

# BYLIVSINDEX ANALYSIS

## Banegårdspladsen, Aarhus C



Picture of Banegårdspladsen

Picture source: Grønvald, H. (2015) *Skal bilerne væk fra Banegårdspladsen?* [Online] Available at: <https://jyllands-posten.dk/aarhus/politik/ECE8253751/skal-bilerne-vaek-fra-banegaardspladsen/> (Accessed 05-06-2019)

# The Train Station Square (Banegårdspladsen), Aarhus C

## Area characteristics:

- Important intersection of different infrastructures
- Placed in close connection to the train station and shopping and near the city hall and bus terminal
- Central position in the city of Aarhus



## Task:

Interviews, countings and observation of cyclist and pedestrians in four different places at Banegårdspladsen/The Train Station Square. The four locations were at the east, center, northwest and southwest as seen on the map. The fieldwork was conducted on Thursday 7 March 2019, from 7-9, 11-13, and 15-17, by 10 Urban Design master students from Aalborg University. A total of 100 interviews were conducted.



Weather: cloudy morning, rain and strong winds in the afternoon.

## Intensity and amount of cyclists/pedestrians:

High



Picture of Banegårdspladsen in 2019

# Observations

## General observations for the square

### Target group

The train station square is used by people of all age groups. There is a majority of young people and grown-ups without kids during rush hour and outside of rush hour families, kids and elders are observed. There is a great diversity in the area where there is space for minorities such as the homeless. In general, most people move through the site alone due to traveling to and from work.

	EAST			CENTER			NORTHWEST			SOUTHWEST		
	MORNING	NOON	AFTERNOON	MORNING	NOON	AFTERNOON	MORNING	NOON	AFTERNOON	MORNING	NOON	AFTERNOON
KIDS					oo	ooo			ooo			o
YOUNG		ooo	ooo	o	oo	o	oo	o	ooo	ooo	ooo	ooo
ADULTS	ooo	ooo	ooo	ooo	o	ooo	oo	o	oo	ooo	ooo	ooo
SENIORS	oo	o	o	oo	ooo	oo		ooo	oo	o	ooo	oo
FAMILIES	oo	o	o		o	o		ooo	o			
SINGLE	ooo	ooo	ooo	ooo	oo	oo	ooo	oo	o	ooo	ooo	ooo
COUPLES	oo	oo	oo	o	o	o	ooo	oo	oo	o	o	oo
GROUPS		oo	ooo		ooo	ooo		oo	ooo			

No dot = Limitid amount    o = Low amount    oo = Middle amount    ooo = High amount

Illustration of the amount of the different target groups during the day.

### Transit space

The area is a major traffic hub due to the train station and bus station being in close connection to the site. People move both across the site and into the train station. Especially pedestrians deviate from the sidewalks and crosswalks to take the most direct route to the stations main entrance. Only few people take up temporary stay, which happens while waiting for the bus, another person, or while looking at one of the few shops or cafes on the square. There are no bicycle lanes on the square, which can be reflected onto the cyclists' behavior. They take up more space on the bus and car lanes since they don't keep to the side of the road.

### Behavior

People's behavior at the train station square is observed as being introvert. They focus on their phone while walking or waiting for a bus or another person, while many people also wear earphones. People move from A to B on this site, which in rush hour becomes even clearer.

As the weather got worse during the day, with heavy rain and wind, people became more introvert trying to seek shelter or speed up their pace to get inside somewhere.



## Location specific observations



Illustration of location of observers

### East

- *Primary and secondary paths*

In the morning, most pedestrians move towards the railway station and most cyclists pass through the square, moving east to west. The routes primarily remain the same during the mid-day and evening.

- *Target group*

In the morning, primary users are adults without kids (mostly workers), followed by young (students). During the mid-day, higher proportion of young (15-25 years) people is observed, and relatively more families and elderly people use the space than in the morning. Additionally, there was increase in number of groups compared to that in the morning. In the evening, almost 1/3rd are adults without children, 1/3rd are young, and remaining 1/3rd are elderly people, families, children, and people in groups.

- *Stay and flow*

In the morning, very few people stay in the square, most people go towards the railway station. While in the mid-day, there is a slight increase in the people staying for using the ATM, waiting during goods delivery, for interacting with the businesses around the square. In the evening, there are very few people who stay to be picked up. Overall, there is comparatively more flow of people than stay.

- *Additional observations*

Due to lack of dedicated bike lanes, there is a clash between cyclists and pedestrians, cyclists and motorists. Some cyclists also rode on the wrong side due to lack of proper crossing for them towards the railway station. Some cyclists have been observed to be riding on the pedestrian sidewalks.

## Center

- *Primary and secondary paths*

In the morning, most people go towards the train station from Ny Banegårdsgade (Bus terminal). During mid-day,  $\frac{1}{2}$  of the people go towards Ryesgade (Walking street) and  $\frac{1}{2}$  of the people go towards the train station. In the evening, amongst the people who exit the train station,  $\frac{1}{2}$  go towards Park Alle and  $\frac{1}{2}$  go towards Ny Banegårdsgade and Ryesgade. Additionally, amongst the people who go towards the station,  $\frac{3}{4}$  come from Ryesgade and  $\frac{1}{4}$  come from Ny Banegårdsgade.

- *Target group*

In the morning, primary users are adults without kids (mostly workers), followed by young (students). During the mid-day, there is an increase in the number of elderly people and families/groups, decrease in adults and young. In the evening, 50% are adults and young; 50% are elderly, families/groups and children.

- *Stay and flow*

The square is treated primarily as transit space. Short term stay in morning, mid-day and evening- while waiting for buses, trains, using shade due to bad weather.

- *Additional observations*

Change in behavior of people based on weather and rush hour. The space is not disabled friendly, many disabled people observed finding trouble in using the space. The space is sometimes used by homeless people.

## Northwest

- *Primary and secondary paths*

Primary path includes the connection between the train station and the bus stops on Park Allé along the sites' northern sidewalk. Secondary path was the movement along the sites' northern sidewalk and across the crosswalk towards Banegårdsgade.

- *Target group*

Morning: Students and workers

Noon: Tourists, elders, mothers with strollers

Afternoon: Tourists, elders, mothers with strollers, students, kindergarten excursion.

