

Industry 4.0 revolution in practise

How to optimize logistics and manufacturing processes
with Confidex RFID, NFC and Bluetooth®



Reliable data powers modern manufacturing and logistics chain

Tightened competitive landscape forces companies to innovate their operations into leaner and find completely new ways to provide services. When unique, made-to-order products with fast deliveries starts to be the baseline expectation for several industries, supply chains must work fluently from one to another.

In Confidex vision, all the valuable and critical physical assets will be traced and characterized based on their unique ID, location and condition data.

With this data manufacturing and logistics companies can truly optimize their operations and resource planning – as they can make sure the right asset is at the right place, in the right time and in the right condition.

In our vision, data is distributed among the ecosystem partners so that supply chain can be optimized with predictable and transparent information. This generates several benefits, when the whole contextual value of goods is maximised, flexible manufacturing works in harmony or when logistics processes work with minimum delays in high capacity.



Which parts of your information sharing process are still manual and require human interaction?

IoT is one tool for overcoming the disruption. IoT and specifically wireless identification technologies will give digital identities for the physical world assets so that the assets can be better traced, controlled and optimized.

Before implementing, sometimes overwhelming, IoT to corporate-wide, global processes, the use of IoT can be started for example from checking what is still done manually. Is there still manual counting of inventories? Are there black spots somewhere along the manufacturing chain where data about the assets would bring new value? Is data of the received goods logged into the systems after a day's, week's or even month's delay? Is there need for intelligent way to authenticate assets or people in order to increase safety?

Wireless identification technologies are used already today for wide variety of applications from tracing material flows to providing easy access of user manuals of the machine. Short-range wireless technologies are powering for example eKanban applications, work-in-progress monitoring of car bodies, validating shipments and authenticating products for protecting brands. Or tracing tools at the large construction yard. There are suitable solutions available to make wide variety of industrial, business-critical applications more efficient.



Physical world is beyond bits - it's dust, rain, vibration and friction

Containers, roll cages and intermediate bulk containers are stored outdoors, handled roughly and facing washing processes - the RFID tag must tolerate all of the same elements.

Manufacturing processes often involve processes in harsh environmental conditions, e.g. high temperature, humidity, abrasion, presence of chemicals or other fluids, in which traditional barcode labels or wireless identification devices are poorly suited for.

Confidex is the pioneer in designing industrial-grade wireless identification products and solutions, since 2005. Our team of experts have been working together with the leading industrial customers, such as Volvo, CHEP, Goodpack and Hilti, and understand what is required from a reliable wireless identification device - whether it utilizes RFID, NFC or Bluetooth® technology.



The world is becoming more and more linked. Gartner is expecting the number of Internet of Things (IoT) units to increase to 20 billion by 2020. This trend will dramatically increase the demand for easy-to-use, secure, scalable and proven solutions.

“Companies often make the mistake of trying to use technologies to their maximum capacity, instead of designing solutions that serve the purpose. We focus on offering wireless connectivity solutions, linking assets with quantifiable data to enterprise systems,” says **Timo Lindström**, CEO at Confidex.

Confidex delivers a customer experience that earns top ratings from its hundreds of international customers in the automotive, logistics and manufacturing industries.

“We have always collaborated closely with our customers. We cooperate to develop robust solutions that are easy to install and maintain and also meet the application requirements. Our solutions are designed to be industrial-grade, and they can be operated even in very harsh conditions.”

The Confidex smart industry business is about creating links between the physical and digital worlds to identify, sense and locate. To give a few examples, the LINKS by Confidex™ products are ideal for increasing the efficiency of logistics and proving product authenticity.

“Our solutions are essential, if not critical, to our customers’ business operations. With the growing number of links between things and people, value will be measured more extensively than based only on material costs. Our customers must always be confident that the right goods are in the right place at the right time. For this reason, the data must always be free from errors, and information security must be intact.”

