



**UNIVERSITÀ DEGLI STUDI  
DI GENOVA**

# **Traditional marketing VS digital marketing**

**Naghmeh Hajipour: 5180329**

**Farsima GivhchiMotlagh: 5052323**

**Maedeh Heidary: 5225992**

**Abstract:** The concept of marketing as we see it today is mostly related to the expansion during the industrial revolution of the 18th and 19th centuries. When for the first time the production of goods was separated from their consumption. Mass production, the development of transportation infrastructure, and the growth of mass media meant that manufacturers needed more precise ways to manage the distribution of goods, so they focused on production and distribution at the lowest possible cost.

From the beginning of the 20th century until the post-World War II era (although development was interrupted by wars), competition increased and marketing focused on sales. Communication, advertising and branding became more important as companies needed to sell their growing product to a crowded market.

With the increase in competition, demand and supply, the role of marketing became more important day by day until technology came to help traditional marketing and marketing approach changed a lot. Today, marketing is not only activities to bring products closer to customers, but also to create customer awareness about products, stimulate purchases, stabilize positive feelings, follow up on customer complaints. Today, many companies choose e-marketing as their main marketing strategy. 24/7 access to all kinds of advertisements from websites, podcasts, platforms such as YouTube and Instagram, etc. has brought about massive changes in the way products are presented to customers. With the digitization of advertisements, access to real customer information became possible and they can easily analyze their customers. In this article, we want to compare traditional marketing and internet marketing to show the difference between them and answer whether traditional marketing has been overtaken by internet marketing? And we give examples of the impact of technology on known industries.

**Research question:** Making the right decision while choosing the right marketing strategy is very essential for a marketer. For this purpose, the marketer must know the differences between internet and traditional marketing and their pros and cons. Some obvious questions may arise in our minds: Which marketing approach is more useful in comparing traditional and internet marketing? In real companies, which tool is used the most? Is traditional marketing lagging behind using internet marketing? Are traditional marketing and Internet marketing independent of each other? The main purpose of this research is to identify the different characteristics of traditional marketing and internet marketing and comparison of internet marketing and traditional marketing used by different organizations

**Literature review:** It is the market target which will define the type of marketing structure the marketers might choose to adopt. There is an ongoing battle between these types of marketing such as traditional marketing and the marketing which utilizes the advancement of information technology in determining which is better than the other. The main objective of this paper is to examine the impact of ICT on Traditional Marketing and to discuss the prospects and challenges of the changing roles for future marketing. How will artificial intelligence change marketing in 2022 and beyond? What will be the new technologies to spice up marketing? How will they alter marketing?

**Method used:** The group worked on different materials from the internet, books, published articles, Google scholar, journals and class presentation on marketing and marketing management

### **Qualitative and Quantitative model:**

In qualitative research, we focus on understanding the research topic by examining the results based on the results obtained, in-depth studies and data analysis.

In our quantitative research based on measuring quality or quantity for phenomena that can be expressed in terms of quantity, we presented examples of the use of technology in industries.

**Introduction:** Principally, marketing is the science of choosing target markets through market analysis and market segmentation, as well as understanding consumer buying behavior and providing superior customer value still needs a wider discussion. 2 The main goal of marketing is to make profit by satisfying customer demands and needs. It is also a strategy that can make a business to grow and become powerful. Profit maximization is the main objective of most business organizations for which they use marketing as their marketing strategy. Marketing is the process of planning and implementing the concept, pricing, promotion and distribution of ideas, goods and services to create an exchange that fulfills individual and organizational goals.

Marketing has been constantly changing over the past decades. The development of new technologies and the advancement of marketing theories have brought us to where we are now. Before the internet, a shop's reputation was their only form of marketing at the time. After that came televisions, radios and newspapers. People believed that direct-to-consumer advertising would lead to increased sales. These days we are almost back to where we started. The difference is that instead of using word of mouth, marketers use social media, which is basically similar to word of mouth but is much faster and reaches more customers. Also, these days, people don't just buy what they need, but sometimes they decide to buy some goods based on their feelings and mood, increasing the knowledge of people's experience is very important to understand how consumers decide on their next purchases. One of a marketer's jobs is to figure out what customers want and need to buy. The study of marketing led sellers to recognize that adopting certain strategies and tactics could significantly benefit the seller/buyer relationship. With "selling" as the ultimate goal, marketing strategies are influenced by two basic factors: first is acquisition of customers, second is retention of the acquired customers. So every other strategy that is laid out will focus on these two. There are some basic marketing functions highlighted as follows:- Market Research and Information Management, Product Management, Market management , Sales management, Physical distribution management and Promotion research.

**The effect of technology on marketing:** Technology is also revolutionizing marketing, which can be considered the key to the success of most businesses. When digital marketing was first being shaped, many overlooked its importance and continued their traditional marketing. But soon, everyone realized that online presence and reputation are indispensable. Traditional marketing still has its place, but digital marketing and technology in marketing altered everything. Today, it is your website, application or e-commerce store in front of the world representing your business and its values. This would have not been possible without modern technology. The AI market is growing rapidly. In 2020, the global AI market was worth \$51 billion, and it is predicted to reach