Overall only a few cyclists during the day

- *Stay and flow*

People clearly moving from A to B. Stopped while waiting for the bus or at the corner next to Burger King while waiting for someone.

- *Additional observations*

During morning hours more people were running to catch the bus, all wearing earphones. Few drunk people passed by. During noon some elders were taking a walk in the area and during the afternoon many students were entering Burger King. Notice during the course of the day was the transition from people walking alone in the morning to people walking in groups later on the day.

## Southwest

- *Primary and secondary paths*

In the morning the biggest flow goes towards the station while it equals out during noon. During the whole day pedestrians going from the northwest area and to the station crosses the parking lot as a fast shortcut creating a secondary path.

- *Target group*

During the whole day the primary target group is young people and adults walking alone. During the day also a lot of seniors transit the area and more couples are seen. There is almost no kids, families and groups of people at this location.

- *Stay and flow*

There is a short stay in and near the bus shelters while the rest of the area is used primary for transit. The speed of the flow is faster during the morning than noon and afternoon. During noon and afternoon a few people are stopping to look at the shop and café. At the taxi rank drivers are meeting each other taking a short break, talking, getting some air and smoking.

- *Conflicts*

A conflict appears between motorist and bikers because of a missing bike lane which causes the bikes to take up a lot of both the bus lane and car lane.

Because of narrow sidewalks at the bus shelters people sometimes walk into the bus lane.

Pedestrians shortcuts make it difficult for drivers, especially people crossing the road from the northwest to continue south. Here they ignore the crosswalk to make a shortcut closer to the intersection.

## Flow and stay

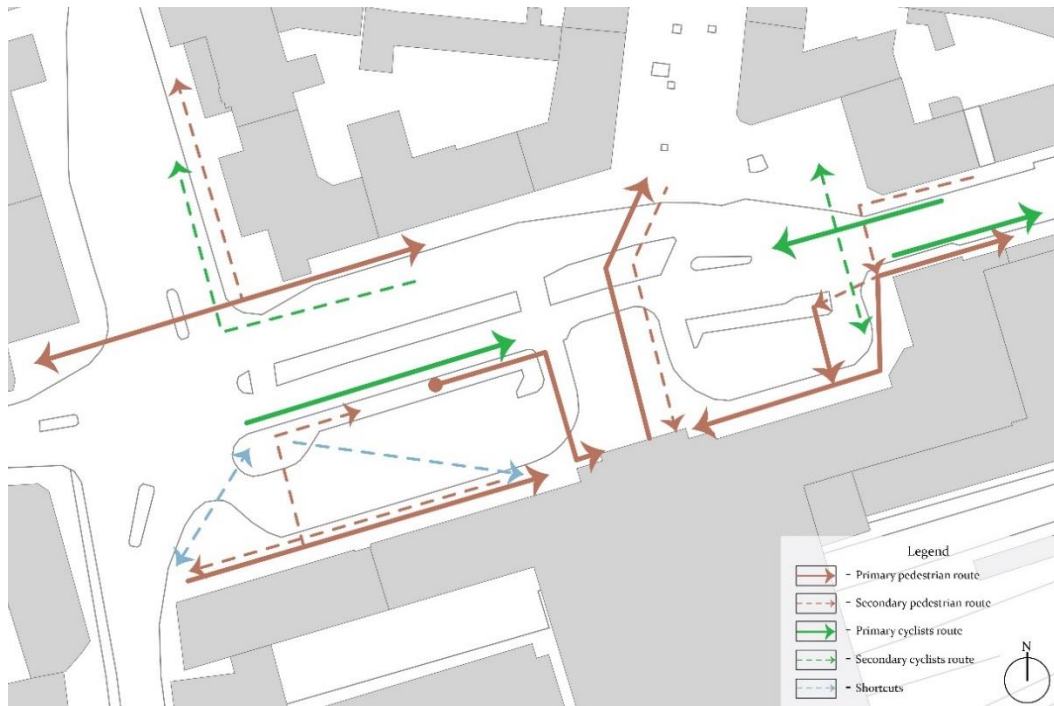


Illustration of the **flow and movement**, in the morning (7-9)



Illustration of the **flow and movement**, in the midday (11-13)



Illustration of the **flow and movement**, in the midday (15-17)



Illustration of the **areas of stay** throughout the day, based on reasons for stay



## Counts

The following illustrations shows the number of people going the different directions on Aarhus Banegårdsplads. The black spots indicate where the observant was placed during this time from 7-9, 11-13 and 15-17.

