Aite Matrix: Payment Integrity in Healthcare

This excerpt provided compliments of Best-in-Class vendor SAS Institute.

§sas

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

Healthcare payers are on a quest to make informed decisions as they strive to optimize their claims processing and payment operations. Improving the quality of claims data that they receive from providers and intermediaries and smoothing out wrinkles in substantiating claims is part of that quest as well. Payment integrity tools play an important role in these optimization initiatives. Using the Aite Matrix methodology, this Aite Group report evaluates a set of key vendors active in the payment integrity and accuracy vendor market serving health plans. The report addresses two major themes:

- Payment integrity vendors identify erroneous, incomplete, suspicious, or inaccurate claims that providers submit to health plans.

- Health plans seeking to optimize, automate, and streamline their claims submission, payment, and recovery process have unexplored opportunities that technology vendor partners can remedy.

This report provides a detailed overview and evaluation of those vendors as health plans consider the emerging capabilities that can benefit their audits, special investigations units (SIUs), and claim processes.

This Impact Report explores some of the key trends within the payment integrity market specific to healthcare claims and discusses how technology is evolving to address new market needs and challenges. It also compares and contrasts the leading vendors' offerings and strategies, and highlights their primary strengths and challenges. Finally, to help financial institutions make more informed decisions as they select new technology partners, the report recognizes specific vendors for their strengths in critical areas.

METHODOLOGY

Leveraging the Aite Matrix, a proprietary Aite Group vendor assessment framework, this Impact Report evaluates the overall competitive position of each vendor, focusing on vendor stability, client strength, product features, and client services.

The following criteria were applied to develop a list of vendors for participation:

- Presence of a payment integrity, payment accuracy, fraud, or data analytics capability

- Presence and expertise in the U.S. healthcare market

- Active client contracts with health plans

Participating vendors were asked to complete a detailed request for information (RFI) composed of qualitative and quantitative questions, conduct a minimum 60-minute product demo, and provide active client references.

THE PLAYERS

This section presents comparative data for the vendors that participated in the Aite Matrix evaluation. This is by no means an exhaustive list of vendors, and firms looking to undergo a vendor selection process should conduct initial due diligence prior to assembling a list of vendors appropriate for their own unique needs. Table A presents basic vendor information for the participating solutions.

Table A: Evaluated Vendors

Firm	Headquarters	Years in business	Target market	Number of employees	Number of clients
CGI Technologies & Solutions	Fairfax, Virginia	30	Commercial and state government payers	78,000	46
Change Healthcare	Nashville, Tennessee	40	Healthcare payers	12,900	152
ClarisHealth	Nashville, Tennessee	7	Health plans	135	15
Codoxo	Atlanta	4	Healthcare marketplace focusing on health plans, which include commercial plans, BlueCross BlueShield (BCBS), administrative services organizations (ASOs), Medicare and Medicaid plans, and state government plans	40	13
Cotiviti	South Jordan, Utah	40	Healthcare payers	More than 5,000	251
EXL Service	New York	21	Health plans	More than 31,900	37
OptumInsight	Eden Prairie, Minnesota	33	Commercial, Medicare Advantage, Medicaid, and third-party administrator health plans; government and veterans agencies	195,000	200
SAS Institute	Cary, North Carolina	45, with 32 active in healthcare	Healthcare payers (private and government)	13,939	1,308, with 200 specific to healthcare

Source: Vendors

THE MARKET

The following market trends are shaping the present and future of the payment integrity market (Table B).

Table B: The Market

| Market trends	Market implications
Competitive landscape is consolidating.	Consolidation presents in multiple forms in payment integrity. It is not limited to vendor M&A but also applies to health plans and healthcare systems as well as atypical or non-traditional technology from other sectors. Continued consolidation of payment integrity vendors via M&A creates a more competitive market from a capability and pricing perspective. More consolidation will occur as smaller vendors look to compete with larger vendors and as large vendors look to fill solution gaps quickly.
Regulatory changes demand updates to rules.	Increase in complexity and scope of data privacy and security laws/regulations define what's next on the regulatory front. Between a new presidential administration, changes and updates to the Centers for Medicare and Medicaid Services' (CMS') guidance regarding Medicare and Medicaid, the role of the Affordable Care Act in cost-containment efforts, Medicaid expansion resulting in an increase in overall insured individuals, and price transparency and interoperability measures ahead, vendors and health plans face a host of regulatory changes in the future.
Technology advances mean emphasizing research and development (R&D) investments.	Automation, AI, machine learning (ML), electronic health records (EHR), and electronic medical records (EMR) are the order of the day. Integration and demand for real-time processing are imminent. Cloud services are on the upswing.
Other critical factors of note	Acquisitions don't automatically mean integrated platforms, nor do they mean an automatic win. Reliance on robust data strengthens. Reducing provider abrasion takes priority. Shift to pre-pay evolves with audits and claim reviews. Bad players and hidden schemes demand vigilance. The next chapter will be about increased accuracy. Identity fraud is on the rise. Payer provider collaboration is becoming a mainstay. Emerging business and reimbursement models (such as value-based care) will reshape go-to-market strategies.

