



**Building interoperability for European civil
proceedings online Conference
EPOC IV Project Achievements**

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European Commission – Directorate-General Justice, Freedom and Security



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- Project Overview
- Result Overview
- Objective Activities and Results (Obj. 1&2)
- Problems with developing a Data Standard
- Common Data Items (Lack thereof)



Project Overview

- Three year duration April 2009 to March 2012
- Six member states participated with 8 partners in total
- 5 interlinked objectives
- Partners + Experimentation
- Project Office + Leadership
- Funding €2m
- Deliverables have provided operational benefits

Objective	Success?
<p><u>Objective 1 – Drafting of a Data Format</u> The EPOC IV Data Standard is already being used for communication with the New Eurojust Decision Article 13 templates.</p>	Exceeded
<p><u>Objective 2 (a) - Evolution of the EPOC software</u> 5 different implementation scenarios developed, providing maximum flexibility, increasing possible uptake. Additional tools developed to increase NAS Software capabilities</p>	Exceeded
<p><u>Objective 2 (b) - Experimentation with the EPOC NAS software</u> Different Scenarios experimented with by 3 Project Partners Additional Experimentation done by French Project Partner</p>	Exceeded
<p><u>Objective 3 – Promotion of EPOC</u> Involvement with 3 external initiatives, actively contributing to European Semantic Interoperability.</p>	Exceeded
<p><u>Objective 4 - Future Evolution of EPOC</u> Continuation with EPOC Concept resulting in application for EPOC V</p>	Success
<p><u>Objective 5 - Statistics on organised crime and corruption</u> Found that data required currently not available due to low incidence and lack of common data. Secondary objective attempted</p>	Completed

The logo for EPOC IV features a red lowercase 'e' inside a circle of twelve yellow stars, followed by the letters 'P', 'O', and 'C' in blue, and a red 'IV' with a horizontal line underneath.

EPOC IV Objective 1 Activities

- Drafting of a data format to exchange structured data between different case management systems (XML scheme)
 - Via Eurojust, Questionnaires on Existing Data Standards
 - (15 completed)
 - Via eJustice Working Party, Questionnaires on Data Sources and Data Types
 - (18 completed)
 - Data Standards mapped into EPOC IV
 - (17 including EJ CMS, EPOC III+, Art. 13, BG, CZ, FR, IT, LT, NLx2, PT, SEMIC.EU Person Core, Europol AWF, Schengen Sirene, EAW, UN/CEFACT, Stork)
 - NIEM used as a working model for EPOC IV. Semantics and Communication Package specification



Objective 1 Results

- EPOC IV standard mapped 1113 (excluding relationships) different attributes, semantically defined based on NIEM where possible.
- from Big Wide Mapped Picture ...
moved to Small Specific Communication Pictures
 1. Comm_to_EJ_CMS. Data Items = 128 (excl. additional info)
 2. Article13 comm. Data Items = 82 (Operational benefits from EPOC IV)



EPOC_{IV} Objective 2 Activities

- Evolution of the EPOC software to connect to diverse case management systems used at the national level
 - The EJ CMS used as starting point
 - Iterative developments done through the project
 - Highly configurable to ensure flexibility
 - Features to manage information and exchange packages
 - Experimentation partners agreed to test software during experimentation with different scenarios

