JUSTICE WITHOUT LITIGATION

Conclusions on Digitalisation

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The Work of the JuWiLi II Digitalisation Task Force

Digitalisation of Non-Contentious Judicial Procedures

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Executive summary

The JuWiLi II Digitalisation Task Force examined how digital technologies can strengthen the role of notaries in non-contentious judicial procedures, particularly in areas such as succession law. The report approaches digitalisation not as a purely technical upgrade, but as a structural reform of justice delivery.

At the core of the analysis is the concept of **Notary Operations**, which is built on three interdependent pillars: **People, Processes and Technology**. Sustainable digital transformation requires digitally skilled professionals, clearly modelled and clearly defined workflows as well as secure and interoperable technological infrastructure.

Using the European Certificate of Succession (ECS) as a pilot case, the Task Force demonstrated how **BPMN-based process modelling** enhances transparency, consistency and readiness for automation. A comparative survey revealed significant differences in digital maturity across participating countries, highlighting the need for coordinated strategies and investment.

The report also explores the responsible use of **Artificial Intelligence (AI)**, particularly Large Language Models (LLMs), as support tools in legal research, drafting and documentation. It emphasises the **human-in-the-loop principle**, ensuring that professional responsibility always remains with the notary.

The report concludes with policy recommendations, including the development of national digitalisation roadmaps, standardised process models, investment in training, secure digital infrastructure and clear AI governance frameworks.

If implemented responsibly, digitalisation can enhance efficiency, strengthen legal certainty and contribute to a modern, citizen-centred European justice system.

Introduction: Digitalisation and the future of notarial operations

Digitalisation is reshaping the administration of justice across Europe. Courts, public administrations and professional service providers are increasingly required to deliver efficient, transparent and accessible services in a technologically advanced environment. For notaries, who traditionally stand at the intersection of private autonomy and public authority, this transformation presents both an opportunity and a responsibility. In non-contentious judicial procedures, particularly in succession and consensual divorce, notaries are uniquely positioned to contribute to a more efficient and citizen-centred justice system.

The EU co-funded project Justice Without Litigation II (JuWiLi II) seeks to explore and advance this transformation. Building on the results of JuWiLi I, the project focuses on strengthening procedural standards, reinforcing the rule of law and relieving overburdened justice systems by further outsourcing suitable tasks to public office holders such as notaries. A central element of this endeavour is digitalisation: the systematic use of information technology, process modelling and data-driven methods to enhance efficiency and quality in non-contentious proceedings.

The Digitalisation Task Force within JuWiLi II was mandated to explore the opportunities offered by digital technologies for the notarial practice, with a particular focus on:

- Conceptualising 'Notary Operations' as an integrated framework of People, Processes and Technology
- Developing and analysing BPMN-based process models for the European Certificate of Succession
- Assessing the state of digitalisation across participating notarial organisations
- Exploring the role of Artificial Intelligence (AI), in particular Large Language Models (LLMs), in supporting notarial work
- Deriving policy and organisational recommendations

The concept of 'Notary Operations': A 'North Star' for digital transformation

Digitalisation in the notarial context

Digitalisation in notarial practice goes beyond the mere introduction of electronic files or online communication. It encompasses the structured redesign of services, workflows and organisational structures through the use of digital technologies. At its core, digitalisation requires a rethinking of how value is created, how legal certainty is ensured and how public trust is maintained in a digital environment.

From a systemic perspective, digitalisation can be understood as the transformation of analogue, document-based and often person-dependent procedures into structured, data-driven and interoperable processes that create efficiency for the clients. In the notarial profession, this transformation is particularly sensitive. Notaries exercise public authority

and are entrusted with preventive administration of justice. Digital transformation must therefore preserve the authenticity, evidentiary value, confidentiality and integrity of the notarial act. Any technological enhancement must be aligned with constitutional guarantees, data protection standards and the fundamental principles of the rule of law.

In non-contentious procedures, efficiency gains are particularly relevant. These procedures are typically document-driven, standardisable and based on legal formalities rather than adversarial disputes. As such, they are well-suited for structured process modelling, automation and digital case management. However, digitalisation must always respect the notary's public function, independence and duty of impartiality. The introduction of technology must not lead to a dilution of professional responsibility or a mechanistic understanding of legal assessment. Rather, technology should enhance the notary's ability to exercise informed judgement.

Moreover, digitalisation in the notarial context has a strong European dimension. Cross-border succession cases, foreign investments and the fact that citizens are mobile require interoperability between national systems to ensure that information is exchanged efficiently. Digital infrastructures must therefore be conceived not only within national boundaries but also in light of EU regulations, eIDAS requirements (including the revised eIDAS 2.0 framework and the European Digital Identity Wallet, together with qualified electronic signatures and seals) and register interconnection frameworks. A digitally well-versed notary operates in an ecosystem that includes courts, registries, banks, administrative authorities and foreign counterparts. Whatever electronic identification means are available, the notary's personal ascertainment of the parties' identity, capacity and free will remains essential and is not being replaced by remote electronic identification. The concept of Notary Operations aims to provide a coherent orientation within this complex environment.

To provide orientation, the Task Force introduced the concept of Notary Operations and developed a corresponding 'North Star' model. This model is not a technical blueprint but a strategic compass. It articulates a shared vision of how notarial offices can evolve into digitally mature, process-oriented and citizen-centred service providers while maintaining their public mandate based on national legal frameworks.

