

Business Models of Rail Freight Service Operators and Their Value for Clients Creation

Mirosław Antonowicz

Leon Kozminski University, Poland

The author of this paper discusses business models of rail freight service firms on the background of the branch changes which result from the stock exchange listing of the biggest Polish company representing this branch. Situational background, as well as the outline of a few business model theories, serve to present developmental trends and plausible business models which aim at the value creation for the client of rail transport businesses.

Keywords: business model, value for client, virtual rail business.

1. INTRODUCTION

The process of stock market listing of one of the bigger state freight firms was a remarkable event for the Polish rail transport market in 2013 because it considerably affected the quality of this market. A new model for running a rail business in Poland was offered. One may assert that the proposed model is innovative and redefines the rules of the game in the sector. This is, as a matter of fact, the sense of introducing new models of operations in a business. Firms do so because they want to be prepared to earn money. And such decisions introduce new, more market-oriented standards of business management. Requirements for a stock market listed company are clarity and transparency of operations. It must be noted, though, that the success of a freight rail transport business depends largely, apart from the new model of business management, on the business environment and the clients behaviour, not to mention the official rail transport policy established by both the European Union and Poland¹. The aim of the paper is to present new business models, applicable in rail transport, the models that will meet the new challenges that rail transport businesses face nowadays.

2. SITUATIONAL BACKGROUND

Strategic management often requires “to have dreams”. The biggest Polish rail transport company aspires to become one of the most important logistic market players on the common European transport market. Its up-to-date operations accompanying its entrance into the European Union member states’ markets only confirm this goal. The rail transport market in Poland shrank, in general, in 2015. However, the said company still remains the market leader. Nonetheless, changes which followed 2015 may affect the level of net profit which again may translate into the company’s stock exchange quotations. It must be also mentioned that the set goals require huge changes, hard work and substantial investment. Common European market for rail transport, in this paper’s author’s forecast, will be dominated by 3 – 4 European enterprises and, thus, entail dramatic reorientation of the operations conducted on this market. The role of a haulage firm as mere logistic operator is now insufficient. The biggest Polish cargo operator which, together with its accompanying firms, forms a logistic group, still has a real opportunity to become one of the strongest common European transport market players. Being the second biggest cargo operator in Europe is not now an asset only but the springboard to becoming the effective European logistic group. However, in order to accomplish so

¹ M. Antonowicz: Chances for the market, Logistics and quality 6/2013, pp. 68-72

much, the changes introduced so far are not enough. The company needs funding for its further development; it needs investments in modern means of transport and the rolling stock which could operate on the inter-operative European market; it also needs funding to raise its logistic capacity, to develop new technologies and make innovations. Recapitalization is taking place. Another high-priority undertaking is to acquire a logistic enterprise of international range, the move which will help to gain wide recognition for its brand. This, in turn, will lead to the completion of the haulage chain and the delivery chain to the customer, to gaining new competencies and winning new markets to operate on. Does the acquisition of a private Czech operator meet the requirements for the acquisition in question? Partially, it does. A client should be given options, within the frames of one company, to choose from, new offers and products (services), the proposal of synergy and new values. There are still a lot of doubts and further restructuring moves to make both by the Polish company under discussion as well as the cargo rail transport market in Poland for the sake of future gains. Strategies to minimize costs and achieve short-term results cannot be operative any longer. The fundamental question that a market leader has to answer nowadays is how to remain the leader in growth, changes and innovations in the new market situation. How to incorporate innovativeness into the strategy of operations on the common European market; how to prepare both the business for further expansion and the teams of employees for more pro-active approach, without which the expansion on the European market is not possible. The role of Polish businesses on the common rail transport market should gain in importance, and so should the common market share of the Polish leader. Such goals require a new business model based on the strategy and vision for the market position of the company in, e.g. 2020. This is the development strategy of the company for the years up to 2020. It consistently pursues the construction of the logistic operator who will offer complex logistic services of varied value, depending on its operations market or the client. Contemporary companies must make themselves immune to market turbulences and unexpected shifts in order to become, according to Taleb², anti-fragile. It means that they can profit on unexpected turns of events, they incorporate such

