



Qualitative conclusions should be considered directional only. Quantitative conclusions are based on targeted standards of at least 95% confidence and an error rate of no more than +/- 5%.

Recommendations should be considered opinions only, but they are based on interpretation of the data and the expertise within MarketWise.

Any questions pertaining to this study, its methods, and/or conclusions can be addressed via email to the preparer of this report.

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Report of Findings — Patient Monitoring

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Executive Summary

Overview

Senphonix aims to position itself as a category-defining leader in continuous patient monitoring—across inpatient, outpatient, and home-based care settings. Senphonix is planning to launch SleeveSense™ in 2026; it's a wearable, wireless, and continuous vital signs monitoring device engineered to automate vital signs data capture and deliver high-fidelity physiological insights in real time. The device will be built for interoperability, comfort, and clinical-grade reliability, providing a much-needed response to persistent challenges in healthcare delivery:

- Manual data entry
- Delayed clinical insights
- Workflow inefficiencies
- Limited early-warning capabilities (or on the other end of the spectrum, “alert fatigue”)

These systemic issues contribute to clinician burnout, safety risks, and rising operational costs. Yet despite the urgency of these challenges, continuous and remote patient monitoring remains underutilized. While an estimated 71 million U.S. patients will use remote monitoring devices in 2025, this still represents a fraction of total need. Healthcare providers manage 51 million inpatient and 900 million outpatient visits per year across 639 health systems, 6,200 inpatient locations, and 30,000 outpatient clinics—plus another 12 million patients in home health and 2 million in clinical trials.

The gap between demand and current monitoring capability signals a critical opportunity for innovation. SleeveSense enters the market at a time of growing urgency and increasing readiness. Built from the ground up to meet frontline needs, it offers a combination of comfort, integration, automation, and clinical validity that differentiates it from short-term adhesive patches and bulky legacy equipment.

To inform product-market fit and go-to-market execution, Senphonix engaged MarketWise Advising to lead a comprehensive, nationally representative research initiative. This study explored perceptions of continuous monitoring among nurses across a wide range of roles and settings.

The project is part of a broader Senphonix strategy involving two concurrent workstreams:

1. Understanding the clinical landscape and user mindset—focusing on how nurses evaluate new technologies, define product utility, and respond to workflow integration and automation in care delivery.
2. Building a clinically grounded, trust-centered technology company—capable of meeting the operational, regulatory, and integration requirements of healthcare institutions. This includes readiness for FDA Class II clearance, HIPAA compliance, and EHR interoperability.

This report delivers findings for the first workstream—focused on clinical demand, user attitudes, perceived barriers, and behavioral segmentation. These insights will directly inform the second workstream by guiding product refinement, messaging strategy, training materials, and market entry planning.

Objectives

Using a mix of qualitative and quantitative, and primary and secondary methodologies, MarketWise pursued the following research objectives to support Senphonix's strategic planning and commercialization:

1. Illuminate macro trends and system-wide pressures influencing the evolution of patient monitoring, including staffing shortages, the rise of chronic illness, care decentralization, and digital transformation.
2. Assess the current state of vitals collection, with particular attention to time burden, workflow disruption, and emotional toll—based on feedback from frontline nurses, charge nurses, and nursing directors.
3. Evaluate market readiness and product resonance, including user perceptions of comfort, accuracy, HIPAA compliance, integration, and openness to automation.
4. Develop behavioral segmentation using clustering analysis to reveal key nurse personas—categorized by attitudes toward technology, adoption readiness, and influence within healthcare organizations.
5. Deliver a unified, data-backed narrative that integrates statistical insights, qualitative sentiment, and actionable recommendations to guide product development, positioning, go-to-market messaging, pricing strategy, and partnership approaches.

Methodology

To evaluate the clinical relevance, adoption potential, and perceived value of SleeveSense, MarketWise designed and implemented a rigorous, multi-phase market research initiative. The research combined both quantitative and qualitative approaches to ensure statistical robustness while capturing the practical and emotional realities of front-line clinical care.

The study focused on licensed nurses across the United States. Respondents represented a diverse set of care environments including inpatient hospitals, skilled nursing facilities, outpatient clinics, home health agencies, and transitional care settings. In total, 402 qualified participants completed the survey, achieving a 95% confidence level with a $\pm 5\%$ margin of error—providing a reliable and nationally representative dataset.

The research design included:

- Structured multiple-choice and Likert-scale questions to assess product perceptions, workflow compatibility, perceived value, and feature importance.
- Demographic and role-based inputs to explore variability in responses across clinical functions and organizational responsibilities.
- Open-ended prompts that allowed participants to articulate specific concerns, enthusiasm, and priorities related to continuous vital signs monitoring.

Following data collection, MarketWise conducted:

- Descriptive statistical analysis to understand overall trends and mean responses.
- Correlation analysis to identify linear relationships between variables, such as role and adoption likelihood.
- Clustering analysis to develop behavioral personas and uncover latent patterns that are not evident through standard demographics.
- Thematic analysis of qualitative responses to surface clinical pain points, emotional resonance, and language that can inform product messaging.

This methodology ensured a rich, multidimensional understanding of the market landscape—enabling actionable recommendations for Senphonix’s product development, go-to-market strategy, and user experience design.

Key Findings

The research revealed strong and consistent enthusiasm for SleeveSense across nursing roles and care settings, underscoring its alignment with real-world clinical challenges. Among the nurses surveyed, 98% recognized the value and expected to support the SleeveSense solution. Of these, 64% rated it “very” or “extremely” valuable, and 66% rated adoption “very” or “extremely” likely, both of which indicate high perceived utility at the point of care and an openness and urgency around implementation.

Key drivers of support included relief from manual vitals collection, confidence in data accuracy, and integration with electronic health record (EHR) platforms. A majority of nurses—70%—reported spending 11% or more of their shift manually collecting and documenting vitals, with some noting that medication pass periods were especially taxing. Additional insights include:

- HIPAA compliance, safety, clinical-grade accuracy, and EHR integration were consistently rated as the important product features, reinforcing the importance of trust, security, and seamless documentation.
- Nurses across roles highlighted the emotional and professional burden of inefficient workflows.
- Leaders such as nurse managers and directors emphasized the solution’s potential to enhance staffing flexibility, reduce burnout, and improve care quality metrics.

Open-ended responses revealed strong emotional alignment:

"As long as it's HIPAA compliant and the data is secure, I'm on board."

"Accuracy has to come first, or the tool becomes a liability."

"If it doesn't integrate with Epic, we can't use it."

Importantly, responses also revealed nuance across roles and attitudes. While most respondents welcomed the idea of continuous monitoring, some—particularly “skeptical realists”—expressed concern about false alarms, poor integration, or unreliable devices based on past experiences. This highlights the importance of messaging, training, and real-world validation in building trust and supporting successful adoption.

Collectively, the findings paint a clear picture: nurses are ready for technology that can reduce documentation burden, close safety gaps, and align with their clinical workflows. SleeveSense is well-positioned to deliver on this need.

Opportunity

The findings reveal a compelling market opportunity for Senphonix to position SleeveSense as a foundational solution in the next generation of patient monitoring. With 98% of respondents recognizing its value, and two-thirds indicating active support for adoption, the demand for this type of technology is not theoretical—it is immediate and deeply felt.

This opportunity exists not just at the level of individual preference, but across multiple care environments and healthcare system priorities. From acute inpatient units to home health and transitional care, nurses consistently reported that current approaches to vitals collection are inefficient, error-prone, and emotionally draining. The shift toward value-based care, early intervention, and care decentralization only magnifies the need for passive, continuous, and clinician-friendly monitoring tools.

Further amplifying the market opportunity:

- Nursing shortages and increasing patient acuity levels are putting unprecedented pressure on care teams, with documentation burden cited as a top contributor to burnout.
- Many hospitals, especially in rural areas, are struggling to stay afloat financially.

SleeveSense can offer an elegant response to these pressures. By combining clinical-grade accuracy, comfortable wearability, EHR integration, and automated documentation, it directly addresses the core concerns raised by nurses and health system leaders. The product is not simply a device—it is a systems-level solution capable of transforming how care is delivered, documented, and scaled.

As healthcare systems seek to optimize operations, improve safety, and retain their workforce, solutions like SleeveSense will move from “nice to have” to non-negotiable infrastructure. Senphonix is well-aligned with emerging needs and could lead in this space.

Path to Success

To capitalize on the opportunity revealed by this research, Senphonix must execute a go-to-market strategy that emphasizes trust, relevance, and role-specific impact. The enthusiasm expressed by nurses—particularly those in decision-making roles—provides a clear signal: the market is not only ready but actively searching for a solution that delivers on the promise of automation without disrupting clinical workflows.

In MarketWise’s opinion, the path to successful commercialization of SleeveSense involves several key imperatives:

1. Tailored Messaging and Role-Based Engagement

The study confirmed that perceptions of value vary by clinical role. Staff nurses emphasized comfort and time savings. Charge nurses and managers prioritized reliability, safety, and workflow fit. Directors and executives focused on system-level efficiency and resource

optimization. Senphonix must craft messaging that speaks directly to each of these priorities—delivering relevance, not generality.

2. Seamless Workflow Integration

Hospitals and care teams will not adopt a solution that creates more work. SleeveSense must demonstrate its ability to integrate with EHR systems, streamline vitals documentation, and reduce redundant processes. Implementation strategies should be flexible—accommodating both standalone and integrated deployments—and supported by clear onboarding pathways.

3. Validation and Clinical Trust

Clinical-grade performance is a non-negotiable. Senphonix should continue investing in pilot programs, validation studies, and peer-reviewed outcomes to build institutional trust. Transparent reporting, regulatory alignment (e.g., FDA Class II), and data security standards will be critical in converting interest into long-term adoption.

