

This Article is under Formatting; the PDF's ready file will be replaced soon.

Journal of Production Research & Management

Volume - 16, Issue-2, 2026

ISSN No.- 2249-4766

Research Article

Received Date – 21st March, 2026

Acceptance Date – 14th August, 2026

Published Date – 31st August, 2026

**Process Mapping and Bottleneck Analysis of the Wellness
Provider Deployment Cycle**

Amit Paul¹

Student, Department of MBA, Amity University Online, Noida, Uttar Pradesh, India

Corresponding Author's Email: amitmaddy.paul@gmail.com

ABSTRACT

This Study focuses on understanding how A wellness Service Provider company currently manages the process of assigning wellness professionals—such as fitness trainers, doctors, and mental health experts—to corporate clients, and where delays tend to occur within that process. As the organization follows an aggregator-based service model, it works with a wide network of freelance professionals spread across multiple cities. While this approach allows flexibility and rapid expansion, it also makes coordination and timely deployment more challenging.

The study is based on a single-organization case study and closely examines the actual steps followed during the deployment cycle. Twenty-six recent service requests were reviewed in detail. For each request, time stamps were tracked from internal emails, CRM records, and WhatsApp communications to calculate how long each stage of the process took. In addition to this data, informal discussions with operations team members were conducted to better understand the practical reasons behind certain delays.

The analysis clearly shows that the most time-consuming stage is the period spent waiting for service providers to confirm their availability. This sourcing and confirmation phase accounts for more than half of the total deployment time, making it the primary bottleneck in the workflow. Based on these findings, the project recommends practical and achievable improvements, such as pre-identifying preferred providers, setting clear response-time expectations, and improving visibility of provider availability. These changes are expected to reduce overall lead time and make the deployment process more reliable and easier to scale.

INTRODUCTION

1.1 Introduction of the Study

In service-based organizations, operational efficiency depends heavily on how quickly and smoothly services can be delivered. Unlike manufacturing businesses, service firms cannot store their output for later use. Instead, they rely on people and time as their primary resources. If a service request is delayed or missed, the opportunity is often lost permanently. For this reason, understanding and improving internal processes is critical for service organizations [1,2].

This project examines the internal deployment process of a corporate wellness service provider. The focus is on how wellness professionals are assigned to client requests and how long each step of this process takes. By using process mapping, routine activities such as emails, phone calls, and follow-ups are converted into a structured workflow. This makes it easier to identify unnecessary delays and repeated effort that usually go unnoticed during daily operations [3].

The study is rooted in real operational experience. The issues analysed in this project are not hypothetical but are challenges faced regularly by the operations team. The aim is to apply operations management concepts in a practical setting and generate insights that can be directly used to improve performance [4].

1.2 Industry Profile: Corporate Wellness in India

The corporate wellness industry in India has grown significantly in recent years. Earlier, wellness initiatives were largely limited to annual health check-ups. Today, organizations expect ongoing engagement in the form of fitness sessions, mental health workshops, nutritional guidance, and on-site medical support. These programs are seen as important tools for improving employee well-being, productivity, and retention [5,6].

For wellness service providers, this growth has increased operational complexity. Services need to be delivered across multiple locations, often at short notice, and with consistent quality. Managing a large network of freelance professionals across different cities requires strong coordination and efficient internal processes. Delays in deployment not only affect service delivery but can also damage client trust [7].

1.3 Company Profile: Crush Fitness India

Crush Fitness India operates as a corporate wellness service aggregator specializing in customized B2B wellness programs. To retain operational agility and limit capital expenditures, the firm leverages an asset-light aggregator business model. Rather than employing an expansive in-house clinical and training staff, the organization maintains a vast network of independent freelance professionals, including certified fitness instructors, clinical nutritionists, corporate psychologists, and medical practitioners [8].

