

# INDUSTRIAL POLICY 2021-2025 IN PARIS

### 2019 INVESTOR DAY





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Having in Paris unique infrastructures in Europe



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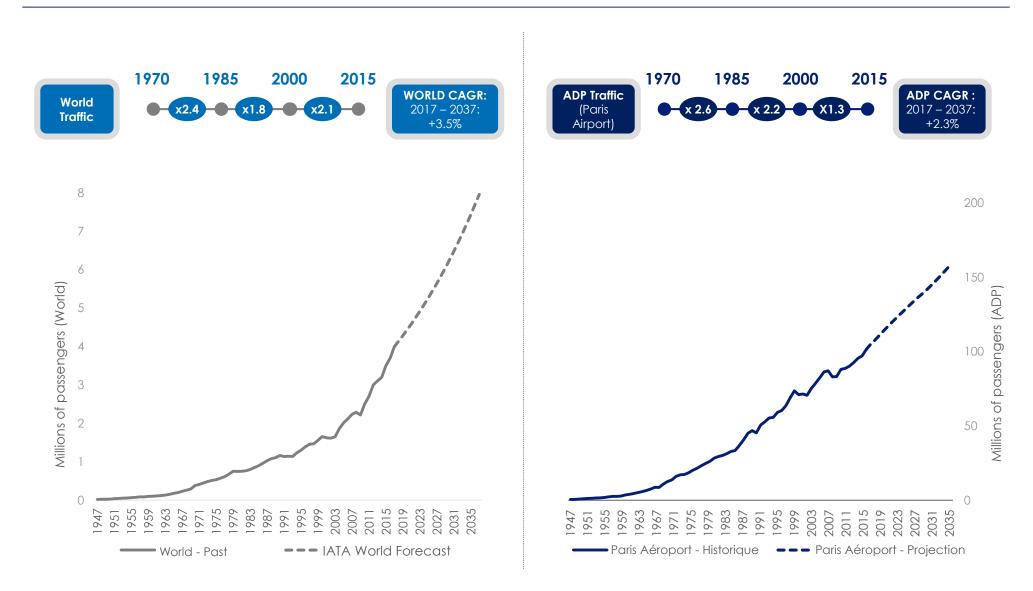
C One promise Guarantee accessibility and fluidity



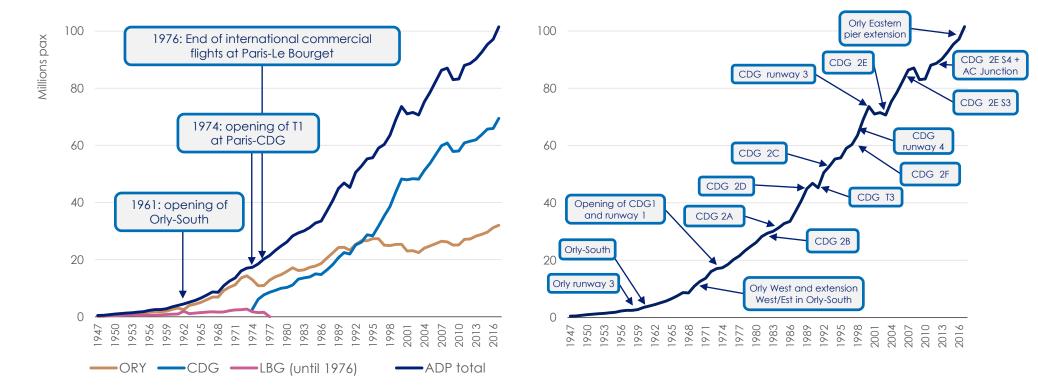
# One Advantage

Having in Paris unique infrastructures in Europe

### A GLOBAL AIR TRAFFIC IN CONTINUOUS GROWTH, RESILIENT TO CRISIS



### A PARISIAN AIRPORT SYSTEM THAT HAS MANAGED FOR THE LAST 70 YEARS TO SUPPORT THE GROWTH OF TRAFFIC



### ONE ROOF APPROACH AT THE HEART OF THE ERA 2016-2020



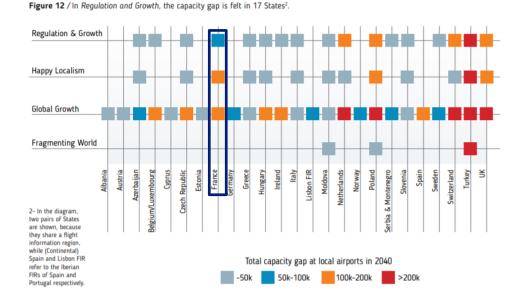






## A NEED OF INFRASTRUCTURES IN EUROPE AND A UNIQUE CAPACITY OF DEVELOPMENT IN PARIS

### An important need of infrastructures in Europe



Eurocontrol has warned about a risk of capacity deficit of around 4% of the flights in 2025

IATA highlights the need to provide Europe with new infrastructres in order to match demand

Source : COHOR, STAC, FAA, Virginia Tech - Air Transportation Systems Laboratory – 2017 data

1. FRA : configuration : one twin parallel runways and one parallel runway

2. AMS : configuration : three parallel runways or two parallel runways and one secant runway.

## A capacity of development in Paris

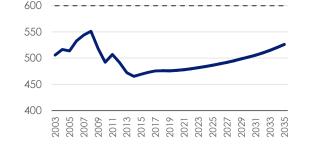
Airports	CDG	LHR	FRA	AMS
Runways configuration	The cost			L.
Number of runways	4	2	4	6
Configuration	Two twin parallel runways	Two parallel runways (non- independant)	One twin parallel runways, one parallel, one secant	Three parallel runways, three secant runways
Theoritical max. capacity (mvt/h)	180	90	<b>135</b> <sup>(1)</sup>	130 - 140 <sup>(2)</sup>
Airport coordination capacity (mvt/h)	120	90	100 + 2	110
coordination capacity	79.7 %	<b>98.8 %</b> (threshold 480 000 movements)	<b>89</b> %	<b>97 %</b> (threshold 510 000 movements)
Nb of movements 2017	475,654	474,025	475,537	496,747

