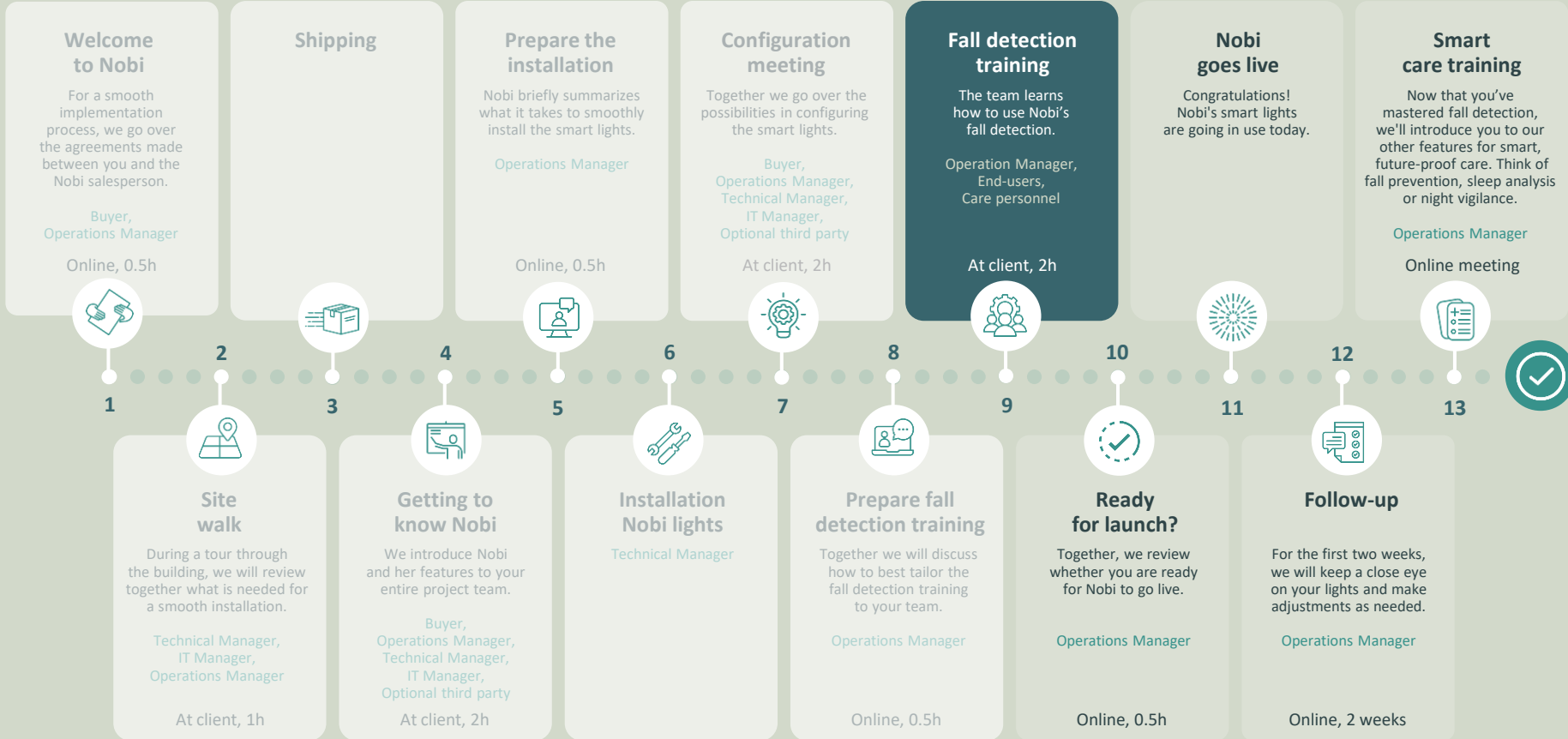


nobi

Fall Detection Training



# Where we are today



# Objective

---

In this training, we will guide you step-by-step on how Nobi's smart AI lights will support you in your job.

Focus of this training: **fall detection**.

## You will learn:

- How Nobi detects falls
- How Nobi alerts you to a fall so you can provide quick assistance
- How to close a fall escalation in the system afterwards.

Together, we are preparing for the moment our smart lights go 'live': when they will also detect falls, in addition to providing light.



# Agenda

---

- 1 Fall Facts
- 2 What is Nobi?
- 3 What is a fall according to Nobi?
- 4 How does Nobi work?
- 5 Privacy
- 6 Nobi exercises
- 7 Need help?
- 8 What's next?



Chapter 1  
**Fall Facts**



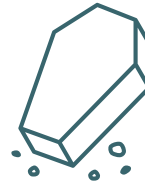
## Did you know that ...



**Every second,**  
a person over the age  
of 65 falls.

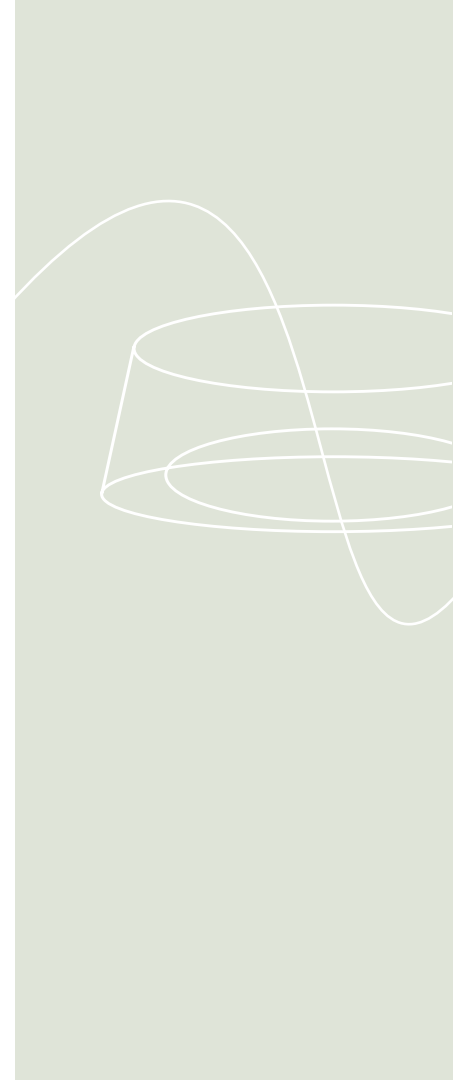


**Every 11 seconds,**  
a person over the age  
of 65 is admitted to  
the emergency room  
after a fall.



**Every 19 minutes,**  
a person over the age  
of 65 dies as a result  
of a fall.

**Let's change those statistics!**

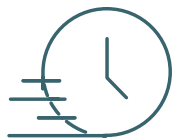


## The solution?



### **Detect 100% of falls**

Also the 64% of falls  
that go unnoticed



### **Immediate assistance**

Also for the 82% of fallers that  
are unable to call for help with  
traditional nurse call systems.

