International Journal For Court Administration

Marco Fabri, 'Will COVID-19 Accelerate Implementation of ICT in Courts?' (2021) 12(2) International Journal for Court Administration 2. DOI: https://doi.org/10.36745/ijca.384

ACADEMIC ARTICLE

Will COVID-19 Accelerate Implementation of ICT in Courts?

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The COVID-19 pandemic with the need to keep physical distance has suddenly increased the use of digital tools in all business areas and social activities, including the judiciary, demonstrating the need to accelerate the digitalisation of the handling of cases, access to justice, and audio-video communications. The outbreak has clearly displayed the problems that affects the general functioning of the various justice systems, and the limited, and often not very effective, use of information and communication technologies. The challenge now is to keep and further develop what has been useful and abandon what has been shown to be too problematic, or maybe just too premature for the time being. This paper tries to answer the question: "Will COVID-19 accelerate implementation of ICT in courts?"

Keywords: Justice; Information and Communication Technologies; COVID-19

1. Information and communication technologies (ICT) for justice systems

Over the years, information and communication technologies (ICT) have been considered a powerful tool to leverage to improve the effectiveness of private and public organizations, (Ciborra 1998; Cordella 2012, 2015).

The demand for digital services is constantly growing, internet users are increasing every year, even before the COVID-19 outbreak. The European Union's Digital Economy and Society Index Report (DESI) shows that in 2019, 85% of European surfed the internet at least once per week, and video calls grew from 49% of internet users in 2018, to 60% in 2019 (European Union Commission 2020b; 2020c). "The internet is the defining technology of our age. Connectivity and information are utilities, like electricity or water, that touch and influence every aspect of modern life" (Doteveryone 2018).

Realising the full potential of ICT is one of the key challenges for any kind of organization. For public organizations in particular, the goals are to deliver online services in line with users' needs, and to promote the usage of those services (European Union Commission 2019, Pope 2020).

The Tallinn Declaration (October 2017) provides a snapshot of the European vision on eGovernment, which is supposed to be: "open, efficient and inclusive, providing borderless, interoperable, personalised, user-friendly, end-to-end digital public services to all citizens and businesses - at all levels of public administration" (European Union Ministerial Meeting 2017, 3).

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Indeed, the deployment of ICT involves the whole public administration. The judiciary, the third branch of government, has several peculiar features that makes such a deployment quite difficult.

The challenge in applying ICT to the judiciary is to increase effectiveness, efficiency, transparency, and standardization of processes, but without impinging on the judiciary's basic and fundamental values in a democratic context, such as access to justice, independence and impartiality of judges, fair trial in reasonable time, quality of judgements.

"IT must not prevent judges from applying the law in an independent manner and with impartiality [...] Over dependence on technology and on those who control it can pose a risk to justice. Technology must be suitable for the judicial process, and for all aspects of a judge's work. Judges should not be subject, for reasons solely of efficiency, to the imperatives of technology and those who control it" (CCJE Opinion 2011, 3, 6).

In the last twenty years (Fabri and Contini 2001, Plotnikoff and Woolfson 2001, Kujanen and Sarvillina 2001, Wallace 2003, 2009, Carnevali 2009, 2020, Reiling 2009, 2010, Kallinikos 2009, Fabri 2004, 2012, CEPEJ 2016, CEPEJ 2017, CEPEJ 2019a, 2020a, European Union Commission 2020a), judicial systems have invested quite a lot of money in developing ICT infrastructures and applications. The main investments in applications can be summarised in four broad areas: 1) case law; 2) digitising case processing (i.e. case management and e-filing); 3) teleservices between courts and parties (i.e. remote access to courts via audio and video); and 4) data analytics (e.g. data warehouse, performance measurement).

More recently, in common with all other private or public business, there are also some investments by courts in blockchain technology, machine learning, artificial intelligence, and the buzz word "predictive justice", but there are only a few actual applications of these technologies in practice in courts (Fabri and Contini 2001, Fabri 2008, Velicogna 2007, 2009, EU 2020b, 2020d).

