Smart courts, smart justice? Automation and digitisation of courts in China

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Chapter Three: Smart Court Reform

3.1 Introduction

Reform in China follows a specific process called fragmented experimentation: overall principles are set centrally, but the specifics of execution are trialled at the local level (Heilmann and Perry 2011; Knight 2020). Although the SCR is a top-down policy initiative, it followed a similar trajectory. The SPC first championed this initiative and gained traction across other courts at every level (Stern et al. 2021: 521). This approach created an iterative process where top-down policy pushes interacted with bottom-up experimentation. However, as I will discuss in this chapter, this mode of "fragmented policy experimentation" often leads to implementation gaps: due to experimentation, various technical, legal, and political standards emerge across different regions and jurisdictions. It slows down the consolidation phase of policy initiatives, where the central authority consolidates local experiences in central standards. Centralising many technical and legal standards increases costs (Chen and Greitens 2022). Due to this experimental nature, "smart courts" can vary significantly across cities and regions in China.

This chapter provides a comprehensive chronological and regulatory overview of SCR from 2013 until 2022. I examine the SCR's stated goals and pain points as it developed over time and how new directives address emerging implementation issues. In so doing, I try to answer how SCR policy developed over time, examining its progress through fragmented policy experimentation.

I have opted for a chronological overview. Policy development is a complex process, making it difficult to get a firm grasp on it. Therefore, I have tried to simplify the overview. Many initiatives described and analysed below do not have perfectly connecting start or end dates. In addition, I combine this chronological narrative with a review of official directives, national regulations, and development plans. Some of the regulatory documents were not issued until years after the first initiatives had already been launched. Other documents are updated yearly, while some are not publicly available. This chronological and documentary inconsistency aligns with the typical trajectory of any reform initiative in China.

In addition, I cannot claim to have reviewed all documents related to informatisation, digitisation, and automation. Because this dissertation researches judicial reform, this chapter focuses exclusively on documents issued by the judiciary. Most of the documents I reviewed in this chapter

were collected ad hoc while writing my dissertation between 2019 and 2023. In most instances, I would discover the documents as a reference in a Chinese academic publication or news article. I then scoured the SPC website, internet search engines, and WeChat to find a full document version. My inclusion criteria were that the document needed to be relevant for the operation or establishment of smart courts or provide general development information. Documents not immediately relevant for courts, judicial reform, or judicial technology are excluded from this review.

For example, other policy plans issued by the State Council, such as the *New Generation Artificial Intelligence Development Plan (2017)* (SC 2017) set out broad, top-level goals for the wider development of (AI) technology and applications in *all* fields, not only the judiciary. It was, therefore, excluded. Moreover, some documents were not public, so I could not analyse their content. In this sense, this chapter is only aspirational in its comprehensiveness. Nonetheless, it is the first comprehensive chronological and documentary review of SCR.

The second and third sections describe and analyse the first building blocks, built between 2013 and 2015. This first phase was largely about making information digitally available and allowing digital interaction on a large scale. The fourth section describes three case studies of the earliest national, provincial, and municipal initiatives to showcase the fragmented rollout of SCR. The fifth section analyses two important documents that further determined the direction of SCR: *Opinion on Accelerating Smart Court Construction* (SPC 2017a) and the *Five-Year Development Plan for the Informatisation Construction of the People's Court* (2019-2023) (SPC 2019a). Examining these allows us to understand better the interaction between recognised pain points of fragmented policy-development and the guiding function of top-down directives. The last section provides a legal analysis of the consolidated regulatory framework of SCR, focusing on three authoritative Rules to regulate Smart Court procedures. Lastly, it describes two central directives on using blockchain and AI in the judiciary.

3.2 The Five-Year Plan for Information Construction at People's Court (2013-2017)

The SPC launched SCR with the *Five-year Development Plan for Informatisation Construction of People's Courts (2013-2017)* (SPC 2013a). The Plan conveys a sense of urgency. It calls the following five years a "key transition period" for the overall informatisation of courts and the increased application of information technology (IT) in the judicial process. It rallies courts to

employ IT to "promote fairness and justice, expand disclosure, broaden mass participation, and communicate social conditions…".

The Development Plan (2013-2017) outlines the basic principles for informatisation: it calls for unified planning and implementation and to strengthen top-level design (*dingceng sheji* 顶层设计), a key policy term introduced in the same year at the 3rd plenum of the CCP' 18th Party Congress. The term indicated a re-centralisation of policy coordination and implementation, making room for local discretion and bottom-up experimentation smaller (Ahlers and Schubert 2022: 13-14). Despite this call for top-level design, SCR followed an incremental approach to implementing policy initiatives, with large cities leading the way in building the first AI systems for adjudication and lower-ranked courts lagging in informatisation (Zheng 2020: 565).

The Development Plan (2013-2017) calls upon courts to maintain a people-oriented and service-oriented approach. Courts should employ IT to support the work of judges so that they can better serve court users. With this goal in mind, the next principle is to deepen and strengthen the use of IT in everyday court work. It pushes courts to intensify informatisation. Lastly, to ensure the security of the IT systems, it asks to unify and strengthen standards and norms in their construction and application. The plan's goals to deepen coordination, increase application coverage, improve information sharing and collaboration, improve information security, expand disclosure channels, and improve convenience are recurring themes.

Importantly, the Development Plan (2013-2017) asserts the coordinating role of the SPC, saying that all new information management systems should be planned and implemented by the SPC. It concedes that individualised application software can be developed locally, but these must comply with the state's and SPC's relevant technical standards. As argued throughout this dissertation, the informatisation of courts runs parallel with other judicial reforms to enhance these. The three online digital platforms are the most visible and concrete examples of this in the early stages. The following section briefly overviews these three platforms and discusses how they fit in the larger reform picture.

3.3 Building Blocks: The Three Transparency Platforms

Early digitisation efforts occurred around transparency and accessibility reforms. The SPC circulated the *Opinion on Several Issues Relating to Advancing the Establishment of Three*

Platforms for Judicial Openness (SPC 2013c), calling on all courts to rely on modern IT to deepen judicial openness. To this end, the SPC would establish three major platforms for information disclosure to enhance public understanding, trust and oversight of the judiciary. The three platforms are called China Court Trial Online (*Zhongguo Fayuan Tingshen Zhibowang* 中国法院庭审直播网); China Judicial Process Information Online (*Zhongguo Shenpan Liucheng Xinxi Gongkaiwang* 中国审判流程信息公开网), and China Judgments Online (*Zhongguo Caipan Wenshuwang* 中国裁判文书网). Through these platforms, all courts provide a long list of different types of information to the public, courts, and other political-legal institutions, ranging from organisation and personnel, litigation guidelines and procedures, to court sessions and hearing dates, and registries of affiliated institutions. The SPC (2013c) already envisions a fully centralised and integrated information network, with the three platforms at its centre, allowing large-scale communication and interaction between users and providers.

3.3.1 China Court Trial Online

The China Court Trial Online platform (CCTO) was officially launched in December 2013. As of late November 2022, it has broadcasted over 20 million trial hearings throughout the past near-decade. This might be only the tip of the iceberg. Many local courts have their own live streaming service and video archives (Finder 2016; Fan and Lee 2019; Tang et al. 2022). The official website provides a map of all provinces and courts in China, allowing users to watch the live stream of trial hearings in intermediate and grassroots level courts. Starting in July 2016, the SPC also started to broadcast its hearings.

In streaming (and video archiving) court cases, the SPC and China are part of a worldwide trend: countries ranging from the United Kingdom and Australia to India and Pakistan live broadcast their judicial proceedings (Shabbir 2021). One of its most well-known examples is the trial of OJ Simpson in the US in 1995, who was tried on two counts of murder. It allowed unprecedented access to courtroom proceedings and provided scholars with invaluable research materials (Cotterill 2003: 2). The murder trial of Oscar Pistorius was similarly broadcast in South Africa (Biber 2019).

However, CCTO goes beyond high-profile court trials: a wide range of cases across all jurisdictions are broadcast, including criminal cases. This raised many concerns among local judges about the

privacy of litigants and the balance between open justice and the right to a fair trial. Cases also do not necessarily represent all cases that pass through trial hearings. The CCTO is mainly meant for legal education rather than genuine transparency, especially because it does not include politically sensitive cases (Finder 2016).

Fan and Lee (2019) also find that the court trials are typically narrated as non-eventful episodes: they are tightly organised and follow strict procedures. They contrast this with sensationalised trials in the US (such as the OJ Simpson murder trial). They argue that this depiction of trials as uneventful and routine is intentional. It creates an image of a just and fair legal system by emphasising the orderliness of court trials. Nonetheless, public affinity with court proceedings remains limited. In addition, Tang et al. (2022) find that live broadcasting does not influence court decisions or judgments in civil or criminal cases. Their research provides preliminary evidence that live broadcasting in Chinese trial hearings makes trial participants more accountable and does not influence the principle of fair trial.

As noted in chapter 2.3.1., the CCTO and other transparency initiatives align with the judiciary's efforts to be more transparent. This concern with judicial transparency is also motivated by improving its credibility and legitimacy vis à vis the public.

3.3.2 China Judicial Process Information Online

The China Judicial Process Information Online platform (CJPIO) officially launched in November 2014. Its primary function is to improve connectivity between litigating parties and the relevant court; once logged in, users can inquire about the status of their case, contact the case handling judge, and accept electronic documents. The purpose is to provide a "one-stop shop" for litigants' interaction with courts.