#### **Fast help:**

- Decreases risk of serious injury
- Decreases risk of hypothermia
- Decreases anxiety and psychological stress



### **Prevent falls**

Prevention to solve  
one of the biggest  
challenges of our  
fast ageing society

**AI technology can help you make a change!**



Chapter 2

# Meet Nobi





# Meet Nobi

Nobi is a smart AI-light that

- **detects a fall** and seeks help for the resident while also emitting **light**.
- **prevents falls**
- **supports** our busy care givers providing even **better, smarter care**.

Nobita,

- the **little sister** of Nobi, operates similarly but is designed with different housing to withstand the temperatures and humidity of **bathrooms and kitchens**.



Fall Detection



Fall Prevention



Better & smarter care



## Chapter 3

# What is a fall according to Nobi?

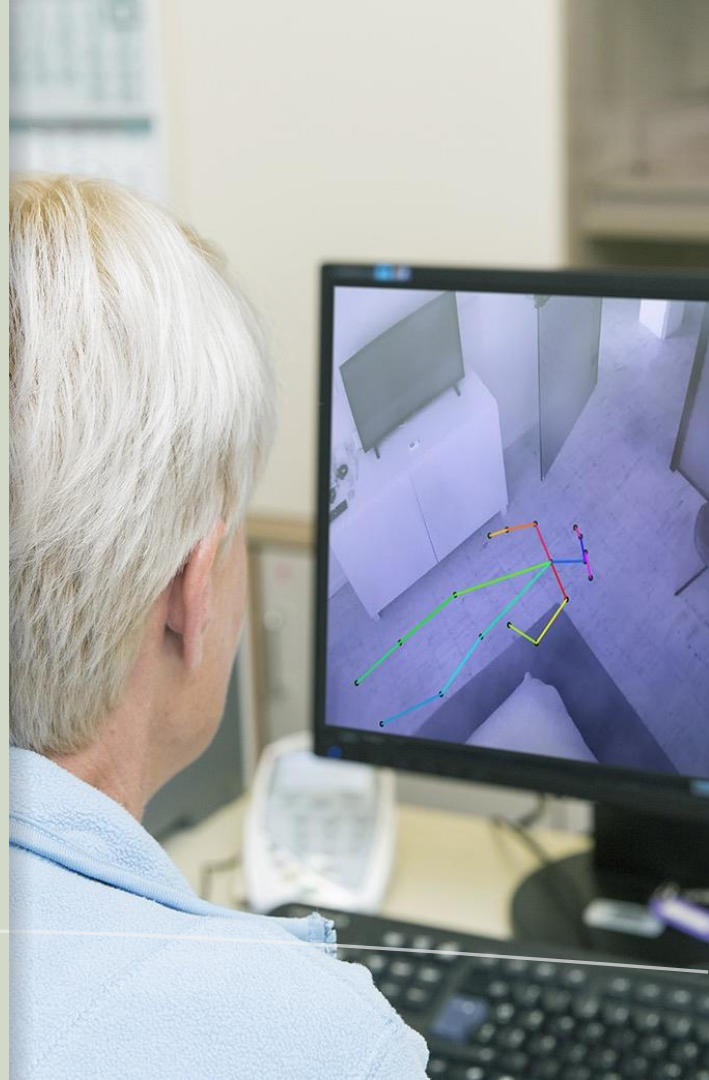


## What is a fall according to Nobi?

---

A person that **unintentionally**  
ends up at a lower level.

When Nobi observes someone  
**sitting or lying on the ground,**  
it will issue a fall alert.  
(max 90 seconds after the incident)



## What is a fall according to Nobli?

*i*

The falling speed doesn't matter  
**Nobli also registers slow falls**

(unlike a smartwatch)



**Important to know:**

Nobli is **not** a motion detection device.  
Nobli just looks at poses.



Chapter 4

# How does Nobi work?



# Nobi's AI analyses anonymized poses

## Nobi analyses 'poses', not body images.

- Nobi's optical sensors take a **picture every second**
- Nobi **locally** interprets the image in the lamp
- Nobi **analyses the pose of the person** (anonymized stick figure) and the bed

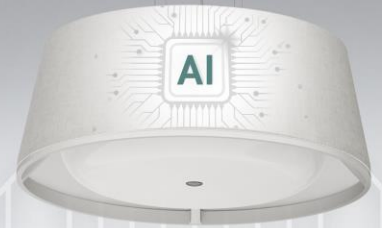


## Nobi distinguishes 3 different poses:

- Sitting (bed/chair/ground)
- Standing
- Lying down (bed/ground)