Source: Aite Group

KEY STATISTICS

This section provides information and analysis on key market statistics as well as projected IT spending related to the vendor market.

ANNUAL REVENUE ESTIMATES ANALYSIS

The consolidated nature of the payment integrity vendor landscape means that there are fewer vendors than just five years ago. It also means that the revenue bands tend to skew large. Six of the eight Aite Matrix participants reported revenue of over US$50 million, and two between US$10 million and US$50 million (Figure 1).

Figure 1: Annual Revenue Estimates Breakdown

Annual Revenue Estimates Breakdown
(N=8 vendors)

US$10 million to
US$50 million
2

More than
US$50 million
6
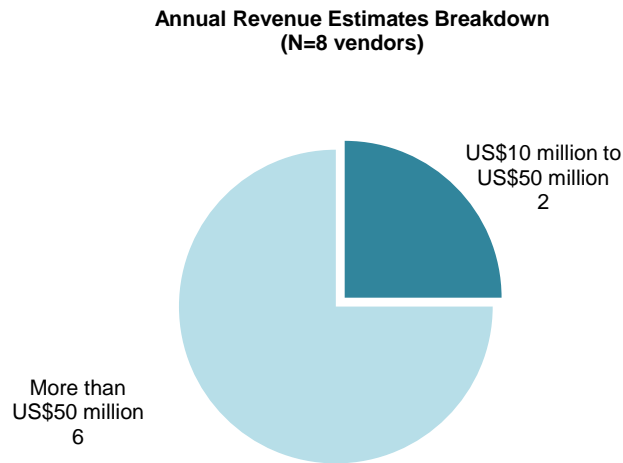
*Note: No vendor reported an estimated
annual revenue less than US$10 million*

Source: Vendors

PROFITABILITY ANALYSIS

The transformation from pay-and-chase to prevent and pay, along with the shift from paper and manual to digital and automated in healthcare claims, is a long way from being complete. Technology vendor partners have been investing heavily in data analytics capabilities, AI, user-friendly features, and functionality and integration to move the industry forward on that front. M&A in the payment integrity field have also meant operational efficiencies, and product and cost rationalizations resulting in a profitable business environment for vendors. Six of eight Aite Matrix participants reported profitability, and two reported being at or near the break-even point, which is not surprising in a competitive environment (Figure 2).

Figure 2: Vendor Profitability

Vendor Profitability
(N=8 vendors)

Break-even
2

Positive
6

Note: No vendor reported
a negative profitability
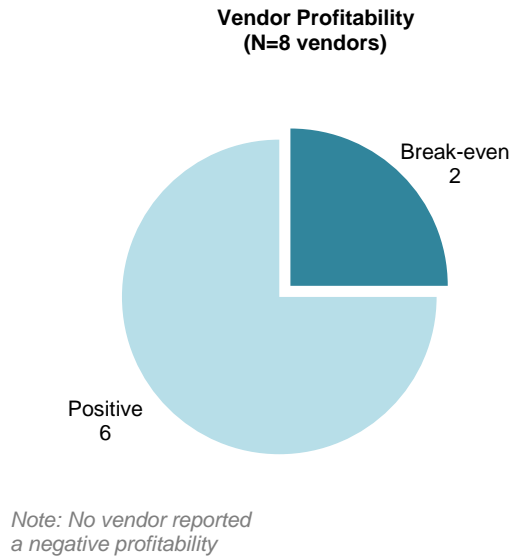
Source: Vendors

GROWTH RATE ANALYSIS

All vendors that participated in the Aite Matrix study of Q4 2020 and Q1 2021 reported growth in their business. Those that were larger in size tended to have a smaller rate of growth, and smaller vendor partners tended to have a higher rate of growth. Also impacting growth rates was the amount of business a vendor had outside of healthcare (Figure 3).

Figure 3: Growth Rate Breakdown

Growth Rate Breakdown
(N=8 vendors)

Greater than 15%
1

Less than 10%
3

10% to 15%
4

Note: No vendor reported
negative to no growth
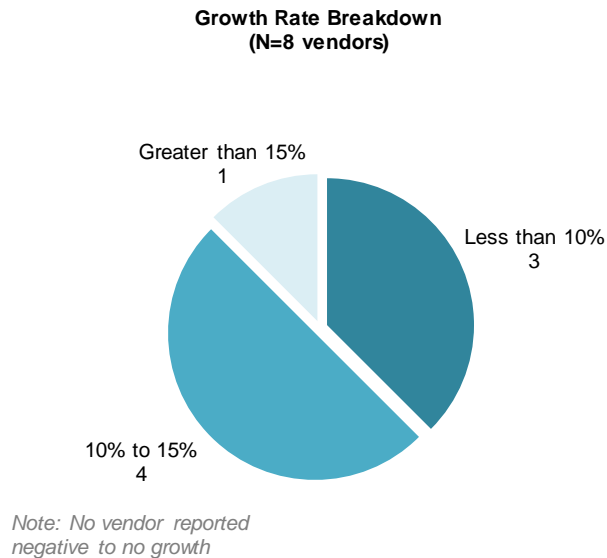
Source: Vendors