Four years later, in 2018, the SPC circulated a central directive that codified the use and functions of the CJPIO: Provisions on People's Courts Disclosing Trial Process Information Through the Internet (SPC 2018b). This document gives a clearer insight into the functions, responsibilities, and procedures related to information disclosure through the CJPIO platform.

The CJPIO is a centralised hub for all kinds of information regarding the court system. For example, users can use a map with all courts across China to find overviews of all names of judges per court with their department and title. The central website also provides databases with litigation

guidebooks from various courts nationwide, SPC regulatory documents, guiding cases, and so forth. The CJPIO also functions as a unified connection hub between the web portals of all provincial high courts that link to the web portals of their intermediate courts.

While the CJPIO's interface is clear and structured, the web portals of lower-ranked courts are much more chaotic. There is an overload of information, the databases are not up to date, and there is a clear lack of coordination: SPC documents are spread across different websites with no interconnection. One potential reason for this is that the Chinese internet has more or less skipped the web portal phase, as most courts have official WeChat accounts and applications within the WeChat platform that allow users to conduct their communication and litigation through here. Therefore, less attention is paid to developing user-friendly interfaces on the web portals. In short, despite transparency and disclosure claims, these web portals do little to achieve this. Anyone navigating the CJPIO and local courts' disclosure platforms will understand that the overload of information and chaotic nature of these platforms obfuscates more about the judicial process than it illuminates.

This chaos might be irrelevant to the effectiveness of the CJPIO because its primary function is to allow better communication between courts and litigating parties. Once parties have made an account on the platform, courts may use additional contact information (mobile phone, e-mail) to actively push information or provide inquiry services about the case process to the parties. Most importantly, it is a centralised communication platform where litigating parties may access all related documents, i.e., notice of case acceptance, trial summons, judgments, mediation documents, and so forth.

Courts are also accessible via mobile litigation platforms based on WeChat mini-programs called "Mobile Micro Court". Documentation regarding the "Mobile Micro Court" indicates that these litigation platforms' functions overlap with those of courts' disclosure platforms, i.e., providing litigation services and supporting online litigation activities (SPC 2019b). It is unclear which channel takes precedence over the other or whether these initiatives are meant to provide as many entry points to courts as possible. It is also unclear how the information is processed. Rather than simplify the bureaucratic nature of the judicial process, the ubiquity of judicial service platforms and the overlap of responsibilities and functions seems to perpetuate the "fragmentation" of China's bureaucracy and policy in the digital environment (e.g., seeLieberthal and Lampton 1992).

3.3.3 China Judgment Online

The China Judgment Online platform (CJO) was officially launched in 2013 and, as of November 2022, hosts over 137 million court decisions, again covering all jurisdictions and courts in the PRC. The SPC Provisions on The Publication of Judgments by the People's Courts on the Internet (SPC 2013e) directed all Chinese courts to upload their decisions to the unified database. The Provisions led to a rapid expansion of public records of court decisions. The 2016 revisions tightened the publication requirements, making it more difficult for judges to evade publication. They also included exceptions such as cases involving minors or related to national security (SPC 2016c).

Ahl and Sprick (2018) find that the database establishes new channels of communication, affecting the relationship between the courts and the public and the position of judges within the judiciary. They argue that these early digitisation measures introduced an "interactive approach to judicial transparency" (Ahl and Sprick 2018: 5). At the same time, while useful for academic and legal research, it is doubtful that a database of court decisions can achieve the aim of judicial transparency and building public credibility. Therefore, the transparency objective might relate more to internal transparency as a tool of bureaucratic oversight rather than public oversight. Ahl and Sprick (2018: 10-13) argues that it increases pressure on individual judges regarding workload, quality of legal reasoning, performance evaluation, and protection from interference. Furthermore, it serves as a tool for the SPC to expand control over lower-level courts. Therefore, the CJO is crucial in enhancing reforms aimed at professionalisation and accountability (see chapter 2.3.3).

However, beginning in 2021, the SPC scaled back the cases available on the CJO. Local courts consequently followed this trend. Luo and Kellogg (2022) find a pattern of large-scale purging of criminal and administrative cases, often deemed sensitive or controversial. In addition, access to the CJO has become harder and requires users to register their phone numbers. Moreover, the CJO now only show the first 600 cases in any search inquiry. They argue that this purge highlights the flaws of the top-down judicial transparency push. It also suggests that the CJO has had a clear external effect on public perception.

Nonetheless, the CJO provides one of the fundamental building blocks of SCR. It is a powerful tool to enhance internal transparency management and increase central oversight. This effect is perpetuated by using algorithmic tools that rely on machine learning and big data analysis, discussed in the next section. These platforms provide the big data necessary to train and operate

these systems. As discussed below, many algorithmic and automated systems in smart courts rely on databases such as the CJO. It is especially relevant for functions such as automatically pushing relevant cases for reference, recommending decisions, and creating benchmarks for automatic decision-monitoring systems.

With the big data now available, courts started with the next step: creating algorithmic and automated systems. The next phase involves the deeper integration of IT into the daily operation of individual courts. Here, IT is employed to facilitate the resolution of legal cases rather than only disclose (external) and share (internal) information.

3.4 First Experiments With Digital and Automated Justice (2015-2017)

The SPC's *Fourth Five-year Reform Plan of People's Courts* (2014-2018) (SPC 2015b) wanted the above discussed three major platforms to be operational by the end of 2015. The term "smart court" was also officially introduced in the SPC's *Annual Work Report* (SPC 2016d). According to Zhou Qiang, Chief Justice of the PRC, as part of the "smart court system", courts should use informatisation to:

> leave traces throughout the trial and enforcement process, standardise judicial conduct, and diligently build a comprehensive, mobile connected, transparent, convenient, safe, and reliable intelligent information system by the end of 2017.

In addition, he calls on the judiciary to:

> improve the three major platforms for judicial openness and the centralised data management platform, strengthen big data analysis, unify judgment standards, and promote the standardisation of similar sentences.

To experiment, the SPC designated two People's High Courts to build pilot "e-courts" (dianzi fayuan 电子法院) to implement online filing, online trial, and online service [of documents] so that "information can travel more, and the masses have to run fewer errands" (SPC 2017c).

Xu (2017a) examined the two People's High Courts', in Jilin and Zhejiang. She found that the two High Courts had designed two significantly different systems. The e-court system in Jilin mainly attempted to move as many offline activities as possible to the online space. It encompasses all jurisdictions of all courts and all stages of the judicial process in Jilin Province. It provides twenty-four-hour non-stop services for litigating parties. The system registers all procedural steps, making this information available to relevant parties. It also collaborates with other relevant actors in the

political-legal system, such as the people's procuratorate and the people's police. According to Xu (2017a: 63-65), the main purpose of Jilin's e-court system was to facilitate parts of the judicial process, not to transform it fundamentally.

The Zhejiang High Court approached it differently. It decided to focus exclusively on e-commerce. In contrast to Jilin Province, they changed how (commercial) cases get resolved radically. Xu (2017a: 66) argues it is designed to provide a one-stop case resolution process where no offline activities are needed. This case is the most interesting because it provided a blueprint for future digitisation and automation projects by other courts.

To develop the e-court system, the Zhejiang High Court collaborated with Alibaba, an e-commerce giant in China. The e-court system's jurisdiction is limited to online commercial disputes resulting from sales conducted on Taobao or Tmall, two shopping platforms owned by Alibaba. The entire process revolves around the system using big data generated by Alibaba and the data story and cloud computing services it provides. The judicial process is intimately intertwined with a private actor (Xu 2017a: 65-67).

The experience from these two experiments likely led to the SPC formulating and circulating the *Guiding Opinion on Comprehensively Promoting the Synchronous Generation and In-depth Application of the People's Court's Electronic Archives* (SPC 2016b). This document provided the first concrete guidelines for courts on how to digitise their judicial process, specifically focusing on better digitising incoming paper documents and ensuring a more efficient digitisation of files.

It is the first document that tackles a concrete element of SCR, discussing how to generate the necessary and fundamental resources for algorithms and AI to function: big data. Ideally, all processes should be conducted digitally to generate the big data necessary to feed the algorithmic systems. However, at this stage of SCR, many processes still needed to be done by paper, and courts struggled to keep up with digitising their archives and incoming cases submitted by paper. Therefore, the overall objective was for courts to create processes where digital versions of litigation documents would be generated during the judicial process, i.e. "simultaneous generation and in-depth application of electronic files along with the case" or something akin to real-time digitisation. This measure was also necessary to reduce the burden on court personnel and judges who had to digitise case files manually.

The document has three chapters, respectively focusing on how to digitise files, how to use digital files and the surrounding safeguard measures:

1. It explains what digital files should consist of and how they should be collected, stored, and reviewed.

2. It stipulates how courts should stimulate the use of digital files by building more digital support infrastructure that enables the retrieval, sharing, and managing of digital documents in all aspects of the judicial process.

3. It outlines each court department's different responsibilities in digitisation and how courts should further promote synchronous digitisation: courts need to pay attention to technological innovations, improve rules and regulations related to implementing the guidelines, and ensure adequate funding for digitisation.

Although the Electronic Archives Opinion (SPC 2016b) does not mention smart courts, it is a crucial building block of SCR because it relates to its primary resource, which is necessary for the end goal of smart justice to be realised, i.e., big data. The quality and consistency of data must be guaranteed, which is done at the start of the "production chain" of justice. Therefore, this document is crucial because it provides concrete guidelines on properly digitising files and divides responsibility among court departments for different aspects of the digitisation process. Although one of the primary goals of SCR is increasing efficiency, it initially simply generates more tasks and burdens personnel. Therefore, the guidelines vertically divide responsibilities and direct courts to provide more funding to outsource some responsibilities.