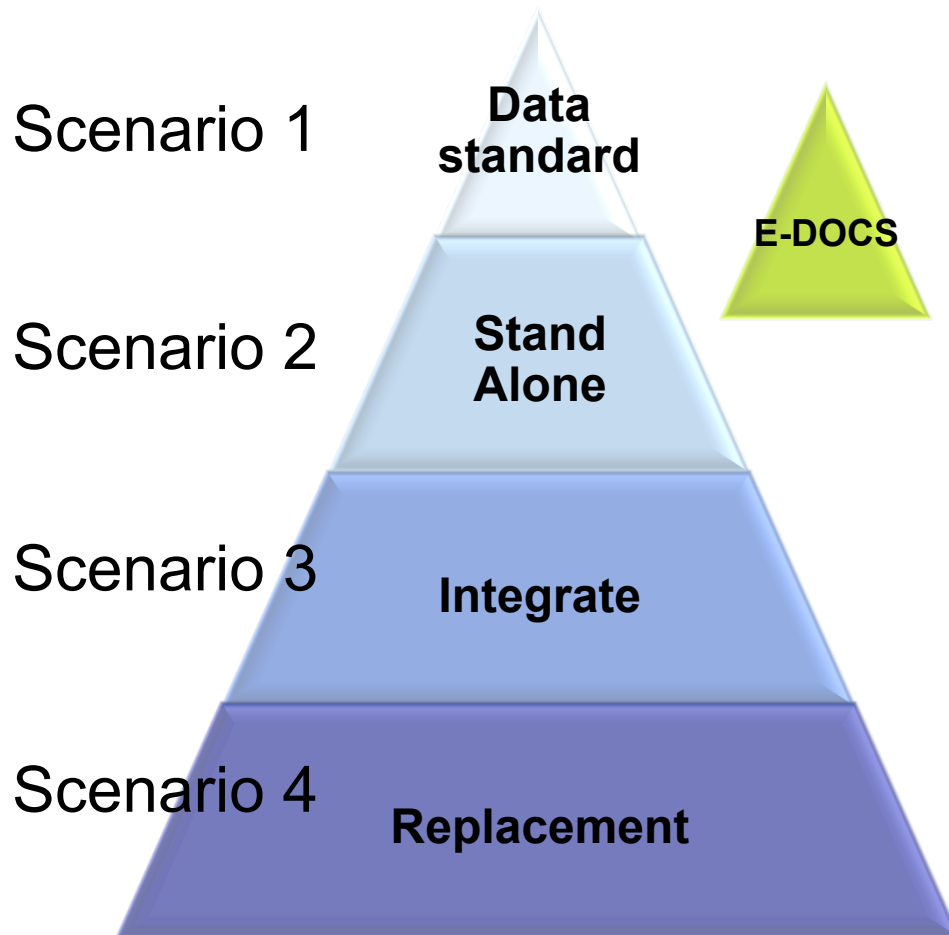


EPOC IV Objective 2 Development Results

- Software = EPOC National Authority System (NAS)
- Information Management Tool that could be used by any National Authority
- NIEM Naming and Design Rules considered during NAS development
- Metadata approach - highly configurable
- Support tools available for implementation
- EPOC NAS can import/export information
- Encryption certificates used to protect xml package
- EPOC NAS can be implemented in 5 different ways (Scenarios)

Objective 2 Scenarios of Use

- Evolution of the EPOC NAS to connect to diverse case management systems used at the national level



Assumptions

- Information exchange between National Authorities and Eurojust will increase
- Data standard will benefit the exchange of information
- Software solutions need to fit to working processes of Member States
- Manual solutions supporting compliance to the Eurojust Decision will be replaced in the future



Problems in developing a Data Standard

- *Wikipedia* - “A **standard data model** ... when in use, they enable easier and faster information sharing because heterogeneous organizations have a standard vocabulary and pre-negotiated semantics, format, and quality standards for exchanged data.”
 - New vs. Existing Data Standard (NIEM/ISA Cores)
 - Lack of common Data Attributes across systems to include in a communication
 - Lack of documented semantically defined data
 - Lack of documented standards which detail the formulating communication packages



Existing or New Data Standard

Benefits using an **Existing Standard**

- Development is quicker.
- Process has been thought out already.
- Tried and tested.
- No need to duplicate effort already spent.
- Cost benefits.

Benefits creating a **New standard**

- Can do it the way you want to.
- You can create a standard specific to your circumstances.



Existing Data Standard

- “The problem when selecting a Data Standard, is that there are so many to choose from”
- “We are suffering from a case of too many Data Standards and no interoperability”
- In the criminal judicial realm found several Member States have mature communications standards. IPS, X-Tee, Xjustiz, JAB2/Jubes, CorXML
- There were no Standards that were shared or common between Member States
- NIEM



What is the NIEM

The **National Information Exchange Model (NIEM)** is an interagency initiative providing a foundation for seamless **information exchange** on a tribal, local, state, and federal level. NIEM is a framework to:

- Bring stakeholders and communities of interest (**COI**) together to identify information sharing requirements in day-to-day operational and emergency situations.
- Develop standards, a common lexicon, and an online repository of Information Exchange Package Documents (**IEPD**'s) to support information sharing.
- Provide technical **tools** to support development, discovery, dissemination, and reuse of exchange documents.
- Provide training, technical **assistance**, and implementation support services for enterprise-wide information exchange.



