

Technical assessment of the Unified Judiciary Informational Telecommunication System

IVAN SHERSTYUK

Short term expert

April 2019



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



EXPERTISE
FRANCE



PRAVO-JUSTICE

This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of the EU-funded Project PRAVO-Justice and do not necessarily reflect the views of the European Union.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



EXPERTISE
FRANCE



PRAVO-JUSTICE

ABBREVIATIONS

UJITS	Unified Judiciary Informational Telecommunication System
System	UJITS System
ICS	State Enterprise Information Court System
SCA	State Court Administration
D3	Court case management system
Cloud	A private Judiciary cloud deployed in the court data center
MVP	Minimum Valuable Product



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



EXPERTISE
FRANCE



PRAVO-JUSTICE

PREFACE

The main task of the report was to assess present state of UJITS development and its implementation status. The report was launched on March 20th and covers the developments up to April, 2019.

The aim of the report was to present the developments from user centric perspective and to present the UJITS in non-technical language accessible to general reader. Some technical language and regulatory issues were unavoidable.

The methodology used was to understand the plans and the development that had taken place through study of materials, supported by interviews with developers and stakeholders and to execute a user journey to submit documents for a court on-line. EU Project Pravo-Justice would like to thank the USAID New Justice Program for their assistance and insights.

A set of fact finding missions were organized:

- March 25, 2019 - Meeting at the SCA
- March 26, 2019 - Meeting at the Darnitskyi District Court, Kyiv
- April 2, 2019 - Meeting at USAID Judiciary Project
- April 9, 2019 - Meeting at the ICS

Also several online materials were studied, e.g.

- <https://sud.ua/ru/news/publication/135885-yesits-chi-gotoviy-ukrayinskiy-sud-stati-elektronnim>
- <https://sud.ua/ru/news/publication/136472-pochemu-esits-ne-zarabotala-s-1-marta-stali-izvestny-realnye-prichiny>



