SOLVEWARE AS
CONSTRUCTION

INDUSTRIES & MARKETS

Department of Business Development
SOLVEWARE AS

CONSTRUCTION INDUSTRY

In Solveware AS we deliver solutions in three main areas: Augmented Reality, Tracking and Navigation, and 3D scanning, planning and modeling.
If you want to learn more about these solutions separately check also "Search by Product, Use and Solution" in "Integrated Solutions" at solveware.no

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We cordially invite your organization to join the list of distinguished clients in the Construction Industry, such as Gilbane and Kuop Designs, who have already implemented our solutions in their workplace.

As the Construction industry becomes increasingly more complex and dynamic, with a growing emphasis on energy efficiency, simplifying tasks, routines and measurements, here at Solveware AS, we want to emphasize the importance of AR and IT solutions and their potential to improve the efficiency and sustainability of construction projects. With our cutting-edge technology and expertise, we can help your organization achieve its goals and stay ahead of the curve in this ever-changing landscape.

Equipment

SMART CHECKLISTS:

To ensure safe and efficient operations in the Construction Industry, Solveware AS offers Smart Checklists as a solution. Smart Checklists are an easy-to-use tool used by supervisors, engineers or chiefs of site, that can recommend actions and procedures and ensure that important work is being done while preventing common errors. They are designed to be operated hands-free and can provide real-time instructions and information about the work being done to supervisors.

Smart Checklists offer several advantages in terms of time savings and reducing the risk of human error. They can be created manually by supervisors or automatically generated by a script that analyzes data from the construction site to determine the tasks that must be followed. By eliminating the need to manually submit information to the server, Smart Checklists save time and ensure accurate reporting.

Supervisors can access Smart Checklists remotely and can easily assign tasks and verify completion. Additionally, Smart Checklists can be customized to fit specific construction site requirements, ensuring that all safety protocols are followed and all necessary tasks are completed.

Smart Checklists also provide valuable data for analyzing work progress and identifying areas for improvement, making them an essential tool for construction project management.

SMART EYES:

The Constructions Industry has a challenging environment where having free hands is a crucial element in work and inspection. Smart Eyes is a simple solution that provides a hands-free virtual operation environment, which can be enhanced with external assistance. By using Smart Eyes, supervisors, chiefs of site, and engineers can connect their AR glasses with support by the chiefs of site, the architect or the clients, while they can display information superposed to reality for inspections, explanations or suggestions, or any other reason.

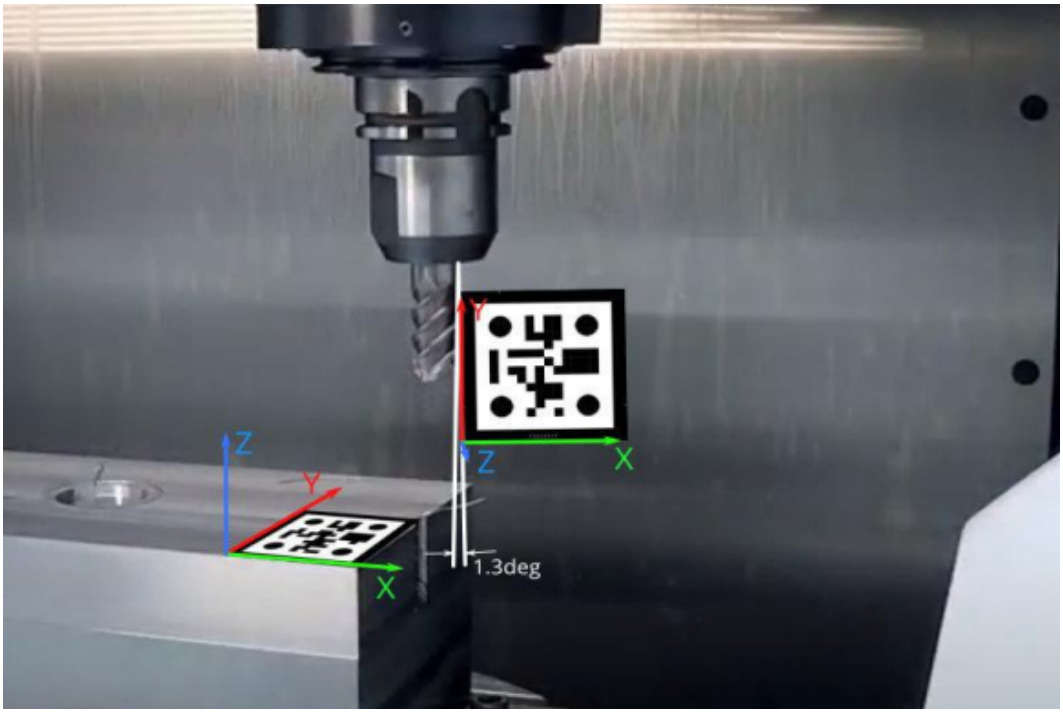
One of the key benefits of Smart Eyes is the ability to display real-time data from machinery or equipment in the field of view of the supervisor or engineer's AR glasses. This enables them to

