



# SMART STATIONS IN SMART CITIES

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Does Hydrogen could be a next-generation solution for powering vehicles for last miles trip around stations ?

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Number and session name

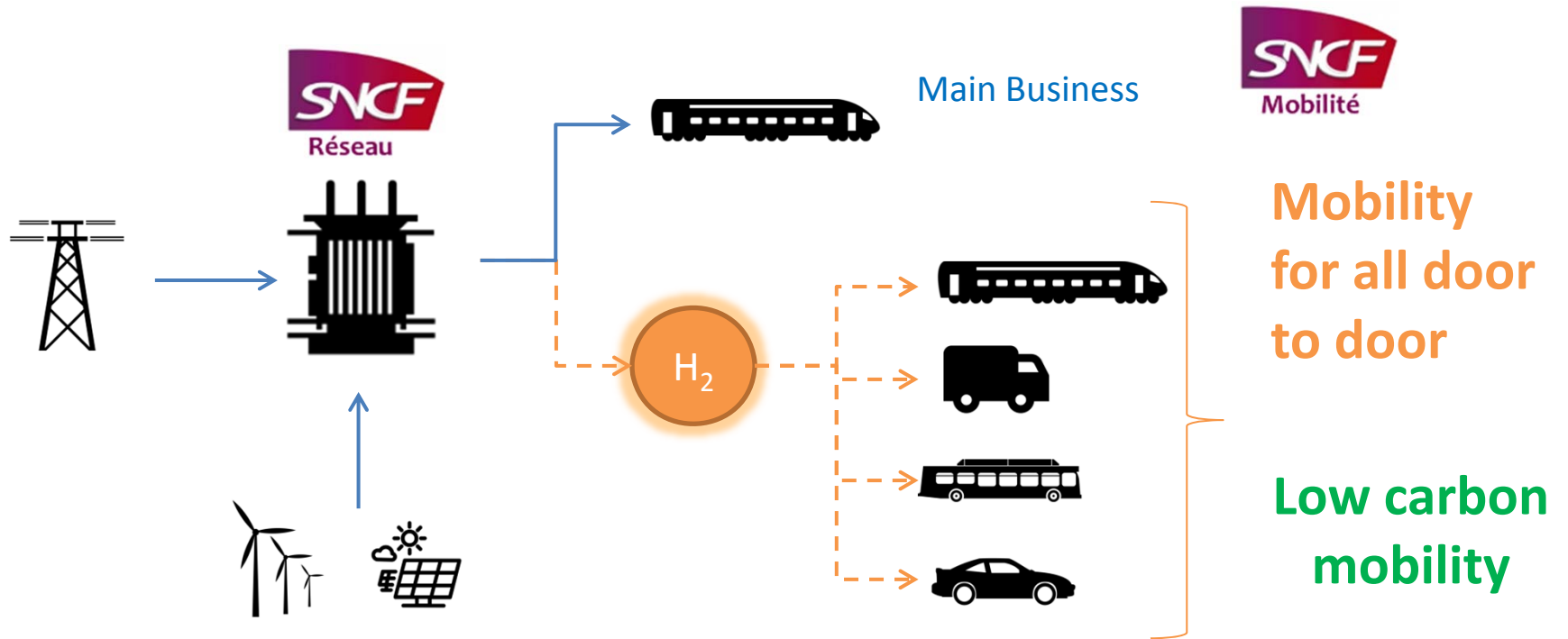
UNDER THE HIGH PATRONAGE OF



ORGANISERS



## ❖ Energy Context and Territorial Mobility



Does Hydrogen could be a next-generation solution for powering vehicles for last miles trip around stations ?

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## Hydrogen in transport/Advantages



1. It is readily available.

3. It is environmentally friendly.



2. It doesn't produce harmful emissions.

5 Range and refuelling time



4 It is fuel efficient.

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## Hydrogen in transport/Advantages



### 1. It is readily available.

hydrogen is a basic earth element and it's very abundant.

### 3. It is environmentally friendly.

Hydrogen is a non-toxic substance which is rare for a fuel source.

### 5 Range and refuelling time

are comparable to hydrocarbon fuelled vehicles

### 2. It doesn't produce harmful emissions.

When hydrogen is burned, it doesn't emit harmful substances.

### 4 It is fuel efficient.

Compared to diesel or gas, hydrogen produces more energy per pound of fuel.

Does Hydrogen could be a next-generation solution for powering vehicles for last miles trip around stations ?