R&D INVESTMENT ANALYSIS

The growing amount of data, analytical muscle, AI, integration, user-friendly interfaces, and customizable reporting and analysis have meant that technology partners have had to continually in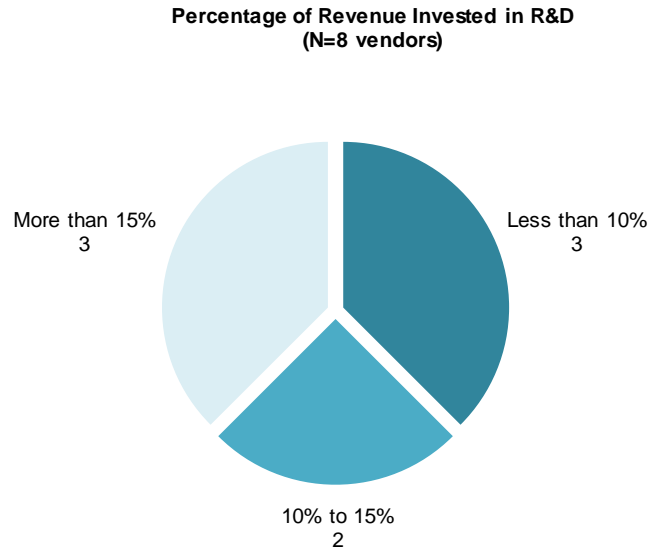vest and reinvest in their technology capabilities. Thirty-eight percent of vendors indicate that they invest over 15% of their revenue into R&D. Twenty-five percent report that their investments average 10% to 15% (Figure 4).

Figure 4: Percentage of Revenue Invested in R&D

**Percentage of Revenue Invested in R&D
(N=8 vendors)**

More than 15%
3

Less than 10%
3

10% to 15%
2

Source: Vendors

CLIENT BREAKDOWN BY TYPE

Several technology vendors, such as SAS, have an established business outside of healthcare, making up 55% of the client breakdown. Commercial plans make up 32% of clients, followed by government plans (such as Medicare clients) at 11%, with third-party benefit administrators (TPAs) making up 2% (Figure 5).

Figure 5: Client Breakdown by Type

**Client Breakdown by Type
(n=1,984 identified clients)**
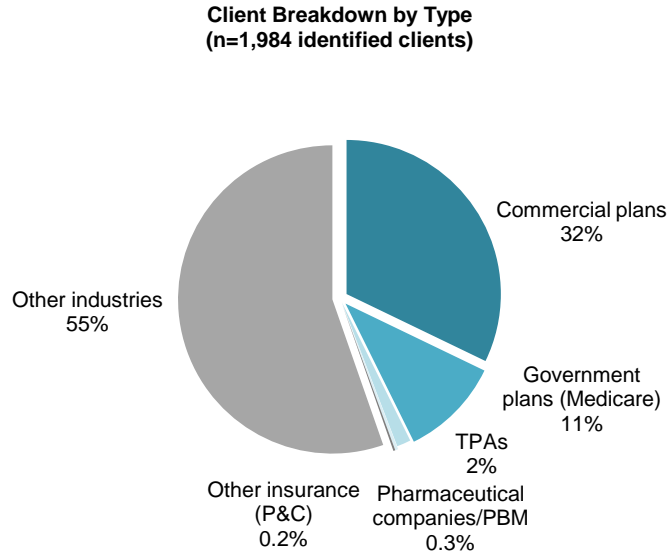
Source: Vendors

When filtered for health insurance clients alone, commercial health plan clients constitute 72% of accounts, and government plans such as Medicare make up 24% (Figure 6).