quickly and easily access critical information, such as construction site or equipment status, performance metrics, and other important data, without the need to look away from the task at hand. Smart Eyes also allows supervisors, chiefs of site, and engineers to receive guidance and support from experts who can see exactly what they are seeing in real-time, ensuring faster resolution of technical issues and reducing downtime.

Quality Control:

SMART MARKERS:

Smart Markers represent the next stage in the evolution of QR codes. These markers are significantly faster to read, can be accurately read in real-time by machines from multiple meters away, and can be also read with low luminosity and from almost any angle.



By employing our Smart Markers, users are able to conduct precise, real-time measurements with an accuracy of up to the millimeter. These measurements can include the distance between objects, positioning, inclination, and various other measurements that are made completely hands-free, without the need for any additional measuring or precision tools.

Smart Markers can also offer real-time information and views from other angles, that can be accessed hands-free with AR glasses, or with the use of any phone or tablet. Smart Markers offer a wide variety of different uses in this industry, and will be explored in the following categories.

HANDS-FREE PDF READER

With our Hands-Free PDF reader solutions for AR glasses you can have access to instructions and information and navigate through them without the need of holding a device or a physical instruction manual, thus allowing you to inspect the site freely and efficiently while having access to information in regards of it.

Our hands-free PDF reading solution can be operated with simple voice commands, with gestures or by touching the smart glasses, depending on the preference of the customer.

The information can also be updated online both by the user or by an external agent that will send information instantly to the user.

You can customize the size and location of the display of the pdf documents in order to have access to information while working on a comfortable manner easily adjustable to your needs and preferences.

3D SCANNING INDOORS AND OUTDOORS:

With our advanced 3D scanning technology and devices, Construction professionals can generate highly accurate 3D point cloud maps of indoor or outdoor buildings and construction sites, with an astounding 99% precision rate, meaning that you can make accurate measurements in your computer, tablet or device, without the need of using actual measurement tools in real life. This can be specially useful to avoid unnecessary delays or physical labor related to measuring certain areas of the building, to simplify reporting information, and to overall prevent human mistakes and make them impossible in the field of precision measurement. These maps can be quickly and easily converted into detailed 3D models or floor plans.

Gone are the days of relying solely on engineers to update layouts or report information and progress to supervisors, including new changes and progress, piping, cabling, or others.

The benefits of our solution extend beyond mere mapping and modeling. With the use of these 3D point clouds and models, Construction Industry professionals can perform highly accurate measurements, create 3D tours, deploy them to physics simulations, and even virtual rendering engines, providing an immersive and comprehensive view of your construction site.

SMART CHECKLISTS:

With our Smart Panels you can deploy Smart Checklists in your workplace, streamlining quality control processes and improving overall productivity.

By leveraging this easy-to-integrate technology, quality control routines can be configured and automatically deployed with ease, along with protocols and conditional statements to ensure maximum precision and efficiency.

With Smart Checklists, you and your clients can enjoy greater peace of mind knowing that every critical aspect of your operations has been accounted for and streamlined to ensure optimal performance.

SMART EYES:

As previously explained, with Smart Eyes you can combine online support with a hands-free virtual operation environment, in which the supervision team can be granted access and collaborate with operators and workers, see what you see, and point out crucial information right into your eyes.

