THE BIG BOOK OF SPECIALTY PHARMACY IT SUCCESS STORIES
**ABOUT 4TH SOURCE**

4th Source has become one of the fastest growing success stories in digital transformation across the Americas. The Irving, TX headquartered company designs, develops, and implements software and solutions, from advanced analytics and big data, to omni-channel commerce and cloud services. 4th Source helps established and new leading companies thrive in the Digital Era in multiple industries including financial services, healthcare, retail, and consumer goods.

**CELEBRATING 15 YEARS OF SPECIALTY PHARMACY IT SUCCESS**

Over the past fifteen years, 4th Source has worked with many of the largest specialty pharmacy organizations in the world and has delivered tens of millions of dollars in IT cost benefits. In addition to full-stack development, QE, informatics, and QA, 4th Source serves multiple areas in specialty pharmacy such as automation, regulatory compliance, system reliability, and manufacturing reporting.

“We were automating before it was on everyone’s radar – because it made sense in many areas. Now it’s expected, but if a vendor doesn’t have system-wide experience, and operations experience, they’ll tread water. This is why we end up training other vendors with larger clients. We’d rather see a project end up as a success by teaming up with another vendor, or managing them, than cost our customers extra time and money – especially in healthcare.”

–Doug Miller  
4th Source Senior Director,  
Client Services

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www.4thSource.com
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INTRODUCTION

According to a recent survey by healthcare market research agency Black Book, 39% of CIOs and technology managers described their outsourcing vendors as “below expectations.” The survey identified 68 IT outsourcing vendors. Only 7 were described as “exceeding expectations.”

Specialty Pharmacy organizations struggle to find solution-ready IT resources; those with process and operational insight who can make an immediate impact. High turnover plagues the industry as vendors have not adapted to meet the needs of customers. 82% of healthcare IT departments have signed new outsourcing contracts since Q3 2016, or are in the process of vendor selection. In addition, 77% of CMIOs are most frustrated when having to manage a vendor with limited experience in healthcare operations.

Traditional outsourcing models do not fit today’s healthcare environment. Many IT companies employ armies of people to do specific technology work, often referred to as the “heads-on-sticks” approach. This method of outsourcing only focuses on technology, not business implications, not operations, and not solutions.

The vendor’s new role is connected to the whole enterprise; responsiveness, data management, change management, and business and operational process competence are what matters.

Specialty pharmacy organizations face challenges in market consolidation, regulatory compliance, operational agility, and financial and revenue management. Under pressure from the federal government to cap price increases, and taking into account rebates and discounts, spending on prescription medication is projected to hold at 2 to 5 percent through 2021.

Now, more than ever, IT is central to all operations from managing data to ensuring compliance. The mad dash for modernization has many organizations making decisions faster than their IT resources (in house, but especially outsourced) can keep up.

The following document showcases the potential of pharmacy IT when a vendor brings over a decade of pharmacy business and process experience, a culture of flexibility, and dedicated problem solvers to accelerate pharmacy IT projects.

The results matter. Completing projects correctly the first time, on time, matters. Not a “let’s try again” or a “we have to call in a specialist.” In all cases below, you’ll find that 4th Source are the specialists.
Transformational technology enables pharmacy teams to improve the speed and reliability of services, but processes are the heart of optimization. The following projects showcase over ten years of specialty process experience, including a specialty pharmacy cost-to-fill assessment, process optimization projects, automation, and improvements to PCA (patient care advocate) services.
SPECIALTY PHARMACY COST-TO-FILL ASSESSMENT LEADS TO PROCESS OPTIMIZATION; INCREASES AUTOMATION TO 50% IN MULTIPLE AREAS

THE ASSESSMENT

4th Source was an established partner of this pharmacy customer with a ten-year track record of discovering and enacting systematic changes to lower costs. A team was assembled to conduct a ten-week assessment of the customer’s existing platform handling customer service, order processing, and fulfillment.

In an effort to position themselves for a digital transformation, the customer was measuring their system costs, and wanted to find out:

1. What a transformation would mean from a cost-reduction perspective.

2. How much they could lower costs by adjusting existing environments.

Using Business Process Improvement as a Roadmap for Digital Transformation

Increasing automation was a focal point of cost reduction. 4th Source, having been a trusted partner for over a decade, was able to nurture profitability and growth through process automation and system enhancements. The assessment also mapped a digital transformation path, showing how the customer could optimize processes and technologies for a seamless transition to new technologies.

Sixty projects were identified that met the criteria for improvement. 4th Source and the customer leadership team chose the five most impactful projects; focused on the fastest return, or where the lowest investment met the fastest return. The customer quickly greenlit the projects, and the assessment team switched gears to execute automation and business process improvement (BPI).

