**EUROPEAN COMMISSION FOR THE EFFICIENCY OF JUSTICE
(CEPEJ)**

**Toolkit
for supporting the implementation of the Guidelines
on how to drive change towards Cyberjustice**

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> *This document was prepared by the Working group on the Quality of justice (GT-QUAL)*
> *of the CEPEJ*
> *based on a preparatory work of Harold Epineuse, scientific expert (France)*

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Foreword

Through its Guidelines on how to drive change towards Cyberjustice, adopted in December 2016, the CEPEJ intended to take a critical look at the implementation of Information and Communication Technology (ICT) within European judicial systems in the recent years, to foster reflections on the underlying principles which should guide their deployment, and to highlight the most commonly encountered challenges by public decision-makers in this connection. Part II of the Guidelines focused on this latter aspect, by emphasizing the need to include ICT development as part of an overall strategic approach to improve the way the justice system operates and by providing a number of lessons learnt from concrete experiences of application of ICT projects across Europe. Indeed, one of the Guidelines main objectives is to accompany and support national authorities in carrying out cyber justice change management processes and meeting related challenges.

Confronted with an increased demand for support in this field in the framework of its cooperation programmes, the CEPEJ has taken the step to draw up a Toolkit for supporting the implementation of the Guidelines on how to drive changes towards Cyberjustice. **The Toolkit intends to be a practical instrument for policy makers and for all those involved in the implementation of CEPEJ cooperation activities**. It includes*:*

- - **An executive summary of the key guidelines and principles on how to drive change towards Cyberjustice***.*
- - **A roadmap to support the design and the management of an IT strategy in a justice system**.
- - **An executive outline to support the building of a Case Management System (CMS) with a user perspective**.
- - **A checklist on the different steps and actions to be taken while designing, developing and implementing an IT project within a justice system**.
- - **And a grid for evaluating the different dimensions of an IT project**.

These documents share the same objective of helping public decision-makers to effectively manage the processes of digital transformation in the justice sector. These documents are intended to : (i) provide a simpler understanding of the different principles and steps that are defined in detail in the guidelines, (ii) clearly highlight the measures to be taken by decision-makers when implementing an IT project and (iii) easily identify any gaps and/or actions to be taken in this regard. In a complementary way, the documents on the governance strategy of information systems in the field of justice and on electronic case management systems (CMS) aim to help public decision-makers to meet the challenges in these specific areas.

The toolkit has been developed bearing in mind operational needs and for this reason is designed to evolve over time with different inputs and contributions from CEPEJ experts, in the light of newly available information on this area or the needs identified in the framework of cooperation programmes. Hence, it will be reviewed and enriched on a periodic basis by the CEPEJ Working Group on the quality of justice and the CEPEJ experts.

Tool #1 - KEY GUIDELINES AND PRINCIPLES ON HOW TO DRIVE CHANGE TOWARDS CYBERJUSTICE

This document provides a summary of the CEPEJ Guidelines on how to drive changes towards Cyberjustice.

Introduction

1. Driving change has proven to be a key factor in both the success and failure of policies when it comes to developing and delivering information systems (Guidelines, § 66).
2. Public decision-makers are invited to take into account the following 7 principles in driving change towards Cyberjustice[1], which stem from practical experience and lessons learnt in implementing Information Technology (IT) projects across Europe.

I. General principles

A. Improving quality of justice as the driving factor behind the deployment of Cyberjustice

1. Improving efficiency and effectiveness of judicial systems is nowadays one of the main reasons behind the deployment of Cyberjustice. Yet, it is crucial that **such deployment takes account of both the requirement to guarantee higher quality standards for the public justice service and of the expectations and needs of justice system professionals and users** (Guidelines, § 3, § 71).
2. **IT does not constitute an end in itself but a means available amongst others** to policymakers, professionals and parties to proceedings **of improving the way the justice system operates** (Guidelines, § 3, § 71). It should be a means for accomplishing certain reforms for the benefit of the justice system (organizational structure, judicial map, simplified procedures, etc.) rather than as a response to pressure from either in-house department (whose sole concern may be to cut costs) or hardware or software companies looking for new business opportunities (Guidelines, § 71). **IT should be part and parcel of an overall strategy for modernizing the judiciary and improving the quality of justice**, formulated via clear, measurable and verifiable objectives (Guidelines, § 79).
3. Public decision-makers should **consider carefully whether the demands to modernize the judiciary coming from the IT industry and the public meet public interest** and quality of justice (Guidelines, § 69). It is important to **maintain a certain detachment from everyday technological applications** (Guidelines, § 70).

B. The need for a tailor-made approach to the needs of the judiciary in implementing Cyberjustice

1. When designing IT projects, due account should be taken of the many non-technical aspects peculiar to the needs of the judiciary that will feed into the information system and help ensure that it is of practical relevance once deployed (Guidelines, § 72).
2. **The changes brought about by the introduction of information technologies need to be supported**. IT upgrade should be part of a wider strategy for change that allows sufficient room for measures to support everyone affected, in order to convince them of the individual benefits to be gained. **Coaching of staff is an essential part of any IT projects** as it allows

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[1] "Cyberjustice" encompasses all the situations in which the application of information and communication technology forms part of a dispute resolution process. (Guidelines, § 2)

for a better rate of application and a stronger diffusion of the implemented tools, as well as the right application in line with the proposed goals (Guidelines, § 73).

3. **It is vital to conduct a comprehensive review of existing technologies applied to the judiciary at large before embarking on projects of some size**. A better understanding of existing provision and a 360-degree view will make for a finer appreciation of the challenges involved and enable a proper strategy for change to be developed, by identifying all the existing connections between users and beneficiaries, both direct and indirect, and the likely impact on each one (Guidelines, § 74).

4. **The issue of security in the context of information systems needs to be handled pragmatically**, bearing in mind that there exist solutions to prevent and mitigate cyber threats. Between security that is so lax it endangers the digital system and security that is so tight it stifles any initiative, a middle way needs to be found and clearly articulated in a policy that seeks to manage risks, rather than simply avoid them (Guidelines, § 76).

5. **Comparison is a useful exercise for an IT project** and should be made both internally within the judicial system (for instance for ensuring technical compatibility with other existing solutions) and externally (by checking applications in use in other administrations or private entities or in other states, particularly when developing a new domestic IT tool) (Guidelines, § 77).

II. Start by setting clear objectives, free from all technical considerations

1. **Changes in the field of Cyberjustice should be court-driven, not technology-driven. The objectives assigned to the change should be free from all technical considerations and able to be linked to promoting judicial values**, at every stage of the project and in every detail of the information system being introduced (Guidelines, § 80 - 81).

2. **Deploying an information system requires an audit of the procedures and processes at work in the judiciary**. Cyberjustice is an opportunity to overhaul the old methods of organisation and procedural rules in keeping with the fundamental principles of procedural law and judicial organization (Guidelines, § 82).

3. **A new information system can be a means for implementing judicial reforms**. Ensuring coherence and synchronisation between legal rules on one hand, and practice and processes around the new technology on the other hand, is of key importance in this process (Guidelines, § 83).

4. **Return-on-investment calculations should be performed right from the project design stage**. They may help winning over financial officials when it comes to financing the project and contribute to a better management of the project and its evaluation. When calculating the return on investment, account must be taken of all the costs (capital outlay and operating costs) generated by the operation and any variations therein (Guidelines, § 84 - 85).

III. Consider the basic criteria contributing to the smooth deployment of IT

1. The nature and age of the existing technical platforms should be considered before embarking on an IT project. **Keeping or replacing the existing infrastructure entails consequences which need to be carefully measured** (Guidelines, § 87). **The global cost of moving from one system to another and of updating existing platforms should be weighed** (Guidelines, § 88).

2. **Special attention should be given to achieving interoperability between all those involved in the information chain both within and outside the judiciary** (lawyers, police, experts) **in the light of present and future needs**. Thinking hypothetically about the

possibilities for information flows and introducing the restrictions required at any given time via appropriate rules on security and confidentiality provides greater flexibility and is more cost-effective than having a closed system restricted to a single user group, with no possibility of allowing wider access, or at least not without further capital outlay and technical complications (Guidelines, § 89).

3. **Similar levels of IT infrastructure must be in place** in order to ensure a successful deployment of the IT solution in question and its use by the defined stakeholders (Guidelines, § 90). Deployment in a "degraded mode", varying according to the users' needs, may be considered (Guidelines, § 91).

4. **When using external service providers, public decision-makers should be particularly careful in defining the legal arrangement and the public-private sector working methods. Users need to be closely involved in the design and execution of the IT solution in question** (Guidelines, § 95-96).

5. The decision to use a private-sector provider to host judicial data can involve significant risks for public authorities. **The utmost attention needs to be given to issues relating to the ownership of the data and the applicable law. Finally, the public authority must ensure, if not to require from their service provider, to deliver the whole of the relevant documentation** useful to the handling, the analysis, and the recovery of the information system. This is an essential condition for exercising its freedom vis-à-vis the provider as a beneficiary of the service (Guidelines, § 97).

IV. Allocate appropriate resources commensurate to the project's goals

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1. **When allocating resources to IT-based projects, due account must be taken of all the direct and indirect costs involved in introducing new technology and new professional practices**. That means the costs entailed in carrying out the project itself and implementing the technology, but also early-stage costs such as preliminary audits, and project costs incurred further down the line such as communication activities (which should be as extensive as possible, and whose targets should include officials responsible for the justice budget), providing information and training users (both professionals and members of the public) (Guidelines, § 98).

2. **The budget should be sized according to the life cycle of the project**. While under-estimating the amount of money required has caused problems for many an IT project, calls for extra funding to rescue projects, where feasible, can also cause lasting damage to the project's credibility among its beneficiaries and those in charge of the justice budget (Guidelines, § 99).

