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Model answer for the assignment(Correction)

Objective	Topic	
Expected Learning Outcome Students will be able to understand and analyze a business lecture video and produce a structured written analysis using appropriate economic and management terminology.	Watch the video and answer the questions (Lecture Analysis)	**Third Activity**

Answers: Text Extraction, Translation, and Analysis:

A. Watch the video carefully, then answer the following:

1. Transcript of the video: Lecture one, introduction to operations management.

In this lecture, we're going to define operations management. We'll talk about the difference between goods or services.

We'll introduce you to the supply chain. We'll talk about the transformational process. We'll cover the evolution of operations management.

We'll talk about environmental and ethical issues. And finally, we're going to talk about supply chain management and issues. So what is operations? So operations is really what you do as a business.

It's the part of the business organization that's responsible for producing goods or services. So if you are a restaurant, it is making and serving food. If you are a automobile manufacturer, it is producing a good, which is the car.

So how do we define operations management? It's the management of systems or processes that creates the goods or provides the services. So here's some examples of goods versus services. So goods includes everything from raw materials to partially assembled something to the final product.

So an example is your car. Your car is a goods. The computer, so the computer that you're using to watch this video, that is a goods.

An oven where you bake something. Shampoo, those are all goods. Services are activities that provide some combination of time, location, form, or psychological value.

So for example, air travel. So the service of air travel is to get you from one town to another town. You're actually using a goods, which is the airplane, to get there.

But your purpose isn't, you're not buying an airplane. You're just simply buying the air travel. Education.

This class is a great example of a service. You are learning something here. A haircut.

Your hair grows. You need to go get a haircut. Your haircut is at a specific time and location.

Legal counsel. You need to go get a lawyer. That's a service.

So here's the supply chain. It's the sequence of activities and organizations that produce or deliver a goods or services. So you start on the left with supplier, suppliers.

That's someone that your suppliers get stuff from. Then you have direct suppliers. Then the producer.

You are the producer. You are making something. Now that product, service, whatever it is, has to be distributed.

So there's a distributor. And then you have the final customers. So that's the supply chain.

And we'll be covering this a lot throughout the class. Now this is the transformational process. This is where you add value.

This is really what you do. So on the left, you have inputs. It could be land, labor, capital, information, raw materials, whatever it is.

Then you go through some kind of a transformational process. And on the output is either a goods or services. Now you have these feedback loops where you're always looking to see if there's something about your product or service that needs to be improved in your transformational process.

You also have feedback to your inputs to say what is it that we need to do different. So an example on an input. Let's say you're a restaurant.

So your inputs are your building, your labor, the cook, the servers. And then it's your food. So you might get a delivery of lettuce and tomatoes and beans and rice.

Those are all inputs. So the transformational conversion process is where you take those things. A cook makes that into food.

And then a server serves that to a customer. And so that's the transformational process and the output. Now the feedback is the cook on the right-hand side, the customer says, something's wrong with this food.

It doesn't taste right or I don't like it. That's feedback, goes back in. And they may say, OK, I'll make you something different.

I'll make you something better or try again. That would be feedback. Now if you've got a box of lettuce and the entire box of lettuce is rotten, now that goes back to feedback to your lettuce supplier of your input.

So that's sort of how the whole thing works, this transformational process. So here's the goods and services continuum. A lot of products are not purely a service or a goods.

They're sort of a combination. So for example, automobile assembly and steelmaking, those are mostly goods. But there is a small amount of service in there.

Home remodeling, retail sales, have a little bit more service. Computer repair, a restaurant meal. So in a restaurant meal, it's really half of it is the food.

You're eating food, which is a goods. But you have a server. They're transforming this food for you.

It's a certain time that you're eating it, which is the service side of it. Songwriting, software development starts getting more into services, surgery, teaching. You start getting into mostly services with just a small amount of goods.

So why study operations management? So every aspect of business affects or is affected by operations. So many service jobs are closely related to operations. So financial services, marketing services, accounting services, information, all those are very closely related to operations.

And so when you learn about operations and supply chain, you will have a better understanding of where we live, the whole world, global dependencies of companies and nations. You'll also understand why companies succeed or fail, and the importance of working with others. So there's three basic functions of any organization, and that is marketing, operations, and finance.

So marketing is the part that goes and identifies customers, brings customers in. Operations is the part that actually makes something or does something. And finance is collecting the money, managing the money, all of those.

Now there's overlap between these three areas. For example, under finance and operation, finance is responsible for budgeting the operations. They provide the economic analysis of an investment proposal.

That you say, well, we should have a new restaurant. OK, so that new restaurant, how much is it going to cost? What's the return on investment? Those kinds of things. And then they provide the funds.

So finance is responsible for providing the funds to pay for your servers or your cook, pay for the food, all of those. And then marketing has an impact with operations. So marketing is responsible for providing demand data.

So we're going to have this restaurant. Marketing is responsible to analyze how many people we think will come to that restaurant at what time. Product and service design.

So marketing is responsible to tell operations the kinds of things that are important to the customer. Marketing does the competitor analysis. So we look at a restaurant.

We want to put a restaurant over on Main Street. Well, marketing will go over there and look and say, well, you know, there's another restaurant that does the same thing as us. And we'll have to compete head to head.

That might not be the best location. They're looking at the competitors. Lead time data.

So marketing is responsible for promising customers the product on a certain time. But they need to work with operations because it might be normally when you place an order, we'll provide it in a week. But maybe operations has a backlog and they need to go tell marketing, you know, the lead time for this is really going to be two weeks because we have too much to do.

Operations management and supply chain career opportunities. So here's some jobs that you could have that are directly related to operations management. It can be an operations manager, supply chain manager, production analyst, schedule coordinator, production manager, industrial engineer, purchasing manager, inventory manager, or quality control.

All of those are very closely related to operations management. There's some professional suppliers for operations management. APICS, Association for Operations Management, ASQ, American Society for Quality, Institute for Supply Management.

Then you have INFORMS, Institute for Operations Research and Management Science, POMS, Production and Operation Management Society, PMI, the Project Management Institute, and then the Council of Supply Chain Management Professionals. So these are some of the professional societies. So let's talk about process management.

So there's three categories of business processes. There's the other upper management process. These govern the entire operation of the organization.

Operational processes, these are like the core processes, and then supporting processes. Then supply and demand. So the operations and supply chain are responsible for meeting the supply.

Sales and marketing is responsible for identifying demand, creating demand. So if you have way more supply than you have demand, that's wasteful and costly. If you say, well, we're going to have 100 people coming to the restaurant, we have to make a lot of food, and then you only have 10, and all that extra food, some of it is not going to be able to be used tomorrow.

So that becomes wasteful. So that's where you have way more supply than demand, or maybe you order a bunch of lettuce and then it's rotten before you can serve it. And then the other one is where supply is way less than demand.

I don't know if you've ever walked into a restaurant, you see something on the menu, say, I'd like to order this burger. And they're like, oh, we're sorry, we ran out of that. And so then you go somewhere else on the menu.

OK, I'll take my second choice. I'll take this. Oh, sorry, we're out of that too.

And so here, and so the customer is dissatisfied, and maybe they go down to a third item. Let's get this instead. And it's like, no, we're out of that too.

So at that point, the customer may actually just leave. It's like, no, I can't get anything here. So you've lost the opportunity to sell anything to that customer.

You have a dissatisfied customer. They might not come back next time. So on the bottom is the ideal, where supply equals demand.

So you have the exact right amount of products or services for the demand. Process variation. So there's four sources of process variation.

So the first is the variety of goods or services being offered. So when you have a large variety, that creates variation in your processes. So if you have low variety, if you have like a cook that's just making burgers, and they only have one kind of burger, one kind of topping, the process is always the same.

You make a burger by doing this. It's always the same. But then if you say, we offer everything, then the process to make the food is different, depending on whether they're making soup or salad or a burger.

All of those have a different process. And then there's structural variation in demand. So these are generally predictable variation.

So an example is a restaurant. Restaurants have a structural variation. Lunchtime, you have a bunch of people.

And supper, you have a bunch of people. And there's not so many people in between. So those are very predictable.

And maybe on Monday night, you don't have very many customers. On Friday night and Saturday night, you may have a whole bunch. So those are examples of structural variation.

Then random variation are natural variation. And you can't really manage that. Sometimes a bunch of people just show up.

And there's no way to predict it, no way to influence it. It just happens. And then the last one is assignable variation.

This is variation that has identifiable sources. So this type of variation can be reduced, eliminated by analysis and corrective action. So an example of this might be the cook always does something.

And let's see. Let's say that whenever he's making a salad, he has to walk to the refrigerator, get the lettuce, bring it out. And so a salad takes a long time.

Well, an example might be, well, let's put a little refrigerator right next to the preparation area where he can have some stuff there. So he's getting ready to make a salad. He just opens the door.

