (for example, migration from paper to electronic form and from one electronic form to another).

– Careful consideration needs to be given to identifying all the data that has to be transferred, and to that which will not be needed any more.

– What data can remain on the old system and be accessed from there; and what are the associated costs of maintenance/availability of the old system? Alternatively, what are the costs of transfer to the new system, and what editing and other work may be involved?

– What data needs to be converted into the new system, including the costs and time involved in transfer from paper systems using graphical formats (for example, Adobe pdf).

– Often it will make sense, in terms of time and costs, to retain paper systems in paper format in archives rather than convert it into electronic format.

– The transition time from one system to the other should be as short as possible:

– only if absolutely necessary should users of the new system have access to the old. To provide such access could involve considerable time and money for short time gain);

– when two systems are in place simultaneously, it is vital that there is clarity and precise rules about who has when the right to edit data on one or other system and when).

– It will be helpful to undertake the transfer in a logical way that follows the flow of data (for example, the transfer civil procedure data before enforcement data, or first instance data before appeal data, or prosecution data before criminal procedure data).

– It will also be useful to take into account any anticipated future data migration requirements and to use standard database formats and query languages (for example, SQL).

2.5.5. Summary recommendations

– Design the system to be open, scalable and based on modern technologies.

– Use Internet facilities to unify the interface between data within and other data outside the system.

– Assure the security of data access from inside the system and protect the system from any possible unwarranted intrusion from outside.

– Use encryption and electronic signature to assure the integrity of data inside the system.

– Use replica databases on servers that are for public access.

– Ensure that data in the system is backed up wherever possible and that there are adequate back-up procedures in place.

– Ensure that effective system recovery procedures are in place and that they are tested regularly.

– Develop a good communication infrastructure and centralised system administration in order to reduce to a minimum management costs.

– Try to use the same environment wherever possible for the application to ensure user-friendly interfaces and common conventions for users.

– Be prepared to modify procedures wherever appropriate if this will facilitate the use of ICTs in a cost effective manner and so long as no other problems are created as a result.

– Maintain and use the old system for a while alongside the new one and at least until all the necessary security measures and checks have been satisfactorily completed.

– Collaborate from the outset with other agencies and institutions with which co-operation is necessary in order to ensure compatibility (and, where appropriate, the interchange of data between systems).

2.6.   User testing, assistance, training and implementation

This will generally cover three phases:

a.   User testing in a pilot phase

By this we refer to the testing and initial implementation by the designers, and the procurement and installation of the equipment at an agreed number of locations (typically a subset). At each such site, there will need to be training for the users on the running system and an assessment made of the design and of any changes needed in the light of experience. A formal report will be required on the conclusion of this phase.

b.   Acceptance

It needs to be absolutely clear who has the authority to accept the project as having been satisfactorily completed and the responsibility for taking this decision. Ideally, the Quality assurance group should be involved in the acceptance of the project to bring the appropriate measure of independence and critical appraisal to the decision.

c.   Training and implementation

– Procurement of equipment for the whole system;
– Training of trainers for the system;
- Training of users by the trained IT staff;
– Going live with the new system;
-- Establishing a budget for the running and maintenance of the system;
   Reporting on the benefits expected of the new system.

User training needs to be carefully planned from the very earliest phases of a project. Effective training from the implementation phase onwards will be especially important. Private sector providers associated with the project may well play a part in the training, but responsibility for training provision should generally not be out-sourced unless there are very comprehensive and specific contract specifications. In any event, the training programme needs to be planned in conjunction with user representatives, whose "front-line" experience is likely to be vital in drawing up an effective training regime, and to winning support and co-operation from staff.

Equally important as the training programme is the establishment of a help desk service from the implementation phase. This may be organised on a central basis using state-of-the-art software that allows simulation of the user's screen and to give advice via special dedicated networks. Alternatively it may be decentralised and involve more staff being available to respond to problems at each of the sites where the systems are being operated. It is easy to be over-optimistic and underestimate the number and complex nature of demands for this type of help desk service, particularly at the early stages of implementation. Failure to resource such a service adequately is likely to undermine the success of the project in the short-term and generate much unnecessary frustration and disappointment. It is also important to ensure that those staffing the help desk are suitably trained and knowledgeable to solve the variety of problems that could arise. In this context, it may be helpful to involve some of the programmers (software application developers).

2.7. Use and maintenance

Once the information system is fully implemented the focus turns to use and maintenance. In this phase the organisation can expect to start to benefit from the investment. But the cost of use and maintenance can itself be considerable. It is estimated that over the life span of the system 60% to 70% of total cost of ownership will be the running expenses. This should be borne in mind from the outset of system development. Each investment in applications will generate structural expenses in the years ahead.

Technical maintenance consists of two major items:

– correction of errors that show up during the use of the system, and

– migrating the system to new versions of the operation system and middle ware.

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Among this issues to consider in this context are the following:

– The objective is to keep the system up and running and maintaining compliance with the original specifications.

– Functional maintenance pertains to changing the system to adapt to the needs of the users and covers issues that would not have been covered by the original design and specification.

– Functional maintenance may be necessary because of new needs arising or recognition of problems not initially identified but highlighted by use of the system.

– User groups can provide a useful way of identifying such functional maintenance needs.

– Scanning changes in the user environment (for example, changes in law of procedure) must be an ongoing task.

– Given limited resources, all desired adaptations to the system will need to be prioritised and planned.

– It should be clear from the start who has the authority to decide in these matters.

– When changing the system the overall architecture of the system must be respected and the organisation of data should follow professional standards of data design to ensure the facility to re-use system parts and data.

– Except in emergencies, the results of technical and functional maintenance should be routinely compiled into new versions or releases of the system.

– Every such release requires testing of the relevant parts and a procedure of acceptance.

– It is important that the system documentation and user manuals are updated with every release.

– Communication about the new release to IT staff and end-users are also a normal part of procedure.

As a system gets older, maintenance tends to get more complex and more expensive. Particularly if large additions have been made, there may be problems of system stability and performance may deteriorate. The time may come when it is better to save on maintenance and start thinking instead about renewal of the system. In order to establish the right time for this, it is necessary to keep track of costs of maintenance and running versus a record of user (dis)satisfaction. Management of a system pertains to the full life-cycle of the system, from development until phasing out.

2.8. System evaluation

It is important that a framework for evaluation is decided from the outset so that appropriate monitoring and data-collection procedures can be put in place.

– The evaluation should relate to the aims and principles established for the project (i.e. the particular items from the list of fourteen above).

– The evaluation should also provide the opportunity to take stock of new developments and possibilities that have come on stream since the project commenced. Thus it should not solely be set in terms of initially defined aims.

– The criteria for evaluation should be explicit and specific.

– The evaluation should be undertaken independently of project management, either by a separate in-house team or by external consultants.

– The evaluation should be seen as an opportunity for learning and for review/change of procedures.

A number of specific issues (of both a policy and technical nature) will have to be addressed in designing and implementing an IT system within a court or other legal data-processing context.

These include:

– how archiving will be organised;

– how to check the authenticity of documents and the identification of users (for example, by electronic signature);

– how far to modify procedures to suit the potential/limits of the new systems (re-engineering);

– how to arrange the migration/transfer of data between systems;

– how to ensure security of data and of the system, protection of personal data and to control access to data;

– how to link different systems (for example, case management systems and legal information systems);

– how to make use of the opportunities provided by Internet, Intranet, Extranet, Hyperlinks/SGML/XML.