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INDUSTRIAL MARKETING 4.0

**THE INTEGRATION OF DIGITAL AND
CONVENTIONAL MARKETING IN
INDUSTRY 4.0**

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KEYWORDS

This PhD thesis includes the following keywords: industrial marketing 4.0, marketing management, industrial consumer’s buying behaviour, distribution of semi-finished industrial goods, paradigm conflict, relationship marketing, industrial marketing mix, sales force, overloading the sales force, digital marketing, conventional marketing, Industry 4.0, technical content marketing, complex model of technical and commercial communication, industrial customers’ path, Asti Magnet Model.

GENERAL CONDITIONS OF PREPARING THE PRESENT THESIS

This PhD thesis was inspired by a long on-field experience in business-to-business marketing, especially the distribution of semi-finished industrial goods, as a marketing expert, but also a PR manager and external consultant for this type of trade firms, which activate in South East Europe. From my personal experience in industrial marketing, I noticed, that **sales forces still have a major role**, this observation was confirmed also by the study of theoretical and empirical researches of this thesis. An important issue, related to the sales forces is their **overloading with repetitive tasks**, most of them **with low added value** and implicitly the stagnation or even **decreasing of the efficiency of distribution processes**.

The main objective of the present thesis is the **development of complex models of technical and commercial communication in Industrial Marketing 4.0**, to solve the problem of overloading of the sales forces and to increase the efficiency of marketing activities on the distribution market of semi-finished industrial goods. All efforts of this research tend to sustain this objective.

The present thesis is based on many **original elements**, personal contribution, among them the two **complex models of technical and commercial communication** on the industrial semi-finished goods' distribution market. The first is the **Asti Magnet Model** – Types of interactions between sales teams and buying centres based on types of transactions. The second is the **Industrial Customers' Path Model**, adapted from Kotler's¹ "customers' path". Also one can find other important contributions, such as **the introduction of the concept of Industrial Marketing 4.0**, a complex approach, to mediate between the **two paradigms of industrial marketing**: the approach of marketing mix, combined with STP strategy (segmentation, targeting and positioning) and the relationship marketing. In addition, one of the key parts of the work with high added value is **the integration of conventional industrial marketing with the digital industrial marketing**, in a period when most of the theoretical and on-field experts argue about the conflict between the two approaches.

In order to simplify the navigation in a large and complex topic, I developed a framework or work plan, the Figure 1, which presents visually the most **important elements, theories and paradigms** presented and researched. This approach can also be used as a

¹ Kotler Ph., Kartajaya H., Setiawan I., (2017). Marketing 4.0 -Moving from Traditional to Digital, Wiley, New Jersey, USA

structure for activity planning and implementing an industrial marketing strategic plan. This framework combines in an original way the well-tried elements of strategic marketing management (PEST – STEEPLE Analyses, The 5 Forces Model of Porter, SWOT etc.), of the approach of marketing mix, with new methods, tools, approaches or even paradigms of industrial marketing, or even the Asti Magnet Model, which in opinion of many experts are in conflict. In this framework these methods, tools and approaches are aligned in a harmonised way that could be used in theoretical papers, but also in practical situations. Also, this framework can be used as a work guide.

In Figure 1, the author also suggests solutions to the researched problems or objectives of present thesis: **the integration of digital and conventional marketing; solving the paradigm conflict between the traditional approach of marketing** (STP – segmentation, targeting and positioning, then Marketing Mix) and **relationship marketing**, completed with the **development of two complex (technical and commercial) communication models in Industrial Marketing**. The two models are **The Asti Magnet – Types of interactions between sales teams and buying centres**, respectively **The Industrial Customers' Path**.