So that's an example of assignable variation where you know how long that's going to take. You actually correct it. So variations can be disruptive to the operations supply chain process.

They can cause additional costs, delays, shortages, poor quality, and inefficient work systems. So this is the scope of operations management. Operations management runs across the organization.

So it includes a bunch of interrelated activities. And we're going to go through all of these in detail in this course. But forecasting, capacity planning, facilities and layout, scheduling, managing inventories, assuring quality, motivating customers, deciding where a location is for facilities, and more and more.

So it's a very broad topic. The role of the operations manager. So the operations function consists of all activities directly related to producing goods or providing services.

So the primary functions of an operations manager is to guide the system by making system design decisions and system operation decisions. So here's some system design decisions. So how much capacity do we have? Are we going to have a really large restaurant with a big kitchen? Or are we going to have a small corner restaurant with just a small kitchen? So that's a capacity example.

Facility layout. Where are we going to put the refrigerator? Where are we going to put the stove? Where are we going to put the customers? How is the, all of those things. A facility location is, are we going to put it on Main Street or out in the country? Product and service planning.

What is it that, how are we going to create this product or service? Acquisition placement of equipment. That's similar to facility layout. But where are we going to get big equipment, little equipment? And so these system design decisions, they're typically strategic decisions and they often require a long-term commitment of resources.

If you're going to buy a, all the equipment to go in a restaurant, you might sign a long lease. You might build your own building, all the equipment. And it really determines the parameters of the system operation.

What kind of restaurant, those kinds of things. So the system operation decisions, they tend to be tactical and operational. It's the management of people.

When are people coming? When are they going? How many people do we need? Is, do we need to fire someone? Do we need to hire someone? Inventory management and control. How much lettuce are we going to buy? How many tomatoes? How much do we have on hand? How much did we throw away because it got rotten? Scheduling, the scheduling of people, the scheduling of your hours, the scheduling if you're developing a product, the schedule to develop that product. Project management, if you're going to try something new, managing that product, project.

Quality assurance, making sure that whatever it is that you're providing is quality. So operations management tend to spend more time on system operation decisions than on any other decision area. But they still have a vital stake in system design.

So these are the operation management decision making. Most decisions involve alternatives and might have quite different impacts on costs or profits. So the typical operations decisions include what, when, where, how, who.

So the what, what resources are needed and what amounts, when, when will each resource be needed?

When should the work be scheduled?

When should materials and other supplies be ordered?

The where, where will the work be done? How will this product or service be designed? How will the work be done? How will the resources be allocated?

And then who? Who will do the work?

So those are all decision making questions. So here's a general approach to decision making, and that is to use a model. So a model is an abstraction of a reality or a simplification of something.

Let's say that you've never had a restaurant and you want to try different layouts. You might go into your garage and you say, OK, what if we put the server right here? We put the refrigerator over here. And you might practice making some things.

That would be a model. Like cardboard cutouts of the table or maybe some folding tables and chairs. That's a model.

It's a simplification of reality. You can have a computer model where you actually analyze things with a computer. So the, the, the features of models, they're simplifications of real life.

They import, they omit unimportant details and they mimic so that the attention can be focused on the most important aspects of the real life system. So that, that's conceptually what a model is. So the keys to successfully using a model is you have to ask these questions.

What is its purpose? How is it used to generate results? How are the results interpreted and used? And what are the model's assumptions and limitations? If you don't understand that, if someone comes into a meeting and said, we ran the model and it said we should not build a store on main street. It's like, OK, what was the purpose of the model? Well, the purpose of the model was not location analysis. It was something else.

Or how did you generate the results? So you can actually use a very good model in the wrong way and get bad data out of it. So the benefits of the model, it's easier to use, less expensive than the real system, requires users to organize and sometimes quantify information. It really increases your understanding of the problem.

It enables managers to analyze what if questions. It serves as a constant tool for evaluation and provides standardized format for analyzing a problem. And it enables users to bring the power of mathematics.

So if you have a mathematical model, you can bring a lot of power with that. OK, let's talk about the systems approach. So a system is a set of interrelated parts that must work together.

So the business organization is a system composed of subsystems. You have the marketing subsystems, the operations subsystem, finance subsystems. So those three subsystems are all working together.

The systems approach emphasizes the interrelationship among the systems. The main thing is that the whole is greater than the sum of the parts. The output and objectives and organization can take precedence over any one subsystem.

So marketing may say, hey, we got this great campaign. We'll bring in double the customers. And operations says, we can't manage that number of customers.

So let's scale back on the marketing. And marketing is like, but we had this great marketing campaign. And it's like, well, for us to be able to do that, we would need to increase capacity.

So then they go to finance and say, can we increase capacity? It's like, well, we don't have the money to buy the system to increase capacity. So in this case, marketing cannot do their super marketing. They may do a little bit more.

Operations could handle 50% more. So they tweak that marketing to bring in 50% more customers, not 100% more. Then establishing priorities.

There's certain issues or items that are more important than others. So by recognizing these important priorities, you can focus on the efforts that will do the most good. There's never enough time.

So you focus on what is the most important. So there's something called the Pareto phenomena. Some people call it the 80-20 rule.

What it is, is 80% of your problems or events comes from 20% of the sources. So if you have 10 employees, 80% of your problems with those employees will come from two of those employees. So 80% of the problems will come from 20% of the employees.

So the critical few factors should receive the highest priority. This is the concept that is appropriately applied across all areas and levels of management. So here's the historical evolution of operations management.

There was the Industrial Revolution, scientific management, human relations management, decision models and management science, and the influence of Japanese manufacturers. So the Industrial Revolution. We talk about this before the Industrial Revolution.

It was really a craft production systems. You had a blacksmith and that blacksmith would make everything in his blacksmith shop. You had a dressmaker who would make the entire dress.

So then the Industrial Revolution, some key elements, really in the 1770s, 1776, 1780, 1796. So it really started in England. You had division of labor by Adam Smith.

You had the rotative steam engine in the 1780s. Then you had the cotton gin and interchangeable parts by Eli Whitney. The management theory and practice did not really advance during this period, but there was this Industrial Revolution.

Then we got to this scientific management. And there was this in efficiency engineer, Frederick Winslow Taylor. And he believed in a science of management based on observation, measurement, analysis, improvement of work methods, and economic incentives.

So management is responsible for planning, selecting, training workers, and find the best way to perform each job. So you have to have cooperation between management and the workers. And you separate management activities from work activities.

And the emphasis was to manage or maximize output. And we got to that human relations movement. It started with Gilbreth with the application of psychology.

And then you have Mayo who did the Hawthorne studies on worker motivation. This was an interesting one where they studied productivity and lighting. And they increased the lighting and productivity.

2. Translate the text into Arabic:

المحاضرة الأولى: مقدمة في إدارة العمليات:

في هذه المحاضرة، سوف نقوم بتعريف إدارة العمليات، ونتحدث عن الفرق بين السلع والخدمات. كما سنعرفكم على سلسلة التوريد، ونتناول عملية التحويل، ونستعرض تطور إدارة العمليات. كذلك سنتحدث عن القضايا البيئية والأخلاقية، وأخيرا سنتطرق إلى إدارة سلسلة التوريد ومشاكلها. إذا، ما هي العمليات؟ العمليات هي في الحقيقة ما تقوم به المؤسسة. فهي الجزء من المنظمة المسؤول عن إنتاج السلع أو تقديم الخدمات. فإذا كنت تدير مطعما، فإن العمليات تتمثل في إعداد وتقديم الطعام، وإذا كنت مصنع سيارات، فإنها تعني إنتاج سلعة وهي السيارة.

كيف نعرف إدارة العمليات؟ إنها إدارة الأنظمة أو العمليات التي تنتج السلع أو تقدم الخدمات. والآن، إليكم بعض الأمثلة عن السلع مقابل الخدمات. تشمل السلع كل شيء، بدء من المواد الخام إلى المنتجات شبه المصنعة وصولا إلى المنتج النهائي.

فمثلا، سيارتك تعد سلعة. وكذلك الحاسوب الذي تستخدمه لمشاهدة هذا الفيديو هو أيضا سلعة. والفرن الذي تخبز فيه، والشامبو، كلها تعتبر سلعا.

أما الخدمات فهي أنشطة تقدم مزيج من القيمة من حيث الوقت أو المكان أو الشكل أو القيمة النفسية. فمثلا، السفر الجوي: خدمة السفر الجوي تهدف إلى نقلك من مدينة إلى أخرى. أنت في الواقع تستخدم سلعة، وهي الطائرة، للوصول إلى هناك، لكن هدفك ليس شراء الطائرة، بل مجرد شراء خدمة السفر الجوي. وكذلك التعليم يعد خدمة.

هذا الصف يعد مثالا رائعا على خدمة، فأنت تتعلم شيئا هنا. وكذلك الحلاقة؛ فشعرك ينمو، وتحتاج إلى الذهاب للحصول على قصة شعر، وتكون الحلاقة في وقت ومكان محددين.

