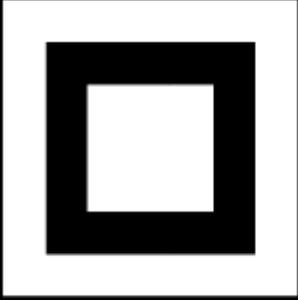


**IQ-R** 

- ***FO-Security was founded in 1930***
- ***Guilloche machine “Fotorotar” sold worldwide***
- ***car registration cards, ID cards, vouchers, public transport tickets, stock and bond certificates, security labels, serialized packaging***
- ***EN-ISO 9001, EN-ISO 14000, EN-ISO 27001, OHSAS 18001, FSC IMO-COC-028635***
- ***member of Intergraf***
- ***FO Group: 25 mio CHF annual sales, 120 employees***





- ***JURA is a leading software developer for security pre-press***
- ***CWA 15374:2005 certificate, based on ISO 9001:2000, by Intergraf (International Confederation for Printing and Allied Industries) and VPGI***
- ***graphic software for security document design***
- ***Direct Laser Engraving (DLE®) for intaglio plates***
- ***CTP output devices developed in co-operation with Kodak***
- ***personalization solutions for travel and personal documents***
- ***covert security features for banknotes, security documents***

2D Code with Security Upgrade

**2D Code**



**I-QR Code**



- **Uses a 2D code, works with multiple types**
- **Does not require special equipment, can be printed with regular inkjet printers**
- **Tracking and authentication happen as one step, at the same time**
- **Uses a smartphone with a reader application**
- **Automatically logs all events and results, which are available live for customers**

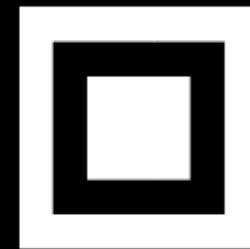
**Step 1: A serialised 2D code is generated , including product code, serial no, expiry date and batch number**



**Step 2: The 2D code is input into IQ-R encoding system.**



**IQ-R**



- **Encodes a second layer of information.**
- **The secondary information is hidden from public reader applications.**
- **The specific hidden information is entered into a database.**

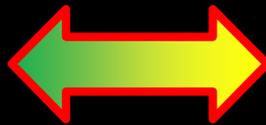
**Step 3: The new IQ-R code contains both the public primary and the hidden secondary information and is ready for printing**



**The resulting IQ-R is indistinguishable from the original by the bare eye or any reading application.**

## Step 4: Authentication requires nothing more than a smartphone application

- The application can identify on spot if the product (2D code) is genuine or copy
- The application can contact a server to download the code-specific hidden information and to compare it to the readout



