

TRILHOS:
EFICIÊNCIA E
NOVOS RUMOS



Moving towards a better city

Corporate International relations

Philippe MARTIN – RATP GROUP Executive Vice-President

SAO PAULO – September 3, 2019



Paris Region : Political administration

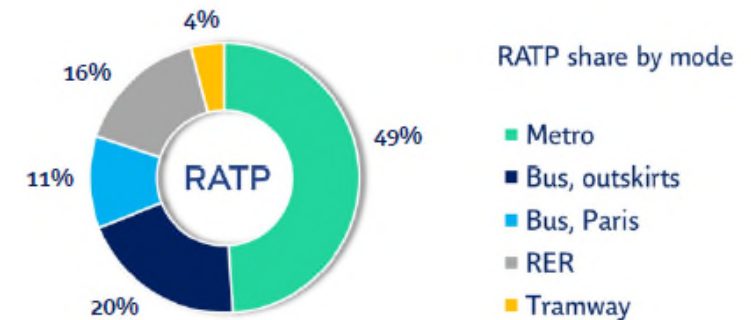


A very dense territory:

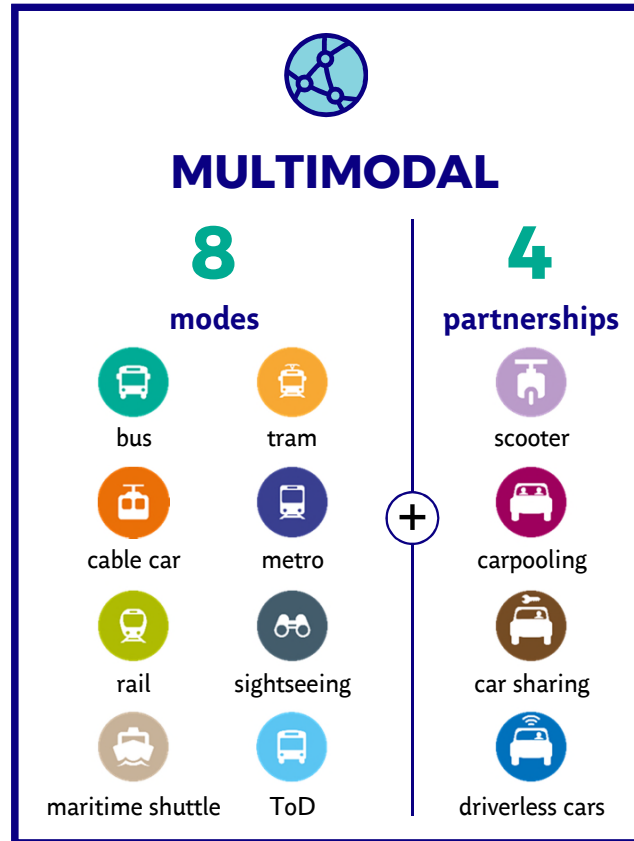
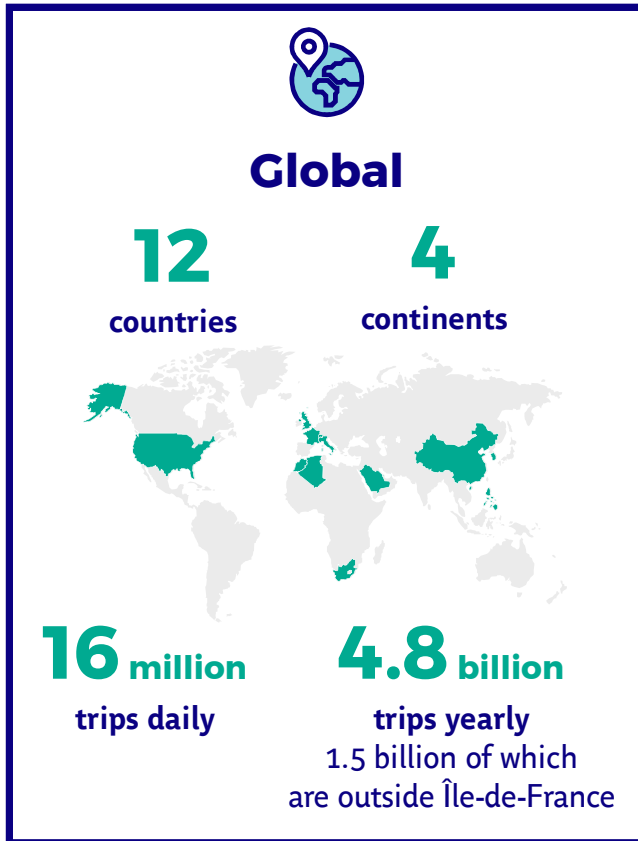
- 2,2% of mainland France
- 12 million inhabitants (19% of France's population)
- 23% of the working population (6 million people)
- 29% of France's Gross Domestic Product (GDP)

