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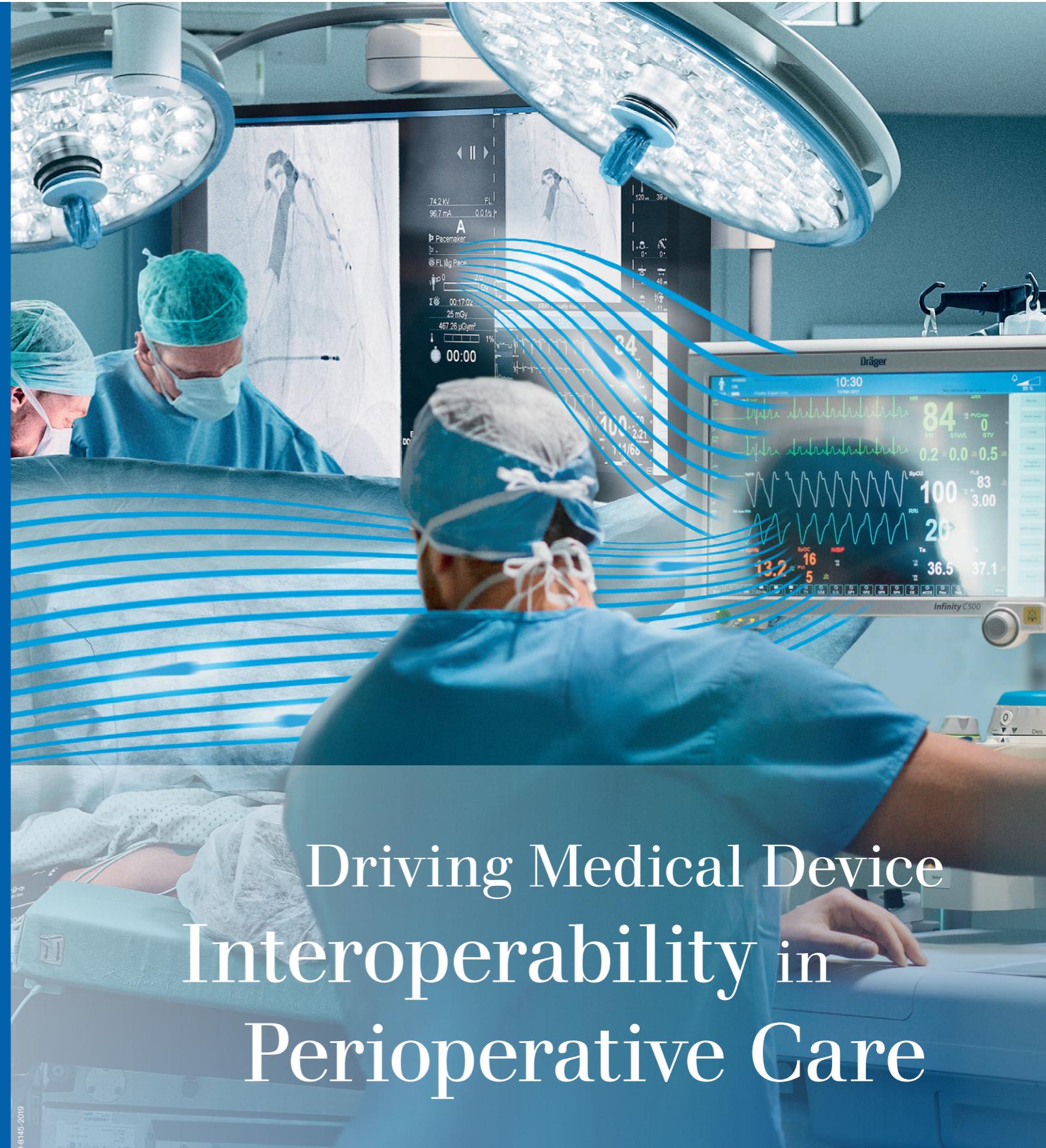
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Driving Medical Device Interoperability in Perioperative Care

This is what drives us: Improving Acute Care

We envision a future where medical devices are connected as systems in high acuity environments and they interact with one another in a safe and secure network enabling new clinical applications that improve the efficiency and quality of care that is being delivered.

Let us lead you into the future of connectivity in perioperative care with our integrated solutions, services and expertise that:

- Improve clinical outcomes
- Optimise workflows
- Reduce treatment costs
- Increase staff and patient safety

This is why we are Your Specialist in Acute Care.



Ensure future-readiness



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Interoperability is the ability to seamlessly, automatically and securely exchange interpretable data between devices and systems within a network in a standardised way without technical restrictions.^{[1], [2], [3]}

Interoperable medical technologies are used best to actively enhance human capabilities in delivering care, not replacing them.

