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A Business Case Feasibility Study for Electronic Court Modernization in the Jordanian Courts

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1. Executive Summary

Overview and Scope

In August 2007, the MASAQ Project, at the request of the Ministry of Justice, Jordanian Government commissioned a Business Case and Feasibility study for three specific technology projects for the Jordanian Courts. These three projects are:

Electronic Document Archiving (E-Archiving) - Electronic Document Archiving is the process whereby an electronic image is made of an existing paper document through the use of scanning hardware and software; or the conversion of an existing electronic (digital) document into a “fixed” or permanent state suitable for archiving.

Electronic Filing (E-Filing) – Electronic filing is the process that enables an attorney to access court data remotely, communicate with court officials and other parties and/or attorneys in a cases and, ultimately, submit electronically, documents destined for the court file. Such a filing process must include an enabling technology and a business process to ensure authenticity of the document. Such process would use an electronic signature (E-signature) and normally would include automatic notification (by the system) to the court, to opposing counsel and to other interested registered parties.

Video Hearing – A Video Hearing is a process by which defendants may appear before the court from remote physical locations without the need to be transported to the court. Through the use of technology, defendants can readily be seen and heard in “real-time” and may be addressed by council or by the court as if they were physically in the room.

Methodology

This study was conducted by consultants hired by the MASAQ Rule of Law Project. The process included:

- A series of extensive interviews with
 - Ministry Of Justice Officials
 - Judge and Staff of the New Palace of Justice
 - Private Attorneys located in Amman,
 - MASAQ Project Staff
 - Private Technology Vendors
 - Various Ministries’ staff currently using these or similar technologies
 - Ministry of Interior
 - Ministry of Housing and Urban Development
 - Ministry of Planning and International Development
 - Ministry of Business
- An examination of various current practices and materials including
 - Current filing practices in the new Palace of Justice – Court of First Instance
 - MIZAN
 - Various Jordanian Statues and Regulations
- Research by the MASAQ legal staff into current Jordanian laws and regulations
- Application of existing standards and practices concerning these areas of interest

Obstacles

The Jordanian Courts are similar to many other modern court systems around the world and they face many of the same obstacles. A short listing of these obstacles is shown below:

- A rapid increase in the number of civil and criminal filings due the growing population of Jordan and the expanding economy
 - The increasing complexity of lawsuits arising from the international and national business community growth and expansion
 - Hiring, training and keeping dedicated, trained professional Judges and staff
 - The need to modify existing physical structures to accommodate more staff, newer technology and access by attorneys and the public
 - Statues and Regulations that do not fully accommodate the practices under consideration in this study
 - Resistance by Judges, Attorneys, and staff to changes in the existing procedures
-

Recommendations

While the body of this report contains detailed recommendations and implementation strategies, a summary of these recommendations, by project, are presented below.

Electronic Document Archive (E-Archiving)

Deploy Electronic Document Archiving (E-Archiving) as a standard technology and business component of the Jordanian Court System.

Begin this process by establishing a Pilot Project for E-Archiving. There are two different alternatives, both equally effective, for establishing a viable pilot project. They are:

- Alternative 1 - Select a group of judges (3 – 5) in the New Palace of Justice, Court of First Instance – Civil Division to participate in a pilot project.
- Alternative 2 - West Amman, Court of First Instance, Civil Division **all** Civil Judges (6-7) Participate in the Pilot.

This pilot project will test the functionality and practicality of E-Archiving by scanning all documents filed for certain judges on or after the start date of the pilot. The pilot is expected to prove the security, convenience and viability of E-Archiving as a technology that should be routinely deployed in the Jordanian Court System.

Electronic Filing (E-Filing)

Deploy Electronic Filing as a standard technology and business component of the Jordanian Court System.

There is **no** demand or interest in the attorney community for E-Filing, **at this time**.

However, there is interest in the possibility of internet access to court documents (E-archived documents) by both judges and attorneys. To capitalize on this existing demand and to help build further demand for E-filing, a pilot system should be built and implemented that will allow secure, remote access to E-archived documents. E-Filing should not be piloted until the business process and legal issues are resolved.

To continue to build the demand in the attorney community for E-Filing, we recommend that the Ministry establish a three phase project of 18 – 24 months duration. This timeline will be necessary to gradually build acceptance by the court and attorney communities to the concepts of electronic filing. Currently attorneys **are** seeking to access information and communicate electronically with the court **but have no interest in filing documents electronically.**

Phase 1 – Lay the Foundation by providing secured, controlled access to court data and court document images to Judges and to Attorneys via court Kiosk or PCs in the Attorney work areas.

Phase 2 - Build the Demand by providing Court – Attorney communication tools for simple exchange of information. I.E. Internet access and court provided E-Mail accounts.

Phase 3 – Full Deployment by initiating the acceptance of court documents in electronic format as well as paper. **Full deployment is contingent upon necessary legal changes being enacted.**

Video Hearing

Deploy Video Hearing as a standard technology and business component of the Jordanian Court System.

Begin the Video hearing implementation process by establishing a Pilot Project for 3 – 5 judges in the New Palace of Justice – Court of First Instance – Criminal Division. This pilot will test the functionality and practicality of using video and audio technology for court hearings as an alternative to the physical movement of prisoners into the courtroom.

Implementation of a pilot project should be delayed until the specific legal ramifications have been researched and resolved.

Conclusion

The Ministry of Justice and the Jordanian Court System are well positioned to continue the court modernization process. Examples of previous successful projects include: MIZAN, the Judicial Institute for Training (JIJ) and Law School Curriculum Improvement. These previous successful projects are indicative of the energy and resourcefulness at hand.

Indeed, the Ministry should be extremely proud, not only of the progress that has been made, but at the very rapid pace that has been set.

The technology infrastructure that has been established to support the MIZAN project is an extremely strong asset for the Ministry and should be used to its fullest capability.

To utilize this considerable technology resource to maximum, the Ministry is encouraged to designate staff that will keep abreast of the technology changes and provide an administrative infrastructure that will produce essential procedures and guidelines for the courts, a full featured training regimen and an on-going evaluation of the effectiveness and usefulness of these and other technological projects.

Finally, the authors wish to express their appreciation for the assistance of all of the MASAQ Project staff and, in particular, Hussein Al-Madani and Hadeel Abdel Aziz. Thank you very much for all of your time, patience and support.

2. Scope of Project

The scope of this project is to assess the feasibility of designing and deploying three specific technology initiatives to improve advanced case management techniques in the Jordanian Courts.

These three technology pilot projects are:

A. Electronic Document Archiving

Electronic Document Archiving is the process in which an electronic image is made of an existing paper document through the use of scanning hardware and software or the conversion of an existing electronic document to a “fixed”, unchanging state.

An Electronic Document Archiving process may include several stages:

- Creation via scanning an existing paper document or converting an electronic document.
- Storage of the document in a safe, secured environment that provides for authentication.
- Retrieval of the electronic image for viewing or printing.
- Document control for versioning. I.E. check in, check out, merge, version, etc.

B. Electronic Filing (E-Filing)

Electronic Filing (E-Filing) is the process that enables an attorney to access court data remotely, communicate with court officials and other parties and/or attorneys in a case and, ultimately, submit electronically, documents destined for the court file. Such filing must include a technology or business process to ensure authenticity of the document (E-signature) and may include automatic notification of the court, opposing counsel and other interested registered persons.

C. Video Hearing

Video Hearing is the process by which court appearances may be accomplished by having participants appear in diverse geographical locations but be readily seen and spoken to in “real-time”.

3. Goals and Objectives

The goal of this study is to provide the Ministry of Justice with a concise compilation that defines the parameters of each technology element under discussion as well as the feasibility of deploying such technology in the Jordanian Court System.

A second goal is to provide specific and descriptive information relating to the necessary legal, practice, and business rule/business process and/or technological changes that will be necessary to implement. These changes will be identified for each legal and business process under review.

Third we will describe a phased approach for pilot project deployment. Recommending multiple pilot projects (phases), allows an approach that incorporates the assessment of results from the pilot project and incorporates those results into the design of a larger scale deployment of each of the recommended procedures.

4. **Methodology**

This report was prepared by consultants engaged by MASAQ on behalf of the Ministry of Justice. In addition to relying on their extensive background of experience in these and related technologies, the consultants conducted multiple interviews with:

- The Minister of Justice
- Ministry HR and Special Projects Director (Judge Ali)
- The Secretary General of the Jordanian Courts
- Court of First Instance – New Palace of Justice, Officials
- Chief Judges
- Court of the First Instance Judges
- Ministry of Justice IT Staff
- Private Attorneys
- Representatives of the Jordanian Bar Association
- Private Technology Vendors
- MASAQ Staff
- Various Ministries' staff currently using these or similar technologies
 - Ministry of Interior
 - Ministry of Housing and Urban Development
 - Ministry of Planning and International Development
 - Ministry of Business

A detailed interview list is included at Appendix B.

Additionally, valuable feedback was obtained during workshops sessions hosted by MASAQ involving Jordanian Ministry and Court Officials. Materials on this workshop are located in Appendix C.

Electronic Document Archiving (E-Archiving)

5. **Expectations**

Electronic Document Archiving (E-Archiving) is widely used in governmental and business practices around the world. In deploying an E-Archiving implementation successfully, organizations must first articulate the needs and benefits that are expected to accrue from its use. Based on the organization's expressed and adopted needs, E-Archiving can then be designed to best achieve those needs in a secure, economical and expedient manner.

The requirements and desired benefits expressed by the participants in this study¹ include:

A. Security

The Court currently experiences difficulty in the area of quality control as it relates to the document filing process. While the majority of case documents are successfully filed in the correct file jacket or folder, there continue to be numerous examples of documents or even entire files that have been misfiled or lost to the courts for months at a time, if not forever.

B. Convenience

The physical movement of files from place to place is a time-consuming process, and by custom, one that is generally limited to the normal business work day. As the courts workload increases, judges and judicial staff are seeking methods to accurately access such data quickly and at all hours of the day and night, whether they are physically in their offices or at a remote location.

The court currently experiences difficulties in the timely accessing of files that are housed in storage facilities not located in normal work areas. Due to space restrictions in the major service areas of the New Palace of Justice, and due to legal requirements concerning the life cycle of a court case,² files are often moved to a locations that is inconvenient for retrieval. A second issue is actual physical organization of files in storage. The files are stored on standard flat shelving and the files are placed in flat stacks upon the shelves. If there were a better method of filing, i.e. electronic documents, then the issue of timely access to the files would diminish.

Currently, courtesy or informational copies of court records can only be obtained by appearing at the New Palace of Justice and obtaining, for a fee, photocopies of the needed documents. Due to staff shortages, photocopying is limited to certain days each week, usually Mondays and Thursdays. This process requires time on the part of the court employee to find the file, take the file apart, photocopy the file and then reassemble the file. The process also requires that the person receiving the copy be in the court to actually receive the copy. The court has no ability to transport such informational copies to requestors via email or other electronic means

C. Future Growth and Expansion

If designed correctly and implemented effectively, an E-Archiving solution that is configured to meet the needs described here will also be ideally positioned to grow as the court grows. As the country of Jordan continues to grow in population and as the economy continues to expand there will be an equal increase in the demands placed upon the court. These demands can be at least partially met by implementing a program of Electronic Document Archiving that allows remote access of the case file by appropriately approved users, and electronic distribution of documents to approved users or appropriate public persons.

¹ See list of study participants at Appendix B – Interview List

² Court documents are retained for a lengthy time period and must be archived in their original paper-state

6. As - is state

For this study, we have chosen the New Palace of Justice as a microcosm of filing practices in all Jordanian Courts. As such, it is typical of a once efficient, fully functional system that has been overwhelmed by increased case filings and demands by attorneys and the public. The increase is reflected in the number of case filings, new types of cases, and an increase in the number of documents within cases. While accurate annual statistics for case filings during the last decade are elusive, all reporters indicate that case and document filings are increasing at an estimated rate of 25% to 33% each year. Given the current growth rate of cases, and considering that the overall population of the country is increasing at a rapid rate, new court practices and policies as well as additional resources to support the clerical filing and management of court documents are a necessity.

Current “paper” filing practices are at the most, basic and include:

- Different initial “filing centers” that receive documents and are required to hand stamp as proof of receipt.
- Different staging areas for documents that are awaiting filing.
- The paper file folders that contain all case documents are preprinted with sections for recording various Notes and Actions.
- A variety of filing equipment is used in the court. This includes industrial shelving, standard storage cabinets, bookcases, other shelving components, and a very modern “high density” filing system in one office.³
- Hand retrieval by clerks of all records that are to be photo copied.
- Removal of “inactive files” from the “filing centers” is only possible 15 years after the date of satisfaction of execution. Once removed, these files are stored in basement of New Palace of Justice.
- Destruction of “inactive files” is only possible in the case of completed cases and then only 15 years after final execution.

Assets of Current Document Filing Process

- **The Staff** - Given the voluminous increase in documents and the limited resources available, the staff of the New Palace has performed admirably.
- **Records Retention** – The Court has recognized the need for a formal policy in the area of file retention and has adopted a records retention policy.
- **Document Size** – While not completely standardized, most paper documents are the same physical size.
- **MIZAN 1.0** – Because MIZAN is an independent recording of the case’s existence, it serves as a repository and does provide some “proof-of-existence” in the event that the paper file of a particular case is unobtainable.

Liabilities of Current Document Filing Process

- **Lack of Standardization of Filing Equipment** – There is a large variety of differing filing equipment in use. There is no apparent standardization of filing equipment in order to facilitate space requirements.
- **Physical Transfer** - During the life of a case, the file is physically transferred many times. The file is carried to and from the Case Management office, to and from the Judge’s Office, to and from the photocopy area, etc. Each physical transfer of the case increases the chance of a lost or misrouted document or a lost file. In addition to the possible loss of a document, the actual movement of the file creates additional wear and tear to the folder and included case documents. Thus further reducing their suitability as archive documents.

³ However, even with the “high density” movable shelving, the case files are still placed flat upon the shelves thereby limiting the “high density” aspect of the shelving.

- **Limit Availability** – Since the paper file of a case exists in only one place, access to the file is effectively limited to one person at a time, and then at only one place.
- **Security** – In the event of a natural disaster, such as a fire or an earth quake, the possibility of case documents being completely destroyed is high. No backup procedure exists.

7. **Feasibility of Implementing E-Archiving**

A. Technology Infrastructure

The success of the MIZAN project has provided the Ministry of Justice and the First Instance Court with a powerful and flexible technical infrastructure. This state of the art approach to deploying MIZAN, utilizing an Oracle Relational Data Base System (RDBS) and a user interface created in Microsoft Visual Basic, will allow the project to implement an E-Archiving by either the purchase of an existing commercial product or by contracting with a developer to deliver a complete custom application.

While details of hardware and software specifications for such a system are contained in *Appendix C – Hardware and Software Specifications*, the following observations are offered.

1. Image creation, image storage and image retrieval should be based on the International Business Community recognized standards of TIFF and/or PDF file formats. While a TIFF format has the advantage of smaller file size for creation and storage, a PDF format should be used as the file display format for retrieved images. This is because PDF files can be “locked” in such a manner that they cannot be changed, as is not the case with TIFF files. Additionally, PDF has become the de facto standard for document sharing that ensures authenticity and ease of use. There are a variety of software tools available for the developer and end user, many free of charge.
2. Whether images are maintained in a centralized data store or whether they are distributed in some manner to differing storage areas, the system administrator should ensure that adequate disk storage space is available for growth.
3. Regardless of storage method selected, there must be a well thought out and implemented back up procedure. Such a procedure should follow industry established guidelines for intervals and types of backups as well as for redundant and remote storage. An example of such a plan is included at *Appendix J*
4. A standardized approach to the “indexing” of images, one that incorporates a well thought out and documented taxonomy of document descriptions, document types and document classes will assure an effective quality control process. Additionally, such taxonomy will greatly enhance the ability to find the right document in the shortest amount of time possible. An example of such a plan is included at *Appendix G*.

B. Legal Infrastructure

Current Jordanian statutes and legal processes do not recognize the use of E-Archiving as a replacement for or augmentation of the current paper filing system. Such statutes or regulations must be in place if there is to be a successful large-scale deployment of E-Archiving. A pilot of an E-Archiving process, using a limited number of judges and a system that “parallels” the current paper process will be necessary in order to fully document all of the current business process and legal processes that will require modifications.

There are several necessary steps to providing a satisfactory legal infrastructure that will allow large scale use of E-Archiving. One of the most important of these would be a Ministry of Justice “internal procedure” document that would guide the staff and project managers in any implementation of an E-Archiving process. Such an administrative procedures document would normally be crafted, implemented, and regularly updated by the Administrative Office of the Court. This document should contain directions that:

1. Assign and affix the responsibility of creation and maintenance of the repository. This document would specify the necessary storage space requirements, what back-up procedures are to be in place and how backups will be tested on a recurring basis.
2. Establishes the process for enabling users and assigning their privileges and establishes policy and procedures for the recurring audit and recertification of these who do have access. Additional security procedures such as requiring password expiration and user initiated password changes should be included.
3. Sets forth the technical specifications for image scanning; DPI settings, grayscale, file type, file class, and taxonomy of document types. Establishes a recurring audit period to ensure that these standards are being met.
4. Initiates a quality control process that, through a system of random checks, validates the current process and checks that all documents are being scanned in a prompt (as defined by the ministry) and proper manner.
5. Proposes legislation or regulations that will allow the use of electronic documents, adhering to the above process and procedures, and for those documents to be considered “as good as” the original paper document in all legal matters. Ideally, this legislation will assign to the Ministry, the responsibility of updating the filing process as needed in order to keep abreast of changes in technology and changing business requirements.
6. Proposes, as required, revisions to Ministry regulation concerning records retentions issues. Allowing for the destruction of the paper record when an electronic record meeting all qualifications exists.

An example of such a plan is included at *Appendix I*

C. Business Infrastructure

The current business infrastructure of the Court of First Instance has no provisions for the use of an E-Archiving. However, given the commitment of the Ministry of Justice, the availability of state of the art technology within the court, and the willingness on the part of the Ministry to seek the necessary changes to existing governing statutes and regulations, this proposed business process can be successfully instituted.

8. Description of Re-engineered Process

In any project, whether pilot or full deployment, there exist multiple alternatives or strategies for re-engineering an existing business process. The primary benefit of a pilot project is to allow system developers the opportunity to explore the most attractive alternatives with the understanding that changes will be forthcoming as feedback is provided. In this case, there are two scenarios **recommended**:

- A. A short-term pilot project designed to quickly deploy a trial solution and seek feedback from all participants: judges, administrative staff and private attorneys. This pilot would be deployed only in a site chosen by the Ministry of Justice and would use existing servers and storage devices. New hardware would only be purchased if needed to ensure effective completion of the project.
- B. A long-term project, based upon the experience gathered in the initial pilot project. This long term project would have the added benefit of being integrated with the MIZAN system in version II of MIZAN.

The following steps are recommended for deployment of the short-term pilot;

Select

Select a pilot site from among the Courts of First Instance – Civil Division, located in Amman⁴. This selected site should be large enough to provide a true test environment to

⁴ The initial pilot will be for civil cases only. Subsequent testing will be done with Criminal cases if the civil pilot is successful.

thoroughly explore E-Archiving, but not so large that it would be impractical for a project of this type.

Cases will be scanned using the following criteria:

- As new cases are assigned to these selected judges, the files will be added to the scanning process. Thereafter, all additional documents filed will be added to the image repository.
- As new documents are filed in active cases previously assigned to these judges, the entire file will be retrieved and scanned. Thereafter, all additional documents filed will be added to the image repository.

Establish

While the first assumption may be to equip and empower the existing document filing or registration points with document scanning technology, we recommend that a new, centralized, “document scanning” entity be created. This new entity will enable the pilot project to be deployed more quickly and easily than would be the case if the current document filing process were to be reengineered overhauling to accommodate a scanning function.

In deference to the current workload in the Court of the First Instance, Civil division, we feel that adding an additional work load to any of the existing employee’s area of responsibility would be counterproductive. Accordingly, we recommend, for the purposes of this initial pilot project, that the ministry retain additional staff members whose sole responsibility will be the scanning of documents, quality control of those scanned images, and the technical support of those ancillary users such as judges and attorneys. The following summarizes the positive benefits as well as the negative issues of such a step;

Advantages

- The initial investment in scanning equipment is reduced
- Fewer staff members need to be trained on the new procedure
- An effective Quality Control process is easier to implement in a single office
- The workload of the current staff is basically unchanged

Disadvantages

- After a successful pilot, maintaining a centralized scanning entity is redundant in terms of personnel and equipment
- Line staff will not “buy-into” the process until it is required in their job function

Determine Needed Administrative Functions

While exact daily procedures will have to be determined, the following basic process illustrates the core administrative functions.

- New Cases filed as normal
- New Case entered in MIZAN, as normal
- Cases assigned by Chief Judge as normal
- Cases assigned to Judges participating in pilot project are routed to E-Archiving staff for scanning.

Staff:

- Captures the following Data:
 - Index data (See Appendix G for Suggested Document Data, Index and Classification Scheme)
 - Document description (See Appendix G for Suggested Document Data, Index and Classification Scheme)
 - Filing Party
 - Filing Attorney
 - Scan Date (automatically supplied by system)
 - Scan Operator (automatically supplied by system)
 - Produces Document Images
-

- Reviews for suitability and accepts image

Upon acceptance, the original paper file folder and each paper document are marked with a unique stamp to indicate that this document is now available in the E-Archiving system. Access to document images can then be granted to users who hold a valid password for a controlled account. Upon transfer of the original file to the Assigned Judge's office, the following activities are suggested:

- Upon transfer of the original file to the Assigned Judge's office:
 - All subsequent filings are forwarded to the central scanned unit and returned when archived.
 - Repeat for each filing
- Hearing transcriptions are prepared by the typist as normal, printed, scanned and inserted into the E-Archiving in addition to their normal availability in MIZAN
- Upon final disposition of the case, the original paper file is returned, as normal for archiving
- The original file completes the process, as normal

9. **Outcomes - Benefit Analysis**

In 2000, The Ministry was charged, by Royal Decree, to increase the level of legal, institutional, and technical capacity of the Jordanian Justice system according to best international practices. The Ministry began to fulfill that charge by developing a strategic vision, known as the Judicial Upgrading Strategy (JUST), with the following mission statement; *fair, effective and timely justice for all in Jordan, guaranteed by a judicial system that operates with efficiency, transparency, accountability and independence.*

Additionally, the Ministry enumerated seven specific goals for the JUST Strategy. They are:

Goal One: Establish and maintain high standards of independence and integrity in the judicial system. JUST will focus on enhancing judicial independence and providing an environment where courts can interpret and apply laws and regulations in an impartial, predictable, efficient, and transparent manner. Under this component, efforts will also focus on building the capacity of the judiciary in a way that will further support the enhancement of judicial independence.

Goal Two: Enhance the efficiency of the judicial system. Judicial efficiency will contribute significantly to national competitiveness, respect for the rule of law, increased investment, and public satisfaction, while maintaining the independence and integrity of the judiciary. Among other needs, efficiency will require investment in processes and procedures as well as physical infrastructure.

Goal Three: Strengthen the capacity of the Ministry of Justice. Enhancing the capacity of the Ministry of Justice will enable it to be a change driver that can serve the judiciary and key stakeholders in an optimal manner.

Goal Four: Develop the human resource capacities of the judiciary and administrative staff. Strong human resource capacities and skills are essential to the achievement of all other goals and to the effective administration of justice.

Goal Five: Automate court proceedings, records and statistics. Modern, automated management information systems and IT infrastructure throughout the courts in Jordan will support efficient case adjudication, timely and reliable statistics generation, and ready access by stakeholders to needed information.

Goal Six: Strengthen the legislative and regulatory framework for efficiency, transparency, accountability and independence of the judicial system. The JUST strategic vision requires an environment of enabling legislation that is responsive to the needs of civil society, reflects best practice and contributes to national competitiveness.

Goal Seven: Increase transparency through strengthened links with civil society, the media, and other key stakeholders. Strengthened ties between the judiciary and key stakeholders will enhance cooperation in achieving better results from the civil and criminal justice systems. Public awareness about JUST, its achievements and its objectives will facilitate stakeholder input, feedback, and monitoring.⁵

The Electronic Document Archive (E-Archiving) project presents an excellent opportunity to further enhance the accomplishments of the JUST Program, particularly Goals 2 and 5. A successful E-Archiving pilot project will:

- Promotes Confidence in the Jordanian Courts by:
 - Assuring that records will be secure from clerical, misfiling, public corruption or natural disaster. The records of all courts are indeed the legacy of a fair judicial process. Parties to a case, and Jordan’s citizens as a whole, depend upon the Ministry to protect these vital records.
 - Increasing efficiency for Judges, Court staff, and attorneys. As the E-Archiving project grows in terms of scanning volume and approved users, the convenience of file access “anywhere, anytime” will not only promote efficiency but will enhance the realization that the Jordanian courts are truly a modern, technologically advanced business.
- Continues the establishment of a “business” approach to the administration of Justice by the successful establishment of a Court Management Department, a Judicial Training Institute, Mediation Programs, and other projects designed to create a professional organization. The Ministry has begun the process of court modernization. Now, the success of MIZAN I and the upcoming release of MIZAN II coupled with E-Archiving will continue the businesslike approach to the Judiciary.

The primary benefit of an E-Archiving project is the further fulfillment of the JUST goals and objectives. However, there is a more tangible or financial benefit of an E-Archiving project. The search for lost files and/or documents is a daily occurrence under the current system. This results in the loss of productivity for judges, court staff and attorneys. Such a loss is a tangible asset to all concerned. There is a direct monetary cost for searching for such documents. It is very easy to envision a New Palace of Justice that functions smoothly and efficiently using both traditional paper files as well as secured electronic copies.

10. Additional Opportunities

While the primary objective of the E-Archiving Pilot Project is to explore the functionality and benefits to be gained from document scanning, there are additional opportunities that may be considered during this start-up.

A. Opportunity 1

Include an “image link” to the kiosk being deployed for testing in the New Palace of Justice. This link would only be available via password access for approved attorneys but would have an added benefit of positioning those attorneys to be receptive to future electronic process enhancements such as electronic filing.

B. Opportunity 2

Because the courts are being linked with a central Local Area/Wide Area Network there will be the ability to electronically transfer the entire case file to the appellate level court if the need arises.

C. Opportunity 3

A paper copy may now be made of the entire case file for anyone needing it by simply printing the file from E-Archiving without having to find the file, remove individual pages, use a copy machine, and all of the related manually intensive process that it currently entails. A further benefit to attorneys would be the

⁵ The JUST program, Jordanian Ministry of Justice Web Site

availability to receive copies on any day of the week, and not just Mondays and Thursdays.

