SMART CITY
IN LYON’S DNA

■ A Flair for Innovation
  1. R&D, researchers, students

■ Entrepreneurship
  1. Support, boosters, accelerators
     Lyon City of Entrepreneurship (LVE)

■ A strong industrial base
  1. Major groups, SMEs, start-ups

■ Know-how to model the city
  1. Urban projects: Lyon Part-Dieu, Lyon Confluence, Carré de Soie, Lyon Gerland

■ Data
  1. Traffic flows, urban data

■ New technologies
  1. Research Infrastructures, Broadband, labs…
LYON, NATURALLY SMART

<table>
<thead>
<tr>
<th>1.3 million people living in Greater Lyon in 2013 (SOURCE INSEE - National Institute of Statistics and Economic Studies)</th>
<th>150,000 NEW Greater Lyon inhabitants by 2030</th>
<th>15,000 new companies founded each year</th>
<th>the 2nd most attractive city for business in France (SOURCE: ERNST &amp; YOUNG’s 2012 ATTRACTIVENESS SURVEY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>130,000 students</td>
<td>N°1 in innovation for French cities with populations over 500,000 (SOURCE: L’ENTREPRISE, OCTOBER 2012)</td>
<td>550 public and private laboratories</td>
</tr>
<tr>
<td>France’s leading university campus (outside the Paris region)</td>
<td>10% from abroad</td>
<td>2,120 patents filed in the Rhône-Alpes Region in 2011</td>
<td></td>
</tr>
</tbody>
</table>
A **CONSEQUENT** SMART METROPOLIS STRATEGY

- **40** major experiments in progress and to come in Greater Lyon
- **100** diverse public and private partners involved in innovation projects
- **210 M€** invested by private & public partners on major projects
A SMART APPROACH WHICH LIES ON
ON 4 MAJOR THEMES

Reinforce the capacity of innovation of local actors

Preserve energetic resources, favour renewable energies, consumption management

Manage, anticipate, regulate traffic flows and invent new ways to think the city

Enhance quality of the city and of the city by developing innovative services
“An area for innovators and experimentation for renewed growth as well as a new approach of the city”

40 major experiments in progress and to come in Greater Lyon

100 diverse public and private partners involved in innovation projects

Rank #1 Smart City in France by m20 City 2013 study (Veolia-Orange)

Unique technological platform in Europe: offering access to cutting edge equipment and technical expertise

LYON SMART CITY PROJECTS

2 iconic projects

OPTIMOD

1st eco-friendly microgrid

LYON SMART COMMUNITY

A € 50 million budget invested in 130 new energy models and services

NEW MOBILITIES CITY MOBILITY
DIGITAL SERVICES CITY SIMILARITY
ENERGY SMART GRIDS CITY SUSTAINABILITY
INNOVATION & INITIATIVES CITY TESTING GROUND
AROUND 40 EXPERIMENTS
FOR A GLOBAL APPROACH

- 100 public and private partners
- Nearly 210M€ invested (2012-2016)
- 1st French Smart City (m2ocity ranking, 11/2013)
AROUND 40 EXPERIMENTS
SPREADING OVER THE TERRITORY
NEW MOBILITY PROJECTS

- Manage Forecast and regulate traffic flow and explore new visions of city travel
- Business Opportunities:
  - Mobile Applications
  - Design of new services
  - Carsharing systems development
A STRONG NETWORK in the competitive poles and clusters

... with more than 700 companies and a workforce of 80,000 employees

€13 BILLION TURNOVER

... with 250 active members and 80 laboratories

MOBILITY

They are all in Lyon region

LYON URBAN TRUCK & BUS

the only French cluster dedicated to the automotive and mobility sector
5 R&D programs initiated within LUTB cluster amounting to 267 M€ (2013)

Companies

ALSTOM, Valeo, electricit®, Plastic Omnium, Transpôlis, metaldyne

R&D / Clusters

LYON URBAN TRUCK & BUS

ADDICTED TO LYON

ONLY IN LYON
NEW MOBILITIES PROJECTS

**OPTIMOD**
Traffic prediction up to an hour
Mobile applications
Optimized Freight & Urban Logistics

**BLUELY**
100% renewable 100% electric Carsharing
50 stations & 130 vehicles

**SUNMOOV** (part of Lyon Smart Community)
30 shared sun-powered vehicles in Confluence area
33 charging stations powered by solar panels installed on neighborhood buildings
100% clean energy