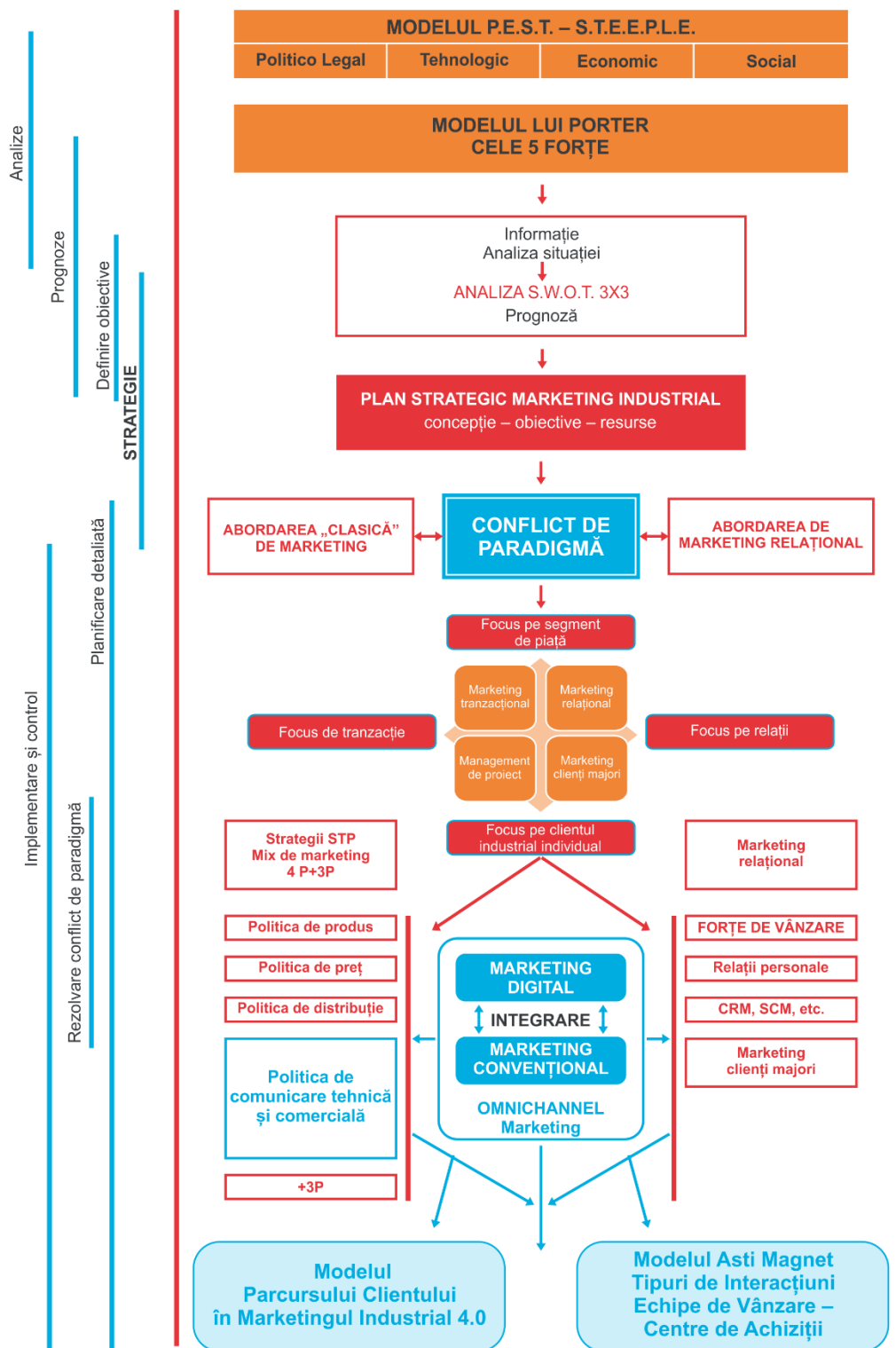


Figure 1 Main elements, theories and paradigms studied in present thesis.

Developed by the author.

The author identified over 150 bibliographical sources for this paper, which presents among others the specific of industrial marketing and its features, like group decision making, inflexible and derived demand, the concentration of selling and buying, high volume and values, less visible transactions for outsiders.

The present thesis contains **89 figures** and **49 tables**, which present visually the information, ideas and concepts of this work.

OBJECTIVES OF RESEARCH

The main objectives of the present research are **the implementation of digital methods and tools in Industrial Marketing 4.0, the integration of conventional methods with the digital ones and the developing of complex technical and commercial communication methods in Industry 4.0** for semi-finished industrial goods distribution companies. These actions should offer solutions to the following challenges: **the need to reduce the overloading of sales forces and increasing the efficiency of communication processes related to industrial sales.**

The specific objectives of research:

- the analyses and understanding of market trends of industrial semi-finished goods in South-East Europe in the Industry 4.0 era;
- understanding the industrial buying behaviour on this market;
- identifying and deep analysis of the principles, methods and tools in industrial marketing used by industrial distribution firms;
- identifying the solutions and possible directions of development of these activities;
- analysing the digitalization of industrial marketing and identification of the integration potential of traditional and digital marketing.