² N. N. Taleb: *Anti-fragility, About things that thrive on shock*, Kucharski Warszawa 2013 p. 27.

events into their development and treat the idea of market uncertainty as a potential source of income. Consequently, such businesses offer diversified portfolios of services and they are on the look-out for opportunities to do business, they operate within the perspective of the place, the time and the client. Finally, they appoint visionaries their leaders. Following B. Nogalski's³ classification, a contemporary rail transport business may operate among active enterprises which have resources that allow them to effectively shape the environment of their business activity. Only leaders can hold such power as regards: market share (provided they discount domination within their sector), ties with political establishment (they create beneficial legal and political milieu) or innovativeness. Consequently, businesses must be, every now and then, rearranged and redeveloped.

3. BUSINESS MODEL – OVERVIEW

An enterprise, as a business entity, has both the assets which enable its operations and the funds which finance its assets. Nowadays, the significance of particular assets is changing. Intellectual property is more and more incorporated into business operations. The process of turning the assets into cash flow is determined by the business model of a given company. Research⁴ shows that in the future it is the suitable business model that will serve as the springboard for a company to gain permanent competitive advantage. Increasing significance of business models results from the combination of a lot of factors, such as: information and communication technology, market deregulation, technological changes, globalization, the role of the concept of balanced development, finally, the rise in a business social responsibility. A business model may be defined as a cluster of operations run by an enterprise, methods and time of their implementation, together with such use of the business assets that, eventually, the client gets the value and the business generates a profit.⁵ A business model may be also understood as such structural organization which enables the business to properly perform all obligations that the

³ B. Nogalski: *Business models as tools for strategic re-orientation of businesses*, MBA 2/2009 p. 4.

⁴ Cf. M. Jablonski: *Shaping business models in the process of value creation*, Difin Warsaw 2013 p. 23 et seq.

⁵ A. Afuah, *Business models. A Strategic Management Approach*, McGraw-Hill Irwin, 2004, p. 2.

legislation imposes on business entities, such as e.g., the rail transport operators.⁶ Adopting the cash flow perspective, one may define a business model as a combination of three vital flows. They include value flow for clients and business partners, revenue flow, and logistics flow⁷. A business model may be also seen, following K. Obłój's⁸ definition, as the combination of a firm's strategic concept and its practical development in the form of chain of values which allows the business for effective exploitation and renewal of resources and skills. The three most popular business models as seen from this perspective are the operator model, the integrator model and the conductor model. However, in businesses, such as rail transport operator, there may be other business models, e.g., the model of full integration with the client, the model which utilizes trade barriers, the model of low prices, the model which offers diversified services or the model offering a specific type of service, etc.⁹

A contemporary enterprise of the transport-forwarding-logistics sector, in order to succeed, needs a coherent, integrated approach to four challenges connected with the value creation of the XXI century, i.e.,

- To design a business model, oriented at the value for the client, by a transport- logistics enterprise,
- To outweigh risks in unstable markets,
- To manage the firm as the portfolio of assets, diversified portfolio of services,
- To use the information about the assets, measure them, and include the information in the financial reports of a cargo transportation business.¹⁰

⁶ I. Gajos, T. Lubicki, Formation of business models of distribution system operators. Key issues, *Energetyka* – January 2006, p. 4.

⁷ M. Jablonski: Shaping business models in the process of value creation for businesses, *Difin* Warsaw 2013 pp. 59-60.

⁸ K. Obłój, *Effective strategies*, PWE, Warsaw 2002, p. 98.

⁹ M. Jablonski: : Shaping business models in the process of value creation for businesses, *Difin* Warsaw 2013 p. 40

¹⁰ P. Kapruś: Business model of an enterprise, *Annales Universitatis Mariae Curie – Skłodowska, Lublin – Polonia* Vol. XLVII, 1 Section H, 2013 p. 63, See: Ten business models for the current decade, *Business strategies* 2012.