The Notary Operations North Star: People, Processes, Technology

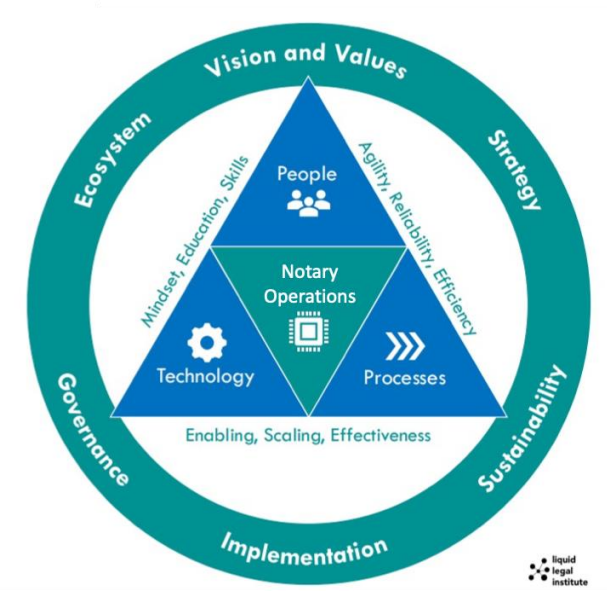


Figure 1: Notary Operations (Notary Ops) North Star
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The Notary Operations North Star integrates three core dimensions: People, Processes and Technology. These dimensions are not isolated pillars but interdependent components of a coherent operational architecture. Only their balanced alignment enables sustainable digital transformation.

People

The notary and their staff remain at the centre of the service. Digitalisation must empower, not replace, professional judgement and legal expertise. Notaries act as impartial advisors, guarantors of legality and custodians of legal certainty. Their interpretative and ethical responsibilities cannot be automated.

Digital transformation therefore requires:

- Development of digital competencies among notaries and employees
- Strengthening of interdisciplinary collaboration between legal and IT experts
- Clear allocation of responsibilities in hybrid (analogue-digital) workflows
- Continuous professional education in emerging technologies, including AI

Human factors such as acceptance, change readiness and trust in technology are key for success. Organisational culture plays a crucial role. Offices that promote openness, structured experimentation and knowledge sharing are better positioned to integrate digital tools effectively.

Processes

Clear, transparent and standardised processes are the backbone of efficiency and compliance. In many notarial offices, procedures have evolved organically over decades. While this evolution reflects practical experience, it often lacks formal documentation.

Digitalisation requires explicit modelling, documentation and continuous optimisation of workflows.

Process orientation means:

- Defining start and end points of each service
- Identifying decision points and legal conditions
- Clarifying responsibilities and handovers
- Ensuring traceability and auditability

A process-driven approach enables scalability, quality assurance and benchmarking. It also provides the necessary foundation for automation, workflow management systems and AI-assisted decision preparation. Without clearly defined processes, technology implementation remains fragmented and inefficient.

Technology

Digital tools, platforms and AI systems support process execution, documentation and communication. Technology in the notarial practice includes electronic file systems, secure communication platforms, digital signatures, register interfaces, identity verification solutions and, increasingly, AI-based tools.

However, technology must be understood as an enabler rather than a driver in itself. The selection and implementation of tools should follow a clear strategic logic derived from process requirements and professional standards. Interoperability, cybersecurity and compliance with data protection regulations are mandatory design principles.

Strategic technological considerations include:

- Adoption of a secure cloud or on-premise infrastructures
- Implementation of structured data standards
- Data connections with national and European registers
- Deployment of AI tools as part of a strict human-in-the-loop model
- Robust back-up and disaster recovery concepts

Each of these dimensions interacts dynamically:

- **People design and execute processes.**
- **Processes define how technology is applied.**
- **Technology enhances human decision-making and procedural transparency.**

This interaction can be conceptualised as an ongoing improvement cycle. Experience from daily operations feeds back into process optimisation. Technological innovations trigger adjustments in workflows. Training and governance frameworks ensure responsible use. The North Star thus functions as a living model rather than a static diagram.

Key elements of the Notary Operations North Star

The following elements operationalise the North Star concept and translate it into practical organisational guidance:

- Clear definitions of roles (notary, staff, external actors)

- End-to-end process orientation (from intake to final act)
- Data connections with public registers and authorities
- Secure digital communication and identity management
- Continuous training and change management
- Defined governance structures for technology and data
- Measurement of performance indicators (e.g. processing time, error rates, client satisfaction)

Particularly important is the end-to-end perspective. Digital maturity is not achieved by optimising isolated steps, such as digital signatures or online appointment booking. Instead, the entire lifecycle of a notarial service must be analysed: from the first client contact through document collection and legal assessment to authentication, registration and archiving.

Furthermore, governance and accountability structures are indispensable. Digital systems introduce new risks, including cybersecurity threats, data breaches and algorithmic errors. A mature Notary Operations model therefore includes:

- Defined decision-making authority for IT investments
- Clear data ownership and access rules
- Regular audits of digital systems
- Incident response procedures

Finally, the North Star emphasises adaptability. Legal frameworks, technological standards and client expectations evolve rapidly. Notarial organisations must therefore establish mechanisms for continuous evaluation and strategic adjustment. Digital transformation is not a one-time project but an ongoing organisational capability.