For Nobi to work as a smart light, it needs the resident's permission



# What Nobi can do for you & your residents

---



**1. Fall Detection**



**2. Fall Prevention**



**3. Better & smarter care**

# 1. Fall Detection

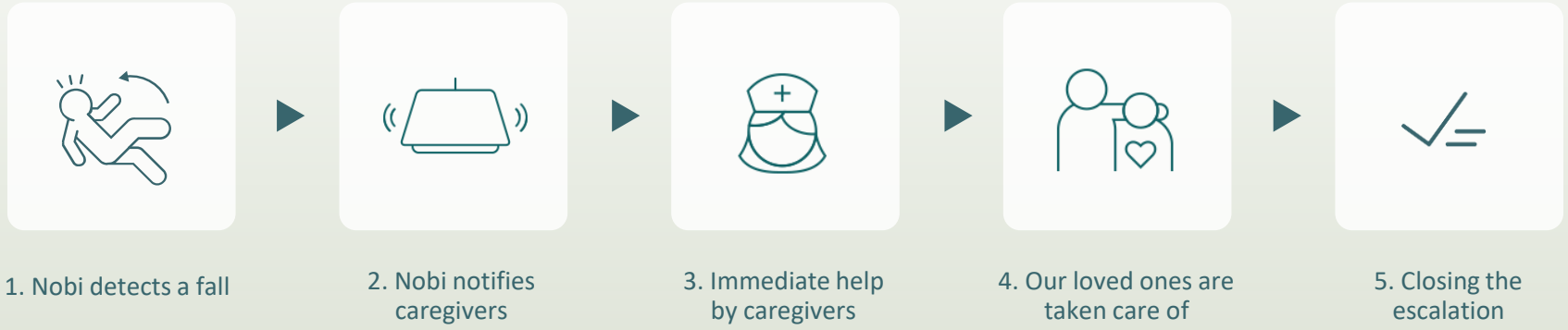
---





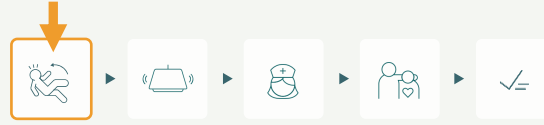
# 1. Fall Detection

---



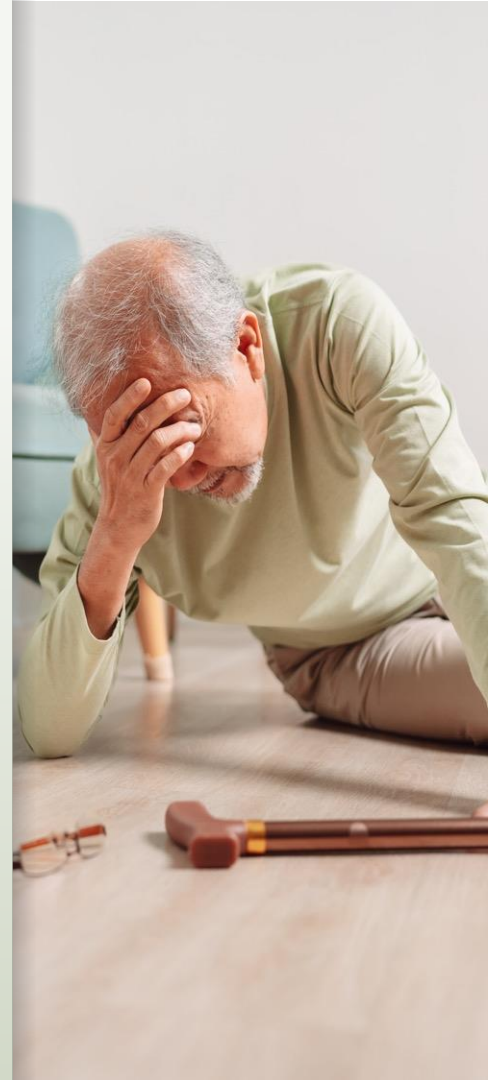
- Nobi dashboard
- Phone or nurse call system
- Additionally via e-mail and/or in-app push message

Step 1  
Nobi detects a fall

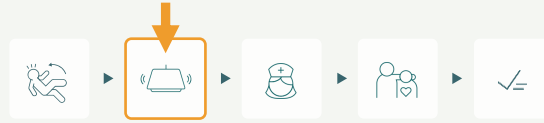


Nobi observes someone  
**sitting or lying on the ground.**


When **Nobi detects a fall** or when the resident **presses the panic button**, Nobi activates the escalation procedure.  
Nobi then alerts care staff so they can provide immediate help.




Step 2  
Nobi notifies caregivers



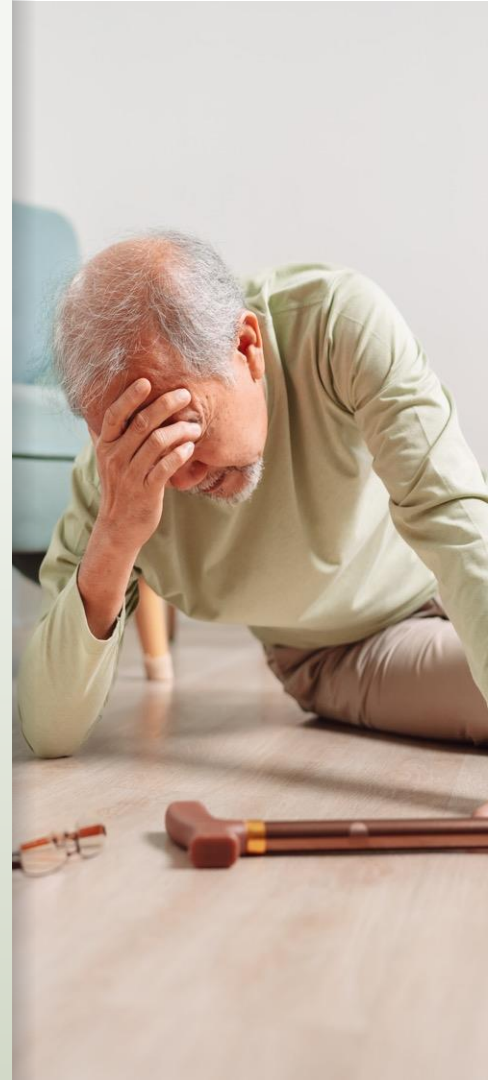
**2 OPTIONS**

Option 1 

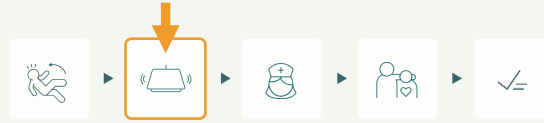
**Sound in the room**

Option 2 

**No sound in the room**



## Step 2 Nobi notifies caregivers



### Option 1: Sound in the room

When Nobi detects a fall, a voice in the lamp asks the person in the room: **'did you fall?'**

YES

If the answer is **'yes'**



Nobi will alert care staff immediately

NO

If the answer is a clear **'no'**

(e.g. resident is on the floor to look for something he dropped)



Nothing happens

...

If there's **no answer**



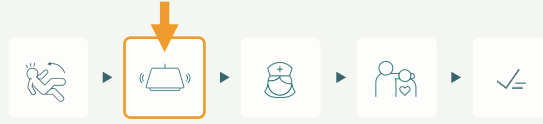
Nobi will alert care staff immediately



'did you fall?'



## Step 2 Nobi notifies caregivers



### Option 2: No sound in the room

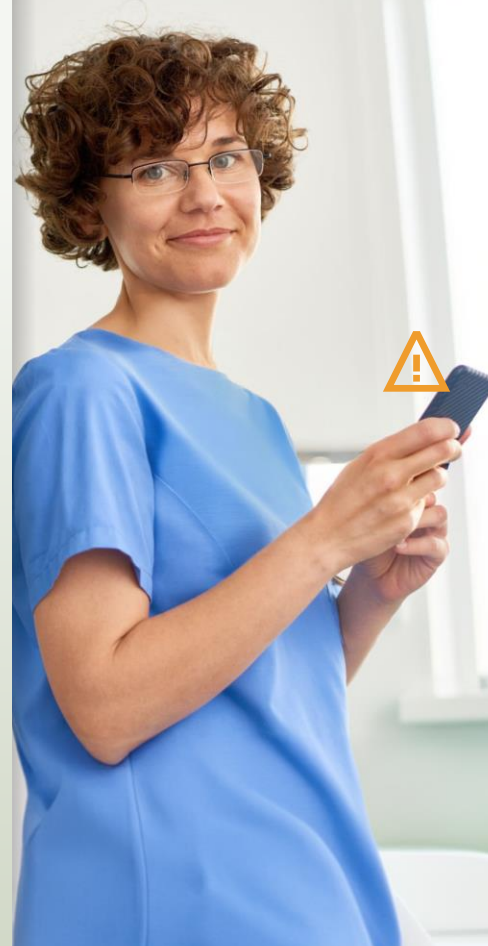
When Nobi detects a fall,  
Nobi will alert care staff immediately.