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



EXPERTISE
FRANCE



PRAVO-JUSTICE

TABLE OF CONTENTS

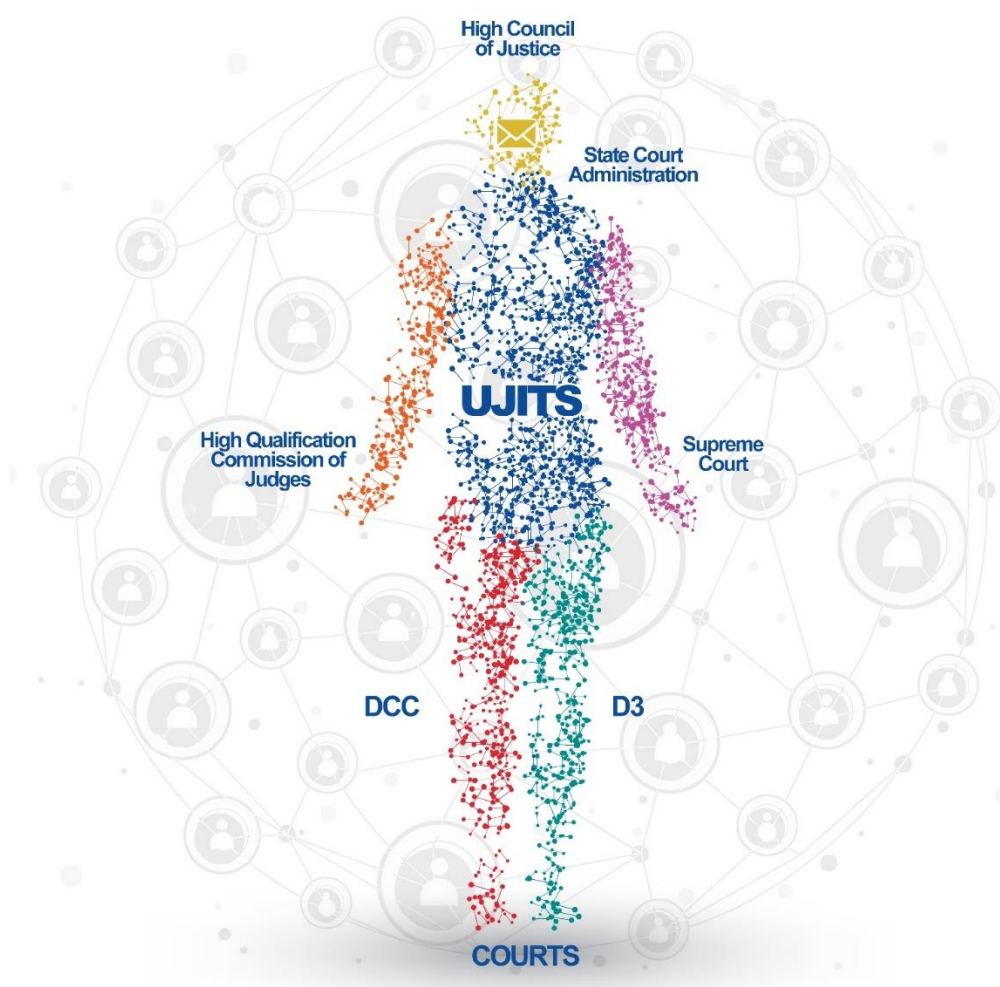
PREFACE	4
UJITS ASSESSMENT	6
Electronic Cabinet	6
Electronic Court	9
Financial-Administrative subsystem	7
Automatic Case Assignment	8
Unified Court Case Registry	8
Contact center	8
Judiciary website	11
Court Statistics	9
COURT DATA CENTER	12
FEEDBACK	14
Plaintiff	11
Initial import	11
Notifications	11
Legal background	11
User Interface (UI) and User experience (UX)	11
Overall impression	12
Lawyer	12
The buzz	12
Notifications	12
Lack of templates	12
Outdated information	12
Information loss	12
Overall impression	12
Court	13
UJITS Regulation	13
Lack of testing	13
Scanning	13
Lack of trainings	13
CONCLUSIONS AND RECOMMENDATIONS	14
Move slow	14
Work on UJITS regulation	14
Keep security in mind	14
Launch the new Unified Court Case Registry alongside the old version	15
Training for users	15
