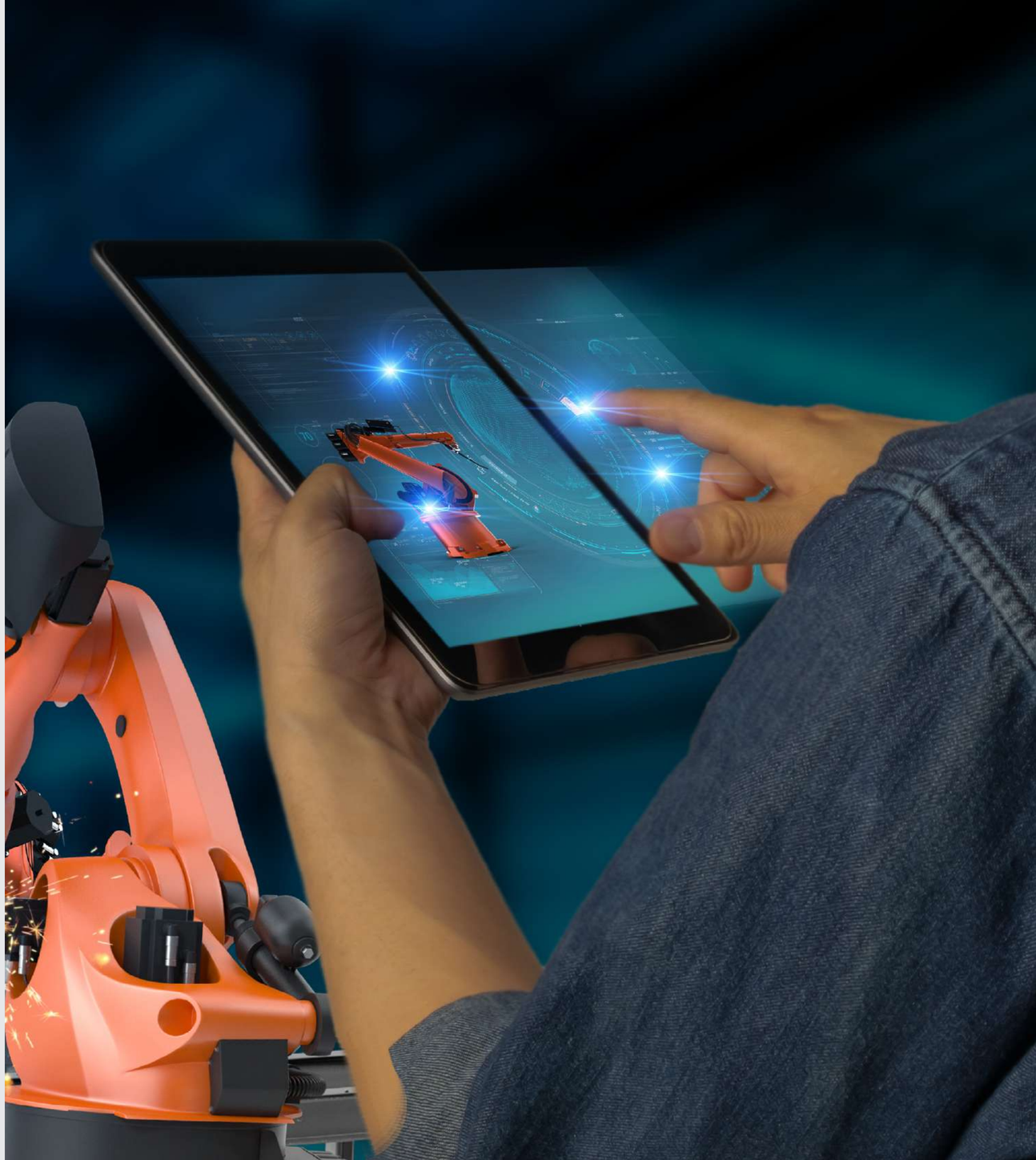
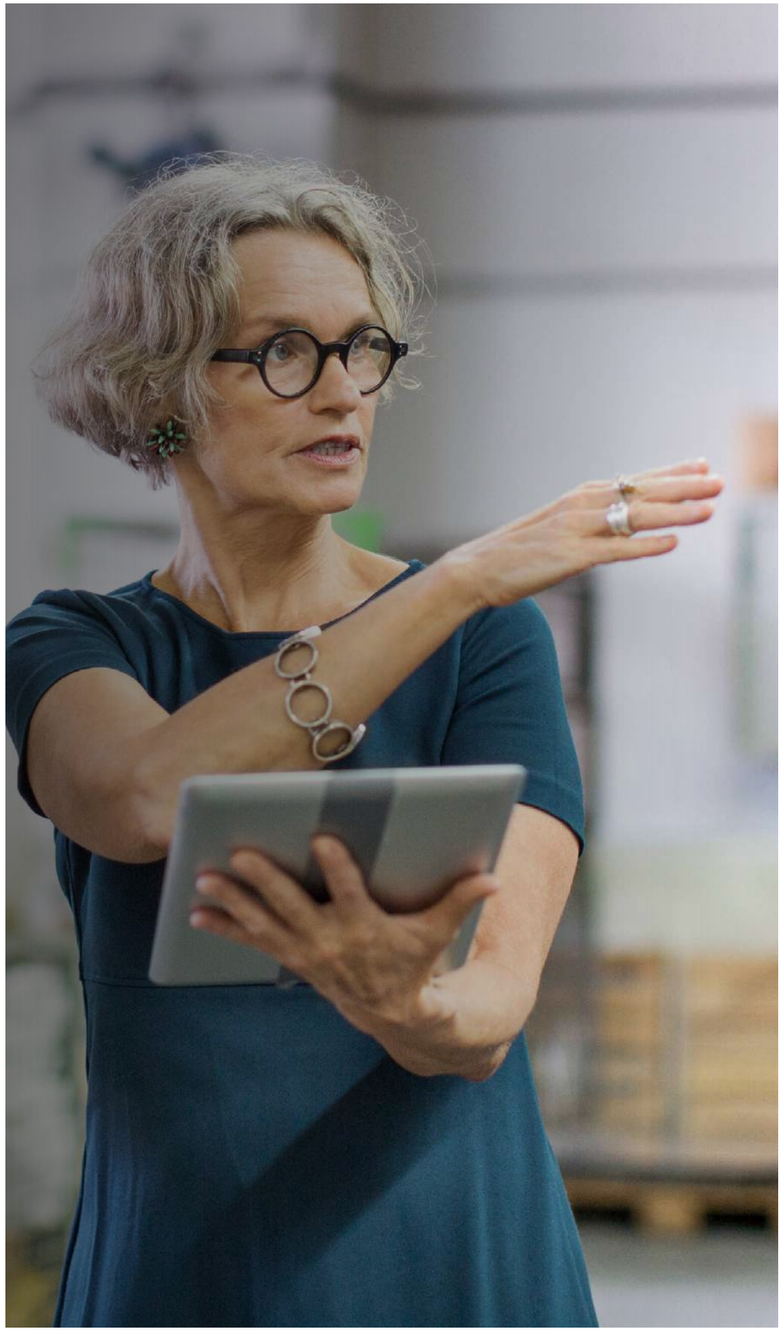
Digital assurance: changing the way we create trust