There is still a lack of empirical evidence-based studies on the assessment of ICT investment in judicial systems, but it can be safely said that the results have been quite often disappointing in many countries over the years (Contini and Lanzara 2009, Fabri 2009, 2009a, Cusatellia and Giacalone 2014, CEPEJ 2020).

A 2014 study by a Dutch Parliamentary commission on e-government in the Netherlands listed the following critical issues about the investment on ICT in the public sector, which also appear perfectly applicable to e-justice.

"a) The Dutch government does not have its ICT projects under control, b) Politicians may not realize it, but ICT is everywhere, c) The government is not achieving its policy ambitions for ICT, d) The governance structures for ICT projects are very poor, e) The government is insufficiently aware of the costs and benefits of its ICT projects, f) The government's ICT knowledge is inadequate, g) ICT project management is weak, h) ICT procurement processes incorporate perverse incentives, i) the contract management of ICT projects is unprofessional, l) the government lacks the ability to learn from its mistakes concerning ICT" (Dutch Temporary Commission 2014).

The COVID-19 pandemic with the need to keep physical distance has suddenly increased the use of digital tools in all business areas and social activities, including the judiciary, demonstrating the need to accelerate the digitalisation of the handling of cases, access to justice, and audio-video communications. The European Union Commission has stressed that "the digital transformation of the justice sector is one of the domains in which Member States are strongly encouraged to focus reforms and investments" (European Union Commission 2020d, 6).

The COVID-19 outbreak has clearly displayed the problems that affects the general functioning of the various justice systems, and the limited, and often not very effective, use of information and communication technologies.

COVID-19 has pushed, and pushes, the judicial community to make greater strides toward the digitalization of communications and processes (OECD 2016, CEPEJ 2020b, European Union Commission 2020f, Velicogna 2020), but it also shows that there is still a lot to do to reach a satisfactory use of ICT in the justice environment, notwithstanding the significant investments already carried out in the recent past.

The COVID-19 emergency has certainly disrupted consolidated working rules and practices, providing a unique opportunity to finally revise and change those that are obsolete and dysfunctional.

The challenge now is to keep, and further develop, what has been useful and abandon what has been shown to be too problematic, or maybe just too premature for the time being.

It should be part of a digital strategy for courts, also based on the COVID-19 experience, to deploy sustainable digital services, and to make these services appealing, understood, and trustworthy for both the legal community, the self-represented litigants, and the people in general.

A well-functioning justice system is essential to uphold the rule of law and enforce rights. An effective justice system is fundamental to give support to the much-needed economic recovery as fast as possible.

Courts have experienced new challenges and they have clearly shown all their weaknesses, and in some limited cases, some strengths. Rooted problems cannot be solved overnight, but courts will be called upon to deal with an outstanding amount of work in the following months, which should be tackled with new ideas, practices, and tools, otherwise the system, in many countries already in great difficulties, will completely loose its legitimacy in the eyes of citizens.

2. What ICT should be developed?

COVID-19 has just highlighted what is already well known about the development of ICT in the justice sector. Over the years, the use of ICT in the judiciary has dealt with the deployment of case management systems, electronic-filing, data and document exchange, on-line dispute resolution, law on-line, performance data for policy development, court records, and court hearing technologies.

It goes without saying that the countries that already have some of these technologies up and running have reacted much better than the others to the COVID-19 emergency. Quite often, more flexible rules have been applied to allow a better exploitation of the already available technology, which most of the time was caged in old fashion procedural rules and bureaucratic practices (CEPEJ 2020b).

In particular, the possibility for both judges and court personnel to use the case management system remotely has been extremely important to keep up the court functioning, provided the system also allows lawyers to file electronically. The backbone of an effective use of ICT in the courts' environment is a robust case management system along with electronic filing (Fabri and Contini 2003, Zorza, 2013).

Due to the lockdown, countries that lack behind in the effective usage of remote case management systems and e-filing in civil, criminal, or administrative matters have suffered, and are still suffering, a problematic disruption of their activities.

