Global Corporate Village – Possibility and Scope

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I. INTRODUCTION

Since all companies have operations, i.e. certain ways to create an optimal output from various input sources, whether it be manufacturing physical products or offering services, it is good to be familiar with the basics of managing these operations. Especially as mastering these basics can directly support your business goals.

In this article, we will introduce you to a historical background and the current concept of operation management, its guiding principles, and the everyday activities that are the responsibility of an operation manager. We will also give you an outlook on some of the recent trends that have an impact on this discipline.

II. WHAT IS OPERATIONS MANAGEMENT?

Operations management involves planning, organizing, and supervising processes, and make necessary improvements for higher profitability. The adjustments in the everyday operations have to support the company's strategic goals, so they are preceded by deep analysis and measurement of the current processes.

III. HISTORICAL BACKGROUND

Operations management was previously called production management, clearly showing its origins in manufacturing. Historically, it all began with the division of production, starting as early as the times of ancient craftsmen, but spreading more widely only by adding the concept of interchangeability of parts in the eighteenth century, ultimately sparking the industrial revolution.

Still, it was not until Henry Ford took a twist on manufacturing with his famous assembly line concept, otherwise known as "bring work to men," that the management of production for improving productivity became a hot topic. From the 1950's and 1960's, it formed a separate discipline, besides bringing other concepts, such as Taylorism, production planning, or inventory control, to life.

As the economies in the developed world were gradually shifting to be service-based, all the corporate functions, including product management, started to integrate them. The service side also began its approach by applying product management principles to the planning and organizing of processes, to the point where it made more sense to call it operations management.

- Multidisciplinary nature

Operations management is now a multidisciplinary functional area in a company, along with finance and marketing. It makes sure the materials and labor, or any other input, is used in the most effective and efficient way possible within an organization – thus maximizing the output.

Operations management requires being familiar with a wide range of disciplines. It incorporates general management, factory- and equipment maintenance management by tradition. The operations manager has to know about the common strategic policies, basic material planning, manufacturing and production systems, and their analysis. Production and cost control principles are also of importance. And last, but not least, it has to be someone's who is able to navigate industrial labor relations.

- Required skills

The skills required to perform such work are as diverse as the function itself. The most important skills are

Organizational abilities. Organizing processes in an organization requires a set of skills from planning and prioritizing through execution to monitoring. These abilities together help the manager achieve productivity and efficiency.

Analytic capabilities/understanding of process. The capability to understand processes in your area often includes a broad understanding of other functions, too. An attention to detail is often helpful to go deeper in the analysis.

Coordination of processes. Once processes are analyzed and understood, they can be optimized for maximum efficiency. Quick decision-making is a real advantage here, as well as a clear focus problem-solving

People skills. Flaws in the interactions with employees or member of senior management can seriously harm productivity, so an operation manager has to have people skills to properly navigate the fine lines with their colleagues. Furthermore, clear communication of the tasks and goals serves as great motivation and to give a purpose for everyone.

Creativity. Again, problem-solving skills are essential for a creative approach if things don't go in the right

direction. When they do, creativity helps find new ways to improve corporate performance.

Tech-savviness. In order to understand and design processes in a time when operations are getting increasingly technology-dependent, affinity for technology is a skill that can't be underestimated. Operations managers have to be familiar with the most common technologies used in their industries, and have an even deeper understanding of the specific operation technology at their organizations.

IV. THE MAJOR PRINCIPLES OF OPERATIONS MANAGEMENT

Some of the fundamentals of the everyday work in operations management worth expanding a little more. Below you will find two major approaches that are important to understand the driving forces behind the decisions about planning, designing and organizing processes.

They are both embracing the idea of focusing on the delivery: supporting the organization to deliver better results, by an optimized input of materials, equipment, technology, and human resources.

The ten principles of OM

An experienced manufacturing and operations management professional, an industrial philosopher, and regular speaker at conferences organized by APICS, the leading US association of supply chain and operations management. He presented his list of 10 principles of operations management at an APICS conference in 2007, saying the violation of these principles had caused the struggle US manufacturing companies were experiencing.

Reality. Operations management should focus on the problem, instead of the techniques, because no tool in itself would present a universal solution.

Organization. Processes in manufacturing are interconnected. All elements have to be predictable and consistent, in order to achieve a similar outcome in profits.