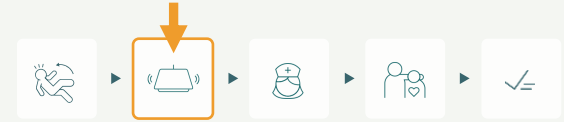
#### WHY?

In some situations, it might not be beneficial for the light to speak to the resident.

People with dementia for instance could experience disorientation or fear when the light seemingly speaks out of nowhere.




## Step 2 Nobi notifies caregivers



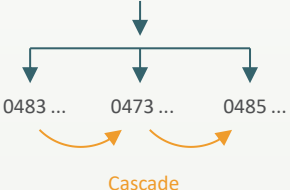
### Different alerting channels

Care institutions can choose the channels through which Nobi should alert caregivers after a fall or when the panic button is pressed. In addition to notification on the Nobi Dashboard, the following options are available:



#### Phone

After a fall, Nobi calls/ sends a message to care workers on their phones, and according to a cascade system.



0483 ...    0473 ...    0485 ...


Cascade

Mandatory choice



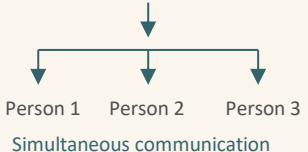
#### Nurse call system

The way a fall is reported depends on the respective nurse call system.



#### App

After a fall, employees also receive a push notification in the Nobi app. Notifications are sent simultaneously to all contacts



Person 1    Person 2    Person 3

Simultaneous communication

Optional choice



#### E-mail

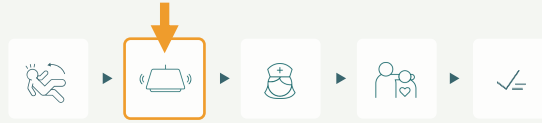
After a fall, employees also receive an e-mail. E-mails are sent simultaneously to all contacts



xx@xx.com    yy@yy.com    zz@zz.com

Simultaneous communication

## Step 2 Nobi notifies caregivers



### Via phone call

## Nobi calls you



### Step 1

'Hello, this is Nobi,  
a fall has been detected add  
"name of the resident",  
room 416.



### Step 2

**Press 1 to confirm.**  
This way,  
you let Nobi know  
help is on the way



### Step 3

You make your way  
to the room.

### EXAMPLE

"Mr Peters, this is Irene.  
I understand you fell?"

"Yes, I need help.  
My knee..."

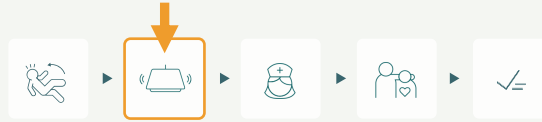
"I'll be there right  
away, it's alright."

"I must have  
stumbled, oh..."

"It's ok, try to stay  
calm, I'm almost  
there."

"Ok, thank  
you."

## Step 2 Nobi notifies caregivers



### **Via phone call**

**Priority list of emergency contacts,**  
ensuring the call is always answered



#### **Contact nr 1: Phone number one**

(other mobile numbers get an alert by SMS 'Nobi detected a fall in room 418')



#### **Contact nr 2: Phone number two**

(other mobile numbers get an alert by SMS 'Nobi detected a fall in room 418')



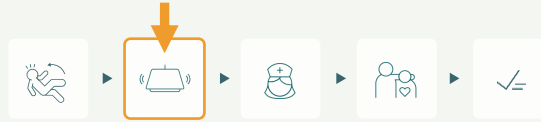
#### **Contact nr 3: Phone number three**

(other mobile numbers get an alert by SMS 'Nobi detected a fall in room 418')





## Step 2 Nobi notifies caregivers



### Via nurse call system

**Nobi seamlessly integrates with multiple nurse call systems.**  
The method of receiving alerts through the system varies based on the settings of each individual system.

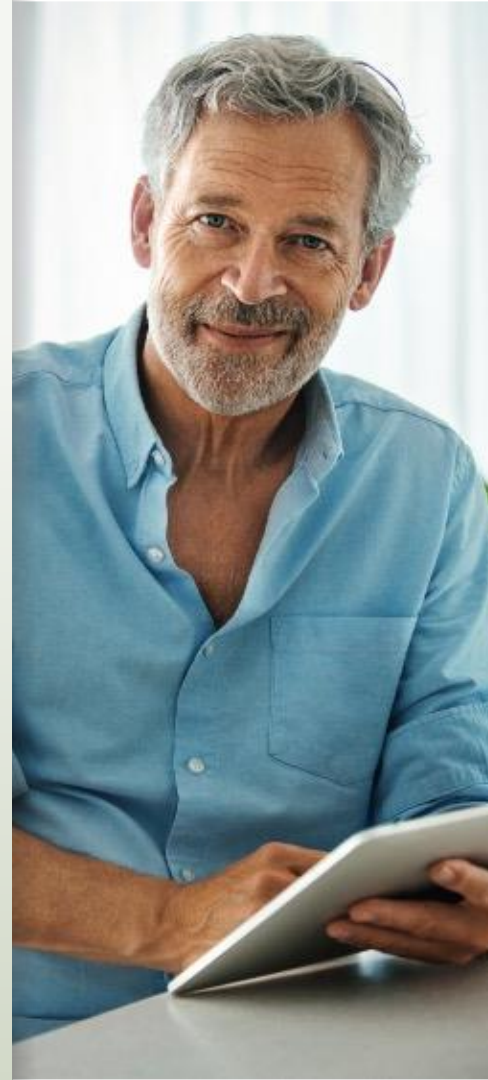
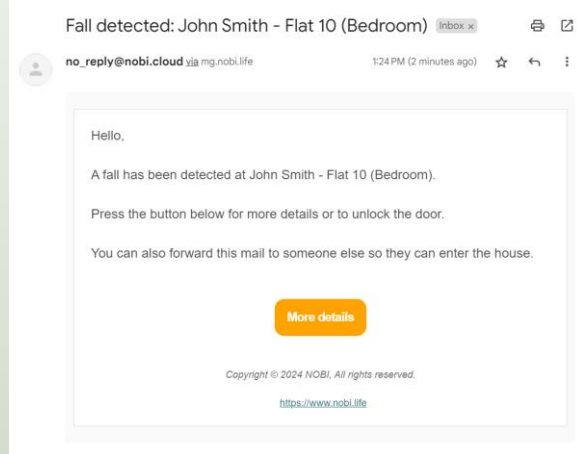
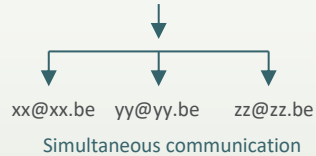
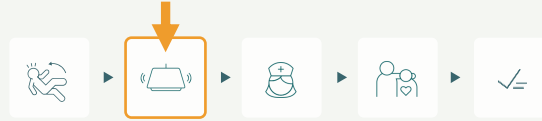
Way of working of the respective nurse call system  
to be added by Nobi-representative



