

HPM[®] – The intelligent digital solution for better processes and enhanced infection prevention and control in healthcare facilities

In today's healthcare landscape, ensuring robust Infection Prevention and Control (IPC) is paramount. Hospitals and healthcare facilities face constant challenges in maintaining a hygienic environment and minimizing the risk of Healthcare-Associated Infections (HAIs).

Benefits of HPM® for Infection Prevention and Control (IPC)

Real-time hygiene status visibility:

- HPM® makes the hygiene status of medical devices visible to all stakeholders.
- This transparency ensures everyone is aware of the contamination status of beds, mattresses, and other medical devices.
- Beds contaminated with germs are clearly marked and the system provides tailored cleaning instructions.
- This real-time information helps staff make informed decisions about device usage and cleaning, reducing the risk of cross-contamination.

Optimized processes and resource management:

- HPM® streamlines processes related to bed management, device maintenance and cleaning.
- Real-time data on the usage of medical devices allows for improved capacity utilization and reduced search times for available equipment.
- The „device finder“ features guides staff directly to the medical devices which need cleaning, disinfection or servicing, minimizing wasted time and effort.
- HPM® helps to reduce medical device overstocks by providing real-time overviews of inventory, status and utilization.

Data-driven insights and continuous improvement:

- HPM® provides a hygiene dashboard with real-time data analysis, giving insights into key figures like infection rates, hygiene violations, and process durations.
- This data-driven approach enables hospitals to identify areas for improvement.

WARD	ROOM	LOCATION	DEVICE ID	DEVICE TYPE	CONTAMINATION STATUS
Ward 2A	R 2.012	Window	B-1055	Hospital bed (mechanical)	MRSA
Ward 2A	R 2.014	Window	B-1224	Hospital bed (electric)	4MRGN
Ward 2A	R 2.016	Window	B-1083	Hospital bed (electric)	MRSA
Ward 2A	R 2.020	Door	B-1005	Hospital bed (electric)	MRSA
Ward 5B	R 5.108	Door	B-1122	Hospital bed (electric)	4MRGN
Ward 6A	R 6.040	Window	B-1094	Bariatric bed (max. 300kg)	TBC
Ward 6A	R 6.044	Window	B-1012	Hospital bed (electric)	3MRGN
Ward 6A	R 6.052	Door	B-1285	Hospital bed (electric)	TBC
Ward 8	R 8.104	Door	B-1200	Hospital bed (electric)	4MRGN
Ward 8	R 8.110	Window	B-1050	Bariatric bed (max. 300kg)	Clostridioides diff.

Digital documentation and tracking:

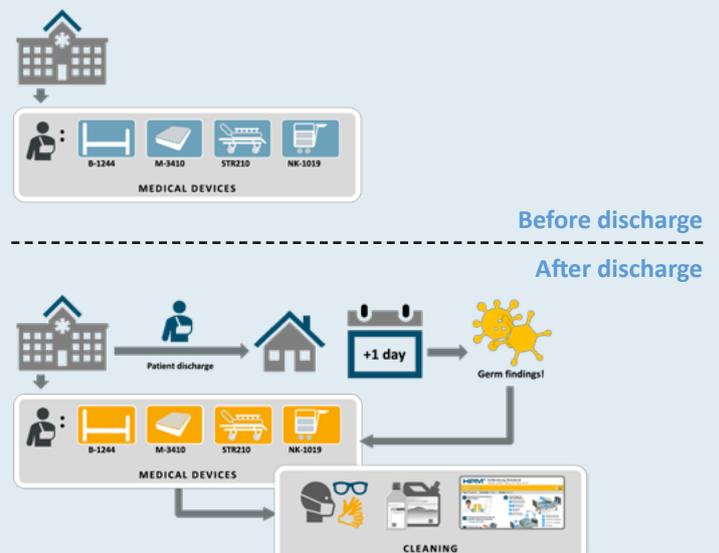
- HPM® digitally documents every step of the cleaning and disinfection process.
- This comprehensive documentation serves as proof of adherence to hygiene protocols, strengthening the hospital's legal position in case of lawsuits.
- The system can track contaminated medical devices, even after a patient is discharged, by linking patients and the devices they used.
- This tracking capability allows for targeted cleaning and disinfection of potentially contaminated devices, breaking the chain of infection.