As Your Specialist in Acute Care, we are striving for:

- Interoperability-based **assisted therapies** to improve outcomes at the point-of-care
- **Data integration** into hospital EMR systems for improved decision-making
- **Hospital data analytics** to leverage the power of data to increase efficiency and drive health outcomes
- Value-adding **digital services** to keep system performance at peak levels
- A high level of **cybersecurity** to maintain system uptime and keep assets secure

Protect patients and streamline workflows with Assisted Therapies



16,6 % of hospitalised patients suffer from adverse events, 51 % of these were determined to be "highly preventable".^[4]

The OR is a stressful, crowded place making it difficult for anaesthetists to always make the right decisions for their patients. Assisting technologies can enhance the protection of patients by putting data into the right context. Valuable insights support clinical decision making to improve outcomes while streamlining workflows for healthcare workers at the same time.

Convenient and easy to use workstations with the clinical assistance package

- Enable consistent and accurate documentation with an NTP-based date and time setting on all connected devices
- Adapt the colours and luminance of all screens and cockpits simultaneously to the clinical scenario
- Mute alarms of the entire workstation from any single connected device

Individualise treatments for patients

- Display of current and predicted anaesthesia levels with SmartPilot View, guiding clinicians to optimize intraoperative drug administration accordingly
- Receive a patient's physiological data from the EMR with the Clinical Assistance Package via the push of a button to individualise therapy settings
- View contextual information that can support successful lung recruitment manoeuvres with the Clinical Assistance Package

Access to data wherever and whenever it is needed

- View near real-time data on mobile devices to supervise patient status with Mobile Patient Watch
- Enable consultancy from remote locations with mobile access to patient status information via Mobile Patient Watch





87 % of physicians perceive administrative tasks as the primary source of the increasing burden of job-related stress. Symptoms of burnout can be observed in half of physicians putting patient safety potentially at risk.^[5]

Electronic documentation into patient records makes data available in a more timely manner and can significantly reduce errors that are a potential threat to patient safety.^[6] Contribute to an improved delivery of care by providing a decision-supporting, integrated database and improving staff satisfaction by streamlining clinical and administrative processes for data management.

Create higher efficiency in administrative workflows with electronic documentation

- Reduction of errors in data files through automated data management processes
- Less time spent on administrative tasks for healthcare workers

Achieve seamless connectivity to electronic medical records

- Standard-compliant data export in HL7 formats to hospital information systems
- Integration into HL7-compatible electronic medical records
- Consistent time stamps for transported data packages

Access comprehensive information wherever needed

- Import of patient data to the point of care from hospital information systems
- Medical-grade data improves the reliability of displayed information

Connectivity impacts the delivery of care all over the world



»Helping to reduce the number of preventable deaths in hospitals is a pledge that I made.

My personal goal goes beyond: Improving Acute Care with technologies and services that lead to therapy assistance and ultimately to hospital automation.«

Stefan Dräger, Chairman and Chief Executive Officer of Dräger

»Now, there is a wealth of clinical information available for us at the touch of a button. We can access anything that the network can offer – not just at our desks, but at the patient's bedside.«

Dr. Sergei Dudnikov, Consultant Cardio-Thoracic Anaesthetist, Derriford Hospital, Plymouth, England

»The concept of monitoring without interruption optimises the processes on the patient – it helps us to save time and money.«

Dr. Stefanie Conrad, Director of Nursing, Marienkrankenhaus St. Josef Kohlhof, Neunkirchen, Germany

»We are now focusing more on the patient than on the machine. The opportunities which Perseus® offers ensure that the machine adjusts to the patient and not vice-versa.«

Jean Bellec, Anaesthesia Nurse, Rennes University Hospital, Rennes, France





Utilise Hospital Data Analytics for better decision-making



Volatile anaesthetic agent costs can be reduced by up to 78% by using low-flow practices.^[7]

Data is a precious commodity - but are you using its full potential? We enable and support you to generate valuable insights out of available data from therapy devices and patient monitors, which has typically remained unused. Increase efficiency and drive health outcomes in hospitals with data-based decision making.