The internal operations team serves as the critical node connecting corporate clients with these independent service providers. Upon receiving an enterprise service request, operations executives are responsible for identifying an appropriately credentialed local provider, verifying real-time availability, aligning scheduling parameters, and formalizing the booking. However, these coordination touchpoints have historically relied on manual interventions via personal communication channels, creating operational friction as client volume scales [9].

1.4 Need for the Study

As request volumes escalated, the manual deployment framework increasingly placed the operations department into a reactive, crisis-management operational mode [10]. This study was initiated to address several critical operational systemic vulnerabilities:

- **The Delay:** It felt like it took forever just to get a simple "yes" from a trainer.
- **The Stress:** My team spends hours chasing people for replies instead of doing high-value work.
- **The Risk:** We were starting to lose face with clients because we couldn't confirm bookings quickly enough.

I needed to move beyond "gut feelings" and get hard data. I needed to know exactly *how long* these delays were and *why* they were happening so we could fix them before we scaled up further.

REVIEW OF LITERATURE

To make sure my analysis wasn't just based on guesswork, I looked at what operational theories say about these problems.

2.1 Business Process Mapping in Service Operations

Business Process Modeling is about drawing a map of how work is done.

Damasio et al. (2014) explain that in service industries, processes are often not visible—they happen through emails or in people's heads. By mapping them out, we can make the invisible visible. I chose to use a Swimlane Diagram for this project because it clearly shows how work moves between people, like from the client to me to the trainer. Research shows that 80% of delays happen at these handoff points, and that's exactly what I experienced.

2.2 The Theory of Constraints (TOC)

This is the most relevant theory for my project. Developed by Eliyahu Goldratt, it states that every system has one bottleneck that limits its overall performance.

- **The Rule:** Goldratt said that because the bottleneck controls the flow, any time lost at that point is subtracted from the system's total output.
- **My Application:** I realized that trying to type emails faster (which is not the bottleneck) wouldn't help. I needed to find the single slowest step in our process and fix that.

2.3 Lean Principles: Identifying "Muda"

Lean management focuses on removing activities that do not add value from the customer's point of view. In service organizations, waste often appears as waiting time, repeated follow-ups, and unnecessary communication. Identifying and reducing such waste can significantly improve service speed and reliability.

2.4 Managing the Service Supply Chain

Ellram, Tate, and Billington (2004) proposed a framework for managing service-based supply networks.

They argue that capacity, like a trainer's time, is perishable. If a trainer is free today but we don't use that time because we didn't know they were free, that opportunity is lost forever. This supports my later suggestion for a real-time availability calendar.

RESEARCH METHODOLOGY

3.1 Research Goals and Objectives

I had clear goals for this project:

1. Map the Workflow: Draw the current process to see who is doing what.
2. Measure the Delay: Use real timestamps to calculate the average time it takes from start to finish.
3. Find the Bottleneck: Identify the step that is slowing everything down.
4. Fix It: Propose a new process that improves things.

3.2 Research Design

I used a Descriptive Single-Case Study approach. I didn't want to survey a large number of companies; I wanted to deeply understand the specific situation and operations of the Crush Fitness India.

3.3 Data Collection Methods

To understand everything clearly, I combined numbers with team input:

A. Quantitative Data (The "Hard" Numbers)

I checked our digital records. I pulled raw data from our email server, CRM, and WhatsApp messages. This gave me real time stamps. Instead of asking people "how long did it take?", I looked at the logs to see exactly when an email was sent and when a confirmation was received.

B. Qualitative Data (The "Soft" Context)

I talked to two of my colleagues in Operations. I simply asked, "Why did this particular request take 20 hours?" Their answers gave me more understanding—like knowing a specific trainer was away or that a client changed their mind—that the numbers alone could not explain.

3.4 Sample Size and Technique

- Sample: I looked at 26 continuous deployment requests from October and November 2025.
- Mix: I made sure the sample included both urgent metro requests (Delhi) and more complicated outstation ones (Kurnool) to get a balanced view.

3.5 Tools Used for Analysis

I used Microsoft Excel to organize the data and calculate time differences.

