



D69 Coping With Changing Legislation: Learning Lessons From the United Kingdom, Reducing the DNA Backlog, the Role of Facilities in Addressing Crime, Use of Robotics and Expert Systems in Forensic Science

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The goal of this presentation is to help attendees understand lessons learned from the United Kingdom to help reduce DNA backlog.

Coping with changing legislation: learning lessons from the United Kingdom: Legislation such as proposition 69 in California is an example of the way that the United States is transforming its approach to the use of forensic science. It is set to have a major impact upon both convictions and upon domestic security. But as legislation changes, there is a growing need to develop capabilities and services to respond to the changing needs of the sector. By drawing upon some of the world's most respected and established scientific technology, the United Kingdom is able to work in partnership with bodies across the United States and further afield to address issues such as DNA backlogging and terrorism

Reducing the DNA backlog: Even as far back as 2005, data from the Bureau of Justice Statistics in the States referred to a "disturbing trend of increased cases and increased backlog in all disciplines of forensic science." The facts certainly present a pressing case for change. Interestingly, the current plight of the US backlog follows a similar pattern to what has already occurred in the United Kingdom. The challenge now is to translate the knowledge and best practice learned, across the pond and to use it to assist the States in tackling the backlog, efficiently and effectively. When it comes to DNA processing, the figures in the United Kingdom are impressive, with over 0.5 million samples processed a year, each within a three to five day timeframe. Additionally, as analyzed samples have increased, staff numbers have dramatically decreased. But it hasn't always been that way. How has the United Kingdom done it and what lessons can the United States learn?

The role of facilities in addressing crime: When it comes to forensics, the building itself is just the shell – what is critical is the technology incorporated within, and its ability to integrate with existing systems and procedures. The need for a temporary structure can be triggered by a number of factors – for some organizations it's about providing an adjunct to an existing facility in order to cope with immediate issues such as backlogging. For others, there's a need for an interim facility whilst a permanent solution is found, for some just a commercial desire to find out whether a forensics laboratory will reap benefits for their bottom line. Whatever the trigger, it is clear that a "quick fix," non-custom facility simply will not do. The United States currently do not have enough facilities to cope with growing demand triggered by legislation such as Proposition 69. The United Kingdom has been through this and come out the other side thanks to advanced temporary facilities.

Use of robotics and expert systems in forensic science: Automation and the use of expert systems present one solution that the United States is beginning to investigate, and it's a path that is well trodden in the United Kingdom. Over the last ten years the United Kingdom has worked to develop robotics and wider technology to ensure that we are able to manage whatever level of samples we are presented with. From this experience we have learnt a valuable lesson: it's not about the technology but about how you integrate it with the rest of the process, and feed it efficiently. Using technical robotic instruments to remove mundane duties for staff has proved hugely successful. It is human nature that after processing hundreds of samples every day, people get tired, distracted and they make mistakes - robots, on the other hand, do not. The use of robotics represented a real leap of faith for forensics teams in the United Kingdom. Quality of programming is critical, and although existing systems were used, considerable time and resources were spent designing protocols for them that instructed the machines to extract DNA, measure, and amplify it as required. As a result however there has been an increase in the number of samples processed and in turn improving match rates. By catching even those criminals committing minor offences, as the statistics show, the United Kingdom's populace are saved from a whole host of future potential crimes.

DNA Backlog, DNA Processing, Crime Reduction