

# System design & installation review



## For your own and others' confidence

*Designing customer- and application specific measuring systems can ultimately result in fully optimised designs, balanced with the applicable criteria. However, these measuring systems are often also (partly) unproven design, until installed in the field. To reduce your risk involved, a third party's independent review and expertise can offer a valuable reassurance about the final field performance.*

Did you know that the various requirements on your meter, measuring system or electronics can already be taken into account from the very first stage of your project start up? In that way development- and purchase costs can be reduced dramatically, while the route from design to end-product is shortened.

Extracting design specifications from (inter)national norms, standards, contractual obligations or applicable laws may pose a challenge on its own. "Translating" such written requirements into clear design specs is familiar business to NMI, as a Notified Body with decades of experience in requirements and actual applications. We turn complicated legal paperwork into easy readable summaries, which will help you in responding to the latest requirements in a proactive way.



## WILL LOWER INVESTMENTS SUFFICE?

A measuring system's performance is determined by a number of factors. The inherent uncertainty of the meter is part of that, but additional instruments and data-processing equipment, as well as process- and installation characteristics add up to its initial uncertainty. Balancing the investment over the various components of the system can be done based on uncertainty analysis of proposed designs. What's the use of investing in a high-end flow meter, if its performance is worsened by poor data-processing or installation? The other way around, it is not unlikely that a mid-range flow meter in combination with similar quality electronics offers an adequate performance for a lower investment.

## FIELD MODIFICATIONS ARE MOST EXPENSIVE

The more you are able to test your measuring system before installation in the field, the better. It will save you not only investments but also creates a faster timeline in your project, building much more confidence in the final end product. It's exactly the reason why NMI offers a various range of pre-testing methods to producers of measuring installations: as a part of the "First Stage of Initial Verification", "Factory Acceptance Tests" (FAT) and tests requested by end-users. With our decades of experience in Initial Verifications in multiple stages on thousands of measuring systems, we know what to focus on during FAT and other pre-tests. Besides the financial benefits, pre-testing in our advanced laboratory often brings practical benefits compared to field-testing.

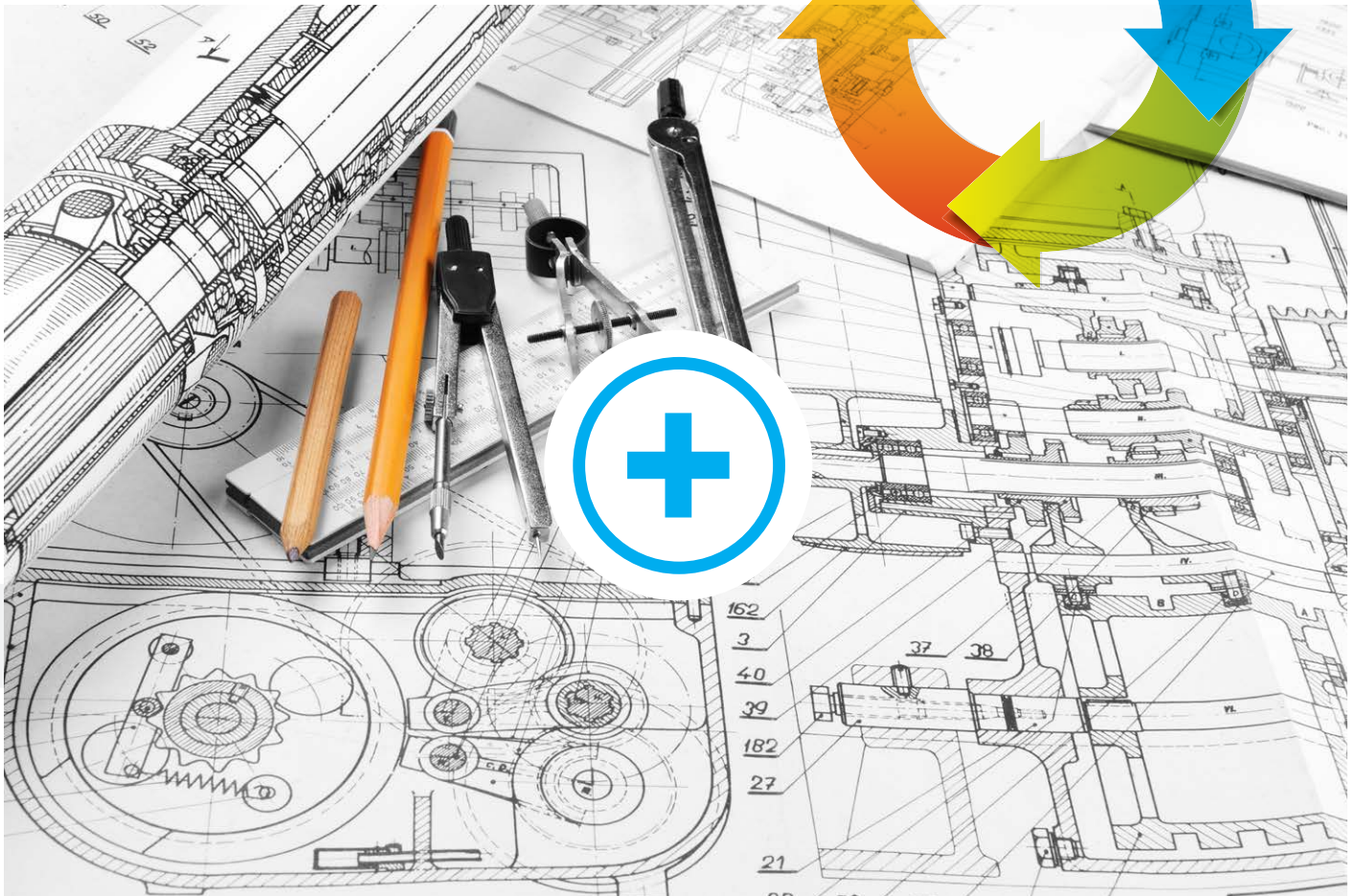


## CONFIDENCE IN YOUR DESIGN

Test situations are never 100% identical to the field situation and the possibilities for field testing are usually not as flexible as in-house facilities. Nevertheless, a SAT (Site Acceptance Test), Initial Verification or other form of field testing usually is performed before the final handover of a measuring system to its new user. Apart from the measuring system being subjected to actual process conditions, this is also the first time where all factors are working together. An uncertainty analysis based on these conditions, rather than just the design at an earlier stage, will finally answer the question whether or not the measuring system performs as required. Field tested and documented proof of a system's performance will help any supplier to convince his customers that indeed the measuring system performs as required.

## LIFE CYCLE MANAGEMENT & TRAINING

After the design phase and the installation of your measuring system, NMI offers a complete Life Cycle Management program to monitor it's performance and uncertainty over the years, with adequate consultancy when upgrading the system or replacing parts. We are looking forward to inform you about this unique program. Training on-site, in our laboratory or online by our team of experts is another of our services that can be of your advantage.



System Design and Installation Reviews as sketched above, are a very powerful tool to help gaining confidence in your design. It makes decisions about investment options much easier. In addition, a third-party evaluation of NMI adds true value to the your measuring system, thanks to the worldwide reputation of the brand.

