Parallel Session 1B – Sustainability

THE SUSTAINABLE CITY PROMOTER

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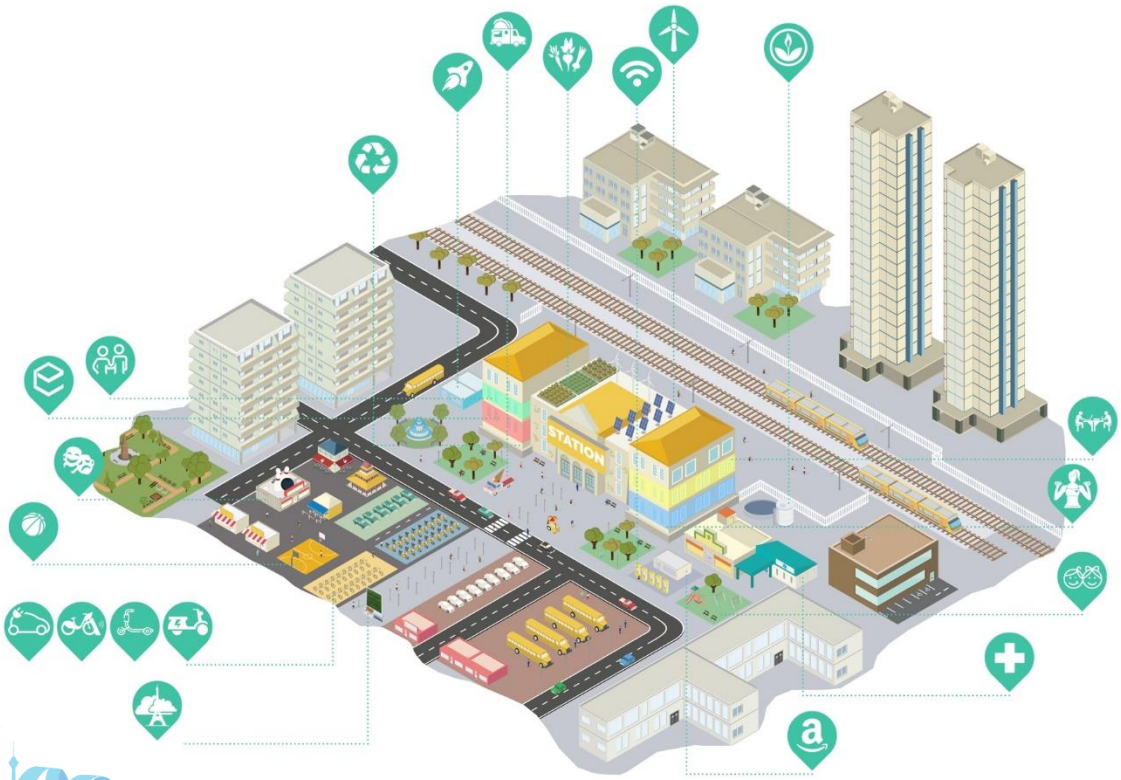
Alice Lunardon

SUSTAINABILITY BOOSTER

FOUNDER

Railway Station, a central point of urban life



As an integral part of the urban landscape, **Station should be at the heart of today's urban development**. It's the vital nerve of the cities of tomorrow with a major role to play in the rise of Smart and Sustainable Cities **by promoting the greenest ways of transport and the more sustainable life-styles**.

So, if Station succeed in **fully serving citizens and users in their daily life** (mobility and basic services needs), it can **increase the number of train and soft-mobility's users**, contributing in this way to the sustainable development of cities and territories.

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Impediments and policy gaps avoiding stations' development as sustainable urban hubs

Impediments:

- Obsolete railway stations' business models only focused on high value rental spaces without managing negative externalities.

How to update it without losing profitability?

Aligning sustainability with business goals

Policy gaps at the European and local level:

- Silo governance and policy gaps in the EU Urban and Transport Agendas.
- EU funding instruments and sectorial organisations relying too much on technology as an enabler, which hampers a holistic approach.
- Urban planning regulations' "economic boundaries".

How to collaborate with EU and local Institutions to fill the gaps?

