

The Philips logo is displayed in a bold, blue, sans-serif font. It is positioned in the top left corner of the page, within a white rectangular area that has a rounded bottom-right corner. The background of the entire page is a dark blue gradient with a complex, abstract pattern of glowing, multi-colored lines (cyan, purple, orange) that flow from left to right, creating a sense of motion and data connectivity. There are also small, scattered light spots in various colors.

Hospital Patient
Monitoring

Position paper

Transforming what's possible

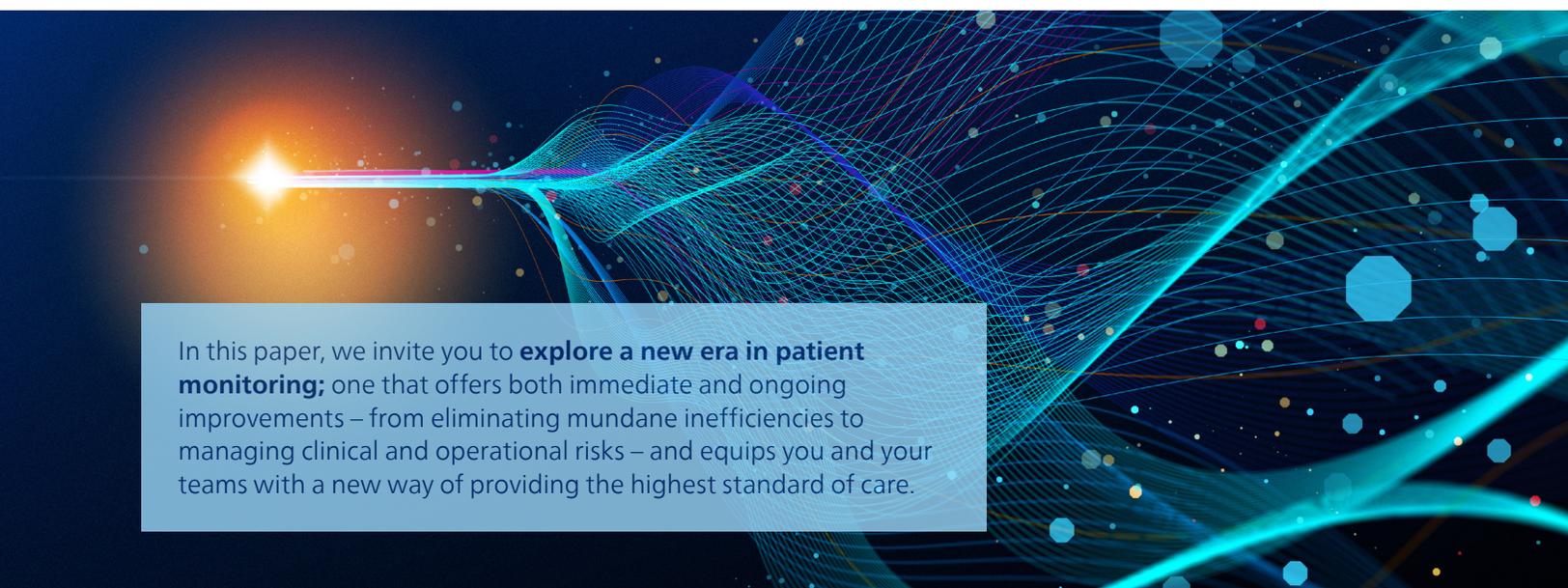
IDN-wide patient monitoring is the
gateway to breakthrough innovations

Sometimes change happens in small steps. Other times, in giant leaps.

For decades, patient monitoring has progressed in incremental, yet important, steps. But progress – which has primarily been focused on hardware and its parameters – hasn't kept pace with the needs of patients, clinicians or hospital systems. Patient monitoring, unlike other mission-critical systems, remains decentralized and disparate, perpetuating inefficiencies and patient safety risks.

With the unprecedented challenges in healthcare, this moment demands a giant leap. The forces of change – sicker patients, more surges, fewer healthcare professionals and frequent health system consolidations – have only increased pressure over time and highlighted the shortcomings of the current approach to patient monitoring. These forces are driving the need for a giant leap forward in how patient monitoring is deployed and managed.

To meet the needs of today and the future, we must transform what's possible and enter a new era of patient monitoring.



In this paper, we invite you to **explore a new era in patient monitoring**; one that offers both immediate and ongoing improvements – from eliminating mundane inefficiencies to managing clinical and operational risks – and equips you and your teams with a new way of providing the highest standard of care.