### Entire day counts



Illustration of pedestrians counts of the entire day



Illustration of cyclist counts of the entire day

## Pedestrian

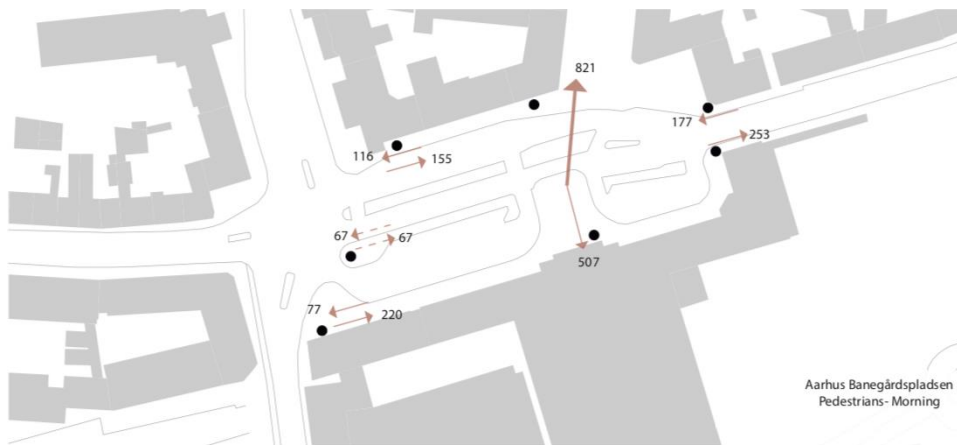


Illustration of pedestrians in the morning

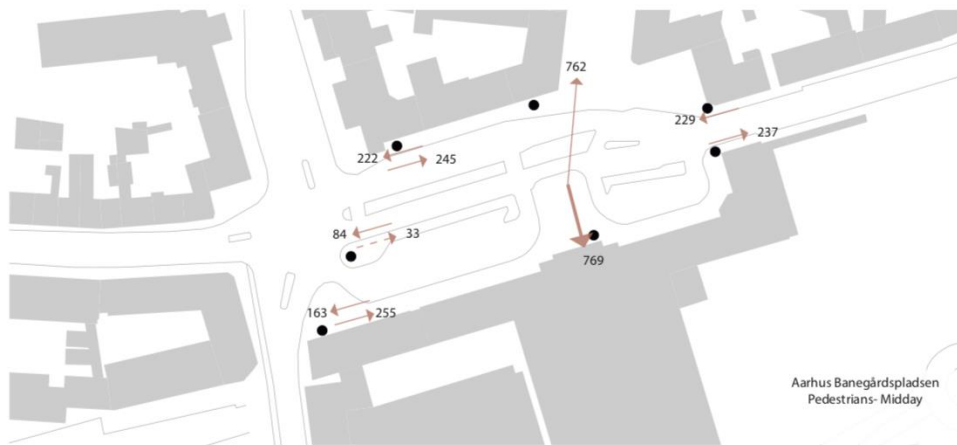


Illustration of pedestrians at midday



Illustration of pedestrians in the evening

## Cyclist



Illustration of cyclist in the morning



Illustration of cyclist at midday



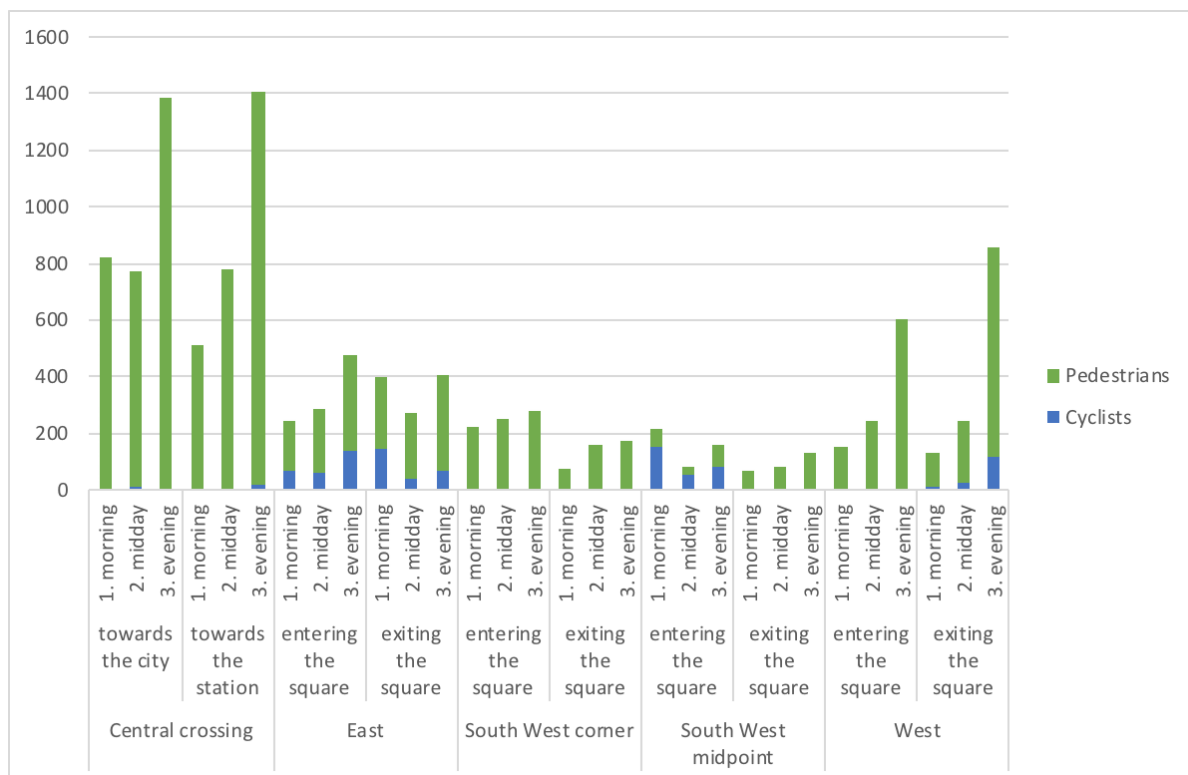
Illustration of cyclist in the evening

## Conclusions

Overall, the analysis of the counts shows a shift in the numbers of pedestrians entering and leaving the square throughout the day. In the morning, the number of people leaving the square is larger than the number who are entering. This can be presumed to be due to people commuting into the city for work. In the evening, this pattern has shifted in the opposite direction. Some locations in the square do not match this trend: the southwestern corner, for example, has an opposite pattern.

The pattern of cyclists matches that of pedestrians, but there are much bigger differences in the numbers from one location to another. The western side of the square receives very low numbers of cyclists, perhaps because they are restricted from taking certain paths. The eastern side of the square has the largest numbers of cyclists overall.

The central crossing of the square, leading from the station entrance to Ryegate, was much busier for pedestrians throughout the day. The eastern side of the square has a lower number of pedestrians throughout the day compared to the centre and western sides.



## Interviews

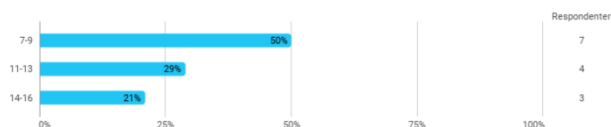
In total we have 100 interviews done throughout the day. Distributed between 13 cyclist and 87 pedestrians. The different in amount comes from how it is more accessible simple to stop pedestrians than bicyclists. Bicyclist was only able to interview when they parked or picked up their bikes from the bike parking spaces. Stopping people for interviews was both for bicyclist and pedestrians easier in the morning - mainly depended on the change in weather where is got both rainy and windy in the afternoon.

### Cyclists

The 13 interviews from cyclist are based on mostly people in the age between 18-24 and 35-50 and 77% are in the area 4-7 days of the week. Mainly the interview was full time employed or students, here by the interviewed where also mainly on their way to school or work. Peoples main reason to choose the bike is explained by it is; quick, economic, healthy, or no access to a car. 70 % of the interviewed bikes all year around. Mainly the bicyclist is happy about the bike paths and connections in the city and have only few requests for change as; having cyclist lanes around the center and Banegårdspladsen. Wishes of more parking spaces for the bikes and keeping free car parking in the outer surroundings of Aarhus center so the commuters can bike from there to the center.