11. Implementation Plan for Short-Term Pilot

- A. Based upon specification contained in *Appendixes E and F* - Hardware and Software Specifications, prepare the initial Request for Proposal (RFP).
- B. Evaluate Proposal for functionality, compatibility with MIZAN I and II, timelines and cost. Release Proposal.
- C. Select Site and Judges to be included in Pilot.
- D. Evaluate proposals and select vendor.
- E. Appoint Project Manager to coordinate testing and document preparation⁶.
- F. Recruit new employees to staff E-Archiving section.
- G. Prepare inventory of hardware and software needed by staff and judges who will participate in the scanning pilot.
- H. Requisition the necessary hardware, software, and supplies (stamps for marking documents, etc)
- I. Install test system in MASAQ office. Selected product will be installed on existing servers and storage devices.
- J. Conduct *Inception Training Session* for senior Ministry Staff, Judges selected for pilot and MASAQ Project management to acquaint all involved with project expectation, parameters and timeline.
- K. Obtain copies of actual files from Court of First Instance for testing purposes.
- L. Project Manager and E-Archiving staff tests all aspects of application and hardware:
 - Input
 - Retrieval
 - Error correction
 - Output
 - Backup
- M. Project Manager, E-Archiving and Vendor staff develops User's documentation (manuals)
- N. Pilot System installed.
- O. Project manager and E-Archiving staff test all equipment
- P. Project manager and E-Archiving staff provide training for Judges and staff involved in EDM Pilot
 - a. *Creator* training for those users actually scanning and indexing documents
 - b. *Consumer* training for those users retrieving and utilizing the electronic file
- Q. E-Archiving begins
- R. E-Archiving staff scans all documents filed in new cases assigned to Pilot Judges on or after start date. E-Archiving scans all documents in exiting cases once a new document is file on or after start date. E-Archiving staff is divided into scan and indexing functions to provide validation component.
- S. Project manager provides quality control by random review of 10% of documents scanned each day.
 1. E-Archiving should contain reporting capabilities that will allow the creation of a "Document Created by Date".
 2. "Problem" documents resolved;
 - In E-Archiving by taking necessary correction including any other effected documents
 - Process reviewed to determine issue (hardware, software, or operator) and corrected.

⁶ Note: project manager will oversee all three technology initiatives.

- T. Pilot expanded to attorneys
 - Workstations installed in attorney lounge for use by attorneys
 - Simple instructions prepared by E-Archiving project staff
 - *Consumer* Training sessions held for attorneys
 - Select group of attorneys chosen to pilot use from office via Internet
 - *Consumer* Training provided to office staff by E-Archiving project members
- U. Evaluation Process based on interviews with all users, reports, etc. prepared at 3 and 6 months intervals to gauge acceptance, note successes and failures and becomes basis for creation of long-term solution.

Electronic Filing

12. Expectations

The Ministry of Justice has shown great leadership in keeping abreast of current trends in court technologies and court management. Additionally the Ministry wishes to take advantage of proven concepts and ideas that have been successfully deployed in other courts. One of the areas of these specific areas of interest to the Ministry is the process of electronic filing or E-Filing.

This process is a combination of technology; business process reengineering and legal procedures that enables an attorney to access court data remotely, communicate with court officials and other parties and/or attorneys in a cases and, ultimately, submit electronically, documents destined for the court file. Such a process, when appropriately engineered, could result in significant time savings for judges, attorneys and the court staff.

Prior to implementing this, or any other new process, it is very important that any needed new rules and procedures relating to that process are carefully thought out, crafted and communicated to all participants. This process will be further detailed in the Re-engineered Process Section and Implementation Plan of this report.

13. As - is state

Currently, there is no Electronic Filing Process deployed in the Jordanian Judicial System. However, significant opportunities exist for a process to be defined and deployed. Noted below are strengths and weaknesses that currently exist. These should all be carefully considered when defining an Electronic Filing process for the Jordanian Courts.

Assets

MIZAN – MIZAN, the case management software developed by the MASAQ project for the Ministry, will be an extremely important component of an E-Filing project. The enhanced functionality and additional feature sets of the upcoming release of MIZAN, version II, will further enhance the ability of the Ministry to enable such a project. The MIZAN software is well thought out and the database back-end is robust and secure. Of equal importance as the application software is the technical infrastructure and technical architecture development that has been done as a part of MIZAN. All courts will be equipped with MIZAN servers and work stations for both officials and staff. When they are eventually connected to a wide area network (WAN) these technical components form the major components of a robust Electronic Filing project.

The hardware infrastructure that the MASAQ project has recommended and installed is an excellent foundation for the future. The project has followed all of the necessary standards and architectural guidelines that would normally be required for an installation of this type.⁷ However, as technology becomes integrated into the day-to-day processes of the Jordanian Court System it becomes critical that the technology infrastructure and all of its attendant components be stable and reliable. The continued modernization of the infrastructure must be maintained for continued success in all of these efforts, particularly E-Filing.

Complimentary Efforts – Other ‘E-Government’ initiatives currently underway in Jordan will compliment the Electronic Filing effort and, perhaps, add functionality to it. There is

⁷ According to the Wikipedia, A modern “multi-tier” architectural model is a client-server architecture in which an application is executed by more than one distinct software agent. For example, an application that uses middleware to service data requests between a user and a database employs multi-tier architecture. The most widespread use of "multi-tier architecture" refers to **three-tier architecture**.

awareness in Jordan of the need to adopt electronic commerce methods and there is an ‘e-government’ initiative.⁸

Electronic Payments – Recently, the Court of First Instance has begun accepting credit cards as a form of payment for registering a new case. This test procedure is working very well and the Ministry plans to enlarge the scope of the credit card initiative. With this in place, a major impediment to the implementation of full electronic filing will be eliminated.

Liabilities

Electronic Document Archiving (E-Archiving) – A successful Electronic Filing initiative will require an operational E-Archiving process. While there is currently no such process deployed, the Ministry is actively seeking a solution.

Current Business Culture – Implementation of an Electronic Filing solution will be a tremendous change in the traditional way of doing business for all involved attorneys, judges and court staff. As in most technology projects, managing the “person” side of the process will be the most time-consuming activity. However, failure to adequately manage this issue could seriously jeopardize the project.

Lack of Infrastructure – Private Attorneys – While the Ministry has deployed and continues to improve upon a wide-area court infrastructure, most private attorneys have not fully embraced the technology and connectivity that will be necessary to participate in this project.⁹

14. Feasibility

A. Technology Infrastructure

The success of the MIZAN project has provided the Ministry of Justice and the First Instance Court with a remarkably powerful and flexible technical infrastructure. This state of the art approach to deploying MIZAN, utilizing an Oracle Relational Data Base System (RDBS) and a Microsoft Visual Basic derived interface will allow the project to seamlessly implement an electronic document transport process. MIZAN II offers the tremendous opportunity to build on the successes of MIZAN while at the same time creating a technology infrastructure that is simpler and easier to maintain. The Central Repository envisioned for MIZAN II will be an integral part of an electronic document transport or Electronic Filing process.

With the possible exception of more storage capacity, no additional hardware needs are anticipated. Depending on the desired state of integration with MIZAN, there may well be additional software interfaces required

Most important will be the creation of a convenient, secure (private) web portal to allow access to MIZAN II and the Electronic Data Archive. Allowing access to these data archives through the convenience of the Internet will be a major cornerstone of an Electronic Filing project.

B. Legal Infrastructure

Currently, Jordanian statutes and rules do not provide for the use in court of e-documents, e-signature or other such electronic conveyance. A tactic that has proven to be very successful in other countries is for the Ministry to draft “model” legislation for the Parliament to use in the enabling process for these provisions. Since any Electronic Filing process encompasses many possible variations of document authenticity requirements, any of which may change as technology advances, the “model” legislation should be very broad and should charge the Ministry with the task of promulgating

⁸ Document Imaging in the Passport Office with central image repository in Amman, and the temporary E-signature law that allows electronic signatures in business contract issues and disputes.

⁹ Estimates by Professor Walid A-Salameh, Dean of the King Hussein School for Information Technology put the number of attorneys who have internet access at below 20%

complimentary and/or ancillary regulations as needed to keep abreast of any changes in the state of the technology.

C. Business Infrastructure

The court's business and legal infrastructures are closely intertwined and will, by necessity, move forward together. As with the Legal Infrastructure, the court's Business Infrastructure is not yet equipped to deploy a mature Electronic Filing process.

It is apparent, from a number of interviews conducted with attorneys located in Amman, that the legal community is **not** ready to accept a fully functional Electronic Filing model, a model that includes routine filing of documents remotely. However, the concept of E-Filing is very broad and subject to many interpretations concerning the functionalities that may be included in such a process. The attorney community is very receptive to Electronic Filing as a concept that would allow them to access data remotely, communicate with the court and to informally exchange documents. They are quite insistent, however, that all official documents continue to be filed as per the current process.

Rather than taking this as a setback, the Ministry should, exploit the opportunity presented by the attorneys to establish a Electronic Filing project that will meet current expectations and create an environment for expansion. The following section of Re-Engineering documents a phased approach for such a Model

15. Outcomes - Benefit Analysis

In 2000, The Ministry was charged by Royal Decree to increase its level of legal, institutional and technical capacity of the Jordanian Justice system according to best international practice. The Ministry set about that effort by developing a strategic vision, known as Judicial Upgrading Strategy (JUST) with a mission statement *fair, effective and timely justice for all in Jordan, guaranteed by a judicial system that operates with efficiency, transparency, accountability and independence.*

Additionally, the Ministry enumerated seven specific goals for the JUST Strategy. They are:

Goal One: Establish and maintain high standards of independence and integrity in the judicial system. JUST will focus on enhancing judicial independence and providing an environment where courts can interpret and apply laws and regulations in an impartial, predictable, efficient, and transparent manner. Under this component, efforts will also focus on building the capacity of the judiciary in a way that will further support the enhancement of judicial independence.

Goal Two: Enhance the efficiency of the judicial system. Judicial efficiency will contribute significantly to national competitiveness, respect for the rule of law, increased investment, and public satisfaction, while maintaining the independence and integrity of the judiciary. Among other needs, efficiency will require investment in processes and procedures as well as physical infrastructure.

Goal Three: Strengthen the capacity of the Ministry of Justice. Enhancing the capacity of the Ministry of Justice will enable it to be a change driver that can serve the judiciary and key stakeholders in an optimal manner.

Goal Four: Develop the human resource capacities of the judiciary and administrative staff. Strong human resource capacities and skills are essential to the achievement of all other goals and to the effective administration of justice.

Goal Five: Automate court proceedings, records and statistics. Modern, automated management information systems and IT infrastructure throughout the courts in Jordan will support efficient case adjudication, timely and reliable statistics generation, and ready access by stakeholders to needed information.

Goal Six: Strengthen the legislative and regulatory framework for efficiency, transparency, accountability and independence of the judicial system. The JUST strategic vision requires an environment of enabling legislation that is responsive to the needs of civil society, reflects best practice and contributes to national competitiveness.

Goal Seven: Increase transparency through strengthened links with civil society, the media, and other key stakeholders. Strengthened ties between the judiciary and key stakeholders will enhance cooperation in achieving better results from the civil and criminal justice systems. Public awareness about JUST, its achievements and its objectives will facilitate stakeholder input, feedback, and monitoring.

The Electronic Filing (E-Filing) project is an excellent opportunity to further the accomplishments of the JUST Program, particularly Goals 2 and 5. A successful Electronic Filing pilot project will:

- Promote Confidence in the Jordanian Courts
 - Electronic Filing is a transparent process that enables quick, economical service for appropriate users. Deployment of such a process will continue the business like development of the court's processes.
 - The Ministry's successful establishment of the Court Management Department, the Judicial Training Institute, Mediation Programs and other projects to create a professional organization has begun the process of court modernization. Further, the success of MIZAN 1 and the upcoming release of MIZAN II coupled with E-Archiving and Electronic Filing will continue the businesslike approach to the Judiciary.

16. Description of Re-Engineered Process

A detailed description of the re-engineered process is not available at this time due to the lack of necessary policy and Parliamentary solutions that must be proposed or implemented. However, there is adequate information available to describe a process that can begin today and move toward a matured Electronic Filing solution that can be completed as parliamentary permission is granted.

Indeed, given the scope of change necessary for an Electronic Filing solution an 18 to 24 month timetable is strongly recommended as there is much to be done, in the short term, to prepare for the eventual full deployment of Electronic Filing.

Phase 1 – Laying the Foundation

A successful deployment of Electronic Filing is dependent upon both attorneys and the court coming to a mutual realization of the benefits to be gained from such a project. While the Ministry is ready, indeed enthusiastic, for this process, the courts and attorneys who practice before the court must also be prepared for the change. Preparing them for this dramatic change in the traditional document filing process will be Phase I, Laying the Foundation. Courts and attorneys must be shown how the electronic exchange of information can be of benefit to all. This process (laying the foundation) will require expenditures of time, money, and more importantly, energy on the part of the Ministry of Justice. There must be a practical reason, one that the courts and the practicing attorney community can easily grasp, that will swing them towards the acceptance of Electronic Filing.

Perhaps the best way to bring them to this realization is to provide a means where document access and communications can be enabled. Every single attorney who appears before the court has the need to "consume" some of the court's information. From those who only need to know when and where their next scheduled hearing is to take place, to others who need to be able to examine a voluminous case file from the comfort and security of their own office, there is component of court information that will appeal to each individual attorney.

Recommendation - Make the Data Available

- Deploy MIZAN II as scheduled
- Deploy an Electronic Document Archive (E-Archiving) application
- Deploy a secure Web Portal that allows read only access to MIZAN II and the E-Archiving

Recommendation - Market the Availability of the Court's Data

- Install attorney access terminal(s) in the attorney lounge
 - Pilot web access for small group of judges and attorneys
 - Create materials promoting acceptance
 - Involve Law Schools...host demonstration seminars
-

- Work with the Ministry and the Bar to offer Technology certifications to new attorneys

Phase 2 – Building the Demand

In most traditional Electronic Filing models, a major emphasis is placed on case initiation or registration by electronic means. While this is certainly a major component of Electronic Filing, there are great opportunities for this project in other areas. Additionally, many of these efforts can be undertaken without the necessity of statute change. These additional opportunity areas should be undertaken to build demand for the electronic business process. By consciously creating an environment that favors electronic access by attorneys the Ministry will fuel the demand for more electronic business services, and the goal of full Electronic Filing can be reached.

Recommendation – Initial Targets of Opportunity

The Ministry should seek out those areas of the practice of law that involve communication with the court as their primary function for inclusion in the initial Electronic Filing project rather than concentrating on the official filing of documents as possible targets of opportunities.

Examples of such opportunities may include:

- Request for Hearing or Notification of Hearing Postponement may be two areas that will gain acceptance by the practicing bar.
- Circulation of Preliminary Judgment prior to the Final Hearing
- Circulation of Attorney Memoranda Prior to Hearings

Recommendation – Pre-Filing of Cases

Create a new process where an attorney completes an electronic “cover sheet” of information needed to register a case. That cover sheet can then be electronically submitted, reviewed and conditionally accepted by the Clerk pending the delivery of the official documents. The Pre-Filing Process may even include an appointment date and time for the attorney to appear for official submission of the documents. When the original documents are received, the “pre-approved” case can be expeditiously accepted by the clerk. Ideally, this ‘cover sheet’ can be constructed to capture useful data that can be used to auto populate certain data fields in MIZAN II and eliminate redundant data entry.

Recommendation – Payment Integration

Integrate the payment of filing fees and other fees into the Pre-Filing process. This can now be accomplished due to the successful credit card payment pilot process that the Ministry has recently instituted.

Phase 3 – Electronic Filing – the Complete Business Processes

Phases 1 and 2, and the necessary commitment of time and resources, have been recommended as steps toward building a foundation that will allow both the court and attorneys to realize the benefits for further development of an electronic business model. The ability of both groups to realize the inherent benefits of such a model is absolutely necessary for a successful deployment of Electronic Filing.

Once this is accomplished, the Ministry can begin the further deployment of Electronic Filing or document transport. Ideally, the Ministry will, by this time, have received authorization to alter current practices concerning original documents and original ink signatures to allow for the secured transport for those items in an electronic process. Currently there are several different secure process models that can be employed¹⁰ we recommend that the Ministry not establish such a solution at this time. The rate of evolution in this security area ensures that any model picked today may be outmoded in 12 to 18 months. Rather, we recommend that the Ministry seek to deploy a system of authentication that can be regularly updated as features and function evolve.

¹⁰ bio-metric assignment (finger print, iris scan, palm scan, voice scan), PKI encryption keys, etc

Finally, the overall Electronic Filing solution that the Ministry should deploy is one that allows for an attorney, or a court, to communicate with each other and exchange documents remotely with the same standing as if the exchange had happened in person.

17. Implementation Plan – (Electronic Filing)

A. Committee

Appoint a joint working of the Judicial and Legal communities to review and draft model legislation that would, if passed by the Parliament, allow Electronic Filing in the Jordanian Courts.

- Model legislation should be flexible and allow the Ministry, through an administrative rule or procedure making process to modify such regulations as needed to maintain congruity with technology and business needs.
- Committee should reconvene yearly to make recommendations to the Ministry

B. Technologies

Move forward with the deployment of new and/or improved technologies

- MIZAN II
- E-Archiving
- The integration of MIZAN II and E-Archiving

C. Web Portal

Develop a secure web portal for the integrated MIZAN II and E-Archiving

D. Credit Card

Expand the use of credit card payments from the current pilot project to allow for electronic payment of all case registration fees.

E. Data Sharing

Open a data sharing portal as a pilot project specifically (Phase 1 - Laying the Foundation) for attorneys practicing in the New Palace of Justice - Court of First Instance by:

1. Installing access terminal(s) in the attorney lounge
2. Issuing accounts and passwords to a selected group of judges and attorneys for access to this data via Internet.
3. Attorneys chosen for participation should agree to provide periodic feedback by evaluation and users support group meetings.
4. Offer training and Help Desk Support for attorneys and judges participating in this pilot. Such training would be a good use of the MASAQ organization and could include large group training at the New Palace or on-site visits to law offices to train key staff.
5. As part of the web portal, create a companion site for user's documentation, a "contact" form, FAQ's and other useful, informative information for the pilot. An example may be found at <http://efile.alacourt.gov/>

F. Users

Expand the pilot project by increasing the number of users as well as the functionality and services available to them (Phase 2 – Building the Demand).

1. Develop a "pre-filing cover sheet" for attorneys to use to submit cases intended for registration in the court. Cover sheet functions may include:
 - i. Calculation of registration fees and opportunity to pre-pay by credit card
 - ii. Transfer of pertinent data, (once reviewed for correctness) from the cover sheet to MIZAN 2. Data elements that may be considered for transferred include:
 - Style of case
 - Parties
-

- Case Type
 - Submission Date
 - Witnesses
- iii. Transfer of electronic documents, once reviewed, to E-Archiving
 2. Expand attorney user group to individual/firms who request service
 3. Based on attorney evaluation and feedback; develop customized views within MIZAN II that allow for quickly accessing and viewing data of high interest.

G. Full Deployment

Move toward full expansion of the Pilot Project (Phase 3 – Complete Business Process).

At this juncture, the Ministry should be in a position to fully deploy a document transport type of Electronic Filing solution. Necessary tasks that must be completed at this point include:

1. Statutes that empower the Ministry to accept documents and signature and treat same “as good as original”.
2. Procedures that describe the Electronic Filing process in clear and legal terminology. An example of such a document is included in *Appendix I*
3. Well tested and functional web portal accessing MIZAN II and E-Archiving
4. Solid base of judges and attorneys who are advocates of the process

Video Hearings

18. Expectations

The concept of video hearings is a relatively new in the Jordanian courts but is currently being used in a limited fashion in the Grand felonies Court for child witnesses. Video hearings involving the court and remote appearance by the defendants are widely used in Australia and Singapore as well as in many locations within the United States (video arraignments). For the Jordanian Courts to successfully implement this conceptual project a number of issues will have to be addressed. Some of those issues will be legal and constitutional and some will be purely practical.

A. Convenience

Video Hearings are envisioned by the Ministry and the Court as a process whereby the routine transfer of criminal defendants from a central holding facility to the court, for the purpose of a case hearing, can be changed. The anticipated change would allow the criminal defendant to appear before the judge via a video and audio link from the secure central holding facility. This would mean that the criminal defendant would not be brought to the court for hearings.

Judges interviewed expressed a favorable opinion concerning the practicality of eliminating or reducing the transport of defendants currently being held in jail. All noted the delays caused while waiting for the arrival of and scheduling for prisoner transportation.

B. Security

Video Hearings are envisioned by the Ministry and the Court as a method to reduce the level of risk in criminal hearings for both the court and other individuals doing business with the court. An additional reduction in the level of risk to individual criminal defendants during multiple transportation events from the Police facility to the court and back should also be considered.

C. Financial

If there is no longer an expectation that the Police transport criminal defendants to the court and back multiple times during the life of a case, the money allocated for that transportation may be reassigned to other tasks either within the Police department or within the courts. Eventually this cost savings would offset the cost of the video hearing technology.

19. As - is state

There is little legal precedent for the use of video evidence in Jordanian courts at this time. There is an example of video testimony currently in use in the Grand Felonies Court for cases involving children who are victims or witnesses. However, for the court to consider the use of video hearings for defendants, the larger legal issues of video as an evidentiary medium must first be resolved.

Currently, criminal defendant being detained for the Amman Courts are housed, if determined to be a flight risk or sufficiently dangerous, in a central detention facility¹¹. This detention facility is under the control of the Public Security Directorate. The Court Police Division is responsible for the transportation of the defendants to and from court and while the defendant is in the court.

Schedules and notifications are sent by the Court to the Police holding facility for appearance dates. When a defendant is due to appear before a judge for a hearing, he or she is brought, usually in a group and under armed guards, via a transportation van to the Court. There they are escorted in handcuffs and shackles to another holding facility within the Court. The individual criminal defendants are then escorted under armed guard, to the specific judge's court hearing room where their case is assigned. Once in the hearing room, the criminal defendant may be placed inside a cage that is a part of each criminal hearing room.

¹¹ There are several holding facilities that are used by the police to house court detainees. Most of them are located in smaller towns outside of Amman. For minor crime issues sometimes the detainees are held in a local police station.

From this secured environment, the criminal defendant is available to answer questions put to him or her by the judge, the prosecutor, and his or her attorney. At the conclusion of the hearing (usually a short time) the criminal defendant is then transferred back to the holding cell, once again under armed guard and in handcuffs chains and shackles. At the end of the day, all of the criminal defendants that were transported together from the Police holding facility are transported, as a group, back to that facility by the police transportation van. This process is repeated for each day's hearings.

20. Feasibility of Implementing Video Hearings

A. Technology Infrastructure

1. Current Status – there is no current technology infrastructure that would support video and audio linkage from the criminal holding facility to any court. There is currently infrastructure between certain special courts (Grand Felonies Court) and court holding room where child witnesses are allowed to testify and answer questions via video/audio link without having to be physically present in the court.¹²
2. Changes - The Ministry would be required to extend the current network to the police central holding facility in order to have the ability to move video and audio images to and from the hearing room. Additionally there would need to be video monitors in each of the criminal court hearing rooms as well as the central holding facility.

B. Legal Infrastructure

There is much debate concerning the defendant's constitutional rights in the use of Video Hearings. The Ministry must ascertain the status of these rights and the necessary, or desirability, of altering these rights or taking the necessary steps to protect them.

C. Business Process Infrastructure

The business infrastructure will follow the decisions made in determining the legal issues.

D. Other Considerations

There is some general concern with the current status of transporting prisoners, in chains and shackles. This concern is based upon the perception that it is extremely humiliating for a person to be seen in the corridors of that court, in chains and in prison garb. The use of video hearings would eliminate this concern.

21. Description of Re-engineered Process

The use of Video Hearing in the Jordanian Court system offers an excellent opportunity to improve the efficiency of the Criminal Courts and to decrease costs associated with inmate transport and security.

In the deployment of this project, most defendants would remain in a detention facility and "appear" in court by entering their appearance from a specially appointed video room. The video camera/display system would allow the Hearing Room participants and defendant to interact as if the defendant was present in court.

While the Hearing Room typist would continue to make a full transcript of the hearing, the video system would also create and preserve the hearing as digital evidence.

22. Outcomes - Benefit Analysis

In 2000, The Ministry was charged by Royal Decree to increase its level of legal, institutional and technical capacity of the Jordanian Justice system according to best international practice. The Ministry set about that effort by developing a strategic vision, known as Judicial Upgrading Strategy (JUST) with a mission statement *fair, effective and*

¹² This is apparently a very limited pilot or local rule implementation and there is no evidence that it is being considered at any other location in the courts.

timely justice for all in Jordan, guaranteed by a judicial system that operates with efficiency, transparency, accountability and independence.

Additionally, the Ministry enumerated seven specific goals for the JUST Strategy. They are:

Goal One: Establish and maintain high standards of independence and integrity in the judicial system. JUST will focus on enhancing judicial independence and providing an environment where courts can interpret and apply laws and regulations in an impartial, predictable, efficient, and transparent manner. Under this component, efforts will also focus on building the capacity of the judiciary in a way that will further support the enhancement of judicial independence.

Goal Two: Enhance the efficiency of the judicial system. Judicial efficiency will contribute significantly to national competitiveness, respect for the rule of law, increased investment, and public satisfaction, while maintaining the independence and integrity of the judiciary. Among other needs, efficiency will require investment in processes and procedures as well as physical infrastructure.

Goal Three: Strengthen the capacity of the Ministry of Justice. Enhancing the capacity of the Ministry of Justice will enable it to be a change driver that can serve the judiciary and key stakeholders in an optimal manner.

Goal Four: Develop the human resource capacities of the judiciary and administrative staff. Strong human resource capacities and skills are essential to the achievement of all other goals and to the effective administration of justice.

Goal Five: Automate court proceedings, records and statistics. Modern, automated management information systems and IT infrastructure throughout the courts in Jordan will support efficient case adjudication, timely and reliable statistics generation, and ready access by stakeholders to needed information.

Goal Six: Strengthen the legislative and regulatory framework for efficiency, transparency, accountability and independence of the judicial system. The JUST strategic vision requires an environment of enabling legislation that is responsive to the needs of civil society, reflects best practice and contributes to national competitiveness.

Goal Seven: Increase transparency through strengthened links with civil society, the media, and other key stakeholders. Strengthened ties between the judiciary and key stakeholders will enhance cooperation in achieving better results from the civil and criminal justice systems. Public awareness about JUST, its achievements and its objectives will facilitate stakeholder input, feedback, and monitoring.

The Video Hearing project is an opportunity to further the accomplishments of the JUST Program, particularly Goals 2 and 5. A successful Video Hearing pilot project will provide economical incentives to the Jordanian government as well as improved the efficiency of the criminal court process.