Why centralizing mission critical systems at the integrated delivery network (IDN) level is mission critical

Health systems cannot operate safely or effectively without mission critical systems such as electronic medical records (EMR), diagnostic systems, hospital information systems and picture archiving and communication systems (PACS). Because they are centralized at the IDN-level, these systems are always available and can scale quickly. They can be relied upon for their security and ability to

maintain data integrity. Through centralization, health systems can meet these requirements and more by realizing the benefits of standardization, improved data visualization, scalability, hardened security and other IDN-wide improvements.

The next mission critical system to benefit from centralization is patient monitoring

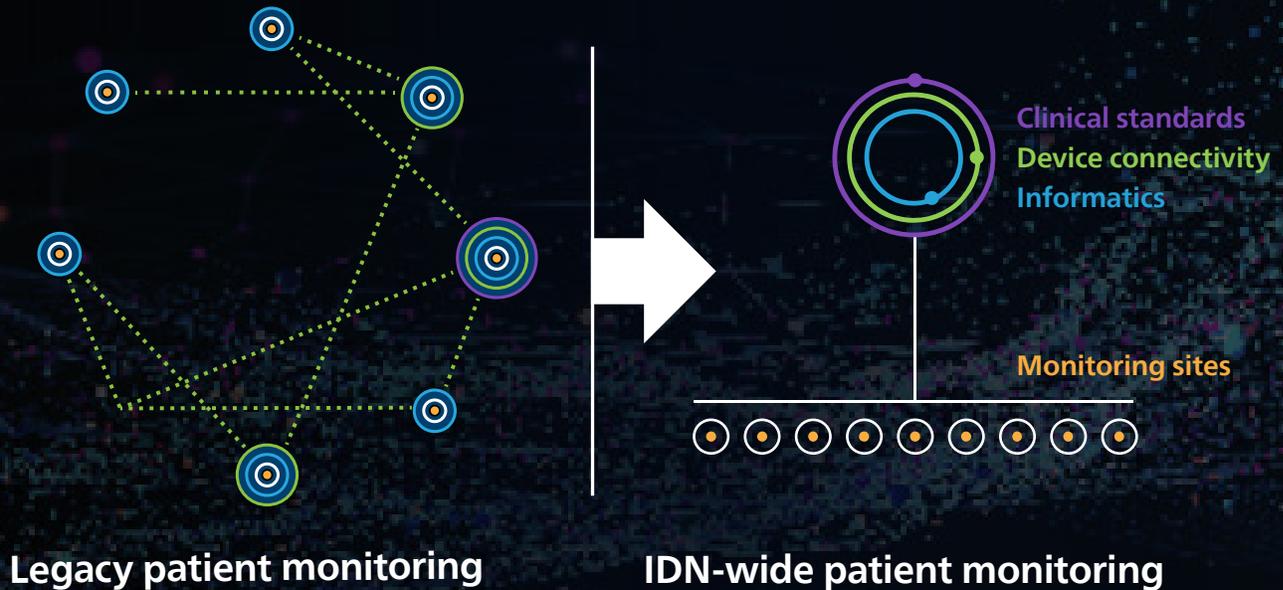
Patient monitoring is mission critical to delivering quality patient care. Patients' safety and, in many cases, their lives depend on it. How can health systems shift how they think about hospital patient monitoring, given that deploying and managing at a site or local level contributes to complexity, gaps in data, security vulnerabilities and more?

Health systems recognize the value of centralizing mission critical systems at the IDN level as demonstrated through EMR and PACS. Not centralizing patient monitoring can prevent health systems from meeting the ever-increasing challenges of delivering quality patient care.

The future of healthcare demands that we look for opportunities to realize IDN-wide benefits, especially with mission critical systems such as patient monitoring. The cost of inertia – of doing things as they've always been done – is high.

At Philips, we believe that now is the time to centrally deploy and manage patient monitoring at the IDN level like other mission critical systems.