**Step 5: Based on the analysis, the application provides feedback whether the IQ-R code is authentic**



**Genuine Code**



**Improper read out  
conditions,  
retry required**

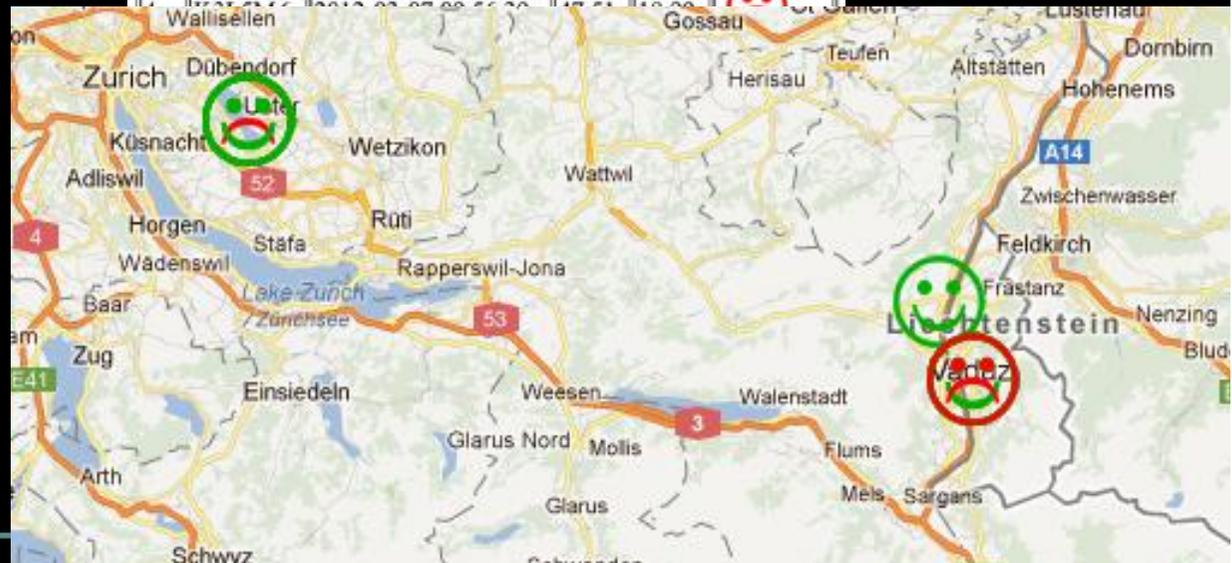


**Forged code**

# Step 6: All the data of any readout are logged and available for review and further analysis

- Readout ID
- Time stamp
- Readout results
- Number of readouts of a particular code
- Geolocation data

ID	Code	Date	Lat	Lng	Original
1	A1B2C3	2012-03-07 09:48:17	47.39	8.54	1
2	A1B2C3	2012-03-07 09:48:17	46.94	7.44	0
3	A1B2C3	2012-03-07 09:48:17	47.56	7.59	-2



## The process of tracking, tracing and authentication

Industry



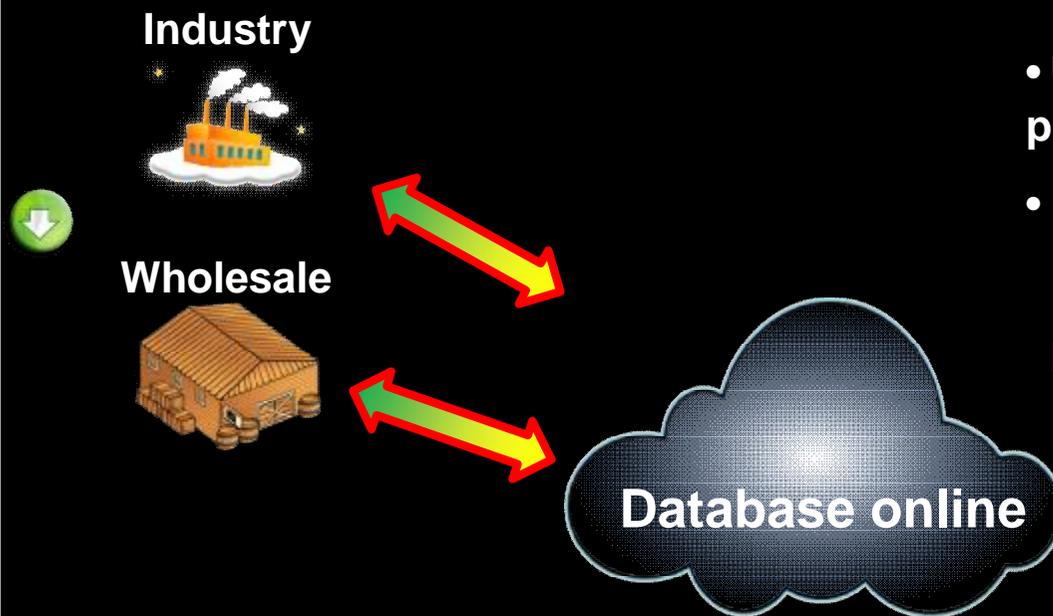
Database online

- Uploads data when the code has been printed
- Downloads data for review and analysis

### Benefits:

- Track & trace system
- Marketing & planning data
- Distribution Information
- Strong protection against falsification
- Black & Gray market information
- Etc...

