Recommendations for Operational Management and Coordination of ICT in the Judiciary

(This document name is: „ICT Operational Management and Coordination 2020“, normal text font used is Arial 11, paragraph line spacing Single, 6 pt before and after)

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Abbreviations:

ICT	Information and Communications Technology
PO	Prosecution office
ITIL	formerly an acronym for Information Technology Infrastructure Library, is a set of detailed practices for ICT service management (ITSM) that focuses on aligning ICT services with the needs of business.
ACCMIS	Current Automated Courts Case Management Information System, as implemented in all courts in North Macedonia
HW	Computer systems hardware, equipment used to perform IT activities
SW	Computer systems software, programs, applications and various utilities, run on hardware
IPMS	Integrated Penitentiary Information System, used in all prisons and jails in the country
Help Desk/Support	system providing help to both computer system users and ICT staff
CIO	Chief Information Officer, top managerial position in an organization, responsible for all information services, storage and safety
"matrix" reporting structure	reporting structure in an organization, where some persons have more than one point above them to report to
ever greening process	a process of periodic replacement of ICT equipment, where each year a fixed percentage of HW is replaced with the new one, usually 20-25%
Server	a HW-based device, with processor, memory and storage, used for various computer processing functions, stored in racks with many connected servers inside

Executive Summary

This document, when completed, should become a part of the collection of different documents, proposals and frameworks, provided as the results of the specification of the Requested Services within the Terms of Reference (ToR), for the Component 3 (ICT) of the project "Support to the Justice Sector Reform"

This document, in this latest version dated June 2020, has been completed using all comments, additions and changes as proposed in the meantime by the members of the ICT Council, and as such is considered final and ready for adoption by the ICT Council.

The document has been initially designed by the project consultant, ICT Expert, after which it has been shared with a number of ICT staff across the country, distinguished members of the ICT community both at the courts and prosecution offices, who provided additional, specific comments and details, to make it fully applicable and in line with the current situation in these organizations and their future needs and possible ICT-related directions.

Besides this, the document also took into account previously expressed opinions and suggestions, as documented in the report on the Open Space training, which took part in Skopje, by end January 2020, and included over 20 representative ICT staff from various courts and prosecution offices in North Macedonia (see Chapter 4 for more details)

The document is presenting current ICT situation in North Macedonia, taking into account further, expected ICT modernization efforts, and finally, recommendations on how to improve operational management and coordination in these new circumstances.

Wherever possible or applicable, specific comments on situation with these institutions are inserted, which would have to be confirmed or updated by the relevant ICT staff in North Macedonia justice, including members of ICT Council.

Towards the end, a specific set of measures to be taken in North Macedonia justice organizations will be proposed, based on inputs provided by the ICT Council and wider ICT community in these organizations.

The document does not consider possible and expected necessary legal changes (laws, bylaws and regulations) which might be needed to make way for the projected changes, both technical and organizational, in the ICT arena.

1. Definition & Intro

"Quality, independence and efficiency are the key components of an 'effective justice system'. Effective justice systems are both a prerequisite for an investment and business friendly environment by instilling confidence throughout the entire business cycle as they are also essential for protecting individual rights, including in particular social rights."

"Adequate ICT Tools to support the monitoring and evaluation court activities with a view to improving court performance by detecting deficiencies and needs, in providing real-time case management, standardised court statistics, management of backlogs and automated early-warning systems are indispensable."[1]

The objective of *ICT Operational Management* is to monitor and control the ICT services and ICT infrastructure. ICT Operational Management executes day-to-day routine tasks related to the operation of infrastructure components and applications.

On the other hand, the objective of *Strategy Management for ICT Services* is to assess the service provider's offerings, capabilities, competitors as well as current and potential market

[1] EU, in Thematic Factsheet on Effective Justice Systems).

spaces in order to develop a strategy to serve customers. Once the strategy has been defined, this ITIL[2] process is also responsible for ensuring the implementation of the strategy. ITIL does not provide a detailed explanation of all aspects of ICT Operations, as the activities to be carried out will depend on the specific applications and infrastructure components in use. Rather, ***ITIL 2011*** highlights common operational activities and assists in identifying important interfaces with other Service Management processes.

Coordination of ICT in Judiciary is an important element of the current overall management of ICT sector within North Macedonia judiciary, because its role is to provide quality, effective coordination of all factors that may influence proper and efficient performance of ICT services across the justice sector.

2. Current Status

ICT operational management in the North Macedonia justice is today characterized by the following key elements:

1. Human resources:

Courts:

Beside the Supreme Court in Skopje, there are 2 Administrative Courts, there are 4 Appeal Courts and under them 27 Primary Courts. Among some 50+ ICT staff, distributed over the courts and prosecutors' offices around the country, there are people with various qualifications and experience. Most are located at local courts and/or PO's, and as such, are considered employees of the respective institutions where they work. This means they are directly subordinated to their respective Court Presidents/PO's Chief Prosecutors. Besides these local ICT staff, there is a Center for Informatics in the Supreme Court that employs 4 ICT persons, which is responsible for its own ACMIS database as well as for centralized databases used by all courts (central nomenclature database, electronic delivery database, database of criminal records, database of published court decisions on the web portals of the courts). Additionally, the Center for Informatics provides centralized backup of AKMIS databases, centralized management of protection devices, centralized data exchange service for Bankruptcy Trustees with Central Registry Public Prosecution and Official Gazette, implementation of centralized public procurement for maintenance of implemented ICT systems, etc.

Public Prosecution:

The Prosecution organization has only one person at the central level, in Skopje (as opposed to 11 positions by systematization) and four more ICT staff at some PO's.

There is also an Information Centre at the Ministry of Justice, organised as a Sector for ICT, with 9 staff divided into 3 units, which performs tasks from the sphere of competence of the Ministry of Justice, related to the information technology.