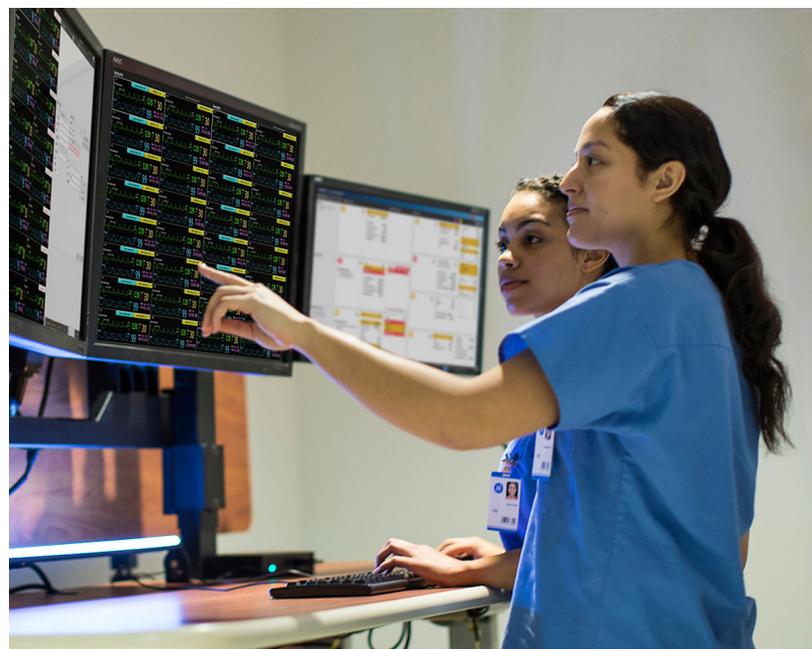
With an IDN-wide patient monitoring approach, health systems can evolve from having many different monitoring systems across many care sites to one IDN-level system.



IDN-wide patient monitoring transforms what's possible

Healthcare trends and demands make IDN-wide patient monitoring and the capabilities it enables ever more imperative. Implementing this approach ensures the system is always available, can scale quickly and can be relied upon as secure and able to maintain data integrity. An IDN-wide approach empowers health systems to improve patient care today and in the future.

In practice, this means a health system can centralize patient monitoring software – implementing a common, flexible infrastructure and leveraging network investments already made – so that it can deploy a single instance of the patient monitoring software across the entire network of health facilities. [Here, we take a closer look at current trends and demands, and what IDN-wide patient monitoring enables.](#)



Standardization that reduces variations and disparities in care across sites

The situation today

Without standardization of patient monitoring, consolidation of health systems can mean siloed systems, lack of interoperability and gaps in data that can lead to variations and disparities in care. In the US, it is estimated that 22,165 preventable deaths per year are attributed to medical errors due to clinical monitoring and management issues, diagnostic errors, surgery/procedural complications, drug- or fluid-related complications, errors related to infections or antibiotic choice and other errors.¹

The new era solution

With a centralized approach to patient monitoring, health systems can effectively standardize data, software and protocols (including alarm configurations and workflows) and enable seamless interoperability at an IDN level. This standardization provides a common user interface, enables continuity of data collection and timely data access, drives adoption of standard clinical workflows and subsequently reduces variability in the delivery of care.

And, centralized patient monitoring supports tech equity across sites to provide a consistent patient experience and standards of care across the IDN.

Visualization of patient data that can help overworked clinical teams address increasingly complex illnesses

The situation today

Multimorbidity affects 38 million adults aged 65 years and older.² The proportion of hospitalized patients with three or more chronic conditions has increased from 1993 to 2012.³ This puts more strain on the already short-staffed, burned-out clinical teams. These teams are further impaired by dysfunctional systems and increasing cognitive load. For example, results of the American Nurse Association COVID-19 Impact Assessment Survey found that 60% of acute care nurses report feeling burned out, and 75% report feeling stressed, frustrated and exhausted.⁴

