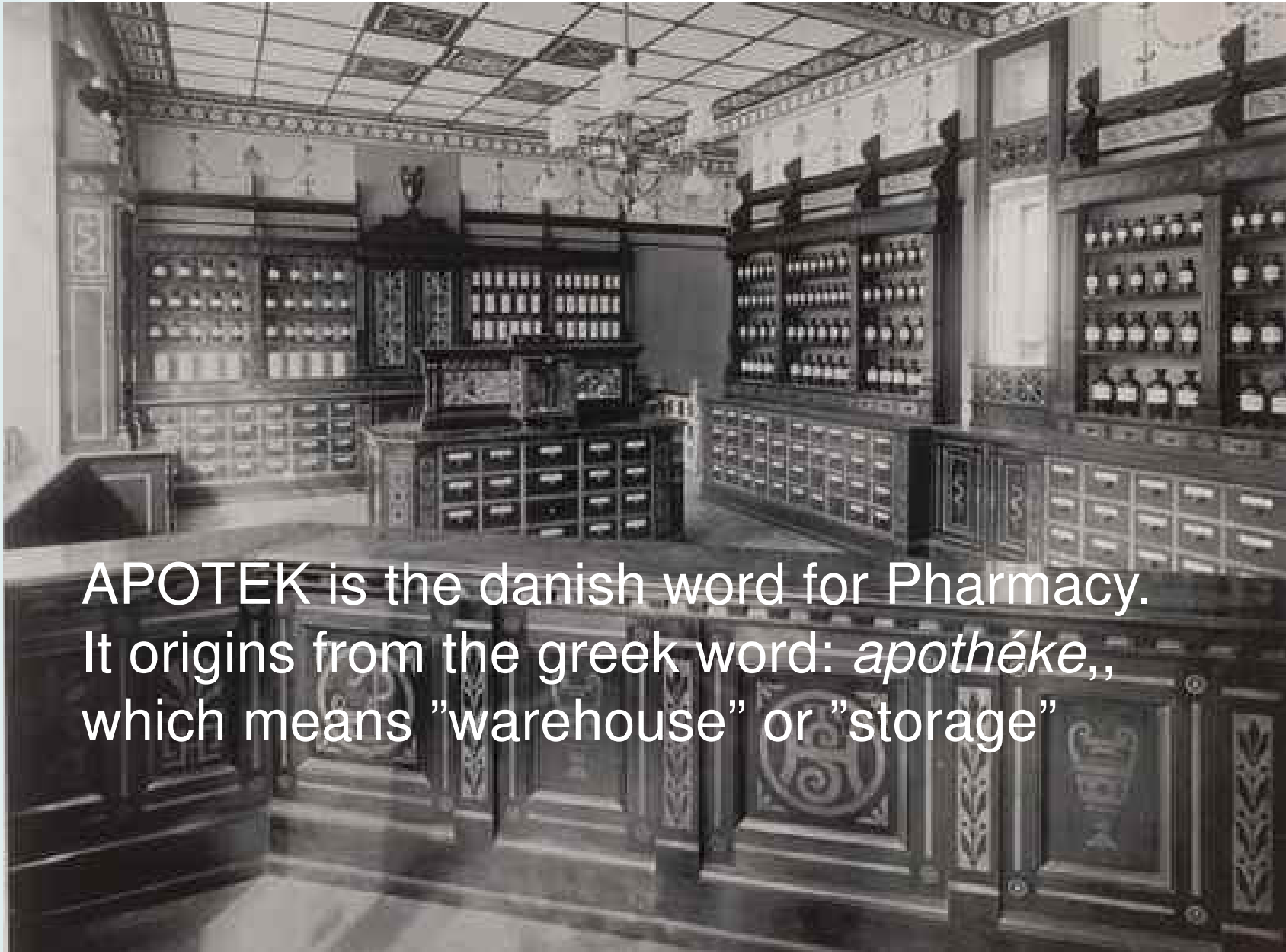


**Apoteket**

REGION

***How GS1 BarCodes  
improve logistics quality  
and patient safety***

Capital Region of Denmark  
Hospital Pharmacy



APOTEK is the danish word for Pharmacy. It origins from the greek word: *apothéke*, which means "warehouse" or "storage"

# The hospital pharmacy in the Capital Region of Denmark is one of the largest hospital pharmacies in the northern part of Europe