High demand for transportation and commuting

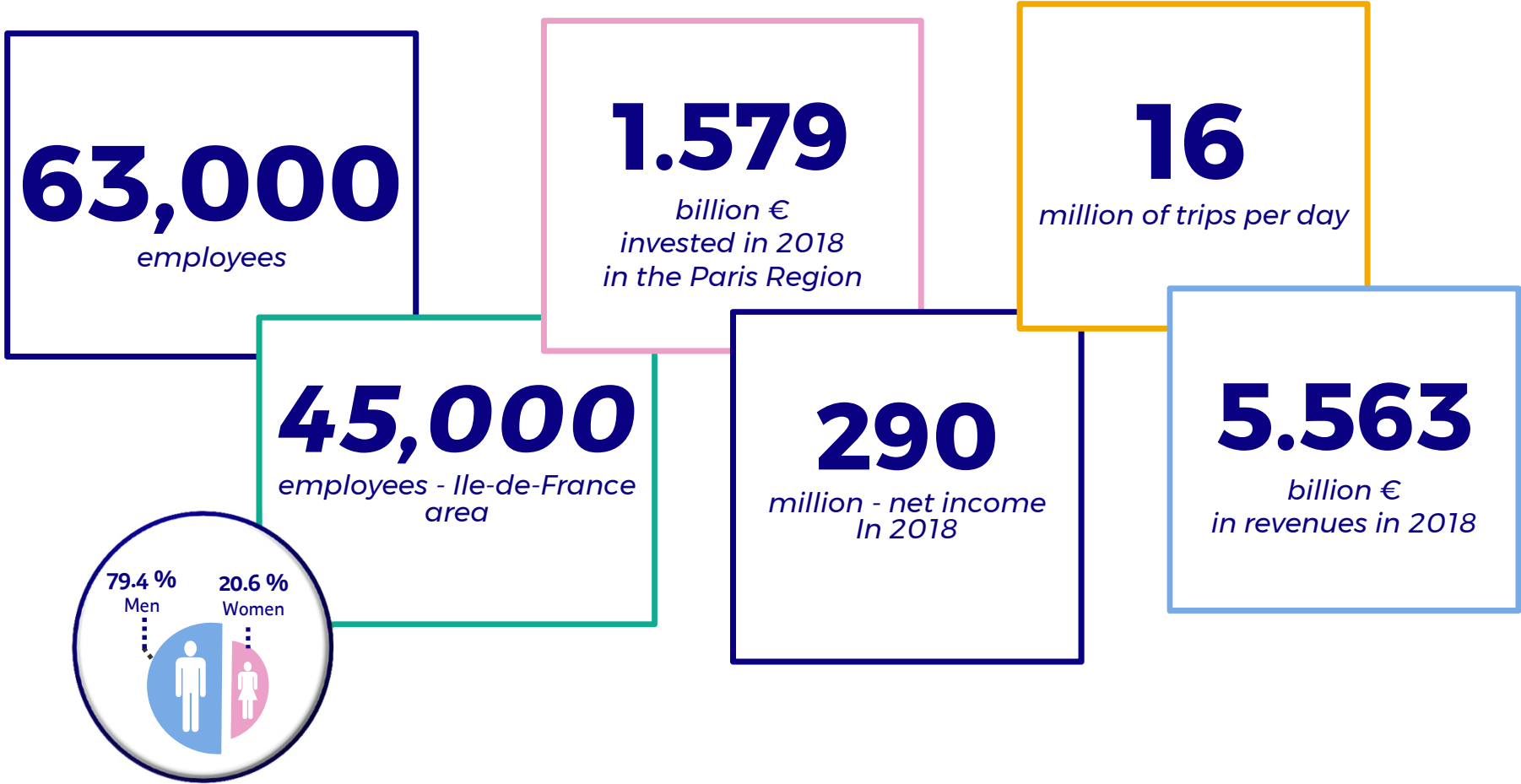
- 2 main rail operators and more than 50 bus and coach operators
- 4 billion journeys per year are made in the Paris Region
- Created in 1949, RATP manages 75% of all journeys



A global leader in transport engineering and operations



RATP Group: Corporate figures



RATP in Central Paris Region : one of the most dense multimodal networks in the world