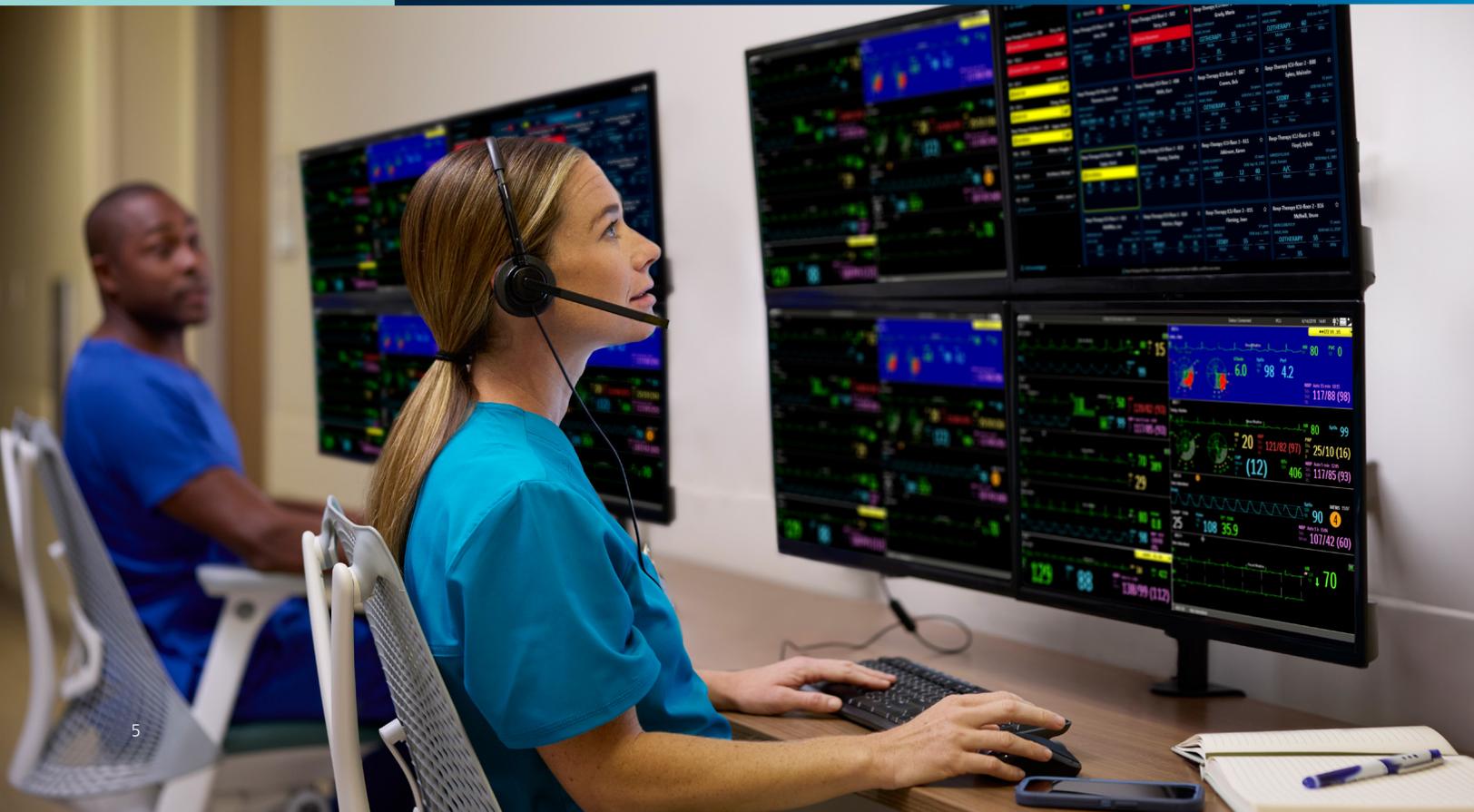
The new era solution

Deploying a single instance of patient monitoring software across an entire IDN makes high-quality, actionable patient data accessible to clinicians anytime, anywhere in the health system. It also allows for increased opportunities for collaborative care and visibility of clinical and operational performance that can facilitate optimizations, such as process improvement.



“Over the past few years, the pandemic and sudden surges in admissions have given us a better understanding of what is needed for physiological monitoring. IDN design must allow for quick expansion, total visibility and emergency preparedness.”

- Thomas P. Cushing, MS, RN
Critical care nurse, IT systems advisor, first responder



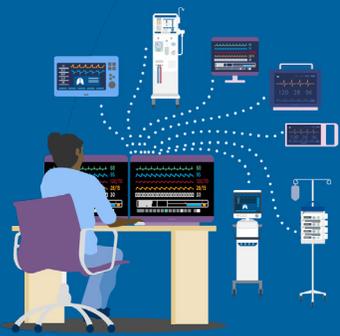
Scalability to handle sudden surges and capacity constraints

The situation today

Surges in patient demand are inevitable, whether caused by acute illnesses, natural disasters or other unforeseen circumstances. Surges require hospitals to scale capacity quickly, which, when not properly prepared for, can be challenging.

The new era solution

IDN-wide patient monitoring unlocks essential system scalability. With one patient monitoring system across the entire organization, IDNs can plan for additional capacity in advance of a patient surge, to rapidly expand and contract standardized monitoring capabilities wherever and whenever needed.