2. Organizational structure:

Considering the above description of ICT staff and their positioning, it is clear that overall ICT staff is not organized into a homogenous, independent structure, they are rather subjected to local authorities, at institutions where they work, similar to other court or PO staff. There is no hierarchical organization, nor is it clear what the reporting channels are. This fact limits the effectiveness of the whole team, and sometimes creates conflicts in term of priorities.

[2] **ITIL**, formerly an acronym for Information Technology Infrastructure Library, is a set of detailed practices for ICT service management (ITSM) that focuses on aligning ICT services with the needs of business.

There is no hierarchical structure regarding the performance of IT work tasks in the systematization, i.e. the IT staff is set to correspond exclusively at the local level, thus their superiors are the basic public prosecutors who run the local prosecution office.

Also, the procedure for delegating work tasks is not clear, most often they arise when a job needs to be completed urgently and the job does not have to be followed and there is not enough time.

3. Tech support:

Support of the local HW/SW is provided by the local ICT staff, with ability to consult their colleagues elsewhere, and/or ask for assistance from the ICT team at the Supreme Court. There are no professional tools and/or systems for ticketing incidents and problems, which could be shared by all ICT staff, and help increase efficiency and knowledge about state-wide problems which may help resolve similar current ones. Thus, a ticketing system for redistribution of work tasks on a daily basis has not been introduced, i.e. work tasks are performed according to urgency, which is rarely decided by the IT staff in charge of performing the work.

4. ICT positions:

These positions are predefined by the valid laws and regulations in the justice system. Currently, these positions are not competitively defined, to at least partially offset the disparity between pay levels in the justice system and those of the private ICT companies in the country. This is one of the main reasons for inability to attract more ICT staff within the justice system, and will continue unless some regulatory measures are taken, which will recognize this situation and adequately set the pay levels for ICT staff.

5. Professional education/training:

It is widely understood today that ICT professionals have to basically keep improving their knowledge continuously, in order to be able to adopt new systems, solutions and processes, which are coming to the market on a daily basis. Unfortunately, there are no continuous efforts to train ICT staff in the justice system, nor are there any ICT update courses planned or implemented at the Judicial Academy. In this situation, it is only to be expected that the current ICT staff will gradually be lacking behind with their professional knowledge, and may not be able to accept and implement some new ICT system solutions and applications, when they do come into the justice sector.

6. Key ICT Systems and Tools (Hardware, Software):

There are several key ICT systems/applications overall in the justice sector of North Macedonia. Without going into detailed listing or description, given within the ICT Strategy document, currently most important ones are ACCMIS, case management system in the courts, FEMIDA, system for audio and video recording of interrogations at courts and PO's, Case Management System used by all PO's, and the new Integrated Penitentiary Information System (IPMS) at penitentiary institutions.

There is currently in process the preparation for the tender for a number of new servers and associated equipment, hardware and system software, valued at approx. Euro 1.5M, which should provide long-awaited replacement of a large number of old servers in many of the courts. List of current servers in all institutions is given in *Appendix 1*.

3. ICT Strategy Considerations

The official ICT Strategy for the justice system in North Macedonia, states in several places, among other critical factors, the importance of both introducing a "centralized data system" across the sector and "reorganization and strengthening of ICT human resources capacities":

Vision

"The vision of the ICT Strategy is a centralized data system of the judicial system in the Republic of North Macedonia"

Mission

The introduction of a centralized data system will lead to increased efficiency, transparency and accountability of information systems in the judiciary.

By implementing of ICT solutions and systems in accordance with European and international standards, the aim will be to increase accessibility, timeliness and easy use of justice services for all users, to improve data quality, protection and security, and to cooperate with other justice systems, the institutions of the European Union, its Member States and international organizations.

Key factors of success

Success in implementation of ICT strategy depends on following key components:

- *technical components: ensuring adequate infrastructure, choice of architecture and technologies used;*
- *institutional components: introduction of centralized governance of ICT in judiciary, by providing of appropriate human resources;*
- *organizational components;*
- *Reorganization and strengthening of human resources capacities in all institutions that will then be able to adequately support all processes in the judiciary;*

Reorganization and Optimization of ICT Sectors in the Judicial Bodies (continuous priority)

The reorganization and optimization of the ICT sectors in the judiciary should ensure efficient fulfillment of the sector's obligations and tasks, which is a prerequisite for the smooth functioning of the ICT in the judiciary. To this end, new IT personnel must be hired, upgrades must be made to existing staff, and a continuous training of IT staff in all institutions of the judiciary must be made.

4. Results of the polling of opinions at the ICT Open Space training

At the Open Space Training session, which our project has organized by end January 2020, for the ICT Council members and other ICT staff from various judicial institutions in North Macedonia, the attendants have been asked to provide their opinions on necessary priority actions and initiatives on several topics. In regards to the topic "ICT Organization" these were their contributions:

1. Electronic exchange of information between various institutions within the system (current issues, activities, etc.); at the moment, this is done only at the meetings of the Working Group for the Standardization of Courts Procedures, every 2-3 months;
2. Systematization & documenting of all ICT activities;
3. Creation of Help Desk/Support system for all ICT staff, for easy, available method of exchanging experience and resolving common issues (now, the only local tool is IT Forum (Bitola));
4. Definition and establishment of clear ICT hierarchy within judiciary, responsibility and area of competence at every level, creating efficient communication processes (new organization);
5. Centralized, long-term planning of all ICT needs;
6. Ensure minimum annual, compulsory ICT (certified) training for all ICT staff;
7. Justice ICT organization structure – to be clearly established, according to the best efficiency principle.

We think it is important to take these proposals into consideration, when recommending solutions for the ICT Operational Management and Coordination, using them to achieve the best possible effects.

5. ICT Operational Management and Coordination Recommendations

Considering the outlined proposals for ICT organization and collected key proposals by the ICT staff across the justice sector, the following recommendations for ICT Operational Management should be considered.