The customer never had to figure out what to focus on to drive costs out of their system. 4th Source took care of everything from discovery to implementation, and measured cost savings with data.
SAVING MILLIONS OF DOLLARS IN SHIPPING COSTS

4th Source, through a business process assessment, found opportunities for the customer to save millions of dollars annually by reducing shipping costs without switching carriers. The project involved:

- Upgrading the profiles of millions of patients
- Developing ERP system enhancements
- Patient Care Advocate process improvements

PROJECT EXECUTION: PATIENT PROFILE UPGRADES, SYSTEM ENHANCEMENTS, PROCESS IMPROVEMENT

The initial solution seemed simple at first; change all shipment defaults from next-day air to next-day air saver – which lowers the cost of postage by guaranteeing that the package will arrive at any time the next day, as opposed to a specific time – usually in the morning. The time of day would not affect medications dispensed, which is why the excess cost was unwarranted. The execution, however, required specific enhancements to the customer ERP system, updates to all patient accounts, and insight into pharmacy processes to ensure operations would not be negatively impacted. 4th Source completed the project within three months, and the customer did not have to switch carriers.

PATIENT PROFILE UPGRADES:

Patient profiles on the main ERP system had a default preferred shipping method attached to them. 4th Source found that profile preferences were overriding the opportunity to change the preferred shipping method.

In order to change the default shipping method from next-day to next-day saver, the team:

1. Identified the affected population – those who did not need their medication delivered at a specific time
2. Systematically updated patient profiles through database scripts

SYSTEM ENHANCEMENTS:

During the three-month turnaround, 4th Source developed enhancements within the ERP system so that it would select next-day air saver while patient care advocates (PCAs) were scheduling orders. In cases where patients did need their medication at a specific time (i.e. they forgot medication during a trip and needed it the next morning) the PCA would have the option of selecting a faster shipping method.

As part of the process, 4th Source ensured compliance with all pharmacy practice standards, making sure that system changes were not going to inadvertently impact any patients. The project was completed on time and the customer has saved millions of dollars per year on shipping.
PCA PROCESS IMPROVEMENT: HOLD THE PHONE. ACTUALLY, DON’T HOLD THE PHONE...

Another project identified by the initial assessment involved customer service calls and order process improvements. The ordering process required PCAs to access different kinds of information, which was separated within the application, itself, or in other systems. As they accessed the information, customers were often placed on hold. The pharmacy customer recognized an opportunity to provide better service, and spend less time filling more orders.

Today, any information that representatives need for ordering is always at their fingertips. **The customer has reduced each call and handle time by approximately 10%.**

Imagine, as a customer, getting a real person on the phone faster, and having your issue resolved in less time. **Customers are willing to spend 13% more** with companies they believe provide an excellent experience.

4th Source designed a faster process. They consolidated steps and developed system enhancements to show necessary information on one screen. Due to the intuitive nature of the changes, additional training requirements were minimal.
REDEFINING SPECIALTY PHARMACY PATIENT CARE PROGRAM WITH SMART ASSESSMENT

SPECIALTY PHARMACY PATIENT SERVICES

Patient advocacy and medication therapy management are a central component of specialty pharmacy, which treats people with complex diseases. These high-touch services involve:

- Helping patients understand their medication
- Scheduling prescription dosage and refills
- Supporting patients who experience side-effects
- Educating patients on what medicines they can and cannot take while being treated

Certain drugs have a risk evaluation and mitigation strategy (REMS) program. Such regulations require pharmacists to be trained in specific dispensing methods and follow-up treatment with patients. Patient care advocates (PCAs) are the first point of contact and drive follow-up conversations.

4th Source customer’s PCAs were relying on manual processes, such as note-taking, to drive patient care. Calls were often inefficient and inconsistent, generating unnecessary risk for patients during treatment assessments. The system was based on the knowledge and experience of individuals, and not on a defined process. There was a clear knowledge gap between ten-year veterans and new hires. New hires might not know what questions to ask based on patient responses, or skip important prompts.

The specialty pharmacy group hired 4th Source to come up with a unified process to capture and report patient assessments, and develop supporting architecture. 4th Source implemented a Smart Assessment system that automatically drives PCAs through patient care; it prompts action based on patient responses.

**Results:**

- Automation of manual processes
- Improved patient care
- Consistency in system reporting
- Increased productivity
- A reduction in PCA training time
- Access to safe, secure population trends
CHOOSING THE DIGITAL STRONG PATH WITH SMART ASSESSMENT

4th Source helped the specialty team develop a process and application, called the Smart Assessment, to drive patient advocacy in real time. The application is dynamic and configurable, which is important due to the many variables of patient therapies.

