





Hanmi Research center



Paltan finished products plant



Hanmi headquarters



Beijing Hanmi



BIO/Antibiotic plant



Paltan finished products plant



Why manage individual products in supply chain?



1. Counterfeit drug

- No effective ingredients
- Deadly substances
- Wrong label
- Bigger market but lesser restriction than narcotic drugs

- Governments
- Companies
- **Patients**

A woman in a grey shirt and black pants is standing in a warehouse, sorting through cardboard boxes on a conveyor belt. She is holding a blue pill bottle. The boxes contain various pills, some blue and some white. In the background, another person is visible, also working with boxes. The scene is lit with a greenish-blue light.

2. Malpractice in distribution

- Price differences
- Tax differences

A person wearing a dark long-sleeved shirt, dark pants, and a dark cap is leaning over a long wooden shelf in a warehouse. The shelf is filled with small, round containers, some of which are blue and some are white. The person appears to be picking items from the shelf. The floor is made of large, light-colored tiles. In the background, there are more shelves and a large circular structure, possibly a conveyor belt or a large wheel.

3. Simple errors

- Wrong products
- Wrong quantity
- Wrong address
- Late delivery
- Duplicates



What's the right solution for us?

We can try bar code and RFID.

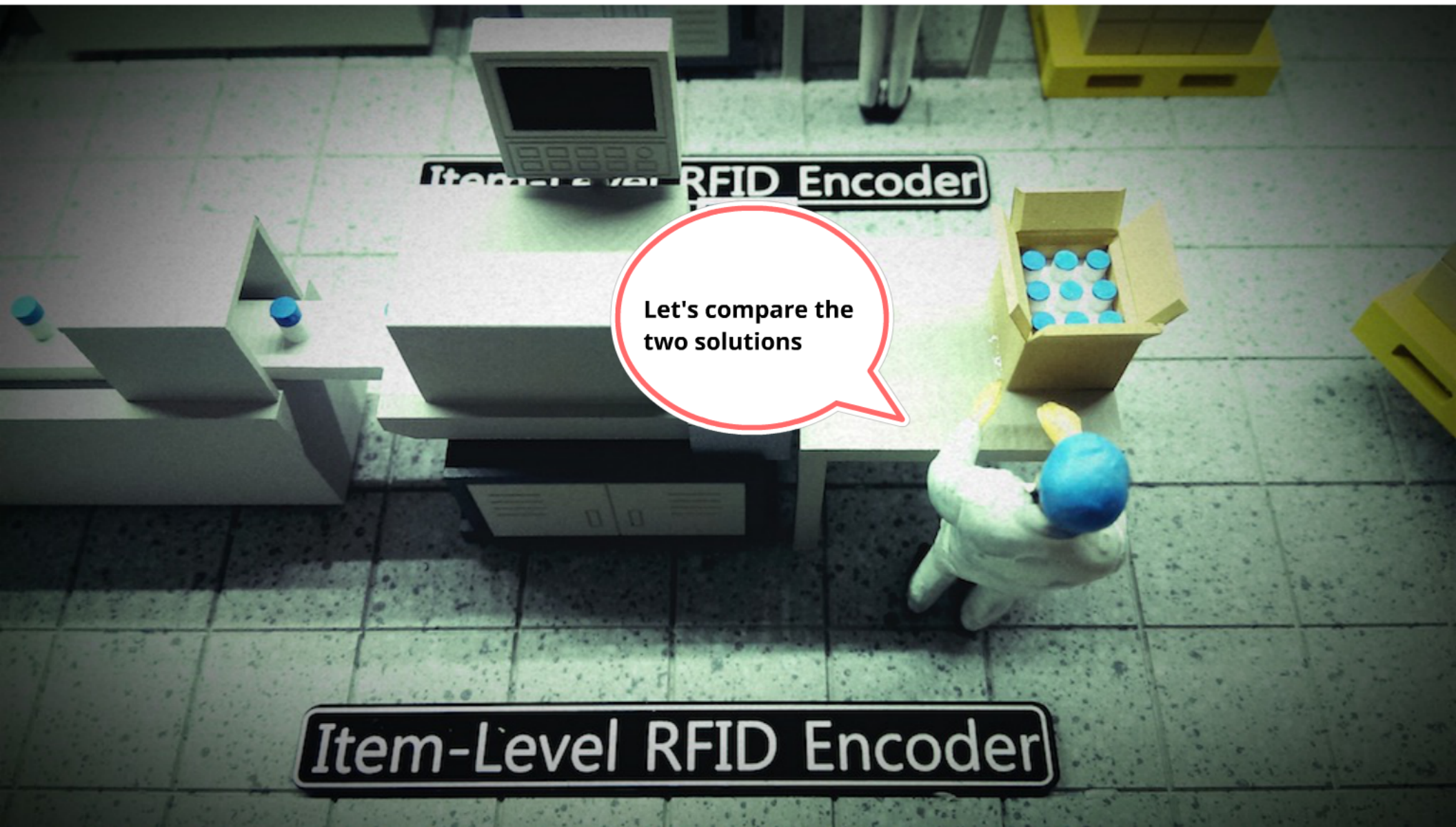


We have to consider **high volume production** and **automation process** in order to justify the technology.