3. **It is vital to have multidisciplinary teams dedicated specifically to the project and led by a legal professional**, assisted by a technical director. Within the team, a range of skills should be available, covering the various judicial and IT aspects of the project, it being understood that areas such as ergonomics, communication about the project and its deliverables and user training are specialist skills that require assistance from experts, either within or working alongside the project team. It is obviously essential that the staff be fully available to pursue the objectives set, within the timetable agreed, hence the need for a cross-sectorial team that has a real managerial and operational freedom (Guidelines, § 100).

4. **Managing the project also requires a degree of flexibility when it comes to directing and deploying resources**, with the support of specialist staff, and without conflicts of interest with any service companies that may be responsible for building or maintaining the technical solutions adopted or conflicts of authority with other parts of the judiciary. in the case of lengthy or complex projects, it is advisable to break the project down into a series of small, specific objectives, which can be achieved within short, manageable timeframes, with any progress made being visible to the beneficiaries as well (Guidelines, § 101 - 102).

V. Closely involve future users in the development of the tools throughout the life of the project

1. **Close, on-going involvement by future users throughout the life of the project (not only at the outset) will help to make it fit to the business- related and legal challenges** and minimise any discrepancies between the needs stated on paper and how the IT specialists address them in practice. It will enable the proposed technical solutions to be reoriented, where feasible and without affecting the project schedule or cost (Guidelines, § 104).
2. In the case of the most expensive IT solutions, stress testing in a laboratory setting prior to any real-life application, using scenarios developed in consultation with legal professionals, will help to better anticipate and prevent any problems that might arise when the technology is rolled out on a large scale. Such tests are strongly recommended therefore (Guidelines, § 104).
3. Pilot sites can be used to provide feedback during the project (Guidelines, § 105).

VI. Develop a deployment policy involving all the stakeholders

1. **Delivering an IT system on time, on budget and in line with the needs expressed by users throughout the life of the project is not enough to ensure success on the ground. Special attention also needs to be paid to how the tool is deployed and to supporting change at the right level** of the judicial system in question (Guidelines, § 106).
2. **The change management process needs to be conducted across all the job categories whose practices will be affected by the new system, at every hierarchical level within those job categories, and at the same time**. Having peer reviewers at every level, i.e. individuals who are particularly knowledgeable about the project and have received training in change support, will be a major asset when it comes to deploying the system across the user community. Far from being just another step in the implementation process, this kind of two-way communication will have been embedded in the project methodology and will contribute to evaluating the results of the project by providing detailed feedback from the ground about how the changes are received and perceived (Guidelines, § 107).
3. **The training in the new technology should be geared to individuals and should be available to everyone working in the judicial environment** (Guidelines, § 108).
4. **It is also important that the training come at the right time, neither too early, nor too late, and that it be available long enough to ensure everyone has actually got to grips with the new system** (Guidelines, § 109).
5. **As well as possessing technical skills, the trainers should have judicial (or job-specific) training tailored to the functionalities of the system in question and to the people to be trained**, so that they can understand users' problems and communicate with them in a constructive manner (Guidelines, § 110).
6. **Due account must also be taken of the need to train users outside the judicial system**. Members of the public, for example, will require support in the form of appropriate online tools or individual support (telephone helplines or online chat rooms). Even in cases where the project developer is not directly responsible for it, training for external users will need to be encouraged (Guidelines, § 111).
7. **Communicating right throughout all project implementation and also when the project is over, to report on actual achievements, is essential** (Guidelines, § 112, § 116).
8. The idea is to **inform future users about the anticipated benefits of the new system**, any actions required on their part, what is supposed to happen and when (Guidelines, § 112). It is important when communicating with future users not to paint too bleak a picture of the current situation, or too rosy a picture of life under the new system. The bigger the promises, the harder it will be to keep them (Guidelines, § 113).

9. **Change support materials and services** (newsletters, information packs, handbooks, video tutorials, online training, hotlines, discussion forums) are all opportunities to connect and to rally a community around the goal of modernisation, as clearly and precisely defined at the very start of the process. This goal will be all the more likely to bring people together if it is framed in terms of promoting judicial principles to which all users (professionals and members of the public alike) can subscribe (Guidelines, § 114).

VII. From a project management culture to a truly hands-on approach to innovation

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1. **The adoption of a single, simple, clearly defined system of governance that makes it possible to separate the management of the project from the rest of the administration is essential** if the new tool is to be delivered on time and to specification. The project team should enjoy some flexibility in the running of the project and report only on the achievement of objectives (Guidelines, § 118).
2. **Effective management by the same entity throughout the life of the system should allow on-going monitoring of the specific resources expended and make it easier to obtain feedback on real achievements** (Guidelines, § 119).
3. **It is recommended to include independent experts or researchers** from a wide range of disciplines to support project management, from the needs assessment to the design and measurement of the performance of the new system and evaluation of its impact. (Guidelines, § 120).
4. **The project management process should lead the developers to place a high priority on redirecting the resources saved through the deployment of given IT solutions to other areas** (Guidelines, § 121).
5. **Rather than eliminating human intervention, computerisation should have the effect of lightening the load on people**, by freeing them from the drudgery of, say, highly repetitive tasks or tasks that provide little intellectual stimulus. **Cyberjustice can be an opportunity to unlock the potential of the individuals concerned**, whether they be judges, prosecutors, registrars, lawyers or auxiliary staff, by reassigning them to tasks which cannot or should not be performed by machines. Tasks which call for the kind of human intelligence and sensitivity that even today are the essence of the justice system (Guidelines, § 121).

Tool #2 – DESIGNING AND MANAGING AN INFORMATION TECHNOLOGY (IT) STRATEGY IN A JUSTICE SYSTEM

Introduction

This document[2] is addressed to policy makers in charge of drafting and implementing an Information Technology (IT) strategy for the justice system. It examines critical issues arising in the process of preparation and delivery of such a strategy, which have been identified among European experiences in this field in light of the CEPEJ Cyberjustice Guidelines[3] and lessons learnt in the framework of implementation of CEPEJ Cooperation programmes[4].

While the appropriate use of IT systems helps also achieve an efficient management within the justice authorities and ensure the good administration of justice for all, it is often recommended to establish a national IT strategy as a driver for the modernization of all courts, public prosecutors' offices and professional units involved in the adjudication of a case. This contributes to benefiting fully and sustainably from a consistent deployment and use of IT tools within the justice system.

The development and content of a strategy is at the discretion of the national authorities but there are certain parameters that are applicable to all. The establishment of an IT strategy for the justice system is an essential framework for any country to ensure the efficient use of information technologies at their full potential, and in particular case management systems.

Such a strategy should seek to present a sound and clear vision of general objectives and targets and the different steps that are required to implement it within a specific timeframe. The future should be defined according to the strong needs of citizens and users of the justice institutions, including court professionals. It is essential to foster their trust in the changes initiated by decision makers, and present IT tools as a contribution to a better future for any individual type of user.
The strategy shall be designed and supported at the highest level, ensuring the effective participation of every group of users who should be proactive 'ambassadors' of the plan during the implementation phase.

It is of the responsibility of the decision-makers, at the highest level to ensure effective implementation, not the technicians or project officers' who, however, will have an important role in the different teams and committees to be set up in the design, implementation and assessment phase of the strategy.

The average duration of a strategy is generally four to five years: envisaging less time may challenge effective implementation; envisaging a bigger time frame could be acceptable but this would require regular and intermediate reviews/monitoring leading to possible updates of the strategy (which entails the establishment of an update mechanism), as technology is rapidly changing.

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[2] Jacques Bühler, former President of the SATURN Working Group of the CEPEJ, made an important contribution to the preparation of this document.
[3] CEPEJ Guidelines on how to drive change towards Cyberjustice: https://rm.coe.int/16807482de
[4] Particularly inspiring to this end is the experience gathered in the framework of the ongoing Joint CoE/EU Programme on "Strengthening the Efficiency to Justice in Albania" (SEJ II).

According to the suggestions below, it is strongly recommended to proceed with preparatory groundwork to develop a strong and targeted strategy by firstly:

a) **Conducting a clear assessment of the current situation regarding IT at the national level** (tools available according to age and technical framework; assessment of use of existing IT tools by the different actors, and review of the current practices developed by all users with or without the tools; regulatory and policy framework in both cybersecurity, data protection and procedural models).

b) **Brainstorming on your vision of the justice system for the future**. What would you like to see happen? What do you think other stakeholders would like? Or would not like to happen when it comes to the use of IT? Try to generate a shared vision on the basis of which you will build your strategy.

c) **Learning from lessons from the past**: make an honest review of the previous attempts to modernize the justice system with or without IT. What worked and what did not? Why? What were the obstacles and which mistakes were made which be avoided? The CEPEJ Cyberjustice Guidelines and checklist can be of useful guidance to identify what steps went right or wrong in your implementation methodology.

d) **Imagining how to fill the gap**: what are the steps to take and obstacles to overcome in the change process from the current to the ideal situation?

e) **Planning before acting**. In what order should these steps be taken, and which obstacles should be overcome? How long should the whole process take? What are the direct and indirect costs to consider? Allocate (and do not underestimate) specific additional costs for change management.

f) **Write your strategy by addressing the different points below in two documents**; one short document that should not move until the end of your timeframe; another and long document with the possibility to adjust provisions over time in application of a review and update mechanism. Make the first document public and mobilize people around your vision. Keep the second with you to assess actions under your governance during the implementation of the strategy; assess the reality what is happening in light of what was supposed to happen. Reassess actions to be taken (back to the plan or move from the plan to something else) in light of the first document.