EPOC use of NIEM

- **NIEM Semantics**
 - Semantic definitions for EPOC IV attributes based on NIEM v2.1 where possible
 - Otherwise use of NIEM Extension principle
 - Making use of the maturity of NIEM Semantics
- **NIEM Structure**
 - NIEM provides a structure around which you can build communications
 - NIEM provides tools by which you can validate the structure of a communications
 - Comm_to_EJ_CMS IEPD is 100% compliant to the NIEM ConTesA Conformance Report.
- <https://www.niem.gov>



Helping Europe move towards a digital single market

- European Commission's **ISA** (Interoperability Solutions for European Public Administrations) programme
- "... would mean that information can be exchanged easily and swiftly across borders ..."
- "...helping citizens and businesses to fully benefit from the freedoms of the single market."
- Action 1.1 looking at Core Vocabularies. Start with:
 - Core Person
 - Core Location
 - Core Business
- Public review of Cores just finished
- <http://ec.europa.eu/isa/>

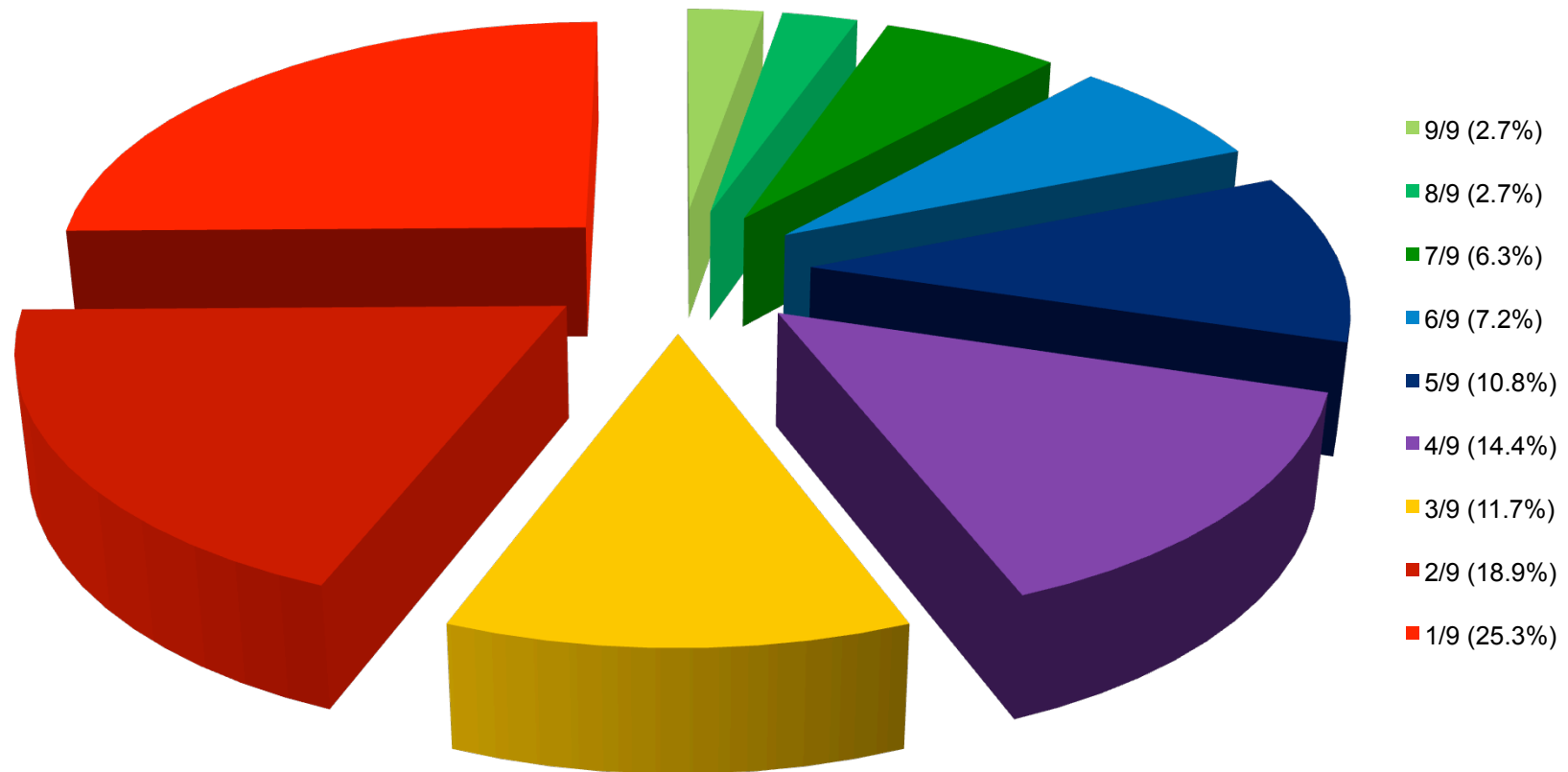


Common Data Items (Lack thereof)