4. Scalable, Configurable Deployment

SleeveSense must be deployable across diverse care settings, from high-acuity inpatient units to home-based recovery programs. Offering modular configurations—such as default alert settings, wireless charging options, and flexible subscription pricing—will allow institutions to scale at their own pace and in consideration of their infrastructure realities.

5. Clinical Advocacy and Thought Leadership

Empowering early adopters to act as champions—through testimonials, case studies, white papers, and conference speaking engagements—will accelerate credibility and awareness. Senphonix should also lead in educating the market about the role of continuous monitoring in workforce optimization, early intervention, and patient-centered care.

By aligning product strategy with these imperatives, Senphonix is well-positioned to shift from innovation to implementation. The challenge ahead is not just to sell a device, but to embed SleeveSense as an essential component of infrastructure in a more responsive, resilient, and data-informed model of care.

Background and Challenges

Market Context

The patient monitoring industry is at a pivotal inflection point. While telehealth, AI diagnostics, and digital health platforms have revolutionized many facets of healthcare, vital signs collection remains a vestige of analog routines. In hospitals, outpatient clinics, and home care settings, nurses continue to collect and document vitals manually—often hours after measurement—introducing unnecessary delays, clinical blind spots, and the potential for documentation errors.

This approach is increasingly untenable. The United States is grappling with an aging population and an

accelerating chronic disease burden. According to the CDC, nearly 60% of American adults live with at least one chronic condition, and 40% with two or more. At the same time, clinical staffing shortages continue to widen, fueled by retirements, burnout, and high attrition within nursing ranks. These challenges are most pronounced in transitional and home-based care, where staffing constraints collide with higher patient complexity. These dynamics are driving demand for new infrastructure—not just new tools.

The Evolving Role of the Nurse

Nurses are the frontline of care and the largest segment of the U.S. healthcare workforce. Yet, as numerous studies from the American Nurses Foundation and American Organization for Nursing Leadership (AONL) highlight that they are increasingly burdened with non-clinical tasks. Among the most time-consuming: collecting, verifying, and documenting vital signs. These processes compete directly with higher-order tasks such as patient education, care coordination, and direct observation.

The COVID-19 pandemic exposed the fragility of these systems. Nurse burnout soared, and institutions confronted the hard truth that staffing models and manual workflows were not resilient in the face of sustained crisis. What began as an emergency challenge has since evolved into a strategic imperative: finding ways to automate routine care tasks while supporting better outcomes.

Automation of vitals collection is now viewed as an essential capability—both for safety and to retain nursing talent.

Fragmented Monitoring and Missed Signals

Despite the digital revolution in health IT, continuous monitoring has failed to reach the mainstream. Hospitals still rely heavily on 4–6-hour spot checks outside of ICU or telemetry units. Post-acute and home care often lack access to validated tools altogether. Where devices do exist, they frequently require adhesives, charging stations, manual input, or patient interaction—which limits long-term use, especially among frail or elderly patients.

The result is fragmented data capture, missed early warning signs, and overreliance on staff vigilance. Respondents in this study made this point clear:

“Our biggest problem is when something happens between vitals, and no one notices until it’s too late.”

Senphonix’s technology is specifically designed to address this gap—passively, continuously, and without burdening staff or patients.

Regulatory and Reimbursement Momentum

Fortunately, regulatory and reimbursement structures are beginning to align with this need. The Centers for Medicare & Medicaid Services (CMS) have expanded reimbursement for Remote Patient Monitoring (RPM) and Chronic Care Management (CCM). At the same time, FDA pathways for Class II wearable devices have become more navigable, offering clearer expectations for clinical validation and market entry.

For hospitals, post-acute networks, and home health organizations, adoption decisions increasingly hinge on whether a device is:

- Clinically validated
- EHR integrated
- HIPAA compliant
- Scalable across workflows

Any solution that cannot meet these standards—or that adds friction—is unlikely to gain traction. Providers are now demanding not only function but fit within their ecosystems.

A Clear Window of Opportunity

Taken together, these forces present a unique opportunity for Senphonix. The demand for continuous, automated, clinically trusted monitoring is high—and growing. Nurses are actively voicing their readiness for change. Institutions are prioritizing efficiency, documentation reduction, and early intervention; and reimbursement mechanisms are beginning to support that shift.

SleeveSense is well-aligned to meet this moment. With its adhesive-free design, clinical-grade fidelity, interoperability, and wearable comfort, it directly addresses the pain points described by clinicians and administrators alike.

Research Methodology and Findings

Study Design

To support strategic planning and guide the market introduction of SleeveSense, Senphonix commissioned MarketWise to conduct a comprehensive, statistically significant research study with licensed nurses across the United States. The objective was to explore perceptions of continuous monitoring, identify adoption drivers and barriers, and gather actionable insights for commercialization strategy.

The study was built on a mixed-methods approach that included both quantitative survey research and qualitative data collection. This enabled the research team to capture not only measurable trends and patterns, but also the lived experience and clinical voice of the nursing population.

Participant Profile

Participants represented a wide variety of clinical roles, including:

- Staff nurses
- Charge nurses
- Nurse managers
- Directors of nursing
- Advanced practice nurses (NPs, CNSs, APRNs)

They also spanned a range of care settings:

- Inpatient hospitals
- Skilled nursing facilities
- Outpatient clinics
- Home health agencies
- Transitional and post-acute care

The sample was designed to reflect a broad and balanced cross-section of the nursing community, allowing the findings to be generalized across the U.S. nursing population with a high degree of confidence (95%).

Survey Instrument

The research instrument was carefully designed to assess not only product-level feedback but also clinical context and emotional resonance. It included:

- Likert-scale questions to quantify perceptions of product value, feature importance, and adoption likelihood
- Multiple-choice questions to assess current monitoring practices, perceived workflow burden, and readiness for change
- Open-text questions to capture direct clinical voices, with space for respondents to share concerns, suggestions, and unprompted reactions

The combination of structured and open-ended formats enabled a richer analysis that went beyond surface-level endorsement or resistance. Following is the introduction provided to the nurses taking the survey:



Thank you for participating in this survey. You're helping us evaluate a new wearable vitals monitoring system designed to support nurses and improve patient outcomes.

This system will be:

 *Comfortable for patients – Soft mesh sleeve can be worn 24/7 for days, weeks, or months*

 *Wirelessly charged – No need to remove; it charges automatically from up to 30 feet away*

 *Automated - Wirelessly sends vitals data to EHRs, reducing the burden of documentation*

 *HIPAA-compliant – Fully encrypted and secure to protect patient privacy*

 *Alert-enabled – Clinicians can set custom alerts, which can appear inside and/or outside the EHR*

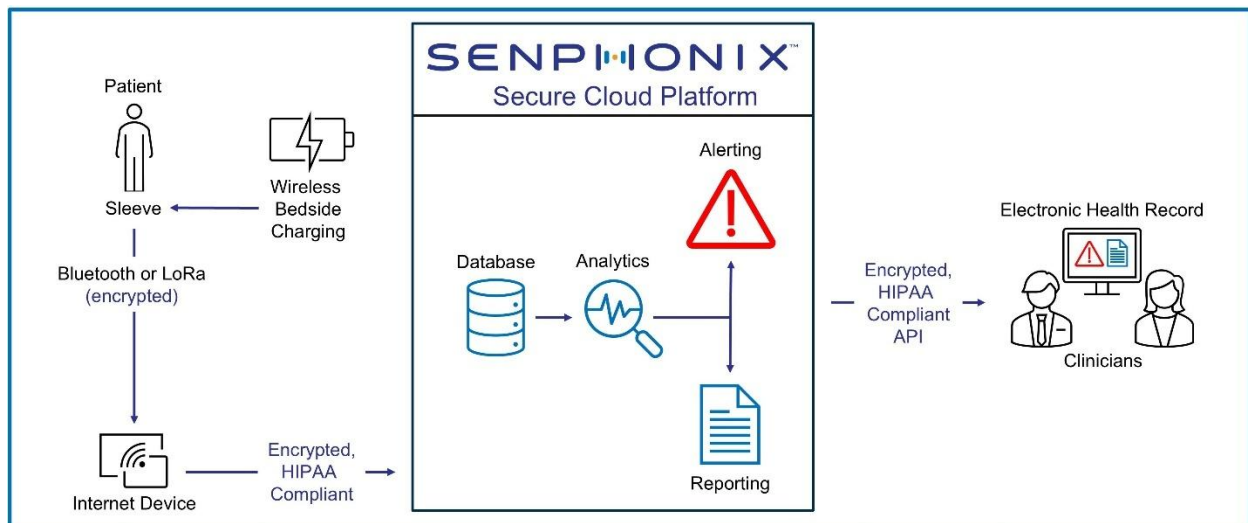
 *Built with advanced, patented technology – Developed with the*

University of Arizona

 *For multiple care settings – Inpatients, outpatients, assisted living patients, and patients at home*

 *Undergoing safety/regulatory clearance – FCC (including SAR), UL, and FDA*

To demonstrate how the overall system would work, the following was also provided a little later in the survey, enabling context to better answer questions related to perceived value and willingness to adopt:



The survey questions included the following:

Q1	Please indicate the type of facility you typically work within.
Q2	Please describe your level of experience and role.
Q3	As you think about a nurse's daily routine, what percent of the shift is typically spent taking, documenting, and reviewing vital signs?
Q4	To the extent the solution described above and below could automate the process of taking patient vital signs, so that you and your colleagues have time for the most important activities, how valuable would you consider that to be?
Q5	How valuable do you consider the following features/benefits of the solution to be? (Please rate)
Q6	How likely would you be to support this solution within your organization?
Q7	What concerns would you have in adopting this solution? (Please describe)
Q8	What improvements would you suggest to increase the value and adoption of this solution? (Please describe)

Analytical Methods

Once survey collection was complete, MarketWise applied a tiered analytical approach:

1. Descriptive statistics were used to summarize central tendencies, common preferences, and frequency of support across features and roles.
2. Standard deviation and distribution metrics helped identify areas of agreement and divergence.
3. Correlation analysis was conducted to explore relationships between variables such as role, setting, perceived value, and adoption likelihood.

