



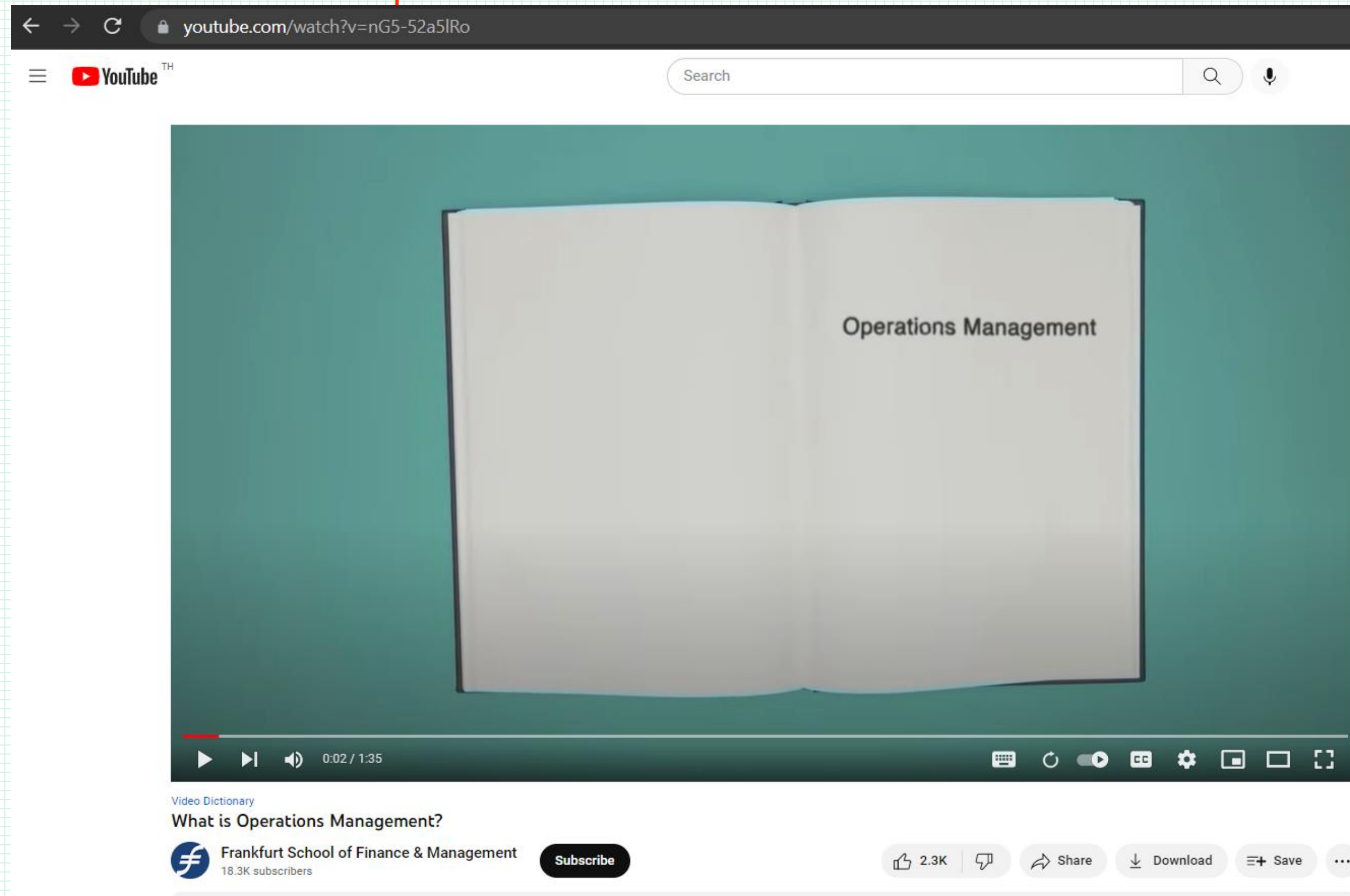
(CLS1105) Production and Operations Management

Introduction to Production and Operations Management

What is Production and Operations Management?



