



# Healthcare IT Talent Balance

A framework for balancing the demand for IT skilled labor with tightening budgets

**\$74B**

The 2018 Healthcare technology budgets, according to Forrester Research. A 9 percent increase from 2017. The Healthcare industry included the highest percentage (35 percent of tech budget) forecasted to be spent on outsourcing. CIO staff costs accounting for 22 percent.

**54%**

The median hospital labor costs as a percentage of total operating revenue, according to Fitch.

## Executive Summary

In today's healthcare environment, keeping IT strategic plans on target isn't just about go-lives and budgets. The biggest determining factor for an IT department's success is how effectively it manages its people and skill sets. Too few of the right talent and the organization falls behind. This shortage can be temporarily addressed through contract labor, but too heavy reliance on the premium cost associated with this supply of skill sets can drive the organization into financial ruin. How then, do health system IT departments juggle these competing demands? Is there an optimal balance of IT contractors and full-time staff? If so, how would that be determined? And, further still, how could it be systematically maintained? To succeed in the coming era of healthcare, health system IT departments will need to answer these questions. They will need to develop strategies for how to strike the right balance of IT talent management, temporary procurement and long-term investment.

## Introduction

The digital transformation in healthcare has had many impacts, from precision medicine to big data, artificial intelligence and hospitals' data being held for ransom. One impact that has been less widely discussed is the impact to the healthcare skilled IT labor force. Health systems have a newfound need to manage numerous technical skills—now required to sustain IT operations and execute organizational initiatives. This has created the need for hyper-specialized knowledge workers and the blending of a consistently rotating pool of on-demand contract workers with permanent operational staff at the hospital. Hospital Chief Information Officers are walking the line of simultaneously supplying highly skilled labor to deliver on IT strategic plans while simultaneously facing the pressures of constraints of a health system under increasing financial pressure. Maintaining this balance requires a close examination of organizational performance and cost of executing standard work. Through our firm's work with dozens of health systems and IT departments, we have identified a framework to assess and manage this balance - delivering on the organization's demands for IT initiatives while also providing good stewardship of the hospital's financial resources.

## To Hire or to Contract?

Judy, the CIO of a multi-hospital health system, just left a meeting with her Directors where she was informed that her department did not have sufficient staff to deliver on the portfolio of approved capital projects for the coming fiscal year. Just last week, Judy was in a budget review meeting with the CFO who informed all department heads that the health system would be reporting significant operating losses this quarter.

The capital committee approved a portfolio of IT projects that the strategic planning committee has identified as “essential for the future of this organization” along with a handful of KTLO “Keeping the Lights On” projects. The projects include several new technologies to help transition the organization into population health management, address some long-awaited upgrades to a set of existing applications, the build-out of a new outpatient facility, a campus-wide upgrade of the desktops to maintain support agreements, and implementation of some new network security measures to stave off the increasing number of cyber-security threats. The health system has approved a capital budget for the year based on some high-level estimates of the projects. The organization is also just finishing its biennial upgrade of the EHR system, which was taken live 4 years ago and is now used to manage all the organization’s core clinical and financial workflows.

Judy has 4 Directors reporting directly to her, overseeing the technical services, clinical and revenue cycle application teams and one overseeing the IT Project Management Office. Through discussion with her directors, Judy has learned that, given the completion of the EHR upgrade, there are several contractors that will finish their projects this month. Additionally, the network security team has been buried the past 2 quarters, addressing a myriad of exposures.

Judy’s Directors have asked for 5 new full-time equivalent (FTE) positions, citing the increasing workload being placed on their teams and complexity of the new EHR. Additionally, the Directors have informed Judy that there is no way they could provide the staff for the project list given. Judy’s PMO Director has provided an estimate that the portfolio of projects requested would require at least 1 additional project manager and 6 additional certified resources.

Judy is now faced with deciding how to maintain the support service levels necessary for the hospital and address the labor needs required to deliver these projects.