PRESENTATION OF CHAPTERS

The first chapter of present work, **The Introduction** is a synthesis of the whole work. Here are presented the professional and personal motivations of picking up the field, the importance of research, the objectives of the research and the anticipated results.

The actual thesis is composed by two major parts: **Part I. The Current State of Scientific Research in Industrial Marketing** and **Part II. The Scientific Research related to the Improvement of Technical and Commercial Communication in Industrial Marketing 4.0 and the Development of the Complex Models**, and also a separate chapter

Final Conclusions, Personal Contributions and Future Researches. The first part is composed of four chapters: **Chapter 2. – The Industrial Marketing Management, Chapter 3. – Development of the Strategy of Industrial Marketing 4.0, Chapter 4. – Premises for implementing of the Strategy of Industrial Marketing 4.0 and Chapter 5. – (Digital) trends in Industrial Marketing 4.0.**

Chapter 2. – The Industrial Marketing Management starts with defining and presenting the evolution of the most important terms and concepts of the thesis: industrial marketing, business-to-business marketing, digital marketing etc. This chapter includes a comparative analysis of the business-to-consumer and the industrial marketing, including the special needs of industrial firms, methods of interactions, decision making, tools and methods of satisfying these needs. Industrial buying behaviour is a key element of this chapter, the so-called buying centres are in the focus of special studies.

Chapter 3. – Development of the Strategy of Industrial Marketing 4.0, starts from the differences and similarities with the B2C marketing, analyses of external environment of the distribution firm (STEEP analysis, Porter's "5 Forces" Model), then the internal value added chain model, and SWOT analysis (which confronts external and internal environments).

Chapter 4. – Premises for implementing of the Strategy of Industrial Marketing 4.0 begins with the idea that any strategy is efficient only if is successfully implemented. So, the author presents the **paradigm conflict** between the two main approaches of implementing strategies in industrial marketing. **The classical approach is the Marketing Mix based on STP strategy** (segmentation, targeting and positioning), obviously adapted to the specific of these markets. The other main approach is the **Relationship Marketing**, here the author focuses on key concepts like: **industrial relationship marketing**, the **special role of sales forces**, as critical element of connecting distribution and promotion and the **tools of relationship marketing** (for ex. CRM).

The chapter is closed with the presentation of **industrial marketing 4.0 as alternative solution to the paradigm conflict**. Sales forces are still the key element in the success of semi-finished industrial goods distribution. The whole activity of organizing of the industrial marketing, including implementation of digital tools have to sustain the activity of sales forces. The above mentioned repetitive tasks of sales forces have to be improved, automated, in order to offer the sales forces the possibility to focus time and personal energy to major customers, high value added negotiation, increasing the company's profit. Sustaining the sales

forces can be based on a better organization of activities, a more performant and hard to copy business model and the integration of digital and conventional industrial marketing.

Chapter 5. (Digital) trends in Industrial Marketing 4.0 studies the concepts and the problems like: **integration of conventional and digital marketing** (one of the key elements of industrial marketing and also of this thesis in the period of complex transition to digital economy), **omnichannel marketing** on industrial markets (as principle and implementation method of the integration and customization of digital industrial marketing), **technical content marketing** (a specific communication method on these markets) and also a **case study, related to the adaptation on fairs and expos to the Industry 4.0**, one of the classical forms of communication and interactions on industrial markets.

Part I. ends with the **Synthesis of Conclusions**.

Part II. of the present thesis, **SCIENTIFIC RESEARCH RELATED TO THE IMPROVEMENT OF TECHNICAL AND COMMERCIAL COMMUNICATION IN INDUSTRIAL MARKETING 4.0 AND DEVELOPMENT OF COMPLEX MODELS**, is composed by two chapters, as follows: **Chapter 6. – Presentation and Results of Research**, and **Chapter 7. – Development of Complex Technical and Commercial Communication Models in Industrial Marketing**.

Chapter 6. – Presentation and Results of Research is the most expansive chapter of the present work, with four important subchapters, each of them with high value added: **6.1. Presentation of research**, **6.2. Research related to actual trends on semi-finished industrial goods distribution market in South-East Europe**, **6.3. Analysis and research of seller – buyer interaction on semi-finished goods’ distribution market**, and **6.4. Synthesis of Research Conclusions**.