Court implementation manual	15
Define power users	15
Define obvious yet important KPIs	15
Improve and promote Electronic Cabinet	16



UJITS ASSESSMENT

UJITS is designed to be the technical backbone of Ukrainian Judiciary, connecting all courts and judiciary management organisations – State Court Administration, High Qualification Commission of Justice and High Council of Justice – together and enable automated data exchange also with outside partners. Its goal is to make their joint work more efficient by introducing modern technologies in their daily operations.

UJITS has chosen the “cloud” approach to address the challenge of coordination of such a high number of organisations. It means that information and services are moved from the local information systems into the private Cloud, providing unified access to all interested parties.



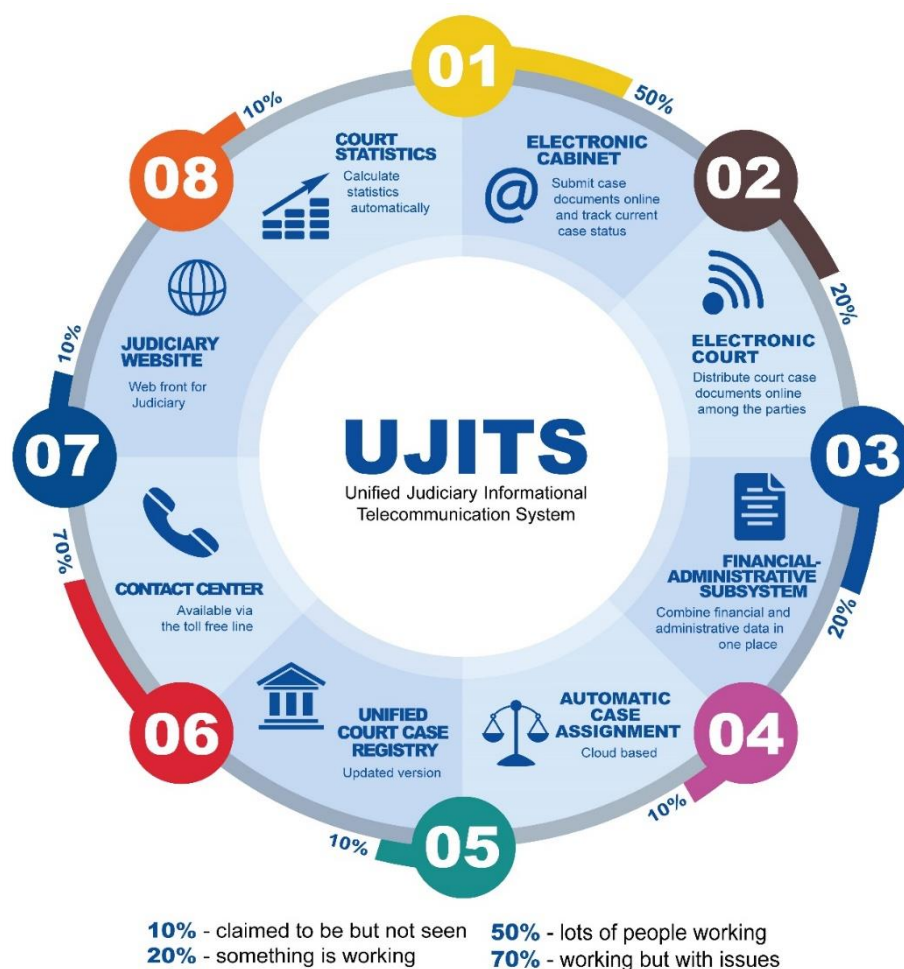
THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