- Consider the relevant Judicial Data Dictionaries incorporated into EPOC (9)
 - **Bulgaria** (BG) - Unified Information System (UIS)
 - **Czech Republic** (CZ) - ISYZ (Information system of public prosecutors)
 - **France** (FR) - CASSIOPEE
 - **Italy** (IT) - DNA Anti Mafia system [extract]
 - **Lithuania** (LT) - IPS (Information Prosecutor System) [extract]
 - **Netherlands** (NL) – GPS (Geïntegreerd ProcesSysteem)
 - **Portugal** (PT) – AGIC (Aplicação de Gestão de Inquérito Crime)
 - **Eurojust** - Existing EJ CMS
 - **Eurojust** - Decision Article 13

Common Data Items (Lack thereof)

**Data Items input into Comms_to_EJ_CMS = 111
(excluding additional info & Communication specific items)**





Common Data Items (Lack thereof)

- Most Common Data Items 9/9
 - PersonBirthDate; LegalPersonRegistrationNumber; LegalPersonName;
- Most Common Data Items 8/9
 - PersonSurname; PersonGivenName; PersonGenderCode
- Most Common Data Items 7/9
 - PersonSystemIdentifier; PersonBirthLocationCityName; PersonBirthLocationCountryIdentifier; IdentificationDocumentCode; LegalPersonSystemIdentifier; LocationAddressLine1; CrimeDescription



Partners



Questions / Discussion



Support from





**End - Building interoperability for European
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EPOC IV Project Achievements

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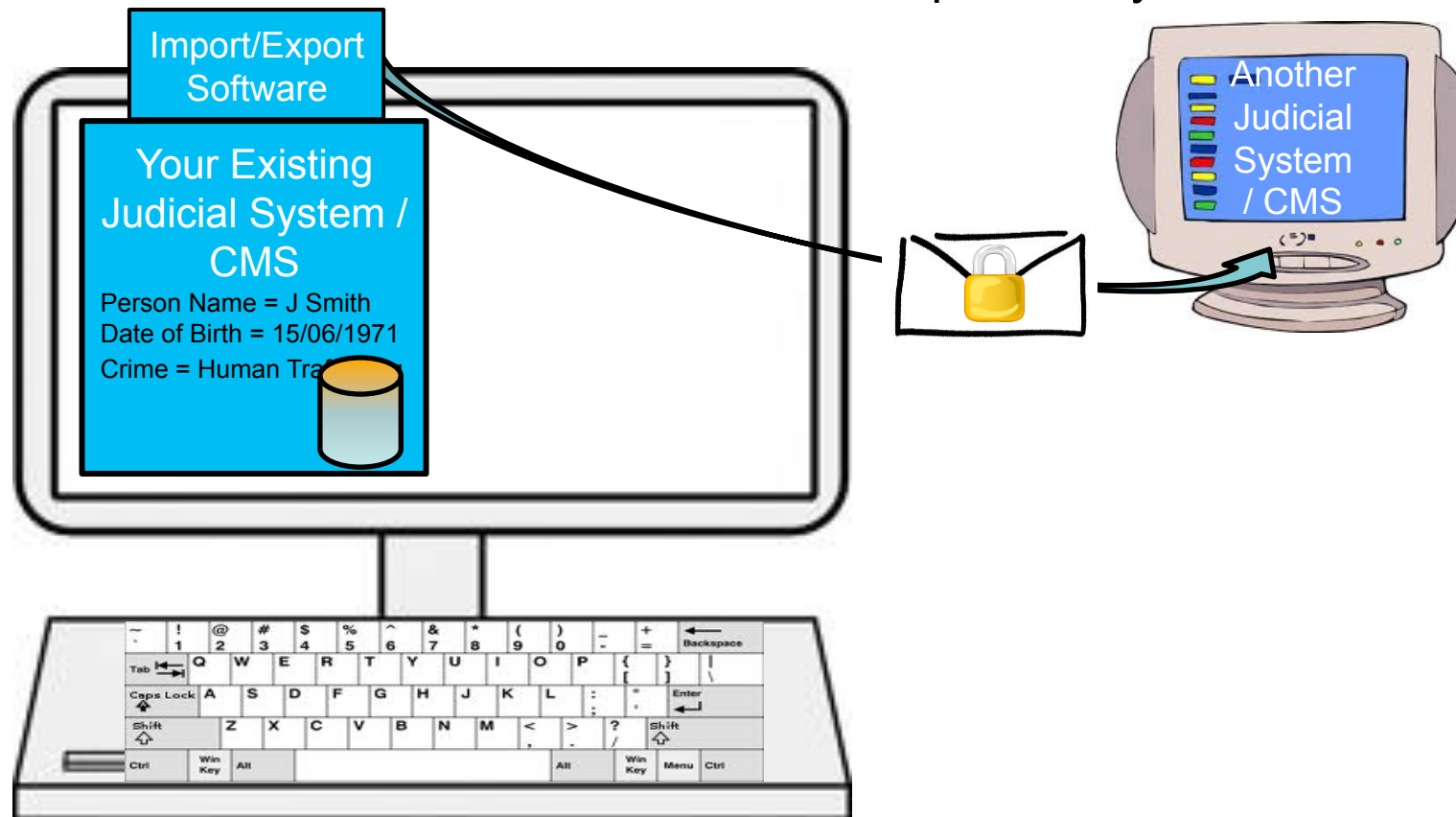
Implementation Scenarios Further Explanation