Figure 6: Health Insurance Client Breakdown by Type

**Health Insurance Client Breakdown by Type
(n=882 identified clients)**

Source: Vendors

ANNUAL CLIENT RETENTION RATE

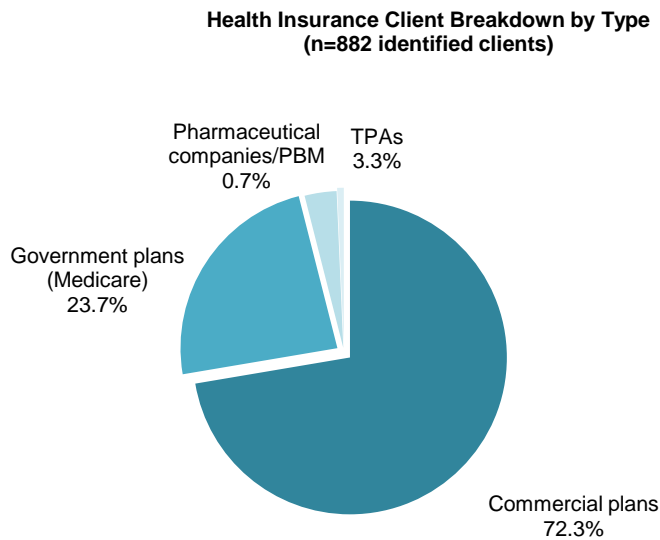Client retention is a good indicator of client satisfaction and stickiness. For payment integrity vendors, client retention levels are high, with most vendors indicating client retention that exceeds 90% annually (Figure 7).

Figure 7: Client Retention Rate

**Client Retention Rate
(N=8 vendors)**

75% to 90%
1

More than 90%
7

*Note: No vendor reported a client
retention rate less than 75%*
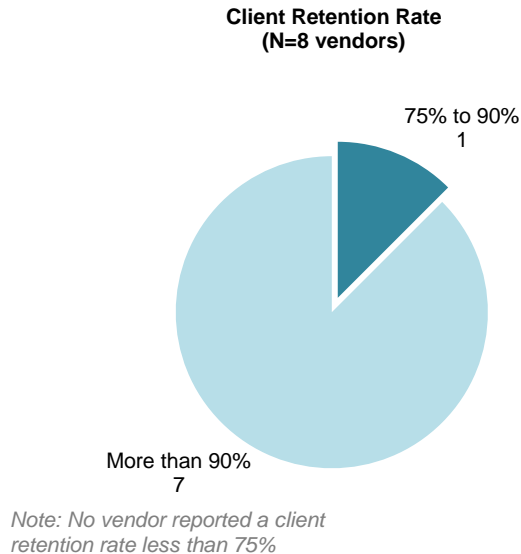
Source: Vendors

High levels of client retention are good for those that already have active contracts with health plans but make for a high barrier to entry for contenders seeking to add new logos to their roster. Regardless of how the contracts are sliced and diced, sales cycles are long, and the propensity of a health plan to change from an existing vendor partner, even if their performance is not stellar, is low, due to the challenges and work that come with changing vendor partners and integrating with a new set of tools.

For contender vendors, untraditional approaches may offer a differentiator to overcome that challenge. Offering pilot programs and giving health plans a limited trial run of their solution, whereby vendors can demonstrate their differentiators and allow the health plan users to compare the returns they get compared to their existing partner, may be what the doctor ordered to sway those buyers. Such approaches may help jump the hurdle in becoming a preferred and approved vendor and provide an "in" with new accounts.

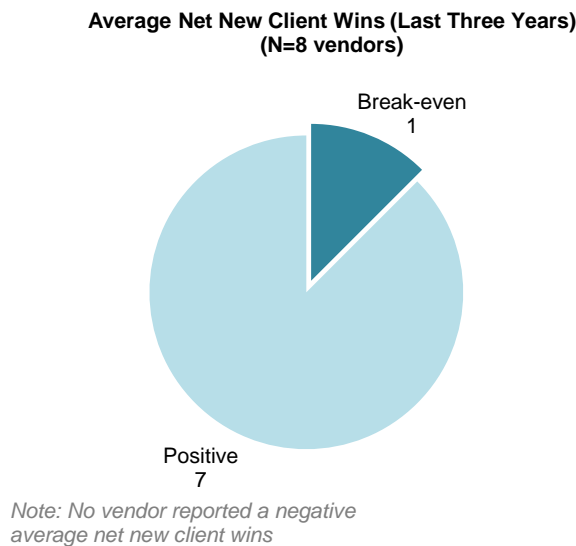Outside of client satisfaction, there are several other factors that influence client retention levels:

- First, health plans routinely work with multiple payment integrity technology partners to support their claim adjudication work. This means that the likelihood of dropping a particular vendor is not high, as work can be shifted around across several different vendors without cutting a contract off entirely.

- Second, contracts tend to last around five years, meaning that the likelihood of any one contract running out at a given point is low compared to contracts with annual durations.

- Third, health plans are highly aware of the amount of effort required to abandon the work with one vendor and shift to another, which prompts them to stay with their existing vendor partner even if things are not going swimmingly.

- If a payer using a competitor acquires a technology vendor competitor, it can be challenging to displace the incumbent. Similarly, a few large clients may acquire a competitor, making retention difficult.

AVERAGE NEW CLIENT WINS

Once a payment-integrity-related agreement is in place, health plans' default preference is to keep that vendor for an average contract period of five years. As the contracts come up for renewal, health plans do look outside their existing vendors but don't change on a whim unless they feel there is a compelling need to do so. This is because of the ramp-up required to switch vendors and work with any new vendor as they learn the ropes and intricacies of the health plan client's contracts. It is no surprise, then, that new client wins are not large and require a long sales cycle (Figure 8).