Average daily ridership



METRO - 5.6 million



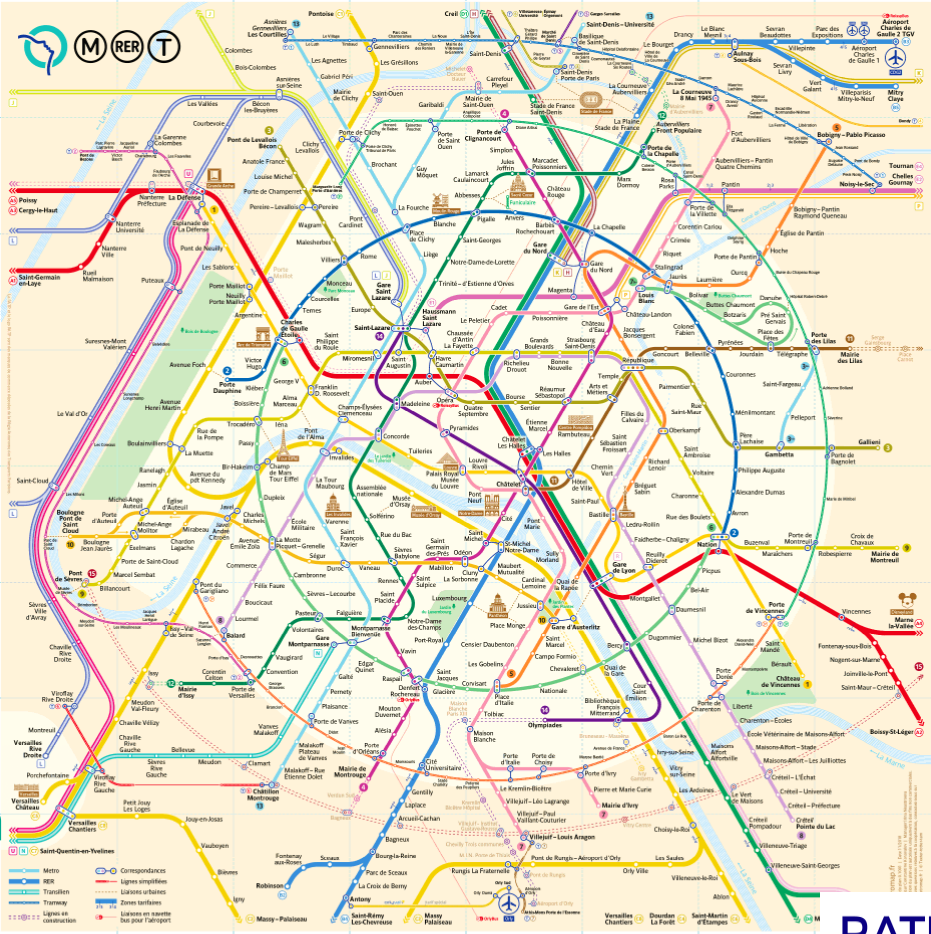
BUS - 3.6 million



TRAMWAY - 1 million



REGIONAL RAILROAD - 2.4 million



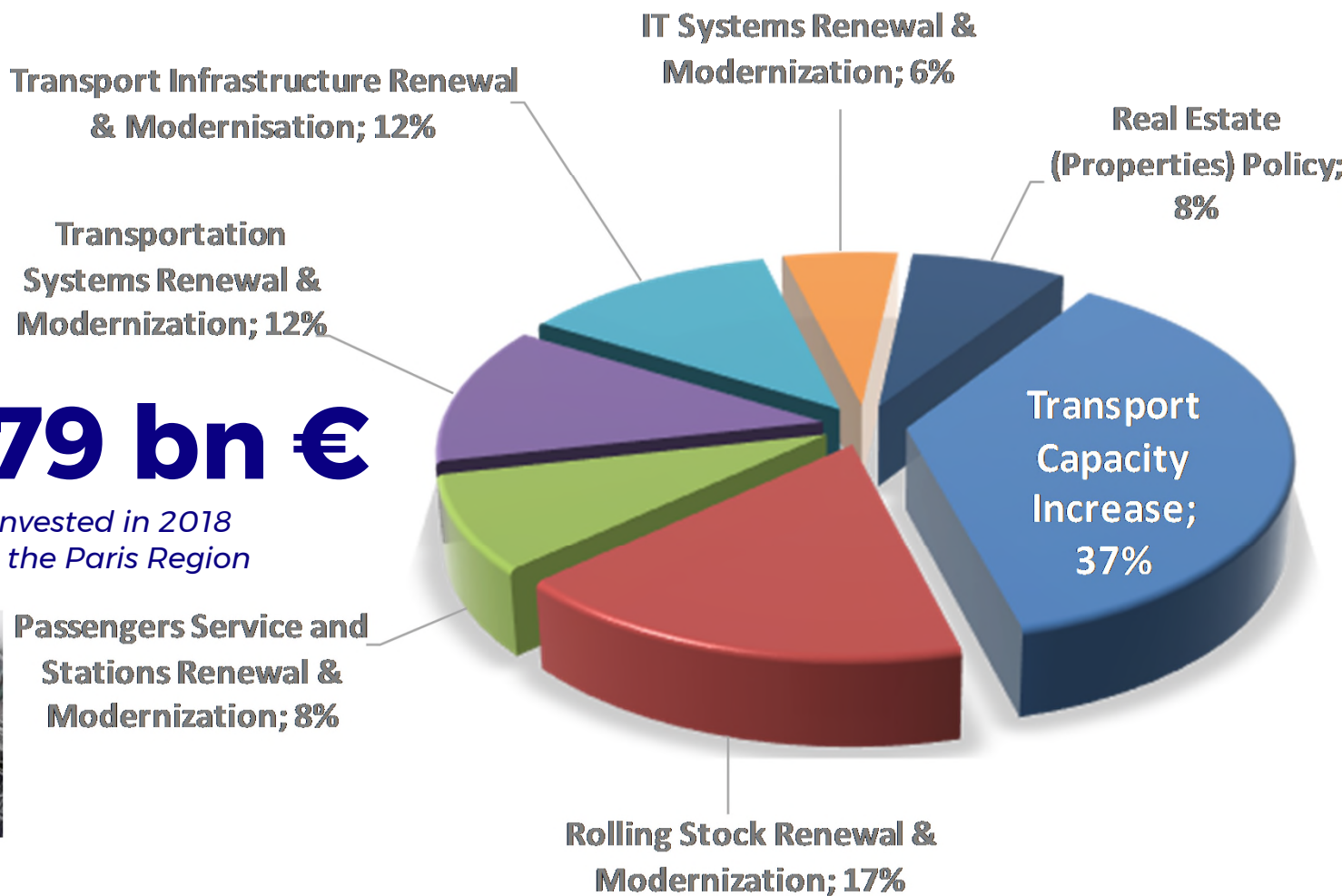
Investment in transport capacity and modernization



1.579 bn €

*invested in 2018
in the Paris Region*

RATP's Investment Distribution



An integrated multimodal network - Metro -

Paris Metro:

High density, historic network (c. 1900) which has a necessity to adapt to an increasing demand in traffic, through many projects.

14

lines

120

seconds headway
between trains

5.6

million
passengers on
average per
day

303

stations

10,200

video cameras

85

seconds
headway for
driverless lines

215

km of lines

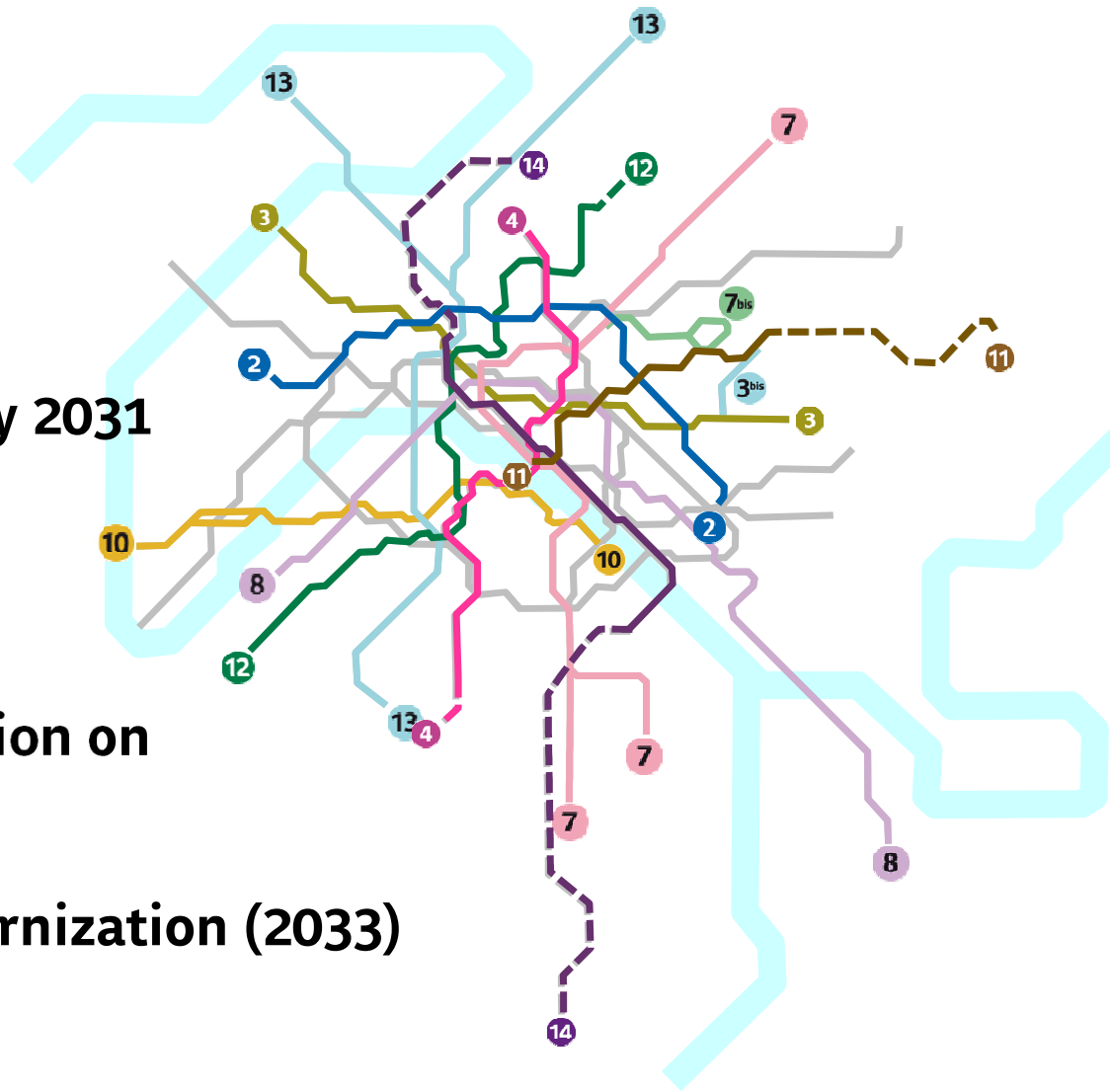
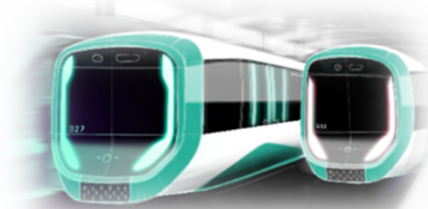
2

driverless lines



Ongoing Metro Modernization

New Rolling Stock for Steel Metros by 2031



Network expansion: + 31km of extension on existing lines by 2024 **4 11 14**

Capacity upgrades via signaling modernization (2033)