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1. Targets and field of activity of the IT Strategy

1.1 Scope of the strategy

The strategy intends to provide a clear and comprehensive view on how information technology will help the justice system to perform its duties by implementing solutions that supports the work of any professional involved and delivers or facilitates the transmission of information which is useful to the adjudication of a case brought to a court.
The strategy should target an ideal situation for the functioning of the justice system to be achieved in a specific time frame. A collection of solutions and means will be mobilized in an incremental manner in order to achieve the ideal situation presented in the strategy.

1.2 Field of activity

Decide from among the institutions listed below which one will be included in the strategy:
  a) Civil courts, criminal courts, administrative courts, specialised courts (serious and organised crimes courts, etc.)
  b) First instance and second instance courts, high or cassation court
  c) High Judicial Council, High Council of Prosecutors, and General Inspectorate
  d) Public prosecutors' offices

Ministry of Justice may not be included as primary user but will have access granted to the data of the system in order to fulfil its obligation to collect and analyse statistics coming from justice institutions activity. Other professionals such as lawyers, experts or bailiffs are not the primary beneficiaries of the IT strategy albeit the modernization of the functioning of the courts may affect their professional practice as well. It should be planned in the strategy to involve them in concrete IT projects that are of interest to them. They should also be invited to elaborate their own strategy with principles and actions compatible with the one of the justice sector at large.

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2. Identify and assess the expected results of the IT systems to be developed in application of the strategy (Needs based)

2.1 Adopt a needs-based approach to set up your objectives

Start by selecting from among the expected results listed below the ones that are relevant to your vision. Identify in detail for each the problem you want to address and the kind of tool or solution you think may ameliorate the issue you face in your justice system.

a) *Efficient management of the courts and prosecutors' offices*

Implementing IT solutions planned in the Strategy will lead to new working methods which will provide accurate, reliable and real time information that will support an efficient management of the professional units by: improving and simplifying the management of cases, making user-friendly tools to adjudicate the cases available, editing tasks and events calendars, providing visualisation of pending cases and backlogs, allocating cases based on programmable rules, etc.

b) *Facilitate the access to the justice - Efficient communication between parties, lawyers and courts, as well as with prosecutors' offices*

The exchange of information is instrumental to professionals involved in a case, and the quality and efficiency of this exchange of information is strongly expected by parties. The strategy should aim at facilitating this exchange while ensuring high standards in integrity and security of information.

c) *Efficient solving of cases*

Having an easy and full access to any type of information needed while adjudicating a case will result in a decision of better quality and a stronger control over the time spent on a case.

d) Efficient execution of judgements

The responsibility of a court does not end when a decision is given to the parties who expect concrete results on their situation coming from this decision. IT tools to be included in the strategy should be interoperable with specific enforcement case management systems and then able to monitor the execution status of decisions in order to provide information to the parties and compute possible delays but monitor compliance with Article 6 of the ECHR.

e) Improving legal certainty

Sharing information about the case law of any court in the country will increase professional and public knowledge of the law as the judges decide it and enhance the authority of precedents. In addition, computation of legal information based on case law will help parties assess their situation to decide whether they prefer to go to court or solve their dispute through ADR[5] (if not ODR[6]).

f) Data protection

Public authorities should ensure to all parties including legal professionals a high standard with respect to data protection, in conformity with the Council of Europe Convention on Data Protection [7] that the strategy will apply.

g) Facilitating the supervision of the courts and prosecutors' offices

Accountability can be enhanced through IT solutions that will collect information about the functioning of the courts and facilitate the production of statistics for internal and external purposes.

h) Ensuring transparency and contributing to the fight against corruption

Traceability of information and communications made possible by IT systems help monitor the implementation of procedural rules and professional duties by professionals and can provide evidence of disciplinary or criminal offences committed in the context of the court.

i) Improving the relationship with the media (accessibility, spokesperson, watchdogs)

Information Technologies can strengthen courts communication and accountability policies by upgrading them according to the level citizens get their information today, i.e. through interactive website and selected social networks.

j) Offering a reasonably foreseeable system

With more information at the disposal of the professionals and the public, the justice system is giving evidence and taking responsibility for a more foreseeable use in line with the ECHR principles on access to justice and fair trial protection.

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[5] ADR = Alternative Dispute Resolution.
[6] ODR = Online Dispute Resolution.
[7] Council of Europe Convention on Data Protection: https://search.coe.int/cm/Pages/result_details.aspx?ObjectId=09000016807c65bf

2.2 Prioritize your investment to achieve certain objectives based on an impact/cost analysis

Now that you have selected the expected results and objectives you want to pursue with this strategy, you need to assess its feasibility by reviewing each selected result using the set of criteria suggested in the table below.

You may realize that you may not be able to invest in all of them or will have to invest in one after the other in a certain period of time. You may then have to choose which one to prioritize according to the impact of each, taking into account criteria of use (how much the investment in one selected priority will impact in practice) and criteria of costs (how the investment envisaged in one selected priority will impact your budget in short and mid-term). For instance, you may realize that one selected objective has in your situation a little impact on the population concerned or management of cases that could be ameliorated, compared to the expense this investment represents. On the contrary, it may happen that one small investment in a selected objective may have an important effect on the current situation of your justice system, now or with a short period of return on investment.

CRITERIA TO PRIORITIZE YOUR INVESTMENT USING A 1 TO 3 SCALE SUGGESTED BELOW	
CRITERIA OF USE (1=low; 2=medium; 3=high)	**CRITERIA OF COSTS** (1=low; 2=medium; 3=high)
What is the final number of users concerned by the envisaged IT tool?	Will the envisaged IT tool result in an increase or decrease of resources (costs/investments)?
How much is the average number of uses per day with the envisaged IT tool?	Will the envisaged IT tool result in increase of efficiency (time management) for courts, support services (IT), infrastructures (archives)?
What is the impact of the IT tool on the solving of cases?	What is for the envisaged IT tool the time needed for the investment return?
What is the impact of the IT tool on the implementation of legislation and the justice reform?	
What is the impact of the envisaged IT tool on image and trust of the justice system?	
How is the internal acceptance of the IT tool envisaged?	

CRITERIA TO PRIORITIZE YOUR INVESTMENT USING A 1 TO 3 SCALE SUGGESTED BELOW	
What is the impact of the envisaged IT tool at the internal level, the external level, and both?	
What is the impact on the envisaged IT tool on access to justice?	

⇨ *The authority responsible for the IT-Strategy has to define each of the criteria: 'low', 'medium' and 'high' priority before deciding on the required distribution.*

For example, for the first criteria (final number of users of an IT tool): according to European experiences, 'low' may correspond to a percentage of less than 50% of users within the justice authorities, 'medium': more than 50% users within the justice authorities, 'high' where tools are used by all/most users within the justice authorities and by the public outside of the court (internet tool).

3. Clarify the status of the different IT applications to be listed in your strategy to the specific situation of your justice system

There are applications that are critical for the functioning of the institutions, in the sense that the court could not operate without these tools or would operate with major difficulties having to post-pone its activity for a few hours, one day or longer if the application was missing or out of order. To the contrary, some useful applications that are improving or facilitating the work of the institutions will not jeopardize the institutions activity if it happens that they were out of order or missing. In that case, they are called "non-strategic" applications.

As your strategy will set up the application environment, you need first to identify and specify the applications that have been already developed and implemented. As a complement and looking forward, you need to specify the applications to be developed during the lifetime of the strategy with a prioritization of choices that must be clearly established.

After having checked the applications that are already implemented and not subject to redevelopment during the lifetime of your strategy, you may use the following scale to identify which level of priority will be yours in the development of the missing applications in the context of this strategy, according to the needs and specific situation of your justice system.

☑ *application is already developed and implemented*
* development of application is of clear political priority
** development of application may be of political priority
*** development of application is not a political priority

a. *List of critical computer applications*

    i. Office suite

    ii. E-Mail application

    iii. Case management system for courts and prosecutors' offices

    iv. Law database online of the Ministry of Justice

    v. Case Law database online of the High court

    vi. Accounting application

    vii. Human resources application

    viii. Document Management System

    ix. Audio-Video recording of hearings (if mandatory by law for the validity of the hearing)

    x. Internet including network

    xi. Online justice services (e-justice/justice 4.0[8])

       - between judicial authorities
       - between parties and judicial authorities

b. *List of non-critical computer applications*

    i. Statistic tool (if non-integrated in the case management system)

    ii. Case allocation tool (if non-integrated in the case management system)

    iii. Dictating to the computer

    iv. Library database

    v. Court room reservation application

    vi. Computer assisted training / e-learning

    vii. Intranet

    viii. Help desk and ticketing system

    ix. Other small computer applications

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[8] The expression « Justice 4.0 » refers to the latest developments of digital services designed for justice systems providing electronic communication, e-filing, online dispute resolution, etc.

4. Principles for the software (purpose: help stakeholders with the categorisation of software to invest in)

a. Open source software

Open Source solutions are more flexible for future developments and generally facilitate interconnection with other systems. There are very often some Open Source technologies built in any IT service, available in the background of most software (LINUX etc.). The question that has to be answered in the IT Strategy is the degree of penetration of the Open Source tools: all tools have to be Open Source, including the tools used by the users (For example LibreOffice[9] instead of Word) or only Open Source in the background, when appropriate.

The costs of Open Source tools are generally lower than for closed source software (no licence costs, only maintenance and/or development costs). The quality of the software is generally better than closed software, because the source code of the software is visible and can be improved by everyone (with respect to the concerned Open Source Licence Rules ex: GPL v3[10]).

b. Closed source software

Some solutions are more competitive using closed source generic software. However, the questions of data ownership and data exportation must be put forward expressly and clearly so that one can check it is at the advantage of the public body.

