

7. Distribution

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7.1. Introduction

Distribution can be understood as the whole process of sending goods from one party to another. The goods are transferred between producers and customers. To distribute goods distribution channels are used. A distribution channel is a chain of businesses through which a good passes till it gets to the end consumer. Distribution channels are part of the process that answers the question ‘How do we get our product to the customer’. It should not be confused with supply chains which are the part of the process answering the question ‘Who are our suppliers?’. Distribution channels may include wholesalers, retailers, distributors and the internet.

The main components of distributions are:

- storage and warehousing (storage of finished goods or materials for manufacturing/ production);
- packaging;
- labeling (information about the product and its package);
- (physical) transportation.

There can be distinguished several types of distributions [1]:

- direct distribution – a strategy where a producer delivers products directly to a customer;
- indirect distribution – a strategy where there are additional party/ parties that distribute products to a customer;
- selective distribution – a strategy where company’s products are sold in a few exclusively chosen places (by selected distributors) in a selected region;

- exclusive distribution – a strategy where there is just one distributor is authorized to sell products within a define region;
- intensive distribution – a strategy based on the idea of making company’s products availavble for customers in as many places as possible.

The comparison of 5 types of distribution is shown in Figure 7.1.

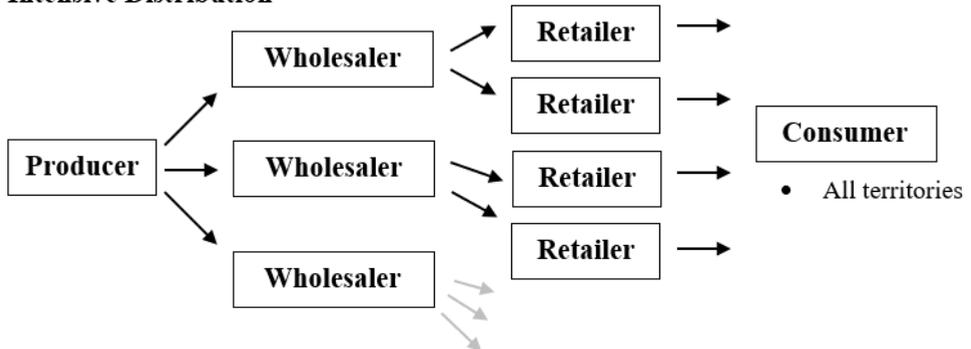
Direct Distribution



Indirect Distribution



Intensive Distribution



Exclusive Distribution

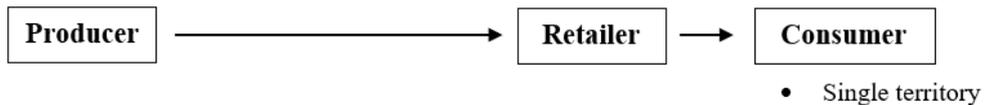


Figure 7.1. Different types of distribution

Source: authors' own work.

Packaging is the process of designing and producing packages. The whole package life cycle should be taken into consideration. The Sustainable Packaging Coalition® (a project of GreenBlue®) has proposed the definition of sustainable packaging. Sustianable packaging means that [2]:

- it is beneficial, safe & healthy for individuals and communities throughout its life cycle;
- it meets market criteria for performance and cost;
- it is sourced, manufactured, transported, and recycled using renewable energy;
- it optimizes the use of renewable or recycled source materials;
- it is manufactured using clean production technologies and best practices;
- it is made from materials healthy throughout the life cycle;
- it is physically designed to optimize materials and energy;
- and it is effectively recovered and utilized in biological and/or industrial closed loop cycles.

7.2. Transportation and carbon footprint

Physical transportation is about the movement of products (or materials) from one place to another. Transportation has a big impact on environment. The factors that affect the environmental impact are, among other, a distance between a producer and a customer, the quality of transportation infrastructure, the amount and locations of depots.

Transport infrastructure should be optimised – products need to travel as much reduced distance as possible. The recommended actions include [3]:

- choose local manufacturing and distribution;
- shift from roads to rail, and from air to sea;
- implement intelligent transportation management systems with the newest technologies (such as 5G or 6G);
- use electric cars, trucks (with lower emission), drones and autonomous cars.

Transport accounts for around one-fifth of global carbon dioxide (CO₂) emissions [4]. The World Resource Institute's Climate Data Explorer provides data that in 2016, global CO₂ emissions were 36.7 billion tonnes CO₂; emissions from transport were 7.9 billion tonnes CO₂. Transport therefore accounted for 21% of global emissions. The total amount of greenhouse gases (including carbon dioxide and methane) that are generated by our actions can be defined as a carbon footprint. According to the Nature Conservancy organization [5], globally the average carbon footprint for a person is closer to 4 tons, whereas in the United States – 16 tons. In order to avoid a 2°C rise in global temperatures, the average global carbon footprint per year needs to drop to under 2 tons by 2050. Every single action matters. There are many carbon footprint calculators available online.

Check *GreenTEX Handout – Carbon Footprint*
(<https://greentex.p.lodz.pl/>)

7.3. Sustainable distribution

The companies present divers strategies to obtain more greener distribution. Let's familiarize with some of them:

1. Using as much as possible natural light and energy-efficient lightening in warehouses (and all other buildings/ offices);
2. Investing in insulation for warehouses (and all other buildings/ offices);
3. Using renewable energy resources;
4. Applying biodegradable or recycled packaging materials;
5. Choosing local suppliers which supports local economy as well;
6. Investing in electric trucks or clean idle trucks;
7. Consolidating shipments – sending full truckloads;
8. Using eco-friendly tires;
9. Becoming a part of supporting programs, e.g. SmartWay Partners (offered by Environmental Protection Agency) that provides tracking tools for control of company's emissions.

Check *GreenTEX Handout – Sustainable Distribution*
(<https://greentex.p.lodz.pl/>)

Extra readings

1. Sustainability Guide, Distribution, online
<https://sustainabilityguide.eu/ecodesign/distribution/> (access: 31.10.2022).
2. Sustainable Packaging Coalition, Resources, online
<https://sustainablepackaging.org/resources/> (access: 31.10.2022).

References

1. Njogu T., Difference Between Selective Distribution and Exclusive Distribution, online <http://www.differencebetween.net/business/difference-between-selective-distribution-and-exclusive-distribution/> (access: 31.10.2022).
2. Sustainable Packaging Coalition, Definition of Sustainable Packaging, online <https://sustainablepackaging.org/resources/> (access: 31.10.2022).
3. Sustainability guide, Distribution, online
<https://sustainabilityguide.eu/ecodesign/distribution/> (access: 31.10.2022).
4. Ritchie H., Which form of transport has the smallest carbon footprint?, online <https://ourworldindata.org/travel-carbon-footprint> (access: 31.10.2022).
5. Nature Conservancy, What is a carbon footprint?, online <https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/> (access: 31.10.2022).