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MARKET REPORT

Modernizing the Healthcare Supply Chain **Through the Cloud**

Why more hospitals and health systems are transitioning to cloud-based supply chain management

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Executive Summary

Cloud-based solutions are quickly becoming a new standard within hospitals and health systems, impacting nearly every domain, including clinical, finance and HR. The supply chain is no exception.

In a new survey of 103 hospital and health system leaders, representing a broad range of provider types and sizes, 45% said they are already using cloud-based supply chain management technologies, and 24% said they plan to begin using these technologies within the next two years. Combined, those research findings suggest that nearly 70% of all hospitals are likely to have adopted a cloud-based approach to supply chain management by 2026.

To further explore the shift toward the cloud, Global Healthcare Exchange (GHX) commissioned healthcare consultancy Sage Growth Partners to conduct this survey of hospital and health system leaders in July 2023. The survey yielded 103 responses from a variety of roles within the C-suite, representing a broad range of organization sizes and entity types.

This report summarizes key survey findings, including factors driving the increasing momentum toward the cloud and how the shift is impacting operations, costs, efficiencies, security and more.

Key Findings

Positive Impact:

Nearly 80%

hospital and health system leaders from organizations surveyed that have transitioned to cloud technologies for supply chain management characterized the move as positive.

Enterprise-Wide Benefits:

Respondents describe several key benefits when it comes to cloud adoption for supply chain management:
- Enhanced decision-making
- Improved efficiency & agility
- Reduced costs
- Better data security & privacy
- Streamlined processes

Significant Momentum:

45%

hospitals and health systems surveyed have already moved to cloud technologies for supply chain management, and many more plan to do so over the next 24 months.
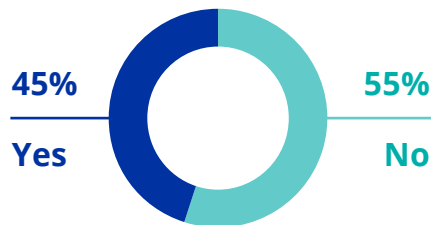
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Cloud Adoption Trends & Drivers

While most hospital and health system leaders said their organizations are using cloud technologies for EHRs (69%), data management (67%), and cybersecurity (62%), the movement to the cloud for supply chain management has been slower. However, it is rapidly gaining momentum.
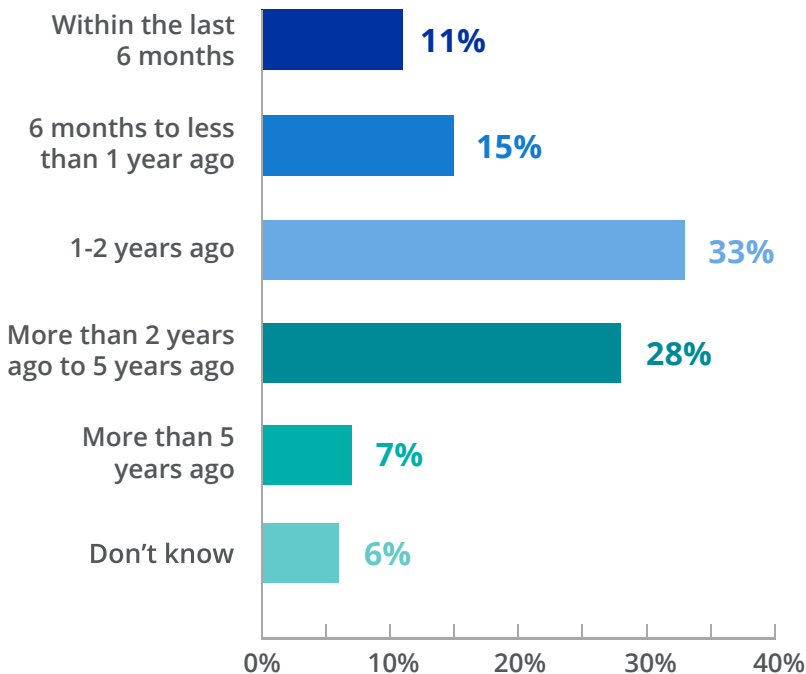
Of those using cloud technologies for supply chain management, more than half have been doing so for more than two years. The primary cloud partners used by respondents include Infor, Oracle, SAP and Workday.

