

## Catch the passenger

An analysis of the influence of soft factors on airport- and access/egress mode choice

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## Airport choice

Land-side

- Access/egress time
- Access/egress mode costs

Air-side

- Frequency
- Ticket costs

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## Catchment area

Captivity vs non-Captivity analysis

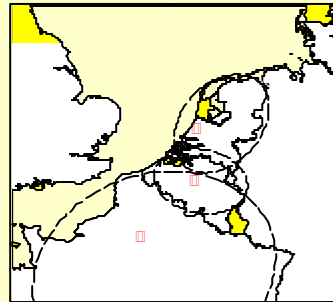
- Diffuse
- Dynamic
- Dimensions

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## Catchment area

Diffuse: Overlapping catchment areas



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## Catchment area

Dynamic: Congestion



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## Catchment area

Diffuse

Dynamic

Dimensions: more than one dimension

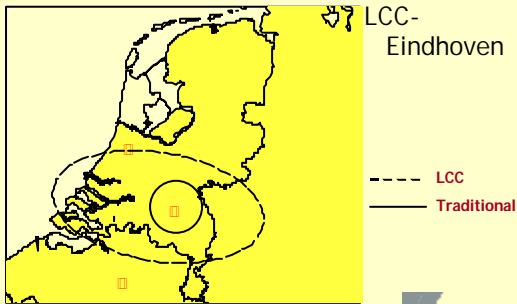
-access/egress time and costs

-LCC

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## Catchmentarea



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## DRAKAR Project

In cooperation with Dutch railways, Schiphol airport and CMGLogica  
Financed by the Dutch strategic research Foundation Connekt

Contribution to the Dutch railways' and Schiphol airport policy

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## Project

Main question:

Do comfort and reliability contribute to an increase of the catchment area?

Sub question:

Does it influence the passenger in access/egress mode choice and airport choice?

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## How to determine?

Difficult to measure

-> Traditional ("hard") factors

eg. Access travel time,  
price, travel purpose

and

-> "soft" factors eg. Comfort, reliability

in an integrated approach

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## How to represent comfort and reliability?

Chosen for 2 concepts:

1. a decentralised check-in and baggage drop point possibility at HST station
2. a pick-up feeder service to HST-station

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## Stated Preference analysis

To measure influence on choice behavior of passengers by these two concepts

With vignettes we observe utility passengers state to derive from hypothetical trip chains

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## Vignet-design : examples

The mark you assign to this vignette is .....	The mark you assign to this vignette is .....
You fly from Brussel to an Intercontinental destination for leisure You travel together To the airport you take your own car	You fly from Paris to an Intercontinental destination for leisure You travel together To the airport you take the Thalys
Your usual travel time is 1,5 hour(s)	Check in and bagage delivery takes place at the trainstation A pick up service brings you to the trainstation Your usual travel time is 5,5 hour(s)
Besides, you depart 30 minutes earlier from home to avoid possible delays on your way to the airport	Besides, you depart 60 minutes earlier from home to avoid possible delays on your way to the airport
The costs to the airport are 70 euros p/p	The costs to the airport are 65 euros p/p

## Respondents

- Approached in HST
- Criteria
- Interactive questionnaire

Total of 1477 respondents to do analysis with



## Method

$$Y = W_{ij} - \bar{W}_i = \alpha_0 + \beta_i X_i + \gamma_j Z_j + \varepsilon_{ij}$$

$$\bar{W}_i = \frac{1}{10} \sum_j W_{ij}$$

$W_j$  = appreciation of vignette

$X_i$  = personal characteristics respondent

$Z_j$  = vignette characteristics vignette

$\varepsilon_{ij}$  = error

$\alpha, \beta, \gamma$  = parameters to estimate



## How do we answer the research questions?

Role of individual concepts in relation to the different characteristics of the transport chain

Estimation of additional passenger volumes for Schiphol airport and Dutch railways due to concepts



## Specific characteristics in the chain

- *Airport choice*
- Access/egress mode choice
- Distance between airport and residence
- Motive
- Destination
- *Reliability in access mode*



## Two concepts and airport choice

If all hard and soft factors are neutralised the traveler is indifferent to airport choice

This means that an airport 'image' does not exist in airport choice



## Two concepts and specific airport

### Amsterdam

Passengers indifferent to check-in facility HST station but positively to pick-up service

### Brussels

Passengers indifferent to service factors

### Paris

Both service factors are positively valued



## Two concepts and unreliability

- Unreliability shows negative impact on trip valuation
- If in an unreliable access mode check-in and pick-up service are introduced validation of the trip deteriorates

-> Two concepts are perceived as a buy-off to congestion uncertainty



## Results unreliability

Compensation (euro/km)	
Train	-0,91
Check-in	0,35
Pick-up	0,31
Unreliability	0,08
Check-in and unreliability	-0,29
Pick-up and unreliability	-0,19



## Indication of behavioral change

### Airport choice

About a couple of thousands pax (p/y) will choose a different airport

### Access/egress mode

A modal shift to the train of about 80 000 pax (p/y) will take place



## Overall conclusion

- Concepts are positively valued
- Although not that much that introduction of concepts change the airport choice
- Use of train is stimulated by introduction of the services
- Pax want to pay-off uncertainty