Setting partnership; contributing to the European policy making

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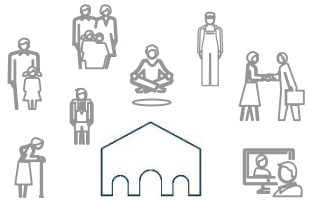
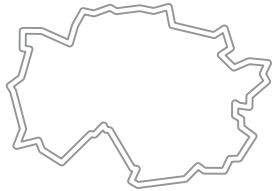
Correctly addressing issues would bring more value, sustainability and ultimately increase profitability

Methodology to make a business case:



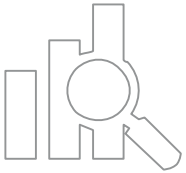
POPULATION POOL ANALYSIS

Understanding the customer needs and consumption trends to provide value-creating activities.



CITY ASSESSMENT

Aligning with the City's sustainable development policies and goals, with SDGs and with UN KPIs.



INDUSTRY ASSESSMENT

Exploring market trends in the transport industry and benchmarking with competitors (air & car industries).

And then calculating the economic value of sustainability actions for the company and for the community in which it operates, and also the S-ROI et E-ROI.

Population pool: analysing the consumption process

A case study in Paris, France: the population is going green!

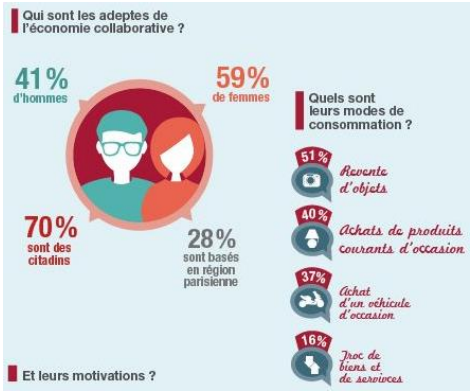
- Commerce: new BUYING habits such as organic food, Km0, bulk products, buy less, second hand…
- Services: new SHARING ECONOMY habits such as co-working, shared storage, peer-to-peer, labour-sharing…
- Mobility: new MOBILITY habits such as biking, free-floating e-mobility…

Business drivers for Stations' development as urban hubs

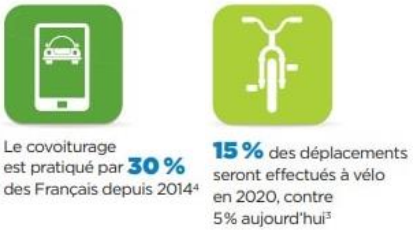
FOOD CONSUMPTION

- *63% of French people privilege buying local products*
- *61% is ready to pay more to support the local economy and job creation* (Le Figaro, 2016)