Fundamentals. The Pareto rule is also applicable to operations: 80% of success comes from a strict adherence to precisely maintaining records and disciplines, and only 20% comes from applying new techniques to the processes.

Accountability. Managers are expected to set the rules and the metrics, and define responsibilities of their subordinates, as well as regularly check if the goals are met. Only this way would the workers put in the necessary efforts.

Variance. Variance of processes has to be encouraged, because if managed well, they can be sources of creativity.

Causality. Problems are symptoms: effects of underlying causes. Unless the causes are attacked, the same problems will appear again.

Managed passion. The passion of employees can be a major driver of company growth, and it can be instilled by the managers if not coming naturally.

Humility. Instead of a costly trial and error process, managers should acknowledge their limitations, "get help, and move on."

Success. What is considered success will change over time, but always consider the interest of the customer. In order to keep them, all the other principles have to be revised occasionally.

Change. There will always be new theories and solutions, so you should not stick to one or the other, but embrace the change, and manage for stability in the long term.

The 16 principles of operations management by Dr. Richard Schonberger

Dr. Richard J. Schonberger, renowned researcher of American manufacturing and author of the book "World Class Manufacturing: The Next Decade," has become widely known in operations management by his set of 16 customer-focused principles.

Team up with customers. Know what they buy and use, and organize product families accordingly.

Continual, rapid improvement. Aim for non-stop improvement to always deliver the best quality, aim for a quicker response to customer demand, and always offer maximum flexibility. Thus, it gives more value, in a more flexible way.

Unified purpose. Involve frontline employees in strategic discussions to make sure they understand the purpose of their work and have their say in what to change.

Know the competition. Know their customers, their best practices, and their competitive edges.

Focus. Allow no variations that the customers don't buy or demand.

Organize resources. Set priorities in organizing resources in a way the operations are close to the customer rate of use or demand.

Invest in HR. Offer cross-training options, job rotation, and improvements in work safety and health. Also offer more rewards and recognitions.

Maintain equipment. Always think of improvement of current assets first, instead of a new purchase.

Simple "best" equipment. Keep the equipment as simple and flexible as possible, at a reasonable cost.

Minimize human error. Improve the equipment and keep frontline workers accountable.

Cut times. Shorten product path to customer by making processes and delivery faster.

Cut setup. Be prepared to support different processes and get all information and tools ready for on-demand production.

Pull system. Improve the workflow and cut the waste by producing on demand.

Total quality control. Use only the best materials, processes, and partners.

Fix causes. Focus on controlling the root causes that really affect cost and performance.

Visibility management. Promote corporate achievements, let the market know about your improvements in competence or productivity.

The activities of operations management

There are three major groups of activities performed by operations management, deriving from its planning or designing, organizing, and supervising functions. All activities involve considering assets, costs, and human resources, and are preceded by a thorough analysis of processes.

Design

Before planning processes or designing products, operations management should be busy analyzing the market to test the demands. If it delivers promising results, e.g. a niche to target or a new product or service to develop, you can start planning.

In most cases, planning involves designing a new product, from the initial concept to the actual launch, with several testing phases involved. During planning, you will have to consider both technical and business requirements.

Sometimes the processes need to be updated: designing a new supply chain or other logistics processes. If your product is a service, process design aims for a variety of requirements and customer contact levels.

Again in other cases, it's about a new facility: your company decides to expand its operations, and you will have to decide on the location of the facility, its capacity, and its layout.

Plans should always support the business objectives: they are in focus when considering the costs and finding the best matching quality and capacity, or calculating inventory and human labor needs.

Therefore, it is important to set proper measures in the planning phase, to know if the actual performance meets them, or there is need for adjustments. Capacity is one of these measures, as is product quality, or delivery times. The initial figures are usually estimates based on the market analysis conducted beforehand.

One thing operation managers should be good at is critical path analysis. Learn more about that in the following video.

Management/Organization

So you have a facility for production, your product design is ready, and so is the way it will be produced: with what material and human resources, at what costs, with what workflow.

This is a solid starting base for maximizing the efficiency of your operations. Still, you will need constant and competent management to correct the accidental mistakes in planning, to adjust production to changing costs or regulations, and keep them efficient on many levels.

The operations manager selects and schedules the processes for an optimal result and does the same with materials for an ideal quality and capacity. Organizing the maintenance of the equipment is also part of the quality management activities. Furthermore, the inventory and the whole supply chain has to be managed in order to produce more efficiently.