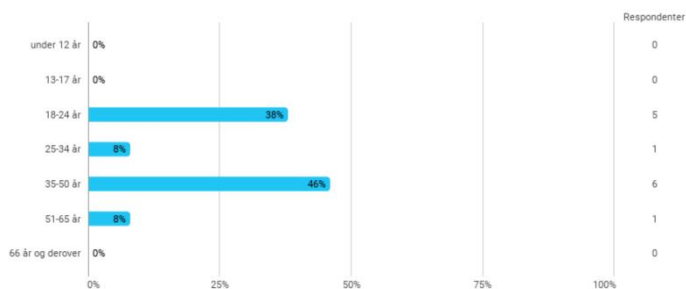
#### Time:

Tid



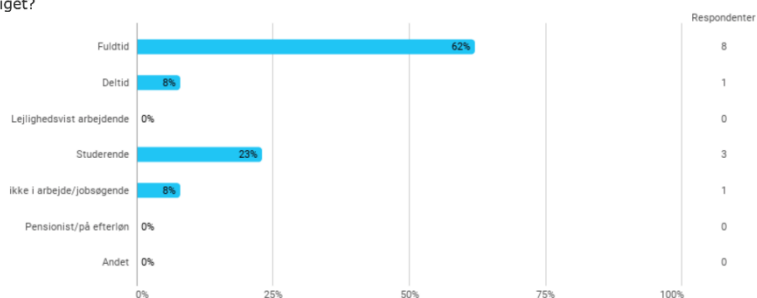
#### Age distribution:

Hvor gammel er du?



#### Employment:

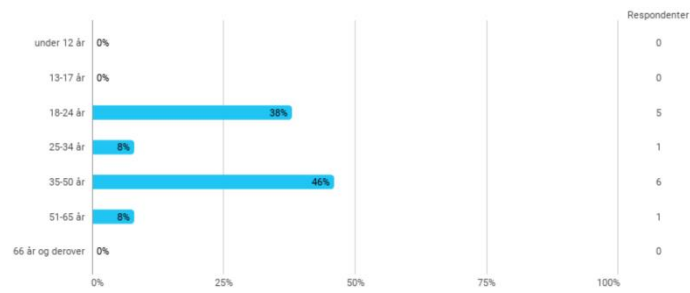
Hvordan er du beskæftiget?





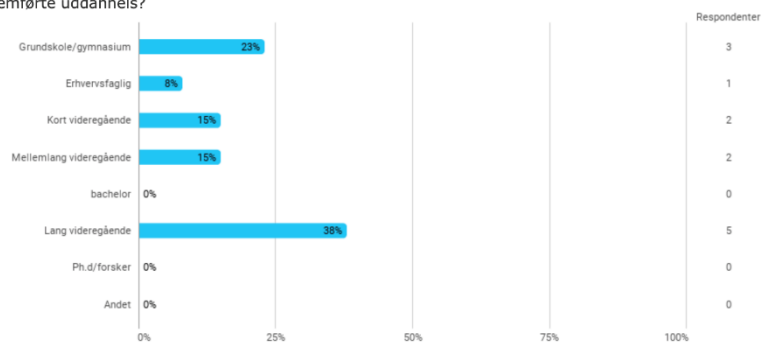
## Gender distribution:

Hvor gammel er du?



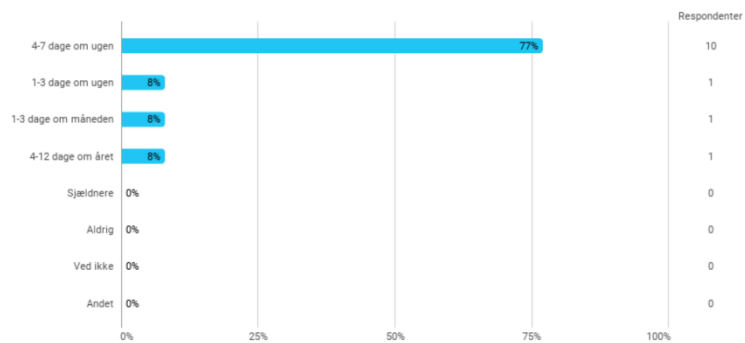
## Education:

Hvad er din sidst gennemførte uddannels?



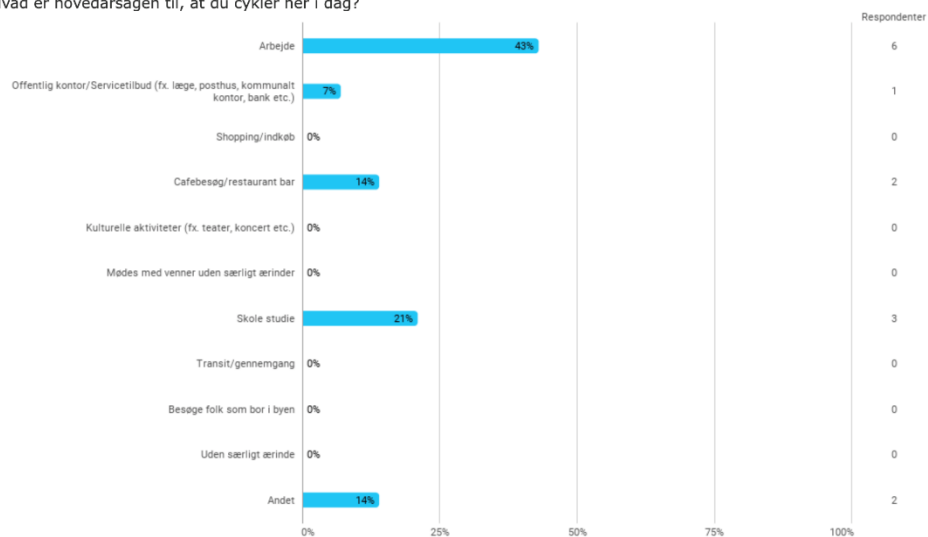
## How often do you find yourself in the area:

Hvor ofte cykler du her?