As I will show in the following examples, the judiciary generally partnered with commercial service providers to develop platforms, systems, and software to digitise and automate justice further. While their development does not fit the chronological divisions of this chapter, they all start in the 2015-2017 period. These examples showcase the meandering and iterative development of SCR.

3.4.1 The SPC's Faxin Smart Push System (2016-2020)

The Faxin 2.0 Smart Push System is one of the first software systems developed nationally for all courts across the PRC. The SPC started developing the "legal knowledge and case big data integration service platform" in 2012. Press releases say the software is connected to various legal

knowledge and court decision databases. It uses big data analytics to process and aggregate legal provisions, cases, legal opinions, and court decisions to analyse judgments, push similar cases, and provide legal workers and the public with expert solutions. "Faxin" was officially launched in 2016 (SPC 2016e). The SPC (2016a) directed all courts to use the platform to strengthen and deepen SCR. According to its website, the Faxin System is the primary national database for laws, regulations, judicial interpretations, administrative decisions, case references, opinions, periodicals, and standards. It offers similar case retrieval, professional analysis, and intelligent assistance services.

Over the years, it was developed into the Faxin 2.0 Smart Push System (Ma 2020). This system is embedded into courts' case-handling platforms and can automatically push matching cases, laws, and judicial opinions for judges. It has several core functions. The first is identifying and matching the incoming case based on all relevant digital files in the case-handling system. It can identify and index legal relations, facts, disputes, the case's legal basis, and general attributes. Based on this information, it generates a kind of "portrait" of the case, which gives an easy overview of all important information.

A second function is classifying and pushing typical cases and judicial documents for reference. Pushed cases are classified into three levels as stipulated by the SPC: the Guiding Cases (Ahl 2014), then Typical Cases, and then Reference Cases issued by High People's Courts. Court decisions are ranked according to the four levels of the court system (Supreme, Provincial, Municipal, Basic). This function helps judges and other judicial personnel prepare relevant materials to adjudicate cases and have convenient access to reference material.

A third function is that it pushes relevant legislation and regulations to the adjudicating judge. Based on identifying the case (function 1), it provides judges with the specific provisions, not entire laws. In addition, it elaborates on cited legislation in the drafting process: it will inform the judge how valid the cited legal provision is for the case on deck, its revision history, what the intended purpose is of the cited provision, higher- and lower-ranked rules, and related laws. Therefore, it helps the judge contextualise the meaning and purpose of cited legal provisions to give the judge a comprehensive understanding of the laws they want to apply.

Once the system is integrated with the case handling platform of a court, it links these and other functions into one automated process: from the retrieval and identification of relevant digital files,

automatic labelling and indexing, generation of the case portrait, and pushing of similar cases and relevant laws. Therefore, the system automates a significant part of pre-trial case preparation for judges, only requiring them to perform an oversight function to make minor adjustments during the screening and labelling process.

As was described above, the system is primarily framed as a tool that helps reduce workloads for judges in the preparatory stage of the judicial process. The 2.0 model was developed as a response to two SPC Opinions: Guiding Opinion on Strengthening Searches for Similar Cases to Unify the Application of Law (SPC 2020a) and Opinion on Improving the Working Mechanism for Unifying Law Application Standards (SPC 2020c). In this sense, its primary purpose is to achieve more consistency in adjudication by providing relevant legislation and reference material to judges. I dig deeper into these implications in chapter 6 and 7.

3.4.2 The Internet Courts (2017-2018)

The "Internet Court" is a designation for what are now three courts in the PRC: the Hangzhou Internet Court (HIC), the Guangzhou Internet Court (GIC), and the Beijing Internet Court (BIC). The HIC was launched in 2017, and the latter two in 2018.

The Hangzhou Internet Court (*Hangzhou Hulianwang Fayuan* 杭州互联网法院) was established to focus on first-instance Internet-related civil and administrative cases within the jurisdiction of Hangzhou's basic-level courts. The HIC, as part of broader digitisation efforts at the time, was primarily aimed at improving the efficiency of proceedings the credibility of courts, and reducing inconvenience for litigating parties to access justice (Peng and Xiang 2020: 347).

The HIC claimed parties could complete filing within five minutes through structured form options. The system automatically generates relevant legal documents and delivers them digitally via e-mail or SMS. It also enables evidence exchange and cross-examination. The trial hearing itself is conducted via video conference on a litigation platform. This platform also displays the evidence online to parties and judges, allowing the parties to examine and debate the evidence. Lastly, it claims that the system generates digital transcripts in real time through voice recognition and automatic transcription.

According to Guo (2021: 2), establishing the HIC marks the beginning of an official ODR mechanism in the PRC. At the same time, they argue that the HIC goes beyond simply moving

litigation processes online and represents a completely new type of adjudication mechanism (Guo 2021: 4). One contribution to the development of online adjudication was the acceptance of electronic evidence through the blockchain. The legal status of electronic evidence in dispute resolution could have been better. While it was introduced in the Criminal Procedure Law and the Civil Procedure Law in 2012, courts had not been clear about admitting electronic evidence due to it being easily modified or misinterpreted (Lu 2020: 105). This issue changed when the HIC determined the legal effect of electronic evidence stored by blockchain. In a particular case from 2018, the HIC provided a review method for examining and admitting blockchain-based evidence (Lu 2020: 107-111).

Following the "Zhejiang Model", the HIC was developed in cooperation with Alibaba, which played a crucial role in the design and operation of the court. Much like the first pilot trial, Alibaba provides functions such as identity verification through Alipay, electronic evidence, data encryption, storage and monitoring. As Xu (2017a) noted, the involvement of a private company in the construction of an adjudication system causes serious conflicts of interest. Mingay (2019) concurs that this type of public-private cooperation allows big tech companies to assert their commercial influence to enter the domain of regulatory authorities. It enables them to affect the content and infrastructure of the (e-commerce) formal litigation system. Nonetheless, a year later, in 2018, the SPC launched two more Internet Courts in cooperation with local tech companies (Guo 2019a).

In 2018, the SPC issued new *Provisions on Several Issues Related to the Trial of Cases by the Internet Courts* (SPC 2018c). The goal was to regulate internet court activities better. With the establishment of the BIC and GIC, it was time that national regulations replaced individual internet courts' regulations. The document grants the Internet Courts clearer jurisdiction over certain types of cases. Generally, it expands jurisdiction from Internet-related e-commerce disputes to broader disputes covering financial loan contracts, ownership and contract disputes, copyright disputes, property rights, and administrative acts. Simply put, any dispute arising through Internet activities should be handled by the Internet Courts.

It covers all procedural steps of a judicial process and explains how they should be conducted through the Internet Courts' online litigation platform. It covers online evidence exchange and examination (articles 10 and 11), online trial hearings (articles 12-14), serving of documents and

materials (articles 15-17), and so forth. The document also clarifies the procedures for appeals. Since the Internet Courts only have jurisdiction over first-instance cases, a separate court has to be designed as its second-instance court. These courts, in principle, also have to conduct the second-instance trial hearing online and follow the Provisions.

A dual-track approach of local experimentation is paired with temporary national provisions to guide this local experimentation towards a more uniform system. Nonetheless, some uniformity in Internet Court procedures was relatively easy to achieve. What would prove more difficult was standardising other aspects of SCR that moved beyond Internet-related jurisdictions.

3.4.3 Shanghai High Court's 206 System (2017)

Cui (2020: xiv-xxi) embeds the development within its reform context (see chapter 2). He argues that the 206 System was a way to help achieve "trial-centeredness", namely strengthening the role of the trial in the judicial process. Supposedly, the software helps to ensure that the trial plays a decisive role in fact-finding, evidence-identification, rights protection, and fair judgment. He states, "substantive justice of case judgment can be achieved through procedural justice".

Once the Shanghai High Court received the task to develop an AI system for trial hearing reform, it collaborated with a private partner, iFlytek, to develop it (Cui 2020: 62). iFlytek is a state-owned enterprise (SOE) that specialises in voice recognition software and closely collaborates with the Chinese state in numerous other digitisation and automation initiatives. Together, they set up a task force composed of staff from Shanghai's courts, procuratorates, public security organs, and technical staff from iFlytek. Therefore, this system was researched and developed by both legal and technical experts (Cui 2020: 62-64). Initially, the purpose of the 206 System was to assist investigators, prosecutors, and judges in handling criminal cases. A human remains in the loop and remains the final decision-maker. It, therefore, functions as a kind of judge assistant (Cui 2020: 67-68).

The 206 System is connected to a series of databases to access the raw big data required to develop the AI. These databases contain criminal evidence standards, case information, case files, court decisions, guiding and typical cases, and laws and regulations (Cui 2020: 70-71). Cui (2020: 72-76) describes a list of 26 functions, giving better insight into what the 206 system is supposed to do. These functions can be divided into three categories: assistive - management - and oversight.

3.4.3.1 Assistive functions

The 206 System is primarily an assistive system meant to improve the efficiency of case-handling personnel during (pre-) trial hearing work. The System can help with evidence standards, reviewing arrest conditions, verification of procedures, assessing social harm, reviewing speech evidence, helping with the interrogation of suspects, finding and displaying relevant evidence during trial hearings, providing real-time references to judges, handling cases with summary procedures (even automatically generating judgments), other legal services, and search for criminal records of suspects.