As in all management functions, the management of human resources is an essential activity. In operations management, the planning of actual employment levels can have a great impact on whether an organization can operate effectively.

Improve

There is always room to improve when it comes to the processes used, the quality and capacity achieved, or as far as the level of inventory and human resources are concerned.

A great deal of operations management's tasks, therefore, comes from these needs, and this is where long-term planning steps in. But remember, changes made according to these plans are only as good as the improvement they bring in business terms.

A better way to forecast demand gets you closer to an improvement of processes, as savings on costs and delivery times occur. The quality of a product will be higher if you have Total Quality Control established and assess the operational risks correctly. Inventory control accounts for a better use of supplies. With Just-In-Time manufacturing, the capacity issues can be solved. Collaboration is a common go-to strategy that you can use to improve the effectiveness of your human resources.

As a general advice, you can always consider adding some technology in the mix. The best way to do that is to develop a technology plan: identify where the company is now, in which areas it would need a boost, what relevant technologies are available, and which ones are feasible to implement.

V. RECENT TRENDS IN OPERATIONS MANAGEMENT

The ever-shrinking product lifecycles, the new trends on the labor market, the environmental concerns, and the digitalization of the processes require innovative approaches to operations management. Some of the trends that have a significant impact on the discipline today are:

Lean and agile manufacturing

Established by the Toyota Corporation, the term lean manufacturing has become a mainstream trend in the industry, and it is used interchangeable with Just-In-Time production. The concept behind is a constant improvement of processes in order to reduce waste and inventory, and maximize the output of high-quality, low-cost products and services.

A new twist on this concept is agile, or otherwise known as "the new lean." It has its origins in software development but now is used by various industries. The reason it came to life was the growing complexity of processes, and it is characterized by product development done in small increments and super-fast decision-making. These together ensure the necessary flexibility and interactivity, proven remedies for unpredictable changes in market demand.

Six Sigma

Improving processes using a data-driven approach is an innovation of Motorola from mid-1980. It's still among the trends of impact because it is a quality-improvement and cost-reducing method that focuses on customer satisfaction.

The method is based on the Six Sigma measure, which is achieved if only 3.4 defects are found in a million of output. This way, production efficiency can be nearly 100%. When presented with a problem, the Six Sigma approach uses a five-step method called DMAIC, an acronym of define, measure, analyze, improve and control.

Reconfigurable manufacturing system (RMS)

Another possible method for reacting to quick changes in the market is RMS, a production system that can be used with different functionalities within a product family. With an RMS, you can make adjustments in production cost-effectively.

Employee involvement

A recent trend that impacts the human resources management activities in operations is the increasing involvement of employees in the planning processes. Listening to the opinions of the workers often brings up fresh ideas, a different perspective on what problems should be solved and how to make the operations more effective.

Sustainability

Due to the ever constraining environmental regulations, businesses must operate under pressure to reduce their harmful impact while still being able to grow. The issues, since affecting all levels of operations, need the insights of operations management on what are the options to meet these new expectations.

Many times, principles applied for efficiency coincide with sustainable operations management principles, like organizing resources or cut times and waste.

Behavioral operations management

This trending research area studies the impact of human behavior, especially non-rational decision-making, on the discipline. Because of its complexity, operations management is a field prone to frequent deviances in problem-solving.

There is a solid interest to understand the most important factors that influence manager's decisions, as well as to make efficient problem-solving methods more widely available. With such a toolbox, managers can make more rational decisions and improve the overall efficiency of the operations.

What is an 'Operating Margin'

Operating margin is a margin ratio used to measure a company's pricing strategy and operating efficiency. Operating margin is a measurement of what proportion of a company's revenue is left over after paying for variable costs of production such as wages, raw materials, etc. It can be calculated by dividing a company's operating income (also known as "operating profit") during a given period by its net sales during the same period. "Operating income" here refers to the profit that a company retains after removing operating expenses (such as cost of goods sold and wages) and depreciation. "Net sales" here refers to the total value of sales minus the value of returned goods, allowances for damaged and missing goods, and discount sales.