- **The slides below are not intended to be part of the presentation (due to time restraints on the day)**
- Although the Implementation Scenarios are specific to the EPOC IV project, the principles of the extent to which communication software can be used are far reaching and could be used by other projects
- The slides give any users an opportunity to use the digital version of the presentation to explain step by step the similarities and differences of the Implementation Scenarios
- They can also be read on a printed version, but you lose the benefit of the animations which help with the explanation.

EPOC NAS Implementation

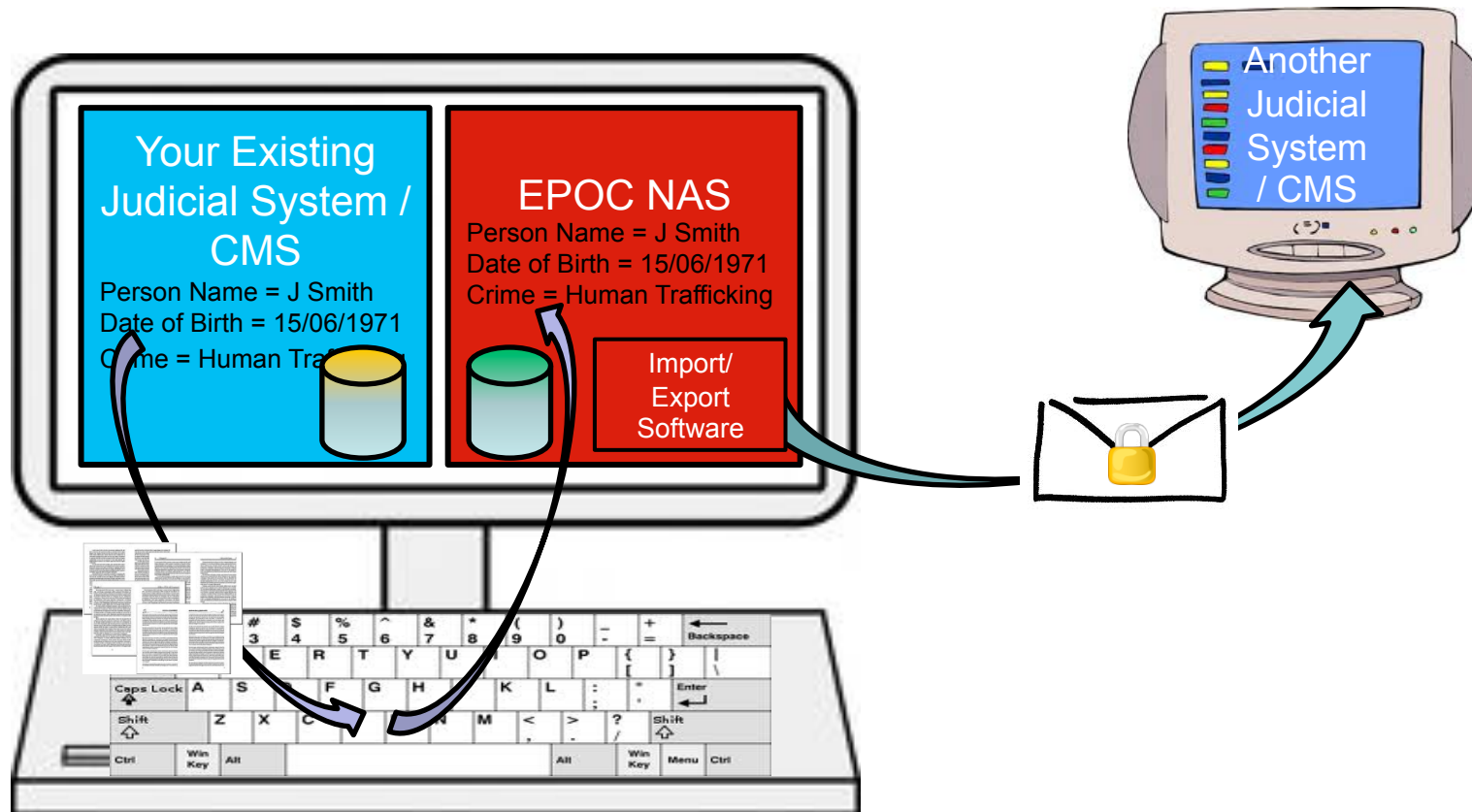
Scenario 1 – Data Standard

- Use EPOC Data Standard for design of your Import/Export Software
- Build the Import/Export Software for your Judicial System / CMS
- Use your purpose built Import/Export Software to automatically extract data
- Send communication to other EPOC compatible System / CMS