However, if the body responsible for the IT in the judiciary decides to use closed source software, it will not have access to the source code and will depend on the owner of the tool to proceed with upgrades and required improvements. It must be checked, nevertheless, whether it is possible to add some additional functionalities or add-on tools through specific interfaces (API11).

For example, Word is a product owned by the company Microsoft. License costs are very high. On the other hand, it is the most distributed word processing software in the world. For that reason, it is generally not necessary to organise training for new employees. This is not the case when an institution decides to use LibreOffice, training is necessary, and it therefore generates costs.

c. Procurement of software

a) Principle = standard software

It is often possible to use standard or existing applications for tools that are also used outside of the justice institutions perimeter. Due to the costs and time needed for specific developments, it is useful to use standard software whenever possible, keeping in mind the possibilities sometimes offered by software providers to customize the standard software to specific needs and functionalities.

b) Exception = owned development

For some very important critical applications (like case management system or case law database) used within the justice institutions, it can be useful to develop or further develop these kinds of tools. However, it should be an exception.

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[9] https://www.libreoffice.org/
[10] GPL = General Public License (https://www.gnu.org/licenses/gpl-3.0.en.html).
[11] API = application programming interface.

5. Technical standards to be adopted by the IT strategy

It is a necessity that the strategy is clearly setting up the technical standards that will be followed by all the institutions in the development of the different applications.

a. Archiving

A dedicated policy related to the status, maintenance and process of archives must be established taking into consideration the digitalization of information which will be included in the strategy.

For example, it is necessary to define in advance:
- When a file of a case has to be transmitted to the electronic archive (without possibility to add any document after the transmission).
- Which specific documents of a file have to be archived.
- If it could be useful to create a transitory archive, without having the possibility to change the existing documents, but with the possibility to add some new document to the file (for example letters between a party and the court after the notification of the judgment).
- The format for the long-time electronic archive (for example which version of PDF/A is agreed).

The strategy has to describe only the directions and the technical details have to be defined in a distinct and specific document.

b. Ergonomic principles

Design principles should be established prior to the development of any IT tool within the strategy and guide the future developments according to the best ergonomic standards.

It is also important to have a certain homogeneity between the interfaces of different tools to simplify the use of the different tools and reduce the necessary training. For that reason, sometimes the choice will not be the newest or of the best ergonomic standard but an ergonomic standard close to what user already know and use in order to facilitate the appropriation. The IT Strategy has to precise the intention of the body responsible for the strategy in that area through the production of a distinct and specific document such as 'Charter' for design principles.

c. Electronic signature

Electronic signature is often complex and costly to deploy. Therefore, it must be thought about alternative solutions to authentify documents and their authors for immediate and effective use, if a proper system of electronic or digital signature is not possible to achieve in a reasonable timeframe.

One can think in particular also about a prior electronic or digital identification system at use in other platforms that could be used and enlarged for other purposes if the guarantees of identity checking exist.

d. Exchange of documents (compatibility of systems)

The type of the required format of documents as produced and accepted by the system must be established prior to the development of any IT tool within the strategy. Exchanges with other systems out of the justice perimeter must be ensured.

e. Structure of documents

Documents or file transmitted electronically between lawyers or parties and justice authorities or also between judicial authorities themselves (for example from prosecutor's office to court) should not only be delivered with respect to the defined format. It is also useful that the metadata of a specific file (like name and addresses of the involved parties and authorities) are also transmitted electronically to the recipient. The system then should make possible to avoid any re-entering of the metadata, even in parts. The method mostly used for that is to structure the files with XML-tags[12].

f. Certification of documents

There may be a need for the documents going out of courts to be certified. The strategy will define the degree of necessity, and the appropriate principles (by default or on demand) for certification that does provide security but do not impair a speedy functioning of the court.

g. Indexing of judicial decisions

The strategy must establish the standard for providing a unique nomenclature to identify court decisions at a national level compliant with the European standard of ECLI[13].
The mandatory part of the ECLI standard of the EU consists only in formal metadata regarding cases (country code, file number, date of decision, etc.).
The facultative part contains the possibility to index judicial decisions with keywords[14]. It is also interesting for the judges and the courts users (especially lawyers) to have the possibility to find case law related to specific articles of the national law[15].
The IT Strategy then has to define:
- What types of metadata (only formal or also keywords and article of the law) have to be assigned to a decision.
- How the metadata have to be assigned: automatic extraction of the formal data from the case management system, intellectual or automatic (with the help of a specific IT-tool) assignation of keywords and articles of the law.

h. Data protection

You are encouraged to write down your policy on data protection to specific address the justice area and make it accessible to anyone concerned with information on the redress mechanism authority responsible in the area.

6. IT Architecture

The discussion on IT architecture can become very technical. It is thus advised to request the technicians to present the pros' and cons' of each solution applied to the specific context of a justice system. Basically, the IT architecture is made up of two components: hardware and software. Here, we will deal solely with the hardware component, which comprises the computer network, servers and clients.

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[12] See for example the XML-Schema developed by the Supreme Court of Switzerland called CHJusML: http://www.datafactory.ch/chjusml/. Text is in German, but the schema is in English.
[13] ECLI = European Case Law Identifier: https://e-justice.europa.eu/content_european_case_law_identifier_ecli-175-en.do?init=true
[14] See for example: http://eurovoc.europa.eu/drupal/?q=node
[15] See for example the indexing by article of the ECHR in the database of the Council of Europe: https://hudoc.echr.coe.int/eng#{%22documentcollectionid2%22:[%22GRANDCHAMBER%22,%22CHAMBER%22]}

In very general terms, the following main variants exist for hardware architecture:

1) Variant : " Totally decentralized "
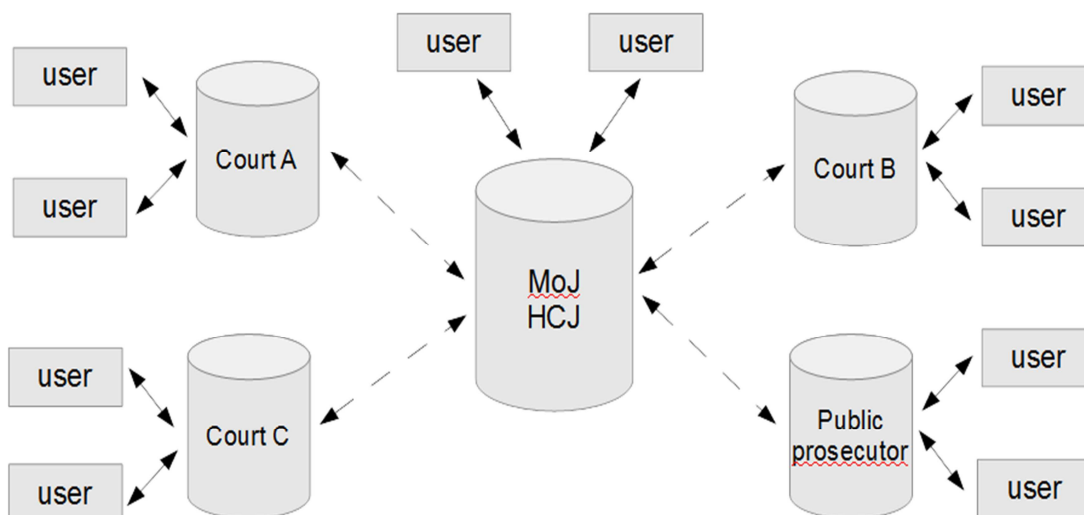
Under this variant, each judicial authority (court or public prosecutor, hereafter "decentralised entity") has its own computing centre and runs the applications and data itself. New versions of applications are made available by the central authority (ministry or body responsible for judicial authorities' IT systems). Data must be transmitted to the central authority on a regular basis.

The advantages of this solution are the high degree of autonomy that the decentralised judicial entities enjoy in terms of managing their IT systems, and the lack of dependency on IT network performance between the central authority and the decentralised entities.

At the same time, there is some risk of the decentralised entities being slow to install new versions of applications, not storing data properly or not transmitting data to the central authority. There is a risk of disparities between the decentralised entities and of complex management for the central authority.

2) Variant : " Partially decentralized "
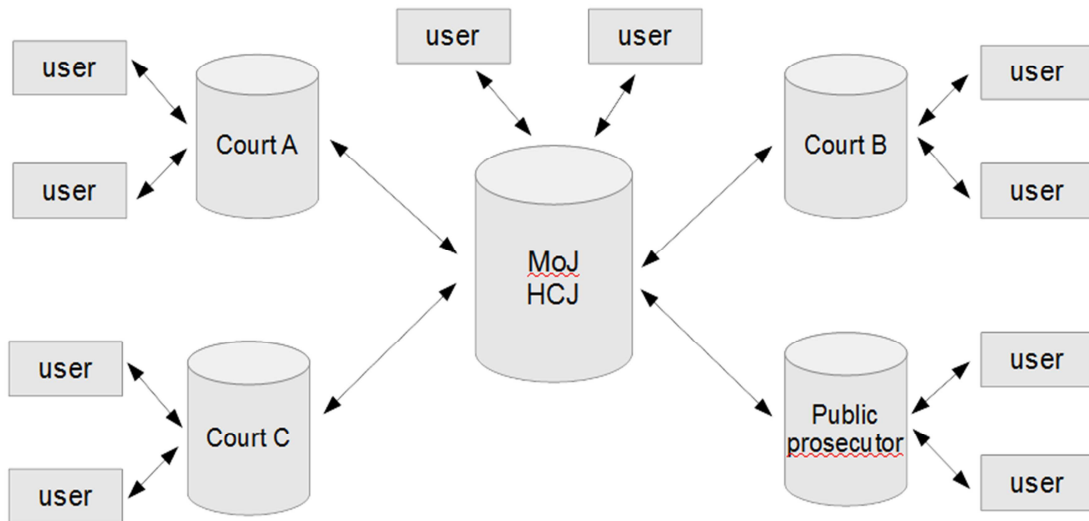
Under this variant, the applications run locally, and data are stored locally within the decentralised entities. However, the central authority (ministry or body responsible for judicial authorities' IT systems) manages the versions of the applications remotely and stores the data (again remotely).