SHARING ECONOMY

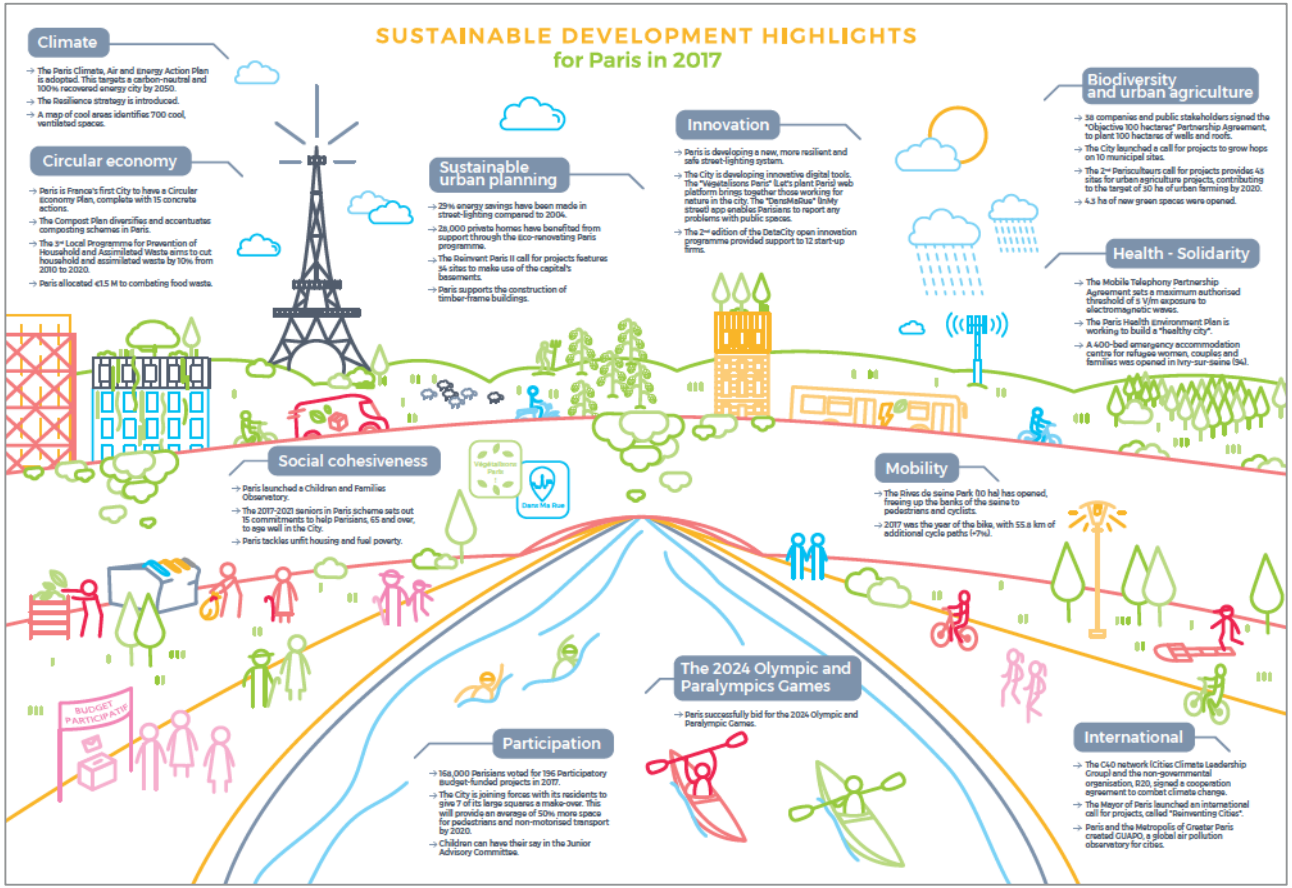


GREEN & SHARING MOBILITY



- *83% of French people are in favor of an increase in the place given to cycling in the city.* (Ifop, 2018)

City assessment



To align with City's strategies

Stations, as infrastructures in Cities, would help them meeting sustainability challenges by adopting a new functioning aligned with city's goals.

The City's goals by 2050

- Make the City of Paris **a zero** greenhouse gas emission area
- Cut energy consumption by **50%*** throughout the city
- **80%*** reduction in Paris' carbon footprint
- Involve all local stakeholders in offsetting their residual emissions to **be carbon-neutral**
- **Become a 100%** recovered energy area, with 20% being generated locally

Ensure **Paris is climate resilient** and deliver a **socially fair transition.**

*compared to 2004 levels

Industry assessment: market trends & competitors

Railways, to become the backbone of EU transport & mobility:

- "Railways will be able to detect, understand and respond to individual and collective European citizens' mobility needs, delivering tailored, on demand, integrated end-to-end mobility solutions"…
- "Rail is the backbone of urban mobility, with intelligent stations at the heart of Smart Cities, being places to work, live, meet and communicate. This requires a clear and solid urban development strategy with a long-term vision to build coherent transport policies." (ERRAC, 2017. Rail 2050 Vision)

To align with EU Agendas & SDGs and launch the policy adaptation process

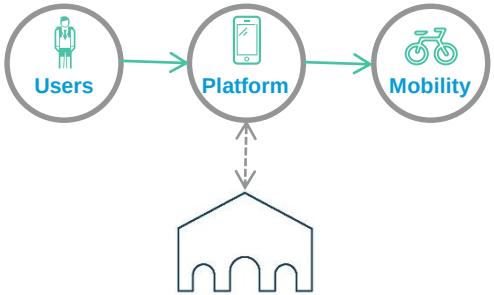
Benchmarking: what the railway can do vs. the car and air transports

- The EU entire transport sector in 2015 has been 358Mtoe accounting for the 33% of the total EU-28 primary energy consumption. Road transport is the most relevant segment (82%) followed by aviation (14,4%). Rail is only 1,7%.
- Main aims for increasing the rail potential is the expected better environmental performance. Researches defined the potential per-seat saving in emissions. (Prussi, 2018. Passenger aviation and high speed rail)