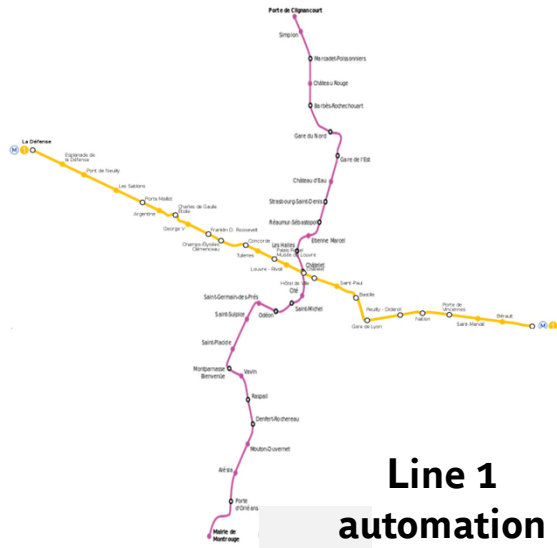
CBTC GOA 4: **1 4 14**

CBTC GOA 2: **2 3 5 6 9 11**

Line 4 GoA2 → GoA4 Automation

Line 1 automation without traffic interruption was a worldwide first. After this success, RATP decided to automate Line 4.

Line 1	Line 4
1900	1908-1910
17 km, 25 stations	14 km, 29 stations
East / West backbone	North / South backbone
Complementary capacity for RER A	Complementary capacity for RER B
1st heaviest traffic : > 725 000 trips / d	2 nd heaviest traffic: > 700 000 trips / d



Line 4 automation : new challenges ...

- Line extension** in parallel
- Three different generations of automated rolling stock**

>98% satisfied passengers

Less than 1% passengers disturbed

13500 night work sites 2007 - 2011

+ 30% capacity

100% peak hours passages

RATP: world leader in unattended metro operation

Functional performance



+30% capacity
Line 1

Immediate response to demand



Fast recovery after an incident

High-qualified jobs for staff



Streamline train performances

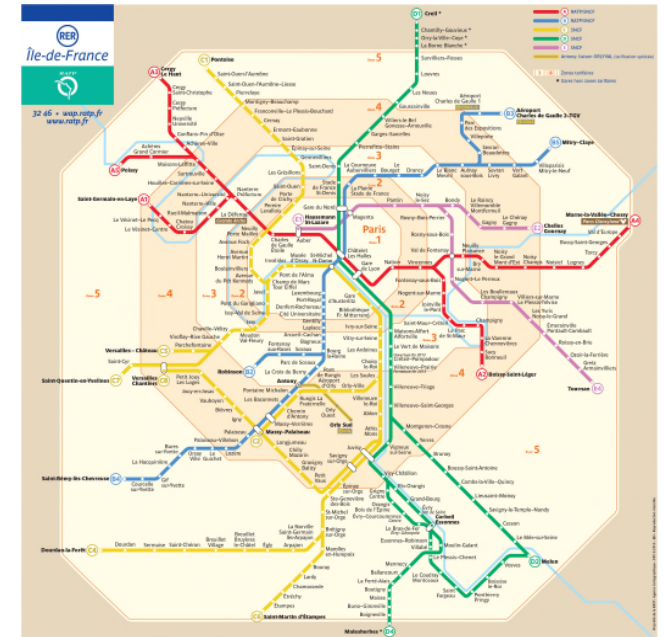
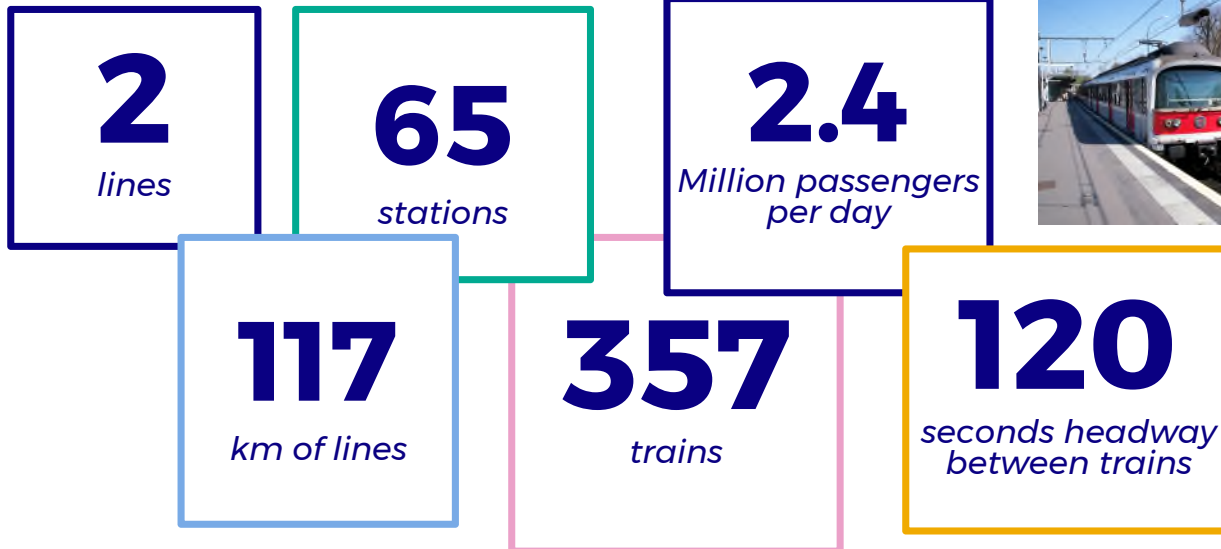


Decrease in OPEX costs

An integrated multimodal network - Regional railroad -

Ile-de-France regional railroad

Performance resulting from **transit speed** and small headways between trains. Regional network carries out a **structuring** role for the areas it serves



RER A

GoA1 → GoA 2

Modernization



RER A Automation using Automated Train Operation (ATO) over Automated Train Protection system

Results

- ✓ *2 minutes less in central section*
- ✓ *+ 5 km/h : central section average revenue speed*
- ✓ *27 trains / h / s (central section)*
- ✓ *Improve regularity, reliability*

