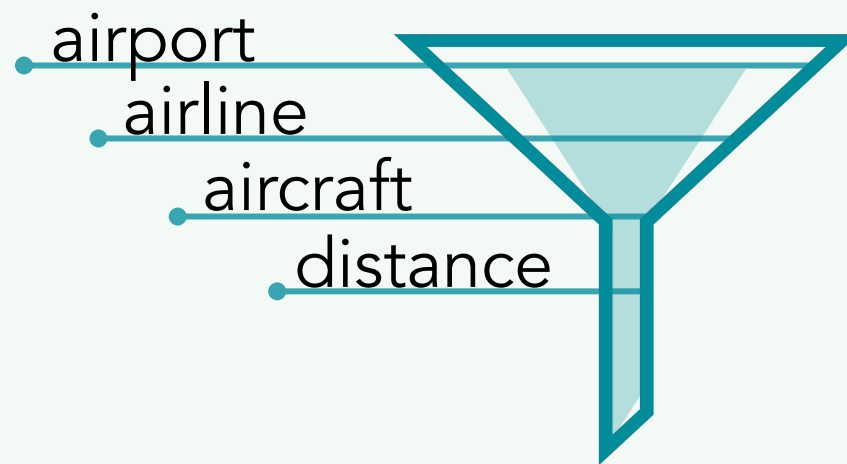


Hampus Alfredsson<sup>1</sup>, Joakim Nyman<sup>1</sup>, John Nilsson<sup>2</sup>, Ingo Staack<sup>3</sup>  
RISE Research Institutes of Sweden<sup>1</sup>, Swedavia AB<sup>2</sup>, Linköping University<sup>3</sup>  
hampus.alfredsson@ri.se

### Air traffic selection...



Filter from database  
(historical flights)



Full aircraft movement  
chains stored (ID)



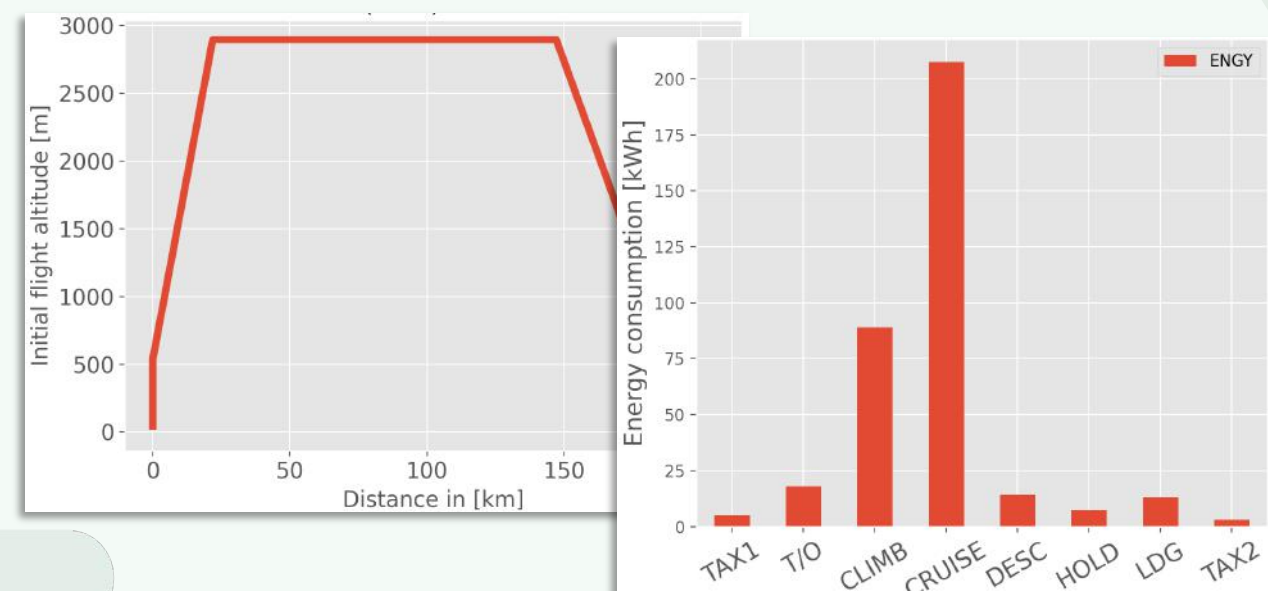
### Aircraft electrification...



