

Your premium partner for 4th PARTY LOGISTICS SOLUTIONS



Who are 4 PL Central Station?

4PL Central Station has many years of experience in transport and logistics solutions both on a consulting basis and as an outsourcing partner in fourth-party logistics.

To meet the challenges in transport emissions and to help our customers understand reports and emissions from transport and logistics, we have created tools and methods for emission calculations specifically developed for transport and logistics activities.

Unclear and difficult to interpret emission data from supply chain activities prevents companies from setting and following up emission targets, measuring changes in emissions over time and more.

We can help you sum up the business's CO₂ impact and present it in relevant key figures via modern interfaces. Contact us if you want to know more about how we can help you and visit our website <u>https://www.4plcs.com/services/emission-calculation</u>



How to create visibility in the field of transport generated emissions



" Even though EU greenhouse gas emissions decreased continuously over the last decade, CO₂ emissions from heavy-duty vehicles increased every year since 2014 [...] While the efficiency of heavy-duty vehicle transport (vehicles and logistics) has improved, it has not reduced total greenhouse gas emissions. This is because increases in demand for freight transport have outpaced efficiency gains." ¹ (European Environment Agency)

- We are heavily dependent on transportation
- Most activities that take place in the transportation chain is still heavily dependent on fossil fuels

¹. https://www.eea.europa.eu/publications/co2-emissions-of-new-heavy

Emissions from logistics and transportation





- Transport logistics is normally an outsourced activity. Often the contracted carrier doesn't own or operate trucks, trains or container vessels themselves
- Outsourcing happens in several layers

Emissions from transportation A real life example – parcel services





Shipper in Jönköping, SE Consignee in Stockholm, SE

- 30 Kgs
- Travel distance by road (via E4): 320 kilometers
- With a standard 40t truck this box would generate approximately 0.6 Kgs of carbon dioxide (WTW CO2e)



Emissions from transportation A real life example – parcel services







Shipper in Jönköping, SE Consignee in Stockholm, SE

 With a parcel provider the shipment is produced via air freight

- Total travel distance distance is now approximatly 1825 kilometers
- The total emission generated is over 60 kgs 100 times more than via road

More examples – parcel routing

Ostrava to Katowice via Poznan



Malmö to Budapest via Brussels



Göteborg to Stockholm via Leipzig





How to create visibility in transport emissions



- Establish a baseline based on known variables
- Measure emissions continually
- Monitor emission intensity and understand how and why it changes
- Re-calculate the baseline if new information or methodology becomes available
- Be consistent and transparent



4PL Central Station - Transport Emissions Services

We perform standardized emission calculations based on activity data

- Based on shipment statistics
- Custom or standard transportation parameters from up to date sources
- Transparent emission models
- GLEC compatible methodology
- Advanced analysis and modelling with custom business data, categories and verticals
- 4PLCS is a neutral partner and can therefore interact directly with LSPs and carriers







13/12/2024

Result baseline Key measures

Total emissions •

Expressed in WTW CO₂e, carbon dioxide equivalent, is used to show the total emissions from CO₂ and other greenhouse gasses converted into one measure

Tonne-kilometers .

Tonne-kilometers is the basis for many activity based emission calculations and is defined as the weight and distance multiplied.

Emission intensity •

The amount of CO₂e per tonne-kilometer transported



80

WTW CO2 equivalent (CO2e) MT by Modality and period

period
Baseline
Year 1



CO2e WTW YoY (MT)





Emissions from transportation Reducing emissions

As consumers of freight services – there are things we can do. Fuel, mode of transport, distance

- Alternative fuels

 Electricity / EVs
 Bio diesels HVO, FAME, Bioethanol
 Hydrogen
 SAF Sustainable aviation fuel
- Modes , some examples

 AIR ~ 1,2 kgs per tonne kilometer
 ROAD ~ 0,08 kgs per tonne kilometer
 RAIL ~ 0,03 kgs per tonne kilometer
- Distance

Sourcing Consolidation (owned vehicles) *"In 2024 4PL Central Station asked 32 road carriers on the european market if they offered electrified transportation options.*

None of them did as a standard service but a third of the carriers were willing to offer EV transports if clients asked for it."





Emissions from transportation Sustainability in transport procurement



- Sustainability and emissions should be addressed in freight tendering
- Conduct a survey to assess carriers sustainability performance in terms of equipment, fuel choices and strategic work (certifications etc)
- Compare carriers based on calculated emission intensities based on how carriers produce transports
- Directly compare transport alternatives based on CO₂ emission impact and cost by including multiple options in the tender

	LSP						
Question	Carrier 1	Carrier 2	Carrier 3	Carrier 4	Carrier 5	Carrier 6	Carrier 7
Are the environmental policies and objectives widely recognized							
and understood within your company?	Yes						
Are you compliant with environmental management system							
certificates such as ISO 14001?	Yes						
Are you part of any sustainability advocacy organisations (e.g.							
Sustainable Business Council,Sustainable network etc.)	No	Yes	Yes	Yes	Yes	Yes	Yes
Do you measure your carbon footprint?	Yes						
Does your organization have a established environmental policy?	No	Yes	Yes	Yes	Yes	Yes	Yes
Does your organization provide any CO2 emissions reports							
connected to customer activities?	Yes						
Has your organization established environmental goals?	Yes						
s there a climate strategy and/or have you set any climate targets?	Yes						
Please provide examples of how sustainability/efficiency is							
reflected in your day-to-day business practice	Yes	Yes	Yes	Yes	Yes	Yes	No
Can you provide information on your processes and systems used							
for data collection and reporting	No	Yes	No	Yes	Yes	Yes	No

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	Kg CO ₂ e p	er Tonnekilometer
LSP	Carrier 1	0,0570 Kg per TKm
	Carrier 2	0,0580 Kg per TKm
	Carrier 3	0,0658 Kg per TKm
	Carrier 4	0,0727 Kg per TKm
	Carrier 5	0,0785 Kg per TKm
	Carrier 6	0,0785 Kg per TKm
	Carrier 7	0,0790 Kg per TKm

Emission reduction

4PL CENTRAL STATION

- Start measuring emissions today establish your baseline
- Calculate emission intensities to make periods comparable
- Give yourself options to use less emission intense alternatives
 Procuremet: Including sustainability components to your freight tenders
 Operational buying what can we do today?
- Optimize your transportations where you can Focus on cases where you make impact i.e. owned vehicles, selecting mode of transport, alternative fuels
- Set goals and targets and communicate these throughout your organisation (e.g. SBTi)

Thank you for listening!



Visit our website to read more about transport emissions

https://www.4plcs.com/services/emission-calculation

Contact

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