

Eco Smart Solutions

Designing the City of Tomorrow



#Biotech start-up



#City of the Future



#Sustainability

#Open Lab



/ECOSMARTSOLUTIONS.LOPENLAB



ECOSMARTSOLUTIONS.PARIS@GMAIL.COM

Developing a GreenTech Start up in France





Our vision
-THE CITY OF THE FUTURE-

WE USE MICROORGANISMS

~since the Greeks & Romans~



To make delicious yogurt
cheese and beer

WE CAN USE THEM TO CLEAN



ECOLOGIC

Natural organisms that keep you in balance with nature

CHEAPER

They last longer

SAFER FOR YOUR HEALTH

Some traditional cleaners like bleach are toxic

-CLEANING WITH- *Probiotics*



With living bacteria inside

LONGER LASTING

They form a biofilm that makes them more resistant

MORE EFFICIENT

They can clean deeper getting into the pores





*The project
Introduction*



DESIGNING THE CITY MICROBIOME

To live in harmony with our environment

1 THE CITY

IS OUR DAILY ENVIRONMENT AND IMPACTS OUR
HEALTH & LIFE



2 KNOWING THE MICROBIOME

WHAT TYPE OF MICROORGANISMS SURROUND US
THE CITY?

3 CHANGING THE MICROBIOME

USE OF MICROORGANISMS TO CLEAN THE CITIES FROM
POLLUTION AND DIRT



1 THE MICROBIOME OF THE METRO

Unraveling biodiversity



1.5 BILLION PEOPLE/YEAR



The most dense transport network in the world



THE EXPERIMENT

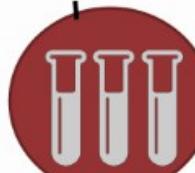
— IN THE PARISIAN METRO —



5 MOST TRANSITED
METRO STATIONS



ANTIBIOTIC RESISTANCE TEST



SAMPLES FROM
SEATS, WALLS AND TICKET KIOSK



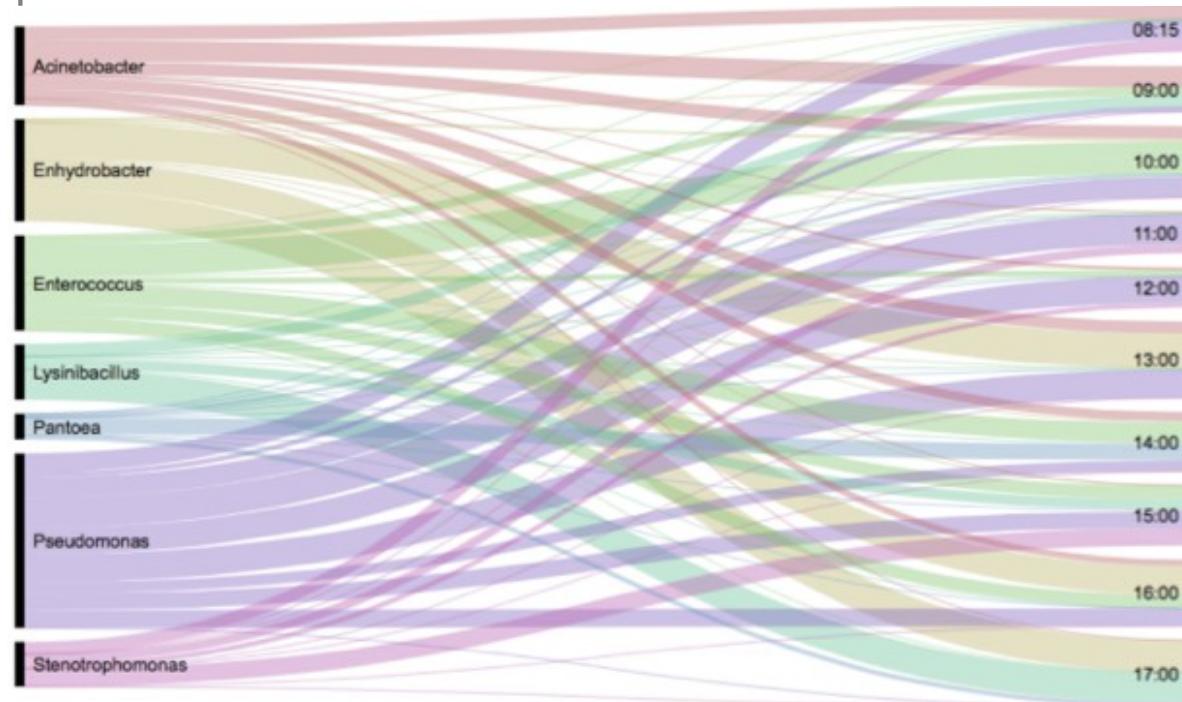
DNA EXTRACTION & SEQUENCING

2 KNOWING THE MICROBIOME

Unraveling biodiversity

Microbiome change during a day in **Gare du Nord**

Example in NY:



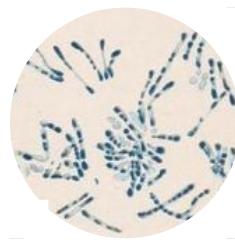
Afshinnekoo et al., 2015

2 KNOWING THE MICROBIOME

Unraveling biodiversity



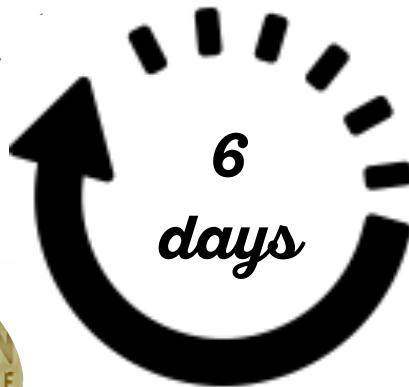
Bleach



Probiotic cleaner 1



Savon de Marseille



Probiotic cleaner 2



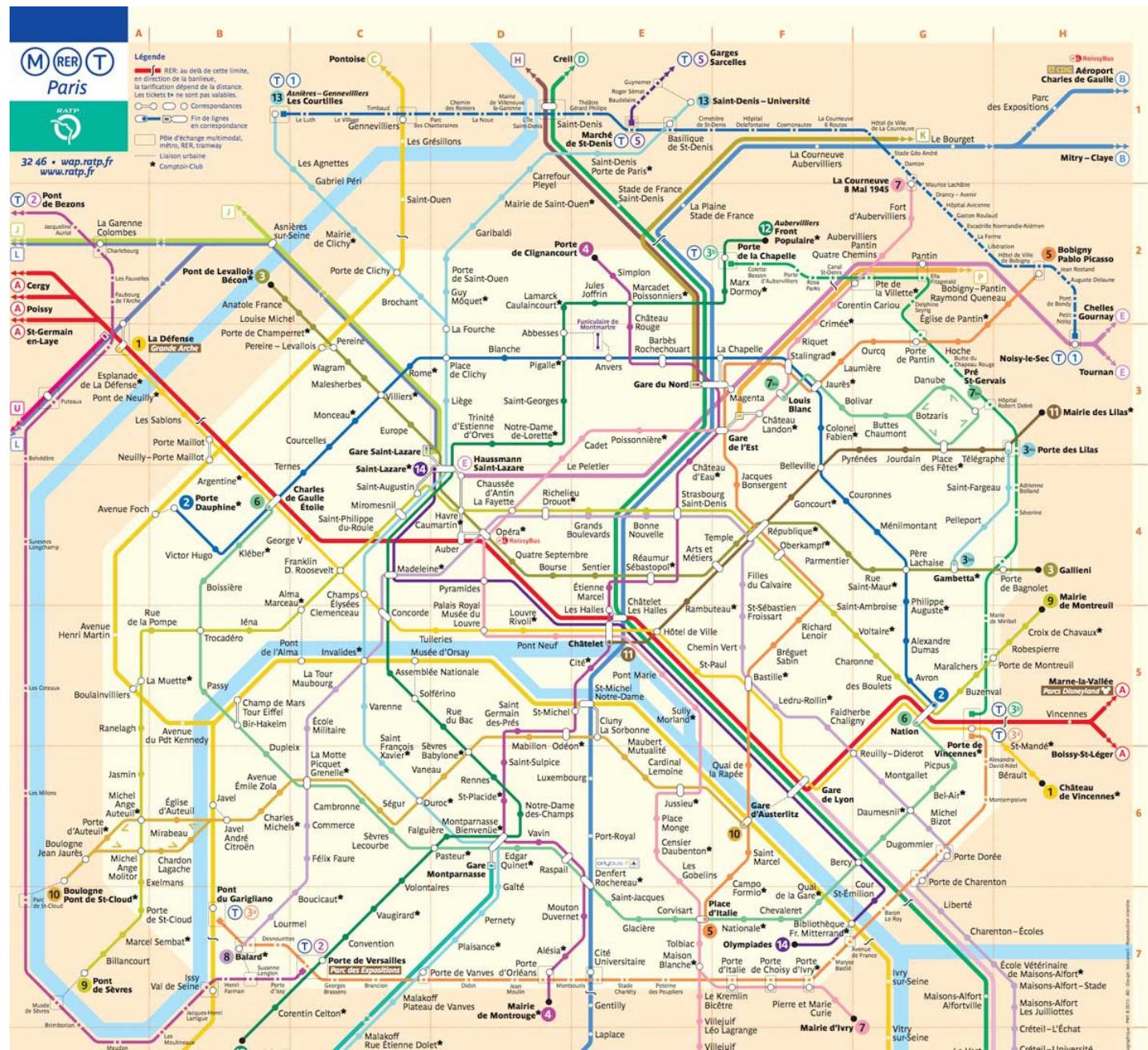
Methods



WORK FLOW



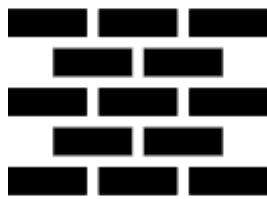
1 SAMPLE COLLECTION



1 SAMPLE COLLECTION



SEATS



WALL



TICKET KIOSK

2 DNA EXTRACTION



MoBio kit



3 SEQUENCING



3a SEQUENCING: PCR



3b SEQUENCING: ILLUMINA MISEQ RUN



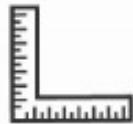
SEND SAMPLES TO GATC:

- 50 MILLION READS PER RUN
- 10³ BACTERIAL GENOME COPIES
- UP TO GENUS LEVEL

3c SEQUENCING ANALYSIS





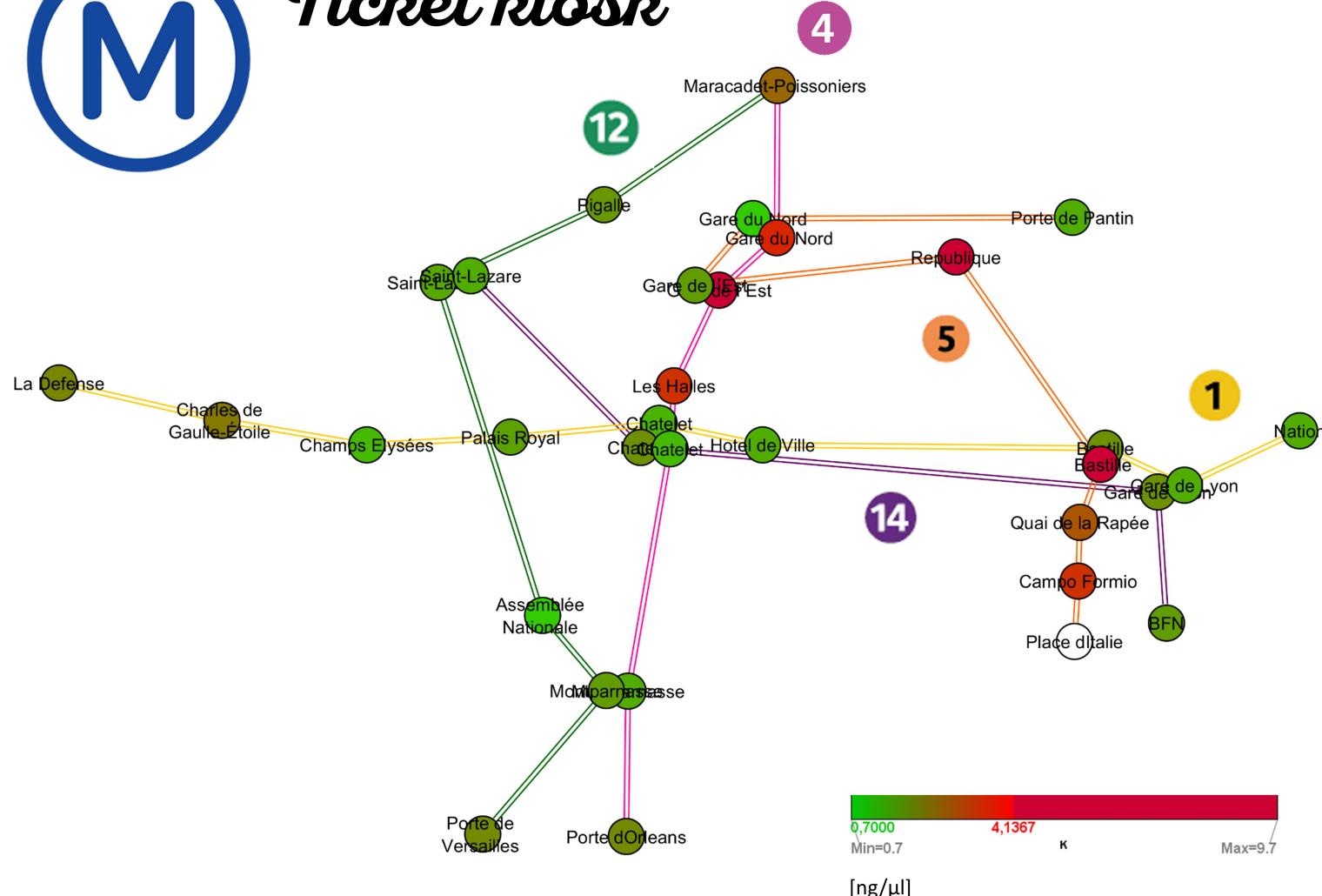


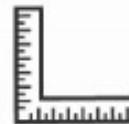
THE RESULTS

— ANTIBIOTIC RESISTANCE —



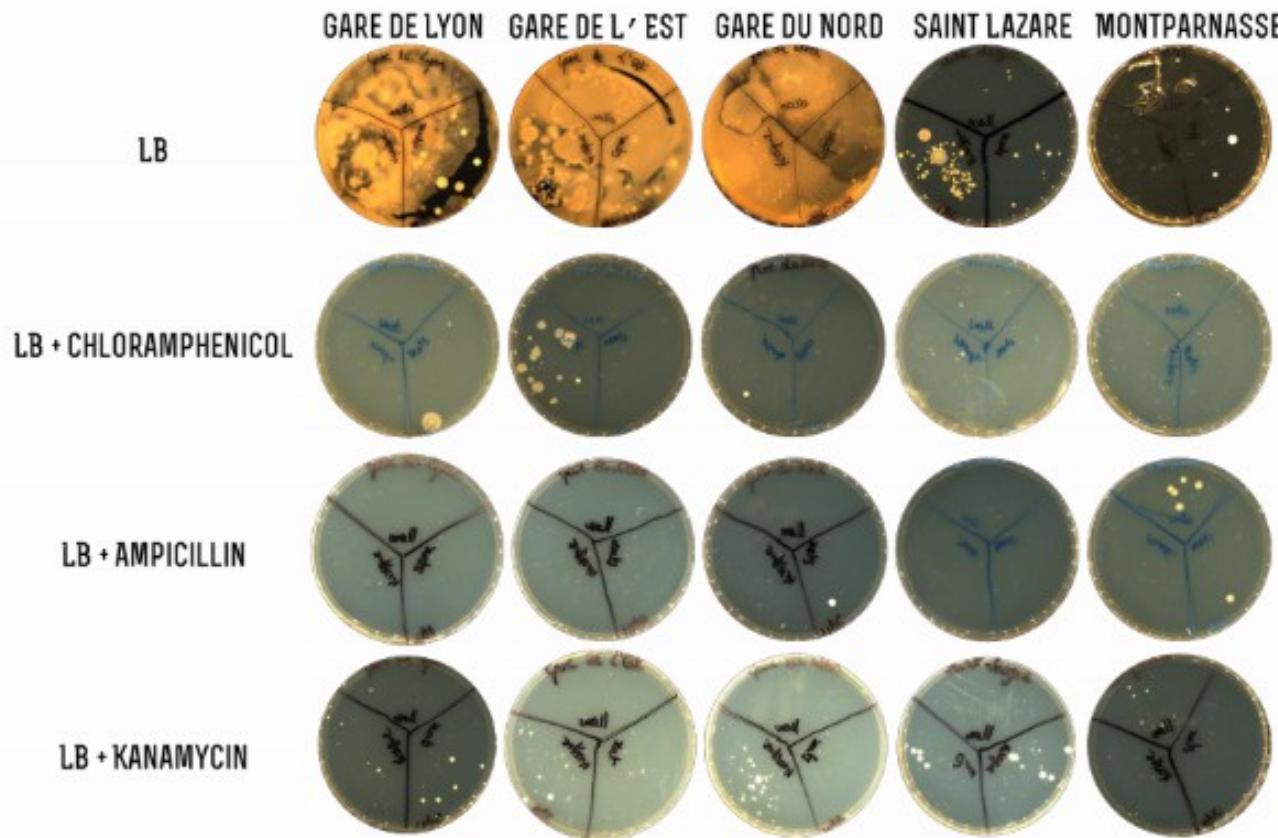
Ticket kiosk



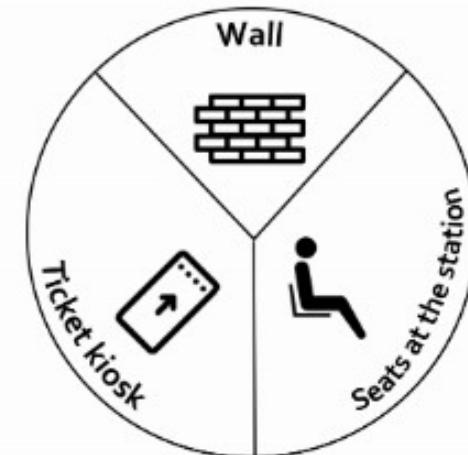


THE RESULTS

— ANTIBIOTIC RESISTANCE —



SAMPLE





CONCLUSIONS

— ANTIBIOTIC RESISTANCE —

- 1** STATIONS HAVE A UNIQUE MICROBIOME THAT WE WILL UNRAVEL BY SEQUENCING
- 2** MOST OF THE SAMPLES CONTAIN ANTIBIOTIC RESISTANT BACTERIA

