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SSFMM

Room for Improvement

Hotel giant resorts to Six Sigma to improve operations

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Six Sigma provides a framework for quality improvement and business excellence. Introduced in the 1980s, the concept of Six Sigma has gained popularity in manufacturing and service organizations. After initial success in healthcare and banking, Six Sigma has gradually gained traction in other types of service industries, including hotels and lodging.

Starwood Hotels and Resorts, one of the largest hotel chains in terms of revenue,<sup>1</sup> was the first hospitality giant to embrace Six Sigma.<sup>2</sup> In 2001, Starwood adopted the method to develop innovative, customer-focused solutions and to transfer these solutions throughout the global organization.

“Six Sigma gives us the tools to eliminate variation and improve efficiency,” said Denise Coll, regional vice president of Starwood’s New England operations. “It has strong record in manufacturing productivity, perhaps most visibly at General Electric (GE). It’s also extremely adaptable; since its introduction at Starwood, we’ve refined it dramatically to reflect our focus on service quality and satisfying the voice of the customer.”<sup>3</sup>

It stands to reason that studying Starwood and its Six Sigma activities would provide an opportunity to critically analyze Six Sigma implementation in a different type of service organization and learn from its experiences.

## **Measuring success**

Before you can discuss Six Sigma and how it's being used in service sectors, you must understand critical success factors (CSFs), critical-to-quality (CTQ) characteristics, sets of tools and techniques (STTs) and key performance indicators (KPIs).

CSFs are described as essential ingredients required for successful Six Sigma projects.<sup>4</sup>

CTQs are those quality dimensions that a Six Sigma project aims to improve. They are the product or service characteristics required to satisfy customer needs.<sup>5,6</sup>

KPIs are not well defined in literature, and there are many interpretations. Mostly, KPIs are likened to performance metrics—that is, measures of performance in terms of cost, quality, yield and capacity.<sup>7,8,9</sup>

The STTs used in Six Sigma are nothing new. The Six Sigma method simply provides a framework for their systematic application.<sup>10</sup> Tools have specific roles with a narrow scope, while techniques have wider application and require specific skills, creativity and training.<sup>11</sup>

The Six Sigma literature we researched focused mainly on CSFs.

## **Collecting and analyzing the data**

To analyze Starwood's use of Six Sigma, we collected data from articles, interviews, presentations and speeches published in magazines, newspapers and websites. This provided details to corroborate information, and we also made inferences from these sources.<sup>12</sup>

The data from the documents were analyzed to uncover evidence about CSFs, CTQs, STTs and KPIs. An initial analysis did not provide much information about STTs and KPIs. Further analysis did reveal more information about CSFs and some on CTQs.

In the case of CSFs, there was only mention of top management commitment to Six Sigma and its initial push for this approach. Barry Sternlicht, Starwood's former chief executive officer, is credited with introducing Six Sigma at Starwood.<sup>13</sup> For example, Sternlicht appointed a former GE executive to become the executive vice president of Six Sigma at Starwood, giving global responsibility to this individual for executing strategy, designing tools and overseeing implementation of Starwood's Six Sigma initiative.

Other articles revealed where Six Sigma projects were able to add value at Starwood. Table 1 provides information about the CTQs considered during Starwood's Six Sigma implementation. You'll notice there was one common CTQ element—time (waiting time and turnaround time)—across different areas and processes. There were also some CTQs specific to a particular area or process, such as billing errors or occupancy rate.

The analysis showed that some of the CTQs related to inventory reduction and waste, which are similar challenges found in manufacturing environments.

