

GOCE DELCEV UNIVERSITY OF STIP FACULTY OF TOURISM AND BUSINESS LOGISTICS

PROCEEDINGS

THE 2ND INTERNATIONAL SCIENTIFIC

CHALLENGES OF TOURISM AND BUSINESS LOGISTICS IN THE 21ST CENTURY

Stip, September 13th, 2019 North Macedonia



GOCE DELCEV UNIVERSITY OF STIP FACULTY OF TOURISM AND BUSINESS LOGISTICS



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North Macedonia

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IN THE 21ST CENTURY

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PREFACE

The Faculty of Tourism and Business Logistics in Gevgelia, at the Goce Delcev University of

Stip, hosted the Second International Scientific Conference, "Challenges of Tourism and

Business Logistics in the 21st Century".

The conference was held on 13 September 2019 in Stip, with 35 works of 62 authors from

Serbia, Croatian, Montenegro, Bulgaria, Kosovo and Macedonia that were presented at the

Conference.

The purpose of the Conference is exchange of ideas and experiences of the participants coming

from Macedonia and abroad, and establishment of cooperation for further development of

tourism and business logistics in Macedonia and beyond.

The results of the Conference are visible through publication in a collection of papers, which is

presented to a wider scientific audience and the public. In this way, we want to promote the

Faculty of Tourism and Business Logistics, promote Stip as the most visited settlement in the

eastern part of Macedonia.

Stip,

September, 13th, 2019

Editor Nikola V. Dimitrov, Ph.D. *Dean*

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IMPLEMENTATION OF CONTEMPORARY TRENDS IN LOGISTICS IN THE TRANSPORT COMPANIES

Magdalena Miceva¹; Tanja Angelkova Petkova²; Vladimir Kitanov³

Abstract

The transport and logistics sector is an area that requires huge investments and human capital, as well as labor for development. That is why the challenges that this sector faces are large, complex and often need a lot of reforms, time, education and funds to solve them. Efficient freight transport provides a range of economic benefits that enhance living standards through multiple effects, such as better market access, employment and additional investment. The role that transport have in the economy has contributed in the past years, continuously investing in the development of this activity in order to improve the quality of the services, as well as introducing innovations in order to better respond to the demands of clients that are equally present in the production sector, and among consumers.

Key Words: transport, logistics, economy, benefits.

JEL Classification: L91, N7, R41

Introduction

With the emergence of e-commerce and rising digital literacy among the consumers, the global logistics industry has been changing significantly in the recent years. Factors such as rising disposable incomes, dual-income households, and constant urbanization have encouraged consumers across both developed and emerging economies to follow upcoming logistics trends. This has further resulted in the rapid development of retail channels requiring efficient inventory management and warehousing solutions for helping the customers to make informed purchase decisions.

There is no doubt that the transport and logistics sector is undergoing an important transformation as new technological solutions come into everyday use, driven by market trends. At no point in recent history have we witnessed such a large degree of political, economic, social, technological, environmental and legal changes influencing this segment of the economy. As complexity of modern transport and logistics grows, it is more and more difficult to understand what should be the short vs long term focus and what to invest in. This is why we have made an attempt to identify the key forces transforming the transport and logistics segment.

Based on analysis of trends, as well as evaluation of maturity and the potential impact of emerging transport and logistics solutions, we have concluded that the primary forces transforming transport & logistics are: digitalization, shifts in international trade, software-

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driven process changes, changes in markets, domestic commerce, machine-driven process changes.

Future transportation technologies and trends that will change transportation

Modern transportation is currently experiencing major changes thanks to transformative transportation technologies. Although we've become accustomed to long international flights, jam-packed public transportation and diesel trucks that only get 20 mpg, the future of transportation promises to change all of that and much more — and it's closer than many people realize. Let's take a look at the follow transportation technologies sure to impact the trucking and transportation industries forever.

> Self-driving vehicles

Self-driving vehicles have been defined as "vehicles in which operation occurs without direct driver input to control the steering, acceleration, and braking", according to the National Highway Traffic Safety Administration. In this type of vehicle, the driver is "not expected to constantly monitor the roadway while operating in self-driving mode".

