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# Asset management through a Real-Time Location System

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## Background

Healthcare professionals spend valuable time on searching mobile medical equipment. In addition, these costly assets are used inefficiently. A Real-Time Location System (RTLS) can be deployed for improved asset management.

## Aim

To evaluate the effect of introducing an asset management system based on an RTLS on **search time**, and **utilisation** of mobile assets among medical staff at the Mother and Child department at OLVG Hospital, Amsterdam (NL).

## Methods

- **Infrared-based RTLS** was implemented, covering more than 80 rooms and hallways;
- **200 tags** were placed on 22 different groups of mobile assets;
- Tags actively send their location to the server, frequency varies with recent movement (typical range 3-300s);
- Philips developed software **Track&Trace**, to search for assets and to instantly localise them (including view of assets on floor plan);
- A before-after study is being conducted to evaluate our aims. Baseline data was collected through questionnaires and active recording of search time by the staff using RTLS. The research will be completed at the end of 2020.



## Results

- Staff self-reported on average 2 search actions per shift and an average time of 3.42 minutes per search;
- Active recording of search times using RTLS showed a search time of 24.3 minutes per search;
- Staff satisfaction on utilisation of mobile assets was average/low.

## Conclusion

RTLS can be successfully implemented in a hospital environment. Using the infrastructure, location of assets was available with room level accuracy in the Track&Trace application. Workable solutions are needed to also tag smaller equipment, for example pulsoximeters or thermometers. Baseline measurements on search time and satisfaction were completed, further research is ongoing to evaluate the effectiveness of Track&Trace.