In order to establish a more efficient ICT Operational Management, it is necessary first to review the current situation, find all inefficient, bottleneck points in the work processes in the ICT daily operations, across the sector. Some of these have already been detected and alternative solutions proposed, at the Open Space training in January 2020 (see earlier paragraph).

Considering the overall costs, required funds and time-dependent processes associated with implementing these recommendations, they are divided into several phases, according to perceived time and resources requirements to implement them:

PHASE 1: New ICT organization, processes (2020)

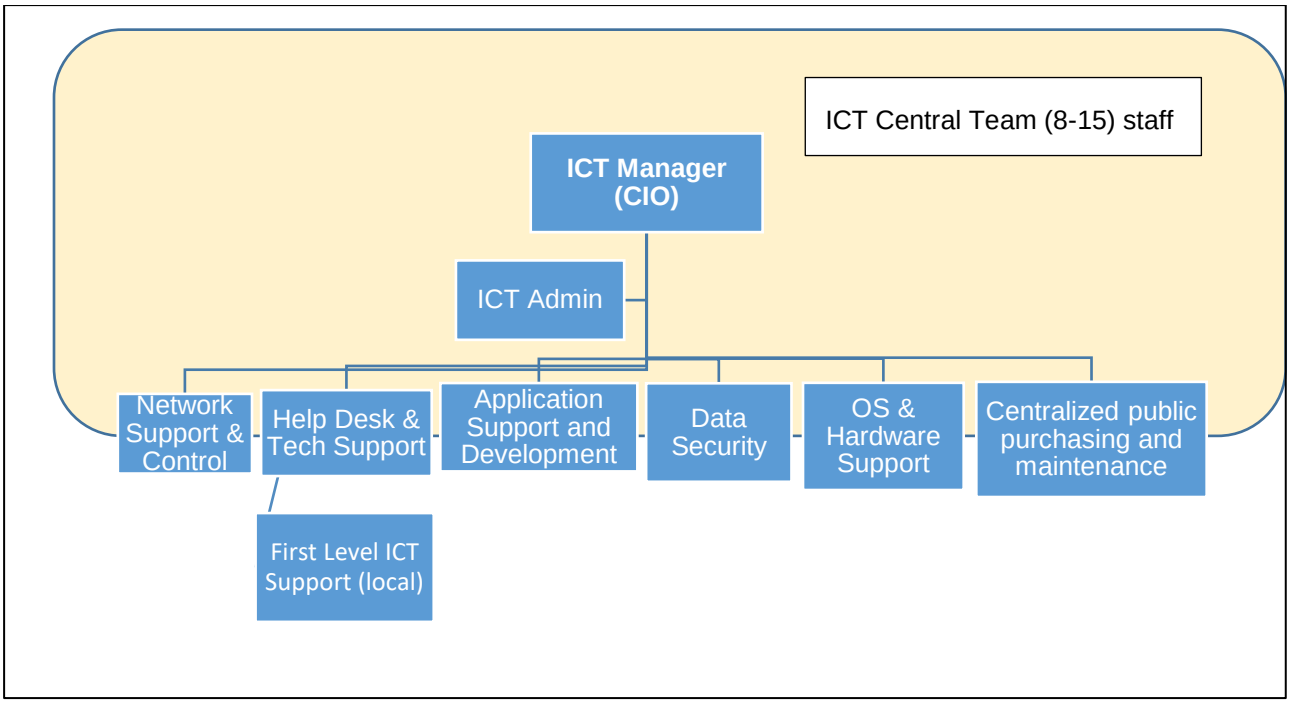
As stipulated within the ICT strategy document, the creation of a new, integrated, centralized ICT organization is an important step towards improved efficiency and netter utilization of all ICT resources, which by implication would improve overall efficiency of the justice system overall. This activity could and should be initiated as soon as possible, since its actual implementation may need various changes and amendments to several legal documents (laws, bylaws and internal regulations).

As a starting point, urgent changes/amendments to the Judicial Service law should be made. Given the previous experiences in requesting an amendment to this law, this process may take a lot of time, so this should be taken into account. Complete systematization of ICT positions and the definition of the Centralized ICT Organization are impossible without changing this law.

Centralized ICT Organization

A centralized ICT organization can be established in a number of different ways, depending on the local/national situation in regards to various justice institutions and their readiness to take on the main brunt of this task. The key point is that the whole ICT sector must be transformed into a single, semi-independent, hierarchical organization, with its own management, all the way to the top, which can define and implement their own rules, regulations and complete systematization of ICT positions.

Phase 1: ICT Functional Organizational Structure (8-15 staff)



To achieve this, a top position of ICT Services Manager must be established ASAP, with high-level authority and approved part of the judiciary budget assigned to ICT organization. However, some key features stand out:

1. Such an organization should take under its control and management ALL ICT staff working within the judicial organization, no matter at what level or institution. This organization would foster the definition and establishment of clear ICT hierarchy, responsibility and area of competence at every level, creating efficient communication processes, as well as systematization & documenting of all ICT activities. It would also allow for a centralized, long-term planning of all ICT needs;
2. The organization should be established hierarchically, thus reflecting the principle of general justice system organization; in this case, it probably means establishing THREE levels of ICT activities, including ICT support and help, meaning, as an example, Central ICT site at the Supreme Court ICT staff at the top level (expanded by several additional specialized staff, such as Network, system and application specialists, Center for the Support/Hel Desk, etc.), four appellate courts locations at the medium level, and all other courts/PO's at the lowest level (see the presentation slide on this);

   Action Note: Some ICT staff has expressed opinion that this (medium) level of support, at the Appellate courts, is unnecessary, since they are not doing it now, when only the ICT staff at the Supreme Court are performing the support role, besides the tech support provided by the external organizations, such as Edusoft support for ACCMIS.
3. It is EXTREMELY important that this change in organization be supported from the very start (meaning now) by a high-level executive (political) sponsor, who has the power and authority to push through this whole idea; in your case, I would try to sell this whole idea to people such as SC President, Minister of Justice, and alike; I am willing and ready to assist you in this matter, on behalf of our project and EUD!
4. The establishment of the new organization should start with the appointment of a person at the top of it, ICT Services Manager, a sort of Chief Information Officer (CIO) for the justice sector, someone with sufficient authority and legal power to define all the key parameters of the new organization, such as the number of positions, their physical locations, types of profiles needed, their job descriptions, pay levels, etc. Such position would ideally be established as SC President Deputy in charge of ICT, but other options are also possible.