Subchapter 6.1. Presentation of research studies the **distribution methods of semi-finished industrial goods**, the **research hypotheses** proposed defined by preliminary researches.

Subchapter 6.2. Research related to actual trends on semi-finished industrial goods distribution market in South-East Europe includes the **research of general trends on industrial distribution market**, **statistical analysis of secondary data related to the efficiency of transactions** (based on sales teams records), **checking the first hypotheses**, and **Pareto Analyses of commercial results concentration on customers**, all these in order

to obtain the specific information for decision making in commercial process development and development of complex technical and commercial communication on these markets.

Subchapter 6.3. Analysis and research of seller – buyer interaction on semi-finished goods’ distribution market includes the analyses of technical and commercial communication methods using on-site observation and in-depth interviews with professionals (to deeply understand the behaviours, communication and distribution processes), research based on survey among sales forces (for checking hypothesis and completing the understanding of the mentioned behaviours), Ward type cluster analyses regarding segmentation on industrial distribution markets (for understanding the segmentation process, but also the paradigm conflict between the two approaches of industrial marketing), research based on survey among customers (for detailing image and checking the other hypotheses).

Subchapter 6.4. Synthesis of Research Conclusions, closes the actual research chapter, by highlighting the main information and details gathered from the complex research and analysing process, and which were later used in the development of complex models from the following Chapter 7.

CHAPTER 7. – Development of Complex Technical and Commercial Communication Models in Industrial Marketing is a shorter chapter as page number, but with a very important contribution to the thesis. Practically, in this chapter are concentrated the propositions or the solutions to the presented problems. This chapter includes two subchapters. The first is **Subchapter 7.1. Asti Magnet Model of Interaction Types between Sales Teams and Buying Centres**, an original model, which tends to offer a complex approach of technical and commercial communication and interaction situations between semi-finished industrial goods distributors and their customers. The second is **Subchapter 7.2. The Industrial Customer Path**, another complex model of communication and interaction, adapted and customized to this specific market. These two subchapters are focused on the concrete results of studying the current stage of scientific knowledge in industrial marketing, but also of the research of secondary and primary sources of the last 3 years.

The final chapter, called **Final Conclusions, Personal Contributions and Future Research**, has the role of concluding the whole thesis. In this part the author focused on the methods and directions of implementing the above mentioned results and also those key areas where researches can and should be continued. In contrast with the laws of fundamental

sciences, which are universal, the reality of industrial markets shows us, that industrial marketing methods and tools need to be adapted and customized to specific markets, segments, customers, but also to the policies and business models of each company. Those companies have to implement these methods and tools according to their mission statement, objectives, resources, assuring that there is a synergy with their business models and processes.

An important building rock in this process of elaborating the models was the so called “Rhomb (Diamond) Model”. In order to better analyse the interactions between industrial suppliers and customers, there were built four categories of transactions, based on the followings: unique transactions or long term relation and focus on individual customer or market segment. So, there were found **four categories of interactions: transactional marketing, project management, relationship marketing and key account marketing**. Each of them pretends different approach, which will be presented in the Asti Magnet Model.

Industrial Marketing 4.0 appeared as an alternative solution to the paradigm conflict between the classical approach of marketing and the relationship marketing. In this order the author introduced the following elements of industrial marketing 4.0:

- **Omnichannel marketing;**
- **Industrial content marketing;**
- **Integration of conventional and digital marketing;**
- Development of digital marketing and sales platforms;
- Hyper customisation of marketing based on artificial intelligence or big data;
- **Adaptation of technical fairs and exhibitions to the new realities of Industry 4.0,** presented in a dedicated case study.

DEVELOPMENT OF COMPLEXE TECHNICAL AND COMMERCIAL COMMUNICATION MODELS IN INDUSTRIAL MARKETING

This chapter is a constructive synthesis of the study on actual state of scientific knowledge, the on-field experience of the author and the results of present thesis' research.