\$641 billion by 2028. From creating content, to powering chatbots that answer customer queries, to identifying consumer behaviors, AI is evolving to automate more and more processes. Advanced analytics can help companies solve a host of management problems, including those related to marketing, sales, and supply-chain operations, which can lead to a sustainable competitive advantage. For example, firms can integrate decisions and optimize the entire value chain by modeling individual customers' behaviors and preferences and offering tailored products priced as close as possible to shoppers' willingness-to-pay price points—all while reducing the cost of servicing individual transactions. But as more data becomes available and advanced analytics are further refined, managers may struggle with when, where, and how much to incorporate machines into their business analytics, and to what extent they should bring their own judgment to bear when making data-driven decisions. The questions they need to answer are: When does it make sense to shift from traditional human-centered methods to greater automation of analytics and decision-making? And how can we strike an appropriate balance between the two? Standardized measures for E-marketing performance are both needed and necessary. The discussion of most of the researchers has centered on the following measures (beside the traditional marketing performance measures):

- Traffic
- Visit duration
- Conversion rate (visit to purchase)
- Catalogue size
- Sales value
- Number of transactions
- Number of users (as measured by the number of registered user accounts).

E-marketing performance measures. Namely:

- Financial measures
- Competitive market measures
- Consumer behavior measures
- Consumer intermediate measures

E-marketing measures, such as

- Conversion rate
- Traffic
- Visit duration
- Number of transactions
- Number of users

E- Marketing components:

Customers (Buyers): impulsive, patient, analytical

- Sellers
- Products

- Infrastructure
- Front end – The portion of an e-seller's business processes through which customers interact, including the seller's portal, electronic catalogues, a shopping cart, a search engine, and a payment gateway
- Back end – The activities that support online order-taking. It includes fulfillment, inventory management, purchasing from suppliers, payment processing, packaging, and delivery
- Intermediaries – A third party that operates between sellers and buyers
- Other business partners
- Support services

There are three common approaches to analytics: descriptive, where decisions are made mainly by humans; predictive, where machines determine likely outcomes but humans choose which course to follow; and prescriptive, which usually means autonomous management by machines.

#### Descriptive: Aggregated observations

In descriptive analytics—commonly called "business intelligence"—managers use machines to understand patterns in historical data. They're basically asking, "Help me figure out what happened." Descriptive analytics is about making sense of the past to inform the future. Past data is specific, clear, and certain, and this approach is rooted in verifiable and objective facts. We expect that descriptive analytics will remain part of business managers' daily experience. Descriptive analytics tends to be overly reliant on internal transaction data, which is the lowest-cost, most readily available data. External data, such as customer-related data (a Net Promoter Score, for example) and market survey data, are more expensive and time-consuming to source. The most common type of data is internal data. In some cases, especially when the diagnostic approach is used, managers instinctively supplement the backlog with their own experience or wisdom. Therefore, a descriptive analysis approach is highly dependent on the intuition of particular decision makers and their ability to overcome their biases, such as not selecting data that confirm prior views. In short, the descriptive analytics approach tends to lack external perspective and to be limited to high levels of aggregation. It is still widely used because it's relatively simple and inexpensive to develop and implement. And it relies on humans for sense making.

#### Predictive: Limited View of the Future

With predictive analytics, machines determine the likely outcome or outcomes of a particular situation for different combinations of input variables, giving manager's insight to choose the course of action whose expected result best meets their objective. Predictive analytics can be used to forecast wins and losses, calculate price elasticities, predict the impact of marketing actions on specific customers, and dynamically cluster customers in market segments.

Predicting the future is very difficult, especially with great certainty, it is almost impossible. Even forecasting individual input variables can be very complex: for example, weather, competition, and supplier performance may require their own forecasting models. Building such models can be not only difficult, but also problematic, as inputs and outputs are often interdependent, forcing managers to predict input and output variables simultaneously. There are also limits to the number of input variables that can be modeled and the level of granularity that can be achieved. Although

multiple factors typically influence purchase decisions, common predictive techniques such as regression, clustering, and time-series forecasting usually accommodate only a small subset of variables. That is because for a model to be valid, its variables must be independent of one another—but adding more input variables creates complex interdependencies that render the model statistically unfit. In addition, to make more-granular predictions, firms must collect more-granular data. For example, to predict sales of a specific product, they must collect data at the SKU level (A Stock Keeping Unit) rather than the category level.

**Well-designed prescriptive models can deliver greater financial rewards and better business performance. But they can be very expensive and complex to set up.**

Another issue in predictive analytics is the gap between data scientists and business scientists in terms of goals. Data scientists focus on improving statistical accuracy (increasing model accuracy), while business scientist's focus on optimizing analytics to increase business results (business impact). Business scientists focus on maximizing the benefits of predictive analytics by considering the economic impact of a false positive (when the prediction is positive but the outcome is negative) or a false negative (when the outcome is predicted to be negative and the company decides not to take any action). Refrain, but if he followed the opportunity, he would have achieved a positive result). A false positive usually results in wasted sales and marketing efforts, while a false negative usually results in a lost opportunity or lost business. Focusing only on increasing accuracy may result in a model that reduces false positives (a good result) but also has a high degree of false negatives, leading to wasted opportunities and suboptimal overall performance. Relying solely on machines may lead to suboptimal business decisions and lost profit potential.