**Figure 8: Average New Client Wins in Last Three Years**

Average Net New Client Wins (Last Three Years)
(N=8 vendors)

Break-even
1

Positive
7

Note: No vendor reported a negative average net new client wins

Source: Vendors

DEPLOYMENT OPTIONS ANALYSIS

On-site deployments and hosted arrangements are the norm in payment integrity. Of 1,675 identified clients, only 14% had opted for cloud deployments in 2020, with 56% preferring an on-site deployment and 30% opting for a hosted arrangement (Figure 9).

Figure 9: Deployment Options

**Client Deployment Options
(n=1,675 identified clients)**
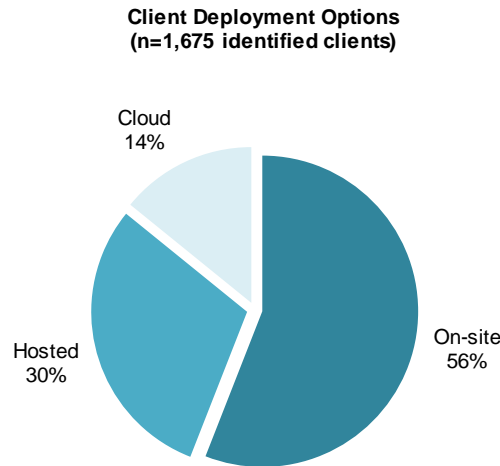
Source: Vendors

Compared to other sectors, such as IT services and financial services, these numbers indicate a slower adoption rate for health insurance, indicating plenty of headroom to expand into and move implementations to the cloud, repurposing best practices and lessons learned from other industries and applying health-specific requirements.

LEADING IMPLEMENTATION FIRMS

Often overlooked but potentially more important than the software vendors themselves, many global consulting and IT services firms provide essential implementation services that round out the vendor ecosystem. While this approach is commonplace in several other instances when health plans may engage a third party, all client references indicated that they do not use a consulting/IT services firm for providing implementation support.
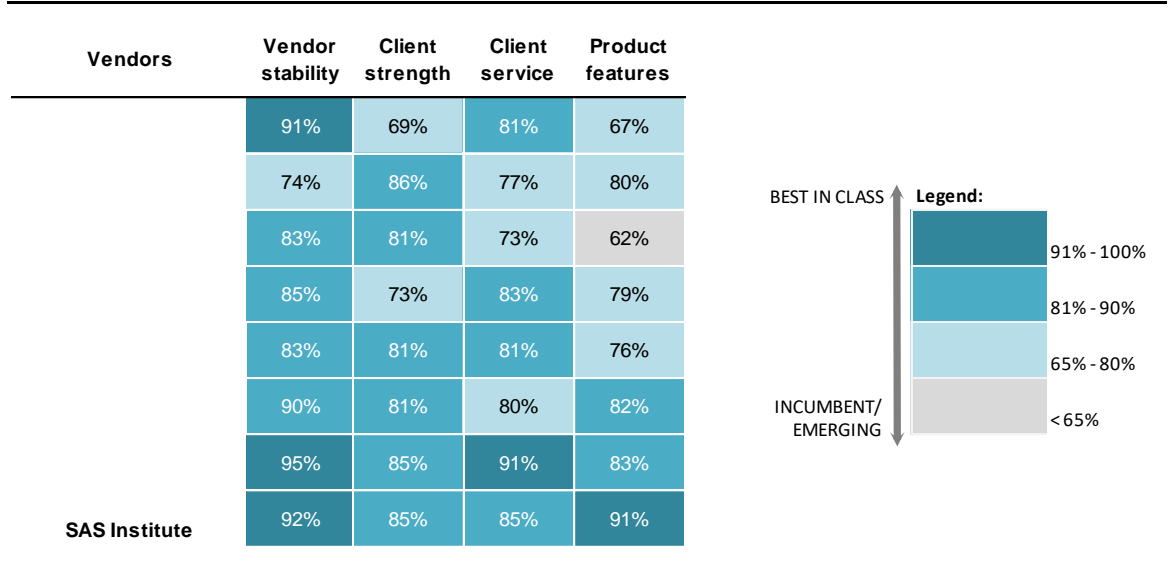
AITE MATRIX EVALUATION

This section will break down the individual Aite Matrix components, drawing out the vendors that are strong in each area and how they are differentiated in the market.

THE AITE MATRIX COMPONENTS ANALYSIS

Figure 10 displays how each vendor scored in the various areas of importance. Each vendor is rated, in part, based on its own data provided when responding to the RFI distributed by Aite Group as well as on product demos and follow-up discussions as part of the Aite Matrix process. Ratings are also driven by the reference customers of the examined vendors to support a multidimensional rating.