The following are the milestones of UJITS development:

- **December 15, 2017** - Legal grounds for UJITS development have been approved.
- **April 13, 2018** - UJITS concept has been approved, development officially started.
- **May 4, 2018** - Testing of Electronic Court module started in 18 courts: Kyiv Appeal Administrative Court, Appeal Court of Odesa region, Kyivskyi District Court of Odessa, Odesa Appeal Commercial Court, Commercial Court of Odesa region, Vinnitsa Appeal Administrative Court, Vinnitsa Regional Administrative Court, Donetsk Appeal Administrative Court and 10 District Courts of Kyiv.
- **January 1, 2019** - UJITS testing started across the country.
- **March 1, 2019** - UJITS experimental usage was scheduled to be started in all the courts, but due to huge resistance from the courts it was suspended until further notice.

Eight modules were supposed to be launched in March 2019:

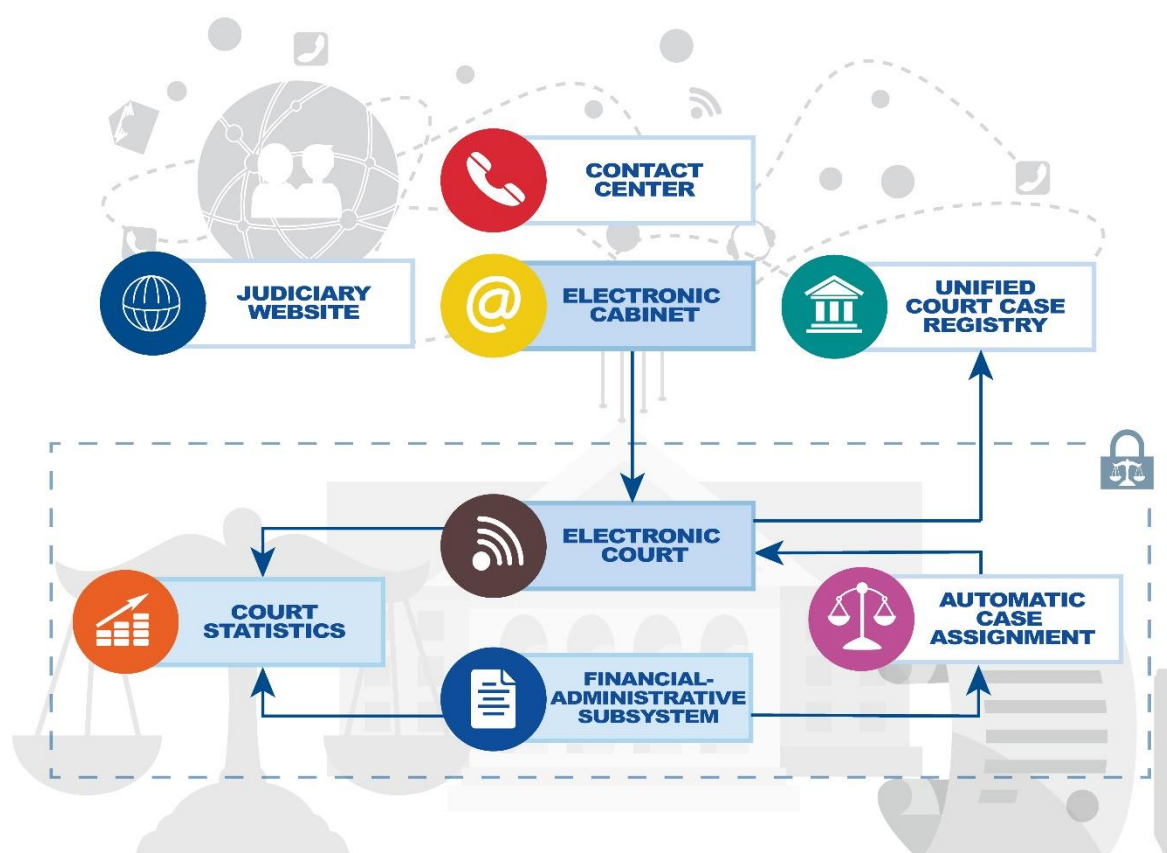


THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



1. Electronic Cabinet,
2. Electronic Court,
3. Financial-Administrative Subsystem,
4. Automatic Case Assignment,
5. Unified Court Case Registry,
6. Contact Center,
7. Judiciary Website and
8. Court Statistics.

The following assessment attempted to establish the current development status of each module, gather end user feedback and propose a set of realistic future steps towards successful UJITS implementation.



Electronic Cabinet

The Cabinet is designed to submit court documents by the parties online, rather than in paper format and to track current court case status.

This module is operational and available at <https://cabinet.court.gov.ua>. An authentication using a digital signature is required in order to access the Cabinet. There are 19 authorized digital signature centers supported at the moment, both private and state

owned. Several digital centers provide signatures online and free of charge. However, an overwhelming majority of digital signatures in Ukraine are weak and should be upgraded and it is unclear whether the State Court Administration has created plans to comply with the requirements of Trust Services law that entered into force in November, 2018.

Electronic Court

This module is designed to distribute court case documents online among the parties. ICS confirms that MVP only is available at this moment, mainly focusing on electronic document submission and distribution.

Technically MVP is a standalone cloud solution that inputs to and fetches information out of D3:

- Procedural documents, submitted via Electronic Court are automatically converted into D3 suitable input format
- D3 is used for archive scanning, however documents are uploaded directly into the Cloud, without impacting D3 productivity
- As soon as automatic case assignment is done in D3, it's results are uploaded into the Cloud to further available in the Cabinet
- As soon as document status changes in D3, it changes also in the Cabinet etc.

MVP is currently a D3 add-on for online court access, which has its own data stored in the Cloud.

D3 is still – and will remain – the court case management system, at least until automatic case assignment is moved to the Cloud.

Currently around 500 documents per day are submitted via the Cabinet module across all courts, which is a tiny fraction of actual document flow. A single court house gets this amount of documents in 1-2 business days.

DOCUMENT SUBMISSION



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



Financial-Administrative subsystem

Financial and administrative data of the Ukrainian courts is currently spread across multiple standalone systems:

- KadryWEB system for Administrative data,
- IS-PRO local, Galactica, Parus and possibly others for accounting,
- D3 separately stores judges' data vital for automatic case assignment.

In order to bring order to this variety of systems and data, ICS purchased an open code version of IS-PRO about 2 years ago and developed it further into a network version, which later became the Financial-Administrative subsystem of UJITS.

It appeared to be impossible to import data from KadryWEB into the Subsystem keeping the required level of quality, however for each of the widely used local accounting systems ICS is working on a designated data converter to speed up the data migration.

Such a converter has already been developed for IS-PRO local, which allowed in 2 days time to migrate all the accounting data of 7th Appeal Administrative Court in Vinnitsa into the Subsystem. Rest of the court which use IS-PRO local, are supposed to follow shortly.

