Needs Assessment on Service Center Technicians' Billable Hours

by Christin Lundberg, Jennifer Elderman, Pat Ferrell, and Leslie Harper

The Client

Best Tool (name changed for anonymity), is a retailer based in the Midwest region of the United States that specializes in power tools and equipment for the serious do-it-yourselfer. Operating over 60 retail locations across the country, 52 of the locations include a service center that typically employs one technician who repairs equipment (whether or not it was sold by Best Tool), handles customer parts ordering and provides technical assistance to walk-up and phone-in customers.

The Problem

In January 2009, the service centers underwent a corporate management change that began to scrutinize the number of billable hours technicians log each week (billable hours are for customer product repairs that are not under warranty).

The authors of this article were the team of needs assessors who conducted a semester-long analysis of the billable hours situation for a project in Dr. Winiecki's Needs Assessment class at Boise State University. The team was asked by the client to determine how to increase the service center technicians' average of only five to six billable hours per week to the company's goal of 10 hours per week.

Data Gathering Methods

To discover how to increase the number of billable hours, the team first conducted a Front-end Analysis (FEA) using a combination of Harless' (1973) 13 Smart Questions and Gilbert's (2007) Behavioral Engineering Model (BEM).

The team then used a combination of methods (based on ethnographic research) to gather empirical data, beginning with a review of existing documents and artifacts (e.g., job descriptions and performance reviews). Open-ended and semi-structured interviews were conducted with a quota-based sampling of store managers and technicians, followed by on-the-job observation at one service center location. The overall data gathering and analysis process is illustrated in Figure 1.
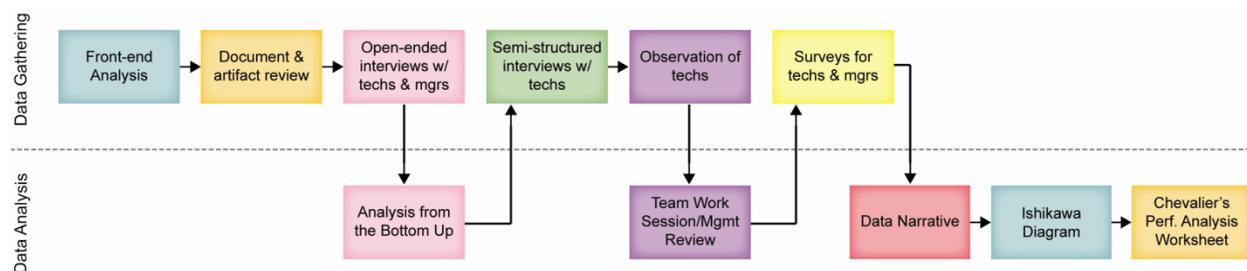

Figure 1. Data gathering and analysis process.

After analyzing the resulting information, the team identified several issues potentially contributing to the problem: (a) corporate expectations for performance were not aligned with job descriptions, (b) job descriptions were not aligned with performance reviews and (c) there appeared to be considerable confusion about the specific tasks and performance expected of the technicians.

From this, the team developed a Job Responsibilities & Recommendations document that included the tasks, knowledge, skills, abilities, attitudes, and behaviors identified during the data collection phase as required to carry out each responsibility. The main contact at Best Tool reviewed the document; he was pleased with the detail and provided a few comments.

This document guided the team's culminating activity in the data-gathering process, which was the administration of a survey to 45 technicians and 39 store managers to complete triangulation of prior findings and to identify the distribution of issues identified during the interviews related to the responsibilities of the service technician position.

Data Analysis
The team used three data analysis tools to develop final recommendations:
- The team generated a narrative based on empirical data collected, which helped to "tell the story" of the situation, and categorized the issues into several categories of problems that affect the technicians' ability to increase their billable hours. These included customer assistance, warranty repairs, standard operating procedures, store management, slow business periods, organization, and additional retail duties.
- An Ishikawa diagram was prepared to highlight the causes the team identified for the billable hours problem. This analysis clearly depicted interrelated issues with management, technicians, methods, time, machines, and material.
- Chevalier's Performance Analysis Worksheet was used to analyze the issues using his BEM-related categories. This analysis showed that the largest negative forces were Job or Task-related Information, Resources, Incentives and Knowledge & Skills.