I then used simple charting tools to show where the delays were happening.

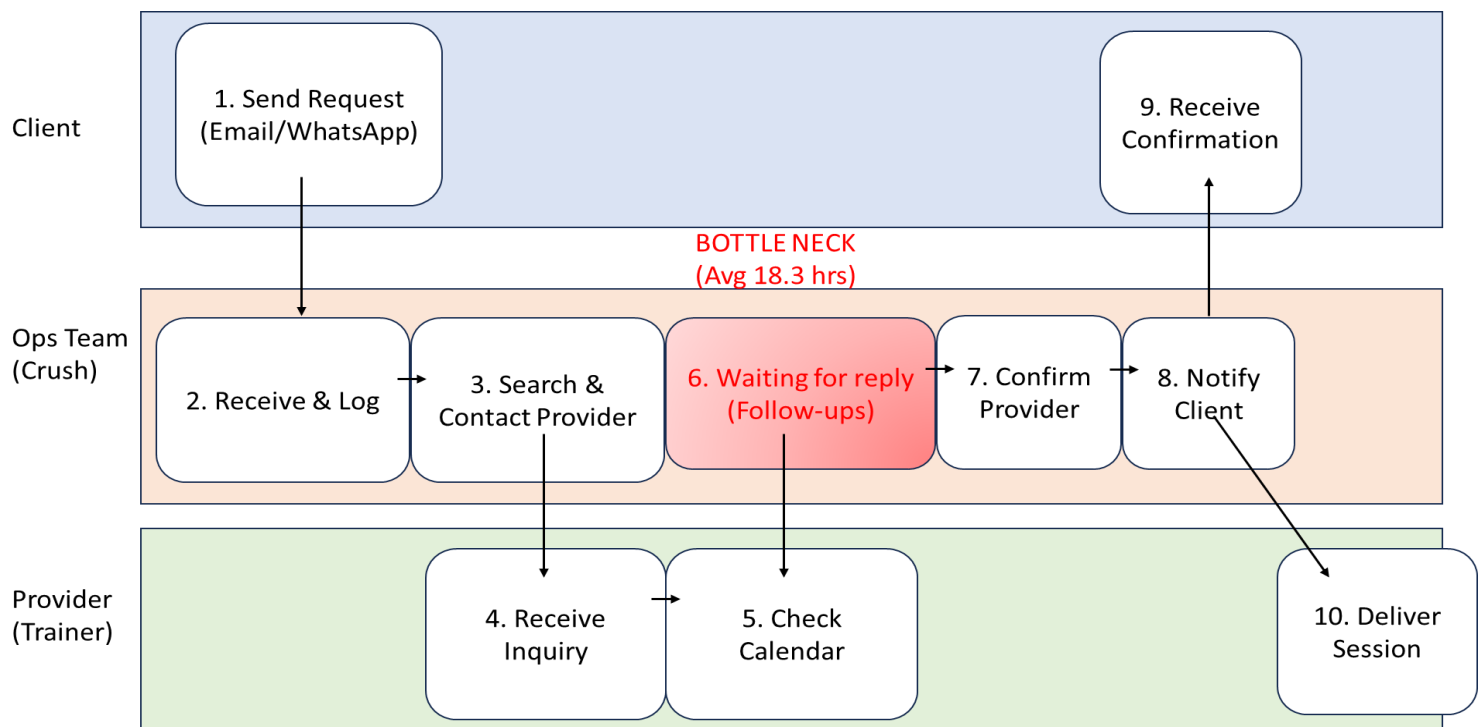
STATISTICAL ANALYSIS AND INTERPRETATION OF RESULTS

This section is the main part where I made sense of the raw data. Here, I turned the information into useful insights.

4.1 The "As-Is" Process Map

First, I showed how the current process works.

I made a Swimlane Diagram (Figure 1) to show the flow.