Figure 10: Aite Matrix Components Analysis by Heat Map

Vendors	Vendor stability	Client strength	Client service	Product features
	91%	69%	81%	67%
	74%	86%	77%	80%
	83%	81%	73%	62%
	85%	73%	83%	79%
	83%	81%	81%	76%
	90%	81%	80%	82%
	95%	85%	91%	83%
SAS Institute	92%	85%	85%	91%

BEST IN CLASS ↑   **Legend:**

91% - 100%

81% - 90%

65% - 80%

INCUMBENT/ EMERGING ↓   <65%

Source: Vendors, Aite Group

VENDOR STABILITY

SAS Institute is among the highest-scoring vendors with regard to vendor stability. Vendor stability metrics comprise number of employees, years in business, and the length of time that the CEO has been heading up the company. It also considers financial stability, which comprises revenue estimates, profitability, recurring revenue, growth rates, and share of revenue invested in R&D. Finally, it takes into account third-party risk assessments and client reference checks regarding the quality of the management team.

CLIENT STRENGTH

SAS Institute scores highly in client strength. The client strength score is based on the number of clients, the diversity of the client base, average client tenure and retention rate, percentage of revenue accounted for by the largest client (i.e., single point of failure), new client wins, client reference checks on the likelihood of replacing the current vendor solution, and the vendor's reputation.

CLIENT SERVICE

Client service scores are based on a large number of metrics, including SLAs, pricing structure, implementation costs, service and maintenance costs, client reference checks on service and support, and client reference checks on the vendor's ability to deliver on promises and cost value.

PRODUCT FEATURES

SAS Institute excels in product features. These scores are based on client references that reviewed user interface, support for customization, ease of implementation and integration, responsiveness to product changes, satisfaction with features and functionalities, and the user experience based on product demos and briefings.

THE AITE MATRIX RECOGNITION

To recap, the results of the Aite Matrix recognition are driven by three major factors:

- Vendor-provided information based on Aite Group's detailed Aite Matrix RFI document

- Participating vendors' client reference feedback or feedback sourced independently by Aite Group

- Analysis based on market knowledge and product demos provided by participating vendors

Figure 11 represents the final Aite Matrix evaluation, highlighting the leading vendors in the market.

Figure 11: Payment Integrity Aite Matrix
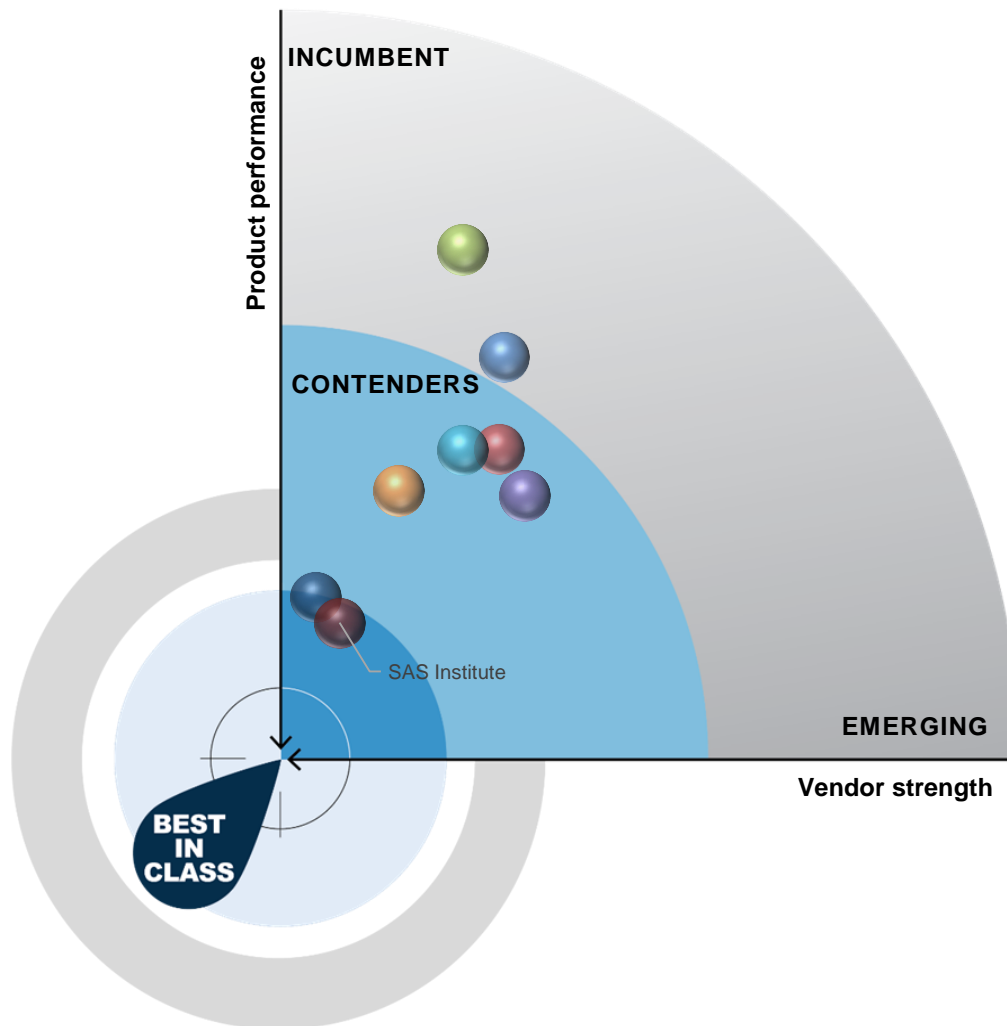
Source: Vendors, Aite Group