Recommendations
Based on the data gathering and analysis, the team provided the client with a summary of training and non-training recommendations, in a suggested order of completion (based on the Chevalier worksheet), that showed the need to clarify performance expectations of the service technician with the technician and management, and maximize the efficiency of the service center. Afterwards, training for both the technicians and other store personnel would be developed. Figure 2 illustrates the overall needs assessment outcomes.
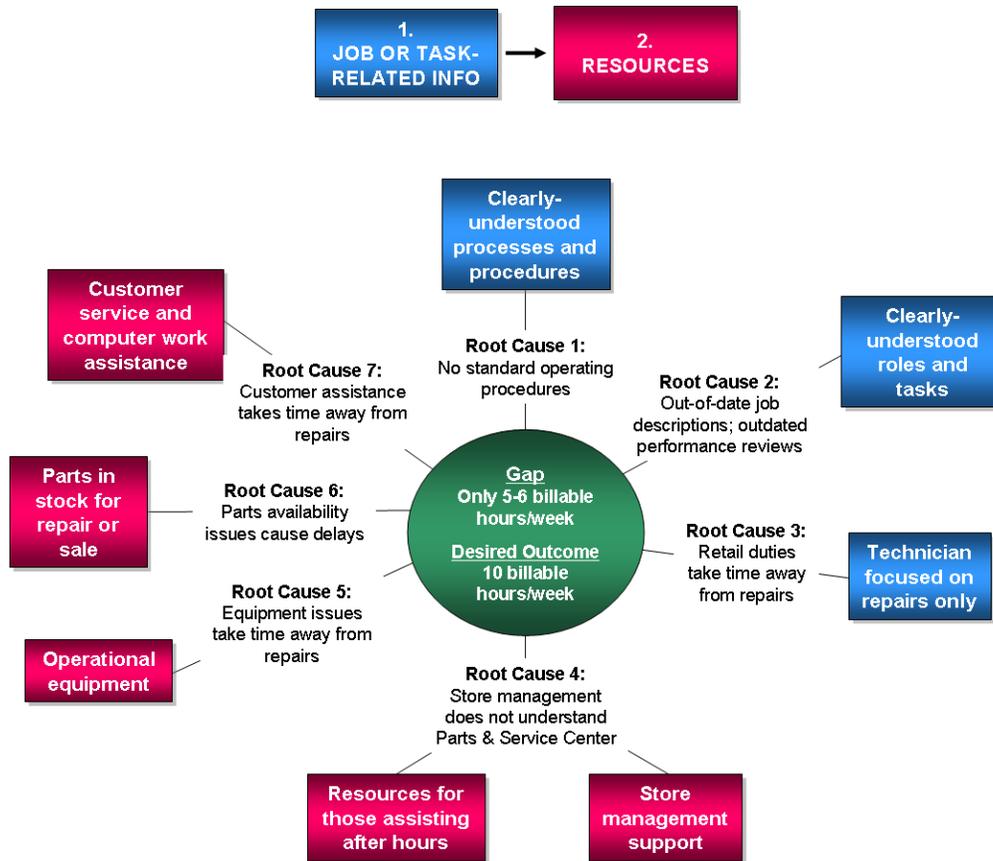
Figure 2. Gap, desired outcome, root causes, and recommended interventions.

IPT-grounded Advice

- Use ethnographic research methods for data gathering and analysis.
- Triangulate the data to produce more complete descriptions of the issues in context.
- Surveys should be used to confirm and measure the prevalence and weight of issues identified in other data gathering methods such as document review, open-ended interviews, semi-structured interviews, and observations.
- Triangulate the data to help ensure the solution-development focus is placed on the most pressing issues first. Select and use data analysis tools to suit the data and issues that are emerging, to ensure full comprehension of the situation.
- Examine environmental factors closely when conducting a needs assessment.

References

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Biographies

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