The advantages of this solution are the only partial dependency on IT network performance between the central authority and the decentralised entities. In particular, this enables staff in the decentralised entities to work with the applications because they are installed locally.

At the same time, there is no risk of the decentralised entities being slow to install new versions of applications, not storing data properly or not transmitting data to the central authority because these operations are performed remotely by the central authority.

However, the autonomy of the decentralised judicial entities is very limited.

3) Variant : " Totally centralized "
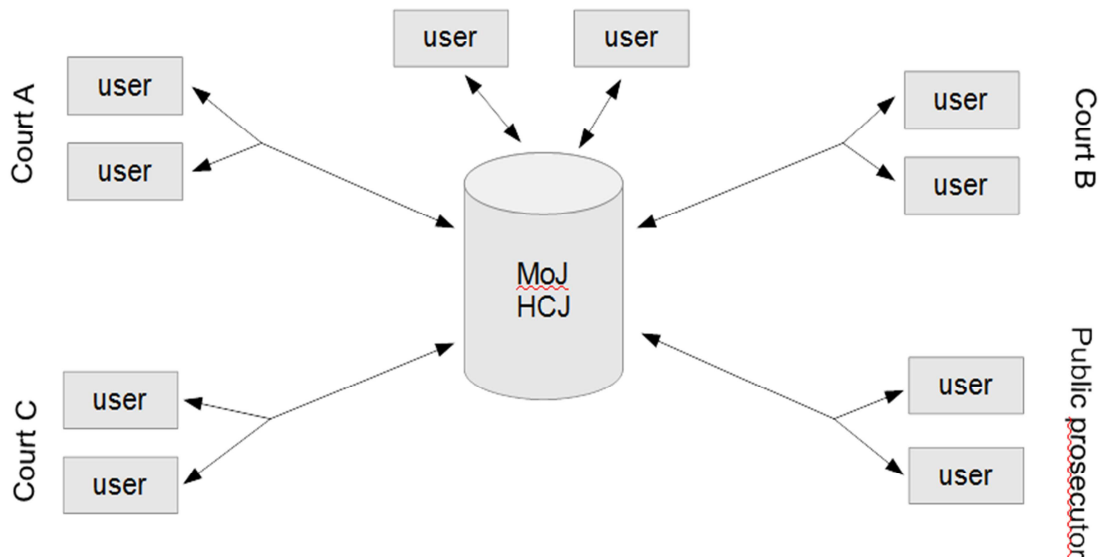
Under this variant, the applications are hosted by the central authority and the data are only stored centrally. The decentralised judicial entities are connected through the existing network to the central authority for daily use of the applications and for accessing their own entity's data.

The major advantage of this variant is the ease of management of applications and data. The major disadvantage is the total dependency on IT network performance.

a. Network
There must be a powerful IT network:
- Both within the decentralised entities of the judicial authorities so as to ensure quick response times when the applications are used.
- And also, between the decentralised entities and the central authority for transmitting data and (depending on the variant chosen) accessing the applications in use.

Given the confidential nature of the data transmitted, the networks must be secure and especially sensitive data should be encrypted for network transmission.

b. Servers
The servers can be hosted centrally and/or locally depending on the variant chosen. In any case, the applications and the data must be:
- Available around the clock (24/7).
- Hosted redundantly.

c. Clients (note that all tools should be up to date)
There are various types of workstations for using computer applications.

i.   Thin client

A thin client is a workstation with limited local memory capacity. It communicates with a central computer to use applications and access data. A powerful network is required to enable users to work efficiently (no waiting time when using applications).
The workstations are managed remotely, and applications management and data storage are performed centrally.

ii.   Fat client (PC, laptop)

A fat client is a local computer on which it is possible to run applications and store data. Management of fat clients demands more staff than for the same number of thin clients. The advantage is that users can keep on working locally if the network is down.

iii.   Teleworking

Teleworking is also in fashion in some organizations. It enables problems in terms of office premises to be addressed by allowing people to work from home for one day a week, for instance.

The necessary hardware can be provided either by the judicial authorities or by the users according to the BYOD principle (Bring Your Own Device). The judicial authority's relevant IT unit installs the applications and/or the connections necessary for teleworking. Users are subject to restrictions on use most of the time for reasons of IT security and data protection. In such a case, risks associated to this kind of solution must be assessed and be managed by the organization according to its standards.

d. Hardware/Procurement
Computer hardware and software are usually purchased through a central state procurement agency. Bulk purchasing ensures lower prices and greater hardware and software homogeneity. Given the sums involved, the threshold for calls for tender under World Trade Organisation rules is also often reached. As the procedure is complex, it is often preferable to have such calls for tenders carried out by specialists.

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7. IT Security and data protection

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a. Risk management

Periodic risk analysis is necessary for all computer applications and for the way in which applications and hardware are managed. These risks should be assessed from at least two angles: the likelihood of occurrence and the extent of the damage in the event of occurrence. Special precautions should be taken regarding the risks that are most likely and would entail the greatest damage.

The risks to be assessed include:

- Attacks on IT systems (viruses, Trojan horses, etc.)
- Hacker attacks on webservers
- Hacker attacks on internal systems
- Email data theft (SPAMs, phishing)

- Non-availability of key individuals for the smooth operation of IT systems
- Data losses due to technical/IT issues
- Data losses due to incorrect operation by individuals
- Data losses due to electricity failures
- Fires in computing or data storage centres
- Water damage (flooding) in computing or data storage centres
- Data theft (for instance, by staff)

b. Data protection

In addition to what was mentioned at 5.7 above, clear rules should be adopted in terms of document access rights, both for users in the justice system and for outside parties.

Deciding between anonymization or no-identification (on personal data protection grounds) of the documents made available to the public and the principle of open justice is necessary for each type of document and, indeed, each document. For instance, a ruling ordering the closure of a medical clinic will be of use to the public solely if the name of the clinic is published. In this example, the public interest of the clinic's potential patients outweighs the clinic's interest in not having its name published.

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8. IT services

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a. Availability: Principles (include in table per software and application)

With a view to determining the services that must be provided by the computing centre(s) hosting the justice system's applications, it is necessary to lay down the expected availability for each application or category of application.

Nb	Computer applications	Availability needed
1	Office suite, E-Mail	07h00 – 19h00 but normally 24 hours /24 Redundancy Reinstallation within 1 or 2 (to be defined) hours in case of major disaster reinstallation within 5 days (to be defined) weeks
2	Case management system	
3	Internet	
3	Law and case law database	
4	Specific strategic applications (accounting, HR, etc.)	
5	Other strategic applications	
6	Non-strategic applications	07h00 – 19h00 No redundancy Reinstallation within 48 hours in case of major disaster within 15 days (to be defined) weeks

b. Interruptions

i. Scheduled interruptions

Scheduled interruptions must if possible be announced x (to be determined) days in advance and the work must be carried out at set times on set days (for instance, Thursday evening from 19h00 to 21h00). Exceptions (interruptions at other times) must be announced if possible, at least x weeks in advance.

ii.   Non-scheduled interruptions

In this section of an IT strategy, it is necessary to determine:
- The hours during which at least one engineer (IT engineer) must be present in the computing centre (these should be the same as the guaranteed availability hours for the IT applications; 07h00 – 19h00 in the above table).
- Whether a standby service should be arranged for the hours when the computing centre is not staffed (19h00 – 07h00 in our example).
- Whether the engineers (IT engineers) should be provided with remote access to the servers to enable them to take emergency action or repair breakdowns from home.

c. IT Human resources

Depending on the IT architecture chosen, the IT staff responsible for maintenance, development and operation of the justice system IT applications and infrastructure will comprise in-house staff (central and possibly some local) or outside staff:

i. Within the justice system

In the case of strategic applications, it may be advisable for the relevant IT staff to be state personnel so as to ensure maximum availability in the event of breakdowns and in order better to respond to users' needs regarding the incorporation of improvements in the applications.

ii. Outside of the justice system (outsourcing)

As a rule, outsourcing does not pose any major problems for non-strategic applications.

iii. Helpdesk, training and superusers

User support (helpdesk) is important, especially when users are provided with new applications. The skills of the individuals concerned (first-line helpdesk) determine whether they are merely able to take note of requests and complaints and pass them on to be dealt with by IT engineers or whether they can answer questions concerning use of the applications.

When these same individuals give introductory courses concerning applications, test them and draw up the relevant user guides, they can answer most of the questions put by users without referring to IT specialists.

Under the centralised architecture variant, it is sometimes advisable to have superusers within the decentralised judicial entities who can act as local correspondents for users and for all installation and hardware maintenance work.

9. Project Management

a. Methodology of project management: how to integrate needs, then plan expectations and prioritise projects

An IT strategy should include information about the project methodology to be used for developing or purchasing new IT applications or for making improvements. A key aspect is making sure that users' needs are taken into consideration and involved appropriately from the outset of projects.

The method may be conventional: definition of objectives, then general and detailed plans followed by production and testing and, lastly, roll-out of the application, including warranty work.