Its primary contribution to justice administration lies in these assistive functions, especially in enhancing evidence procedures. Especially within the context of "trial-centred reform", it is crucial that the trial hearing becomes a stage that enables the contestation of evidence. As discussed in chapter 2, courts are administratively weaker than public security and police organs, who submit the evidence when they bring a criminal case to court. In Chinese criminal proceedings, evidence is perceived as truth (Shytov and Duff 2019). Therefore, it is hard to contest it, even on procedures, for judges. In this sense, the different assistive functions that help with the enforcement and review of evidence procedures can be seen as a way for courts to leverage technology to improve their position vis à vis other judicial organs. As Stern et al. (2021: 542) note, this increased the workload for the police and procuratorate and received pushback. Therefore, the Shanghai 206 System provides an interesting case study for research on how technology and automation may change the relationship between the judicial organs in China's political-legal system.

3.4.3.2 Management functions

The 206 System also functions as a basic management and organisation tool: it enables the easy transfer and sharing of digital files between the judicial organs, helps organise pretrial meetings between them, automatically generate court documents, share case notes, connect procedures, and manage confiscated assets. The system improves procedural efficiency by connecting departments and judicial organs and enhancing cooperation. It underscores the relationship between China's justice organs, namely cooperation rather than checks and balances. All data and information should be seamlessly shared and connected. However, Stern et al. (2021: 543) again note that the abovementioned resistance might also hinder data-sharing or coordination across organs. As the

next section and chapter 5 discuss, digitisation and automation might exacerbate fragmentation across China's political-legal system.

3.4.3.3 Oversight functions

Lastly, the system also has recording and oversight functions. Every step of the judicial process taken in the digital environment of the 206 System is recorded. The System also makes full-course audio and video recordings of collegiate panel meetings, pre-trial meetings, interrogation, and even meetings by the adjudication committee. According to Cui, the recording and monitoring functions will enhance procedural adherence. It is unclear how this will affect judicial behaviour. Stern et al. (2021: 546-547) argue that constant surveillance of Chinese judges will increase their caution and avoidance of making decisions that stray from the mean.

In sum, these three examples showcase the patchiness of SCR in its early stages. Far from being the only examples, many courts nationwide rapidly embraced digital technologies and collaborated with local tech companies to develop new systems. While it shows the government's willingness to work with private industry to implement reform, it also exacerbates the issues of fragmented policy implementation.

3.5 Identifying Pain-Points and Key Tasks (2017-2021)

After the initial experimentation period that started around 2015-2017, the period between 2017 and 2021 saw a flurry of new SCR related initiatives and directives from the SPC.

The model of fragmented experimentation was central to the rollout and innovation of SCR, providing maximum agility and responsiveness while also shielding the central government from criticism should the systems have met with public pushback. This honeycomb-like pattern of siloed schemes with differing technical standards and practices has, however, caused no end of problems when it comes to integration at the regional or national level. Such unfettered expansion has come at the expense of uniformity and moderation, causing bottlenecks in the systems' standardisation that threaten their continued rollout, as well as their legitimacy in the eyes of policymakers and the wider public.

For example, the rapid embrace of digitisation and automation outpaced their incorporation into law. Without a coherent legal framework, there exists no strong legal basis for the digitised judicial

process, as procedural laws did not recognise the legal validity of electronic versions of submitted evidence, witness statements, etc. While local courts, such as the Internet Courts had issued relevant documents for digital processes, such as e-filing, they did not have national effect. Therefore, concerns emerged that this legal uncertainty and inconsistent regional regulations could undermine the credibility and ambition of the smart courts (Peng and Xiang 2020).

This section focuses on the SPC's identification of pain points and how they planned to address it in the new five-year plan and other authoritative documents. Chapter 4 goes more in depth on Chinese legal scholars' assessment of SCR.

3.5.1 The SPC Opinion on Accelerating Smart Court Construction (2017)

By far, the most important document issued by the SPC regarding SCR is the *Opinion on Accelerating Smart Court Construction* (SPC 2017a). It was the first SPC directive that mentioned the SCR by name in its title. While still very general in its aspirations and scarce in details, it created more coherence in principle and spurred courts to develop their own smart court systems.

Its primary contribution is the comprehensive and explicit definition of the term "smart court":

> Smart courts are people's courts that make full use of advanced information systems to support online handling of all business, full-process disclosure in accordance with the law, and all-round intelligent services to achieve a fair judiciary, and a judiciary that is organised, constructed, and operated for the people.

It outlines the three principal targets of giving play to the "function of advanced science and technology": serving the people, serving adjudication and enforcement, and serving judicial management. In this, it calls on courts to uphold unified planning, indicating already that there is a need for more top-down coordination. It asks courts to integrate all their applications into a centralised platform. Some courts digitised and automated processes incrementally, building different systems and platforms with different goals over the years. This led to fragmentation within courts, on top of fragmentation between courts.

This document's call for more unified and top-down planning does not necessarily hint at more consolidation. Rather, the Opinion (SPC 2017a) is a clear signal to courts that the experimentation phase with local trial pilots is over and that the general direction has been established. All courts are now engaged in the reform of digitising and automating justice. In this, it calls on courts to fully recognise the significance of SCR and its objectives:

Correctly understand the work objectives of construction smart courts. Constructing smart courts means a networked, transparent, and intelligent people's court informatisation system, supporting the online handling of all business, lawfully disclosing the entire process of trial enforcement, offering comprehensive intelligent services for judges, litigants, society, and government departments, using informatisation to practically serve adjudication and enforcement, making the judiciary closer to the people, using advanced information technology to unceasingly increase the scientific management level of people's courts at all levels.

It also stipulates requirements for SCR, i.e., upholding unified planning by using 5-Year Development Plans and the SPC and provincial high courts as guides. This is a reiteration of the guiding role of the central judiciary in SCR and stands in contrast with how SCR has been implemented up until that point (Zheng 2020; Stern et al. 2021). It asks courts to improve integration and sharing of information both internally between intra-court departments and externally between courts.

The remaining five sections of the Opinion (SPC 2017a) focus on different aspects of smart court building. The first section discusses how courts should provide strong basic support for informatisation: it asks courts to establish network systems that allow secure data transfers between different cloud network systems, build a comprehensive internal platform that integrates all applications, and connect internal management work with external judicial services.

Second, it calls on courts to leverage technology to enhance the quality of trial work further. SCR initiatives need to focus on making the operations of trial hearings more efficient and orderly: this requires a fully digital judicial process that allows for "full traceability, dynamic oversight, and early warning[-systems] […]." Interestingly, this document is the only SCR policy document that notes that informatisation is meant to promote the "organic unification of procedural and substantive justice". However, the merging of procedural and substantive elements of justice in SCR is a recurring theme in official policy documents. Chapter 6 further investigates what this means.

Improving the quality of trial work also implies improving the enforcement of judicial decisions. SCR should offer the solution to the judiciary's well-known enforcement problem by better integrating the different actors that play a role in enforcement (police, procuratorate, administrative institutions, and so forth). Lastly, SCR should improve access to justice by making filing cases and other procedural steps for litigating parties easier and more convenient. Through digitisation and automation, it wants to "strengthen the sense of achievement" among litigating parties. As stated

in the previous chapter, Chinese courts suffered a serious legitimacy crisis, and their rapid embrace of advanced technologies is a bid to improve their standing among the public and other actors in China's political-legal system (Chen and Li 2020a). One way of doing this is to change people's perceptions about the effectiveness of going to court.

Third, it requires courts to use informatisation further to promote transparency and convenience of court work by expanding the three transparency platforms and building a multi-channel disclosure platform, such as websites and WeChat platforms, allowing people easier access to court information.

Fourth, courts need to leverage big data and AI technologies to provide more accurate and smart services, reduce the administrative burden on judges, and provide smarter litigation and legal educational services for people. Interestingly, it asks court management to use this technology to increase the scientific level of judicial decisions. The idea that computers are more accurate, objective, and "scientific" is deeply rooted in the Chinese conception of governance. Chapter 5 examines the ideological foundations of this conviction.

Last, it underscores the importance of creating adequate safeguards and security measures for the storing and sharing data. Given the sensitive nature of some court cases and the work accounts of court personnel, this infrastructure must be sufficiently protected.

3.5.2 The Five-year Development Plan for the Informatisation Construction of the People's Courts (2019-2023)

Another important document is the next *Five-Year Development Plan for the Informatisation Construction of the People's Court* (2019-2023) (SPC 2019a). Strangely enough, unlike other Five-year plans, this plan is updated on a rolling basis, with the five years increasing yearly. In 2021, the SPC passed the Development Plan for the period (2021-2025), but the document is unavailable to the public (SPC 2021f). Therefore, the latest publicly available plan at the time of writing (early 2023) is the 2019-2023 version.

In this Development Plan (2019-2023), the SPC reported that the "main body of the People's Court informatisation 3.0 has been established, and the smart court has moved from preliminary formation to comprehensive construction." The Development Plan lists the achievements of court

informatisation and discusses the tasks for the next five years. The main theme of the discussed achievements is improving interconnectivity and information management.

The period between 2017 and 2019 focused on interconnecting as many courts as possible on a national court private network, forming a "relatively complete information infrastructure with intra-network interconnection". The SPC connected with various political-legal departments to enable collaboration and information sharing for enforcement and control. SCR does not only refer to the digitisation and automation of legal courts but also to improving digital interconnectivity and information sharing between all actors of the political-legal system.

According to the Development Plan (2019-2023), 95 per cent of courts have built informatised litigation service halls, 83 per cent established litigation service networks, and 78 per cent established a hotline. These three elements of SCR make up what the Development Plan calls the "Trinity" Litigation Service Centre, which allows litigating parties and their legal counsel to participate in online litigation. These public-facing elements supposedly make judicial services more efficient and accessible. Many courts now have websites allowing parties to log in and file cases remotely. However, the litigation service hall is a physical expression of the current digital infrastructure.