Permanent staff training and improved workplace safety:

- HPM® provides cleaning instructions tailored to the medical device and the nature of its contamination.
- By providing ongoing training through these instructions, staff are continuously updated on the proper procedures, minimizing the risk of errors and promoting a culture of hygiene.
- The system prioritizes staff safety by making the hygiene status transparent and documenting cleaning processes.

Traceability of contaminated medical devices with HPM®

Medical devices can be linked to the patient. This means that even after the patient has been discharged and a germ has been diagnosed, it can be traced which medical devices the patient had contact with. Cleaning of these medical devices can then be arranged according to the type of contamination.



CLINARIS HPM®: Streamlining healthcare operations

Facing the Challenges of Healthcare

In today's fast-paced healthcare environment, medical staff are increasingly burdened with a growing workload and longer hours. This can lead to burnout, errors, and a decline in patient care.

Introducing HPM®

HPM® is a revolutionary solution designed to alleviate these challenges and optimize healthcare operations. By automating time-consuming tasks and providing real-time insights, HPM® empowers medical staff to focus on what truly matters: patient care.

Key benefits of HPM®

- **Automated reporting:** Automatically records decontamination, cleaning, and maintenance processes, eliminating the risk of human error and ensuring compliance with strict hygiene standards.
- **Real-time inventory management:** Provides accurate and up-to-date information on the location and availability of medical devices, reducing search times and improving efficiency.
- **Enhanced patient safety:** Minimizes the risk of infections by ensuring that medical devices are properly cleaned and maintained.
- **Improved staff satisfaction:** Reduces the burden on medical staff, leading to increased job satisfaction and improved patient care.

How HPM® works

1. **NFC/QR labelling:** Medical devices, rooms, and bed spaces are labelled with NFC/QR codes for easy identification.
2. **Automated reporting:** Staff can simply scan the NFC/QR code on a device to record its status (Type of infection, occupied, clean, dirty, defective, etc.) and HPM® automatically generates reports.
3. **Data-driven insights:** HPM® provides valuable insights into device utilization, cleaning cycles, and maintenance needs, enabling data-driven decision-making.
4. **Real-time tracking:** HPM® utilizes existing RTLS networks in your medical facility to track the location and status of medical devices in real-time.

By implementing HPM®, healthcare facilities can significantly improve efficiency, reduce costs, and enhance patient safety.

Experience the future of healthcare today!

Real-time tracking of beds and other medical devices:



¹ i.e. all maintenance, testing and calibration appointments were completed on time

HPM® simple tools:

Geodata ¹	QR / NFC label	Distinctive symbols	Web view ward / clinic	Mobile health system / smartphones
	<ul style="list-style-type: none"> • Medical devices • Rooms • Bed spaces • Logistics areas 	<p>clean</p> <p>unclean</p> <p>contaminated</p>		

¹ are supplied by external companies

Relieving the burden on care? Only with real-time information about location and status of the medical device!

In times of a chronic shortage of skilled nurses relieving the burden on nursing staff is one of the biggest challenges that hospitals currently have to face. In the future, there will be fewer and fewer professionals available to cope with the tasks in the hospital. This is why solutions are needed, which simplify processes, help to avoid mistakes and reduce unnecessary tasks, so that nursing staff can focus on their core tasks: the care of patients.

Frequent searches for urgently needed medical devices cost precious time and can lead to frustration.

Localisation solutions, which only show the location of medical devices but not their actual availability (occupancy and hygiene and technical status) are only partially suitable to reduce search times and distances and thus avoid frustration.

This is exactly where CLINARIS with HPM® steps in!