## The process of tracking, tracing and authentication

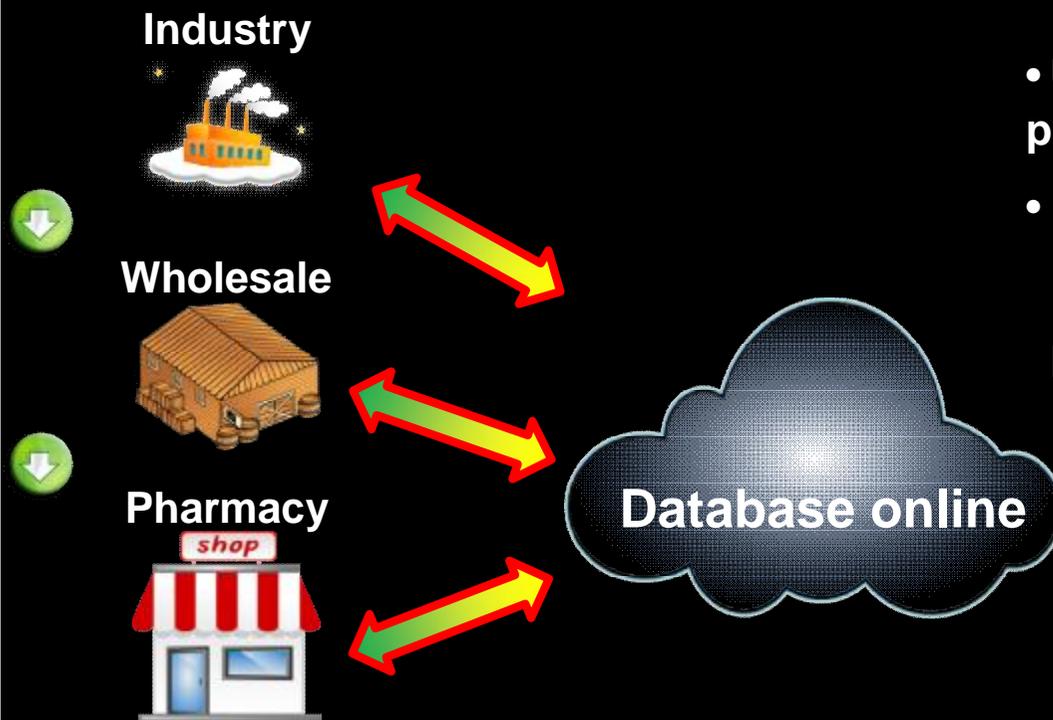


- Uploads data when authenticating the product
- Downloads data for authenticity check

### Benefits:

- Can discover counterfeited products
- Knows that forging happened before reaching this step
- Provides feedback to manufacturer for evaluation via the live information in the database
- Etc...