These service halls are equipped with machines that allow litigants to submit their cases physically, but documents are immediately processed digitally to reduce the workload of court personnel. Courts require digital files to create a functioning digital and automated justice system. This caused much extra work in the early days because court personnel had to scan case documents manually. Therefore, case documents needed to be digitised from the beginning of the judicial process. This digital entry point is now also physically represented by these machines.

Different managerial elements within the judiciary have also been almost fully digitised. Ninety-six per cent of courts have built personnel management systems, and 90 per cent have built administrative systems and internal websites. Most notably, 100 per cent of courts have achieved full recording and monitoring of all aspects of case information. The Development Plan (2019-2023) also mentions that some courts have integrated their personnel information and trial information to enhance their personnel management system; it allows courts to "grasp the judges' case-handling in real time, conduct individualised performance evaluations, […] and promote judges to achieve self-discipline, self-assessment, and self-management". As Stern et al. (2021)

noted, SCR is not only about centralising control and oversight over courts but also increasing internal oversight and monitoring of the work of judges. The case studies in chapter 7 go deeper into this.

SCR also achieved a breakthrough in centralising data management. High courts established data transmission and exchange systems, and provinces installed new systems to upload and exchange data from grass-roots courts in their jurisdictions and to aggregate court case information across the country to the SPC. It is an interesting development: as argued throughout this dissertation, SCR is mainly about centralising control and oversight over the judiciary. Therefore, it would include the facilitation of vertical data transfers. However, as discussed later, fragmentation continues to persist. Moreover, courts have complex hierarchical relationships (Ng and Chan 2021), and local courts would likely try to resist hierarchical oversight by refusing to share data. The issues with uploading court decisions to the CJO and bureaucratic resistance among judicial organs testify to this assumption (Luo and Kellogg 2022).

The Development Plan (2019-2023) also features a long list of "deep-seated problems" that have emerged over the continuous informatisation of courts. First, the overall planning and top-level design of informatisation construction is an issue. It complains that there exists a "disconnect between the construction plan and implementation", technical standards are not up to par, digital and automatic applications lack a clear legal framework, and so forth. Therefore, the "guiding role" (*zhidao zuoyong*, 指导作用) of development planning needs to be strengthened.

The plan calls for more integration and information sharing to establish full-process digital litigation services. It says that most litigation services are limited to online case filing and online notifications. Courts need to improve the digital treatment of evidence and coordination between internal and external departments. The plan addresses a pain point of SCR where courts were digitising different stages of the judicial process but rarely the entire process from start to finish. This practice creates bottlenecks between already digitised external judicial services and internal back-office processes that are still conducted offline.

Another issue was the lack of computing and storage devices to meet the growing demands of court services. Despite the achievements mentioned above, the Development Plan (2019-2023) also admits that interconnectivity is imperfect and information exchange between departments is low. This issue is spread unevenly across the country: according to the plan, the application rate in

various regions needs to be more balanced, and some courts must catch up. The plan acknowledges the issue of "emphasising construction and light application", calling out courts that might market themselves as implementing SCR but where the new tools are not actually used.

The Development Plan (2019-2023) also includes a long list of construction requirements, development ideas and goals, and key tasks. For brevity, we outline only a few of the general key tasks. The first is strengthening top-level design based on the five-year development plan. It should be reviewed every year. Technical standards should be included in the plan. It calls on provincial high courts to play a role in expanding standardisation. It also announces a new evaluation index system to measure the progress of smart court construction.

Next, it calls to accelerate system construction (referring to how systems should operate, what applications they include, and what functions they have), focusing on expansion and integration. Smart court applications need to be expanded and, at the same time, better integrated with broader SCR systems and platforms. This integration must also lead to more sharing between higher- and lower-level courts. It also dedicates many tasks to establishing a new cybersecurity system to protect all the digital information generated by SCR applications sufficiently. However, the simultaneous call for more data sharing and protection might be self-defeating. Local courts are basically given munition to refuse to share data or make data-sharing more difficult in the name of security and sensitivity. It goes against the call for more sharing between hierarchical levels of courts. It is uncertain how SCR will resolve this issue, as it continues to persist at the time of writing. The issue of "information siloes" (*xinxi guidao*, 信息孤岛) features prominently in SCR, and future chapters elaborate on this.

A last point of interest is the claim that informatisation needs to help promote the "proceduralisation of trial work" (*shenpan gongzuo chengxuhua*, 审判工作程序化). This task substantiates one of the arguments of this dissertation that SCR is seen as a way to enhance and institutionalise procedural reforms. The framing of IT as something that can enforce procedural compliance is a key theme of SCR. Notably, the Development Plan (2019-2023) implies that the end goal of informatisation, and, therefore, SCR is to build a "systemic iron cage" or a "digital big-data iron cage" around adjudicators. The Smart Court Opinion (SPC 2017a) states that smart courts should promote "the organic unification of substantive and procedural justice". This statement implies that digitisation should improve adherence to procedures but that these procedures remain in service of substantive

outcomes. Therefore, with other judicial reforms, SCR may be about improving and better enforcing judicial procedures at the cost of human discretion. Judicial reformers believe that this makes the judiciary more efficient, consistent, and fairer (Hu 2019). In this sense, automation might not refer so much to adjudication automation. Rather, it refers to the reduction of human agency in making discretionary decisions during the judicial process. Chapters 6 and 7 go deeper into this argument.

In sum, the Development Plan (2019-2023) indicates the end of the experimentation phase. While it recognises many of the rapid achievements made since 2015, it also recognises that this came at the cost of uniformity and compatibility. This cost has created numerous issues, which I will return to throughout the next chapters. In 2021, the SPC issued national Rules for online litigation and smart court operation. National Rules issued by the SPC are more authoritative than their directives, often formulated in Opinions and Provisions. They overrule any local procedural rules, and all courts must adopt them.

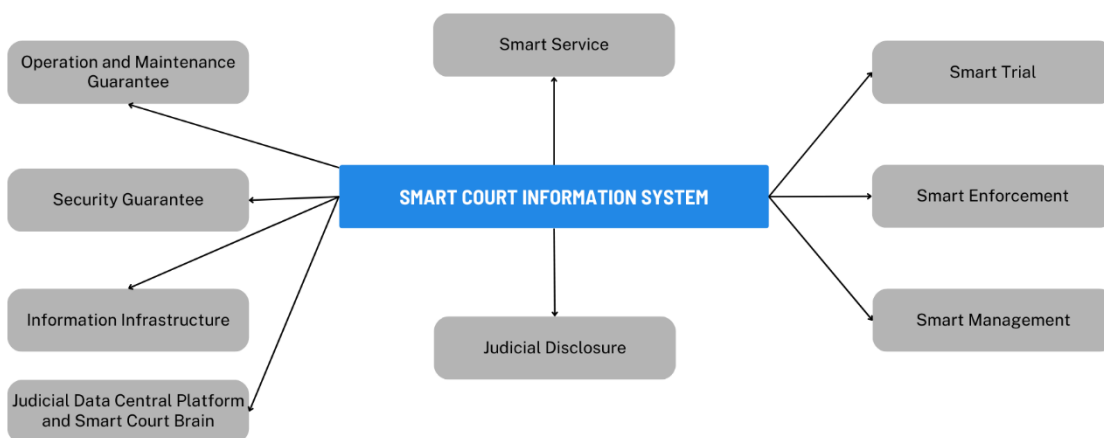*Figure 1: The Smart Court Information System*

Figure 2: The Smart Service System

Online Authentication

Online Security System

e-Service Platform

People's Court Online Service

SMART SERVICE SYSTEM

12369 Litigation Service Hotline

e-Litigation Platform

People's Court Mediation Platform
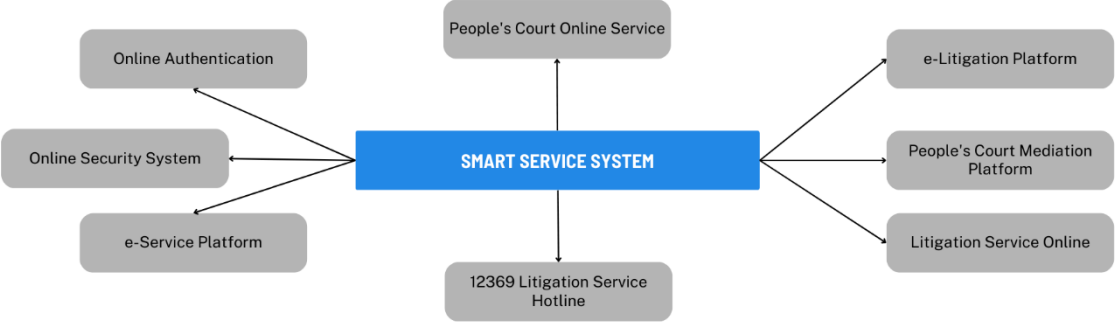
Litigation Service Online

Figure 3: Judicial Disclosure Platform

3.6 Consolidation and Legal Framework (2021-2022)

According to an SPC research report in 2022, the third phase of People's Court Informatisation is officially complete. Smart courts can conduct all judicial operations completely online, have achieved full disclosure of the judicial process through digitisation, and can provide all-around intelligent services. By the end of 2021, electronic or online litigation was used in eighteen per cent of judicial trials nationwide, a seventeen per cent-point increase from 2016. The next phase, People's Court Informatisation 4.0, will build "all-round intelligence, full system integration, full business collaboration, full ubiquity over space and time, and full system autonomy" (Wang and Tian 2022b).