Confidex is expanding its LINKS by Confidex™ product offering to cover Bluetooth Low Energy (BLE) technology. This technology can be used to monitor conditions, such as vibration or humidity, and send data over distances of hundreds of yards. With BLE, Confidex Links will also be able to locate and sense assets in real time.

At Confidex, we have created links to industrial IoT since 2005.

More than 40 major companies - turnover €1 billion - link their assets with our devices.



Confidex UHF tags identify over 2 million Volvo cars

Improved use of assets and resources by minimizing waiting times and eliminating waste and rework

Lean operations and smart automation for improved cost-efficiency and productivity

Final products that match customers' specifications and expectations



Hilti uses NFC technology to help construction professionals manage and optimize their assets

Improved cost-efficiency and productivity by eliminating the need to spend valuable working time on locating tools, looking for lost assets or waiting for replacements

Quick and accurate identification of equipment



Metsä Fibre tracks pulp bales

An effective, reliable way to track pulp units and generate savings in material flow management



CHEP Pallecon Solutions uses RFID for tracking returnable containers

Tracking of assets all the way down the value chain, wherever they go, throughout multiple processes

Improved data integrity and asset visibility

Management of returnable assets in real time

Elimination of bottlenecks and reduction of loss and damage across the asset pool



About the LINKS by Confidex technologies

NFC brings data to your products



Near Field Communication (NFC) technology is designed for data transfer over short distances. Data is attached to items by means of tags, each containing a link that can be opened using a smartphone.

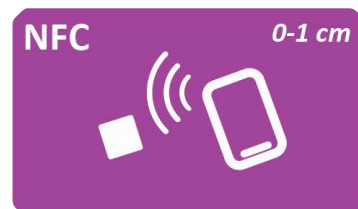
NFC solutions are used to verify the authenticity of products, such as spare parts for cars. This technology also improves safety at work: industrial machines can be equipped with video instructions.

Our tags and labels link over 60 million assets. Every day, our links connect more than 80 Million industrial assets with data all around world.

RFID is the barcode 2.0



Radio Frequency Identification (RFID) tags can be read over distances of dozens of yards. This technology enables companies to monitor large streams of goods automatically.



Confidex RFID tags help Volvo use assets more efficiently at its car factory. By using the tags, the company has constant visibility over equipment utilization rates and can ensure that the right parts are in the production lines at the right time.

Over 2 million people drive Volvos built around our tags.

BLE enables more complex measuring in larger areas



Bluetooth Low Energy (BLE) technology enables data transfer over distances of hundreds of yards. Because this high-performance technology has an independent energy source, it can be used to monitor the condition of products, for example.

With BLE, companies can ensure that the cold delivery chain of frozen foods is never broken, from the production plant all the way to the grocery store. Beacons measure the product temperature at regular intervals and transfer the data to company systems.

More than a million fresh products are delivered every day, with our tags securing the cold delivery chain.

The RACE for Industry 4.0

The Confidex recipe for success in the implementation of IOT

Experience has shown us that LINKS must be easy to use, secure, scalable and industrial-grade.

Easy

Our LINKS are easy to use, easy to implement, compliant with the application's requirements, industrial-grade and rugged to withstand harsh environments in the logistics and manufacturing chains.

Secure

Our customers use LINKS to improve their critical processes. This means strict requirements for information security. To ensure secure data transmission, we use Google EID encryption in every connection between Links and devices.

Scalable

The same products and designs must be available, regardless of the volume. We supply the same products from small test volumes to global implementations.

Proven

Today, LINKS are well established as an integral part of several business-critical, enterprise-grade applications to control, verify and identify assets in complex manufacturing and logistics processes.



More than 100,000 construction workers find their tools faster, thanks to our tags.

We are trusted by the world's largest car manufacturers.

More than 10 million people have been delighted by fresh flowers, thanks to our tags.

Majority of European flowers are transported with containers that are linked by our tags.

We are linking in more than 60 countries.



www.confidex.com