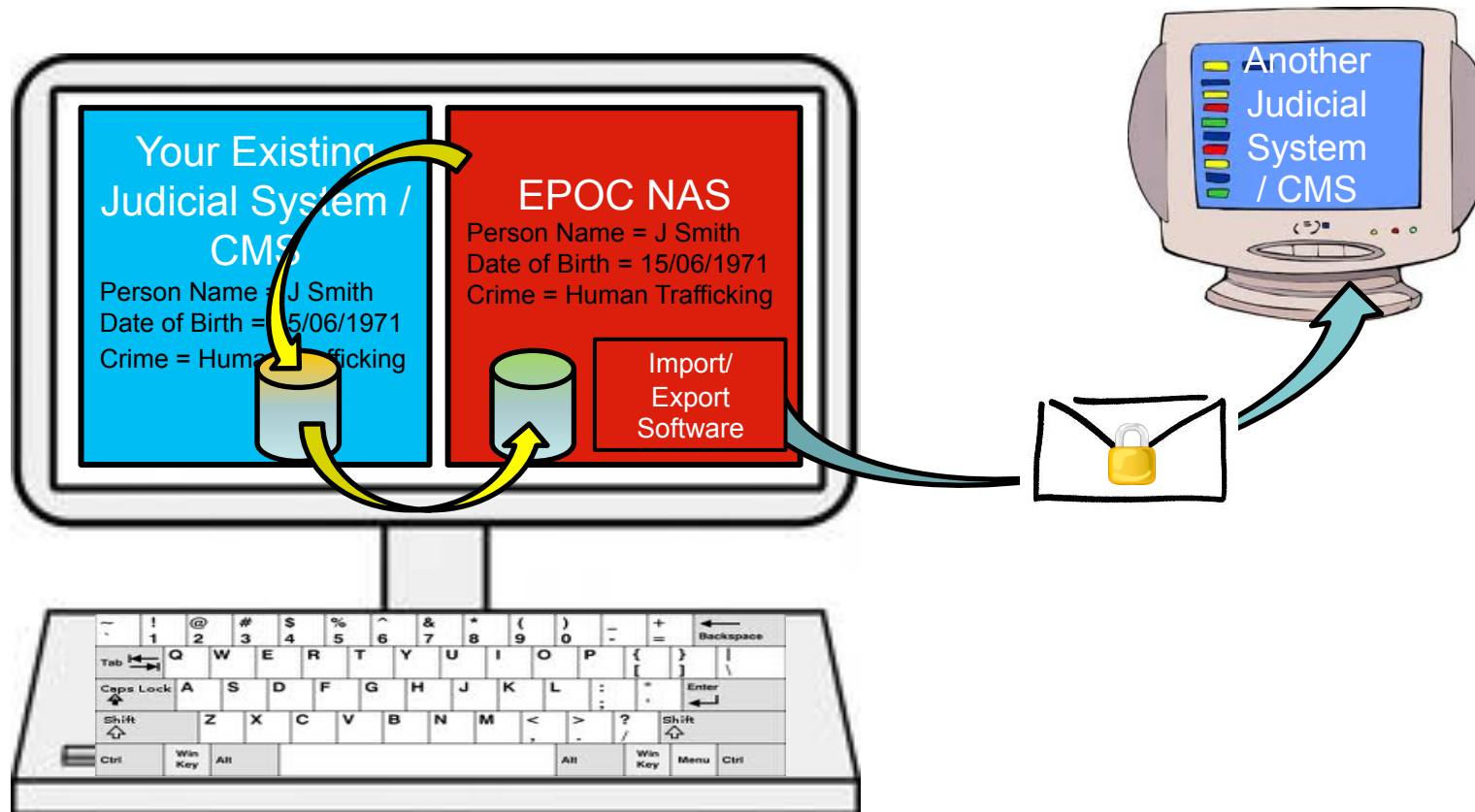
EPOC NAS Implementation Scenario 2 – Stand Alone