“The interoperable, secure architecture can also break down barriers to systems integrations and simplify clinical workflows.”⁵

- Jeff DiLullo, Chief Region Leader, North America

The security needed to handle cyber threats and vulnerabilities

The situation today

Cybercrime – which can cost health systems millions – continues to threaten patient safety, organizational credibility and the bottom line. In 2023 alone, there were around 475 cyber attacks involving healthcare organizations, affecting 106 million Americans.⁶

The new era solution

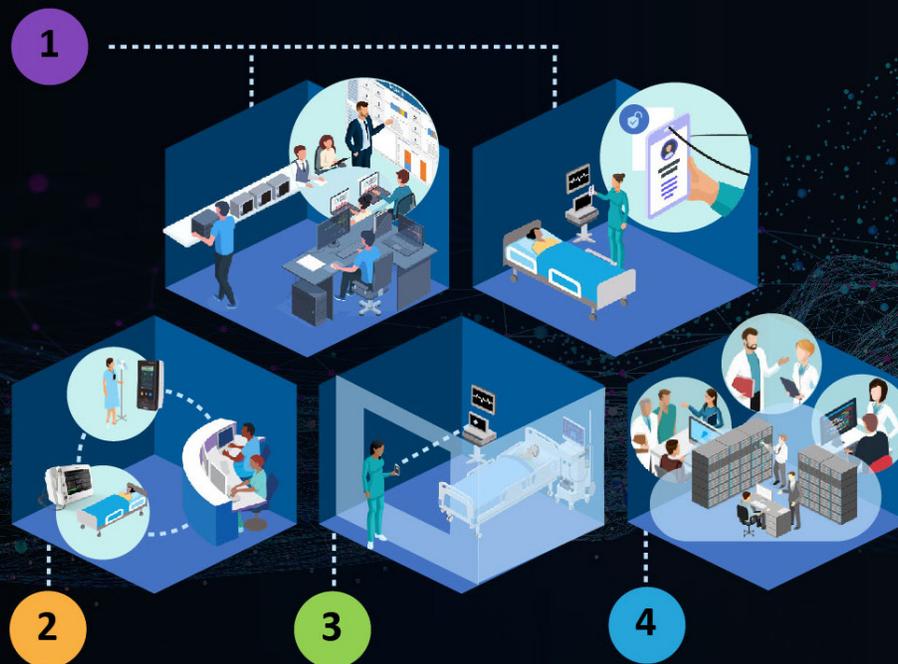
A single, IDN-wide patient monitoring system allows for hardened security. One centrally deployed system limits potential entry points through the firewall and enables more frequent security updates that can be managed remotely across the entire organization.



Unlocking new capabilities through centralized, IDN-wide patient monitoring

Philips IDN-wide patient monitoring strategy takes an open ecosystem approach that connects caregivers and devices across the IDN. It allows customers to set clinical and technical standards, rapidly deploy best practices across the hospital network for IDN-level impact, accelerate deployment and innovate faster to improve patient care and drive productivity, safely and securely.

Breakthrough innovations in transformative technology enable new capabilities that are immediately available when adopting an IDN-wide patient monitoring strategy.



1 IDN-wide administration
IDNs can create stronger data security, while still enabling data to be available to the right clinicians at the time that it's needed.

2 Cross-acuity integration
Patient data across acuity levels and across devices is accessible from one interface, helping clinicians see a more complete patient condition.

3 Command and control mobility solutions
Clinicians can access streaming patient data from more locations across the health system, giving them confidence their patients are receiving the care they need.

4 Big data and analytics
IDNs can gather insights from data across their entire system, to build on their successes and adjust where needed.

Only Philips delivers the advanced technology to bring IDN-wide patient monitoring to life

Philips offers the only centrally deployable patient monitoring software available today and the innovative, strategic partnership that ensures it is deployed, adopted and managed effectively and efficiently.

The fourth generation of [Philips Patient Information Center iX](#) (PIC iX) is key to revolutionizing patient monitoring to become a centrally managed, secure, integrated informatics ecosystem that can be deployed at scale across an IDN.* PIC iX delivers significant clinical and operational impact and accelerates the clock speed of innovation.

IDN-wide patient monitoring, made possible by PIC iX, is the gateway to an innovative ecosystem of capabilities.

