ACHIEVING AUTOMATION WITH LIGHT PROCESS CHANGES

Many are considering discontinuing the use of an existing bar code system. Often there are good grounds for changing the complete system and choosing a completely new technology to improve efficiency. However, there are times when the investment is too heavy, time consuming and would require process changes that the company just isn't ready for. In these cases, it could pay off to keep the existing barcode system and just finetune the processes by adding Wirepas Massive in to the mix.

Locating people and objects coupled with the collection of sensor data can often make processes in a warehouse or distribution center significantly faster and more productive, thereby boosting overall business efficiency. However, an investment in a new system that would change all the old processes and would require a change in the legacy system as well, would not give enough payback for the investments made. In these situations, it pays off to keep the old legacy system and e.g. the barcode processes people are used to and just add more data by adding a simple component to the process. Marrying the barcode to the Wirepas Massive ID on a tag provides SKU (=stock keeping unit) item level data together with pallet level data that can be used in processes where location and sensor data is required.

BENEFITS OF LEGACY BAR CODE SYSTEMS WITH SUPPORTING TECHNOLOGIES

Adding Wirepas in Legacy system can be small change in floor level, but enables major improvements in processes by when articles are connected. Bar codes are low cost, virtually for free.

- Well established standardizations are in place for bar code processes. E.g. GS1 standard is widely acknowledged.

- There are plenty of proven legacy systems available and they are constantly being developed further.

- Old processes can still be valid and well-working and fine-tuned by adding a supporting technology, like the Wirepas Massive.

  —When item level barcode data is married to a Wirepas Massive ID on a returnable transport item("RTI", for example a pallet, container, roll cage etc.) the item level

data can simply be retrieved by using existing bar code processes and tracking and sensor data is automatically collected with the Wirepas Massive.

  —RTI level data tracked with Wirepas Massive will only bring new data sources for the backend system as well as automates certain processes.

- In case bar code items are loaded on Wirepas Connected pallet, there will be no overkill in tagging, when wanting sensor data, since there's no need to change the item level barcode to sensor enabled tags for item level data collection.

  —There is no need to attach a tag to every individual item to collect sensor data extensively and reliably. RTI level is more than sufficient and when the RTI's are married to item level identification data, you can rely on the sensor data match item level bar code data.

- No overkill in new infrastructure for counting the goods for inventory. One simple, small gateway device gathers the RTI level counting data.

  —Old bar code handheld readers can still be used for reading item level data manually when needed. No need to invest in new handheld devices.

  —RTI level processes can be fully automated.

  —If location data is needed, a few small battery-operated anchor devices need to be installed. There will be no need for big, chunky, expensive radio frequency reader or repeater installations and wiring.

  —No need to replace existing fixed bar code readers to e.g. RFID readers.
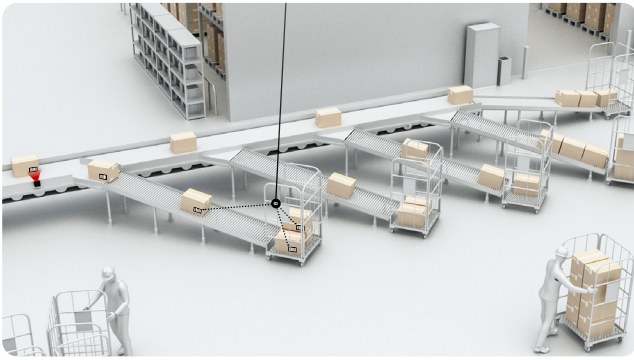
HOW TO UP THE GAME BY ADDING WIREPAS MASSIVE TO BAR CODE PROCESSES

There are multiple bar code processes that can be enhanced with Wirepas Massive in warehouses, distribution centres, healthcare environments, postal services and manufacturing.

1. The need for 'line of sight' for every inventory round for each item and or RTI disappears and manual reading tasks decrease. Since using Wirepas Massive to count full pallets or other RTI's they can be counted into inventory automatically via the network, and only items on partially loaded pallets need to be counted manually. Partially loaded pallets can be identified by having sensors in the Wirepas Massive enabled tags.

2. The RTI's usually have printed bar codes (often on paper) that tear, stain, break or otherwise spoil and thus cannot be read and connected to the barcodes on the products. Those are no longer needed and the transport carrier can have an unbreakable mechanic design on the tag into which the item level bar code gets married to.

3. Automated location data available on RTI level thanks to Wirepas Massive enabled positioning.

    — Similar tags as used on the RTI's can be installed around the premises as anchor point that offer a reference point for the tags on the RTI's for position data.

4. Goods-in / goods-out processes can be automated on RTI level. When item level bar code data is married to RTI level before hand, the goods-in / goods-out process is completely automatic.

5. RTI level sensor data, instead of just room level, available throughout the process to enhance productivity and to prevent loss, is where Wirepas Massive network excels.