The Smart Assessment consists of a process nicknamed “FQE” (Fast Quick Entry), supporting architecture and system integration. It would prompt PCAs as they drove calls to success. Each script was based on a patient’s unique history, and the therapy they received, relying on trigger points to drive action. They include how to take each dosage (i.e. with food or at night), making sure patients do not combine certain medications, and scheduling refills.

The FQE process became the go-forward standard for managing patient assessments.

DYNAMIC & CONNECTED

All PCA’s could drive calls to success with the new system, regardless of their experience. The Smart Assessment would prompt the next action, reducing PCA training while increasing the quality and speed at which specialty services were delivered.

System automation was built in, further expediting the process. If, for example, a question was gender-based, and the patient was a male, the assessment would skip any female-specific questions such as questions about pregnancy.

The system was also built to connect patient calls to a single system of record. Patient health information (PHI) captured in the assessment would automatically update the PHI file, and tie into an application that schedules prescription refills and invoicing.

REPORTING

The Smart Assessment model opened the door to population group information while keeping individual patient information safe. The added insight would be used to improve therapy treatment plans and service.

There were universal questions that needed to be asked across population groups. If, for example, patients were losing weight because of their medication, it could be documented and reported. Such information was not accessible in the prior system without extensive manual analysis.

Similarly, if a patient population was responding positively to a treatment update, that information could be reported to enhance future therapies.

4th Source’s knowledge of specialty pharmacy business processes enabled the team to roll out a process and support architecture within six months.
The demand for digital services are at an all-time high, and most IT departments struggle to keep up with innovation, security, asset management, and data management. Ushering in the age of the connected enterprise, ServiceNow is the ultimate productivity system, elevating everyday tasks through a cloud-based IT framework. The following section depicts how a Children's Research Hospital leans on 4th Source to implement ServiceNow, gain visibility into digital and physical assets, and expand their instance across pharmacy and other departments.
HOSPITAL DIRECTOR OF IT SERVICE MANAGEMENT LEVERSAGES SERVICENOW TO IMPROVE IT, SECURITY, ASSET MANAGEMENT, & OPERATIONS

With 3,600 staff members caring for more than 7,500 children each year, this children's research hospital needs to be responsive to improve outcomes. Like many hospitals, they developed multiple custom applications that became difficult to support over time, and were facing a problem quantifying internal work. Different departments were using different systems. Processes and procedures were disjointed, adding pressure to meet regular inventory audit objectives.

A new data center and the need for more robust patch management security motivated the hospital to implement ServiceNow.

9.65 Customer Satisfaction Score
incident management | problem management | change management | CMDB configurations

TAKING THE DIGITAL STRONG PATH

The children's research hospital chose 4th Source as their ServiceNow implementation partner and continued services provider.

4th Source conducted several onsite workshops to guide the hospital team through implementation, which was accelerated through clear planning and the use of quick-start solutions. The hospital stopped using of third party asset software, consolidating different asset monitoring applications into the asset management application within ServiceNow and their CMDB under one license. ServiceNow was rolled out within four months of the initial engagement.

“4th Source helped us zero in on ServiceNow, and having a trusted partner was important. We knew that 4th Source would do essentially whatever it took to make this project successful. That kind of attitude and trust was essential.”

– Director of IT Service Management at the Children’s Research Hospital

ASSET MANAGEMENT & SECURITY

Asset management and configuration management databases were implemented so the hospital can know exactly where assets are at all times, lowering costs of semi-annual inventory audits. Information security dramatically improved as a result. Asset tracking enabled field technicians to quickly identify at-risk computers for patch updates. Originally housed in an Excel file, 4th Source moved task operations into ServiceNow where the CMDB ties patch updates to overall system health in real time.

DATA CENTER MAPPING & PREDICTIVE ANALYTICS

Performance analytics enable the hospital to manage incidents longitudinally, and not just as a point in time. 4th Source helped the hospital IT team develop a relationship reporting tool for their new data center. The tool uses predictive analytics to bridge and monitor physical hosts to virtual servers, and the applications that are installed or supported on them. This tool is one of the keys in making sure they move their equipment into the new data center on an application by application basis without disrupting operations.
SERVICENOW EXPANSION TO PHARMACY

A major goal for the hospital was to expand ServiceNow across departments and operationalize processes, that they can be executed in a repeatable and measurable fashion instead of being done in an ad hoc manner from emails. The benefits of ServiceNow in operations are evident in the hospital’s Pharmacy and Clinical Informatics departments:

PHARMACY

The hospital’s Pharmacy Group has taken advantage of ServiceNow to track requests for their information systems group, and for creating new drug builds.

Pharmacy, Clinical Informatics, and Finance are involved whenever a new drug is added to the hospital’s record system. 4th Source developed a ServiceNow workflow so each department can add tasks, manage quality control, and prompt sign-offs.

