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LEGACY APPLICATION MANAGEMENT & SUPPORT BEST PRACTICES

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Table of Contents

Background

You've made the decision to transform your organization by implementing a new EHR. You've selected your best and brightest to focus on this initiative, but now there's a gap in your capabilities to maintain and manage your legacy systems. During this transformation, legacy applications may have different destinations. Some will carry forward, some may remain and continue to need legacy support, and some will be allowed to retire. Regardless of their destination, these legacy applications will need support for a certain amount of time.

Legacy applications can cause issues in your everyday IT operation. Staff can't focus on more strategic, forward-moving initiatives when they are still tied up with old. Maintaining these legacy applications leads to an increasing dependency on the limited number of staff with these skills. This can increase risk at an operational level due to a potentially lowered skill pool, as the number of employees with knowledge of these applications lessens. One strategy to meet your organizations' IT staffing needs is to outsource resources from an external company.
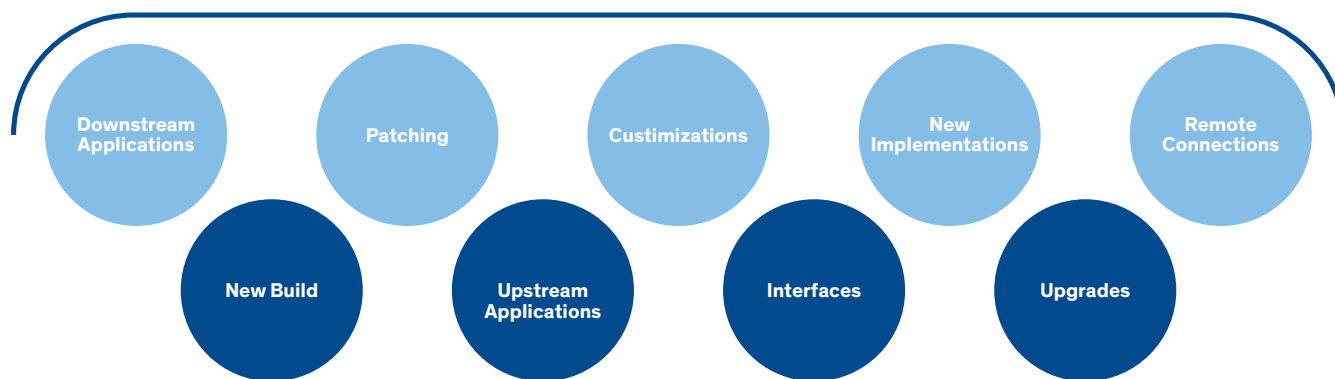
60%

of healthcare provider respondents indicated their organization outsourced at least some of their IT staffing needs to a vendor or consultant rather than hiring the workers directly.

> "Outsourcing vendors can combine a wide range of expertise with the ability to flex staff when needed, while maintaining state-of-the-art technology to improve efficiency and drive cost savings. In addition, Health IT service providers have become more adept at providing the services practices need, when they need them."

Abstract

When a HCO considers outsourcing any portion of their IT operation, there are many unknowns and considerations to assess. An ideal HIT service provider can offer coordinated, broad-ranging integrated services—a one-stop-shop for support. This way your practice only interacts with a single point of contact that addresses the needs and personality of the practice, and offers a tailored package of options. There isn't a need to go "shopping" for a variety of vendors, and have your staff spend most of their time trying to coordinate differing and even conflicting service providers.

Scope of Responsibilities

Downstream Applications	Patching	Custimizations	New Implementations	Remote Connections
New Build	Upstream Applications	Interfaces	Upgrades	

This whitepaper will look at best practices and processes in both exploring a legacy application management support partner and the transition it entails. It will look at the drivers behind outsourcing legacy application support and cover the metrics and KPIs to track the success of a support partner. When supporting a legacy application, your partner should take the complex and time-consuming tasks the organizations plate, allowing you to focus on more productive, strategic, operation improving and patient experience enhancing activities.

Drivers to Outsource Legacy Application Support

An application support partnership ensures availability of needed skill sets, that are vitally important during an EHR transition. Other benefits include predictable pricing over the long term as well as flexibility in ramping up and ramping down resource levels. For healthcare organizations that are facing major organizational changes and decreasing funds, these benefits could be "just what the doctor ordered."

Bringing in external staff may initially seem intimidating to internal staff, but in the case of an EHR transition, this can achieve buy in from staff. No one wants to be stuck working on old technology while everyone else learns the new system. Not only are they physically removed from their coworkers but they can't share the emotional journey of learning a new system either. Having your legacy applications managed by outside resources ensures your staff isn't stuck worrying where they'll fit and what their future looks like, which boosts overall morale.

