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TOPIC BRIEF 1 -Digital transformation: From paper registries to case management

Summary

This topic brief is the first out of four accompanying a World Bank series of online workshops to support the digital transformation of judicial institutions in the MENA region. An early stage in the process of digital transformation of courts and judiciaries is moving from paper registries to digital case management. This topic brief discusses concepts, impacts to be expected and realized, technologies involved, planning, development and implementation phases of this stage. It also discusses the most important aspect of digital transformation: the values to be realized.

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Introduction

The World Bank organizes a series of four virtual workshops under the World Bank's Justice Network for the Arab World to support the digital transformation of judicial institutions in the MENA region, to be held in 2022. The workshops are planned to cover the different technologies and development stages, from the development of case management systems substituting paper based registries to the implementation of comprehensive e-justice platforms enabling the digitization of the entire business process. Other topics discussed in the workshop series will be the use of case management data for managing judiciaries, courts and court procedures and the implementation of legal information systems making the court decisions available on the Internet. This paper provides the topic brief for the first workshop dealing with the development of case management systems. It discusses aspects of development and implementation as well as the values to be realized. In the case of courts and judiciaries, these are access to justice, expedition and timeliness, equality, fairness, and integrity, independence and accountability, and public trust and confidence (National Center for State Courts, 2005) (ICCE (International Consortium for Court Excellence., 2014) (BJA (Bureau of Justice Assistance) U.S. Department of Justice., 1997).

This topic brief discusses an early stage in digital transformation, that of moving from a paper registry to a case management system.

Digital transformation is the adoption of digital technology by an organization, a company or an institution. Digital transformation is a process of many stages. Each stage has some specific elements. This topic brief discusses an early stage: that of moving from paper case registration to a case management system (CMS).

Box 1 Digital transformation

Digital transformation is the adoption of digital technology by an organization, a company or an institution. Digital transformation is the process by which organizations, companies and institutions move from traditional, paper-based processes to processes supported or replaced by digital technologies. Digital transformation considers how products, processes and organizations can be changed through the use of new, digital technologies. Digital technology (IT) can improve performance in existing practices and also present ways for creating new practices or even fundamentally changing the way services are delivered, in order to improve delivery of core values. Common goals for implementing digital technology implementation are to improve value and efficiency, and innovation. Such values can be effectiveness, efficiency and timeliness. Justice systems can use technology-based solutions to build smarter justice systems in order to improve performance in value delivery. In the case of judiciaries, those values are:

• Access to justice
• Expedition and timeliness
• Equality, fairness, and integrity
• Independence and accountability
• Public trust and confidence.

(Source: Trial Court Performance Standards, CourTools, and International Framework for Court Excellence)

Expected impact

Information technologies generally facilitate making information available and handling it. This availability of information and ease of handling can have many impacts on the way organizations, and courts in particular, work. Easier document production, more efficient case management, more effective research, these are all proven impacts of introducing work processing, digital case registries and search engines into the courts**.**

The expected impact of introducing a case management system is to have better control over the caseload and over case processing. Better control can support increased performance and service delivery and thus have direct positive impacts on the key judicial values. CMSs improve procedural standardization, legal compliance and hence legality: similar cases are treated following the same procedure. Case management systems also streamline administrative and judicial activities, and reduce procedural exceptions. They can improve efficiency and timeliness of case disposal. As is discussed in more detail in **topic brief 2**, well-designed CMSs enable collecting detailed and accurate data for statistical reporting and active case management. This may improve the transparency, accountability, and legitimacy of judicial institutions as well as timeliness of court proceedings. At the same time, since CMSs are back-office technologies, they do not directly impact access to justice.

Planning

Planning an innovation process has a number of stages. They are discussed in more detail in **Box 2**. Am example of the planning process was presented in the first online workshop (Jneid, 2022). The stages range from recognizing the problems that need to be tackled by the innovation to identifying the relevant stakeholders, to choosing appropriate technology, to setting up monitoring impact. In the case of replacing the paper registry by a case management system, the court staff are a prime stakeholder. However, they do not have experience with a digital system yet, so their knowledge is limited.

If the assessment shows that the working processes need to change, business process reengineering may be considered.

Box 2 Planning

Step 1: Recognize the current problems: In this phase, those in charge should also acknowledge and agree that things need to change.

Step 2: A more detailed assessment of the current state will need to identify issues and deficiencies more precisely. This assessment will help define the scope of the improvement initiative and highlight key processes on which to focus. Assessment of the current state needs to include identifying all stakeholders that are affected and/or have an interest in the way courts work and in the improvements to be made: the users in the courts, judges and court staff, lawyers, other justice institutions and court users.