In the course of decision making, rail transport businesses should simultaneously take into account the following aspects: strategy, risk management, processes and information; and the business model will only become stable when all the aspects remain in equilibrium.¹¹

Now, with the use of the content discussed in the preceding paragraphs, the author wants to propose a practical structure of a business model. Such structure is presented in chart 1. The proposed model, irrespective of other elements, attracts attention to the problem of how to establish a competitive advantage. In the rail transport of freight, where there is free competition, competitive advantage is of particular significance especially with prospects for the European market. According to J. Brzóska¹², the competitive advantage is composed of the following elements:

- Value offered for clients, based on their preferences as regards the choice of services offered by a given business. Such preferences arise from the following characteristics: a service stands out from the competitors' services or, the clients' perception of the service as identical to the one of a competitor's still, it is offered at a lower price or it is more easily available,
- Choice of market segment. Clients' preferences and needs predetermine the firm's choice of such market segments for its ultimate operations which will make the services attractive for the client. Diversified clients' needs requires from a business to direct adequate services to the suitable market segments – so that the offer of services can always meet the client's expectations. The selection and holding of an attractive segment requires the business to combine certain values incorporated in a service and designed for diversified groups of clients.
- Level of revenues in particular market segments. It is important to note that an enterprise may have a lot of sources of revenues which may bear diversified importance within the framework of a given market segment. An example to illustrate such situation could be the business which gets revenues from the sale of complex services and, at the same time, profits on their monitoring or ensuring protection.

¹¹ P. Kapruś: *ibid.*

¹² J. Brzóska: *Innovative business model – practical approach*, p. 3.

➤ Choice of a specific type of competitive advantage which is conditioned by a variety of factors, such as e.g., innovativeness and the quality of the service, location of the enterprise, ability to lower the costs. Material resources and competencies create the value through the process of rendering rail transport service.

the bottom-line turnover and costs must be decided.

- In the third step, the new model must be compared with the one that already exists. This will enable the development of the new model implementation process. This will also make it possible for the business to decide which elements of the new model can be

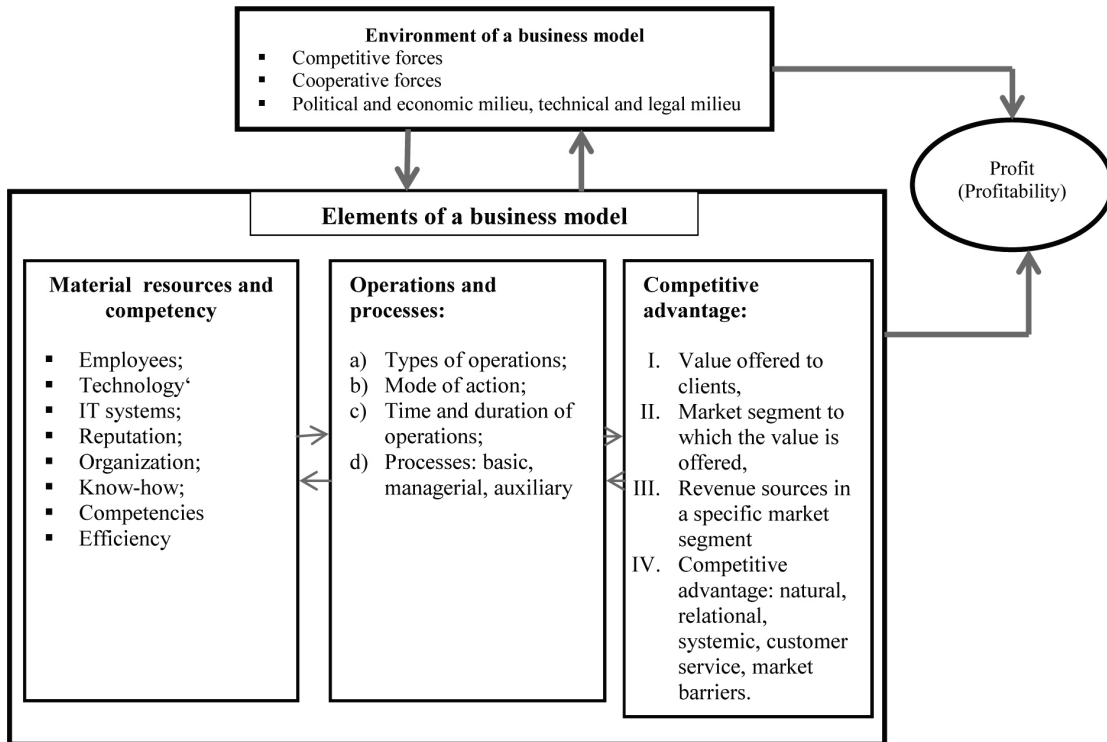


Chart 1. Business Model Structure.