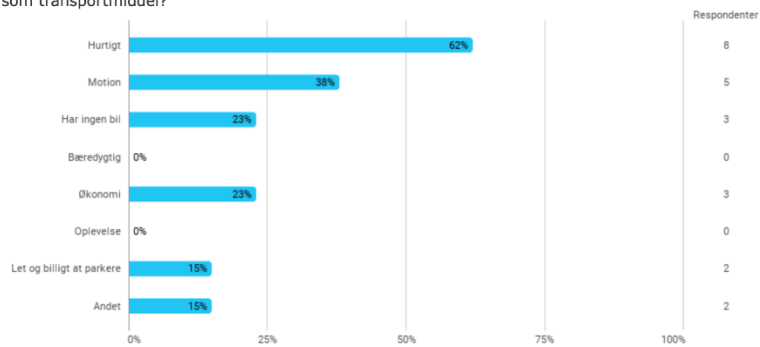
## The reason for being in the location:

Hvad er hovedårsagen til, at du cykler her i dag?



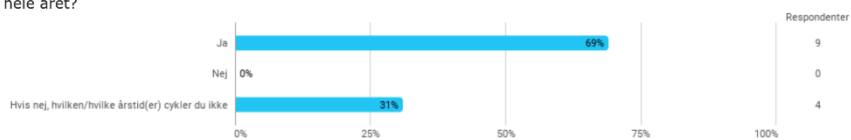
### The reason for choosing the bike as means of transport:

Hvorfor vælger du cykel som transportmiddel?



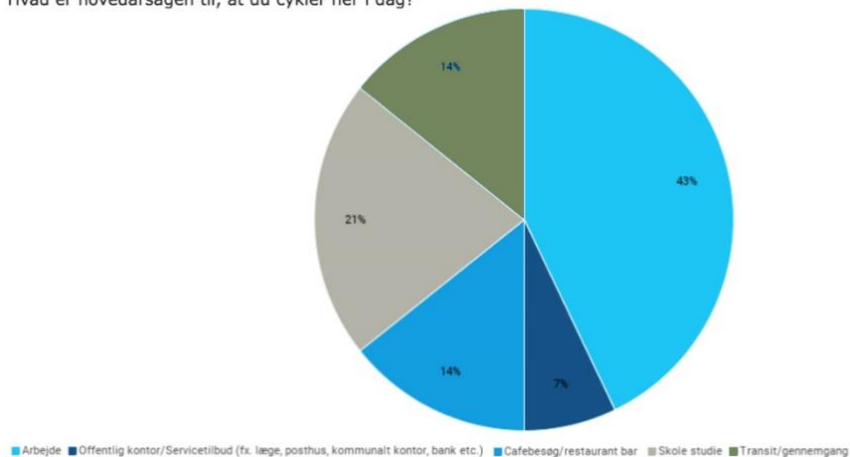
### Are you cycling all year round?:

Cykler du hele året?

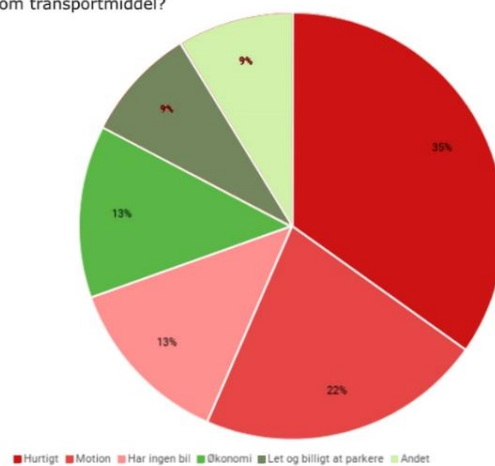


### Selected questions / answers by percent - cyclists:

Hvad er hovedårsagen til, at du cykler her i dag?



Hvorfor vælger du cykel som transportmiddel?



### Themes for the area around the railway station

- *More bicycle parking spaces*
- *Lack of bike path / space*

#### **More bicycle parking spaces**

- *"More parking in the center - Not many dedicated roads to the city center."*
- *"More space at the bike parking areas."*

#### **Lack of bike path/space**

- *"Problematic in city center - Many cars."*
- *"Several parking spaces at the station. Generally, just make sure there are cycle paths connected throughout the city."*
- *"Good, but the distance without a bike path you have to take special care of/be aware of. Not so comfortable."*

### Themes about Aarhus in general

- *Good cycle paths*
- *Park the car and take the bike*

#### **Good cycle paths**

*Many of the cyclists are generally very satisfied with the bicycle facilities in Aarhus and use a bicycle because it is healthy, cheap, easy and quick to get around the city.*

- *"Good with Mejlgade - bike path all the way. Free parking"*
- *"Easy parking + plenty of space when cycling."*
- *"Super good roads and well salted."*
- *"Safe, fast and good accessibility."*
- *"Fast, good parking – Several routes to different parts of Aarhus"*

#### **Park the car and take the bike**

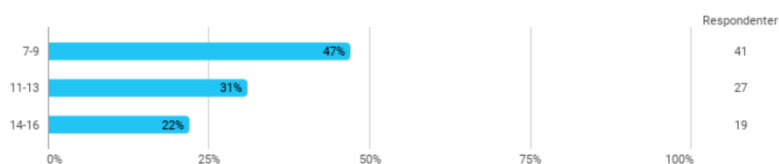
- *"Many parks the car and take the bike. Works well, but will be a problem if the parking spaces outside the cities being removed. Could be good with several bike parking options."*
- *"Keep free parking in Risskov. Many bring their bike by a car. Important to think about safe parking for bicycles when parking the car and taking the bike into the city."*
- *"Easy parking + plenty of space when cycling"*

## Pedestrians

The 87 interviews from pedestrians are based on mostly people in the age between 18-24 and 25-65 and 55 % are in the area 4-7 days of the week. Mainly the interviewed are students or fulltime employees. The main reason for being in the area is a mix between going to work, study or other purpose. The most came by foot or by a combination of walking and going by bus. When they were asked what could make them choose another way of transport than going by car, 38% don't want to change and 31% would with cheaper public transportation. To the question to make them walk or bike more 34% don't want to change their way and 24% always walk and chose the bike as often they can. Mainly the pedestrians are annoyed by the car traffic by the noise and closeness of the sidewalk and the road, and the pedestrian's comments on how the space around Banegårdspladsen seems narrow and crowded with parked bikes, signs, traffic and people. On the opposite site they are very satisfied with the traffic light and the amount of green lights to cross the roads and the connectivity in the city. They wish for more green spaces in the center and for more parking and pathways for the bicyclist in the center.

