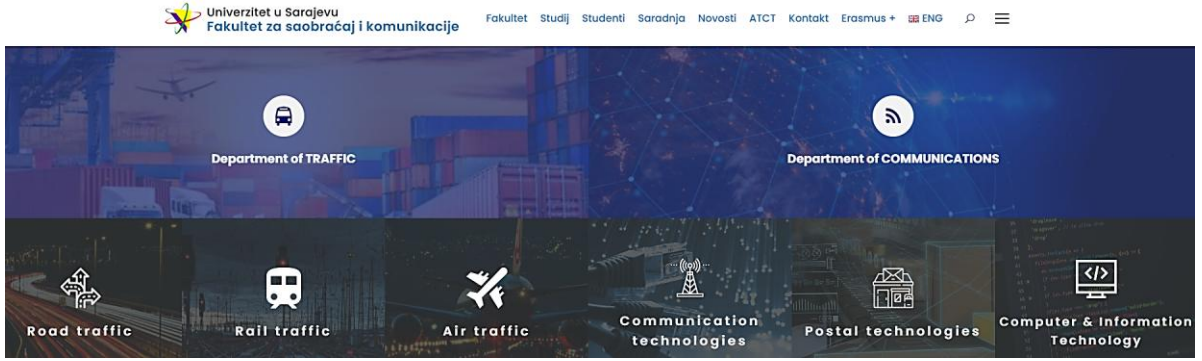
University of Sarajevo: https://www.unsa.ba
Faculty of Traffic and Communications: https://fsk.unsa.ba/



E Logistic

E Logistika

Concept of City Logistics / Koncept gradske logistike

- • Definicija: Upravljanje i optimizacija procesa dostave robe u urbanim sredinama.
- • Cilj: Smanjenje negativnih uticaja transporta – zagađenje, buka, gužve.
- • Uključeni akteri: Javna uprava, logističke kompanije, trgovine, građani.
- • Izazovi: Fragmentacija isporuka, stara infrastruktura, ograničenja pristupa.

- • Definition: Management and optimization of the process of delivery of goods in urban areas.
- • Goal: Reducing the negative impacts of transport – pollution, noise, congestion.
- • Actors involved: Public administration, logistics companies, shops, citizens.
- • Challenges: Fragmentation of deliverables, old infrastructure, access restrictions.

The Future of City Logistics – A Smart System with Zero Emissions / Budućnost gradske logistike - pametni sistem sa nultom emisijom

- • Pametni gradovi: IoT, big data i senzori za upravljanje isporukama.
- • Zero-emission zone (ZEZ): Samo vozila bez emisije.
- • Autonomna vozila: Efikasnije i sigurnije isporuke.
- • Digitalna platforma: Koordinacija u realnom vremenu.

- • Smart cities: IoT, big data, and sensors for delivery management.
- • Zero-emission zone (ZEZ): Zero-emission vehicles only.
- • Self-driving cars: More efficient and safer deliveries.
- • Digital platform: Real-time coordination.

E-commerce / E-trgovina

- • Rast e-trgovine: Više online porudžbina, više isporuka.
- • Logistički pritisak: Više pojedinačnih isporuka u gradu.
- • Rješenja: Mikro-hubovi, locker sistemi, konsolidacija.
- • Promjena geografije isporuka.

- • E-commerce growth: More online orders, more deliveries.
- • Logistical pressure: More individual deliveries in the city.
- • Solutions: Micro-hubs, locker systems, consolidation.
- • Change the geography of deliveries.

City Logistics and Freight Transport / Gradska logistika i teretni transport

- • Veza: Gradska logistika dio šireg sistema transporta robe.
- • Specifičnosti: Kraće relacije, više zaustavljanja.
- • Optimizacija ruta: Softver za efikasnije isporuke.
- • Upravljanje zalihama: JIT povećava broj isporuka.