This conceptual framework guided the subsequent work on process modelling and AI integration. It provided a shared vocabulary and analytical structure for the Task Force and ensured that technological discussions remained anchored in professional values, procedural clarity and institutional responsibility.

Understanding and modelling notarial processes

What is a process in the notarial practice?

A process is a structured sequence of activities that transforms an input into a legally valid output. In the notarial context, the input may be a client request or a legal fact (e.g. death of a person) and the output may be an authentic instrument, a certificate or a registration in a public register. The defining characteristic of a notarial process is that it culminates in an act endowed with public faith and enhanced evidentiary value.

From an operational perspective, a notarial process is not limited to the visible act of authentication. It encompasses preparatory, analytical and follow-up activities that ensure legality, validity and enforceability. These include identity verification, capacity assessment, legal qualification of facts, conflict-of-law analysis, drafting, reading and explanation of the

instrument, as well as communication with authorities and proper archiving. Each of these steps contributes to the preventive function of the notary in safeguarding legal certainty.

Understanding processes requires abstraction. Many notarial procedures are deeply rooted in tradition and professional experience. They are often executed intuitively, based on tacit knowledge accumulated over years of practice. However, formal modelling may further enhance transparency, consistency and documentation. It can reveal inefficiencies and inconsistencies that would otherwise remain hidden. Process transparency is therefore a prerequisite for meaningful digitalisation. Only what is explicitly described can be systematically analysed, optimised or supported by technology.

In addition, formal process definition enhances compliance and risk management.

Clearly documented procedures:

- Reduce dependency on individual experience
- Facilitate onboarding and training of new staff
- Improve internal quality control
- Provide a defensible audit trail in case of disputes

In non-contentious procedures such as the application for a European Certificate of Succession (ECS), processes typically include:

- Client intake and identification
- Verification of jurisdiction and applicable law
- Collection and validation of documents
- Drafting and authentication
- Communication with registers and authorities
- Archiving and reporting

Each of these steps may itself constitute a subprocess with its own internal logic and decision points. For example, the verification of applicable law under Regulation (EU) No 650/2012 requires a structured assessment of habitual residence, potential manifestly closer connections and possible choice of law declarations. Modelling these elements explicitly ensures consistency and legal robustness.

The relevance of process modelling and the role of BPMN

Business Process Model and Notation (BPMN) is an internationally recognised standard for modelling business processes. It provides a graphical language that allows legal and technical experts to develop a shared understanding of workflows. BPMN bridges the gap between legal reasoning and technical implementation by offering a shared visual syntax.

For notaries, BPMN offers several advantages:

- Standardised visual representation of procedures
- Clear identification of roles and responsibilities
- Explicit modelling of decision points and legal conditions
- Improved basis for automation and digital case management systems

Beyond visual clarity, BPMN fosters interdisciplinary communication. Legal professionals, IT developers and administrative staff can collaborate on a shared model without ambiguity. This is particularly relevant when implementing workflow management systems or interfacing notarial software with public registers.

Far from being an academic exercise, process modelling is a strategic instrument for quality management, compliance and digital transformation. A well-designed BPMN model can serve multiple purposes simultaneously:

- Internal documentation and training material
- Blueprint for software configuration
- Basis for performance measurement
- Foundation for AI-supported assistance tools

In the context of JuWiLi II, modelling exercises revealed that even seemingly straightforward procedures contain implicit decision trees and conditional logic. By making these explicit, BPMN enhances transparency and creates the structural foundation for digital interoperability across jurisdictions.

Benefits of BPMN for notarial offices

- Identification of bottlenecks and redundancies
- Alignment across regional chambers
- Facilitation of cross-border cooperation
- Basis for AI-supported process execution
- Enhanced documentation and auditability
- Increased predictability and standardisation of outcomes
- Support for regulatory compliance and supervision

Moreover, BPMN modelling supports a shift from document-centric to process-centric thinking. Instead of focusing solely on the final deed, attention is directed to the entire lifecycle of a case. This holistic view is essential for optimising client experience, ensuring timely completion and maintaining high professional standards.

Core BPMN elements in the context of notarial processes

In the modelling exercises conducted within JuWiLi II, the following BPMN elements proved particularly relevant:

- **Start Events** (e.g. receipt of application)
- **Tasks** (e.g. verify identity, assess habitual residence)
- **Gateways** (e.g. decision on jurisdiction or applicable law)
- **Sequence Flows** (direction of procedural steps)
- **Subprocesses** (e.g. ‘Assessment of Applicable Law’)
- **End Events** (e.g. issuance of ECS, rejection of application)

Each of these elements carries specific functional meaning. Start events define the trigger of a legally relevant workflow. Tasks represent legally or administratively required actions. Gateways are particularly important in the notarial context because they embody legal

evaluation and conditional branching. For example, a gateway may reflect the legal distinction between the general rule of habitual residence and the exception of a manifestly closer connection.