Because HPM® uses the RTLS location data for beds and other mobile medical devices independently of the tracking technology used, and enhances this data with the status data (occupancy, hygiene and technical status).

As a result, every employee receives not only information about the location of the medical device they are looking

for, but also whether it is actually available and 'suitable for safe use', i.e. it is not occupied, it is cleaned, without defects, maintained and tested. All medical devices (incl. information about the real-time location and its status) can also be viewed in the 3D map view feature for wards, which CLINARIS has developed in cooperation with its partner VIRTUAL TWINS.

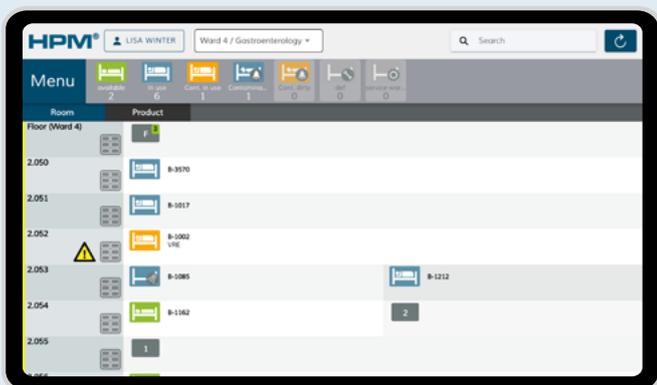
How HPM® works:

Prior to the registration in HPM®, NFC/QR labels are used for the precise identification of medical devices, rooms and bed spaces.

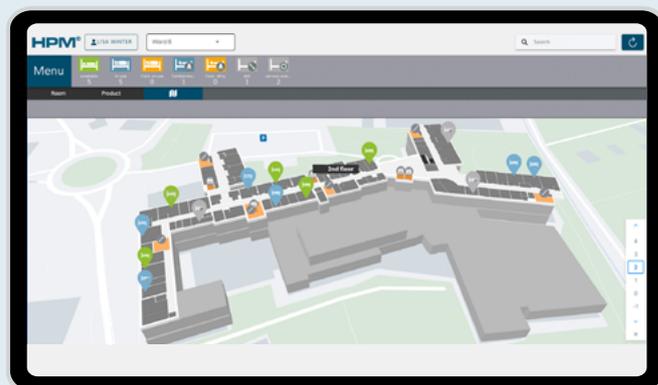
By scanning the NFC/QR label with a smartphone or tablet, the status of medical devices can be checked, the devices can be marked as occupied, defective, contaminated or can be transferred to cleaning / disinfection.

In the basic version of HPM®, the location is determined by scanning the label on the device and on the bed space. In the next step, HPM® can be enhanced with automatic RTLS technology, whereby e.g. BLE, RFID or UWB technology can be used depending on the use case.

Together with our partners for automatic tracking, we will be delighted to advise you on this issue.



HPM® ward view for the ward PC or tablet



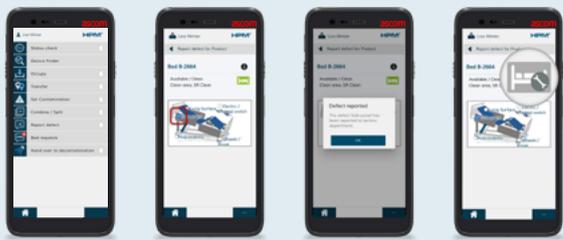
NEW FEATURE: 3D map view of medical devices (incl. real-time location, occupancy, hygiene and technical status) in cooperation with

VT VIRTUAL TWINS®
Platform for Indoor Navigation

HPM® has so much more to offer! Get to know the other functions of our software solution!