Step 3: Once the scope of the improvement is set, a more detailed analysis should identify gaps and potential solutions. In order to have a baseline to compare performance before and after the project, appropriate performance metrics and reporting methods should be chosen. Another choice to be made at this point is, whether some work processes need to be redesigned. Some solutions may be quick wins and others more challenging and longer-term activities – priority should be given to initiatives that are easiest to achieve and those likely to yield the greatest benefits.

Step 4: Practical solutions need to be drawn up. The solutions need to be implemented by defined projects and supported by justifiable business cases. Topics to include are resource procurement and management, monitoring of external suppliers, service level management, knowledge management, and staff training and development programs. The introduction of CMS is a modernization project, and special attention should be given to skills development and the training program, which is often neglected or not sufficiently funded. A description of how to plan such a program was given in the first online workshop (Jneid, 2022).

Programs are temporary organizations to support an improvement goal, for instance shorter disposition times. Programs may include one or more projects. The projects are also temporary organizations set up to achieve a defined goal: the project result. The project result can be a new case registration system. Once the project result is delivered, the project ends.

There also needs to be a change plan for implementation. Phasing implementation properly while maintaining flexibility is important.

Benefits also need to be monitored using the performance metrics and reporting methods.

Step 5: Monitoring must be established. This should include choosing the most appropriate methods for performance metrics and reporting. Once this is done, monitoring of the achievement of expected benefits should be expected to be in operation.

Technologies

Case management systems replace the functionality of traditional court registration systems (Reiling, 2009). The functionality underlying case management systems is database technology. A database is an organized collection of structured information, or data, typically stored electronically in a computer system. A database is usually controlled by a database management system (DBMS). Together, the data and the DBMS, along with the applications that are associated with them, are referred to as a database system. The data can then be easily accessed, managed, modified, updated, controlled, and organized.

The case registration database contains information about the cases in a court or court system. On top of the case registration systems, court and case management applications can support case tracking, case planning and document management. Other applications can also generate information on the performance of courts. The purpose of case management systems is to ensure cases are disposed properly and promptly (Reiling, 2009).

Case management systems are designed by encoding the procedural rules and the working practices of the courts into software programs that streamline and guide the actions of clerks and administrative staff. Distinction is commonly made between case tracking systems (CTSs) and case management systems (CMSs). Case tracking systems perform basic data collection. Standard CMSs support the collection of case data and their use to populate standard documents (office automation). More advanced systems also offer procedural guidance, deadline monitoring, and the use of case-related data for managerial purposes. Clerks and administrative staff are the most frequent users of these systems (Cordella & Contini, 2020).

Adopting technological solutions

Technological solutions adopted for case tracking and case management systems need to be proven technology and provide legal certainty. In the technology market, there are proprietary systems, developed and owned by private companies, and custom systems developed by companies contracted by the judiciary or the government depending on the institutional features of the judiciary. There are also hybrid systems that can be adapted to user needs. In some cases, the judiciary's own IT organization develops solutions by customizing hybrid or off-the-shelf technology. However, there is not a single best technological solution fitting all court systems. National and local circumstances, opportunities and constraints must be taken into account.

Judiciaries must provide legal certainty; they are not an appropriate ground for experimenting unproven technologies. Choosing **proven technologies** is essential. Experimenting with unproven technologies is expensive and may be very time-consuming. The technologies must have proven to serve their purpose, and provide **legal certainty**. The judiciary must be in control of software code in order to have the possibility to check its compliance with procedural laws and other rules (Reiling & Contini, 2022). Other considerations are keeping maintenance and adaptation at a reasonable cost and avoiding vendor lock-in.

Rules

Legal certainty is the core product of the judiciary. To safeguard legal certainty of digital proceedings, rules may need to change.

Legal changes may be needed for different purposes: recognizing digital documents as the original source of information, digital communication as written correspondence, e-filing as a valid way of starting a legal claim.

Rules can be work process instructions, practice rules for an entire judiciary, or procedural legislation. It is advisable to amend the rules on the lowest level possible, so work process instructions before practice rules, and both of them before formal procedural legislation. This will keep the legal framework flexible and adaptable to new insights. The rules should also be technology neutral because technology will evolve, and the rules need to be sustainable.