وأيضا الاستشارة القانونية؛ تحتاج إلى الذهاب إلى محام، وهذه تعتبر خدمة.

والآن، هذه هي سلسلة التوريد، وهي تسلسل الأنشطة والمنظمات التي تنتج أو تقدم سلعة أو خدمة. تبدأ من الجهة اليسرى بالموردين، وهم الأشخاص الذين يحصل موردوك منهم على المواد. ثم لديك الموردون المباشرون، وبعد ذلك المنتج، وأنت هنا تمثل المنتج لأنك تقوم بصنع شيء ما.

بعد ذلك، يجب توزيع هذا المنتج أو الخدمة أو أيا كان، لذلك يوجد موزع، ثم في النهاية لديك العملاء النهائيون. هذه هي سلسلة التوريد، وسنقوم بدراستها بشكل كبير خلال هذا المقياس.

أما الآن، فهذه هي عملية التحويل، وهي العملية التي يتم من خلالها إضافة القيمة.

هذا هو في الحقيقة ما تقوم به. ففي الجهة اليسرى لديك المدخلات، ويمكن أن تكون الأرض، العمل، رأس المال، المعلومات، المواد الخام، أو أي شيء آخر.

ثم تمر عبر نوع من عملية التحويل، وفي المخرجات تحصل إما على سلع أو خدمات. بعد ذلك، لديك حلقات تغذية راجعة حيث تقوم دائما بمراجعة ما إذا كان هناك شيء في منتجك أو خدمتك يحتاج إلى تحسين في عملية التحويل.

كما توجد تغذية راجعة نحو المدخلات لمعرفة ما الذي يجب تغييره. لنأخذ مثالا على المدخلات: لنفترض أنك تدير مطعما.

مدخلاتك هي المبنى، والعمال، مثل الطباخ والندل، بالإضافة إلى الطعام. فقد تتلقى إمدادات من الخس والطماطم والفاصوليا والأرز، وكلها تعد مدخلات.

أما عملية التحويل فهي المكان الذي تأخذ فيه هذه الأشياء؛ حيث يقوم الطباخ بتحويلها إلى طعام، ثم يقوم النادل بتقديمها للزبون. وهذه هي عملية التحويل والمخرجات.

أما التغذية الراجعة، فعلى سبيل المثال، قد يقول الزبون للطباخ إن هناك خطأ في الطعام، أو أن مذاقه غير جيد أو لا يعجبه. هذه تغذية راجعة تعود إلى العملية، وقد يقول الطباخ: حسنا، سأعد لك شيئا مختلفا أو أفضل أو سأحاول مرة أخرى. هذه أيضا تعد تغذية راجعة.

أما إذا كانت لديك علبة خس فاسدة بالكامل، فإن هذه المشكلة تعود كتغذية راجعة إلى مورد الخس، أي إلى المدخلات.

هكذا تعمل هذه المنظومة عموما، أي عملية التحويل.

والآن، هذا ما يسمى باستمرارية السلع والخدمات. فالكثير من المنتجات ليست سلعا خالصة أو خدمات خالصة، بل هي مزيج بين الاثنين.

فعلى سبيل المثال، تجميع السيارات وصناعة الفولاذ يعدان في الغالب سلعا، لكن يوجد فيهما قدر بسيط من الخدمة. أما تحديد المنازل والبيع بالتجزئة، ففيهما قدر أكبر من الخدمة.

إصلاح الحواسيب أو وجبة في مطعم: ففي وجبة المطعم، يكون نصفها تقريبا طعاما (وهو سلعة)، لكن يوجد أيضا نادل يقوم بتقديم الطعام لك، أي أنه يضيف عنصر الخدمة من خلال تقديم هذا الطعام.

وذلك في وقت محدد تقوم فيه بتناول الطعام، وهذا يمثل جانب الخدمة في ذلك. أما كتابة الأغاني وتطوير البرمجيات، فهي تبدأ بالاقتراب أكثر من الخدمات. كذلك الجراحة والتعليم، تصبح في الغالب خدمات مع وجود جزء صغير فقط من السلع.

لماذا ندرس إدارة العمليات؟ لأن كل جانب من جوانب الأعمال يؤثر على العمليات أو يتأثر بها. كما أن العديد من الوظائف الخدمية ترتبط ارتباطًا وثيقًا بالعمليات، مثل الخدمات المالية، والتسويق، والمحاسبة، والمعلومات، وكلها مرتبطة بشكل كبير بإدارة العمليات.

ومن خلال تعلمك لإدارة العمليات وسلسلة التوريد، ستفهم بشكل أفضل العالم الذي نعيش فيه، والاعتماد العالمي بين الشركات والدول. كما ستفهم لماذا تنجح الشركات أو تفشل، وأهمية العمل مع الآخرين.

هناك ثلاث وظائف أساسية في أي منظمة، وهي: التسويق، والعمليات، والتمويل. التسويق هو الجزء الذي يحدد العملاء ويجذبهم. أما العمليات فهي الجزء الذي يقوم فعليا بصنع شيء أو تنفيذ عمل ما. والتمويل هو جمع الأموال وإدارتها.

هناك تداخل بين هذه المجالات الثلاثة. فعلى سبيل المثال، في العلاقة بين التمويل والعمليات، يكون التمويل مسؤولا عن إعداد ميزانية العمليات، كما يقدم التحليل الاقتصادي لمقترحات الاستثمار.

فمثلا، إذا قلنا إننا نريد فتح مطعم جديد، فإن السؤال يكون: كم سيكلف هذا المطعم؟ وما هو العائد على الاستثمار؟ مثل هذه الأمور. ثم يقوم التمويل بتوفير الأموال اللازمة.

إذا التمويل مسؤول عن توفير الأموال لدفع رواتب الندل أو الطباخ، ودفع ثمن الطعام، وكل هذه التكاليف. أما التسويق فيكون له تأثير كبير على العمليات.

فالتسويق مسؤول عن توفير بيانات الطلب. فمثلا إذا كنا سنفتح مطعما، فإن التسويق يقوم بتحليل عدد الأشخاص الذين نتوقع أنهم سيأتون إلى هذا المطعم وفي أي وقت.

كما أن تصميم المنتج والخدمة يقع ضمن مسؤوليات التسويق، حيث يقوم بتحديد الأشياء المهمة بالنسبة للزبون ويبلغ بها قسم العمليات.

ويقوم التسويق أيضا بتحليل المنافسين. فمثلا إذا أردنا فتح مطعم في شارع رئيسي، سيقوم التسويق بدراسة المنطقة ومعرفة وجود مطاعم أخرى تقدم نفس الخدمة، وهل سنواجه منافسة مباشرة معهم، مما قد يعني أن هذا الموقع ليس الأفضل.

كما يقوم التسويق بدراسة بيانات زمن التوصيل (Lead time)، أي الوقت الذي يتم فيه تسليم المنتج للزبون. فالتسويق مسؤول عن وعد الزبائن بوقت تسليم معين، لكنه يجب أن يعمل مع العمليات.

فعلى سبيل المثال، قد يكون الوقت المعتاد للتسليم أسبوعا، لكن إذا كان قسم العمليات لديه ضغط كبير، فقد يبلغ التسويق أن الوقت الحقيقي للتسليم سيكون أسبوعين بسبب كثرة العمل.

أما فيما يخص الفرص المهنية في إدارة العمليات وسلسلة التوريد، فهناك العديد من الوظائف المرتبطة مباشرة بهذا المجال، مثل: مدير العمليات، مدير سلسلة التوريد، محلل الإنتاج، منسق الجداول، مدير الإنتاج، مهندس صناعي، مدير المشتريات، مدير المخزون، ومراقب الجودة. وكل هذه الوظائف مرتبطة ارتباطا وثيقا بإدارة العمليات.

كما توجد بعض المنظمات المهنية المتخصصة في هذا المجال مثل جمعية إدارة العمليات (APICS)، والجمعية الأمريكية للجودة (ASQ)، ومعهد إدارة التوريد (Institute for Supply Management).

ثم لدينا (INFORMS)، وهو معهد أبحاث العمليات وعلوم إدارة العمليات، وجمعية إدارة الإنتاج والعمليات (POMS)، ومعهد إدارة المشاريع (PMI)، وكذلك مجلس متخصصي إدارة سلسلة التوريد. وهذه تعد من الجمعيات المهنية في هذا المجال.

والآن لننتقل إلى إدارة العمليات (Process Management) هناك ثلاث فئات من عمليات الأعمال: عمليات الإدارة العليا، وهذه تنظم وتتحكم في مجمل عمل المنظمة بالكامل.

والعمليات التشغيلية، وهي العمليات الأساسية (Core Processes)، ثم العمليات الداعمة (Supporting Processes).