Action Note: ICT staff in their comments asked to emphasize here that it is mandatory that ICT Service Manager, as defined here, will have to create a full central team of ICT specialists.

5. The organization should, by its structure and job assignments, try to avoid full dependence of ICT staff on their local presidents, which is the case now; rather, there should be, what is usually called, a "matrix" reporting structure, where each ICT staff reports both vertically to his/hers ICT manager/director at the top, and horizontally still to their court presidents/chief PO, but only partially, i.e. with respect to their pre-defined job descriptions.

   Action Note: Here, there might be a problem and possible conflict with the current IT job systematization and other legal acts, which would have to be adequately modified; if the IT persons remain to be employed in the courts, and not in ICT organization as independent unit, then the proposed independence of ICT staff from their local presidents will be hardly feasible.

6. This organization thus must establish its own rules of engagement, including its own operational manual, reporting structure, procedures, etc. to avoid dependence on others; its own first tasks would also be to introduce central problem reporting/information system, which all ICT staff should be sharing, in order to make problem resolving easier and relevant information always available to all.

8. ICT Support Online Tool: To make ICT operations most effective, there must be an established online tool (or tools) to efficiently post and exchange all necessary technical support situations, which could be reached on a daily basis by all ICT staff, across the country. This would make the tasks of their technical support easier to perform, through sharing of information and previous experience.

   Action Note: this takeover of the application support will have to be done gradually, so that the application support staff at the central location would have a chance to learn and get practice with this kind of support function. Any new significant application introduced to judiciary, should provide both source code and training for judiciary ICT staff, to enable them to continue independent support of the new application after the warranty period. This would make ICT organization less dependent on external factors. The financial resources saved from the annual maintenance contracts will be used for additional specialized staff (central team of ICT experts) in the new organizational structure.

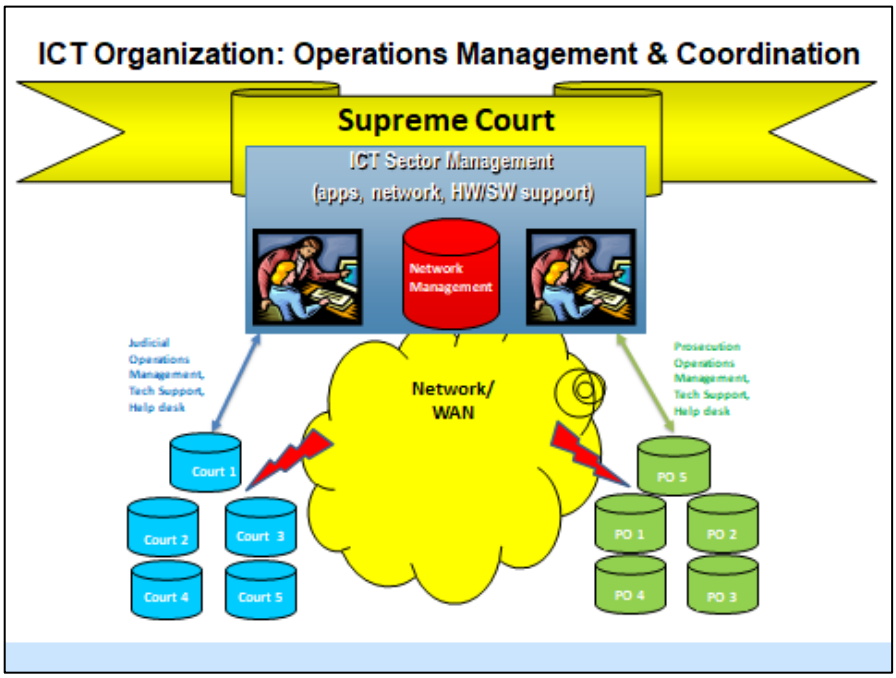
9. The new ICT organization must become independent of external tech support by various companies that have provided either hardware or specific software/applications, such as Edusoft for ACCMIS. All key applications must provide source code to ICT organization, which will take over tech support for these.

10. Integrated Help Desk service, with its own procedures (ticketing of reported issues/problems), to be defined by regulations and other systemic acts. Help Desk could be used to service both ICT support staff and other users, if and when necessary;

11. ICT Staff deficiency and training: When creating new systematization, special attention must be made to the fact that ICT staff is a very deficient category in the economy, and therefore special, additional incentives must be introduced, to keep the current and attract new, quality ICT staff; this measure must be introduced into any necessary legal regulations, recognizing this particular need, and then introduced into the ICT positions systematization across the justice sector. In addition, to improve ICT staff up-to-date knowledge of current trends, a minimum annual, compulsory ICT (certified) training for all ICT staff should be defined and built into all relevant regulations, as well as prepared with the Judicial Academy;

12. Budget ICT Requirements: As already mentioned, in order to function efficiently, the new, integrated ICT organization must be assigned a pre-defined portion of the overall budget for justice; this budget must take into consideration, besides actual payroll for the ICT staff, the costs of the overall network maintenance, the “ever greening” process of replacing a portion of

ICT HW/SW every year (at least 15-20% annually), introduction of new technologies, renewal of licences, etc.