It has been well documented (Fabri and Contini 2001, Velicogna 2007, Wallace 2009, Contini and Cordella 2015, Cordella and Contini 2020) that ICT is not a panacea to achieve fair justice in reasonable time; many more organizational factors need to be addressed. However, it is crystal clear that in many countries the disruption of judicial services due to COVID-19 was much more limited if, for example, videoconferencing and e-filing had already been a common practice in the courts.

COVID-19 also showed that online resolution disputes (ODR), within or outside the courts system, is one of the areas to be developed.

As commonly known, several online commercial sites have developed their own online dispute resolution platform, to speed up the resolution of disputed claims. As far as it is known, COVID-19 has not disrupted these platforms that certainly contribute to keep the incoming cases to courts quite low in comparisons to the number of disputes that may arise from e-commerce.

In the courts, fully fledged on-line systems are usually used for small claim dispute resolutions (e.g. Money Claim Online in United Kingdom, Kalinikos 2009, Lupo 2014), payment orders (e.g. the Italian "trial on-line" *Processo civile telematico,* Contini 2000), or enforcement procedure (e.g. Slovakia's court of Banská Bystrica, CEPEJ 2017). These systems, managed by the courts, reduce the cost of the proceedings for the parties, and they may improve access to justice. However, this is possible only if the courts take the responsibility to give the correct information and to develop a friendly interface and a simple process to make the whole procedure very effective for the users.

The Parliamentary Assembly of the Council of Europe called on member States to "make voluntary ODR procedures available to citizens in appropriate cases; raise public awareness of their availability, and create incentives for participation in such procedures, including by promoting the extrajudicial enforcement of ODR decisions and by enhancing the knowledge of legal professionals about ODR". (Parliamentary Assembly 2015, 18).

Reference is also made to the need to control the contribution of ODR so that it can provide citizens with quality justice, which for European States consists in "ensuring that existing and future ODR procedures contain safeguards compliant with Articles 6 and 13 of the European Convention on Human Rights, which may include access to legal advice".

A major concern about the massive use of digital technologies in justice is to the need to grant to everyone the right to access to justice. People who are disadvantage or indigent have serious barriers to access courts if digital access is the only method provided to interact with courts. So alternative options should be designed to guarantee a multi-channel access to justice services (Parliamentary Assembly of the Council of Europe 2015; HM 2016; Houg 2012; Hough and Zorza 2012, Justice 2018, The Law Society 2019).[1]

Indeed, COVID-19 has further shown that a massive use of digital technology in justice should also be accompanied with a massive policy to grant to everyone the access to justice.

The judge must at any rate be careful to ensure that no party is placed at a disadvantage as compared with another just because it does not have the resources to access the technology.

Justice users can have very different features. Business lawyers have different needs than self-represented litigants. ICT applications should have the flexibility to tackle most of the different features and demands of their different users. Technology design should ensure the possible advantages of the use of ICT are not unevenly distributed. ICT must not worsen the access to justice for low income and self-represented litigants.

3. Remote digital hearings

Among the ICT tools, physical distance and lockdown rules imposed by the COVID-19 outbreak have increased the use of teleservices in general, and videoconferencing in particular.

"Teleservices" may be broadly defined as tools that provide digital and remote communication, from telephone to high quality videoconferencing. Some of these tools such as call-centres, chatbot, online text assistance, have already been adopted by courts to different extents and using varying procedures. The COVID-19 emergency has made their usage compulsory

[1] "Articles 6 and 13 of the European Convention on Human Rights and 47 of the Charter of Fundamental Rights of the European Union is assured as long as electronic means are not the sole means for accessing the (settlement) procedure". Court of Justice of European Union, Cases C-317/08 to C-320/08, Rosalba Alassini and Filomena Califano v. Wind SpA, Lucia Anna Giorgia Iacono v. Telecom Italia SpA and Multiservice Srl v. Telecom Italia SpA, judgment of 8 March 2010, paras. 58 and 60).

in many countries, showing both their potential but also the weakness of such systems that need to be addressed.