Patient safety is a factor when developing new drugs. Housing the workflow and drug build tracking within one system simplifies the process with a clear audit trail.

Azanias Sanchez, at 4th Source, actually built [the new drug build workflow] in an exceptional way. We understood that users would make some small changes, and Azanias was very responsive. We essentially had a one-day turnaround on requests coming from pharmacy users.”

– Director of IT Service Management at the Children’s Research Hospital

LEAVING COMPLEXITY BEHIND

Uncertainty in healthcare is spurring decisions to rapidly change care models and payment methods. The demands of more responsive care, which run through IT, create challenges for organizations to stay connected to their mission. IT has been called upon to pave the way forward. ServiceNow has enabled the children’s hospital IT team to transcend “usual” IT work, and become real-time responders within a growing connected enterprise.
Industry consolidation has increased as regulatory pressure mounts to limit pricing and display efficacy. This section contains information on post-merger data migrations, patient information services, and system integration services. One Fortune 25 PBM accelerated M&A related IT projects without interrupting patient services, and has saved millions of dollars.
POST-MERGER IT: LEVERAGING SPECIALTY PHARMACY EXPERIENCE TO MIGRATE SYSTEMS, PREVENT DUPLICATION, AND DEVELOP A PATIENT PORTAL AT A $4.5MM LOWER BID

SPECIALTY PHARMACY MERGER SYSTEM INTEGRATION:

The world’s largest pharmacy benefits management organization (PBM) was in the process of acquiring a specialty pharmacy group. The go-forward platform had been owned by the incoming subsidiary, and the PBM had hired 4th Source to consolidate multiple systems and processes for the newly formed specialty division.

System integration is a normal function of mergers and acquisitions. Part of the new mission was to ensure that service to patients and network pharmacies would be uninterrupted. An incoming customer, the largest affected by the merger, had not yet been transitioned. They required that the PBM build a self-service patient portal where patients could order refills, and check their prescription and shipment statuses.

The new customer could not be migrated until the requirement was met.
One vendor group suggested a system rewrite. This group lacked knowledge of the current systems, business unit, and processes involved, and thought that starting over on their terms would yield the best result.

**MEET INCOMING CUSTOMER REQUIREMENTS FAST WITH A MINIMAL FOOTPRINT**

The PBM would need to flesh out their existing specialty pharmacy patient portal within the context of the go-forward system. Vendors from both sides of the merger were asked to solve the challenge quickly. Two options emerged:

**4th Source QUOTE**

The 4th Source project team, having already been working on system integration, understood specialty pharmacy, and what it would take to create a secure customer-facing portal within the go-forward system.

**COMPETITOR BID**

One vendor group suggested a system rewrite. This group lacked knowledge of the current systems, business unit, and processes involved, and thought that starting over on their terms would yield the best result.
CHOOSING THE DIGITAL STRONG PATH

The opposing vendor group had a much broader scope, but they could not figure out how to narrow the focus to meet the new customer’s requirements.

4th Source already knew:
- What was available from a technology standpoint
- How to leverage components of a previous project when developing the new patient portal
- What was critical and what was not

The team advised the specialty pharmacy division on the decision to determine what was necessary for the go-forward system vs add-ons.

An added risk of rewriting the platform was that the specialty division would run two platforms until the five-million-dollar rewrite was finished. Running multiple systems is complex and comes with a high cost. The PBM would face duality across subsidiary groups, and would have to maintain those applications.

The customer saw 4th Source option as a faster way to meet customer requirements at a 90% lower bid than the competing estimate, and within a manageable timeframe.

RESULTS:
- $4.5MM lower bid than competitors*
- Prevention of system duality – leaving minimal footprint
- Successful M&A system integration with added patient portal
- Effective project management with external teams

*The 4th Source team figured out how to create the patient portal and meet customer requirements without having to build new systems from scratch.
MIGRATING SENSITIVE PATIENT INFORMATION BETWEEN DISPARATE SYSTEMS

A specialty pharmacy merger saw the world’s largest PBM gain over one million new patients, and two systems to support them. They decided to migrate all patient services to their existing ERP. 4th Source was brought in to:

- Create a project plan
- Develop a migration solution
- Develop new services and processes
- QA the migration & new functionality
- Ensure patients would not be negatively affected

The PBM understood the gravity of the project, and established a two-year timeline. 4th Source took a digital strong approach to meet all deadlines and requirements successfully.

MEASURING SUCCESS

Patient migration, as a determinant factor, lacked congruency. 4th Source and the PBM determined to go with a plan-based measurement scheme organized by population tiers. Patients covered under the same plans had similar data, and their migration could be more clearly managed.