(Figure 1: The 'As-Is' Process Map showing the manual handoff loops)

Interpretation:

As you can see in the diagram above, the process isn't linear. Look at the red loop in the middle. When the Operations Team contacts a provider, we go into a "Waiting State." If the

provider says no, we have to start over. This looping is the key reason our workflow gets stuck.

4.2 Quantitative Cycle Time Analysis

I looked at the 26 requests and divided the total time into three "Gaps" : Initiation, sourcing, and final confirmation. Initiation includes the time taken to acknowledge the client request and begin the search. Sourcing covers the period spent contacting providers and waiting for confirmation. Final confirmation involves informing the client once a provider is booked [Table 1].

The analysis shows that the sourcing stage consumes the largest share of total lead time. While initiation and final confirmation are completed relatively quickly, sourcing often stretches across several hours or even days. This imbalance clearly indicates that administrative efficiency alone cannot solve the delay problem.

Table 1: Operational Cycle Time Breakdown

Process Stage	Definition	Average Time (Hours)	% of Total Time
Gap 1: Initiation	Client sends request → We start searching	6.12 Hours	21%
Gap 2: Sourcing	We contact provider → Provider confirms	18.30 Hours	62%
Gap 3: Finalization	Provider confirms → We notify client	5.13 Hours	17%
Total Lead Time	Total duration starts to finish	29.55 Hours	100%

4.3 Bottleneck Identification

The charts clearly show what's causing the issue.

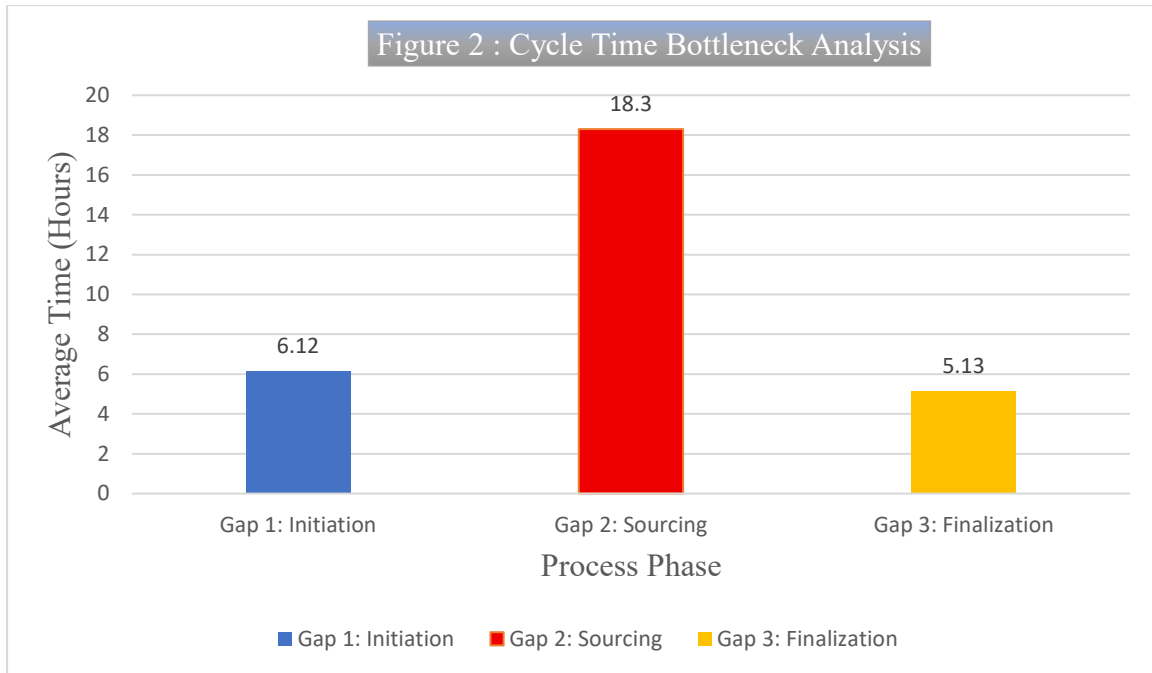
- **The Real Problem**: It's Gap 2 (Sourcing).