45%

are using cloud technologies for supply chain management and optimization

45%
Yes

55%
No

Supply chain optimization ranks as one of the top five strategic initiatives at hospitals and health systems over the next 12 months, according to the survey. The ranking is based on input from all 103 survey respondents, including those whose organizations have already adopted cloud technologies for supply chain management and those whose organizations have not.

When did your organization start using cloud technologies for supply chain management?

Category	Value
Within the last 6 months	11%
6 months to less than 1 year ago	15%
1-2 years ago	33%
More than 2 years ago to 5 years ago	28%
More than 5 years ago	7%
Don't know	6%

The use of cloud technologies for supply chain management is gaining momentum and the vast majority of respondents have already moved to cloud-based solutions in other areas of their organization.

What are your organization's top strategic initiatives for the next year?

#1/#2 (tied) Growing revenue/ Improving staff recruitment and retention

#3. Improving the patient and consumer experience

#4. Reducing the cost of care

#5. Optimizing the supply chain

Other strategic initiatives that did not rank in the top five, included: expanding service lines, improving patient safety, enhancing workforce resiliency, reducing administrative costs, expanding access to care, improving staff safety and expanding home and remote care offerings.
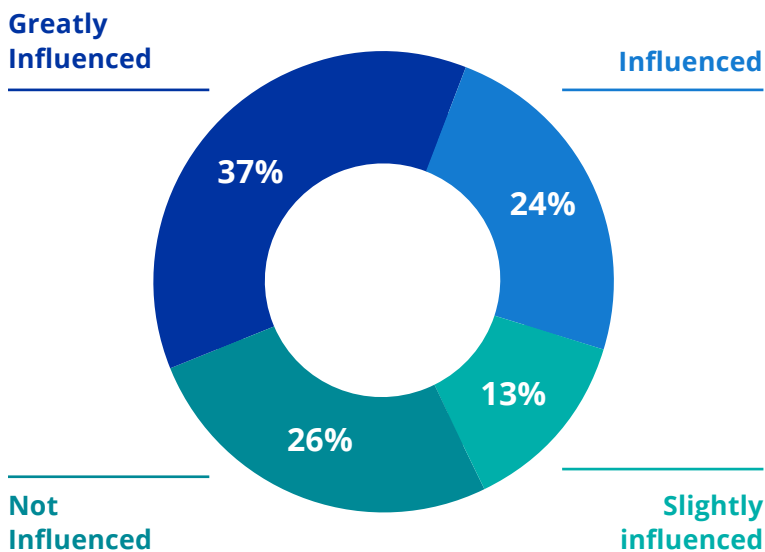
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Nearly three-quarters of survey respondents noted that expansion of their organization (such as acquisitions of other hospitals and health systems) influenced the decision to incorporate cloud technologies for supply chain management.

However, that is not the only reason organizations are making the move. According to survey respondents who have already transitioned to cloud technologies for supply chain management, the top three drivers are improving efficiency, reducing costs and enhancing operational resiliency.

37%

said that expansion has greatly influenced their move to cloud-based supply chain management.

Greatly Influenced

Influenced

37%

24%

13%

26%

Not Influenced

Slightly influenced

What was the biggest driver behind your organization's decision to migrate supply chain management to the cloud?

#1. Improve efficiency

#2/#3 (tied) Reduce costs/Improve operational resiliency

#4/#5 (tied) Improve security/Achieve digital transformation

Consolidation:

A Cloud Adoption Accelerant

With more industry consolidation comes more need for a cloud-based supply chain management approach. As organizations expand, the cloud offers significant benefits related to data access, integrity and visibility.