**VELO’V**
50,000 users, 35,000 shared bicycles rentals/day

**COVOITURAGE-GRANDLYON.COM** (Carpooling)
10,000 members/33,000 carpoolers daily

**GEOVELO**
GPS for cycling
Bike route calculator integrating user criteria
(beginner, advanced…)

**ONLY’MOOV**
Real-time traffic information displays

**Citylog & Freilot**
Urban logistics, 20 private Partners

**Move In Pure**
low carbon & renewable power supply for vehicles

**Autolib**
90 carshared vehicles

**Navia**
Experimental driverless shuttle
FOCUS: OPTIMOD’LYON: INTELLIGENT TRANSPORT SYSTEM TO OPTIMIZE SUSTAINABLE URBAN MOBILITY

AN INNOVATION PROJECT AND PUBLIC-PRIVATE PARTNERSHIP aiming at co-developing information services in real time and predicting urban mobility

REAL TIME DATA COLLECTION AND TREATMENT
- 30 data bases
- Real time diffusion of reliable information

1st in Europe
1H TRAFFIC PREDICTION
- Traffic active management through monitoring of traffic

1st in the World
A MULTIMODAL URBAN GPS
- Real time information
- 1 hour prediction
- All transport modes
- Available everywhere at any time

A URBAN FREIGHT NAVIGATOR
- Traffic conditions
- Delivery areas and construction sites availabilities
- Round itineraries re-calculation in case of perturbation

PROJECT TIME FRAME 2012-2015

BUDGET 7 M€

CO FUNDING

13 PUBLIC-PRIVATE PARTNERS
Develop new services to make city living easier for everyone

Business Opportunities:
- Mobile Applications
- Design of new urban services
- Housing management software solutions
- Decisions making tools
- Detailed analysis of behavioral & societal phenomena
2nd Digital hub in France

- €3.5 billion turnover
- More than 200 events and meetings each year

4000 COMPANIES in the IT sector employing 34,000 people

DIGITAL SERVICES

They are all in Lyon region

Schools / R&D

Companies

Clusters

ADDICTED TO LYON

INSA Lyon
École Centrale Lyon
EM Lyon
Liris
Cité de Lyon
Inria
HiKob
Ubiant
Atos Worldline
CloudEdit
Imaginove
Rezopole
LacuisInnoWeb
DIGITAL SERVICES PROJECTS

GRIZZLY SENSORS
- Wireless, autonomous sensors
- Road condition analysis: humidity, air and ground temperature,…
- Optimizing winter road maintenance

CONTACTLESS SERVICES
- NFC parking meters with contactless payment
- Access to a full range of cultural & visitor services in the city using contactless technologies

FORCITY (4CT)
- Urban Planning decision-making tool
- District modeling that integrates the urban ecosystem’s various components
- (Transportation, land use, energy, buildings, infrastructures…)
- Experiments in Gerland District

INTERACTIVE STREET FURNITURE
- Interactive bus shelters & benches
- Heritage signage

URBAN PASS
- Access to all the city’s cloud services

SMART STATION
Turning the Lyon Part Dieu Train Station and multimodal interchange station into a smart connected hub offering a wide range of innovative services
- CALL FOR IDEAS IN PROCESS

SMART SPACE
Intelligent facilities and innovative signage to simplify and streamline public space use in the Lyon Part Dieu district
LYON URBAN DATA: A SPACE TO CO-DESIGN AND TEST NEW URBAN SERVICES

AN ORGANIZATION ALLOWING
- Data access (Big data)
- Innovative urban services prototyping
- Co-creation and test with

ALSO A PLACE FOR
- Events and meetings
- Actors visibility (showroom)
- Exchanges (co-working)

FACILITATE INNOVATION
for SMEs, start-ups and project leaders

SUPPORT COLLABORATIVE PROJECTS
- Speed up networking of start-ups, large companies, research laboratories
- Identify and create consortiums