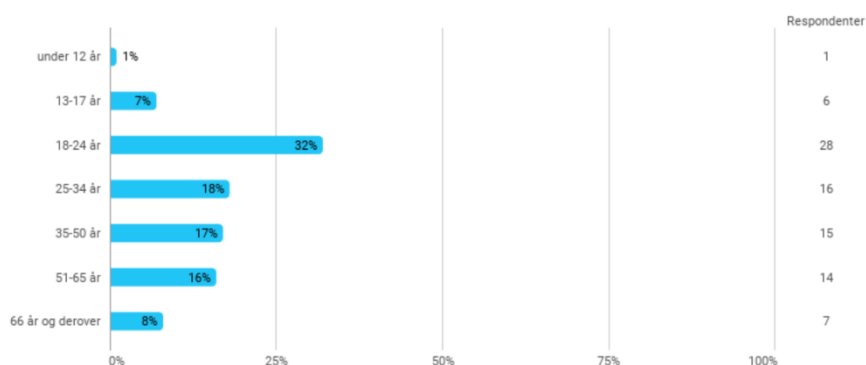
### Time:

Tid



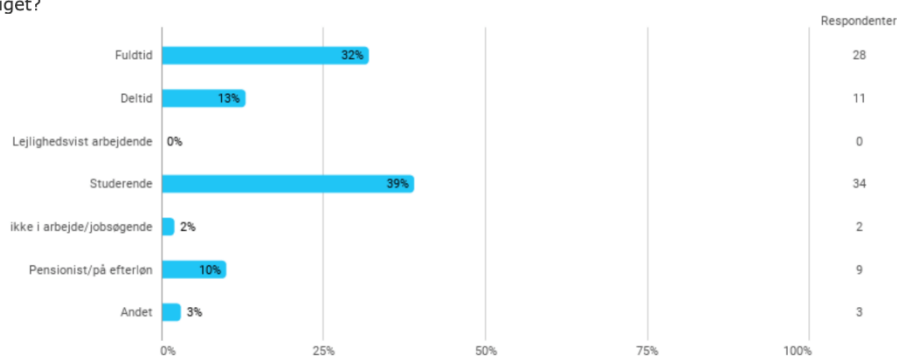
### Age distribution:

Hvor gammel er du?



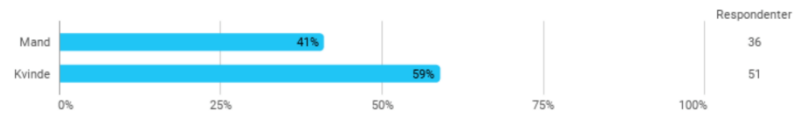
### Employment:

Hvordan er du beskæftiget?



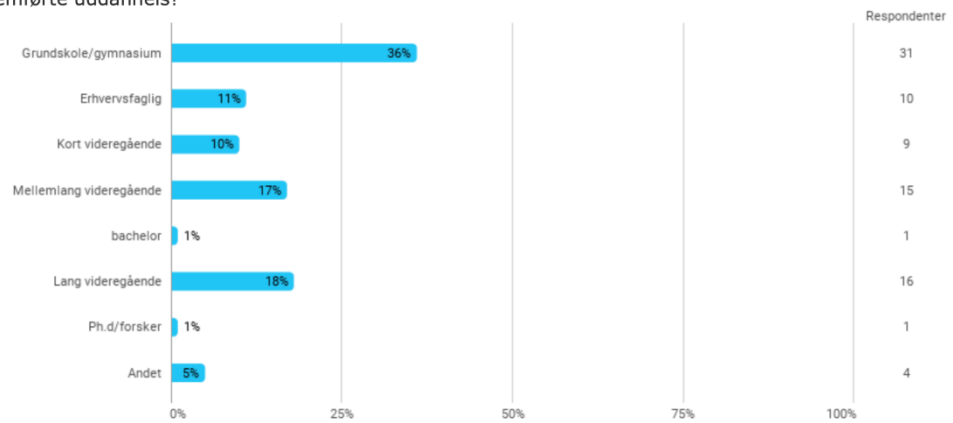
### Gender distribution:

Køn



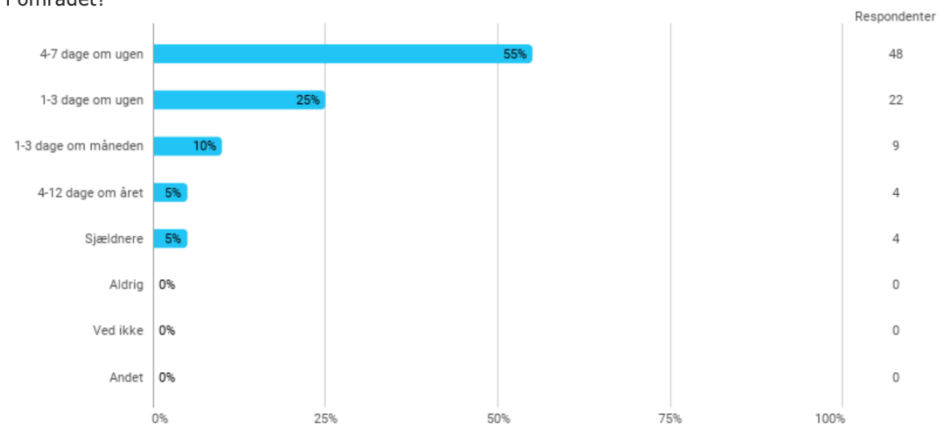
### Education:

Hvad er din sidst gennemførte uddannels?