Subprocesses make it possible to break complex legal analyses down into manageable units. In succession matters, this may include:

- Determination of international jurisdiction
- Assessment of applicable law
- Verification of heir status
- Evaluation of submitted foreign documents

End events define the legally relevant outcome and should reflect the final procedural status with precision (e.g. 'ECS issued and notified', 'Application rejected with reasoning'). Explicit end events prevent ambiguity and ensure that all possible procedural paths are covered.

Correct and consistent use of these elements is essential to ensure clarity and interoperability. Inconsistent notation or incomplete modelling can lead to misunderstandings, flawed software implementation or compliance risks. Training in BPMN fundamentals should therefore form part of digital competence development within notarial organisations.

Ultimately, process modelling contributes to a deeper understanding of notarial work itself. By visualising the interplay of legal assessment, administrative execution and technological support, BPMN modelling can support a more transparent and systematically documented perspective on the notarial professional practice. This reflective dimension is indispensable for a responsible and sustainable digital transformation.

Process modelling: the European Certificate of Succession (ECS)

The issuance of a European Certificate of Succession (ECS) as a notarial process

The issuance of a European Certificate of Succession (ECS) under Regulation (EU) No 650/2012 can be understood as a structured, multi-stage notarial process that transforms a factual situation – typically the death of a person with cross-border elements – into a legally recognised instrument with uniform evidentiary effect across EU Member States.

From a process perspective, the procedure is typically initiated by an application submitted by an interested party (e.g. heir, legatee or executor). This triggers a sequence of legally defined tasks. First, the competent authority, often a notary, must establish jurisdiction and verify the applicable law, primarily based on the deceased's habitual residence, while considering exceptions such as a manifestly closer connection or a valid choice of law. These assessments represent key decision points that can be modelled as gateways within a BPMN framework.

Subsequently, the process moves into evidence collection and verification. Relevant documents (e.g. death certificates, wills, civil status records) are gathered, validated and, where necessary, assessed in a cross-border context. The authority then determines the status and rights of the parties involved, ensuring consistency with the applicable legal framework.

Once the legal assessment is complete, the ECS is drafted and issued. This final stage includes formal authentication, registration (where applicable) and communication to the applicant. The process concludes with a clearly defined outcome: either issuance of the certificate or a reasoned refusal.

In BPMN modelling, this procedure benefits from being broken down into subprocesses – such as 'Assessment of Applicable Law' or 'Verification of Heir Status' – ensuring clarity, auditability and interoperability. This structured representation reflects the regulation's logic while enabling collaborative development and future digital support.

Collaborative development of BPMN models

Participating organisations developed BPMN models describing the process of applying for and issuing a European Certificate of Succession (Regulation (EU) No 650/2012). These models reflected national procedural particularities while aiming to capture common structural elements.

The modelling exercise revealed both convergence and divergence. While core steps were similar across jurisdictions, the level of formalisation and adherence to BPMN standards varied significantly.

Feedback and best practices (Abstracted from model reviews)

Based on the analysis and discussions, the Task Force identified recurring areas for improvement. The following best practices apply generically to all reviewed BPMN models:

1. Compliance with BPMN Standard Notation

- Adherence to official BPMN symbols
- Clear distinction between start and end events
- Correct use of gateways and sequence flows

2. Clarity in Decision Logic

- Explicit labelling of outgoing flows from gateways
- Use of atomic conditions (e.g. 'Yes' / 'No') where applicable
- Selection of appropriate gateway types (XOR for exclusive decisions, AND for parallel processes)

3. Consistent Flow Direction

- Preferably left-to-right or top-to-bottom
- Avoid crossing or diagonal sequence flows
- Clear external inputs and outputs

4. Definition of End Events

- Every process path must lead to a defined end event
- Clear definition of the target state (e.g. 'ECS Issued', 'Application Rejected')

5. Use of Subprocesses

- Breakdown of complex activities

- Maintain a clear and readable main diagram
- Encapsulation of recurring tasks (e.g. identity verification, applicable law assessment)

These findings are documented in detail in **Annex I**.

Description and feedback on BPMN modelling

Austria: Description of the model

The model schematically presents the procedure in connection with a European Certificate of Succession pursuant to Article 62 *et seq.* of the EU Succession Regulation. The model aims to make the process steps relevant and transparent from the perspective of the issuing authority. It also aims to create a basis for the evaluation of existing processes as well as for the design of possible optimisation measures. At the same time, it enables analysis of the potential of digital tools along the entire process flow and can thus serve as a basis for the development of more efficient, digitally supported processes.

The starting point of the procedure is the submission of an application by an authorised person. The application must be submitted to the competent authority responsible for issuing the European Certificate of Succession. Once the application has been received, the information and documents are examined. In this context, the issuing authority may, where appropriate, also seek assistance from other authorities or institutions (Article 66(5) of the EU Succession Regulation).

The examination may lead to different results. If the documents are incomplete or there are still open questions, a rectification procedure is initiated to obtain missing information or documents. If there are disputes about the relevant facts or the eligibility of a person, appeal proceedings may be required. If, on the other hand, all the conditions are met, the European Certificate of Succession is issued.

After issuance, the original remains with the issuing authority. Certified copies are handed out to the parties concerned. These copies can then be used before authorities, courts, banks or other bodies in other EU Member States. The model thus also illustrates the cross-border function of the certificate within the European Union.

