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Case Title: Sequencing Amid COVID-19 Pandemic

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ABSTRACT

This case is about the Param Softwares Ltd., a startup based at Pune city of Maharashtra state, India. It mainly focuses on the challenges and risk faced by the company after lockdown during the pandemic. This is operations management case study where employees are reluctant to join organization after unlock 1.0 as they are worried about their safety measures at the premises. Finally, sequencing of safety measures are done and the employees are made to enter the oranisation by passing through these checks in the sequence.

Novelty: This case will help students to explore new mantras of operations management during COVID-19 Pandemic.

Originality: Data is taken on the basis of observation method.

Key Words: Sequencing, Covid-19, Johnson's Rule, Operations Management

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Introduction

Param Software Ltd. is located at Pune city, popularly known as Oxford of the east. During its inception year only, the company was able to attract very good projects and increased their employee base from 15 employees to 150 employees, who specializes in their technical software development field. Mr. Raman is the CEO of the company with leadership vision, to advance the company by leaps and bounds.

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Due to COVID-19 pandemic outbreak, almost all the employees are made to work from home. On daily basis, they are having online meetings, video conferencing and submission of software modules. Under the sound policy of Param software Ltd., employees are enjoying all fringe benefits and have faith that company will take suitable health measures, so that they can resume their work in the pink of their health, even after the lockdown gets over.

Mr. Raman, while sipping the cup of coffee at his home, is in the dilemma of how to ensure the safety of employees at the office premises. After discussion with the top management, they decided to put three machines in sequencing viz. Thermal Gun (for temperature checking), Sanitization Kiosk (to sanitize all the gadgets), and finally the Physical Checkup. Any person who enters the organization, need to go through the above mentioned three centers in that order.

A mock run has been carried out, to calculate total time spent by a single person on these three centers in a sequence. But, Mr. Raman is worried that it will increase the idle time of the remaining two centers. He wants that all the centers must be equally occupied and none of the centre should remain idle, so he constituted the committee of operation managers to calculate and reduce the total idle time, who then presented the following tabulated data -

PROCESSING TIME (Minutes)			
S.No.	***Thermal Gun***	***Sanitization Kiosk***	***Physical Checkup***
A	1.0	0.5	2.5
B	1.5	0.5	2.0

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C	1.3	0.3	1.5
D	1.5	0.8	2.0
E	1.0	0.3	0.5
F	1.5	0.7	1.0

Questions:

- If the test checkups can only be done one at a time, suggest and apply Johnson's rule sequence, so that the total time of all checkups is the minimum possible.
- Draw the GANTT chart for graphical representation with calculation of idle time.

TEACHING NOTES

Teaching Objective:

The objective of the case is to present a situation were in students can experience the sequencing by using the Johnson's Rule and understand the topic in practical way depth.

Issues Involved in the case:

1. Sequencing
2. Johnson's Rule
3. Decision Making

How to use the case:

The case can be used while teaching Operations Management and decision making in the class. The teacher can use "Operations Management" by S.N. Chary for teaching different types of environmental strategies.

The case can be given a day prior to starting the topic and then the next day the teacher can ask students a few questions:

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- What is sequencing?
- What is Johnson's rule?
- Which OM theories suited best to this environment?

Practical Solution:

S. No.	Thermal Gun + Sanitization Kiosk	Sanitisation Kiosk + Physical Checkup
A	1.0 + 0.5 = 1.5	0.5 + 2.5 = 3.0
B	1.5 + 0.5 = 2.0	0.5 + 2.0 = 2.5
C	1.3 + 0.3 = 1.6	0.3 + 1.5 = 1.8
D	1.5 + 0.8 = 2.3	0.8 + 2.0 = 2.8
E	1.0 + 0.3 = 1.3	0.3 + 0.5 = 0.8
F	1.5 + 0.7 = 2.2	0.7 + 1.0 = 1.7

New Job Sequence					
M/C 1 ——————>			<—————— M/C 2		
A	C	B	D	F	E

Calculating Output									
S. No.	Thermal Gun			Sanitisation Kiosk			Physical Checkup		
	PT	IP	OP	PT	IP	OP	PT	IP	OP
A	1.0	0	1.0	0.5	1	1.5	2.5	1.5	4
C	1.3	1	2.3	0.3	2.3	2.6	1.5	4	5.5
B	1.5	2.3	3.8	0.5	3.8	4.3	2.0	5.5	7.5
D	1.5	3.8	5.3	0.8	5.3	6.1	2.0	7.5	9.5
F	1.5	5.3	6.8	0.7	6.8	7.5	1.0	9.5	10.5
E	1.0	6.8	7.8	0.3	7.8	15.3	0.5	15.3	15.8
The **Minimum Possible Total Time** For All The Possible CheckUps Is **15.8** With The Sequence **A-C-B-D-F-E**.									