HPM® is not just about infection prevention and control. It's also a solution, which simplify and improve the safety of collaboration between patient care, hygiene, medical technology, cleaning and logistics through efficient and transparent processes. Get a closer look into the functions, HPM® has to offer:

Biomedical reporting and tracing

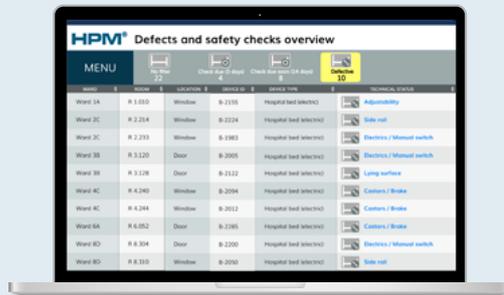


With HPM®, defects in patient beds and other medical devices such as ultrasound devices can be easily reported to the medical technology department. The report is made directly in the app using intuitive pictograms: the defect can be selected with just a few clicks.

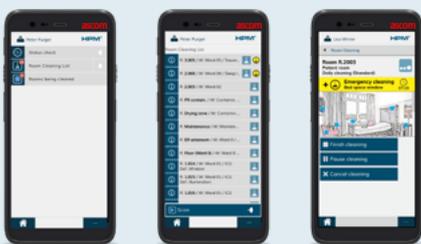
The defect is forwarded in real time (directly or via CAFM interfaces) to the medical technology, which will be informed by push message (including details such as location and defect type). Via smartphone or PC, biomedical technology staff can not only find out the real-time location of defective medical devices, but also receive further details, e.g. on the type of defect and on the device itself.

Likewise, HPM® can also be used to initiate repair processes and safety checks (maintenance/test/calibration appointments).

This ensures that defective devices are removed from the utilisation cycle and returned more quickly after repair. The result: shorter downtimes, improved patient safety and a reduced need for excess inventory.



Housekeeping and scheduling



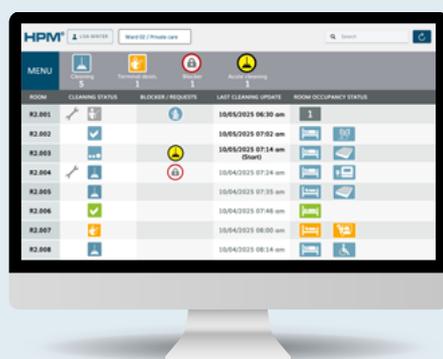
Integration of cleaning robots possible



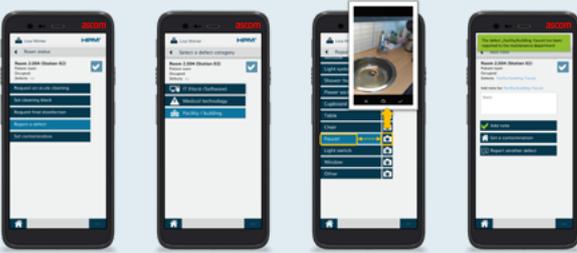
With HPM®, hospitals can digitally control room and surface cleaning. Any cyclical cleaning intervals for different room types can be defined easily and intuitively. Cleaning staff are controlled in a targeted manner using mobile job lists and receive important information, for example about the type of cleaning or possible contamination in the room.

The ward view makes it possible to maintain an overview at all times: it shows which rooms have already been cleaned, where cleaning is currently in progress and provides additional details, such as requested urgent cleanings or existing cleaning blocks. All cleaning activities are documented, so digital proof of each completed cleaning is provided at the end. Individually customisable cleaning reports show at a glance and in a clearly structured way all cleanings that have been carried out correctly and those which have been left out.

HPM® thus ensures maximum transparency in the cleaning processes and offers the option of a target-performance comparison.



