



# Innovating and investing in a new international high-risk environment: Lyon's impact economy model



# Bertrand FOUCHER

CEO of ONLYLYON&Co  
Lyon Area Economic Development  
Agency

# Economic overview: Lyon metropolis in a few figures



**58**  
TOWNS

**1.4** MILLION  
INHABITANTS

Insee - RP 2022

ABOUT

**24%**

of the  
population is  
between 15 and  
29 years old

**17.6%**

of the inhabitants of  
"Auvergne-Rhône-Alpes"  
region

**+ 52,360**

inhabitants in 6 years  
2016-2022

**169,000**  
PRIVATE  
COMPANIES

Insee - SIDE 12/31/2022

**7,300** SMEs

**255** ISEs

Insee - SIDE 12/31/2022 –  
Head offices of commercial  
companies

**30,500**  
BUSINESSES  
CREATED

Insee - SIDE 2023

**300**

SUPPORT STRUCTURES  
FOR BUSINESS CREATION



## EMPLOYMENT

**884,000**  
JOBS

Insee 12/31/2022

**660,000**  
jobs in the  
private sector

Urssaf 12/31/2023

**+ 13%**  
between 2018 and  
2023

## INDUSTRY

**84,000**  
JOBS

**+7.5%** employment  
vs. **+2.6%** in France  
between 2019 and 2023  
Urssaf 12/31/2023

**1<sup>st</sup>**



world's leading  
R&D and vaccine  
production  
center

**191,000**  
STUDENTS

**300**  
higher education  
institutions

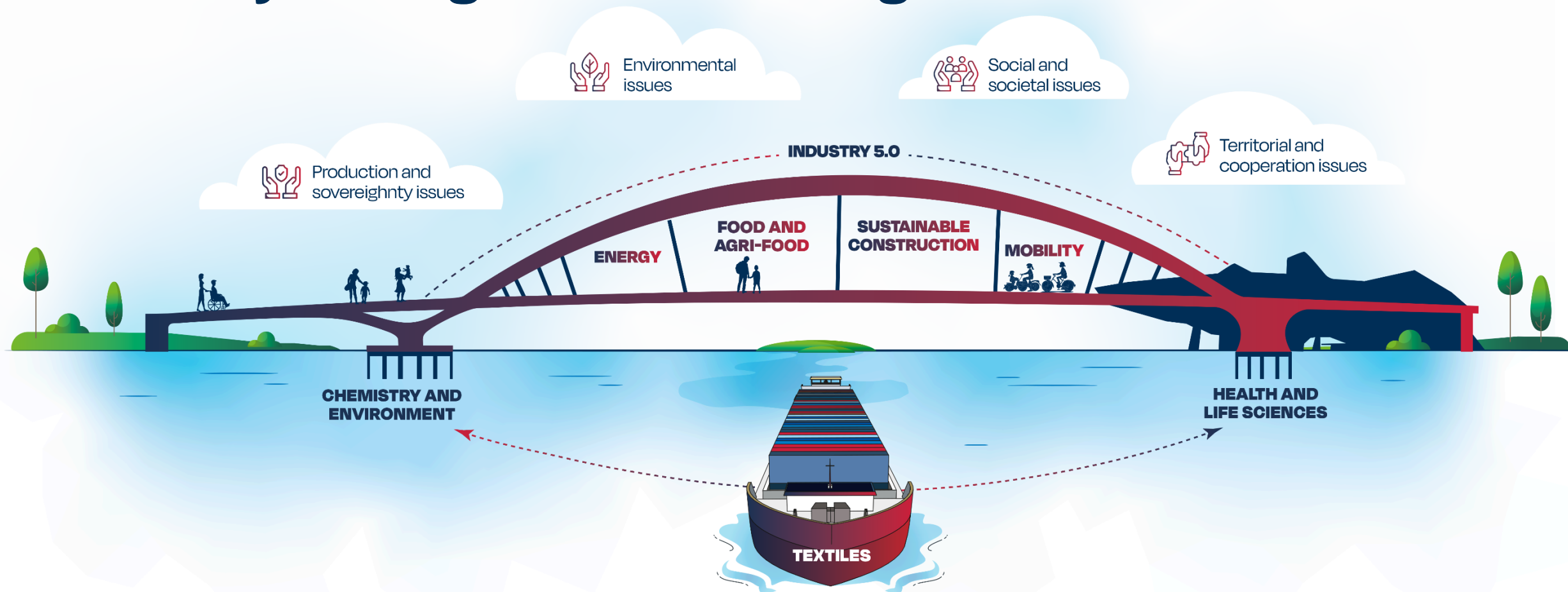
**5,000**  
PHD STUDENTS

**18** DOCTORAL  
SCHOOLS

**160** RESEARCH  
UNITS



# Industries at the crossroads of the Lyon region's challenges



# About ONLYLYON & CO

Non-profit association created in 1974, bringing together the main local authorities and economic institutions, and co-chaired by:

MÉTROPOLE  
GRAND LYON



CCI LYON METROPOLE  
SAINT-ETIENNE ROANNE

ONLYLYON & CO runs two programs:



Territorial marketing  
B2C



Investment promotion  
B2B



# Benoit CHEVALIER-ROIGNANT

Associate Professor at emlyon business  
school in quantitative Finance & Economics



# The environment is a unique distressed asset

## Asset characteristics

This asset provides **services** such as food, raw materials, waste repository.

Assets need to be **properly maintained**, via replenishment and preservation.

Maintenance has been overlooked in the case of the environment:

- Our current consumption of this capital is unsustainable and would require 1.6 Earth to be maintained
- Between 1992 and 2014, produced capital per capita doubled, while human capital per capital increased by c. 13% globally. On contrast, “natural capital” per capital declined by c. 40%

## Unique features

The **probability distribution** for environmental risk is not Gaussian. It has significant fat tails.