LEVERAGING EXISTING ERP FUNCTIONALITY TO CREATE AN ETL MIGRATION TOOL

4th Source realized that building new functionality would raise costs and dramatically extend the project timeline. The team called on their system experience to extract the logic from an existing transfer process and create an automated ETL (Extract-Transform-Load) migration framework, which involved the following:

1. Split models in both systems
2. Create a middle database to store patient data in the structure of the incoming system
3. Within the middle database, translate the structure to the incumbent system, ensuring accuracy
4. Migrate patient data onto the incumbent platform, creating and modifying objects
AN EVER-ACCELERATING SCHEDULE

The schedule accelerated as the team got to know the new, incoming system. The first migration came at the six-month mark; then a migration was completed every three months, then every month, and as the team grew more confident with their system, they were completing a large migration every two weeks.

QA

Another key innovation component came from the QA team. The short timeline constrained the team’s ability to validate a large number of patients. They developed a QA strategy to essentially beat the clock; it involved test planning and an automation framework to support testing. Automation was not necessarily used as a regression tool but as a testing accelerator.

MOVING DATA IS ONLY HALF OF THE SOLUTION

A key critical success factor was that patient data would be usable after migrated. PCA’s needed to work with patient profiles to create subscriptions, set up payments, and manage their profile. New plans and patient types led to the creation of new functionality in the PBM’s main ERP system.

Patients came first. They had to make sure that when a patient was migrated that they were able to service them without a problem. What began as an M&A data migration of over one million patients, became a revamp of the core specialty pharmacy system. 4th Source simplified and streamlined many of the system’s processes to improve patient care.


**REVITALIZING A CLINICAL RESEARCH PROGRAM**

**RESULTS**
- Dual system merger
- 13.9X faster protocol migration
- Five-week vendor transition
- 24 successful protocol migrations vs. 1 failed attempt from the prior vendor

4th Source has been the CRIS and Cerner partner for this children’s research hospital for over four years.

The CRIS migration project had two lasting effects:
1. It cut maintenance costs in half – by eliminating an entire system
2. It enabled the customer to renew their infrastructure

**14X FASTER DATA. LESS HEADACHES.**

A clinical research information system (CRIS) is the nerve center of research hospitals. Physicians, caretakers, and researchers rely on CRIS to manage their programs.

An offshore vendor was painfully slow in CRIS development and support for one of the most prominent Children’s Research Hospitals in the U.S., which supports 47 departments and over 400 research protocols. With no sense of urgency from their incumbent vendor in sight, the hospital switched to a digital strong path with 4th Source.

4th Source merged duplicate systems, developed enhancements, and continues to support the updated system. The increase in productivity and work completed for the Children’s Cancer Research Hospital reflected no increase in cost compared to the previous offshore vendor.

**PREVIOUS VENDOR**
1. Migrated one protocol (only in testing – unsuccessful in production)
2. Development test took 6.5 hours to run

**4th Source**
1. Successfully migrated all 24 protocols
2. Production run took 28 minutes
The culmination of process excellence, pharmacy operations experience, and digital transformation is on full display when one PBM saves tens of millions on annual taxes with auto payment software, and realizes tens of millions in additional cost benefits from restructuring specialty pharmacy RCM systems.
RESTRUCTURING RCM SYSTEMS TO ROOT OUT VARIANCES

TRANSPARENCY IN PAYMENT SYSTEMS

4th Source worked with a PBM customer to systematically root out bad debt through automated revenue cycle management (RCM) solutions.

A major challenge was not being able to clearly identify the proper insurance plan for a single patient as the system prompted several options. System users (mostly patient care advocates - or PCAs) were seeing between thirty and fifty plan options per patient when there should only be one.

Each time a wrong payer option was selected, it would take between 60 and 90 days to correct the billing mistake. By the time the correct payer was billed, they would cite overdue SLA and other contractual agreements, nullifying their responsibility. The PBM would then have no choice but to absorb the treatment cost, which can add up to thousands of dollars per patient in the specialty pharmacy division.

4th Source had been working with this PBM for over thirteen years, and had become the incumbent subject matter experts in all specialty pharmacy systems and processes. The team was called on to:

- Analyze the causes of bad debt
- Improve intake functionality
- Close gaps on RCM processes
- Provide faster reporting and data analysis
- Reduce bad debt costs absorbed by the PBM

PCAs were sorting through 30-50 plan options per patient when there should have been only 1.

The RCM solution required enabling the system to update patient insurance data, payer data, and front-end processes in real time.