The method may also be iterative (agile): definition of user needs, production of an initial version with the basic features, roll-out of the initial version with collection of user feedback in terms of reactions and additional wishes, followed shortly thereafter and subject to advance planning by a fresh production phase and roll-out of a second version. The number of jumps should be determined beforehand, and the development resources should also be set aside beforehand.

b. Overall organisation of the project management

Project governance should also be outlined in an IT strategy. In particular, the following should be laid down:
- The political authority responsible for giving the go-ahead for a project and simultaneously granting the necessary funding.
- The strategic project steering body responsible for distributing the funding granted and accepting the project milestones.
- The supervisory body responsible for checking whether the correct procedures are followed, and the funds are used properly and for the intended purpose;
- Project leadership (operational level).
- The members of the project teams (IT engineers and users).

c. Procedure for identifying needs

It is often necessary to determine beforehand the channels and bodies which users can employ for submitting any requests or complaints.

In decentralised entities, it can, for instance, be the superuser, who then passes on the points made to the central body to decide on the action to be taken. The information is then sent back to the superuser who, in turn, informs the user concerned.

d. Criteria for prioritising needs and projects

The number of projects or of requests often exceeds the development team's capacities or the available financial resources. In this case, it is necessary to determine beforehand criteria for prioritising projects.

The most widespread criteria in the justice sector include:
- The number of users concerned.
- The estimated number of times used per day and per user.
- The efficiency gains in terms of completing cases.
- The quality gain in terms of completing cases.
- The outside impact (image/trust) if the project is carried out (e.g. case law database).
- The technological risk inherent in the project.
- The estimated cost.
- Etc.

e. Categories of projects and competencies

The requests made by users do not all demand the same investment in terms of working days or money.

Accordingly, it may be advisable to have different procedures depending on the workload or the cost estimate for the relevant project or request:

i. Small projects

- Number of days / amount: (to be determined) for instance, 10 days / 10 000 euros;
- Competence / lead: IT engineers responsible for the relevant application in the justice sector's main IT centre.

ii. Medium-sized projects

- Number of days / amount: (to be determined) for instance, 50 days / 50 000 euros;
- Competence / lead: head of the justice sector's main IT centre.

iii. Big projects

- Number of days / amount: (to be determined) for instance, over 50 days / over 50 000 euros;
- Competence: committee (operational level) responsible for overseeing justice sector IT projects.

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10. Implementation of the strategy

The sequence of steps below can be followed to produce an IT strategy:

i. The body responsible for drawing up the IT strategy discusses the points set out in this document and chooses between the options proposed.
ii. The draft is then submitted to the relevant authority for approval.
iii. The strategy is circulated and implementing documents such as:
   - organisational arrangements for overseeing projects in the justice sector;
   - process for taking account of users' wishes;
   - IT communication plan;
   - etc.
   are drafted, approved and implemented.

TOOL #3 – OUTLINE ON BUILDING A CASE MANAGEMENT SYSTEM THAT SERVES THE USERS

Preparatory work by Harold Epineuse, scientific expert (France)[16]

Purpose of the document

Help CEPEJ cooperation experts and beneficiaries to identify key issues and follow strategic steps in the design and implementation of a new Case Management System (CMS). This document takes the ultimate view of the public served by the courts. It aims at identifying the supporting tool the professionals must have at their disposal to perform their task and better serve their public.

For the purpose of this document, the category of users is defined at large, and encompasses different information needs (both in nature and quantity):
- Presidents of courts, judges, clerks, court administrators and court staff in general considered as "primary users".
- Professional users out of court such as prosecutors, lawyers, experts, interpreters, bailiffs, etc. considered as "associate users".
- And finally, the "ultimate users" for various reasons from among the population (parties to a case, victims, witnesses...).

This view takes into consideration the expanding possibilities of information exchange and accountability principles accessible to the new systems. However, the document starts with and emphasizes more on the perspective of the primary users, as it is the most common view the variety of justice systems take for their CMS and what really structures the organization of the justice service delivery. Still, it must be encouraged to push the walls of the court by considering the different categories of users at once in the future system, in line with the variety of services that can be offered to the associate users or the ultimate users, either at first stage or in a further version of the CMS.

The first expectation users may have from a CMS is probably – and even before getting information – to have justice delivered more efficiently and with improved quality. Information provided by a CMS will then be a mean and not an end.

- Why a new CMS?

Managing information is essential to the adjudication of a case and the good administration of a court. It is key to the outcomes the judicial process provides to the citizens and a strong element for accountability. People do have expectations towards courts in this area. They expect courts to collect, manage, share and deliver information from which their decisions are taken with high standards and respect of the procedural values set up in the article 6 of the ECHR.

The basic information people want to have access to are information that helps them figuring out what is currently happening with their individual case, would they be a plaintiff, a defendant, an accused person, a victim, or a professional of any kind involved in the adjudication of a case (judges, court staff, prosecutors, attorneys, bailiffs). They expect to receive information and updates about a case status they are involved in all along its journey in a court, whether they can take an action and the effect this action is having on the case.
It is a court's responsibility to collect, manage, share and deliver information on a case in an

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[16] The expert thanks the following contributors for their valuable suggestions and inputs on an initial version of the document: Giulio Borsari, Simone Ginzburg, Martin and Roland Grah, Jennimari Huovinen, Villem Lapimaa, Ioannis Papadopoulos, Dory Reiling, Evar Somer and Jasa Vrabec.

appropriate manner together with the legal professions involved in the adjudication process (i.e. attorneys and bailiffs). This responsibility goes beyond information provided on individual cases to encompass information about the overall functioning of the particular court in which the case is dealt and on the overall the justice system.

Pursuing this goal, it is the justice system overall responsibility to provide the courts and the different professionals involved in the adjudicating process the right tools and methods to perform their duty. As underlined by the CEPEJ Cyberjustice Guidelines, there are a variety of solutions to promote and ameliorate court efficiency and quality which core solution still remains an evolutive Case Management System.

The purpose of a CMS is to support the collection, management and delivery of information according to the law in respond to the users' needs. From the service rendered by the first case management systems implemented by early adopters several decades ago at court levels, to the newest generation of centralized information systems now available at a nation al scale, it looks essential to consider the upgrade of any court information management system by designing and implementing a modern CMS that incorporates functionalities promoting quality and accountability of the service provided.

It might be good to consider if there are specific types of cases or streams of activities, which would benefit from more automated processes separate from the regular CMS (e.g. uncontested claims, electronic payment order…). In such a case, it is important to make sure the two systems are interoperable at least in terms of exportation of data to facilitate the work of general reporting on the court system activity.

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1. Activities to carry prior to take any action regarding your CMS

1.1 Considering the replacement of your old CMS by a new one

- Make a full and honest assessment of the functioning of your current CMS by asking yourself: a) how the current solution was?; b) what was successful and why?; c) where is room for improvement?
- Identify the place the present CMS has in the overall strategy for your justice system and the dedicated IT strategy that supports your vision for your justice system.

1.2 Set up your short term and long-term objectives targeting services you plan to offer to your court users using the new CMS

- Be visionary and look forward; building a new CMS is an investment in the future more than a remedy to the problems of the past.
- Court users are producers as well as recipients of court information. Each type of user having specific needs, Identify the type of services you expect the CMS to provide to each category of users.
- Make a clear distinction between users' expectations and needs, but take into consideration the two, and confront them.
- Refer your objectives to the justice sector strategy when it does exist and to its declination for the type or level of courts and services concerned by the new CMS.
- Gain experience from other countries and justice systems on how they planned, designed, built and implemented their system.

1.3 Scan your court environment to identify institutional partners to involve in the design and implementation process of your future CMS

- You may have partners ready to take their part of the job in the design or implementation phases of the new CMS; identify who they are and integrate them in your process.
- Identify your professional, technical and financial partners and assess their ability and willingness to contribute to your project.
- Involve the partners in the design process, since they are better able to identify their needs than anyone else.

1.4 Define your budget ability and the type of financial resources available or economic constraints to take into consideration for the CMS functioning lifelong

- Make a clear and honest assessment of your funding possibilities in the long run.
- Detail the different costs, possible savings, and estimate your Return on Investment (ROI) point.

1.5 Review the complete legal framework in place and your ability to reform it if necessary before you consider changing your organization

- Is the e-government framework, including data protection and the cybersecurity legal framework compatible with or an obstacle to your project?
- Are the procurement rules made to support your investment and spending scheme?
- Are the procedural rules compatible with or an obstacle to your professional objectives?
- Is there especially any change to be considered and included in the procedure before the new CMS operates in order to avoid last minute or ex-post changes with the risks it puts in the implementation agenda or the consequences it may have on the courts' activity?

1.6 Decide about the major orientations that will frame your work in the years to come

- Upgrade your existing system or build a new one? The answer to this question really depends on the evaluation you have conducted of your existing system and the possibilities of its upgrade from a technical and a financial point of view.
- Start with new cases only or import pending ones? There are large debates along the question of data migration. Some think you should import in the new system all cases that are pending; others think you shall only start with new cases and keep your old system running until pending cases are solved. This largely depends on the resources you can spend in data migration process, which is time is very consuming. It also depends on the possibility to keep the two systems running in parallel during a certain period of time (keeping two categories of users during that period. An alternative to consider would be to build an interface tool based of extraction of a data from the old system in order to keep the two systems separated but providing with a complete view on cases' status coming from the two systems in one single interface until the cases running on the old system are terminated.
- Insource or outsource?
- Assess the pros and cons, expected gains and potential risks of the above-mentioned options in regard to other justice systems experiences available.
- Build effective governance that includes feedback from users, both inside the courts and outside, ensuring that court leadership is fully informed and open to the expected changes.
- Identify among the justice institutions the entity that will take over the project not based only on legitimacy but also on readiness to effectively take the lead and provide consistent, accurate and timely decisions during the long life of the project.
- Set up operational and financial indicators to monitor your project and its impact.