ICS will be developing converter for Parus next.

At this moment:

- 86 courts have expressed their interest to start using the Subsystem;
- around 500 designated users across all courts have been created;
- 25 courts have fully moved their data to the Subsystem and are using it on a daily basis.

We can thus assess that this module's initial testing has been performed and currently the Subsystem is heading to mass production stage.

Automatic Case Assignment

ICS confirms that this module has been created. In addition, a throughout research on case complexity ratios has been performed and a general unified case type registry that would be used by all the courts, has been created.

Module testing is still at the initial stage, however, as courts are very hesitant to even test it without UJITS regulation enacted in the first place. Also, judges' data from the Financial-Administrative subsystem is required for the proper Module operation. So it cannot operate before the data transfer on the subsystem will be completed.

Unified Court Case Registry

Existing version of Unified Court Case Registry was developed back in 2006. Since then nothing but maintenance has been performed. During all these years a set of crucial



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



bottlenecks have been discovered, like for instance automatic downloads of Registry data by private companies, that slows the Registry down.

It was decided to develop the Registry from scratch using modern technologies, resolving bottlenecks and adding new desired functionalities like modern user friendly search engine.

ICS has confirmed that the new Registry is ready, but not in production yet due to more pressing needs, like the Financial-Administrative subsystem and implementation of the Electronic Court.

Contact center

Contact center was launched back in 2018, and is fully operational now. It is available via the toll free line, 0-800-501-492. There are 30 operators for general inquiries and 20 more for specific technical assistance.

It is technically implemented on the freeSWITCH platform using SIP protocol. All the data is stored in the Cloud. Microsoft Dynamics is used for CRM purposes.

Contact center is fully scalable and its present capabilities are sufficient enough to cover the current needs. It took only 3 seconds for an operator to pick up a control call and I was given 7 minutes of time for consultations.

As for the possible future development Mrs. Korsunskia Natalia, head of the contact center, expressed interest in introducing an automatic response mechanism for typical simple inquires, like obtaining next hearing date by case number etc.

In order to implement this feature Mrs. Korsunskia is considering to purchase a specific voice recognition software for Ukrainian language.

Judiciary website

A new version of <https://www.court.gov.ua> has already been developed and is about to be published online. It is foreseen that each court will have a possibility to manage it's personal court web page using online content management tool.

Basically, there is nothing crucially new here, as courts already have the possibility to manage their home pages. But since the website has been developed from scratch, a new content management tool must be introduced.

Court Statistics

Currently courts literally close for a couple of days during statistics preparation period. During this time all the report forms, required by SCA, are produced and verified on regional and central levels.

The idea behind this court statistics module is quite simple – as soon as all the required data is inside UJITS, it would be possible to calculate reports automatically, literally by a click of a button.

When introduced – at the beginning – it is expected to prepare reports both automatically and manually and double check them.

We understand that this module was created and delivered to SCA last year, however it is still not in production due to lack of data in UJITS.

COURT STATISTICS



THEN

Preparation of statistical reports took couple of days.



NOW

As all the required data is inside the UJITS, it is possible to prepare statistical reports fully automatically.

COURT DATA CENTER

The first and the only working court data center is located at the premises of the SCA in Kyiv. It is a Tier-2 certified data center that basically holds all the data and computing powers of UJITS.

It was equipped with Dell PowerEdge R630 and EqualLogic PS6610/PS4210 hardware solution with 1.3 Pb of overall storage in 2016, and a new HPE 3PAR 9650 storage base equipment of the following configuration was added in 2018:



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



HPE 3PAR 9650	1
HPE Scalable Object Storage Scality Ring	1
HPE Apollo 4200 G9	6
HPE StoreOnce 51100	1
HPE BLc7000	2
HPE BL660c G9	4
HPE BL460c G9	20
HPE DL360 G9	4
HPE FF 5950	2
HPE FF 5940	2
SAN HPE SN6000B	2

Data array, based on HPE Apollo 4200 G9, has a total of 0.5 Pb storage.

