

# How to improve cargo bike design

Ton Dagers



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Combining the demand of logistic operators  
with the offer from the Bicycle Industry

# Background

- Goods transport in urban areas has a major impact on the economy and liveability of cities,
- But receives little attention in comparison to passenger movement (OECD delivering the goods)



# Background

- „The last mile is currently regarded as one of the more expensive, least efficient and most polluting sections of the entire logistics chain”  
(MACHARIS u. MELO 2011: )
- Up to 70 % of cost is in the last mile



# Background



„today up to 35 per cent of this urban goods traffic is generated by CEP (courier, express and parcel) services" (MELO 2011: 200).



# “Time windows”





# Legal issues





# Demand

- Services
- Parcel delivery
- Food delivery
- SME cargo bikes





# HACP standards





# Safety aspects





# The need

Deutsche Post   
concept renders





# Innovation





# Innovation





# Offer

- Two wheelers
- Three wheelers
- Four wheelers
- Electric assistance 250W
- Electric assistance max 500 W



# The offer





# The offer





# The offer





# Design aspects





# Design aspects





# Weight and volume

- 100-400KG max
- Width platform: 60-95
- Length platform : 88- 200
- Europallet: 80\*120 (EPAL)



# Design aspects





# Design limits





# Trailer or cargo bike





# Assisted trailer



Source: vogelvrije fietser



# Courier service: (mini) distribution centres



foto:vaneckgroup.com



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# Courier service and innovation





# Fleet of delivery cargo bikes



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# Competitors





# Car industry





# Conclusions

- Modern Cargo bike design is just beginning
- There is a huge demand from logistic industry
- Bicycle industry is not aware of this demand
- Cargo bike industry is fragmented
- Innovation as in speed pedelecs should be adapted in cargo bikes





# Conclusion: innovation and upscaling is needed





Thank you for your attention!



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