2. Suggestions of steps to follow in designing a new CMS

- Consider building a meta-system that offers a limited amount of very flexible and powerful operations.

- As courts are under changing conditions, the new CMS must allow agility, i.e. an ability and readiness to adapt first if and when needed during its lifetime. The possibility to configure new actions and rules on the go enhance the agility of the system and better answers to the needs of the courts in a mid and long-term perspective.

- Make sure your system is designed to be accessible to Person With Disabilities both in front-office and back-office.

2.1 Identify an adjudication or a court activity area to start with, and eventually the others to follow. Define with precision what defines each area and name its finality.

Make an inventory of the following elements:
- The different actors involved, their role and expectations towards information.
- The type and number of information to manage.
- The type and number of documents to be issued by the court.

Map the different actions to take when it comes to manage information and documents:
- Collect
- Produce
- Store
- Update
- Certify
- Share

2.2 Draw up an ideal information flow chart for each area of the court activity concerned in order to map the information exchange process. Start with the "last common multiple" as a proof of concept before going into particularities.

Start building the flow chart by making a link between the different actors. For each link, specify the type of actions performed by each actor. Indicate also the information that supports or is necessary to the action of each actor, as well as the information produced by the actors as a result of the action performed.

- Identify in priority which information could be easily be provided as structured data in electronic form rather than through a document (even electronic).

- Consider all information as public by default but define then a list of restrictions (by law or other business needs) of information subject to privacy protection, sensitive or extremely sensitive with appropriate access restrictions.

- For the specification, use the following format:

> As … (a user role, for instance a judge) … *a judge*
> I need to … (define the action) … *be able to read the digital case file*

In order to … (defines the result or impact) … *be well prepared for the hearing*

- For each type of information, define where it comes from (origin), how it is incorporated in the system (manually, semi-automatic or automatic transfer from another system) and by who (the parties, a professional in or out of the court) doing what (implementing, checking quality or acknowledging reception or diffusion of information).

- Explore the necessity to include all or some of the following functions for which technical building blocks necessary to regulate them:
  - Enable external users (e.g. lawyers) to access data and documents.
  - Receive electronic data and documents from external users (e-filing).
  - Enable internal users (i.e. judges, court staff) to produce digitally-native electronic documents.
  - Send electronic communications to external users or entities (e-communications).

- Define with precision the finality of each exchange of information (the tasks or events it is linked to) and the status of information shared (confidential, sensitive, public).

- Invest in solutions (either automated, semi-automated or purely human) that monitors the quality of data on a regular basis and propose redress mechanisms such as new interface design, update of support documents, etc.

- Think about incorporating data mining possibilities in your system and the possibility to correlate with other dataset from the public or the private sector that would be beneficial to the justice system to elaborate its policies in the era of big data.

2.3 Apply the procedural framework that provides rights to access information, authorizes or makes mandatory to take action for each step and any actor, and check that the combination of the two is compliant with the fair trial principles and provisions established by article 6 ECHR.

2.4 Assess the current flow of information within a court environment and make an inventory of the methods, practices and tools that support the exchange of information (would they be electronic, paper based or even informal) for each professional organization or unit concerned, in order to identify the discrepancy between the current and the ideal situation.

- Deduct from the above possible redress mechanisms to apply to your plan either by adapting your theoretical flow to the current practices, methods and tools you want to keep, or by filling the gap between the current practices, methods or tools and the ideal situation you want these professional organizations or units to reach after the training and change management period.

- Publish a blueprint and check with your stakeholders whether it serves the purpose you assigned to the future CMS for each category of users, confronting their needs and expectations to the functionalities of the new system.

- Envisage a flexible database scheme that can easily adjust to legal frameworks changes and enables interoperability with other institutions.

- Perform a preliminary control of individual stand-alone information systems that operate independently and could be integrated in the new system in the future (e.g. registries).

- Expect your design to change with growing experience in building and testing the system. Make adjustments accordingly.

3. Suggestions of steps to follow in implementing a new CMS

3.1 Based on your vision defined above of how information supports the work of the professionals and the service provided to the different users, identify key functionalities to the CMS that will structure the organization of the court.

- Start by incorporating CEPEJ metrics[17] in your CMS to be able to produce basic statistics in real time about the activity of a court.

- Develop additional metrics that you think will help each category of professionals to have a clear idea on how they perform with certainty about their ability and willingness to use them (i.e. case weighting and automated allocation of cases).

- The configuration module should be flexible enough to allow the configuration additional metrics lifetime, including possibilities for an easy evaluation of the data entered.

- Recapitulate for each category of users (professionals in and out of the court, as well as parties) the type of information and actions they need as part of their role or the tasks they have to carry defined as the system's functionalities they have access to. This can be done by establishing a list of "points of view on a case" (e.g. "my pending cases", "my cases for which action to be taken is due in one week", etc.) assigned to users' profiles.

- Work hard on data visualisation and interfaces so that people get the information close to the action they need to take (too much information kills information) and let users test the designs as quickly and as much as possible. Ensure the shortest possible feedback loop from the design team, the builders and the users and vice-versa. Establish a unique and consistent design principles framework for the entire system.

- Apply the "good enough principle" for data to collect, manage or visualize by type of users. Being overwhelmed by information does not help much in your daily work.

- Request your technical partner to build a demo case to be tested and put under stress that will incorporate all the elements from the design phase and the implementation requirements above.

3.2 Run a test in real conditions using a pilot of the CMS and learn from the findings

- Start with the smallest possible pilot: one case, one court; scale up the piloting step by step.

- Choose the pilot court for its readiness to adopt new ways of working.

- Assess all technical aspects, relevance of functionalities and design proposed in the pilot to be able to build a consistent product in an alpha version.

- Review the consequences of the introduction of the pilot on the organization of the pilot environment and update your change management plan to your findings.
- Take into account how receptive or resistant your users are to change; court culture is usually not designed nor prepared to adopt innovation and the collaboration among all actors it

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[17] In this area, see documents published by the SATURN working group of CEPEJ: https://www.coe.int/en/web/cepej/cepej-work/saturn-centre-for-judicial-time-management

requires.

- Assess the users' skills and provide them with adequate on-the-job training and permanent learning/help desk services.

- Set up a stand-up committee under the supervision of a judicial officer in order to monitor the appropriate implementation of the system and the quality of data entered by court staff.

3.3 Submit a full report to your governance in order to decide about (launch, report or cancel) the deployment of the CMS at a large scale

- Check you have considered as many issues and anticipated as many obstacles as possible that may interfere in the deployment of the future CMS, especially when it comes to scaling up.

- Specify and prioritize what the system can do now if launched and what may be deployed later. A gradual and incremental deployment is often a better solution as it provides time for users to adapt to new routines.

- Update your financial forecasts to the situation you have assessed by reaching the point of producing an alpha version of the CMS.

- Work out a comprehensive communication plan that will support the implementation of the CMS including all the provisions you have identify to support change management (especially when it comes to tasks and jobs transformations due to the introduction of the new CMS).

- Be prepared to invest in support documents and services that do not only give a description of the system or answer to technical questions. Produce the kind of literature that stands clearly the link between the use of the CMS, the organization of the court and how the combination of the two provide the services the users expect. Use illustrations as much as possible when it comes to the description of workflow.

Tool #4 – CHECKLIST ON THE DIFFERENT STEPS AND ACTIONS TO BE TAKEN WHEN DESIGNING, DEVELOPPING AND IMPLEMENTING AN IT PROJECT WITHIN A JUSTICE SYSTEM

This Checklist inspired by the Cyberjustice Guidelines on how to drive change towards Cyberjustice provides an overview of the different steps and actions to be undertaken when implementing an ICT project within a judicial system. By marking "not implemented", "partially implemented" or "implemented" its users can get a quick understanding of the degree of implementation of a given ICT initiatives and identify further steps to be taken.

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments
Defining a project	➢ List the problems that arise in terms of efficiency and quality of the service provided: • This can involve a variety of issues such as processing times, archiving of procedures, workload distribution, management of human and material resources, budget management, internal and external communication, stock management, etc. • Various indicators and evaluation systems such as audits, stakeholder/user satisfaction surveys, consultations, statistics etc. can be used. ➢ Analyze in a systemic and multifactorial way these problems on the human, cultural, economic, social, organizational and structural levels: • Identify causes. • Identify the consequences on the system as a whole and at the local level (of the court, the judge, the user, etc.). • Identify the links between these different problems.	**§69, 70, 71, 79, 80, 81**				

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[18] Following 4 Essential steps: Defining a project; Before project implementation; Study on project impact; Project deployment.

