Digital justice: nice to have but hard to achieve

Dory Reiling mag. Iur. PhD[1]

Our imagination is struck only by what is great; but the lover of natural philosophy should reflect equally on little things. Alexander von Humboldt

1 Introduction: Courts and information technology

Digital justice has been a buzzword around the judicial reform community for quite a while.[i] In practice, we see court systems struggle to digitalize their procedures. This article aims to provide some insights into digital justice from practical, historical and future-oriented perspectives. If we want to understand how information technology (IT) can work in courts, we first need to understand what it is that courts do. In the context of IT, we need to find out how courts process information. Whether they do so in criminal, administrative or civil cases is largely irrelevant for our question. Historically, it helps to trace the development of information technology and its uses. Finally, the article looks at ways to put information technology to good use in courts and judiciaries.

2 What do courts do?

Courts decide disputes, they also have a shadow function when their decisions are a guideline for behaviour by others than parties to a case. Deciding disputes involves processing information. How courts process information is relevant for the kind of IT that is useful for courts. Parties, be they the prosecution, someone appealing an administrative decision, a couple requesting a divorce or a party to a civil case, bring information to court. In most cases, another party is involved. The court processes the information, and at the end of the process a result comes out that is new information. Courts transform information, and turn it into new information that can be useful for the parties involved. It can also be useful for those who are not involved, but take the information as a guideline for their behaviour.
How courts process information is largely determined by two factors:

1. how unpredictable is the outcome, and
2. What is the relation between the parties?

Below is first a description of the concept.

- As a package of information comes in, that information can be sufficient to decide the outcome of the case in question. Example: a money claim that remains undefended, or a one-sided request that does not involve a second party. Cases like that belong in **group 1**. All the court does is provide a title for execution. For this outcome, no information exchange between the parties is necessary.
- In **group 2**, parties bring a proposal to court, but the law requires that court to examine the request for legality. Here, parties do exchange information, and work together to put together their proposal. Most family cases come into this group, as do certain labour cases. The cases in this group have in common that they largely deal with long term relationships and regulation is light. In this group, the court has a rather notarial role, checking whether all legal provisions have been complied with.

---

[1] Dory Reiling Mag.Iur. PhD was a judge in the 1st instance court in Amsterdam. She also designed digital procedures for the Dutch courts. She retired in 2018. Her work can be found on www.doryreiling.com.

So far, cases largely had a predictable outcome. In more unpredictable cases, more activities are needed to transform the information and make the outcome more predictable. That can be requests for further information, another reaction from the other party, a hearing, a witness hearing or a visit to a location.

- Sometimes, parties still reach an agreement between themselves to settle their dispute during the procedure. This is **group 3**. In this group, parties work together, that is, they exchange information, for a win-win outcome.
- If parties do not reach agreement, a decision by a judge is needed to bring the case to a conclusion. That is **group 4**. In this group, whether the parties exchange information is not relevant for the outcome.

This give us a first impression of the way courts process information.