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*According to Moody's, hospitals that invest in IT, along with those that invest in outpatient services, are most likely to survive challenging operating conditions.*

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## The Rise of the Machines

While Judy is a fictional character, this scenario is playing itself out within healthcare systems across the country. The situation Directors & CIOs find themselves in has evolved by the healthcare industry facing competing forces to both innovate and reduce the overall financial burden it imposes on families and the country.

In healthcare, the introduction of electronic Patient Health Information (ePHI) standards in HIPAA, and especially the introduction of Meaningful Use (MU) standards in the 2009 HITECH Act, have forced a significant digital transformation.

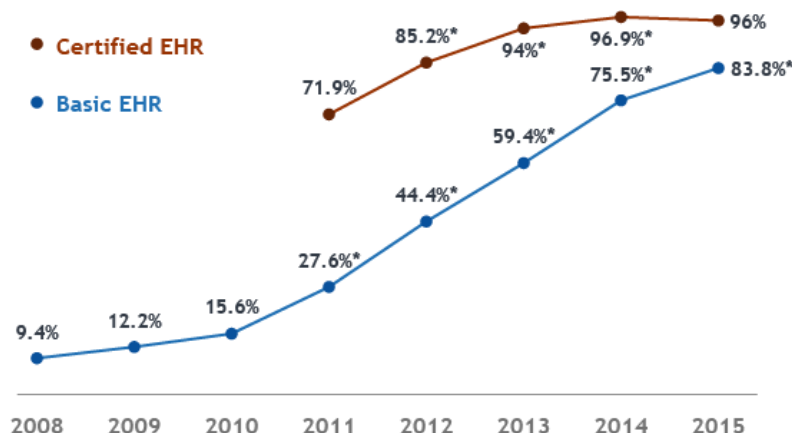
Providers of all sizes have needed to adopt Electronic Health Record (EHR) systems. According to the ONC, the EHR adoption rate among acute care hospitals has risen from just under 10% in 2008 to 96% in 2015.

This push to implement ever more comprehensive EHR systems has created a surge in demand for contract labor as hospitals struggle to keep up with a high volume of technical projects. In prior years the main driver for utilizing short term contract labor was the maintenance of legacy systems. Data on healthcare budgeting priorities shows that this has shifted in recent years. Project Management Offices (PMOs) are now the primary seekers of IT contract labor in the healthcare industry.

The range of technical skills organizations need to possess not only to complete new projects like EHR implementations, but to just maintain operations has continued to increase. At many healthcare organizations this has snowballed to the point where they find they need to use contract labor to fill long-term knowledge or capacity gaps among regular operational staff.

This trend has been driven in part by the underlying growth in the complexity of mandated EHR systems as they have become more integral to all facets of healthcare operations. For example, the current version of Epic now includes over 100 different applications in its portfolio. The technical skills necessary to manage such a wide range of different underlying technologies has increased dramatically.

For providers to effectively manage the slate of IT projects they now typically undertake each year they often need to utilize skill sets acquired from a mix of FTE and contract labor.