### How often do you find yourself in the area:

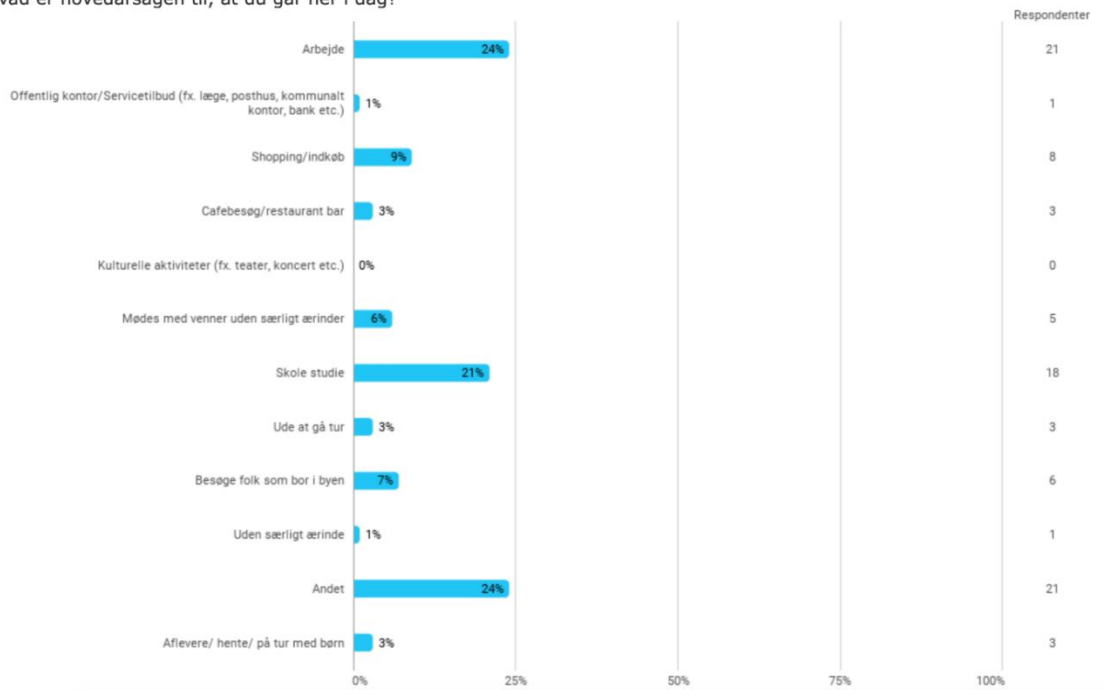
Hvor ofte befinder du dig i området?





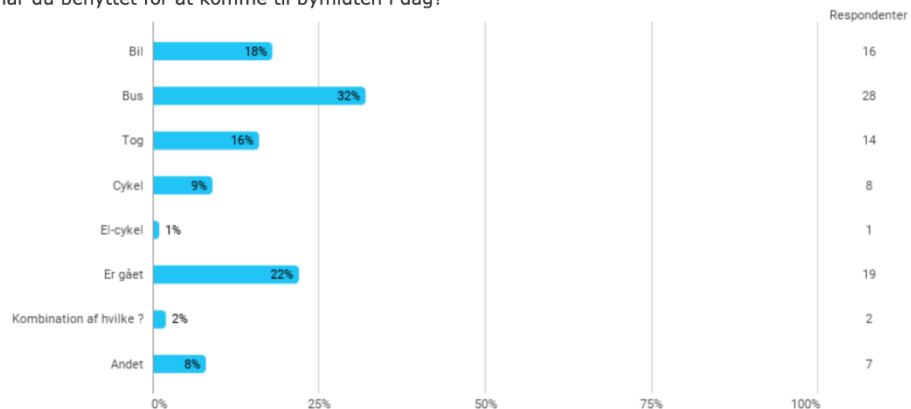
### The reason for being in the location:

Hvad er hovedårsagen til, at du går her i dag?



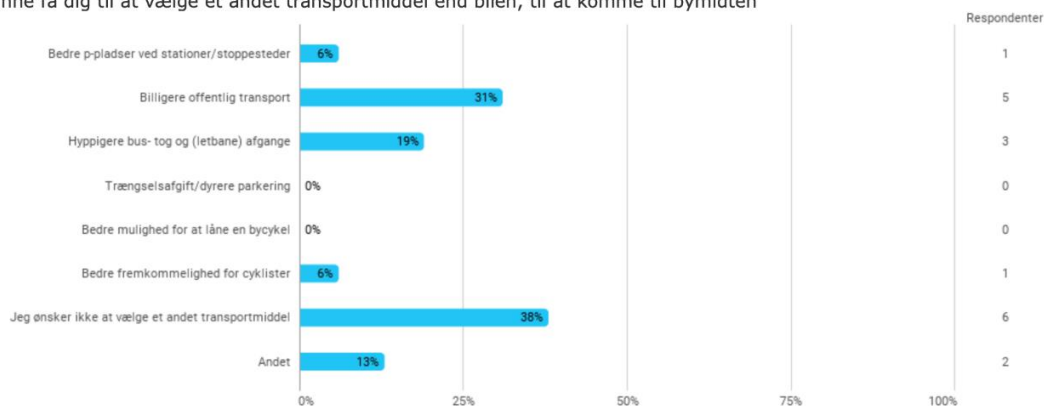
### The choice of transport (People where pedestrians when they were interviewed):

Hvilket transportmiddel har du benyttet for at komme til bymidten i dag?



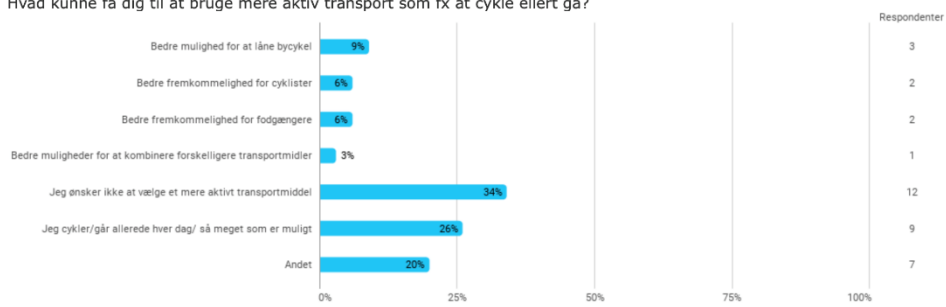
### What could get the respondents to choose other means of transport than the car?:

Hvad kunne få dig til at vælge et andet transportmiddel end bilen, til at komme til bymidten



