



Dominique Pizzalla/Group PSA - direction de la communication

ECONOMY

September 2019 • www.institutparisregion.fr/en

THE PARIS REGION'S AUTOMOTIVE INDUSTRY ON THE WAY TO THE VEHICLE OF THE FUTURE

1,600

LOCATIONS DEDICATED TO THE AUTOMOTIVE SECTOR.

73,200

DIRECT EMPLOYEES.

IN THE PARIS REGION, THE AUTOMOTIVE SECTOR REPRESENTS ONE FRENCH AUTOMOTIVE INDUSTRY JOB OUT OF FIVE AND 17% OF TOTAL INDUSTRIAL EMPLOYMENT IN THE PARIS AREA. SINCE 2008, THIS SECTOR HAS UNDERGONE SEVERAL MAJOR CHANGES: A DECREASE IN ITS WORKFORCE; A CONTINUED GEOGRAPHICAL REPOSITIONING; AND, ABOVE ALL, THE EMERGENCE OF THE VEHICLE OF THE FUTURE AROUND WHICH INDUSTRY PLAYERS ARE ORGANISING THEMSELVES. TO THIS END, THEY ARE CREATING NEW ORGANISATIONS AND DEVELOPING TECHNOLOGY-BASED ALLIANCES WITHIN THE REGION.

The automotive sector is one of the main industry pillars in Paris Region. In addition to being an economic driver, this sector fosters a variety of innovations and activities such as exports and R&D that have ripple effects on other economic sectors. Today, more than ever, the automotive industry is facing great new challenges. Its future, based on renewal and sustainability, will depend on innovation and collaboration with more players not originally within the industry's core business sectors.

In 2018, the Paris Region automotive sector directly employed 73,200 people, 51,000 of whom (70% of the automotive workforce) were employed by core automotive sector players – vehicle builders (mainly Renault and PSA) and parts suppliers (Faurecia, Valeo, Continental, Robert Bosch, Delphi, etc.).

In addition to the jobs directly related to manufacturing; industrial suppliers and technical design offices dedicated to the automotive sector employ an additional 22,000 workers. These are first-tier suppliers (makers of glass, tyres, plastics) and mostly second-tier suppliers (providers of mechanical or electronic sub-assemblies). These suppliers make up a critical mass of over 900 facilities, 70% of which employ fewer than 10 people and whose share of sales revenue generated by the automotive sector represents 46% of total turnover. Finally, technical design offices and IT service companies are increasingly participating in the design and industrialisation of vehicles, including famous brands such as Alten, Assystem, Akka Ingénierie and Bertrandt. Half of these players are also small businesses employing less than 10 people.



Cover page

PSA plant in Poissy (the Yvelines "département").

1. Along with Renault, Peugeot is the other large automotive manufacturer in the Paris Region. Recently, the group operated a geographic move clustering its activities in the Yvelines "département", making Grand Paris Seine & Oise, the leading Paris Region automotive inter-municipality.

2. The automotive industry has been adapting itself to technological changes with a strong integration to vehicle connectivity, a prelude to the evolution of vehicles towards greater autonomy...

17% OF FRENCH VEHICLE PRODUCTION OUTPUT

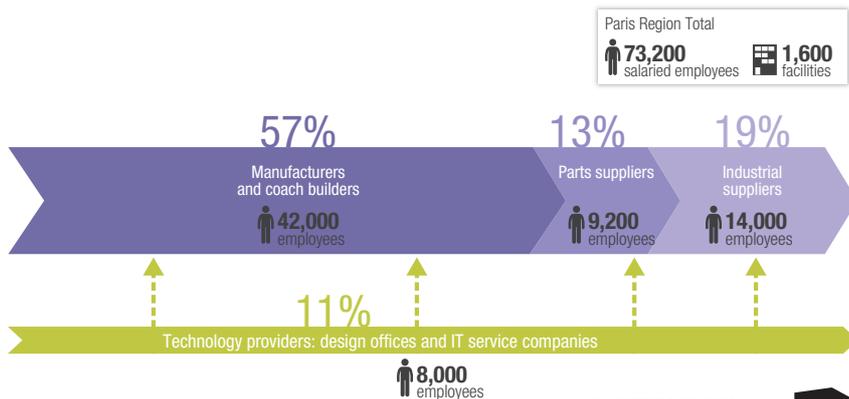
One of the specificities of the Paris Region is that it is home to all of the functions of the automotive sector's major players, notably the decision-making and R&D centres of the top two French automotive manufacturers. It is also home to two vehicle assembly plants, which produced 360,000 vehicles in 2018. The Paris Region also hosts the major French parts suppliers, Faurecia and Valeo, and several corporate headquarters, R&D centres and production sites of major global players, namely: Continental and Bosch (Germany); Visteon, Lear, Delphi and Adient Seating (USA); Akebono, Denso and Yazaki (Japan); Telma (China); and SMR (India).