The overall concept of Production and Operations Management



A screenshot of a YouTube video player. The video shows an open book with the title "Operations Management" on the right page. The video player interface includes a search bar, a play button, a progress bar showing 0:02 / 1:35, and various control icons. Below the video, the title "What is Operations Management?" is displayed, along with the channel name "Frankfurt School of Finance & Management" and 18.3K subscribers. There are also buttons for "Subscribe", "Like" (2.3K), "Share", "Download", and "Save".

<https://www.youtube.com/watch?v=nG5-52a5IRo>

Production and Operations Management

- **Production** = the transformation of raw material (input) into the finished goods (output as “Tangible products or Services”).
- **Operations** = the administration of business practices to create the highest level of efficiency possible within an organization. It is concerned with converting materials and labor into goods and services as efficiently as possible to maximize the profit of an organization by attempting to balance costs with revenue to possibly achieve the highest net operating profit.

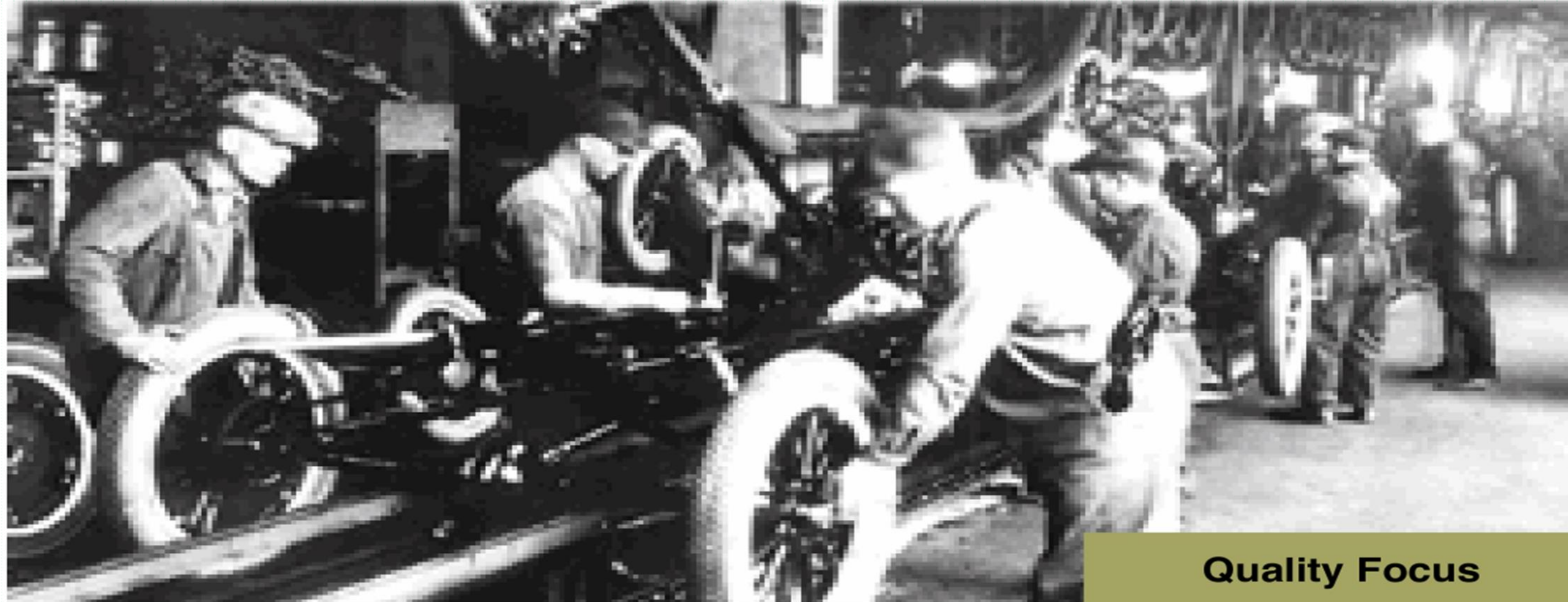


Production and Operations Management

- **Production + Management** = the administration of business activities to accomplish goals, achieve higher productivity, and maximize profitability by completing production timeline of a service/ product from the input stage to the finished stage, including planning, organizing, and supervising the operations, manufacturing and production processes, and service delivery to lead to the desired outcome of high-quality product/service that meets the demands of the customers.
- **Operations + Management** = the process that generally plans, controls and supervises manufacturing and production processes and service delivery. Operations management is important in a business organization because it helps effectively manage, control and supervise goods, services and people.