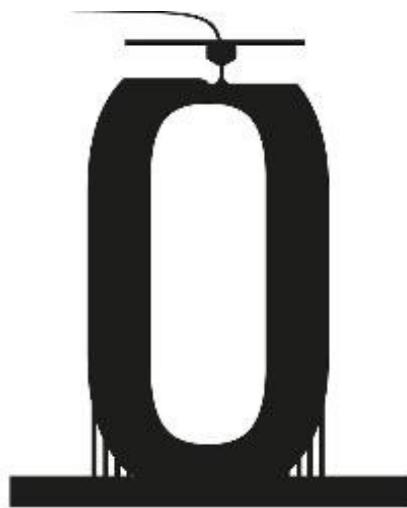




Reachout

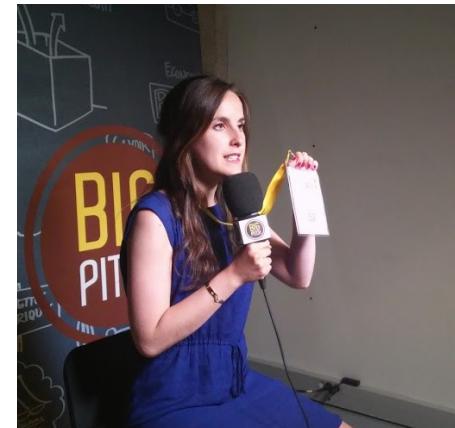






L'OpenLab

EVENTS, PITCHING & NETWORKING



COMMUNICATION

Eco-Smart Solutions
improving you life's quality

OUR SOLUTION OUR MISSION ABOUT YOU THE TEAM BLOG

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Cristina Inicio

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Alcance de la publicación: 133 esta semana

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Promocionar página

INFORMACIÓN

The soul of Eco-Smart Solutions raised from the idea of living in harmony with our environment.

Añadir su sitio web Promocionar sitio web

FOTOS

Eco-Smart Solutions ha añadido 2 fotos nuevas. Publicado por Cristina García Timermanns (?:) · Ayer a las 13:14 ·

Eco-Smart Solutions en #HelloTomorrow

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COMMUNICATION



Eco Smart Solutions
Designing the City of Tomorrow

#Biotech start-up #City of the Future #Sustainability #Open Lab

GREEN TECHNOLOGIES
Introducing the city of the future

Long-lasting effect
More efficient cleaning
Eco-friendly
Gentle on bacteria

Probiotic cleaners

ECO-SMART SOLUTION IS A BIOTECH COMPANY THAT PROPOSES GREEN TECHNOLOGY FOR A MORE SUSTAINABLE AND ECO FRIENDLY CITY.

OUR FIRST PROPOSAL IS TO INTRODUCE PROBIOTIC CLEANERS IN THE CITY OF PARIS.

11 MILLION METRO RIDERS AND WE ARE UNVEILING THE INCREDIBLES OF PARIS.

DESIGNING THE CITY MICROBIOME
To live in harmony with our environment

1 THE CITY
It's our daily environment and impacts our health & life

2 KNOWING THE MICROBIOME
The first step is to understand what type of microorganisms surround us in the city. (Our first study focuses on the metro)

3 CHANGING THE MICROBIOME
We can introduce probiotics to clean the cities from pollution and dirt. We want you to live in harmony with your city

THE MICROBIOME OF THE METRO
Unveiling biodiversity

19 00 OPENED
1.5 BILLION PEOPLE/YEAR
The most dense network in the world

THE EXPERIMENT
IN THE PARISIAN METRO

THE RESULTS
ANTIBIOTIC RESISTANCE

THE MICROBIOME

9 times more bacteria than cells
1 kilo

Bacteria make... WELLNESS
They help you extracting energy and have an impact on your health

We use microorganisms
We can use them to clean cities
We make delicious yoghurt, cheese and beer

... OF THE CITY

ECOLOGIC
Nature respects the one you it follows with nature

CHEAPER
They cost less

SAFER FOR YOUR HEALTH
Some bad ones makes the sick are here

CLEANING WITH PREBIOTICS
With living bacteria inside

LONGER LASTING
They last a little but make more impact

MORE EFFICIENT
They are more efficient getting rid the pests

Our vision

Our mission: Unveiling the microbiome of the Parisian Metro

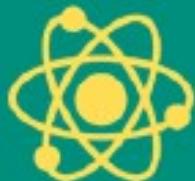
PROBIOTIC CLEANERS
GREEN TECH
DIVERSITY
BIOTECH
RECYCLING
SUSTAINABILITY
ECONOMY
ENVIRONMENT

ECO CITY
« Live in harmony »