Operating margin is expressed as a percentage, and the formula for calculating operating margin can be represented in the following way:

$$\text{Operating Margin} = \frac{\text{Operating Income}}{\text{Net Sales}}$$

Operating margin is also often known as "operating profit margin," "operating income margin," "return on sales" or as "net profit margin." However, "net profit margin" may be misleading in this case because it is more frequently used to refer to another ratio, net margin.

BREAKING DOWN 'Operating Margin'

Operating margin gives analysts an idea of how much a company makes (before interest and taxes) on each dollar of sales. Generally speaking, the higher a company's operating margin is, the better off the company is. If a company's margin is increasing, it is earning more per dollar of sales.

For an example of how to calculate operating income, suppose that Company A earns $12 million in a year with $9 million of cost of goods sold and $500,000 in depreciation. Also suppose that Company A makes $20 million in sales during the same year, with $1 million worth of returns, $2 million in damaged and missing goods and $1 million in discounts. Company A's operating margin for the year is then:

($12M - $9M - $0.5M) / ($20M - $1M - $2M - $1M) = $2.5M / $16M = 0.1563 = 15.63%

With an operating margin of 15.63%, Company A is earning about $0.16 (before interest and taxes) for every dollar of sales.

A company's operating margin often determines how well the company can satisfy creditors and create value for shareholders by generating operating cash flow. A healthy operating margin is also required for a company to be able to pay for its fixed costs, such as interest on debt, so a high margin means that a company has less financial risk than a company with a low margin.

When determining operating margin, it is important to take into account the nature of the operating expenses you are incorporating into your calculations. Operating expenses are often considered to be either "fixed" or "variable." Fixed operating expenses are expenses that remain steady over time, even as business activity and revenues change. Some examples of fixed expenses include rent paid for facilities and interest on debt, as these expenses are often at predetermined rates. Variable operating expenses, on the other hand, change with changes in business. One example of a variable operating expense is the cost of raw materials, as the total cost of raw materials will rise with increased demand and sales of manufactured goods.

Often, nonrecurring cash flows, such as cash paid out in a lawsuit settlement, are excluded from the operating margin calculation because they don't represent a company's true operating performance.

When calculating operating margin, expenses are also often designated as either "cash expenses" or "non-cash expenses." Unlike cash expenses, non-cash expenses do not require a cash outlay. For example, for the sake of calculations, the cost of a piece of equipment expected to last ten years has its cost divided out over those ten years, with annual calculations during that period each taking into account 10% of the cost of the equipment. This distinction largely accounts for difference between operating income and operating cash flow.

VI. USES OF 'OPERATING MARGIN'

Operating margin's primary functionality, as mentioned above, is its ability to gauge how efficiently a company is operating, or how profitable it is. Yet, using it in different ways can elucidate certain things about a company or industry that a single operating margin for a company cannot.

For example, operating margin may be calculated for a period of a quarter or a year, which is useful in assessing a company's operating history. A savvy investor may often track a company's operating margin over time (perhaps over the past four, eight or twelve quarters) to determine if the company's margin has historically been consistent or if growth in its operating margin is stable. For example, a company with a high operating margin in the current quarter but low operating margins during the previous seven quarters probably requires further attention. With its operating history, one may not necessarily rely on this high operating margin persisting in a stable way.Operating margin can also help an investor take an even closer look at a company, as it can be used to analyze a particular project within a company, not only the company itself. Projects can vary widely in size, but operating margin may still be used to investigate a particular project or compare multiple projects within a company.

VII. LIMITATIONS OF 'OPERATING MARGIN'

Like any ratio that sets out to gauge a company's performance and profitability, operating margin comes with an important set of limitations that a prudent investor would do well to consider.For one, operating margin calculations do not account for the investment capital that got the company started in the first place. This is particularly important when considering young companies, as they may be working to recoup initial costs, an effort that will likely not be reflected in an operating margin.

Additionally, certain complications involving overhead costs may arise when attempting to calculate the operating margin for specific projects within a company. Many companies have overhead that is not tied to a single particular project, but rather to the entire company. One common example of such costs is salary costs for employees working at a company's headquarters, which may oversee and provide support for all or many of a company's projects.Moreover, like all ratios used in ways similar to this one, operating margin should only be used to compare different companies when they operate in the same industry, and ideally when they have similar business models and revenue numbers as well. Companies in different industries may often have wildly different business models, such that they may also have very different operating margins, thereby rendering a comparison of their operating margins relatively meaningless.

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