The History of **Production and Operations Management**



Customization Focus

Mass Customization Era 1995–2005

Globalization
Internet
Enterprise Resource Planning
Learning Organization
International Quality Standards
Finite Scheduling
Supply Chain Management
Agile Manufacturing

Quality Focus

Lean Production Era 1980–1995

Just-In-Time
Computer Aided Design
Electronic Data Interchange
Total Quality Management
Baldrige Award
Empowerment
Kanbans

Cost Focus

Early Concepts 1776–1880

Labor Specialization
(Smith, Babbage)
Standardized Parts (Whitney)

Scientific Management Era 1880–1910

Gantt Charts (Gantt)
Motion & Time Studies
(Gilbreth)
Process Analysis (Taylor)
Queuing Theory (Erlang)

Mass Production Era 1910–1980

Moving Assembly Line
(Ford/Sorensen)
Statistical Sampling
(Shewhart)
Economic Order
Quantity (Harris)
Linear Programming
(Dantzig) PERT/CPM
(DuPont)
Material Requirements
Planning



The Importance of **Production and Operations Management**

- **It helps to cut down cost per unit and thereby improve the profits.**
- **Gains from productivity can be transferred to the consumers in form of lower priced Products or better-quality products.**
- **These gains can also be shared with workers or employees by paying them at higher rate.**
- **A more productive entrepreneur can have better chances to exploit expert opportunities.**
- **It would generate more employment opportunity.**
- **Overall productivity reflects the efficiency of production system. \Rightarrow More output is produced with same or less input.**
- **The same output is produced with lesser input.**
- **More output is produced with more input.**
- **The proportional increase in output being more than the proportional increase in input.**



Productivity

Productivity is a relationship between the output (product/service) and input (resources consumed in providing them) of a business system. The ratio of aggregate output to the aggregate input is called productivity.