It is a typical industrial solution for building a private cloud, that is exactly what was planned to do. However, it is needed to mention that acting head of ICS Mr. Dubinko Dmytro stated that the HP specs were not run by him and ICS had to work with what had been purchased. In fact, he mentioned that even a connector to already existing Dell was missing, making impossible to use Dell and HP as one unit at the beginning.

At present HPs are used as a computing powers for UJITS related tasks, Dells – as a data storage. Several virtualization platforms: Docker, WmWare and Hyper-V are simultaneously used for various tasks. Database provider is Oracle.

ICS states that around 10% of computing powers are used at the moment, mostly for scanned documents recognition. Storage is hardly used also, but we need to keep in mind that UJITS is NOT operational at the moment. As soon as it will be – when documents start massively arrive electronically and court hearing recordings are uploaded to the Cloud – the picture will change. ICS predicts to be able to hold for up to 6 months of production load on existing hardware.

It is also necessary to mention that there are certain legal terms for storing court hearing recordings and ICS is going to meet them, by purchasing additional storage units when required. Estimated storage capacity growth is 3Pb per year.

UJITS has been designed to serve 40K internal and 300K outside users.

A second data center, located in Zhytomyr, is being configured at the moment: internet connection lines, cooling, electricity etc. It is a modular data center by design, its construction box has been bought in 2018. Servers are still missing, but ICS will launch the procurement on these when the new environment will be ready.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



FEEDBACK

This section will cross check expectations of the System that different type users have against its real behaviour. Does the System really cover end users needs assisting in their daily routine?

A researcher had a couple of on-going cases, so he will be the Plaintiff. A legal firm he used for court representation submitted one of his cases electronically on purpose, so it will be the Lawyer.

Plaintiff

Initial import

First of all, after the initial logging in, I expect to see the list of all court cases, I am involved in any role. Prior or on-going. Perhaps without documents, if not scanned yet, but at least the basic structure. Such a search can be performed based on my TaxID number in the Unified Court Case Registry or in the courts D3 databases directly. ICS explained that TaxID may not be mentioned in a court file, or not my case may popup, however still it will be good for the System to automatically at least try to import something, even with the possibility for future court side confirmation, rather than showing me a blank page.

Notifications

There is a separate side menu tab called Notifications, where, as per video manual, important notifications pop up after document status changes. I create an inquiry to the court to be able to see my case electronically (which was previously submitted electronically by lawyers, so it should be available). After a couple of days I didn't get any notification at all, however at the Inquiries tab I see that the status of my inquiry has been changed to Registered. No case file yet, so basically I do not know how long it may take for the inquiry to be resolved and will it be resolved at all? Still nothing after 7 days.

Legal background

I have a strong feeling that the Cabinet was designed by lawyers for lawyers. It is expected that the user should have a certain amount of legal education background to be able to use it. I do not have any, but still expect the Cabinet to follow basic usage logic.

User Interface (UI) and User experience (UX)

User interface of the personal cabinet is lacking usability, though it has developed substantially from the time its early testing period. However, there is plenty of work to be done for instance cutting string lines is not the best way to display information.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



<input type="checkbox"/>	Назва	Статус	Суд, до якого направлено заяву	Власник	Дата створ...
<input type="checkbox"/>	Заява про внесення даних РНОКПП до додаткових...	Зареє...	Дніпропетровський окружний ад...	Шерстюк Іван Іванович	09.04.2019 1...

I can't log in, using my usual internet browser. Just a running blue line without any notification. Also a "Use proxy server checkbox" on the login page may be quite confusing. What is the necessity to place it visible right on the login page?

It is frustrating that I can't select and copy from the created document. It is really a basic feature in computer usage. Very inconvenient.

Overall impression

I was able to login and submit an inquiry, but my problem has not been resolved yet. I would probably have to further call a support line and/or the court directly.

I suggest mandatory UI and UX testing prior mass production.

Lawyer

The buzz

There is an informal buzz among lawyers that the System should be avoided. Case file may be lost, there are legal precedents than judges refused to accept electronically submitted documents. I actually had to force my lawyers to submit the case electronically, and they still persuaded me to use a usual paper submission procedure.

Notifications

Same issues as reported by others, notifications do not arrive.