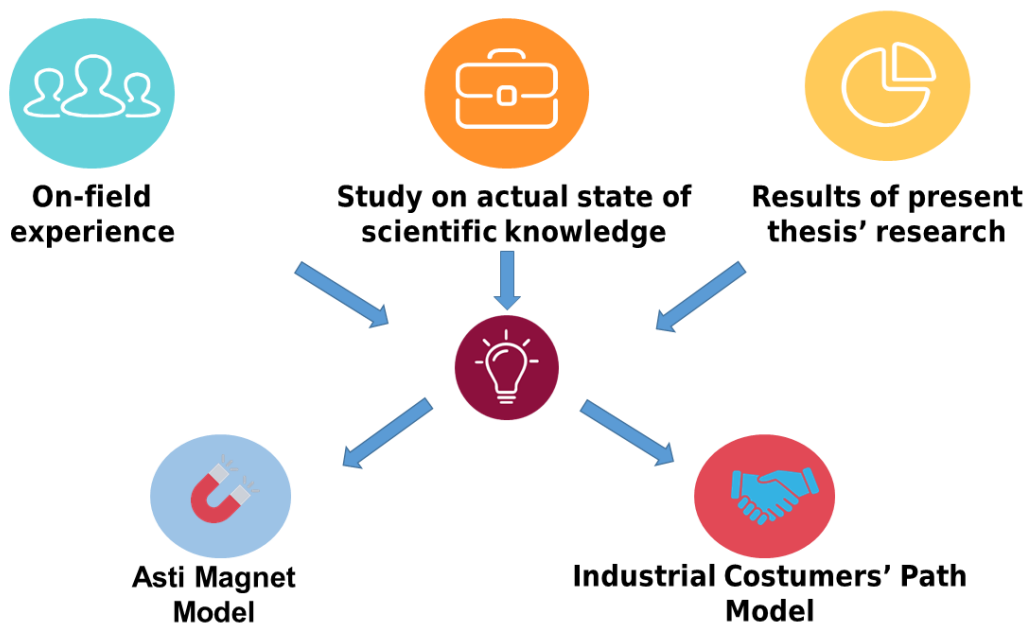


Figure 86 The process of development of the original models Asti Magnet and The Industrial Customers' Path. Created by the author.

ORIGINAL MODEL ASTI MAGNET – TYPES OF INTERACTIONS BETWEEN SALES TEAMS AND BUYING CENTERS.

This original model, developed for the distribution market of semi-finished industrial goods, is the most important personal contribution to this thesis, completed with The Industrial Customers' Path Model.

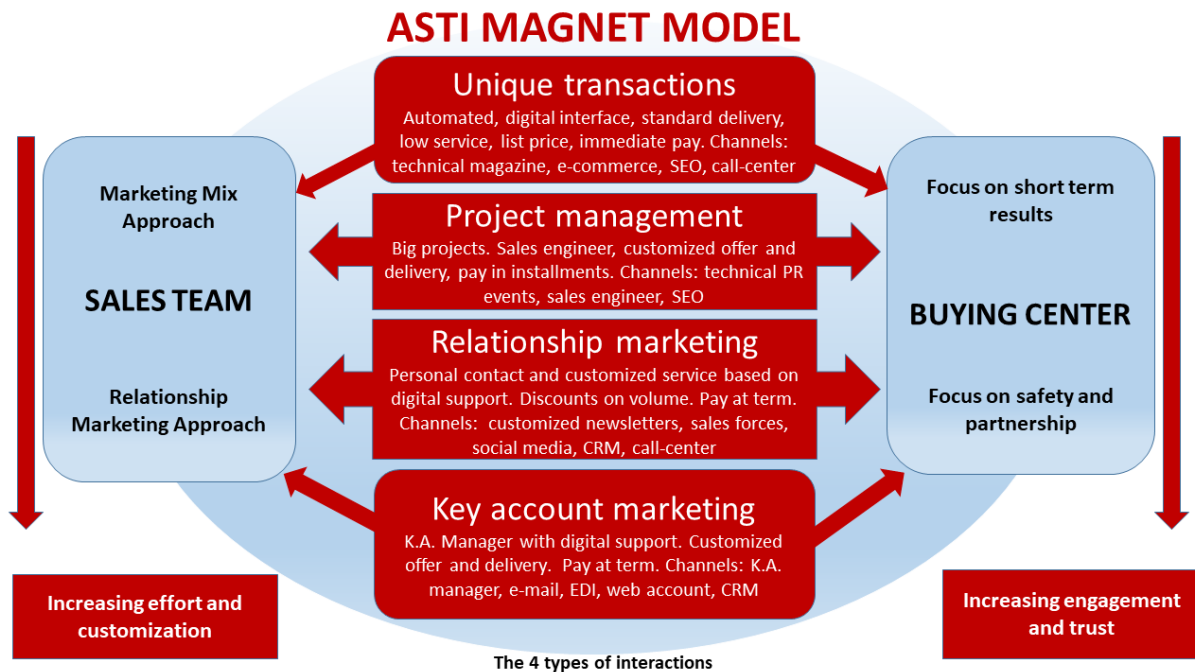


Figure 88 Asti Magnet Model- Complex Technical and Commercial Communication Model between Sales Teams and Buying Centres. Created by the author.