Electric aircraft  
model applied



Mission profiles and flight  
simulations

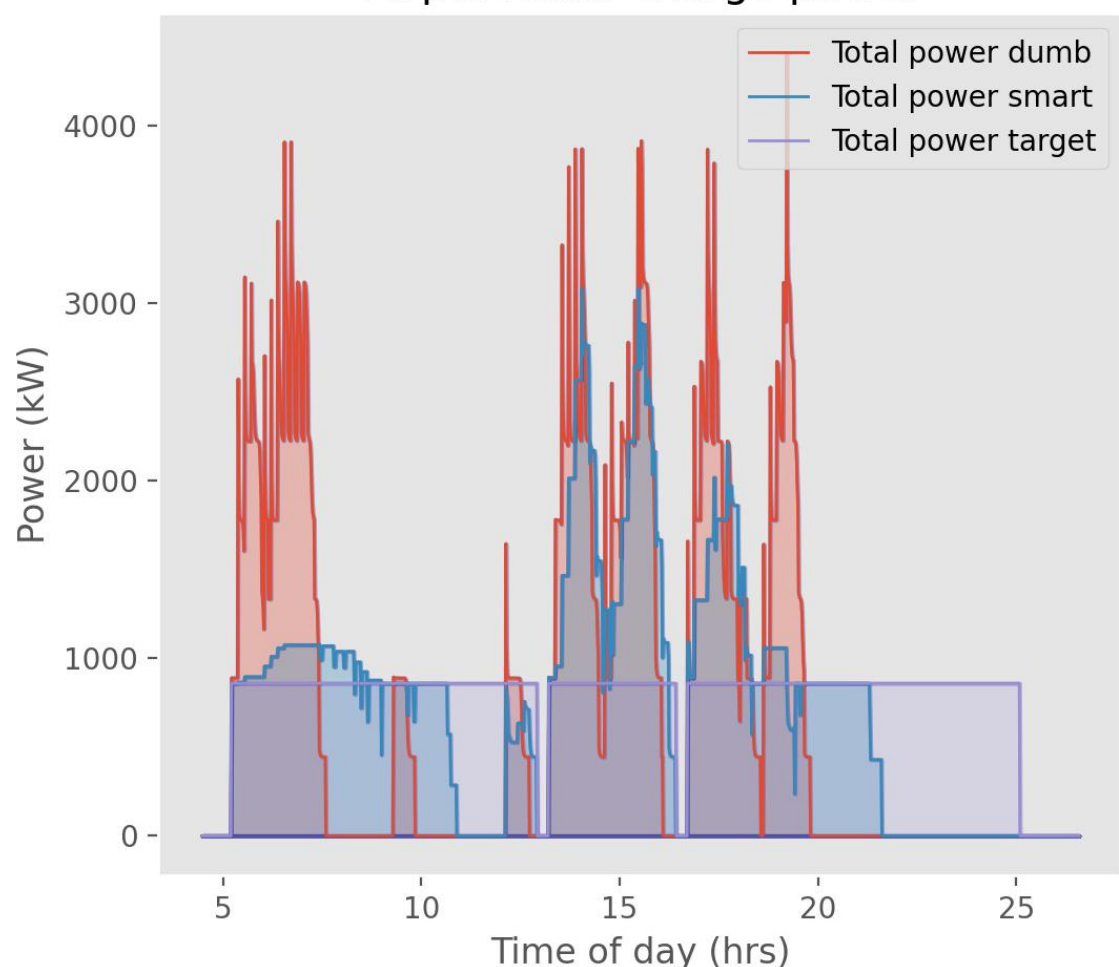


### Charging simulations...



Charging simulated for all aircraft visits at every airport in the analyzed system  
Dumb charging: "independent fast charging directly upon arrival"  
Smart charging: "load balancing and peak-shaving by limiting charger output"

Airport total charge power



Model includes functions addressing...



Charging time > scheduled turnaround



Different flight speeds with electric



Lower passenger capacity with electric