23. Implementation Plan – (Video Hearing)

- A. Through the Ministry of Justice or outside legal counsel, determine the status of the defendant’s constitutional and statutory rights to physical appearance in court for hearings.
 - B. Once the status is clear
 1. Define a process; if possible, that meets the legal requirements.
 2. Assess benefits of establishing the process under current requirements.
 3. If process is in terms of convenience to all parties, improving public safety and decreasing cost, establish pilot.
 - C. Pilot Established
 1. Assign Project Manager
 2. Appoint working group to review and prepare administrative procedures and scenarios for use.
 3. Based on scenarios above, release RFP for necessary equipment
 4. Establish connectivity between all participating sites.
 5. ~~Install and test all equipment~~
-

6. Host Inception Training event for Ministry of Justice Staff and Judges
7. Project Manager prepares final Administrative Procedures to document process, instructions and procedures
8. Host User Training event for Hearing Room and Detention Facility Staff
9. Initiate Pilot
10. Evaluate and Adjust, as necessary

Appendices

24. Appendix A - Consultants

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334-546-8607

mcarroll1641@gmail.com

EDUCATION

PUBLIC ADMINISTRATION

BACHELOR'S DEGREE: 1976

University - Auburn, Alabama

PUBLIC ADMINISTRATION

MASTER'S DEGREE: 1980

Auburn University, Montgomery - Montgomery, Alabama

EMPLOYMENT

ALABAMA ADMINISTRATIVE OFFICE OF COURTS

Years Employed: 1976 to 2007

During my 31 years at the Administrative Office of Courts, I have had the opportunity to serve in a number of different capacities; both in direct provision of services to the trial courts and in staff positions. The highest position in which I have served is as the Deputy Administrator of Courts, from 2003 to 2007. I have also served as the Chief Information Officer for the Administrative Office of the courts from 1997 to 2007.

My original assignment in 1976 was that of a Research Associate on the staff of Chief Justice Heflin. At that time, the primary occupation of all the staff was the implementation of the Judicial Article. Following the implementation of the Article on January 17, 1977, I then spent several years as a Case and Jury Management Analyst working with trial court officials in the area of improving court management functions. In other staff positions, I have served as the Assistant Court's Planner in charge of Grant Preparation and Management, as an Accountant in charge of Jury Accounts and Revenue Transmittals and as the Chief Information Officer.

I was one of the staff members of the Administrative Office of Courts responsible for the introduction of technology into the judicial branch of Alabama's government. My role in this long-term project involved planning, training and implementation of technological systems for the trial courts. In addition to the systems used by some 2500 plus trial court officials and personnel, we also designed and implemented systems for Social Workers, Juvenile Probation Officers and Adult Probation Officers.

Recent Projects

In the last several years, in my role as Deputy Administrator of Courts and Chief Information Officer, I led and directed the efforts of Alabama Judicial System to conduct business electronically with the courts. These projects and results include:

- E-Citation – Statewide program to allow law enforcement officers to issue tickets using a laptop based application. Tickets are electronically transferred to the judiciary's CMS for uploading. This project involved securing funding to equipped 500 State troopers, legislative and rule changes to allow electronic signature; application development, training, deployment and on-going support. Currently all troopers are equipped with E-Citation and 98% of citation are electronically reported to the court.
 - E-Filing – Statewide program to allow private attorneys to electronically file cases and submit documents to the court. Currently deployed statewide and in use by 5,000+ bar members, the process required rules changes, an extensive training agenda and development
-

and deployment of a CMS front-end and document imaging application.

- E-Appellate – Statewide program to allow the electronic creation and filing of the trial courts record on appeal. These records, sometime consisting of thousands of pages have a much prescribed format. Additionally, this project was expanded to allow the electronic filing of briefs by attorneys.
- E-Forms – Statewide project used to house all official court forms for access by attorneys and litigants. Many forms were created in both English and Spanish for the convenience of the user.
- E-Worksheet – Statewide project in support of Alabama’s Sentencing Commission. This application “retrieved” data on a defendant’s prior criminal activity, assessed the data based on a set of business rules and provided recommendations to the judge as to the appropriate setting and duration of punishment.
- Various Web Sites – To enable customers to conduct business with the courts expediently developed various web sites including; credit card payments for courts costs and fines, on-line forms repository, and training and support sites.

Faculty

During my tenure at the Administrative Office of Courts, I have served as a faculty member at numerous Alabama Judicial College conferences dealing with a variety of issues Conferences in which I have participated include:

- Circuit and District Judges
- Municipal Judges
- Circuit and District Clerks
- Judicial Assistants
- Court Specialists
- Court Referral Officers

Additionally, I have served on the faculty for the following organizations:

- Alabama Bar Association-Continuing Legal Education
- Alabama District Attorneys
- Child Support Association
- Board of Pardons and Paroles
- Chief Juvenile Probation Officers
- Legal Secretaries Association
- Alabama Sheriff’s Association
- Law Enforcement Coordinating Committee

Boards

I have served on various justice commissions, committees and boards.

- Alabama Criminal Justice Information System Board (CJIS) – Technology Committee Chairperson
- Alabama Law Enforcement Technology Alliance (ALETA) – Board Chairperson
- Law Enforcement Standards and Integrated Systems Board (LESIS) – Board Vice-Chairperson
- National Center for State Court - Court Process Reengineered Committee

Consultant

I have served as a consultant for various local and national organizations.

- National Highway Traffic Safety Administration – Traffic Records Assessments for Pennsylvania and New Mexico
- Alabama Sheriff’s Association – Monitoring of Juveniles in Detention
- 10th Judicial Circuit (Birmingham, AL) District Attorney – Automated Case

Management Plan

- Tennessee Traffic Safety Administration - eCitation Deployment
- Jordon Rule of Law Project – Sub-contracted to DPK to conduct in county feasibility study for deployment of e-filing.

Jim Pickett

Vice President – Cyberbest Technology, Serving as Chief Operations officer, I drive the business development of Court and Law Enforcement related project development.

2005–2006:
2006–Date:

Consultant, while serving as a Senior Systems Architect, for Adaptech Systems Inc., conducted an in-depth analysis of the technical architecture of the Defense Security Cooperation Agency DSCA.

Consultant, serving as senior systems analyst for *Mythics Professional Services Inc.* I completed a strategic planning document and a Business Strategy plan for the Maryland Judicial Information Services directorate.

Consultant, serving as Business Analyst for CyberBest Technology.

Executive Director, Southwest Alabama Integrated Criminal-Justice System.

Accomplishments:

2002-2004

- Reported to a Board of Directors comprised of elected criminal justice officials of municipal, county and state agencies in southwest Alabama including chief judges, trial judges, prosecutors, sheriffs, and other justice agency directors.
- Turned around a failing \$25M statewide project creating a national model in less than two years.
- Created the first statewide integration project in the nation to successfully initiate court centric information sharing between court case management systems of the state trial courts with other agencies and members of the state criminal justice community.
- Created a nationally recognized model for Court Information and Criminal Justice information sharing
- First ever sharing of positive photo identification within the trial courts entire criminal justice community.
- Established first ever-successful statewide access to driver's license photo ID database by courts and other justice agencies of local, county and state governments.
- Featured in Government Technology Digest, USA Today, Governing Magazine, Public CIO Magazine, and Federal Computer News.
- Recognized by Public CIO Magazine and Microsoft Corporation as the best Government-to-Government Information Technology Solution in 2003.
- Featured presenter at Microsoft Corporation's roll out of its new speech server platform.
- Developed a low-cost, reliable, easily implemented method of database integration that eliminates the need for any client software licenses.
- Created national demonstration site for Criminal Justice information sharing technology.

Vice President and Chief Information Officer, National Center for State Courts.

2000–2002:

Accomplishments:

- Organized and implemented the first CIO division of the NCSC responsible for development of information technology policy and standards and for providing information technology consulting, research and development, and technical assistance to state trial and appellate courts.
- Responsible for the development and implementation of National Functional Standards for Court Case Management Information Systems.
- Planned, hosted, and led the world's largest court technology conference, CTC 8 – Baltimore
- Served as senior staff to Conference of State Court Administrators (COSCA) and National Association for Court Management (NACM) Joint Technology Committee.
- Served as the chief information resource to the U.S. Department of Justice for the State Court Systems.
- Directly responsible for securing four million dollars in continuing federal grants and project work.

Business Case Feasibility Study for Electronic Court Modernization

- Represented the National Center for State Courts at conferences, hearings, and committee meetings both nationally and internationally.
- Served as liaison to US Department of Justice on information technology issues on behalf of the State Court Systems.
- Appointed chair of the US Department of Justice Information Standards Repository committee.
- Directed and lead the technology consulting staff in three offices, Denver, Washington, Williamsburg.

Technical Director, Information Systems, US Army Safety Program.

1997–2000:

Accomplishments:

- Set policy and directed development of the Technical Architecture.
- Responsible for system capacity planning and integration.
- Completed Year 2000 system compliance and legacy system Y2K certification.
- Selected as network systems design and certification officer.
- Developed the information systems strategic plan.
- Conducted Business Process Reengineering process for the information systems division.
- Responsible for departmental budgeting and capital expenditures.
- Coordinated contract monitoring and outsourcing programs.
- Responsible for new technology identification, development, and implementation.
- Managed a \$10M requirements based contract for Information systems support as Contracting Officers Representative (COR).

Chief, Information Integration, US Army Safety Program.

1996–1997:

Accomplishments:

- Managed a database system conversion from an IBM mainframe COBOL system to a UNIX and Oracle system on multiple RISC servers.
- Engineered and managed the installation of an English Language ad-hoc query Interface system for Oracle databases and World Wide Web.
- Pioneered the use of voice recognition technology as an ad-hoc query tool for Army databases.
- Engineered and managed the installation of a Web Interface for Oracle databases that allows full transactions via World Wide Web.
- Designed a system for Video on demand training via World Wide Web, installed in first quarter FY 98. System will support 250 simultaneous users via the World Wide Web.
- Engineered, and supervised a complete information architecture and infrastructure overhaul for the US Army Safety Center, converting to a Fast Ethernet system to the desktop with an ATM backbone and fiber optic link to the Internet. This overhaul was accomplished for only \$2400.00 per workstation, and included replacing the mainframe, upgrading all workstations, all office automation software and e-mail systems.
- Initiated and managed the migration from mainframe to client server.
- Successfully managed the design and implementation of a major Army program for accident prevention and data collection using an Oracle database with an English language interface.

Positions Held: **2004 – Pres:** Semi-retired, Consultant, Senior Advisor.
2002 – 2004: Executive Director, Southwest Alabama Integrated Criminal Justice System.
2000 – 2002: Vice President and Chief Information Officer (CIO), National Center for State Courts
1997 – 2000: Technical Director for Information Systems, US Army Safety Program.
1996 – 1997: Chief, Information Integration, US Army Safety Program.

Business Case Feasibility Study for Electronic Court Modernization

1988 – 1996: Visual Information Manager, US Army Safety Program.

Education:

- Certification, Advanced Management Program for Federal Agency Chief Information Officer (CIO), Information Resource Management College, National Defense University, 1998.
- Certification, Army Information Managers, Army Management College, 1995.
- Certification, Organizational Leadership for Executives, Army Management College, 1992.
- Additional Graduate Study (20 hrs), Educational Administration, Auburn University, 1973 –1983.
- Masters Degree, Educational Technology, Auburn University, 1973.
- Bachelors Degree, Sociology, Auburn University, 1972.

Awards:

- Award - Best Government-to-Government IT solution of 2003, Public CIO Magazine and Microsoft.
- Presenter - Microsoft's 2004 CIO Summit, Corporate Campus, Redmond, Washington.
- Presenter - SpeechTek 2004, San Francisco
- Award - Keith L. Ware Award for Excellence in Army Television Production.

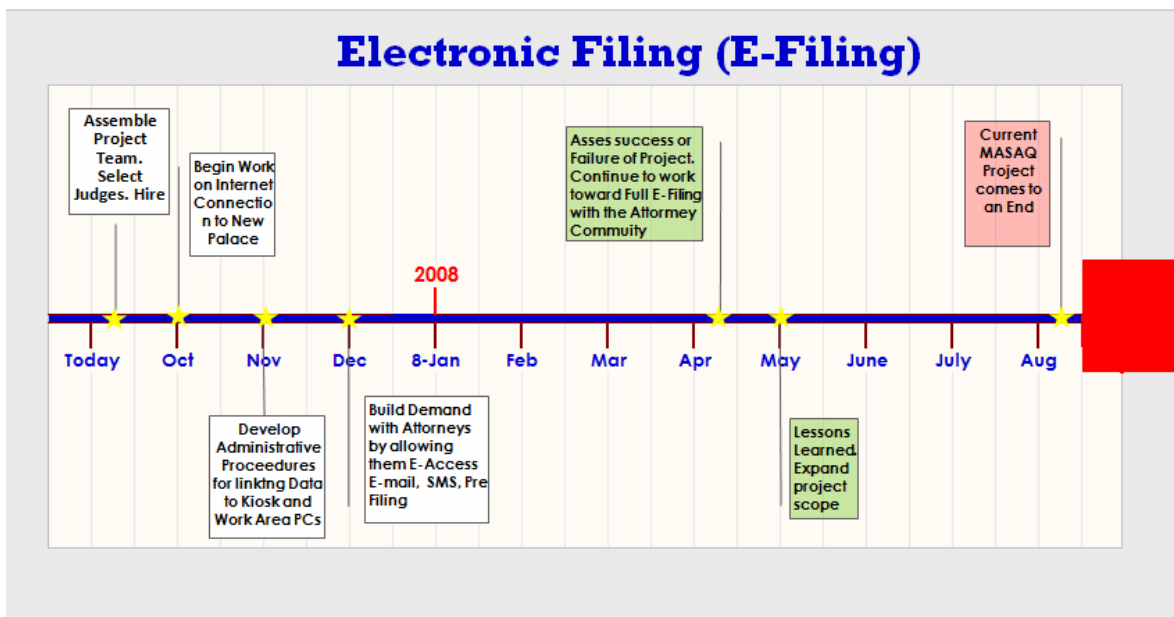
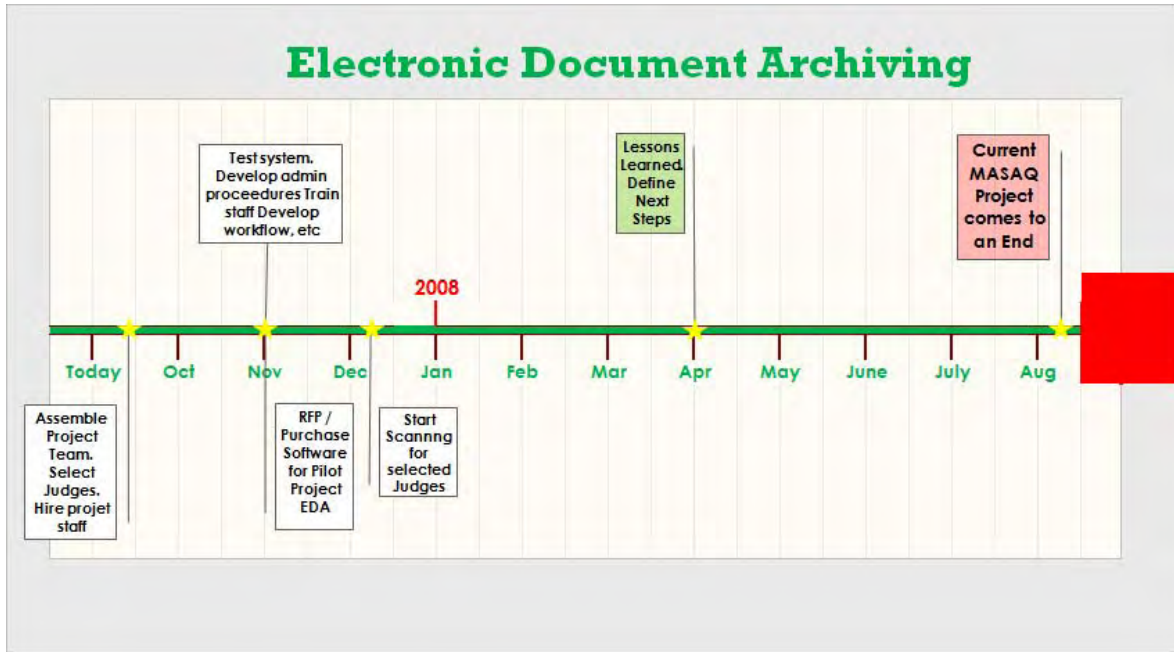
25. **Appendix B - Interview List**

Interviews Conducted by MASAQ Consultants in support of Advanced Case Management Technology Feasibility Study August 4 – September 7 2007

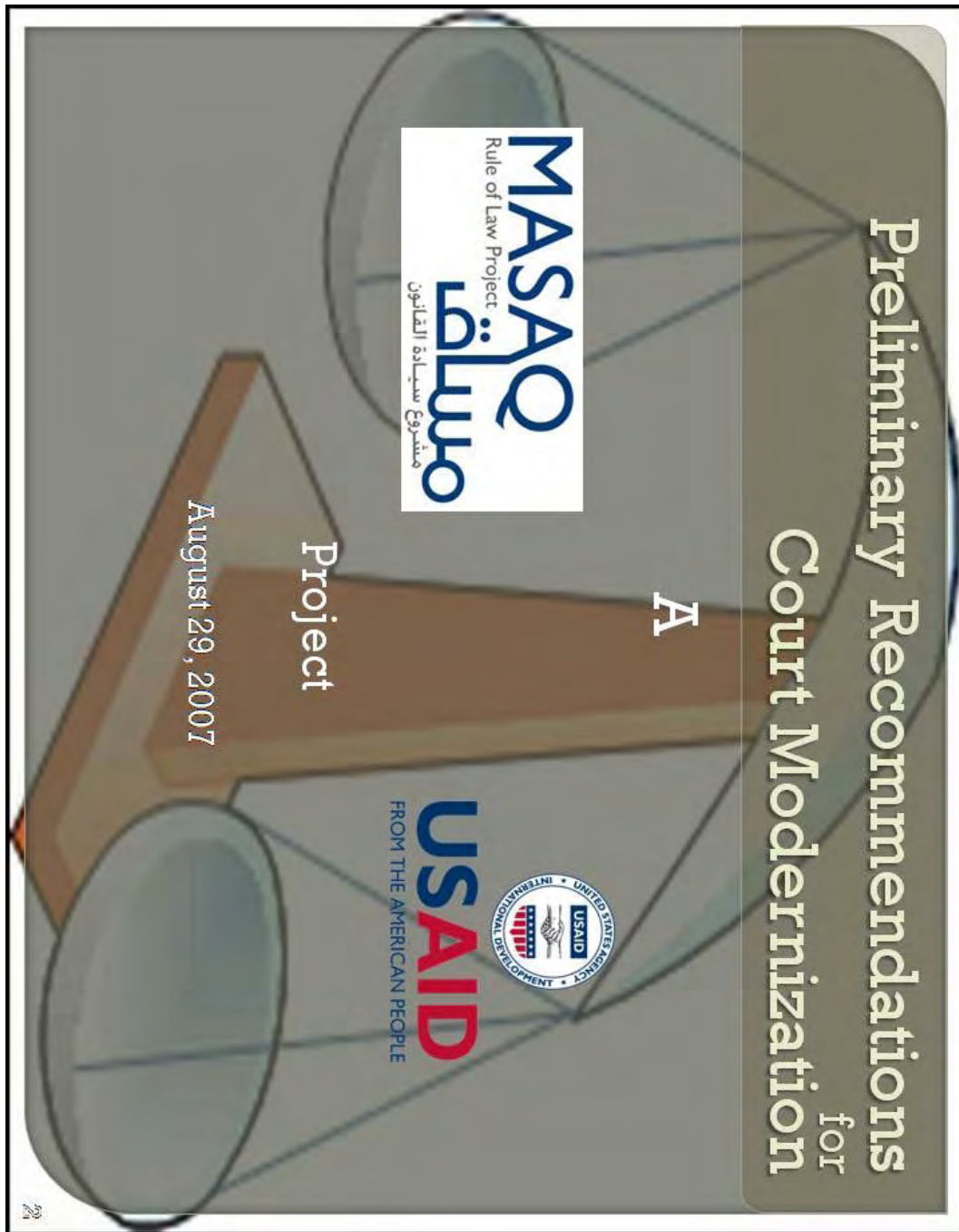
Date	Interviewee
August 6	Walter Kuencer, Executive Director – MASAQ Project
	Randy Fox, Technology Director – MASAQ Project
	Hussein Al-Madani, Legal Advisor – MASAQ Project
	Hadeel Abdel-Aziz, Legal Coordinator – MASAQ Project
August 8	His Excellency, The Minister of Justice
August 9	Judge Ali
August 10	Optimaza
August 13	Hikmat Salim, IT Advisor – MASAQ Project
August 14	Suleiman Nabulsi - Private Attorney Islam Smadi – Private Attorney
August 19	Judge Mohamad Ghazou Secretary General / MOJ Judge Ali Masri HR Development director / MOJ Adv. Yahya Abu Aboud – Jordan Bar Association Adv. Ghassan Fraihat – Jordan Bar Association Adv. Mohamad Odeh – Attorney Adv. Rajaey Dajani – Attorney Adv. Thaer Najdawi - Attorney
August 23	Omar Obaid HUDC Ministry Staff Said Mahroom Ministry of Planning & International Cooperation Atef Hamdan Ministry of Trade and Industry

26. **Appendix C - Pertinent Documents**
Critical Timelines

27.



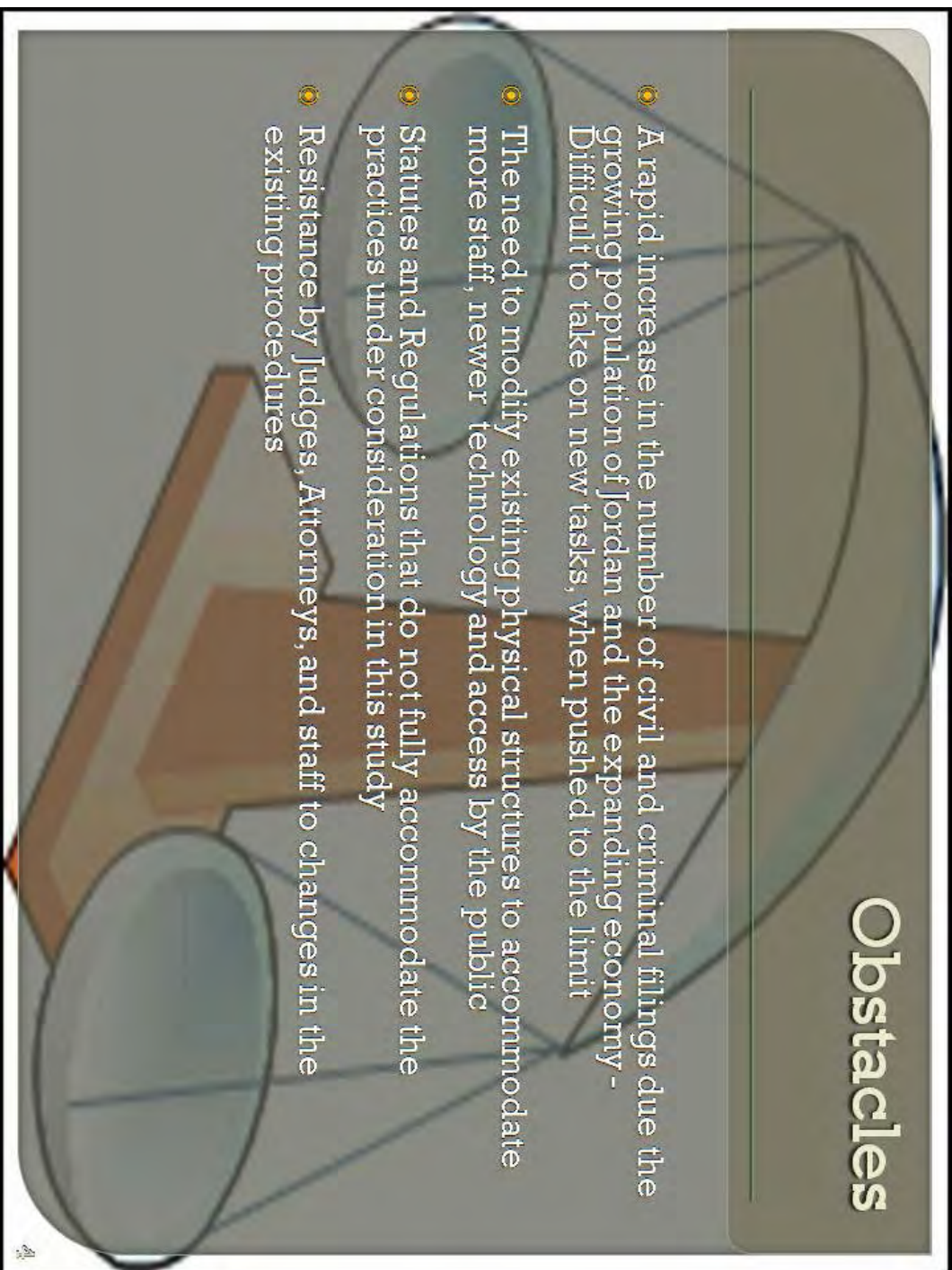
Appendix D - Workshop materials
Workshop Slides – English Translation



Overview

- **Electronic Document Archiving (E-Archiving)** - is the process whereby an image is made of an existing paper document into a “fixed” or permanent state suitable for archiving.
- **Electronic Filing (E-Filing)** – is the process that enables an attorney to access court data remotely, to communicate with court officials, other parties or attorneys in a case, and to electronically submit documents to the court file.
- **Video Hearing** –is a process by which defendants may appear before the court from remote physical locations without the need to be transported to the court.