SMART ALERTS:

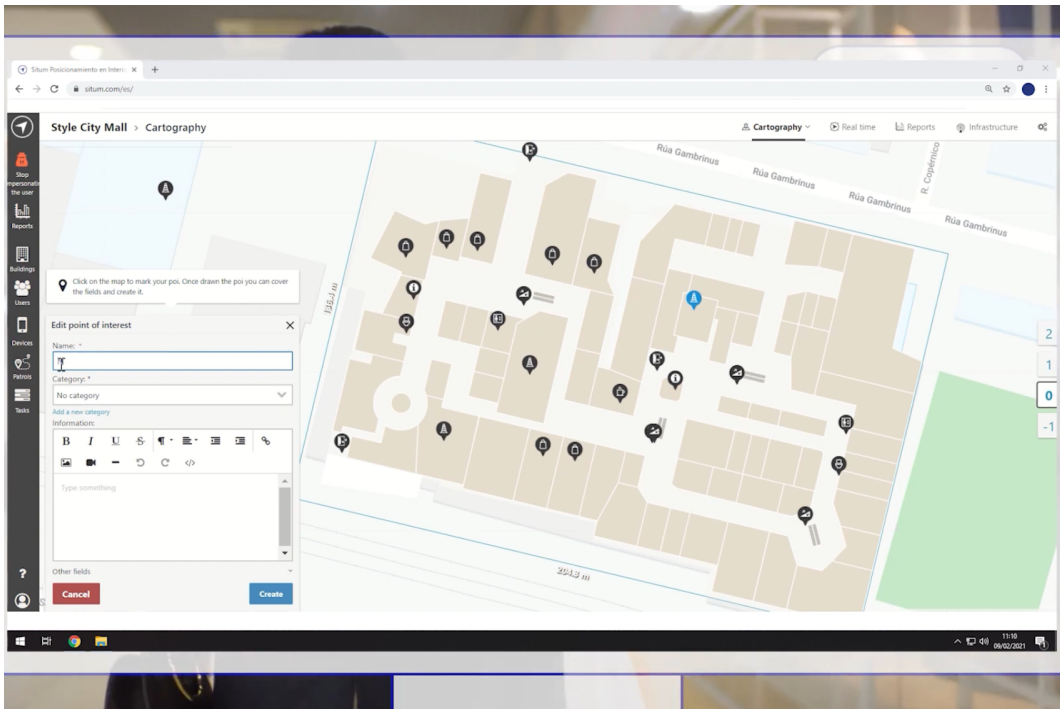
Join Nokia on the list of companies upgrading their alert systems to include our Smart Alerts solutions, which provide a more comprehensive alert system with more detailed information easily accessible with your smart-watch, AR glasses or any device.

Give your supervisors or operators more information about alerts, such as parameters, real-time data from the site or machinery, as well as indications on the relevance of the alert.

Work Routines & sECURITY:

TRACKING AND SMART NAVIGATION SOLUTIONS:

We offer two alternative Tracking Solutions to locate on real time any employee or visitor in your building or location. This is a way of ensuring security as well as that all check-ups, routines and quality controls are being actually done, as well as ensuring that safety protocols are being enforced.



One way of achieving this is with the use of Smart Markers, which has the advantage that it logs these routines or procedures offline, and will be uploaded to the server as soon as the AR glasses gain access to internet connection. This is very advantageous in environments with connectivity problems, such as in Faraday Cages, underground or remote facilities, et cetera.

We can also achieve this with an algorithm that creates a coordinate system with your wifi network and using some repeaters or beacons. The main advantage of this procedure is that we no longer rely on using AR glasses or any camera, and works perfectly on any phone or tablet. We are currently testing this on smaller devices similar to Apple Tags that can be carried like a pin, and that would monitor the location inside the facilities.

This second method is significantly cheaper and easier to implement among a large amount of workforce, as it works on almost any kind on device, such as a regular phone, and does not relyon the camera to detect Smart Markers to locate you on real time.

Training:

At Solveware AS, we understand the importance of properly training employees, particularly in complex and dynamic industries such as Construction. That's why we offer various AR and IT solutions that can greatly benefit employee training and development.

For example, our Smart Markers and Smart Checklists can be used to provide hands-free and precise training indications and procedures. For example, to explain the procedures, routines and sections of the construction site without the need of an actual worker ceasing his work to make the explanations. It can also serve as a guide for other matters related to machine operation, having access to real-time information from the machines or processes involved in the construction site . This allows for a more interactive and engaging learning experience, while also reducing the need for expensive measurement or precision tools.

In addition, our tracking solutions can be integrated into employee training programs to ensure that work routines and procedures are being followed accurately. This helps to prevent human errors and ensure consistency in training across all employees.

Furthermore, our AR glasses with Smart Eyes technology can also be used to connect employees with online support and technical supervision during training. This provides a valuable resource for employees to receive guidance and assistance in real-time, without the need for the support team to be physically present or to carry a bulky device such as a tablet.