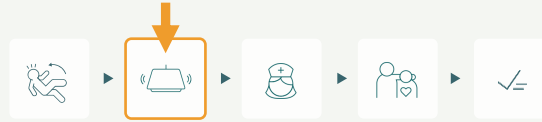
## Step 2 Nobi notifies caregivers

 **Via e-mail**

**After a fall, employees also receive an e-mail.**  
E-mails are sent simultaneously to all contacts.

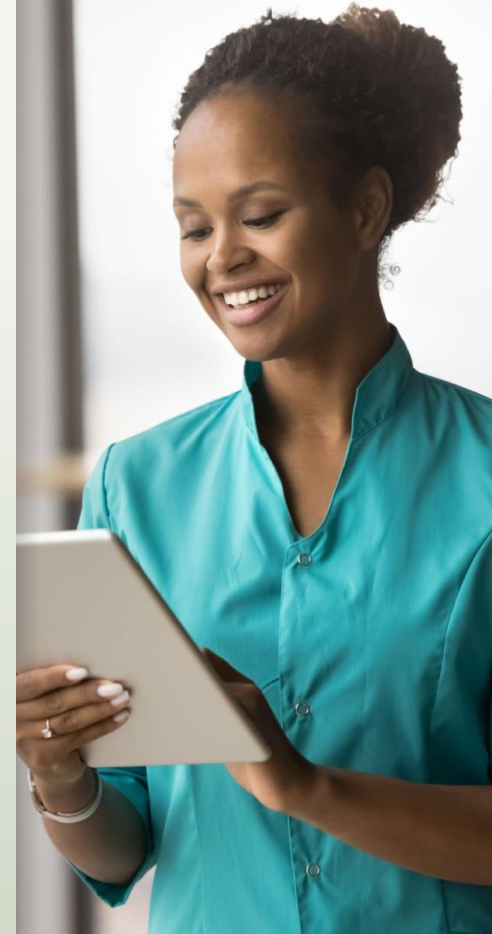


## Step 2 Nobi notifies caregivers



### In app notifications

After a fall, employees also receive a push notification in the **Nobi app**. Notifications are sent simultaneously to all contacts



## Step 3 & 4 Help the resident & close the fall alert



### Step 3: Enter the room and help the resident



### Step 4: close the escalation

#### Why important?

- Your colleagues and Nobi now know that the resident is taken care of
- Nobi is now ready to detect falls again

#### How?

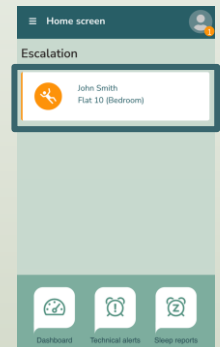
##### Push the Presence Button

- First, push the presence button when you enter the room. Then proceed to help the resident.
- The escalation is now closed
- Nobi will also prevent further fall alerts for 15 minutes (snooze)
- After 15 minutes, Nobi can create again a new fall alert

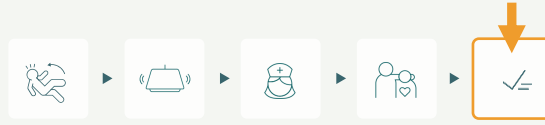
OR

##### Close in the app

- First, help the resident. Then close the fall in the app.
- After closing the fall in the Nobi app, Nobi knows it can detect new falls again.



## Step 5 Close the escalation



### How to close a fall in the Nobi application?

1. Home screen

Escalation

John Smith  
Flat 10 (Bedroom)

Dashboard Technical alerts Sleep reports
2. Fall detected

Resident: John Smith  
Timestamp: 2024/06/19 11:47 AM  
Housing Unit: Flat 10  
Room: Bedroom

Close escalation  
Call resident  
Images  
Snooze escalation  
Call log
3. Mark escalation as closed?

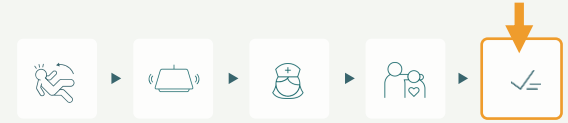
Do not do this until the resident has received the appropriate help.

By closing the escalation you confirm that the necessary help has been provided to the resident.

Close escalation  
Keep escalation open


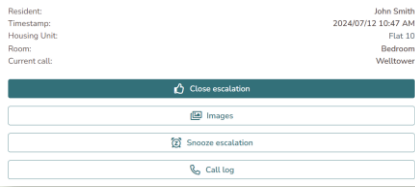



## Step 6 Add cause of the fall



After helping the resident and closing the escalation, the care worker can enter the cause of the fall for future reporting. This can be done via the dashboard of the Nobi app.

### How to add?

- 
- 
- 
- Answer a few questions, for example:**

  - Was there a person sitting or lying on the ground?
  - Was it a resident lying on the ground?
  - Was the resident unintentionally on the ground?



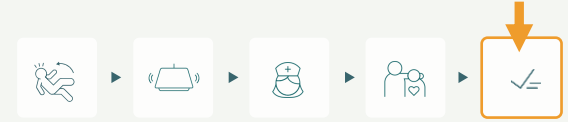
### Attention

Have you closed an escalation using the existing nurse call system or the 'Presence button'?

Then don't forget to still enter the cause of the fall via the Nobi Application!

## Step 6

# Add cause of the fall



After helping the resident and closing the escalation, the care worker can enter the cause of the fall for future reporting. This can be done via the dashboard of the Nobi app.

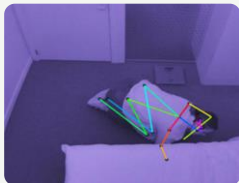
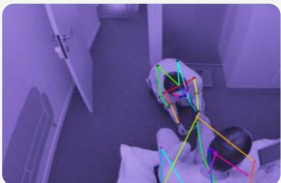
## Relevant fall causes for your facility

Specific causes of a fall, relevant for client's facility  
to be added by Nobi-representative



## Did you know?

**You can ask Nobi to pause  
its fall detection for 15 minutes?**



This is very useful when you perform care activities that Nobi will interpret as a fall, triggering an alert you don't want. Think of:

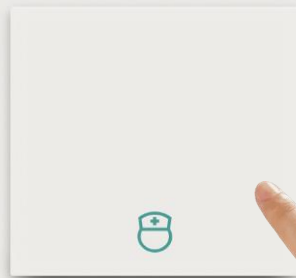
- bending down to put on residents' socks or shoes
- cleaning staff bending down to clean under the cabinets.