Lack of templates

There was a need to submit a petition for case file disclosure, but the required template was not available. The System instead redirected to plain creation form.

Outdated information

The Cabinet displays current complaint status as Delivered. However, no case file is available. The Cabinet statistics displays current status of the same complaint as Registered, which is confusing.

More importantly when calling the court directly, it appeared that a case number has already been assigned, automatic case assignment in D3 has already been performed and judge has been selected. This information is confirmed by the <https://court.gov.ua/fair/> page, the current way lawyers use to verify a case status but not in Electronic Cabinet.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



So currently the basic information in the Cabinet is outdated and in my case has been so for a more than a week already.

Information loss

One of the most serious issues is the information loss from the input stage in electronic cabinet through the electronic court system. It is clearly visible from the complaint submitted that my TaxID number was provided. But ICS support says it didn't arrive into the System. Basically it means that somewhere down the line this information was lost, which clearly shows the malfunction of the system.

Overall impression

It is impossible to rely on the System in a daily routine.

Court

UJITS Regulation

Courts expected that their propositions to UJITS regulations will be taken into account before the System is in production. I managed to analyse a set of propositions, usually it is a couple of pages document there both technical and legal issues are raised. Although, some of the courts have never received draft UJITS regulation at all and, thus, were unable to comment.

Courts were proposed to finalize suggestions by February 20, which was just 8 days before the System announced start of production, March 1.

It is clear that there was really not enough time for courts questions and doubts to be addressed properly.

Lack of testing

Here are the numbers of electronic documents received by the courts since testing started:

- Vinnitsa Regional Administrative Court - 6
- Volynsk Appeal Court, 1st Appeal Administrative Court, Kropyvnytskyi Appeal Court, Commercial Court of Kirovohrad region - 0
- Appeal Court of Dnipro region - 5
- Kyiv Regional Administrative Court - 11
- Darnitskyi District Kyiv Court - 20 etc

As one can see these numbers are quite insufficient in overall court document flow, so it is hardly possible to consider testing had been successful.

Scanning



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



In order for the Electronic Cabinet to work properly, case files arrived in paper must be scanned. SCA distributed an instruction that all the input paper documents as of September 1, 2018 must be scanned by courts. Some of the courts simply were not provided with scanners on time, proper scanning instructions were not distributed. Who exactly should scan? Sometimes courts were eager to hire additional staff just to cover the need of scanning, however, some courts are still waiting for this.

So as you can imagine that documents scanning for UJITS launch was not appreciated by the courts at all.

ICS actually made a test scanning case in Obolonskyi District Court. It took 3 weeks for 10 ICS staff members, with a speed scanner each, to actually scan all the court case files. From 9 to 5 each working day.

Lack of trainings

ICS created a set of online training courses and video manuals for the use of the System. However, courts appeared quite conservative in this regard, preferring live human training interactions instead. As per statistics, shared by ICS, not a single judge has passed online courses yet.

Basically this all resulted in total lack of awareness of the System's routine usage which in turn created a launch resistance.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



CONCLUSIONS AND RECOMMENDATIONS

This assessment clearly indicates that an unreasonably fast implementation schedule has been root cause of the confusion. The software, still being in Minimal Viable Product phase, was not good enough for smooth operation, lack of trainings and legal UJITS regulation uncertainties resulted in implementation resistance by courts.

It has been a good idea to postpone the implementation phase and maybe to question the overall methodology of deployment. The MVP approach is usually chosen when the target audience is technically savvy and can see future beyond the initial difficulties whereas in other cases it can result in a distrust of the system developed.

The crucial mistake independent of the choice of implementation strategy has been the lack of information for the stakeholders and the failure to put the user in the center of development.

Below is a list of steps, that in our opinion will help to successfully implement UJITS.

1 Move slow

An idea of simultaneous launch across all the courts didn't work out. So the correct approach here will be to move slow by picking up a certain amount of courts that are "internally" ready for a possible implementation discomfort. This number must not be large, 5-20 courts, preferably of different level and jurisdiction.

Having been able to fully launch all the modules in these courts will send a positive message to Judiciary. With a bit of additional effort, the court staff of these courts could become the System ambassadors.

