

# Life Cycle Service Management



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The 360°KAS Life Cycle Service Management program enables clients to realize maximum availability of their systems with minimum downtime at the most economical operational costs.

As part of this program the following services can be coordinated by our dedicated in-house Customer Service department:

- Site Construction & Supervision
- (Pre-) Commissioning & Start up
- Site Acceptance Test (SAT)
- Training
- Service Level Agreements (SLA)
- Analyser Maintenance Support
- Spare parts & consumables
- Life Cycle assessment
- Upgrades & retrofits
- End of life services & replacement

Services are executed by our professional team of experienced service engineers. We work according to international standards such as NEN1010 and NEN3140 and are ISO9001:2015 and SCC\*\* certified. You can trust us with safe services of high quality to keep your systems going.

We set the bar for accuracy, durability and reliability together with our clients. In close contact with our Customer Service department the path to an optimal asset availability is determined in order to meet your challenges and expectations, now and in the future.

The Life Cycle Management Program covers our full product portfolio: Pilot Plants, LNG Sampling Systems and Analyser & Sampling Systems. We have over 40 years of experience with analysers for all applicable measuring principles and brands such as ABB, Siemens, Yokogawa, Emerson and XOS.



## Site Construction & Supervision

We offer electrical and mechanical construction and system integration activities at site: these can either be executed ourselves or we advise and supervise your site construction team. We guarantee quick and full site readiness in order to proceed to a quick and smooth commissioning and start-up phase.

## (Pre-) Commissioning & Start up

During (pre-) commissioning the system is functionally tested to verify the system performance is according to the design objectives and project specifications. This is a very critical phase and should be carried out thoroughly before the initial start-up of the system.

After commissioning our engineer will fine tune all the settings of the instruments and loops to match the process conditions. In this way we achieve the highest possible accuracy and reliability of the measuring devices.

## Site Acceptance Test (SAT)

During the Site Acceptance Test we prove that the system operates according to the design objectives and project specifications. We always follow a system specific SAT Plan and procedure which is established in close cooperation with the asset holder.

## Training

It is of the essence that your operators and maintenance teams are sufficiently trained to create optimal value from your assets.

If your operators can judge and verify all the data supplied by the devices, interpretation of this data can result in an increased performance of not only the analytical system but also for the entire plant.

A well trained maintenance team is able to keep your system in perfect condition, resulting in a lower cost of ownership.

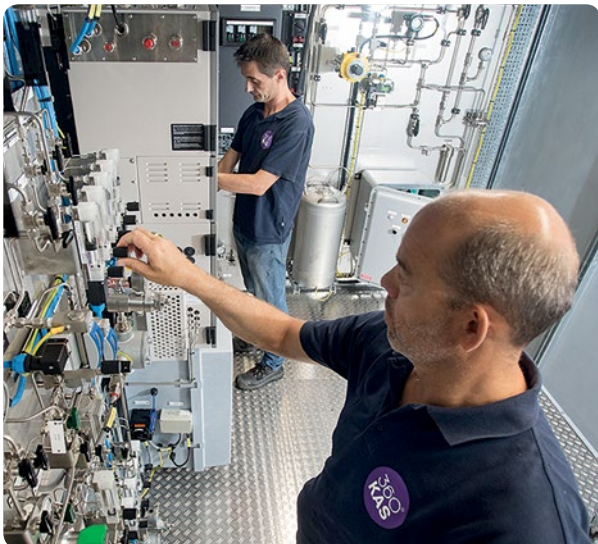
For both purposes 360°KAS offers special trainings, either in classroom sessions, hands-on training in the field or a combination of both.

## Service Level Agreement

With a Service Level Agreement (SLA) you have the possibility to conduct maintenance according to your unique wishes.

We can either develop a custom made Service Level Agreement depending on your wishes, or we compile an agreement from a range of standard modules:

- Technical phone support
- Remote support
- Spare parts holding off-site
- Emergency on-site service
- Scheduled maintenance service
- Verification & calibration service
- Pre-paid bank of hours
- Pre-paid bank of training



## Preventative & Corrective Maintenance

Downtime of your systems can cause unscheduled plant shut down or noncompliance to environmental demands.

Together with your technical team, 360°KAS can develop a maintenance plan to guarantee minimal downtime of your systems, this encompasses for example:

- Regular (planned) preventive maintenance for the basic inspections to analysers and systems to avoid costly repairs due to neglect;
- Corrective maintenance after a failure detection to restore the analysers and/or systems to a steady condition.



## Spare Parts & Consumables

Spares and consumables are critical in the maintenance approach of any system. But which spares to keep in stock? 360°KAS developed a SMART spare parts and consumables program that helps you to maintain your assets in optimal condition at minimum investment. The program consists of following key elements:

- Determine and hold critical spares for emergency situations
- Determine consumables and spares for planned preventative maintenance
- Determine less-critical spares and obsolete components & analysers

## Analyzer Maintenance Support

360KAS offers its analyser (or QMI = Quality Measurement Instrumentation) specialists for flexible support of your own maintenance team during i.e. holiday period or turn-around.

## Life Cycle Assessment

During the life cycle of any system hardware obsolescence is likely to occur. This should not be a problem unless it occurs unexpected and a replacement isn't available quickly.

A periodical life cycle assessment is part of our Service Level Agreement. The result of this assessment is an advice on how your system can be adjusted to a state of the art system with the current availability of components, materials and analysers on the market.

## Upgrades & Retrofits

Technical innovation demonstrates that upgrades become more and more critical and should therefore become an integrated part of your maintenance philosophy. New or improved technologies offer higher reliability, accuracy, quality and safety. For example, we offer possibilities in remote system upgrades, specific system software and HMI's.

## End of Life Services & Replacement

When your system has reached the end of its life cycle, the decision has to be made on how to proceed. Either the life cycle can be extended by a certain period of time via an upgrade or retrofit. The system can also be replaced entirely.

Our end of life service and replacement services encompass the latter. It could include consultancy for basic design as well as detailed engineering, assembly and integration of a new system at site.



**360°KAS is an independent system integrator serving the global Oil & Gas, Petrochemical, LNG and Research & Development markets with high-end analyzing, sampling and pilot testing solutions. We take care of the whole process from basic and detailed design, through procurement, assembly and final system integration on site.**

We believe trust is the most valuable asset in any relationship. You should be able to rely on our systems; 360°KAS is driven to be the quality leader in our field of expertise. Our solutions are more than accurate. They are durable, reliable and keep going. That's what we call Engineering Trust. Our portfolio encompasses:

- **Analyzer & Sampling Systems**  
From sample take-off, sample preparation, sample storage up to actual analyser measurement we are able to provide you with a fit for purpose and trustworthy solution.
- **Pilot Plants**  
R&D Test Units for continuous, semi-continuous and batch, dedicated and multi-purpose, fixed/ fluidized bed, liquid, gas and multi-phase reactor applications.
- **LNG Sampling Systems**  
Serving the Liquid Natural Gas (LNG) value chain with a variety of smart solutions to sample LNG from the main transfer line.
- **Spares, Service & Maintenance**  
All services necessary to maintain and operate your systems safely and accurate from initial start-up till controlled end of life cycle.
- **Instrument Sales**  
Our portfolio of distributed products.

360°KAS is part of the Industry International Group. Industry International Group currently employs around 300 people across five autonomous businesses, each delivering specific technical engineered products and services in their respective fields and markets from different locations in The Netherlands, France, Africa, Middle East and the Far East.



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