#### Prescriptive: Granular Guidance




With prescriptive analytics, machines make decisions that are based on managers' defined objectives, by employing large amounts of data to rapidly analyze market conditions and learn by designing and running large numbers of low-cost experiments and what-if scenarios. Although many of their experiments might initially be suboptimal or even downright wrong, the machines can learn rapidly, getting closer to the optimal outcome targets quickly and inexpensively. They then tell the manager what needs to be done, shifting focus from inputs (such as ensuring the accuracy of decision variables) to outputs (such as optimizing the business impact of decisions), while explicitly modeling risk and economic costs. In predictive analytics the focus would be on forecasting the number of units expected to be sold while ignoring the level of error in demand uncertainty. The prescriptive approach takes this uncertainty into account to make profit-optimizing decisions and continuously adjusts as new information becomes available. For example, a retailer with low inventory on the shelves and relatively low logistics costs might respond to the possibility of a demand uptick with an aggressive inventory-replenishment strategy. However, the same retailer, in the face of high logistics costs and market uncertainty, might find a more conservative replenishment strategy to be optimal and profit-maximizing.

**Well-designed prescriptive models can deliver greater financial rewards and better business performance than descriptive or predictive models can.**

They can be very expensive and complex to set up; they require specialized software and hardware solutions and human expertise to translate management strategies into mathematical and machine-friendly optimization goals and business rules. The role of man in all this is very important.

## Three Approaches to Analytics

Different management problems are best solved by different analytics approaches. As decisions require less intuition and ambiguity resolution, and more deduction, granularity, and scalability, data and algorithms play a bigger role.

APPROACH	<b>Descriptive: Business intelligence</b> <i>What happened?</i>	<b>Predictive: Prediction engines</b> <i>What will happen?</i>	<b>Prescriptive: Decision automation</b> <i>What should I do now?</i>
ROLE OF MACHINE	Helps me understand	Supports my decision	Tells me what to do
SIZE OF VALUE-CREATION OPPORTUNITY			
EXAMPLES	Strategic planning — Initial product pricing — Scenario planning — Investor reporting	Demand planning — Discount/promotion management — CRM segmentation — Maintenance	Inventory optimization — Price optimization — Markdown optimization — Risk optimization
RATIONALE	Typically little data available compared with the problem — High levels of uncertainty — Simplified manual approach	Quick-win opportunities — Relatively frequent decisions and observations — Semi-automation	Larger size of improvement prize — High frequency of decisions — Full automation

Figurer 1: Tree approaches to analytics

Which approach to use in a given situation depends on two factors: the relevance of the available data and the strength of the business case? A successful balance between human and machine maximizes the contribution of each. When available data is limited and high levels of uncertainty exist, descriptive analytics is the most viable option for providing directional guidance to managers. As the frequency of decision-making increases, more granular data becomes available, and the relevance of the data to the problem increases, more-autonomous prescriptive analytics approaches tend to perform best. In intermediate cases, where only limited relevant data is available, a predictive analytics approach is preferred. For example, machines may struggle with problems related to setting long-term strategy and innovation, for which the initial definition of the question is actually more important than the formulation of accurate answers. But when it comes to the optimization of prices, inventories, or marketing investments, analytics offers companies substantial opportunities.

### In Practice: The Evolution of Price Markdowns at Event Network

Excess inventory is a common problem. It must be sold, and usually at a discount, making price markdowns a pervasive and necessary part of inventory management. The root cause is the structural impossibility, even with a theoretically perfect forecasting model, of precisely predicting sales. Given the uncertainty of factors such as weather, competitors' actions, and macroeconomic shocks, managers tend to maintain high levels of inventory to avoid losing sales and customers.

Let's look at how Event Network (EN), which operates gift and memorabilia stores throughout the United States and Canada, handled the challenge. (Disclosure: EN is a client of Fabrizio's company, Evo Pricing.) Customer traffic at its stores, which are located in museums, zoos, aquariums, and other cultural attractions, is highly seasonal and relatively unpredictable. Each EN location carries unique inventory, often customized to the location (San Francisco or New York, for instance), the theme of the attraction (plants at a botanical garden), and the time of year (sweaters in winter). The chain's high number of SKUs—more than 100,000—posed a formidable challenge to price-markdown management.

Over time EN has used all three analytics approaches. Here's how each one worked.

#### Approach #1: Descriptive Analytics

EN managers started by using a simple method: They offered deeper discounts on products with higher inventories that resulted from disappointing sales. To decide which products to mark down and by how much, EN managers considered measures such as historical sales per week, inventory levels, and coverage ratio (the number of days that the inventory will last given the current rate of sales).

To calculate the markdown for a product with a \$10 unit cost and 10,000 units on hand, they multiplied the proposed markdown (30%) by the number of units on hand ( $30\% \times 10 \times 10,000$ ). They started with the SKU with the highest coverage ratio and worked down the list of SKUs until the total available markdown budget was spent.



This approach was ultimately unsatisfactory because it relied entirely on historical internal inventory-performance data. It did not consider customer- or context-related factors that have a significant impact on consumer demand.

### Approach #2: Predictive Analytics

Next, the managers used regression-based techniques to discount products with the highest price elasticity (the percentage change in sales volume expected from a given percentage change in price). They calculated price elasticity by running the regression of historical sales volumes on historical prices by category by store by week. For example, a price reduction of 10% for an SKU with a price elasticity of  $-2$  yields a volume of sales increase of 20% (a product of  $-10\% \times -2$ ). So going from a baseline of 100 units at \$10 each earning \$1,000 in revenue to selling 120 units at \$9 each would lead to \$1,080 in revenue, representing a gain of 8% in revenue. Similar calculations can be made for metrics such as margin and inventory level. By simulating scenarios, the managers could pick their preferred strategic objective and determine the optimal markdown mix according to its expected impact. Doing so could take into account not just internal inventory data but also the customer-demand expectation and therefore the market impact of their decisions.