Outcome: a disruptive model for Station

A hub of green mobility

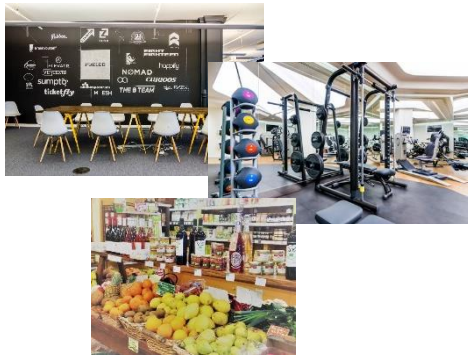
Aggregating energy-efficient, green, and socially inclusive mobility, station can help on addressing city & territory's decarbonisation.



Enabling MaaS and green mobility for the first and last mile

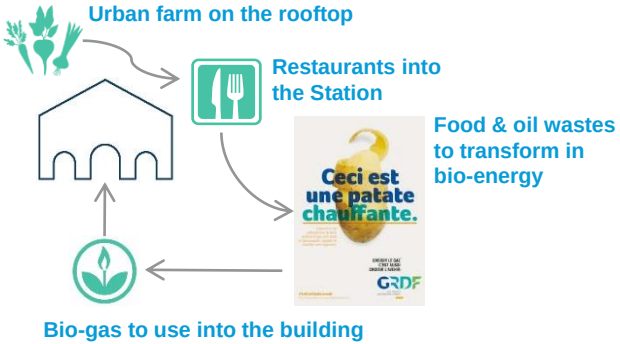
A hub of services

Aggregating multiple services meeting citizens and users' needs and furthering societal objectives, station can help on economic growth, foster social inclusion, and promote urban planning regeneration.



A "circular infrastructure"

A socio-technical system operating as a city's greening engine for the surrounding environment by recycling materials, wastes, energy and water coming for the area in which it operates, and by adopting a circular-economy functioning.



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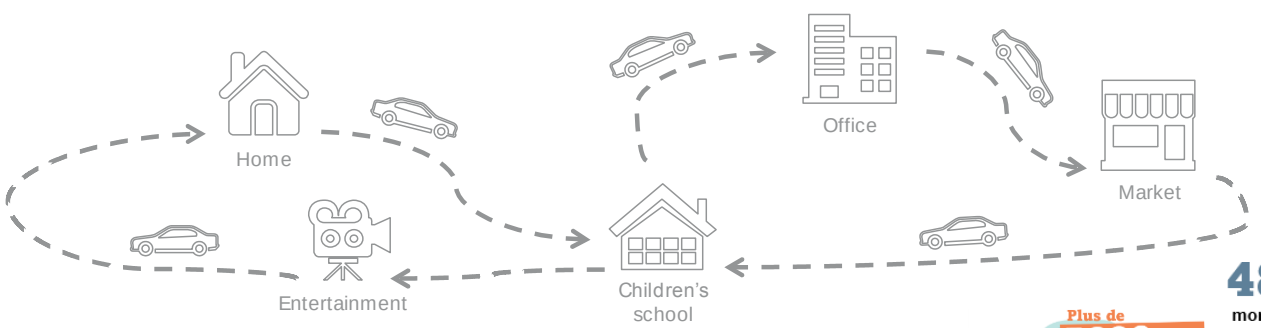
Current scenario: car-based

Source ADEME



48 000
morts par an
liés à la pollution
de l'air aux particules
en France

57% Oxydes d'azote (NO_x)