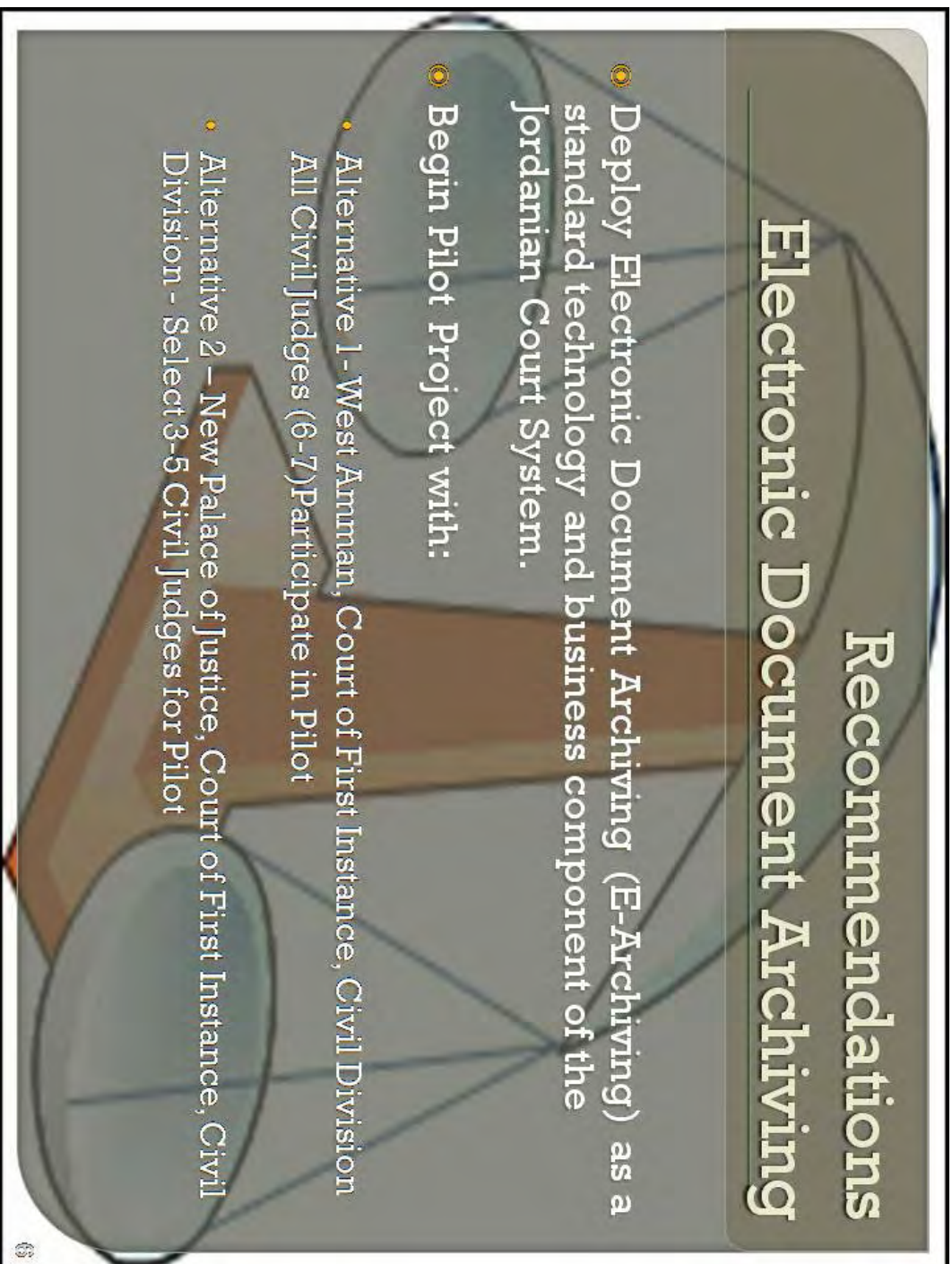
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Opportunities

- The Judicial Upgrading Strategy Supports E-Government Initiatives
- Capable Technology Infrastructure in MIZAN and upcoming MIZAN 2. Courts well on the way to excellent technology.
- Growing Professionalism in both the Bench and Bar. Success breeds the desire for more success.

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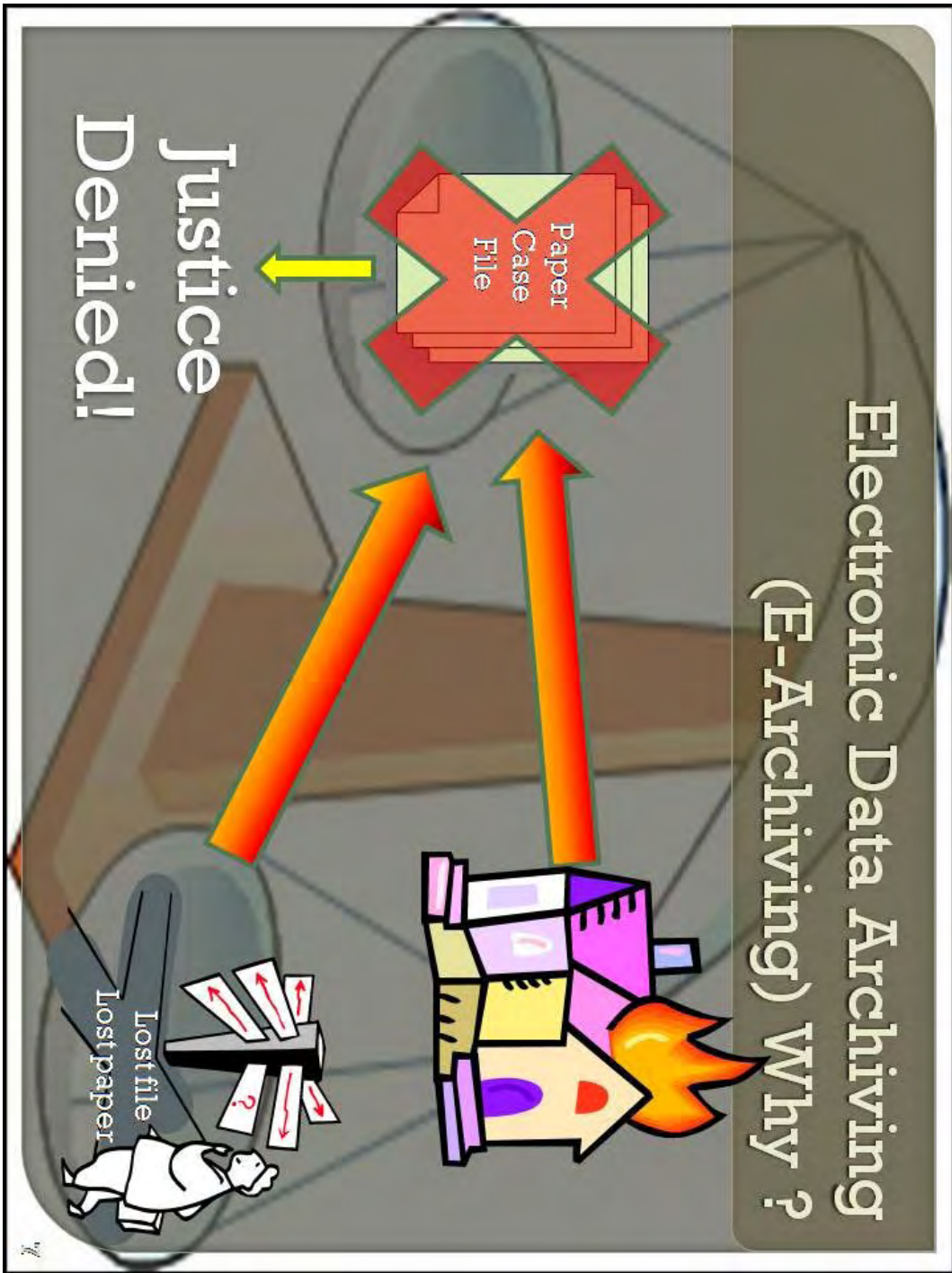


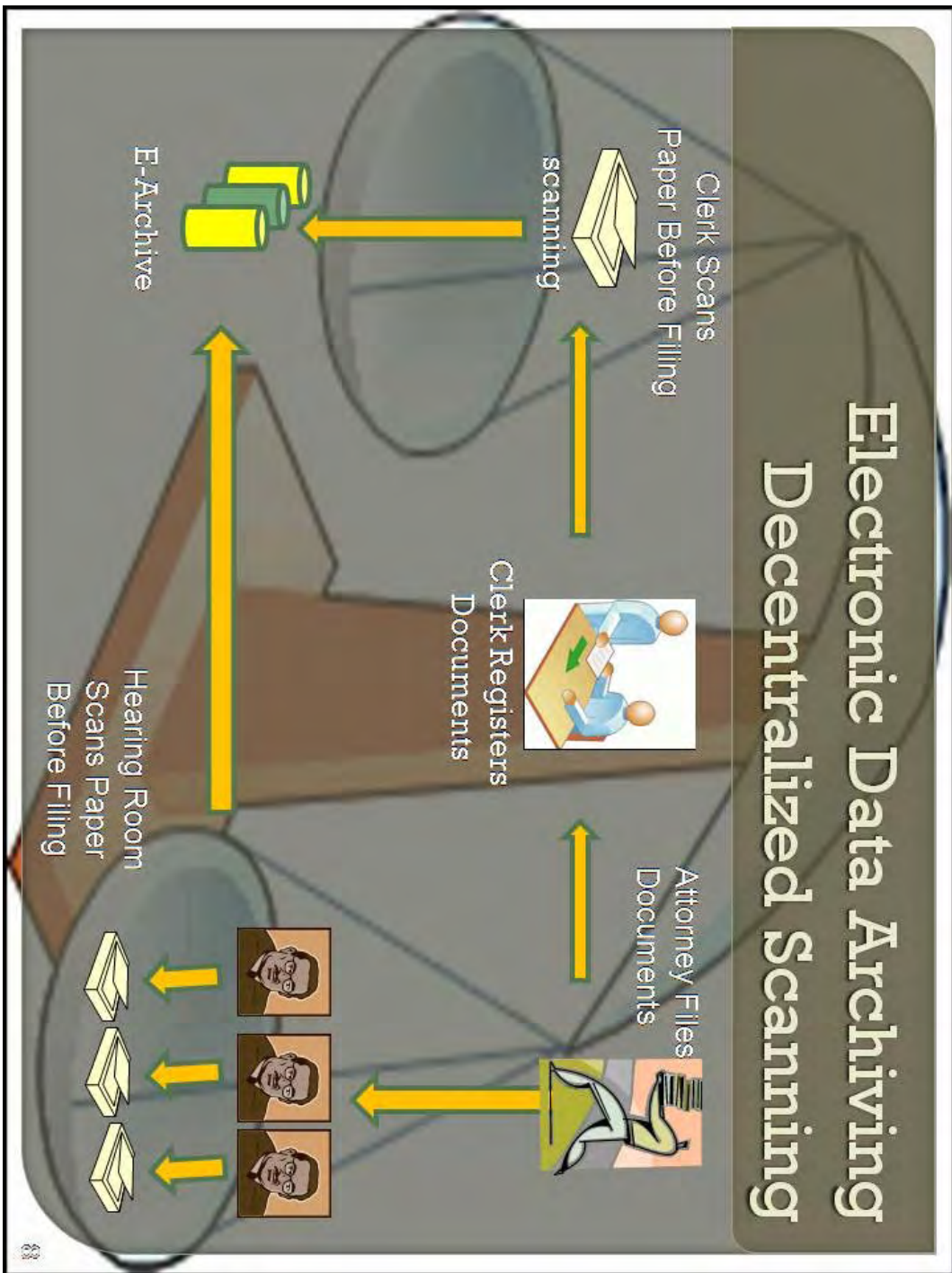
Recommendations

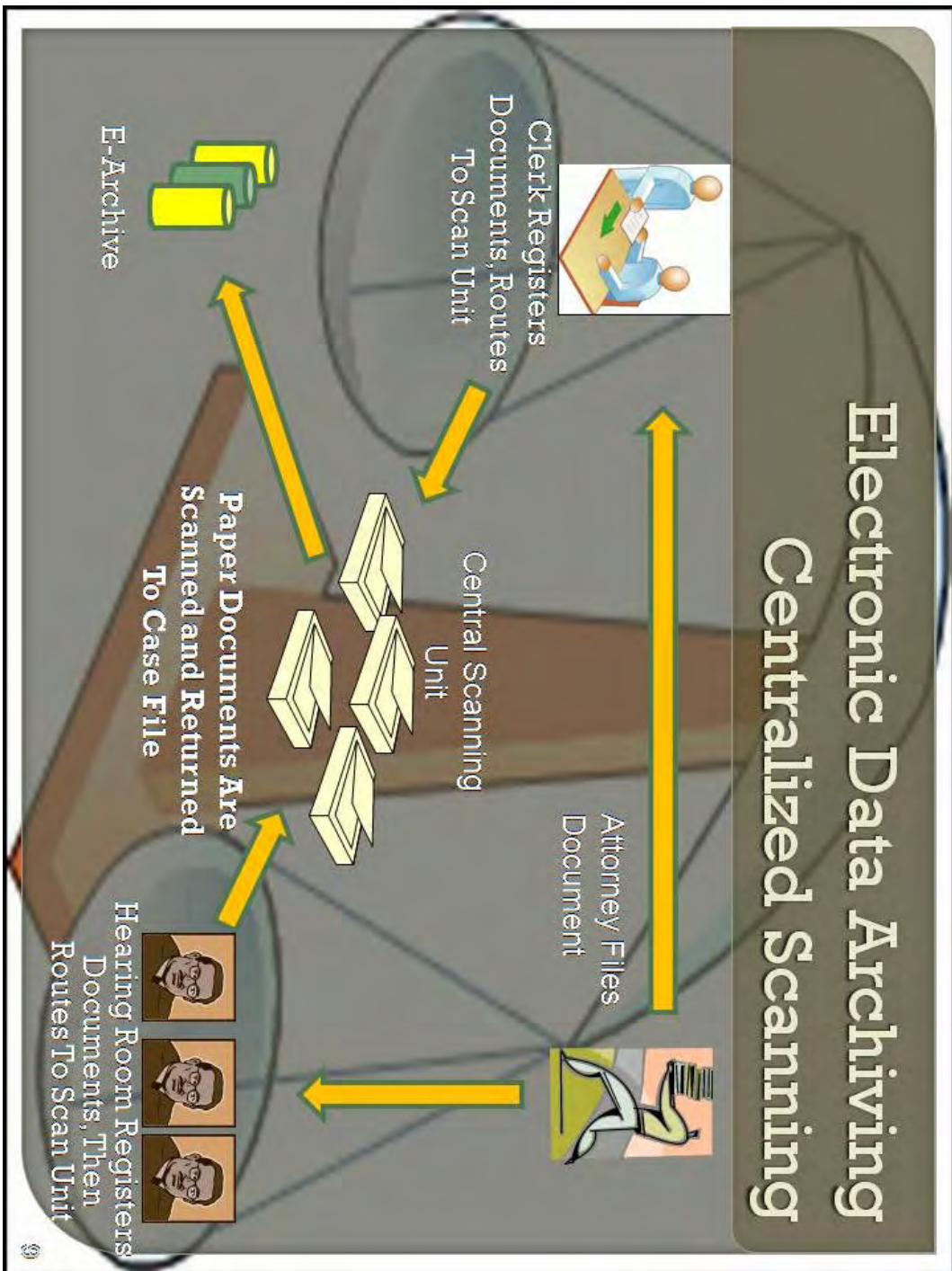
Electronic Document Archiving

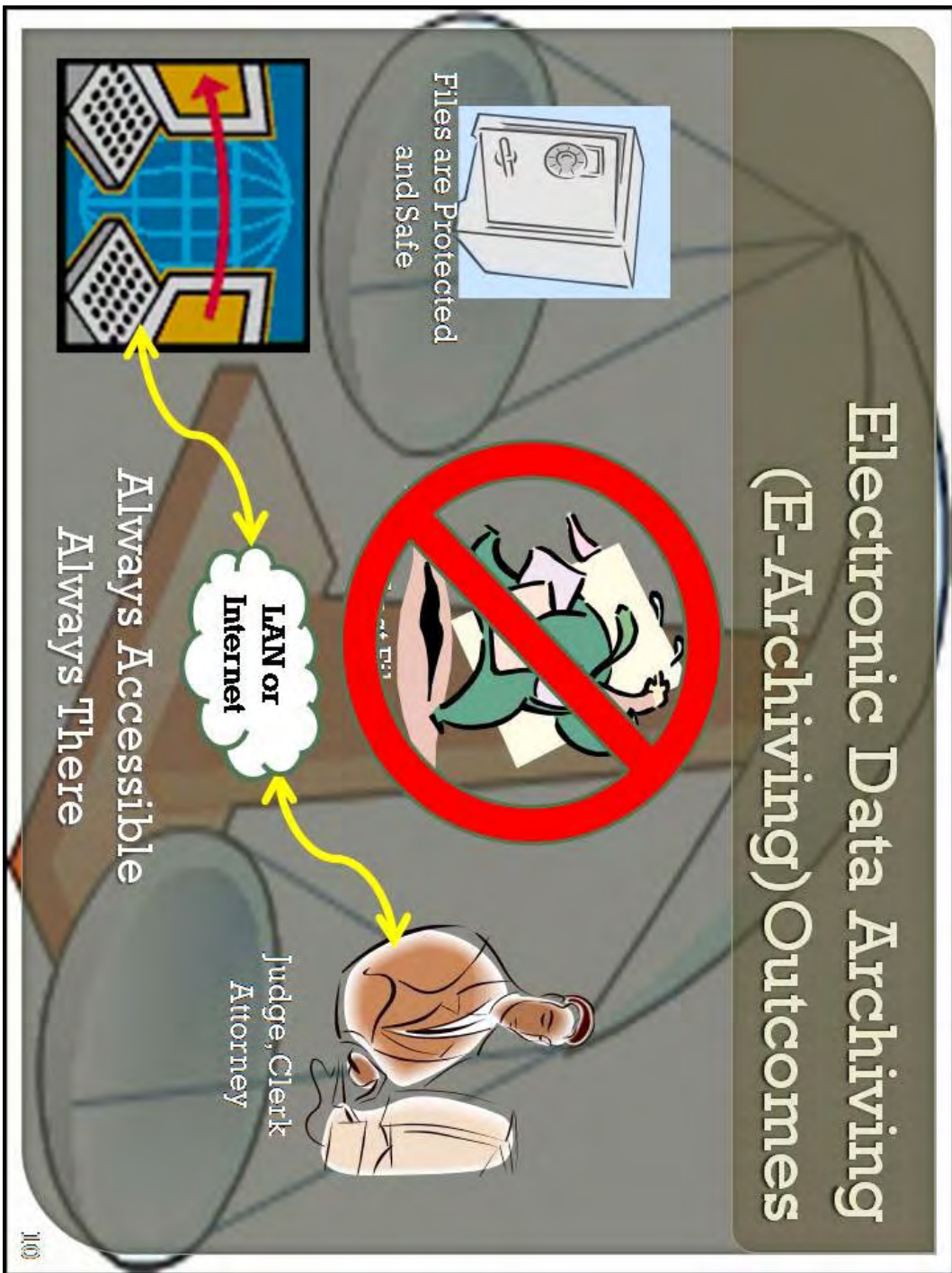
- Deploy Electronic Document Archiving (E-Archiving) as a standard technology and business component of the Jordanian Court System.
- Begin Pilot Project with:
 - Alternative 1 - West Amman, Court of First Instance, Civil Division All Civil Judges (6-7) Participate in Pilot
 - Alternative 2 – New Palace of Justice, Court of First Instance, Civil Division - Select 3-5 Civil Judges for Pilot

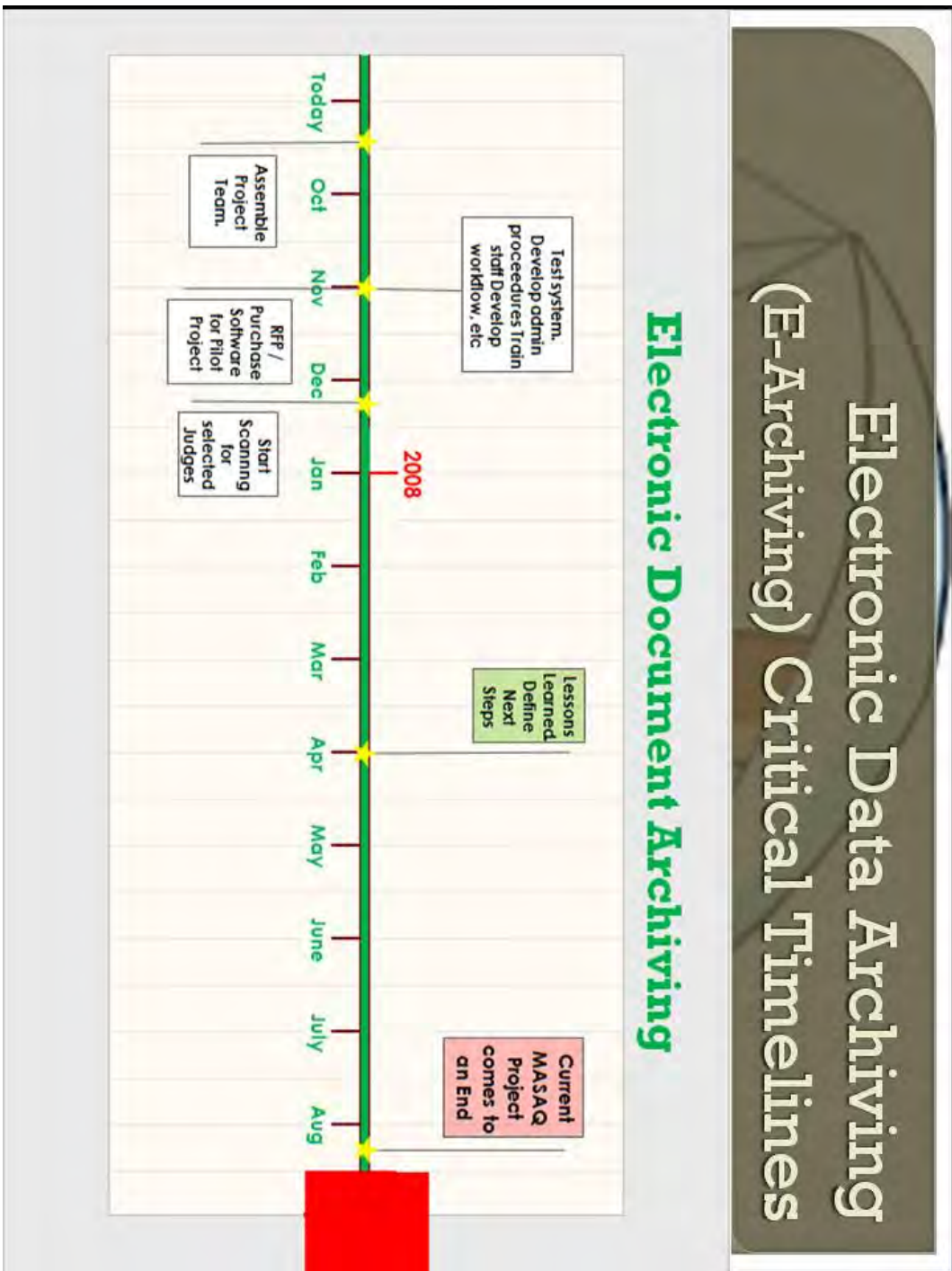
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Electronic Filing (E-Filing) Recommendations

- Deploy Electronic Filing as a standard technology and business component of the Jordanian Court System.
- Begin this process by establishing a three phased project of 18 – 24 months duration. This timeline will be necessary to build acceptance by the attorney. Currently attorneys are seeking to access information and communicate electronically with the court **but have no interest in filing documents electronically.**
 - Phase 1 – Lay the Foundation by providing secured, controlled access to court data and court document images to Judges and Attorneys via court kiosk or PCs in the Attorney work areas.
 - Phase 2 - Build the Demand by providing Court – Attorney communication tools for simple exchange of information.
 - Phase 3 – Full Deployment by initiating the acceptance of court documents in electronic format as well as paper. **Full deployment is contingent upon legal changes being enacted.**

Electronic Filing (E-Filing) Why

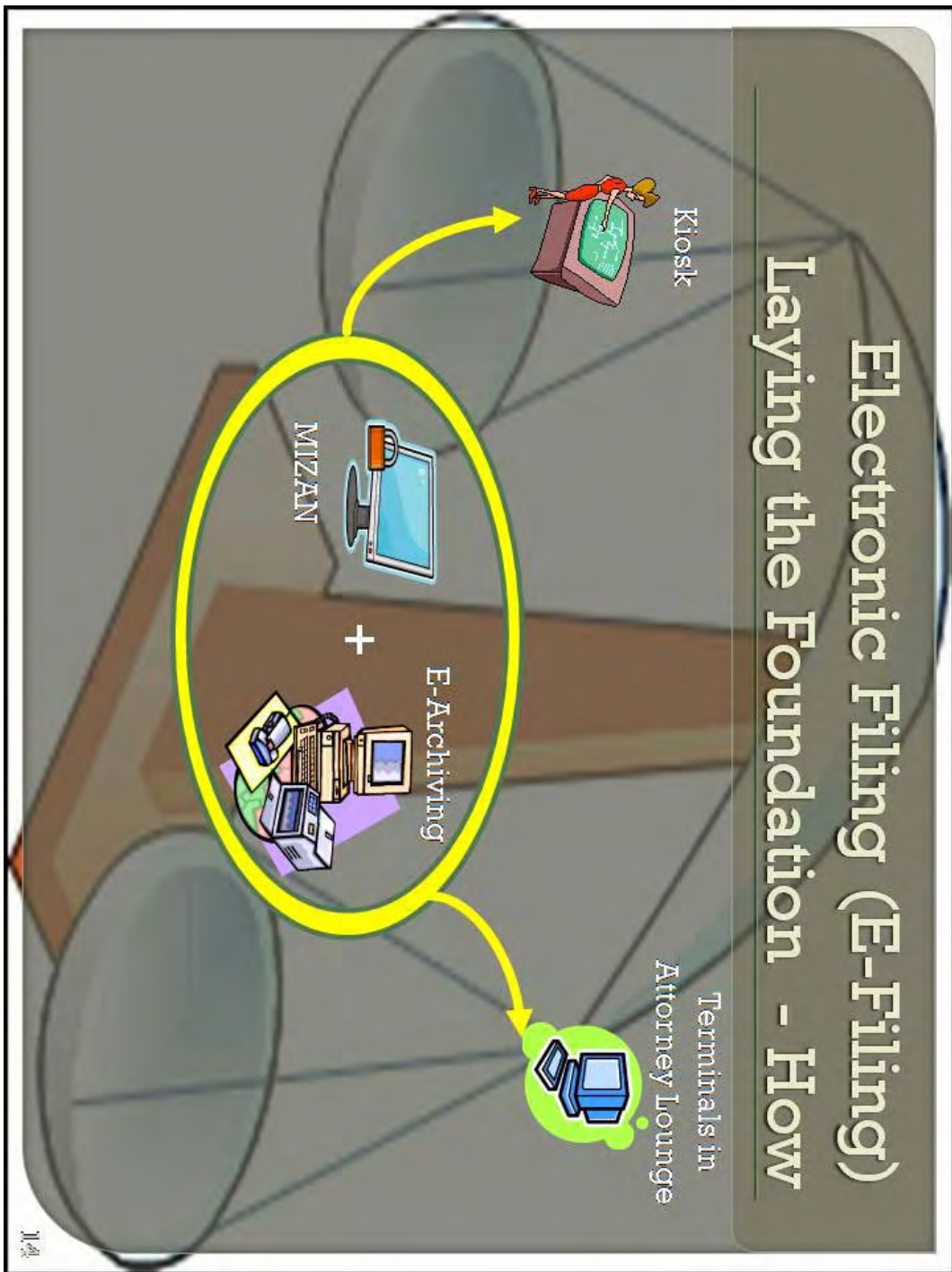
Attorney's Practice of Law is now nationwide