Source: J. Brzóska: Innovative business model – practical approach, p. 3.

A business model may be composed of four elements which, together, create value for the prospective firm and its clients. These elements are presented in chart 2. From this perspective, the process of a business model formation progresses in a few steps¹³. They are the following:

- In the first step, a strong value for client position must be established. Successful business discovers how to meet the needs of a real client who has real work to do.
- In the second step, a profit formula must be established. It will provide value for the business. Segmentation of the business value, which defines the ultimate volume of overall profits, will allow the business to determine what resources and processes are vital to achieve the planned goals. During this phase,

implemented within the existing organization structure and which elements require changes in the structure, including the plausible necessity to establish a new entity.

For managers, such reasoning means the turnabout of thinking from the traditional process, related to the traditional understanding of the chain of values, which used to start with resources and key competencies of a firm and end with the client. According to Slywotzky, Morrison and Andelman¹⁴, the modern chain of values starts with clients, with their expectations, preferences and priorities as well as with options which enable their realization.

¹³ P. Kapruś: Business model of an enterprise, *Annales Universitatis Mariae Curie – Skłodowska, Lublin – Polonia* Vol. XLVII, 1 Sectio H, 2013 pp. 64-65.

¹⁴ A.J. Slywotzky, D. Morrison, B. Andelman: *Profit zone*, PWE Warsaw 2000 pp. 35-36.

<p style="text-align: center;">Proposal of value for client</p> <ul style="list-style-type: none"> ▪ Ultimate client, ▪ Task to accomplish: to recognize an important problem or to satisfy crucial need of the ultimate client. ▪ Offer to resolve the problem or to satisfy the need. It comprises the service and the way it is provided. 	<p style="text-align: center;">Key resources Profitable provision of value requires</p> <ul style="list-style-type: none"> ▪ People, ▪ Technology and wide range of services, ▪ Equipment, ▪ Information, ▪ Distribution channels and logistic system of supplies, ▪ Partnership, alliances, cooperation ▪ Brand
<p style="text-align: center;">Profits formula:</p> <ul style="list-style-type: none"> ▪ Revenue model. How much can be earned; price/volume of the sale of services, e.g. volume seen through the size of the market ▪ Structure of costs, Model of allocation comprises the cost of the essential assets, direct and indirect costs, economy of scale benefits ▪ Margins model: What should be the net value of each transaction to bring the desired profit. ▪ Pace of resources exploitation, i.e. how to efficiently and intensively use owned resources in order to reach the planned volume of services sale. 	<p style="text-align: center;">Key processes and principles, measures and norms by which profitable sale of the value offer is repeatable and scaled</p> <ul style="list-style-type: none"> ▪ Processes: designing and development of services. Provision, production and technology of services, marketing, employment and training, IT. ▪ Principles and measures: ultimate requirements for investments, credit terms and terms for the service provision. ▪ Norms: market opportunities from the investment point of view, approach to the client and to the system of distribution and logistics.

Chart 2. Elements of a business model.

Source: Johnson M.W., Christensen C.M., Kagermann H., How to fundamentally change the firm’s business model, under development, About strategy „Harvard Business Review Poland”, ICAN Institute, Warsaw 2012 p.121.

4. BUSINESS MODEL FOR RAIL TRANSPORT BUSINESSES

Rail transport is a process. The key role in the configuration of business models is played by processes - driving forces which create the company values on the basis of its operations. This is why a modern rail transport business must treat its suppliers, agents and logistic contractors as partners in the creation and assurance of value for the client. Management of the value creation process for the client by the rail transport operator means effective satisfaction of the clients’ needs as well as the needs of other businesses involved in the creation of the values network. The operator’s management of the value creation process may be divided into 4 areas of activity. Chart 3 presents these activity areas on the background of the chain of values in transport.