4. Cluster analysis was used to develop personas based on behavioral patterns—not just job titles or demographics.
5. Thematic coding of open-ended responses allowed researchers to extract recurring themes and illustrative quotes that add depth to the quantitative data.

This method enabled the synthesis of statistical rigor and clinical narrative, giving Senphonix both hard evidence and contextual clarity to guide conclusions and recommendations.

Data Quality and Validation

The survey was distributed through curated nursing panels and peer networks with verification protocols in place. Respondents were screened for:

- U.S. licensure as a nurse or advanced practice clinician
- Clinical experience in relevant settings (inpatient, post-acute, outpatient, or home care)
- Familiarity with vital signs documentation and/or digital health tools

Responses were reviewed for completeness and internal consistency before being included in the final dataset.

Summary Table

Attribute	Description
Roles Represented	Staff Nurse, Charge Nurse, Manager, Director, and APRN
Settings Represented	Hospital, SNF, Outpatient, Home Health, etc.
Methodology	Quantitative survey with open-text fields
Analysis Techniques	Descriptive statistics, correlation, clustering, and thematic coding

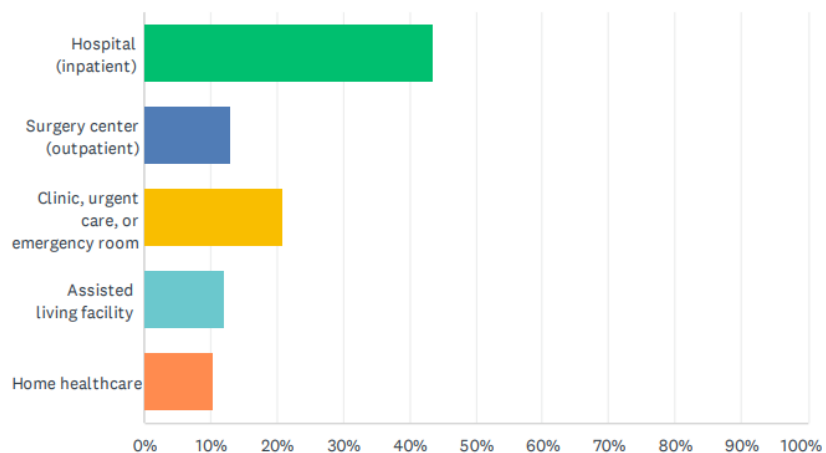
In summary, the research methodology was designed to ensure representation of the U.S. nursing population, reliably, and with depth—with insights that reflect both the scale of opportunity and the complexity of adoption in clinical settings. The next section summarizes the key quantitative findings from this work, including what nurses value most, where concerns remain, and how preferences differ across roles.

Quantitative Research – Key Findings

Based on first-level (descriptive) statistics, charts representing the panel’s survey data follow. Note that the sample was carefully recruited to ensure a relatively equal distribution by geography, role, age, etc.

Q1 Please indicate the type of facility you typically work within?

Answered: 402 Skipped: 0

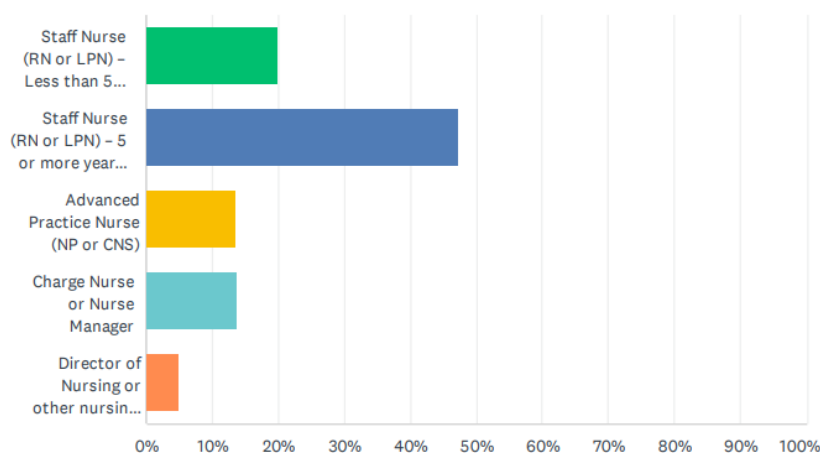


ANSWER CHOICES	RESPONSES	
Hospital (inpatient)	43.53%	175
Surgery center (outpatient)	12.94%	52
Clinic, urgent care, or emergency room	20.90%	84
Assisted living facility	12.19%	49
Home healthcare	10.45%	42
TOTAL		402

Notes/Interpretations: The sample of nurses by facility provides a good distribution of healthcare setting provided throughout the United States, as compared with the actual population of care settings.

Q2 Please describe your level of experience and role.

Answered: 402 Skipped: 0

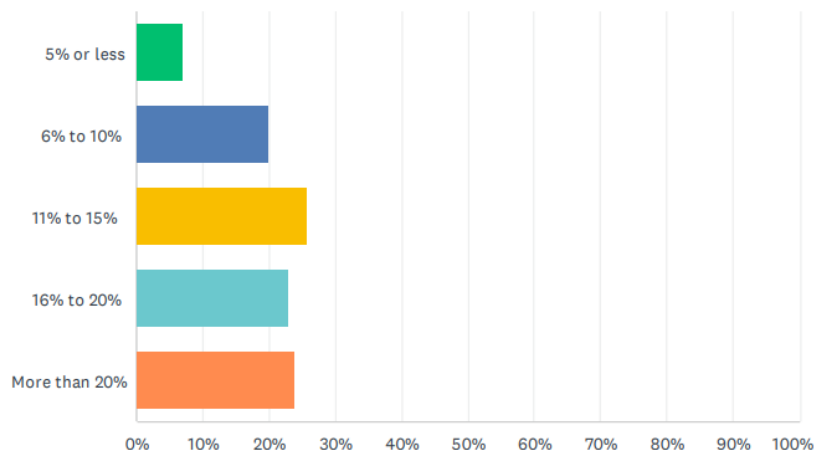


ANSWER CHOICES	RESPONSES	
Staff Nurse (RN or LPN) – Less than 5 years of experience	20.15%	81
Staff Nurse (RN or LPN) – 5 or more years of experience	47.26%	190
Advanced Practice Nurse (NP or CNS)	13.68%	55
Charge Nurse or Nurse Manager	13.93%	56
Director of Nursing or other nursing leadership role	4.98%	20
TOTAL		402

***Notes/Interpretations:** The sample of nurses used in this study are reasonably representative of the population of nurses nationwide, as compared to the 2022 National Nursing Workforce Survey.*

Q3 As you think about a nurse's daily routine, what percent of the shift is typically spent taking, documenting, and reviewing vital signs?

Answered: 402 Skipped: 0

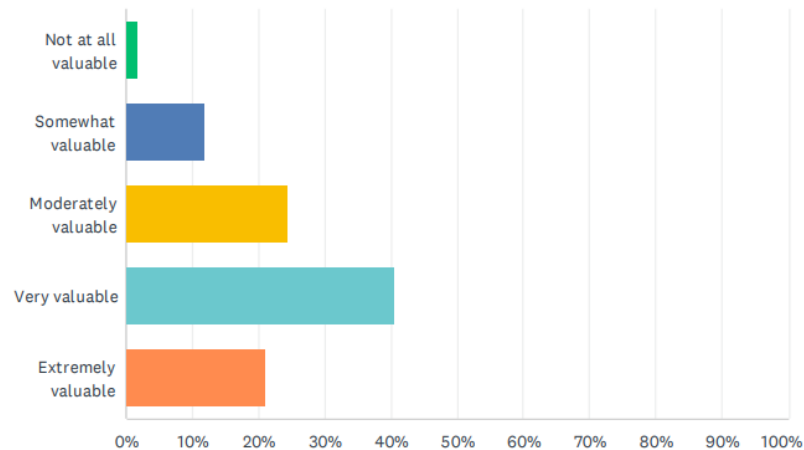


ANSWER CHOICES	RESPONSES	
5% or less	6.97%	28
6% to 10%	20.15%	81
11% to 15%	25.87%	104
16% to 20%	23.13%	93
More than 20%	23.88%	96
TOTAL		402

Notes/Interpretations: Secondary data collected previous to this study indicated “up to 20%” was at the top of the range for time spent taking, documenting, and reviewing vital signs, but this data suggests the number is higher for some (nearly 24% of nurses). The qualitative findings support this data.

Q4 To the extent the solution described above and below could automate the process of taking patient vital signs, so that you and your colleagues have time for the most important activities, how valuable would you consider that to be?