LEGACY SYSTEM
- Crowded
- One screen contained multiple processes
- Unclear data structure
- Difficult to access data

NEW SYSTEM
- Intuitive structure
- Distinguishes roles & processes
- Clear hierarchy of data
- Simpler data access & management
- Automated updates

ACCELERATING THE IT AGENDA IN SPECIALTY PHARMACY
CALLING IN THE SUBJECT MATTER EXPERTS

The platform in which the RCM systems lived was dated. The PBM decided to restructure their systems on a new, more modern platform, that was easier to support and more logical for users. They spearheaded their digital transformation effort with the RCM project, which included:

- New platform technology
- Data restructuring
- Updated processes
- Automation

NEW PLATFORM TECHNOLOGY:

4th Source grew its Pega skillset to the point that the team has been asked to replace other Pega vendors due to their distinct knowledge of the legacy platform and RCM processes. The team leveraged database and systems load knowledge to create an ECS (enterprise class structure), giving them an optimal model to restructure payer setup.

The data management and IT teams weren’t the only people to call on 4th Source’s insight. Finance worked with 4th Source to clarify revenue variances and detect anomalies.

DATA RESTRUCTURING

The size of the legacy system database, and how overly indexed it was, posed a major challenge. 4th Source designed new system architecture and a nimble table structure that was easier to support. Users can now match the correct payer information with each patient and treatment plan.

AUTOMATION & MACHINE LEARNING

Automation was essential to accelerate the RCM deployment components and part of the QA performance, testing, and accuracy. In addition is building a risk evaluator system to deter future revenue variances and bad debt. The risk evaluator will be analyzing data trends to detect risk factors. An intelligent algorithm will learn patterns to predict issues across patient data and payer contracts, and flag any potential issue.
**AUTOMATIC PAYMENT SYSTEM SAVES FORTUNE 25 PBM TENS OF MILLIONS IN ANNUAL TAX FEES**

**NAVIGATING PHARMACY TAX CODES**

A Fortune 25 Pharmacy Benefits Management company (PBM), the largest in the world, was taking on the full tax burden of all medications dispensed, costing the company tens of millions of dollars annually. The company needed a mechanism to automatically charge payers – entities that finance or reimburse the cost of health services such as insurance carriers and plan sponsors – their share of taxes.

Prior to that, they paid all taxes on invoicing. The project to accurately distribute taxation required:

- Learning the many ways payers processed taxes
- Financial process audits
- Sourcing tax automation software
- Integrating tax software with financial IT systems
- Modifying all related workflows from shipment creation to payments receivable

**RESULTS:**

- 100% of taxes now accounted for
- Automatic payments established within the billing system
- A cost burden lowered by tens of millions of dollars annually
- The project was completed $800,000 under budget
SUBJECT MATTER EXPERTISE

The main ERP system contains hundreds of applications with many more workflows. The customer relied on 4th Source’s technical lead, and subject matter expert (SME) in finance to flesh out the requirements and affected workflows. The SME provided research and documentation to cover all possible tax scenarios.

The SME also provided consultation, analyzing requests from business administrators and gave feedback as to whether or not the request would work in the overall project scheme.

4th Source was involved with nearly every financial process in the main ERP system including:

- Invoicing
- Adjustments
- Denials
- Payments receivable

The team modified tables, screens, and workflows within each process – leading to the development of an automated tax allocation system. The team also ensured that all EDIs (electronic data interchange – how IT sends information from one system to another) were properly installed and modified.

A35 PAYMENTS & THE DIFFERENT METHODS PAYERS USE FOR TAXES

Not all payers process payments or data the same way. This was discovered by the 4th Source team during the requirements phase.

After reporting their findings and receiving approval, the team incorporated all potential methods of payer tax accommodation. Today, the system has been set up to automatically determine the specific tax amount to bill based on service codes. Depending on the code, the algorithm will either apply a specific formula per billable item, or distribute tax invoices for all items as a default value.

Either way, 100% of taxes are now correctly allocated: 70% of tax payment methods are currently covered, with the rest applying a default value. The result has been the full recovery of lost tax revenue.

4th Source designed, developed, and QA’d the new tax processes without impacting operations, and delivered the project $800,000 under budget.
The regulatory landscape is expected to continue to change. How quickly can pharmacy technologies adapt in an uncertain environment? The following projects show how the right tech partner can quickly adapt to regulatory compliance updates.

[06.1] RESTRUCTURING PHI SYSTEM ENVIRONMENTS

[06.2] ICD 10 CODE UPDATES
RESTRUCTURING PHI SYSTEM ENVIRONMENTS IMPROVES PBM DATA STRUCTURE & PATIENT SERVICES

MAKING SENSE OF TESTING ENVIRONMENTS

Release updates were causing system failures for a 4th Source PBM customer. Patient care advocates (PCAs) had to delay care as they were disrupted when attempting to access patient information in real time.

A 4th Source team uncovered discrepancies between how data was treated in non-production testing environments, and how it was treated upon a production release. The non-production environment would respond to updates within one second. The client would sign off on the update and move it to release, where it would take hours to move the code and data. 4th Source found that the testing environment used hundreds of data points, whereas the production environment consisted of millions of customer information fields.