According to Kaufman Hall, M&A activity among hospitals and health systems increased in the second quarter of 2023 and is now back in line with pre-pandemic levels[1]. As consolidation continues, movement to the cloud is likely to continue as well.

[1] Kaufman Hall. (2023). Report on M&A Activity Among Hospitals and Health Systems, Q2 2023.

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The survey reveals that there's not a typical profile for hospitals and health systems that have already moved to cloud technologies for supply chain management. These organizations represent a broad range of sizes and entity types. Generally, however, those that have not yet transitioned tend to have under 10 hospitals in their system, fewer staffed beds, and a net patient revenue under 500 million.

"Many organizations are operating with very thin margins and some don't have the budget to move to cloud for supply chain management right now, but it's only a matter of time. Hospitals and health systems recognize that the cloud helps provide a better, safer, more accurate and efficient approach to increase ROI. Data moves faster, it's more accurate and decisions can be made faster."

JOHN MARTIN
Executive Director, Strategic Accounts & Commercial Programs at GHX

When asked to identify the most compelling benefits of using the cloud for supply chain management, survey respondents stated:

37%
Streamlined supply chain operations

33%
Reduced costs

30%
Improved data analytics and reporting

28%
Enhanced supply chain decision making

26%
Enhanced security

22%
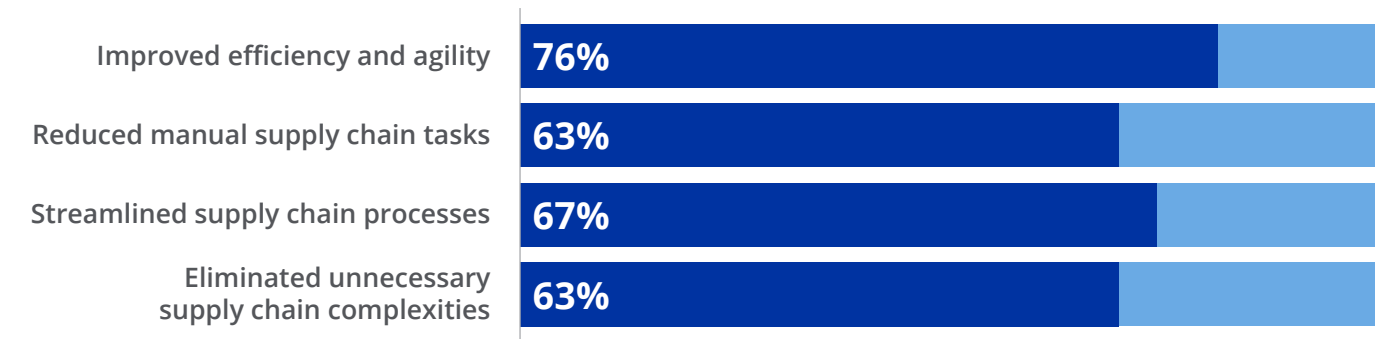Reduced manual supply chain tasks

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Cloud Adoption Impact & Benefits

Hospital and health system leaders whose organizations have adopted cloud technologies for supply chain management report very positive results across a range of areas. These results correlate directly with the previously noted top three drivers that are leading organizations to shift to cloud technologies: improving efficiency, reducing costs and improving operational resiliency.