Although the Paris Region remains a major production centre (1/6 of final French vehicle output), it mostly hosts the research teams of the core automotive sector players (manufacturers and parts suppliers). We estimate that out of the 51,000 jobs at the heart of the sector, half of them are related to research (researchers and others), and a third of them relate to head office, administrative support and sales personnel. One employee out of five is involved in production.

23% OF THE WORKFORCE LINKED TO FOREIGN GROUPS

In the Paris Region, foreigners are particularly active in the automotive sector and, according to our estimates, employ 23% of the workforce – nearly 17,000 jobs. In general, foreign groups are responsible for 17% of Paris Region's employment. The largest employers are German groups (5,000 jobs), followed by US groups (3,500 jobs) and Japanese groups (1,300 jobs). This distribution follows the hierarchy of global automotive manufacturers, but also features a higher proportion of European players. Foreign automotive investments over the 2014-2018 period added or consolidated 800 jobs in the Paris Region. The predominance of German, American and Japanese investments representing 258, 151 and 137 jobs respectively has not changed the hierarchy of major foreign players. However, the rise in the weight of new players has been observed, mainly from China in fourth place, which represents 8% of investments (65 jobs) whereas they represent only 0.5% of jobs in the Paris Region's automotive sector. Finally, three investments have been made by Indian groups including the extension of a production site. Regarding the typology of these investments, 17% of them have been in production activities – the same level as for jobs linked to decision-making centres. R&D accounts for 19% of investments, while service activities, including the marketing of vehicles, account for 40%.

Value chain of the Paris Region's automotive industry



THE SIGNIFICANT IMPACT OF THE 2008 CRISIS

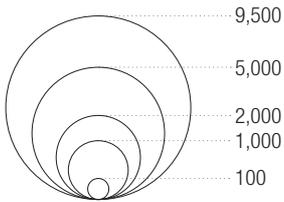
Between 2007 and 2017, salaried employment in the Paris Region's core automotive sector declined by 30% – a rate comparable to that on a national level¹. In the Paris Region, most of the job losses were recorded by vehicle manufacturers. In the category of "other parts suppliers" the loss of jobs was proportionately the largest (-49%), whereas the category of "specialised parts suppliers" in electronics recorded a 20% rise in the number of their employees. This increase was due to the large investments made by parts suppliers in their R&D activities in the Paris Region.



MAIN AUTOMOTIVE INDUSTRY LOCATIONS IN THE PARIS REGION

Automotive industry locations

Employee headcount



Functions

- Head office and related activities
- Production
- Design offices
- R&D
- Logistics