OPTIMIZE MARKETING through prototyping and testing with users

INNOVATIVE PUBLIC-PRIVATE PARTNERSHIP
in a dynamic of enlargement

EXPERIMENTATION FIELDS
- Mobile applications and digital services
- Robotics services
- Urban monitoring
- Smart housing
- Communicating urban furniture

LA PART-DIEU
- 500,000 daily flows
- 40,000 employees
- 29M travelers/yr
- 43M visitors/yr (mall)

Launch 2014
GRAND LYON SMART DATA
OPEN DATA IN GREATER LYON

A TERRITORIAL PLATFORM OF PUBLIC:PRIVATE DATA

- More than 400 data available (geographical, equipments, mobility, services, urbanism…)
- 14 themes treated so far

- Innovation capacity reinforcement
- of the territorial actors
- New services creation for tomorrow's city by private players
- New forms of public-private partnerships

- A unique platform to access public and private data of territorial actors
- Quality data available by standardized services
- A dedicated support measure: Lyon Urban Data

GRADUATED OPENNESS WITH 3 DISTINCT LICENCES

Open licence
Free access of 99% data without sharing clause
Encourage commercial use

Engaged licence
Data access after user authentication
Check compatibility of reuse with public policies

Associate licence
Possible royalty from a use threshold (except experimentation)
Promote a fair competitive ecosystem

smartdata.grandlyon.com
GREATER LYON EXPERIMENTATION CELL
CATALYST FOR INNOVATIVE PROJECTS AND PRODUCTS

POSSIBILITY TO TEST A PROJECT IN REAL CONDITION IN URBAN SERVICES
- Fields and equipments for experimentation: urban networks, public spaces, buildings and infrastructure made available to test products and services at different scales

TIME SAVING IN INNOVATION DEVELOPMENT
- Facilitate access to people for testing
- Estimate product or service need
- Facilitate adaptation of the offer to the market
- Accelerate access to markets

NETWORKING
- Financiers, entreprises, laboratories, clusters, fablab … to materialize projects

ACCESS TO EXPERIMENTATION TOOLS
- Grand Lyon Smart Data
- Lyon Urban Data (experimentation space)

VISIBILITY ADVANTAGE
- Companies enjoy communication related to their project

PROJECT SUPPORT
- An identified interlocutor in Greater Lyon to follow the project from beginning to end
GRIZZLY CAPTORS:
WIRELESS CAPTORS IN THE ROAD TO OPTIMIZE WINTER MAINTENANCE

AUTONOMOUS WIRELESS CAPTERS
straight into the road

ANALYSIS OF ROAD TEMPERATURE AND HUMIDITY
in complement to Météo France data

AN ECO-INNOVATIVE PROJECT
Supported by the Region program INNOV’R

IN REAL CONDITIONS
Use of infrastructures in place (City lights optical fibre PC criter)

TO BETTER MANAGE BAD WEATHER
i Treat only when necessary
i Limit consumption of resources (salt, carburant)
i Manage maintenance costs,
ii Optimize human and material means

A PARTNERSHIP
GRANDLYON
HiKoB

April 2014 END OF EXPERIMENT
and validation of captors relevancy
Conserving energy resources, managing consumption

Business Opportunities:
- Energy management applications
- Analysis of consumption patterns
- Offers from different production sources
- Information exchange systems between facilities
- Linky compatible products and services
The project of NEDO & TOSHIBA at Lyon’s Confluence district is the worldwide most complete demonstration (60 M€ investment) in Smart Grid initiatives in the energy sector: electric and electronic equipment, employing 45,000 people.
ENERGY-SMART GRIDS PROJECTS

LINKY
- Smart Meter
  Remote Services, meter readings, service activation, consumption management, technical problem response...
- Implemented 175,000 homes within the Greater Lyon

SMART ELECTRIC LYON
- 25,000 Greater Lyon household and businesses out of the 175,000 having Linky involved
- Large Scale demonstrator project
- Testing innovative services and products to manage and reduce consumption

WATT& MOI
- Electricity consumption data-tracking system using a secure website
- Testing done through panel of 1000 tenants with Linky meters
- Helping individuals understand and adapt their energy consumption and better manage their energy bills