Answered: 402 Skipped: 0

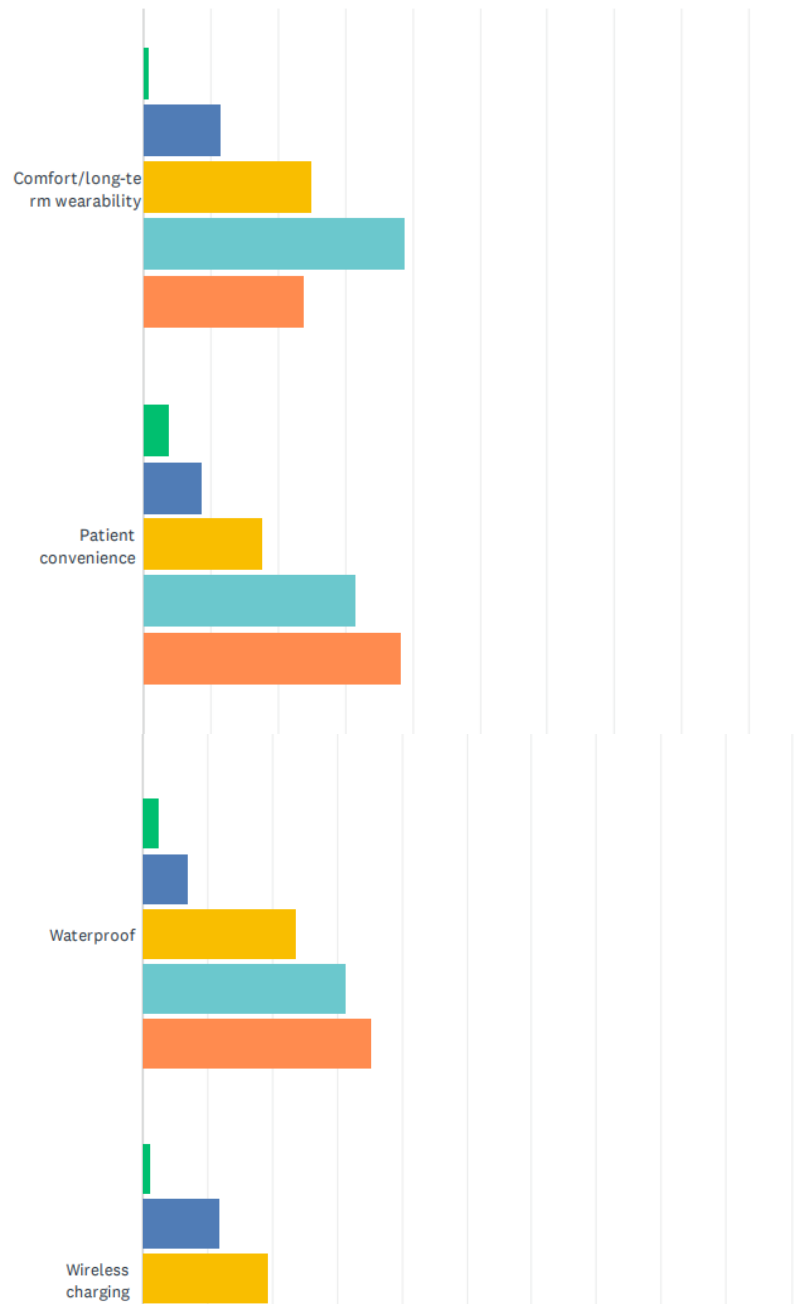


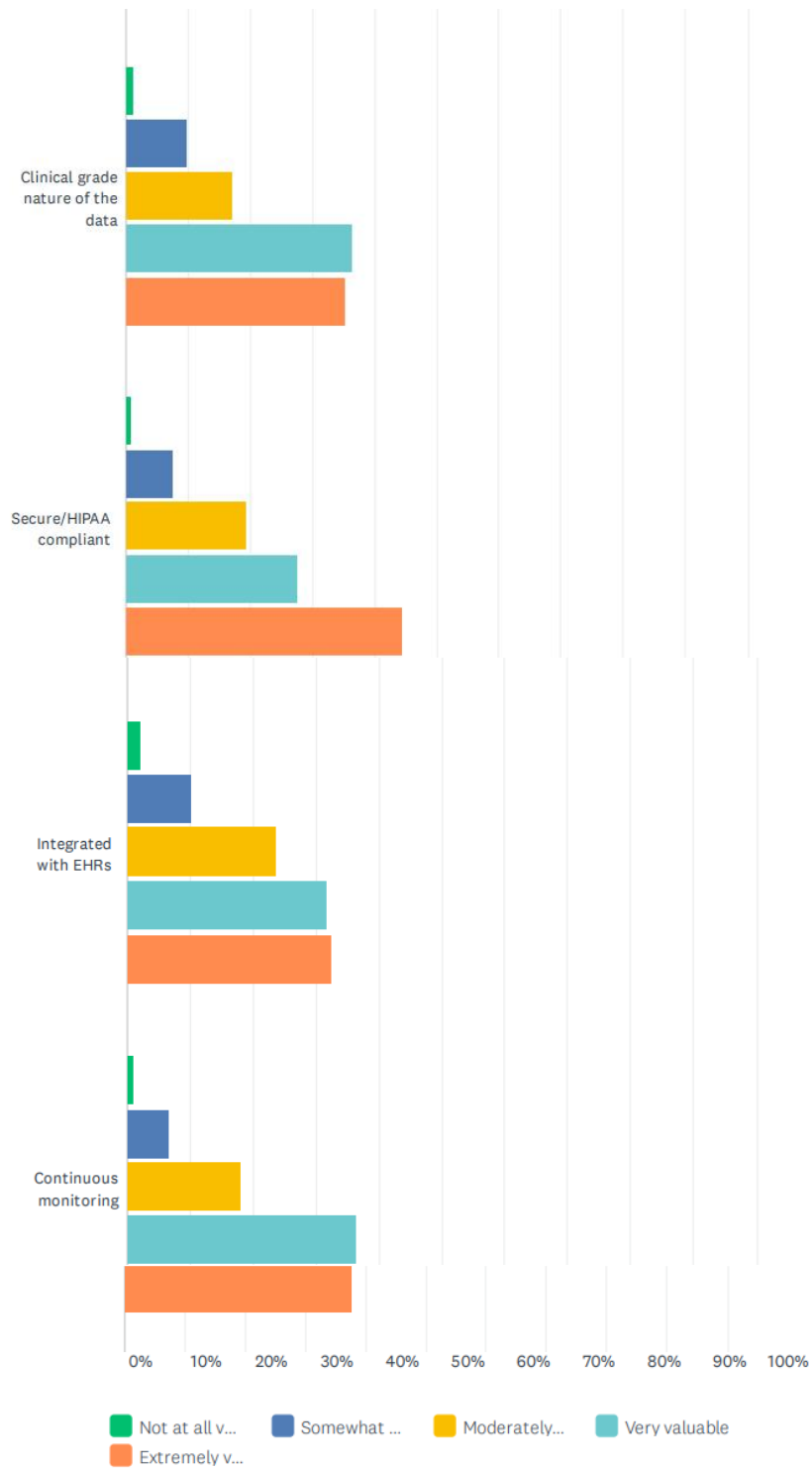
ANSWER CHOICES	RESPONSES	
Not at all valuable	1.74%	7
Somewhat valuable	11.94%	48
Moderately valuable	24.63%	99
Very valuable	40.55%	163
Extremely valuable	21.14%	85
TOTAL		402

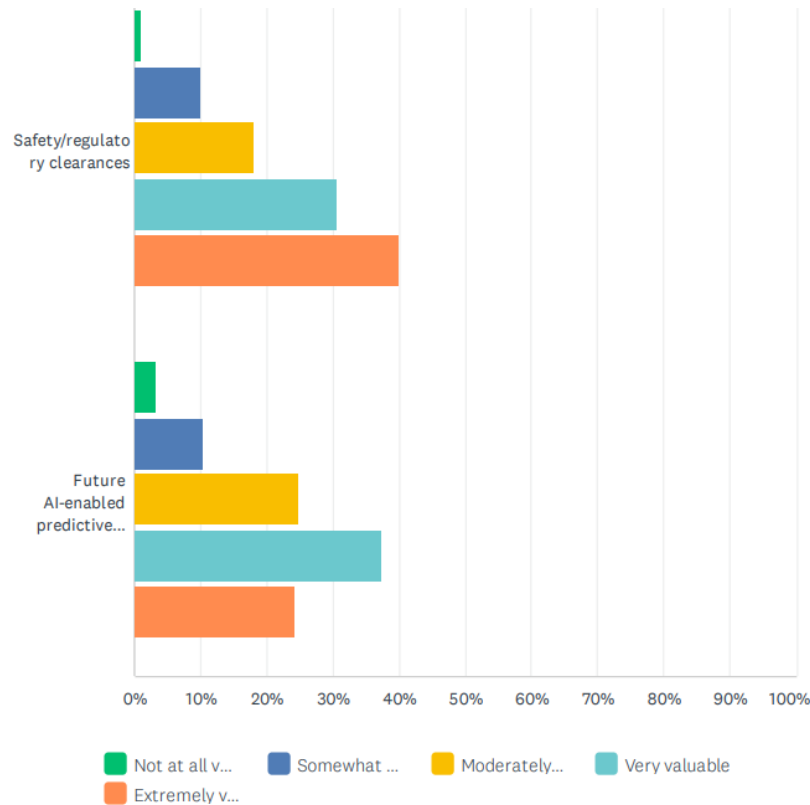
Notes/Interpretations: This is a high level of acceptance and validation of market need/solution fit. With 98% of nurses viewing SleeveSense as having at least some value, MarketWise does not expect significant pushback from nurses when this is introduced commercially, if done with particular attention being paid to messaging that empathizes with and provides support of nurses.