Although the results of their regression models were statistically significant, the EN managers found the explanatory power of the models to be relatively low (price explained just 10% to 20% of the variance in the sales of a product). That's because many other factors than price influence sales, including weather, foot traffic, and the range of products available. Adding such variables to the model would have incurred the cost of collecting the additional data in a timely manner. Moreover, more data would increase the complexity of the calculations by introducing more noise and causing unwanted interdependencies among the variables.

The EN managers went ahead with the simple one-dimension regression of volume versus price, however crude, since it yielded results superior to those obtained using the descriptive analytics approach. The resulting improved performance also built up the EN management's appetite for the use of more advanced approaches to analytics. They became open to using a different approach altogether to overcome the structural limitations of the predictive analytics approach.

### Approach #3: Prescriptive Analytics

The prescriptive analytics approach that the EN managers eventually used improved on the prior two approaches by accounting for the broadest range of factors affecting consumer behavior. Using multiple data sources and advanced techniques such as machine learning and automated optimization, EN could identify which products to discount at any particular time and by how much. The managers recognized that it was virtually impossible to rely on intuition at this level of granularity and nonlinearity. Furthermore, their journey across the different analytic approaches led them to appreciate the benefits of using automation and machine learning to make sense of complexity and to build self-learning systems that improved profitability significantly over time. When it comes to choosing an analytical approach, it is necessary to rethink the role of the manager: from the person who has all the answers to the person who asks the right questions. Framing problems, which can be given to machines to solve, remains a purely human ability. Humans and machines excel at different tasks: humans at dealing with limited data and using

intuition in unfamiliar contexts, and machines at making decisions, however fragmented and fragmented, that are repeated over time or space or both, and in environments full of Rich data. Machines are in very ambiguous situations with very little data, but for complex problems that have a lot of relevant data, their solutions can significantly improve business performance.

### **Examples:**

McDonald's is a global chain of fast food restaurants, the most well-known and respected food service retailers in the world. The company is growing at a fast pace with the promise of quality service at any time and at every meal that sets it apart from other chain restaurants. They always believed that the market is changing and adopted the right strategies for marketing. McDonald's follows the QSCV (Quality, Service, Cleanliness and Value) strategy in all its stores around the world and the quality of products and services offered in all stores is also the same. To maintain and manage close relationships with customers, McDonald's has respected the changing markets and customers' wants and needs, including the introduction of breakfast menus, adult food, children's area, internet (wifi), training for employees worldwide. Adapting to the choice of food needed by people in different parts of the world with different cultures and so on. . McDonald's is very local with global products so that customers are offered every time there are new changes in the menu or combination of meals such as Happy Price Menu, Extra Value Meals, etc. in the stores. The quality of service and product provided with local taste and variations has a superior quality that turns McDonald's customers into loyal or loyal customers. One of McDonald's marketing methods by using technology was using the TikTok hashtag challenge, which was very successful. The challenge lasted for 8 days, asking users to participate as much as possible, resulting in 228,000,000 views and 193,000 videos by 75,000 TikTok users.

<https://www.tiktok.com/business/en-US/inspiration/mcdonald%E2%80%99s%C2%AE-italy-132?>

**Hotel Industry E-Marketing:** The hoteling industry is considered to be a very important industry that performs very well in e-commerce where traditional marketing strategies do not work very well. Most people prefer to book their accommodation before arriving at their destination so that they don't have to worry about their place of residence. Internet's affordability and convenience to customers is an important channel for marketing, marketers can reach a wide customer base, find target customers, identify their needs and communicate with them at a relatively low cost. Imagine that you had to go from one hotel to another to get a room until you finally find a good room at a reasonable price. E-marketing makes prices transparent, in fact, customers try to find better prices, which means that discounts simply move customers from one distribution channel to another. Any increase in volume cannot make up for lost revenue from discounting, so hoteliers must be more selective about the rates they offer to third-party sites to ensure they are truly generating incremental revenue. According to research, six out of seven people shop online, airline tickets the most common, followed by accommodation, travel information, rental cars, event tickets, bus or train tickets and package tours.

One of the most important points in e-marketing is website layout and design. To consider the differences between consumer tastes and service provider interests, hotels should think about their website design because effective websites are a constant search engine. Website quality is an important antecedent for information satisfaction, ease of use shows the strongest relationships with information satisfaction and behavioral intentions, in addition, companies can

focus on other areas for effective website design such as information accuracy, clarity and completeness, ease of use, quality Use navigation and color combination. On the other hand, responding to emails is very effective, which means that hotels that pay attention to emails also pay attention to their websites.

Customer relationship management and e-marketing: The philosophy of getting to know the customer intimately can reduce marketing costs and increase sales through closer relationships and increased satisfaction. For this to happen, the entire hotel chain must cooperate in collecting, managing and disseminating customer information.

Some of the economic and human factors that affect the choice of hotel:

- Follow the money - Travel decisions aren't just about hotels: airline costs, car rental costs and entertainment costs also drive how companies choose which hotels to approve and in which cities.
- Familiarity drives return - the role of hotel chain/brand loyalty programs is a significant benefit to travelers. Companies of all sizes can influence these programs
- Internal and external roles - hotel selection is influenced by relationships that develop over time. People in an organization may greatly influence hotel selection. Companies may buy from large agencies, and even the entire travel purchase can influence company and agency behavior.
- Power is local - sometimes overlooked. Inbound demand for hotels can be driven by external business factors that drive business to a region. Partnering with other local businesses in your area is a great way to build brand awareness and drive direct bookings. To start, create a list of local businesses you'd like to partner with and that would also benefit from a co-marketing arrangement. Some examples could include tour operators, restaurants, and travel agencies. Determine how the agreement will work – will you recommend their business in your hotel lobby?

