



**hackaTUM 2024**  
Connected Mobility Challenge  
24.11.2024

## What did we optimize for?

$$loss := \sum_{customer} value(customer) \times waiting\_time(customer)$$



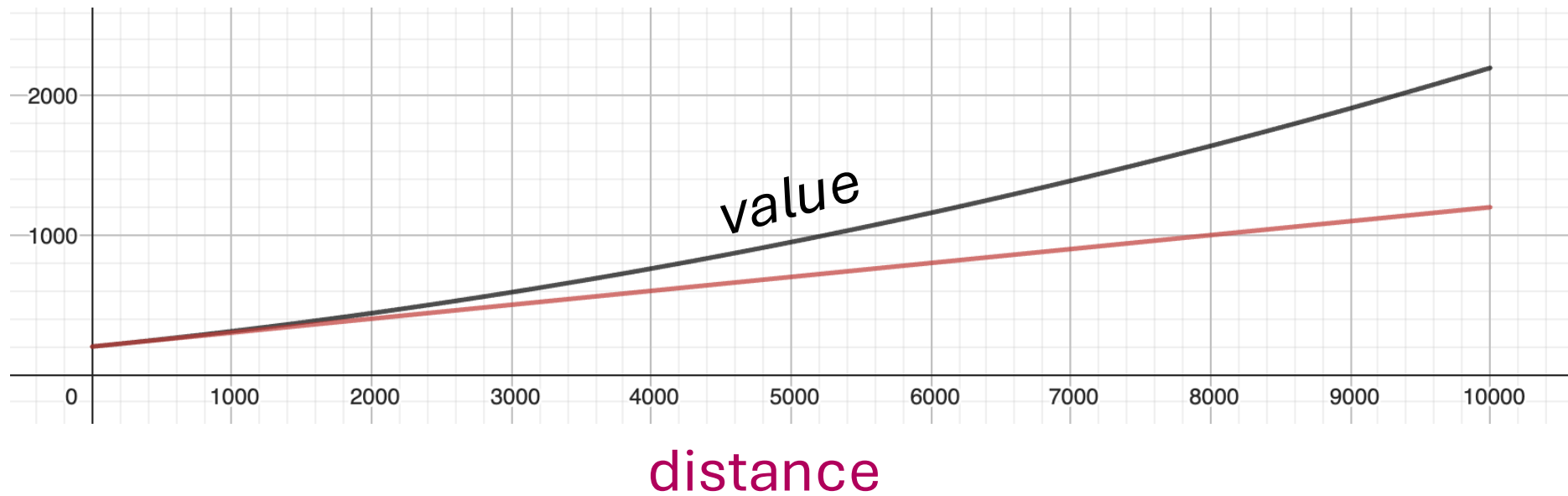
### **Prioritize Profitable Customers**

Reduced wait time based on their trip length.

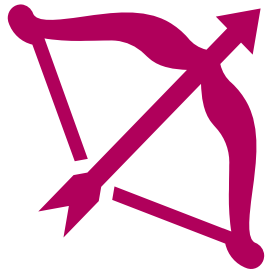


# Our Loss Function

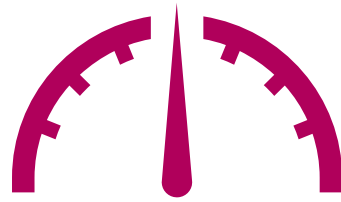
$$\text{loss} := \sum_{\text{customer}} \text{value}(\text{customer}) \times \text{waiting\_time}(\text{customer})$$