Q5 How valuable do you consider the following features/benefits of the solution to be? (Please rate)

Answered: 402 Skipped: 0







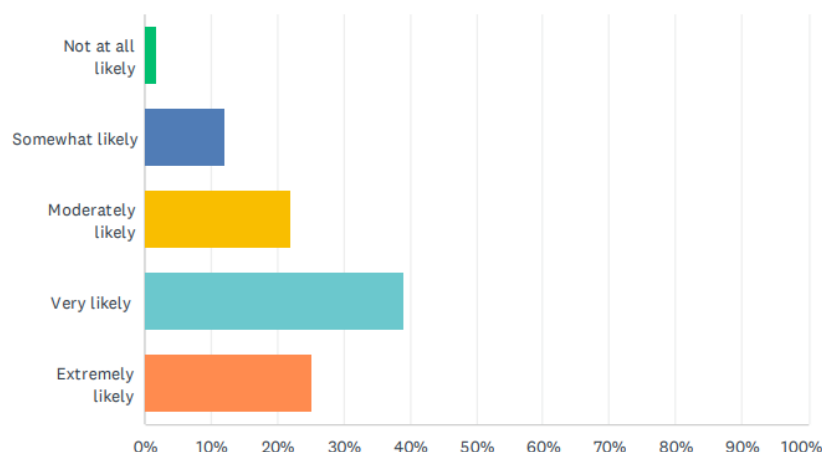
	NOT AT ALL VALUABLE	SOMEWHAT VALUABLE	MODERATELY VALUABLE	VERY VALUABLE	EXTREMELY VALUABLE	TOTAL
Comfort/long-term wearability	0.75% 3	11.47% 46	24.94% 100	38.90% 156	23.94% 96	401
Patient convenience	3.78% 15	8.82% 35	17.63% 70	31.49% 125	38.29% 152	397
Waterproof	2.53% 10	7.07% 28	23.74% 94	31.31% 124	35.35% 140	396
Wireless charging	1.26% 5	11.84% 47	19.40% 77	34.76% 138	32.75% 130	397
Clinical grade nature of the data	1.27% 5	9.87% 39	16.96% 67	36.46% 144	35.44% 140	395
Secure/HIPAA compliant	0.76% 3	7.63% 30	19.34% 76	27.74% 109	44.53% 175	393
Integrated with EHRs	2.04% 8	10.18% 40	23.66% 93	31.81% 125	32.32% 127	393
Continuous monitoring	1.01% 4	6.55% 26	18.14% 72	36.52% 145	37.78% 150	397
Safety/regulatory clearances	1.01% 4	10.08% 40	18.14% 72	30.73% 122	40.05% 159	397
Future AI-enabled predictive modeling	3.28% 13	10.35% 41	24.75% 98	37.37% 148	24.24% 96	396

Notes/Interpretations: Without exception, all ten features/benefits scored well (at or near “very

valuable”), indicating SleeveSense is positioned well to meet current needs. Qualitative data offered some additional ideas, but most were more geared toward secondary features, such as size, color, etc.

Q6 How likely would you be to support this solution within your organization?

Answered: 402 Skipped: 0



ANSWER CHOICES	RESPONSES	
Not at all likely	1.74%	7
Somewhat likely	12.19%	49
Moderately likely	21.89%	88
Very likely	39.05%	157
Extremely likely	25.12%	101
TOTAL		402

Notes/Interpretations: This is a high level of support and validation of market need/solution fit. With 98% of nurses indicating at least some willingness to support the adoption of SleeveSense, MarketWise does not expect significant pushback from nurses when this is introduced commercially (see caveat above). This is extremely important because in this case, MarketWise believes nursing teams will make or break any hope of full deployment once pilots are introduced.

Overall Support and Value Recognition

These findings suggest a broad foundation of support, with particularly high enthusiasm among nurse managers and directors, who are often the decision-makers for pilot programs and new technology integration.

Workflow and Time Burden Indicators

As indicated earlier, the survey captured the amount of time nurses spend on vital signs collection and documentation—an important factor in the perceived value of automation.

- Staff nurses and charge nurses reported the greatest time burden, particularly during medication passes and night shifts.
- Nurse managers emphasized the cumulative impact of manual vitals collection across staffing schedules and patient throughput.

This workload aligns with repeated themes from open-text responses, including statements such as:

“It would save 30–50% of my time during medication pass—it would make me love my job again.”

“This would free me up to do real nursing again.”

Most Desired Features

As seen earlier, when asked to rate product attributes on a 1-to-5 scale, where 4 = “very important” and 5 = “extremely important”, respondents consistently scored the following features with importance (ranked):

1. HIPAA compliance - 4.08
2. Continuous monitoring - 4.04
3. Safety - 3.99
4. Clinical-grade accuracy - 3.95
5. Convenience - 3.92
6. Waterproof - 3.90
7. Wireless charging - 3.86
8. EHR integration - 3.82
9. Wearability/comfort - 3.74
10. AI-enabled - 3.67

Across roles, there was strong agreement that any viable monitoring system must be secure, accurate, and easy to integrate into existing documentation workflows. Staff nurses and charge nurses placed higher priority on comfort and wearability, while nurse managers focused more heavily on compliance and workflow integration.

Role-Based Differences

While general support was high across the board, nuanced differences emerged by role:

- Staff Nurses emphasized time savings, comfort, and reliability.
- Charge Nurses prioritized data accuracy, alarms, and ease of escalation.
- Nurse Managers focused on documentation reduction, EHR integration, and staff optimization.
- Directors of Nursing consistently framed the solution in terms of operational efficiency and risk mitigation.
- Advanced Practice Nurses (APRNs) viewed it as a potential tool for early detection and chronic care management.

These distinctions are critical for segmentation and should inform go-to-market messaging and pilot site selection.

Note: role-based differences should be considered suggestive in nature, because overall, survey results showed limited correlation between factors, meaning there was ubiquitous acceptance of SleeveSense.

Summary Insight

The quantitative results paint a consistent picture: the current approach to vital signs collection is outdated, inefficient, and unsustainable. Nurses recognize the potential of a product like SleeveSense to transform this process—not just by saving time, but by improving safety, precision, and job satisfaction.

What sets this feedback apart is the convergence of clinical logic and emotional urgency. Nurses aren't just willing to use a better tool—they're actively hoping for one.

“This is the kind of thing nurses have been hoping for.”

Quantitative Research – Baseline Statistics

To understand response patterns across the survey, MarketWise conducted a descriptive statistical analysis of all multiple-choice questions, including central tendencies (mean, median, and mode) and variation measures (standard deviation). These metrics illuminate how consistently respondents agreed on feature priorities, adoption potential, and system-level concerns.

How to Interpret the Data

- Mean: The average score across all responses. Helpful for spotting overall trends.
- Median: The middle value in a ranked dataset. Less influenced by outliers.
- Mode: The most frequently selected response. It shows the most common sentiment.
- Standard Deviation: Measures how spread out the responses are. A low value means most people responded similarly; a high value means views varied widely.

	Q4	Q6	Q1	Q2	Q3	Q5-1	Q5-2	Q5-3	Q5-4
Mean	3.67	3.74	2.33	2.36	3.37	3.74	3.92	3.90	3.86
Median	4.00	4.00	2.00	2.00	3.00	4.00	4.00	4.00	4.00
Mode	4	4	1	2	3	4	5	5	4
Std Dev	0.99	1.02	1.40	1.10	1.24	0.97	1.12	1.05	1.04

Note: Q4 and Q6 asked about “value” and “support,” which is why they’re shaded.

	Q5-5	Q5-6	Q5-7	Q5-8	Q5-9	Q5-10	Full/Part	Gender	Age	Region
Mean	3.95	4.08	3.82	4.04	3.99	3.69	1.09	1.50	2.51	5.16
Median	4.00	4.00	4.00	4.00	4.00	4.00	1.00	1.00	3.00	5.00
Mode	4	5	5	5	5	4	1	1	3	1
Std Dev	1.02	1.00	1.06	0.96	1.04	1.05	0.29	0.51	0.84	3.30

The analysis of the Senphonix nursing survey’s multiple-choice responses revealed consistent and informative patterns across key statistical indicators. The median values closely mirrored the means,

suggesting a relatively symmetrical distribution with limited skew. In most cases, the mode also aligned with the higher end of the scale, reinforcing that a majority of respondents consistently rated these product attributes as critical. The standard deviation varied by question, with most items hovering around 1.0, which points to moderate variation in responses. This statistical profile supports the broader interpretation that while enthusiasm for the SleeveSense solution is widespread, the specific drivers of perceived value vary in subtle but actionable ways across the nursing population.

Note: Full/Part time, gender, age, and region, came not from questions asked, but rather from the metadata provided by the survey panel.

Clustering Analysis and Market Segmentation

From Correlation to Clustering

Initial correlation analysis revealed lower linear relationships between most survey variables—indicating that no single factor (e.g., age, setting, role, etc.) consistently predicted attitudes toward SleeveSense. For instance, a nurse who prioritized HIPAA compliance didn't necessarily prioritize comfort, and those who saw value in continuous monitoring didn't always feel confident about organizational adoption.

Note: See Appendix 3 – Correlation Calculations for details on correlation.

This lack of strong correlations prompted MarketWise to apply unsupervised (AI-based) clustering techniques to reveal more nuanced patterns. Rather than group respondents by demographics alone, clustering segmented participants based on how they think, what they prioritize, and how ready they are to act.

These behavioral clusters offer Senphonix a practical and strategic foundation for audience targeting, go-to-market messaging, pilot selection, and product refinement.

Behavior-Based Segments: Nurse Personas

Six distinct personas emerged from the clustering analysis. These segments are based on attitudinal and behavioral patterns, not just job title or setting. Each represents a meaningful opportunity—and requires tailored engagement.

Persona 1: The Efficiency Champion

- Profile: These nurses consistently rated SleeveSense highly for its potential to reduce documentation time, ease workload, and alleviate burnout.
- Goals: Free up time for direct patient care; reduce redundant charting.
- Barriers: Frustration with fragmented tools; concern about yet another “new” system.
- Strategy: Emphasize EHR integration, automation, and staff relief. Provide testimonials on time savings.

“I spend more time documenting vitals than talking to my patients.”

Persona 2: The Safety Advocate

- Profile: These nurses prioritized early detection, reduced deterioration events, and continuous visibility into patient condition.
- Goals: Prevent adverse events and intervene faster.
- Barriers: Distrust of inaccurate tools; concern about false alarms or incomplete data.
- Strategy: Lead with clinical-grade accuracy, continuous monitoring, and case studies showing improved outcomes.