### **Creativity and innovation**

Though the analysis did not provide information on STTs and KPIs, the research offers insight into how Six Sigma relates to creativity and innovation. Traditionally, Six Sigma has been seen as a prescription for conformance rather than a formula for creativity, breakthrough thinking or entrepreneurship.<sup>14</sup>

Six Sigma at Starwood, however, proved to be a source of innovation, as shown by the development of profitable guest programs. For example, Starwood team members used Six Sigma to formulate one program called "Unwind," which offers complimentary massages for guests and draws them to the lobby to meet and mingle. This initiative actually helped and also

surprised Starwood as the revenues from paid massages in the hotel spa hit an all-time high, rising 30% over the previous year.<sup>15</sup>

Another program, Star Meeting Concierge, grew from another Six Sigma project. The hotels now provide a meeting concierge assigned to a Meeting Organizer as a permanent point of contact, on hand to welcome delegates, explain how the technology works, anticipate needs and respond quickly to any requests for assistance, ensuring the best service. Outside meeting planners are given business cards with the photo of their concierge so they can recognize them in an area where several meeting groups may be gathered. The free service enhances the customer service the concierge was able to provide to the meeting planners.<sup>16</sup> As a result of the program, 95% of meeting planners rated their concierge's responsiveness as excellent.

During research on Starwood, limited information about its Six Sigma successes was found through popular databases such as ISI Web of Science, ABI/Inform and Business Source Premier. For example, 10 articles about Starwood and Six Sigma were found on ABI/Inform. Also worth noting was the fact that scholarly journals did not include any related articles on Starwood and its Six Sigma efforts, suggesting a lack of academic perspective and visibility on Six Sigma case studies in service organizations.

### **Bottom-line results**

Financial metrics can help you understand the success of Six Sigma in any organization.<sup>17</sup> There was no shortage of examples of Starwood's success resulting from Six Sigma project metrics uncovered during our research. For example:

- At the Westin Turnberry Resort, a Six Sigma project resulted in an 11.95% increase in incremental spending by customers and an increase in room revenue of more than 19%.
- A Six Sigma project improved reservation systems and helped maximize the use of massage therapists and treatment rooms, increasing spa-related revenues from \$145 per booking to \$225 per booking.

Another Six Sigma project focused on improving the housekeeping service process<sup>18</sup>.

That project resulted in:

- An estimated yearly reduction of \$500,000 in cost of poor quality
- Reducing the time it takes to clean rooms by 65%, to eight minutes.
- Reducing the number of defects per room from 42% to 3.7%. This resulted in cleaner rooms.
- Increasing the number of rooms that a member of the housekeeping staff can clean each day—from 13 rooms to 17 rooms. This resulted in labor cost savings.
- Reducing a housekeeper's movement within a guest room by 64%, or 205 feet.

Another pilot project at the Westin, Atlanta North hotel focused on streamlining the laundry separating process. As a result of the project, the laundry department improved productivity by 14%, representing a savings of 291 hours of non-value added time each year. The same project at another resort resulted in a savings of 815 hours of non-value added time each year, or \$11,415.<sup>19</sup>

When Six Sigma was initiated at Starwood, the company incurred \$17 million in training costs. At the same time, the company reaped tangible earnings before interest, taxes, depreciation

and amortization—increases of more \$17 million.<sup>20</sup> Since then, programs developed under Six Sigma have delivered more than \$100 million in profits to Starwood's bottom line.<sup>21</sup>

### **Further study needed**

Our findings have many implications for researchers and practitioners. The findings help identify the particular CSFs and CTQs that acted as a guide for practitioners in Six Sigma implementation. The findings also showed that Six Sigma can spark innovation and promote a culture of creativity in Six Sigma projects.

For large-scale systems that share customers across business units, Six Sigma can have a big impact when it comes to innovation.<sup>22</sup> One of the important aspects of Six Sigma is linking projects to dollar savings. This enables top management to assess the actual effectiveness of each project and the overall success of Six Sigma program.

Starwood has not only achieved and exceeded customer expectations, but it has also registered high bottom-line results. This should be an important indicator for top management of other service organizations, as well as practitioners while implementing Six Sigma.

Limited scholarly articles on Six Sigma implementation in service organizations are a cause for concern, especially when a high-profile service organization such as Starwood is reaping such great benefits. Scholarly studies on Starwood's success could encourage Six Sigma implementation at manufacturing and service organizations, just as GE's story did in 1990s.

