

# IPCS 9Flows | Shop floor management

IPCS by 9Solutions

The concrete precast element factory employs about 50 people. The factory manufactures precast elements for the construction industry totalling about 30-50 elements a day. The elements tend to be different, so the manufacturing process must be very flexible.

## Problem: It is difficult to calculate production time of each precast element

---

The manufacturing of each element consists of about 10 different production phases, such as building the mold and transferring the element to the stock. Different working groups make these production steps. In addition, the same working groups make several different production stages for different elements. The calculation of the working time for each element includes a great deal of estimations and the margin of error is large.

## Solution: IPCS by 9Solutions

An IPCS system was installed in the precast concrete factory. The system monitors the working time for each element. When the production process of the element begins, an Asset Tag identifier is attached to its drawing. The drawing accompanies the element through the entire production chain. The employees, working with the elements, have their own ID Badge Tag identifiers. If an employee is close to a drawing for more than five minutes, the IPCS system considers that the person is working on the element. If two elements are close to each other, the IPCS system cannot unambiguously identify which of the two elements the employee is working on. Often the employees switch between one element and another for very short periods of time. In these cases, the employees can touch the Asset tag with their ID Badge Tags. Touching indicates that they are working on that particular element. In this way, it is possible to calculate very accurately the time that it takes to produce each element.

In addition to the element-specific monitoring of working hours, the IPCS system also serves as a workers' working time monitoring system. Employees keep their ID Badge Tags in the lockers. When the tag is in a locker and does not move, the system registers its location and concludes that the person is not at work. When the shift starts and the tag moves with the worker, the system determines that the person has started working. Breaks can be monitored by the time spent in rest areas.

The IPCS system is extremely easy to use, as it is integrated to the factory enterprise resource planning system (ERP). The elements in the production plan are automatically updated to the IPCS system database over an application programming interface.

9Solutions Indoor Positioning and Communication Solution (IPCS) is a wireless real-time positioning system that can track the location of people, assets and goods within your facility.

## The Benefits of IPCS

- ✔ Quick and easy installation. There were no changes made to the factory's electrical, IT or communications configuration. The system installation was carried out in a few hours.
- ✔ No software installations. The factory management can monitor the statistics in real time by using any Internet enabled device.
- ✔ Ease of use. At the beginning of the installation, you add the floor plan of the factory to the system and determine the different areas, such as rest areas, smoking areas and so on. After the installation, you do not need to enter any data to the system as IPCS fetches all the data from legacy shop floor management system of the Compass application programming interface.
- ✔ Software as a service: The tag monitoring system is provided as a cloud service. The factory staff do not have to worry about server operations; employees can concentrate on their work. Since the IPCS system is not installed on local servers, it does not burden the local IT staff.
- ✔ Low maintenance costs. The system self-diagnostic alerts the 9Solutions control room in the case of a fault situation. Problems can often be corrected remotely. If the problem requires an on-site visit, 9Solutions will send an error report to the local partner within 15 minutes after the occurrence of the problem.

Combination of solid Bluetooth technology platform and 9Solutions' strong IPR portfolio has enabled us to build a unique product.

The IPCS sets new RTLS performance standards.

It is built on robust wireless Bluetooth technology, used in over 3 billion devices globally.



**SEEK NO MORE**  
IPCS by 9Solutions