أما العرض والطلب، فإن العمليات وسلسلة التوريد مسؤولة عن تلبية جانب العرض، بينما التسويق والمبيعات مسؤولان عن تحديد الطلب وخلق الطلب.

فإذا كان لديك عرض أكبر بكثير من الطلب، فهذا يؤدي إلى الهدر والتكلفة العالية. فمثلا إذا توقعت أن 100 شخص سيأتون إلى المطعم، وقمت بإعداد الكثير من الطعام، ولكن حضر فقط 10 أشخاص، فإن الطعام الزائد لن يُستخدم في اليوم التالي، وبالتالي يصبح هدرا.

وكذلك إذا قمت بطلب كمية كبيرة من الخس، ثم فسدت قبل استخدامها، فهذا أيضا يعتبر هدرا.

ومن جهة أخرى، إذا كان العرض أقل بكثير من الطلب، فقد يحدث أن يدخل الزبون إلى مطعم ويطلب برغر معين، فيقال له إنه غير متوفر. ثم يختار شيئا آخر من القائمة، ويقال له مرة أخرى إنه غير متوفر أيضا. وهنا يصبح الزبون غير راضٍ وقد يغادر المكان، لأنه لم يجد ما يريد حتى بعد عدة محاولات.

وفي هذه الحالة، يصبح الزبون غير راض، وقد يختار عنصرا ثالثا من القائمة ويقول: لنأخذ هذا بدلا منه. لكن يقال له مرة أخرى: للأسف، هذا غير متوفر أيضا.

عند هذه النقطة، قد يغادر الزبون المكان تماما، لأنه لا يستطيع الحصول على أي شيء. وبذلك تكون قد خسرت فرصة بيع أي شيء لهذا الزبون، وأصبح لديك زبون غير راض، وقد لا يعود في المرة القادمة.

وفي الوضع المثالي، يكون العرض مساويا للطلب، أي يكون لديك الكمية المناسبة تماما من المنتجات أو الخدمات لتلبية الطلب.

الآن، نتحدث عن تباين العمليات (Process Variation) هناك أربعة مصادر لتباين العمليات، وأولها هو تنوع السلع أو الخدمات المقدمة.

فعندما يكون هناك تنوع كبير، فإن ذلك يسبب تباينا في العمليات. أما إذا كان التنوع قليلا، فإن العملية تكون ثابتة ومتشابهة دائما.

فمثلا إذا كان الطاهي يحضر البرغر فقط، ونوع واحد فقط من الإضافات، فإن العملية تكون دائمًا نفسها: طريقة إعداد البرغر ثابتة ولا تتغير.

أما إذا كان المطعم يقدم كل شيء، مثل الحساء والسلطات والبرغر، فإن كل منتج له عملية مختلفة في التحضير.

أما المصدر الثاني للتباين فهو التغيرات الهيكلية في الطلب، وهي تغيرات يمكن التنبؤ بها بشكل عام.

فمثلا في المطاعم، يوجد نمط واضح للطلب: في وقت الغداء يكون هناك عدد كبير من الزبائن، وفي وقت العشاء أيضًا، بينما بينهما يكون عدد الزبائن أقل. هذه التغيرات تكون متوقعة وواضحة.

وربما في ليلة الاثنين لا يكون هناك عدد كبير من الزبائن، بينما في ليالي الجمعة والسبت يكون هناك عدد كبير جدا. وهذه تعد أمثلة على التباين الهيكلي (Structural Variation).

أما التباين العشوائي (Random Variation) فهو تباين طبيعي، ولا يمكن التحكم فيه بشكل دقيق. أحيانا يأتي عدد كبير من الأشخاص فجأة دون توقع، ولا توجد طريقة للتنبؤ به أو التأثير عليه، فهو يحدث بشكل عشوائي.

أما النوع الثالث فهو التباين القابل للتحديد (Assignable Variation)، وهو تباين له مصادر يمكن تحديدها. وهذا النوع يمكن تقليله أو إزالته من خلال التحليل واتخاذ إجراءات تصحيحية.

فمثلا، قد يكون الطاهي دائما يقوم بطريقة معينة في إعداد السلطة، وعندما يحضر السلطة عليه أن يذهب إلى الثلاجة، يجلب الخس، ثم يعود، مما يجعل إعداد السلطة يستغرق وقتا طويلا.

في هذه الحالة، يمكن حل المشكلة بوضع ثلاجة صغيرة قرب منطقة التحضير، بحيث يكون كل شيء قريبا منه، وعندما يبدأ إعداد السلطة يمكنه ببساطة فتح الثلاجة مباشرة. وهذا مثال على التباين القابل للتصحيح، حيث نعرف مصدر المشكلة ويمكننا إصلاحه.

إن التباينات يمكن أن تؤثر سلبا على عمليات سلسلة التوريد وإدارة العمليات، حيث قد تسبب تكاليف إضافية، وتأخيرات، ونقصا في المواد، وضعفا في الجودة، وعدم كفاءة في أنظمة العمل.

وهذا هو نطاق إدارة العمليات، حيث تمتد إدارة العمليات عبر المؤسسة بأكملها، وتشمل مجموعة من الأنشطة المترابطة.

وسنقوم بدراسة هذه الأنشطة بالتفصيل خلال هذا المقياس، مثل التنبؤ، وتخطيط الطاقة الإنتاجية، وتصميم المرافق وتخطيطها، والجدولة، وإدارة المخزون، وضمان الجودة، وتحفيز العملاء، وتحديد مواقع المرافق، وغيرها من المهام.

إذا فهذا موضوع واسع جدا. الآن نتحدث عن دور مدير العمليات. وظيفة العمليات تتكون من جميع الأنشطة المرتبطة بشكل مباشر بإنتاج السلع أو تقديم الخدمات.

أما الوظائف الأساسية لمدير العمليات فهي توجيه النظام من خلال اتخاذ قرارات تصميم النظام وقرارات تشغيل النظام.

هناك قرارات تصميم النظام، مثل: ما هي القدرة الإنتاجية؟ هل سننشئ مطعما كبيرا بمطبخ واسع، أم مطعما صغيرا بزاوية ومطبخ صغير؟

ومن أمثلة ذلك أيضا تخطيط المرافق: أين سنضع الثلاجة؟ أين سنضع الموقد؟ أين سنضع العملاء؟ وكيف سيكون تنظيم المكان؟ كل هذه الأمور تدخل ضمن تصميم المرافق.

وكذلك اختيار موقع المنشأة: هل سنضع المطعم في شارع رئيسي أم في منطقة ريفية؟

وأيضا تخطيط المنتج أو الخدمة: كيف سنقوم بإنتاج هذا المنتج أو تقديم هذه الخدمة؟

وكذلك شراء ووضع المعدات، وهو مرتبط بتخطيط المرافق، أي من أين سنحصل على المعدات الكبيرة أو الصغيرة وأين سنضعها.

هذه القرارات المتعلقة بتصميم النظام تعتبر قرارات استراتيجية غالبا، وتتطلب التزاما طويل الأمد بالموارد. فمثلا إذا كنت ستجهز مطعما، قد تحتاج إلى توقيع عقد إيجار طويل أو بناء مبنى خاص بك وشراء جميع المعدات. وهذه القرارات تحدد بشكل كبير طبيعة النظام التشغيلية، أي نوع المطعم وطريقة عمله.

أما قرارات تشغيل النظام فهي تميل إلى أن تكون تكتيكية وتشغيلية، وتشمل إدارة الأفراد: متى يأتي العاملون ومتى يغادرون؟ كم عدد العمال المطلوبين؟ هل نحتاج إلى توظيف أشخاص جدد أم تسريح بعضهم؟

وكذلك إدارة المخزون: كم كمية الخس التي سنشتريها؟ كم كمية الطماطم؟ كم المتوفر لدينا؟ وكم تم التخلص منه بسبب التلف؟

وأيضا الجدولة: جدولة العمال، وساعات العمل، وجدولة تطوير المنتجات إذا كنا نطور منتجا جديدا.

وكذلك إدارة المشاريع: إذا كنا نقوم بشيء جديد، كيف ندير هذا المشروع.

وضمان الجودة: التأكد من أن ما يتم تقديمه ذو جودة عالية.

مدير العمليات يقضي عادة وقتا أكبر في قرارات التشغيل مقارنة بقرارات التصميم، ولكن لا يزال له دور مهم في تصميم النظام.

هذه هي عملية اتخاذ القرار في إدارة العمليات. معظم القرارات تتضمن بدائل مختلفة وقد يكون لها تأثير كبير على التكلفة أو الأرباح.

تشمل قرارات العمليات النموذجية: ماذا، متى، أين، كيف، ومن.