"What we're seeing for benefits on this, I would say the biggest one is the morale of the team. Once you start announcing that you're moving to a new EHR, you can imagine the staff is sitting there thinking 'what's my future going to be, what does that look like?' This is a way you can move them into that future very quickly, get them focused, and out of the past. It's shows that you're supporting your

employees and your people." – Chuck Podesta, CIO, UC Irvine Health, healthsystemCIO.com Webinar: All Stars Panel: Supporting Yesterday's EHR While Launching Today's

Hiring additional internal staff to support your organization during a transition also results in an overflow of employees once it's over. A well-qualified outsourcing company will have a strong team to give you the complete support you need without the constraint you have in house. You have more control over consultants than full time resources internally. Let them deal with dialing down resources when less engagement is needed.

> **"I mean, let's face it, no staff member has the desire to support the legacy application when all of their coworkers are learning the new application. That's a career limiting move."**
>
> – Tim Schoener,
> VP/CIO, UPMC Susquehanna

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What Should You Budget For?

When preparing to transition to a new EMR, people often neglect to budget properly. Whether it's for backfill, if you decide to outsource, or for the distraction and lack of focus from your staff if they must do two jobs. Knowing what to budget for so you can put an accurate plan in place is key.

Start by evaluating the current state of your application portfolio. Understanding your own organization is the foundation for evaluating outsourcing opportunities. Application rationalization is an important exercise for evaluating your entire IT organization. Rationalization helps you focus on the total cost of ownership by looking for duplicate applications, one-off technologies, applications with few users, and applications with a high cost to user ratio. With a current inventory, the next step is to consider what's necessary to move from current to the ideal. This will give you a better idea of just how much change will be introduced into your system.

Another important consideration in staffing for support roles is the number of resources on-boarded. Look at your current staffing model. Have your current team document everything they do. Many of the day-to-day tasks are done automatically and often doesn't reside as a documented process. Once the team has moved onto the new implementation project you want to avoid having to reach out as much as possible. We often find that information is in an email or someone's head versus documented which can not only expedite the on-boarding process but it also ensures the legacy team does it the same way. Sometimes organizations underestimate the number of resources they need or currently utilize. This is can result in changes needing to be made to the original plan and scope, altering the budget as well. Especially because unanticipated work can arise in these type of projects, it is recommended to budget for two additional resources than thought to be necessary for your project to ensure sufficient staffing.

1	**People**	# of resources supporting # of applications # of resources that need to be trained for certain roles Backfill requested
2	**Organizational Analysis**	% of FTEs supporting applications How many employees will be moving over to the new system? What will each employee need to be trained on?
3	**Support Timeframe**	How many hours of support per day is required for each service? (e.g. 24×7, 16×5)
4	**Ticket & Application Volume**	What % of incidents are Low, Moderate, and High Priority? What are the top applications utilized?
5	**System & Regulatory Compliance**	Adhere to HIPAA Compliance, ensure PHI traceability Follow organization's policies & procedures
6	**Tools & Process**	Review of all clinical applications and application deployment

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It is unrealistic to think that there will not be any change introduced to your legacy system. A standard timeline, from when the initial decision is made to transition EHRs to when you go through your final go-live implementation, often takes 2+ years, within which a lot could happen. Reporting standards could change, patient safety issue present, equipment needs to be replaced/updated, vendors leave the work space, key personnel may unexpectedly take a medical leave of absence. Make sure change is factored into your budget, because the one guarantee is that it will happen.

As with most projects, give yourself as much time as you can. Come up with a proposal early and make sure you've planned adequate time. Your timeline can significantly affect your budget. As indicted by Chuck Podesta, CIO, UC Irvine: "We knew we we're going to get started with our implementation sometime in the June timeframe, so we did an RFP for legacy support back in March. We knew that we needed to get somebody in and give them a good couple of months to get ramped up with our legacy applications. That's worked great." It's not only planning for the actual implementation or the length of support needed, but also allowing time for learning the new systems, both for your organization's team and the external resources. This is determined by the amount of applications they will need to support and how large a role they'll be playing within the organization, based on your existing staff model.

The last crucial aspect of your budget is creating an accurate service level agreement (SLA) outlining the level of service expected from your support partner. The best way to do this is to already have true SLAs in place so you have a baseline established. Most organizations have a ticketing system but don't have effective SLA reporting; then when they decide to outsource application source they must take extra time to get references built up. Get SLAs in place now so when you budget for external resources you'll have an idea of the length and level of support needed.