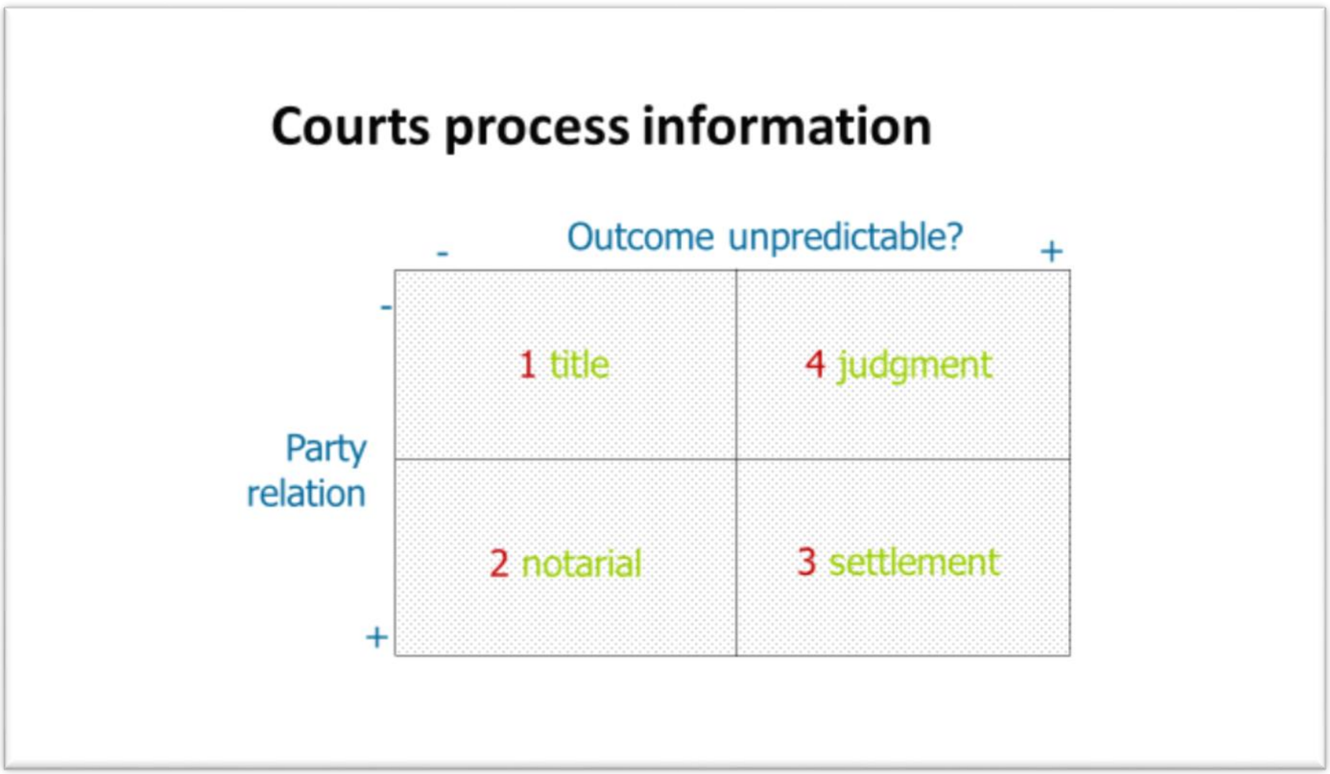

Figure 1 Courts process information

Next, it is helpful to find out how these groups are distributed across the total case load. In my research, I have found that for 1st instance civil cases in the Netherlands, group 1 is about 41% of the total case load.[ii] Group 2 is about 36%. Group 3 is about 12%, and group 4 11%.

Group 1 lends itself to automation: digital case filing will remove the need to input data into the court systems. Because the outcome is largely predictable, automating parts of the process is an obvious use of IT for this group. Most courts already do some of this. There may be some use for artificial intelligence, for instance to triage cases, in this group.

For group 2, that is largely the same, except that some form of internet support may help parties put together a proposal that will comply with the criteria the court uses to examine it.

For group 3, an added benefit can come from negotiation software.

Group 4 is what we think of as the essence of what courts do. It makes up only 11 per cent of the total case load, but it is the majority of the judges' work load. Cases here can be somewhat to very complex.

There is a lot of information in the case file, legal research needs to be undertaken to bring the case to a close. This is where digital case files, knowledge systems and search engines come in. Artificial intelligence may be helpful for structuring large case files and for research purposes.