- [Focal Point](#) is a robust operational management application that aggregates, processes, stores and streams network system health performance metrics in near-real-time to support a proactive approach to optimization.
- [Clinical Insights Manager \(CIM\)](#) uses retrospective data to help clinicians understand the effects of clinical interventions and enable improved alarm protocols.
- [Philips Medical Device Integration Platform \(MDIP\)](#) includes device integration, vital signs monitoring and clinical surveillance services. It connects almost all existing medical devices and EMRs in hospitals through a vendor-neutral system for next-generation interoperability.

And, we'll continue to enhance our patient monitoring ecosystem, catalyzing breakthrough clinical and infrastructure innovations at an IDN-wide level.



*PIC iX 4.2 or higher with MDIP integration.

Ongoing investments in patient monitoring technology that expand patient care management capabilities

Philips commitment to ongoing innovation and improvement is demonstrated by recent strategic acquisitions that help transform care delivery models and connect in-hospital and out-of-hospital care.

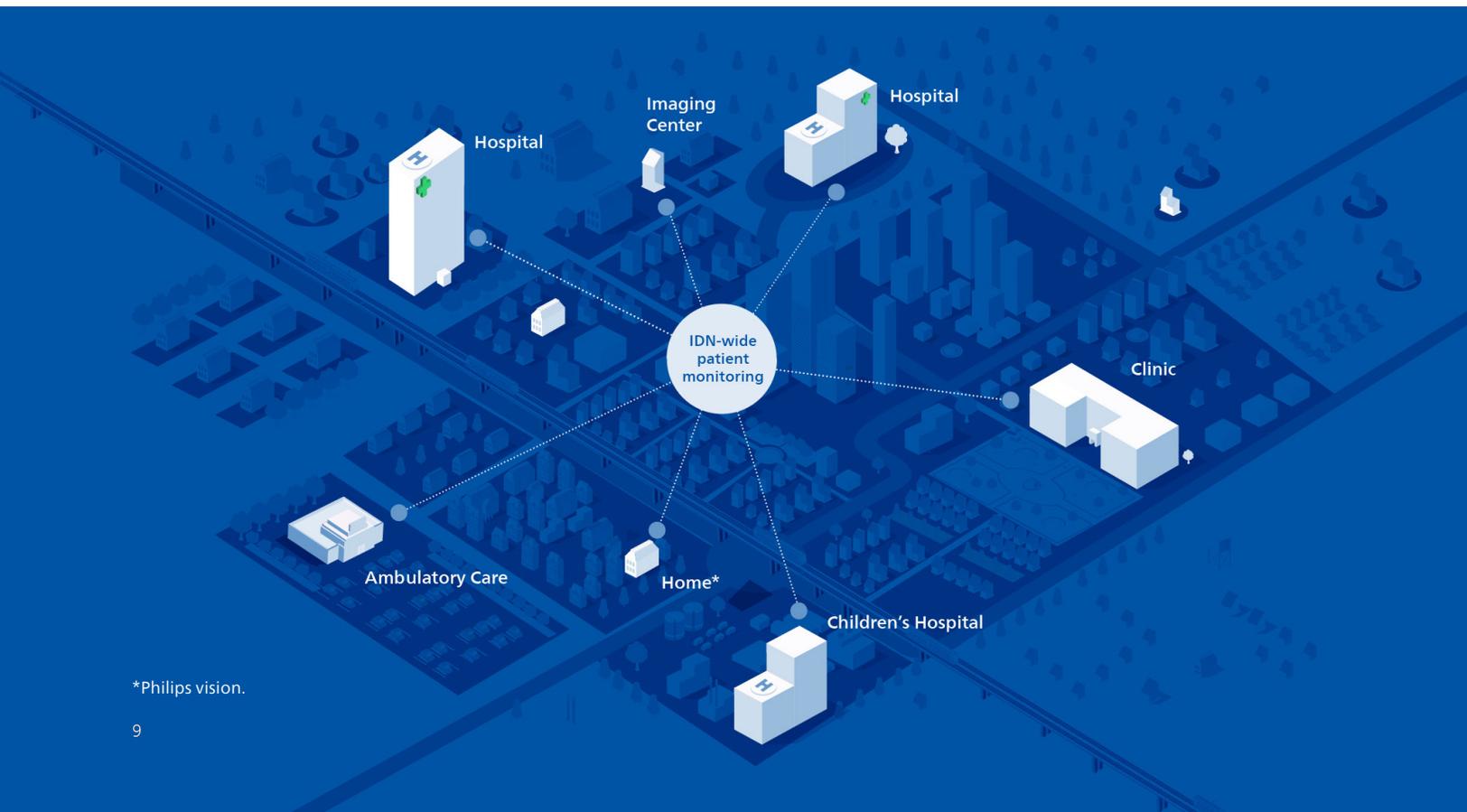
Acquisition of Capsule (now Philips MDIP) and its vendor-neutral medical device integration platform further unlocks the power of medical device data to enhance patient monitoring and management, improve

collaboration and streamline workflows in the ICU, as well as other care settings in the hospital and beyond its walls.

