

# Friburgo

Mar Alonso



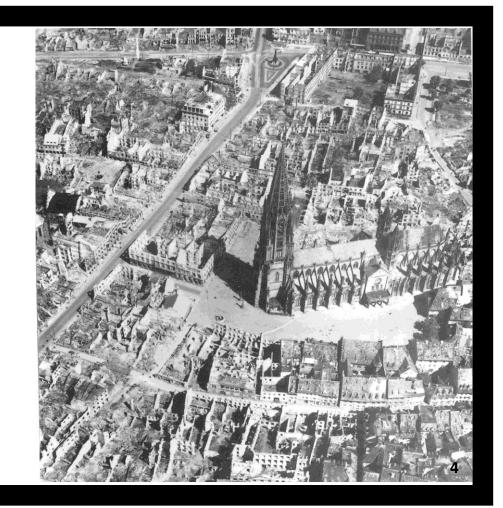
# Index

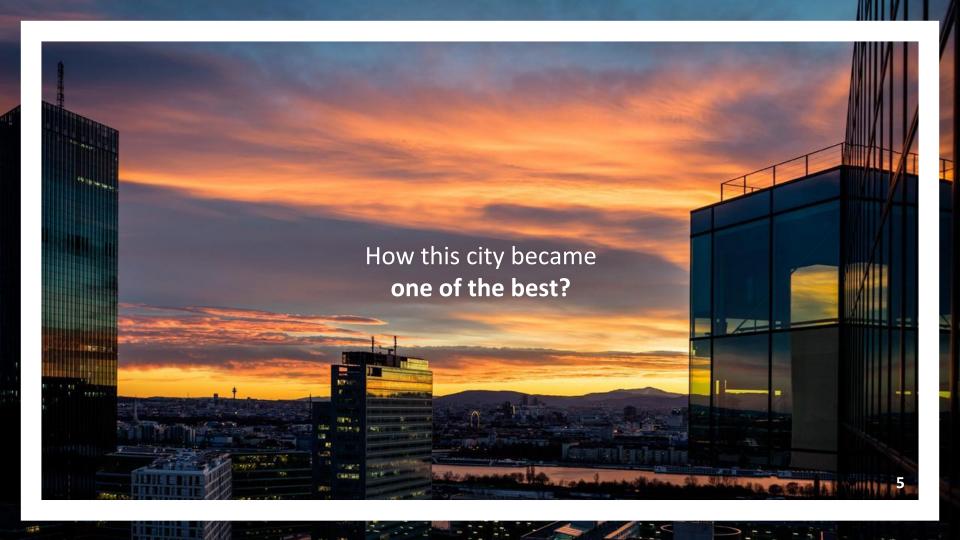
- Location
- History
- Ecologic characteristics
- Its energy sources



# History

- Tigerfish operation
- ■It was bombarded in the year 1944Aproximatly, 2800 dead
- ■It was rebuilt in the years 70 with the purpose of make it the city most ecologic and sustaiable city of the world





### No cars



#### Vans

Only at the morning for leave the merchandise.

#### Tram

It's the most usefull transport to travel to the turistics points, in the center

#### Bus

Is preffered in the exterior places, like the periphery.

Is more used in zones where the tram can't go.

### Cable car

Schauninsland (Black jungle)



### Bicycle

Lot of people ride a bike

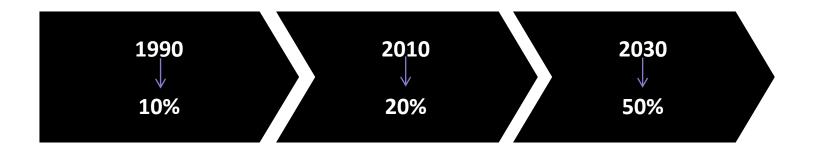
The majority are universitary teenagers

### **Public transport**

Accord to some local companys, each year more than 78 million trips are made in this type of transport



### **Reduction of CO2**



### **Characteristics**



### Low level of noise

The laughest noise that you can hear is the tram, or the students



### **Green energy souces**

The builts consume 65 kw/year.

Less than the rest of German



# Passive buildings



- Constant temperature, air exchange system, no heating
- Save up 90% energy
- Solar panels generate energy and aument the power network
- Sometimes the phones don't work
- The roof has a aislation of 30 cm





# **Green city tower**

- Solar panels in the roof
- Generate 1 MW of energy
- Stored in one battery
- To the rest of the town



# **Energies**



#### Solar

Is the most popular energy 1800 hours of sushine

### **Eolic**

In the Black Jungle are eolic turbines

#### Geotermic

We can use the temperature of Earth's interior for heating

### **Biogas**

People put organic waste in plants and the gas that generates trasforms in electricity

### **Hidroelectric**Clasic energy

Used in a low percentage

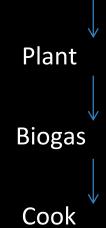
#### **Biomass**

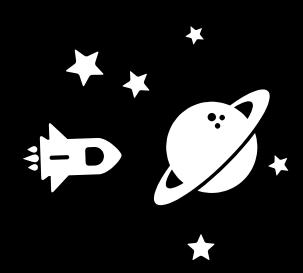
Rests of trunks gerenerate energy or heat

# **Another resources**

Small plants generate hot water

Organic waste (food and excrements)







### **Cities Contaminated**

### Saudi Arabia

Things like breathe are very dangerous due to the particles produced by sand storms, traffic and industrial pollution

### Singapour

This city produces so much products

Now, it hasn't got space and people decide burn it, but it produces CO2.

They are searching solutions for this.

"

The city incinerates about 8.2 tons of garbage each day which creates over 2,500 MKh of energy that can power about 900 homes within the