The two twin parallel runways of CDG give the best capacity and highest growth potential (+50%) in Europe

### A NEED OF INFRASTRUCTURES IN EUROPE AND AN UNIQUE DEVELOPMENT CAPACITY IN PARIS

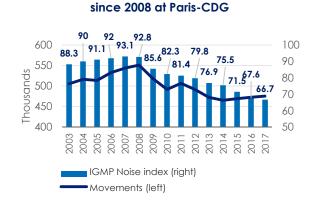
Total aircraft movements at Paris-Charles de Gaulle below the threshold of the Noise Exposure Plan

Actual and forecasted annual movements at Paris-Charles de Gaulle



At Paris-Charles de Gaulle, a **moderate growth in the number of movements** is expected in the coming years, without exceeding the planned revision thresholds of the Noise Exposure Plan (600,000 annual movements).

#### Noise index at Paris-Charles de Gaulle



IGMP noise index in strong decrease

At Paris-Charles de Gaulle, the noise index has significantly decreased since 2008. **Moderate growth in movements**, fleet modernization, the limited growth of night flights and new flight paths will lead to **contain the increase of the noise index.** 

### A passenger traffic growth not impacted by the movements ceiling at Paris-Orly



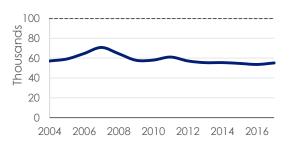
Actual and forecasted total annual

In Paris-Orly, traffic forecasts indicate that the 250,000 movements ceiling will not be reached in the medium term

Assumptions regarding slots usage or the number of passengers per movement could further delay the reach of this cap :

- An increase of an average of 4 passengers per flight (driver 1)
- Optimization of 10 short-haul slots per day (driver 2)
- Optimization of 15 long-haul slots per day (drive 3)

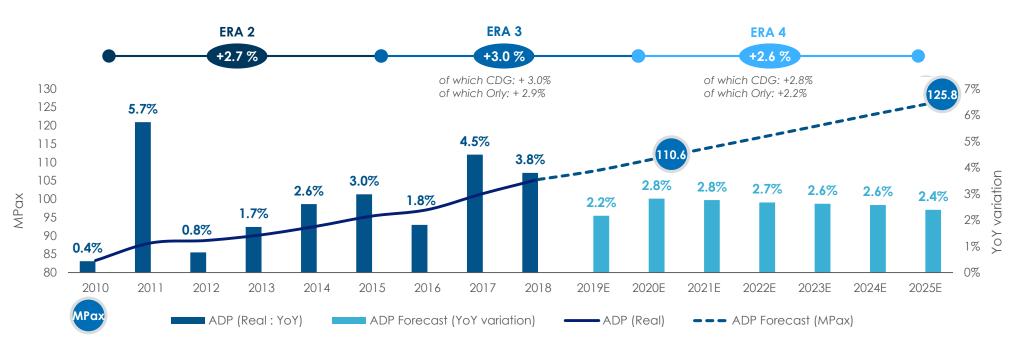
### Total movements at Paris-Le Bourget are below regulatory caps



#### Paris-Le Bourget: Annual movements. vs. ceilina

At Paris-Le Bourget, the annual movements number is significantly below the renegotiation threshold enforced by the Noise Exposure Plan (100,000 annual movements).

### AN ASSUMPTION OF AIR TRAFFIC GROWTH IN CONTINUOUS GROWTH IN PARIS FOR THE ERA 2021-2025



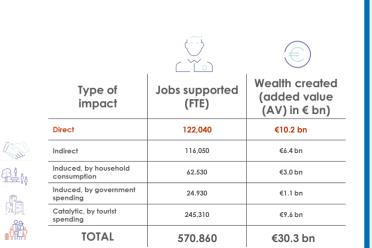
Note : 2019 forecast in the middle of the guidance scale of 2.0% to 2.5% as released on February 14th 2019 and 2016-2020 forecast of 3.0%/year for a guidance between 2.8% to 3.2%/year

Evolution by destination

MPax 2025	ADP assumptions
France	16.6
Schengen	41.7
EU / EEA excl Schengen	7.8
French Overseas	5.7
International	54.0
TOTAL	125.8

TCAM 2020 – 2025	ADP assumptions
France	+0.6 %
Schengen	+2.2 %
EU / EEA excl Schengen	+2.8 %
French Overseas	+3.2 %
International	+3.5 %
TOTAL	+2.6 %

### A PARISIAN AIRPORT SYSTEM DRIVING THE LOCAL, REGIONAL AND NATIONAL ECONOMY





Source: Utopies 2017

# In average, over the 2014-2016 period:

- Paris-Charles-de-Gaulle has created 1 375 new direct jobs for every one additional million passenger
- The activity in Paris-Orly has created 914 new direct jobs for every one additional million passenger

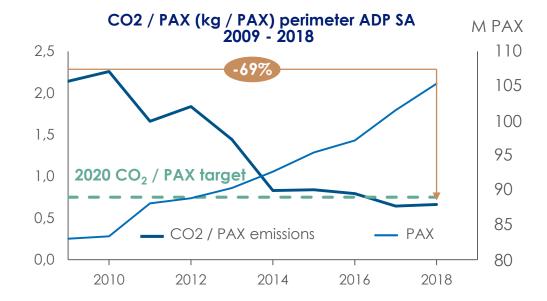
### In the hypothesis of stability of those ratios, the traffic growth expected for 2025 should allow to create:

- 29 670 additional direct jobs for Paris-Charles de Gaulle<sup>(1)</sup>
- 6 350 additional direct jobs for Paris-Orly<sup>(1)</sup>

Once its construction completed, the traffic of the future terminal 4 should create, on its own, around 50,000 additional jobs<sup>(1)</sup>

### TOWARDS CARBON NEUTRALITY IN PARIS

Significant progress made during the last 10 years



### Groupe ADP reaffirms the ambition of carbon neutrality in 2030 (for Parisian airports)

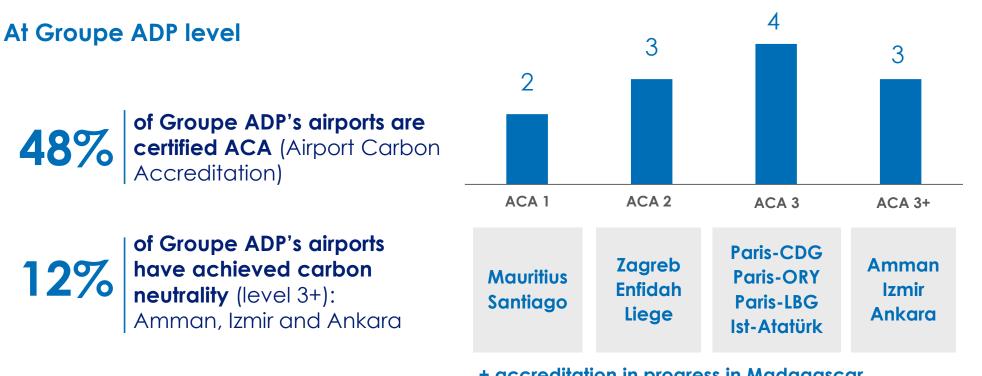
## **4 AXES OF WORK** to reduce its internal CO<sub>2</sub> emissions

Improve energy efficiency <sup>(1)</sup>	5.9% / m <sup>2</sup> in 2018 vs. 2015 (7% in 2020)	
Increase renewable energy production	15.8% of internal energy consumption in 2018	Carbon Neutrality
Accelerate the purchase of green electricity	65% of 2018 purchases (80% in 2020)	in 2030
Increase the share of <b>clean vehicles<sup>(2)</sup></b>	25.4% of the park at the end of 2018	

1. Energy efficiency gain (internal consumption / m2)

2. Share of clean vehicles in ADP SA light vehicle fleet

## AN ENVIRONMENTAL APPROACH AT GROUP LEVEL













# One project

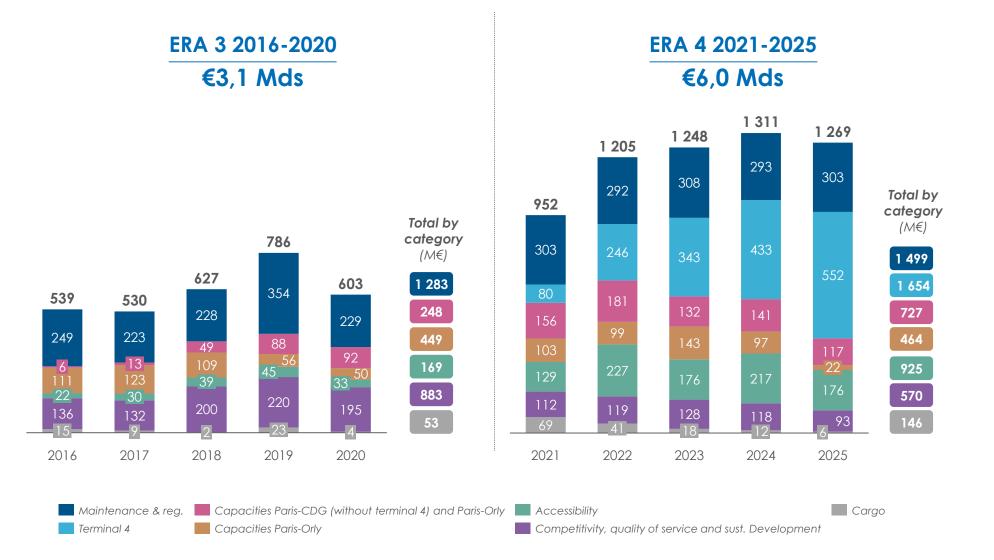
Sharing new horizons

### A LONG TERM DEVELOPMENT WHILE STRENGTHENING FUNDAMENTALS AND ACCESSES

de Gaulle

On the short te	erm	On the middle term	On the long term
Continue the agreed e order to guarantee the missions of an airport o	primary	Support traffic growth through optimization and modernization operations	Initiate long-term development projects
Efforts of maintenance		Continuation of the	Construction of Terminal 4 in
optimization of <b>infrast</b>	ructures	transformation of <b>Paris-Orly</b>	Paris-Charles de Gaulle
Guarantee of a <b>stand</b> of service	ard	Optimization of <b>Terminals 2</b> <b>EFG</b> in Paris-Charles de Gaulle	Development of West airside of <b>Paris-Orly</b>
Improvement <b>access</b> platforms	to the	Continuation of the fusion of the satellites of <b>Terminal 1</b> in Paris-Charles de Gaulle	Modernization of <b>Paris-Le</b> <b>Bourget</b>
Seamless passenger p in the terminals	process	Continuous improvement Terminals 2 ABCD and Terminal 3 in Paris-Charles	

### A REGULATED INVESTMENT PROGRAM TWICE AS BIG AS THE ERA 2016-2020



Amount of works + regulated of costs ERA 2021-2025 in  $\in$  M, in constant euros 2018 Amount of works + regulated of costs ERA 2016-2020 in  $\in$  M, in constant euros since 2018