BEST-IN-CLASS VENDOR: SAS INSTITUTE

SAS Institute is a multinational developer of analytics software. Its payment integrity product, SAS D&I for Health Care, combines rules, anomaly detection, and predictive methods to detect actors who exhibit improper treatment or billing and payment behavior at every stage of the claims process, and stop improper payments before claims are paid.

- **Vendor strength:** The company's stability as a vendor, its brand recognition, and its desirable product features outpace those of its peers.

- **Product performance:** SAS Institute's legacy and strength in data analytics and aggregation shine, bringing it to the top of the Aite Matrix. Building on its core competence in data, SAS Institute analyzes healthcare claims data, drawing from over 1,400 scenarios that trigger alerts accompanied with a risk value.

BEST IN CLASS: SAS INSTITUTE

SAS Institute is a multinational developer of analytics software. SAS Institute's payment integrity product, SAS D&I for Health Care, combines rules, anomaly detection, and predictive methods to detect actors who exhibit improper treatment, billing behavior, and payment behavior at every stage of the claims process, and to stop improper payments before claims are paid. SIUs are likely to use the data at the post-pay phase, while chief financial officers will opt to access the data for real-time insights.

BASIC FIRM AND PRODUCT INFORMATION

- **Headquarters:** Cary, North Carolina

- **Years in business:** 45, 32 active in healthcare

- **Number of employees:** 13,939 globally

- **Ownership:** Privately held

- **Key financial information:** SAS Institute is a profitable company that has more than US$3.1 billion in revenue, with US$50 million of that generated from healthcare. Half to three-quarters of that figure comes from recurring revenue. The company invests more than 25% of revenue back into R&D.

- **Key products and services:**

  - **Products**: D&I for Health Care

  - **Services:** The core architecture, SAS Viya, is based on a modern cloud-ready microservices architecture. The microservices are loosely coupled and can be independently scaled for both high availability and workload balancing.

    SAS Viya provides multiple run-time environments to meet specific characteristics of different workloads. SAS Cloud Analytics Services provides a high-performance massively parallel in-memory processing engine for data management and analytics. SAS Microanalytic Services is a memory-resident high-performance program execution engine for real-time or near real-time use cases.

- **Target customer base:** Healthcare payers (private and government)

- **Number of clients:** SAS Institute's software is installed at more than 83,000 business, government, and university sites, across 147 countries; 1,308 of these customers are specific to healthcare.

- **Average net new clients per year (or average client tenure):** Not disclosed

- **Global footprint:** The company has offices in Africa, Europe, the Middle East, Latin America and the Caribbean, North America, and the Asia-Pacific.

- **Implementation options:** D&I for Health Care is deployed on-site, hosted, or on the cloud.

- **Pricing structure:** Pricing structure is based on the number of covered lives. Pricing for maintenance is 28% of software licensing cost. Scope includes software updates, 24/7/365 support, and online issue tracking. Training prices vary widely, based on scope and on-site/virtual options.

KEY FEATURES AND FUNCTIONALITY BASED ON PRODUCT DEMO

- SAS Institute's solution is fueled by data analytics and grounded in three main components—analytic alerts, link analysis, and case management.

- The offering is a single, integrated end-to-end solution for detecting, preventing, and managing FWA and improper payments. The solution includes components for detection, alert management, and disposition, along with predefined investigation workflows, content management, and advanced analytics. It also includes link analytics to detect and visualize hidden risky fraud rings, collusive networks, and relationships among healthcare entities otherwise invisible to investigators.

- SAS Institute's solution ingests multiple years of claims data, updated monthly, as well as a history of past provider scores. A network view provides a visual look at links to identify potential kickback schemes. At a broader level than a provider-specific view is the ability to look at trends at a county or regional level.

- Alert capabilities—an aggregated set of risk values—can be plugged in anywhere, as can decisioning support.

- The user interface for SIUs entails a sign-in to arrive at a work landing page where they can view audit files, along with scenario violations by procedure codes (i.e., unusual treatments, duplicate billing, phantom providers, or policy violations). This interface provides the documentation and artifacts for discovery.

- A prescribed action could be prevention, recovery, credentialing, targeted audit, provider network management, system error correction/enhancement, supporting fraud investigations, and sending referrals to appropriate authorities.