“There’s too much that happens between vitals. This would help us intervene earlier.”

Persona 3: The Skeptical Realist

- Profile: Cautiously supportive but wary. They’ve used tools that overpromised and underdelivered.
- Goals: Simplify—not complicate—workflows.
- Barriers: Doubt about accuracy, integration challenges, tech fatigue.
- Strategy: Offer validation data, peer testimonials, and straightforward demos. Avoid jargon and hype.

“If the vitals are wrong or incomplete, it just becomes more work.”

Persona 4: The Managerial Optimizer

- Profile: Often nurse managers or directors. They view the product through an operational lens—staffing, budgets, patient throughput.
- Goals: Improve productivity, reduce labor costs, enhance safety metrics.
- Barriers: Budget concerns, cross-department coordination, IT alignment.
- Strategy: Share ROI calculators, use-case modeling, and pilot deployment playbooks.

“This isn’t just about efficiency—it’s about risk reduction and better outcomes.”

Persona 5: The Patient Advocate

- Profile: Focused on patient dignity and compliance, especially in long-term, pediatric, or rehab settings.
- Goals: Ensure comfort and reduce resistance to long-term monitoring.
- Barriers: Concern over wearability, adhesives, and device visibility.
- Strategy: Emphasize SleeveSense’s adhesive-free design, comfort, and discreet wearability.

“No adhesives is a plus. Those cause skin breakdown.”

Persona 6: The Passive Bystander

- Profile: These respondents showed limited engagement. Their responses were neutral or vague, suggesting low decision-making authority or change fatigue.
- Goals: Maintain current practices; avoid disruption.
- Barriers: Lack of exposure, low motivation to switch tools.
- Strategy: Use peer influence, hands-on exposure, and role-based champions to gradually build curiosity.

“If it doesn’t integrate with Epic, we can’t use it.”

Strategic Implications

Understanding these personas allows Senphonix to:

- Tailor messaging and materials to meet role-specific concerns.
- Prioritize pilot sites based on the concentration of Efficiency Champions or Managerial Optimizers.
- Equip champions with the right language to influence more cautious colleagues.
- Refine training to meet the practical concerns of frontline nurses—especially Skeptical Realists and Patient Advocates.

In essence, these personas reflect not just market readiness—but the voices Senphonix must win over to drive sustained adoption.

Qualitative Themes from Open-Ended Comments

As mentioned, the survey included two open-ended questions to capture nurses' unfiltered thoughts about automated, continuous vital signs monitoring. These free-text responses revealed powerful emotional undercurrents and validated the quantitative findings. Recurring themes included time burden, trust in data, workflow integration, physical comfort, and emotional relief, which provide rich insight into market readiness and messaging strategy.

Note: These themes transcend the personas identified in the previous section.

1. Time and Workflow Burden

The most consistent theme across comments was how much time vital signs collection and documentation consume—especially during medication passes, shift changes, and in high-acuity settings. Many nurses expressed frustration that these tasks take time away from direct patient care.

“Would save 30–50% on medication pass time — it would make me love my job again.”

“This would free me up to do real nursing again.”

Insight: Time savings isn't just a functional benefit—it's a restorative one, offering nurses a way to reconnect with the human side of care.

2. Trust and Data Accuracy

Nurses were highly supportive of automation—but only if it delivered clinically valid, reliable data. Several expressed concerns about prior technologies that generated false readings or failed to reflect the patient's actual condition.

“Accuracy has to come first, or the tool becomes a liability.”

“Only support this if it meets our quality control standards.”

Insight: Trust must be earned through clinical validation, transparent data practices, and consistent performance in real-world settings.

3. Integration and Simplicity

Respondents frequently stated that they would only adopt new technology if it worked seamlessly with existing systems—especially EHR platforms like Epic or Cerner. Nurses are not interested in switching screens, manually entering data, or troubleshooting devices.

“Too many devices already. This needs to fit into what we’re already doing.”

“Make it seamless. Nurses don’t have time to troubleshoot tech.”

Insight: Interoperability is mission-critical. Ease of use and fit within the existing workflow are key differentiators.

4. Physical Comfort and Patient Acceptance

Comments often focused on the patient’s experience. Nurses described concerns about adhesives, restricted mobility, and patient refusal to wear devices. SleeveSense’s non-adhesive, sleeve-based form factor was seen as a strong differentiator.

“If it’s not comfortable, patients won’t keep it on.”

“Needs to be discreet, especially for outpatient and rehab.”

Insight: Comfort is central not only to patient compliance, but to long-term adoption in real-world care settings.

5. Excitement and Emotional Resonance

Many comments conveyed genuine enthusiasm and relief that someone was finally addressing this problem. The tone was often personal—reflecting a deep desire for support, recognition, and innovation that puts nurses first.

“This is what we’ve been waiting for.”

“Thank you for thinking about nurses for once.”

Insight: Messaging should not just highlight function—it should connect emotionally with nurses who have been underserved by past innovations.

Overarching Themes and Messaging Implications

Theme	Core Insight	Messaging Recommendation
Time Burden	Vitals documentation pulls nurses away from patient care	Focus on time savings and restored focus on meaningful work
Data Trust	Accuracy and reliability are non-negotiable	Highlight clinical validation and data integrity
Integration	Nurses will reject tools that don't align with current workflows	Emphasize seamless EHR integration and plug-and-play deployment
Comfort	Wearability influences both patient compliance and staff use	Market physical design as a patient experience advantage
Emotional Relief	Nurses want to feel supported—not burdened—by technology	Lead with empathy; celebrate nurse-centered innovation

These themes reinforce the behavioral segmentation detailed earlier and provide a human-centered foundation for product messaging, deployment strategies, and customer support.

Competitive Landscape

The continuous vital signs monitoring market is growing rapidly, with new entrants and legacy providers offering a mix of patch-based, strap-based, and telemetry-linked devices. However, few offer a solution that aligns with the most pressing needs of nurses and care teams—namely, long-term comfort, seamless integration, clinical-grade accuracy, and workflow alignment.

SleeveSense stands out in this space as the only solution designed specifically for continuous, comfortable, adhesive-free monitoring, engineered with direct input from frontline clinicians.

To contextualize this advantage, MarketWise analyzed several competing solutions that are marketed for hospital and post-acute settings. From the public information available, MarketWise has assessed some of the most direct competition as follows:

Device	Comfort & Wearability	Clinical Accuracy	Integration Potential	Limiting Factor
SleeveSense™	✓ High – soft sleeve, no adhesive	✓ Multi-vital with AI assist	✓ Designed for EHR and workflow fit	New to market (requires trust-building)
ViSi Mobile	✗ Bulky, tethered	✓ High in hospital	⚠ Requires infrastructure	Patient mobility & comfort
Everion	⚠ Strap may be restrictive	⚠ Mixed in real-world	✓ Good for remote use	Respiratory/Temp accuracy issues
SensiumVitals	⚠ Adhesive, single-use	⚠ Basic parameters only	⚠ Moderate integration	Short wear time, limited vitals
SmartCardia	⚠ Adhesive ECG patch	✓ Cardiac-specific	⚠ Limited nurse-facing tools	Narrow use case (mostly ECG)
VitalPatch	⚠ Adhesive patch	✓ General vitals	✓ Some integration	Limited wear time, skin irritation risk

Competitive Differentiation

SleeveSense addresses five of the most cited nursing pain points in one unified platform:

Differentiator	Description
Built for Comfort	Soft, breathable, and adhesive-free sleeve supports long-term wear without skin irritation
Clinical-Grade	Designed for high-fidelity biosignals capture, including HR, RR, BP, Temp, and SpO ₂
HIPAA-Compliant	Fully secure and compliant with U.S. data privacy and cybersecurity standards
EHR-Integrated	Seamlessly connects with major platforms to automate documentation and minimize manual input
Wireless and Rechargeable	Wireless communication and charging reduce maintenance demands on clinical staff
Subscription-Based	Flexible, scalable deployment across hospitals, home care, and transitional care environments

"We've tried wrist-based monitors, but they break down or patients remove them."

"Telemetry is helpful, but it's bulky and only works in certain units."

"We already use wearable patches, but they don't talk to our system."

Strategic Implication for Senphonix

SleeveSense can lead a new category of nurse-centered continuous monitoring—bridging the gap between patient comfort, operational efficiency, and clinical excellence. Its wearability, data interoperability, and implementation flexibility are key advantages over competitors focused on niche use cases or single-feature solutions.

This combination of user-centered design and enterprise-grade functionality supports a differentiated brand position and a clear value proposition to healthcare decision-maker

Market Forecast

The U.S. market for patient monitoring is undergoing rapid and sustained expansion, fueled by increasing demand across care settings—ranging from inpatient hospital units and outpatient clinics to assisted care facilities, home health programs, and remote patient monitoring (RPM) systems.

While traditional inpatient monitoring remains critical, the fastest growth is occurring in remote and continuous monitoring, particularly as healthcare systems respond to staffing shortages, the aging population, rising rates of chronic disease, and shifts toward value-based care. According to industry estimates, more than 71 million Americans are now using some form of remote monitoring, including wearables, home-based devices, and clinical-grade biosignals platforms.

Importantly, this care model is now fully reimbursed not only by CMS (Medicare/Medicaid) but also by the majority of private insurers, with average annual reimbursement rates reaching up to \$1,500 per patient, depending on the services delivered and the frequency of data review. This positions the total addressable reimbursement opportunity for RPM at more than \$100 billion annually.