PROBIOTIC
CLEANERS



*Living in harmony
with your environment*



GREEN TECH

Glowing
trees

DIY



RECYCLING



HEALTH

SUSTAINABILITY



Paris
2.0

ALGAE IN THE WALLS

ENERGY



Symbiosis

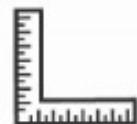
URSZULA CZERWINSKA & CRISTINA TIMERMANS



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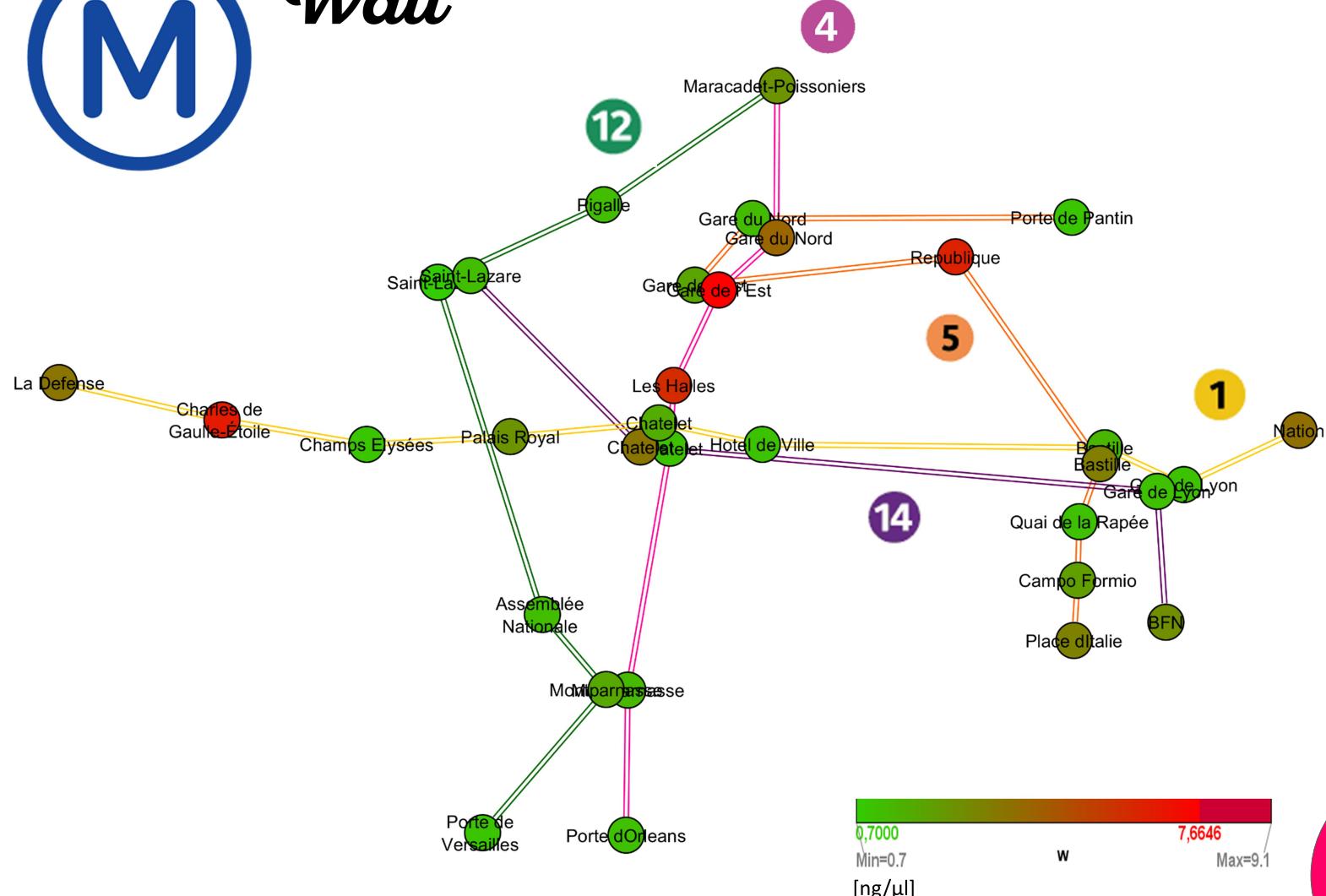
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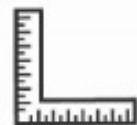


THE RESULTS



wall





THE RESULTS



Seats