SUBTLE ADDITIONS TO THE PROCESSES WILL MAKE ALL THE DIFFERENCE


Goods in/ goods out

1. GOODS-IN

Once the goods containing barcodes arrive at the premises they can be counted in on the pallet level if the pallet is equipped with an ID on a Wirepas Massive enabled tag/sensor. The goods' item level barcode information needs to be married to the Wirepas Massive ID. When transferring the items from RTI to shelf or storage room the marriage between the RTI needs to be broken and if needed it can be then married on a Wirepas Massive ID in the place chosen for storing the item.

2. GOODS-OUT

Once the goods containing barcodes are loaded on an RTI carrier, the barcode gets married with the Wirepas enabled tags/sensor ID on that carrier. When the carrier leaves the network, all the items married to it will also have processed as goods-out in the backend system.
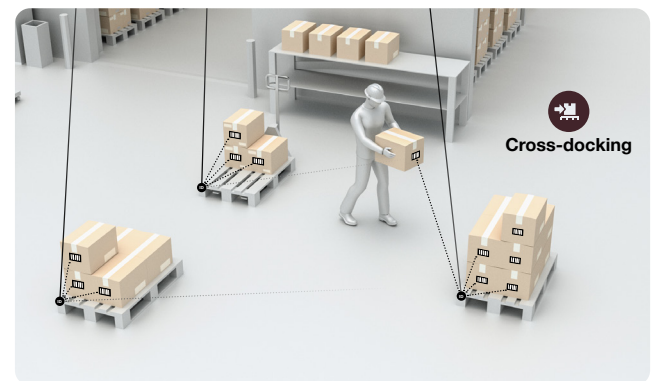

Cross-docking

3. CROSS-DOCKING

Once the goods containing barcodes are loaded from one transport carrier to a pallet, container, roller cage or another transport carrier, the barcode gets unmarried from the original RTI carrier with Wirepas Massive ID and married to the new one on the next transport carrier.


Inventory

4. INVENTORY AND PICKING

Once on the shelf the goods' item level barcode gets married with the Wirepas Massive ID of the shelf or another specifying location. The inventory on the shelfs, pallets or other containers is automatic if the backend system is informed of items taken into use with the existing barcode system. Reading the barcode at picking process, the backend will know to which Wirepas Massive ID it has been married to and will then count it out of inventory. Sensor technology can also be taken into use for picking purposes to automate the process even further, e.g. weight sensors.
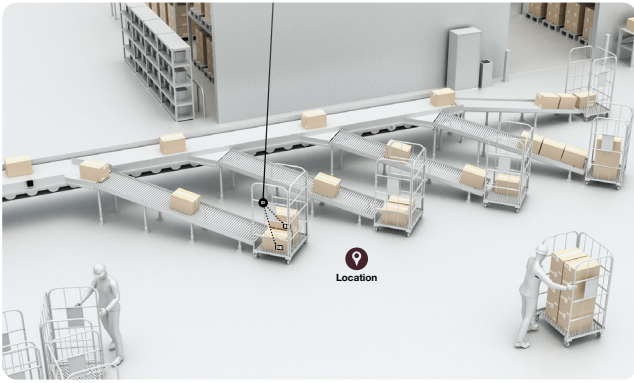
5. LOCATION DATA

Once the goods containing barcodes are on a pallet, their item level barcode ID gets married with the Wirepas Massive ID on the tags/sensor ID of the pallet. The location of the goods can be derived based on neighbor information of similar Wirepas enabled tags that have a fixed location configured to them.
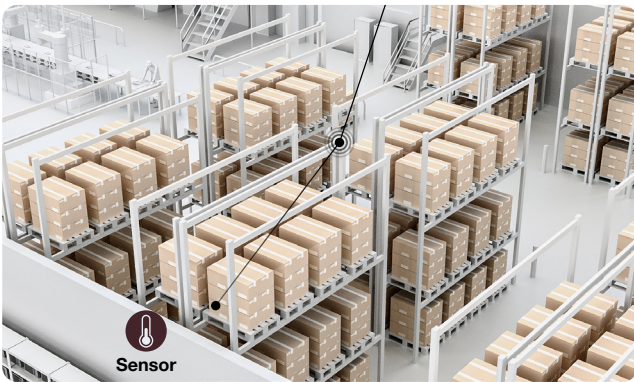
6. SENSORING

Once the goods containing item level barcode ID's are married with the Wirepas Massive ID enabled sensors on the shelf, on a transport carrier (such as a pallet or a roller cage) or in a specific room or area, the sensor data collected via these tags can be married in the backend system to the goods in question. This way it can be ensured that the goods have been stored in the right conditions (e.g. temperature, humidity etc.).

NEW PROCESSES OR IMPROVED PROCESSES

When considering of replacing your legacy barcode system to a completely new technology, it is a worthwhile exercise to consider the actual business case, the amount of change in the processes, needed infrastructure and its disruptive-ness as well as the costs to benefit ratio.

Wirepas Massive can automate and secure processes and at the same time provide more data sources for the business intelligence without disturbing the existing processes, with light infrastructure that is easy to install and needs very little configuration.