فـــ"ماذا": ما الموارد المطلوبة وبأي كمية؟

"متى": متى نحتاج كل مورد؟ متى يتم جدولة العمل؟ ومتى يتم طلب المواد والمستلزمات؟

"أين": أين سيتم تنفيذ العمل؟

"كيف": كيف سيتم تصميم المنتج أو الخدمة؟ وكيف سيتم تنفيذ العمل؟ وكيف يتم توزيع الموارد؟

"من": من سيقوم بالعمل؟

وأخيرا، هناك نهج عام لاتخاذ القرار وهو استخدام نموذج (Model) والنموذج هو تمثيل مبسط للواقع أو تبسيط لشيء ما.

لنفترض أنك لم تمتلك مطعما من قبل وتريد تجربة تصميمات مختلفة للمكان. يمكنك أن تذهب إلى مرآبك وتقول: حسنا، ماذا لو وضعنا النادل هنا؟ ووضعنا الثلاجة هناك؟ وقد تقوم بتجربة إعداد بعض الأشياء.

هذا يعتبر نموذجا .(Model) مثلا استخدام قصاصات من الكرتون لطاولات، أو استخدام طاولات وكراسي قابلة للطي، هذا أيضا نموذج. إنه تبسيط للواقع.

كما يمكن أن يكون هناك نموذج حاسوبي حيث يتم تحليل الأمور باستخدام الكمبيوتر.

خصائص النماذج أنها تبسيط للواقع الحقيقي، فهي تحذف التفاصيل غير المهمة، وتحاكي الواقع بحيث يتم التركيز على أهم جوانب النظام الحقيقي.

وهذا هو المفهوم الأساسي للنموذج.

أما مفاتيح الاستخدام الناجح للنموذج فهي أن تطرح الأسئلة التالية: ما هو الهدف منه؟ كيف يتم استخدامه لإنتاج النتائج؟ كيف يتم تفسير النتائج واستخدامها؟ وما هي افتراضاته وحدوده؟

إذا لم تفهم هذه الأمور، فقد يحدث أن يأتي شخص إلى اجتماع ويقول: لقد شغلنا النموذج ووجدنا أنه لا ينبغي بناء متجر في الشارع الرئيسي. لكن السؤال هنا: ما هو هدف هذا النموذج؟ ربما لم يكن هدفه تحليل الموقع أصلا، بل شيء آخر.

أو كيف تم إنتاج النتائج؟ يمكن أن تستخدم نموذجا جيدا بطريقة خاطئة فتحصل على نتائج غير صحيحة.

أما فوائد النموذج فهي: أنه أسهل في الاستخدام وأقل تكلفة من النظام الحقيقي، ويتطلب من المستخدمين تنظيم وأحيانًا تحويل المعلومات إلى أرقام، كما يزيد من فهم المشكلة بشكل كبير.

ويساعد المديرين على تحليل أسئلة "ماذا لو"، ويستخدم كأداة ثابتة للتقييم، ويوفر إطارا موحدا لتحليل المشكلات، كما يسمح باستخدام قوة الرياضيات في التحليل.

إذا كان لديك نموذج رياضي، فيمكنك الاستفادة منه بشكل كبير.

والآن لننتقل إلى منهج النظم (Systems Approach) النظام هو مجموعة من الأجزاء المترابطة التي يجب أن تعمل معا.

فالمؤسسة (أو المنظمة) هي نظام مكون من أنظمة فرعية. لديك النظام الفرعي للتسويق، والنظام الفرعي للعمليات، والنظام الفرعي للتمويل، وهذه الأنظمة الثلاثة تعمل معا بشكل متكامل.

يركز منهج النظم على الترابط بين هذه الأنظمة. والفكرة الأساسية هي أن الكل أكبر من مجموع أجزائه. كما أن أهداف المؤسسة ونتائجها قد تكون أهم من أي نظام فرعي بمفرده.

فمثلا، قد يقول قسم التسويق: لدينا حملة رائعة ستجلب ضعف عدد الزبائن، لكن قسم العمليات قد يرد: لا يمكننا التعامل مع هذا العدد من الزبائن.

لذلك يجب تقليل الحملة التسويقية. فيرد التسويق: لكن لدينا حملة ممتازة. فيقال: لكي نستوعب هذا العدد نحتاج إلى زيادة القدرة الإنتاجية.

ثم يذهبون إلى قسم التمويل ويسألون: هل يمكننا زيادة القدرة؟ فيكون الرد: لا توجد لدينا أموال كافية لشراء الأنظمة اللازمة لذلك.

في هذه الحالة، لا يستطيع التسويق تنفيذ حملته الكاملة، وقد يتم تقليصها بحيث تجلب 50% زيادة فقط بدلًا من 100%. ثم يتم تعديل الخطة التسويقية لتناسب قدرة العمليات.

ثم يأتي موضوع تحديد الأولويات. هناك قضايا أو عناصر تكون أهم من غيرها. ومن خلال تحديد هذه الأولويات، يمكن التركيز على الجهود التي تحقق أكبر فائدة.

فالوقت دائما غير كاف، لذلك يتم التركيز على الأمور الأكثر أهمية.

وهناك ما يسمى بظاهرة باريتو (Pareto Phenomenon)، أو ما يعرف بقاعدة 20/80. وتعني أن 80% من المشكلات أو الأحداث تأتي من 20% فقط من الأسباب.

فمثلا، إذا كان لديك 10 موظفين، فإن 80% من المشكلات تأتي غالبا من 2 فقط من هؤلاء الموظفين. أي أن القليل من المصادر مسؤول عن معظم المشاكل.

لذلك يجب إعطاء الأولوية للعوامل القليلة المهمة (Critical Few Factors)، وهذه الفكرة تستخدم في جميع مجالات ومستويات الإدارة.

والآن ننتقل إلى التطور التاريخي لإدارة العمليات. بدأ الأمر بالثورة الصناعية، ثم الإدارة العلمية، ثم إدارة العلاقات الإنسانية، ثم نماذج القرار وعلوم الإدارة، ثم تأثير المصنعين اليابانيين.

قبل الثورة الصناعية، كان الإنتاج حرفيا (Craft Production)، حيث كان الحرفي مثل الحداد يصنع كل شيء بنفسه، وكذلك صانع الملابس كان يصنع الثوب كاملا.

ثم جاءت الثورة الصناعية، وكانت في أواخر القرن الثامن عشر (حوالي 1770–1790)، وبدأت في إنجلترا. ومن أهم عناصرها تقسيم العمل عند آدم سميث، ومحرك البخار الدوار في الثمانينات، وآلة حلج القطن والأجزاء القابلة للتبادل عند إيلي ويتني.

لكن خلال هذه الفترة، لم يتطور علم الإدارة بشكل كبير، رغم التقدم الصناعي.

ثم ظهرت الإدارة العلمية مع فريدريك تايلور، الذي كان مهندس كفاءة، واعتقد أن الإدارة يجب أن تعتمد على العلم المبني على الملاحظة والقياس والتحليل وتحسين طرق العمل والحوافز الاقتصادية.

وكان يرى أن الإدارة مسؤولة عن التخطيط، واختيار العمال، وتدريبهم، وإيجاد أفضل طريقة لأداء كل عمل، مع ضرورة التعاون بين الإدارة والعمال، وفصل أنشطة الإدارة عن العمل التنفيذي، والتركيز على زيادة الإنتاج.

ثم ظهرت حركة العلاقات الإنسانية، وبدأت مع جيلبريث باستخدام علم النفس، ثم مايو الذي أجرى دراسات هوثورن حول تحفيز العمال. وكانت إحدى الدراسات تدرس الإنتاجية والإضاءة، حيث لاحظوا أن زيادة الإضاءة أدت إلى زيادة الإنتاجية.

3. Organize an essay in English:

Title: Operations Management, Supply Chain, and Business Decision-Making

Introduction:

In modern business environments, organizations face increasing pressure to produce high-quality goods and services while minimizing costs and meeting customer expectations. This makes Operations Management a critical function for organizational success. However, this raises a central issue:

How can organizations efficiently transform resources into valuable outputs while maintaining quality, coordination, and competitiveness?

In order to explore this issue in depth and deconstruct it, the following research questions are formulated:

Q_1: To address this problem, several related questions must be considered:

Q_2: What is operations management and what does it involve?

Q_3: How do goods differ from services?

Q_4: How does the transformational process operate in practice?

Q_5: What role does the supply chain play in production and delivery?

Q_6: How are managerial decisions classified into strategic and tactical levels?

Q_7: How do operations interact with marketing and finance to achieve organizational goals?

Before proceeding with the analysis and answering the questions, it is necessary to highlight the importance and objectives of the topic as follows:

- **The importance** of this topic lies in its role in improving efficiency, enhancing productivity, reducing costs, ensuring quality, and strengthening the competitiveness of organizations in both local and global markets. Therefore, understanding operations management is essential for achieving sustainable performance and effective resource utilization.