GREENLYS
- Test all operations over an entire smart grid
- Integrate renewable energy facilities, electric vehicles and Linky in consumers studies
- Experiments conducted in Lyon and Grenoble by a consortium of market players: GDF Suez, Grenoble INP, Schneider Electric, GEG, and more

TRANSFORM
- European research and development program
- Establishing an energy-transition process on a community level: Part Dieu
- Modeling the region’s future energy needs, building performance analysis, brainstorming on new energy planning guidelines.
LYON SMART COMMUNITY
A UNIQUE DEMONSTRATOR IN EUROPE

1st EUROPEAN PROJECT FOR SMART GRID PILOT PROJECT
- The Confluence district, at the front line of Smart Metropolis
- Testing at the district scale what Smart City will be tomorrow
- + economical + liveable + sustainable

A GLOBAL DEMONSTRATOR
- Energy efficiency
- Multimodality
- Role of user and related monitoring tools

30 PARTNERS
50M€ BUDGET
2016 PILOT PROJECT END

An exemplary public-private partnership

GRANDLYON
NEDO
LYON CONFLUENCE
TOSHIBA
LYON SMART COMMUNITY
LYON SMART COMMUNITY

1. MIX PLOT OF SMART, POSITIVE ENERGY BUILDINGS
   - Bouygues Immobilier
   - MANASLU
   - CRB Architectes
   - Kengo Kuma & Associates
   - TATEYAMA KAKAKU GROUP
   - Panasonic
   - AGC
   - JX
   - TECSON
   - TAZAKI
   - selec
   - ingelux
   - DENTIKO
   - ICT SOLUTIONS

2. MOBILITY SYSTEM USING CARBON-FREE ENERGIES
   - transdev
   - PROXIVAY
   - OLISYCE
   - PRDF
   - LATIAT
   - PSA
   - PEUGEOT
   - CITROEN
   - NISSAN
   - CITRUM
   - CITOLUM

3. REFURBISHMENT AND CONSUMPTIONS MONITORING
   - GRANDLYON HABITAT
   - GRANDLYON CONFLUENCE
   - TOSHIBA
   - TOUGH S
   - CEBea
   - Datacenter
   - Toshiba Services
   - MATTI
   - JPS
   - Toshiba Building Solutions
   - Toshiba Infosystems
   - Toshiba Projects

4. MANAGEMENT SYSTEM AT THE DISTRICT SCALE
   - GRANDLYON
   - LYON CONFLUENCE
   - TOSHIBA
   - TOUGH S
   - CEBea
   - Datacenter
   - Toshiba Services
   - MATTI
   - JPS
LYON SMART COMMUNITY 4 TASKS OF THE PROJECT

MIX PLOT OF SMART, POSITIVE ENERGY BUILDINGS

12,000m²
3 buildings designed by Kengo Kuma

34
34 Apartments
34 offices and stores

PV
Energy production
Roof + façades + batteries

MOBILITY SYSTEM USING CARBON-FREE ENERGIES

33 Charging stands
33 Supplied by PV and RE

30 Cars

6 Stations

MANAGEMENT SYSTEM AT THE DISTRICT SCALE

Data Center

Energy consumption monitoring

REFURBISHMENT AND CONSUMPTIONS MONITORING

275 Apartments
275 Cité Perrache

ONLYLYON
The example of LYON SMART COMMUNITY integrates a positive energy program.

Rhône-Alpes region aims at 100,000 energy efficient building renovations each year.

Support from the Greater Lyon authorities.

Lyon, a European pioneer in the field of sustainable development.
Green Building

80% Innovation of the R&D spending in the French construction sector is spent in the Rhône-Alpes region for energy efficient buildings, renewable energy and HVAC.

They are all in Lyon region:

- Lafarge
- Vinci
- Spie
- Eiffage
- Schneider Electric
- Dalkia
- Saint-Gobain
- Tenon
- Indura
- Cofely

R&D / Clusters:

- Cluster Rhône-Alpes Eco Energies
- Geopolis
- Tenon
- Cofely
- Eiffage
- Lafarge

... with combined expertise of civil engineering works and energy efficiency companies

Rhône-Alpes region concentrates the highest number of low consumption sustainable buildings.

the forerunner of clusters dedicated to the French buildings sector with a unique cross-disciplinary approach.
SOFTWARE PUBLISHERS

1st Concentration of software publishers after Paris- Region
Cluster Edit – with 460 members, brings together the software and services sector. France’s only cluster dedicated to this sector.