We need **fast**
recognition
solution that
can identify
items in a **bulk**
with **accuracy**.

Digital



Item-Level RFID Encoder

Let's compare the two solutions

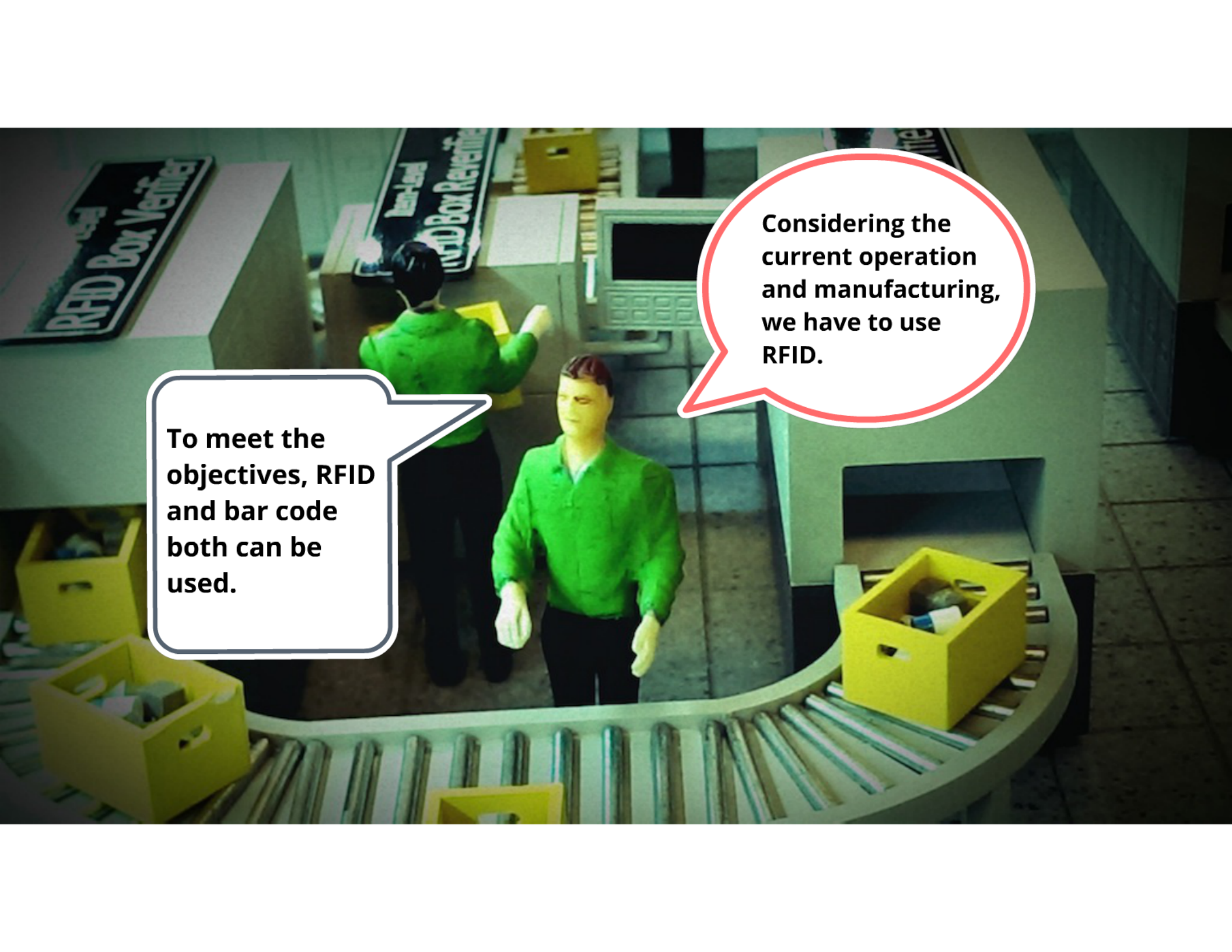
Item-Level RFID Encoder



To process 50 items in a box, RFID takes 3 seconds and bar code takes 100 seconds.