Facility management
(opportunity for interfaces to CAFM-solutions)

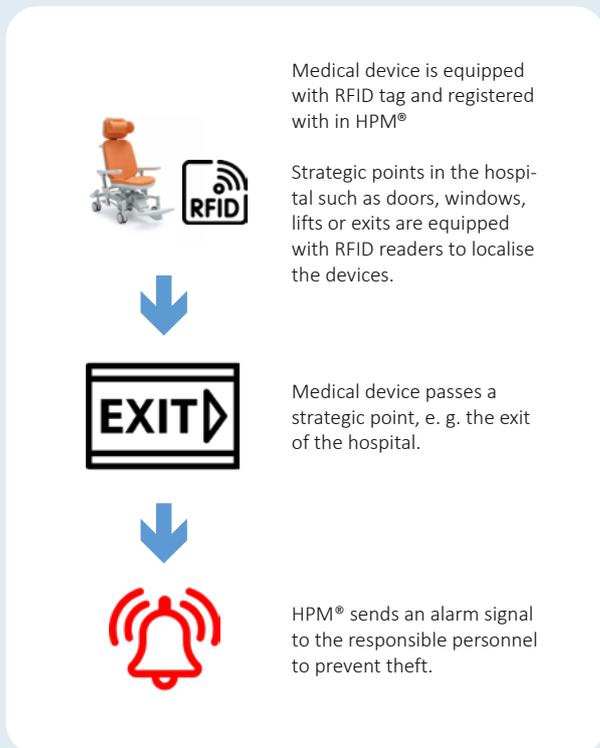


HPM® offers comprehensive support in facility management, e.g. by providing a simple option to report room defects directly to the technical team. Users can describe details and add photos for documentation.

In addition, HPM® enables the monitoring of critical processes. These include, for example, the regular flushing of aerators or the control of HEPA air filters. These measures help to eliminate germs and reduce the risk of infection for patients and staff.

Repair processes can also be efficiently initiated and seamlessly documented using HPM®.

Property control



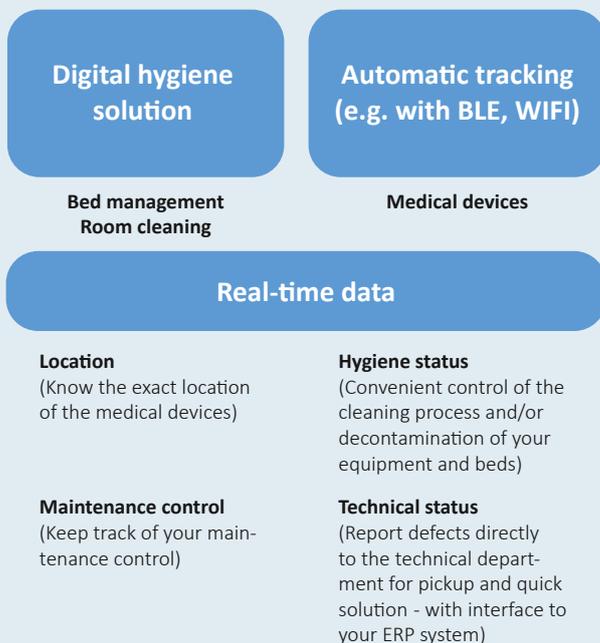
With HPM®, hospitals and healthcare facilities can effectively protect their medical devices from theft. For this purpose, all devices, e.g. patient beds, infusion pumps or wheelchairs, are equipped with RFID tags. These tags contain unique identification information that clearly identifies the device and its affiliation.

RFID readers are installed at strategic points, such as doors, windows, lifts and exits. This allows the devices to be localised in real time and prevents unauthorised removal from the building. All of the devices' movement data is logged, so that it is possible to determine where a device was last located at any time. If a tagged device leaves the designated area or the hospital, HPM® automatically triggers an alarm.

HPM® not only protects against the loss of expensive medical devices, but also saves costs for replacement purchases and insurance.

In addition, RFID technology facilitates inventory management: hospitals can keep track of their medical devices, and devices can be found quickly thanks to efficient localisation.