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments
	➢ To derive objectives					
	➢ For each objective identify the associated theoretical needs					
	➢ To confront these goals and needs with the fundamental values of justice					
	➢ Among these theoretical objectives and needs, isolate those for which the use of IT tools could be a solution, regardless of what exists on the market (any modernization process does not necessarily involve the use of IT tools)					
	➢ Define the ideal-theoretical tool					
Before project implemen-tation	**A) Basis of implementation:** ➢ Take stock of existing information systems and computer tools and how they are used: • Identification of existing IT tools, systems and platforms. • Expert analysis of the technical potential of these tools, systems and platforms. • Collection and analysis of its use. • Evaluation of the ratio between the technical potentialities - effective technical use of these tools, systems and platforms. ➢ Assess the capacity of the existing system, in terms of use and potentiality, to solve the problems posed and to meet the objectives pursued and the needs associated with them	**§72, 74, 86, 87, 88, 96, 97, 101, 104, 108, 109, 110, 111, 112, 114 et 120**				

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments
	➢ Confrontation of the existing tool with the ideal-theoretical tool ➢ Evaluation of the short-, medium- and long-term cost of maintaining the existing or replacing the existing according to an expense / return on investment analysis: • Take into account the programmed obsolescence. • To take into account the stakes of interconnection of systems at the internal level, even at the international level. ➢ Deduct the chosen approach, either to maintain or to replace the existing one **B) Providers:** ➢ Choice of the service provider following a public and transparent call for competition: • To watch out for potential conflicts of interest. • Choice of service provider according to a cost / performance evaluation. ➢ Confrontation of the choice of service provider with the requirement of judicial independence ➢ Confrontation of the choice of service provider with actual needs and theoretical objectives (it is up to the service provider to adapt to the needs and aims pursued by the public service of justice and not vice versa) ➢ Confrontation of the choice of service provider with the regulations on ownership and data protection					

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments
	C) Users: ➢ Define the target user for the implementation of the project according to the objectives pursued and the needs associated with it ➢ Identify user's needs ➢ To compare user's needs with the objectives pursued (this is a kind of intermediate step of evaluation - validation; as mentioned earlier, the objectives have been defined also taking into account the values of justice that the system must guarantee) ➢ Identify structural and organizational needs (i.e. those of the implementation structure beyond user requirements) ➢ To confront these structural and organisational needs with the objectives pursued (as mentioned earlier, the objectives have been defined also taking into account the values of justice that the system must guarantee) ➢ To confront the real needs thus identified with the theoretical needs defined further on ➢ Assess users' computer skills and training needs ➢ Ensure that user training is comprehensive and usefully sequenced during project deployment: • Theoretical training					

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments

	• Practical training
	• Assessment of prior learning
	• Support before and during the deployment of the new system
	• Choice of support structures for the handing over of the tool:
	    o Tutorials
	    o FAQ
	    o Toll-free numbers
	    o Forums
	    o On-site meetings
	
	➢ Regularly assess the level of user acceptance
	
	➢ Take into account user feedback in adapting the tool during the course of the process					

Study on project impact	**A) Costs:** ➢ List all the direct and indirect costs incurred by the deployment of the new tool and their possible variations, taking into account maxima rather than minima: • Design • Deployment • Management of the existing system • Training • Technical assistance • Maintenance • Update • Audits • Communication • Risk management ➢ Define ratios - boundaries between projected	**§72, 75, 76, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 98, 99, 100 et 115**				

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments
	and actual costs to guide the project's deployment					
	➢ Analyzing funding modalities with a view to keeping in mind:					
	• The efficiency of public expenditure management. • Requirements specific to the public service of justice, in particular as regards independence. • Costs linked to the medium and long term (interests or rents, for example in the case of recourse to public-private partnership mechanisms). • Ratio of short-term capital costs to medium and long-term operating costs.					
	➢ Inventory the return on investment in the medium and long term					
	➢ Ensure that the procedure for adopting the budget is made public					
	B) Security:					
	➢ Identify security flaws and risks intrinsic and extrinsic to the IT tool and information system (all scenarios must be studied) ➢ Intrinsic security holes: • Confidentiality and access to data • Data retention • Vulnerability of the system given the state of knowledge on cyberspace • Compliance of the system with national, European and international rules on the					

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments
	protection of personal data and professional secrecy ➢ Extrinsic security holes: • Site security • Arrangements for access to support materials ➢ List the requirements in terms of confidentiality between the different users of the system ➢ Identify communication and information/data sharing needs ➢ Ensure interoperability and interconnection of the tool, system or platform with external tools, systems and platforms (including lawyers and users) ➢ Analyze these risks in a systematic and pragmatic way, bearing in mind the search for a balance between the need for security and confidentiality on the one hand, and the preservation of the system's potential for use, particularly in terms of interoperability, interconnection of tools, and ultimately, the circulation of information and data **C) Fairness of the procedure:** ➢ Evaluation of the impact of the IT tool on the current procedure: • Is the tool consistent with the guiding and fundamental principles of the procedure? (principle of adversarial proceedings and equality of arms in particular). • Should certain procedural rules be reformed to					

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments
	take account of the changes in working methods brought about by the use of this tool? (e. g. as regards the oral examination of a file, the presentation of certain procedural documents or the requirements in terms of service and service of procedural documents, for example). • Should new rules be introduced to secure procedures involving the use of this tool? (should rules be laid down in law, for example under the rules of evidence, to ensure the reliability and security of exchanges of documents or the communication of pleadings; should digital documents have the same probative value as paper documents and, if so, under what conditions?. • Should the use of the tool be prohibited for certain acts or procedures, particularly with a view to preserving a certain ontological ethics of the trial? ➢ Development of a common timetable for the deployment of the IT tool and procedural reform					
Project deployment	**A) Management:** ➢ Define the operational project management structure: • What skills and at what level? • National / local referents? • Composition of project management teams at national and local level, taking care of: - Representativeness (especially users);	**§72, 99, 100, 101, 102, 103, 104, 105, 106, 107, 112, 113, 114, 115, 116, 119**				

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments

	- Multi-disciplinarity (competence in the legal and judicial, IT, technical and administrative fields)
	• Choice of project management methodology:
	      - experimentation
	      - piloting
	      - the bottom-up
	
	➢ Define the modalities and periodicity of communication and dialogue between the different referents and project management teams
	
	➢ Ensure the quality of communication around the project:
	• Designation of communication referents at all implementation levels
	• Content of the communication
	• Frequency of communication
	• Communication media
	      - newsletters
	      - brochures
	      - practical guides
	      - online tutorials
	      - toll-free numbers
	      - forums
	• Coordination of communication
	• Adaptation of communication to the different audiences concerned:
	      - users
	      - citizens
	
	B) Evaluation:
	
	➢ Define the modalities and periodicity of the					

Step of the IT project[18]	Actions to be undertaken	Relevant Guidelines	Not implemented	Partially implemented	Implemented	Comments
	evaluation of the implementation of the project in relation to the needs and objectives ➢ Define the project's budget management modalities while keeping in mind the requirements of flexibility and autonomy (for pragmatism and preservation of the independence of the justice system): • Allocation • Periodicity • Management • Control ➢ Ensure that budgetary management and control procedures are made public ➢ Define the project evaluation method and the selected indicators ➢ Ensure that this evaluation procedure is made public					

Tool #5 – SUGGESTED GRID FOR EVALUATING IT PROJECTS

Document prepared by Harold Epineuse (scientific Expert, France) and Luigi Cippolini (scientific Expert, Italy)

1.1 Name of the ICT initiative concerned	1.2 Name of the agency(ies) or department(s) in charge of the design (D), the construction (C), and the implementation (I) of the selected ICT initiative	1.3 Name of the beneficiary(ies)	1.4 Is the project finished, on-going or planned. Provide start date/Finish date[19]	1.5 Cost of the project as planned and as actually engaged (if available) and any relevant technical details
IT Project #1	(…)	(…)	(…)	(…)
IT Project #2	(…)	(…)	(…)	(…)

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[19] You may distinguish between the following project status: a) Device completely deployed and used; b) Device being deployed (being finalized or nearly finalized); c) Device being deployed (early deployment or being deployed); d) Under testing in one or several pilot(s) site(s) or resulting from an individual initiative of the jurisdiction; e) Device not existing or being designed.

2.1 What kind of service the ICT tool is providing, by whom is it used, and how? What is the technical connection to the CMS (or to other tools)?[20]	2.2 What are the advantages of the system and gains for different actors involved (court administration, judges, court staff, court users)?	2.3 What new developments or usages could be envisaged to better fit the needs of users and benefit the efficiency of courts?	2.4 From the experience in designing, building and implementing the system, what disadvantages, malfunctions, difficulties for different beneficiaries/users, or potential risks have you identified?	2.5 Was an assessment/impact evaluation of the project conducted in the course of its implementation or after its completion? If yes, what were the results?	2.6 What is the envisaged future of the tool?	2.7. Recommendations from CEPEJ experts
(…)	(…)	(…)	(…)	(…)	(…)	(…)
(…)	(…)	(…)	(…)	(…)	(…)	(…)

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[20] It might be worth splitting the answers to this question in two or three: 1 What kind of service; 2 Who are the users ;)3 Technical connection to the CMS (case Management System) if any.

3.1 Equipment rate (% of courts where the programme is installed)	3.2 Usage rate (To what extent do people actually use the software)	3.3 Type of solution (Is it a web application or stand-alone programme?)	3.4 Technology involved[21]	3.5 Easiness of usage[22]	3.6 Promptness of the system[23]	3.7 Hardware involved : Does the software need additional hardware to be used?[24]	3.8 Cross-platform software: Is the application reachable by different devices (tablet, smartphone,...)	3.9 Training and/or help desk provided (please detail your training and help desk plan if any)
(…)	(…)	(…)	(…)	(…)	(…)	(…)	(…)	(…)
(…)	(…)	(…)	(…)	(…)	(…)	(…)	(…)	(…)

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[21] Please give an overview of the overall architecture of this solution. What kind of technology is involved for both backend and front-end point of view (e.g. Oracle, SQL server, Java, ASP.net)? What is the language used for programming such application (e.g.Java, Python, C#,...)?

[22] Please rate the easiness of usage (for the average user) on a scale from 1 to 5 where 1 means "Difficult to use" and 5 means "Easy to use"

[23] Please rate software performance in terms of response time on a scale from 1 to 5 where 1 means "Very slow" and 5 means "Fast".
Please also inform us whether the system is slower during certain hours of the day.

[24] (e.g. Scanning facility, QR code scanner, webcam, smart card reader,...).