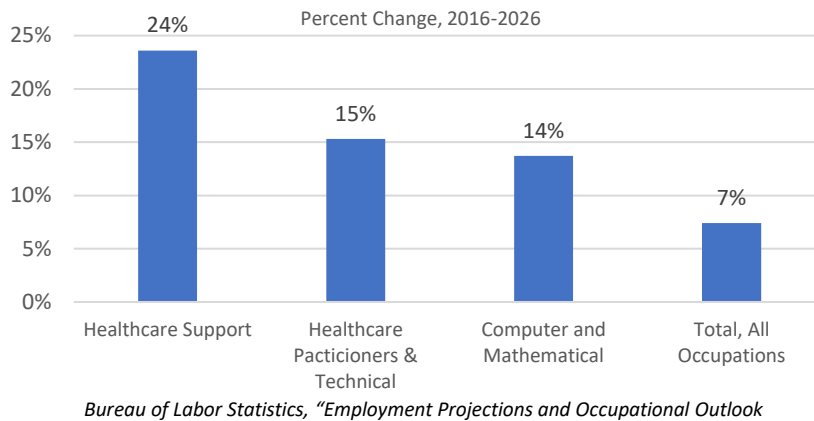


## Contract Labor – a double-edged sword

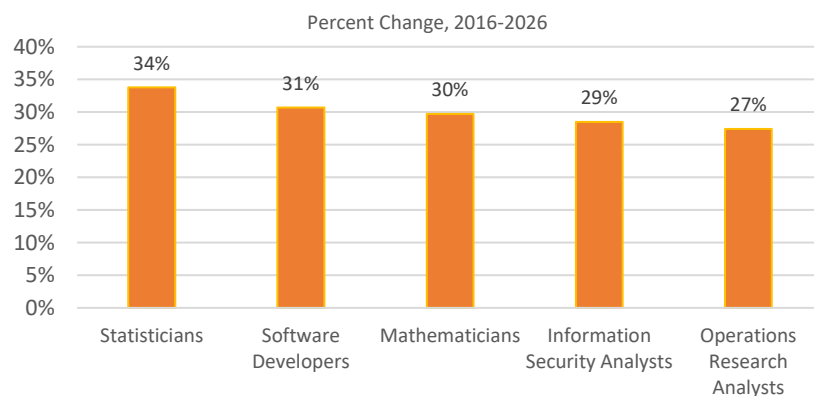
While the healthcare system has always kept a steady reliance on contract labor, the increase in complex technologies and the temporary projects to implement those technologies, has created a surge in demand for temporary, skilled contract labor. Premiums on this labor can range from 200-300% of the average hourly rate of a full-time resource.

The growth in contract labor utilization is not unique to healthcare or healthcare IT, but it appears to be most pronounced in this industry as droves of people left their full-time positions in favor of higher wages for consulting and contract work.

The Bureau of Labor Statistics expects the increase in healthcare contractor utilization to outpace all other sectors through at least 2026.



The Bureau expects a concurrent rise in many of the desired technology and IT disciplines needed for health IT projects during the same period.



## The Importance of Technical Expertise

The Project Management Institute (PMI) conducts surveys to assess leading causes of project failure.

While most surveys indicate the leading causes of project failure to be changes in the project itself (referred to as scope creep), the second highest reported causes are resources, including overallocation and skill levels.

### Overallocation

The most often occurs when a particular skill becomes increasingly in high demand, but only contained within a small number of resources within the organization. These resources are assigned to more and more work, delaying the projects they are working on and slowing overall progression of the strategic plan

### Inadequate Skill Levels

This occurs when the technical complexity of the problems exceeds the skill level within the talent pool. The work assignments require a more advanced understanding of the technology and quality of the delivered solutions falls off.

This suggests even further tightening of the contract labor market over the coming decade as competition for available technical specialists increases. This will have significant ramifications. The average contract length in healthcare is between 3 and 18 months for technical skill sets. Organizations late in the industry cycle deploying mandated EHR systems and other technologies can expect to pay even more as available specialist labor is in even shorter supply.

Maintaining a balance between FTE and contractor utilization is essential both for optimal project performance and for ongoing operations. However, most organizations are not positioned to find such an optimal balance as they lack the necessary metrics and processes.

## Financial Considerations

Both the under and over-utilization of contractor labor can have significant financial consequences for healthcare organizations. When IT departments become caught in rigid cycles of labor usage without proactive breaks to evaluate overall costs and performance they struggle with project completions and ongoing operations. This is a non-trivial concern as administrative overhead at hospitals, comprised primarily of labor, has grown significantly over the past decade.

Cutting labor rates may not solve the problem either. Performance issues can arise both with over-utilization and under-utilization of contract labor.