Every category of customers (based on the interaction type which they choose at a certain moment) is treated in a specific way customized to their own buying behaviour. We can observe here (left blue column) the dominance of marketing mix approach or of the relationship marketing, but also their coexistence. So, this model can be the solution for solving the paradigm conflict, proving the possible coexistence of the two different approaches. The same situation in the right blue column: we can observe the dominance of focusing on short term solutions and results (optimizers) or the dominance on focusing on safety and partnership (satisfiers). In the central, red column, every interaction type (as seen in the Rhomb Model) has its own “interaction script”, a combination of methods, channels and tools, which can satisfy the needs of those specific customers. Also, this approach focuses on the efficiency of the technical and commercial communication processes and also sales activity of distribution companies.

This model is called “Asti Magnet”, because in marketing and especially industrial marketing, we can observe frequently interactions which attract and interactions which push away partners (sales forces or buying teams), such as a magnet. These interactions have a very fragile equilibrium, where a little bit over pressing or higher expectation can ruin the relations. These relations are coordinated by technical and commercial communication, which

imply traditional and digital elements, combined in a way that assures an equilibrium between the needs of customers to obtain customized services with a human touch, and the needs of distribution companies to achieve a profitable activity without massively overload the sales forces. The expression Asti refers to the marketing consultancy firm Asti Advertising SRL, through which the author and his partners organized most of the industrial marketing consultancy projects, which offered the practical inspiration for developing the model.

Through the four approaches (from unique transaction to key account marketing) sales forces offer higher and higher customization and personal involvement. In cases of industrial project marketing and key account marketing, commercial, economic and financial results are very valuable, compensating the invested effort.

As seen from the perspective of customers, in relation to their acquisition policy, they can choose one of the interaction models. They can opt for short term results (calculated especially on cost cutting and other financial calculus, by comparing prices of different suppliers) or for long term safety and partnership. In this direction engagement and trust to suppliers increase, a fact that can assure long term cost cutting, by decreasing communication cost, finding supply chain management solution which bring mutual benefits, decreasing the nonconformities by a better understanding of the partners' processes and technical claims.

INDUSTRIAL CUSTOMERS' PATH – ADAPTED TO DISTRIBUTION MARKET OF SEMI-FINISHED INDUSTRIAL GOODS

This model is a personal contribution, by adapting and customizing an existing marketing model², developed originally to the classical or general markets, to the industrial marketing, more precisely to the distribution market of semi-finished industrial goods. The model is adapted to the specific of this market, on a “journey” of the industrial customer through interactions with sales teams (communication and sales channels) and key touch points, and through which the customers become **aware** of the company or his products, are **attracted** to them, **ask information** about them, **act** (test, order, buy) and become **advocate** of the company and its products. That is why Kotler and his associates gave an alternative name to this model: The 5 A's.

² Kotler Ph., Kartajaya H., Setiawan I., (2017), Marketing 4.0 -Moving from Traditional to Digital, Wiley, USA

In the present thesis the author studied those key elements of the model, which are specific to industrial marketing 4.0, especially the features of the activity of sales forces and buying centres: communication methods and channel in the era of digital transition.

