

Knowledge-Driven Decision-Making at the Crime Scene

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Knowledge driven decision making at the crime scene

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For more information see:



Forensic investigations rely on the expertise and judgment of professionals. By enhancing feedback mechanisms and continuously expanding their knowledge base, forensic experts have the opportunity to make even more well-founded decisions^{1,2,3}. Strengthening knowledge-sharing and improving decision-making processes can lead to greater consistency and a more data-driven approach in the early phases of forensic investigations⁴.

The desired situation is that forensic professionals can make decisions based on substantiated knowledge, that transparency is created about the choices made, that these decisions can be reflected upon by themselves and by other actors in the criminal process.



After a crime, the police gets called



Crime scene investigators collect traces and select traces for examination (triaging)



Certain traces are examined



Examination reports are sent to the public prosecutor and the investigative judge



Crime scene investigator requests examination of traces



Forensic public prosecutor and forensic advisor of the police discuss and prioritize requests



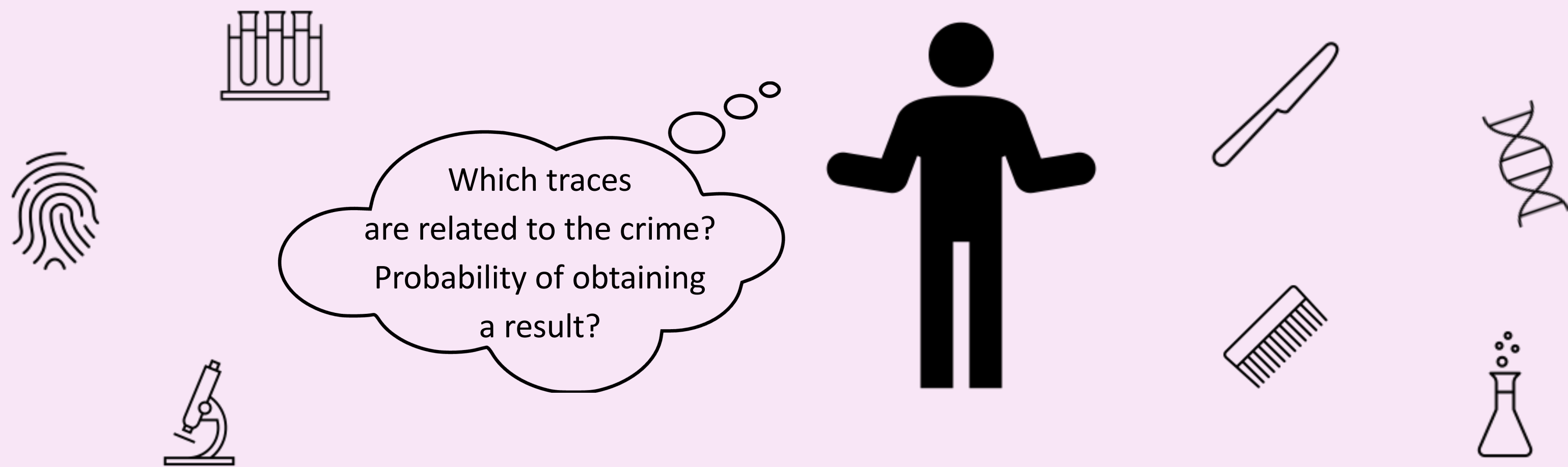
Examination orders are arranged



Traces are transported to the external labs for examination

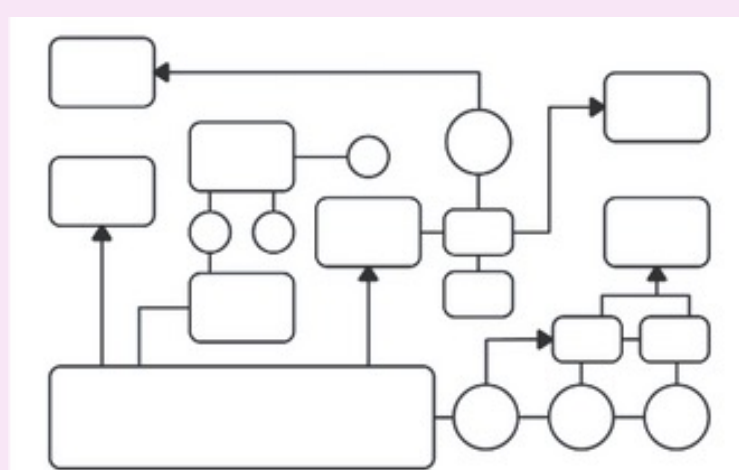
The aim is to develop an interactive support tool that can support complex decision-making within the forensic domain

This interactive support tool will contain historical case information from the National Police and Netherlands Forensic Institute, as well as published scientific data. The goal is to make the crime scene investigation data and experience driven.