### **How to pause Nobi's fall detection for 15 minutes?**

**Push the presence button**

**Pause in Nobi App**  
(only in case of an escalation)

## Meet Nobi's Snooze Feature

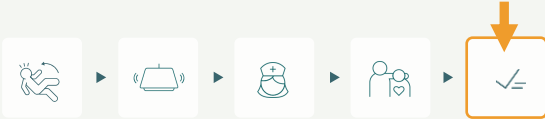


**15 min**

Press the **Presence button** to:

- to close an escalation
- to pause the fall detection for 15 minutes

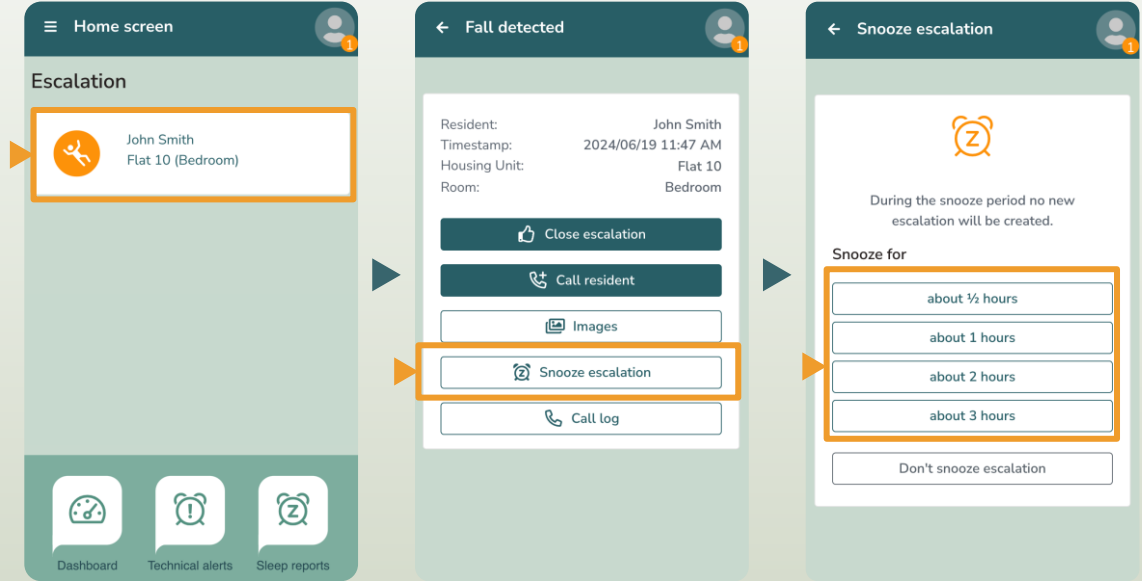




# What if you want to pause fall detection for 15 minutes or more in the Nobi App?

To not receive fall alerts for a specific length of time

## **Snoozing** a fall in the application:



## 2. Fall Prevention

---



## 2. Fall Prevention

“To prevent is more effective than to cure.”

Nobi can:

Prevent  
falls

Nobi can:

Deliver insights to  
facilitate preventive care

Result: less day-to-day challenges for you

## 2. Fall Prevention



Automated  
lighting

+



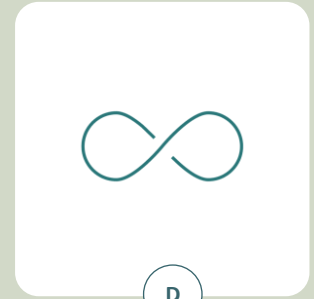
Night light

+



Monitoring  
functions

+



Fall  
analysis

## 2. Fall Prevention

### A. Automated lighting

Always experience the right lighting

**Entering a room:**  
light automatically  
goes on

**Leaving a room:**  
light automatically goes  
out after xx seconds

> Increase  
safety

> Reduce  
disorientation

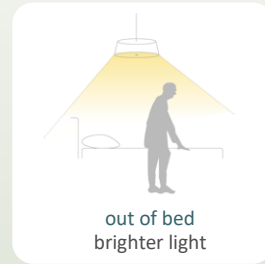
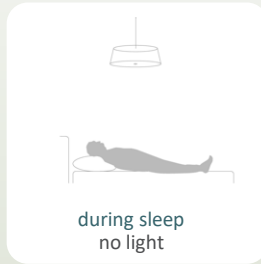
> Configurable  
per Nobi light



## 2. Fall Prevention

### B. Night light (used for some residents)

Always experience the right lighting  
day and night



> Reduce  
disorientation

> less intrusive  
check-ins

> Configurable  
per resident

(if a resident is in bed, the light stays out, even if someone enters the room)



## Always experience the right lighting day and night

Features of automatic lighting and night light can be combined.

Night light overrides automatic lighting, meaning the light will stay out,  
even if a caregiver enters the room during the night.

---

**less intrusive  
check-ins**



Day & Night

## 2. Fall Prevention

### C. Monitoring events

**When your resident is in a position with a high fall risk, Nobli can notify you.**

These monitoring events are chosen for certain residents:



Resident is out of bed



Resident sits on the edge of the bed  
(after lying in bed)



Resident is out of bed



No person detected





## 2. Fall Prevention

### D. Fall analysis

Only in case of a fall:

**Nobi will show real images of the fall, the moments leading up to the fall, and the moments after the fall.**

This allows you to analyse and prevent further falls.  
These images will be automatically deleted after 14 days.

Residents have given consent for this and all other privacy settings.



### 3. Better & Smarter Care

---



### 3. Better & Smarter care

---

Nobi's feature of delivering insights help you to provide more individualised care and, in some cases, even to identify health issues at an early stage.



## A. Dashboard - Live view



In Nobi's dashboard you can remotely check the actual situation in each room, 24/7

Only with resident's consent, you see:

Actual  
behaviour

> less intrusive check-ins

Stick figure against a  
fictional background

> more dignified life

The stick figures are **completely anonymous**



## B. Sleep reports



Nobi provides you with a report that offers insights into in-bed and out-of-bed behavior



when the resident went to bed



how often the resident left the bed



total time spent in bed throughout the night

7 pm

■ in bed ■ out of bed

11 am

When you notice a resident gets up 3, 4 times in the night and already is in bed at 7 PM, you can evaluate this behavior with staff.



## C. Fall analysis reports



This report shows you an overview of the number of fall incidents.

---

### REAL-LIFE SCENARIO - EXAMPLE

You've observed a significant number of falls occurring around 6 PM, coinciding with residents preparing for dinner.

After numerous slipping accidents, it seems that at 6pm it is dark in that part of the hallway. Extra light needs to be provided.