## AN INVESTMENT PLAN THAT MEETS THE NEEDS OF AIRLINES AND PASSENGERS

$IVP = \frac{DMA}{VAR}$	Maintenance	Convergence and reduction of the obsolescence of Paris-Charles de Gaulle, Paris-Orly and Paris-Le Bourget	€1,279 M
Basin putval Seine 30 app. 1 Rotras Astri Studi	Regulatory compliance	Rainwater management at Paris-Charles de Gaulle, strengthening of facades protection and development of video protection	€220 M
	Preparation of Terminal 4	Launch of the preparatory works: servicing plot, structural work APM (Airport People Mover) in airside areas, airside North, etc.	€1,654 M
	Capacities	<ul> <li>Paris-Charles de Gaulle : densification of the Hub, continuation of the junction of the T1 satellites, 2D renovation</li> <li>Paris-Orly : Quebec boarding room, connection Hall 1/2, project Orly 4</li> </ul>	€1,191 M
1 de la	Accesses	Development of the East and West accesses of Paris-Charles de Gaulle , T2E viaducts, additional APM (Airport People Mover) trainsets, Parking PR upgrade, Paris-Orly drop-off, North interchange at Paris-Orly	€925 M
	Competitiveness, Smart Airport, Sustainable Development	APOC (Airport Operation Center), Hub robustness reinforcement, improvement of the quality of service, digitization of the passenger itinerary	€570 M
	Aviation Real Estate	Cargo development, rehabilitation of hangars and aeronautical areas	€146 M
	Total		€5,985 M