SACEM : **ATP system with Cab-Signal**, using fixed block and rail transmission, allowing **2 minutes headway with 224m trains**

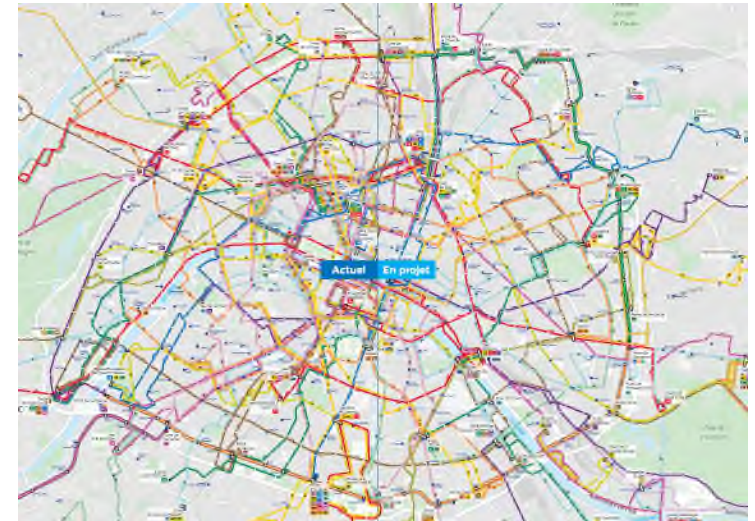


Bus network

BUS Paris and suburban buses:



April 2019: 50 lines and 4 000 stops modified overnight to adapt routes to Paris' changing needs.



Major project : energy transition

« Bus 2025 » - high-tech eco-friendly fleet programme

Bus tested on operating lines from several suppliers

Charging systems

- long night charge in depot
- opportunity charging at bus terminals
 - by standard plug (n° 115)
 - by reverse pantograph (n° 126)

Implementation

- 77 buses
delivery 2019
- 800 bus - tender - 3 batches
(400 Million €)
commitment 2019 – delivery 2020-2022

800
electric buses
2 years tender

**2019 : 1st order 150 vehicles
-3 suppliers
(133 Million €)**



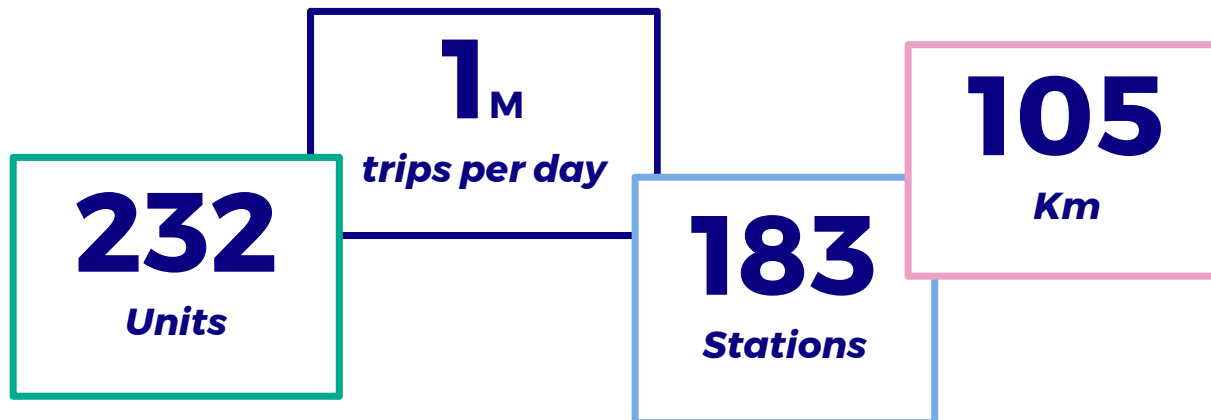
An integrated multimodal network - Light rail -

T Paris tramway network:

Light rail solutions support quality of urban life policies and make public surface transport more attractive

A new network growing since 1992 fully connected with metro and RER with an impressive impact on demand

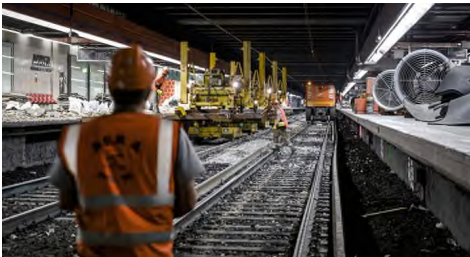
8 lines in the Paris Area: transport operations and city Embellishment coupled with real-estate development



RATP Group : The company

Key partners and suppliers

- RATP or RATP Subsidiaries to partner on innovation or bids
- Integrated operator and infrastructure manager, with many subcontractors & purchasing, such as:



Contracting and
infra. maintenance



Rolling stock



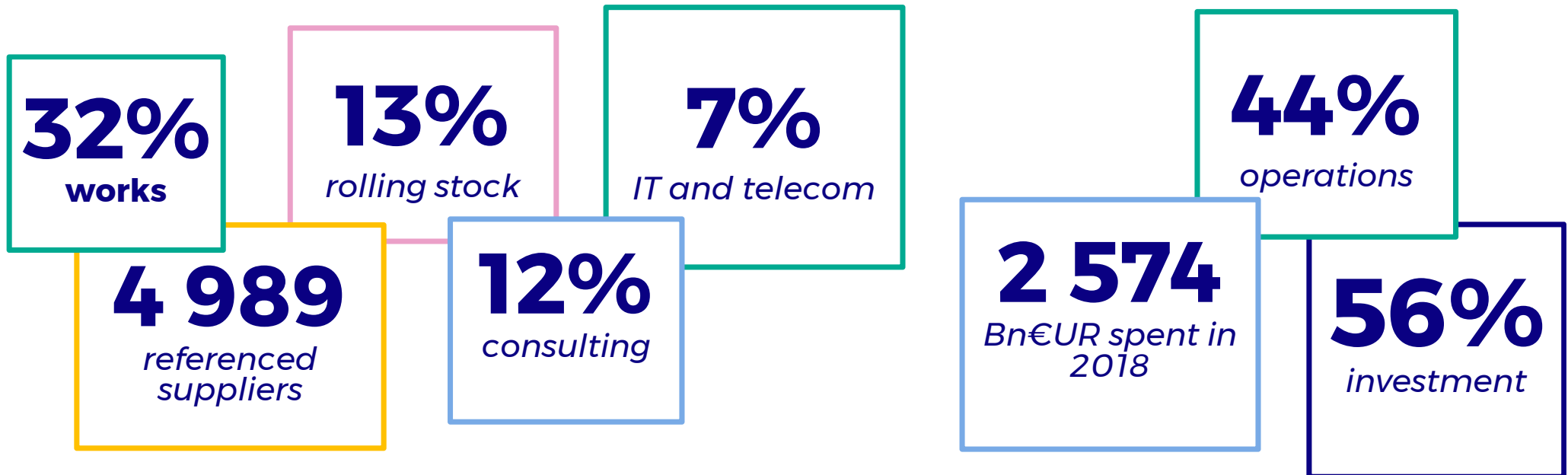
Cleaning & facility
management



Rail safety systems
& IT services

- RATP: state-owned company subject to public sector tender rules in France

Purchasing - Key Figures



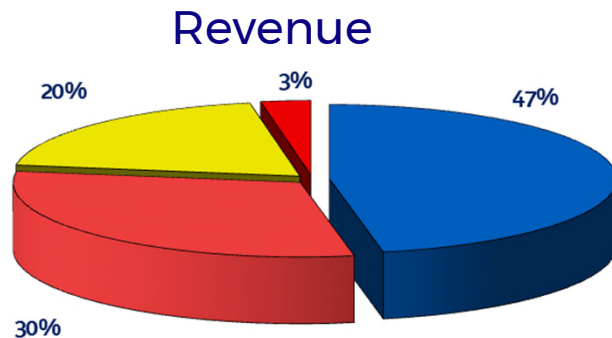
- RATP is a state-owned company and goes through to tender processes for purchases
- Beyond financial and technical, social and environmental criteria are compulsory

Business Environment: one PTA for all of the Paris Region

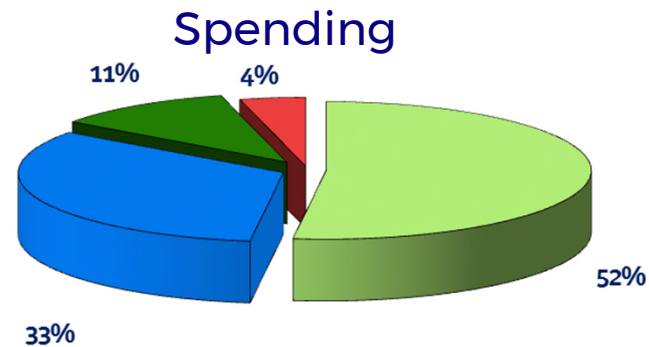


The Île-de-France Mobilités – Public Transportation Authority of Ile-de-France area

Annual budget (for operations) :
10 bn€ / year



- Transport tax + Transit pass refund
- Ticket sales revenues
- Public subsidies
- Advertising / fines



- RATP
- SNCF
- Optile
- Special operations

Only bus & tram services subject to tendering (new lines, Olympics, COP21, railworks substitution) until 2020.

Scheduled tenders for railway O&M

2020/2029 (exp.): intercity railway lines in France

- Full commercial risk for high-speed & long distance
- Tenders & subsidised operation for regional rail

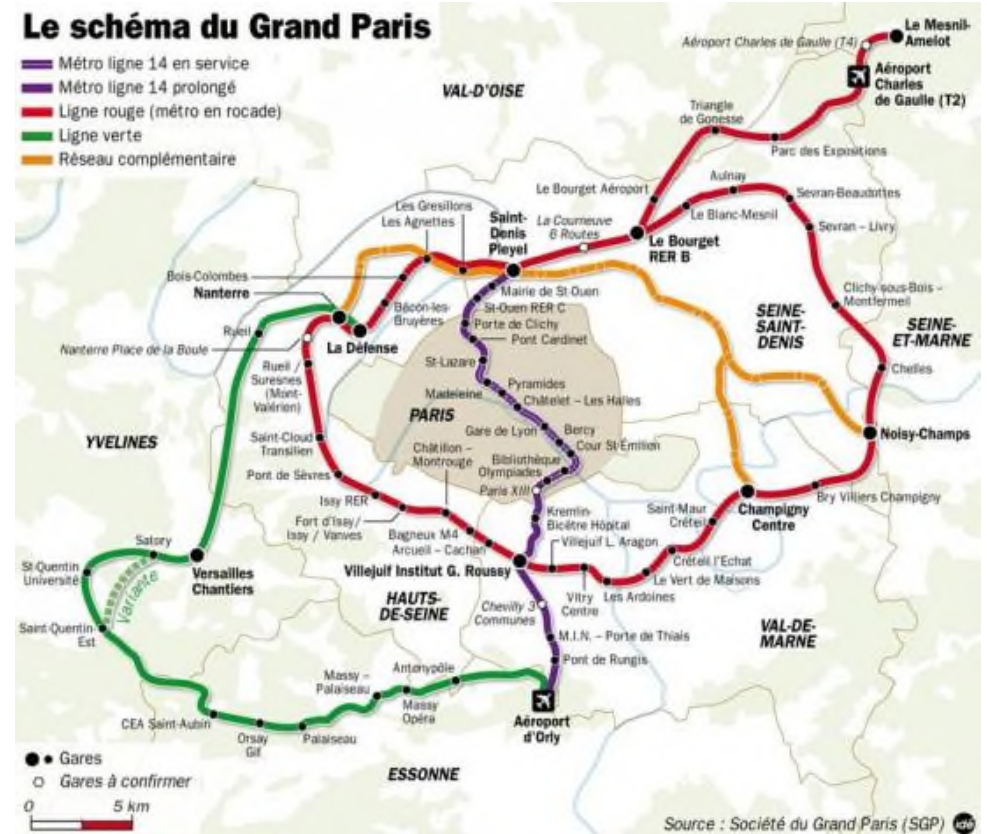
Greater Paris Driverless Metro O&M

- 2022 (exp.): Line 15, 16 and 17
- 2024 (exp.): Line 18
- 2030: network expansion with existing lines