Beyond reimbursement, multiple converging trends are accelerating the pace of adoption:

1. COVID-19 shifted care models permanently, exposing the risks of relying solely on in-person monitoring. Health systems now prioritize scalable, automated solutions to reduce clinician exposure, ensure continuity of care during surges, and prevent system overload.
2. The aging U.S. population—projected to exceed 73 million people aged 65 and older by 2030—accounts for a disproportionate share of hospital admissions, chronic illness management, and home health visits. This demographic is a primary driver of demand for continuous monitoring.
3. Chronic disease is now the norm: The CDC reports that 6 in 10 adults in the U.S. live with at least one chronic condition, and 4 in 10 live with two or more. These patients are prime candidates for early-warning solutions that enable proactive intervention.
4. Workforce shortages remain critical: The American Hospital Association reported a shortfall of over 200,000 nurses as of 2023, with burnout, documentation burden, and inefficient workflows cited as primary stressors. Automating vitals collection is a direct response to this crisis.
5. Regulatory clarity and payer alignment: CMS has established reimbursement pathways for RPM and chronic care management, and leading private insurers have followed suit. Additionally,

FDA guidance on Class II medical devices has improved, making it more predictable to bring clinically validated wearables to market.

Taken together, these trends signal a tipping point. RPM and continuous biosignals monitoring are no longer viewed as emerging technologies—they are becoming the standard of care. Adoption is growing not only among large health systems but also across skilled nursing, assisted living, and home-based care organizations, all of which are seeking tools to manage more complex patients with fewer staff.

SleeveSense addresses the most pressing provider needs: continuous, automated monitoring that is comfortable, secure, interoperable, and aligned with reimbursement pathways. Unlike adhesive patches or bulky telemetry systems, SleeveSense was intended for long-term wear, full vital sign capture, and EHR integration—making it an ideal solution across the \$100B+ RPM opportunity and adjacent inpatient, outpatient, and transitional care markets.

Recommendations and Strategies

Survey data confirms that automated, continuous monitoring is not only desired — it is urgently needed. Nurses overwhelmingly support solutions that can alleviate documentation burden, enhance patient safety, and fit seamlessly into their clinical workflows. Based on these insights, Senphonix is well-positioned to lead with a differentiated strategy grounded in empathy, evidence, and operational excellence.

1. Align Product Features with Nursing Priorities

Nurses care most about:

- Accuracy and safety
- Integration with EHRs
- Patient comfort
- Ease of use

Senphonix should prioritize continued investment in:

- Clinical validation to reinforce trust
- Seamless plug-and-play integration with major EHR systems
- Physical design that maximizes wearability and minimizes friction
- A clean, nurse-friendly interface that doesn't require significant additional training

Tactical recommendation: Develop a real-time “nursing impact calculator” that shows time saved and patient safety improvements per shift when SleeveSense is deployed.

2. Tailor Messaging to Behavioral Segments

The survey revealed six distinct nurse personas (Efficiency Champions, Safety Advocates, Skeptical Realists, Managerial Optimizers, Patient Advocates, and Passive Bystanders). To maximize adoption and engagement:

Persona	Messaging Focus
Efficiency Champions	"Give time back to nurses" — emphasize workflow relief
Safety Advocates	"Never miss early warning signs again" — highlight patient safety
Skeptical Realists	"Validated. Trusted. Integrated." — lead with proof, not promises
Managerial Optimizers	"Staff smarter, not harder" — show ROI and staffing impact
Patient Advocates	"Comfortable for every patient" — highlight adhesive-free, soft design
Passive Bystanders	"Your team is already using it" — rely on social proof

***Tactical recommendation:** Develop role-based landing pages and collateral that reflect these motivational profiles.*

3. Build Trust Through Transparency and Support

Trust is paramount in healthcare technology. Senphonix should actively:

- Share real-world results (e.g., pilot program data, user testimonials)
- Publish a data governance and privacy statement aligned with HIPAA and HITRUST standards
- Offer a 24/7 clinical support hotline and onboarding concierge

***Tactical recommendation:** Launch a "Nurse Advisory Council" of early adopters to co-author insights and provide implementation feedback.*

4. Demonstrate Economic and Clinical ROI

Healthcare executives need assurance that SleeveSense will deliver measurable value. Senphonix should:

- Quantify savings from reduced documentation time and fewer adverse events
- Provide bundled ROI calculators segmented by care setting (e.g., hospital, SNF, home health)
- Show alignment with CMS reimbursement for remote patient monitoring and value-based care

***Tactical recommendation:** Include ROI dashboards in every sales pitch, showing cost offsets within 6–12 months of deployment.*

5. Position Senphonix as a Thought Leader in Nurse-Centered Innovation

To differentiate and build long-term trust:

- Publish white papers and op-eds on nurse burnout, automation, and the future of monitoring
- Present findings at AONL, HIMSS, ANA, and Becker's conferences
- Lead national webinars on "Automating Care Without Losing the Human Touch"

***Tactical recommendation:** Launch a content series titled "Voices from the Frontline," spotlighting real nurses using SleeveSense.*

Path to Market Leadership

Senphonix is not just introducing a product. It is reimagining what continuous monitoring looks like—from bedside to back-office, from clinician to patient. To succeed, the company must:

- ✓ Speak the language of nurses
- ✓ Build with trust at the center
- ✓ Demonstrate clinical and economic impact
- ✓ Partner with early adopters and grow from the inside out

By executing these strategies, Senphonix will not only meet current needs—but will define the next era of nurse-centered, data-enabled care delivery.

Appendix 1 – Summary of Secondary Data Sources

Primary sources

1. Remote Patient Monitoring Market Insights 2024-2029 — Research and Markets: <https://www.businesswire.com/news/home/20241128873389/en/Remote-Patient-Monitoring-Market-Insights-2024-2029---Integration-of-AI-in-Remote-Patient-Monitoring-Surge-in-Demand-for-RPM-Technology-and-Growing-Use-of-Mobile-Technologies-and-Smart-Devices-in-RPM---ResearchAndMarkets.com>
2. BioIntelliSense – BioButton Overview: <https://www.biointellisense.com>
3. Current Health (Best Buy Health) – Remote Patient Monitoring Platform: <https://www.currenthealth.com>
4. VitalConnect – Remote Patient Monitoring: <https://vitalconnect.com/remote-patient-monitoring>
5. CMS – Telehealth & Remote Patient Monitoring Billing Guide: <https://www.cms.gov/files/document/mln901705-telehealth-remote-patient-monitoring.pdf>
6. Grand View Research – U.S. RPM Market Report: <https://www.grandviewresearch.com/industry-analysis/us-remote-patient-monitoring-system-market-report>
7. Medtronic – BioButton Multi-Parameter Wearable: <https://www.medtronic.com/en-us/healthcare-professionals/products/patient-monitoring/remote-patient-monitoring/intelligent-patient-monitors/biobutton-multi-parameter-wearable.html>
8. Best Buy Health – Remote Care Solutions: <https://www.bestbuyhealth.com/remote-patient-monitoring>
9. MarketsandMarkets – RPM Market Analysis: <https://www.marketsandmarkets.com/Market-Reports/remote-patient-monitoring-market-77155492.html>
10. Business Wire – BioIntelliSense FDA Clearance Announcement: <https://www.businesswire.com/news/home/20241002371306/en/BioIntelliSense-Announces-FDA-Clearance-of-the-BioButton-Multi-Patient-Wearable-and-BioDashboard-System-for-Continuous-Patient-Monitoring>
11. Telehealth.HHS.gov – RPM Billing Resources: <https://telehealth.hhs.gov/providers/best-practice-guides/telehealth-and-remote-patient-monitoring/billing-remote-patient>
12. Fortune Business Insights – RPM Devices Market Outlook: <https://www.fortunebusinessinsights.com/remote-patient-monitoring-devices-market-106328>
13. MassDevice – BioIntelliSense FDA Clearance News: <https://www.massdevice.com/biointellisense-fda-nod-biobutton-wearable-monitor>
14. VitalConnect – Cardiac Monitoring Solutions: <https://vitalconnect.com/cardiac-monitoring>
15. CMS – 2024 Physician Fee Schedule Overview: <https://www.cms.gov/medicare/payment/fee-schedules/physician>
16. Barriers to Remote Patient Monitoring & Strategies for Success: <https://www.tenovi.com/how-to-overcome-barriers-implement-remote-patient-monitoring/>
17. The Challenges with Remote Patient Monitoring (RPM): <https://www.doccla.com/post/challenges-with-remote-patient-monitoring>
18. Benefits and Challenges of Remote Patient Monitoring as Perceived by Health Care Practitioners: A Systematic Review: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10730976/>
19. Remote Health Monitoring Benefits, Challenges & Solutions: <https://www.globallogic.com/insights/blogs/remote-health-monitoring-benefits-challenges-solutions/>

20. Challenges in managing a remote monitoring device clinic:
<https://pmc.ncbi.nlm.nih.gov/articles/PMC8859788/>
21. Continuous Remote Patient Monitoring in Patients With Heart Failure (Cascade Study): Protocol for a Mixed Methods Feasibility Study: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9459840/>
22. Remote Vital Sign Monitoring in Admission Avoidance Hospital at Home: A Systematic Review: [https://www.jamda.com/article/S1525-8610\(24\)00502-4/fulltext](https://www.jamda.com/article/S1525-8610(24)00502-4/fulltext)
23. Post-discharge after surgery Virtual Care with Remote Automated Monitoring-1 (PVC-RAM-1) technology versus standard care: randomized controlled trial:
<https://www.bmj.com/content/374/bmj.n2209>