Another focus of the model is the representation of possible steps after its issuance. Circumstances may subsequently arise that require a correction, amendment, revocation or suspension of the effects of the certificate. The model shows the respective decision-making processes and the subsequent notification of those persons to whom copies of the certificate have already been issued.

In addition, the presentation takes into account the possibility of judicial review of decisions taken by the issuing authority. Appeal proceedings therefore form an independent procedural track within the model.

Overall, the model illustrates the main procedural steps related to the European Certificate of Succession – from the application and administrative examination to the issuance and use, and to possible corrections, amendments, revocations or appeals.

Quotes

- User comment: “The process model helped us see the entire procedure clearly. It showed where communication problems occur and where technical solutions can support the work.”
- User comment: “It [the modelling] was a very good opportunity to understand how the application actually works in practice and to show others how the procedure could be improved with better interfaces and automation.”
- User suggestion for improvement: “Employ […] a broader range of colours and visual elements to make the model more accessible and engaging for viewers.”

Dutch: Modelling the Dutch European Certificate of Succession process

As part of the JuWiLi II project, BPMN models were developed for the Dutch procedure for the European Certificate of Succession (ECS). Although prior experience with BPMN methodology was available, the legal and procedural aspects of inheritance law first had to be analysed in detail before the modelling process could begin. An initial challenge therefore consisted of gaining a comprehensive understanding of the succession procedure and its practical implementation within the Dutch legal framework.

In order to achieve this, the procedure was examined from multiple perspectives. Consideration was given both to the position of an applicant requesting an ECS and to the role of the notary responsible for handling the application. Based on this approach, it was possible to identify not only the formal procedural steps, but also the relevant decisions, supporting documents and interactions between the parties involved.

The work began with extensive desk research, including the review of the European Succession Regulation, explanatory materials, publicly available online resources and BPMN models prepared by other participating European countries. While these sources provided valuable information, it became apparent that there was no single comprehensive description with regard to the practical operation of the Dutch ECS procedure.

To validate the developing models, two consultation sessions were organised with a Dutch notarial office. During the first session, an initial draft of the BPMN model was reviewed and several unresolved questions and exceptional procedural scenarios were discussed. Certain situations proved sufficiently uncommon that the participating notaries conducted additional legal and procedural research before providing further clarification. After integrating the resulting feedback, a second session was held to validate the revised version of the models.

The final outcome consisted of two separate BPMN models: one describing the application and issuance procedure for the ECS and another addressing amendments, corrections, revocation and suspension procedures following the issuance of the certificate. The decision to separate these processes contributed to greater clarity and improved comprehensibility of the models.

The experience demonstrated that the modelling of legal procedures is inherently iterative in nature. While desk research provides an essential foundation, direct engagement with practitioners is essential in order to understand how procedures operate in practice. Furthermore, the work highlighted that BPMN modelling is not solely concerned with technical accuracy. Equal importance must be attached to ensuring that models remain understandable and accessible for different stakeholders.

The project also underlined the value of involving domain experts at an early stage and documenting assumptions in a systematic manner throughout the modelling process. What initially began as a technical modelling exercise ultimately evolved into a process of translating legal complexity into a structured and comprehensible form that could support discussion and cooperation among practitioners and project partners.

Quotes

- "The first challenge was therefore understanding the process itself before I could start modelling it."
- "I found that there was no single, complete description of how the Dutch process works in practice."
- "One of the main lessons I learned was that modelling legal procedures is highly iterative."
- "What started as a modelling exercise ultimately became an exercise in translating legal complexity into something that practitioners and project partners could discuss and understand together."

General remarks on the BPMN model of Regulation 650/2012

In selected models, the 'Assessment of Applicable Law' emerged as a critical subprocess. The quality of modelling varied significantly:

- Some models integrated Articles 21 and 22 of Regulation 650/2012 directly into decision gateways.
- Others treated applicable law as an external legal analysis without structured integration into the workflow.

The best-performing models:

- Structured habitual residence assessment as a discrete task.
- Included a gateway for 'Manifestly closer connection' (Article 21(2)).
- Included a separate gateway for 'Choice of Law' under Article 22.
- Ensured documentation of each decision for audit purposes.

This modelling discipline is essential for digital support and potential AI integration.

Survey on the state of digitalisation

With reference to the Economic Analysis of this report, the empirical architecture of this study is based on a structured data collection instrument, notably the Economics Questionnaire. Under the subtitle 'Digitalisation of Notarial Work Across EU Member States', section G: Data on standardisation and digitalisation, questions dealt with the state of

digitalisation of the notarial chambers in 22 EU Member States. The responses to this part of the survey permit a (limited) analysis of their IT strategies and organisational frameworks. These findings are self-reported and the depth of coverage varies across chambers. They are therefore best read as indicative of broad trends rather than as a precise ranking of digital maturity.

Strategies and organisational frameworks

Most participating countries reported the existence of clear digitalisation strategies at the level of the national chamber or professional body. Some countries indicate partial strategies.

Likewise, digital maturity varies considerably. Some chambers operate with dedicated digital departments and multi-million euro budgets, while others rely on voluntary engagement.

Key findings

- Digitalisation strategies are widespread but uneven — some countries are still in the early stages of development.
- Stronger strategies are linked to the coordinating efforts of chambers or councils of notaries.
- A minority of countries are lagging behind, often due to legislative or financial constraints.