## Hydrogen in transport/Disadvantages

### 1. It is expensive.

	Kg of CO2 for 100 KM travel			USD cost for 100 KM travel
	Future Grid (50% 2014 avg)	Average Grid	Coal Only Grid	
Diesel	121	121	121	\$ 40.17
Electric	75	150	276	\$ 28.12
Hydrogen - natural gas	139	139	139	\$ 72.10
Hydrogen - electrolysis	300	600	1,105	\$ 92.70



### 2 It is difficult to store.

### 3. It is not easy to replace exiting infrastructure.



### 4 It is highly flammable.

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## Hydrogen in transport/Disadvantages



### 1. It is expensive.

While widely available, hydrogen is expensive

### 2 It is difficult to store.

Hydrogen is very hard to move around.

### 3. It is not easy to replace exiting infrastructure.

Gasoline is still being widely used to this day

### 4 It is highly flammable.

Since it is a very powerful source of fuel, hydrogen can be very flammable.

Does Hydrogen could be a next-generation solution for powering vehicles for last miles trip around stations ?

So .....

is there a futur for H2 to develop mobility around stations ?

Is there a way to develop new business for stations operators ?

How ...

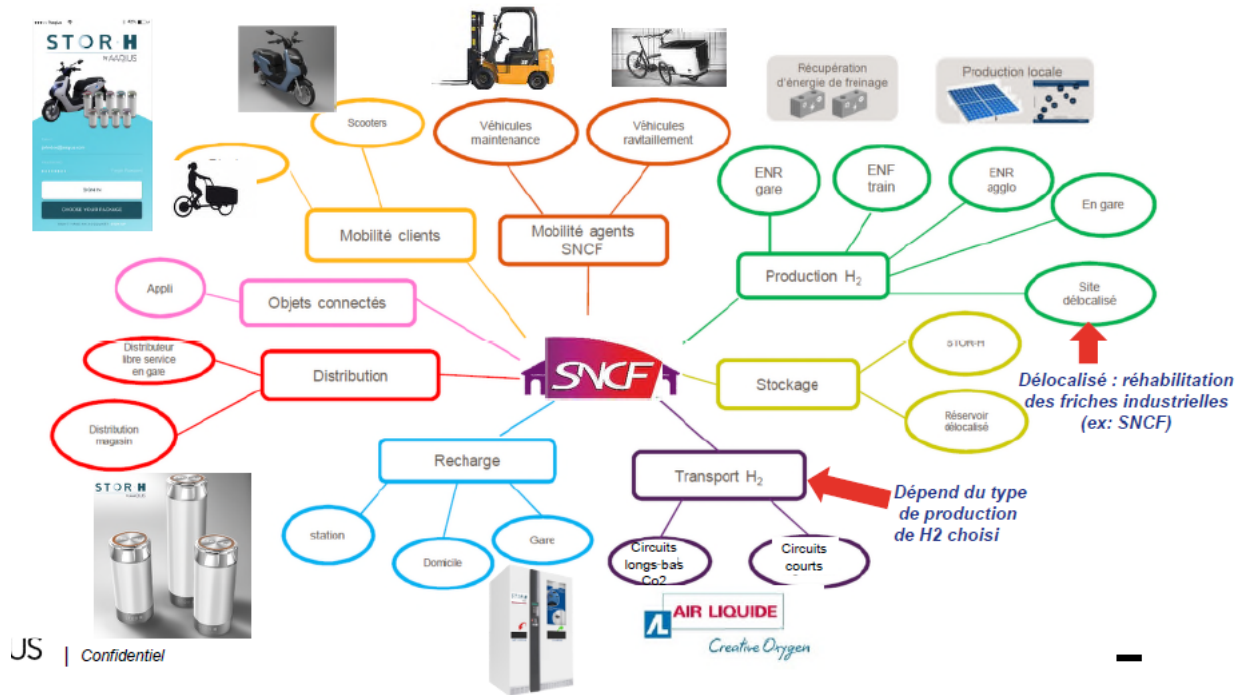
By doing a big technical step for storing H2 and making its uses friendly



Does Hydrogen could be a next-generation solution for powering vehicles for last miles trip around stations ?

And...

By developing a new ecosystem around the station



Does Hydrogen could be a next-generation solution for powering vehicles for last miles trip around stations ?





The first step of this project is to provide a mobility solution with hydrogen scooters



THANK YOU  
GRACIAS

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