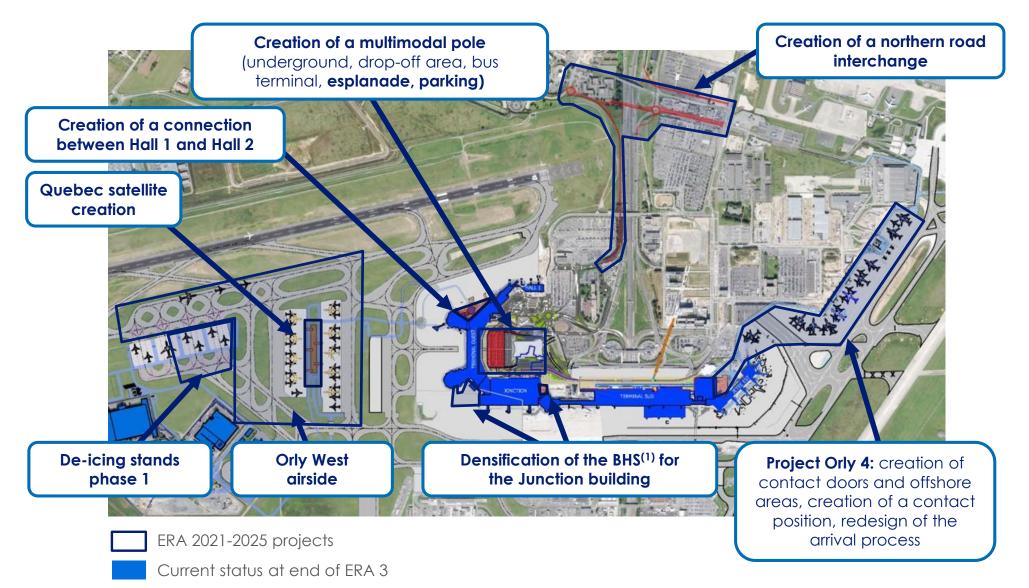
# **One project** Sharing new horizons

A One commitment Invest for long-term development

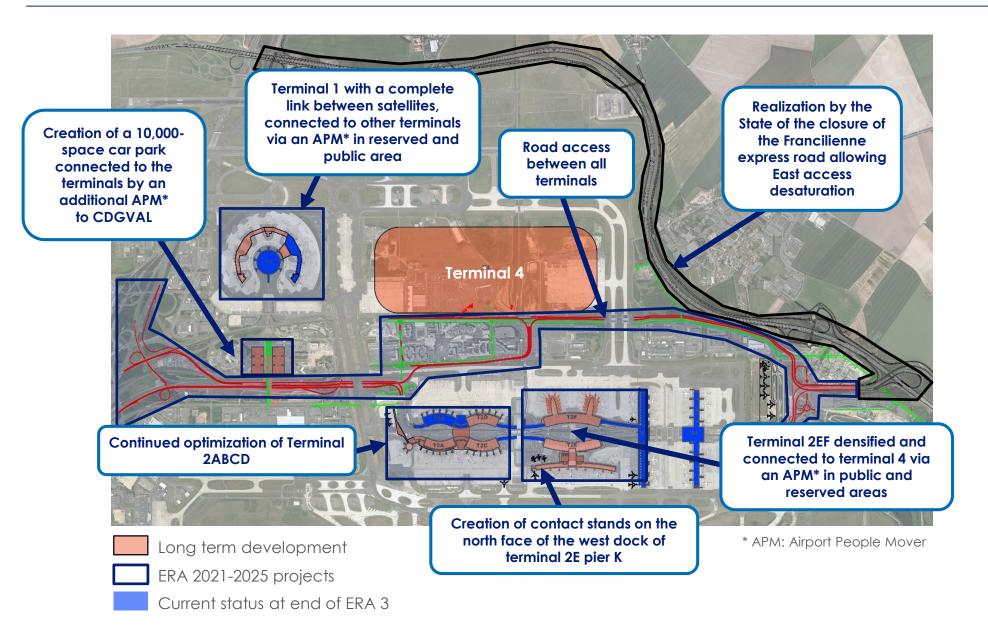
B One principle Strengthen fundamentals

**One promise** Guarantee accessibility and fluidity

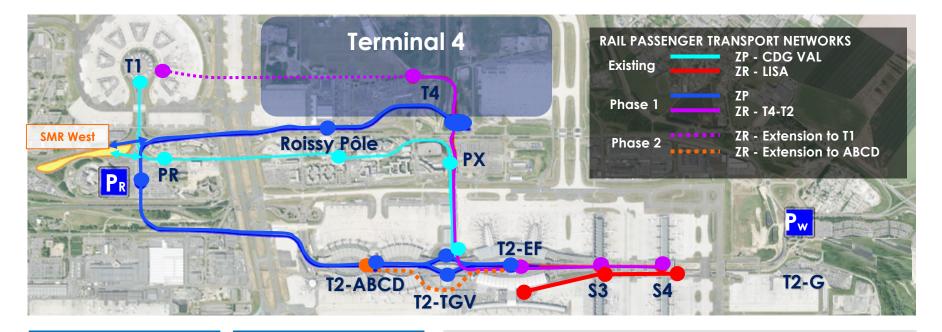
### TARGETED VISION OF THE DEVELOPMENT OF PARIS-ORLY



### TARGETED VISION FOR THE DEVELOPMENT OF PARIS-CHARLES DE GAULLE

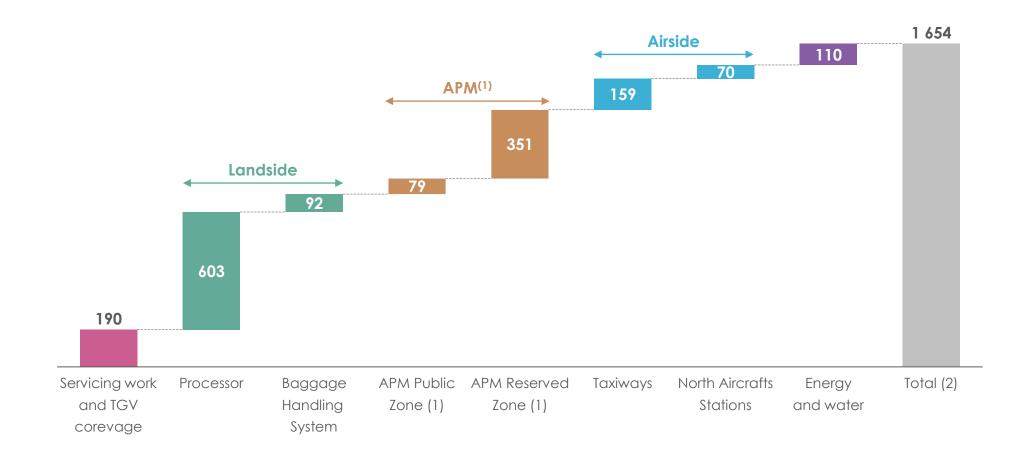


### A TERMINAL 4 FOR A LONG-TERM DEVELOPMENT OF PARIS-CHARLES DE GAULLE



35 to 40 Mpax	1 <sup>st</sup> delivery in 2028	<ul> <li>Content of the works by 2037</li> <li>Airport infrastructures: processor, Baggage Handling System and boarding piers</li> <li>Airfields and aircraft taxiways, including the covering of the TGV trench</li> <li>Road network for passengers, professionals and employees from West and</li> </ul>
7 to 9 bn €	Finalizing in 2037	<ul> <li>Notat horizont for passengers, processionals and employees norm west and East accesses</li> <li>Multimodal transport hub (eg connection to the metro station Grand Paris Line 17)</li> <li>Airport public transport connecting the remote car parks and the terminals</li> <li>Other transport links in the security zone for connecting passengers</li> </ul>

### A FIRST PHASE OF TERMINAL 4 DURING THE ERA 2021-2025



1. APM : Airport People Mover

2. Total terminal 4 without accesses and parkings



# One project

Sharing new horizons

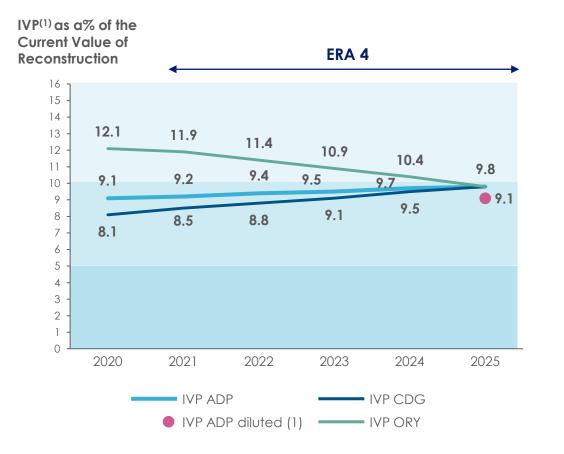
One commitment Invest for long-term development

B One principle Strengten fundamentals

One promise Guarantee accessibility and fluidity

### A OBJECTIVE OF MASTERING THE OBSOLESCENCE OF THE TWO PLATFORMS

### IVP trajectory<sup>(1)</sup> of both platforms



### Comments

### Investments on ERA 4 characterized by:

- A catch-up on Paris-Orly to correct aging assets
- A ramp-up on Paris-Charles de Gaulle<sup>(1)</sup> with the obsolete entry of the assets of terminal 2E
- The convergence towards an identical IVP level of the two platforms at the end of ERA 4, below 10%

For an envelope of c.  $\in$  1.1 billion for Paris-Charles de Gaulle and Paris-Orly, the global IVP 2025 of the two platforms should reach 9.8% ± 1pt <sup>(2)</sup>

- 1. IVP ("Indice de Vetusté Physique"): Physical aging index: ratio between the asset maintenance deficit and the replacement value
- 2. The inclusion in the calculation of IVP of new assets launched on both platforms during ERA 2021-2025 would reduce IVP to 9.1% ± 1 point.