Attorney need access to court data

Increasing Case Load Demand on Courts

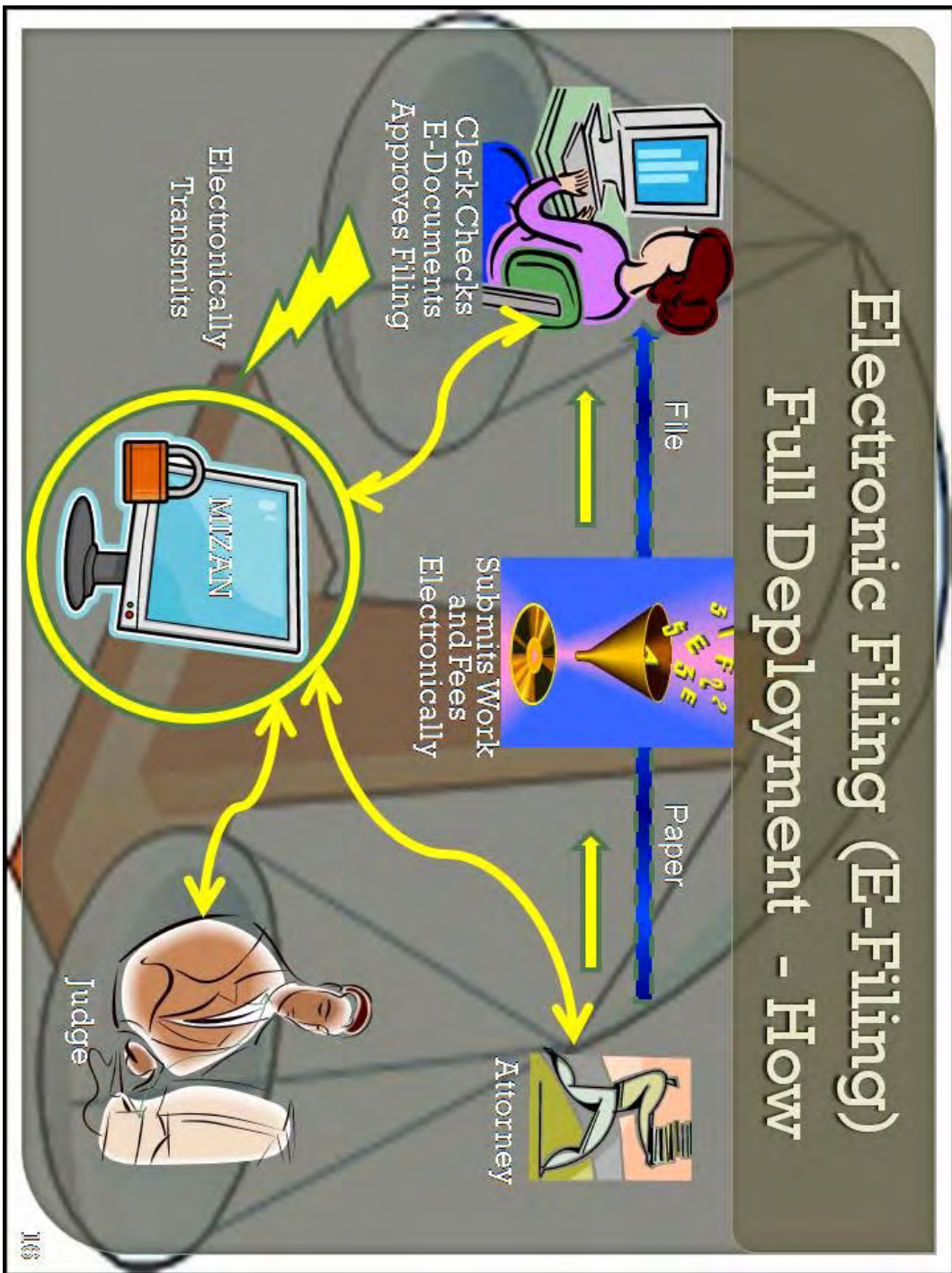
Jordanian Courts move toward E-Government and less paper

11.3



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Electronic Filing (E-Filing) Outcomes



Courts join E-Government Initiatives. Move toward paperless environment



Clerks Begin Providing Electronic Information To Users Outside Court



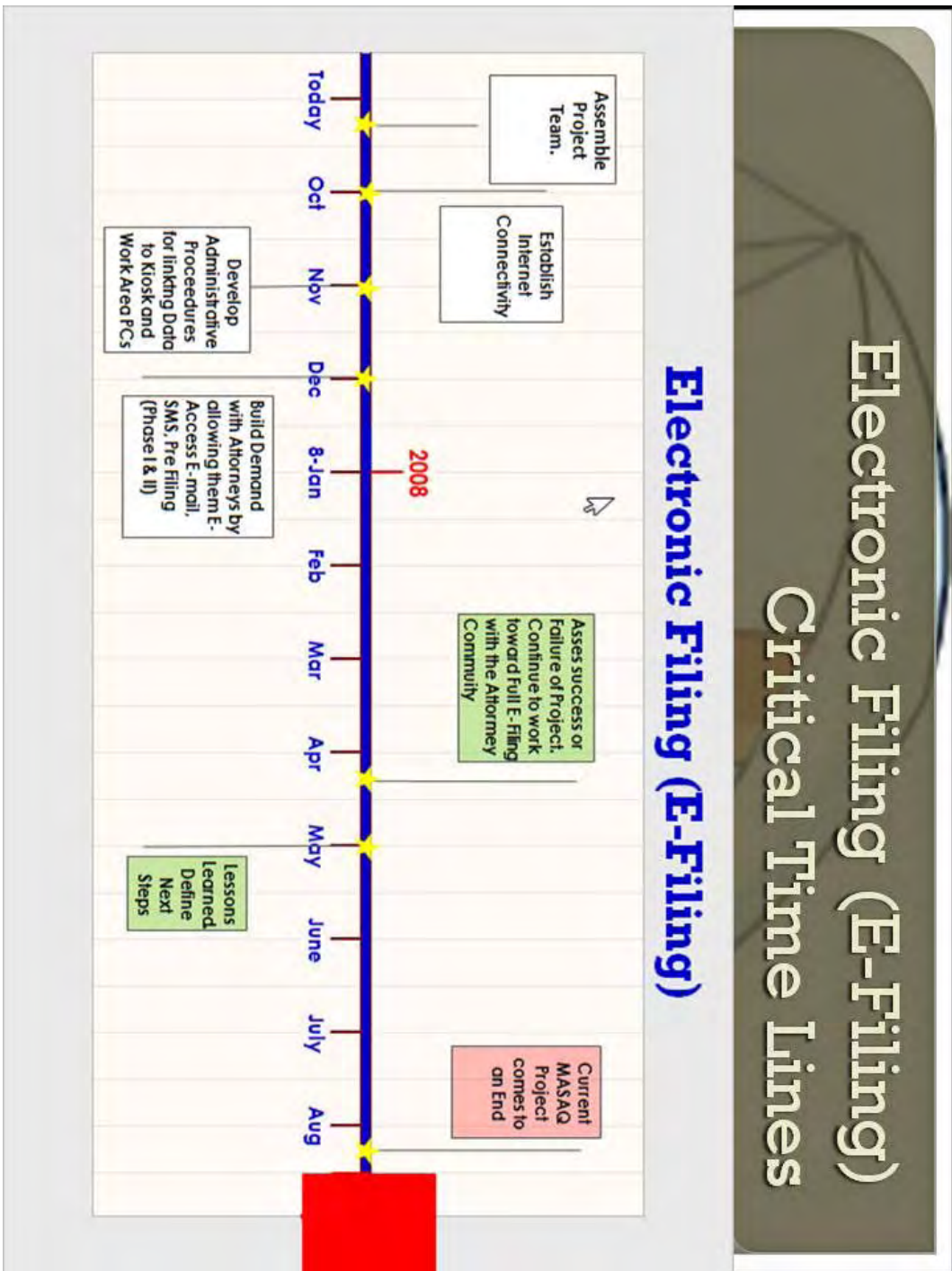
Judges and Attorneys have Electronic Access to Case Documents

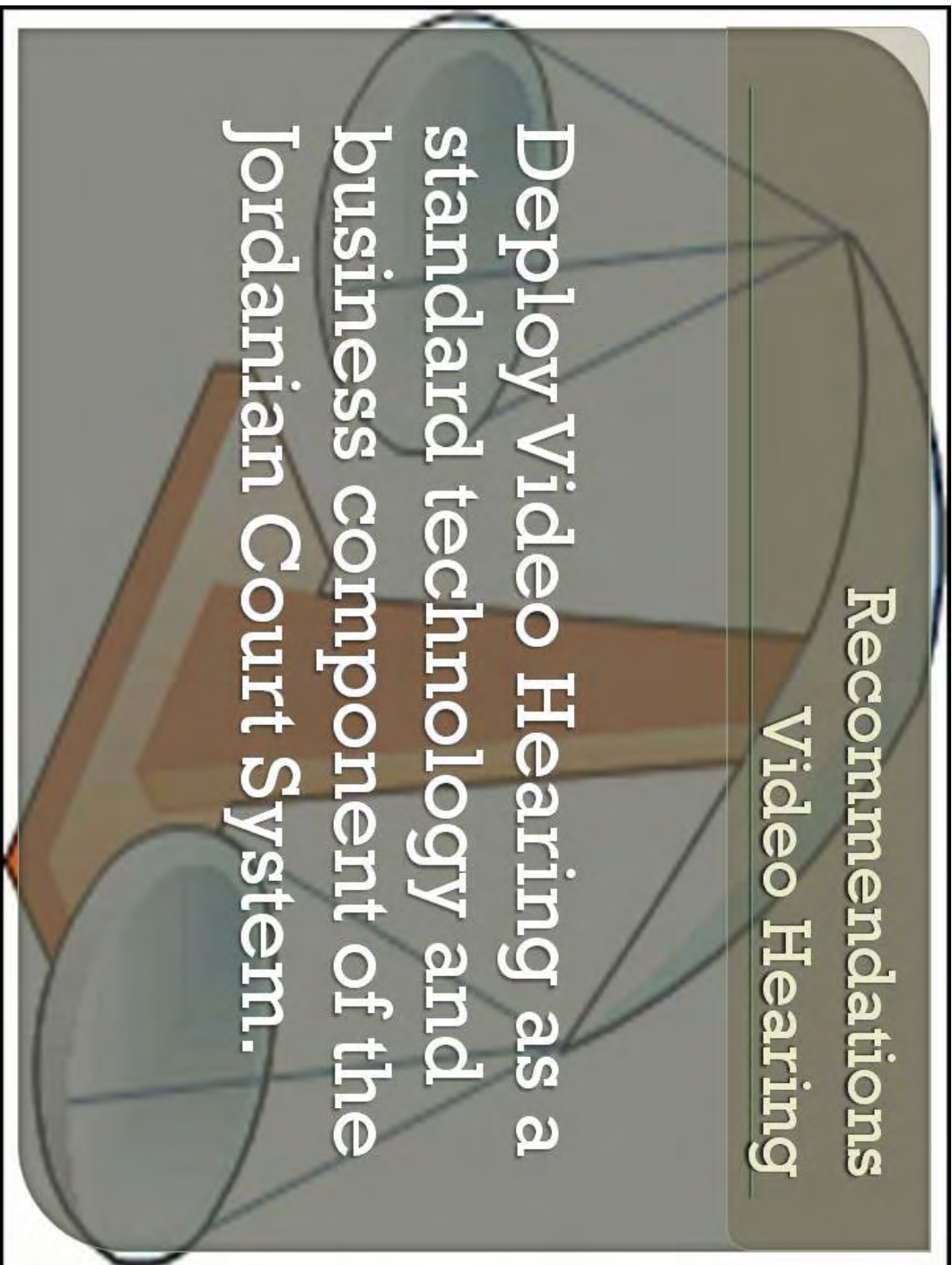


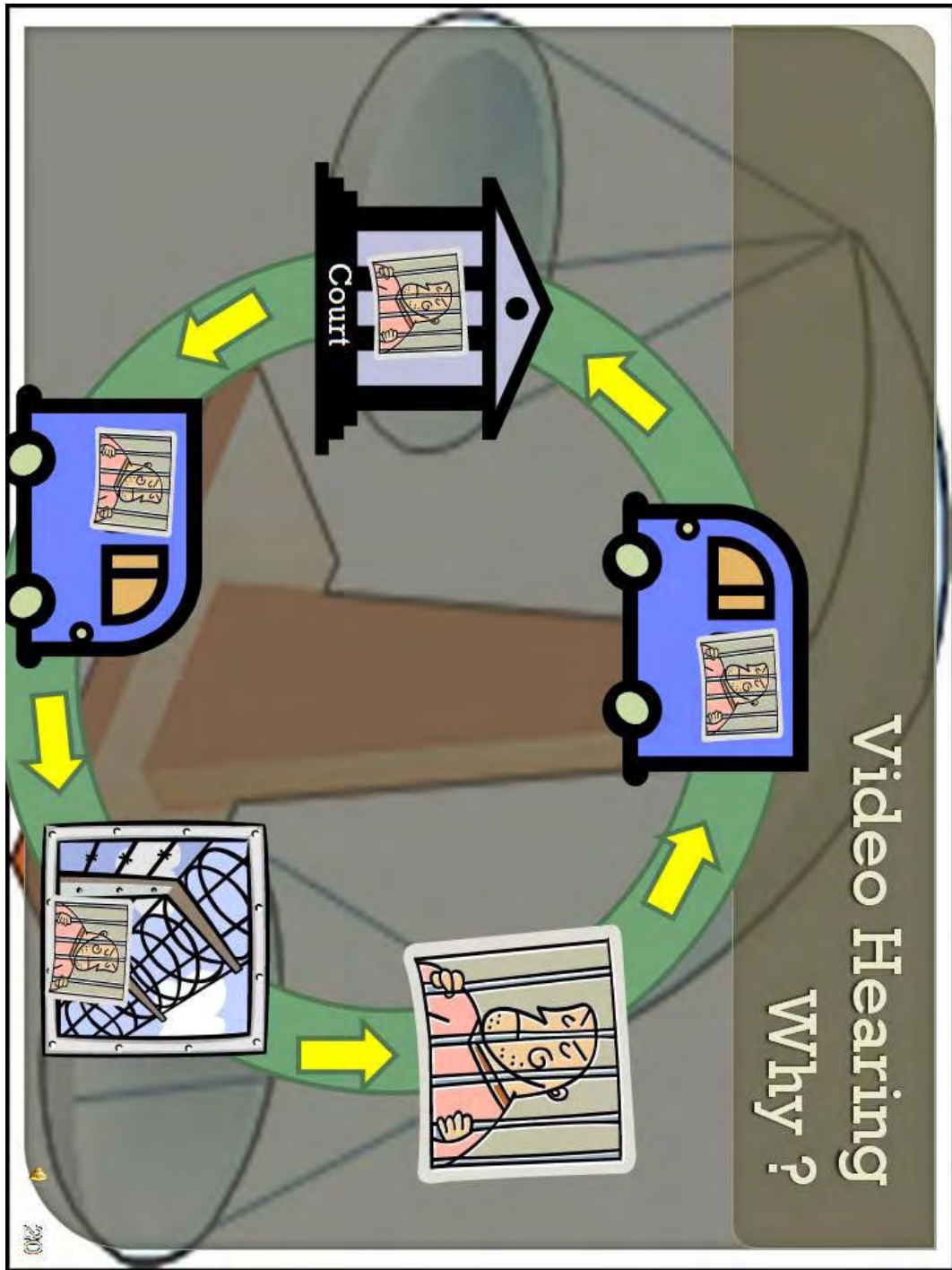
Ministry of Justice wins King Abdullah's Award For Excellencell!

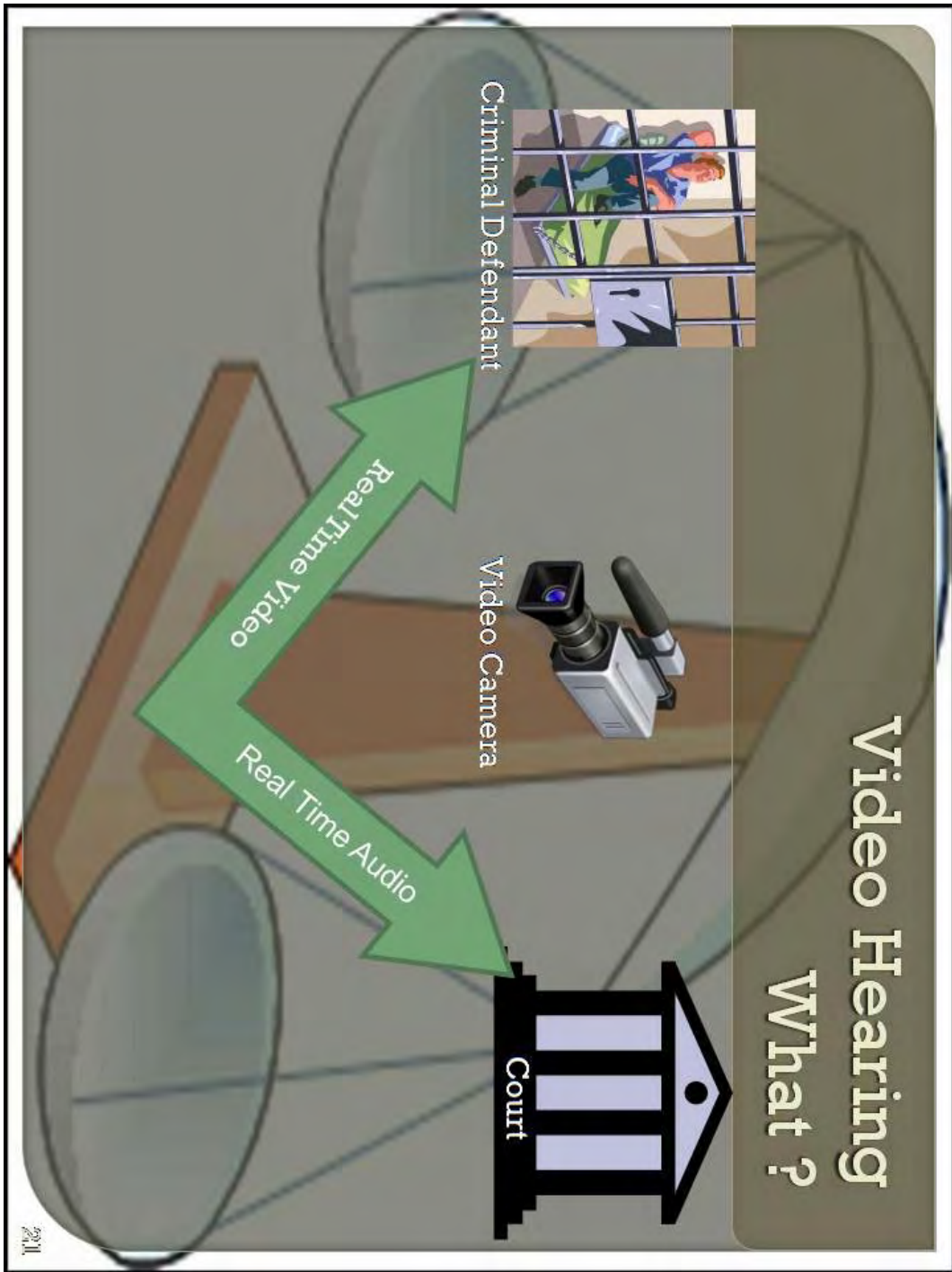


ITC

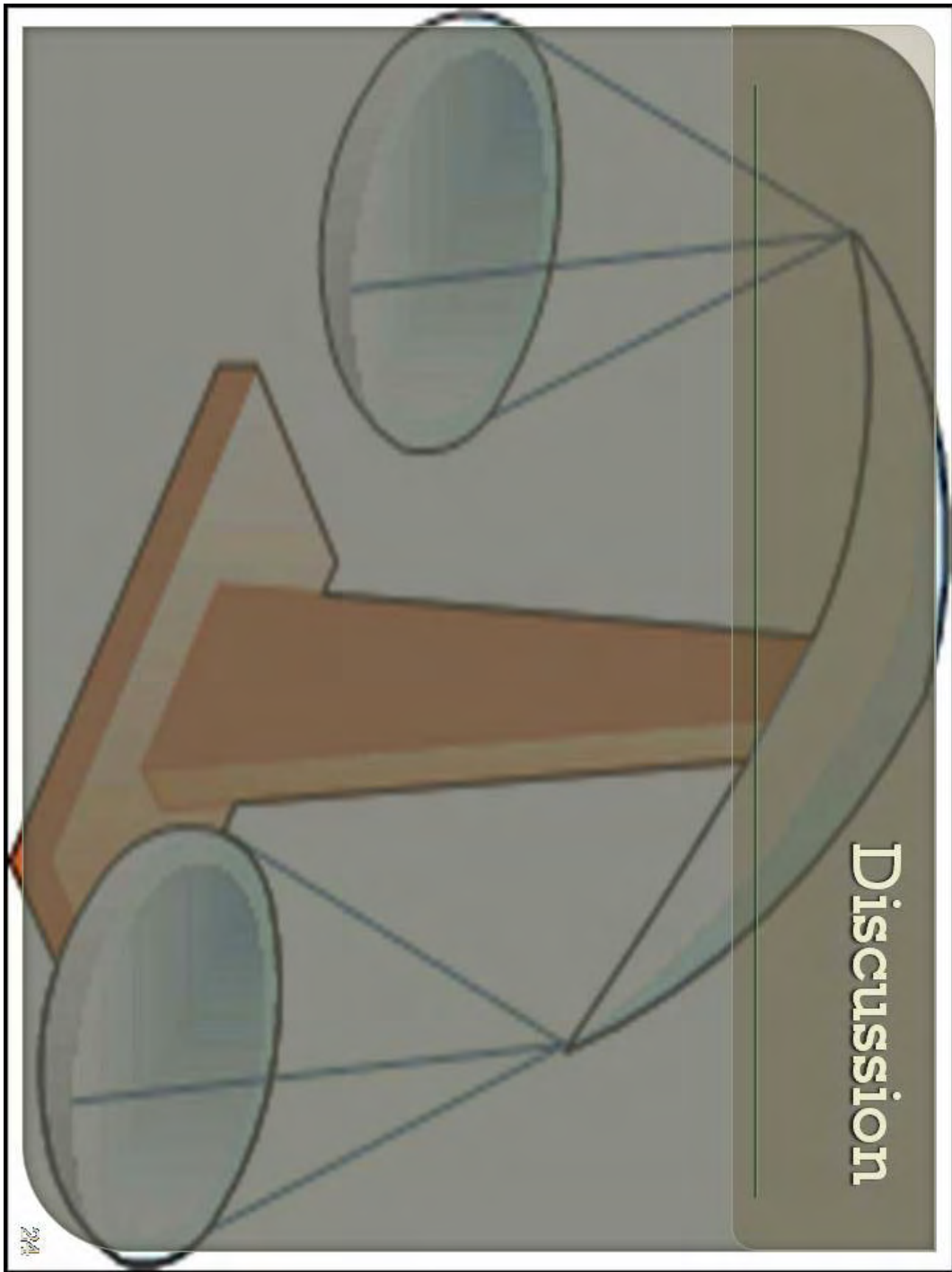




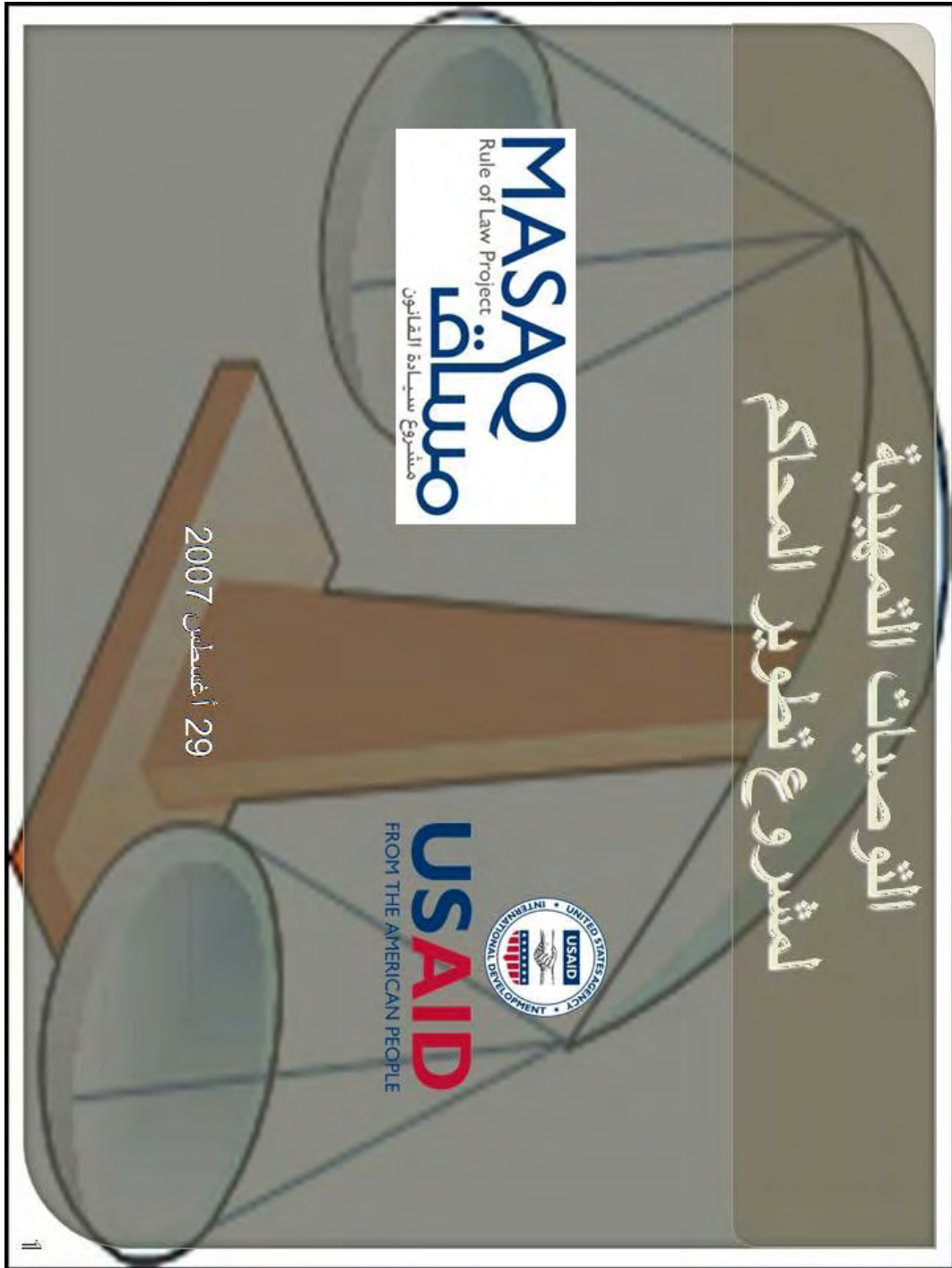








Workshop Slides – Arabic Translation



28.

