



PSA PEUGEOT CITROËN

Press release

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**PSA Peugeot Citroën and France's leading design schools
innovate within the OpenLab Design programme to support tomorrow's mobility solutions**

PSA Peugeot Citroën, École Nationale Supérieure de Création Industrielle, STRATE École de Design, École de Design de Nantes Atlantique and the TALM Le Mans Sound Design master's programme present the results of three years of creative research within the **OpenLab Design programme on autonomous and connected cars, one of PSA's strategic areas of innovation.**

- **2012:** Visual interpretations of PSA Peugeot Citroën's scientific work help focus the teams of specialists on two shared, federating avenues to the car of the future.
- **2013:** Interactive interface concepts, adapted to driving, guide the styling choices for vehicle human-machine interface (HMI) systems.
- **2014:** The most appropriate driver/vehicle/connected object proposals are integrated in innovation programmes on autonomous cars, connected services and user interface systems.

In 2025, vehicles will be autonomous and connected. Both on-board and remote human-machine communication will be carried out via intuitive multimodal interactions using a mobility assistant. Autonomous vehicles will travel in road trains on the motorway to optimise fuel consumption, share information over dedicated social networks and offer a new on-board experience for drivers and passengers.

Created by PSA Peugeot Citroën in 2012, the OpenLab Design programme brings together Group engineers and student designers in open innovation workshops at France's major design schools. The objective of this programme, situated at the leading edge of innovative design methodologies, **is to integrate the design aspect upstream in the development of HMI systems and thereby anticipate new mobility uses.**

In 2014, the programme focused more specifically on three projects:

The Internet of Objects®, or communicating robot-objects

How can a system based on data exchanges between vehicles and connected objects anticipate my mobility needs (vehicles/schedules/trips) so that I get where I need to go on time, in good spirits, without having to plan the itinerary?

Avacar®, or the mobility assistant

How can people and vehicles communicate in a natural way, both on-board and remotely? Thinking back to the red diodes on the "Knight Rider" television series, what could the artificial intelligence of mobility embodied by Avacar® look like?

Social robots®, or vehicle-to-vehicle communication

What functions could sound and light perform aside from signalling, alerting, and allowing motorists to see and be seen, so that individuals can communicate from vehicle to vehicle without the risk of confusion?

Design, a strategic lever for innovation

In the face of technological complexity, design needs to be integrated into corporate strategies to explore new uses and new ways of relating to innovation. Designers give meaning to products and services by observing how people live and creating the conditions for an optimal, memorable experience. In the area of research, the schools involved in the programme agree with PSA Peugeot Citroën on the need to:

- Involve designers upstream in the development of corporate innovation strategies.
- Acquire knowledge through experimentation with materials and intuitive interaction methods that structure and transform objects. Examples include smart textiles, emotional communication devices using sound and light, and robotised objects (or Robjects®).
- Use emerging joint design-production processes such as fab labs* that give everyone an opportunity to invent and manufacture products.

The French design schools' objective within the OpenLab Design programme is to contribute to the emergence of a new profession – that of the designer-researcher – which will have its full place in multidisciplinary R&D teams in the years ahead.

Open Innovation at PSA Peugeot Citroën

PSA has adopted an Open Innovation strategy to remain in the vanguard of automotive products and services and ensure that it is closely involved in future scientific discoveries. Open Innovation entails developing and managing relationships with a variety of ecosystems, from individuals and businesses to the academic world and institutions.

As part of its relationship with the academic ecosystem, the Group launched **StellLab** in 2010. The OpenLab Design programme is part of this network of open labs and academic chairs.

StellLab is designed to strengthen PSA's scientific partnerships with publicly-funded laboratories involved in leading-edge research.

The OpenLab network operates worldwide to respond more effectively to the societal, environmental and economic challenges associated with the car of the future. In this way, it benefits from the shared human and experimental resources of PSA Peugeot Citroën and its partner laboratories.

* A fabrication laboratory, or fab lab is a small-scale workshop equipped with computer-controlled tools that is open to the public.