With the acquisition of BioTelemetry and Cardiologs, Philips is enabling connection of in-hospital and out-of-hospital care. Expanded ambulatory monitoring and diagnostic capabilities extend cardiac diagnostics and monitoring and analytics from hospital to home and eliminate care obstacles for patients living with chronic conditions.

“At Philips, we continue to invest in servant innovation to meet our customers and patients where they are. Whether that’s providing vendor-agnostic connectivity across the care continuum or delivering care in the home or ambulatory settings, we’re helping caregivers provide optimal care efficiently.”

- Julia Strandberg, Chief Business Leader, Connected Care & Monitoring, EVP and Member of the Executive Committee at Royal Philips



*Philips vision.

Technology that transforms patient care and clinician support



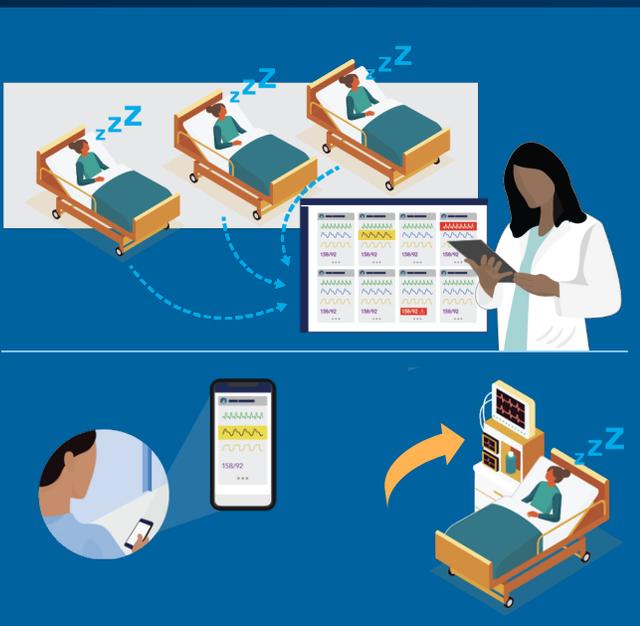
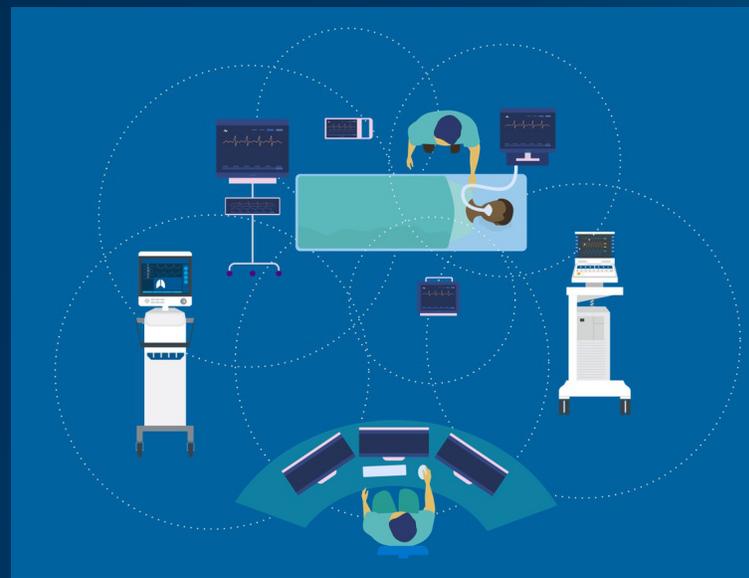
SDC-enabled devices deliver enhanced interoperability across your network for a smarter ICU

The interruptions and stress of alarms in the ICU are a well-known and major problem, and we're determined to solve it. That's why we're focused on creating not just a quiet ICU but a silent ICU, where clinicians can monitor patient conditions and address all alarms remotely, while reducing patient disruptions and promoting a better healing environment.