To start establishing your application support metrics, make sure you address the following critical success factors:

Critical Success Factor	Commitments/Solution
Collaborative Governance Model	Executive Sponsorship by Senior Management Dedicated Project Management Defined objectives, renewed by organizational manager on a periodic basis
Knowledge Transfer	Availability of organization's SMEs and IT staff Close interaction with staff to cover all components for system in scope Equivalent skill level between resources
Pre-Requisites Met On Time	System access, required licenses in place Follow timeline for deliverables
Change Management	Prioritize and approve changes Develop a structure for dealing with change
Service Agreement	Establish protocols for the various tools and systems being managed, with associated response times for their mission critical applications

Communication Best Practices

At engagement kick-off, it is vital to establish clear roles for both your organization and your support partner. Begin by putting together detailed standards for change approval, test environments, and factors for prioritization. To minimize confusion around scope, determine a common place for storing work-in-progress changes as well as completed documentation.

Communication is critical throughout all phases of the project. To ensure effective communications between the team, create a communication plan that outlines: who does what; who provides oversight; how information will be provided to specified individuals; and the format and frequency of each communication deliverable, including issue resolution response time depending on the criticality of the situation. Unclear business objectives before the contract is signed are the most-likely causes for dissatisfaction or cost overruns.

Effective communication deliverables include reporting, dashboards and service metric reporting. The hospital's incident management system is typically used for tracking and reporting application support activities and performance to warrant seamless integration into ongoing operations.

Elements can include:

Performance Tracking and Evaluation: Work by the partner team will be tracked and reported in several categories, such as: reporting-related problems; maintenance requests to cover all work undertaken; on-call production support; and user requests, special projects and ad hoc requests.

Regularly Scheduled Status Reporting: Status meetings will follow the hospital's standards and procedures. Status reports will include sections on topics such as: tasks or maintenance requests completed; maintenance requests in process; significant accomplishments; unresolved problems; planned tasks and prioritized maintenance requests; maintenance requests approved and accepted; Small Service Request (SSR) status; and project status.

Quarterly Management Meetings: Leadership meetings to discuss potential changes in project scope, report on performance relative to the agreed-upon SLAs, and allow agreement on plans for the next quarter

Executive Dashboards for Business-IT Management

Service Level Performance Scorecards

View SLA performance in multiple dimensions. Program Level, BUsiness Units, Performance by Tower, supplier etc

Process Centric View of Performance

Process or business centric view that provide a holistic view of perfaormace based on KPI's that indicate health of operations, IT System Performance, IT KPI's & Business Process KPI's

Continuous Improvement

Provide insights to Continuous Improvement Activities
• Process Maturity and productivity improvements
• User Experience
• Cost Reduction & Automation

Operations Management

• Job Failures
• Transaction KPI's for key business processes
• System Availability & Performance Alerts
• User Experience Issues

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Partner Staff Onboarding

The onboarding process varies from client to client, and should be customized based on an organization's needs. A customized onboarding process allows a partner to build efficiencies and thereby makes the transitions smoother and more efficient for both the organization and partner's consultants. A good support partner will perform background checks, drug screening tests, health screenings, and put together an IT security agreement for their team. In response, the organization should work to provide network and application access, laptop and hardware requirements, and FBI fingerprinting when necessary. The length of time it takes for access to be granted to a consultant varies depending upon a client's internal processes. Your partner should set a clear expectation that their ability to begin work depends upon having system access.

Once the required background information is completed and distributed as required, the actual transition of work responsibilities can start. Typically, a transition plan is developed with a lead support resource who will help manage this transition. The lead resource helps to ensure that the partner's team has all the resources and information needed to do the work as effectively as the organization's current team. What the organization desires, determines which team does what and how many are needed to eventually manage the application. However, it is important to note the need for some overlap time with the existing organization team and to have clear expectations of how long those team members will be available to the partner's team during this transition. Gradual transition helps ensure a seamless and complete transfer of responsibility from the hospital's staff to the partner.

Many organizations will start the transition process with an introduction to the organization, similar to new employee orientation. Interviewing staff that are shifting off the project to discern their day to day activities is a preferred method. Most organizations will also have repositories of workflows, documentation specific to set up or build work, and troubleshooting methodology. Links to or copies of this documentation are very helpful as they ease and speed up the transition process. Many times, sitting with a client resource while they are working through an average day or more gives the partner an opportunity to pose questions and uncover information, workflows or assumptions overlooked by the organization.