- • Connection: City logistics is part of a wider system of transport of goods.
- • Specifics: Shorter routes, more stops.
- • Route optimization: Software for more efficient deliveries.
- • Inventory management: JIT increases the number of deliveries.

Electric Vehicles / Električna vozila

- • Prednosti: Nema CO_2 emisije, tiši rad, niži troškovi.
- • Vrste EV: Putnička, komercijalna vozila, bicikli.
- • Podsticaji: Subvencije, porezne olakšice, parking.
- • Ograničenja: Cena, domet, infrastruktura.

- • Advantages: No CO_2 emissions, quieter operation, lower costs.
- • Types of EVs: Passenger, Commercial Vehicles, Bicycles.
- • Incentives: Subsidies, tax breaks, parking.
- • Limitations: Price, range, infrastructure.

Electric Trucks / Električni kamioni

- • Primjena: Urban logistics, “last km” isporuke.
- • Prednosti: Nema emisija, pogodni za noćne isporuke.
- • Proizvođači: Volvo, Mercedes, Tesla, Renault.
- • Izazovi: Težina baterije, domet, cijena.

- • Application: Urban logistics, "last km" deliveries.
- • Advantages: No emissions, suitable for overnight deliveries.
- • Manufacturers: Volvo, Mercedes, Tesla, Renault.
- • Challenges: Battery weight, range, price.

Development of Infrastructure for Charging Electric Vehicles /
Razvoj infrastrukture za punjenje električnih vozila

- • Vrste punionica: Brze (DC), spore (AC), kućne i javne.
- • Pokrivenost: Stambene zone, poslovni centri, logističke baze.
- • Pametno punjenje: Integracija sa smart grid mrežama.
- • Politike: Javna ulaganja, PPP modeli.

- • Charging station types: Fast (DC), slow (AC), domestic and public.
- • Coverage: Residential zones, business centers, logistics bases.
- • Smart Charging: Integration with smart grid networks.
- • Policies: Public investments, PPP models.

Sustainable Urban Distribution / Održiva urbana distribucija

- • Ciljevi: Efikasnost, smanjenje CO_2, bolji život u gradu.
- • Strategije: Konsolidacija, EV, kargo bicikli.
- • Uloga vlasti: Regulacija, urbana planiranja, podsticaji.
- • Integracija održivih principa u logistiku.

- • Goals: Efficiency, CO_2 reduction, better life in the city.
- • Strategies: Consolidation, EV, cargo bikes.
- • Role of government: regulation, urban planning, incentives.
- • Integration of sustainable principles into logistics.

Zaključak/ Conclusion

- • Tehnologija i održivost ključne za budućnost logistike.
- • Saradnja javnog i privatnog sektora je neophodna.
- • Pametna i zelena logistika poboljšava gradski život.

- • Technology and sustainability key to the future of logistics.
- • Cooperation between the public and private sectors is essential.
- • Smart and green logistics improves city life.

University of Sarajevo: https://www.unsa.ba
Faculty of Traffic and Communications: https://fsk.unsa.ba/

*PhD. **Osman Lindov**, Full Professor-Traff. Eng.*
Faculty of Traffic and Communications University of Sarajevo
Zmaja od Bosne 8, 71 000 Sarajevo, B&H
Phone: +387 (33) 565 200 / Mobile: + 387 (61) 161 482

Thank you for your attention

Osman Lindov: osman.lindov@fsk.unsa.ba

Amel Kosovac: amel.kosovac@fsk.unsa.ba

Drago Ezgeta: drago.ezgeta@fsk.unsa.ba

Adnan Omerhodžić: adnan.omerhodzic@fsk.unsa.ba

Belma Memić: belma.memic@fsk.unsa.ba

Elma Avdagic-Golub: elma.avdagic@fsk.unsa.ba

Aida Kalem: aida.kalem@fsk.unsa.ba

Edvin Šimić: edvin.simic@fsk.unsa.ba

Ajdin Džananović: ajdin.dzananovic@fsk.unsa.ba