Instagram is one of the biggest social media platforms that you can use to showcase your property and interact with guests. To use Instagram properly, the content you post on your channel must be thoughtful and well targeted to your specific audience. Sending high-quality photos, re-sharing user-generated content, encouraging guests to post on their own page and write comments about the duration of their stay at the desired hotel, etc. can be very effective.

**Digital Transformation in Railway Transport:** Transportation can benefit from providing new and optimal solutions, and digital transformation has a positive effect on transportation and attracts customers and increases its competitiveness. Upgrading the transport system and digitization does not mean only the redevelopment of infrastructure or the promotion of new energy carriers compatible with the environment, It also requires measures to improve the effectiveness and integration of different modes of transportation. For example, European transport is expected to become a common, competitive, affordable, safe and intelligent system. The European Commission states that by 2030, European transport will have the following characteristics:

- Completely digital information in logistics chains
- Extensive use of integrated ticketing systems
- General automation of transport operations (European Commission, 2020).

Rail transport should be an integral part of the transformation defined in the transport sector, mainly thanks to its environmental benefits presented in Figure 2.

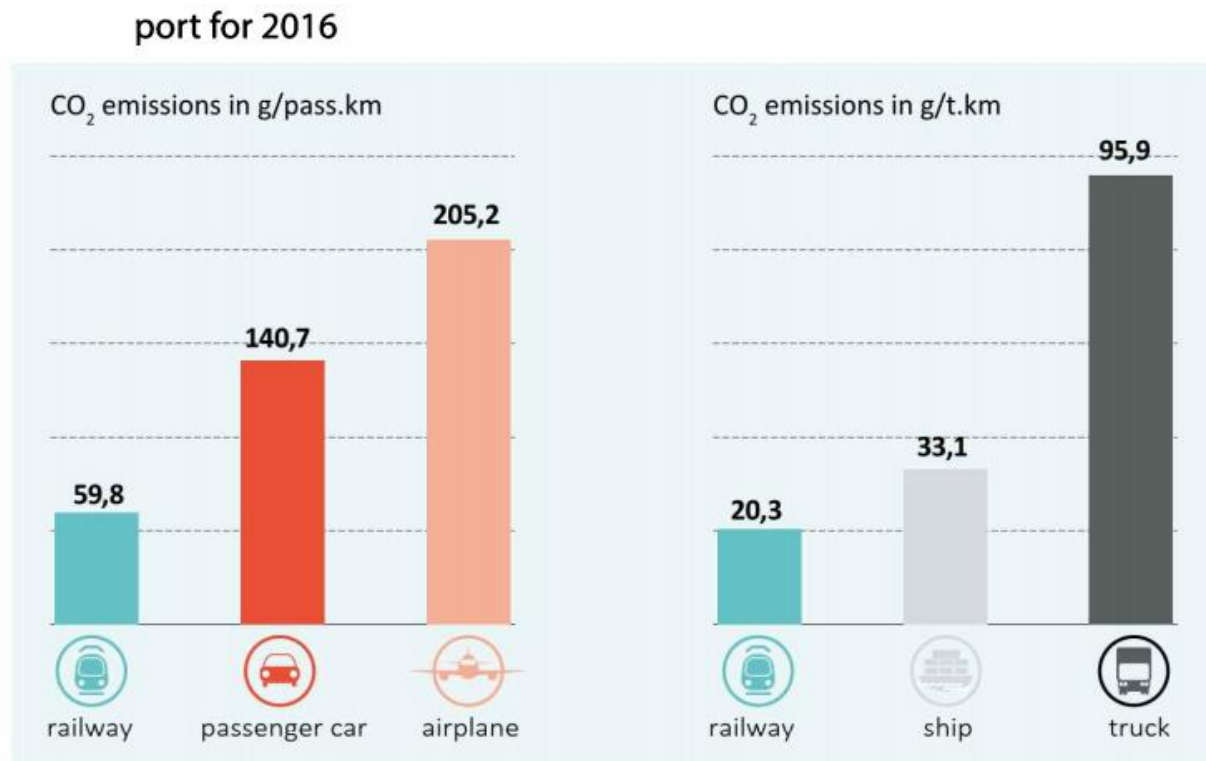


Figure 2: Carbon dioxide emission in the EU transport, by specific modes of transport for 2016- Source: Railway Transport in Numbers, ProKolej Foundation, Warsaw (2021); see also: Report The Rail for Climate –Climate for the Rail, ProKolej Foundation, Warsaw (2021).

Information and communications technology has been used in the railway since the 1970s. In 2016, the following areas were identified as primary for the adoption of digital technologies in the railway transport (CER, UIC, EIM, 2016):

- Creation of networked railway which uses reliable connectedness, ensuring the safety, efficiency and attractiveness of the railway services
- Increased customer satisfaction thanks to added value for passengers
- Increased railway capacity, reliability and efficiency through the automation of processes
- Improved competitiveness of the railway through the optimal use of data.

From the railway transport perspective, the biggest potential lies in digital technologies and information and communications technologies concerning the following:

- Internet of Things
- Cloud computing
- Big Data recording and analysis
- Robotisation, autonomous vehicles

- New digital products and services that are becoming integrated with the transporters' operations
- Employment of autonomous and near-autonomous vehicles.