Background Checks

IT Agreements

Drug Screenings

Health Screenings

Seamless Transition

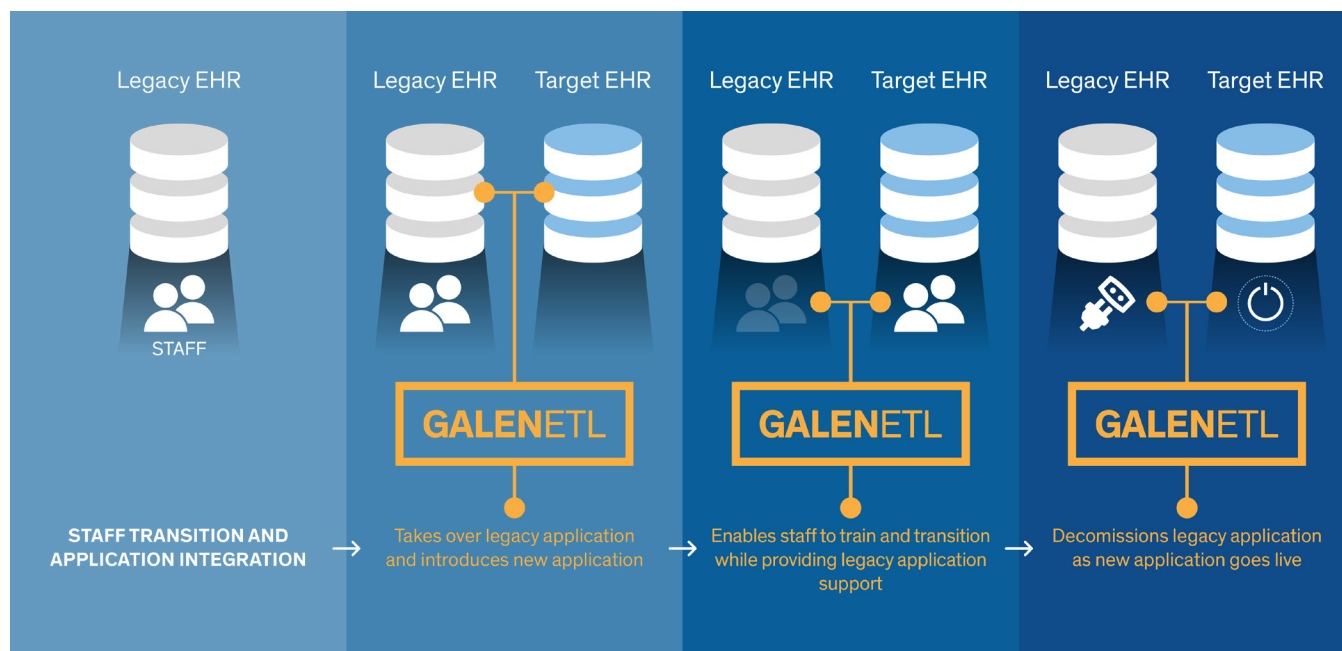|		
1 No business disruption	**2** Effective Risk Management	**3** Communication & Reporting
4 Effective Tools implementation	**5** Measuring Transition Effectiveness	**6** Effective documentation

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SLA & Project Oversight

Once there is full support team deployment and they've taken ownership of all responsibilities, an organization can begin monitoring SLA performance. Many organizations choose to go with a fixed fee structure when expensing for application support. This allows them some flexibility when it comes to staffing needs. As explained by Chuck Podesta, CIO, UC Irvine, "If, for example, in one month we had planned to have 30 people in total, between all three categories, from the legacy support company, and they get the work done and meet the SLAs with 27 people, we then get credited for the three people, because again, we're under a fixed fee price. You start to build up credits along the way, depending how you manage this, and you can use those credits against future invoicing."

It's important to work closely together. Having a director level employee engaged with your support partner to act as a project manager from the organization's side, helps to better manage staffing. This person can be hands on in the legacy support, looking at the SLAs against the number of people available, and then controlling how many people to use against those SLAs. It's important to note that this does need to be specified in the contract.