This model analyses the channels and methods used by sales teams and industrial customers through their path, passing the 5 steps. Here is the model:

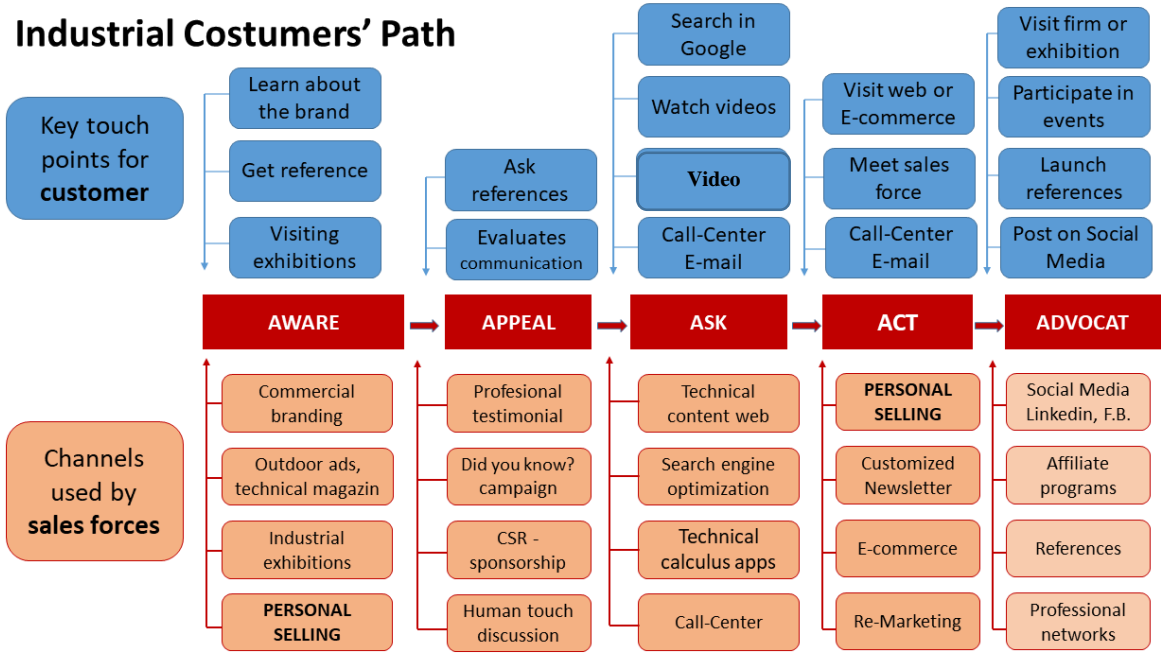


Figure 89 Industrial Customers' Path in industrial marketing 4.0. Adapted by the author, based on Kotler Ph., Kartajaya H., Setiawan I., (2017), Marketing 4.0 - Moving from Traditional to Digital, Wiley, New Jersey, USA

The elements of the central axis, presented in red, represent the **Industrial Customers' Path**³, in different stages of the path.

The brown elements describe the actions of the distribution companies, including sales forces and marketing teams. In this area the light brown elements, represent the actions of the “advocates of the company”, meaning those customers which went through the path, and being very satisfied become supporters, advocates of the company. These channels are no longer under direct control of company, but can be very credible and efficient. Every stage has its own dominant channels and tools, which can appear in other stages with a lower influence.

³ Székely S., Csata Z., Cioca L.I., Benedek A., (2020). Industrial marketing 4.0 - upgrading the industrial customers' path to the digital economy. Polish Journal of Management Studies

Sales forces remain the **key element in the technical and commercial communication**, but also in the sales process. However, they need digital support, as presented in the researches of this thesis. An intense branding activity and recommendation from third party experts are a good foundation to launch interactions with customers. A company “must leave communication channels open”, especially in stage three “ASK Information”, when customers start to search rapidly for information or products. In this stage **technical content marketing** focusing on specialized fields, can be very useful. Their effect can be completed by search engine optimized webpages, well prepared and easy to access call-centres. In the fourth stage, which is the most important and with the most visible results, the stage of signing contracts and launching orders, sales forces prove again their importance, but they need to be supported by newsletters (customized to well defined niches), remarketing (customized online advertising, based on previous searches or visits to websites, followed by IP addresses or “cookies”), but also e-commerce sites (at least for standard products and services). Other tools can be useful, such as CRM (customer relationship management systems).

This model is a general one developed for the distribution market of industrial semi-finished goods. Every company on this market needs to develop its own business model based on its structure, capacities, strengths and company mission. Every company needs to search a unique position, which can assure a long term development and profitability.

FINAL CONCLUSIONS, PERSONAL CONTRIBUTION AND FUTURE RESEARCH

Based on personal on-field experience, research of the current state of scientific knowledge and the information obtained from present researches, the author developed the complex models for industrial marketing 4.0.