This might look too ambitious at the moment, and it is probably not going to be achieved neither easily nor quickly, but it has to start now, otherwise ICT will stay on the periphery of the justice system, as it is now, without its own voice, financing or influence. This has been done in other countries, so it is not unreachable goal, as long as the key tenets I have described here are respected and serious attempts made to implement them!

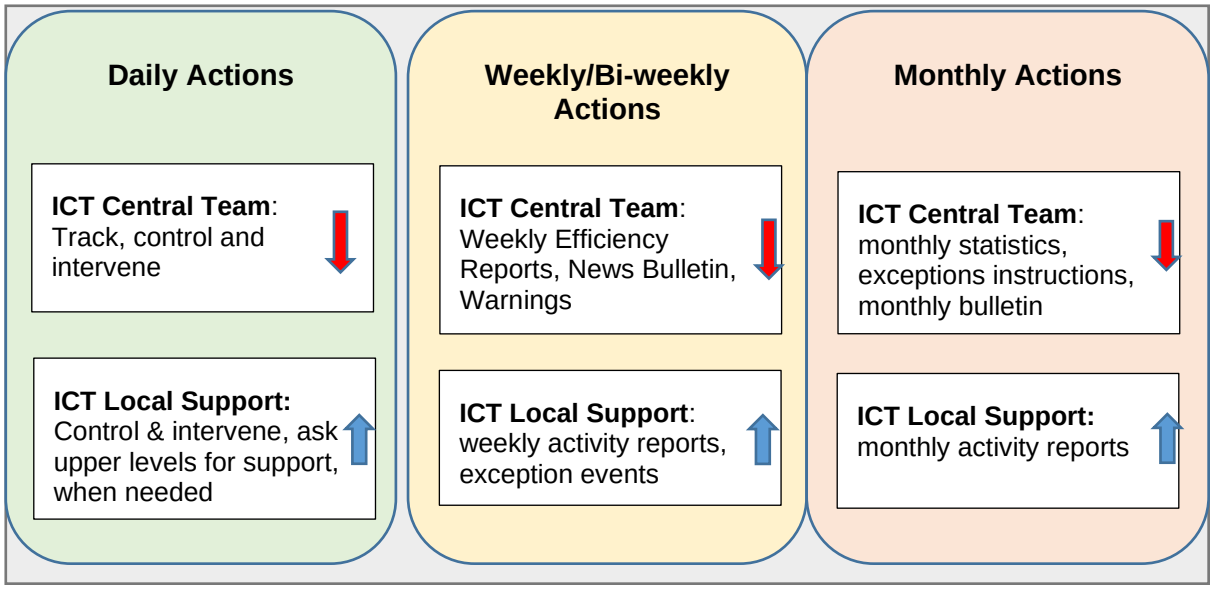
Coordination Issues

Considering the outlined proposals for ICT organization and collected key proposals by the ICT staff across the justice sector, the following recommendations for ICT coordination should be considered:

1. On the overall system-wide level, ICT Coordination will have to be managed within the auspices of the ICT Council, who by design and its proposed role, should be in charge of such activity. The coordination at this level should include synchronization of the overall efforts to standardize all aspects of ICT management between different key institutional players: Ministry of Justice, Supreme Court, Central Prosecution Office, later Director of Penitentiary Services, and other important institutions.
2. On technical and human resources level, coordination should be taken over by the ICT Central Team, located within the Supreme Court; their activities are discussed in the next chapter.

ICT Operational Management Actions

The chart underneath shows the expected flow of information, documents and reports within the integrated ICT organization, divided by various time periods. The arrows show the direction of vertical information flow, between the hierarchical levels of such organization; in the judicial system. Secondary support should be discarded according to the suggestions by some of the ICT employees in the courts. Some of these actions, if not all, can be performed using some widely available ICT tools which enable regular ICT support organization activities, such as tech support ticketing system.



Daily Actions:

- ICT local support, located at the individual courts, is performing their daily activities, including use of the new tech support tools to record any performed action and/or problems encountered; they are entitled to ask for additional support upper levels, when they find it necessary
- ICT Central Team, located at the central ICT site, is providing on a daily basis continuous management, tracking of tech support actions and high-level technical support to institutions where local ICT staff cannot successfully resolve issues. It provides timely response and actions in cases where outstanding situations occur, such as complete failure of ICT-supported processing at a particular institution.

Weekly/Bi-weekly Actions:

- ICT local support, is submitting (non-mandatory) weekly reports for each institution, outlining any outstanding problem or issue, if they appear; otherwise there is no need to send them and overburden staff.
- ICT Central Team, issues Weekly Efficiency Reports, News Bulletin and warnings on any longer-term unresolved issues, as shown by the online tech support tool, monitored here

Monthly Actions:

- ICT local support, each local institution issues a monthly report on ICT activities, outlining any exception events, keeps a meeting with the court president or chief administrator, to discuss monthly key issues and/or preparations for future activities.
- ICT Central Team, reviews monthly report for the complete ICT organization, creates necessary exception instructions, either common or specific for an institution, issues monthly bulletin, holds a meeting with the president of the court or the chief administrator to discuss the main problems of the month and / or preparations for future activities.

PHASE 2: New, centralized ICT system, interoperability (2021-2022)

The assumption here is that the new, centralized ICT system (replacement for ACCMIS), will be supported by the new data center, with much more space, cooling and other secondary facilities including more space (approx. 50 m2). The computer equipment at such data center must be significantly expanded compared to the current situation at the Supreme Court servers' facility, for the simple reason that this new facility will have to concentrate all computer power in one location, in order to support centrally installed new ACCMIS. At the same time, the servers at the all local courts will be free of the need to have locally installed case management application;

instead, all their users will be accessing the central case management system through a web browser and network. This will free local servers' capacity for other tasks, as required over time. This new, centralized ICT system by the nature of its operation is highly dependable on the quality, speed and reliability of the communication network that would support courts operations through the central site; there are examples of many years of successful operation of such central system, even in some countries in the region (e.g. Bosnia-Herzegovina is using such national network, both for courts and prosecution offices since 2008, and its annual reliability is 99.9999%). However, if such reliable network cannot be guaranteed, different approach should be used.