### What could get the respondents to use more active transport such as cycling or walking?:

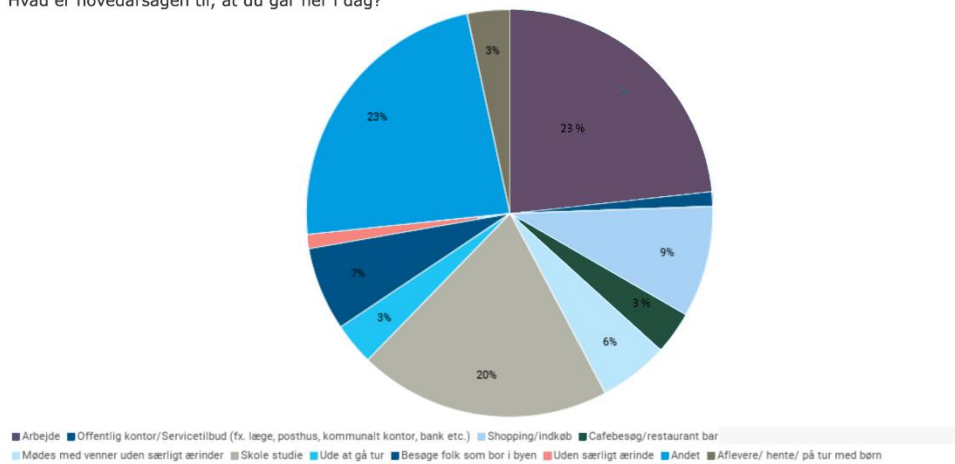
Hvad kunne få dig til at bruge mere aktiv transport som fx at cykle ellert gå?



### Selected Questions / Answers by Percentage - Pedestrians:

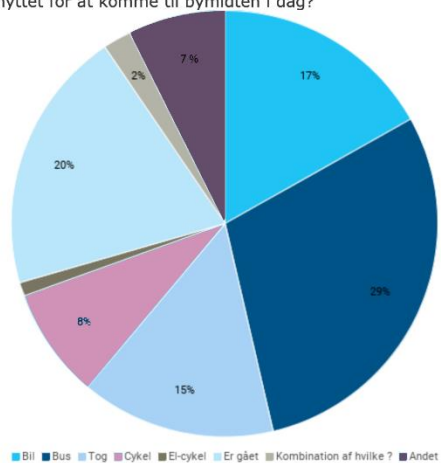
#### The reason for walking here today:

Hvad er hovedårsagen til, at du går her i dag?



#### The way of getting here today:

Hvilket transportmiddel har du benyttet for at komme til bymidten i dag?



### Themes for the area around the Banegårdspladsen

- Troublesome car traffic
- Good time to cross the traffic lights for pedestrians
- Too crowded or too little space

#### **Troublesome car traffic**

Several pedestrians feel bothered by car traffic on the Banegårdspladsen.

- *"Cars are annoying"*
- *"Do not think it's nice to be a pedestrian in the area when the cars get close."*
- *"Walking is dominant, but the cars have a lot of space"*
- *"There is a lot of traffic, but I think everything is fine"*
- *"A bit confusing with all the cars at the train station in the morning"*
- *"Sad place. not bike-friendly, and it feels too unsafe when the bikes and the cars are being so close together."*

#### **Good time to cross the traffic lights for pedestrians**

Several pedestrians note that more time has been set aside for pedestrians to cross the road at the traffic lights in Banegårdspladsen.

- *"We are many, fast green for pedestrians"*
- *"Nice there is good time to cross the pedestrian"*
- *"There is a long time to come to the pedestrian crossings"*
- *"There is plenty of time to cross the pedestrian - green light long"*
- *"There is time to get over the road here at the railway station - in the crossroads"*

#### **Too crowded or little space**

Several of the pedestrians' comment on how the space around Banegårdspladsen seems narrow and crowded with parked bikes, signs, traffic and people

- *"More bike parking spaces - pedestrians are forced out on the road, bikes take over the sidewalk."*
- *"Not easy for bikes, the infrastructure is not good for the bikes."*
- *"Need of bicycle parking - it works well with pavement and pedestrian crossing."*
- *"In need of a continuing bike path on Park Allé, room for pedestrians, and easy access for bike parking."*
- *"Think there is a need of more bike parking spaces."*
- *"As bicyclist the roads are too narrow, too close to the cars. More room at the bike parking spaces and at the paths."*
- *"As a pedestrian it is good, but for bicyclists it doesn't work, there is too much traffic which makes me leave my bike at home, because I am uncomfortable."*
- *"In need of smart solutions for bike parking, there is not enough space."*
- *"Sad space. Not bike friendly, and very unsafe when biking because the cars are very close."*
- *"Make space for the sidewalk, get the signs away, they are messy and takes spaces from the pedestrians. It is very narrow and less space at the bus station."*
- *"Have more focus on where stuff/elements are placed. Think about the disabled as blind people. It is fine for me but think the city should be for everyone."*

### Themes on Aarhus in general:

- Good connections and conditions
- More green and urban spaces in the city center

### **Good connections and conditions**

Between the interviewed there are positive feedback on the connectivity and structure of the city.

- *"Nice and good bike paths. Nice with green wave for bikes. Nice with more green + stay. "*
- *"Nice pedestrian street"*
- *"Good connectivity"*
- *"Not far too different places - People respect the bikes."*
- *"Cars consider the bicyclists and there is a good relation in between cars and bikes compared to Austria."*
- *"It feels safe to be a pedestrian."*
- *"Good connections here in Aarhus"*

### **More green and urban spaces in the city center**

The interviewed have comments and wishes for a greener city center and a city center with more opportunities for stay for kids and visitors.

- *"More green spaces, time-out spaces, enjoy the pulse of the city, it could be good that everything was no just centered around high rises and square meter prices."*
- *"Ok, but more green"*
- *"There should be more green."*  
- *"Art and architecture is missing on Banegårdspladsen."*
- *"More green, more colors, less traffic in the city center."*
- *"Could be nice with more green spaces, especially in the center, so there would be more spaces for children as well and spaces to sit at the pedestrian streets and at Banegårdspladsen."*

## Conclusion on the interviews

When comparing the answers from pedestrians and bicyclist they have similar and different opinions on the city. They agree on how Aarhus needs more parking space for the bikes and the connectivity and accessibility in Aarhus are very good. The bicyclists are in general happy about the pathways and bike lanes in the city and have only small critics where the pedestrians think the bicyclists have a very unsafe travel within the city especially in the city center and therefor they chose to walk instead of bike. This shows the different perspectives from how you come around and experience the city.