In transport, the thing that matters is the comprehensive resolution of the client’s problems (e.g. inter-operational, logistic, transactional, documentary, etc.) connected with the flow of a particular product from point A to point B. This resolution must not happen on a one-off basis and not sporadically, but as the long term process and on the basis of relations established on numerous incidents. This means that the value for the client

arises during the resolution of their problems by the business, and not only comes from the benefit of the provided service itself or the after-sales service or extra services, but from the client’s emotional states arising in connection with the business partner’s credibility and trustworthiness, reliability and promptness in the performance of particular contracts.

Nonetheless, following B. Nogalski’s¹⁵ analysis, globalization and consolidation processes, now in progress, require a business to continuously improve its methods of analysing and establishing its competitive advantages on the open market. Rail transport enterprises must search for effective ways to indentify factors which help to gain a competitive advantage. Such factors will highlight the areas that are in need of necessary strategic renewal of business operations via modification, improvement or change of the business model. One of the proposals for the model is presented in chart 4. The model requires identification of growth areas, allocation of resources and investments as well as suitable management of growth processes on the basis of resources, norms and meters. Such

¹⁵ B. Nogalski: Business models as tools for strategic reorientation of businesses, MBA 2/2009 s.12.

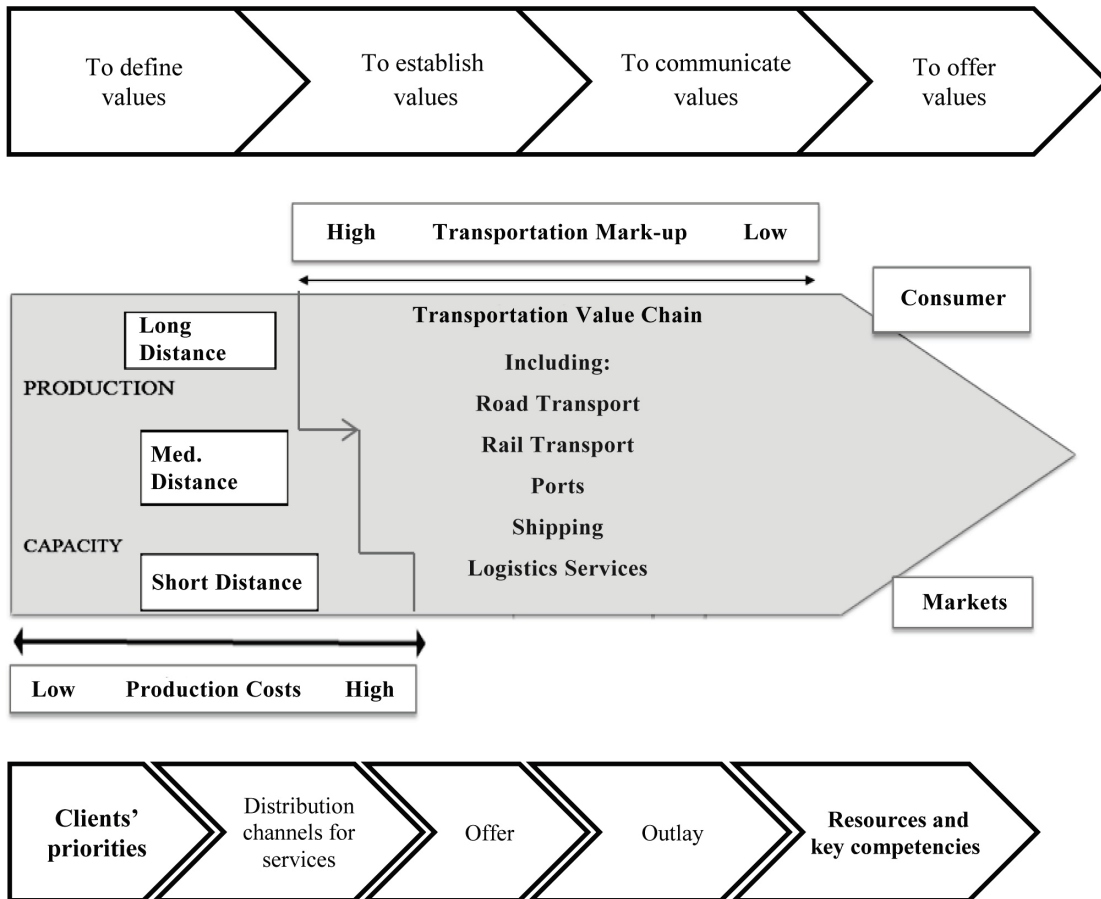


Chart 3. Process of value for client management in the context of chain of values in transport.