In that case, there is a valid counter-reason for an approach where the courts would still run their local version of an ICT system, while this centralized system should constantly collect data from local data servers and should be ready any time to take the roll of any local system in case of a major incident. In this version, the courts would retain their local ICT versions of the new system, and all existing local servers – DC, Database servers, Application servers and File servers, in need of the local access to data and application, with full control of the local user accounts in the Active directory and definitely of the file structures on the File servers. The justifications for this approach would be:

-possible frequent interruptions of internet connection which may result in data loss or termination of public hearings,

-system designed to access the data base via internet will slow down the work of the application, it can also occasionally be unavailable for hours – this is the real situation with the existing ABMS application in the courts,

-ticketing system is great for managing the IT communications, but when used in incident cases, like system interruptions during public hearings or logging problems, the emergency response time can be impermissibly long,

-possible failure of the central system will mean paralyzing the entire judicial system.

For all the above reasons, it would be necessary to investigate and justify the most efficient version of these two approaches, before starting the design of the new replacement for the ACCMIS system and new architecture of the whole network.

This new, expanded data center will have to satisfy both expanded requirements for space, hardware and utility equipment, as well as an expanded, specialized team of ICT experts. The following are examples of such needs:

Data Center Configuration

Data center of this type usually consists of:

- Servers based on RISC and Intel platforms, with various performances, from mid-range to high-end
- Systems for the mass storage and backup of data (enterprise and mid-range)
- Key network components

A number of different function servers types are present in the data center:

- Database application servers
- Database servers
- Enerprise storage for new case management system and other databases
- Web servers
- E-mail servers
- File servers
- Antivirus, backup, update and proxy servers
- Active Directory and DNS servers
- Servers for management and tracking of the system and network resources, as well as applications and databases performance

Expanded Central ICT Experts Team

The following expert types should be considered, but not exclusively:

- System Analyst,
- Application Support Specialist,
- Database Specialist,
- Network Specialist,
- Security Specialist,
- System Support Specialist,
- Help Desk Support,
- OS Support Specialist.

These experts would be organized into specialized teams, such as: Apps Support, Help Desk/Tech Support, System OS Support, Network Management and Support, etc.

Expanded linkage (interoperability) and cooperation with other justice systems

As stated in the Mission definition of the ICT strategy, there is a need "to cooperate with other justice systems, the institutions of the European Union, its Member States and international organizations".

In the first place, expanded linkage refers to the ability of the judiciary (and indeed, the prosecution, for their own specific needs) to directly link to other sources of relevant information, which could be exchanged using ICT tools and methods. This is usually called "interoperability capacity". At the moment, this capacity for courts is limited to only few cases, and even these are not fully implemented; as an example, courts are using the site www.edostava.sud.mk to deliver certain documents to both registered persons and legal entities that are notaries, lawyers, mediators or bailiffs.

The extension of interoperability would be particularly useful in case of the need for accessing information directly information about citizens, National Registry Office, or Central Registry, for information on legal entities, such as lawyers offices. Such features should be built directly into ACCMIS functionality (or the new successor to it).

Interoperability can be expanded to a whole range of other institutions which are in some way related to the court operations, but these actions must be subject to already established rules on interoperability, as published by the Ministry of Information Society and Administration (MISA), as the result of the twinning project under the programme Support to the Civil Service and Public Administration Reform", in the documents:

- Macedonian Interoperability Building Block: IOP-S (Semantic Interoperability)
- Macedonian Interoperability Building Block: IOP-O(E)
- Macedonian Interoperability Framework (MIF) for Macedonian public services

Best Practice Electronic Cases Data Bank

Establishment of an electronic data bank with selected court cases for reference. These cases are currently being selected at four appellate courts, collected and published in an annual book "Bulletin of Courts' Practice" ("*Bilten na sudskata praksa*"). The idea is that this useful reference for all judges becomes an online, real-time, simple-to-use tool, which every judge can use and search electronically to find the best references.

PHASE 3: Further technical and organizational expansion (2022 onwards)

Once both new ICT organization and the key new case management system are in place and stabile, the ICT organization can start considering further improvements and expansion of its

technical coverage, tools and expertise. The most likely new areas of ICT expertise and involvement are:

Video-conferencing

Use of video conferencing at courts and prosecution offices, especially at times of large national emergencies, such as the one world has today with the corona virus, is definitely one possible solution. Regardless of the crisis situations, it can also help in areas where court services are far away and/or difficult to reach, or when it is not possible to organize hearing with all participants in the court case at the court.

This feature of court system is already present in many countries, but it also demonstrates a number of problems that need to be dealt with, preferably in a timely fashion, so that introduction of this technical feature at courts and prosecution offices does not necessarily creates additional problems which may jeopardize its successful implementation and cause public resentment. The Appendix 2 shows a number of useful tips to consider when organizing implementation of this feature at the justice institutions, and is based on extensive experience at a number of US state courts until now.

More focus on mobile devices

With massive increase of mobile phones, and especially smart phones usage among the population in most countries in the world, it becomes necessary for the justice system to include various means of either one- or even two-way communications between it and both citizens and businesses involved in a justice-related processes, such as court case.

In case of North Macedonia justice, this approach has not been sufficiently implemented so far, which becomes obvious in case of massive, nation-wide emergencies, such as the one we are seeing now. Thus, it would be almost necessary, in order to improve and make more efficient the process of communication between courts and court clients, citizens and businesses, to take the following steps:

- Investigate methods and available applications which would allow both easy and safe method of delivering information about a case to all interested parties in a case, by sending messages to their email addresses and/or using messages on mobile phones, through various social networks (Viber, WhatsApp, etc.).
- Take steps to make these methods available directly within ACCMIS, or any new system that would eventually replace ACCMIS in near future.
- Special attention must be paid in the case of access to mobile devices to the fact that they are easily lost, stolen and otherwise subject to all kinds of hacking, thus security aspects must be carefully considered.

