

Case study: Using workforce modeling and assurance tools to ensure quality

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When one large public institution faced cost reductions it was determined to use its wealth of data to ensure needed staff cuts did not jeopardize quality. Drawing on the expertise of a variety of stakeholders as well as best practices, Deloitte helped the institution build an easy-to-use dashboard that organized and analyzed its data to model and predict workforce outcomes based on a range of scenarios and inputs. A dynamic and sustainable system that once operational required little-to-no technological expertise, the solution now allows the institution to rapidly consider risk factors across a range of areas as they plan and explore different workforce possibilities and configurations.



The situation

Many public institutions around the world are facing severe financial pressures, finding themselves compelled not only to meet mandatory cost reductions but do it against a backdrop of increasing demand. As such, evaluating workforce needs and finding new ways to build efficiencies has become critical. But how do you ensure staffing levels remain appropriate to deliver services despite any reductions deemed necessary?

To achieve this, one UK public institution looked to its existing wealth of data to inform its workforce decisions and find ways to maintain quality controls. Workforce planners needed to have the ability to create scenarios for changing workforce needs as well as compare and contrast the impacts of differing strategies. Managers with system oversight responsibility needed to have the ability to better identify and predict organizational risks in light of workforce changes as well as monitor the performance and interaction of workforce and quality control. And, overall, decision-makers needed a more effective way to easily view information and the outputs of the planning and assurance processes.

The solution

Deloitte United Kingdom, already working with the institution on workforce issues, was asked to develop an intuitive and comprehensive set of tools that the client could use to model, analyze, understand, and predict performance within the entire workforce system—and target resources appropriately. Though the client was already collecting large amounts of data, they were not consolidated in one place nor being used to inform workforce decision-making and risk assessment.

“We saw an opportunity here to consolidate good practice from across the institution,” says UK partner Chris Stirling. “We could use the available data and apply it consistently to inform workforce decision-making and create an overall workforce risk model.”

To do this, the team set out to consolidate best practices, capturing information from a range of stakeholders from both inside and outside the organization, including workforce managers and planners and performance analysts. Combining published literature and established working practices with peer review, the team worked with these experts to develop a set of key business rules. To

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bring together the many disparate viewpoints and indicators and express them in a coherent way, a network of risk indicators and triggers was developed that allowed the team to reflect best practices and convey in a concise manner where the most important areas of risk lay.

Building on the agreed-upon best practices as well as peer group performance and a large number of contextual data points, the solution used a variety of analytic techniques to determine current and future areas of organizational risk. This included an analysis to understand the statistical relationships between each of the data items supplied and how they change over time as well as an analysis of the data quality and completeness of each dataset. The likely values of future data points—based on trends, relationships, and data quality—were also assessed as were the likely levels of future risk using projected data points and best practice risk indicators.

Using expertise gained from the stakeholders—workforce managers, planners, and performance analysts—the tools were designed with the capability to model a workforce using a variety of approaches, ranging from an overall view of the workforce to a lower, more detailed level. Users would be able to model using specific values, such as precise numbers and types of staff. They could also model based on staff requirements needed to meet customer needs or on the pathway each customer took through the system and the impact it had on staffing. The results could then be put together in ways defined by the user, allowing them to create a series of scenarios that could be analyzed and used to generate reports.

The tools also needed an easily understood interface that would allow users to share and engage with the output. Wizards provided step-by-step processes to assist with the more complex elements, enabling a wide range of people to use the tools. Even users with no formal statistical expertise would have the ability to drill down into the data and understand the detail within each modeling case, including analyses and implications of different planning options, peer-group benchmarking, trends in risk indicators, and, ultimately, the underlying source data.

Of critical importance, also, was that the team's solution be dynamic and sustainable. The client's data format changed regularly and new data emerged on a frequent basis. The tools would have to cope continually with

updated data, large changes in the way the workforce operated, new datasets that may not have originally been envisaged, and changes to existing business rules as well as new rules that reflected refinements in established best practices. This high level of dynamism was achieved in two ways. At a technical level, the system created was highly configurable: this meant that many of the changes could be made by an administrator rather than requiring any re-programming of the solution. From a broader solution perspective, Deloitte would provide a flexible managed service to operate and undertake the process of loading new datasets, maintaining business rules, and maintaining and updating analytic routines.

The team's efforts to create the tools involved working with many levels of management, requiring the ability to build consensus and nurture collaborative behavior. The team also reached across the UK member firm and the broader Deloitte global network, seeking input from a wide range of experts, including analytics and technology practitioners.

The outcomes

The solution has increased the client's capabilities, infrastructure, and readiness to project and plan a complex and shifting workforce effectively. In particular, the project has helped shift the focus of consideration from “current” to “future” workforce. The solution also incorporated data quality assessment into the risk assessment process to reduce any subsequent challenges on data quality grounds.

The solution provides a standardized definition of risk indicators based on existing literature, practices, and expertise. It draws together different datasets to enable the rapid and structured consideration of risk factors across a range of areas and allows users to better understand the implications of what they are planning and the different workforce options they have.

Most importantly, the institution now has a way to monitor workforce risk across its systems, identify areas of risk early, and take appropriate action in a timely fashion to improve overall service quality.

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