Benefits of Moving to the Cloud

Greater Efficiency
Moving to the cloud enhances supply chain operations by reducing complexities and streamlining operations. Survey respondents said the move:
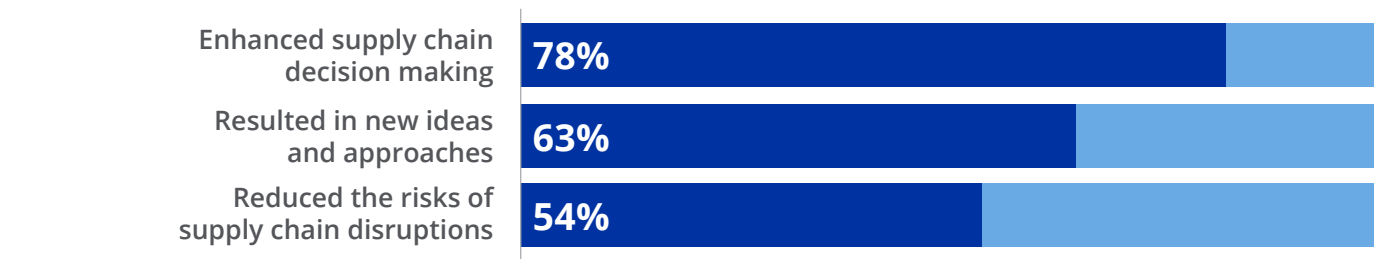
Improved efficiency and agility	**76%**
Reduced manual supply chain tasks	**63%**
Streamlined supply chain processes	**67%**
Eliminated unnecessary supply chain complexities	**63%**

Reducing Costs
Cloud technologies help reduce costs and improve resource allocation. Survey respondents said the move:

Reduced costs	**76%**
Improved supply chain resource allocation	**56%**

Improving Operational Resiliency
Cloud adoption helps tackle supply disruptions and drive innovation while enhancing the decision-making process. Survey respondents said the move:

Enhanced supply chain decision making	**78%**
Resulted in new ideas and approaches	**63%**
Reduced the risks of supply chain disruptions	**54%**

Hospital and health system leaders from organizations that have implemented cloud technologies for supply chain management cited several additional positive benefits, including enhanced data security, improved scalability and better analytics and reporting.

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How much has each of the following been positively impacted by your hospital's use of cloud-based supply chain management?

| ■ Majorly | ■ Moderately | ■ Minorly | ■ None |

| 30% | 43% | 20% | 7% |

Data Security & Privacy

| 20% | 47% | 33% |

Analytics & Reporting

| 20% | 46% | 24% | 10% |

Infrastructure Costs & Maintenance

| 17% | 61% | 20% | 2% |

Operational Efficiency

| 17% | 53% | 28% | 2% |

Data Storage & Recovery Capabilities

| 13% | 59% | 17% | 11% |

Meeting Compliance & Regulatory Requirements

| 11% | 59% | 26% | 4% |

Collaboration & Communication

| 11% | 61% | 24% | 4% |

Scalability & Flexibility

| 2% | 65% | 24% | 9% |

On-Contract Spend

| 4% | 59% | 30% | 7% |

Interoperability & Data Exchange

A Secure
Advantage

Nearly three quarters of survey respondents from organizations that have transitioned to cloud technologies for supply chain management said the move has improved data security and privacy.

According to Archie Mayani, Chief Product Officer at GHX, hospitals and health systems find significant incentive in bolstered security.

"The utilization of cloud technology can offer advanced cybersecurity measures, a crucial factor given the escalating frequency of cybersecurity threats and their substantial associated costs."

ARCHIE MAYANI
Chief Product Officer at GHX

GHX.

Overall, most hospital and health system leaders from organizations that have moved to the cloud report that their supply chain teams responded favorably to the shift. Nearly two-thirds (64%) said their teams were receptive or very receptive, 28% said their teams were neutral, and only 9% said their teams were not receptive.

A comparison of the survey findings between organizations that are using cloud technologies for supply chain management and those that are not further underscores the benefits.

When asked to rate their performance as "good," "moderate," or "poor" across key supply chain management areas, cloud technology users were more likely to rate their performance as "good" in nearly every area, including:

⚠ **Managing vendor credentialing and compliance**

🛒 **Managing inventory**

🤝 **Collaborating with supply chain partners**

👁 **Enhancing inventory visibility**

📊 **Improving data quality and integrity**

🧑‍⚕ **Collaborating with clinician partners**

📄 **Managing vendor contract compliance**

♻ **Managing the order cycle**

🏷 **Conducting value analyses**

Cloud technology users also reported more confidence when it comes to utilizing advanced supply chain management technology, such as AI and machine learning. While only 11% of all respondents are currently using AI and machine learning for supply chain management, 59% of cloud technology users said they plan to use it soon compared to only 39% of non-cloud technology users.