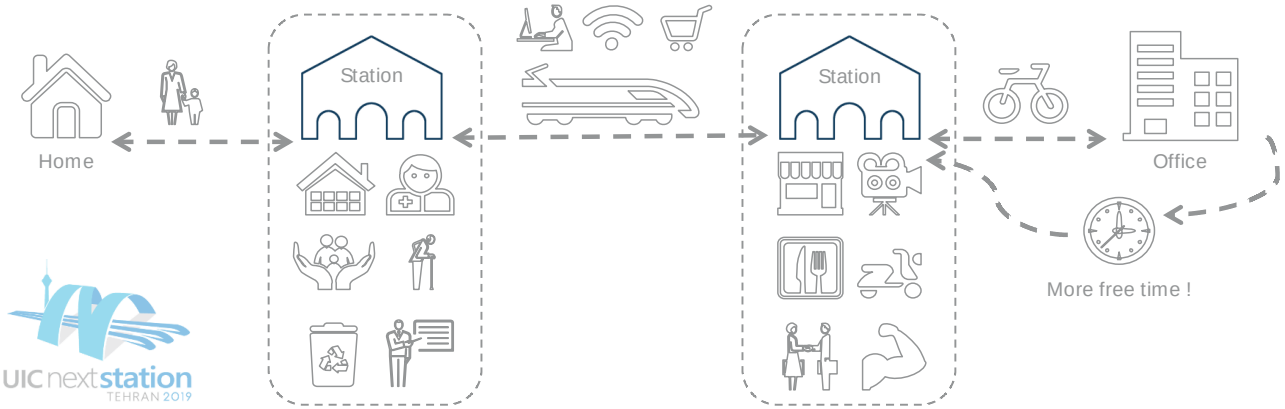
12% Particules (PM_{10})

9% Composés organiques volatils (COV non méthanique)

1% Dioxyde de soufre (SO_2)

1% Ammoniac (NH_3)

Foresight scenario: train-based



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C'est meilleur pour la santé

30 mn de vélo ou de marche quotidienne
= -30 % de risque de maladie (cardio-vasculaire, cancer, diabète...). Lorsqu'on utilise les transports en commun, on marche déjà **27 minutes** en moyenne par jour !

C'est moins cher à l'usage

10 km/jour
= 100 €/an à vélo
= 1 000 €/an en voiture

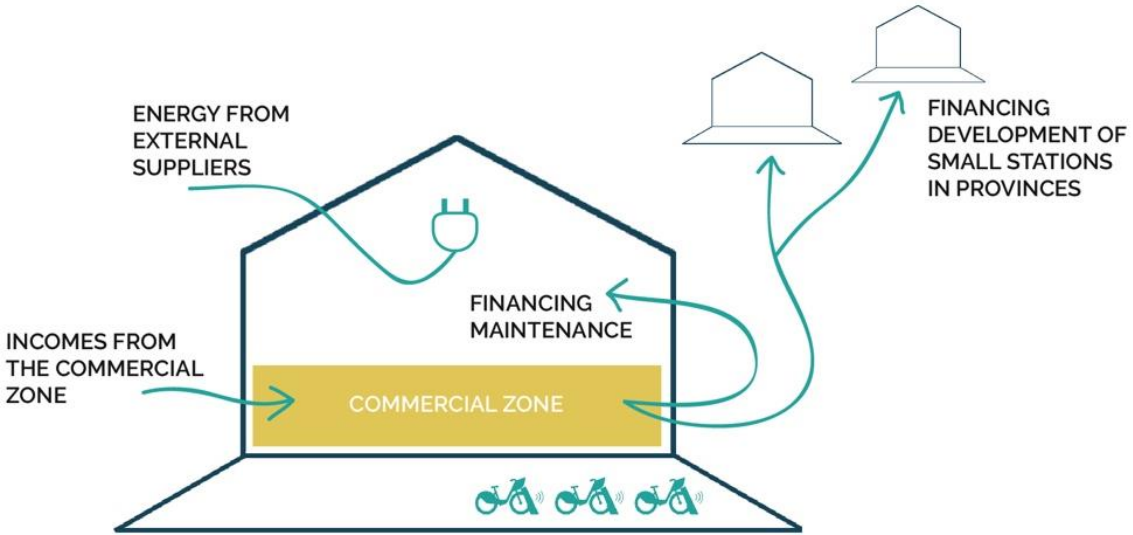
4 pleins d'essence
= le prix d'1 vélo neuf