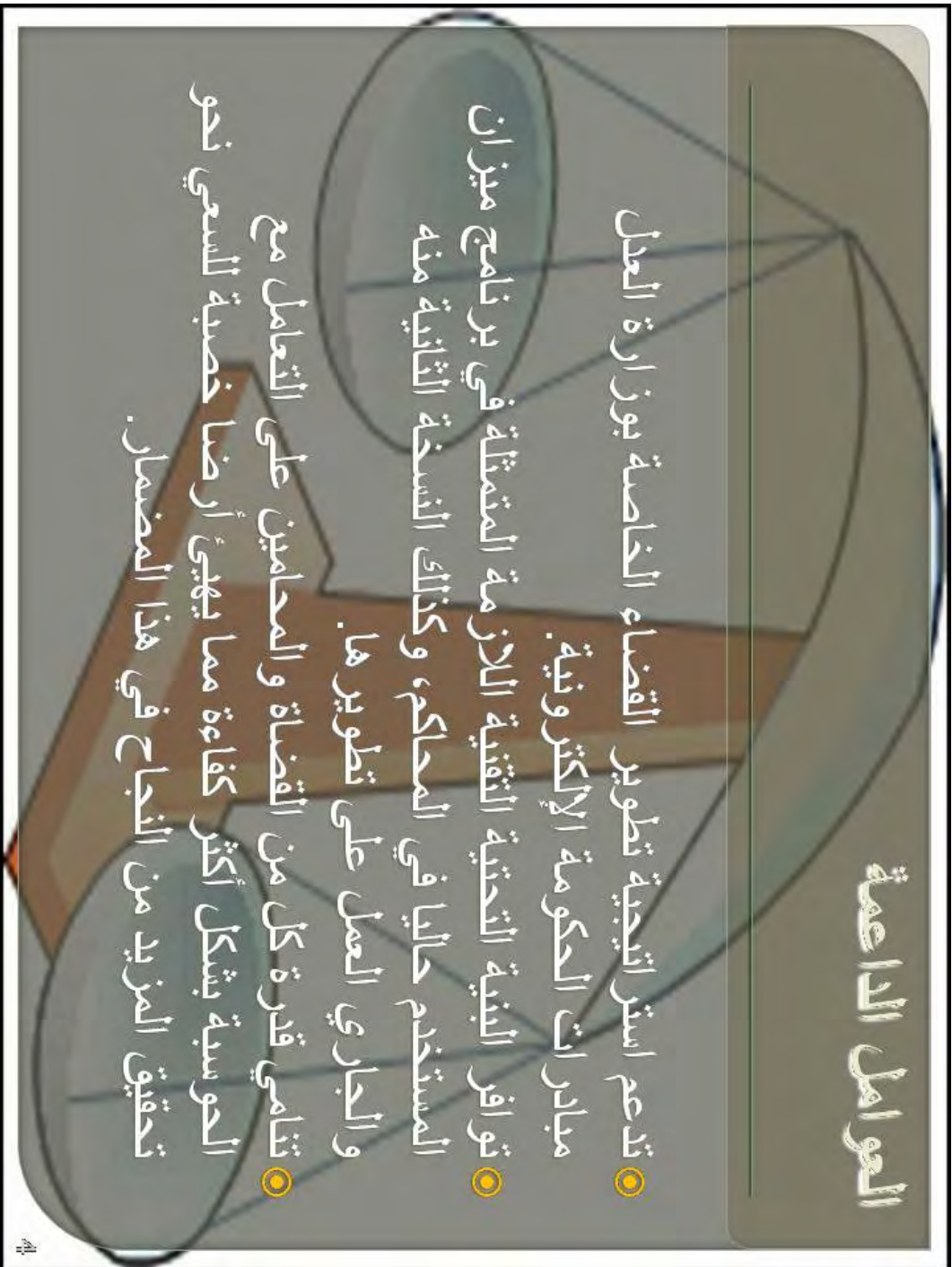
لمحة عامة

- **الأرشيف الإلكتروني** - نظام يتم بموجبه مسح ضوئي لوثائق الدعوى الورقية لتحويلها إلى نسخة إلكترونية، ثابتة، يتم حفظها في نظام أرشفة الوثائق الإلكتروني.
- **الملف الإلكتروني** - نظام يتيح للمحامي الوصول إلى البيانات الخاصة المحكمة وبالاعتماد عن بعد، كما يتيح التواصل مع مسؤولي المحكمة وغيرهم من الأطراف والمحامين من ذوي العلاقة، إضافة إلى تقديم الوثائق الرسمية إلى المحكمة إلكترونياً.
- **المحاكمة عن بعد (نظام الفيديو المرئي)** - عملية تسمح للمتهم الظهور أمام المحكمة أثناء تواجده في مكان آخر (موقع الاحتجاز) باستخدام التقنيات الحديثة دون الحاجة إلى نقله إلى المحكمة.

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العوامل المعيقة

- التزايد السريع في عدد الدعاوى المدنية والجزائية التي تستقبلها المحاكم وذلك تبعاً للنمو السكاني والتوسع الاقتصادي في الأردن- مما يشكل عائقاً في وجه التطوير وإدخال تقنيات جديدة إلى العمل.
- الحاجة إلى تطوير وتحديث البنى التحتية للمحاكم لتستوعب المزيد من الموظفين والتقنيات الحديثة وتسهيل تقديم الخدمات للمواطنين.
- التشرّعات والأنظمة الموجودة حالياً غير كافية لاستيعاب الممارسات التي تتضمنها هذه الدراسة .
- صعوبة تقبل التغيير من قبل العنصر البشري (القضاة، المحامين وموظفي المحاكم).

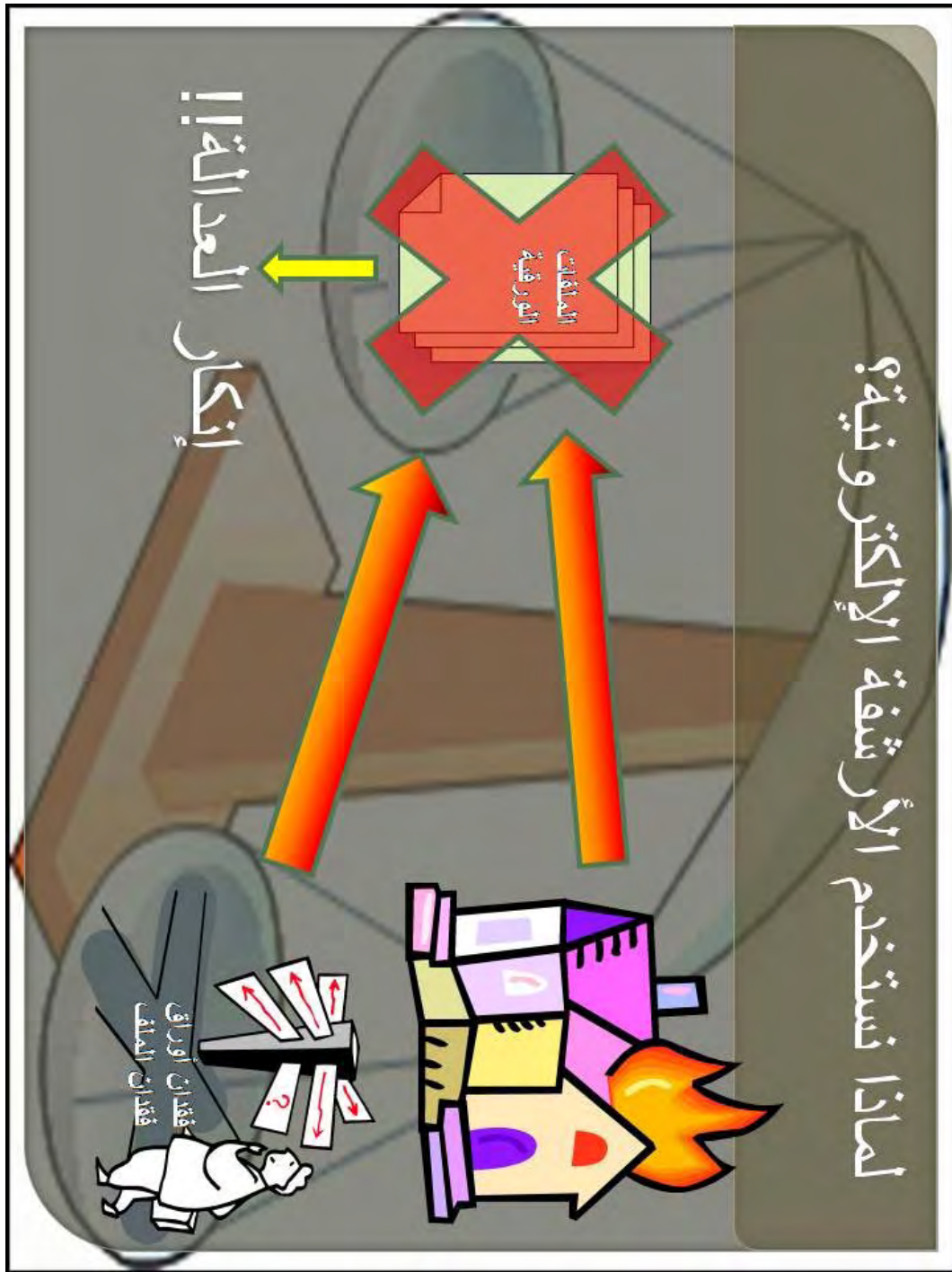


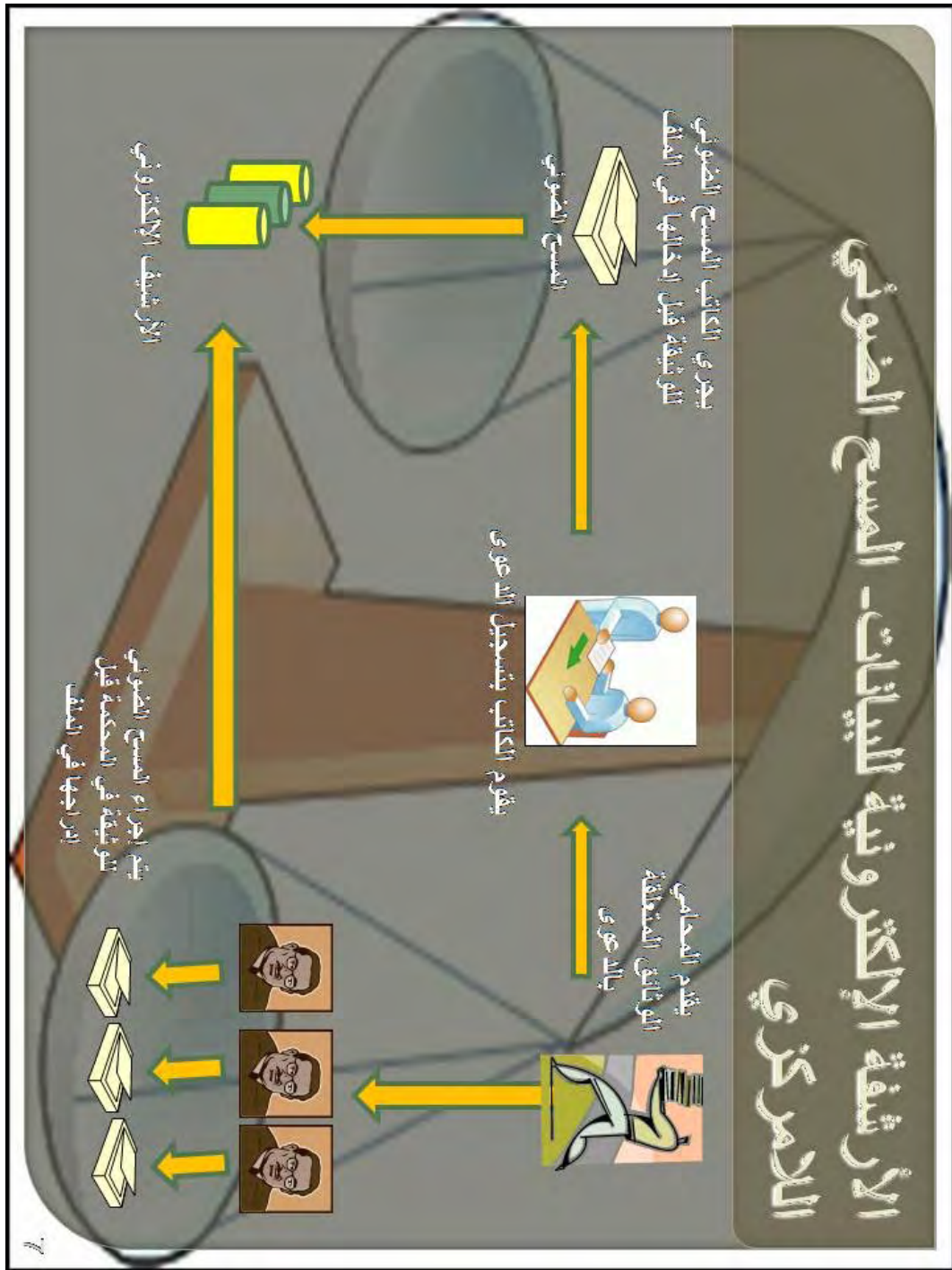
التوصيات الأرشفة الإلكترونية

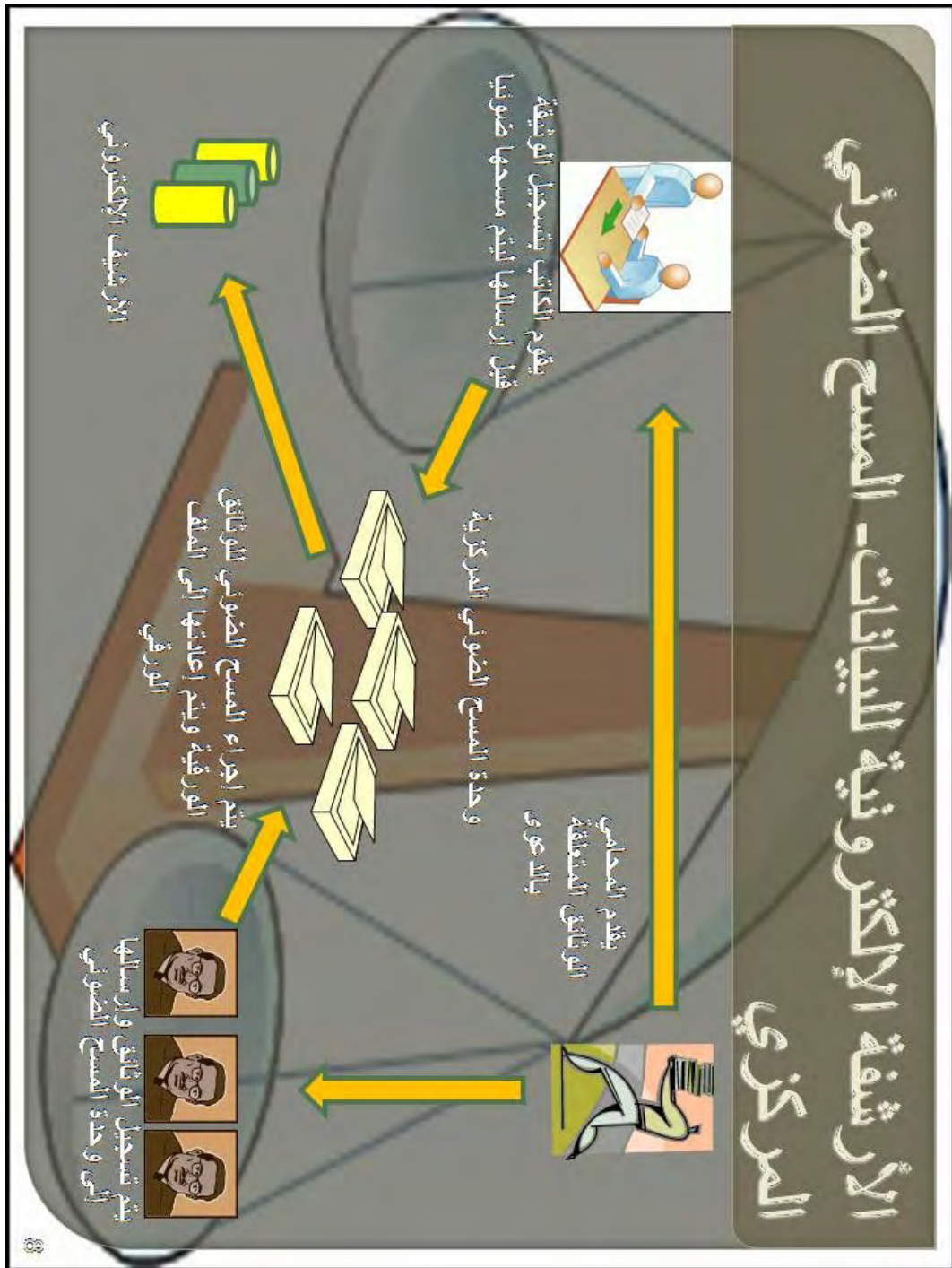
● إطلاق نظام الأرشفة الإلكترونية موحدة ومعتمدة في عمل المحاكم الأردنية

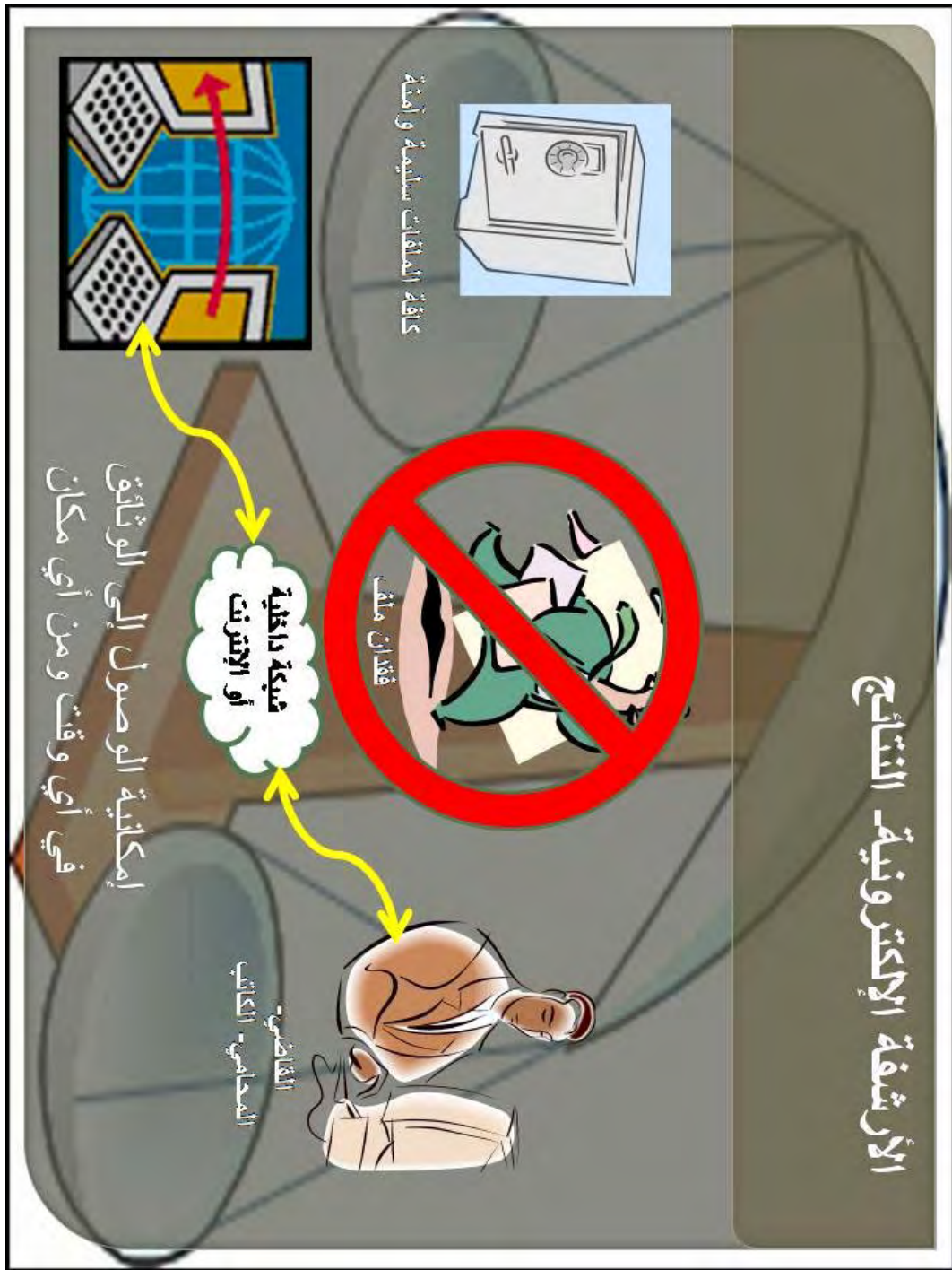
● بدء العمل بهذه التقنية من خلال مشروع ريادي يتضمن:

- الخيار 1: محكمة بداية غرب عمان - الحقوق. حيث سيشترك كافة القضاة هناك (ويتراوح عددهم بين 6 إلى 7 قضاة) في هذا المشروع الريادي.
- الخيار 2: محكمة بداية عمان - الحقوق. وسيشترك 3 إلى 5 من قضاة المحكمة في المشروع الريادي.









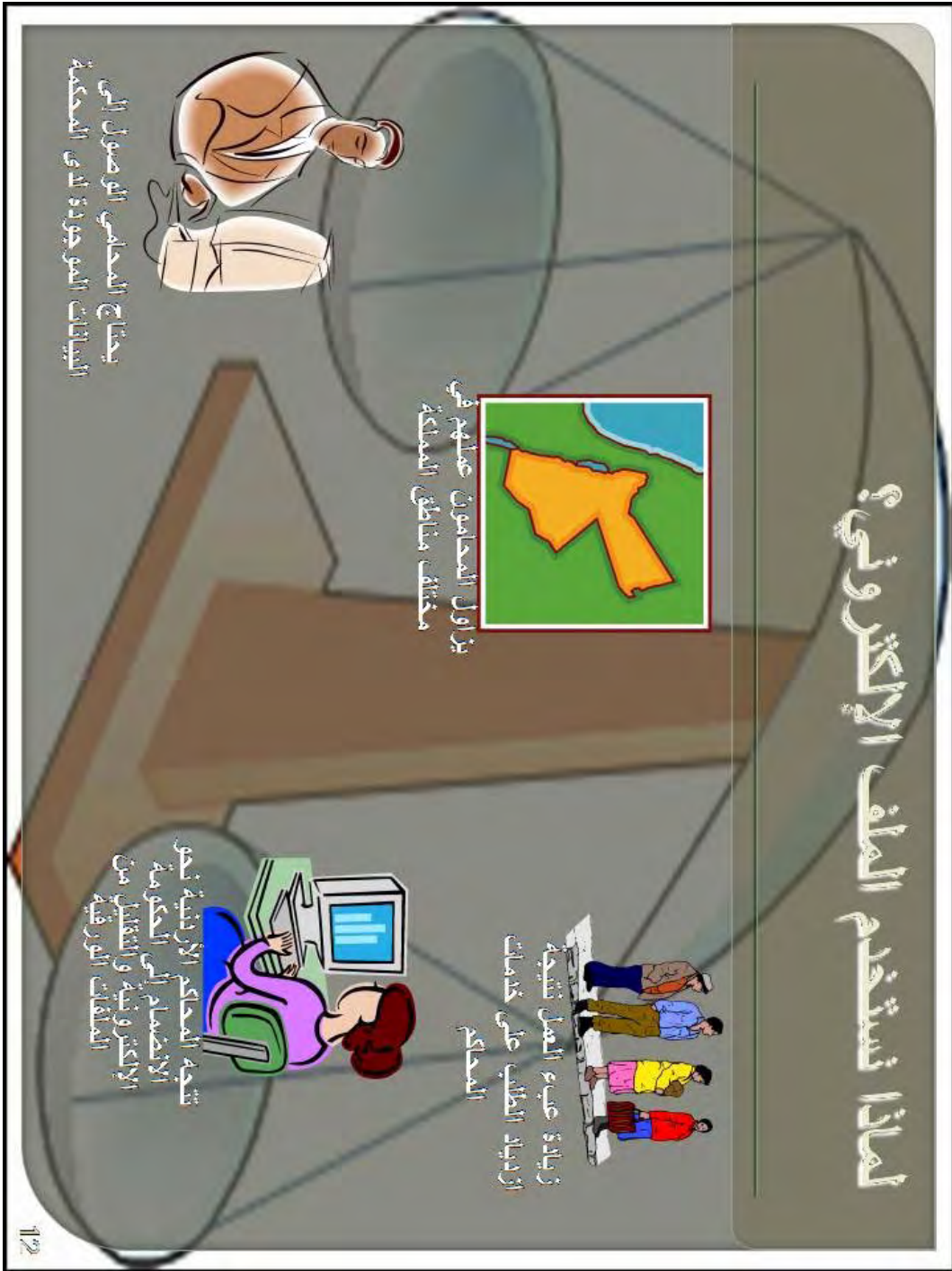
التوصيات

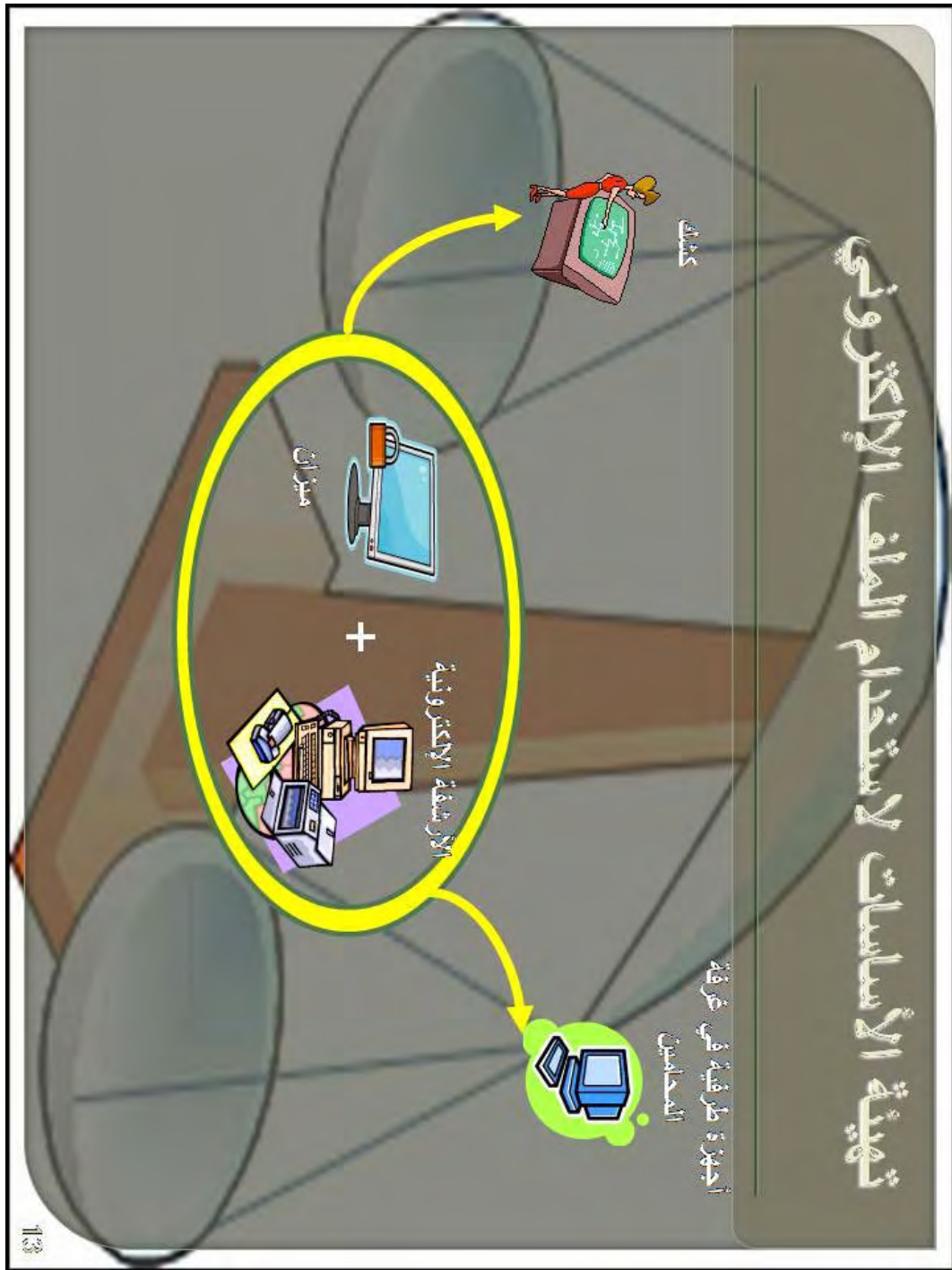
الملف الإلكتروني

تبنى " الملف الإلكتروني " كتنفيذ موحدة ومعتمدة في عمل المحاكم الأردنية.