As far as is known, such an approach has now been deployed by ICS. They are currently implementing all of the modules of UJITS in the following 5 courts: Kyiv Obolonskyi District Court, Kyiv Pechersky District Court, Fastiv District Court, 7th Appeal Administrative Court in Vinnitsa and Rivne Appeal Economic Court.

2 Work on UJITS regulation

UJITS is an IT solution for Judiciary, so having legal grounds in place is a must. From what we have gathered from different courts: they provide similar feedback, so it is a good idea to group similar ideas into common categories and have them resolved.

Resolving legal issues along with positive implementation feedback from initial 5 courts will create a positive buzz.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



3 Keep security in mind

We have to remember that court decisions influence people's lives and businesses, so digital signatures used for court ruling signing must be given with secure personal device. Unfortunately, most of the cases today are those when a simple unprotected key, as a computer file, is used for signing.

The adequate solution here comes from following the Trust Services law plus awareness raising, assuring that each judge would be using a personal hardware key which s/he will not leave in the office for assistants to use on his/her name.

4 Launch the new Unified Court Case Registry alongside the old version

There is a strong interest both from inside and outside Judiciary to have a new, more efficient and robust version of Unified Court Case Registry operational. What we know from the ICS: it has already been developed and is ready for production. We suggest that both new and old version should work simultaneously for some time, making sure users have time to benefit from the advantages of the new Registry and to take a conscious decision to switch from the old version for good.

An obvious KPI, new vs old Registry usage, must be set up. As soon as it grows high enough, the old version may be disabled, making users transition smooth and natural.

5 Training for users

While reference videos might help the occasional users, the power users need specially designed approach for their respective user category that can be worked out through a focus group exercise.

For example, lawyers community is expected to be one of the power users of UJITS, especially of Electronic Cabinet. It will be reasonable to have an open discussion with this community to hear their expectations and suggestions.

Such a discussion can be organized by the means of online feedback, or even preferably by a set of seminars across the country. It will be also good to have QA sessions, discussing designated use cases.

6 Court implementation manual

It would be valuable to develop a set of manuals on proper UJITS modules implementation, based on practical implementation experience in 5 test courts.

Such manuals along with human support will greatly assist in further UJITS implementation.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



7 Define power users

Apart from the lawyers community there are other power users which are expected to provide a huge amount of documents electronically. Like banks (PrivatBank in particular) for loan cases, General Prosecutor's Office for criminal cases etc.

It is a must to work with such power users directly to be able to better suit the System for their needs. As an example, to provide API for mass submission.

Electronic Cabinet is designed for case per case manual submission and may not be convenient for let's say 50 similar cases submission.

Being able to provide a designated API for mass case submission will benefit power users greatly and further result in decrease of percentage of cases, submitted by them in paper.

8 Define obvious yet important KPIs

It is extremely important to define a set of easily understandable KPIs to be able to track UJITS implementation progress. Like:

- number of electronically submitted files vs total number of files. Per day/week/month per court/total etc,
- number of judges in the System vs total number of judges,
- number of courts using Automatic Case Assignment module vs total number of courts etc.

For the sake of transparency, everyone should be able to track the progress on UJITS implementation through a sort of "pulse page" that would display KPIs and other important stats in real time.

Improve and promote Electronic Cabinet

9 Electronic Cabinet is the front end and a business card for UJITS. For the majority of users of the system, this is the environment that embodies the Electronic Court. It must be quick, efficient, reliable and user friendly.

Thus, it would be a good idea to perform UI and UX tests of the Electronic Cabinet. Data should be easy to enter. Data mustn't be lost in transaction. Etc. Each of the case of malfunction must be deeply studied and analysed. The basic IT rule says that it is many times harder to attract a user than to lose her.

It may be a good idea to provide some benefits for electronic document submission, for instance court fee discount. As far as we know SCA is already considering this. Also, a possibility to actually pay court fee directly in the Cabinet should be added together with automatic payment confirmation document generation.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



In future, when a significant amount of documents will be already provided via the Cabinet, it may be feasible to set a fee for paper case submission to further stimulate users to submit electronically.



THIS PROJECT IS FUNDED BY
THE EUROPEAN UNION



EXPERTISE
FRANCE



PRAVO-JUSTICE