

FOR SMEs CONSIDERING THE WATER TEST NETWORK



VERIFICATION

VALIDATION

REGULATORY COMPLIANCE

CERTIFICATION

Table 1 highlights the key differences that need to be taken into account and illustrates verification and certification available for certain comparators.

THE DIFFERENCE BETWEEN VERIFICATION, VALIDATION, REGULATORY COMPLIANCE AND CERTIFICATION FOR SMEs CONSIDERING THE WATER TEST NETWORK

TABLE 1

COMPARATOR	VERIFICATION	CERTIFICATION
Applicable International Standards	None are generally available	Covers existing standards and specifications
Laboratory standards used	ISO17025	ISO17025
Product testing protocol	ISO17020	ISO17065
Testing regime	Product specific design and only assesses the technology not the reliability of the manufacturing process	Testing done in controlled conditions and also looks at manufacturing repeatability
Design changes considered on the impact of the assessment	No	Yes
Surveillance after approved	No	Yes
Monitoring Data reliability	Low	High

When a product is innovative there is generally little supporting evidence that the technology works and confidence in the research data may be lower than that of tried and tested products. In addition to this there would be no international standard or specification for innovative products. There is no requirement within the verification to audit the manufacturing process or conduct ongoing surveillance once the product has been verified.

Any SME commercialising a product will need to make sure that they verify, validate and comply with the appropriate regulation. It is important that any SME considering entering into the water sector (or indeed other environmental sectors) understands the requirements of the regulating bodies and the customer requirements within that market.

ENVIRONMENTAL TECHNOLOGY VERIFICATION IN MORE DETAIL

Innovation is critical to addressing the environmental challenges faced within Europe and at a global level. Often innovation could make a significant change as a disruptive technology but in many cases never reach the markets. Environmental technology verification was developed to provide evidence that supports the claims of new technologies in a credible, scientific and quantifiable way.

Innovative environmental technologies provide technical solutions for specific environmental problems

such as pollution control and climate change or they use natural resources in a more efficient manner when compared with the technologies that they are intended to replace. The ISO 14034 standard provides a process for verifying the performance of such technologies and charts a path for technology performance assessments where sustainability and innovation are inextricably linked. Use of the ISO 14034 standard helps build credibility, increasing market confidence that environmental technology performance claims are valid and supported by high quality, independent test data and expert opinion.

VERIFICATION WITH RESPECT TO ETV

Verification is a multi-stage process which is based on collaboration between the technology owner, the verification body and the testing laboratories. Agreement at each stage of the process is necessary to move on to the next and the technology owner has control over how they wish to proceed, normally this is informed by the analytical data used to substantiate the performance claims. The multiple stages of the process are shown in figure 1.

The first stage in the process is to sit down with the technology owner and define the performance claim. Once the claims are defined, a quick review of existing information and data that has been used to develop the claims will be completed. This is often known as a “quick scan”. A gap analysis is then conducted to identify any gaps in the quality and quantity of data

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VERIFICATION WITH RESPECT TO ETV cont.

needed to verify the technology performance claims. The gap analysis informs the verification plan and a further test data assessment is conducted. Some additional testing may need to be generated to provide enough analytical data that will support the performance claims. The Water Test Network provide the facilities and test laboratories to enable this to happen quickly.

Once the data is collected and analysed the performance of the system is verified and, assuming the data supports the claims, a verification report and certificate is produced. The certificate of verification will be recognised internationally meaning only one verification will be necessary to enter multiple international markets. If the issuing organisation is accredited as a certifying body (ISO 17020), accreditation can be claimed for issuing an ETV validation report/certificate for compliance ISO 14034 if the SMEs claims are verified. If the issuing body is not accredited as a certifying body, there must be no claim to accreditation on the report or certificate.

If the data does not support the claims then the claims, under certain circumstances, may be altered to reflect what the data tells us. Alternatively, the technology provider may choose to optimise the system more and repeat the verification process to ensure the original claims are verified.

BENEFITS OF VERIFICATION

The Water Test Network will enhance and support new product development and market entry through the application of verification as one of the tools for success. Through verification we will be able to help companies to demonstrate the value of their innovation compared to any existing best available technology and provide reassurance to investors that a new technology performs as well as or better than existing solutions. Environmental technology verification, when completed through the application of ISO14034:2015, will be recognised internationally so the verification certificates will allow or enable market entry beyond Europe.

Verification is often confused with certification or labelling. Normally certification is assessed against a pre-existing set of standards. Verification is flexible and not limited to comparison against technical specifications or standards. Each technology is assessed on its own merits with the test plan bespoke to that technology and designed on a case by case basis.

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FIGURE 1: THE VERIFICATION PROCESS