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Future Perspectives

Providing assurance services, which create trust in organizations, services and products, is key to our purpose. We do this through a range of auditing, testing, certification, and training solutions serving more than 60,000 clients worldwide.

“Assurance is provided when expert professionals, using valuable and reliable data points enabled by relevant technology, demonstrate that a product, service or organization operation is embracing best-practice standards or regulations and is committed to continuous improvement over time. This creates trust in that company, for their company’s clients, for their employees, for their management team, for their investors, for stakeholders and consumers, that the company and its products or services are reliable and trustworthy, and that they will meet expectations over time.”

Pietro Foschi

BSI Group Director, Assurance Services

Based on market trends and BSI’s own experience, this paper explores how digital solutions are changing the way assurance is created, leveraging technology to create ‘digital assurance’.

Digital assurance: changing the way we create trust

Digital assurance: hype or reality?

“We tend to overestimate the effect of technology in the short run and underestimate the effect in the long run”
Amara’s Law [i]

Once president of the Institute for the Future, Roy Amara noticed a pattern in how we predict the future impact of new technology. New, ‘world-changing’ technologies can be quickly dismissed as hype and bluster when their predicted effects are not immediately seen. But over time, we realize that many of these technologies did fundamentally change our work, industries and lives. With the increasing interest in Digital assurance, this ‘law’ leads us to ask two questions:

- **Will digital assurance have an impact on the way we create trust in the short term?**
- **Will digital assurance fundamentally change the way we create trust within and between organizations?**

Disruption accelerates innovation

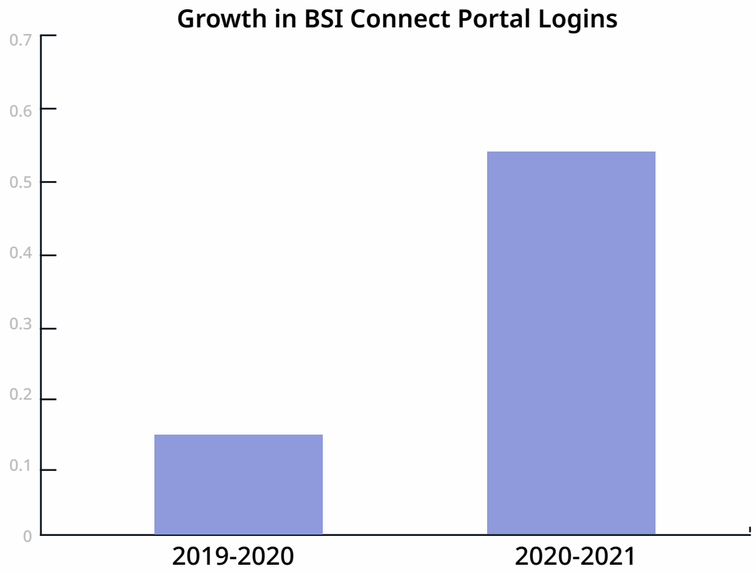
A fundamental component of auditing has been the use of a human auditor (internal or external) visiting sites, observing activities, looking at information, and talking to people. Through auditing and certification, we create transparency, which builds trust. This basic formula for engendering trust in organizations has been largely unchanged for decades.

As the restrictions associated with the COVID-19 pandemic tightened in 2020, this method of creating assurance faced an existential crisis. Auditors were no longer able to travel to see operations, review data, or talk to people. Yet at the same time, trust and assurance had never been more important.

Despite the disruption, audit and certification activities continued to deliver transparency, trust, and assurance. How was this possible when some of the key methodologies underpinning these activities had become impossible?

The answer, as across many other industries, was accelerated innovation. Auditors rapidly deployed ideas and technologies that had previously been in a pilot phase. As the IBM ‘Covid-19 and the future of business’ report points out, “It’s not that new tech was suddenly discovered and implemented; rather, the tools already at hand were deployed to fuller potential.”[ii]

Sure enough, in early 2020 we see an increase in the number of audits BSI are conducting remotely and the adoption of online portals grow. The BSI Connect Portal, which facilitates audit and certification management between BSI and our clients, launched in 2017 but saw its usage increase during the pandemic and further accelerate when restrictions eased.[iv]



Three things learnt about digital assurance

Web conferencing and web portals are not ‘cutting edge’ innovation, but their use has led to new thinking, behaviour, and understanding that has far-reaching implications for assurance as it is increasingly digitized.