Source: Based on M. Antonowicz, Value for client in intermodal transport – key theoretical issues, Internal Trade, Research Institute of Market, Consumption and Prices 2013 No. 3 p. 23 i A.J. Slywotzky, D. Morrisson, B. Andelman: Profit area, PWE Warsaw 2000 p.36.

shift in the functioning mode, which may result from privatisation process, is extremely important for the business and market, nonetheless it is only the beginning.

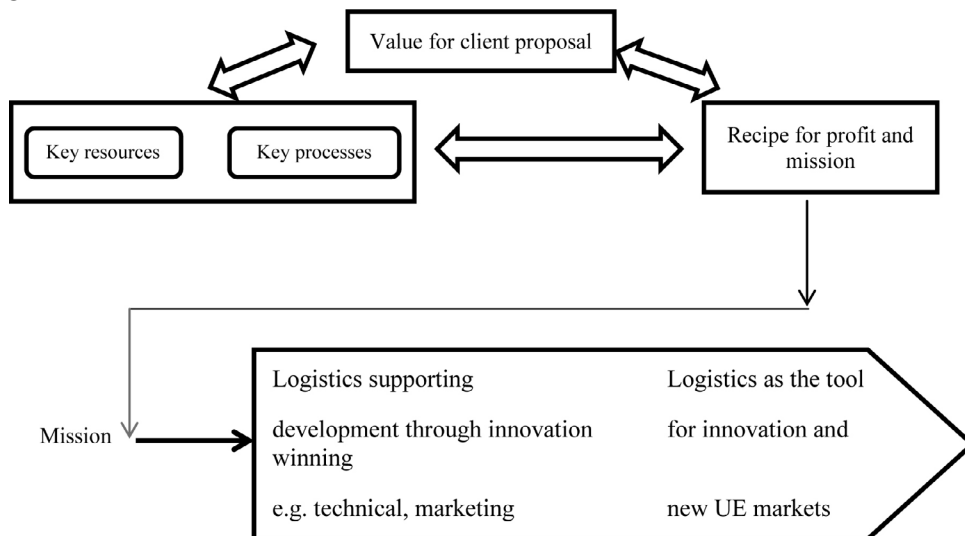


Chart 4. Business model of rail transport businesses.

Source: M. Antonowicz, based on: M. Johnson: Seize the white space – how to enter new market spaces with reinvented business model, Harvard Business Review, Warsaw 2013.

The client will verify the business value and the sense of its existence on the market through their decisions about the choice of the services on offer. And the services are not only transportation; they mean the system of solutions to handle the client’s problems. Therefore, the proposed model must be completed with logistics, the more so that Cargo operations are designed for the European market. Logistics, then, is becoming the element of strategy as the element of mission to win new markets.

In contemporary researchers’¹⁶ opinions, remarkable changes can already be seen. They are, among others: divergence from the model of market capitalism dominated by the value for stockholders towards the capitalism dominated by clients; favouring of intellectual standards, such as ideas or information which both increase the strength of internal links between elements of economic processes. From the process perspective, transport, and especially the chain of delivery whose significant elements are transport processes, is gaining particular importance. Additionally, one can observe ongoing changes in the enterprisers’ awareness who think that in order to meet new

challenges, they need to understand the core of network cooperation. Competition will mainly exist among organized network structures which will actively link businesses with educational establishments and which will be able to assimilate the created and acquired knowledge. The factor which will stimulate the establishment of new business models will be networks. New types of markets are underway, and they are based on electronic networking, a business model developed within electronic business activity – integrated logistic chains, with virtual rail enterprises, mentioned by Paprocki¹⁷. Following Szpringer, making the most of the potential of virtual enterprise (network, flexibility, agility, key capacity) is possible for the businesses which have already collaborated, have positive cooperation record and trust each other. The subject is further expanded by Gattorna¹⁸ who focuses attention on virtual networks of consortiums as well as the businesses of joint services. He supports his reasoning by the example of changes in the south-African freight rail (chart 5). South-African freight rail operates within the framework of cooperating business models at the branch level. Electronic