Resources and budgets

The amount of resources allocated is a strong indicator of digital maturity. Many countries have dedicated departments, staff or budgets while others rely on voluntary work or external IT companies or report no dedicated resources. This disparity has significant implications for implementation capacity. Outsourcing IT services is common where internal capacity is weak and the lack of resources is a barrier, particularly in smaller States.

Assessments, training and barriers

When asked whether an assessment of processes and workflow regarding the impact of digitalisation is in place, most countries reported having those. Based on this information, it can be concluded that digital maturity assessments are widespread. In itself, their commonality shows awareness of the efficiency impacts of digitalisation. Without such assessments, there is a risk of fragmented or inefficient digitalisation.

Skills, training sessions and education programmes for digitalisation for notaries are recognised as being essential and exist throughout the participating States although implementation is uneven. Larger chambers can invest in structured programmes. A lack of training can form a barrier to adoption, especially where there is resistance to change.

Common priorities

Asked which processes should be digitalised, archiving and succession procedures are universally seen as the main priorities. Secure client communication and proper interfaces with public registers for property, companies and powers of attorney are mentioned frequently as well. Countries emphasise efficiency, transparency and fraud prevention as drivers.

Common barriers

Barriers to digitalisation of workflows and processes are perceived when it comes to:

- Legal constraints (many laws still require physical presence)
- Funding gaps (which prevent mostly smaller countries from scaling up digitalisation)
- Human resistance and skills gaps (which slow down the adoption of proven technologies)
- Technical challenges (e.g. cybersecurity, interoperability and legacy IT systems)

Artificial Intelligence in notarial work

The role of LLMs in LegalTech

Artificial Intelligence (AI) is increasingly influencing the legal sector. Within this broader field, Large Language Models (LLMs) represent a significant technological development. LLMs are AI systems trained on vast amounts of textual data and capable of understanding, generating and transforming human language. Their relevance for LegalTech lies in their ability to process complex regulatory texts, identify patterns and produce structured outputs in natural language.

In legal contexts, LLMs can:

- Analyse regulatory texts
- Summarise complex documents
- Draft structured responses
- Support legal research

Beyond these general capabilities, LLMs can assist in identifying inconsistencies, extracting structured data from unstructured text and generating first drafts of legal assessments. They can also translate between legal systems or languages, which is particularly relevant in cross-border matters within the European Union.

However, integrating LLMs into the notarial practice to create more efficiency for the client while upholding notarial quality and assurances requires a nuanced understanding of their limitations. LLMs do not ‘understand’ the law in a normative sense. They generate outputs based on statistical probabilities derived from training data. As a result, they may produce plausible but legally incorrect statements (so-called ‘hallucinations’), omit relevant legal nuances or fail to reflect the most recent legislative developments.

For notaries, LLMs must therefore be understood as support tools – not decision-makers. The responsibility for legal assessment, verification of sources and final decision-making remains exclusively with the notary. The principle of personal accountability and the public function of the office cannot be delegated to an algorithm. AI can assist in preparation and documentation but it cannot replace professional judgement, ethical evaluation or the formal act of authentication.

From a governance perspective, the use of AI in notarial practice must be aligned with:

- Professional secrecy and confidentiality obligations
- Data protection requirements under the GDPR
- Cybersecurity standards
- Emerging EU regulatory frameworks, including the AI Act

A structured and responsible approach is therefore indispensable. In particular, each AI use case should be assessed for its risk classification under Regulation (EU) 2024/1689 (the AI Act) – including whether functions delegated from the judiciary fall within its high-risk categories – and the corresponding obligations applied, while general-purpose AI models additionally carry transparency duties. Where AI systems process personal or estate data, a data protection impact assessment may be required, and such data should not be exposed to general-purpose external models, with closed or retrieval-augmented environments being preferable.

AI support in BPMN-based processes

In the context of ECS procedures, AI can support:

- Identification of relevant regulatory provisions
- Drafting of structured legal assessments
- Generation of checklists
- Preparation of client communication

For example, within the subprocess ‘Assessment of Applicable Law’, an LLM may assist in:

- Summarising Articles 21 and 22 of Regulation (EU) No 650/2012
- Structuring the legal criteria for habitual residence
- Generating a checklist for evaluating a potential choice of law
- Drafting an internal memorandum documenting the reasoning

Similarly, in the drafting phase, AI may provide template-based suggestions aligned with regulatory requirements. In communication tasks, it may help formulate clear explanations to clients regarding procedural steps or required documents.

Example prompts used during the project included:

- “What are the specific articles regarding habitual residence?”
- “Describe the process of the creation of a European Certificate of Succession based on the regulation.”

Such prompts demonstrate how LLMs can accelerate research and documentation. However, the quality of the output is very dependent on the precision and structure of the input prompt. This insight led to the development of a dedicated Prompting Guide.

Importantly, AI integration should follow a 'human-in-the-loop' model. This means:

- The AI generates a preliminary output.
- The notary reviews, corrects and validates the content.
- The final decision and responsibility remain with the human professional.

This model preserves accountability while leveraging efficiency gains. For this oversight to be meaningful rather than formal, the reviewing notary must have the competence, the information and the time genuinely to assess and, where necessary, override the system's output. The 'human-in-the-loop' aspect must not become mere rubber-stamping.