Videoconferencing has been the teleservice most used or demanded. The use of videoconferencing, in particular for cross-border proceedings, was already mentioned as a priority in the EU 2019–2023 e-justice plan. "However, this will involve developing national systems in close coordination at EU level, in order to ensure mutual trust, interoperability and security. Therefore, Member States should regularly exchange information about ongoing work in this area and best practices. The use of videoconferencing should not infringe the right to a fair trial and the rights of defence, such as the rights to attend one's trial, to communicate confidentially with the lawyer, to put questions to witnesses and to challenge evidence" (European Union Commission 2020, 14).

The reliability and quality of the system used to grant a constant and clear flow of voice and video, if needed, are of paramount importance. For example, the broadband used by the courts and by the parties is extremely important to support fluid videoconferencing, also taking into consideration that, generally speaking, hearings should be public. To build a robust technology infrastructure is not something that can be done overnight, but it is the fundamental foundation for the effective development and usage of digital services.

The quality and encryption of the communication are even more critical in criminal proceedings. What was not possible to properly manage during the emergency period should be carefully planned and developed now. For example, policies and procedures should be clearly established for remote hearings, taking into account the parties' rights, the requirements of a fair trial, and the privacy of communication between clients and their lawyers. Special attention should be given to vulnerable people, whether victims, witnesses, or defendants. These tools that apparently are simple, in such a sensitive context as justice, need to be fully understood and manageable by the users, particularly for those have not had previous opportunities to use them.

Therefore, online training should be organized and the responsible authorities (i.e. Ministry of justice, Court administrations, Judicial councils) should be prepared to give all the needed assistance to make it works properly. COVID-19 has showed that the lack of ICT assistance and technical support before and during the use of the technology can significantly jeopardize the fair functioning of justice. (UNODC 2020, 15).

The costs to be borne by each party and by the judiciary for the connections are also a matter to be addressed. In some countries (i.e in the United States), parties are supposed to pay for the connection with the courts, in Europe, apparently the costs of the hearing itself are supported by the courts, while parties must have an internet connection and the hardware which allows the application to run smoothly (The Law Society 2020). If the digital services are paid for by the parties, this limits the possibility to use this door to the court only to those who can afford such costs, while it creates barriers for indigent and self-represented litigants. (The Law Society 2019).

More research is needed into whether remote hearings, that have been the rule during the COVID-19 emergency, can be effectively used for all kind of cases, for example, also for those in which self-represented or vulnerable litigants are involved (The Law Society 2020).

Some studies remark that remote hearings will rarely be an equal substitute for face-to-face proceedings within a court room and before the judge in substantive matters. Removing participants from a physical court may impact on their perception of what is happening and the gravity of the case. Being unable to pick up on body language or gestures may also impact on a participant's understanding of particular points, and there is a risk of all participants feeling emotionally, as well as physically, detached from the hearing (Hough 2012, Fielding 2020, Law and Society 2020, Zou 2020).

So far, we do not know if and how remote hearings affect the judge's decision-making process and the relationship between the client and lawyer. Another question to be investigated

is whether the "appearances of parties" in person or by telephone or video, should be decided by general rules, local rules, a decision by the judges, or a request by one or both parties. In several countries, the COVID-19 emergency has also revealed a lack of common policies, and inconsistency in behaviours by various courts, as well as governance issues about the independence of each presiding judge to establish local rules of practice (e.g. courts hours and rules), instead of following the national directives given by the court administration (e.g. Norway) (The Law Society 2020, OECD 2020).

Before COVID-19 there were no analytical studies about the savings in using remote access to courts, but it is intuitive that if people travel less to court, there are clear savings in time and therefore in money, and also a positive impact on CO_2 emissions. So, these savings should be re-invested in technical infrastructures and multi-port access to courts.

However, the COVID-19 experience has clearly shown that before accepting the remote hearing as an ordinary way to appear before a court, there is a need to carry out in-depth qualitative analysis to be sure that the quality of the proceeding and the justice values are not being impaired.

Maybe hybrid solutions where the judge, and the lawyers, are in the physical courtroom, and other participants are taking part remotely, may also be more effective for certain kind of cases. These different solutions need to be assessed and studied in each country, in order to see if they may be effectively and useful for all the parties involved in the case.