Optionally RTLS-Tracking
(by using existing Bluetooth and WIFI)



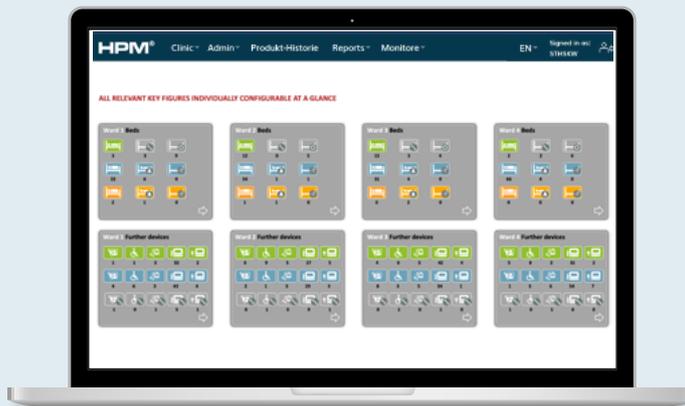
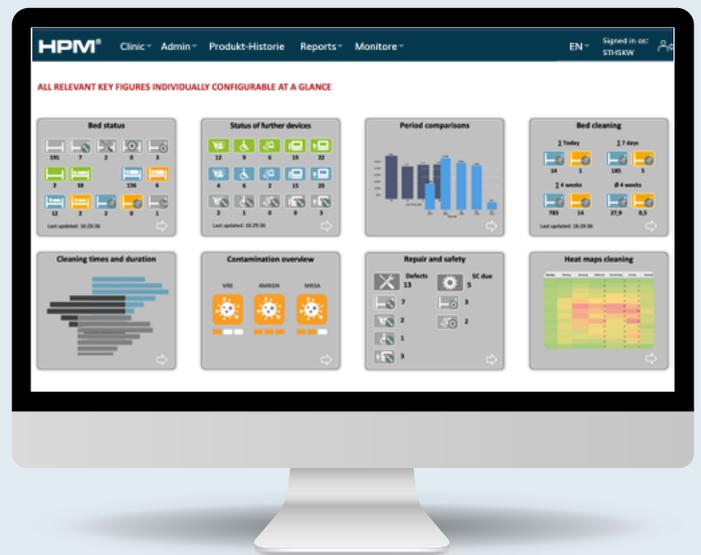
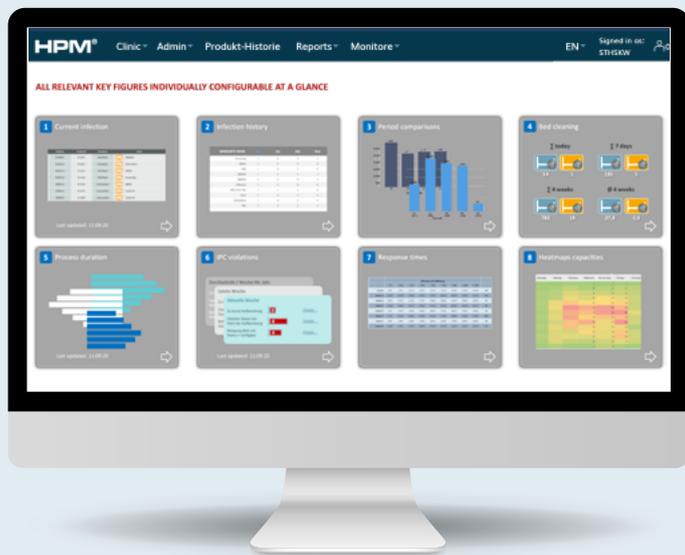
The main functions of HPM® can be used without additional tracking infrastructure. In the basic version, the location is determined by scanning labels on the device and storage location.

Optionally, HPM® can be expanded to include automatic localisation. This uses the hospital's existing technical infrastructure, such as Bluetooth Low Energy (BLE), Wi-Fi or UWB technology.

This provides all employees not only with information on the occupancy status and the hygienic and technical condition, but also the real-time location – without any manual effort.