Prompting Guide for Notaries (Annex II)

The Task Force developed a first draft of a Prompting Guide for Notaries in order to provide practical guidance on how to interact with LLMs in a professional and legally sound manner. Effective prompting is not merely a technical skill but a methodological competence that determines the reliability and usefulness of AI-generated outputs.

The core elements of the Prompting Guide include:

- Clear definition of role ('You are an expert in notary services…')
- Precise legal references
- Structured output requirements (e.g. bullet points)
- Data protection awareness
- Mandatory human validation

In addition, the Prompting Guide emphasises:

- Contextualisation of the legal question (jurisdiction, regulation, factual background)
- Explicit instruction to cite legal provisions where possible
- Clear indication of the desired depth of analysis (summary vs. detailed assessment)
- Avoidance of confidential or personally identifiable information in external AI systems
- Documentation of AI usage where relevant for internal compliance

The full guide is provided as **Annex II**. It is conceived as a living document that should evolve alongside technological developments and regulatory changes. Future iterations may incorporate risk classifications, internal approval workflows and alignment with national professional rules.

Recommendations for policymakers and notarial decisionmakers

The findings of the Digitalisation Task Force demonstrate that technological innovation in the notarial practice cannot be left to isolated initiatives or market dynamics alone. Sustainable

digital transformation requires strategic alignment between public authorities, professional bodies and individual notarial offices. The outsourcing of non-contentious judicial functions to notaries, as envisaged in JuWiLi II, will only achieve its full potential if supported by coherent digital frameworks.

Policymakers at the EU and national levels, as well as decisionmakers within notarial chambers and offices, therefore share a joint responsibility. Digitalisation must be embedded in governance structures, adequately financed and accompanied by clear professional standards. The following recommendations sum up the main insights derived from process modelling, survey analysis and AI experimentation within the project.

1. Establish national digitalisation roadmaps
Digital transformation requires long-term orientation rather than fragmented pilot projects. National digitalisation roadmaps should articulate a shared vision for the profession, based on the national legal frameworks, in order to define priorities and allocate responsibilities. These roadmaps should not merely outline technical ambitions but also address organisational, legal and ethical dimensions.

A structured roadmap provides predictability for investment decisions, ensures coordination among stakeholders and reduces duplication of efforts. It should be developed in close cooperation with ministries of justice, professional chambers and IT providers.

Key elements include:

- Develop binding strategies with measurable milestones
- Align with EU digital justice initiatives
- Provide stable multi-year budgets
- Define governance and accountability structures
- Establish monitoring and evaluation mechanisms

Particular attention should be paid to facilitating cross-border exchange of information contained within national registers – respecting the applicable professional laws on data protection and professional secrecy. These should include, where possible, information sharing and access points to national registers of wills and successions, building on existing European networks (especially ARERT), so that the existence of a will or of a prior act can be verified across borders.

2. Standardise core non-contentious processes
The modelling exercises conducted within JuWiLi II revealed significant heterogeneity in procedural design and documentation. While national legal frameworks differ, many structural elements of non-contentious procedures are comparable across jurisdictions. Standardisation does not imply uniformity of substantive law, but alignment of procedural architecture where feasible.

The development of reference models – especially for recurring procedures such as succession matters – would significantly enhance efficiency and cross-border cooperation. BPMN-based reference models can serve as templates adaptable to national specifics.

Recommended actions:

- Develop BPMN reference models
- Promote and facilitate cross-border interoperability
- Integrate legal requirements directly into process logic
- Encourage peer review and shared repositories of process models
- Use standardised terminology and documentation formats in line with common notarial practices

Embedding legal norms directly into structured process logic reduces ambiguity and facilitates automation and AI-supported assistance.

3. Invest in capacity and training

Technology alone does not create digital maturity. Human competence and organisational culture are key success factors. The survey results indicate substantial disparities in training capacities across participating countries. Without systematic investment in digital skills, even well-designed infrastructures will remain underutilised.

Training should not be limited to technical tool usage. It must encompass digital literacy, data governance, cybersecurity awareness and a critical understanding of AI systems. Continuous professional development in digital skills will support the effective and responsible use of emerging technologies.

Priority measures include:

- Digital literacy training by national notarial training programs and/or from European cooperation initiatives like EL@N
- Specialised AI competence programmes
- Exchange of best practices among chambers
- Interdisciplinary workshops with IT experts
- Certification schemes for digital competence

Investment in human capital strengthens resilience, fosters innovation and enhances acceptance of change within the profession.

4. Develop secure digital infrastructure

Trust is the cornerstone of notarial services. Digital infrastructure must therefore meet the highest standards of security, reliability and legal compliance. Fragmented or outdated IT systems not only hinder efficiency but also create systemic risks.

Infrastructure development should follow principles of interoperability, modularity and security-by-design. Interfacing with public registers and administrative systems is particularly important for non-contentious procedures such as succession and company formation.