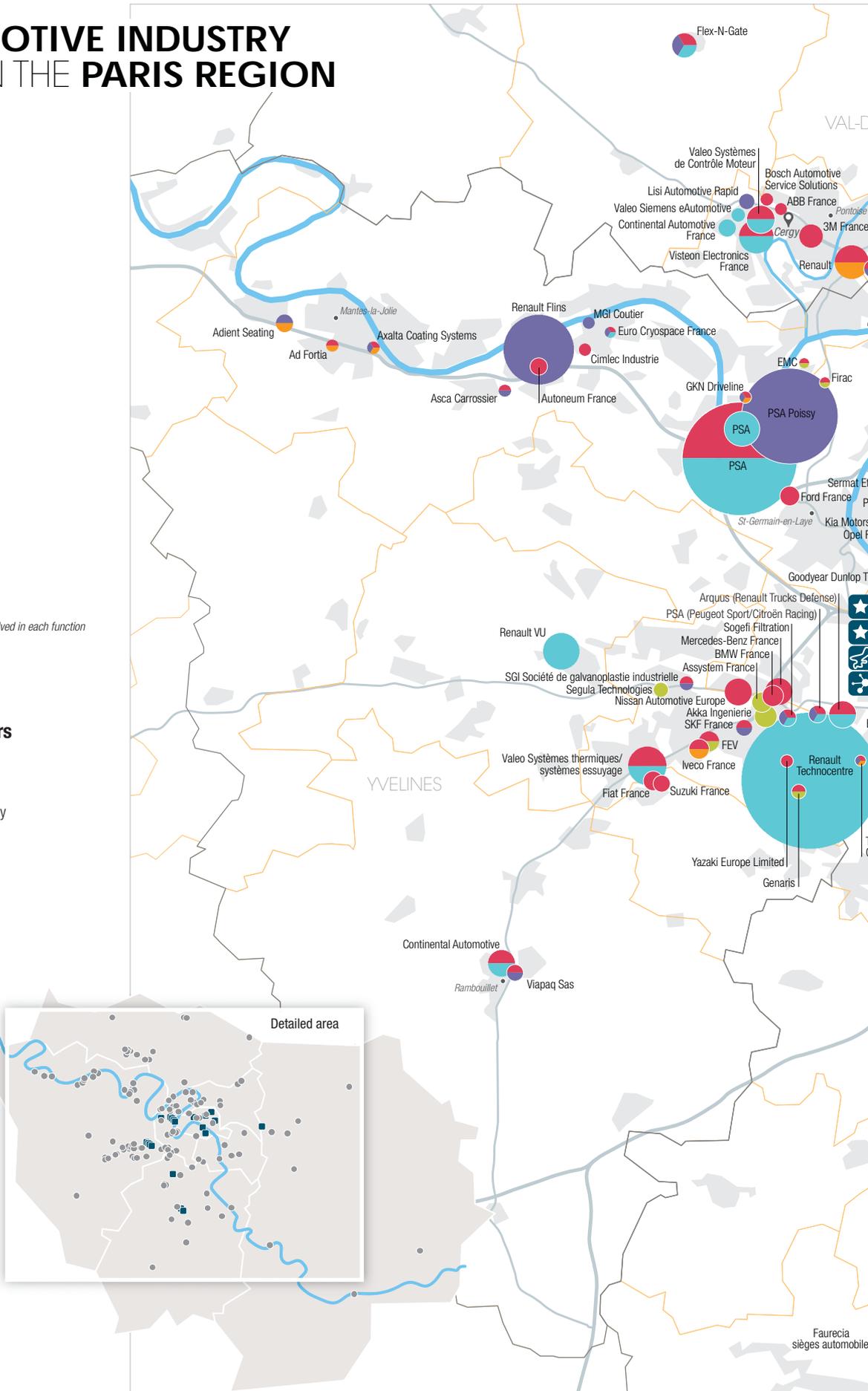
The colours are not proportional to the workforce involved in each function

Other automotive ecosystem players

- Research centre specialised in the automotive-mobility sector
- Certification and accreditation body
- Automotive-mobility incubator
- Professional/trade body
- Competitiveness cluster/hub
- Network
- Notable facility (shared test track)

Background map

- Urban space
- Airport site
- Main hydrography
- Primary road network
- County border
- Intermunicipal border
- Prefecture and sub-prefecture





3

Laure Wassen, L'Institut Paris Region



4

Renault

A CENTRIFUGAL SHIFT TOWARDS THE WEST

Automotive manufacturers have continued to strengthen their already long-standing presence in the west of the Paris Region through a centrifugal shift away from Paris and the loops of the river Seine. This trend has recently accelerated and features the continued specialisation of the sector in R&D functions. This new geographical positioning meets both the need to streamline locations and to cut costs in a difficult economic climate. It has been impacted by several recent events and announcements:

- the closure of the PSA Aulnay production site in 93 Seine-Saint Denis "département" in 2014, which in 2012 still employed 3,500 workers;
- the closure of the Renault plant in Rueil-Malmaison (engine technical centre in 92 Hauts-de-Seine "département") in the autumn of 2014 to make way for an urban development project. Its 1,200 employees were transferred to the technical centre in Lardy (91 Essonne "département") and the Technocentre in Guyancourt (78 Yvelines "département");
- the sale of PSA's headquarters in Paris and the transfer of some of the employees (600) to a smaller site in Rueil-Malmaison in late 2017, over 1,000 other employees were relocated to the services centre in Poissy (78 Yvelines) in 2018;
- the PSA technical centre in La Garenne-Colombes (92 Hauts-de-Seine) closed at the end of 2018 and in early 2019 moved its 2,200 employees to plants in Poissy, Carrières-Sous-Poissy and Vélizy (78 Yvelines). The services site in Poissy has been renamed a "business and regional expertise centre" and now employs 6,500 staff next to the factory (4,700 employees) – concentrating close to 11,000 group employees;
- the PSA press-forming plant in Saint-Ouen (350 employees in 93 Seine-Saint Denis) is to be closed by 2021 due to land pressure.