1 How to use remote technologies

While most remote audits were conducted through web conferencing, interest in more advanced technologies grew rapidly. These included; streaming images from mobile phones, using ‘smart’ glasses, and deploying drones.

Using a camera, whether on a phone, smart glass or drone, allows the auditor to see without being there, but there are other benefits too. Lasting images from the audit are captured with no additional effort, allowing richer audit reporting. Having a complete digital record opens future opportunities to deploy artificial intelligence (AI), to identify risks and opportunities that an in-person review may have missed.

Drones bring the advantage of a bird’s eye view not readily available to an auditor. They also offer additional sensory capabilities, creating opportunities for entirely new types of findings.

Our Technologies

Level one:
Live web streaming technology

Live streaming technology such as MS Teams, Webex and Adobe Connect enables:

- Review of documents, records and procedures
- Live interviews with your teams
- Connected learning live - our online training service
- Secure sharing platforms which may also be used to transfer documentation.

Level two:
Live streaming paired with mobile technology

Video applications on smart devices immerse our teams in the audit. This technology enables:

- Virtual site tours
- Video capture
- The ability to observe the implementation of processes and activities in real time
- No software downloads required

Level three:
Live streaming paired with smartglass technology

The use of smartglass technology and live streaming enables:

- A fully immersed in-audit experience, using hands-free technology such as smart glasses and video headsets.
- Live feeds communicate data to our augmented reality platform for verification by our experts.

We provide immersive technology in advance of the audit for your teams to use.

Level four:
Drone and satellite aerial imaging and analytics

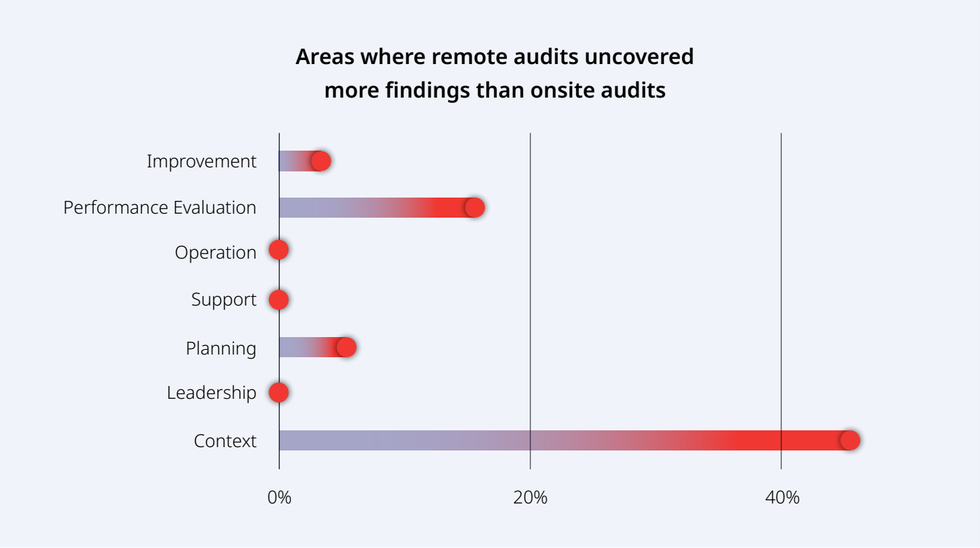
As part of our Immersive Technology Solutions, we are using drones and satellite imagery to bring our clients a safe, cost-effective experience that enables:

- Superior levels of analytics
- Highly effective planning
- Lifetime digital remediation.
- Computer vision and Image AI

2 What can be audited remotely

The effectiveness of remote auditing is a new and growing field of research, but early findings suggest that, while some aspects of an audit are most effectively achieved through in-person engagement, other parts might be better done remotely. For example, in 2021 BSI identified more findings per day of remote audit in performance evaluation and in context of the organization for Quality Management Systems than through onsite auditing.[vi]

This data is complex and there are many factors that contribute to these findings. Plausible explanations for these outcomes are that the context of the organization is best understood through remote engagement with a range of people across the organization. Similarly, areas such as performance evaluation often have clear, digital records. However, support and operations functions are easier to assess when an auditor is on site. A mix of onsite and remote auditing to create a hybrid audit programme combines the best of both methodologies to add most value.



