



Fewer falls in care facilities

An intelligent sensor solution as a warning system in care facilities

Project costs (digits)	5	Running costs (per month, digits)	3
Subscription	Yes	SaaS	Yes
On Premise	No	API (% of features)	90 %
Docker possible	No	Helm Chart	No



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! THE PROBLEM

In nursing homes digital possibilities were sought which could help the often overworked staff to point out and analyze falls or other abnormalities and thereby provide support.

Nursing staff are overworked and stressed out, so many mistakes are made and critical situations such as falls are detected late. The industry records one of the maximum number of working days as well as a high fluctuation of nursing staff of almost 50% within 7 years. Caregivers often have to work fast and cannot take care of all residents at the same time. This is particularly noticeable at night, when one nurse is responsible for 50 residents.

💡 THE SOLUTION

A sensor band fixed in the room, which informs about critical situations

With the help of the sensor tape, caregivers can work more efficiently and effectively; more efficiently by being automatically notified of critical situations such as falls or leaving the bed; more effectively by enabling long-term analyses and the connection of further sensor technology and care documentation to improve the prevention of critical situations and illnesses. For example, the sensor strip is attached at the height of the baseboards and analyzes activities in the room in a very discreet way.



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— INSIGHTS

STUMBLING BLOCKS

- The connection to the call system did not always work well, but with the support of the provider it was solved immediately
- The sensor system was not initially installed in the entire room, especially the area in front of the bathroom was left out. Therefore there were falls in front of the bathroom door which could not be detected by the sensor system. In the present, as much sensor tape as possible is always installed in rooms.

WHAT HAD THE CUSTOMER TRIED BEFORE?

Sensor mats were used (as in most facilities), which are placed on the floor directly in front of the bed and cover only a small part of the room.

DIFFERENTIATION FROM OTHER SOLUTIONS - TECHNICALLY

The residents do not have to carry any objects with them or become active themselves when a fall happens. At the same time, the technology also respects privacy, since unlike cameras or 3D sensors, no sensitive data is collected. The software is gradually being expanded with new functions and is open to integration with third-party products. The solution is superior to other products because the devices intended to be used, such as wearables, are often not worn in practice and other technologies strongly interfere with privacy. In addition, other systems do not have sufficient accuracy, require a high installation and maintenance effort or are very expensive.

DIFFERENTIATION FROM OTHER SOLUTIONS - FOR THE USER

The solution is independent, as the resident does not have to wear items such as a Smartwatch or press a button, which should be avoided especially in the case of residents with dementia. The solution can be adapted to the resident's needs via the software, and new functions can also be added via software updates. At the same time, privacy is always respected. Thus, our solution fits every resident, whereas 3D sensors or cameras are accepted by some but not all residents. The sensor tape is hardly visible in a room and therefore does not give the resident the feeling of being constantly observed. Last but not least, the system can be quickly installed in less than an hour per room, making it perfect for both existing and future buildings. Maintenance is usually carried out "over the air", so that only minimal effort is required.

SPECIAL CUSTOMER SEGMENTS

The focus lies on the nursing sector. On the one hand, the provider's team would like to support this industry and help it cope with demographic change. On the other hand, there is still a lot of potential for digital support in this industry.



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— BUSINESS



THE PROJECT SCHEDULE

- a) The solution was presented
- b) The customer decided to test the solution
- c) The solution was installed
- d) The management received a briefing on how to use the solution, especially the web portal
- e) The customer became a kind of practice partner and gave feedback

Project maturity level

Used
Locally/In the department

Project duration

March-
June
2018

Project cost (digits)

5

Running costs (per month, digits)

3

Involved employees (Operating phase, FTE)

1

Involved employees (Project phase, FTE)

1

Data protection

The processing of the sensor data for real-time functions (fall detection, bed abandonment alarm) is done locally in the base station in the room. Data for the portal and activity analyses as well as data on the technical condition of the devices are stored at AWS.

Data processed and stored at

- EU
 US
 Switzerland

- China
 Worldwide

Billing model

- One Time Payment
 Subscription
 Maintenance mandatory

Subscription charged by

- Fixed payments
 Usage fees



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— TECHNICAL



SKILLS REQUIRED BY THE CUSTOMER

Simple technical tasks such as connection to the call system via an adapter and a connection to WiFi.



THE PROJECT SCHEDULE

- The customer supplied floor plans of the rooms, named the manufacturer of the call system
- The sensor system was installed and connected to the call system with an adapter
- The system was connected to the WiFi network

The hardware was mature, the software was not yet fully developed at that time, but was gradually improved. Here and there, there were improvements to the installation, for example because the tape did not hold as expected.



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API (% of features)

0.9

Integrations available

Yes

Available at mobile

- | | | |
|---|---|--------------------------------------|
| <input type="radio"/> Android App | <input type="radio"/> iOS App | <input checked="" type="radio"/> PWA |
| <input type="radio"/> Browser (almost completely) | <input type="radio"/> Browser (partially) | |

Deployment

- | | | |
|---------------------------------------|--------------------------------------|---------------------------------------|
| <input checked="" type="radio"/> SaaS | <input type="radio"/> SaaS dedicated | <input type="radio"/> Customer server |
| <input type="radio"/> Private cloud | <input type="radio"/> Workstations | <input type="radio"/> Docker |
| <input type="radio"/> Helm Chart | | |

Administration

- | | | |
|--|---|--|
| <input type="radio"/> Unnecessary | <input type="radio"/> Commandline | <input type="radio"/> API (completely) |
| <input checked="" type="radio"/> API (partially) | <input checked="" type="radio"/> Admin Web UI | <input type="radio"/> Built-in |

SSO available for

- | | | |
|--------------------------------------|--|---|
| <input type="radio"/> No | <input checked="" type="radio"/> User UI | <input checked="" type="radio"/> Admin UI |
| <input checked="" type="radio"/> API | | |

Integration support

- | | | |
|--|--|--|
| <input type="radio"/> Documentation | <input checked="" type="radio"/> Phone support | <input checked="" type="radio"/> Email support |
| <input type="radio"/> Implementation service | <input checked="" type="radio"/> Implementation by partner | <input checked="" type="radio"/> Other |

Support

- | | | |
|--|---|--|
| <input type="radio"/> Phone (business hours) | <input type="radio"/> Phone 24/7 | <input checked="" type="radio"/> Email - response time |
| <input type="radio"/> Email - best effort | <input type="radio"/> Chat (business hours) | <input type="radio"/> Chat 24/7 |
| <input type="radio"/> FAQ | <input type="radio"/> Knowledge DB | <input checked="" type="radio"/> Other |