## The process of tracking, tracing and authentication

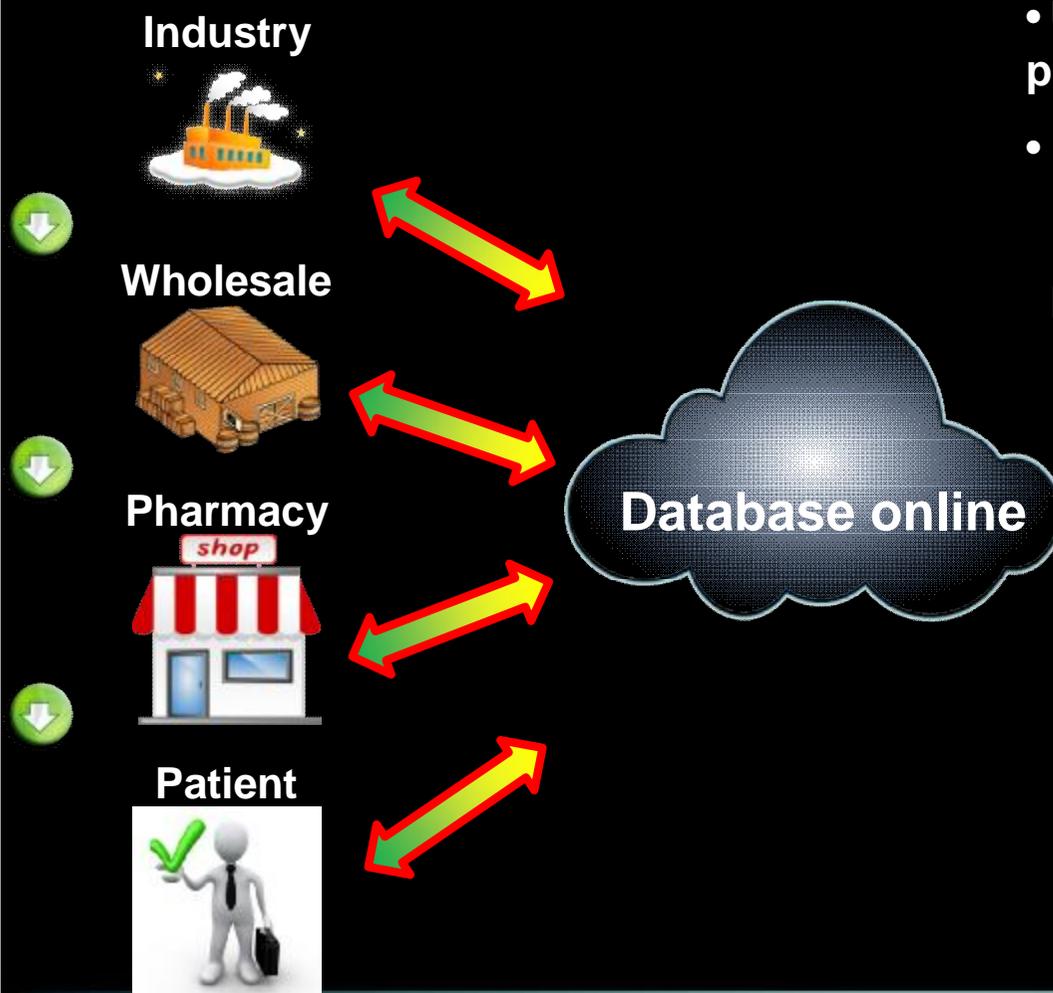


- Uploads data when authenticating the product
- Downloads data for authenticity check

### Benefits:

- Can discover counterfeited medicine before they reach the end user
- Knows that forging happened before reaching this step
- Provides feedback to wholesaler
- Provides feedback to the manufacturer via the live information in the database
- Etc...