### **AUTHORS' NOTE**

The research for this article was done strictly by reviewing documents in public domain about Starwood's Six Sigma implementation. The number of documents was limited. The authors

acknowledge that interviews with key personnel involved in Six Sigma implementation at Starwood were not possible. Future studies should involve interviewing participants of different levels of Six Sigma activities at Starwood.

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## **Sidebar 1:**

### **Six Sigma at Starwood**

The Starwood Capital Group was founded by Barry Sternlicht in 1991. In 1995 Starwood, made its entry into the hospitality industry with the purchase of Westin Hotels.

Today, Starwood is a fully integrated owner, operator and franchisor of hotels and resorts, operating about 750 properties in more than 80 countries and employing 110,000 people.<sup>1</sup> Its major brands include: St. Regis, the Luxury Collection, Sheraton, Westin, Four Points by Sheraton and W, as well as Starwood Vacation Ownership Inc.<sup>2</sup>

Starwood began its Six Sigma journey by training 450 Starwood associates in specialist roles. This massive training was undertaken to develop a human network that would link good ideas across all properties and get them implemented. The organization has trained more than 300 employees as Black Belts (BB) and more than 2,700 as Green Belts (GB).

Within Starwood, the Six Sigma organization reports to divisional leadership and aligns with the division's goals and priorities. Various levels of Six Sigma exist in the organization:

- GBs have full-time positions with a portion of their time dedicated to being the Six Sigma point person, transfer project Champion and manager.
- BBs are full-time employees who typically work on new projects. They are a resource to GBs in their property or area. They are a member of the property's executive committee.
- Master Black Belts (MBB) are a full-time resource dedicated to overseeing and creating a portfolio of Six Sigma projects in a given division, area or region. They are a resource to BBs, GBs and Six Sigma council members in their areas.

Each Starwood property has a Six Sigma council consisting of engineering, technology and management personnel, and key department heads. The role of the council is to brainstorm ideas and translate them into projects. Using this type of lean structure and encouraging lateral team involvement, Starwood can generate new projects every two weeks.

Following implementation, each solution is followed for 12 to 18 months to ensure change is sustained and impact is significant, consistent and permanent.

There are “countless Six Sigma projects we have going on in many of our hotels across the world ... however, Six Sigma projects are not a one off—‘Let’s do it and leave it’—there needs to be ongoing monitoring of results to ensure that improvements made are continuous and sustainable,” said Paul James, an MBB of Starwood’s northwest Europe operations.<sup>3</sup>

Starwood’s Six Sigma efforts resulted in its Westin Turnberry Resort winning an award at IQPC’s 5<sup>th</sup> Annual European Six Sigma Summit in London.<sup>4</sup> The award was in the design for Six Sigma category for a project involving reservation systems. Sheraton Miramar Resort had the highest overall performance in 2004 and was recognized as the hotel of the year in East Africa and the Middle East Region.<sup>5</sup> —*T.K.C. & A.C.*

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## **Sidebar 2:**

### **Specific Starwood projects**

The Six Sigma journey of Starwood is mixed with several challenges and accomplishments, as shown in Figure 1.

To date, the organization has successfully executed hundreds of Six Sigma projects in areas involving productivity, menu redesign, resort concierge, e-mail marketing and sales. Some of the projects tackled by Starwood addressed the following problems:

- **Green room program:** Hotels face rising cost associated with linen and towel laundering.
- **Increase sales lead conversion:** Sales managers were unable to identify regional options for group booking leads.
- **Reduce room assignment defects:** High guest complaints were registered because of room assignment issues.
- **Tracking customer interactions and evaluations:** Staff performance was monitored to drive improvement.
- **Reduce accident rates:** A continuing effort was made to improve workplace safety.
- **Unwind activities:** Develop various activities during the evening hours, including massage services, to draw guests to the lobby to meet and mingle.—*T.K.C. & A.C.*