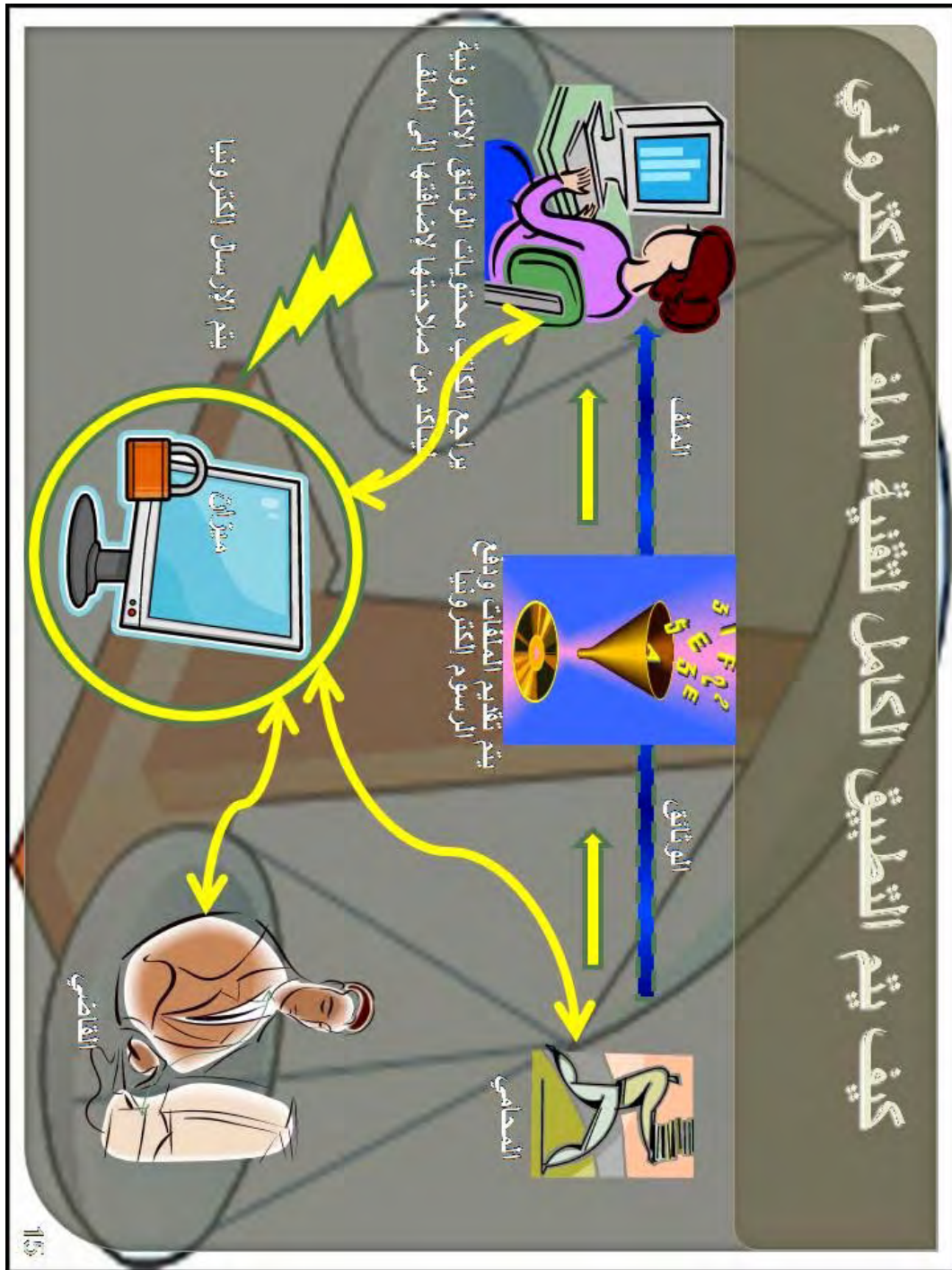
- بدء العمل بهذه التقنية من خلال مشروع ريادي يتضمن ثلاث مراحل تستمر ما بين 18 إلى 24 شهرا، وتعتبر هذه المدة هامة في تحقيق قبول المحامين تدريجيا للتقنية الجديدة. وفي الوقت الحاضر يسعى المحامون إلى إتاحة الوصول إلى المعلومات والاتصال إلكترونيا مع المحكمة ولكن لا يبدو أن لديهم اهتمام باستخدام تقنية الملف الإلكتروني.
- المرحلة الأولى- التحضيرات الأولية تتم عن طريق توفير تقنيات محمية تسمح للقضاة والمحامين الوصول إلى بيانات وصور ووثائق المحكمة، من خلال توفير كشك أو جهاز حاسوب خاص في غرفة المحامين.
- المرحلة الثانية- تعزيز الطلب على هذه التقنية بتوفير أدوات التواصل بين المحكمة- المحامين كرسالة لتبادل المعلومات.
- المرحلة الثالثة- التطبيق الكامل عن طريق المرافعة على قبول الوثائق بصورها الإلكترونية إلى جانب المسح الورقية. ويحدث التطبيق العامل لهذه المرحلة على إجراء العمليات القانونية اللازمة.

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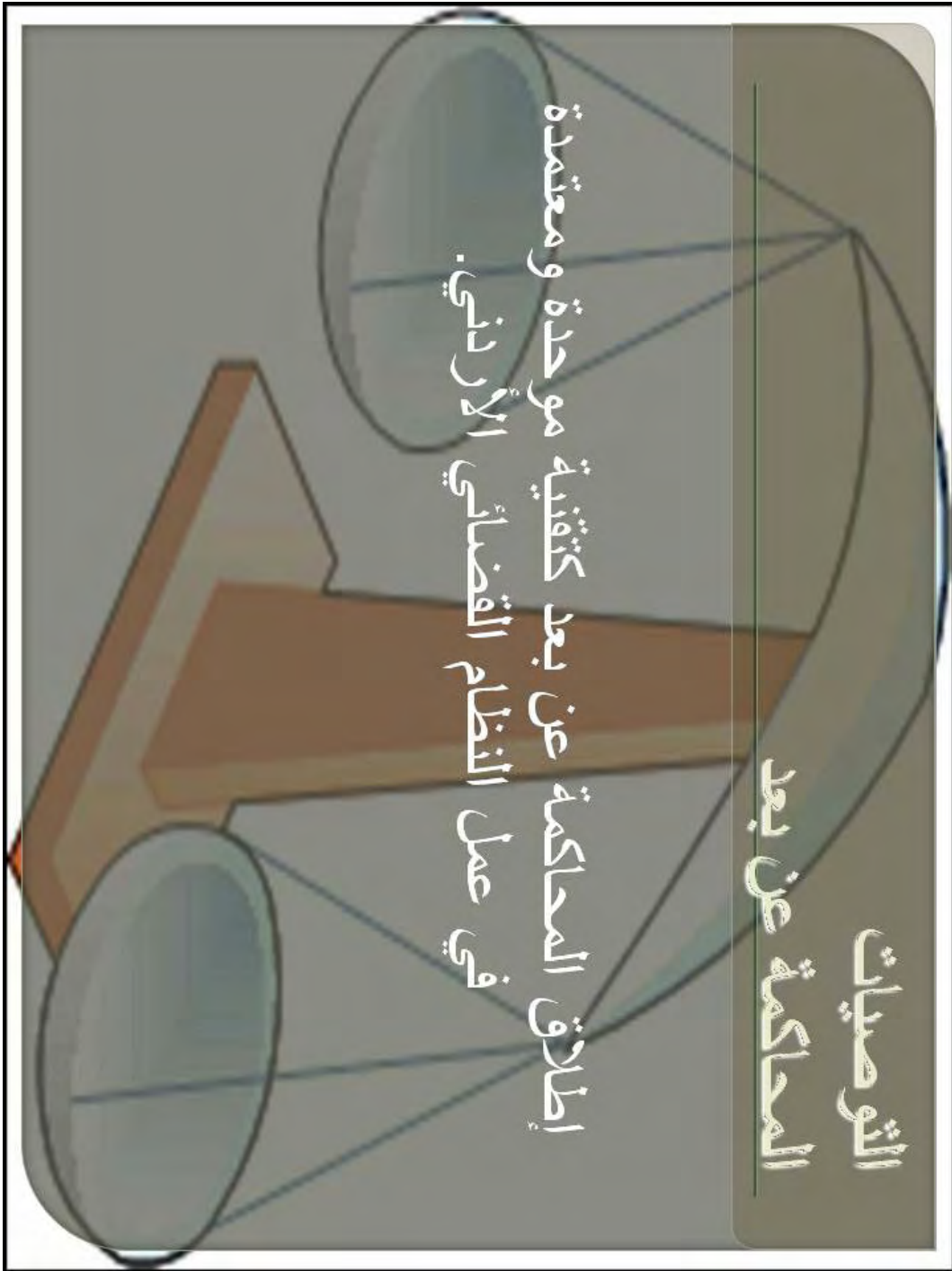