Environmental risk has features of **idiosyncratic and systemic** nondiversifiable risk.

Climate change is a **market externality** that is not fully priced-in.

The environment is a “public good.” The absence of clearly definable property rights makes the environment a victim to the **tragedy of the commons**: Uncoordinated actions by economic agents lead to resource depletion.



# Financial considerations are key to understand the proposed solutions

## Centralized solutions

States believe that the **regulatory environment** can provide an effective tool for firms to achieve the “first best” by reducing the misalignment of interests. This boils down to money transfers, either positively (subsidies) or negatively (quotas, and other restrictions).

**Taxes** are supposed to reduce the competitive advantages of non-environmentally friendly solutions against more sustainable solutions (e.g., taxes on gas). Taxes do not discriminate among users, so they may be seen as unfair (“yellow vests”).

**Market-based solutions** such as the European carbon market provide a less arbitrary approach for markets to regulate themselves, with firms internalizing their negative externality on the environment. The practice of market-based solutions often fall short on their promises...

## Decentralized initiatives

The finance sector evolves towards **sustainable finance** (regulations, standards, norms, and ‘green products’) besides impact & governance criteria. Specifically, **ESG investors** allocate resources to assets with better ESG metrics, while **impact investors** put more weight on effective impactful practices, possibly the expense of financial performance (e.g., green bonds, greenium).

Environmental criteria are part of **industry standards**.

Firms may **commit themselves** to sustainable practices (e.g., green power purchase agreements, benefit corporations).

These initiatives rest on reliable, quality data, enabled via compulsory **environmental disclosure** (Non-Financial Reporting Directive, Corporate Sustainability Reporting Directive, European Financial Reporting Advisory Group) and external **ESG ratings** (e.g., MSCI, Bloomberg).



# emlyon humbly contributes to addressing climate change

emlyon has become a benefit corporation with the mission to be “respectful of the planet.”

emlyon has been ranked top for its environmental commitment (ChangeNow – Les Echos)

## Various measures

Core modules (“climate workshop,” “sustainable business models,” etc.)

Field missions on ESG.

“SDG-inside” pedagogy.

Possibly an impact fund coming next.

## Finance-specific teaching

Dedicated accounting, corporate, and capital market modules on climate change

Students have access to various ESG scores to build “green portfolios”

## Finance research strategy

Climate change has become a key research topic, in various research fields such as strategy, operations management, economics, and finance.

Corporate partners liaise with emlyon faculty to develop specific knowledge.

# emlyon has been working on a related topic with Groupama, an insurance company

## Key motivations

Groupama, a large insurance company in France, and emlyon set up a **partnership** to promote impactful research.

The acquired knowledge will be crystalized in a set of **research papers/publications** addressing key challenges facing Groupama.

## Benefits to academic partners

Enhanced scientific credibility and visibility.

Fresh strategic insights to internal teams

Strategic position as a leader in sustainable insurance innovation

Help Groupama source top talents from emlyon and other elite institutions

## Specific research objective

Climate change impacts Groupama's exposure to property insurance risks. Especially, the very foundations of many buildings in the region are at risk, due to "**clay risk**."

The research team (Olivier Le Courtois, Lorenz Schneider, one PhD student) are tasked with building a theoretical and quantitative framework to assess and price this risk for the insurance company.

## Research Topics

Probabilistic modeling of extreme weather and shifting seasonality patterns

Use of extreme value theory, including joint distribution of extreme events

Calibration based on climate data

Recommendation to insurance companies about mechanisms to facilitate the risk exposure due to climate change

# Erick LELOUCHE

President of Lyonbiopôle,  
the health competitiveness cluster  
of the Auvergne-Rhône-Alpes region



## Key figures

**1<sup>st</sup>**

vaccine production  
center in Europe  
(Lyon)

**800**

Life Sciences'  
companies in the  
Auvergne-Rhône-  
Alpes region

**1<sup>st</sup>**

region in France  
for active  
pharmaceutical  
ingredient  
manufacturer

**>20**

majors companies  
in Lyon  
(pharma, in vitro  
diagnostic,  
medtech, etc.)



# Main actors

## BIOTECH & PHARMA



## DIAGNOSTIC



## MEDTECH



## E-HEALTH



## DERMOCOSMETIC





*Biodistrict Lyon Gerland*



**LYONBIPOLE**

AUVERGNE-RHÔNE-ALPES   
LE RÉSEAU INNOVATION SANTÉ

# Innovation cluster

## Health



**Initiating  
collaborative R&D  
projects**

193 projects financed  
for more than €218M



**Federating  
ecosystems**

More than 250 active  
members



**Promoting  
companies  
in France and  
abroad**

# ONE HEALTH





# An international network to cultivate the region's reputation

ONLYLYON Ambassadors are located across the world, with **14 communities in more than 10 countries**, brought together by coordinators.



Montreal



London



New York



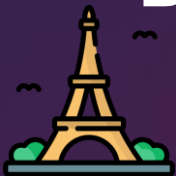
Brussels



Boston



Frankfur



Paris



Barcelona



Sydney



Delhi



To join the  
network



ONLY  
LYON  
& CO



# Come to visit us by the end of 2025



**September 22-23**

**Bioproduction Congress**

Annual event of the biopharmaceutical production sector

**October 7-10**

**Pollutec**

Event for environmental innovation

**November 9<sup>th</sup>**

**« Lyon as an impact fabric » by**

**ONLYLYON&Co**

**November 13-14**

**I4ID**

Immunotherapies & innovations for infectious diseases congress 2025



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