Likewise, SCR has seen the introduction of regulatory and procedural standardisation at the national level. In 2021 and 2022, the SPC introduced national rules to standardise and unify SCR. In quick succession, the SPC issued the *Online Litigation Rules* (OLR) (SPC 2021b)*, the Online Mediation Rules* (OMR) (SPC 2021c), the *Online Operation Rules* (OOR) (SPC 2022b), the *Opinions on Strengthening the Judicial Application of Blockchain* (Blockchain Opinion) (SPC 2022d), and, lastly the *Opinion on Regulating and Strengthening the Applications of Artificial Intelligence in the Judicial Field* (AI Opinion) (SPC 2022c). The publication of these documents

indicates that the stage of consolidating experiences and unifying practice has begun. They are the first step in standardising smart court procedures. This last section discusses these documents.

In the future, the National People's Congress (NPC) might draft a national law related to online procedures on par with the Civil and Criminal Procedure Laws (Papagianneas 2021a). These documents aim to unify and standardise the smart systems and their application, operation, and management (OOR, article 1). They ask for more coordination and planning from the top (OOR, article 2.3), which, together with the circulation of these Rules, is a strong signal of more centralised planning and coordination. The Blockchain Opinion also signals a focus on improving interconnectivity, collaboration, and information-sharing between courts and other sectors and standardising the use of blockchain systems in the judicial system at a national level (Deng 2022). In this last section, I discuss and examine these latest regulations.

The first sign that consolidation was underway was when the SPC issued the *Provisions on Several Issues Related to the People's Court's Handling of Cases Online* (SPC 2021d). This document was published after the outbreak of the COVID-19 virus in 2020, which forced courts to accelerate their digitisation efforts to continue hearing trials online.

The provision has 36 articles covering the meaning and scope of online litigation, the role of consent, evidence treatment, trial hearings, and digital service of documents. Most notable is the concept of consent: online litigation requires the parties' consent. However, courts can opt to conduct a dual offline-online track for the litigation process where one of the litigation parties refuses to participate in online proceedings. It means that at any point in time during case proceedings, a party may revoke its consent and request to continue offline.

Regarding efficiency, including expedition and simplification of the judicial process, the issue of consent seems counterproductive. The dual track of offline/online proceedings will likely increase courts' workload and complicate matters. At the same time, though, SCR also aims to improve judicial services and credibility. The strong focus on consent could be a trade-off with efficiency and ensures that litigation participants feel that they have a sense of agency and control over the trial proceedings, which is an important element of perceived procedural justice (Sela 2019).

Articles 9 through 17 are dedicated to submitting, exchanging, and verifying electronic evidence. Evidence may be submitted through scanning, copying or transcription to digitally process and upload it to the litigation platform. These digital representations have the same validity as the originals, and the originals do not need to be submitted to the court except in specific circumstances. Articles 10 and 11 discuss the conditions to determine the validity and authenticity of the digitally submitted evidence. The court will require the parties to submit the original in specific circumstances.

A major concern remains the verification process. The Provisions (SPC 2021d) try to address this by allowing for notarisation of the creation process, but as Lu (2020) already discussed, the associated cost is high. The Provisions (SPC 2021d) also allow the use of blockchain evidence (article 14-17), which is considered a digital evidence integrity protection method. Blockchain evidence refers to evidence submitted by the party that is recorded through blockchain technology. According to Lu (2020), Chinese courts are already using blockchain, helping to improve the credibility and authenticity of electronic evidence. It is also a cheaper alternative than the notarisation of electronic evidence, which is costly.

The treatment of evidence has long been problematic in the Chinese judiciary (e.g., see Capowwski 2012; Guo 2020; Zhang 2021). Therefore, the increased application of a reliable tool to ensure authenticity is a positive development. However, it remains to be seen whether other judicial organs, especially in criminal justice, are willing to adopt it. Its success largely depends on large-scale and widespread adoption. As Stern et al. (2021) noted, horizontal bureaucratic resistance exists within the judiciary against SCR. Using blockchain evidence will also increase the strain on relations between judicial organs. According to Lu (2020: 119-120), the application of blockchain in China's judiciary has already positively impacted its efficiency. However, blockchain is not a silver bullet that can magically automate evidence verification. The chained information remains a part of the entire case and needs to be interpreted by the judge in combination with the other facts.

In addition, the Provisions (SPC 2021d) allow for asynchronous trial proceedings, albeit only for small claims procedures and administrative summary procedures. Although this option is significant for goals such as access to justice (people are unrestricted by specific times and other commitments), the limited scope of application diminishes the potential impact. Furthermore, courts are empowered to choose an offline trial hearing in certain circumstances, such as

complications with the evidence, technical conditions, or in "other circumstances that are not suitable for online trial". This last circumstance most likely entails highly sensitive cases related to social stability, giving courts a certain degree of discretion that arguably limits the potential of online litigation.

Especially worrying is the immediate waiver of litigation rights if a party fails to complete the online litigation activities within the specified time limit. It needs to be clarified what this means for the case proceeding. There are no provisions for appeal, and the exact conditions need to be clarified. While consent to online litigation precludes appeals because of deprivation of procedural rights, the Provisions (SPC 2021d) do not plan for unforeseen circumstances that may hinder parties' completion of required procedures within the time limits. There could e many reasons for "failure to participate" or failure to "complete litigation activities asynchronously", such as technological barriers, internet connection, technological (il)literacy, and so forth.

The last part addresses the digital service of judicial documents. Service of judicial documents is another issue that the judiciary struggles with, as parties may change addresses and fail to inform the relevant authorities or not have a valid address. It is especially problematic when cases involve migrant workers, who are extremely mobile and often do not possess an official address. Digital service also allows the sender, i.e., the courts, to get confirmation that the service was successful. Therefore, the service of documents through digital means is a straightforward way to address this issue. The ubiquitous use of smartphones and instant messaging apps such as WeChat in the PRC will likely make the digital service the primary channel of serving documents for courts.

Therefore, the Provisions (SPC 2021d) remain quite limited in scope and leave some crucial issues related to access to justice, efficiency, fairness, and due process unaddressed. The next section analyses whether the new Smart Court Rules address these issues.

3.6.1 The Smart Court Rules

The Smart Court Rules, issued in 2021 and 2022, constitute the most authoritative documents that regulate and shape smart courts and online litigation in China. In this last section, I will analyse the OLR (SPC 2021b), the OMR (SPC 2021c), and the OOR (SPC 2022b). I examine whether these Rules and Opinions help address the identified pain points in this chapter and issues that emerged from the fragmented policy-implementation approach.

The SPC quickly decided to separate and clarify the distinctions between different judicial procedures: it separated online procedures into the two main judicial services, i.e., litigation and mediation. The third document aims to regulate internal operation rules. Therefore, I analyse the OLR (2021) and OMR (2021) together because they are externally oriented, whereas the OOR (2022) is oriented internally.

Despite their common internal orientation, the preambles of the OLR and OMR differ in their stated goals. The OLR's main goal is "to promote and standardise online litigation activities", "protect legal rights", and "ensure fair and efficient trial of cases". This sentence indicates three themes or goals: consistency (or standardisation), fairness, and efficiency. However, the OMR only mentions efficiency: its goals are to "facilitate" and "improve the efficiency" of resolving disputes. The reason for this might be simple: mediation is mainly voluntary and a non-legal way to resolve disputes, is easier for enforcement, and often satisfactory for both parties (Chan 2017: 5-12). The court only has to facilitate this process by acting as an intermediary and offering the (online) venue for mediation. Litigation generally only happens when parties cannot agree on a mutually satisfactory resolution, is often more antagonistic, and tends to be avoided by judges if possible (Ng and He 2017: 125-132). Therefore, issues of fairness and rights carry more weight in litigation.

That the OLR needs to consider more principles than the OMR is clear from the first few articles. Article 2 of the OLR discusses all the principles that the court must follow in conducting online litigation: the principle of fairness and efficiency, legality and voluntariness, rights protection, people's convenience, and, lastly, safety and reliability. In contrast, the OMR does not have such a provision, even though these principles are arguably also relevant for mediation.

OLR article 3 significantly expands the scope of online litigation. Table 2 shows the difference.

Table 2: Changes between the Provisions and the final Rules

Scope	Provisions 2021	OLR 2021
Civil and admin litigation	v	v
Special civil and oversight procedures	v	v
Civil and administrative enforcement case, enforcement of civil cases attached to criminal proceedings	v	v
Criminal expedited procedures, criminal cases, review of commutation and parole	x	v
Bankruptcy procedures and reviews of administrative enforcements	x	v
Other suitable cases	x	v

Whereas the Provisions (SPC 2021d) kept the scope of online litigation quite limited, only six months later, the OLR had already expanded it to criminal cases and added elements of civil and administrative cases. Interestingly, the OLR maintains a non-exhaustive list with the line "other suitable cases", whereas the Provisions were exhaustive. It indicates that online litigation can be used in any case, depending on the court's discretion and the parties' consent.

Consent is another topic that the OLR emphasises. OMR article 4 briefly mentions the requirement of consent. In contrast, OLR article 4 is much more exhaustive on the issue of consent. It replicates most of article 4 from the Provisions (2021) but expands its content to three articles (OLR, articles 4-6). First and foremost, it underscores the importance of *informed* consent: In order for consent to be valid, courts must explain how online litigation is conducted, what the legal consequences are, and the parties' rights and obligations. OMR article 7 also contains this provision but focuses on convincing and guiding parties to prioritise choosing online mediation.