BILION TURNOVER

in Lyon and its region

Software Publishers

They are in Lyon

Top Ten Publishers

Performant SMEs

Addicted to Lyon

... with 1000 companies and 33,000 employees
2000 researchers
8 Universities
50 R&D laboratories

€3.5

Accelerator dedicated to software publishers

Incubator dedicated to software publishers

Axeléo

Cluster Edit – Software in Rhône-Alpes
Pôle PIXEL, Lyon’s very own cinecittà

- Lyon, historical city of images
- birthplace of Cinema in 1895 & Infogrames in 1983
Major Events in Lyon & Around

Competitiveness Cluster dedicated to contents
More than 150 members including Arkane, Ubisoft, Namco Bandai, Team To, Folimage

175 collaborative R&D projects for €350M
85 projects for €130M
(FUI, ANR, Serious Game, Go Innovation, OSEO)

DIGITAL CONTENTS

Regional Fund for co-production of feature films.
€3.5M/year

Dedicated platform for recruitment by Imaginove

They are in Lyon

Top Companies

Schools & Major Labs

And many more....
Top People, Booming Businesses, and excellent infrastructures supporting a thriving digital reality
400 Web companies within the Greater Lyon

22 000 jobs related to the web sector within the Greater Lyon

Lyon Web Community

An association to boost web entrepreneurship, at all levels

WEB COMPANIES

They are in Lyon

Some Companies

Events

OpenCoffee Lyon

And over 200 digital-themed events every year

Addicted to Lyon
TELECOMS

- Greater Lyon’s overall digital strategy structured around 3 axes, including telecoms
- Making the environment a motor for development through telecommunications infrastructures taking environmental issues into account
2nd region for telecommunications services in France

GDP (industry & services): €5.2 billion
21,000 employees
3rd competency centre in France
Field of Excellenc in optics & wireless networks

LyonIX 1&2, Internet Exchange Point allows operators and Internet service providers to exchange IP traffic without going through distant infrastructures.

Develops very high speed Internet by operating Internet eXchange Points (IXP) and by implementing ICT related services. Hosts and organizes regular events for Internet and telecoms professionals.

TELECOMS

OTHER NETWORKS

Réseau Métropolitain Universitaire (RMU)
Network connecting educational and research institutes

Réseau Métropolitain des Télécommunications (RMT)
Shared network built by private or public operators

OPERATORS

Major national operators (Orange, SFR, Colt, Completel, Numéricable, Free, etc.);
Historic operators from other countries (BT, TI, DT, etc.);
Global IP operators (Level 3, Global Crossing, Interoute, Cogent, etc.);
Local operators (MWSP, Jaguar, etc.);
Mobile operators (Orange, SFR, Bouygues, Free, etc.)
Funding & Subsidies; various supports for the financing of your start-ups and for every step
Financing your Company

Regional & local subsidies and loans.

IDéclique Potential: loan from 75 K€ to 150 K€/8 years

15 K€ subsidy for the creation of innovative Start-ups

Fond Innovation du Rhône Max. loan of 40K€

At every key step of your growth.....
TAX CREDIT FOR RESEARCH: A MAJOR ADVANTAGE IN FRANCE

ELIGIBLE COMPANIES

- Any company performing R&D operations in France is eligible to receive the research tax credit.

- R&D operations mean operations involving basic research, applied research or experimental development using prototypes or pilot plants which contribute to advances through the implementation of a solution that exceeds state of the art.

APPLICABLE RATES

- The research tax credit is 30% of eligible R&D expenses, up to €100 million, and 5% for any further expenses above €100 million.