This is also the time for your support partner to review and improve policies, system performance and other processes currently in place. This can include the implementation of regulated incentive programs, requirements to avoid penalties at a state or local level, and other changes impacting users. All in all, an application support partner's goal should be for the level of service that an organization receives is better than prior to engaging staff augmentation services.

| Legacy EHR | Legacy EHR | Target EHR | Legacy EHR | Target EHR | Legacy EHR | Target EHR |

STAFF

STAFF TRANSITION AND APPLICATION INTEGRATION → Takes over legacy application and introduces new application → Enables staff to train and transition while providing legacy application support → Decomissions legacy application as new application goes live

Performance Measurement

Hospitals must demonstrate quality through reports and dashboards for external benchmarking and internal quality improvement. Dashboards and KPIs add a level of accountability. Effective partnership governance will include reporting, dashboards and service metric reporting. One of the most significant areas of cost and SLA issues is staff turnover and training, which can also be time consuming and fluctuate greatly. Outsourcing can eliminate this cost variation while keeping SLAs consistent.

Outsourcing the management of the legacy systems/applications will free up your IT department to focus on more strategic initiatives while guaranteeing that you have the consistent and reliable service you expect. Why focus on back-office operations when you could put all your attention on new technology that will improve the business?

Project Scorecard

Category	SLA
Un-responded communications — End of each shift	0
Open Incidents beyond 10 days	<0.5
Open Incidents beyond 5 days	<1%
Customer SLA Compliance:	Steady state SLA of 95% month on month basis Re-activations <1% on monthly basis Open incidents <3 per application
Escalations	A downward trend in the escalations to BSWH FTEs - Baseline will be established Test/Development - Baseline will be established

	SLA		Target Compliance	
Incident Priority	Response	Resolution/ Closure	Response	Resolution
P1	1 hour	4 hours	95%	100%
P2	4 hours	24 hours	95%	>98%
P3	48 hours	72 hours	95%	>98%
P4/P5	48 hours	96 hours	95%	>98%

Ticket Volume by Team April 2016 to March 2017

Team	Allscripts	Allscripts	IDX	Interface	Totals
Total	14166	265	8264	3362	26057
Total Open	117	8	34	1	160
Total Closed	14049	257	8139	3361	25806
% Closed	99%	97%	98%	100%	99%

Return on Investment

Capital expenditures (CAPEX) and operating expenses (OPEX) are the two main categories for business expenses. CAPEX are the funds used to purchase major systems or services to expand a company's abilities to generate profits. OPEX results from ongoing costs a company uses to run its basic business. These expenses are fully tax-deductible in the year they are made, while CAPEX are not. Outsourcing helps with reducing CAPEX costs. Adopting outsourcing can free up capital for investment spending and positively impact OPEX costs. This is further contended by Chuck Podesta, CIO at UC Irvine Health, where they recently went through an EHR migration journey. In healthsystemCIO. com's webinar, All Stars Panel: Supporting Yesterday's EHR While Launching Today's, he says:

"It's a win-win when you look at the financial model. Legacy support is OpEx so if that's less than what you were paying your own people and you're moving your people to CapEx, you're saving money on the OpEx side as well, so that's a bonus."

The return-on-investment is shown in a report by Black Book Market Research which announced that, by the end of 2015, 90% of hospital organizations say they were at or near an immediate (3 months or less) return on their investment for IT outsourcing. 84% of those organizations also expressed that their relationship with their outsourcing vendor is exceeding expectations.

90%

of hospital organizations in Q3 2015 state they are at or near an immediate (3 months or less) return on their investment for IT outsourcing

84%

of healthcare organizations that outsource to vendors express their relationship exceeds expectations

From upgrades to acquisitions, any additional functionality deployed is another job to add to your staff's already large to-do list. Many providers underestimate the time and staffing needs associated with EHR deployment, and end up stuck. The amount of anticipated change to your current system is a large factor in determining whether to outsource. It's an efficient way to attain a workforce that can meet your organization's current and rapidly evolving demands.

"Healthcare companies are asking themselves, how can you flex capabilities? How can you create teams for rapid assignment and redeployment? How can you build small teams that are highly experienced in handling the dynamic nature of projects? Static, defined projects are history."

– Chuck Podesta
CIO, UC Irvine Health

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Conclusion

With today's healthcare organizations focusing more on quality of care and improving outcomes, hospital leaders must manage their capital and human resources carefully to handle vital business functions. Your application support partner should ensure you and your end users have a superior experience by making the 'change of staff' unnoticeable. This goal is accomplished by investigating current practices and workflows, keeping an open line of communication between organizational leaders, managers and support staff and having a clear understanding of where organizational responsibilities lie, with existing staff or newly created leaders. With the right support partner, hospitals will be free to focus their time and resources on what counts — the patient.

References

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- Black Book Market Research. "Providers to Adopt IT Outsourcing Solutions in 2016 as More Hospitals and Physician Practices Slide Deeper Into Financial Uncertainty."
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