Due to the sudden emergency, many judiciaries have been forced to use commercial applications for videoconferencing. Another question that should be explored if there is the possibility of developing a public infrastructure for this purpose that can grant security, privacy, and performance.

However, apart from the technical aspects, the basic question is whether judges and lawyers are culturally and mentally ready for the delivery of justice outside a brick-and-mortar courtroom once the emergency is over.

4. Are the judiciaries willing to change to finally accelerate their use of ICT?

COVID-19 has further made clear that technology challenges in-depth the role and functions of judges, clerk of courts, lawyers, and, more generally, justice seekers. ICT has already, and will much more, reshape judicial roles, rules, traditions, symbols, buildings, and practices built over the years, it calls upon for a profound rethinking of the judicial function.

Judges are challenged to change dramatically the way in which they make decisions. ICT makes it possible for most of their activities to take place remotely, using electronic files, with much less interactions with their colleagues, their staff and, even more importantly, the parties in their physical presence. In the foreseeable future, the development of machine-learning and artificial intelligence is going to further challenge the role and work of judges, as the "third impartial decision maker" as we are accustomed to regard them (European Commission for the Efficiency of Justice 2019b).

The increasing use of remote access to courts and a depersonalization of justice due to technology are going to open a highway to decision making by machine learning and artificial intelligence[2] applications (Lupo 2019).

[2] The potential and the implication of artificial intelligence in the justice domain are a point of attention of the European Union Commission which: "considers that certain uses of AI applications in the justice sector pose particular risks to fundamental rights [...] The opacity of certain AI applications can be a challenge with regard to the need to justify decisions, the equality of arms concerning parties in judicial proceedings, and other principles. Appropriate safeguards are needed to guarantee the protection of fundamental rights, including equal treatment and data protection, and to ensure the responsible, human-centric development and use of AI tools where their use is in principle appropriate [...] Algorithmic transparency is an important safeguard for accountability and fairness in decision-making. From various AI applications to ranking results in search engines, algorithms govern the way we access information online. This has large implications for consumers and businesses in areas

COVID-19 has shown how the traditional procedure and practices could, and must be changed, with the use of technology. The question is if they are going to be changed to the detriment of fair justice, or "only" to the detriment of established practices, roles and functions of judges and lawyers. For example, the need to change procedure brough about by the COVID-19 emergency, challenges the principles of oral arguments, and saw a return to a procedure more inclined to written submissions.

The clerks of the courts also face significant change, as their tasks will change with the increase of remote access to court's registers and hearings. For them, providing support to judges and parties on digital proceedings are probably going to be the most relevant activities in the near future (OECD 2019)

Digital services are changing the traditional business model of lawyers and their role as intermediary between the litigant and the courts (Susskind 2017). The expected growth of online procedures and online legal services will increase the self-representation of litigants,at least in civil disputes. COVID-19 shows that lawyers need to adapt fast to the new circum-stances and way of working, to be more responsive to the challenges ahead.

The first collection of information about the "emergency boost" to digital communications, online filings, and remote hearings, has shown a dramatic lack of familiarity by most of the legal professions with these technologies and the lack of effective support (CEPEJ 2020b).

Better use of information and communication technologies is one necessary way to try to tackle the overwhelming caseload and modernise the judicial system. Justice digital services can and must be improved to meet the needs of the justice seekers, as the COVID-19 emergency has shown.

Most of the people who work in the judicial environment are not within the "net generation", therefore training and digital education are fundamental to the ability to best exploit the opportunities that the technology can offer.

There is a need to study in depth what has been done in the emergency situation in terms of ICT usage, partnership between courts and lawyers, new procedures, protocols to adapt current legislations, and new practices, to assess which ones worked and should be maybe adopted and adapted to the non-emergency period. Mistakes that may be justified due to the emergency will not be acceptable in regular time. Distilling good practices from the emergency and enabling their continued use could be the only good legacy of COVID-19. (OECD 2020).

The development of suitable methodologies and empirical studies should be a priority to evaluate if, how much, and in which way the deployment of ICT investments have and will impact the justice system[3] (Lupo 2016).