- **The objectives of this study are:**
  - To define operations management and explain its main functions.
  - To distinguish between goods and services.
  - To explain the transformational process and how value is created.
  - To identify the role of the supply chain in production and delivery.
  - To classify managerial decisions into strategic and tactical levels.
  - To explain the interaction between operations, marketing, and finance.

After presenting the introduction with its various components, we proceed to the main body of the topic, which includes answering the questions raised.

Body: Operations Management is a fundamental function in any organization, as it focuses on managing systems that transform inputs such as labor, materials, capital, and information into outputs in the form of goods and services. This transformation process is essential because it directly impacts efficiency, productivity, and customer satisfaction. Organizations rely on the input–process–output model to convert resources into valuable outputs; for instance, a restaurant transforms raw ingredients into meals, while continuously improving performance through customer feedback. Moreover, operations do not work in isolation but interact closely with marketing, which generates demand, and finance, which provides the necessary resources. In today's competitive and globalized environment, companies must continuously improve quality, reduce costs, and adopt sustainable and ethical practices to remain successful and meet customer expectations.

Therefore, we will analyze this information and expand the idea by answering the following questions:

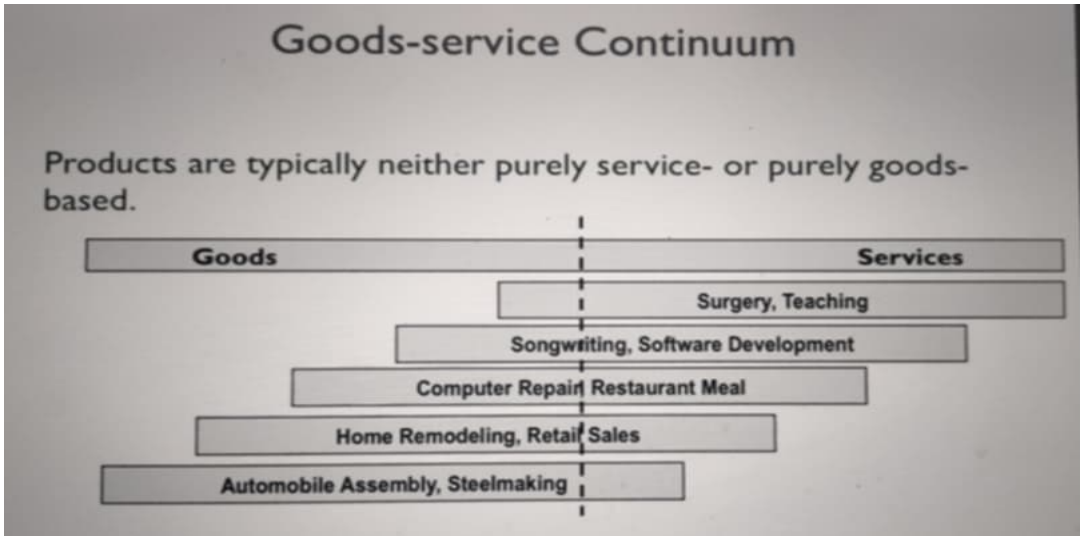
2. The explanation of the difference between goods and services:

The difference between goods and services can be explained as follows: goods are tangible products that can be stored and transported, while services are intangible activities that provide value without physical ownership.

Goods are tangible products that can be seen, touched, stored, and transported, such as cars, computers, and food. In contrast, services are intangible activities that cannot be stored or physically owned, such as education, healthcare, and transportation. Goods focus on physical output, while services focus on providing value through experience or performance.

The transformational process is a core principle in operations management that explains how organizations create value. It can be understood through the Input–Process–Output framework, which describes how various inputs such as human resources, materials, capital, and information are systematically transformed into outputs in the form of goods or services. This transformation does not occur randomly, but through organized activities that add value at each stage of the process.

For instance, in a restaurant setting, ingredients represent the inputs, which are then transformed through cooking and preparation activities performed by staff, resulting in finished meals delivered to customers as outputs. Moreover, this system is not linear only, as it includes feedback mechanisms that allow organizations to evaluate performance, identify gaps, and continuously improve the transformation process. The concept, as explained in the lecture, is illustrated in the following figure:



After understanding the concept of the process, we can move on to how it is practically implemented as follows.

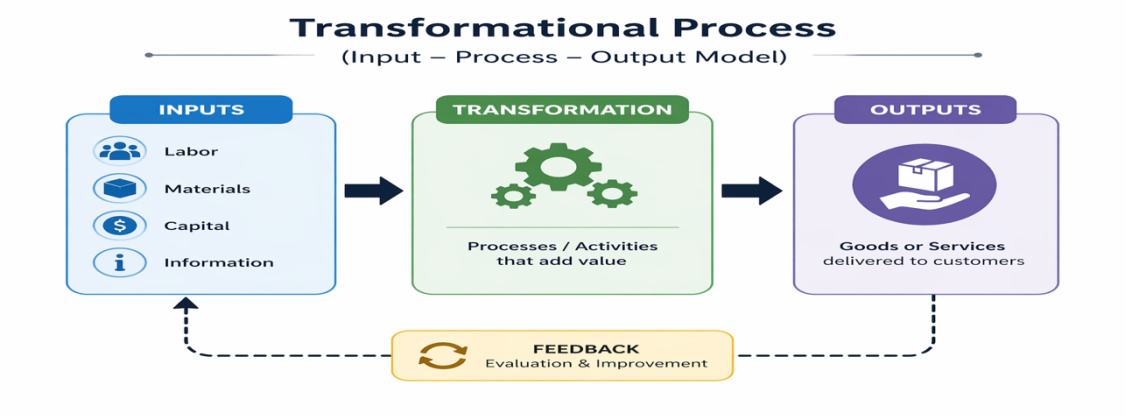
3. Transformational Process (Input–Process–Output Model):

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and information are systematically transformed into outputs in the form of goods or services. This transformation does not occur randomly, but through organized activities that add value at each stage of the process.

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To explain this concept in more detail, we can refer to the following figure:



To understand how the transformation process is linked to the different external stakeholders of the organization, we can move on to studying the supply chain.

4. Supply Chain and Its Importance:

The supply chain can be understood as an interconnected network of organizations that work together to produce and deliver goods or services. This network typically brings together suppliers, manufacturers, distributors, and the final customer within a coordinated system. Its main function is to ensure effective integration among all participants so that materials, products, and information flow smoothly and efficiently throughout the different stages of production and distribution.

From an analytical perspective, the importance of the supply chain lies in its strategic role in enhancing organizational performance. It contributes to increasing operational efficiency by optimizing resource use, reducing unnecessary costs, and ensuring timely delivery of products while maintaining the required quality standards. In addition, a well-structured supply chain strengthens an organization's competitiveness by enabling it to respond quickly and effectively to changes in market demand and environmental conditions.

To better analyze how this system operates in practice, it is useful to examine its main stages, starting from raw material sourcing and ending with the delivery of the final product to the end user, as illustrated in the following reference.

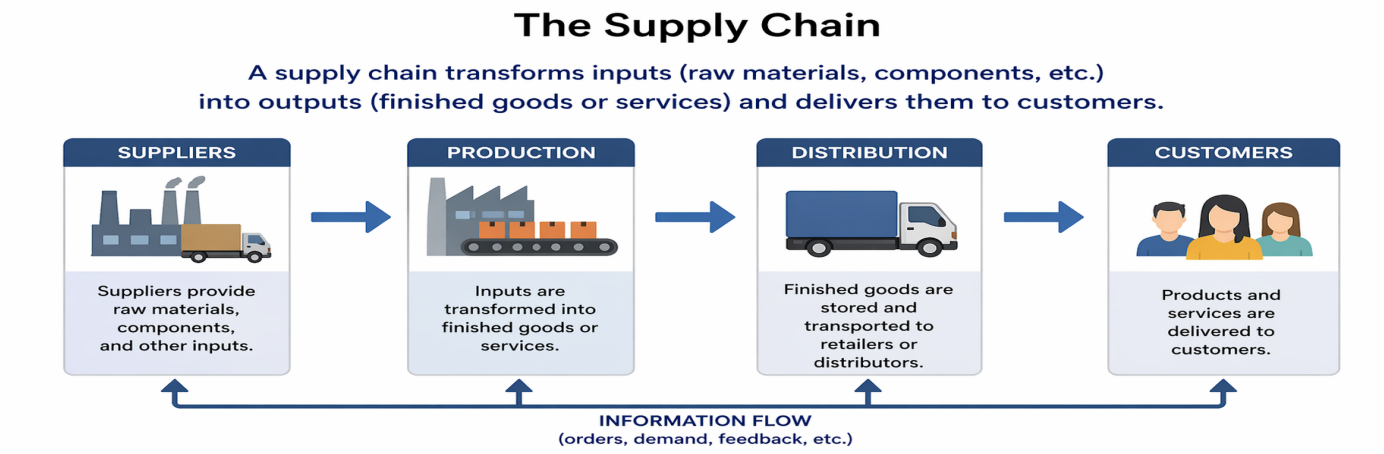
5. The description of the supply chain stages from suppliers to customers is as follows:

The supply chain can be viewed as a structured and interconnected system of activities that ensures the transformation and movement of a product from raw materials to the final consumer. Rather than being a simple linear flow, it operates as a coordinated system in which each stage plays a specific and interdependent role in creating value and ensuring efficiency.

