



Application of new technology (e.g. drones) in the field of inspection

EA Inspection Committee – Oslo 12th March 2019

Virtual 1st October 2020

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Application of new technology in the field of inspection



To further develop thinking/discussion on;

- Application/use of different types of technology;
- Requirements for assessment (based on ISO/IEC 17020) of activities involving new technology;
- Legal and safety requirements (including approval) in applying new technology

Why - The new 'normal' (after Covid-19)!?

Different types of 'new' technology



- Instrumentation (e.g. smart sensors)?
- Mobile phones/tablets?
- Remote visual tools (e.g. Cameras/Google glasses/drones)?
- Robots?
- Artificial Intelligence (AI)???
- Information and communication technology (ICT)*

Different types of 'new' technology



Advantages of adopting new technology within an inspection activity;

- Safety & accessibility (e.g. working at height, confined spaces including those inaccessible to humans ...)
- Preparation (e.g. remove need for access equipment)
- Speed (e.g. quicker than human intervention)
- Permits remote inspection where appropriate/necessary (e.g. Covid-19)

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Requirement for assessment of activities involving new technology



ISO/IEC 17020:2012

6.2.1 The inspection body shall have available, suitable and adequate facilities and equipment

6.2.2 The inspection body shall have rules

6.2.3 The inspection body shall ensure the continued suitability

6.2.13 If the inspection body uses computers or automated equipment in connection with inspections, it shall ensure that

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6.1.1 The inspection body shall define and document the competence requirements for all personnel involved in inspection activities

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Requirement for assessment of activities involving new technology



7.1.1 The inspection body shall use the methods and procedures for inspection which are defined in the requirements against which inspection is to be performed

7.1.3 When the inspection body has to use inspection methods or procedures which are non-standard, such methods and procedures shall be appropriate and fully documented

Requirement for assessment of activities involving new technology



*Information and communication technology (ICT)

IAF MD 4:2018 - IAF mandatory document for the use of information & communication technology for auditing/assessment purposes

0.2 ICT is the use of technology for gathering, storing, retrieving, processing, analysing and transmitting information. It includes software and hardware such as smartphones, handheld devices, laptop computers, desktop computers, drones, video cameras, wearable technology, artificial intelligence, and others. The use of ICT may be appropriate for auditing/assessment both locally and remotely.

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Requirement for assessment of activities involving new technology



*This MD may also be considered for use with other conformity assessment standards, such as:

ISO/IEC 17020 - Conformity assessment – Requirements for the operation of various types of bodies performing inspection

4.1 Security and Confidentiality

4.2 Process Requirements

Legal, safety & other requirements in applying new technology



Planning – suitable ‘platform’, agreement, changed effort, meeting etiquette, contingency planning ...

Legal – legislation such as human rights, privacy laws, image rights, aviation legislation ...

Safety – environmental impacts such as explosive atmospheres, electromagnetic disturbance, ...

Other – volume of data, data security, confidentiality, connection stability/bandwidth, image/sound quality, ...

Going forward



Proposal to ILAC IC WG 6 to consider including something on 'new technology' – e.g. the need to validate the inspection process including the new technology in the revision to ILAC P15 – see 7.1.1n3 and 7.1.3n2

UK HSE research activity – RVI (remote visual inspection) only, UKAS participation/watching brief

Awareness of legislation relevant to new technology (e.g. drones)

Additional Reading



[IAF MD 4 :2018 IAF Mandatory Document for the Use of Information and Communication Technology \(ICT\) for Auditing/Assessment Purposes](#)

[IAF - ISO 9001 Auditing Practices Group - Guidance on Remote Audits](#)

[IAF - ISO 9001 Auditing Practices Group - Guidance on Auditing Digital Processes](#)

[IAF ID 3:2011 IAF Informative Document For Management of Extraordinary Events or Circumstances Affecting ABs, CABs and Certified Organizations](#)

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Going forward



Questions;

Is there a need for some kind of EA/ILAC document on the accreditation of remote inspection activity?

Could we/should we identify 'remote inspection' capability on schedules of accreditation?

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Thank You!!

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