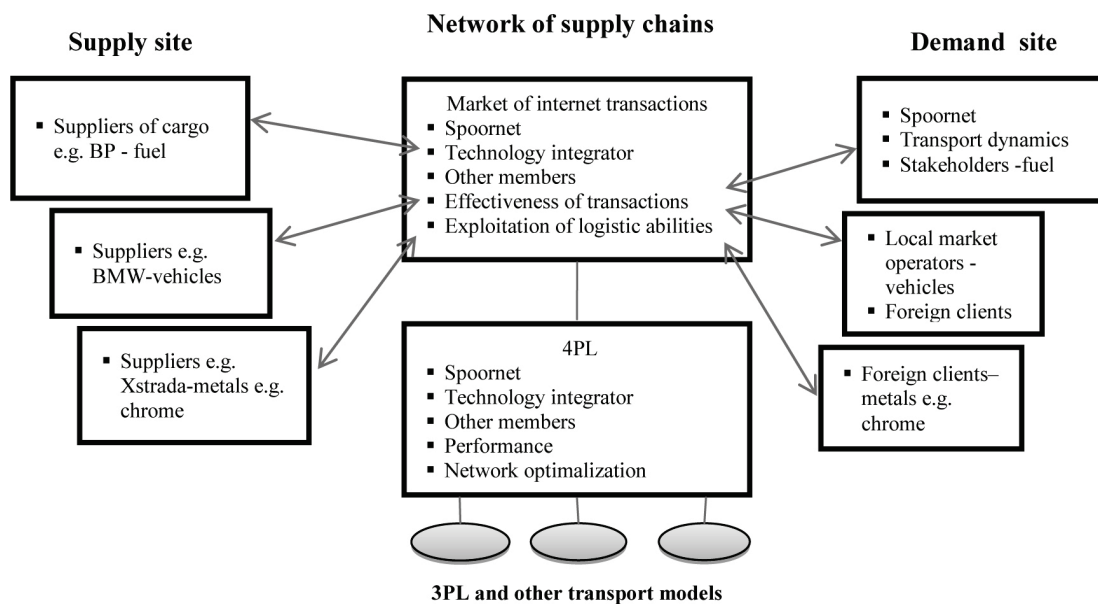


Chart 5. Self-transformation of rail transport businesses.
Source: J. Gattorna, Dynamic supply chain, Eurologistics Poznań 2013 p. 293.

¹⁶ Zob. P. Kapruś: Business model of an enterprise, Annales Universits Mariae Curie – Skłodowska, Lublin – Polonia Vol. XLVII, 1 Section H , 2013 p.68, M. Jabłoński Formation of business models in the value creation process, Difin Warszawa 2013 p. 30, J. Gattorna; Dynamic delivery chains, Eurologistics Poznań 2013 pp. 278-314.

¹⁷ W. Paprocki: Modern Rail Enterprise Cargo, TOR Warsaw 2003 p. 300 et seq.

¹⁸ J. Gattorna, Dynamic delivery chains, Eurologistics Poznań 2013 pp. 297-298.

markets, especially adjusted to the needs of buyers and sellers, are being established. 4 PL¹⁹ style – virtual management business is set up – in order to coordinate work actually performed by other businesses, e.g. 3PL and freight businesses which only offer haulage.

5. SUMMARY

Developing common European transport market, deregulation, competition and search for new markets to conduct operations lead rail enterprises to the necessity for reorientation. And so, they may need to change their business models or they may need to promptly adjust their business models to volatile environment. Finally, they may have to radically redirect operations towards value for the client in the process of their cargo transportation services provision. Innovations-based and network-connected business models will come more and more in use. This paper proposes value-creating business models, which may be one of many ways to conduct business in the rail transport. They highlight the direction of changes and influence strategic decision making process which directly affects the business success.²⁰ European rail enterprises are already heading for that and it is evident in the new business model of the French rail, roughly presented in graph 6. The new model employs the electronic economy method, uses new technologies, new work methods and actions. The methods of work and actions consist in expanding cooperation, gaining and management of information in real time as well as continuous melioration of the business operations through its focus on collaboration and communication with the client and the creation of solutions in the technological-innovative sphere. This means that rail businesses can effectively pursue their strategy and keep looking for value in new segments and new markets.