## AN AMBITION FOR SUSTAINABLE DEVELOPMENT AT ERA 2021-2025 BY POSITIONING ITSELF AS A SOLUTION INTEGRATOR

### Adaptation of the tariffs structure favoring more environmentally friendly aircraft

Further renovation of **lighting** and **heating / air conditioning / ventilation facilities** to enhance passenger and employee well-being as well as energy performance

Development of **renewable heat** generation capability, including geothermal energy solutions

Build of a new **deiceing facility** at Paris-Orly to collect and treat of winter fluids

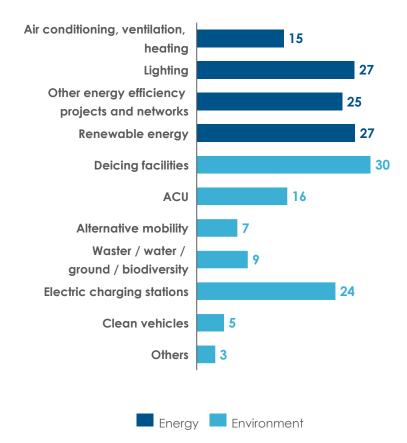
Equipment of non-remote parking stands with mobile ACU (air conditioning unit) plugs to curb the use of APU's (Auxiliary Power units)

Develop **alternative mobility** at the airport (pedestrians, cyclists)

# **Electrification and deployment of charging stations** for individual cars both airside and landside for all airport stakeholders

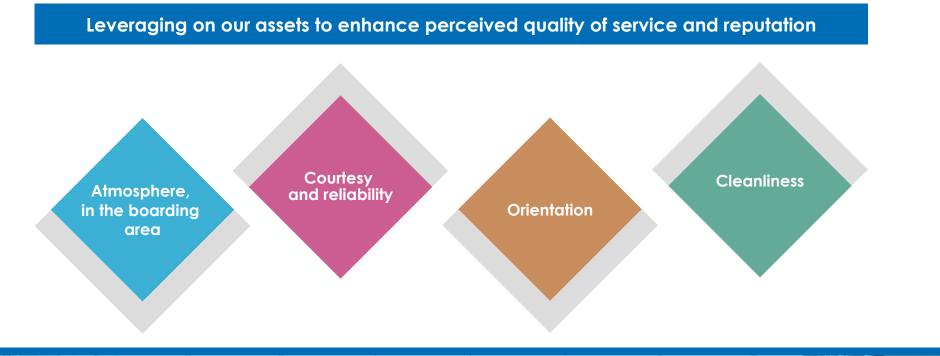
Continuation and intensification of **fleet renewal** for Groupe ADP vehicles

### Transversal vision of regulated investments in sustainable development (€M) <sup>(1)</sup>



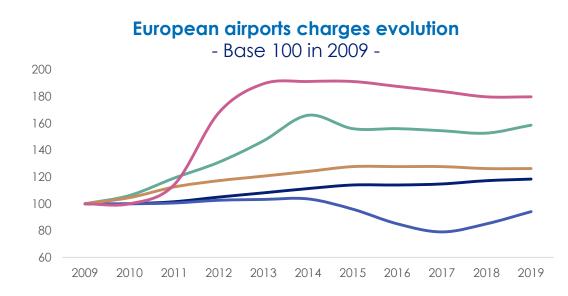
1. Overall amount incorporating heritage maintenance investments, large capacity projects and those contributing to sustainable development.