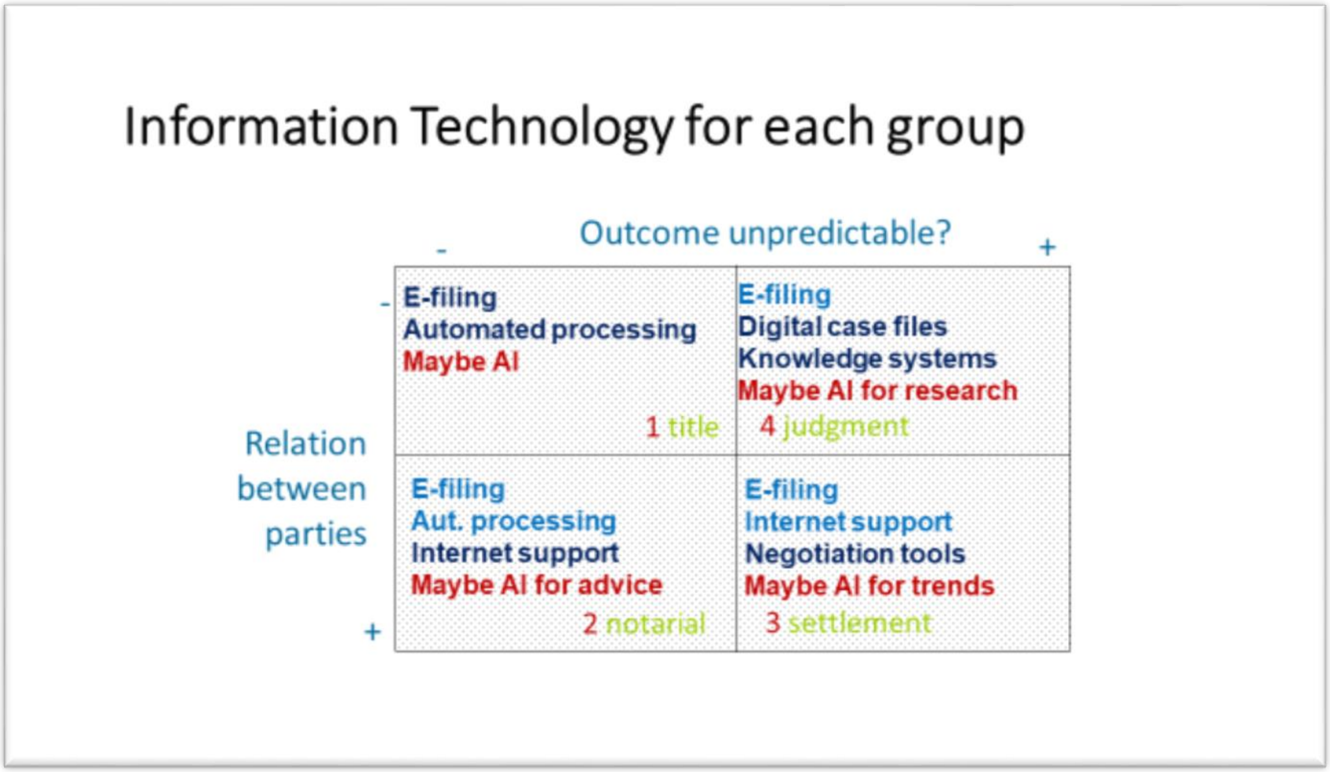

Figure 2 Information Technology for each group

Meanwhile, some courts in Europe and elsewhere have started to digitalize their procedures. The next section describes a model of a digital court procedure, based on my experience with building procedures for the Dutch courts.

3 Digital procedures

What can a fully digital court procedure look like? From the procedures we built for the Dutch courts, I can present the following picture. The court, or the court system, has a portal. There is a web interface, and there is also a systems interface. The web interface allows users to file case through the Internet. The systems interface allows filing through a connection between – for instance – a lawyers' office system and the court system.

In criminal cases, the prosecution will file information with the court. The defendant in the case will need to be notified. In an administrative case, someone will lodge an appeal against an administrative decision. The court system can notify the system of the administration, for instance the social security service, the immigration service or the tax office, in question, which can send the case file to the court automatically. The description below focuses - by way of an example - on the civil procedure as designed and built for the Netherlands courts. Two assumptions: (1) this procedure is for civil cases with claims over € 25.000,-, and compulsory legal representation by a lawyer, (2) filing is done by lawyers, not by others.