Appendix 2 – Competitive Snapshot

Suitable for clinical use

Device	Vital Signs Monitored	Wireless Charging	Battery Life (Days)	Clinical-Grade Accuracy	Communications	Uses	Up-Front Costs	Consumable Costs	Expected Maintenance
Sotera Wireless (VISI Mobile)	Heart rate, SpO ₂ , respiratory rate, blood pressure, ECG	No	1	Yes	Bluetooth, Wi-Fi	Multiple use (2,500, inpatient only)	\$5,000+	\$4-\$6, depending on volume	\$2,500
WinMedical (WinPack)	Heart rate, SpO ₂ , respiratory rate, ECG	No	2	Yes	Bluetooth, Wi-Fi	Multiple use (2,000, inpatient only)	\$3,000+	\$2-\$4, depending on volume	\$2,000
BioVotion (Everion)	Heart rate, SpO ₂ , skin temperature, activity tracking	No	5	Yes	Bluetooth	Multiple use (1,500)	\$1,500+	\$0	\$1,500
Intelesens (Aingel)	Heart rate, respiratory rate, ECG	No	2	Yes	Bluetooth, Wi-Fi	Single use (up to 24 hours)	\$500-\$2,000, depending on size of deployment	\$3-\$6, depending on volume	\$0
Sensium (SensiumVitals)	Heart rate, respiratory rate, temperature	No	5	Yes	Bluetooth, Wi-Fi	Single use (up to 5 days; inpatient only)	\$500-\$2,000, depending on size of deployment	\$30-\$50 each, depending on volume	\$0
VitalConnect (VitalPatch)	Heart rate, respiratory rate, SpO ₂ , ECG, skin temp	No	3	Yes	Bluetooth, Wi-Fi	Single use (up to 7 days)	\$500-\$2,000, depending on size of deployment	\$25-\$60 each, depending on volume	\$0
SmartCardia	Heart rate, SpO ₂ , respiratory rate, blood pressure	No	2	Yes	Bluetooth, Wi-Fi	Single use (1-2 days)	\$500-\$2,000, depending on size of deployment	\$4-\$6 each, depending on volume	\$0
SleeveSense™	Heart rate, blood pressure, respiratory rate, SpO ₂ , ECG, skin temp, perspiration	Yes	5	Yes	Bluetooth, LoRa	Single use (weeks or months)	\$0-\$2,000, depending on size of deployment	\$50+depending on volume	\$0

Not suitable for clinical use

Device	Vital Signs Monitored	Wireless Charging	Battery Life (Days)	Clinical-Grade Accuracy	Communications	Cost
Apple Watch Series 9	Heart rate, blood oxygen saturation, ECG, skin temp, respiratory rate	Yes	1.5	No	Bluetooth, Wi-Fi, Cellular (optional)	\$399 - \$799
Fitbit Sense 2	Heart rate, blood oxygen saturation, skin temp, stress level, respiratory rate	Yes	6	No	Bluetooth, Wi-Fi	\$299 - \$329
Oura Ring	Heart rate, respiratory rate, skin temperature, sleep stages	Yes	7	No	Bluetooth	\$299 - \$399
Samsung Galaxy Watch 6	Heart rate, blood oxygen saturation, ECG, body composition, stress level	Yes	2	No	Bluetooth, Wi-Fi, Cellular (optional)	\$299 - \$429
WHOOP Strap 4.0	Heart rate, respiratory rate, skin temperature, heart rate variability	Yes	5	No	Bluetooth	\$30/month subscription
Masimo W1	Heart rate, blood oxygen saturation, pulse rate variability, respiratory rate	Yes	4	Yes, but not FDA approved	Bluetooth, Wi-Fi	\$499+
Biostrap EVO	Heart rate, respiratory rate, blood oxygen saturation, heart rate variability	Yes	5	Yes, but not FDA approved	Bluetooth	Multiple use

Pictures of competitors' products



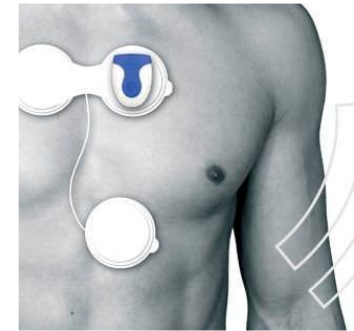
Sotera



WinPack



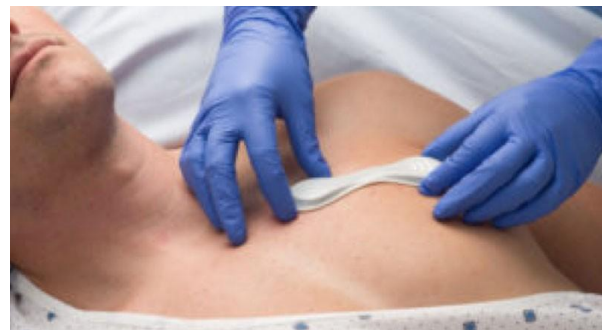
BioVotion



Intelesens



Sensium



VitalPatch



Smartcardia

Appendix 3 – Correlation Calculations

Quantitative Research—Inferential/Correlation Statistics (multiple choice questions + panel-provided demographics):

	Q4 Value	Q6 Support	Q1 Facility	Q2 Role	Q3 Vitals (%)	Q5-1 Comfort	Q5-2 Convenience	Q5-3 Waterproof	Q5-4 Wireless Charg	Q5-5 Clinical Grade
Q4	1.00	0.61	-0.05	0.00	0.22	0.45	0.37	0.18	0.30	0.27
Q6	0.61	1.00	-0.14	-0.09	0.29	0.43	0.32	0.22	0.29	0.28
Q1	-0.05	-0.14	1.00	0.02	-0.03	-0.03	-0.14	0.02	0.04	0.04
Q2	0.00	-0.09	0.02	1.00	0.00	0.00	0.01	-0.03	0.00	-0.01
Q3	0.22	0.29	-0.03	0.00	1.00	0.19	0.15	0.14	0.21	0.21
Q5-1	0.45	0.43	-0.03	0.00	0.19	1.00	0.44	0.33	0.43	0.38
Q5-2	0.37	0.32	-0.14	0.01	0.15	0.44	1.00	0.25	0.41	0.35
Q5-3	0.18	0.22	0.02	-0.03	0.14	0.33	0.25	1.00	0.42	0.35
Q5-4	0.30	0.29	0.04	0.00	0.21	0.43	0.41	0.42	1.00	0.28
Q5-5	0.27	0.28	0.04	-0.01	0.21	0.38	0.35	0.35	0.28	1.00
Q5-6	0.26	0.35	-0.12	-0.01	0.16	0.44	0.43	0.30	0.27	0.36
Q5-7	0.30	0.34	-0.16	0.03	0.15	0.45	0.48	0.36	0.48	0.31
Q5-8	0.26	0.31	-0.06	0.00	0.18	0.44	0.43	0.31	0.35	0.38
Q5-9	0.33	0.37	-0.01	-0.05	0.20	0.44	0.40	0.39	0.44	0.41
Q5-10	0.28	0.35	-0.11	0.00	0.07	0.20	0.29	0.29	0.31	0.24
Full/Part	0.04	0.06	0.02	-0.10	0.09	0.08	0.09	0.08	0.10	0.07
Gender	-0.02	0.09	0.14	0.01	0.21	0.18	0.16	0.13	0.25	0.22
Age	0.07	0.08	0.08	0.14	0.00	0.03	0.07	0.20	0.15	0.12
Region	-0.03	0.00	0.05	-0.02	0.03	0.00	0.37	0.09	0.02	0.00

	Q4	Q6	Q5-6	Q5-7	Q5-8	Q5-9	Q5-10	Full/Part	Gender	Age	Region
	Value	Support	Secure	Integrated	Continuous	Regulatory	Future AI				
Q4	1.00	0.61	0.26	0.30	0.26	0.33	0.28	0.04	-0.02	0.07	-0.03
Q6	0.61	1.00	0.35	0.34	0.31	0.37	0.35	0.06	0.09	0.08	0.00
Q1	-0.05	-0.14	-0.12	-0.16	-0.06	-0.01	-0.11	0.02	0.14	0.08	0.05
Q2	0.00	-0.09	-0.01	0.03	0.00	-0.05	0.00	-0.10	0.01	0.14	-0.02
Q3	0.22	0.29	0.16	0.15	0.18	0.20	0.07	0.09	0.21	0.00	0.03
Q5-1	0.45	0.43	0.44	0.45	0.44	0.44	0.20	0.08	0.18	0.03	0.00
Q5-2	0.37	0.32	0.43	0.48	0.43	0.40	0.29	0.09	0.16	0.07	-0.02
Q5-3	0.18	0.22	0.30	0.36	0.31	0.39	0.29	0.08	0.13	0.20	0.09
Q5-4	0.30	0.29	0.27	0.48	0.35	0.44	0.31	0.10	0.25	0.15	0.02
Q5-5	0.27	0.28	0.36	0.31	0.38	0.41	0.24	0.07	0.22	0.12	0.00
Q5-6	0.26	0.35	1.00	0.42	0.40	0.42	0.16	0.05	0.27	0.06	-0.03
Q5-7	0.30	0.34	0.42	1.00	0.37	0.41	0.28	0.05	0.32	0.11	0.03
Q5-8	0.26	0.31	0.40	0.37	1.00	0.37	0.23	0.08	0.24	0.04	0.05
Q5-9	0.33	0.37	0.42	0.41	0.37	1.00	0.26	0.04	0.27	0.06	-0.07
Q5-10	0.28	0.35	0.16	0.28	0.23	0.26	1.00	-0.06	-0.06	0.20	0.07
Full/Part	0.04	0.06	0.05	0.05	0.08	0.04	-0.06	1.00	0.22	0.11	-0.03
Gender	-0.02	0.09	0.27	0.32	0.24	0.27	-0.06	0.22	1.00	0.03	0.02
Age	0.07	0.08	0.06	0.11	0.04	0.06	0.20	0.11	0.03	1.00	0.03
Region	-0.03	0.00	-0.03	0.03	0.05	-0.07	0.07	-0.03	0.02	0.03	1.00