3 Digital engagement is being normalized

Appetite for online portals is growing in assurance. The use of governance, risk and compliance software, which is often used to store important compliance data, is also growing. Organizations are increasingly comfortable giving auditors access to these online systems as part of the audit process. This means less disruption for the client and more thorough audit preparations.

The key technologies and the understanding of how to apply them already exist. This leaves the opportunity for an accelerated journey toward more comprehensive digital assurance wide open.

BSI Connect Portal

BSI Connect is a convenient, web-based self-service tool with all your BSI audit and testing information. Included as part of BSI certification, you can manage your BSI data, understand your business's performance and act to improve it.

How BSI Connect can help you

Available in 18 languages, BSI Connect gives you the flexibility to track progress of your corrective actions and certificates from your different BSI assessments. BSI Connect brings together your audit data from multiple sites, schemes and potentially your supply chain creating an aligned and uniform view of your data.

Using BSI Connect you can access your audit schedule, certificates, audit reports and findings, delivering increased efficiency and visibility. Its ability to analyse and benchmark your nonconformities and audit findings, as well as manage your corrective action plans, gives you the insight to spot important opportunities.

BSI Connect empowers individual and organizations to improve their performance and resilience.

Is digital assurance needed?

As we have established, remote auditing has been proved effective, digital engagement between auditors and their clients is becoming normalized, and the appetite for engaging in innovation is growing. However, significant advancement in digital assurance will only occur if it helps realize new and substantial opportunities, increased value, and business improvement.

The opportunities digital assurance can realize

1 Sustainability

With the emergence of frameworks for actions like the United Nations Sustainable Development Goals and the recognition of the responsibilities organizations have in addressing sustainability, its importance has never been greater.

Onsite auditing is often more carbon-intensive than its remote counterpart. In some cases, auditors and compliance managers board aeroplanes to visit the sites where audits are taking place. As organizations look for opportunities to reduce the carbon footprint of their operations and supply chains, auditing teams will be challenged to provide assurance services while limiting carbon emissions. This will be a clear driver for remote and data-based auditing. 95% of respondents to an IAF survey recognized that remote auditing had at least some benefit in reducing environmental footprints.[ix]

2 Technology and data as resilience

The Institute for the Future of Work points out that "firms are investing in new technologies to deal with disruption" [x] and the Fujitsu Global Digital Transformation Survey Report 2021 concludes that "three main factors contributed to an effective pandemic response: agility, digitalization, and employee well-being". [xi]

As organizations increase their use of technology and data, and their employees are increasingly focused on how to exploit technology to enhance the resilience of their business, compliance activities will be expected to embrace this change. Better use of technology also positively contributes to improved health and wellbeing for all team members involved.

3 Continual improvement

High-performing organizations restlessly look for continuous improvement. Looking at health and safety management systems standards, a Harvard Business School working paper highlights that certification to standards is related to improved Health and Safety performance. "U.S. establishments certified to the OHSAS 18001 standard indeed tend to be safer workplaces"'.[xii]

What will fundamentally drive change is not using technology to generate assurance faster, cheaper, or even more sustainably. What will really drive change is when we start using technology to create better assurance where fewer issues arise and trust within and between organizations and society is even stronger.

