

Workforce Analytics Case Study

Providing Insights and Actions



Many engineering firms are facing a market with a shrinking supply of talent. Coupled with an aging workforce, the problem of having a sufficient inventory of capable engineers and project managers available and/or working on projects is of significant concern. The following case study identifies the insights and actionable decision recommendations that emerged from the role analytics played in a large engineering firm experiencing critical talent turnover.

The firm has over 10,000 employees and is headquartered in the United States with offices in several countries around the world. It has operations in business areas including industrial products, processing, and government. Over the last two years the firm has been experiencing unwanted voluntary turnover, increased retirement rates, and mediocre business performance. The CHRO recently approved a pilot analytics project to identify solutions. The project duration was three months and the firm enlisted the support of OptTek Systems to assist the internal staff.

Talent, financial, and related data were assembled from a number of computer-based businesses and HR systems, interviews were held with leaders from the global offices, and models were built representing the workforce behavior at the individual employee level by implementing its OptForce® analytics software platform. The models were tested for validity and were used for the ensuing analyses. The following is a summary of the deliverables:

Turnover rates of the high-risk critical roles of Engineers and Project Managers are higher than average (14% and 13% respectively). This leads to high turnover costs – over \$10 million in the past year for Engineers and over \$8 million for Project Managers. Furthermore, over the last two years turnover rates have been increasing among employees with fewer years of service. Even if the cost assumptions are over-estimated, the costs are significant enough to take action. Additionally, demand for Project Managers is expected to grow, and Engineers are the primary feeder role for Project Managers, making the voluntary turnover of Engineers even more costly. Further compounding the costly turnover risks, the demand forecast based on projected revenues is greater than the demand forecast based on current trends in headcount, meaning that there are likely to be larger critical role talent gaps in the future; as a result, the firm may not be able to meet its revenue goals.

Insight #1

The predictive modeling capabilities of OptForce allow employee behavior to be modeled so that interventions may be compared and their ROI evaluated. OptForce predictions showed that under the status quo, about 100 Engineers are expected to leave the organization over the next 12 months, at a cost of approximately \$8 Million. Currently, there are roughly 200 Engineers with 1-3 years of service; if the Company can achieve a reduction in turnover rates among these employees over the next year, then any program which achieves this reduction and yields a positive ROI should be implemented. For example, let's analyze the value of a modified compensation plan that could yield such improvements in turnover.

Let us consider Engineers with 1-3 Years of Service (YOS). The impact of their most recent salary raise on their turnover is shown in the chart below.

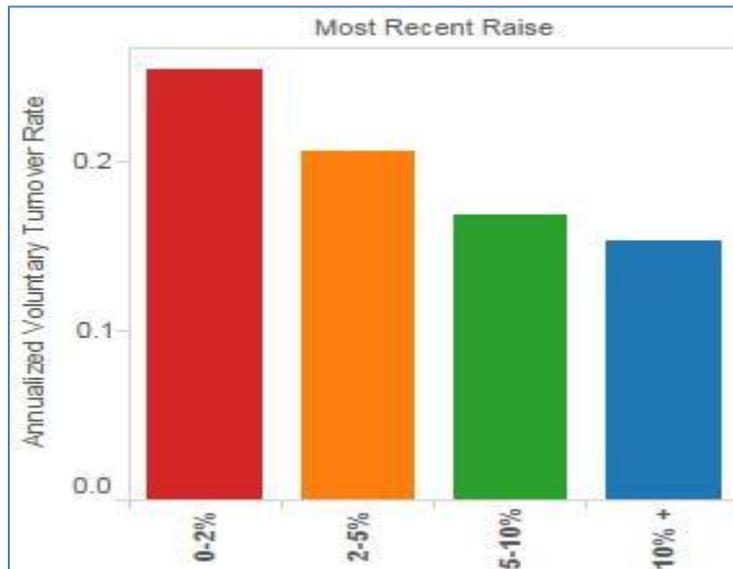


Chart showing the effect of the most recent raise on turnover of Engineers with 1-3 YOS

The average annual salary of Engineers with 1-3 YOS is approximately \$70K; a 5% raise is therefore \$3,500, while a 2% raise is \$1,400 – a difference of \$2,100. Based on the data shown in the chart, Engineers who got a 5% raise are retained at a rate that is at least 4% higher than those who got a 2% raise. With an average turnover cost of \$80K per Engineer, a 4% increase in the annual retention rate would save the Company \$3,200, a **net savings of \$1,100 per Engineer per year**.

Recommendation #1:

These results indicate there is a relationship between compensation and turnover; therefore the firm should consider reviewing their career plans with an eye on increasing raises in compensation in critical roles.

Insight #2

Of all Engineers with 1-3 years of service, those who have taken at least one leadership training course have a 10% higher annual retention rate (89% vs. 79%). Since the average turnover cost of 1-3 YOS Engineers is \$80K, if training costs less than \$8,000 per employee it yields a positive ROI (assuming a 10% gain in retention).

Recommendation #2:

Consider investing in more leadership training and other development programs and integrate with career planning. Emphasis should be placed on those engineers with career plans leading to project management. Identifying high-potential engineers and communicating clear career path opportunities to them is also recommended.

Insight #3

Building the workforce model for the firm has resulted in a computer-based capability that is highly representative of the behavior of talent, especially for the critical roles identified. This digital model enables rapid, customized, as well as structured report generation with a high visualization value through the software portal provided. This capability will save significant preparation time and will permit that time to be used for other responsibilities.

Recommendation #3:

Acquire the analytics capability and its integrated training program to orient users on how to pull data from the model as needed; each user can have a customized dashboard and visualization graphics built to their requirements.

While this project was only a pilot, other areas of focus where future performance could be improved were identified. Recruitment channels can be analyzed more thoroughly with regard to turnover and high performing talent in order to reduce costs and optimize recruiting strategies. An analysis of mobility can also offer potential gains via cost reduction and minimizing turnover.

As this project moves beyond the pilot phase, the savings generated will be significantly greater than their cost. It will also deliver a platform for HR to more deeply engage its finance and operations partners, thereby enhancing strategic planning and business performance.

Let's Talk About Optimizing Your Workforce

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