Over the next six months, you can use this report to assess whether there has been a reduction in falls.



## D. Monitoring events reports



Behaviour monitoring reports allow you to identify patterns within your operations, make necessary adjustments, and evaluate the effectiveness of your care procedures.

---

These behaviour monitoring functions are available:



Resident is  
in bed



Resident sits on the  
edge of the bed  
(after lying in bed)



Resident is  
out of bed

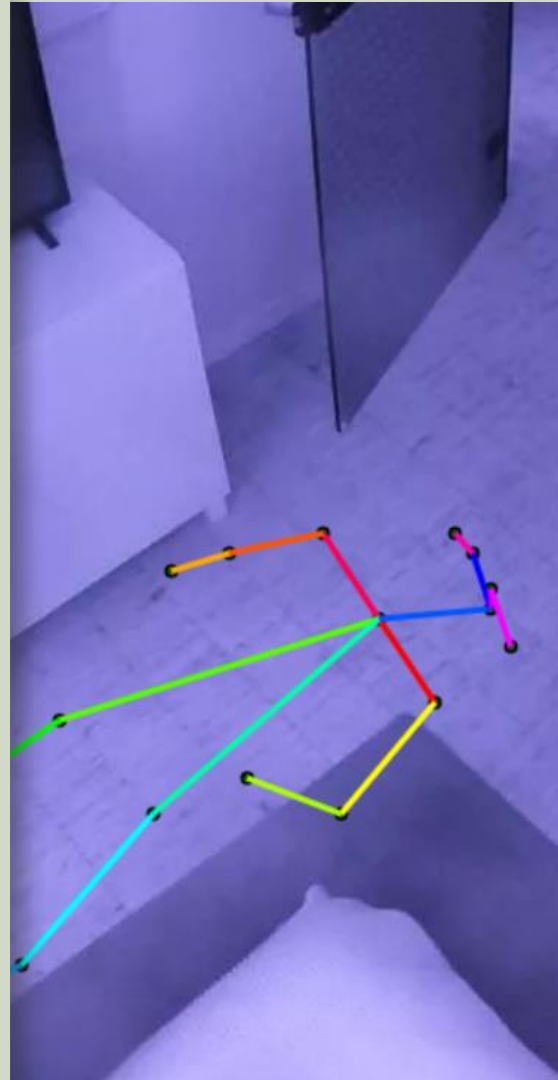


No person  
detected



Chapter 5

100% Privacy Protected





# 100% Privacy

---



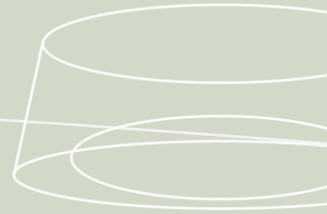
Privacy for  
**Residents**



&



Privacy for  
**Care Staff**



100% Privacy

## Privacy for residents

AI

### 1. Nobi analyses 'poses', not body images.

#### In essence

Nobi doesn't need images of your body to be extremely effective. Instead, it works with anonymized stick figures.

#### What are stick figures?

Essentially, this is a combination of lines and knots that resemble matchstick figures, specifically designed to protect your privacy.

#### This is how it works

- Nobi's optical sensors take images of the room every second.
- The AI then makes smart analyses based on 'poses', also known as these anonymous 'stick figures'.

#### Nobi distinguishes 3 types of 'poses'

- Sitting (bed/chair/ground)
- Standing
- Lying (bed/ground)



100% Privacy

## Privacy for residents

### 2. No fall, no images to cloud

**Nobi deliberately chose for a strong AI processor that is located within the light itself.**

The big advantage is that interpretation of images can happen locally, within the light. No need to send images to the cloud for AI analysis.

Depending the privacy settings, and only in the event of a fall, Nobi will store images in the cloud for care professionals to better assess the required care following a fall & to prevent future falls.

AI



100% Privacy

## Privacy for residents

### 3. Residents choose their level of privacy

Before Nobi's smart features were activated, residents or their representatives chose what images can be viewed by care staff to gain more insights into the type of help needed after a fall and what caused the fall.

#### This way, Nobi helps care workers

- provide the right help after a fall
- and prevent future falls.

#### Nobi comes with three privacy options:



Full image



Anonymized  
stick figure



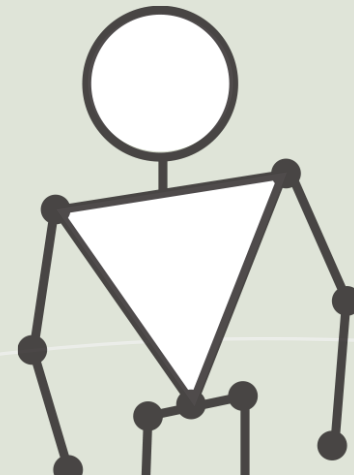
No image



## Did you know?

All residents that have a Nobi light in the room were well-informed about Nobi and its privacy measures.

They signed an informed consent document and are now waiting for Nobi to start detecting falls.



100% Privacy

## Privacy for residents

### 4. Automatic deletion of fall images

**Protecting of Nobi data is key:**

- Images can only be viewed.
- Images will be automatically deleted 14 days after the fall.



100% Privacy

## Privacy for (care) staff

Nobi is there to support you.  
Not to monitor you

Nobi's smart lights are designed to assist caregivers in their day-to-day job and support them in providing the best care possible.

We know very well how hard our caregivers work to give residents the best care possible. Therefore, Nobi does not concern itself with monitoring the actions and behaviours of caregivers.



By only supporting the abstract visualisation (stick figure), the Live View does not show if the person in the room is a resident or caregiver. Nor does it track how long someone has been in the room.



Chapter 6

## Nobi Exercises



## Nobi exercise: time for action!

@ Nobi-representative:

Walk the attendees of the  
Nobi Fall Detection Training through  
their customised escalation process.

Be as detailed and specific as possible.



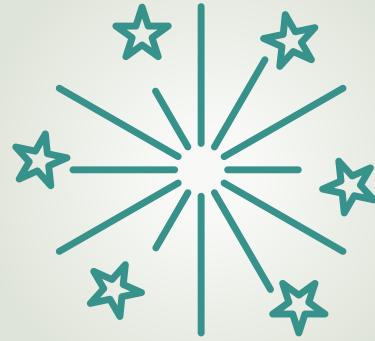


# Nobi exercise

**Do you know the answer to these questions?**

- How does Nobi work?
- What happens when Nobi sees a fall?
- What are the four ways to prevent a fall?
- What are the 2 functions of the presence button?





**Congratulations!**

You are now ready to start working  
with Nobí's smart lights

Chapter 7

Need help?