HPM®: The intelligent digital solution for enhanced infection prevention and control in medical facilities

Management tools (for ward PCs, works e.g. on iMac, MacBook, Windows laptops)



HPM® provides a variety of management tools that can be easily accessed via ward PCs. These tools are based on real-time data, which is continuously collected during the use of HPM®.

These data open up a wide range of possibilities, e.g. for process optimisation, efficient distribution of resources or targeted control of staff deployment.

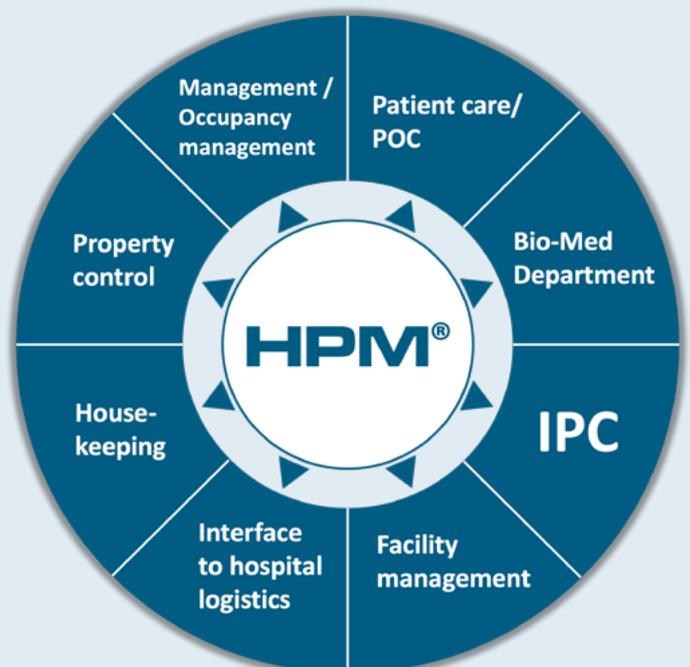
A wide range of user groups benefit from these tools equally, including management, nursing, hygiene, bio-medical engineering, cleaning and logistics.

More than just infection prevention and control!

HPM® is an intelligent digital solution that empowers hospitals to take a proactive, data-driven approach to infection prevention and control. But in fact it's more than just a solution for Infection Protection and control!

It simplifies and improves the safety of collaboration between different departments in the hospital. Various user groups benefit from HPM® in their daily work.

By implementing HPM®, medical facilities can create a safer environment for patients, staff, and visitors, minimize the risk of HAIs, and optimize resource utilization. It's a significant step toward building a more efficient, hygienic, and patient-centric healthcare system.



HPM® for your hospital – all advantages at a glance!

Managing and documenting the cleaning processes

Manage cleaning processes with HPM® and obtain detailed documentation of each cleaning step. The documentation of the cleaning can improve the hospital's legal position in the event of a lawsuit.

Reducing overstock of medical devices

Transparency regarding the location and use of mobile medical devices, as well as faster repair and maintenance processes, ensure more efficient use of existing beds and medical devices. The need for overstock of beds and other medical devices can be significantly reduced.

Intuitive digital defect reporting

Nurses, cleaners and technicians can report defects by clicking on easy-to-understand pictograms. Defect reports are forwarded to the medical technology department in real time (directly or via interfaces to CAFM solutions).

Total flexibility

HPM® can be used for centralised, decentralised cleaning or cleaning in the patients' rooms. Transports can be initiated via interfaces to logistics solutions in HPM®.

Relief for staff

The use of HPM® enables more efficient processes and simplifies communication and documentation. HPM® thus enables nursing staff to concentrate on caring for their patients.

Workplace safety

Maximise the safety of your staff by making the hygienic status of your medical devices transparent to everyone. Clear colour scheme and design language prevent misunderstandings and can also be understood by people with limited language skills.

Transparency

HPM® helps to maintain the hygiene and technical status and the lifespan of hospital beds and other medical devices in real time.

Continuous training

By providing instructions to the respective device and to the contamination, HPM® helps to avoid mistakes and also provides permanent training.

Contact us now!



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