Second, the OLR distinguishes between different forms of consent. The court considers parties to consent to online litigation when one or all parties voluntarily apply. It also allows bifurcation between online and offline proceedings when parties agree to online litigation in some procedures but disagree in others. The court clarifies that in this case, said procedures can be carried out online by the party who agreed to it and offline by the party who disagreed with online litigation for that specific procedure. This arrangement reconciles the differences in preference between parties and does not let the absence of consent stand in the way of the judicial process. While the Provisions (SPC 2021d) already provided for this kind of bifurcation, the OLR simplifies it.

Another addition is that the court may not equate consent by parties to conduct a *specific* procedure online with consent to conduct the *entire* litigation process online. It is important because it gives litigation parties more control over the judicial process. At the same time, consent hinders efficiency improvements, as the judicial process is significantly compartmentalised because of consent. However, it is likely that where SCR touches upon public-facing services, fostering a sense of control and fairness is more important to stimulate more acceptance of online litigation by the public.

What complicates procedures further is the requirement of consent from the Procuratorate. Over the past decade, the Procuratorate has overshadowed the police and further marginalised the courts (He 2022). Whereas the court still has final discretionary decision-making power over online or offline litigation and can leverage its judicial authority over private litigation parties, it does not have that luxury with the Procuratorate, a judicial actor at the same horizontal administrative level, but with significantly more leverage over courts in criminal cases.

Another change is the phrasing of the first paragraph in the Provisions (SPC 2021d): the "waiver of corresponding procedural rights" is removed in the new version. It is replaced with "[parties] will bear the corresponding legal consequences in accordance with relevant provisions of the law and judicial interpretations" (OLR, article 6). Although punishment remains, non-compliance does not explicitly lead to a deprivation of procedural rights. In sum, consent is important to the legitimacy of online litigation to foster a sense of fairness (Grimes 2006).

The Rules give litigating parties considerable control over proceedings. Whereas this raises efficiency concerns, the OLR has found a balance between the fairness-efficiency trade-off. Not granting or revoking consent during litigation does not necessarily hinder the judicial process.

Remarkably, parties are allowed to revoke consent in the middle of the judicial process. Courts do have the discretion to review, but there are no strict or clear conditions that parties need to meet to ask for offline proceedings or revoke consent. At the same time, though, courts also enjoy discretion to move proceedings offline, but this is conditional, e.g., the case needs to be too difficult or complex for online litigation, it requires witnesses to testify in person, or the court may find that evidence needs to be provided physically and cross-examined offline, rather than online. Ultimately, online litigation needs to remain optional, and ample room exists for moving between offline and online.

In contrast, the OMR does not have these considerations: as stated earlier, it is primarily geared towards efficiency and convincing parties to use the online option. There are also no provisions to bifurcate procedures into online and offline. Therefore, the OMR is more of a facilitation document, whereas the OLR is more of a (procedural) rights-giving document.

Lastly, the OOR (SPC 2022b) aims to regulate smart courts' internal procedures. It is important because it finally provides a clear and coherent framework for smart court operation and a clear understanding of what falls under the term "smart court". It covers the system construction, steps of procedure, and management of its operations. System construction relates to different systems (articles 4 to 13). These systems comprise the smart court: smart service, smart trial, smart enforcement, smart management, judicial disclosure, judicial data centres and smart court brains, general IT infrastructure, a network and information security system, and an operation and maintenance system. The section stipulates how each system *operates*, what applications it *includes*, and what *functions* it provides.

At the core of the smart court lies the judicial data centre and "smart court brain" (*zhihui fayuan danao*, 智慧法院大脑) (article 4). They include all the judicial databases and the data management and exchange platforms that enable smart courts to operate. They provide functions that allow courts to "operationalise" the big data they have at their disposal (article 10). The "brain" allows for data interconnectivity and supports collaboration between internal and external departments. Simply put, it is the engine of the smart court.

Articles 14 to 33 cover every procedural step of the judicial process and which system should be used for what purpose at each step. The first point of contact is the smart service system, which

allows litigation parties to register for online litigation or mediation. The smart service system is connected to other platforms, such as the court's online litigation, online mediation, and blockchain platform (for evidence submission).

Application and other documents are submitted through the smart service and smart trial systems. Payment of fees happens through the smart trial and smart enforcement systems. Documents submitted through the smart service system are verified and then processed to the smart trial, smart enforcement, and smart management system for circulation and use.

The trial itself is conducted through the smart trial system. The smart trial system also generates new digital files regarding the trial in real time. It is connected with the smart court brain, which processes the new data but also enables the smart trial system to push relevant legislation and cases for reference. The enforcement stage of the judicial process is conducted through the smart enforcement system, which allows for investigation and control of (seized) property, paying fees and fines, organising auctions, and so forth.

Finally, articles 34 to 44 cover operation management. Courts are required to formulate security management procedures and determine cybersecurity responsibilities. This section is less solidified than the previous two sections, reverting to broad directives on dealing with the data generated in smart courts. Courts must ensure data security throughout its life cycle and formulate procedures for dealing with data security emergencies and reviews. Courts must also draft contingency plans to effectively deal with sudden emergencies such as power outages, technical failures, cyber-attacks, and so forth. Lastly, all courts must prioritise using the national unified information system and integrate their local self-developed systems into the corresponding national unified system.

In sum, the three Smart Court Rules address multiple issues related to the initial development of SCR, i.e., the lack of a regulatory basis, the lack of clear procedures, and issues related to privacy and litigants' agency. These Rules consolidate SCR by issuing clear definitions and provisions and providing more national coherence. They call for more top-level design and underscore the importance of integrating with national-level platforms and systems. However, at the same time, they provide new directives and guidelines for further policy experimentation. The OOR illustrates how courts are still struggling to sufficiently protect all the sensitive data they now hold while simultaneously creating a sufficiently free flow of information between various horizontal and

vertical levels of the judicial system. As the PRC's data security and AI governance regime likely takes more solid shape in the coming years, SCR will also address these issues.

3.6.2 Regulating Blockchain and AI in Courts

The two last documents of this comprehensive review of SCR are the Blockchain Opinion (SPC 2022d) and AI Opinion (SPC 2022c). Both documents outline the overall objectives of blockchain and AI in courts until 2030, giving directives on the general principles, scope of application, and requirements for system construction. The general purpose of both documents is to align blockchain and AI development in the judiciary with other policy plans such as the *14th Five-Year Plan for National Economic and Social Development (2021-2025)* (NPC 2021), the *New-generation Artificial Intelligence Development Plan* (SC 2017), and the *14th Five-Year Plan for National Informatisation (2021-2025)* (CCCI 2021). In addition, both explicitly reference SCR, stating that they aim to promote the further construction of smart courts.

3.6.2.1 The Opinions on Strengthening the Judicial Application of Blockchain (2022)

The Blockchain Opinion (SPC 2022d) is the first central judicial document fully dedicated to using blockchain in the judicial process. Remarkably, it is also published in English, indicating that this also has a foreign audience in mind. The Opinion aims to leverage the role of blockchain to improve judicial credibility, efficiency, collaboration, and facilitate social governance.

Blockchain has been central to broader informatisation policies in China since 2016. Multiple central government institutions have already issued documents related to blockchain, such as the *White Paper of Blockchain Technology and Application Development in China*, which laid out a roadmap for blockchain development (Lu 2020: 103-104). The 14th Five-Year Plan (CCCI 2021) indicates that the Chinese government wants to achieve "notable advances" in cutting-edge technologies, such as AI and blockchain. It calls to foster a "healthy and orderly development of blockchain technology applications": i.e., building standards and norms, improving testing and assessment, launching more blockchain-related initiatives, and so forth.

Therefore, the policy environment has been conducive to blockchain development. Blockchain has also been in use for several years in the judiciary. With this context in mind, the Blockchain Opinion was issued to accelerate the integration of judicial processes with blockchain, providing

key directives to standardise further and strengthen its application in the judicial process. The Opinion states that blockchain application has become widespread and that over two billion pieces of evidence have been sorted on judicial blockchain platforms nationwide.

The Blockchain Opinion focuses on six themes: national interconnectivity and sharing, creating construction standards for blockchain platforms in courts, expanding the application scope of blockchain beyond evidence, integrating blockchain with other processes, leveraging blockchain to improve collaboration, and using blockchain in economic and social governance. These themes of more bureaucratic interconnectivity, standardisation, integration, cross-institutional collaboration, and social governance recur across all general judicial reform and SCR goals. It is divided into seven chapters.

First, the Opinion envisions blockchain as the glue that binds the entire political-legal system together. By 2025, the SPC aims to have established a "blockchain alliance" that will fully connect all people's courts and social sectors. It wants to integrate judicial blockchain in economic and social operation systems to enable information sharing and coordination between the political-legal and other sectors, e.g., commercial, financial, and social credit. These interconnectivity and integration principles are crucial to reaching the next stage of deeper collaboration and coordination between political-legal actors. It is necessary to develop common fundamental technologies through unified and open technical standards that facilitate deeper and more widespread standardisation across and between sectors.

As discussed earlier and in the following chapters, the fragmentation in SCR poses real problems for deeper integration and upscaling of future digitisation and automation. The SPC makes a clear bid for blockchain, one channel that opens up the "information-siloes" or connects the "data islands" between political-legal and other sectors.

Second, once again, the SPC calls to "strengthen top-level design", meaning there needs to be more top-down coordination and systematic implementation of blockchain applications. It naturally ties into the aim to overcome fragmentation. Deeper blockchain application and integration between political-legal institutions are necessary to improve social governance. However, the technical capabilities must be improved by optimising technical standards and management specifications for its application to achieve this.