### Over-Utilization Financial Impacts

Industry data on contractor utilization is scarce, which is indicative of this paper's central criticism that healthcare organizations could benefit from improved tracking and managing of internal labor utilization rates. One report from 2015 found that the US healthcare industry spent a record \$11.6 billion on IT contractors in that year alone. That figure is expected to grow by 5.1% annually through at least 2020.

An over-reliance on contract labor can happen for many reasons. Budgets balloon as new contractors are brought in to shore up gaps in previous contractor efforts, new projects are added to the PMO's slate, old contractors stay on performing purely operational tasks.

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*In a HIMSS survey of IT leaders, the most-cited reasons for increasing budgets were an increase in the number and complexity of IT systems in the organization, followed by a need to comply with regulatory changes and an overall budget increase.*

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Capital and operational budgets bleed into one another. Organizations with these problems run the risk of exhausting labor budgets on skill sets that are better retained in-house as FTEs.

### Under-Utilization Financial Impacts

At the other end of the spectrum are organizations resistant to bringing in any contract labor, prioritizing bottom lines over actual performance. This resistance to any spending often puts them in a position where they cannot compete with more technologically agile providers.

They might lack in-house expertise to innovate, are restricted from paying the increased rates contract labor requires, and then are unable to execute new initiatives.

Both under and over-reliance on contract labor are inefficient uses of capital and operational budgets. Healthcare organizations should not aim to be at either end of this spectrum. Ideally, they need to position themselves in the agile midrange.

## Organizational Culture Considerations

The other major consideration in balancing contractor and FTE utilization is the impact it can have on organizational culture. Technical skill sets, knowledge, and experience are key resources for healthcare organizations. As with the financial considerations outlined above, relying too much or too little on contractor labor can have a significant impact on workplace culture.

### Over-Utilization Cultural Impacts

External contractors unfamiliar with an organization cannot leverage many of the intangible efficiencies a long-term FTE labor force is able to. These include utilizing accumulated institutional knowledge, fluid teamwork, and effective communication. When the percentage of contractors in a labor force increases the team's collective ability to leverage these intangibles is compromised.

Research has shown that the more specialized a skill set, the higher the acquisition costs paid on the labor market both in time and money. As a best practice it is appropriate to maximize the use of contract labor to acquire skill sets needed only temporarily and identified not to contribute to an organization's unique capabilities in the long-term.

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## 8 Years

The average years an employee stays with an organization  
-SHRM

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### Under-Utilization Cultural Impacts

At the other end of this spectrum are organizations unwilling or unable to bring in contract labor. They may have high operational efficiency among their FTEs, but their technical skill set is stagnant. Research has shown that hiring contractors even on short term contracts can facilitate the transfer of novel technical skills from contractors to FTEs. Beyond improved project performance organizations can enhance their operational IT performance by intelligently introducing contract labor, even on a short-term basis.

Determining which skill sets should remain salaried within an organization and which should be acquired on the labor market can help healthcare IT departments maximize their competitive advantage delivered by labor. Knowing when to do this though remains a challenge.

### Developing the Talent Balance Framework

Managing the reliance on contract labor to meet organizational performance and minimize labor costs requires a framework for assessing where skill sets are procured. This provides a basis for the cost of this skill set and, when combined with the long-term need for this skill, can provide the basis for the decision to shift procurement of the skills. This can be achieved through routine internal measurements of the capital and operational budget contract labor utilization rates by skill set.