Leverage the power of data through customer-specific gas consumption analytics

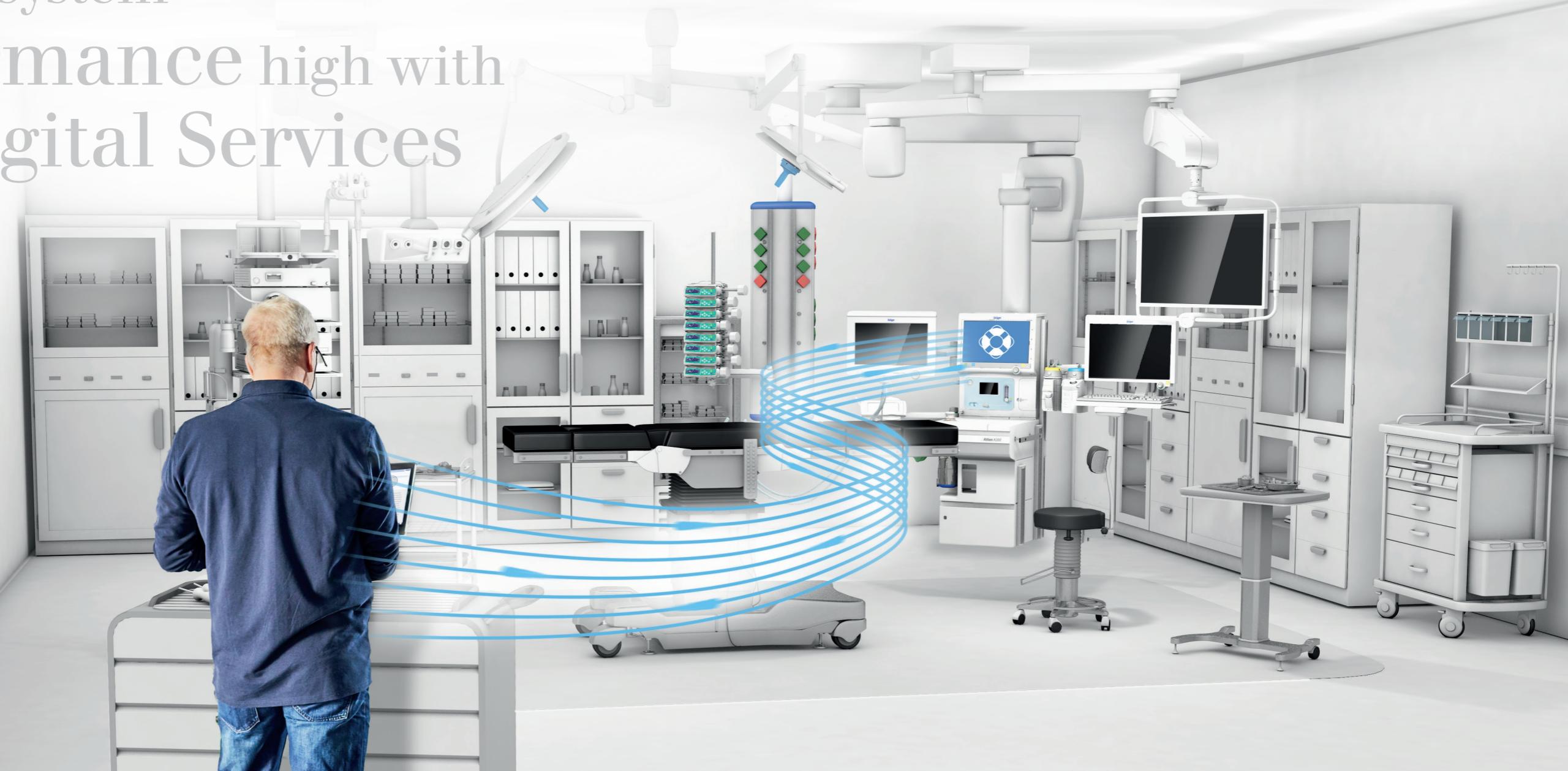
- Patient protection with low- and minimal-flow anaesthesia practices
- Reduced costs of intervention by saving on expensive anesthetics
- Reduced Global Warming Impact (GWP Index) through lower anesthetics emissions



Our tailored process optimisation strategies include:

- Training of the staff in the perioperative environment
- Complementing professional services
- Support for the implementation of efficient workflows

Keep system performance high with Digital Services



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The downtime of an operating room can cost **\$3,600/hour** of unused operating time.^[8]

Maintaining a heterogeneous installed base of medical devices and software solutions is a complex and challenging task. Enhance operational efficiencies and keep system performance at high levels with digital services and solutions.



Increase uptime within the medical device fleet

- Faster response times by checking device status remotely
- Better first-time-fix-rate by opening a remote help ticket

Improve transparency on the fleet's assets

- Ability to manage and distribute software updates remotely
- Easy access to networked devices

Your Cybersecurity is our priority



In the last two years, **91%** of healthcare organizations have had **at least one data breach involving the loss/theft of patient data.**^[9]

In the perioperative care environment, it is compulsory that therapy and monitoring devices are protected against unauthorised access and manipulation. This aims at ensuring the continuous delivery of care, while protecting assets and sensitive data of hospitals and their patients in sync with regulations.