- Manually extract data from your Existing Judicial System / CMS
- Manually input that data into the EPOC NAS and save in NAS Database
- Use existing NAS Import/Export Software as communication tool ...
- Send communication to other EPOC compatible System / CMS



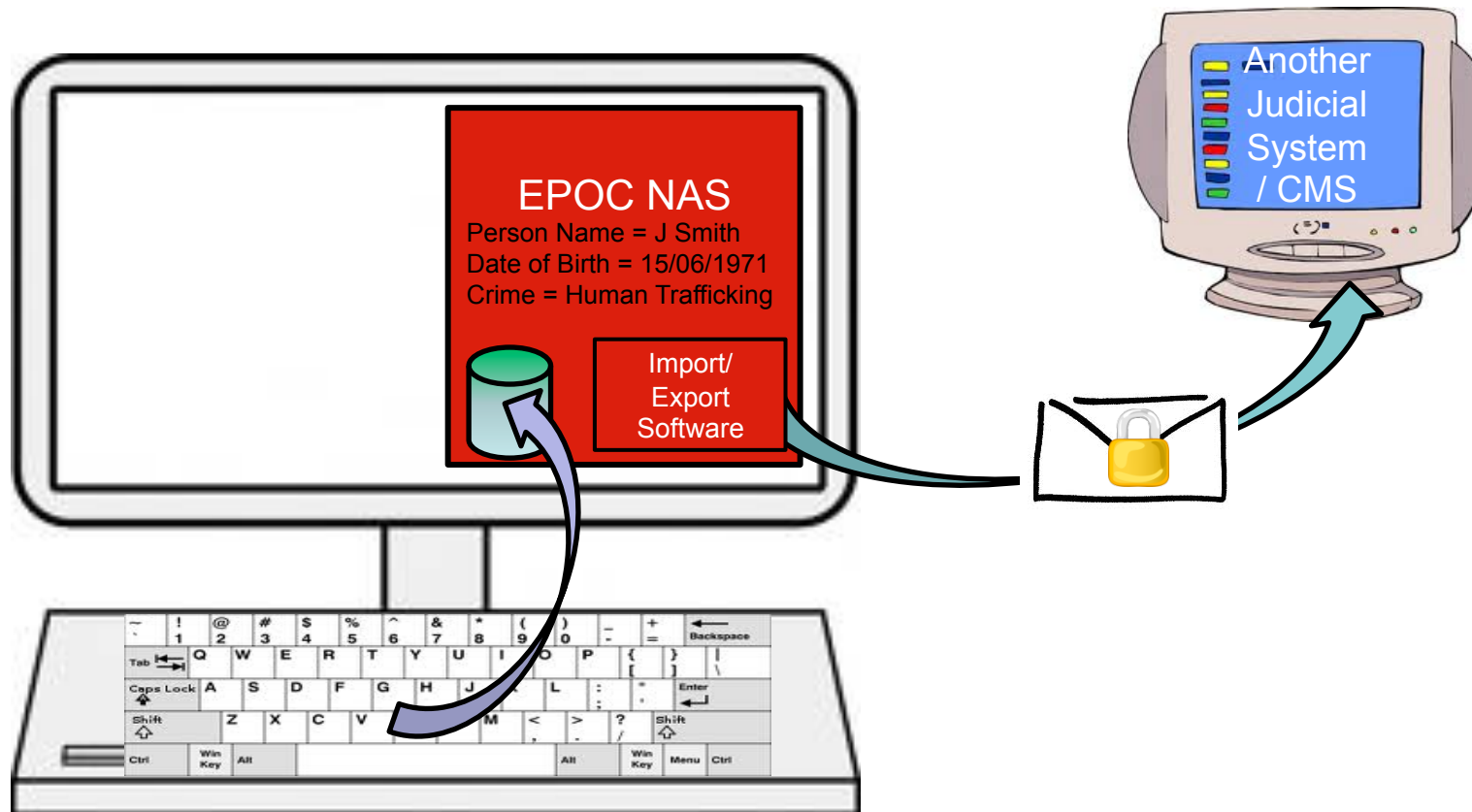
EPOC NAS Implementation Scenario 3 - Integrated

- Use NAS tools to query your Existing Judicial System / CMS
- Data is automatically extracted and saved in the NAS Database
- Use existing NAS Import/Export Software as communication tool
- Send communication to other EPOC compatible System / CMS