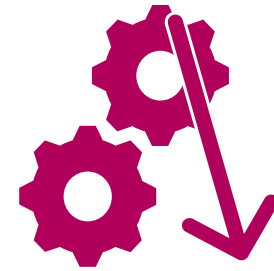
# Our Algorithm



**Single-Shot  
Policy**



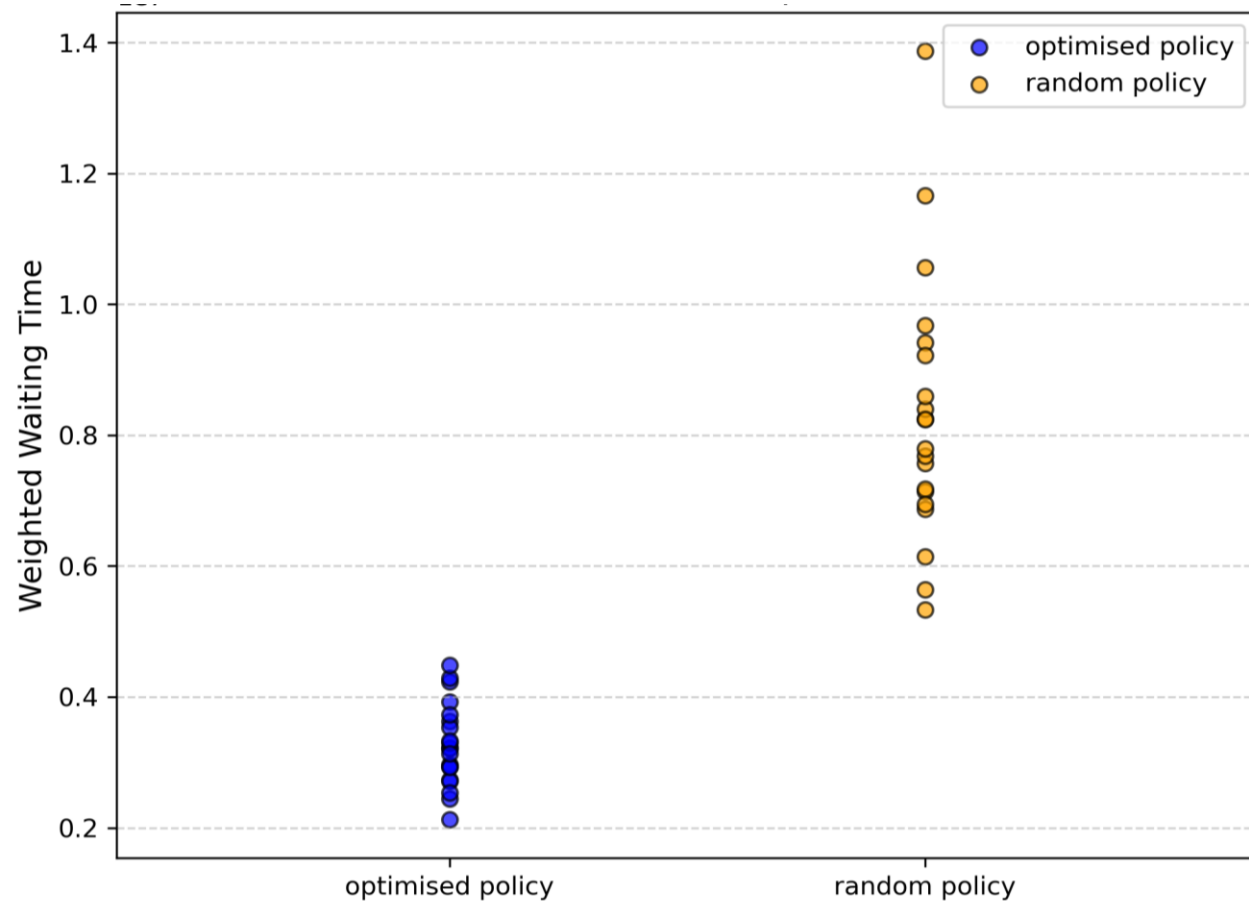
**Assuming  
Static Speeds**



**Optimizing  
Loss Function**



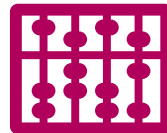
# Performance Comparison



*Speed variance has little impact on performance...*

# Outlook

Visualize impact  
of **varying vehicle**  
**amounts...**



More **Analytics...**

More **Heuristics...**