About E-filing and case details

Lawyers file cases either through the web portal of the systems interface. Information can be sent to the court in a structured way, in a form, or as a document. Filing a case will usually involve a combination of both: information in a form that will feed into the court case management system and information about the content of the case. The content information can either be laid down in a form with text fields, or in a document that is attached to the filing. Case details are, to a large extent, retrieved from the case management system. If necessary, an administrator can adjust details of the case in the case detail screen in the court work space. The case header in the case provides an overview of the most important information about the case, such as the party names, the court and the court date. The case history shows information about the course of the case.

The procedure (1)

A lawyer can start a civil case in different ways. (1) The lawyer of the claiming party first submits the claim with grounds and evidence to the court. (2) The lawyer first serves the claim on the defendant and then submits the claim to the court. Lawyers log in to the court system through the Netherlands Bar portal, with their lawyer's pass, a smart card. Their support staff can log in with their own pass. The system remembers which card was used for the login. E-filing is restricted to lawyers and their authorized support staff because authorization to access the information in the case files requires a secure identification of the person accessing the court system.[iii] This secure identification is in place in some countries, but in most countries it is not. The system calculates the court fees. The lawyer can pay the calculated court fee in the filing process via their current account with the court system, their bank account, or they can request an invoice and pay within 28 days from filing.
Immediately upon filing, the court's case management system generates a case number, creates a digital file, gives feedback of the filing to the lawyer with the URL to the case file, and assigns the administrator the task: check process introduction, and also gives the administrator the task of checking court fees.

About digital case management: tasks and activities

The backbone of the system is digital case management, balancing strict process control with flexibility in case management. The system assigns tasks that are required, the court can also, when needed, assign tasks to case-related persons in case they are needed. Tasks comprise actions that have to be performed because they are prescribed by the law, by procedural rules or by a decision of the case judge. Tasks have a due date. Due dates, for example for lawyers, are usually regulated by law. If they are not, then the due date in our example is two weeks. Internal tasks for the courts have a due date of – in our example - five working days, unless the law provides otherwise. Distinct from tasks are activities. A court user can digitally start an activity when needed, for instance in exceptional situations in the procedure. An activity will then generate a task.

The procedure (2)

The next step in a procedure is to involve the other party, in a civil case this will be the defending party. There are several ways in which this can be done: notification by the court, or by the claiming party's lawyer. Dutch civil procedural law allows informal notifications. The lawyer can also opt for formal service by a bailiff. In all cases, the summons notice is generated by the court system in a standard format. The system monitors whether the defending party joins the case. The defending party's lawyer can access the case file access code that is included in the summons notice. The defending party's lawyer can report that he will join the case for one or more parties. The lawyer of the defending party will also

pay the court fee calculated in the filing process, using their current account with the court system, their bank account, or they can request an invoice and pay within 28 days from filing.
The system sends a message to the claiming party's lawyer: defending party joined the case, and assigns the defending party's lawyer a task to file a defence within six weeks from joining the case.
If the defending party did not join the case within the term specified in the summons, the system reports this in a message to the claiming party's lawyer. Generally, the system will the assign a task to check the claim, and then issue a default judgment (group 1).

About messages and notifications

The lawyers, the judge and other parties involved in the case can communicate with each other via messages in the case. The messages are a simple way to exchange information quickly, for instance about procedural and hearing planning issues. The messages are part of the case file. With every event in the case, the system sends case-related lawyers a notification on a self-chosen email address. Notifications are meant to alert lawyers to new information in the file. In the systems interface, the notification is sent to the law firm's system. The law firm's system then retrieves that information from the attorney's file. As email is considered to be a non-secure way of transmitting information, there is only a minimal amount of information in the notification, since it is a way to alert the recipient to a change in the case. What the change is, is contained in the message that is in the case file itself.
The defending party's lawyer submits the statement of defence with a form. He can include evidence and possibly a counterclaim. In the event of a counterclaim, the system gives the claiming party's lawyer a task to file a defence to the counterclaim within two weeks. The system assigns two tasks to the administrator role: checking the statement of defence and checking the court fee.

