

Forensic Integrated Operations Network Applications

Creating Operational Efficiencies for Forensics



The Health Sciences Authority (HSA) is a multidisciplinary agency in health sciences expertise in Singapore. It is responsible for administering the national regulatory frameworks for pharmaceuticals, complementary medicines, medical devices and other health products; the running of the national blood bank and provision of transfusion medicine services; and the provision of forensic medicine expertise, investigative forensic and analytical science services.

STREAMLINING ADMINISTRATIVE PROCESSES & WORKFLOW

Forensic Integrated Operations Network Applications (FIONA) is an IT initiative by the HSA to streamline its administrative processes and workflow associated with forensic medical services such as death investigation, autopsy, scene investigation, clinical histopathology laboratory service and forensic medical consultancy. FIONA was to support all Forensic Medicine Division (FMD) services, including the histolab, and meet the following objectives:

- Reduce manpower required for data entry
- Streamline workflow by improving the data flow among the sections within FMD
- Streamline administrative process with external agencies for case registration
- Increase operational efficiency in streamlining and reinforcement of the body management and document flow processes
- Accurately track movement of bodies and specimens using RFID and/or barcodes technologies.



CHALLENGES

- Reducing costs of manual processes
- Simplifying workflow with external agencies
- Assuring accuracies in tracking movement of body parts

SOLUTION

- Forensic Integrated Operations Network Applications

BENEFITS

- Improved workflow across multi-agencies
- Streamlined processes
- High effectiveness and accuracy in tracking process

FIONA

NCS was awarded the contract for the supply, delivery, installation, testing, and commissioning of a fully operational FIONA in May 2007.

To achieve the above objectives and HSA's direction of moving towards a paperless environment, NCS proposed and implemented an integrated suite of technologies for FIONA, including:

- Clinical mobile notebooks (C5/F5 from digimobile) are used in the autopsy suite to perform the body charting, notes taking etc while the pathologist is performing the autopsy for ease of data synchronisation to servers.
- Integrated Track and Trace framework with RFID solution was introduced to track the movement of the body/body parts and specimens. Each body/specimen is tagged immediately when it reaches the HSA mortuary. Whereabouts of the body/specimen including movement date & time are fully tracked from receipt of the body till body is claimed or disposed. The system supported an end-to-end movement tracking, which typically includes trailing from the entrance, holding area, cabinet, autopsy suite and claim/disposal.
- Application that enables capturing of the results of autopsies and laboratory electronically. Documents such as post mortem reports are prepared and generated directly via the FIONA system.

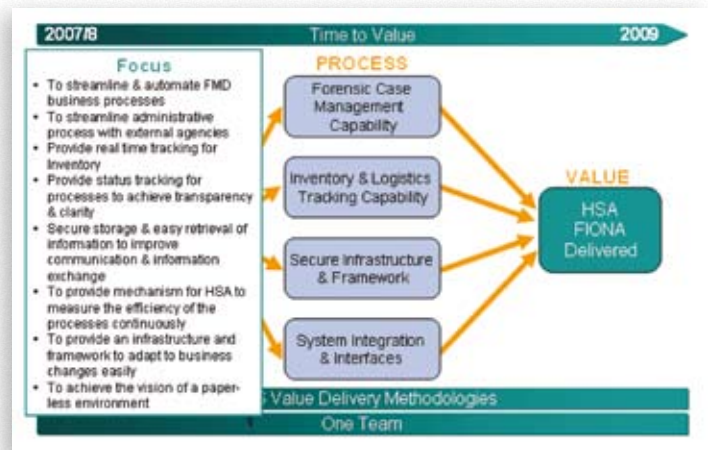
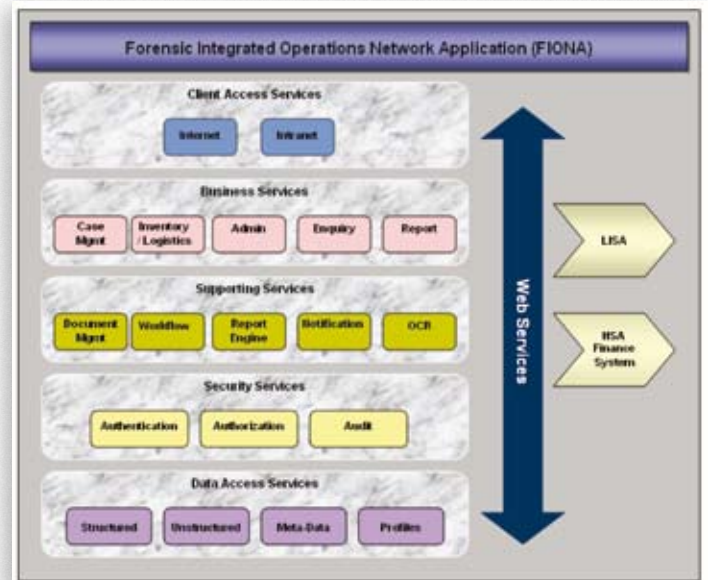
With the complex nature of forensics, there was a significant demand for domain familiarity to translate the business requirements into system workflow that can be comprehended and used easily by the scientists based on their familiar jargons and working practices.

Besides the team having to resolve technological and domain complexities, they also faced a unique challenge of working in an emotionally discharged and sometimes grim environment. However, through a concerted effort and support from HSA teams, NCS delivered the system within the stipulated implementation timeframe and budget.

The adoption of RFID technologies vastly increased efficiency in managing of body parts within the forensic settings. Costs of manual entries were significantly reduced with the use of technologies for data entries and updates.

WIRELESS, PAPERLESS ENVIRONMENT FOR IMPROVED EFFICIENCIES

FIONA proved to be a breakthrough success in creating a technology-driven, paperless and more efficient working environment for HSA. The adoption of RFID technologies vastly increased efficiency in managing body parts within the forensic settings. Costs of manual entries were significantly reduced with the use of technologies for data entries and updates. With the streamlined workflow, inter-agencies interaction such as data exchanges between Police and HSA can now take place electronically for speedier processing of cases.



Integrated services for FIONA

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