Challenges in the digital age

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Digital technologies have profoundly reshaped how laboratories operate and are managed: from easier access to information using cloud computing and streamlined workflows based on Laboratory Information Management Systems (LIMS) to improvement of instrumental performances and automation. The growing use of artificial intelligence (AI), internet of things and blockchain –to name a few– are expected to keep laboratory practices moving at an ever-increasing pace. However, such a digital transformation introduces new risks. Cybersecurity threats such as data theft and ransomware lockdowns are also expected to rise, laboratories are increasingly dependent on external providers, personnel training is crucial and interoperability has never been such a critical concern. To mitigate such evolving risks, requirements from the regulation (e.g., GDPR [1], NIS2 [2]) and quality standards also increase. For example, the last version of ISO 15189 [3] explicitly refers to the ISO 27001 standard on information security [4].

EUROLAB (the European Federation representing laboratories and other conformity assessment bodies) is well aware of this challenge and have set up a working group on digitalisation (the WGD) dedicated to helping laboratories solve daily pains and stay up to date in the digital age. Following the publication of a new guidance document on the management of digitalised systems in ISO 17025 laboratories [5] the WGD is currently reviewing existing cookbooks and pooling teaching resources from Eurolab national members in view of creating a European hub for laboratories. The WGD also aims to work with other organisations and take part in other international projects related to digitalisation, such as QI Digital and the European Quality Infrastructure Network. Recently, Eurolab and Eurachem expanded their cooperation through a joint working group on digitalisation focusing on analytical equipment management and qualification.

References:
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