DIGITAL STRONG = DATA STRONG

The 4th Source team, known to solve complicated data issues, created a testing environment that simulated the real number of data in production, but without displaying patient information – using algorithms to scramble sensitive data. This would ensure a PHI compliant environment for developing future enhancements.

The entire project took roughly thirty hours to complete, with the data scramble process taking eight hours. The result was a more stable release cycle – going from between ten and fifteen production issues per release, to one or two production issues every few months.

Before:
- 10 – 15 production issues per update/release
- System downtime
- Interrupted patient services

After:
- 1 – 2 production issues every few months
- Faster system release updates
- Improved patient service
- Increased productivity

The new testing environment accurately simulated the production environment, and changed the game for testing teams. Everyone from QA to UAT was on the same page, and release updates were being pushed out faster. In addition, the added productivity and service meant that patients were having less problems.
WHY MORE HEALTHCARE ORGANIZATIONS TURN TO 4TH SOURCE FOR COMPLIANCE

The 4th Source team understands healthcare and pharmacy businesses. The rapid solution turnaround was due to the team's knowledge of PHI regulations. The team undergoes PHI, Medicare, and Medicaid training every year. They also understand the systems and processes that impact patients, and, due to years of experience, can pinpoint causes of system disruption. In this case, the team quickly found that the testing and production environments were disparate.

4th Source offers IT compliance services for healthcare including data integration and migration, system modernization and compliance, pharmacy and healthcare process improvements, full stack software development, and ServiceNow solutions. The 4th Source team receives HIPAA, Medicaid, Medicare, and other regulatory training to maintain compliance standards.
GUIDING A PBM IT TEAM THROUGH ICD 10 CODE UPDATES WHILE AVOIDING PENALTIES

PHARMACY ICD CODE UPDATES

The World Health Organization uses an alpha-numeric classification system to publish known diseases. The system, named International Classification of Diseases, or ICD, has been updated regularly since 2003. U.S. healthcare organizations were required to update their codes by October 2016.

The update was substantial, affecting the way many systems read and processed patient data.

ICD-9 to ICD-10 Updates:
- 55,000 more diagnostic codes
- An increase of maximum characters from five to seven
- Double the number of disease & condition categories

ICD codes are closely tied to this PBM’s central ERP. The codes are primarily used to document patient status, as well as for dispensing medication, claims processing, billing, and other processes.

If the organization did not update its systems, they would face government financial penalties and disrupt patient care. ICD codes are tied to patient records, hospitals, and pharmacy manufacturers. The update also affected dispensing. If a dosage limit is ever exceeded, that patient faces serious health risks.

NAVIGATE DIGITAL TRANSFORMATION FASTER. DITCH THE COMPLEXITY.

A vendor who does not learn your unique system setup and processes will develop a generic model. 4th Source has developed a rapid transition methodology that the team uses to quickly learn and adapt new technologies to customer business models, partnering in the broader mission – because there is no generic organization.

RELEASEING BOTH ICD-9 & ICD-10 CODE

The longer ICD-10 codes affect every process in the pharmacy ERP system. To make sure that the system would continue to run as planned, 4th Source released both ICD-9 and ICD-10 codes. This process ensured that, if one screen wasn’t working as intended, that they could instantly pinpoint the affected area, and adjust.

Reporting was also affected. The team needed to set up rules within the ERP system in order to identify which version needs to take the report, the screens, and the processes.

CLEAN DELIVERY IN ONLY NINE MONTHS

The clean analysis and design optimized delivery. 4th Source divided deliveries into several releases so that teams could work in parallel. Several code releases were not the same size - which is a major reason the team did not wait to release everything at once.

Zero major issues occurred during the nine-month update, which was extraordinarily low considering the size of the project.
Freedom to innovate often means trusting a managed services partner (MSP) with your most critical systems. The following two projects define how 4th Source drives out system failures and high-ticket volumes, and how IT partners can adapt their partnership structure for ultimate flexibility in the age of digital transformation.
MANAGED SERVICES TEAM REDUCES TICKET VOLUMES BY 42% IN ONE YEAR

TOO MANY TICKETS

As organizations tip their scales towards digital transformation, they often experience ever-growing mission-critical outages. Such was the case with one 4th Source pharmacy customer, whose open rate was higher than the close rate every month, adding to a ticket volume of over 19,000 per year.

Before they could even think about reaping the rewards of modernization, the company rightfully turned their attention toward slowing the ticket open rate and closing incident gaps.