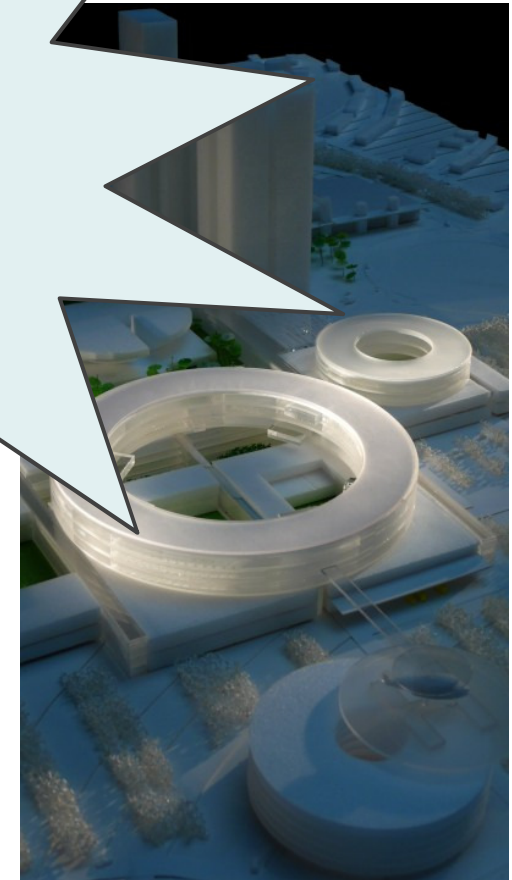
## Staff 2014

Logistics	71
Production	112
Clinical Pharmacy	280
Quality	31
Adm. / operations	33
Total	527

Turnover in 2013 of 370 mio. €  
equal to 5 mio. packages  
of medicine



- Deliveries to 11 hospitals
- 3-6 hours leadtime



**Mission:**

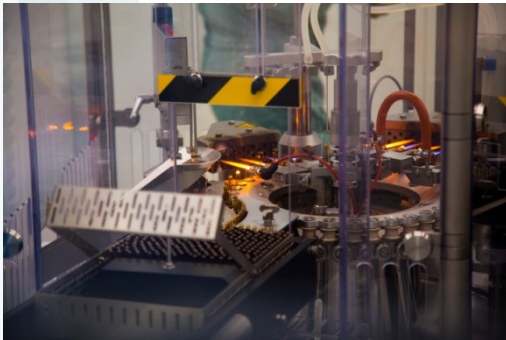
**We develop services  
and produce medicine  
focusing on quality, price  
and patient safety**

**Vision:**

**In dynamic cooperation  
with hospitals, we  
provide the best  
treatment with medicine  
to patients**

**But not a single word about BarCodes.....**

# Main processes in the Capital Region Pharmacy



## Production:

- Rawmaterials
- Packaging
- Assembly/manufacture
- Quality control
- Transfer to logistics



## Logistics:

- Call off
- Receiving
- Put-away
- Storing
- Picking
- Packing
- Transport



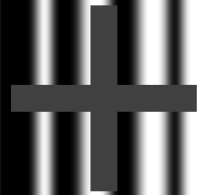
## Clinical Pharm. Service:

- Replenishment of medicine on wards
- Adjustment of assortments
- Advice on the use of medication
- Preparation of ready to-use medicine

# It's quite simple.....

## How barcodes support the mission of the logistics department:

- 24/7 availability of medicine
- Delivery of right products
- Fast and responsive set up
- Cost efficient operation



Data-structure

Data-capture

Data-processing

# Benefits from using barcodes-1



## Actions:

- Verification of right item in put-away process

## Benefits:

- Securing right items on right warehouse-location
- Quality control of barcode readability
- Quality control of masterdata in barcode
- Alternative process is visual ID done by two employees



## Benefits from use of barcodes-2



**Goods out:**

### Actions:

- Go to right location
- Pick by visual ID
- Verify by scanning
- Confirm quantities

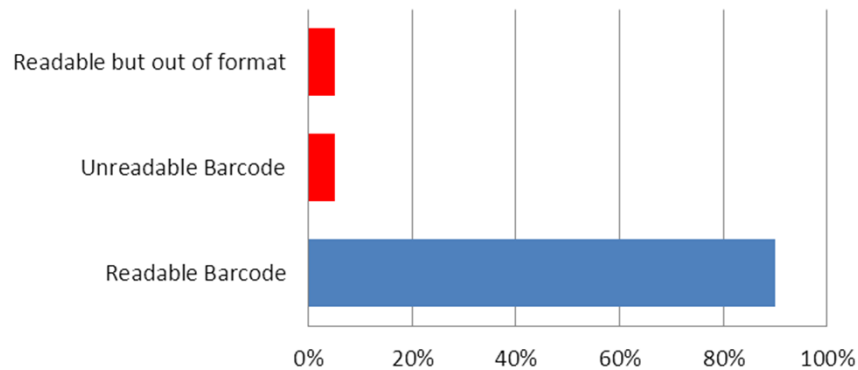
### Benefits:

- Visual ID provides limited validation
- Visual ID needs a second opinion
- Less than 1% of package surface carries the most important information
- Scanning ensures that right items are picked
- Scanning is faster and more reliable than tapping in figures
- An operation without scanning will require more staff and provide lower quality

## Why barcodes?

- Great design
- Super branding
- Very little focus on critical information
- High risk of errors using visual ID
- When using blister packs - extreme risk of errors

### Top 400 items (packages) Quality survey - sales unit



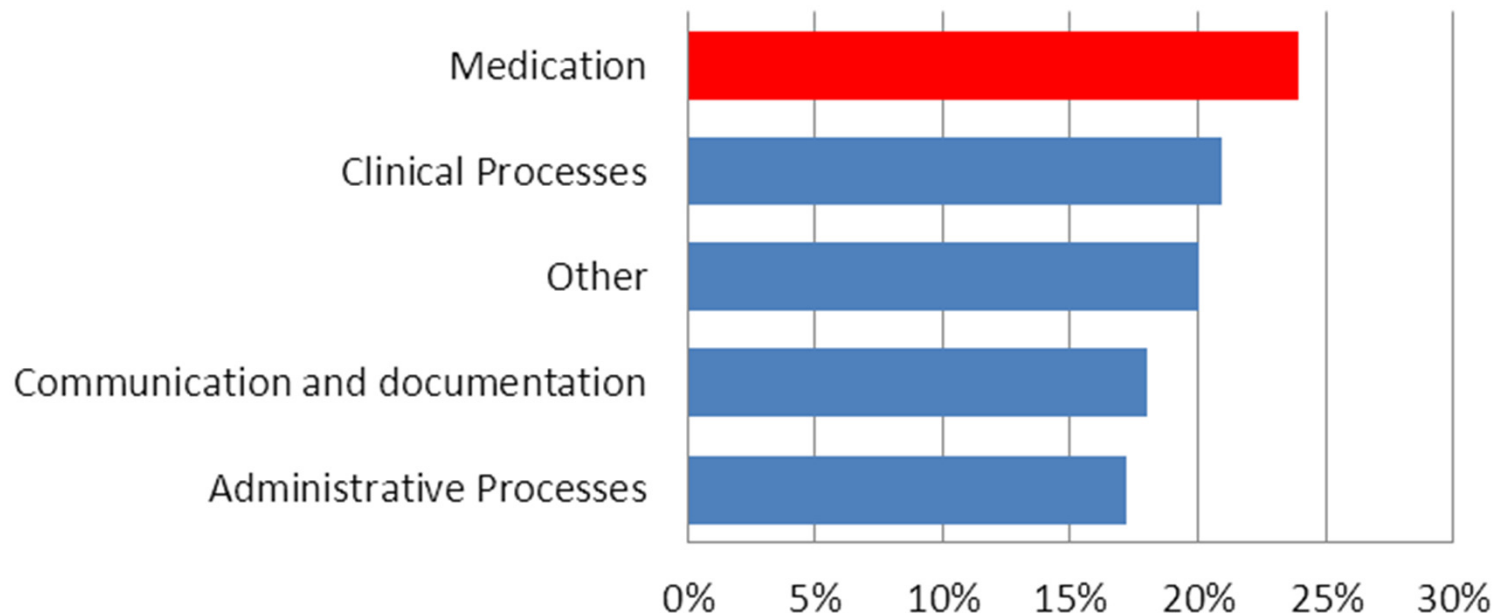
### Most common challenges:

- Codes exceed quiet zone
- Codes are "stretched"
- No stringent logic to code - too many zeros
- Wrong use of 2D codes

## Reported errors 2013 in hospitals

National Danish Patient Safety DataBase

(Source: DPSD Annual Report 2013)