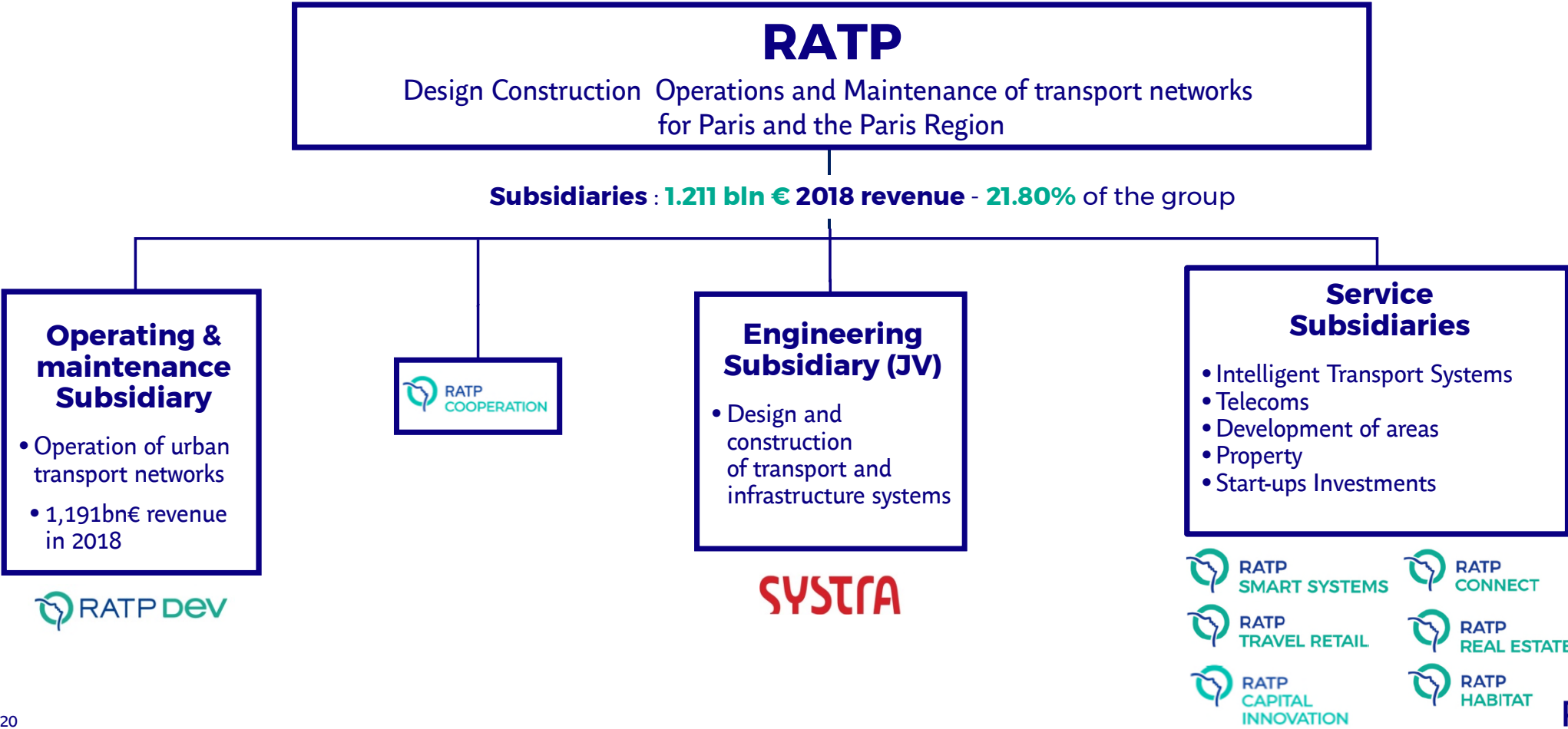
Opportunities on the current network

- Tramway: tenders from 2029
- Metro and urban rail from 2039

RATP will remain the sole actor in infrastructure management, projects and maintenance.



RATP Group : Overview



Metro and heavy rail expertise around the world

M Foreign Metros

Algiers metro (Algeria)

Doha metro, 3 lines GoA4 (Qatar)

Riyadh metro, 2 lines GoA4 (Saudi Arabia)

Manila metro line 1 (Philippines)



RER Foreign Regional Rail

GAUTRAIN

Johannesburg – Pretoria Intercity

→ 77kms in operation including airport link

→ 10 stations with 900 security personnel



Light rail operated by RATP Group abroad in 2019



WASHINGTON (USA)

- Operating started in February 2016
- 3.9 km
- 8 stations
- 4 000 passengers/day



CASABLANCA (MAROCCO)

- Operating started in 2012
- 47 km (2 lines) – +2 new lines under construction (total future network 74 km)
- 70 stations
- 130,000 passengers/day (line 1)



FLORENCE (ITALIA)

- Operating started in 2010
- 16,8 km
- 2 lines
- 38 stations
- 35,000 passengers/day (line 1)
- 37 M p/y expected



LUSAIL (QATAR)

- Open at January 2019
- 18 km
- 4 lines
- 25 stations
- 50% underground network



HONG KONG (CHINA)

- Operating started in 1904 operated by joint-venture RATP Dev/TRANSDEV since 2009
- 30 km
- 6 lines
- 120 stations
- 230,000 passengers/day



TUCSON (USA)

- Operating started in 2014
- 6.2 km
- 23 stations
- 4 000 passengers/day



CONSTANTINE (ALGERIA)

- Operating started in 2013
- 8.1 km
- 10 stations
- 25,000 passengers/day



ORAN (ALGERIA)

- Operating started in 2013
- 19 km
- 32 stations
- 32,000 passengers/day



ALGER (ALGERIA)

- Operating started in 2011, operated by RATP Dev in 2012
- 20.4 km
- 32 stations
- 60,000 passengers/day



SIDI BEL ABBES (ALGERIA)

- Operating started in July 2017
- 14 km
- 22 stations



OUARGLA (ALGERIA)

- Operating started in March 2018
- 12.6 km
- 23 stations



SETIF (ALGERIA)

- Operating started in May 2018
- 17.8 km
- 26 stations

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Bus networks operated on 3 continents

BUS Other cities (RATP Dev)

French cities (20 networks) :

- Aix-les-Bains, Angers, Annemasse (MaaS), Brest, Bourges, Cluses La Roche sur Yon, Lorient, Moulins, Saint-Malo Agglomeration, Vannes, Vienne, Vierzon, Valenciennes,
- Cross-border line (France-Switzerland)

Foreign cities :

- Modena and Tuscany (Italy)
- Washington, New York, Texas, Pennsylvania and Georgia (USA)
- London, Bournemouth, Bath, Manchester (UK)
- Riyadh (Saudi Arabia)

Sightseeing :

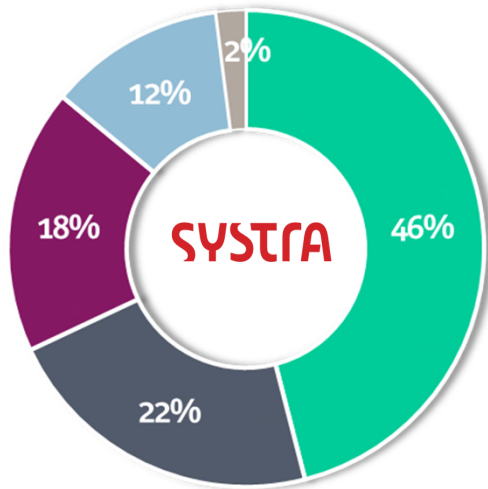
Paris « Open Tour », London « The Original Tour », Hong Kong Tramway



RATP Group Engineering Subsidiary: SYSTRA

SYSTRA

Industry leader in engineering and project management



Main areas of expertise

- Engineering
- Construction Management
- Project Management
- Consulting
- Others