EXAMINING THE ROOT CAUSE & DEVELOPING SYSTEM ENHANCEMENTS

4th Source’s managed service team stepped in to systematically turn the tides. Of tickets opened, the team developed production code fixes based on prioritization and delivered on all contractual SLAs. They fixed root issues by diving into system codes and processes, developing application enhancements using GAPs.

Results:
- 100% of GAPs delivery in year one of the contract
- Paving the way to closing more tickets than were opened monthly: a 101.33% close rate

RESOLVING OPEN TICKETS

Some MSPs work to contain, others stomp out the fire entirely. The 4th Source team exceeded the year one goal by 180%.

Results:
- Ticket reduction of 42% in one year (the original requirement was 15%)
- 85% of all inbound tickets are now closed in 3 days or less

ACTIVE PREVENTION

In addition to ticket reduction, a strong managed services program includes maintenance to prevent future system issues. 4th Source built custom monitoring and update tools including real time queue processing and database automation.

4th Source’s 24/7 system monitoring is conducted by a 9-person dedicated support team and includes:
- Hourly system health checks with reporting
- Daily morning SMS to leadership
- 17 services monitored hourly
- 18 FTP processes monitored daily
- 35 batch jobs monitored daily

High ticket volumes cause unnecessary friction. There’s no need to hire both a consulting firm and a technology company to resolve process improvement issues. 4th Source offers consultative services to root out underlying IT support issues, and then dives under the hood with technical, cost-effective resources to develop lasting solutions.
SPOTLIGHT ON PERSISTENT TEAM™
SHIFTING THE MSP MODEL TO ELIMINATE SOWS & OVERTIME; OFFERING RESOURCE FLEXIBILITY

The need for reactive and fast IT services is needed more now than ever before; regardless of industry, organization, or specialty. IT users, patients, customers, clinicians, and healthcare staff cannot afford to wait on a broken process or slow systems.

Out of necessity to respond and accelerate our managed service offerings, 4th Source developed the Persistent Team™ model in one of the most demanding industries; consumer loyalty programs.

Brierley+Partners, creates, manages, and supports customer loyalty programs for more than 250 of the world’s largest travel and retail brands including Hertz, 7-Eleven, Hilton, Kellogg’s, Hard Rock, and many more. Forrester has recently named Brierley as a global leader in customer loyalty.

Prior to the Persistent Team™, 4th Source supplied Brierley with resources via a project-based staff augmentation service. Each SOW required two weeks to hire a new resource. The reactive nature of constantly hiring new people made it difficult to offer insight into how resources were leveraged, and limited the options to be flexible as new work came in.

4th Source introduced a Persistent Team™ model so that Brierley’s IT team could react faster to their customers, shifting the focus from individual projects to work completed. It involves a blended team covered under a single monthly rate, regardless of resource specialization and experience level. Unlike staff augmentation, the team gains experience with customer systems and business processes as they remain with that account over time. The blended team, in this case, used mostly for virtual services, work out of a single office, offering seamless collaboration between subject areas.

Persistent Team™ Specialties:
- Full-Stack Development
- QA
- Data services

Results:
- Elimination of SOWs
- A 33% IT resource increase in three months
- Faster, more responsive IT services
- Increase in service efficiencies
- More fluid communication
- No audit needed
DIGITAL STRONG RESULTS

Without the need to interview new people, and go through the SOW process with each project, Brierley was free to use 4th Source IT services as they needed – as an extension of their team. Persistent Team™ elevated collaboration, and increased the team’s knowledge of multiple areas of the customer’s business. Brierley’s IT team became more responsive and were able to deliver faster than before.

4th Source has eliminated the need for yearly audits, having recently earned SOC 2 compliance. Brierley, after adopting the Flexible Team™ model, has increased their IT resources by 33% in only three months.
STAFF AUGMENTATION

SOURCING MODEL COMPARISON

<table>
<thead>
<tr>
<th>STAFF AUGMENTATION</th>
<th>PERSISTENT TEAM</th>
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<tr>
<td>SOW contracts for each project</td>
<td>A single, flexible contract – no lead times</td>
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<tr>
<td>Focused on projects</td>
<td>Focused on work completed</td>
</tr>
<tr>
<td>Entrenched resources</td>
<td>Flexible, “swivel chair” resources</td>
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<tr>
<td>Added overtime</td>
<td>No over time charges, ever</td>
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<tr>
<td>Does not cover inevitable unforeseen work</td>
<td>4th Source adds a bench of resources to cover extra work, no questions asked</td>
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CITATIONS


ACCELERATE YOUR IT AGENDA WITH 4TH SOURCE

4th Source identifies new opportunities for improvement that today’s digital era opens up for organizations, creating value through our team of highly-specialized experts’ experience in information analysis, cloud scalability, omnichannel retail, user experience, and more. We connect this talent and technological potential with the needs of your business, providing your organization with a full Digital Powerhouse.

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