The supply chain begins with suppliers, who provide the raw materials or basic components required for production. These inputs are then transferred to manufacturers, where they are transformed into finished or semi-finished products through various production processes. After that, the products move to distributors and wholesalers, who are responsible for storage and transportation to ensure efficient delivery to different markets. Next, retailers make the products available to customers through physical stores or online platforms. Finally, the chain ends with customers, who purchase and use the finished goods.

In summary, the supply chain progresses step by step from raw material suppliers → manufacturers → storage and distribution → retailers → customers, ensuring that products reach the right place, at the right time, and in the right form.

To present these stages more clearly and in a more organized way, the supply chain can be illustrated in the following diagram:



6. Types of Decisions Operations Managers Make (Strategic vs Tactical):

Based on the video, it becomes clear that operations managers do not rely on a single type of decision. Instead, their decisions vary depending on the time horizon and the level of impact within the organization. These decisions can be broadly classified into two main categories: **strategic decisions** and **tactical decisions**, each with distinct objectives, scope, and implications.

Strategic Decisions

Strategic decisions are long-term decisions that focus on defining the overall direction and structure of the organization's operations system. They have a broad and lasting impact because they determine how the organization will operate in the future.

Tactical Decisions

Tactical decisions are short- to medium-term decisions that focus on the efficient day-to-day operation of the system. They aim to ensure that resources are used effectively within the framework established by strategic decisions.

Although these two types of decisions are closely interconnected, as strategic decisions define the overall framework of operations while tactical decisions ensure their effective day-to-day implementation, achieving a balance between long-term planning and operational efficiency, there is still a clear difference between them in terms of nature, objectives, and level of application, as shown in the following table:

Aspect	Strategic Decisions	Tactical Decisions
Time horizon	Long-term	Short- to medium-term
Level of impact	Organization-wide and long-lasting	Operational and day-to-day
Main objective	Define system structure and direction	Ensure efficient daily operations
Examples	Choosing the location of a factory; Selecting production technology; Deciding on key suppliers within the supply chain	Scheduling workers and shifts; Planning daily production quantities; Managing inventory levels

7. Importance of Decision Making in Operations Management and the Consequences of Poor Decisions:

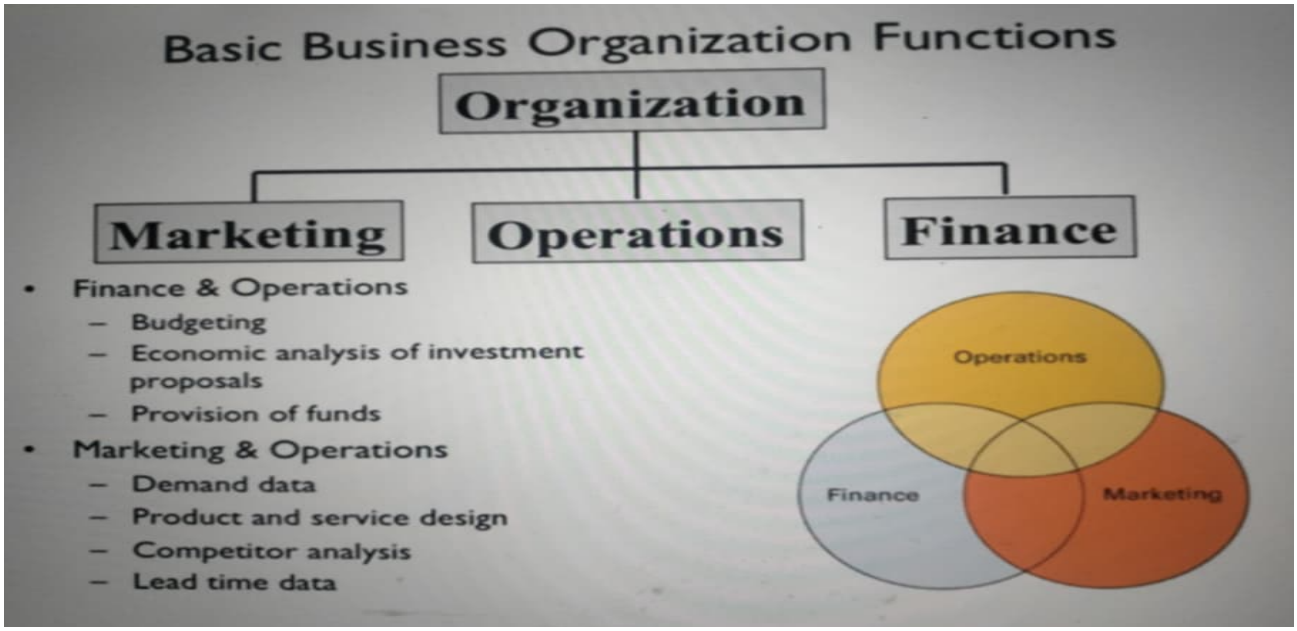
Decision-making plays a critical role in operations management because it directly influences the overall performance of the organization. From an analytical perspective, effective decisions determine how efficiently resources are used and how well operational processes are executed. As a result, they have a direct impact on key factors such as cost control, productivity, and customer satisfaction.

On the other hand, poor decision-making can create significant operational problems. Inefficient choices may lead to delays in production or delivery, waste of resources, and increased operational costs. Over time, these issues can also negatively affect customer satisfaction and result in the loss of customers, weakening the organization's competitiveness in the market.

In addition to internal decision-making, operations management is also strongly connected to other functional areas of the organization, such as marketing and finance, which work together to support overall business performance.

8. Operations Interaction with Marketing and Finance:

Operations interacts closely with both marketing and finance to ensure organizational efficiency. From an analytical perspective, the video shows that operations depend on **marketing** to understand customer demand and market needs, which helps in planning production and delivering the right products at the right time. At the same time, it relies on **finance** for budgeting, cost control, and allocating financial resources needed for production activities. Therefore, operations acts as a coordinating function that aligns market requirements with financial constraints to achieve efficiency and customer satisfaction. The video illustrated this process through a diagram shown in the following image:



9. The Impact of Key Challenges (Global Competition, Innovation, and Risk) on Operations Management:

Operations management does not take place in isolation; it is influenced by several internal and external challenges that shape how organizations produce goods and deliver services. Among the most important of these challenges are global competition, innovation, and risk, which directly affect the efficiency and performance of operations.

These challenges can be further understood by examining how each one specifically impacts operations, as shown below:

Challenge	Explanation	Impact on Operations
Global competition	Global competition places significant pressure on organizations to enhance operational performance. This drives operations management to prioritize cost efficiency, faster production and delivery, as well as consistent quality standards.	**Thus**, operations are expected to be highly efficient and competitive in terms of cost, speed, and quality.
Innovation	Innovation requires organizations to continuously update their products and production processes through the adoption of new technologies and improved methods.	**Hence**, operations become more adaptive, flexible, and continuously evolving.
Risk	Operational risks such as supply chain disruptions, demand fluctuations, and global crises require proactive planning. This includes developing contingency strategies, improving inventory control, and diversifying suppliers.	**Accordingly**, operations must be resilient and capable of adapting to uncertainty.

10. The Explanation of Why Quality Management Is Important and How It Helps Companies Improve Their Operations:

Quality management is essential in operations because it ensures that products and services consistently meet required standards and customer expectations. From an operational perspective, it reduces defects, waste, and inefficiencies in the production process.

Analytically, it improves operations by strengthening process control, enabling early detection of errors, and supporting continuous improvement. This leads to more efficient workflows and higher reliability in output.

Ultimately, quality management enhances customer satisfaction and competitiveness while lowering long-term operational costs through reduced rework and failures.

11. The ethical considerations associated with operations management and the supply chain:

Ethical considerations in operations management and supply chains involve ensuring that all organizational activities are conducted in a responsible and socially acceptable manner. This includes safeguarding fair labor practices, protecting workers' rights, maintaining safe working conditions, minimizing environmental impact, and ensuring transparency throughout sourcing and production processes. Organizations are also expected to enforce ethical compliance across their suppliers to maintain integrity throughout the supply chain.

A critical issue arises in global supply chains where cost pressures may lead to labor exploitation and inadequate working conditions, particularly in developing regions. Such situations have been observed in the apparel industry, where certain production facilities supplying international brands were associated with unsafe environments and low wages, prompting companies to implement stricter auditing systems and reinforce ethical sourcing standards to improve accountability and operational integrity.