Figure 3 : 12 key capabilities of the railway, according to the Europe Horizon for 2021–2027, Source: own materials of PKP S.A.,

At the first stage of digitalization in the railway sector, substantial progress could be observed in regard to communication with clients due to the following factors:

- Expanded and reinvented websites of carriers
- Mobile applications with access to the information about the train timetables in real time and the possibility to buy a ticket and extra services
- Ultra-modern systems of dynamic information for passengers on a train, at train

stations and stops, which use tools to forecast the development of the situation on the basis of the timetable, information about the current traffic and train parameters.

Table 1 presents examples of digitalization in the railway transport of passengers.

**Table 1.** Digitalisation areas in the passenger railway transport

Technology	Digital idea	Examples of use
<ul style="list-style-type: none"> <li>- Broadband access to the internet</li> <li>- Mobile internet</li> <li>- Big Data</li> <li>- Cloud computing</li> </ul>	<ul style="list-style-type: none"> <li>- Connected commuter</li> <li>- Intelligent stations</li> <li>- Smart ticketing</li> <li>- Mobility as a service</li> </ul>	<ul style="list-style-type: none"> <li>- Access to the internet during journey (3G/4G/5G)</li> <li>- Mobile applications with real-time information about trains and the option to buy a ticket</li> <li>- Infotainment systems on board of trains and at the stations</li> <li>- A variety of applications integrated into one system through the inter-operable product service interface</li> <li>- Real-time Passenger Information Systems</li> <li>- Automation of the ticket selling and information providing processes</li> <li>- Applications to plan an intermodal journey</li> </ul>

Source: J. Pieriegud (2019). *Transformacja cyfrowa kolei*, p. 52.

Access to Wi-Fi and extra services to accompany the journey are also available at the train stations. Systems of virtual information provide the train timetables, the platform to buy train tickets, the maps of train stations with shopping and service zones, maps of the surrounding areas, information about sports and cultural events. The need for continuous access to the internet and various communication channels, in the transport of freight is met with the rising need for new products and services. To successfully meet the mentioned expectations, new concepts of mobility are presented and different formulations are adopted: mobility on demand, mobility at any time, network mobility, shared mobility, integrated mobility and e-mobility. Each of the new models is connected. This allows for fast planning of the most convenient journey, bookings and paying the fare, and eventually travelling, with the up-to-date information about the journey.

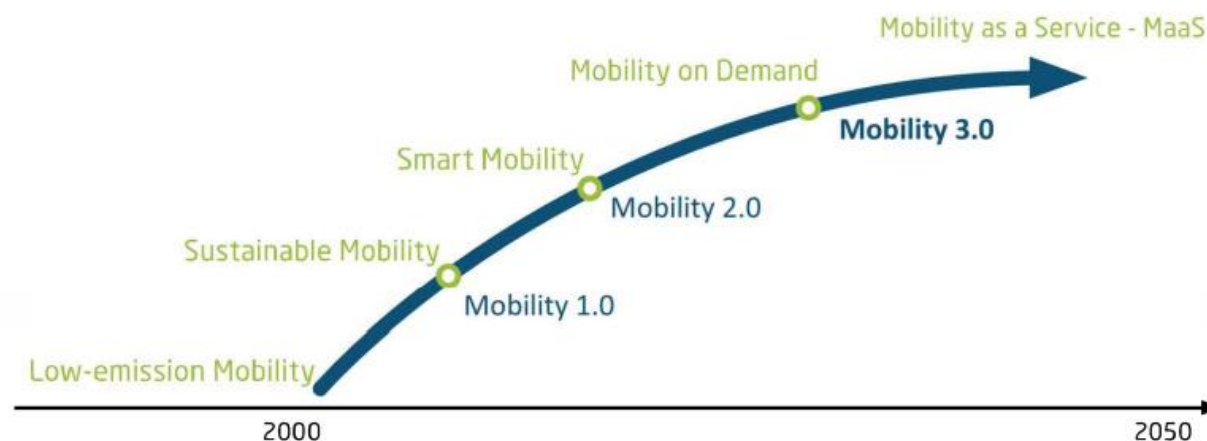


Figure 4: further stages of the advancing revolution in transport- Source: J. Pieriegud (2019). *Transformacja cyfrowa kolei*, p. 26.



Examples of digitalization areas in the railway freight transport are presented in Table 2

**Table 2.** Digitalisation areas in the railway freight transport

Technology	Digital idea	Examples of use
<ul style="list-style-type: none"> <li>– Internet of Things</li> <li>– Big Data</li> <li>– Cloud computing</li> <li>– Automation and robotics</li> </ul>	<ul style="list-style-type: none"> <li>– Logistics 4.0</li> <li>– Freight as a service (FaaS)</li> <li>– Intelligent freight car</li> <li>– Logistics platforms</li> </ul>	<ul style="list-style-type: none"> <li>– Real Time Train Tracking System</li> <li>– Electronic consignment notes, e.g. digital CIM/ SMGS consignment note and e-invoices</li> <li>– Digital cargo booking platforms</li> <li>– New business models to organise transportation</li> <li>– Smart contracts (blockchain technology)</li> </ul>

Source: J. Pieriegud (2019). *Transformacja cyfrowa kolei*, p. 52.

Digitalization in the Railway Transport on the Example of the Russian Railways Strategy:

The Russian Railways belong to the biggest railway organizations in the world. In 2019, they approved the digital transformation strategy of the company by 2025 and they implemented the Digital Railway project. The Digital Railway project run by the Russian Railways means digital environment in which the information is the resource which defines processes, management model and available services. Its aim is to improve the quality of transport and logistic services rendered with the use of digital technologies. The structure of digital railway is presented in figure 5 . Special attention in the project has been paid to digitalization and information technologies.