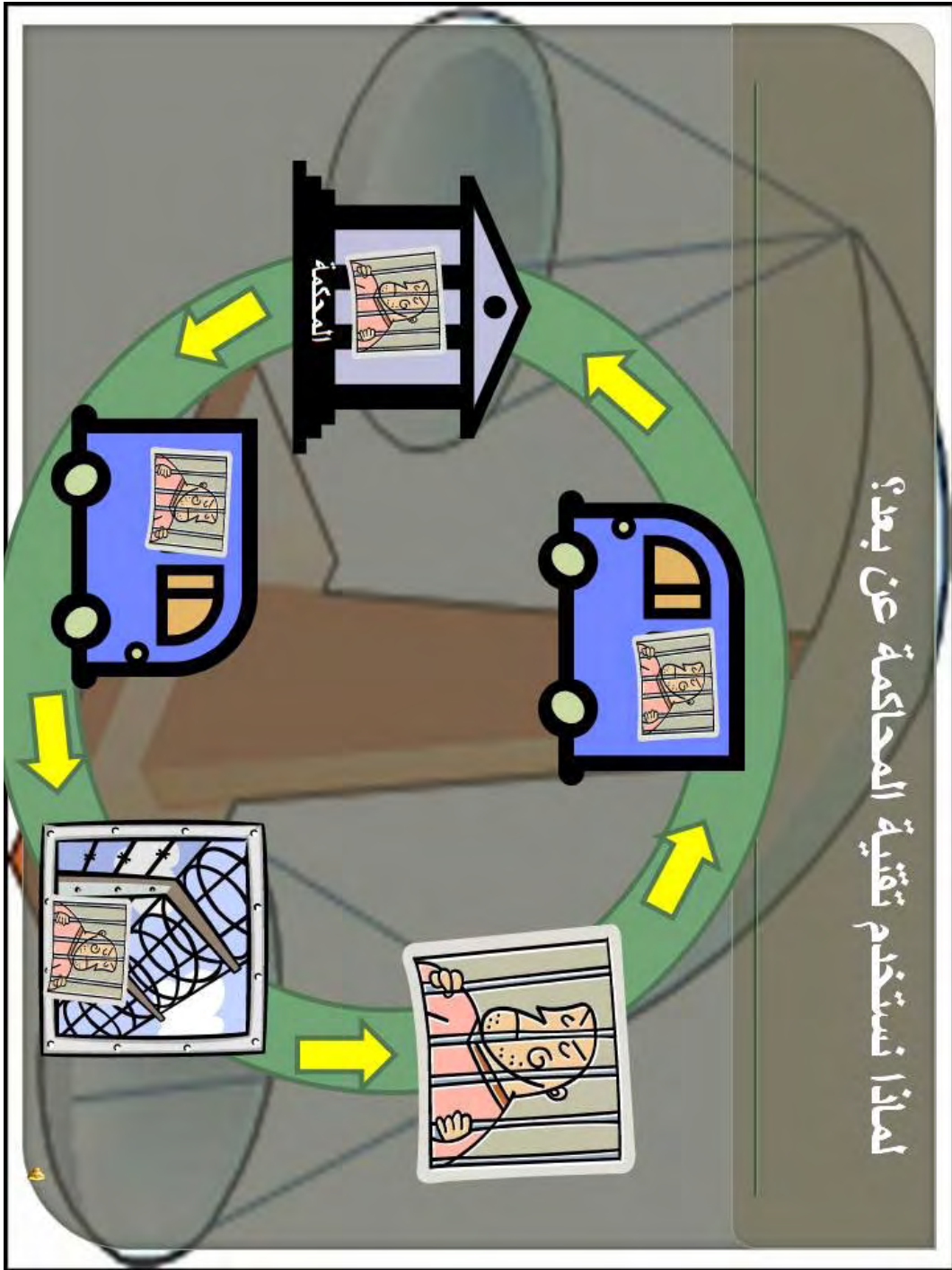


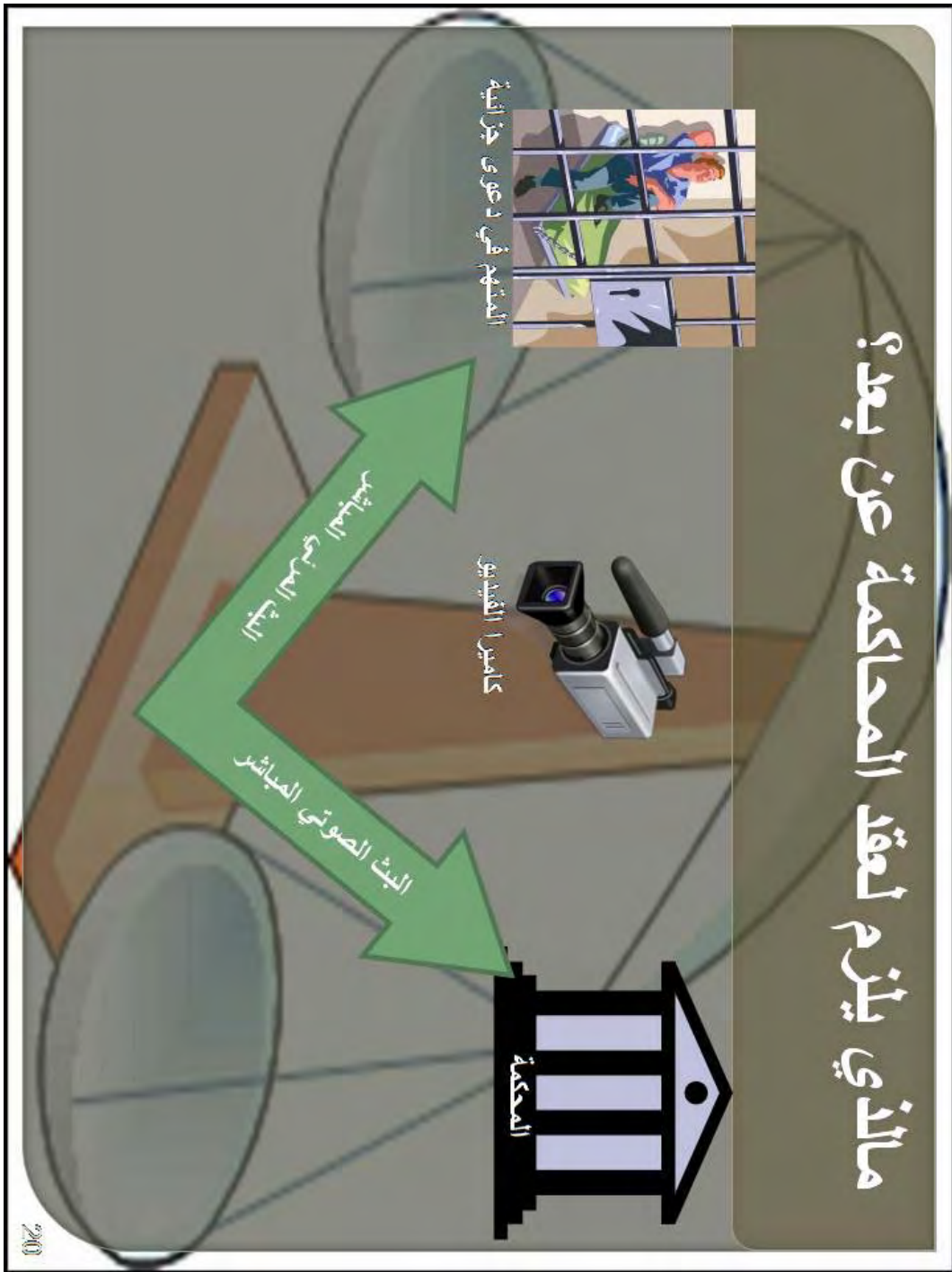


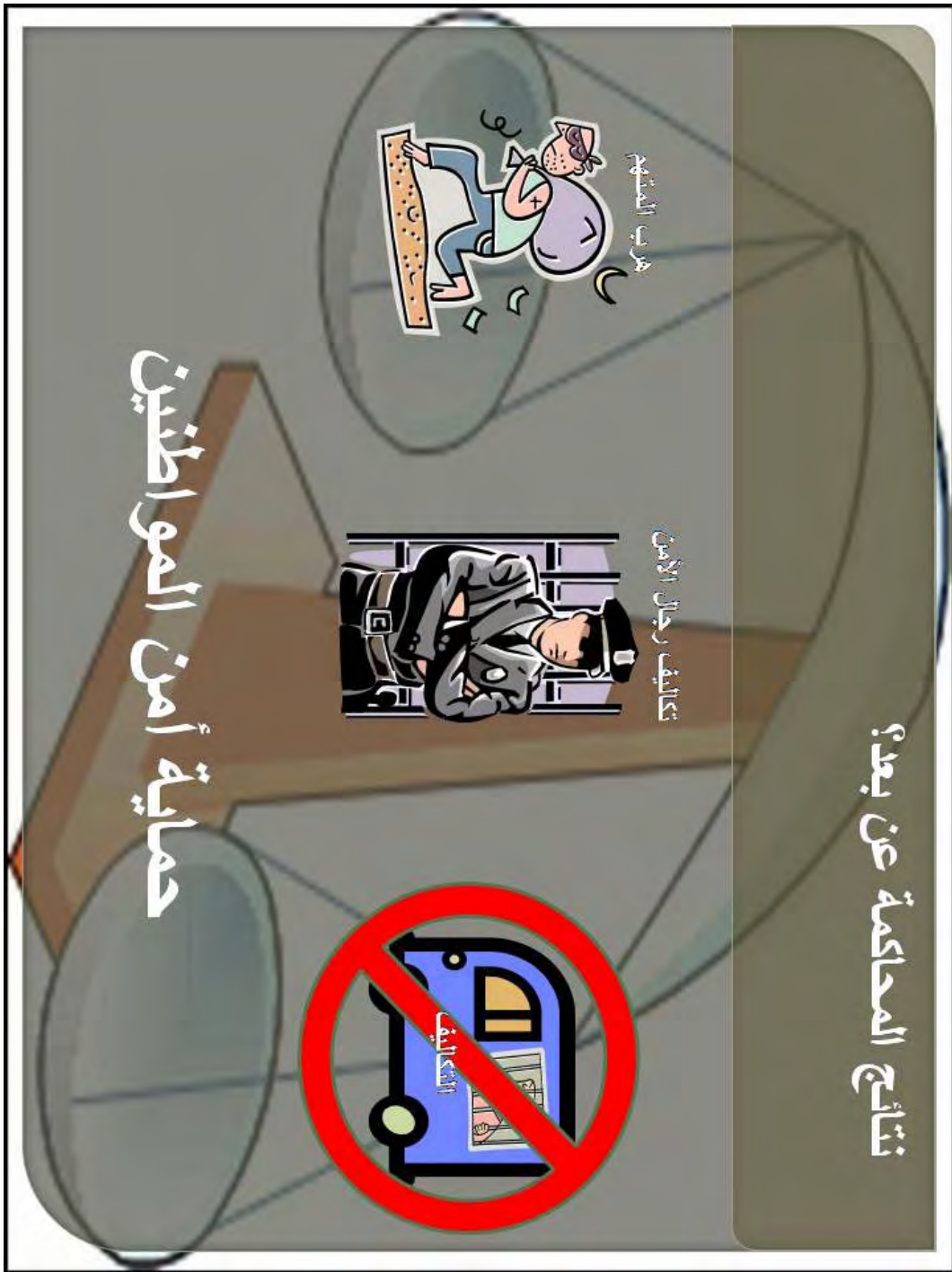


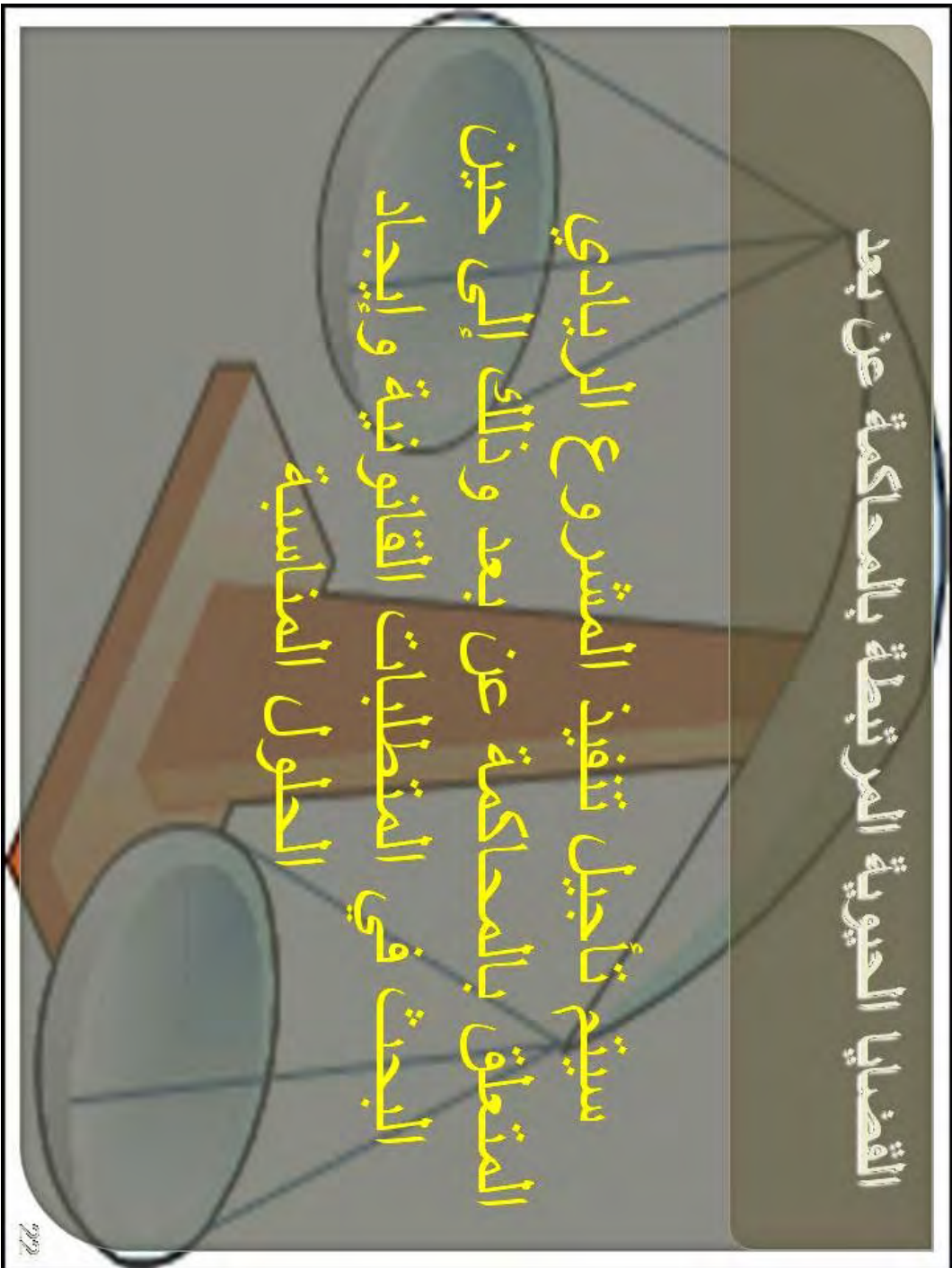


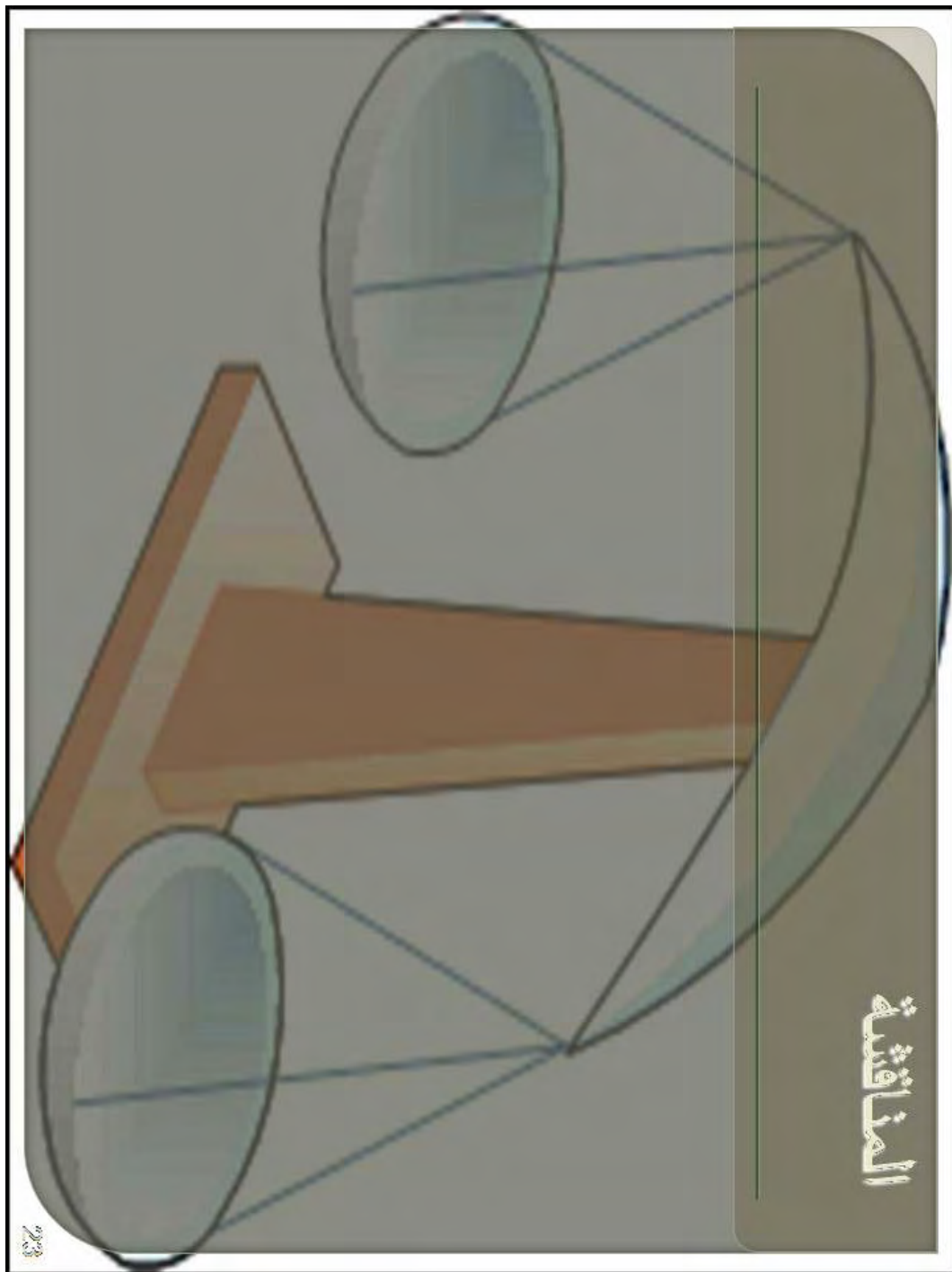












Appendix E - Hardware Specifications

Central E-Archiving – Server
Cluster support with all required Cluster Management software.
Required processors in each server: Two (2) 64 bit Intel XEON processors MP. Expandable to 4
Processor speed: Min. 3.33GHz per processor, Min 8MB L3 cache per processor.
FSB: 667MHz Front side bus.
Memory: Min. (4GB) ECC DDR2 400MHz SDRAM or higher MHz, single rank or dual rank 2GB DIMMs expandable to Min. 32GB (or higher) on Motherboard.
Memory Protection: such as Advanced ECC, HotPlug Mirrored Memory, Online Spare Memory, ...etc
Storage Controller: Dual channel Ultra320 SCSI RAID controller with Min 64MB Cache.
HDD: Two (2) 72GB Hot Plug, 15,000 rpm, 1", HDDs (Configured RAID 1 for mirrored OS internal to server)
DVD Drive or Combo Drive.
FDD: 1.44 MB 3.5 " FDD.
SAN Connectivity: 2xFiber Channel Cards (HBA's)
Expansion Slots: Min. 5 X 64bit/133MHz PCIX slot(s),.
Min.(2)USB ports ,Min.(1)HighSpeed Serial Port, Min.(2)RJ4 port, Min.(1) video port, and Min.(1)Graphics Port.
NIC: Min. two (2) Integrated 10/100/1000 (Gigabit) Ethernet adapters or Dual Port PCIX 10/100/1000 Gigabit network adapter, Auto sensing supports standard communication protocol. With UTP Port(s), support Win 2003 Sever Enterprise Edition, Win 2003 Sever Standard Edition, Win Storage Sever 2003, Win (98/2000/XP), IPX, and TCP/IP.
Drivers: All Drivers for HDD, CDRW/DVD and Ethernet adapters that support Win 2003 Sever Enterprise Edition, Win 2003 Sever Standard Edition, Win Storage Sever 2003, and TCP/IP (16 and 32 Bit) <u>must be provided by the manufacturer and delivered with the System</u> (Not preinstalled).
Remote Management.
Original server management software, configuration, and installation software (Utilities for installation and usage).
Form factor: Rack.
Monitor Keyboard KIT: Rack Mount KIT Max2U, The two servers to be connected to the same Rack Mount Monitor /Keyboard Kit through KVM Switch (8port KVM switch)
Power cable: MK Power cable
Power Supply: Redundant, HotPluggable Power supplies, Standard 220250 VAC / 50 HZ.
Cooling: Hotplug, redundant cooling Fans. Enough cooling and heating dissipation, designed to enable working continuously (24 Hours) without overheating and with hot swap fans

SAN Network Storage
Compliant with Open Industry Standards, ISO/ANSI Standards

Support different hard disk capacity (36GB, 73GB, 146GB, 250GB, 300GB, 400GB & 500GB)
Must have (support) Remote storage based data replication capabilities for disaster recovery & Business Continuity.
Must have the following: Multi RAID level (0,1,5, Cross RAID) Hardware virtualization Hot Spare Technology SAN (Snapshots, Snapclones & Online Backup).
Scalable, Expandable and Modular Design & Architecture.
Redundancy and High Availability to Minimize planned and unplanned downtime
All needed Software items required for the solution (SAN & Backup) whether it is vendor or Third Party items must be proposed.
All required Host adapters, cables, accessories, should be redundant.
Microsoft Windows server Environments(NT, 2000, 2003, ...)
HPUX Environments (HPUX 11.0, ...)
IBM AIX environments (4.3.3,)
Red Hat Linux (7.0, ...)
Sun Solaris Environments (Solaris 9, Solaris 8, ...)
True Unix 64
Sizing Requirements
Required initially with 3 Terabytes expandable to minimum 10TB by adding HDD only within the same offered cabinet/Configuration and up to 28TB min by adding HDD & shelves only.
Capacity of the storage system should be increased with ZERO downtime (by adding HDD only) & NOT by making backup & restore of running application
Required initially with 2 controllers with 4GB mirrored cache.
Better Backup cache for at least 96 hours.
Must support direct redundant connectivity of hosts and with SAN switches.
Must support Multi RAID Levels with the ability of mixing RAID levels.
Must support Multi LUN and LUN Security [Masking].
Must be equipped initially with 2 redundant RAID Controller.
Must include, redundant, hot swap hot spare: power supplies. Cooling fans (blowers) Enclosures. Hard Disk Drives.
SAN Management HW (SERVER) & SW must be supplied under the contract.
Management SW must be for unlimited capacity license.
Management SW must be on a dedicated Management Server which will be connected to the SAN Switches (redundant connection).
Management tools must be Web based/GUI.

Tape Back Up
Tape Library should be initially equipped with [1] drives up to 2 Drives.
Number of library slot shall not be less than 24 slots.
LTO3 "Ultrium3" technology.
Tape Cartridges must be proposed capacity of 400/800 GB.
Web-based remote management system.
Front panel display
Online backup software must be offered.

Backup Management with agent licensing to be included.
All cables and other accessories must be offered and provided.
Tape library must be connected to the fibre channel switch.
All needed software packages and licenses must be proposed.

Fibre Channel SAN Cards
Support heterogeneous Server environment on a storage Area Network (SAN)
At least (8) fully equipped Fibre channel ports with at least 4Gbit/Sec per port.
Each switch must be upgradeable to 16 fibre channel ports.
Fibre channel interface with all necessary software drivers for all proposed servers.
Non-blocking switch architecture.
Equipped with required SAN Zoning
Supports various management platform protocols such as: SNMP, telnet and web management.
All above items (1, 2a, 2b &2c) must be racked in an appropriate one cabinet

Scanning Server - Remote
Processors: One (1) Intel Pentium XEON processor, expandable to Dual processors.
Processor speed: Min. 3.4 GHz per processor.
FSB: 800MHz Front side bus.
Cache: 2MB L2 cache.
PCI-X Architecture or latest Architecture.
Memory: Min. (1GB) ECC DDR SDRAM or higher MHz, expandable to Min. 10GB on Motherboard (Expandability is preferred to be adding new memory modules, and not by upgrading and replacing the existing ones).
Memory Protection: Such as ECC, Hot-Plug Mirrored Memory, Online Spare Memory, and Hot - plug SCSI hard drives, etc.
Storage Controller: Dual channel Ultra320 SCSI RAID controller with Min 64MB Cache .
Required HDD: Three (3) 72 GB Hot Plug Ultra320 (10,000 rpm) SCSI
CD-RW/DVD Drive: Min. 24X CD-RW/DVD Drive.
FDD: 1.44 MB 3.5 " FDD.
Monitor: 17" CRT Color Screen Monitor, Plug & play with power cable.
NIC: Min. two (2) 10/100/1000 (Gigabit) Ethernet adapters, Auto sensing supports standard communication protocol. With UTP Port(s). Supports Win 2003 Sever Enterprise Edition, Win 2003 Sever Standard Edition, Win Storage Sever 2003, Win (98/2000/XP), IPX, TCP/IP.
Expansion Slots : Min. 5 PCI-X Slots
Multi-function I/O Adapters: Min. (2) USB ports (combination for the front and the rear), Min. (1) High-Speed Serial Port, and Min. (1) RJ-45 port, Min. (1) video port, and Min. (1) Graphics Port.
Drivers: All Drivers for HDD, CD-RW/DVD and Ethernet adapters that support Win 2003 Sever Enterprise Edition, Win 2003 Sever Standard Edition, Win Storage Sever 2003, IPX, and TCP/IP <u>must be provided by the manufacturer and delivered with the System (Not preinstalled).</u>
Original server management software, configuration, and installation software (Utilities for installation and usage).
Form factor: Tower
Keyboard: Enhanced keyboard 104 Keys (imprinted A/L keyboard) or latest number of keys.
Mouse with Pad: MS Compatible Mouse with Pad.
Power cable: MK Power cable
Power Supply: Redundant, Hot-Pluggable Power supplies, Standard 220-250 VAC / 50 HZ.

Cooling: Hot-plug redundant cooling Fans. Enough cooling and heating dissipation, designed to enable working continuously (24 Hours) without overheating and with hot swap fans
Complete Original Documentation, Manuals, Setup Utilities for installation and usage.
MS Windows 2003 Server OS, Standard Edition. The software will be provided by MoICT. The bidder should be responsible of installing and operating the required OS in CSPD sites.

Scanner
Paper size: A4 and Legal sizes [max width = 216mm (8.5"), max length = 356mm (14")]
ADF (Automatic Document Feeder).
Built in handling for ADF operations
ADF capacity: up to 200 pages of mixed size document Sheets capacity
Simplex and Duplex scanning.
Hardware resolution: Min. 600 dpi, color image processing.
Grayscale Levels min. 256 (8-Bit).
Scan speed (in Simplex mode): Min. 60 ppm for A4 at 200dpi (monochrome or color).
Scan speed (in Duplex mode): Min. 100 ipm for A4 at 200dpi (monochrome or color).
Double Feed Detection.
High quality scanning through support for multi-color drop out, automatic color / binary detection and dynamic threshold support.
Image manipulation through auto-deskewing, paper size detection and image cropping.
Durability: should be certified for a scan cycle of not less than 10,000 pages per day.
SCSI Interface with cables (adapter) interface or High Speed USB connectivity.
Scanning must be supported and controlled by software
Compatible operating systems: Wind (98, 2000, XP) Pro Edition, Win NT, Win 2003 server.
Drivers: All Drives that supports WINDOWS (98, 2000, XP) or latest version, WINDOWS 2003 and all necessary software drivers including TWAIN, ISIS drivers to support the required system Must be delivered with the System (Not preinstalled).
Power Supply: Standard 100/220-250 VAC, 50/60 Hz, and MK Power Cable
(FCC, UL) OR (TUV) OR (CE), and ISO 9001 OR ISO-9002 compliant
Complete Original Documentation Manuals, Setup Utilities for installation and usage

29. Appendix F – Software Specifications

Request for Proposal
Electronic Document Archive (EDA) System
General Specifications

Company Profile and General Information

The bidder shall submit information concerning its history and expertise in the field of Electronic Document Archive. The bidder shall submit a list of references where similar systems have been installed. We reserve the right to contact such references.

The bidder shall submit CV's of key personnel who will be assigned to this project and their role in the project should the contract be awarded. The CV's shall include details of professional experience including experience with previous similar system implementations.

The bidder must provide the information requested in the following tables.

Table (1) Summary of the Electronic Document Archive Systems implemented.

Table (2) Company Information

Year Established	Main Activities (Software, Hardware, Training, Consulting, Database support ...etc)	Company's experience in EDA
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Institution, Date of Implementation and Contact person	Description of the system	Remarks

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Table (3) Company Profile

Number of employees (Full time)	Number of Developers & System analysts involved in EDA	Number of Technical Support Team	Number Database Support	Project Management (CVs must be included)

Table (4) Project General Activities and Other Remarks

Include the estimated completion time for these stages:				
Document business requirements and the scope of work	System Implementation	Customizations and Functional Testing	Administrators and end users Training	Final Acceptance
The vendor must provide at least 2 case studies for customers who implement similar project in Jordan and out side Jordan				

Table (5) Electronic Document Archive System General Specifications

Specification	Y/N	Comments
General		
The system must be provided with full (Arabic/English) user manuals.		
The system must include API/development tool kit to allow for the integration of the system with other line of business applications.		
The Vendor must have access/own the source code of the System.		
The vendor must have at least 5 years in the EDA field and at least 3 customers from the government sector		
The system must integrate with a workflow system.		
The system must have separate interfaces for the administrators and the end users.		

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Specification	Y/N	Comments
Licensing must be based on concurrent users		
The server application can be installed on multi physical servers on any locations.		
<i>Web Capabilities</i>		
Internet/Intranet ready. No modifications needed to be accessible from the Internet/Intranet.		
Search & retrieval operation to be supported via the web browser as well as the standard client.		
Documents displayed through web browsers will be converted to PDF format during retrieval.		
The system must have the document handling features available in the user client application available through the web browser. (Update document indexes; upload images and MS office documents).		
System administrator must be able to generate pre-defined reports from the web browsers (i.e. Users Information and privileges, Productivity Summary, Documents Distribution and etc).		
The system must enable the administrator to create custom reports using technology relative to the selected EBMS		
<i>Database</i>		
The system must support Oracle, MY SQL and/or MS SQL Server as database engines.		
EDMS Database Design and Definition to be stored in the RDBMS can be administrated from EDMS administration session.		
EDMS to communicate natively or through ODBC connectivity with the Database Server.		
Database must be controlled by the EDMS Components		
<i>User Interface</i>		
The system viewer must be fully bilingual (Arabic/English) in the entire EDMS end-user interfaces, including trees, toolbars, menus, and system messages. Switching from Arabic to English mode and vice versa should be done without the need for the user to re-login to the system.		
The user interface must be compliant with the Windows XP and Vista environments and their standards.		
Simple users interface {Microsoft Standard} for all modules		
Users must be able to navigate the document repositories in a simple graphical manner, preferable similar to windows explorer.		
The proposed viewer must support viewing multiple documents at the same time.		
The system must have separate modules for administration and reporting and other for document		

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Specification	Y/N	Comments
scanning and indexing and viewing.		
<i>Capturing</i>		
The system must be able to use either high volume or desktop scanners.		
The system must support Black and White, gray scale, and colored images having any dimensions.		
The functionality of the scanning operation must be integrated part of the EDA system.		
The system must support TWAIN and ISIS scanning technologies.		
The system must support Duplex, simplex and batch, single image scanning from the same interface.		
Using the EDA, the user must be able to scan, index, search and view from the same interface without the need to scan from the scanner native interface.		
The system must have scanning profile to enable user to change scanner settings easily.		
The system must be able to link a scanner profile with certain document type of name, so that when the user scans a specific document the system will automatically choose the appropriate scanner profile.		
The system must be OLE compliant: all OLE objects such as WORD files, EXCEL sheets shall be viewed from within the system without the need to start the corresponding application. The option to view the document in their native viewer should be available.		
The system must have the ability to include several data object types in a single document and to be viewed simultaneously using the same viewer.		
<i>Indexing</i>		
The system must support basic document properties, which are minimum document indexing fields, such as the document name, creator name, creation date.		
The system must include Out-of-the-box support for Indexing capabilities.		
The system must support user-defined index fields. These fields will be used in indexing different documents types		
The system must have a user-defined indexing utility that will allow the system administrator to maintain and create solutions.		
The system must support an easy GUI design feature that will allow the system administrator to modify and change the structure and shape of the indexing fields.		
The system must support, Free Text, Numeric, Date, Code Files, and auto increment fields as field types.		
The system must support mandatory and optional fields.		
The system must have the option to define some user-defined index fields as unique-index.		

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Specification	Y/N	Comments
All user-defined indexing fields must be searchable.		
The system must support the use of document categories for additional classification of documents		
The system must support the indexing using keywords.		
The system must support the use of user pre-defined document sets (Document Templates) to allow the user to easily add multiple documents.		
The system must have the ability to accept English and Arabic document identifiers.		
<i>Image Enabling</i>		
The system must provide an image-enabling feature. This feature will allow the system to add document management features to any database application with out the need for the source code of the applications.		
The system must be able to image enable Windows Applications and other legacy applications running through terminal emulators or though a web browser.		
The system must allow the user to search in the EDA database and images using the keys of image enabling, without the need to access the original database application, from the native EDA interface.		
The system must have the ability to limit the user's access.		
<i>Search & Retrieval</i>		
All user-defined indexing fields must be searchable fields.		
The system must allow the user to search the entire database for a certain document (Global Search)		
The system must have the ability of searching using the document categories.		
The system must have the ability to store user-queries so that the user will be able to search easily for certain documents.		
The system must allow the administrator to modify, update or delete the user query from with in the system.		
The system must support (AND) and (OR) operation is search.		
The system must support locking (check in/check out) where a user can lock a document to prevent other users from performing any modifications to it, while allowing them to view it.		
The system must allow simultaneous viewing of the same document by many users in the system.		
The system must have a recycle bin. This recycle bin will contain all the deleted documents by the users. The deleted document will remain in the recycle bin until the system administrator purges them or restores them.		
<i>Image Processing</i>		

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Specification	Y/N	Comments
The system must have imaging functions to include zoom in, zoom out, rotate, flip, image panning, and magnifier.		
The system must have the image enhancement functions like scale-to gray, despeckle, deskew, cropping... etc.		
The system must support scanners that have image enhancement functions that come with the scanner hardware specifications.		
The system must have annotation capabilities including rectangle, blackouts, lines, stamps and free hand annotations and User Signatures.		
Users must be able to rearrange pages of the documents (drag and drop) and insert and remove pages, according to their security profiles.		
User must be able to quickly preview document pages before opening the document for actual work, using thumbnails.		
Users must be able to put pre-defined stamps as annotation overlays. Users should be able to define new stamps as well.		
The system must be able to print the document from within the main system interface.		
The user can print the document with or without the associated annotations.		
The images in the system must have one of the standard image formats utilizing standard compression that can be opened by international viewers.		
The system must store the images using standard TIFF format. The system must use Group 4 compression for black and white documents and must use JPEG compression for colored images. Switching between compression criteria must be automatic according to the image type.		
The system must expose a set of API that can enable other application to use the imaging functionality of the system using standard programming languages.		
<i>User Security</i>		
The system must allow the administrator to define users and user groups and their security profiles in a GUI interface.		
The user security profile includes password, role and permissions on all the objects in the system.		
The system must have full Configurable user access to all filing structure levels (document/ folder/ drawer/...etc.), document types, and queues.		
The system must be able to assign user rights on every object in the storage tree. Right will include (view, add, delete, update, copy...etc)		
Users must be grouped on security basis, meaning that all the users in one group must have the same security		

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Specification	Y/N	Comments
permissions.		
The system must support unified login feature, utilizing the user names of the AD Windows Domain, without the need to define users manually.		
The system must support security levels. Security levels are applied to user and documents, where the user will be able to view the documents in his security level or at lower levels.		
The system must have the ability to activate and deactivate a user account without the need re-define his security profile.		
<i>System Administration & Monitoring</i>		
The system must have the ability to record all modifications to system objects using a transaction log.		
Administrator should be able to view the transaction log using classification filters to easily locate actions.		
The system must have the ability to show the system administrator the status of all the documents in the system.		
This transaction log can be enabled or disabled according to administrator decision.		
The system must have a tool to generate system reports. The reports include users and their privileges, data objects and other system vital statistics.		
System Administration must be bundled in a single module, where the system administrator can control the system from one interface.		
The system must have different user interfaces for the administrator and the end user.		
<i>Faxing & Email</i>		
The system must allow the user to receive and send email messages utilizing Microsoft Exchange from within the document management system interface.		
The system must have the optional ability to send and receive documents as a FAX directly and automatically archive it to the system.		
<i>OCR</i>		
The system must have built-in English OCR engine.		
The system must be able to generate text content from the scanned documents.		
The system must be able to generate OCR results in RTF, HTML, Word Perfect or plain text formats		
The system must have the ability to OCR certain zones in the image document rather than the entire document.		
Integration options must be available to integrate other OCR engines with the system.		
<i>Document Route (Collaborative Workflow)</i>		

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Specification	Y/N	Comments
The system must have an internal routing engine that facilitate sending documents between EDA users in a collaborative mode (3 rd part integration is not acceptable).		
The user should be able to send documents to any number of users in two ways :		
Send the document as a copy to each recipients		
Send the document in sequence (Document Route style) and enforce the first recipient to send it to the next recipient		
The sender should be able to assign a deadline date on the message		
The system administrator must be able to define route templates to enable users to send documents in pre-configured route (unlimited route templates)		
The sender must be able to view the document route history for a certain document (send date and time, the subject, each recipient's action on the message like read, unread, deleted unread, deleted after read and etc)		
The system must log all transactions for all documents that have been routed using the system.		
The system should notify users when a new document arrives.		
Users should be able to search on Inbox and Outbox for a specific document.		
Users should be able to track the status for each document from within the user interface		
The system should allow users to forward any received document to other users and keep tracking for the route history.		
<i>Storage</i>		
The system must have the ability to classify and electronically organize documents in folders and cabinets and other storage units		
The system must a have tree like storage hierarchical structure to allow the user to classify and organize his documents.		
The system must have the ability to store document in several locations to create multiple document repositories.		
The proposed solution must support storing images on RAID storage, NAS and SAN storage.		
<i>External Viewer (CD Viewer)</i>		
The system must have an external stand alone CD Viewer module with ability to export subset of the system documents in PDF format		
The CD Viewer must be able to view the documents directly from the CD (Not from the PC).		
The CD Viewer must be able to encrypt the exported files.		
The login to CD Viewer must be protected by a user name		

Business Case Feasibility Study for Electronic Court Modernization

Specification	Y/N	Comments
and password.		
The CD viewer must provide search capability (document properties, indexes, keywords, categories and etc).		

30. Appendix G – Document Data Index and Classification

Suggested Document Data, Index and Classification Scheme

1. Metadata for Each Document

- a. System supplied date of scan
- b. System supplied operator – scan
- c. System supplied date of index update
- d. System supplied operator – index

2. Case Data

- a. Case or File Number
- b. Judge
- c. Case Type/Classification
- d. Attorneys Allowed to Access Case (Multiple)
 - i. Use of unique Bar Number is recommended, if Bar registration file is available to retrieve name and contact information

3. Document Data

- a. Document Type
 - i. Pleadings
 1. Party
 2. Attorney
 - a. Use of unique Bar Number is recommended, if Bar registration file is available to retrieve name and contact information
 - ii. Power of Attorney
 - a. Party
 - b. Attorney
 - i. Use of unique Bar Number is recommended, if Bar registration file is available to retrieve name and contact information
 - iii. Answer(s)
 1. Party
 2. Attorney
 - a. Use of unique Bar Number is recommended, if Bar registration file is available to retrieve name and contact information
 - iv. Evidence
 1. Party
 2. Attorney
 - a. Use of unique Bar Number is recommended, if Bar registration file is available to retrieve name and contact information
 3. Date of Hearing
 - v. Forensic or Expert Evidence
 1. Party
 2. Attorney
 - a. Use of unique Bar Number is recommended, if Bar registration file is available to retrieve name and contact information
 3. Date of Hearing
 4. Expert

- a. Free Field Text for Expert's Name

- vi. Notifications
 - 1. Type
 - 2. Date of Notification
 - 3. Date of Hearing
 - 4. Party
 - 5. Attorney
 - a. Use of unique Bar Number is recommended, if Bar registration file is available to retrieve name and contact information

- vii. Transcriptions
 - 1. Date of Hearing
 - 2. Typist ID

- viii. Judgments
 - 1. Preliminary
 - 2. Final

- ix. Miscellaneous
 - 1. Free Text Field to Describe Miscellaneous Document

- x. Fee Receipts

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