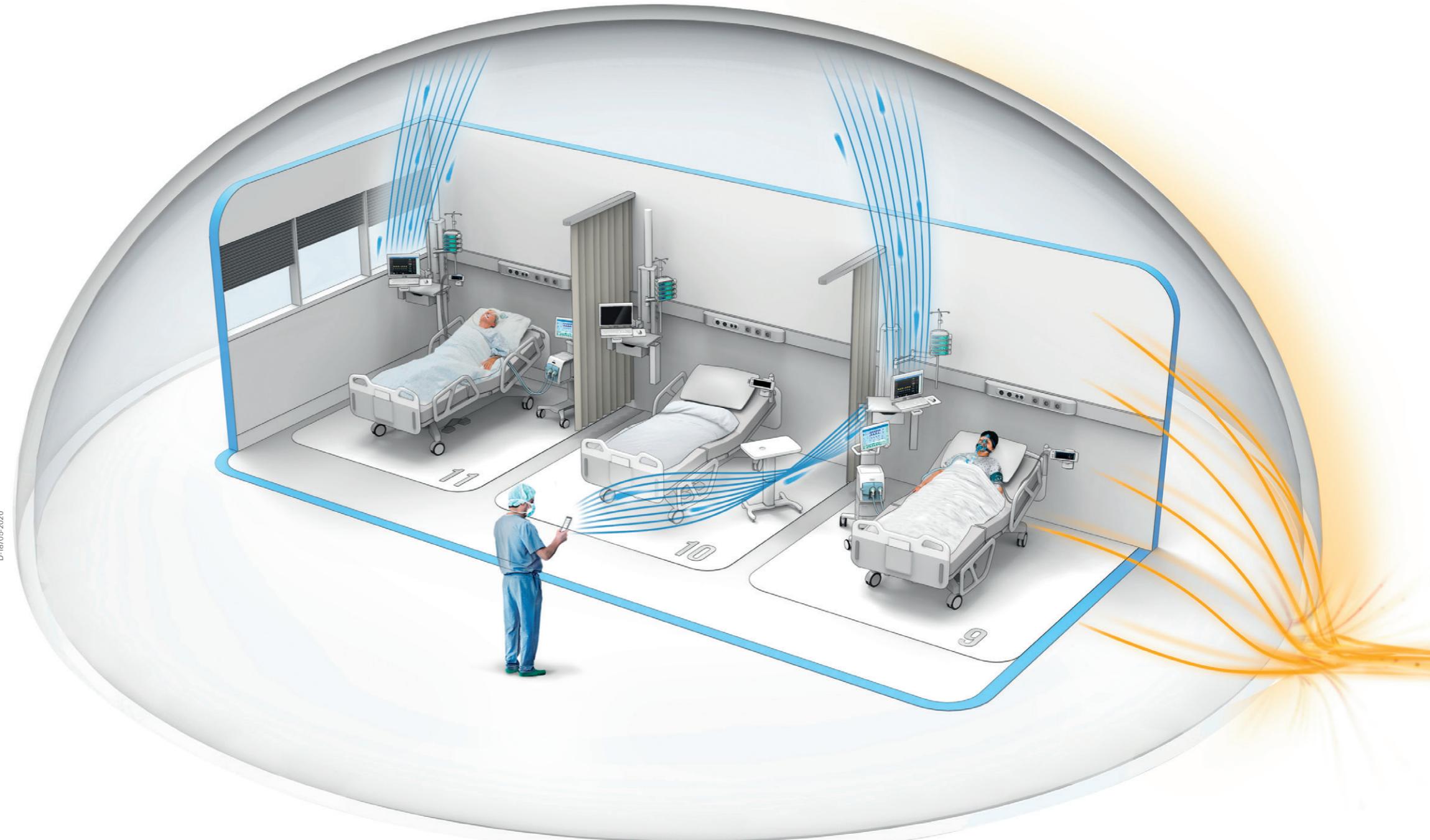
We implement security measures in devices, systems and data exchange

- Product development and lifecycle management with security in mind
- Secure development lifecycle including dedicated product security managers*
- Checking the security level with Penetration tests*
- Threat analysis to discover structural weaknesses and take countermeasures*

Limit the access to data and systems to the right users

- Encryption of transported data to increase integrity and confidentiality*
- Digital certificates-based authentication mechanism to regulate data access*
- Authorization of devices via whitelists*

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Our System Offerings

As Your Specialist in Acute Care we know that connected solutions play a vital role in driving outcomes and efficiency of patient care. If you want to learn more about Connected Technologies from Dräger visit www.draeger.com



Anaesthesia

Patient Monitoring



Infinity Acute Care System

Services

Connected Maintenance and Professional Services



Systems Solutions



Infinity Gateway



Gas Consumption Analytics



SmartPilot View



Clinical Assistance Package

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