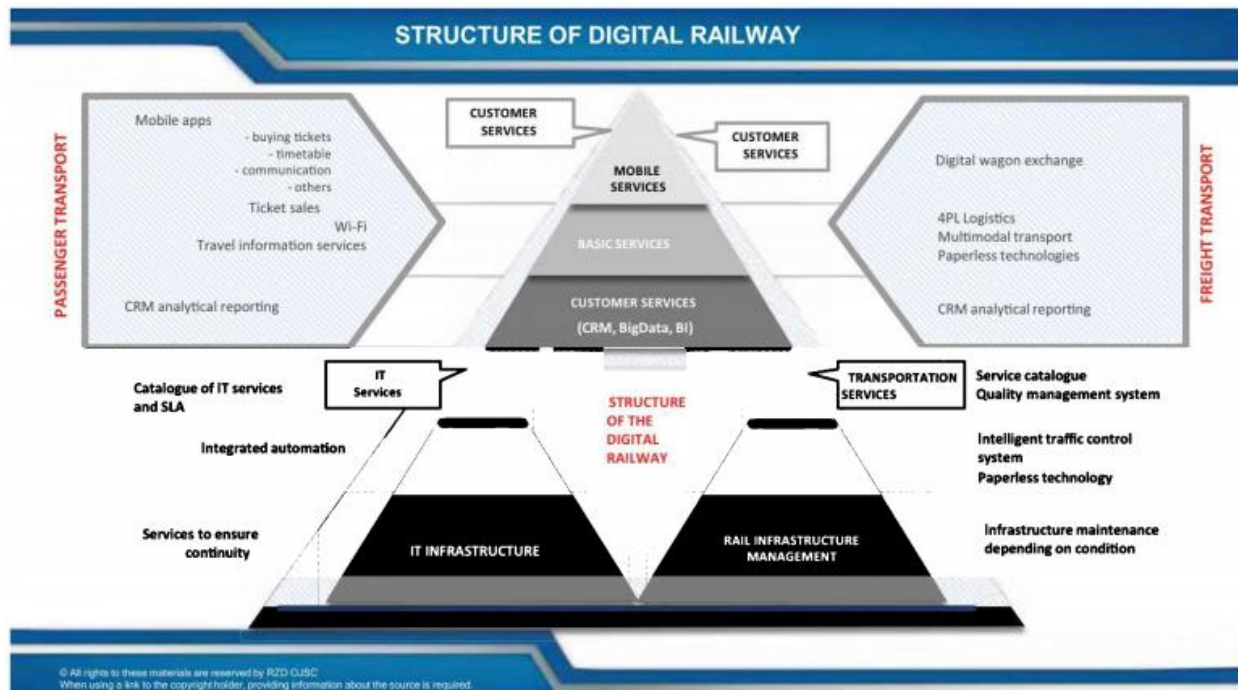


Figure 5 : Structure of digital railway- Source: Charkin (2019).

The project includes key directions of information system development in the Russian Railways and they are:

- Creation of information space for freight transport and logistics in order to increase their profit-earning capacity
- Creation of information space for passenger transport to increase its profit-earning capacity
- Creation of complex digital technologies to organize the transportation process (Digital Railway) in order to improve effectiveness of the railway transport and infrastructure
- Creation of one integrated and automatized operation system, optimization of corporate systems of company management, analysis and development of reporting in order to increase profit-earning capacity of its overseas activity, increased effectiveness of the social sphere and governance.

Pursuing the strategy of digital transformation is not only supposed to aid the introduction of innovations and breakthrough technologies in the Russian Railway Holding. It is also expected to change the corporate culture, increase performance and start new business processes, as well as extend the range of services offered on the market by entities from the Russian Railways Holding. One of the main principles of the strategy will be to establish eight digital platforms – sets of related technological solutions intended to facilitate the interaction of the transport market participants. They include:

- Multimodal passenger transport
- Multimodal freight transport
- Transport and logistic nodes
- Line infrastructure operator
- Logistic and e-commerce operator
- Management of the transportation process
- Railway rolling stock
- Non-production processes.

The strategy provides for running over 50 projects in these areas as well as the use of domestic advanced innovative solutions based on such digital technologies as the storage and management of Big Data, distributed ledgers, quantum computing and others. Basic platforms are created as structures of interconnected technological solutions which ensure support of information technologies such as the Internet of Things, Big Data, smart systems which implement, among others, machine learning methods, virtual reality, as well as new technologies for data transmission such as quantum communication.



Tentative calculations by the Russian Railways show that, only due to the introduction of digital technology, the volume of freight will have increased by 70 million tons by 2025. Customer Relations Management system (CRM) will help to translate into electronic form up to 90% of the correspondence with freight dispatchers.