# Need help?

Whether your question is big or small, the Nobi customer service team is ready to help. You can contact us through one of these channels:

1

## Virtual helpdesk

<https://support.nobi.cloud/>

Here you will find answers to the most frequently asked questions from our users.

Can't find the answer you're looking for? Click on **'Submit a request'** at the top right and ask your question to a Nobi representative. Our team will get back to you within 24 hours.



2

## Helpline

Monday to Friday  
9 a.m. to 5 p.m.

If you do not immediately find an answer on our virtual helpdesk, go to the desktop Nobi App and click at the bottom left on **'Contact support'**.

The pop-up will display the telephone number of the helpline.



? Contact support

3

## E-mail

[Support@nobi.life](mailto:Support@nobi.life)

Please also feel free to send us an e-mail at [support@nobi.life](mailto:Support@nobi.life).

Our team will get back to you within 24 hours.



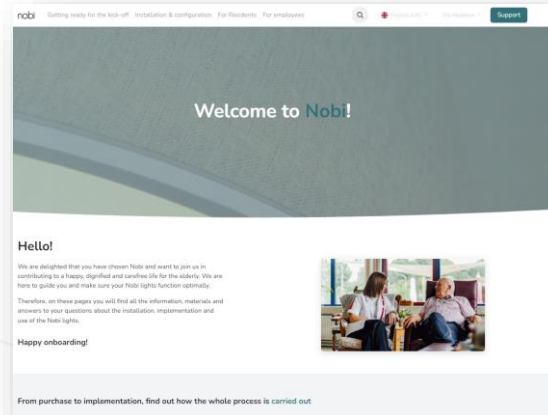
Training & onboarding

## Virtual onboarding portal

To ensure the onboarding process with our customers goes as smoothly as possible, Nobi gathers all training modules, useful reference documents, and supporting tools in a central customer portal.

Want to download this presentation or previous presentations for a colleague or reread it yourself? Then surf like hell to:

<https://clientportal.nobi.life>



Chapter 8

What's next?



Nobi goes live

## Towards the big day

### AI Learning Period

While you and your colleagues are being trained to use Nobi's smart lights, Nobi's artificial intelligence is being trained too for a period of 7 to 14 days. During this period, Nobi does not yet detect falls, but it prepares behind the scenes for a smooth start.

#### During this learning period:

- Nobi learns how the room looks like and what objects it contains
- Nobi tests its camera, signal strength, and internet stability.
- Nobi is further trained to detect falls as accurately as possible.  
This is crucial to minimise the number of false fall alarms.



# Next steps

## Inform all staff

- Don't forget to inform your colleagues
- To support you:
  - You can use this presentation, to be downloaded [here](#)
  - Use Nobi's Cheat sheet

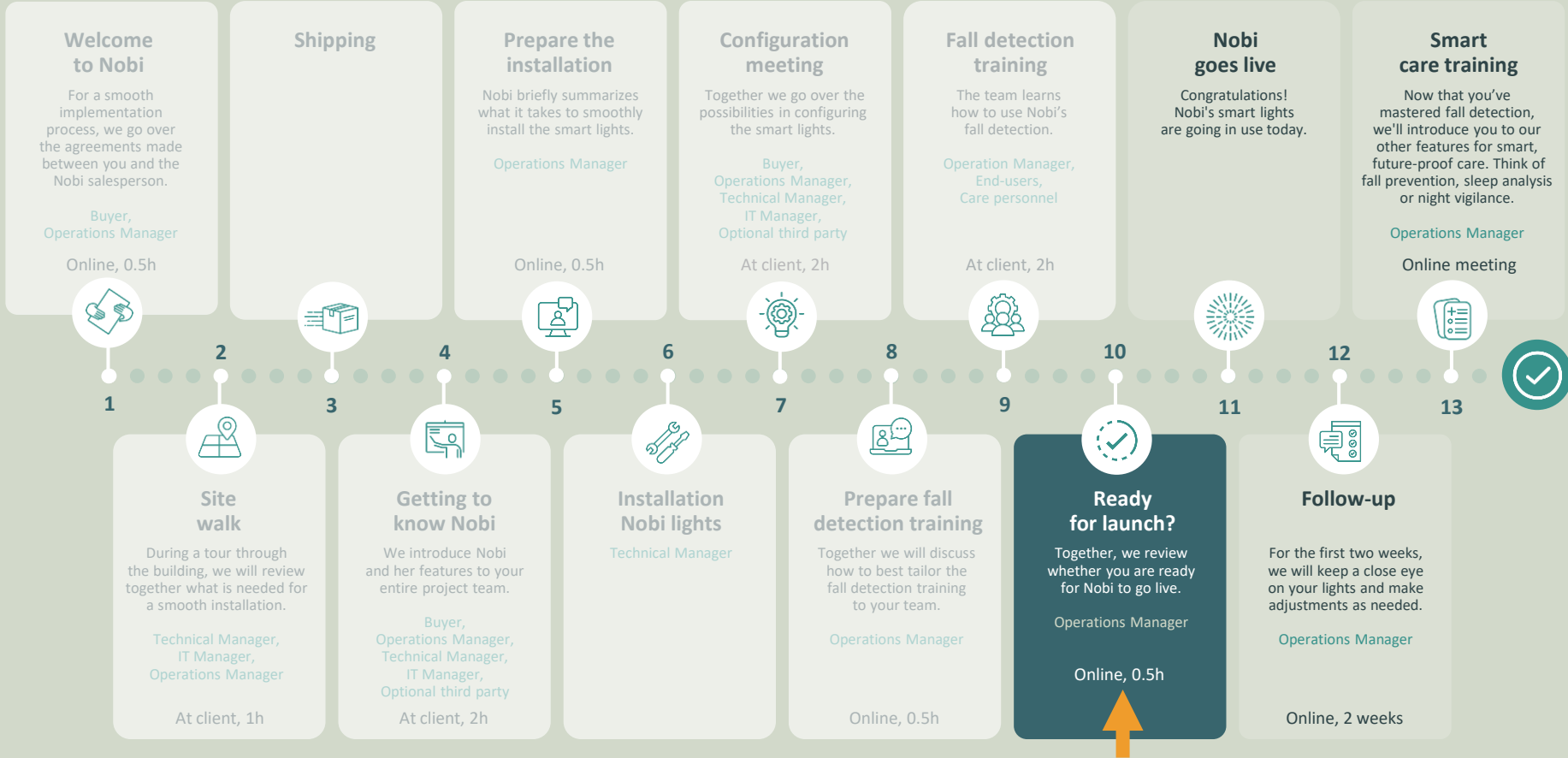
## When will Nobi go live?

- The general project lead will inform you as soon as a date is set
- Nobi also supports you to inform your residents with information cards you can leave in the room of the residents.





# What's Next?





Thanks for your attention  
**Take care!**



[www.nobi.life](http://www.nobi.life)