These events mark the end of the historic presence of automotive research in the geographical area known as "the loops of the river Seine". Today, Yvelines "département" is home to most of the automotive sector workforce, which alone represents 56% of the Paris Region's entire automotive workforce.

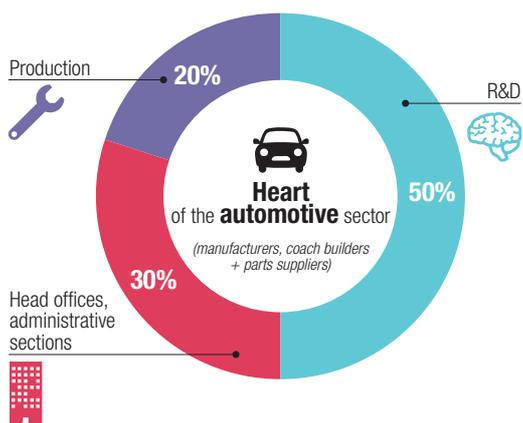
Thus, the automotive workforce is concentrated in three agglomerations: Grand Paris Seine & Oise (towns of Poissy and Flins) with 16,000 jobs; the town of Saint-Quentin-en-Yvelines (Guyancourt) with 15,000 jobs and Versailles Grand Parc (Vélizy) with 9,000 jobs. This high employment concentration results from the presence of the main business sites of vehicle manufacturers – R&D centres, production plants and service centres. This density should not conceal the fact that a significant network of industrial subcontractors are still present in the heart of the agglomeration, notably in the north of Hauts-de-Seine "département" along the Paris to Cergy axis.

A SECTOR AT THE CROSSROADS

Since the beginning of the 2000s, the automotive industry in the Paris Region has been deeply transformed by the concomitant irruption of four trends: vehicle electrification, enhanced connectivity, autonomous (self-driving) vehicles, along with new mobility practices such as car-sharing, carpooling, etc.

Moreover, newcomers have been moving into the automotive sector. Some of them have capitalised

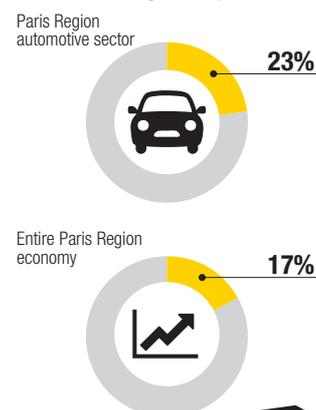
Core automotive sector functions in the Paris Region



3. ... In addition, the French automotive manufacturers are positioning themselves on the car-sharing market such as Renault through the Moov'in service in the city of Paris.

4. French automotive manufacturers have also developed a range of electric vehicles to meet the challenges of de-carbonisation. The Renault Zoé electric car manufactured only in the Flins's factory (the Yvelines "département") is the second of the top 12 list of electric cars most sold in Europe. It is also available on Australian markets and will soon be available in South Korea.

Proportions of the workforce linked to foreign companies



on their strong skills in the fields of energy (generation, motorisation, storage), sensors and data transmission (telecommunications and ICT), as well as artificial intelligence and massive data processing. Others have emerged as start-ups specialised in mobility services that seek to capture a significant share of value added, forcing the traditional market players to call themselves into question. The Paris Region's automotive industry is at the heart of the French automotive ecosystem. In a large part, the Paris Region is home to this new mobility ecosystem that is taking shape and reinventing itself.

This openness to new technologies, particularly digitalisation, is also impacting the location of automotive players. Renault has established Renault Digital in Boulogne-Billancourt, with 100 employees from Intel teams. Faurecia has taken over Parrot Automotive (in the 10th "arrondissement" of Paris) with over 300 engineers. Valeo has set up Paris Valeo.ai, an artificial intelligence laboratory devoted to self-driving vehicles with 100 researchers. In 2019, it plans to open a new R&D site in Créteil dedicated to self-driving vehicles and served by 1,100 people and a new test track. The new centralisation of industrial sites promotes innovation stemming from being located closer together. Furthermore, it also enables groups to attract or retain highly demanded skilled employees, competitive on today's job market, with strict requirements regarding their work employment.