- Rules are related to CMS payment policies or are customized for a payer's payment policies and are checked against the data. Any scenario violations, such as unusual treatments, duplicate billing, or policy violations, can be broken down into granular components, such as by procedure code.

- Users can suppress certain flags, so they don't come up down the road. In similar fashion, they can close out any flagged claims that turn out to be a false positive or on which they don't wish to take further action.

TOP THREE STRATEGIC PRODUCT INITIATIVES OVER THE LAST 12 TO 18 MONTHS

- Alert management enhancements, including support for reinvestigating alert history, user interface suppression of scenarios, partial disposition of scenario-fired events, operation reports for alert assignment, and an improved user experience for alert domain, strategy, and queue administration

- Flows and scenario enhancements, including retention of flow edit history, entity scorecard generation through flows, filtering out repeatedly triggered events to save space and improve system performance, improved transaction replication performance, redesign of flow test results, and the scheduling of flows

- Workflow enhancements, including hardcoded values, an escalation process for workflow tasks, ability to capture who is currently assigned a user task and who manually starts a workflow, a group detail view in reports, the option for null values in workflow variables, and the ability to select the user type when updating an entity

TOP THREE STRATEGIC PRODUCT INITIATIVES IN THE NEXT 12 TO 18 MONTHS

- **Completion of cloud-native architecture:** The company will complete architecture changes to enable fully cloud-native deployments.

- **Integration with a real-time decisioning engine:** The company will complete its integration with the SAS real-time decisioning engine to support true pre-payment analysis and enable fraud/integrity analytics on the edge (such as embedded in medical devices, wearables, and durable medical equipment).

- **Text analytics:** The vendor plans to finish integrating its Visual Text Analytics product into D&I for Health Care to enable analysis of unstructured text to generate fraud cases.

CLIENT FEEDBACK

Table C displays the vendor's strengths and challenges.

Table C: Key Strengths and Challenges—SAS Institute

Strengths	Challenges
Cutting-edge and flexible tools	Client training is a challenge. Clients may include end users such as nurses or investigators who do not necessarily have a technology background.
Experience in FWA and analytics	SAS Institute would benefit from improving the usability of its advanced analytics, allowing users to move between modules (case management audit module versus "SAS studio," for example, where clients pull data and run queries). Today, there is a fair amount of effort involved with importing/exporting between modules, which would benefit from streamlining.
Competitive pricing and comprehensive solution	Clients want better integration of outside documents (i.e., Excel documents with formulas and macros) and external databases, which are important for FWA investigations (like LEIE or law enforcement type databases) and to be able to download/import the information that is relevant to the investigation.

Strengths	Challenges
Social network analysis capabilities that identify recipients with multiple providers	The vendor needs to expand the existing data points and link them, expanding on the social network analysis by adding public records, to enhance the user experience.

Source: Aite Group

AITE GROUP'S TAKE

SAS' legacy and strength in data analytics and aggregation come into play at a time when health plans can benefit from robust analytics capabilities to uncover irregular claim submissions. Building on its core competence, SAS analyzes healthcare claims data using a package of over 1,400 scenarios that trigger alerts, accompanied with a risk value.

CONCLUSION

Commercial and federal health plans:

- While you want to see results, it is important to understand that results take time to emerge in full color. That should not delay your decision to invest in a solution or solutions or ignore their benefits.

- Consider bringing compliance, audit, finance, and claims processing leaders into one cross-functional team to streamline and centralize the decision-making process and avoid paying for duplicate services from multiple vendors.

- Unique vendor management and orchestration tools that can help health plans manage multiple vendors bring value, and they are worth exploring as part of vendor and partner strategy.

- Vendors are committed to hearing health plan clients' wishes and working with them to address their customized and unique needs, so focus on aligning your expectations with what the vendor can deliver.

- Take advantage of the vendor's R&D investments and ensure you are getting adequate support to use those tools optimally.

ABOUT AITE GROUP

Aite Group is a global research and advisory firm delivering comprehensive, actionable advice on business, technology, and regulatory issues and their impact on the financial services industry. With expertise in banking, payments, insurance, wealth management, and the capital markets, we guide financial institutions, technology providers, and consulting firms worldwide. We partner with our clients, revealing their blind spots and delivering insights to make their businesses smarter and stronger. Visit us on the web and connect with us on Twitter and LinkedIn.

AUTHOR INFORMATION

Inci Kaya
+1.617.398.5047
ikaya@aitegroup.com

Research Design & Data:

Sarah Fitzsimmons
+1.617.398.5039
sfitzsimmons@aitegroup.com

CONTACT

For more information on research and consulting services, please contact:

Aite Group Sales
+1.617.338.6050
sales@aitegroup.com

For all press and conference inquiries, please contact:

Aite Group PR
+1.617.398.5048
pr@aitegroup.com

For all other inquiries, please contact:

info@aitegroup.com