6. Action Plan

This is the set of recommendations, including the Action Notes presented in the document, with further actions proposed:

ICT Council:

This document, which has already been expanded by using comments and suggestions collected from various ICT staff across the country, will be sent by our project to the ICT Council, for their further actions. We expect the ICT Council to proceed with the following actions:

a. Review the document, considering further extensions or improvements, in their next monthly meeting;

b. Assign one of the members as a rapporteur to manage the process of completing this document;

c. The ICT Council should, during its examination of this document, consider the Action Items as defined in the document, and their ramifications to the future ICT Strategy plans, as well as necessary changes to ICT Strategy, timing and financial needs;

d. Once this is done, the Council should include this document as part of the ICT strategy and send the completed document, together with proposed activities, timing and financial expectations, for further consideration to Ministry of Justice and other relevant bodies/institutions;

The following are short additional comments on all items and time-related components presented in the Chapter 5, with financial implications for each one added:

PHASE 1: New ICT organization, processes estimated costs (2020)

Centralized ICT Organization

Legal changes and hiring of the top-level ICT manager will require mostly administrative efforts, with the provision of funding for this top-level systematization and pay.

Financial Implications: Thus, the costs here are small, at negligible level.

Coordination Issues

Synchronization of the overall efforts to standardize all aspects of ICT management between different key institutional players: Ministry of Justice, Supreme Court, Central Prosecution Office, later Director of Penitentiary Services, and other important institutions.

Financial Implications: Again, these are mostly admin efforts and the cost is low.

ICT Operational Management Actions

Here, most of the costs will be reflected in the purchase and implementation of professional tools to enable automated reporting processes between different levels of ICT support.

Financial Implications: estimated costs and implementation time: EUR 50,000 over 6 months.

PHASE 2: New, centralized ICT system, interoperability estimated costs (2021-2022)

Data Center Configuration

The new data center, to be located in Skopje, either at Supreme Court or another convenient location, must be able to support complete set of activities and applications for all courts in the country. This should be ensured, regardless whether local courts should have their own versions of ACCMIS (or its replacement) or not, in order to provide single location and point-of-processing for all system-wide statistics, reports, etc.

Financial Implications: based on other regional experience, such data center would cost approx. EUR 1.5 – 2.0 M, including all hardware, room equipment and supporting middleware.

Expanded Central ICT Experts Team

As detailed on page 12, the central experts/ICT support team should contain approx. 10 ICT specialist to start with. That means jiring another 5-6 staff, and ensuring their competitive positions and pay.

Financial Implications: additional funds for salaries, at central site.

Expanded linkage (interoperability) and cooperation with other justice systems

The issue of interoperability should be resolved separately, subject to already established rules on interoperability, as published by the Ministry of Information Society and Administration (MISA), and starting with the access to the key Central Registry, and moving on to other institutions of interest for data exchange.

Financial Implications: approx. additional EUR 100K annually, over next 2 years.

Best Practice Electronic Cases Data Bank

This functionality has already been established in several countires in the region, and their experiences could probably be shared, to reduce the cost and implementation time.

Financial Implications: depending on ability to receive free assistance in the region

PHASE 3: Further technical and organizational expansion estimated costs (2022 onwards)

Video-conferencing

This new method of organizing hearings is currently under scrutiny in many countries, and receives mixed responses, depending on legal, procedural and technical solutions applied.

Financial Implications: if all courts are to be equipped, the average cost per court would be around EUR10,000, using state-of-the-art professional solutions, including hardware, software and implementation for one such room.

More focus on mobile devices

The ability for the courts to include communication to the court clients mobile devices could be solved mostly through upgrades to the key case management systems currently in use (ACCMIS) or its future replacement.

Financial Implications: depends on the system used.

Appendix 1: Integration – as defined for justice information systems

(Excerpts from the document: „*Integrated Justice Information Systems, Governance Structures, Roles and Responsibilities, A Background Report, National Criminal Justice Association, for the U.S. Department of Justice")*

Justice information systems integration is not a new idea – agencies throughout the nation recognize the importance of integrating information systems to share critical data, documents, images and key transactions. State and local jurisdictions are actively developing IJIS (Integrated Justice Information Systems) plans and programs.

Integrated systems improve the quality of information, and thereby the quality of decisions, by eliminating error prone redundant data entry. In addition, by sharing data between systems, integration typically improves the timely access to information, a critical factor at many justice decision points (e.g., setting bail). Moreover, integration enables the sharing of crucial information without regard to time or space; multiple users can access the same records simultaneously from remote locations around the clock.

The concept of "integrated justice information systems," however, means different things to different people in different contexts. The extent to which justice agencies across the country are integrating depends on a number of variables, not the least of which is the definition and scope of the individual integration project. In many cases, integration takes the form of a single agency integrating its many information systems, such as a state police agency integrating its criminal records system with mugshot and fingerprint identification databases. Significant improvements in efficiency and effectiveness can be achieved when internal information systems communicate critical data in a timely manner.

Other projects have taken a broader approach, integrating information systems between different agencies with different functions, but that need to share key pieces of data at critical points in the justice process. Integration encompasses a variety of functions designed to enable the timely and efficient sharing of information within and between agencies.

It is important to recognize that building IJIS does not mean that *all* information between agencies is shared, without regard to the event, the agencies involved or the sensitivity of the information available. Rather, it means sharing critical information at key decision points throughout the justice process.

At arrest, for example, the arresting agency typically transmits certain information regarding the arrestee to the state criminal history records repository (e.g., name, age, sex, race, driver's license number, electronic image of the arrestee's fingerprints, etc.) to record the arrest transaction in the instant case, but also to verify the arrested person's identity and determine whether they have a criminal history record in the resident state, or in other jurisdictions around the nation.