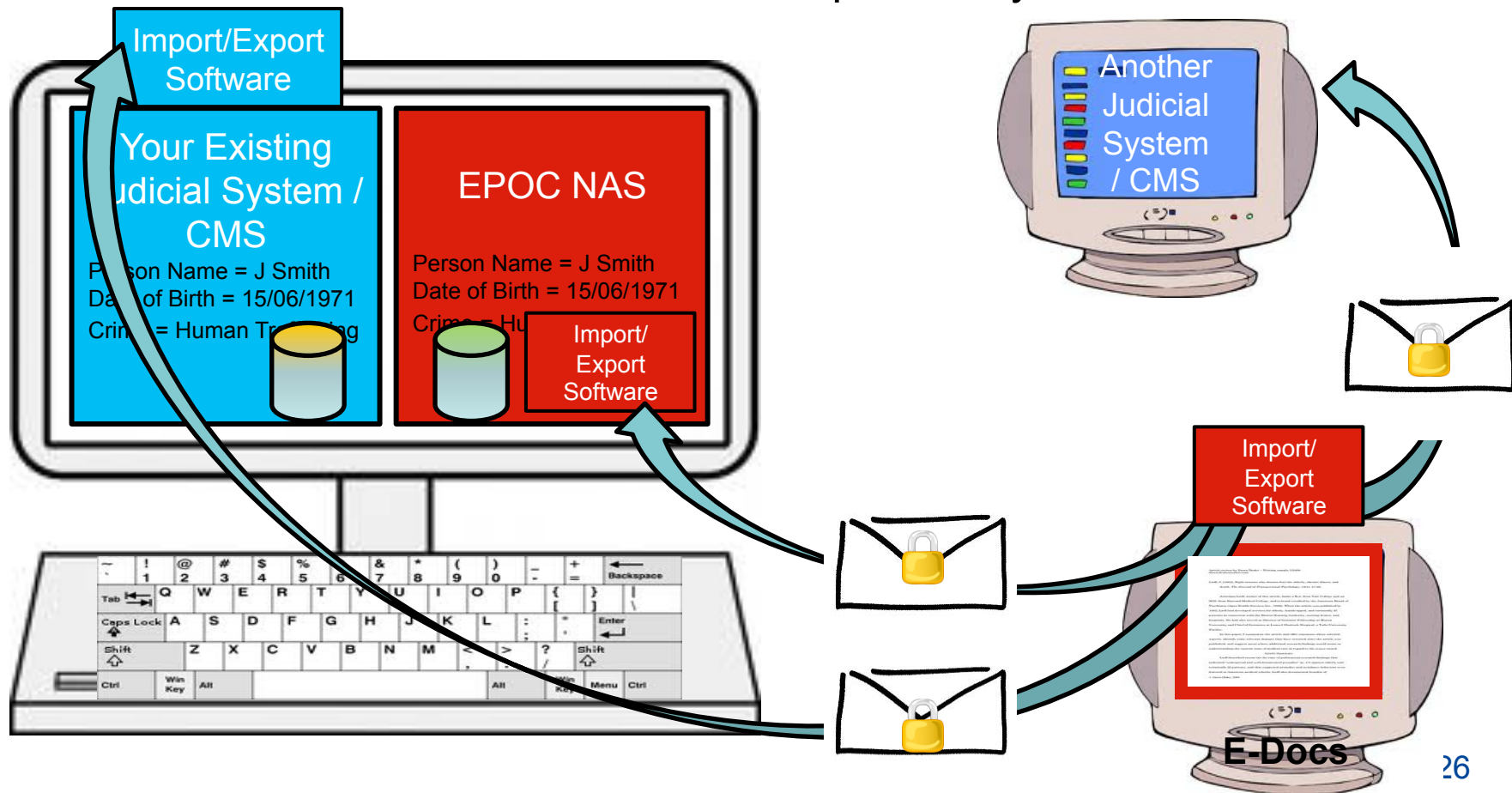
EPOC NAS Implementation Scenario 4 - Replacement

- You have no existing IT System / CMS, or want to replace with EPOC NAS
- Manually input data into the EPOC NAS and save
- Use existing NAS Import/Export Software as communication tool ...
- Send communication to other EPOC compatible System / CMS



EPOC NAS Implementation EPOC Documents (E-Docs)

- Data is inputted into a Form Template (No NAS/Servers/Databases needed)
- This data is stored in a structured way as a document (with imbedded xml)
- Use existing NAS Import/Export software as communication tool ...
- Send communication to other EPOC compatible System / CMS



EPOC NAS Implementation EPOC Documents (E-Docs)

- Alternatively ... you can extract data stored in various Judicial Systems /CMS
- Use Import/Export Software as communication tool ...
- Send the communication to the E-Docs user
- Who can read the data in a structured format on the Form Template