-494 kg de CO_2 émis en 3 mois*

Updating the business model without losing profitability

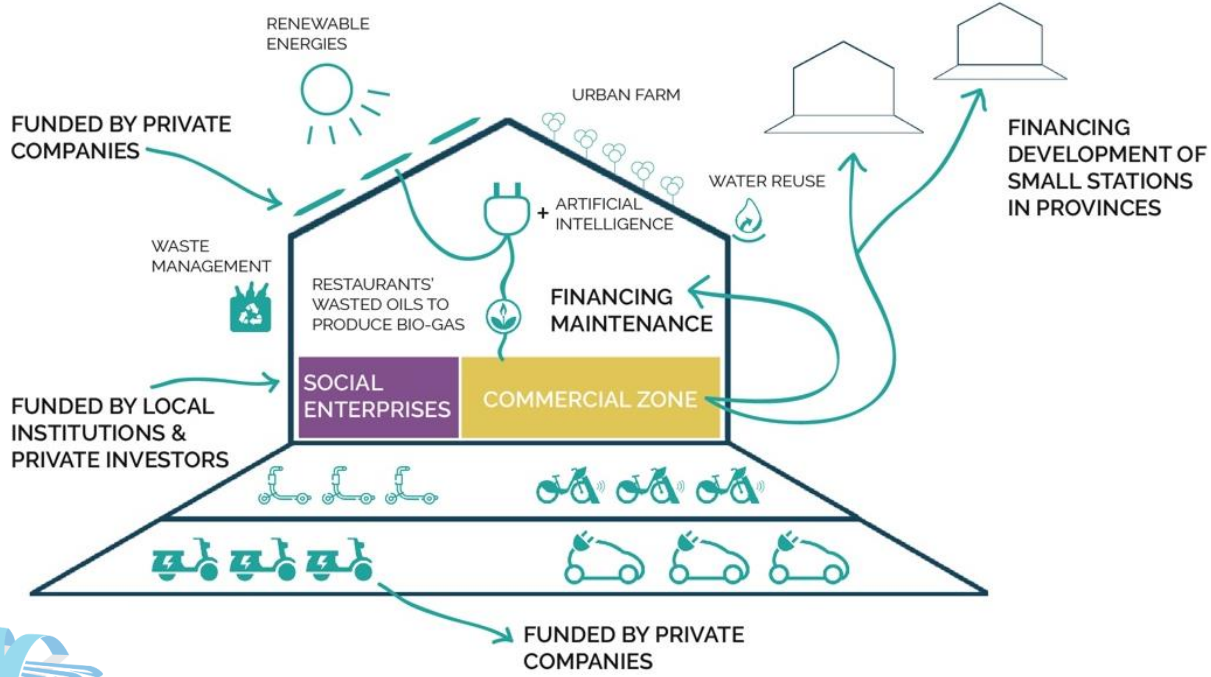
The current business model: based on the “equalisation” principle: renting spaces at the highest price possible to support maintenance and works.

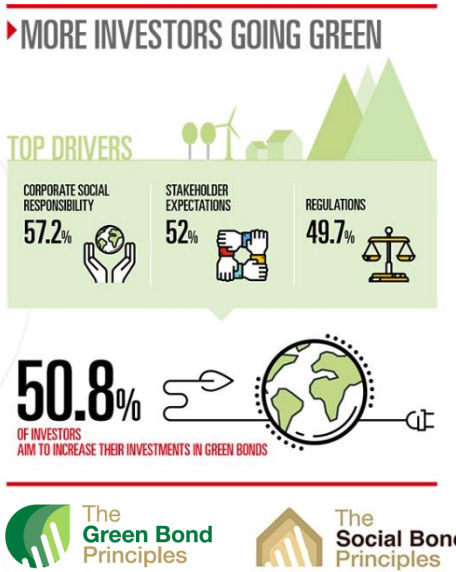
This model doesn’t manage negative externalities it creates…



Updating the business model without losing profitability

The Sustainable City Promoter business model: aligning sustainability with business goals, creating synergies of investments





Aligning with SDGs:

From where it comes

Work experience at SNCF G&C (French Railway Company):

Firstly as an Architect & Project Manager for Stations' projects and works, and now as Sustainability Consultant for Stations' environmental management.

Research work at Graduate Institute of International & Development Studies, CH:

Academic research on the policy gaps at the European and local level. Policy paper on the role of EU Institutions and sectorial organisations, exploring opportunities to set up collaborations and partnerships.

Current research work at the CISL of University of Cambridge, UK:

Development of a sustainable business strategy & model, and of a multi-stakeholders working methodology to engage railway companies and city's institutions. Using business strategy tools and integrating sustainability as a "differentiator" for the business value creation.

THE BEST IS YET TO COME...

Thank you

for your kind attention

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