THE VEHICLE OF THE FUTURE IS BEING INVENTED IN THE PARIS REGION

The major stakeholders in the automotive sector are mobilising to invent the vehicle of the future from within their own organisations and more frequently in partnership with new digital and mobility players. Within this framework, they benefit from the internationally recognised quality of the ecosystem that is developing in the Paris Region in the field of artificial intelligence, thanks to the presence of leading international brands such as the R&D centres in artificial intelligence of Facebook or Google, as well as world-famous national centres such as l'Institut national de recherche en informatique et en automatique (Inria), and CEA List, the CEA's technology research institute in Saclay near Paris.

Although the share of the automotive workforce in the Paris Region dedicated to production is now a minority, this sector has positioned itself in the market for advanced vehicle models such as the Renault Zoé electric car, the second best-selling model in Europe², manufactured only in the Paris Region (Flins) for the European market, whose production capacity has recently been doubled.

The Paris Region's local government authorities support the development of an ecosystem based on the vehicle of the future and, more generally, on the mobility of the future. This support has resulted in funding for the creation of dedicated research centres such as Vedecom, and for greater geographical proximity of several public laboratories to form a new cluster on the site of Versailles-Satory. It has also resulted in experiments with self-driving vehicles, both on specifically designed test tracks such as in the Versailles-Satory or Linas-Montlhéry clusters, and in urban environments. Finally, the Paris Regional Council and the Paris regional transport authority (Ile-de-France Mobilités) have launched a 100 million euro self-driving vehicle plan to redevelop the motorways and major roads of the Paris Region that will increase experiments with self-driving/autonomous vehicles.

Whereas all the options for the technologies and business models of the future remain open, the Paris Region and its local government authorities are positioning themselves as a hub for the development of the vehicle of the future and are supporting automotive sector stakeholders in the face of great uncertainties. ■

Thierry Petit, economist
Economics department (Vincent Gollain, director)

1. According to Unedic statistics (facilities whose main activity is vehicle manufacturing or vehicle parts supplying).
2. Number of vehicles sold over the first five months of 2019. Source: EV-Volumes.

PUBLISHER

Fouad Awada

HEAD OF COMMUNICATION

Sophie Roquette

EDITOR-IN-CHIEF

Isabelle Barazza

COPY EDITING

Christine Morisceau

LAYOUT DESIGN

Jean-Eudes Tilloy

GRAPHICS/CARTOGRAPHY

Pascale Guery

PRODUCTION

Sylvie Coulomb

TRANSLATION

Cabinet Iain Whyte

MEDIA LIBRARY/PHOTO LIBRARY

Inès Le Meledo, Julie Sarris

MEDIA RELATIONS

sandrine.kocki@institutparisregion.fr

L'Institut Paris Region

15, rue Falguière
75740 Paris Cedex 15
33 (0) 1 77 49 77 49

ISSN 2555-7165

ISSN online

2497-126X



institutparisregion.fr/en



RESOURCES

- Boichon Nicolas, Predali Frédérique, *Mobilités du futur en Île-de-France*, IAU îdF, mars 2018.
- Burfin Yves (Crocis/CCI Paris-Île-de-France), Chevrot Joseph (Insee Île-de-France), Harpedanne de Belleville Louis-Marie (Banque de France), Koubi Danièle (Banque de France Île-de-France), Petit Thierry (IAU îdF), « L'industrie francilienne : des mutations de long terme toujours à l'œuvre », *Note rapide*, n° 795, IAU îdF, décembre 2018.
- Direction régionale des entreprises, de la concurrence, de la consommation, du travail et de l'emploi d'Île-de-France (Dircecte), PSA, CCI Versailles-Yvelines, *L'industrie automobile en Île-de-France et dans les Yvelines : établissements et emplois*, mars 2019.
- « La vie mobile. Se déplacer demain en Île-de-France », *Les Cahiers*, n° 175, IAU îdF, septembre 2018.
- Nguyen-Luong Dany, *Expérimentation et déploiement du véhicule autonome en Île-de-France. Le rôle facilitateur des pouvoirs publics*, IAU îdF, mai 2019.
- Petit Thierry, Rakotomalala Dina, *L'automobile en Île de France : défis et enjeux d'une filière en mutation. Vers une industrie de la mobilité*, IAU îdF, mai 2019.



- Petit Thierry, « 620 000 emplois franciliens dépendent d'un groupe étranger », *Note rapide*, n° 761, IAU îdF, novembre 2017.

L'INSTITUT
PARIS
REGION