About PSA Peugeot Citroën

With its three world-renowned brands, Peugeot, Citroën and DS, **PSA Peugeot Citroën** sold 2.8 million vehicles worldwide in 2013, of which 42% outside Europe. The second largest carmaker in Europe, PSA Peugeot Citroën recorded sales and revenue of €54 billion in 2013. The Group is the European leader in low-carbon vehicles, with an average of 115.9 grams of CO₂ per km in 2013. PSA Peugeot Citroën has sales operations in 160 countries. It is also involved in financing activities (Banque PSA Finance) and automotive equipment (Faurecia).

For more information, please visit www.psa-peugeot-citroen.com

L'École de Design Nantes Atlantique

Supported by the Chamber of Commerce and Industry of Nantes Saint-Nazaire, L'École de Design Nantes Atlantique was created in 1988. State-acknowledged, the school offers a 5-year Design course (MDes) which is certified by the French Ministry of Higher Education. The school also offers various vocational and work-based programs (2-year advanced vocational diplomas, Bachelor's and Master's degrees) thanks to the Vocational Training Center for Creation and Industrial Innovation (CFA). Its teaching programs are focused on occupational qualifications in partnership with companies: internships, apprenticeships, prospective studies, workshops, collaborative projects and backing for innovative projects.

With an active international development policy, L'École de Design Nantes Atlantique has subsidiaries in Delhi (India) and Shanghai (China). A center for design and innovation, the school has set up 4 Design Labs dedicated to innovation and research: Sustainable Cities, New Eating Habits, Care (Health, quality of life and social innovation) and READi (Applied Experimental Research in Interaction Design). For more information: <http://www.lecolededesign.com/>

ENSCI-Les Ateliers

Founded in 1982, ENSCI-Les Ateliers is jointly governed by the Ministries of Culture and Industry. The School offers advanced study, consultancy and research in all aspects of contemporary design practice. Les Ateliers is located in historic premises near the Bastille - once home to the workshops of the decorator Jansen - and is open 24 hours a day all year round.

ENSCI-Les Ateliers is recognized for its innovative approach to design education, based on diversity of student profiles, individualized programming and project-based learning. Academic study is balanced with professional experience and the study platform allows each student to develop his / her own profile, vision and field of practice. The School also offers a Textile designer master (DT), a professional master in Design and contemporary technology (CtC) and the Innovation by Design (IdB) programme for non-designers. Learning to work in partnership with non-design experts is essential and this experience is extended through "Residences" in research laboratories (for example the CEA - the French government-funded technological research organization, Grenoble) or joint programming / research with leading management and engineering schools, universities and social science labs.

In Europe, the ENSCI is one of the seven founding institutions of the MEDes (Master of European Design). Very recently the school was highest ranked among Europe and America's schools and universities at the Red Dot Award / Design Concept. Its students and diplomas are regularly recognized with prestigious awards in the area of design (villa Noailles, Audi Talent Awards, Orange Challenge...). For more information: <http://www.ensci.com/>

ESBA TALM

Three fine arts schools assembled in one institution: Tours Angers Le Mans (ESBA TALM). This union represents the result of the European higher education harmonisation.

ESBA TALM is a part of a platform that valorises artistic teaching and enhances research poles development to deliver a bachelor master PhD (LMD) (national master diploma).

A third PhD cycle will be opened soon, as well as a post-graduate course. This new cycle and its corollary, research, are expected to be settled together with the academic and industrial partners at a local, national and international scale.

ESBA TALM Le Mans -in partnership with LAUM, IRCAM and ENSCI- is the only French institution to deliver a Sound Design master degree.

For more information: <http://lemans.esba-talm.fr/nt>

STRATE

Located in Sèvres, in the middle of a green campus and nearby student residences and sport facilities, Strate - Ecole de Design trains industrial designers in a five-year course, with a certified engineering level diploma (RNCP level 1).

Four departments structure the Design courses: Product Design, Mobility & Transport Design, Packaging and Retail design, Interaction Design, with the purpose of immersing future designers in the notions of sustainable and innovative development within the companies. In 2010, the school created a new department focused on research – STRATE Research – with the aim to including designers in the French research landscape, by taking part in research programs with universities and industrial partners, and launching new courses devoted to researcher training. For more information: <http://www.stratecollege.fr/>

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