Product Vs. Services

$$\text{Productivity} = \frac{\text{Total output}}{\text{Total input}}$$



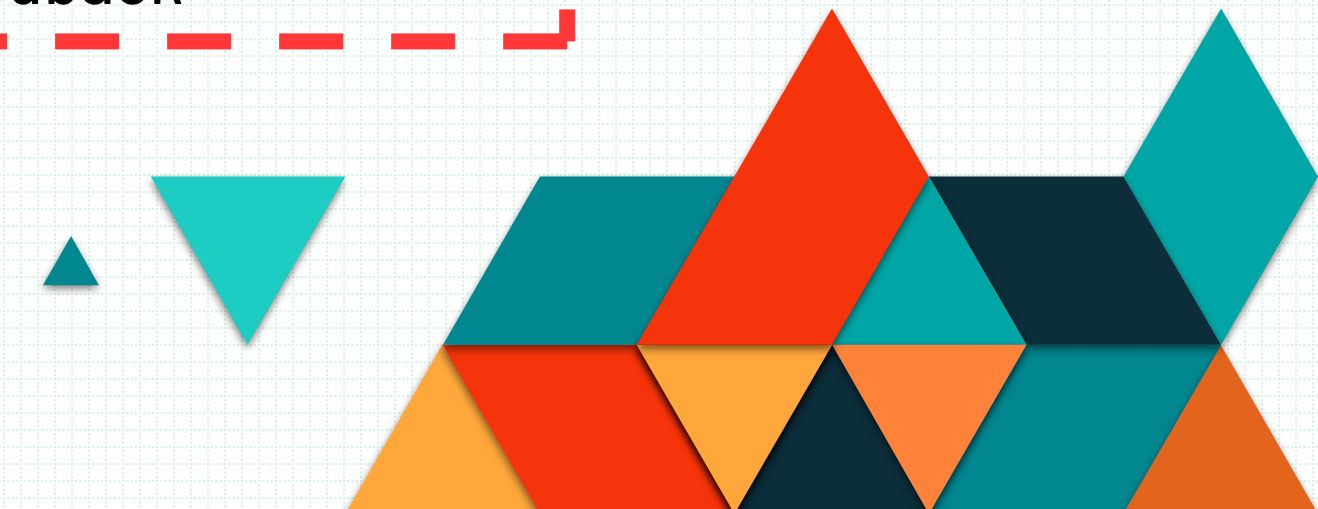
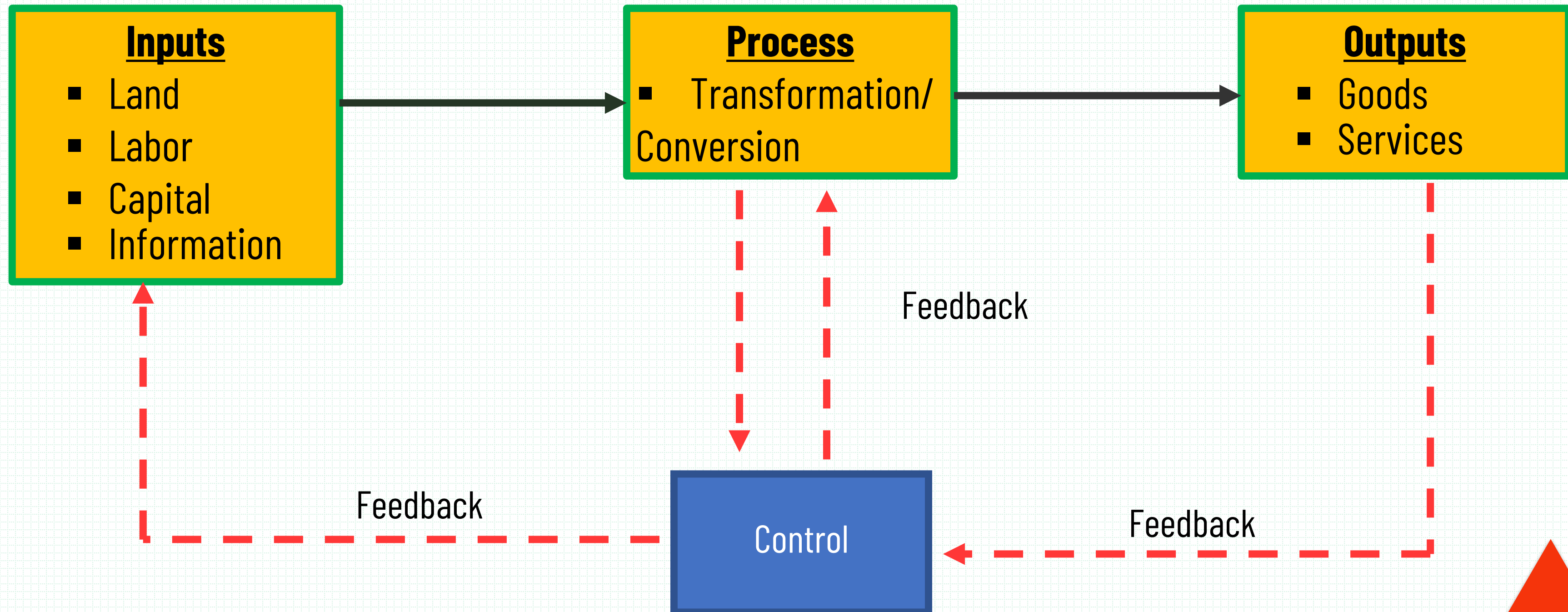
Product Vs. Services

Product	Services
1-tangible, durable products.	1- Intangible, perishable products.
2- Output can be inventoried.	2- Output can't be inventoried.
3-consumption/use takes more time.	3-Immediate consumption.
4-low customer's involvement.	4- High customer's involvement.
5-long response time.	5- Short response time.
6-available at regional, national and international market.	6-local market.
7-Require large facilities.	7- Require small facilities.
8-Capital intensive.	8-Labour intensive.
9-Quality easily measured.	9- Quality not easily measured.
10-Demand variable on weekly, monthly, seasonally.	10- Demand variable on hourly, daily, weekly basis.



IPO: Input/Process/Output OR Operations system model

Value - Added



**Why do the company need the output to be high
in Productivity?**

Let's see it next...



Q&A

THANK YOU