80 countries
(References in 150 countries and 350 cities)

6,700
employees

3,000
projects

585
million €
Revenue in 2018

70%
Outside
France



Santiago de Chile, Chile
(lines 1, 2, 4, 3, 6, extensions, upgrading)
Design and PMC



Kuala Lumpur LRT3, Malaysia
Design

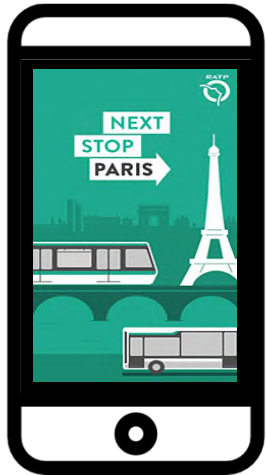
Thank you for your attention



RATP Smart Systems



« Next Stop Paris »



New free phone application - 10 languages

(French, English, German, Dutch, Italian, Spanish, Japanese, Mandarin, Russian & Portuguese)

To help tourists visiting Paris by metro

- Personal location
- Mapping of itinerary
- Metro, bus, RER and tramway networks maps
- Paris streets maps
- Information about Paris sights of interest

2 million clients

With or without web connection

Projects: IMAGE & Zenway

IMAGE :

- Real time and multimodal PIS (Passenger Information System)
- 3100 screens settled at bus, metro and RER stations
- To keep passengers informed between connections
- To improve transport connections



Ratier		9:12	
Point du Gargillan	7:17	Point de Sèvres	7:17
Porte de Vincennes	7:17	Nanterre-Préfecture	7:17
Métro G. Pompidou	7:17	Gargis - Saclay	7:17
Gare du Nord	7:17	St Denis - St de Paris	7:17
Place Babant	7:17	Porte de Valnes	7:17
Métro G. Pompidou	7:17	Champs	7:17
		Place de Geste	7:17

Zenway :

- Access to information or services related to transport (about routes passing through the site, next bus or train real time schedule, seeking for a route on the rail network), and information neighborhood (plans, restaurants, hotels and nearby attractions, with pedestrian paths to get there).
- Access to information on mobile phone using QR code and NFC Tag.
- 60 stations equipped



7 Languages

RATP Connect



IT and Telecom Network Management

created in 1997 100% RATP subsidiary

- builds and operates fibre optic cable RATP's network (2 000 km) of RATP's rail network
- sells dark fibre telecommunication system (90 000 km)

Offer :

- connection of client networks to cloud and Data Center
- system maintenance during the contract (1 to 20 years)
- dark fibre telecommunication system between sites (Paris region)

Projects :

- 3 G / 4G deployment – all stations will be equipped at the end of 2019
- Wi-Fi access points & “ Connect point ” Wi-Fi areas
 - 100 stations will be covered at the end 2019

2018 revenue

19.4
million €

131
clients

37
employees



RATP Travel Retail



Transit Spaces Management & Marketing

100% RATP subsidiary, created in 1971

to implement and promote shops and services in the Paris area

- Taking into account commuters needs
- Planning policy for shops expansion with global brands and local shopkeepers (60 %)

4 large transportation hubs with shops

- La Défense (73 shops & services), Gare de Lyon, Opera-Auber, Châtelet

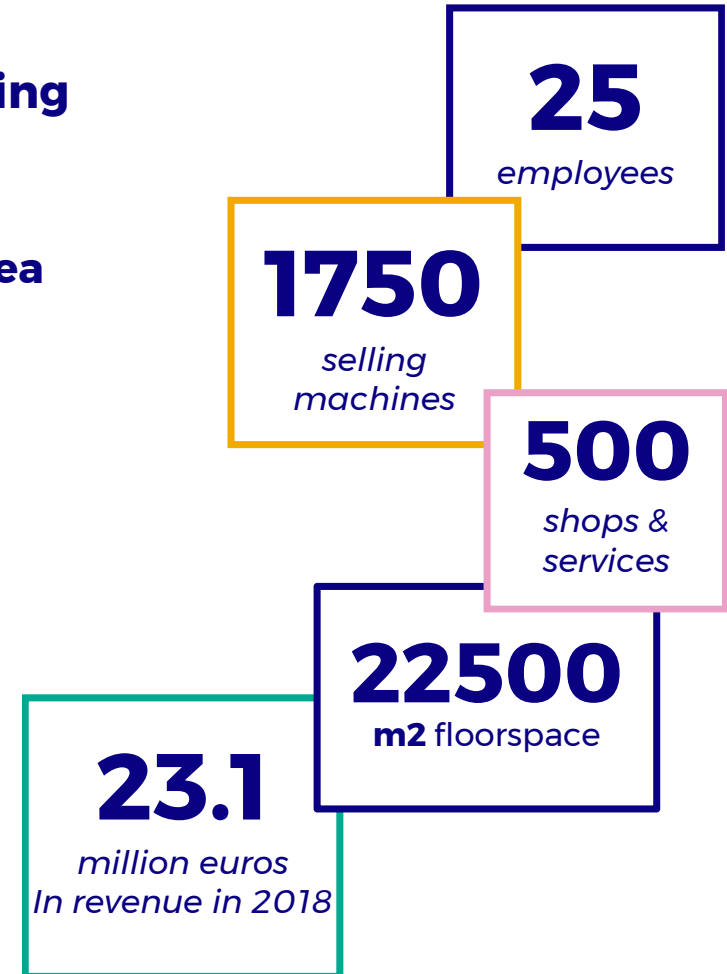
Consultancy references

- Lyon : 800 m2 retail floorspace / 20 shops – 100% local shopkeepers
- Toulouse, Algiers, Brussels, Lisbon, Buenos Aires

Cycles parking services

Concierge services

16 points : Quatre Epingles & Lagardère Travel Retail France



RATP Group : a new vision on integrating industrial sites



« Jourdan – Corentin – Issoire » workshops

2018 - Grand Prix de la Région Capitale : Urban development price



145 M €
40,200 m²
Net floor area

Urban co-construction : RATP – as a Project Manager

3 architectures, multi-use conception (2017)

- Public transportation : workshops and bus parking area (200 places for buses, 200 places for private cars)
« Montrouge » bus depot (built in 1860) modernisation project
– cost 48 M €, financed by surface real estate programme
- Equipment : nursery (66 children), kinder garden (33 places) for Paris City Hall, city associations activities space (Paris 14th arrondissement)
– financed by Paris City Hall,
- Commercial areas
- Housing : construction of over 660 new flats above bus parking area
 - 365 flats for students
 - 193 flats for social housing (3/4 - for RATP employees)
 - 108 private flats
– financed by State, Ile-de-France Area Council, Paris City Hall, Caisse des Dépôts (bank), Amallia Act. Logement