To process 1,000 boxes of shipments, RFID takes 50 minutes and bar code takes 28 hours.

bar code = labor?



To meet the objectives, RFID and bar code both can be used.

Considering the current operation and manufacturing, we have to use RFID.



**Is it easy to
implement?**

500 products

42 Production lines

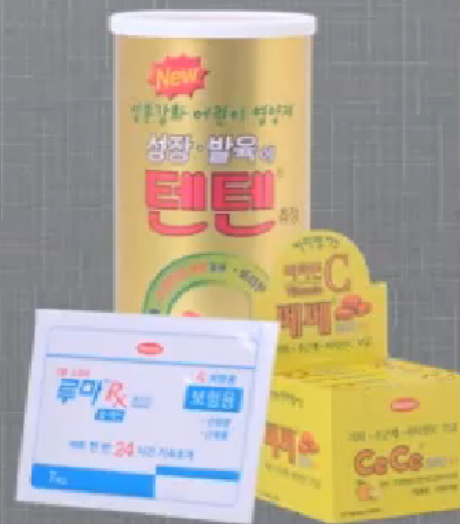
50,000,000 items



Stretch Pack



Liquid

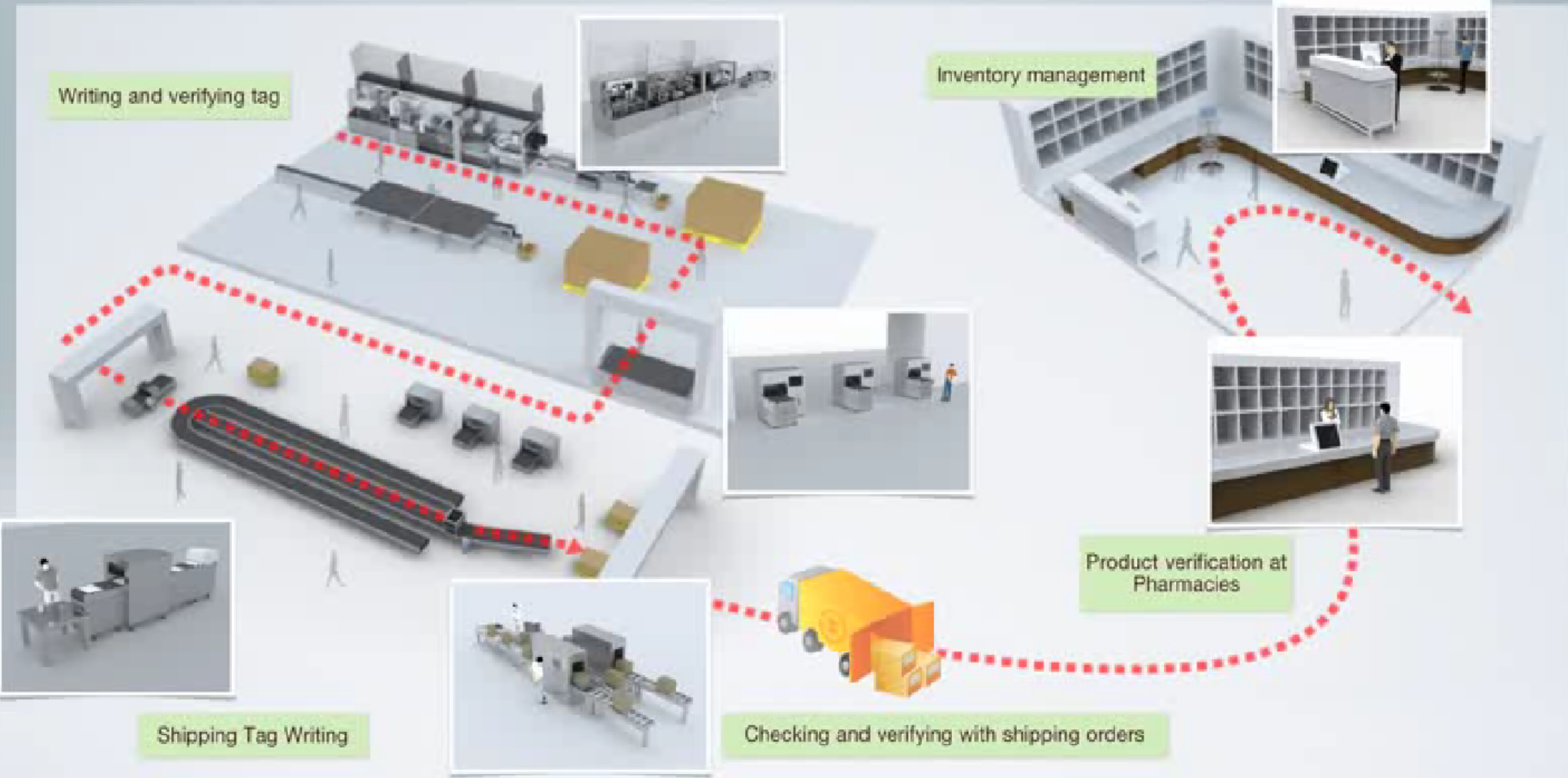


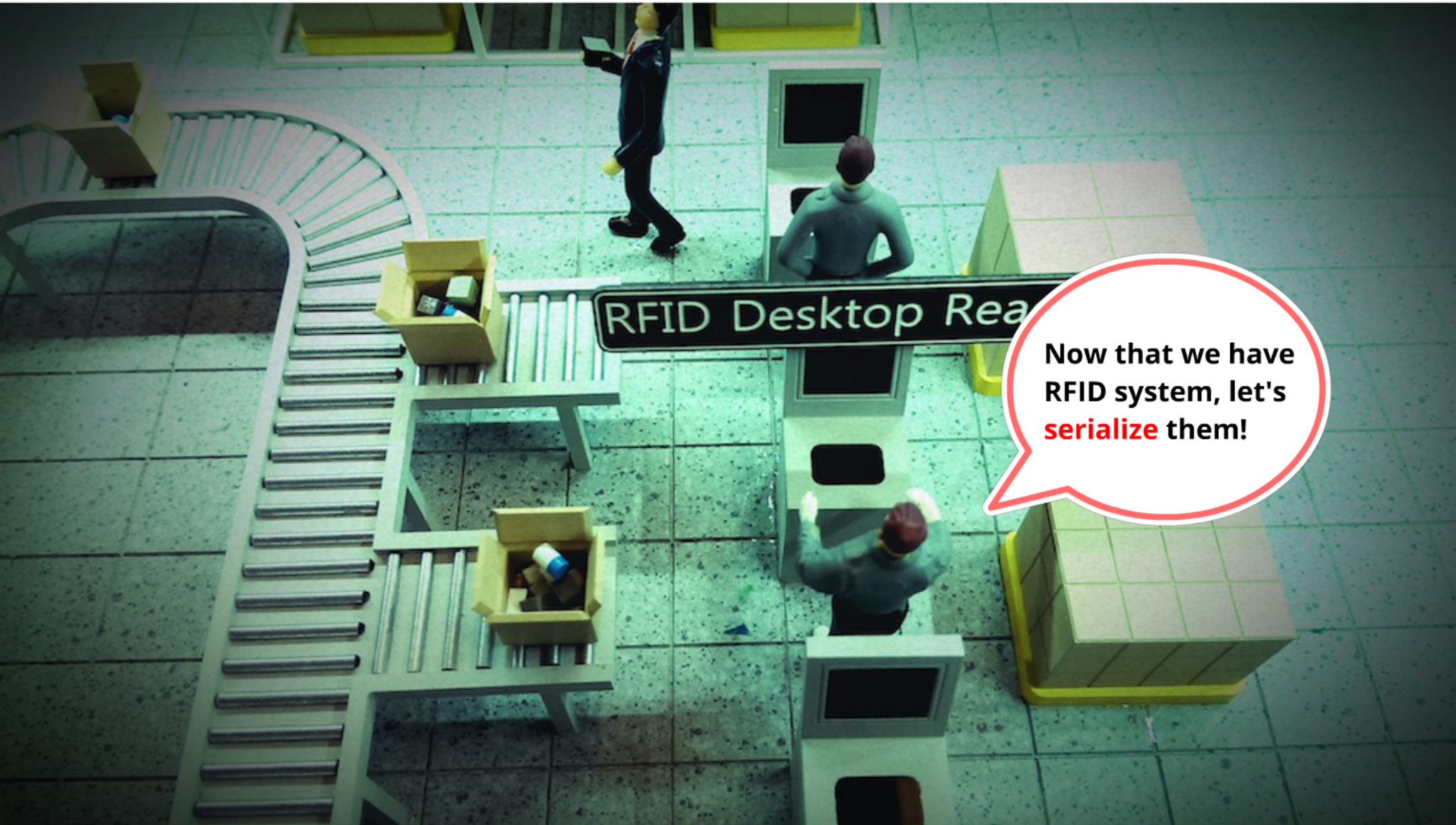
Metallic



Carton Box

RFID system at Hanmi Pharmaceutical





RFID Desktop Rea

Now that we have RFID system, let's **serialize** them!

Hanmi Hanmi IT Co., Ltd.

KEIDAS



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runs on