About roles

The judge, the clerk, the session planner, the administrator: they all fulfil different roles in the process. These roles determine which tasks and activities they need to be able to perform. The courts determine who has which role, and who can perform which tasks and activities. The administrator role, for example, can be performed by more than one person.

The procedure (3): The case in court

Now that the case file is complete with a claim, a defence, possibly a counterclaim and a counter-defence, the system assigns a task to assign a judge to the case. The court determines who can or may perform this task. Whoever performs this task will assign a judge or a panel to the case. Assignment of judges to cases is also decided by the court itself.
The system then assigns the case judge the task of deciding whether a hearing should be held in the case or not. In the case of a hearing, the judge sets the agenda for the session, the time allotted to the hearing, and any details relevant for hearing planning. The hearing planner, using this information from the judge, plans the hearing. The hearing planner can request availability dates from the lawyers in an exchange of messages. As there is no standardized procedure to set hearing dates, the system allows courts to either request availability for hearing dates or not.

The administrator will finalize the hearing invitation. The agenda for the hearing is in the invitation. The system places the invitation in the digital case file and sends the lawyers a message and a notification. The lawyers can use message traffic to request a date change for the hearing. The administrator may change or cancel a session.

The procedure (4): The hearing

The hearing team can prepare their hearing in the case file viewer with a preparation form. In the case file viewer they can: filter / sort documents, annotate, bookmark, include links in a preparation form. In the hearing, the judge can present a document to the parties and the audience on a large screen using the case file viewer. The registrar can create session notes in Word and add them to the internal part of the file.

At the end of the hearing, the judge determines the next step. The system has assigned him a task for this purpose. These are the options:

- if the case is settled (group 3), the case can be closed. Someone will be assigned a task to close the case
- if more information is needed (group 4), one party will be assigned the task of providing it, after which the other party gets the task of reacting to it
- if more discussion is needed (group 4), a new session can be scheduled immediately in consultation with the parties
- if the information is sufficient for a decision (group 4), the team member assigned with drafting a decision will get the task to do this within six weeks from the hearing date.

The hearing clerk can make an official report with an ordinary word processor. It will be saved as a pdf-A document and signed by the judge. It is part of the case file.

The procedure (5): Judgment

The judgment can be drafted either by the judge or by support staff. Information can be retrieved from the case data, and also inserted by cutting and pasting from the case file and from sources of law in the knowledge systems. The judge finalizes the judgment with a digital signature. The administrator / registrar also signs the statement digitally. The administrator / registrar makes the decision ready to be shared with the parties and uploads it to the case file. The system sends the parties a message and a notification to signal the judgment has been issued.

The administrator registers additional information for accountability purposes and closes the case. Case information remains accessible for the parties at least until the term for appeal has expired.

Improvements

The most important element of how a digital court may work is the combination of procedural rigor of tasks and due dates with flexible case management using message traffic and activities. The Dutch administrative courts use a very similar system that was built on the same platform for all habeas corpus procedures nationwide. They have processed more than 40.000 cases since the start.

The digital procedure has brought considerable improvements. Compliance with the right to a fair procedure in Article 6 of the European Convention on Human Rights increased:

- Easier court access through digital case filing.
- Equal access to information and increased transparency since parties' lawyers all have access to the digital case file.
- Less delay with instant messaging and automated case management. One full adversarial procedure, including a hearing, was completed in seven weeks.

There are also other improvements:

- The civil procedure was simplified.
- Information security: digital documents are kept in a persistent format with metadata on their status.
- Process information is now public.

Starting September 2016, two courts have piloted the system. Digital filing became compulsory for those two courts in September 2017. At the time of writing, the end of April 2019, in the Netherlands, more than 3000 cases were filed in the two pilot courts that handle new commercial cases using this system. In June 2018, The Netherlands judicial council decided not to implement the commercial courts digital procedure in the other nine first instance courts. The next sections will try to explore some lessons that can be drawn from this unfortunate development.