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Bottom Line

When asked to identify the biggest drivers behind their efforts to improve supply chain management overall,

71%

of all respondents (regardless of whether they have implemented cloud technologies or not) cited financial pressures to reduce waste and costs.

The survey findings show a direct correlation between meeting that objective and moving to cloud-based management:

76%

of survey respondents who are using cloud-based technologies for supply chain management said it resulted in reduced costs

66%
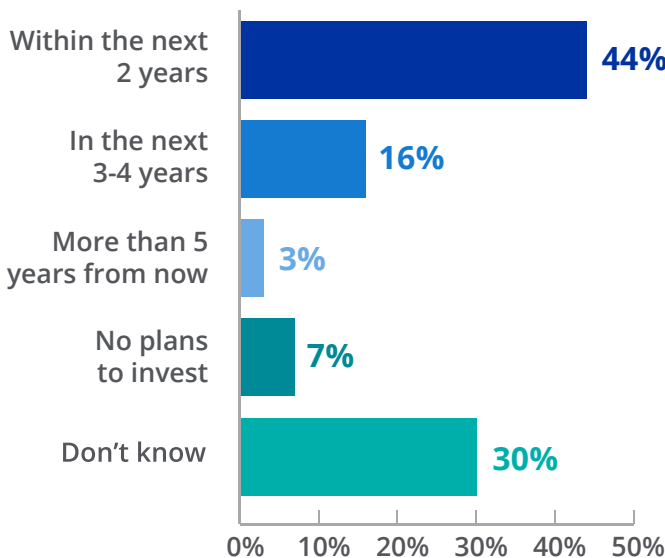
said it reduced infrastructure and maintenance costs

56%

said it improved supply chain resource allocation

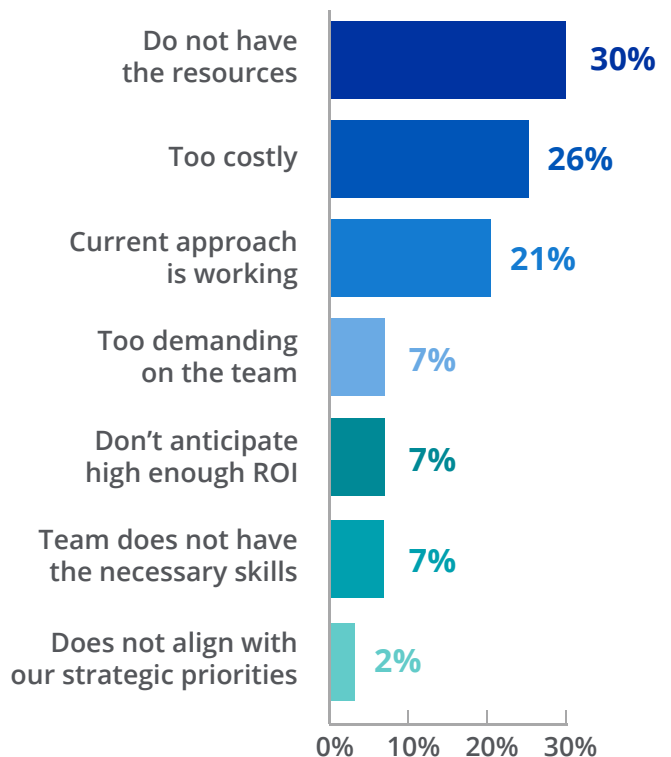**GHX.**

Cloud Adoption Success Levers

As the benefits of cloud technologies for supply chain management become apparent, more hospital and health system leaders are taking notice. Even among the survey respondents not yet using these technologies, nearly half said their organization plans to invest in cloud-based supply chain management within the next two years.

When does your organization plan to invest in cloud technologies for supply chain management?

Category	Value
Within the next 2 years	44%
In the next 3-4 years	16%
More than 5 years from now	3%
No plans to invest	7%
Don't know	30%

The majority of respondents that haven't adopted cloud technologies plan to do so within the next two years.