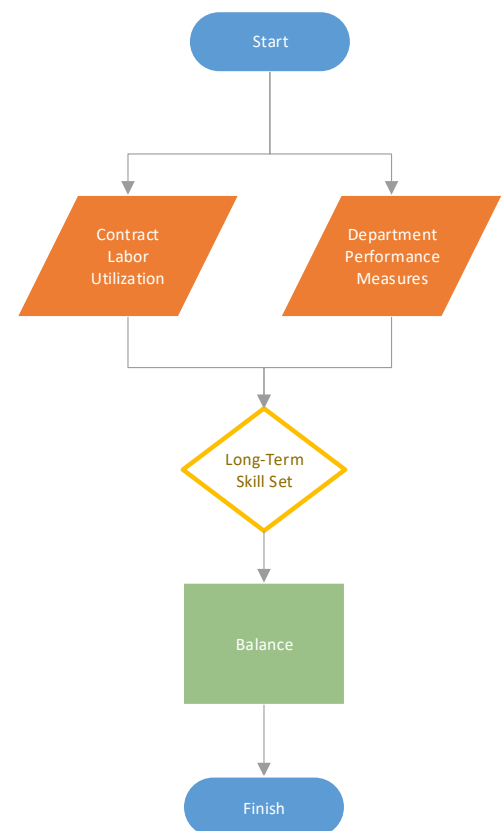
When coupled with a skills assessment, this measurement can serve as an indicator for over-reliance on contractor labor for a given skill, signaling the need for further assessment on the longevity of the skill set demand and potential conversion of the role from contract labor fulfillment to full-time equivalent.

As results are assessed over time the organization can develop benchmarks to further refine future utilization and improve both operational and project performance while minimizing organizational costs.

Given a high-level of over-reliance on contract labor, hospitals can cut departmental labor costs while maintaining productivity levels and without incurring layoffs.

## 1. Measure Cost of Essential Skills

## 2. Balance Labor Pool to Drive Down Cost

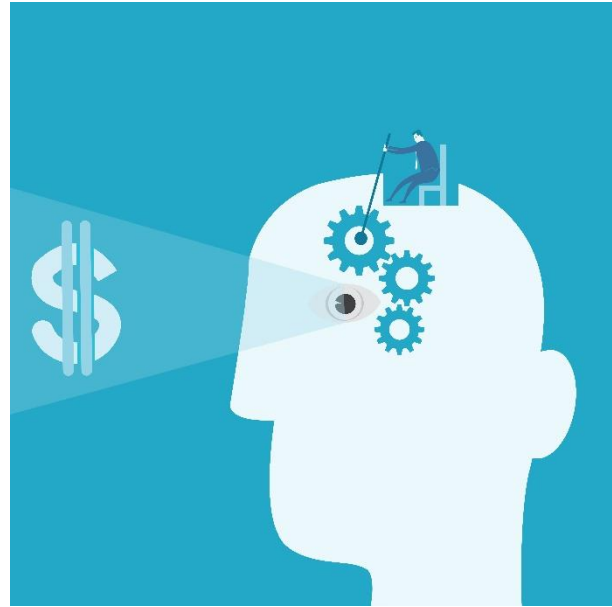




## Conclusion

Developing a framework for labor utilization allows healthcare IT departments to maximize the efficiency and cost effectiveness of operations and technical projects, and therefore maximize overall operational performance and project delivery.

As digital technologies become ever more enmeshed in our healthcare processes, cost- effectively balancing technical skill sets between FTEs and contract labor will be essential for the long-term success of healthcare providers.



## References

- SK&A Market Insight “EHR Adoption Trends: Current & Historical Insights”, February 2017
- HHN First American, “Survey Health Forum”, American Hospital Association, January 2017
- ONC/American Hospital Association, “AHA Annual Survey Information Technology Supplement”, 2016
- Net Revenue Data, Financial Database, American Hospital Directory, Retrieved April 16, 2018
- Bureau of Labor Statistics, “Employment Projections and Occupational Outlook Handbook 2016-26”, October 2017
- Phillips, Jocelyn, “Industry Report OD5496: Healthcare Consultants in the US”, IBIS World, March 2015
- Mahler, J., Woodward-Barringer, M., Milkovich, G. T. “Boundary-less and Traditional Contingent Employees: Worlds Apart.” Journal of Organizational Behavior, 425-452, 2002
- Evans, J. A., Kunda G., Barley S. R. “Beach Time, Bridge Time, and Billable Hours: The Temporal Structure of Technical Contracting,” Administrative Science Quarterly, March 2004

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