This definition assumes that the vehicle will always have a driver. However, this isn't essential – autonomous technologies are already able to perform all of the required functions for a vehicle to move safely from A to B without anyone on board at all. The widespread adoption of driverless vehicles may seem a distant vision – something we would expect to see in a futuristic movie perhaps. However, the reality is that some of the world's leading automotive and technology companies are already showcasing first prototypes and discussing the advent of "the next automotive revolution". First trials of fully driverless vehicles are already underway. And if you look closely at the vehicles on our roads today, you'll find that many adopt a number of the key technologies required for autonomous driving.

Figure 1: Self-driving vehicles in logistics



Source: www.delivering-tomorrow.com

The hype surrounding autonomous driving clearly suggests that there must be advantages to be gained from investing in driverless vehicles. And these benefits will increase exponentially as more and more people adopt this method of transportation. Imagine a world where our streets and highways are full of driverless trucks and cars moving in perfect sync with each other. Road traffic accidents caused by human error will become a thing of the past. Our daily commute to

work will be stress-free and safe – we'll get into our cars, enjoy a cup of coffee, read the latest news, interact with other passengers, and even catch up on some sleep!

The American public had this dream already some 70 years ago. We'll arrive relaxed and refreshed at our destination and step out of our vehicle and directly in through our office door. We'll leave the car to find an available parking space autonomously.

> Next-Gen GPS Devices

GPS units are nothing new — they've been around for decades. The biggest difference when comparing modern GPS devices to earlier models is the amount of functionality seen in the newer hardware. In the past, GPS devices were very limited. They could calculate total mileage and provide an estimated time of arrival to a final location — but that was about it.

Today's GPS units are much more versatile. Not only do they fulfill the basic functionality of planning a trip, but they can make adjustments for extreme weather, traffic conditions or even your preferred route.

The idea of business has changed with the advancement of technology and businesses nowadays highly rely on the technology due to its multiple advantages. Global Positioning System (GPS) technology or GPS has changed the traditional aspect of logistics businesses and it has emerged as an important factor in the business of transportation and logistics in the recent years. On the other hand, the emergence and development of smart gadgets, mobile apps and other relevant technologies have helped it to reach up to the next level and offer greater logistics mobility solutions to the consumers.

The vast reach of the high-speed Internet and the easy availability of smartphones have helped the GPS Technology to transform the transportation industry in the recent years. GPS tracking app development has redefined the transportation and logistics business. The advanced business-effectual tool can fulfil the requirements of your business and the consumers. For example, now you can easily track the products or packages with the help of advanced technology and you don't have to visit any particular place for this. You can do it from anywhere using your Smartphone and the internet. The same features can also help a logistics business to manage several operations and plan drivers' assignments in an effective way. GPS tracking application development has changed the idea of transportation and logistics business and it can help your business in numerous ways. These features will help you get rid of the lengthy reports and hundreds of phone calls for the management.

Advantages of Vehicle GPS Tracking:

- Improved Fleet Management
- Optimization of the Resources
- Enhance the Performance and Drivers Safety
- Direct Statistics from the Vehicle
- Cost Efficiency
- Reduced Risk of Theft
- Top-Quality Customer Service

You have to keep it in mind that you can get these facilities only if you use apps developed by top mobile app development companies. A top-ranked mobile app developer can offer top-notch mobility solutions with the best app functionality. They have gained years of expertise and it will be the best choice for your business to offer the best mobile experience to your

customers. Customer satisfaction is one of the greatest concerns of any business and a GPS tracking app can easily monitor the transportation activities from time to time. It will save your precious time and you will get 100% customer satisfaction at the same time.

> Transportation Technologies will Impact Public Transportation for Individuals

Typically reserved for big cities and crowded residential areas, public transportation often comes with negative connotations. Not only are these vehicles often overstuffed with passengers, but in some areas, they're hotbeds of crime and suspicious activity. Future public transportation hopes to change all of that thanks to forthcoming and developing transportation technologies. There's only room for one passenger per pod, which immediately reduces the risk of crime or personal injury, and their intuitiveness makes them an excellent example of how easy it is to integrate new transportation technologies into everyday life.

High-Speed Rail Networks

High-speed rail networks are generating tremendous interest all around the globe. The Shinkansen bullet train was officially unveiled in Japan in 1964, and countries have been hoping to introduce their networks ever since. Although there's been little progress, some nations are still pursuing these plans. Officials in the United States are currently considering no less than ten high-speed rail networks in the country alone. The Hyperloop — originally conceived by Elon Musk — is an underground rail that shows speeds up to 240 mph in early tests. Developers hope to achieve three times that speed with the finished version.