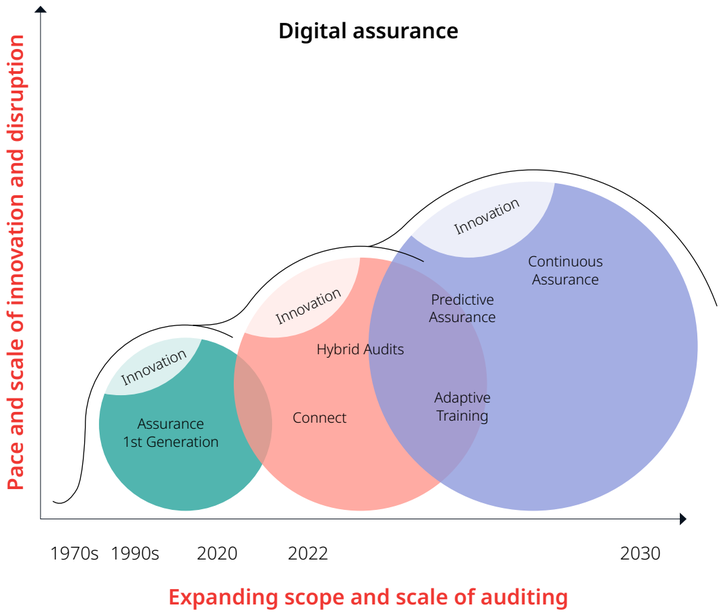
Where digital assurance can unlock opportunities

Traditional Approach	Future Approach
Audits are typically conducted annually	Multi touch audit with real time data
Auditing a sample of data	Data from all sites/locations brought in and analysed via continuous assurance
Identifying corrective actions based on historical data	Profiling risk to predict likely future system weaknesses

So, the methods we use to create assurance need to become continuous, predictive, and consider more data. They need to be relevant to the way organizations are managing information and focusing on sustainability. And it has been proven that digital engagement and remote auditing are effective in enhancing assurance.

The future of digital assurance

We expect an acceleration in the spread of digital innovation through most aspects of the way we create assurance.



Hybrid auditing is here to stay

Hybrid audits combine physical face-to-face audits, remote audits, and integrated technology to optimize your time, data insights, and outcomes, combining the best of both worlds. Work conducted with a leading business school found hybrid audits were at least as effective as traditional, in-person audits.[xiii] Increasingly, sophisticated technologies will be deployed to record audits. Findings will be enriched with more visual information and more data. Auditors will access online systems directly and be able to record links to specific digital records that require investigation.

New hardware will be deployed starting with mobile apps. Drones and wearable technologies will be used more frequently over time by auditors onsite and by others remotely, increasing the context and value of the audit data being collected.

Onsite auditing will still play a significant role. Areas such as reviewing the support and resources available in an organization, and the operation of the organization, may be better audited in person.

Where could hybrid auditing take us?

“Digital assurance is not just about our BSI Subject Matter experts not flying or driving to a client’s site to perform an audit. While the technology and our process has demonstrated the effectiveness of conducting virtual certifications, this is more about the future of immersive. The features on the backend including AI, Computer Vision, connectivity to IoT devices and future technical advancements will not only meet the rigour of an ISO audit, but advance the capabilities of a BSI Certification and extend value an organization has when a client uses our digital assurance platform. This is the future of audit, and BSI will continue to pioneer and lead the market in this space.”

Dan Purtell, BSI Group Innovation Director

Continuous assurance

As hybrid auditing becomes the norm, it raises new questions that go to the heart of the idea of an ‘audit’. Audits that involve people travelling to a site generally need a long duration to make them practical, but remote audits could be shorter and more regular. Data can be automatically transferred, and artificial intelligence can flag abnormalities/outliers to be reviewed.

BSI is working with an organization that puts both software and physical devices onto an organization’s IT infrastructure to highlight issues as they emerge and map them against information security standards. Similar ideas are being explored around carbon emissions where real-time monitors provide much richer information about an organization’s carbon footprint.

Assurance would no longer be delivered through periodic audits but could be delivered through a combination of constant monitoring of entire networks and data sets, with auditors engaging with the organization more regularly for shorter periods of time.

