

NATA explores 'Why Measurement Uncertainty Matters' this National Science Week

11 August, Sydney – Every day our lives are impacted by science often without us noticing or taking the time to learn and appreciate. And measurements play a key role, whether it's being able to trust the quality of the water coming out of our taps, or the steel supporting our homes and cars, someone has put in the hard yards, so we can all benefit from the results.

The National Association of Testing Authorities, NATA, is using this [National Science Week](#) to hero and explore the role measurement uncertainty plays in our lives and in powering future industries like quantum computing and precision medicine.

Measurement uncertainty is the difference between a measurement result, typically the result read from the equipment, and the true value, the actual size of what is being measured. However, we can only ever know an approximation of the true value, and that depends on how it's being measured.

To cast a spotlight on the ways in which measurement uncertainty supports our way of life, NATA's Deputy Sector Manager for Materials, Assets and Products, Nick Di Cresce features in a video introducing [Why Measurement Uncertainty Matters](#), to those who may not be familiar with the topic.

"If all measurements are wrong, then how can we know when a measurement is right?" asks Deputy Sector Manager for Materials, Assets and Products, Nick Di Cresce, as part of the video.

"Well, your degree of 'wrongness', or uncertainty in measurement, will vary depending on your end purpose. The energy rating on the back of a light bulb package may be a sufficient guide for use in your home, however for an architect designing an energy efficient building would need more precise information. Measurement uncertainty can be quantified, and by doing so, testing facilities can control and mitigate the associated risks inherent the work they carry out," Di Cresce added.

Australia's leading accreditation body, NATA tests the testers, so that the public can have confidence in the results of those tests conducted for products and services we use and rely on every day. Accreditation also facilitates global trade ensuring that products tested here are accepted in other countries.

[Why Measurement Uncertainty Matters](#) is the latest in a series of stories where NATA outlines the role and often-impact of accreditation, in our daily lives.

Jennifer Evans, NATA CEO, said: "Innovation relies on some certainties. And the ability to quantify measurement uncertainty has undoubtedly helped power future industries like quantum computing and precision medicine. An understanding of this is written into the accreditation standards NATA uses for all its laboratories and it's vital that everyone in organisations has an appreciation of its role."

NATA's accreditation services have been servicing the [best interests of Australians for more than 75 years](#), providing testing, calibration and technical standards' competency that touch our daily lives. This ranges from the food we eat and drink, the products we use to build our homes and our roads to mining, construction, health pathology services, international trade and much more.

Di Cresce added: “It’s important for all of us to question what went into ‘how’ a measurement was taken, so we know the degree of trust we can attach to it. And that will differ for each of us, whether it’s the assurance of reaching 10,000 steps for the day from your smartphone/smart watch or relying on claims that a product is gluten free if we have a complex food intolerance.”

Described as one of “Australia’s best kept secrets,” NATA is the world’s oldest accreditation body and a not-for-profit organisation which has been working behind the scenes “testing the testers” for more than 75 years, helping deliver confidence and assurance for domestic and international products and services.

To discover more about Why Measurement Uncertainty Matters, [click here](#).

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Notes to editors:

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About NATA

National Association of Testing Authorities (NATA) provides accreditation for laboratories to ensure testing results can be relied on and trusted. As Australia’s sole internationally recognised accreditation authority, NATA’s role is to uphold the national standards of technical competence for those delivering products or services to the general public. Through its extensive network, NATA provides assessment, accreditation and training services to laboratories and technical facilities.