Sources: Invest in France Agency 2013
The government wants France to become a “Startup Republic” by supporting innovative companies to set up and grow.
WHAT IS LA “FRENCH TECH”

- **ATTRACTING INTERNATIONAL TALENTS**
  - Talent Passport: simplify & ease VISA obtenition
  - French Tech Ticket: 25k€ subsidy for selected foreign start-ups setting-up in France

- **PRO-BUSINESS STRUCTURAL REFORMS: « The French Tech Initiative »**
  - €215 million in support to accelerate the growth of digital start-ups
  - Policies to make the digital economy a key part of France’s investment attractiveness

- **NETWORK OF FRENCH CITIES**
  - design a network of local, urban innovation ecosystems: The French Tech Cities

- **ACCELERATION PROGRAM**
  - The State will invest 200M€ in acceleration programs.

- **INTERNATIONAL CAMPAIGN**
  - Improving the visibility of the French Tech ecosystem with a marketing budget of €15 million.
LYON: A STRONG POLICY OF INNOVATION

17TH IN THE WORLD AND 5TH MOST INNOVATIVE CITY IN EUROPE
ACCORDING TO THE AUSTRALIAN “2THINKNOW INNOVATION CITIES GLOBAL 256 INDEX”
(256 CITIES RANKED ACCORDING TO 162 CRITERIA OF INNOVATION, IN 2011)

TOP CITY FOR INNOVATION IN FRANCE OUT OF 115 CITIES
(ACCORDING TO L’ENTREPRISE MAGAZINE, 2012)

- 600 public and private laboratories
- Nearly 13,300 research scientists (25,900 in Rhône-Alpes), including 1800 foreigners
- 5700 doctoral candidates, 800 theses per year

| 5.2 billion euros invested in regional R&D in 2010 (about 12% of R&D investment in France) |
| The Rhône-Alpes region: 2nd highest number of patents with more than 200 families of active patents. 10th highest number of European patent applications, 5th highest R&D expenditure in Europe (€4 million in 2011) |
| Rhône: 595 patents in 2011 (over 30% of the Rhône-Alpes region’s patent) |

ADERLY- INVEST IN LYON

Lyon Area Development Agency
IS A NON-PROFIT INVESTMENT PROMOTION AGENCY

SINCE 1974, WE HAVE HELPED OVER 1000 COMPANIES TO SET UP IN LYON

- Our mission is to promote the Lyon region and facilitate the set-up of companies

- Our services

1. Support in your decision

   - MARKET INFORMATION
   - FINDING SUBSIDIES
   - LEGAL ADVICE
   - LOCAL NETWORK

2. Once you have chosen Lyon

   - HR & MOBILITY
   - BUSINESS REAL ESTATE
   - PRESS RELATIONSHIPS / COMMUNICATION
   - AFTERCARE
7 KEY STEPS TO SET UP YOUR COMPANY

**STEP 1**
Decide on company form and draft business plan

**STEP 2**
Have temporary address in business center

**STEP 3**
Open bank account to receive capital

**STEP 4**
Filing incorporation documents of the CFE

**STEP 5**
CFE communicates information received to: tax offices, INSEE, URSSAF, Commercial Register

**STEP 6**
Obtain INSEE number (company registration number) & Kbis statement

**STEP 7**
Find definitive office & recruitment
# Subsidiaries Are the Main Implementation Forms

<table>
<thead>
<tr>
<th>Representative Office</th>
<th>Branch</th>
<th>Subsidiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing expansion into new market</td>
<td>Foothold for commercial activity</td>
<td>Sales / manufacturing</td>
</tr>
<tr>
<td>conversion possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only prospecting, advertising, logistics</td>
<td>Commercial operations</td>
<td></td>
</tr>
<tr>
<td>Parent companies liability</td>
<td>Own liability</td>
<td></td>
</tr>
<tr>
<td>Not eligible to French fundings</td>
<td>Eligible to French fundings</td>
<td></td>
</tr>
<tr>
<td>Employees/no legal rep.</td>
<td>Legal representative necessary</td>
<td></td>
</tr>
<tr>
<td>Only local &amp; payroll taxes</td>
<td>Corp. income taxes/VAT</td>
<td></td>
</tr>
<tr>
<td>Ability to open bank account/phone lines</td>
<td>Company registration under French law</td>
<td></td>
</tr>
</tbody>
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