Leading the way with PIC iX

Through the capabilities of the PIC iX, we can already deliver a quiet patient room, where alarms from patient monitors can be acknowledged and managed remotely, and patient information can be streamed to central stations and mobile devices. We've established the quiet ICU and silent patient monitoring. But we're not stopping there. We're expanding our footprint to incorporate all Philips and non-Philips SDC-enabled devices, extending these capabilities within an open standard ecosystem to support a silent ICU.

As a leading member of the SDC consortium, Philips is embracing SDC and an open ecosystem approach. SDC in an open ecosystem can allow us to massively expand ICU functionality by including third-party devices, too.



Primed for ecosystem management

Philips provides an end-to-end patient monitoring solution that includes monitoring at the bedside, monitoring at the central station and mobile applications on caregivers' smartphones. When ICUs become fully SDC-enabled, this will require management across bedside, systems and mobile devices, and we're prepared for our monitoring systems to act as the hub for managing aggregated device data.

Looking forward, our North Star is a smart ICU where breakthrough innovations in AI and analytics advance patient care, and we can get smarter about not just alarming, but care delivery as well.

Combining the comprehensive benefits of SDC with the IDN-wide standardization from PIC iX, we can realize the vision of a silent and smart ICU.

Four quick wins with IDN-wide patient monitoring



Implementing and adopting an IDN-wide patient monitoring approach delivers immediate and ongoing value. **Amy Martin**, Head of Standards at Philips North America and a nurse and pediatric nurse practitioner with more than a decade of experience providing patient care, works with some of the largest hospital systems in the Northeastern United States. She is passionate about empowering clinicians and improving patient outcomes.

Here, Amy identifies 4 ways to quickly realize the value of an IDN-wide patient monitoring approach.



Standardizing alarm configurations IDN-wide to reduce variation in care



Deploying a mobility solution allows clinicians to visualize patient monitoring data on any mobile device and consult with specialists remotely, and it empowers them to take action via remote control capabilities



Digitizing and storing wave strips automatically into the EMR so that they can be accessed when needed



Planning for the unexpected with patient monitoring capabilities that can be deployed quickly wherever capacity is needed across a health system



“Centralization makes quality care possible from virtually any location. IDN-wide patient monitoring opens the door for these innovations and so much more.”

- Amy Martin, RN
Head of Standards at Philips North America

Realizing the benefits of IDN-wide patient monitoring in your health system

To help determine the impact that IDN-wide patient monitoring can have on your organization, reflect on how the current approach to patient monitoring in your organization may help or hinder patient care and clinician workflows.

Consider these questions:



- How often do patients need to be admitted across different departments and acuity levels in a typical hospital stay? How does this impact their outcomes?
- How does fragmented or incomplete data impede the right care conversations?
- Are there currently care disparities between hospitals in your health system due to a lack of standardized alarm configurations?



- How accessible is streaming data to your clinicians?
- Can clinicians take actions remotely and collaborate across care sites to care for patients?



- How prepared are you to deal with the next patient surge?
- How do you accommodate monitoring needs based on changing patient acuity?



- How much time is wasted patching or updating individual patient monitoring servers?
- What barriers exist to providing secure access to patient data and tracking how data is being accessed IDN wide?

Philips is partnering with health systems to build the future of healthcare together

Philips has developed the only technology available that makes IDN-wide patient monitoring a reality* and continues to invest in the future of patient monitoring.

Through our vision and technology, we are fundamentally transforming what's possible for how patient monitoring is deployed and managed. IDN-wide centralization of patient monitoring, with the benefits of standardization, visualization, scalability and hardened security, breaks through legacy thinking and creates an environment ripe for efficiencies and improved outcomes.

These improvements can happen faster through partnerships that accelerate deployment, adoption, optimization and transformation.

We are excited to help health systems along their journey in this new era of IDN-wide patient monitoring. Let's work together to harness the power of IDN-patient monitoring in your health system today.

Get in touch:

For more information or to request a meeting with a Philips representative, [contact us](#).

"It's about shifting away from legacy ways of thinking and embracing a system-wide approach. When considering an IDN-wide patient monitoring system, we should prioritize thinking beyond individual hospitals and focus on the future scalability of the entire network."

- Thomas P. Cushing, MS, RN, Critical care nurse, IT systems advisor, first responder



*PIC iX 4.2 or higher with MDIP integration.



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