¹⁹ 4PL Forth Party Logistics – it is the integrator which connects resources, capacity and its own and other entities' technologies to design, create and realize comprehensive solutions for the whole supply chain. The essential value offered by 4PL is the management and integration of the flow of information among external partners of the supply chain and the businesses which hire them.

²⁰ E. Boland, F. Fletcher, Business problems; Solutions. PWN Warsaw 2014 p.110.

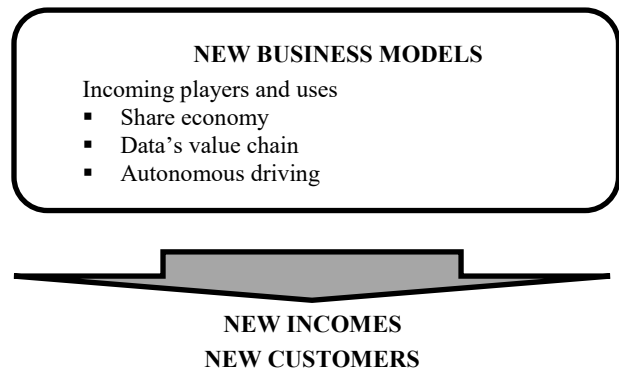


Chart 6. Kind Of Business Models.

Source: Y. Tyrode: New Challenges New Responses, Berlin, January 2016, Papers from DB Symposium

REFERENCES

- [1] Afuah A., Business models. A Strategic Management Approach, McGraw-Hill Irwin, 2004;
- [2] Antonowicz M., Chances for the market, Logistics and Quality No. 6/2013.
- [3] Boland E., Fletcher F., Business problems, Solutions, PWN Warsaw 2014.
- [4] Brzóska J., Innovative business models – practical approach, Study within the project co-financed by EU and European Social Fund.
- [5] Gajos I., Lubicki T., Formation of business models for distribution system operators with reference to key issues of the subject, Energetyka, 2006.
- [6] Gattorna J., Dynamic delivery chains, Eurologistics Poznań 2013;
- [7] Jabłoński M., Formation of business models in the proces of business value creation, Difin Warszawa 2013.
- [8] Johnson M.W., Christensen C.M., Kagermann H., How to fundamentally change the firm's business model, under development, About strategy, „Harvard Business Review Poland”, ICAN Institute, Warsaw 2012.
- [9] Kapruś P., Business model of an enterprise, Annales Universits Mariae Curie – Skłodowska, Lublin – Polonia Vol. XLVII, 1 Sectio H, 2013.
- [10] Hunny, 10New Business Models for this Decade by Reinier Evers (trendwatching.com) and Theo Huibers (Thaesis), Business Strategy, 2012.
- [11] Nogalski B., Business models as tools for strategic reorientation of businesses, MBA 2/2009.
- [12] Nunes P., Breene T., Sztuka budowania modelu biznesowego, Przebuduj firmę zanim nie będzie za późno, Harvard Busines Review Polska , ICAN Institute, Warsaw 2013.
- [13] Obłój K., Effective strategies, PWE, Warsaw 2002.
- [14] Paprocki W., Modern Rail Enterprise Cargo, TOR Warsaw 2003.
- [15] Sływotzky A.J., Morrisson D., Andelman B., Strefa zysku, PWE Warsaw 2000.

- [16] Szpringer W., Wpływ wirtualizacji przedsiębiorstw na model e-biznesu, Oficyna Wydawnicza SGH, Warsaw 2008.
- [17] Taleb N.N. Anti-fragility, About things that thrive on shock, Kurhaus Warsaw 2013.
- [18] Tyrode Y., New Chalanges New Responses, Papers from DB Symposium Berlin, January 2016.

Date submitted: 2015-03-20

Date accepted for publishing: 2016-06-08

Mirosław Antonowicz
Leon Kozminski University, Poland
maaw@kozminski.edu.pl