Source:www.worldfinance.com/infrastructure-investment/high-speed-rail-the-future-of-freight

At present, high-speed rail is used only as a mode of passenger transport. Yet, the acceleration of logistics and freight transport flows could be compatible with high-speed rail capabilities.

> Gyroscopic Vehicles

Although flying cars might be too complicated for mainstream use any time soon, hovering vehicles — which are propelled with the assistance of monorails and balanced through the innovative use of next-gen gyroscopes — could solve public transportation issues across the globe. While these vehicles look like they're something out of a sci-fi comic book or television show, they could become a reality sooner than expected.

Figure 3: Gyroscopic vehicles the future of urban travel



Source: https://inhabitat.com/gyroscopic-driving-cabins-may-revolutionize-urban-travel/

Sometimes referred to as gyrocars, their size makes them more akin to modern busses or trains. Early conceptualizations show a vehicle that can move along on city streets and even raise its body via built-in stilts to navigate through traffic congestion without stopping.

Next-generation transport and logistics management solutions the transportation companies use

> Supply chain collaboration

Supply chain collaboration is a hot topic today. Companies that use innovative digital solutions to collaborate effectively across the supply chain are seeing huge business advantages:

- Up to 35% cost reductions
- Up to 50% lower carbon footprint
- Increased forecast accuracy (up to 25%)
- Up to a 20% reduction in inventories
- Improved SLAs for delivery accuracy (in some cases up to 98% or above)
- Up to a 10% reduction in administrative workforce

➤ Moving from B2B to B2B2C

B2C (business-to-consumer) and B2B (business-to-business) have currently been kept separate when discussing logistics. With the growth of e-commerce, consumers (in B2C operations) have been used to being continuously informed about the movement of goods, even with the possibility of changing the destination while the product is moving. These experiences – amplified by the influx of new, young talent into businesses – lead to new requirements also in B2B logistics operations. B2B2C is the hottest new business model trend, where transparency, flexibility, sustainability, and efficiency go hand in hand.

Green logistics

Increasingly, logistics companies are integrating sustainable development goals into their business. With an objective to decrease the environmental burden of transportation and supply chains, the industry is turning to green logistics. Advantages of integrating sustainability into the supply chain management approach are:

- Stronger company reputation
- Lowered supply chain costs
- Increased process and product innovation, generating additional revenue streams
- Increased customer loyalty.

Elastic logistics

Elastic logistics is a new concept in the logistics environment. It refers to the ability to expand and shrink logistics capabilities to align with the demands of any given situation within a logistics operation.

Flexible cloud-based solutions for supply chain integration and visibility help logistics companies adjust to market fluctuations. Elastic logistics enable companies to deliver on time while keeping their costs down – despite the rise in demand. This brings many benefits, such as:

- Enhancing customer experience
- Adding real-time supply chain visibility
- Connecting all business processes
- Providing agility and scalability

Digital logistics

There is no elastic logistics without digital logistics. In an industry marred by inefficiency, the now and future is about digital supply networks. The push towards digital logistics (ie. moving beyond paper-based processes and rigid legacy systems) will continue in 2020 and onwards, as the benefits and opportunities are numerous:

- New product development
- More innovation
- New sources of revenue
- A more dynamic, secure and interactive supply chain
- Improved access to real-time data and information
- Better decision-making
- More agile and efficient processes and operations
- Increased control, visibility and collaboration
- Enhanced responsiveness to market conditions (elastic logistics)
- Faster planning and execution capabilities
- Reduced time to market
- Better customer service and higher customer satisfaction.

Conclusion

When identifying key trends in logistics, one truth is abundantly clear: digital is in full swing. As advances in transportation and logistics technologies continue to evolve, innovative supply chain leaders embrace these options and move their operations to the cloud, in open logistics networks. Doing so, they meet and exceed the expectations of their customers and improve their position in the marketplace. Globalization and technological advances have brought rapid change to the transportation and logistics sector in recent years and 2020 promises to be no different. Whether businesses are able to adapt and take advantage of those changes is a top priority for companies in the industry. From changes in the modern consumer's needs and the

skyrocketing growth of ecommerce to digitalization of the supply chain, automation technology, and the overall economic shift to the cloud, we see 2020 as being a pivotal year for transportation and logistics companies.

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