4 Three worlds of information technology

Before we try to understand what happened in The Netherlands, it is helpful to put the IT development in a broader perspective. Andrew McAfee, a professor at the Massachusetts Institute of Technology, distinguishes three worlds in information technology.[iv]

- *Function IT*, which supports the execution of a task, for example registering cases, document production or case law databases. This is the first world, the one we know from the 80s. This IT works stand-alone, it does not need a network to function.
- *Network IT*, such as the internet, e-mail, more sophisticated case law databases or digital files needs a network to be able to work. This IT supports collaboration, but does not enforce a specific working method. In this second world user takes a tool like you take a bucket from the kitchen cupboard, uses it and then puts it back again. The paper case file is still the main carrier of information. This world emerged with the arrival of the Internet for everyone. The simplest form is a website that provides information to the reader. In a next stage of development, the user can also perform an activity, for example download a form that he or she can print, fill in by hand and then send in by mail or email. A next step up is that the user can also fill in the form online. Still a step further, and the user also receives the result of the transaction in digital form. But by then, we have already entered the third world of IT.
- *Enterprise IT*. That is what McAfee calls Enterprise IT. Examples include workflow and digital interaction with external users. Now we are no longer talking about a tool like my proverbial bucket, that we can choose to use or not. The system has become an environment, and the user can only work within this environment. This IT requires that work processes are predetermined and standardized. The work process only exists within the set rules, the rules and the process merge; they become one and the same.

As Lawrence Lessig already predicted: Code is law.[v] According to McAfee, who has studied the process of introducing Enterprise IT at many large companies, this is the most difficult transition there is. Only companies recognizing this in advance and taking measures for it will successfully manage this transition. Decision rights about the process and about changes to the system must be established in advance.

Information technology is like PUR foam

Spray polyurethane foam into a space, and it will extrude from all the weak spots. Just like PUR foam, developing and implementing IT will bring up all the weak spots in an organization. And more specifically, court IT turns out to be particularly difficult. Why is court IT so difficult? Ten years ago, my fellow judges plagued me with this question when I was writing my book. So, I felt I had no choice but to investigate. The shortest answer to this question is that, in all IT projects, complexity is underestimated.[vi] In addition, participants tend to be overly optimistic about results. Risks, however, are usually underestimated. Governance is an issue: who decides what, and when? The amount of change needed for an organization to use the IT effectively is also usually underestimated. In government IT projects, the political environment makes things even more complicated. Court culture is also a concern. Courts and judges are the guardians of the existing legal order. Their work is looking back and deciding who should get the blame for what went wrong. This means that looking ahead and envisioning how to innovate does not come naturally to them.

Nowadays, agile development is the standard for developing digital processes. Agile development is a strict methodology to design, develop, build and test technology in an integrated way. In order to be successful, all users need to be involved – one way or the other - in the development and implementation process from the start. Agile development requires experimentation. Legal culture tends to be quick to find someone to be blamed if something goes wrong. Blaming in retrospect does not help innovation. Concluding: court reform with IT is difficult.

5 Reforming court procedures with IT

So, the question to be answered is: how to effectively develop, build and implement court IT? The short answer is: Simplify, simplify, simplify. The longer answer depends on the type of procedure as described in the section about how courts work.

In the case of the Dutch civil commercial claims procedure, all complexity and risks came together in a toxic conflagration. To make matters worse, funding ran out before the procedure could be implemented in all courts. Implementation, so much was clear, was going to be very complicated as well. Many changes were made to civil procedural legislation to speed cases up. These changes mostly had nothing to do with the digitalization process. Translating the new digital procedure into work processes, something that should be done with the two pilot courts, was far from complete.

From my experience with court IT, there appear to be three models, and there are practical examples of each of them.