The Russian Railways, together with their adviser, have launched a project which consists in the use of IT solutions to make a machine see in order to collect data from the sensors located on the rolling stock and to analyze these data in real time. In order to manage the life-cycle of the whole railway infrastructure, the Russian Railways have created a special line infrastructure operator which will employ methods of building information modelling (BIM). The following ultimate digitalization level is

Planned to be gained by 2025:

- Introduction of platform solutions integrated with production systems of the Russian Railways, their coordination and interaction with digital solutions of the whole transport system and the possibility to make digital services on this basis
- Establishment of electronic channels of interaction with the market (passengers, freight forwarders, and service agents), federal executive bodies and the participants involved in transportation along the transport corridors across borders
- integration of technological processes of the Russian Railways with the Internet of Things, processing Big Data, distributed ledgers, digital modelling and artificial intelligence
- Creation of new generation mobile job offers and electronic management of documents in production and management processes
- Modernization of the information and communication infrastructure to ensure the guaranteed accessibility of information services
- Introduction of centralized security measures, based on independent solutions, to ensure the information is secure
- Formation of sustained culture of work with the use of new technologies (searching, approving, prototyping, implementation) and the development of high-tech business in the holding.

**Pros and cons:** Marketing can be said to be the management process through which goods and services move from concept to the customer. It includes the coordination of product, price, place and promotional strategy. Marketing consists of the strategies and tactics used to identify, create and maintain satisfying relationships with customers that result in value for both the customer and the marketer. It means thinking about the business in terms of customer needs and their satisfaction and it differs from selling. The entire business process as consisting of a tightly integrated effort to discover, create, arouse and satisfy customer needs.

Traditional marketing

Marketing is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchange that satisfy individual and organizational objectives. In traditional marketing, channels of communications such as magazines, catalogues, face to face communication etc are used.

#### Price

Is a Conditioning element to the purchase? The pricing of services is one of the major factors in competing. it affects the demand as the demand and price are dependent to each other.

#### Product or service

Is the element which satisfies the client's needs? Quality, design and function of the product are some examples of different aspects of the product. The size, color and general design should be considered by the marketer for the product appearance. The demand should be also kept in mind so that what is required in the market should be known and for that research and market study is essential. Service is also included in the product or is a part of this P. The company can provide warranty as a good customer service which is attached with the product.

#### Place

Products and services have to reach their customers to be consumed. In traditional market, it was possible for producers and their customers to meet face- to – face to exchange goods and services. Place in marketing can be about location in the means of store, factory and storage. Also the decision on distribution channels and transport are part of it.

#### Promotion

Sales promotion is any form of promoting sales where there is a call to action that results in a demonstrable benefit, whether tangible or not.

#### Internet Marketing

Today, with the creation of large scale databases and internet that systematically collect information on households and individuals, direct marketing has become faster. online marketing are driving the explosive growth in advertising and marketing revenues, Also collected information can then be used in conjunction with other direct marketing plans to design and deliver targeted messages.

#### Price

Price transparency on the internet as it is much quicker and easier to compare prices by visiting company's websites or by using prices comparison sites has made the business more competitive than was on the traditional marketing. Also the main reason of being competitive is the ability to reduce costs of store spaces and staff costs. As already mentioned above this is the reason of internet marketing being cost effective tool of marketing.

Online payment is new methods of payment that internet offers. Credit cards are seen as an efficient, convenient and flexible payment method for both customers and companies. However, customers are less confident about the service because of the security and privacy issues.

#### Product

The internet leads to faster discovery of customer needs, greater customization of the products to the customer needs, faster product testing, and shorter product life cycles. On internet, a picture or description will replace the physical product offered in the traditional marketplace or in stores.

#### Place

New way of distributing product is done in internet marketing i.e. online selling. People can make decisions and purchase any product from anywhere in the world. Internet has a large market place.

#### Promotion

Internet marketing as a promotional tool can give business a presence all over the world. To promote a product, they do not need to be present in that country, and this means a significant reduction in costs. For example, websites and email are the effective tools to review the new ways of communicating to the customers.

#### Comparing Traditional and Internet Marketing Mix

The cost of supply chain or the cost of distribution channel determines the price of the product. The bigger amount of cost is saved through internet marketing which can result lowering the product price.

The competitors can scan our potential pricing strategy and also our potential customers can reach to the competitors on one click.

There is always security problem in the internet marketing, where customers may not feel safe paying online through their cards rather paying in the physical store where they can have more control over the payment process

In traditional marketing the product is tangible and customers can experience the quality by feeling it. Customer can sometimes change purchase decision because of lack of physically reaching and feeling the product.

Company can offer wide range of products via internet marketing but it is not possible or it costly to offer wide range of products in the physical store.

There will be more problem of storing and staffs handling inventory in traditional marketing than in internet marketing.

In traditional marketing, you can attract customers by decorating the store, like Christmas

In the internet marketing customers don't have to bother about opening hours and the location. They can shop anytime and delivered anywhere from the world

Time is money, what people say nowadays. The internet marketing helps save time of the customers and the company by the speed of reaching message to the customers about the product and services and also the purchasing process is done speedy.

Face to face communication with customers creates bond between business and the customers. They can get straight feedback and can measure result quickly. Having a good website is very important for succeeding in online marketing and the biggest problem in internet marketing is trust and safety (Avoiding from database hacking)

**Conclusion:** Basing on different references, we have come to a conclusion that, the changes which occurred in the community which automatically necessitated the dimension of the type of marketing marketers might use, the best way to really know how effective your marketing approach is to see exactly what the audience is responding. Despite the development of the Internet; Traditional marketing strategies are still proven to be very effective when implemented correctly, but due to the living standards we have today, changes in the way we do marketing are inevitable. The combination of the two ways of marketing may be important for successful marketing functions in global markets. With respect to emerging the ICT revolution, internet which is mostly used as a communication channel it has a large impact in marketing and a strong tool of reaching large audience. In general, humans are more capable in the areas of intuition and ambiguity resolution; machines are far superior at deduction, granularity and scalability.

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