### **BE READY FOR THE OLYMPIC AND PARALYMPIC GAMES IN 2024**

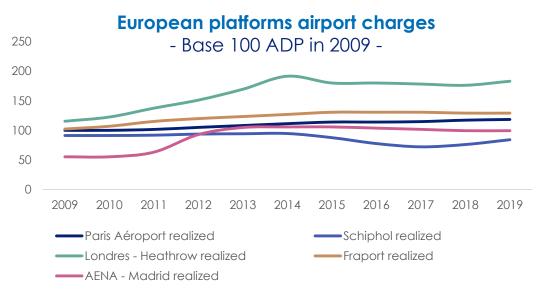




### AN MODERATE EVOLUTION OF AIRPORT CHARGES ON THE LONG TERM

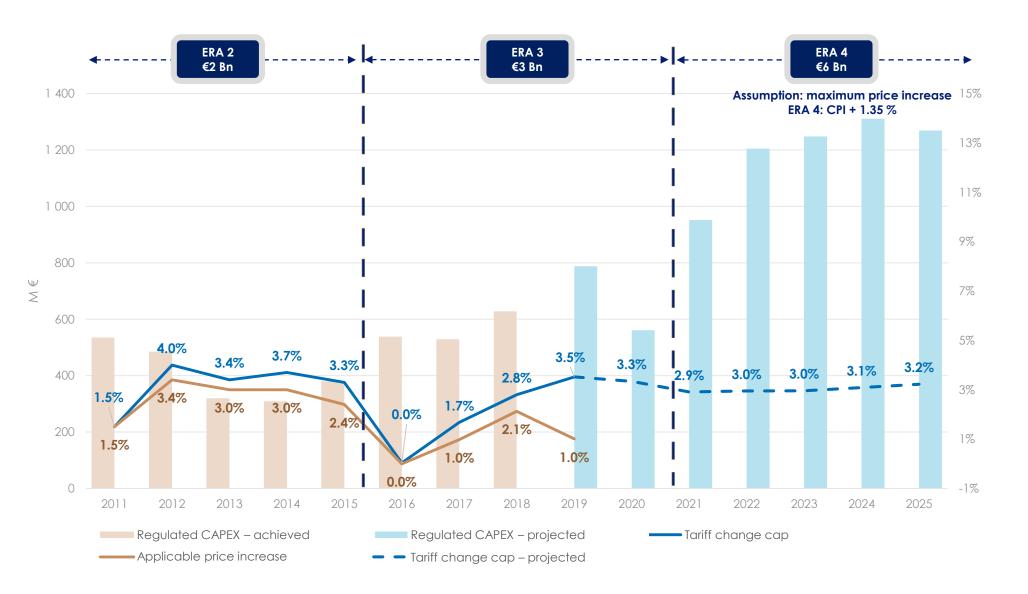


	<b>CAGR</b> (2009 – 2014)	<b>CAGR</b> (2009 – 2019)
LHR	+ 10.7 %	+ 4.7 %
FRA	+ 4.4 %	+ 2.4 %
CDG	+ 2.2 %	+ 1.7 %
MAD	+ 13.8 %	+ 6.0 %
AMS	+ 0.7 %	- 0.6 %



Excluding Schiphol, the **average annual airport charges increases** of London, Frankfurt and Madrid over the **period 2009 – 2019** are higher than in Paris : MAD : **+ 6,0 % / year**, LHR : **+ 4,7 % / year** ; FRA : **+ 2,4 % / year** 

### A LIMITED AIRPORT CHARGES INCREASE DESPITE INCREASING INVESTMENTS



### ERA 3 achievements 2016 – 2018

**Reward the performance of airlines**, promoting the increase of passengers per plane and an better use of slots in order to favor bigger aircrafts :

- The load factor has increased from 83.8 % in 2016 to 85.6 % in 2018
- The CAGR of the number of movements between 2016 and 2018 is + 0.2 %, while the CAGR of passengers on the same period is + 4.1%

**Consolidate Paris-Charles de Gaulle as a hub**, **improving intercontinental traffic**, for a higher international traffic growth

 The decrease of « National » passengers during the period 2016 – 2018 (CAGR : -0.3%) is compensated by a significant increase of « Europe » (+4.0 %) and « Other international » (+ 6.1%) regions over the same period

**Incentive for based airlines**, with the exemption of night aircraft parking (around 4.000 movements per year)

### **ERA 4 ambitions**

Objective to preserve the current airport charges grid, with minor adaptations to cope with the following ambitions:

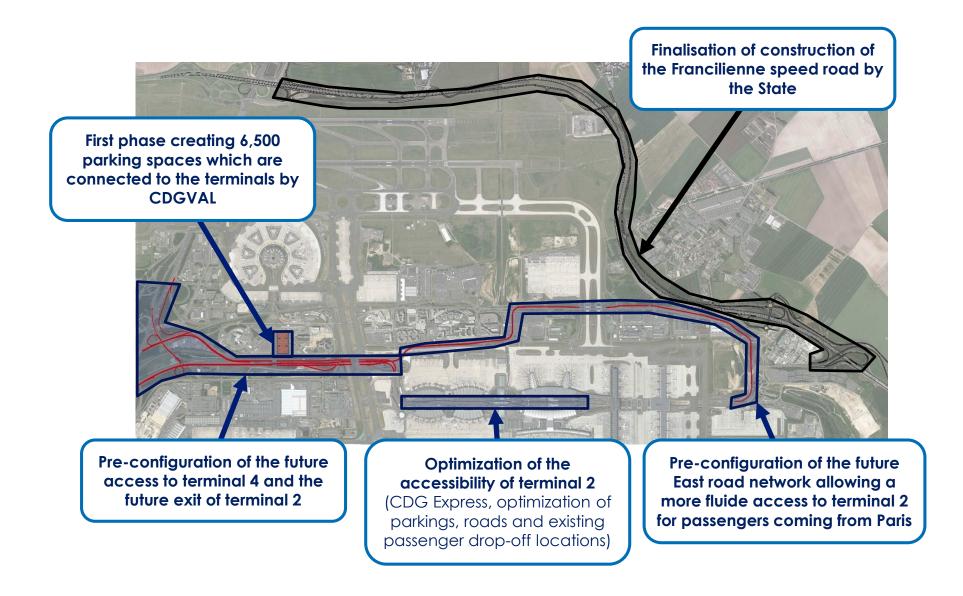
- 1 Accompany the industrial strategy of "clustering" the airport resources and services towards an « all inclusive » strategy
- 2 Encourage the development of **based airlines and traffic**, through the increase of existing exemptions to night aircraft parking
- 3 Optimization of our facilities, namely aircraft stands, thanks to incentive to double traction (contact – remote – contact), rapid turnarounds and remote aircraft parking
- 4 Take increasingly into account the **environmental impact of the activity** (fleet renovation, noise modulations and gas emissions



# **One project** Sharing new horizons

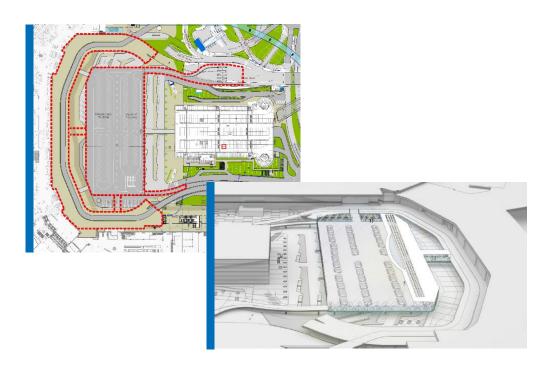
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### **GLOBAL REORDERING OF EAST & WEST ACCESSES OF PARIS-CHARLES DE GAULLE**