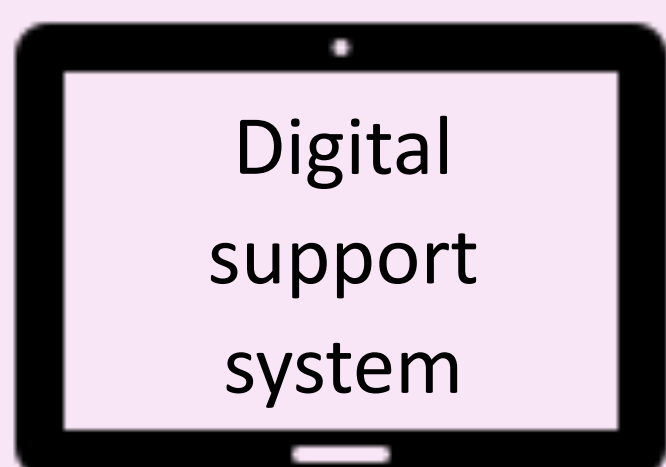


Data and experience driven

A support tool can enable crime scene investigators to access and utilize historical case data, supplemented with results from scientific research. This knowledge can help address questions related to the likelihood of obtaining a DNA profile and its relevance to the crime. In this way, the crime scene investigation will become 'data-and-experience-driven', meaning that both the valuable experience of crime scene investigators and the scientific knowledge derived from historical case data and experiments can be taken into account when making decisions.



Historical case information



Published scientific research



Personal experience



Knowledge from colleagues

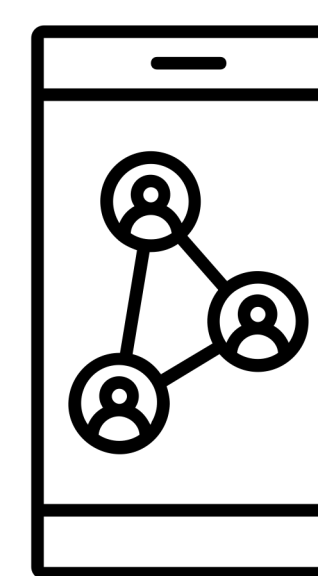
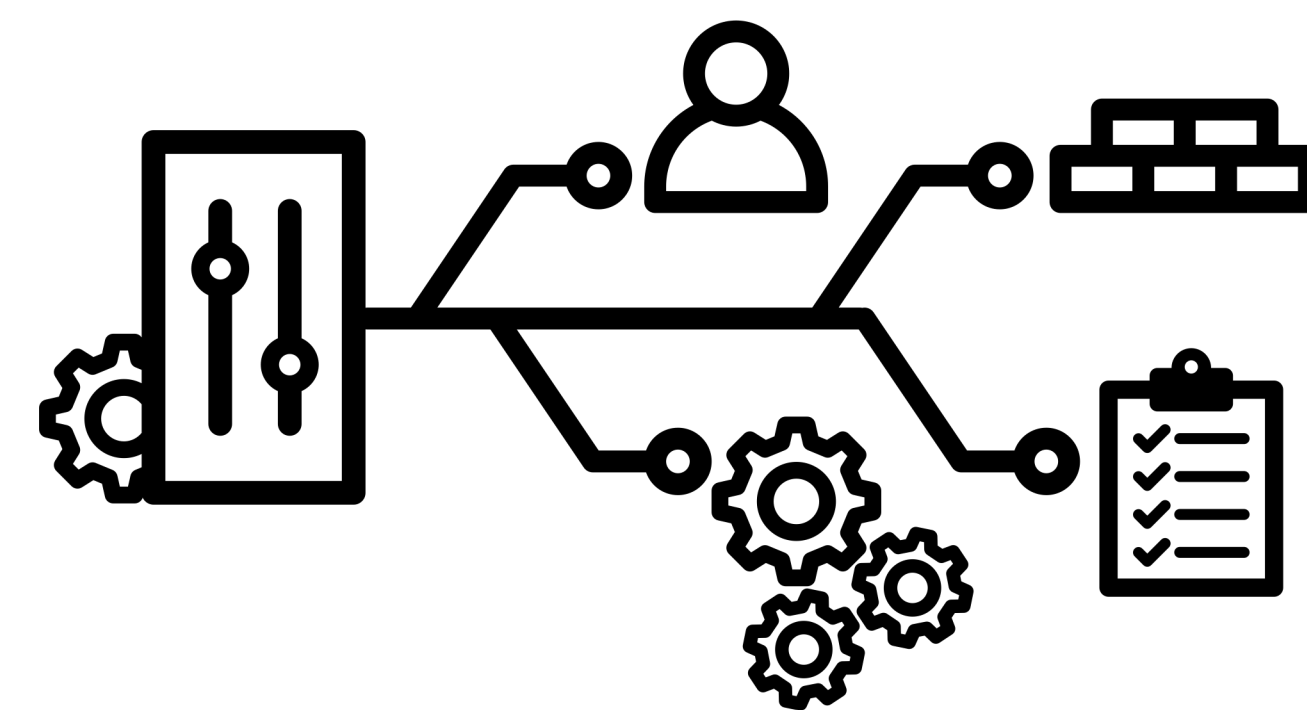
Outcomes first year



Experiment with crime scene investigators:
At what moment in the forensic investigative process is the use of additional forensic information most effective?

Most valuable during trace collection

Overview of the triaging process for DNA-analysis, and parties involved, for all police regions of the Netherlands to establish the strengths and weaknesses of each approach



Inventory of user requirements and design elements to build a decision support system

References

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