Why has your organization not invested in cloud supply chain management solutions?

Category	Value
Do not have the resources	30%
Too costly	26%
Current approach is working	21%
Too demanding on the team	7%
Don't anticipate high enough ROI	7%
Team does not have the necessary skills	7%
Does not align with our strategic priorities	2%

Lack of resources and cost concerns are the primary barriers to cloud adoption in the healthcare supply chain area.

While the survey reveals that cost, resources and skills are common barriers to cloud technology adoption, nearly 60% of respondents from organizations that have not yet moved to the cloud expect their supply chain budget to increase over the next 12 months.

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Cloud Transition Recommendations

Selecting the right cloud partner can help hospitals and health systems achieve maximum benefits from the move, including enhanced data integrity, advanced data analytics and reporting, reduced costs, improved efficiencies and stronger data security.

Organizations that are preparing for the transition should look for a cloud partner with supply chain expertise and solutions that support a broad range of supply chain management capabilities. Some key capabilities to consider include:

- ✓ Automation Analytics and Reporting

- ✓ Supplier/Supply Chain Risk Analytics Tools

- ✓ Demand Forecasting Tools

- ✓ Value Analysis and Strategic Sourcing Tools

- ✓ Integrated Business Planning

More than 60% of all survey respondents characterized the above capabilities as "beneficial" or "very beneficial" to supply chain operations.

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Top Six Characteristics of a "Best in Healthcare Supply Chain"

With so much to track, trend and analyze when it comes to supply chain management, it can be difficult for hospitals and health systems to determine what to prioritize. To gain further insight, we asked survey respondents to identify the top characteristics of a *Best in Healthcare Supply Chain*. Here is what they rank as the six most important qualities and where most organizations stand when it comes to achieving them.

1. **Strong communication and collaboration with supply chain partners**

   86% of all survey respondents characterized this as important or very important to achieving a *Best in Healthcare Supply Chain.* Nevertheless, the survey findings indicate that most organizations have a lot of room for improvement in this area. Only about 57% of survey respondents report that they currently collaborate well with supply chain partners.

   > **Key Finding:** Survey respondents from organizations that use cloud technologies for supply chain management were more likely to say they collaborate well with supply chain partners (64% said they collaborate well compared to 53% of non-cloud technology users).

2. **Ability to forecast demand**

   82% of respondents said demand forecasting is important or very important to achieving a *Best in Healthcare Supply Chain*. Again, the survey findings indicate this is a significant improvement opportunity for hospitals and health systems. Only about 37% of all respondents said they use demand forecasting technologies, and only 10% of those respondents characterized their use as effective. These response rates were similar across organizations that use cloud technologies for supply chain management and those that do not.

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3. Visibility across the order process

81% of survey respondents characterized this as important or very important to achieving a *Best in Healthcare Supply Chain*. Here again, many organizations could benefit from increasing visibility across the order process. Just 21% of all respondents rated their visibility into inventory as "good" and only 27% rated their ability to manage the order cycle as "good."

> **Key Finding:** Thirty one percent of respondents from organizations that use cloud technologies for supply chain management rated their visibility into inventory as "good," compared to just 12% of non-cloud technology users. Similarly, 39% of cloud technology users rated their ability to manage the order cycle as "good" compared to only 15% of non-cloud technology users.

4. Access to data and analytics

80% said access to data and analytics is important or very important to achieving a *Best in Healthcare Supply Chain*. These findings suggest this is a key area that needs improvement for most hospitals and health systems. When all respondents were asked to assess their performance related to data quality, integrity management and analytics, only 18% characterized their performance as "good."

> **Key Finding:** Survey respondents who said their organization uses cloud technologies for supply chain management were more likely to characterize their performance as "good" (24% of cloud technology users compared to only 12% of non-cloud users).