### AN ADAPTATION OF THE ROAD NETWORK AND A NEW DROP-OFF AREA IN PARIS-ORLY

## New drop-off area



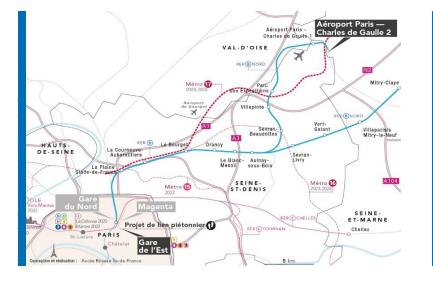
### North Interchange



Creation of a **slab** above the future bus station to serve as a **passenger drop-off** areas directly serving the Orly 1-2-3 sectors Creation of a **road interchange** in order to reduce the road flux in front of the terminals and **streamline overall access to the platform** 

## AN IMPROVEMENT OF TRAIN ACCESS FOR PARIS-LE-BOURGET AND PARIS-CHARLES DE GAULLE

CDG Express



Le Mesnil-Amelot Aéroport Charles de Gaulle T Aéroport Charles de Gaulle T2 × Triangle de Goness arc des Expositions Aulna Le Bourget Aéropo 16 Sevran - Beaudottes Le Blanc-Mesnil La Courneuve Sevran-Livry "Six Routes" nt-Denis a Bournot RER Mairie d'Aubervilliers Drancy - Bobigny Bobigny Pablo Picasso France Fort Clichy - Montfermeil de Saint Ouen d'Aubervilliers OPont de Bondy nt-Ouen RER C

A railway connection specially designed for airport passengers

Direct rail connection between Paris-Gare de l'Est and Paris-Charles de Gaulle

Journey time of 20 minutes

A departure every 15 minutes, from 05.00 am, to midnight, 365 days a year

A high quality level of service both at the station and on board

Separate routes with RER B to ensure the reliability and regularity of both daily trains and CDG Express

A metro line connecting the center of Paris and Paris-Le Bourget, then, eventually, Paris-Charles-de-Gaulle

A commissioning between Saint-Denis Pleyel and Paris-Le Bourget scheduled for 2024, and between the triangle of Gonesse and Paris-Charles de Gaulle in 2030

A significant improvement in the travel time of passengers and employees of the various platforms (divided by 4)

### **One promise:** Guarantee accessibility and fluidity

## AN IMPROVEMENT OF THE ACCESS TO PARIS-ORLY

Intermodal station of Paris-Orly



A railway station of the Grand Paris Express network right in the heart of Paris-Orly airport with direct access to the terminal for pedestrians

A 10-level parking designed for 2,000 vehicles

An adjoining railway station

Lines 14 and 18 of Grand Paris Express

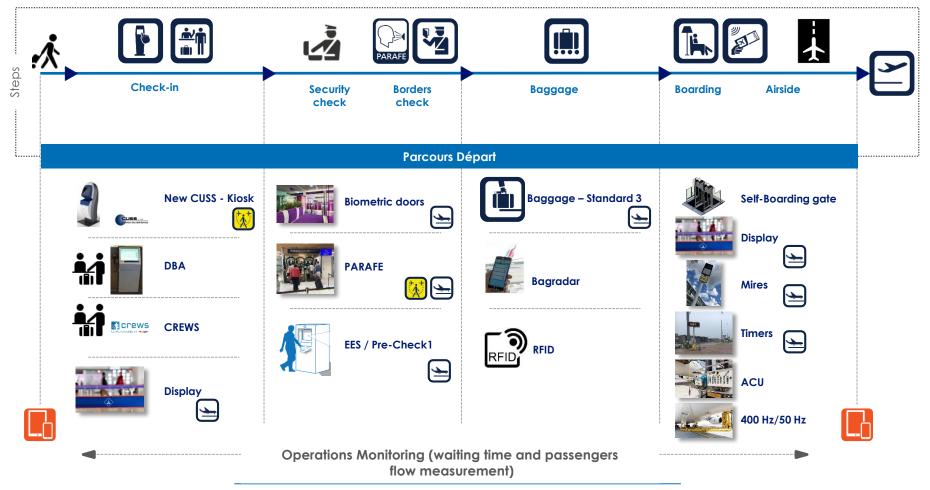


A direct connection for line 14 from downtown Paris to Paris-Orly in 27 minutes instead of 54 minutes today

In 2024, a "Pont de Rungis" station on line 14 that will serve the North of Paris-Orly platform and adjoining business parks (diversification real estate)

In 2027, a direct connection via line 18, with a link of Paris-Orly to Paris-Saclay scientific pole

### THE COMMITMENT FOR « SMART » AUTOMATED AND SEAMLESS PASSENGER ITINERARY



### A promise: guarantee a smooth itinerary for all passengers

Equipment also available for "Arrivals" and "Connecting Flights"

Capitalise on competitive advantages

Exceptional **industrial know-how** A **non reproductible** Parisian asset **Critical capacity reserves** in France

# Be, at the same time, at the meeting of all horizons

**Optimize** the existing Accompany the **growth of tomorrow** Build the **airport of the future** 

An industrial project, base on which Groupe ADP intends to build a balanced 2021-2025 ERA, addressing all relevant stakeholders

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#### About Groupe ADP

Groupe ADP develops and manages airports, including Paris-Charles de Gaulle, Paris-Orly and Paris-Le Bourget. In 2018, the group handled through its brand Paris Aéroport more than 105 million passengers and 2.3 million metric tonnes of freight and mail at Paris-Charles de Gaulle and Paris-Orly, and more than 176 million passengers in airports abroad through its subsidiary ADP International. Boasting an exceptional geographic location and a major catchment area, the Group is pursuing its strategy of adapting and modernizing its terminal facilities and upgrading quality of services; the group also intends to develop its retail and real estate businesses. In 2018, group revenue stood at €4,478 million and net income at €610 million.

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### **Investor Relations**

Audrey Arnoux Phone: + 33 1 74 25 70 64 E-mail address: invest@adp.fr Website: finance.groupeadp.fr

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