## The process of tracking, tracing and authentication

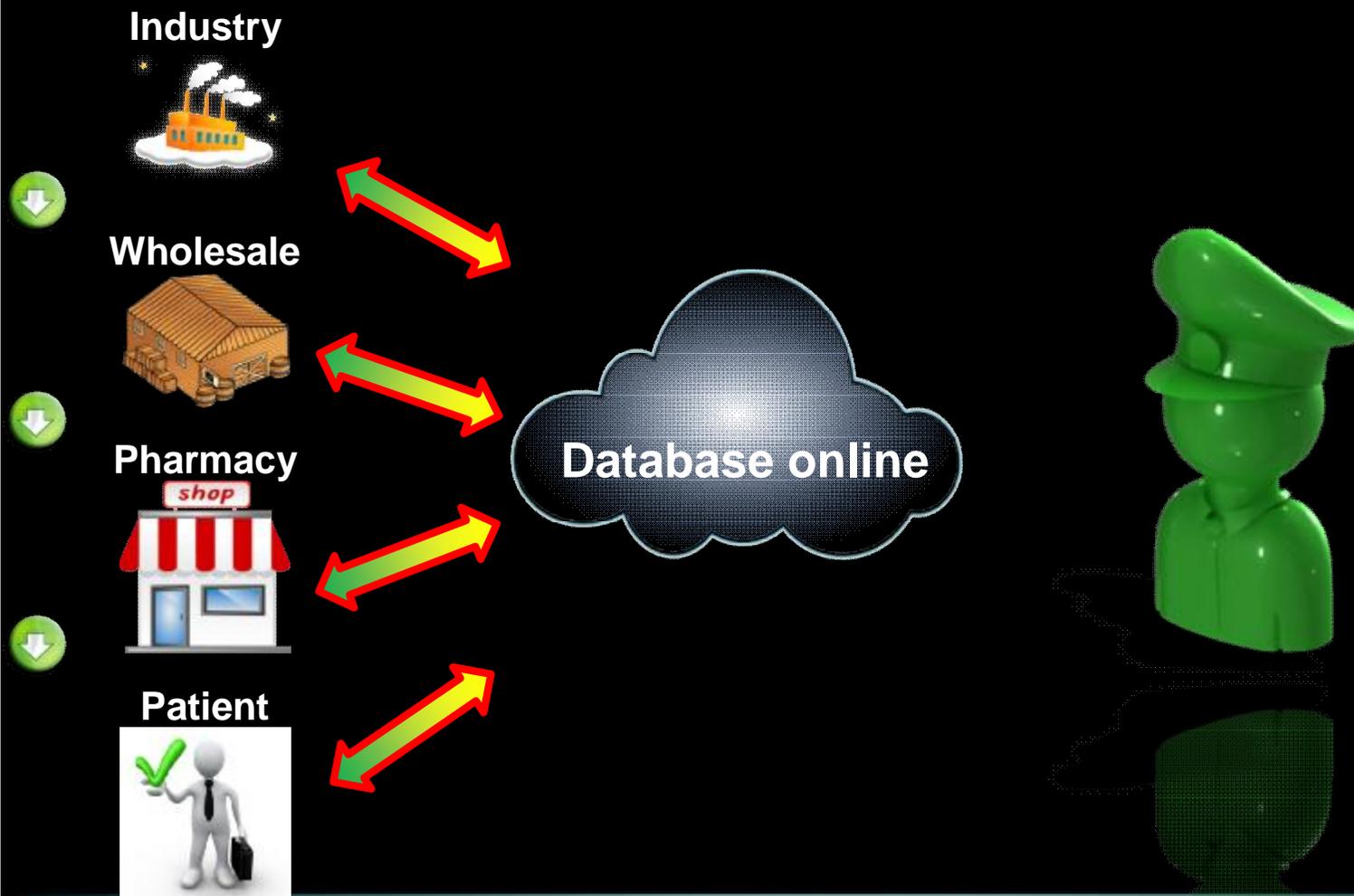


- Uploads data when authenticating the product
- Downloads data for authenticity check

### Benefits:

- Can discover counterfeited medicine before buying them
- Knows that forging happened before reaching this step
- Provides feedback to the pharmacy
- Provides feedback to the manufacturer via the live information in the database
- Patient can be targeted with extra services via the application

# The process of tracking, tracing and authentication



## Direct Benefits

- **Contains product code, serial no, expiry date, batch no**
- **Easy to implement; no specialised tools for manufacturing**
- **Does not require specialised devices for tracking and authenticating**
- **Provides protection against forgery**
- **Provides protection against photocopying**
- **Provides live tracking and authentication information**
- **Can be used as a channel to reach the patients with other types of information, such as:**
  - **R&D – Doctor – Patient relationship management**
  - **Package insert**

The End

**Thank you**