Core components include:

- Interoperable platforms to support efficient cross-border information access
- Secure identity and signature solutions
- Direct data connections with public registers
- Robust cybersecurity frameworks

- Clear data governance and access control policies

Where appropriate, shared national or regional platforms may generate economies of scale and ensure consistent security standards. In several jurisdictions, such already existing platforms are operated by profession-owned bodies, a model that can combine economies of scale with direct professional control over security, data governance and the long-term preservation of digital authentic instruments. Security-by-design should align with the applicable EU cybersecurity baseline, notably Directive (EU) 2022/2555 ('NIS2'), given the critical nature of notarial data.

5. Promote responsible AI use

Artificial Intelligence offers significant efficiency gains but also introduces new legal and ethical challenges. A proactive governance framework is essential to ensure that AI is deployed responsibly and in compliance with professional obligations.

The 'human in the loop' principle must remain central. AI systems may assist in information processing and drafting, but they must not replace human judgement or accountability. Transparent documentation of AI usage enhances traceability and reinforces trust.

Recommended measures:

- Clear governance frameworks
- 'Human-in-the-loop' principle
- Transparent documentation of AI-supported decisions
- Internal guidelines on permissible and non-permissible use cases
- Periodic evaluation of AI system performance and risks

In addition, alignment with European AI regulation and data protection law should be continuously monitored.

6. Encourage comparative and economic research

The outsourcing of non-contentious judicial functions to notaries and the digital transformation of such procedures should be guided by empirical evidence. Comparative legal research can identify best practices while economic analysis can assess cost-efficiency and societal benefits.

Behavioural studies may provide insights into user interaction with digital services, acceptance of online procedures and trust in digital authentication mechanisms. Evidence-based policy-making enhances legitimacy and supports the rational allocation of resources.

Recommended research priorities:

- Evidence-based assessment of outsourcing effects
- Cost-benefit analyses of digital investments
- Behavioural insights into user interaction
- Benchmarking studies across EU Member States
- Impact assessments of AI integration in notarial workflows

Concluding perspective
The recommendations outlined above are interdependent. Strategic roadmaps without funding remain ineffective; infrastructure without training remains underutilised; AI without governance undermines trust. Digital transformation in notarial practice should therefore be approached as an integrated part of ongoing notarial education and training.

For policymakers, the challenge lies in creating enabling regulatory and financial frameworks. For notarial decisionmakers, such as the various chambers, the task is to translate these frameworks into operational excellence within their organisations. If successfully implemented, these measures will not only enhance efficiency but also strengthen the preventive function of notaries, nationally and in cross-border cases, and thus improve access to justice and contribute to a resilient European legal area.

Conclusion

JuWiLi II demonstrates that digitalisation of non-contentious judicial procedures is not merely a technical project but a structural reform of justice delivery. As trusted public office holders, notaries are central actors in this transformation. By integrating People, Processes and Technology under a coherent operational framework, notarial offices can significantly enhance efficiency, accessibility and legal certainty.

The modelling of ECS procedures revealed both the potential and the challenges of process standardisation. The survey highlighted disparities in digital maturity across Europe. The exploration of AI illustrated that technological innovation must be accompanied by governance, training and ethical safeguards.

Ultimately, digitalisation is not an end in itself. It is a means to strengthen the rule of law, ensure access to justice and deliver high-quality public services in a digital Europe. JuWiLi II provides a foundation upon which future initiatives can build – towards a justice system that is efficient, people-centred and technologically robust.

ANNEX I

Feedback for process modelling improvement based on the submissions

Compliance with BPMN standard notation

Observation:
Deviations from the BPMN standard notation were identified, particularly regarding start events, gateways and sequence flows.

Recommendation:
The diagram should adhere to the official BPMN notation. All elements, such as start and end events, gateways and tasks, should be represented correctly. This promotes both clarity and compliance with the standard.

Clarity of gateways and decision logic

Observation:
A gateway was used without explicitly indicating the decision logic. Conditions on the outgoing sequence flows are missing or unclear.

Example:
In the example, it is very difficult to recognise on the basis of which parameters and criteria the decision is made. The specific conditions on which the decision is based should be explicitly stated.

Recommendation:

- Gateways should be used consistently for decisions or branching.
- Outgoing sequence flows must be labelled with clear (atomic) conditions, such as ‘Yes’ or ‘No’.
- The appropriate gateway type (e.g. XOR for exclusive decisions or AND for parallel flows) should be selected.

Consistent sequence flows

Observation:
The direction of sequence flows is inconsistent, which negatively affects readability.

Example:
The example appears somewhat inconsistent. It gives the impression that the process is in a continuous loop, as there is no external input and it is not recognisable which process step leads out of the flow.

Recommendation:

- The flow direction should be kept as linear as possible, ideally from left to right or from top to bottom.
- Crossing or diagonal sequence flows should be avoided in order to improve clarity.

Use of end events

Observation:
End events are missing in all process paths, making the process appear incomplete and leaving it unclear what is achieved at the end of the process (target state).

Suggested improvement:

- A clear end event should be defined for each possible process path.
- For example, a ‘Message’ end event could be used if the process concludes with a notification, or a generic end event for other types of completion.

Use of subprocesses

Observation:
Recurring or complex activities were modelled directly within the main diagram, which reduces clarity.

Recommendation:

- Complex processes should be divided into smaller subprocesses. The subprocess symbol (a rectangle with a ‘+’ sign) can be used for this purpose.
- The main diagram should be kept streamlined by outsourcing details to subprocesses. This facilitates both understanding and maintenance of the model.