In addition, the agency will also query other state and national systems to determine whether there are any outstanding warrants, detainers, or other holds on the arrestee. For these transactions, the arresting agency does not need to share *all* information regarding the arrestee or the event which led to the arrest, but only that information necessary for the discrete transaction "check for outstanding warrants" or "verify identity and report arrest transaction to the criminal history repository."

Beyond improving the internal operations of justice agencies, integration is more expansively viewed as enabling the sharing of critical information between agencies. Integration efforts are often referred to as horizontal (e.g., among different divisions of the same court system, or between the state police, court and correctional systems) or vertical (e.g., from limited to general jurisdiction courts, from trial to appellate and state supreme courts, and from local agencies to state and national/federal systems).[3] Interagency integration, whether horizontal or vertical, generally refers to the ability to access and share critical information at key decision points throughout the justice process.

Justice agencies throughout the nation already share considerable information. It is important to recognize that regional, statewide and national systems currently exist to facilitate access to and sharing of key information among many of the actors in the justice enterprise. In addition, some of the information exchange is currently accomplished with existing technology or is being developed in new systems, but much is also still done by hand through the ceaseless efforts of justice practitioners. Integration efforts are designed to automate many of these operations, reengineer systems and processes, and achieve new capabilities with greater efficiency and effectiveness.

Appendix 2: Video Conferencing at Courts

Court Web Conferencing Tips, National Center for State Courts, Court Technology Bulletin

James E. McMillan, Principal Court Management Consultant with the NCSC

In the time of the COVID-19 pandemic, we want to share some tips from more than twenty years using videoconferencing and web conferencing technology for presentations, technology development and support. We begin:

1. **Test, test, test** – all following recommendations require testing just as we would do for software development programming. Don't assume that it will work with everyone every time. Assume that it won't work. There are issues with multiple devices, operating systems, apps, and especially network capacity that can affect how things work. Yesterday we learned that the private Arbitration Place Virtual e-hearings provide "Hearing Technology Specialists" – "who are trained to operate the hearing technology, so that counsel and the arbitrator(s) or mediator can focus solely on the case." We need a court version of this staff function.

2. **Choose the platform**. We are very comfortable with issuing court rules as to what, when, and how attorneys and parties interact with the courts. The same needs to be done for web conferencing with the court's selecting a paid, yes paid, system that the participants can learn how to use every time they virtually come to court. It needs to be a paid service to receive all the benefits and support available when (not if) you run into issues.

The paid services also have test capabilities that your users can access to make sure their side of the conference works. This is the key because the courts must rely on the parties to solve their connection issues when they arise.

3. **Control**. The court must control all aspects of the web conference. That means that the invitations with security passwords are issued by the court for the participants. It also means that the court can turn on and off participant microphones/cameras and record and store the session.

The court should also be in control of recording the hearing as the official record. In turn, this means, there will be large recording files to save. It is likely less expensively done by the court on their local servers. And since it is also the official record of the proceeding, this local storage approach allows the record to be stored in the courthouse.

4. **Configurations**. First audio. The remote parties must use excellent microphones. The microphones built into the laptops are simply not good enough. There is an easy solution, your old mobile phone wired earbuds (although I have seen some good use of Bluetooth Apple iPods).

Next, lighting. It is making me crazy watch web video of ceiling lights and dimly lit subjects. Use an indirect light source such as an old fashion table lamp. It creates a direct light source that you can mount on top of your laptop display or monitor. Overhead florescent lighting isn't good enough.

Third, dual monitors. If you can, use your laptop screen for the web conference participation and a second monitor for documents and your presentation materials. That way you don't have to print things out or flip windows. This allows the participants to be ready to show slides, photos, and other materials to the hearing.

5. **Video viewing**. In most instances, I recommend a quad (2x2) to view the participants for a formal conference and/or hearing. Once you go smaller it is very hard to see the remote person even on a large second monitor. That said, for committee meetings or even appellate conference meetings you can go smaller because one knows the participants. This is where a ribbon display of the remote participants can also be used.

https://www.gotomeeting.com/video-conferencing

6. **Private or Public conference**. Generally, the web conference should be an invitation-only, private, password-protected that is only given to the participants. This is a feature of the paid services and avoids the embarrassing problem that a Skype hearing had many years ago.

https://courttechbulletin.blogspot.com/2013/07/avoiding-skype-zimmerman-trial-problem.html

One can use the calendar/invitation feature that is available from most web conferencing systems to implement this.

7. **Chat**. This function can be very useful if there is a technical problem during the web conference, for example, the audio cutting out. Again, the court should provide guidance on its usage to avoid extra-party communication.

8. **One person controls the conference**. Judges control the hearings in the courtroom by calling on the person who will be speaking. It should be no different in the web conference.

9. **Remote language interpretation**. Several courts use web conferencing for language interpretation. The interpreter needs to be shown in their own video window. This is where one will likely need to go to a four+1 configuration (the speaker's window enlarges in this interface) or more windows. This is also something that you may wish to keep after the emergency as more and more languages are involved in our courts.

10. **Check-in and Staging**. I really like the idea of the Zoom waiting room function. This allows the participants to gather for the next hearing while the previous hearing concludes. This is also where the idea of the Hearing Technology Specialist or another clerk/registrar/judicial assistant (not necessarily in the courtroom) can help to facilitate preparation. The prep stage can also test documents and slides with the participants to make sure everything is working properly.

11. **E-signature (goes with E-filing)**. Last, this is your chance to enable e-signatures in your court. No one wants to wait for the paper / wet signature when the hearing and documents are electronic. I have written about this so often here in the CTB that it is easier to just refer you to the subject column on the right to click on e-signature.

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- https://www.huffpost.com/entry/zoom-hacks-work-meetings-virtual-happy-hours_l_5e7ba807c5b6cb9dc1991ef4
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