I would like to address the question "How the Criminal Justice System can be equipped with robust, accurate and transparent forensic science"

"Robust", "accurate" and "transparent" are adjectives that can only be attributed to forensic science research generated through a synergistic dialogue between academics, end users and industry. Academia has still some margin of blue sky research, has typically advanced instrumentation and can drive innovation; end users (LEA, Police and governmental agencies) have the knowledge of the law requirements within which a given technology needs to operate to withstand court scrutiny; industry has the business vision and the knowhow on turning science into a viable product for adoption by the end users. Sometimes academics answer questions that do not need an answer (with consequence waste or resources and funding) because they do not talk to the end users. Sometimes the end users use old and underperforming technology because they are not aware of the exciting innovation and developments driven by academia. This dialogue is broken for many reasons, one of which being lack of funded opportunity for knowledge exchange and creating this synergy. Before the merge with DSTL, CAST has been the promoter of meetings between these sectors and this relied much on participants' efforts to find the resources for such meetings. The UK has the responsibility to step up if they wish to continue to keep a leader position in forensic science which is very much threatened already by budget cuts and reorganisation (dismantlement of the FSS first and merging of CAST with DSTL lately). Schemes such as the EU COST actions (http://www.cost.eu/), could be an excellent answer to the lack of dialogue and networking and could be specific to UK Forensic Science calls to advance meaningful and implementable innovation in forensic science and enhancing transparency, accuracy and robustness (please see the Action Chaired by myself as an example http://www.cost.eu/COST_Actions/ca/CA16101).

An obvious link to the previous answer is funding and funding bodies. There is no UK research council dedicated to forensic sciences spanning from digital to analytics to medicine to conservation. Furthermore with the enormous negative impact on EU research funding caused by Brexit, funding opportunities will be greatly and further minimised. Forensic Science is a huge discipline comprised of many branches just as biomedicine is but despite we have many funding bodies covering the latter (MRC, BBSRC, Cancer research UK, to name the most popular) there is no dedicated forensic funding body. This cannot be conducive to any forensic science progress because there is no premises to undertake research in this field. Sadly, forensic science does not fall in the remits of any funding body apart from loosely within BBSRC (Global security) and EPSRC (Analytical Portfolio). However when transparency data were requested from EPSRC in 2013, the at the time portfolio manager disclosed the following:

- There is no forensic scientist in the grant reviewing panels when forensic grants are reviewed
- All the grants awarded had been given to red break Universities despite research excellence in non red brick ones recognised internationally
- a small number of forensic grants awarded were in the analytical stream
Less than 10% of the grants awarded within the analytical portfolio were forensic grants

I would also argue that the generally used blind grant review system only endorses lack of appropriate competences, lack of responsibility in dedicating the necessary time to understand a grant as well as dishonest conduct (undeclared conflict of interest) when evaluating a grant. Too many examples can be gathered by the written comments of such reviewers as proof of the above. *It is the perception* of all academics that I know that the reviewing panels of the major funding bodies do not evaluate the reviewers' comments and the Principal Investigator response to technically incorrect and unsupported reviewers arguments, but just add up the scores provided. A mathematical average cannot be a quality evaluation and does not help good science to be developed.

Other funding bodies such those on the translational side of the research (which I will not name here to avoid entering a public dispute, despite having documented proof) may provide good schemes for forensic science (though not directly calling for forensic science grant proposals) but they have allowed companies (that on paper had to drive the submission of the grant) to take the award and not honour the agreement with the academic co-writers of the grant to work at the project despite NDAs in place with consequent failure of the project.

I urge the UK government to open a survey/inquire on the funding bodies about the mission, the remits and the details of the grant evaluation process for a deep understanding on the emptiness and darkness forensic science lies in and to promote a change; this being the disclosure of the reviewer's identity to instigate a better quality review or the revision of the criteria for the reviewers' response. For example, the panel should evaluate whether the reviewer has supported their statements with quantitative and published arguments rather than just dismissing what the grant's authors have proposed or stated.

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