Chinese social governance functions like a feedback-loop system that allows the political-legal system to adapt to changing circumstances based on information that gets fed into it (see Chapter 5). However, for more efficient adaption, it is also necessary that the different actors that make up social governance are better interconnected. According to this document, interconnectivity is best achieved through blockchain.

The following three chapters discuss the use of blockchain to improve judicial credibility, efficiency, and collaboration. To improve credibility, it aims to leverage blockchain to enhance the trustworthiness of digital evidence and ensure better compliance with enforcement. To improve efficiency, the SPC aspires to automate procedures such as docketing cases after their classification and categorisation, starting trial proceedings when mediation has failed, investigating, freezing, and seizing property in eligible enforcement cases, all through blockchain technology. It also improves collaboration by automating the verification of lawyers' qualifications, facilitating case handling between political-legal actors, and enhancing enforcement that requires cross-departmental cooperation.

Lastly, it details how blockchain should be leveraged to improve economic and social governance trustworthiness. It calls to build blockchain platforms to protect intellectual property better and improve the business environment through market regulation and property and transaction registrations. Blockchain platforms support the better and more secure circulation of financial information. In addition, the SPC (2022d) wants to leverage blockchain to build the credit system further to enable more secure and reliable circulation and use of information on judgment debtors' blacklists. Ultimately, it needs to improve a "new credit-based supervision mechanism" and stimulate the "construction of the social credit system".

In short, the Blockchain Opinion focuses on improving interconnectivity and cooperation between actors within the broader political-legal system internally and externally with other economic and social actors. It presents blockchain as the glue that will help achieve a more seamless collaboration between these actors. Tellingly, the keyword in this document is "interoperation collaboration" (*kualian xietong jizhi*, 跨链协同机制). If AI is the motor that drives the automation of justice, then blockchain platforms are the nuts and bolts that bind the different cogs together within the social governance machine.

3.6.2.2 The SPC Opinion on Regulating and Strengthening the Applications of Artificial Intelligence in the Judicial Field (2022)

The AI Opinion was issued in late 2022 and is the latest (at the time of writing) SPC document to standardise and improve the use of AI in the judiciary. It has four principal goals: to strengthen its use in the entire case-handling process, in helping with clerical work, and in helping with diverse dispute resolution services and social governance (SPC 2022a).

The Opinion discusses the application scope, system construction, and comprehensive support concerning using AI in the judiciary. Its objectives are two-fold: by 2025, the SPC wants to deploy AI to support external judicial services and internal management, especially administrative work. By automating these processes, it wants to improve oversight and control functions to reduce judicial corruption and enhance the role of courts in social governance.

By 2030, these goals must be upscaled: AI must provide whole-process high-level smart support with more explicit norms and principles, significantly reduced workload, and more precise social governance functions, ultimately achieving "full application effectiveness". In other words, AI needs to be fully operational and widespread across all courts by this date.

The Opinion also outlines the general principles for using AI in justice administration. AI must adhere to the principles of security and legality, fairness and justice, its supportive role, transparency and credibility, public order, and good customs.

Regarding fairness and justice, it states that AI products and services should be free from discrimination and prejudice. The Opinion underscores that AI can never impair the fairness of judicial processes or trial outcomes. It aims to offer fair, reasonable, and feasible solutions based on judicial demands. Furthermore, the Opinion affirms the supportive role of AI in adjudication: the human user will always maintain their decision-making authority. AI is not meant to make judicial decisions and can only be a reference tool for adjudication, management, and oversight. Using judicial AI may also not damage public interests and social order and not violate public morals and ethics. To achieve this, the Opinion calls to establish mechanisms for risk management, emergency response, and responsibility investigation in case of risks to morality and ethics.

The Opinion also clarifies the scope of application for AI. Simply put, it ideally wants to use AI at every stage of the judicial process. It aims to use AI in case-handling procedures, such as evidence guidance and review, and providing adjudicating assistance. Furthermore, AI must play a crucial role in administrative work and management. AI tools are needed to help detect deviations and irregularities in judicial procedures and other "prevention and control" mechanisms against judicial corruption to maintain judicial integrity. In addition, the Opinion indicates a willingness to further expand the use of AI in the judiciary, specifically AI services for dispute resolution and social governance. For example, AI tools must help the judiciary detect and asses risks to social governance better.

Like many other central-level documents, the AI Opinion also calls for strengthening top-level design. Moreover, it states that the SPC shall now guide and regulate AI system construction of courts at all levels across the country. At the same time, it will broaden the application scope of judicial AI while strengthening internet-, data- and personal information security. It could mean that the SPC will get more hands-on with developing AI systems in local courts. The document is a strong signal of a top-down policy push, but how local courts will receive this remains to be seen.

The Opinion also calls on the judiciary to support the research and development of judicial AI. Therefore, courts are expected to support innovation, encourage patent applications and copyright registrations, and provide other types of comprehensive support that will facilitate further integration of AI in the judicial process. This is in line with the general public-private partnership approach that the judiciary has taken in developing AI systems for the judiciary. In this sense, it depends on the success and cooperation of tech companies in developing AI applications.

In the typical fashion of central-level documents, both the AI Opinion and Blockchain Opinion contain grand goals and broad directives with little detail. The former is especially sparse in details. However, it is notable that it mentions that the SPC will take the lead in guiding further development of AI systems. It might indicate a more hands-on approach to local policy implementation, but it is unlikely to resolve the fragmentation issues completely. A possible consequence could be that the SPC will coordinate to set up cross-provincial judicial platforms and AI systems. However, at this stage, this remains purely speculative. As stated, AI is the driver of automation, and blockchain is its nuts and bolts. However, the oil, i.e., big data, without which automation cannot survive, remains jealously guarded by governments and judiciaries at all

hierarchical levels. Information asymmetry in Chinese policy implementation and governance is an age-old issue (Zhan and Qin 2016) that digitisation and automation cannot solve overnight.

Nonetheless, the ambitions of the judiciary to use blockchain and AI to strengthen the judicial process and its social-governance role as part of the broader political-legal system are clear. These two Opinions are a clear starting shot for the next step in court informatisation that will increasingly expand and upscale the use of technologies such as AI and blockchain.

3.7 Conclusion

This chapter provided a comprehensive and chronological review of the official documents that make up SCR. It showed how SCR followed the typical trajectory for Chinese policy development: it starts with a signal from the centre giving broad directives and aspirations but with little detail. It signals local governments to start experimenting within the given framework. Local experimentation in policy implementation naturally leads to fragmentation: different regions focus on different elements, partner up with different tech companies, maintain different standards for system construction, and so forth.

Consequently, what constitutes a "smart court" can vary depending on which court one looks at. This variation is not necessarily a negative consequence, as it allows the Chinese party-state to move fast and experiment and then pick and choose between successful initiatives to use them as "model cases", i.e., successful policy initiatives that should serve as an example of future reform, and other governments or courts are expected to emulate. However, it also leads to many pain points, such as compatibility, legality, and legitimacy issues. Especially with the SCR, the nature of the reform and the role of data and digital technologies exacerbated these problems. Moreover, fragmentation contradicted its goals, i.e., creating a more consistent and homogenous judicial system.

SCR started by creating three national digital platforms, obliging all courts to digitise their processes, upload, and make their court decisions publicly available. While it aligned with transparency reforms and attempts to improve the judiciary's public credibility and legitimacy, it also aimed to increase vertical control and oversight over local courts. It shows how information, in the form of digital data, is often the object of bureaucratic resistance and hierarchical control: local courts, as an administrative bureaucracy, want to maintain ownership and authority over their

information. Forcing them to put it in a central database equals asking them to surrender their advantage in the information-asymmetric relationship with the SPC.

This chapter also reviewed three examples of SCR initiatives to showcase different systems' foci. Each court, whether at the national, provincial, or municipal level, has its considerations and trade-offs to make but is also driven by different goals: the national Faxin Smart Push System aims to improve judicial consistency by providing relevant legislation and decisions for the reference of judges. The Internet Courts mainly focus on providing more efficient and quick judicial services for online commercial and other Internet-related disputes. Lastly, Shanghai's AI System mainly focuses on enhancing procedural compliance in processing evidence. All three initiatives were developed in partnership with three different private players, which caused different issues relating to conflict of interest, fairness, and quality.

Starting in 2017, SCR took off in earnest while the SPC simultaneously formulated a more coherent policy, giving clear guidance on what a smart court should look like. The consequences of fragmentation became clear and were addressed in development plans throughout this period, paving the way towards consolidation. Consolidation, especially legal, came in 2021 and 2022 with three landmark national rules regarding smart courts. They provide a legal foundation for smart court operations, online litigation, and mediation procedures. 2022 closed with two important SPC Opinions on the use of blockchain and AI in courts. Although these two Opinions remain scarce in detail, they provide a more coherent direction for the future development of blockchain and AI.

Important to note is that this trajectory is not linear: experimentation and consolidation go hand in hand. Some smart courts preceded the invention and definition of the terminology in the SPC Work Report (SPC 2016d). By the time of the Smart Court Opinion (SPC 2017a), there already existed many different initiatives related to smart courts. It explains why the Smart Court Opinion focused on general principles and tried to reassert the guiding role of the central judiciary to bring more cohesion in future development, albeit only in principle. Likewise, the use of AI in adjudication precedes the AI Opinion (SPC 2022c). The document does not announce the application's start but wants to strengthen and regulate ongoing and future use of AI. The goal is again to bring coherence to policy implementation by centralising the focus after a few years of fragmented development. In this sense, these directives do not function as starting points of policy development but rather as a way to rectify and address pain points and provide more coherence and consistency for future

development. Therefore, SCR is a meandering and iterative process where top-down directives and bottom-up initiatives occur and interact simultaneously.