It takes an average of 18.3 hours, which is almost three times longer than the initiation phase.

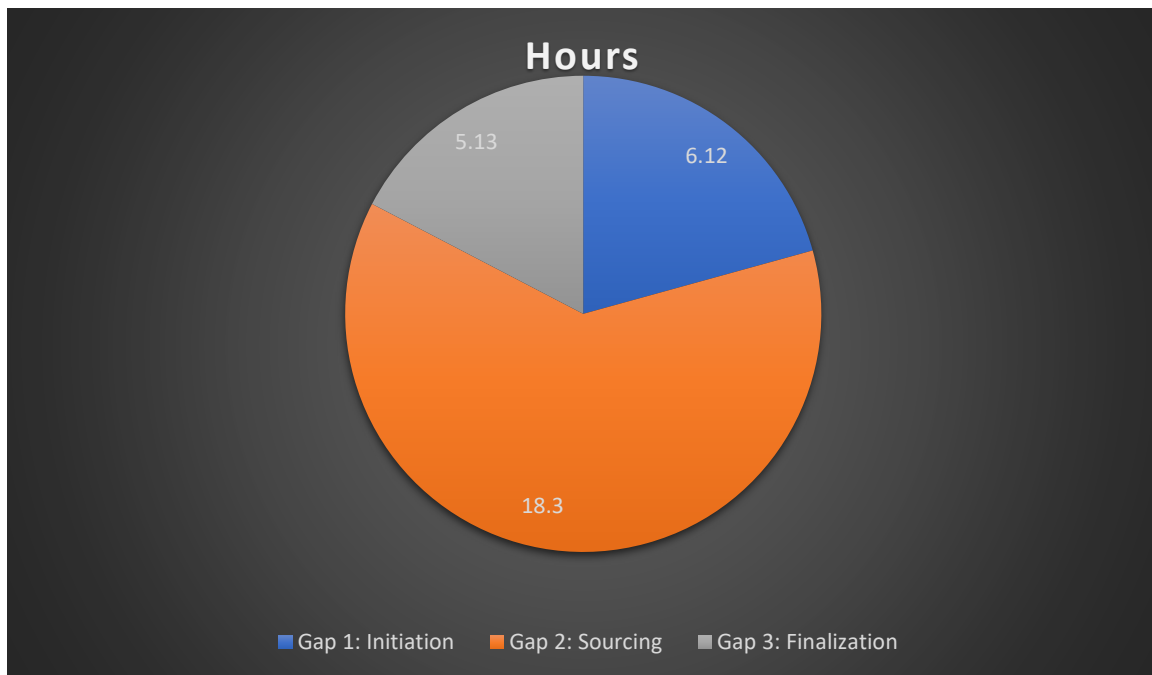
- **The Reality Check**: Gap 2 takes up 62% of our total processing time.

- **What this means**: Even if my team types emails faster or logs data instantly (Gap 1), it won't make a difference (Figure 2 and 3).

- We are losing time in the sourcing phase. Improving the admin work won't help until we fix the sourcing delay.



(Figure 2: Average Time per Process Step)



(Figure 3: Percentage of Total Lead Time by Phase)

Interpretation:

The charts make the problem very clear. Gap 2 (Sourcing) is the main bottleneck.

- It takes an average of 18.3 hours.
- It uses up 62% of our total processing time.
- The "Admin" work (Gap 1 and 3) is actually quite fast.

The delay isn't because my team is slow at typing; it's because we're waiting for trainers to respond.

4.4 Root Cause Analysis

Why does Gap 2 take 18 hours? After talking to the team, I found three simple reasons:

1. The **"WhatsApp Lag"**: We use personal WhatsApp for work. Trainers are busy teaching and check their phones hours later. We see the "double tick," but no reply.
2. **One-by-One Processing**: We have a bad habit of asking our "favorite" trainer first, waiting for a "No," and then moving on to the next person. This serial process significantly delays the timeline.
3. **Flying Blind**: We basically work in the dark. We don't know who is free until we ask, which wastes a lot of time.

OBSERVATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 Synopsis of Research Outcomes

1. We are stuck in a "Waiting Game": The 18-hour delay in Sourcing represents idle capacity. My team is stressed not by the workload, but by the mental effort of tracking multiple unconfirmed requests.
2. The "Weekend Effect": Requests that come in on Fridays often take 50+ hours because our manual process stops over the weekend. A digital system wouldn't have this issue.
3. Scale is impossible: Right now, if we double the number of clients, we'd need double the operations staff to make phone calls. That's a scalability problem.

5.2 Suggestions and Recommendations

To break this bottleneck, I am proposing a three-tiered strategy for Crush Fitness.

A. Strategic: The "Preferred Provider" Program

For our steady clients (like the Kurnool account), we should stop searching every week. We need to pre-assign a trainer for the whole quarter.

- **Impact:** This **eliminates Gap 2 entirely** for these clients. We don't need to search; the slot is pre-sold.

B. Process: The 4-Hour SLA

We need to professionalize our freelancers. I recommend adding a clause to our contracts: "Requests sent between 9 AM and 6 PM must be answered within 4 hours."

- **Incentive:** Trainers who follow this rule get "Gold Status" and first access to high-paying gigs.
- **Impact:** This simple behavioural nudge could cut the waiting time from 18 hours to 4 hours.

C. Technology: Shared Visibility

We need to stop asking "Are you free?" and start knowing.

- **Action:** Implement a simple shared Google Calendar for each city. Trainers mark their "Blocked" times.
- **Impact:** My team can look at the calendar, see who is open, and book them instantly.

5.3 Conclusion

This project started with a hunch that our process was slow. The data proved it. We found that **62% of our time** is spent just sitting around waiting for providers to reply.

This isn't a problem with our talent or our clients; it's a process problem. We are using manual tools for a digital job. By shifting from reactive "chasing" to proactive "pre-booking" and using basic digital tools like shared calendars, Crush Fitness can cut its delivery time in half. This will transform our Operations team from stressed "firefighters" into strategic planners, ready to handle the next wave of growth.

5.4 Limitations of the Study

- **Sample Size:** I only looked at 26 requests due to time constraints. A full year's data might show seasonal trends I missed.
- **Location Bias:** The data is heavy on our current active cities. New locations might have different challenges.

REFERENCES

1. Chase RB, Shankar R, Jacobs FR. Operations and supply chain management. 15th ed. New York: McGraw-Hill Education; 2018.
2. Goldratt EM, Cox J. The goal: a process of ongoing improvement. Croton-on-Hudson (NY): North River Press; 1984.
3. Ellram LM, Tate WL, Billington C. Understanding and managing the services supply chain. J Supply Chain Manag. 2004;40(3):17-32. doi:10.1111/j.1745-493X.2004.tb00176.x.
4. George ML. Lean Six Sigma for service: how to use Lean speed and Six Sigma quality to improve services and transactions. New York: McGraw-Hill; 2003.

5. Slack N, Brandon-Jones A, Johnston R. Operations management. 8th ed. Harlow, England: Pearson; 2016.
6. Damasio J, et al. "The use of business process mapping to improve organizational efficiency." International Journal of Business and Management. 2014.
7. *Crush Fitness India. Operations logs and deployment data [internal company records]. New Delhi: Crush Fitness India; 2025.*
8. Hammer M, Champy J. Reengineering the corporation: a manifesto for business revolution. 1st ed. New York, NY: HarperBusiness; 1993.
9. Womack JP, Jones DT. Lean thinking: banish waste and create wealth in your corporation. 2nd ed., rev. and updated. New York, NY: Free Press; 2003.
10. Johnston R, Clark G. Service operations management: improving service delivery. 3rd ed. Harlow, England: Financial Times/Prentice Hall; 2008.