Predictive assurance

The greatest opportunity to enhance assurance lies in better anticipating the future. Predictive assurance will be made possible by increasingly large and frequently updated data sets. For example, internal audit data could be monitored in real time and analysed against patterns seen across the industry and/or geography to identify areas where an individual organization might be at risk. System monitors could highlight unusual activity that might require more attention, and employees’ experience of a management system can be understood better to identify risks around leadership, communication, and competence.

Adaptive training

The skills required by auditors are likely to evolve rapidly, meaning additional effort will go into their professional development. Auditor training will need to deliver competence effectively and efficiently. Again, the pandemic accelerated experimentation with remote and blended learning technologies, further highlighting different individuals’ learning styles, pace, and level of background knowledge on a topic. Training will become more adaptive to an individual’s needs. Pre-course assessments will assess individuals’ background knowledge and development needs with more flexible learning programmes being created that combine self-learning, eLearning, virtual classroom and physical classroom training, in order to bring each individual up to the required level of competence.

The opportunities that predicative assurance brings

“We will see a paradigm shift in the way that assurance operates. Today, when we audit, we look at what has been done over the last 12 months and then we assess what went wrong or what didn’t. Looking to the future, we will add value by using technology to help mitigate future risks and help you to enhance performance across your organization.”

Ahmad Alkhatib – BSI System Certification Director

So when will the future arrive?

Hybrid auditing is already with us. Continual assurance and predictive assurance will develop rapidly over the next few years. 97% of respondents to an IAF survey said that new technologies should be used to enhance assurance. Reflecting on Amara's law, "We tend to overestimate the effect of technology in the short run and underestimate the effect in the long run," there is certainly a degree of truth in this. But in the case of digital assurance the enablers, the drivers, and the expectation are well aligned. This suggests that we are entering a period of rapid digital change in the way we create assurance.

[i] Cited oxfordreference.com/view/10.1093/acref/9780191826719.001.0001/q-oro-ed4-00018679

[ii] IBM – 'Covid-19 and the future of business report'. ibm.com/downloads/cas/1APBEJWB

[iii] BSI global audit data representing over 200,000 audit days

[iv] BSI Connect Portal login count data

[v] When conducted by BSI and anecdotally for other internal, supplier and third-party audits

[vi] Based on BSI operations data for ISO 9001 in the UK

[vii] IIOC paper. 'Transformative technology techniques enable Assurance Services to meet evolving industry needs'. iioc.org/wp-content/uploads/2022/01/IIOC-white-paper-%E2%80%93-FINAL-21-Jan-2022.pdf

[viii] Industry ARC Governance, Compliance and Risk Software Market – Forecast (2022 - 2027) estimates CAGR of 12.1% 2021 to 2026 industryarc.com/Report/18637/governance-compliance-and-risk-software-market.html

[ix] Report for IAF/ILAC/ISO Survey on Remote Audit/Assessment/Evaluation (Reference Report) iso.org/files/live/sites/isoorg/files/news/News_archive/2021/10/Ref2737/Survey_IAF_ILAC_ISO_2021

[x] Institute for the future of work. Jan 2021. 'The Impact of COVID-19 on Technology Adoption' ifow.org/news-articles/the-impact-of-covid-19-on-technology-adoption

[xi] Fujitsu Global Digital Transformation Survey Report 2021 fujitsu.com/downloads/GLOBAL/vision/2021/download-center/FTSV2021_Survey_EN.pdf

[xii] HBS Working Paper 22-042 Do Management Systems Standards Indicate Superior Performance? Evidence from the OHSAS 18001 Occupational Health and Safety Standard hbs.edu/ris/Publication%20Files/22-042_76d20593-bee6-4075-972c-19934123b313.pdf

[xiii] Ongoing research with a leading business school as of March 2022

[xiv] Report for IAF/ILAC/ISO Survey on Remote Audit/Assessment/Evaluation (Reference Report) iso.org/files/live/sites/isoorg/files/news/News_archive/2021/10/Ref2737/Survey_IAF_ILAC_ISO_2021

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