Case registration needs to have a basis in the law. Most jurisdictions will need a legal basis for case management systems as the single form of registration instead of the paper registration. Even where the introduction of case management systems mainly affects the registration work of registry offices, it is advisable to have a legal framework that authorizes the use of the given technologies instead of the pre-existing paper-based registries. The first step is to check whether the legal basis of operation needs to be adapted in order to keep processes and outcomes legal, and then work with the judicial leadership and/or the legislator to amend the rules. It is advisable to involve leadership and reckon with required legal changes from the start of the project.

Development

This section first discusses the main approaches to development, and then the most important development practicalities.

There are two main approaches to development. The Agile approach is to develop what the system needs to do by experimenting what works best, and user testing what works technically right away to

see if the system does what the users need and can work with (Pichler, 2010) (Beck & others, 2001) . The waterfall approach specifies what the system needs to do completely, and then starts building it, testing the system when it is ready, and then implementing it in the organization. Here, each phase depends on the previous phase (Bell & Thayer, 1976). These approaches are discussed in more detail in **Box 3**.

Box 3 Development approaches

There are two main approaches to IT development: waterfall and agile. Agile development is a methodology that has become the standard for software development. Agile software development uses adaptive planning, evolutionary development, early delivery, and continual improvement, and it encourages flexible responses to change (Pichler, 2010), (Beck & others, 2001). This means that things that do not work are discovered as early as possible, and plans are adjusted accordingly. Agile development needs active involvement of system users in all phases of development and deployment. Depending on the solution to be developed, users can be court staff, judges, lawyers and others. It is possible to implement the new software in installments, once the installments have been user tested and accepted for implementation. In agile development, most common problems are limited availability of users for designing and testing and poor fit with the existing, usually bureaucratic, organization.

Waterfall was the standard methodology in the 'eighties and 'nineties and at the turn of the century. In waterfall, system requirements are mapped out completely before a project starts developing software (Bell & Thayer, 1976). The waterfall model is a breakdown of project activities into linear sequential phases, where each phase depends on the deliverables of the previous one and corresponds to a specialization of tasks: conception, initiation, analysis, design, construction, testing, deployment, and maintenance. Here, what does not work will only manifest itself in the testing phase. In waterfall, user involvement is strictly required only for setting requirements and for testing. In waterfall, most common problems are lack of flexibility when circumstances change and lack of user involvement.

The most common problems with developing case management systems arise from the different practices in the courts. If court A uses a specific term in their paper registry and court B uses a different term for what is basically the same thing, this is not a problem because each court only uses their own registry. This is a very common thing, it happens all the time. However, if the system is to work for all courts, the system needs a single term for all of them. This requires standardization, as is well documented for MENA in the example of case registration in Morocco where different practices among courts had to be aligned (Faik, 2022). Decisions about such standardization need to be taken by, and on behalf of, the judiciary/court system. Who takes these decisions with authority for the entire system needs to be decided before development starts (Reiling & Contini, 2022). These decisions also impact the accuracy and reliability of statistical data discussed in topic brief 2.

Functioning

Implementing a new way of working in courts has proven to be problematic. Courts and court systems are production organizations. They are organized to process cases, not to manage large scale change or innovate. The most common problems in implementation are the need for training and lack of readiness in the organization. Staff need to be freed up for training at the time when they are about to start using the new system. This requires planning. Readiness involves organized maintenance, adaptation and user support of the system. This requires organization.

The scale of any digital transformation is usually underestimated, because it is simply very difficult to envisage what is involved. This risk can increase when there is lack of commitment from the leadership. If the court leadership is not involved enough, the courts may not feel committed to adopting the new system (Reiling & Contini, 2022).

Impact achieved

For measuring the achieved impact, a baseline and a mechanism to measure the impact are needed. Something else that needs to be in place by the time of implementation is a mechanism to measure the impact achieved by adopting the new system and the new way of working. What value has been achieved? To what extent were the judicial values of access, legality, legitimacy, and timeliness realized?

Measuring this impact works by comparing relevant aspects of the old situation with those of the new one. Has disposition time reduced, and is the backlog of cases smaller? Has this increased the legitimacy of the courts or made access to justice easier? This means information on the old situation is needed. This is generally called the **baseline**. The baseline, the starting point of the change, needs to be ensured at the start of the development for accurate comparison. Setting up the baseline is part of step 3 in the planning process described in **Box 2**.

Judiciaries that have basic case tracking systems can then start thinking about the next step: more intelligent case management systems for more sophisticated case and court management. This is the topic of **topic brief 2**.

Further reading

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