12. Discussion of Why Environmental Sustainability Is Important in Operations and Supply Chain Management

Environmental sustainability has become a key focus in operations and supply chain management due to increasing environmental pressures and resource limitations. Companies are now expected to go beyond cost and efficiency goals and consider their environmental impact.

From an operational perspective, sustainability drives the reduction of waste, emissions, and energy consumption through more efficient processes. In supply chains, it requires responsible sourcing, optimized transportation, and coordination with environmentally conscious suppliers.

Overall, environmental sustainability is essential because it aligns operational efficiency with long-term resource protection and strengthens corporate responsibility and competitiveness.

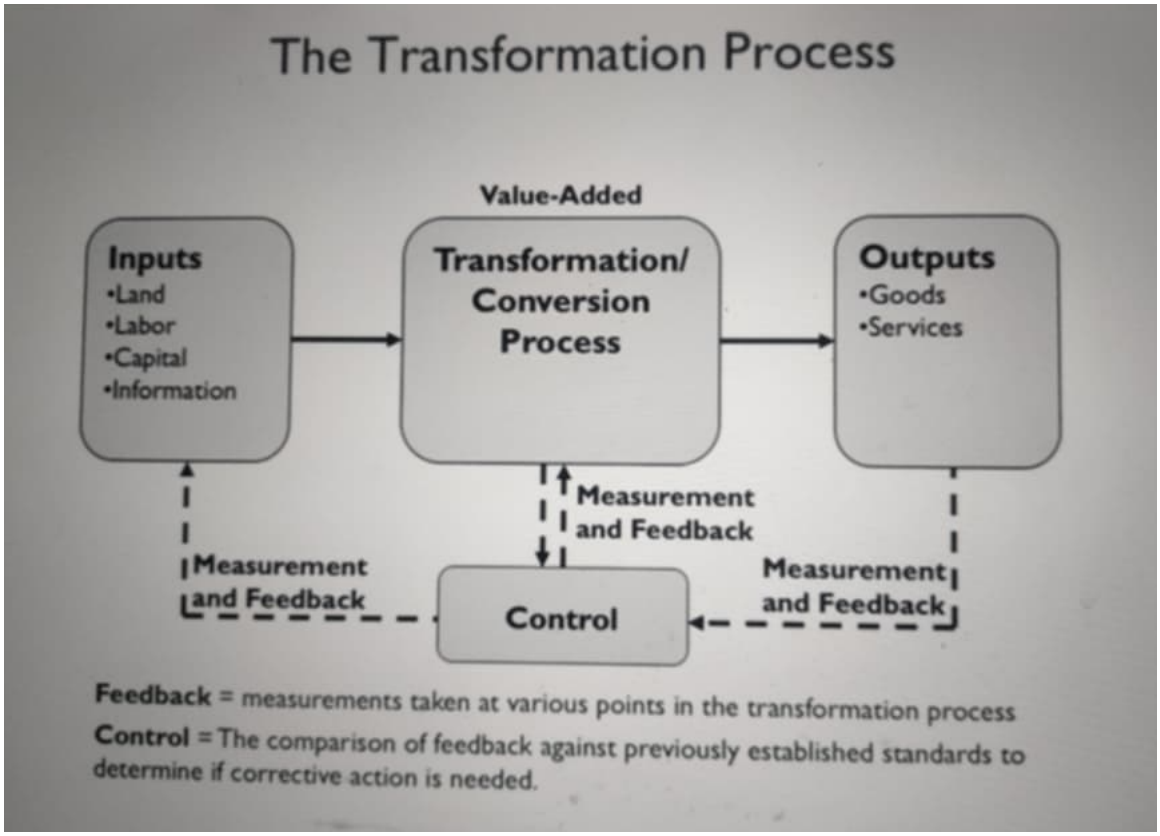
13. Choosing the process flow diagram from the lecture in the video:

The video explains operations through the **transformational process**, where organizations take **inputs** such as labor, materials, and capital, and convert them into **outputs** in the form of goods and services.

This process shows that value is created by transforming resources through a series of activities, where each stage contributes to producing the final product or service. The model also highlights that operations management is responsible for ensuring this transformation is efficient and effective.

In addition, the video emphasizes that this process is central to all organizations, as it represents how businesses actually produce what customers need.

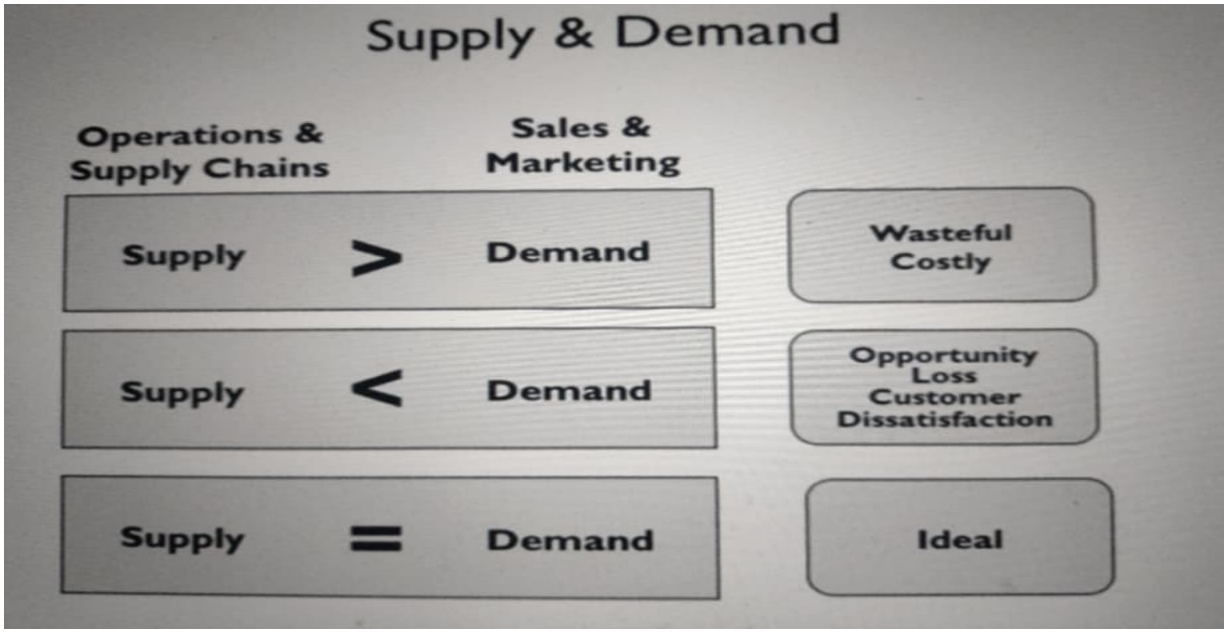
As illustrated in the video, the following diagram is presented:



14. Through the video, an explanation is provided of how supply and demand determine price and production in a production environment:

The video explains that price and output in production are determined by the interaction between supply and demand. When demand is higher than supply, prices increase, which encourages firms to expand production to meet market needs. Conversely, when supply exceeds demand, prices fall, leading firms to reduce output to avoid excess stock.

Therefore, the equilibrium between supply and demand guides firms' production decisions, helping them adjust output levels and maintain balance in the market. **And it can be explained as presented in the video in the following way:**



Conclusion:

In conclusion, operations management represents a fundamental function within modern organizations, as it integrates resources, processes, and organizational functions to create value efficiently. In my view, the key insight from this study is that operations is not limited to production activities, but rather constitutes a coordinated system that aligns all business functions toward the achievement of organizational objectives.

The analysis highlights that efficiency is achieved through the effective transformation of inputs into outputs, while overall performance is strengthened through supply chain coordination, structured managerial decision-making, and the integration of operations with marketing and finance.

From my perspective, the main takeaway is that organizations that adopt a well-structured approach to operations management are more capable of responding to market changes, improving performance, and sustaining long-term competitiveness.

Results of the analysis:

- Improved operational efficiency through better resource coordination;
- Enhanced quality and consistency of goods and services;
- More effective use of resources and reduced waste;
- Stronger integration between operations, marketing, and finance;
- Increased organizational competitiveness and responsiveness to market needs.

A. True or False Questions:Read the following statements carefully and write True if the statement is correct, or False if it is incorrect. For each False statement, correct it in your own words:

1. Operations Management only deals with physical goods, not services. **False**

Correction: Operations management deals with both goods and services.

2. The transformation process turns inputs into outputs. **True**

3. Supply chain management is not important for the efficiency of a company. **False**

Correction: Supply chain management is essential for improving the efficiency of a company.

4. Decisions in operations can be either strategic or operational. **True**

5. Ethical and environmental considerations are part of Operations Management. **True**

6. Quality management helps improve production processes and customer satisfaction. **True**

7. Operations managers do not need to coordinate with marketing or finance departments. **False**

Correction: Operations managers must coordinate closely with marketing and finance to ensure organizational alignment and efficiency.