- **Replace existing processes** in their entirety. This can be an option for relatively short, simple procedures, like the ones in groups 1 and 2. This can work if:
  - The legal basis for this procedure already exists.
  - Decision rights can also stay the same, because the work processes, although digitalized, basically stay the same as well.
  - Agile development is viable because the process can be piloted in a single case, on a voluntary basis.
  - Implementation, in these conditions, will still not be easy, but it can be successful.
- **Reform existing processes**. This may be an option for longer running procedures like group 3 and 4 cases, for instance large criminal cases or adversary civil proceedings. Replacing longer running existing processes in one operation is extremely complex and costly. Existing processes were designed for processing information on paper. They will need redesign if they should provide the full advantage of digital processing. The most likely will need changes to the legal basis, decision rights and work processes. Reforming existing processes gradually may be an option, either starting from the front, with e-filing, or from the back, starting with a digital case file. The court system in Austria is a very early example of e-filing; Austria is are now developing a digital case file. After the decision not to implement the fully digital commercial claims procedure any further, the Netherlands is now planning to develop simple e-filing as well as a digital case file.
- **Design a new process.** A model that appears to be successful is to design an entirely new process, or even a new institution, for processing cases. This seems an attractive option, since there are no constraints to be reckoned with. An early example is the United Kingdom's Money Claim Online.[vii] This tool was designed for handling money claims only. Another, more recent, example is the Civil Resolution Tribunal in British Columbia, Canada. The Tribunal is a new institutional body set up to handle disputes between owners and tenants of subsidized housing. It gradually expanded into other areas of civil justice.[viii]

In each case, factors to be taken into account are the legal basis for the transition, decision rights and work processes, requirements of agile development and pilots, and implementation. The more change in the existing situation is needed, the more difficult the transition will be.

Conclusion

This article discussed information technology for courts. Experience is that introducing information technology to courts is difficult. The courts' primary process is processing information. Courts process information in different ways, depending on the cases in question. The main factors influencing the process are the level of predictability of the outcome of the case, and the relation between the parties. This is important to know because different processes are best served with different kinds of technology. Simple, predictable processes profit from e-filing and automation, complex processes involving research need search engines and knowledge systems.

The second step in understanding IT for courts is to envisage what a fully digital procedure can look like. By way of an example, the article described in general terms how a digital commercial claims procedure works. The most important element is digital case management combining procedural rigor with flexibility where needed.

Replacing a paper based process with supporting IT tools by a fully digital process is a complex process. In order to understand the complexity of moving from a paper based process using IT tools to a fully digital process, the article applies findings from some of such transitions to court systems. Finally, the article identified three models for developing and implementing IT for courts, based on the known factors involved. And here as well, the choice is determined by the type of procedure. As more change to the existing organization is needed implementation will be more difficult.

---

[i] Susskind, Richard. 1998. *The Future of Law*. Oxford University Press. In this, his first and very influential book, Richard Susskind outlined his vision for the future of law with information technology.

[ii] Reiling, Dory. 2009. Technology for Justice, how information technology can support judicial reform. Online at www.dory.reiling.com, last visited on April 26 2019. On p. 120-122of the book there is a full description of the methodology used. The percentages in the book represent the total case load including bankruptcy cases. A later insight made me exclude bankruptcies from the case load for the purpose of this breakdown, since their process is, in the Netherlands, not comparable to case disposition. In this article, I used the new figures.

[iii] Article 5, 1 f, REGULATION (EU) 2016/679 (EU General Data Protection Regulation), which replaced Directive 95/46/EC on May 27, 2018.

[iv] McAfee, Andrew, Mastering the Three Worlds of Information Technology, Harvard Business Review, November 2006

[v] Lessig, Lawrence. 1999. Code: And Other Laws of Cyberspace, New York.

[vi] Reiling 2009, p. 60-80 provides a more detailed description.

[vii] www.moneyclaim.gov.uk last visited April 26 2019

[viii] https://civilresolutionbc.ca/ last visited April 26 2019.