5. Clinical expertise

77% characterized this as important or very important to achieving a *Best in Healthcare Supply Chain*. The survey findings indicate this is another area in which many hospitals and health systems could improve their performance. For example, when all respondents were asked to assess their performance related to collaborating with clinician partners, only 22% rated their performance as "good." These response rates were similar across organizations that use cloud technologies for supply chain management and those that do not.

6. Ability to leverage automation

76% of survey respondents characterized this as important or very important to achieving a *Best in Healthcare Supply Chain*. Once again, most survey respondents said this is a key area in which they could improve. For example, when asked to assess their performance related to automating manual, repetitive tasks, only 17% rated it as "good."

> **Key Finding:** Survey respondents who said their organization uses cloud technologies for supply chain management were more likely to characterize their performance as "good" (21% of cloud technology users compared to only 12% of non-cloud users).

Hospitals and health systems that are seeking to improve supply chain management performance should consider the above capabilities and then evaluate their performance within each. Then, they should determine which technologies or initiatives could support improvements. Organizations that are not yet using cloud technologies for supply chain management could significantly benefit from making the move, as the survey findings indicate this can be a key advantage in the quest to achieve a *Best in Healthcare Supply Chain*.

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Wider Adoption: The Path to Cloud Optimization

With mounting pressure to reduce costs and improve efficiencies, adopting cloud-based technologies for supply chain management can provide significant benefits. While the shift entails an upfront investment in both costs and resources, hospitals and health systems that have made the move report positive outcomes.

As more organizations implement cloud technologies or supply chain management over the next two years, industry attention will shift from the cloud transition to cloud optimization. More hospitals and health systems will begin to explore advanced supply chain management capabilities—including AI, machine learning, value analyses, and demand forecasting—to maximize the impact of cloud adoption.

In the future, cloud optimization benefits may include:

- Better and more timely insights into supply chain optimization opportunities across the enterprise driven by enhanced data integrity, analytics and accessibility.

- Enhanced supply chain resiliency supported by better substitution processes and a more diverse supplier base.

- Improved strategic sourcing powered by access to more reliable data that reveals the best products and partners for the organization.

- Greater clinical standardization delivering better visibility into product efficacy in support of better patient outcomes.

With mounting pressure to reduce costs, improve efficiencies, and enhance security, it's time for hospitals and health systems to truly lean into cloud technologies, including the most innovative and advanced, for supply chain management. Those that do so successfully are likely to be among the first organizations to achieve a truly modernized supply chain, and experience the significant and wide-ranging benefits that come with it.

About **GHX**

Building on decades of collaboration among providers, manufacturers, distributors and other industry stakeholders, Global Healthcare Exchange, LLC (GHX) is leading the charge in helping organizations run the new business of healthcare. By automating key business processes and translating evidence-based analytics and data into meaningful action, GHX is helping the healthcare ecosystem to move faster, operate more intelligently and achieve greater outcomes. With the support of GHX, healthcare organizations have removed billions of dollars of wasteful healthcare spend. For more information on GHX's suite of cloud-based supply chain solutions, visit **ghx.com** and **The Healthcare Hub**.

Methodology

In July 2023, GHX commissioned Sage Growth Partners, a healthcare consultancy, to conduct an independent survey of hospital and health system and supply chain leaders. The survey yielded 103 responses.

Organization Type

17%	Academic Medical Center/Teaching Hospital
32%	Community Hospital
16%	Integrated Delivery Network
9%	Independent Hospital
7%	Large Privately Owned Hospital Group/System
9%	Small Health System University Hospital
1%	Group/System
3%	Government Health System (VA, etc.)
6%	Other

Title/Role

17%	Chief Executive Officer
14%	Chief Information Officer
12%	Chief Operating Officer
12%	Chief Financial Officer
11%	Chief Supply Chain Officer
10%	Chief Medical Officer
7%	Chief Nursing Officer
4%	Chief Quality Officer
1%	Chief Strategy Officer
1%	Chief Transformation Officer
1%	Chief Development Officer
10%	Other

Number of Staffed Beds

23%	Less than 50
5%	50-99
10%	100-199
20%	200-499
15%	500-999
27%	1,000 or more

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