# The value stream of medicine

Product development

Manufacturing

Supply Chain

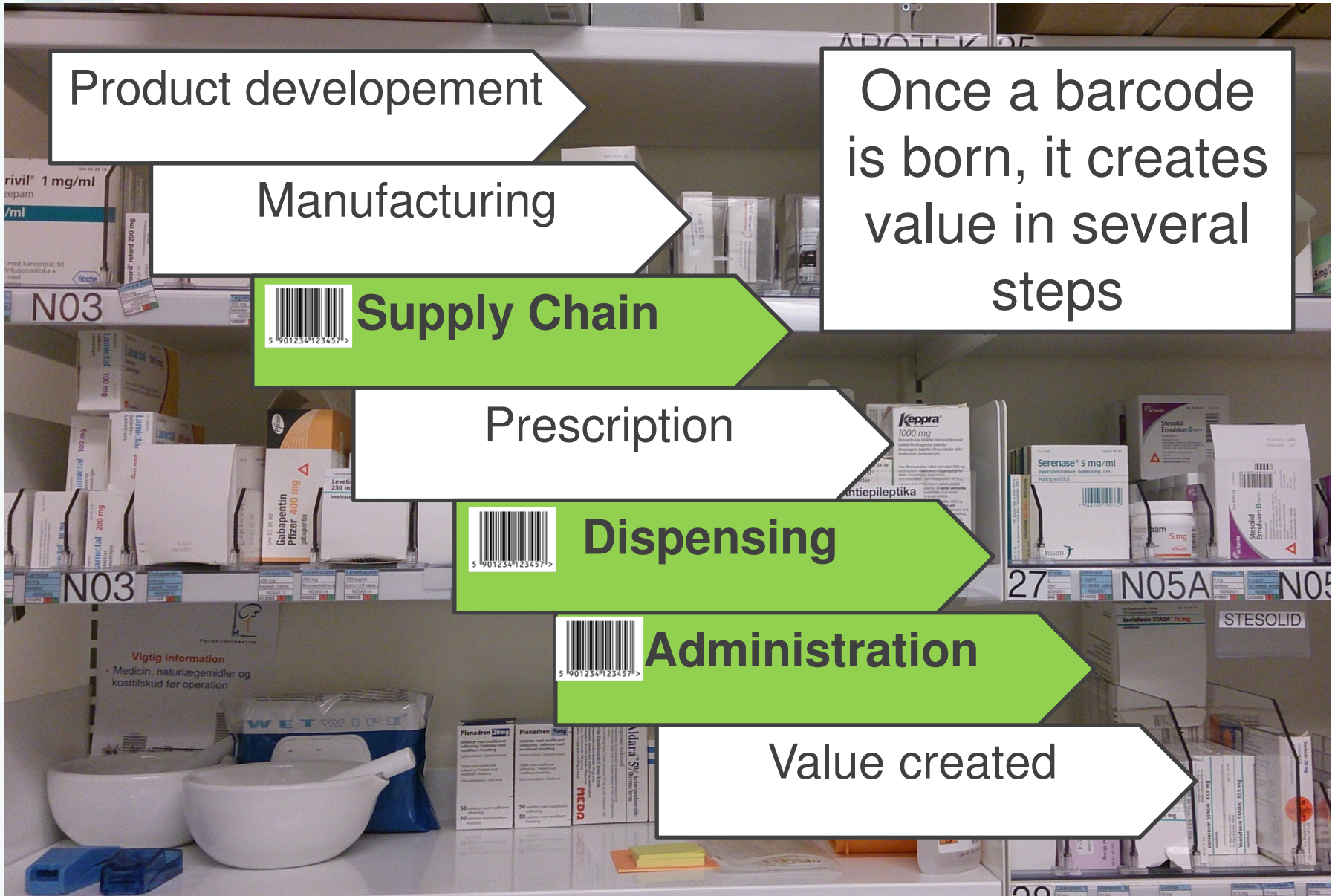
Prescription

Dispensing

Administration

Value created

Once a barcode is born, it creates value in several steps



# The benefits of standardization

- Barcodes are **cross functional**
- The same codes used for **various purposes**
- The same data used in **different systems**
- The **GS1** system offers:

## Data structure:

- Unique ID of all trading parties
- Unique item numbering on all packaging levels and shipping units
- Unique ID on expiry date, lot no. etc.

## Concepts for barcodes:

- Linear
- Datamatrix
- Application identifiers

## Use of standards:

- It *is* quite simpel
- No one should be in doubt about right or wrong
- The decesion is strategic – we want it !!
- Benefits for all parts of the valuestream

# On Thursday .....the Site Visit

**Thank you for your attention**