Final conclusions of the thesis based on the above mentioned elements:

1. Despite the digitization of communication and transition to the Industry 4.0, **sales forces are still the key elements of communication processes** on the markets and also key elements of sales processes.
2. Sales forces of industrial distribution markets use many digital tools, but which (in many cases) are not used in a systematic, harmonised way.
3. Sales forces are **overloaded with low value added, repetitive tasks of technical and commercial tasks**. This overload makes more difficult the optimal customer services of key customers and this fact decreases the efficiency of commercial processes. The causes can be: time crisis and extra pressure related to the execution time of different tasks, pressure coming from the (sales) target which increases every year. Most of sales representatives (on-field or back-office) are supposed to offer a large amount of technical information (about ally, product use, certificates etc.), but also commercial information, too (existing stocks, price lists, delivery conditions, situation of orders etc.). These can be completed or complicated by the need of solving different mistakes in transactions.
4. There are very big differences between transactions made with different customers, starting from a few hundred RON, to hundreds of thousands of RON. The Pareto Law is valid also in this situation, a small percent (about 17,7%) of customers brings a major part of results (turnover etc.). Even though smaller transactions have a higher margin (in percentage), the sales process (offer request, offer, discussion on phone for details, looking for logistical solutions, solving mistakes) costs are higher and the extra margin is consumed by these extra operations.
5. As an answer on the previous point, I proposed 4 different approaches to the 4 main categories of commercial interaction (unique transaction, business relations, project type and key account). The main differences comes from different “effort dosage” of sales forces’ personal activity, the automation and standardization of services versus

customization. As presented in the Asti Magnet Model, that in the case of unique transactions, especially the low value ones, it is recommended that processes to be almost completely automated, standardized, with digital interface or call-centre, fix price lists, standard logistics, payment on delivery or in advance. At the other end we can find the key accounts, with customized services to their specific needs, negotiated prices, and special deliveries. But even these need digital support, real time interconnected data base, without losing the human connection.

6. Communication and negotiation with key accounts is a process that requires personal interaction, but also digital and informational support. In change, if these transactions become partnerships, learning each other's working methods, using also methods and tools like CRM, EDI, these processes can become more fluid and efficient. This fluidity drives to mutual financial benefits on medium on long term, compensating the results of the "approach of getting the lowest prices at the moment".
7. Industrial marketing communication on these markets uses different channels, among them: (digital and print) product catalogues, web pages (with technical descriptions and calculus functions, maybe e-commerce), social media (especially the professional versions, like LinkedIn, but also personal ones, like Facebook or Youtube), call-centres with digital support, and other digital tools (CRM, ERP, newsletter etc.), events (exhibitions, fairs, workshops and conferences), advertising in technical magazines, or different combination of all of these. But the key element remains, as was mentioned earlier, the activity of sales forces.
8. Even if acquisition managers are the contact person in most of these business relations, the decisions of selecting a supplier or conditions of partnership are discussed in groups, in the so called "buying centres". The buying centres include beside the acquisition managers also other people like: production managers, members of financial or accounting department, sometimes law office or top management. In order to establish and maintain a profitable long term partnership sales forces have to communicate (in a customized way) to all the members of buying centres.
9. Acquisition managers don't want to be disturbed by sales forces with phone-calls or visits. But, if they need some technical and commercial information, they become proactive in searching. In these cases, they want urgent answers, even if negative. They pretend precise information, exactly the details they are looking for at that certain moment.

10. The **Omnichannel** approach, meaning a seamless integration of all the communication and interaction channels between suppliers and customers, is the next step to digital transition. We don't discuss any more about the conflict or rivalry between the conventional and digital methods. All their methods, tools and elements are combined in a unique system, where customers can choose different touch points or channels without any further effort. In this model, the customer obtains maximal experience, due to the improved and customized processes, based on big data and artificial intelligence.

I consider, that we only passed the first stages of transition to Industry 4.0 (in industrial marketing) or to the Digital Economy. The general trend is the convergence of traditional and digital methods and tools into a complex system.

We must not forget the importance of human contacts and interactions, as Kotler affirms: *“technology convergence will ultimately lead to the convergence between digital marketing and traditional marketing. In a high-tech world, people long for high touch”*.⁴

⁴ Kotler Ph., Kartajaya H., Setiawan I., (2017), Marketing 4.0 -Moving from Traditional to Digital, Wiley, New Jersey, USA pag. 11