Technology is also going to reshape our physical spaces, and also the traditional justice symbols. Remote appearances to courts and a substantial increase in online filings exchange are also going to change substantially the design and the functioning of court buildings. If the number of people attending the courts is going to decrease dramatically, the architectural design and functioning of courts building must be completely revised.

The territorial jurisdictions of courts and their geographic locations, as they have been known and draw for years, should also be rethought, with a different mind-set, due to the possibilities offered by ICT.

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such as online platforms. Understanding algorithmic transparency in an in-depth manner is key for informed policy-making" (European Union Commission 2020e, 11).

[3] For example, it has been estimated that the electronic filing and case management system used in Italy for civil proceedings (*Processo civile telematico*) has allowed to save an average of about 60 million Euro per year, just avoiding the paper communications from the courts to the parties since its deployment in July 2014 (Ministero della giustizia 2017).

With remote access to courts and judges, does the concept of the "legal or natural judge" that is a pillar of the judicial function in some countries, sometimes also stated in the Constitution, still make sense?

The outbreak has shown how reliable and timely data are essential to strategies to address problems. This has been particularly evident in the health sector, but this is, and will be, fundamental for the judiciary too, in order to tackle the demand for justice with an evidence-based approach. Courts and policymakers need to rapidly know and understand what the justice situation is to design and to deploy consistent policies with short and middle range actions. Quality data are necessary to take informed decisions (Chapman 2020).

"A prerequisite for digitalisation of the systems is the reengineering of those processes and the design of the systems supporting them, always with the citizens and businesses in mind. Digital transformation structural reform without high-level process reengineering in mind, would be of limited impact" (European Union Commission 2020d, 7).

It is vital to invest time and resources in a collaborative approach in the justice community to improve the system, reduce the length of judicial proceedings, give a quality answers in due time to people and to businesses that are looking for some certainty in very unpredictable times.

ICT infrastructures should be designed to also allow cross-country connections which are becoming more and more numerous and needed, in particular in some matters (e.g. family, commercial, expert evidence, criminal cases, etc.).

The COVID-19 crisis has showed that there is still a lack of digital literacy and practices within the judicial environment that hamper the exploitation of ICT tools. It is essential to invest in ICT literacy in the judicial system to exploit the possibilities that ICT offer (Office of the National Statistics 2019).

ICT for justice system should be futureproofed, without losing the fundamental values of independence and impartiality, which are the pillars to build trust in fair conflict resolutions in reasonable time. This may be possible through investment based on users' needs and a constant analysis of what happen in practice.

A larger use of social media should be explored to ease access to justice in a less formal way to increase the number of users allowed to contact the justice institutions.

Online justice services should cater for the most affordable and ubiquitous digital interactions. In this regard, mobile applications, still used very seldom by judiciaries, have to be much further developed.

What the design of ICT tools should achieve is quite clear: "It is important that existing and new IT tools are interoperable by default, accessible for persons with disabilities, user-centred, fast, secure, reliable, resilient and data-driven, and ensure privacy, data protection and transparency" (European Union Commission 2020d, 6). How these tools are actually to be designed and deployed is a different and a far more complicated story.

COVID-19 has also showed that complexity in the use of ICT is a terrible enemy for access to justice and equality of arms. "Keep it simple" is still a mantra in ICT development, particularly true in the judicial context. "The greatest obstacle to progress is only in part the maturity of technology; to a greater degree it is the capacity of institutions and organizations to make the changes to the actual working practices and attitudes needed to reap the benefits that the technology can bring" (Fabri and Contini 2001, 17).

The damage that the COVID-19 pandemic has brought, and that most probably will also last for several years ahead, hopefully can be counterbalanced by a positive pandemic of openness to change. This is the only way that I can see to finally accelerate the use of ICT in the judicial context.

Competing Interests

The author has no competing interests to declare.

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How to cite this article: Marco Fabri, 'Will COVID-19 Accelerate Implementation of ICT in Courts?' (2021) 12(2) International Journal for Court Administration 2. DOI: https://doi.org/10.36745/ijca.384

Published: 06 May 2021

International Journal for Court Administration is a peer-reviewed open access journal published by International Association for Court Administration.

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