

## GAUSSIN and BA Systèmes develop the robots of the future ports within the French “Investissements d’Avenir” program

**Press Release - Rennes (FR), February 15<sup>th</sup>, 2016** – VASCO for “Véhicule Automatisé Supervisé pour COnteneurs” (i.e. Automatic & Supervised Vehicle for Containers) is “a project of research and development structuring for competitiveness” (French PSPC) which benefits from a €8.8 million in help and is funded up to €5.5 million (subsidies and repayable advances) within the French program “Investissements d’Avenir” (PIA i.e. Investments for the Future), established by Bpifrance.

Driven by GAUSSIN SA and BA Systèmes, VASCO is a collaborative project of innovation in port robotics which aims at **developing the first 100% automated system with guidance without any infrastructure for the transfer of containers in port terminals.**

### The Consortium:

- **CRYSTAL** laboratory of Lille 1 University and **IRCCyn** laboratory of the École Centrale de Nantes will work on both the automation and guidance of the mobile robots (3 automated vehicles) and the system’s supervision.
- The project leader is **GAUSSIN SA** company along with **BA Systèmes**. Their objective will be the design and implementation of a demonstrator made of a fleet of 3 automated vehicles, a supervision system and an automated powerpacks exchange system. This demonstrator will function in real conditions as of 2017 on the Héricourt test site.

### Economic interests of the project:

The solution offered by VASCO should radically improve the productivity of container terminals and reduce the operating costs.

### Labels:

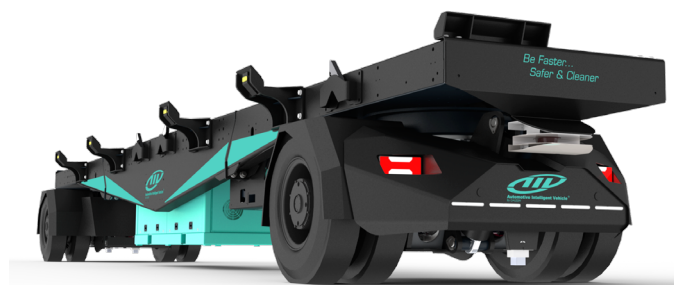
Bpifrance conducted the audit of the project, following which, the public institution submitted a framework contract to the consortium members. Furthermore, the project was labelled by three competitiveness clusters: Véhicule du Futur, i-Trans and Images & Réseaux.

The “Investissements d’Avenir” program, conducted by the CGI, devotes a total envelope of € 550 million for the co-funding of projects of research & development structuring for competitiveness (PSPC) within the framework of the action “Financing of innovative companies, strengthening the competitiveness clusters” of “Investissements d’Avenir”. This action aims at supporting structuring R&D projects, sources of direct economic and technological benefits under the form of new products, services and technologies, and also indirect benefits in terms of sustainable structuring for activities.



### GAUSSIN – BA Systèmes partnership for port automation

GAUSSIN and BA Systèmes companies announced in October 2014 the creation of a joint company called PORT AUTOMATION SYSTEMS (P.A.S.), which aims at combining the port equipments of the first one with the expertise in navigation without infrastructure (robotic guidance and Fleet Management) of the second one, in order to meet the growing global demand for port terminals automation.



The AIV (Automated Intelligent Vehicle), fully automated port vehicle

## Partners presentation within the VASCO project

**GAUSSIN MANUGISTIQUE®** is specialized in the auditing of handling processes, and the development of wheeled handling systems used to install and transport heavy, bulky or fragile loads. With more than 50,000 vehicles worldwide, GAUSSIN Manugistique boasts a strong reputation in four fast-expanding markets: Energy, Transport, the Environment and Raw Materials. GAUSSIN MANUGISTIQUE® has been listed on Alternext since 16 June 2010. GAUSSIN shares have been listed since 20 July 2012 in the E2 trading group (public offering) since obtaining AMF Visa no. 12-360 on 17/07/12 for the Prospectus, available free of charge on <http://www.gaussin.com>

French leader in intralogistics systems based on AGV, **BA Systèmes** supports industrial companies in the full automation of their flows. Over 250 sites in Europe are equipped with BA Systèmes' solutions, hence improving the productivity, flexibility and reliability of processes of Nestlé, L'Oréal, Kraft Food or even Heineken.

Involved in a permanent innovation process recognized by international awards, the group develops its expertise in mobile robotics to provide its industrial customers with the cutting-edge technologies. Innovative applications are also implemented by dedicated subsidiaries; BA Healthcare for the medical field and Port Automation Systems (PAS) for the port sector.  
<http://www.basystemes.com>

**CRISTAL** (Research center in Computer Science, Signal and Automatic Control of Lille) is a laboratory (UMR 9189) of the National Center for Scientific Research, University Lille 1 and École Centrale de Lille in partnership with University Lille 3, Inria and Institut Mines Telecom. CRISTAL is the result of the fusion of the LAGIS (Laboratory of Automatic Control, Computer Engineering and Signal - UMR 8219) and of the LIFL (Laboratory of Fundamental Computing of Lille - UMR 8022) to federate their complementary competencies in information sciences. The laboratory is composed of about 430 members (222 permanent employees and more than 200 non-permanent employees) among whom 22 permanent employees of the CNRS and 27 of Inria. Main CRISTAL Research activities involve topics related to major scientific and social issues such as Big Data, software, image and its uses, human-computer interaction, robotics, control and supervision of large systems, intelligent vehicle systems, bio-informatics... with applications in retails, technologies for health, smart grids.

<http://www.cristal.univ-lille.fr>

**IRCCyN** (Institut de Recherche en Communications et Cybernétique de Nantes) is a Joint Research Unit (in French "*Unité Mixte de Recherches*") of CNRS (Centre National de la Recherche Scientifique), UMR CNRS 6597, attached to Institut des Sciences de l'Information et de leurs Interactions (INS2I), Institut des Sciences de l'Ingénierie et des Systèmes (INSIS) and Institut des Sciences Biologiques (INSB). Its other local administrations are École Centrale de Nantes (ECN), Université de Nantes (Univ-Nantes) and École des Mines de Nantes (EMN), within the frame of COMUE LUNAM ("Communauté d'Universités et d'Établissements, l'Université Nantes, Angers, Le Mans"). IRCCyN also belongs to two research federations: AtlanSTIC (Fédération de recherche en Sciences et Technologies de l'Information et de la Communication, CNRS 2819) and IRSTV (Institut de Recherche en Sciences et Techniques de la Ville, CNRS 2488).

CRISTAL laboratory and MOCIS team bring to the project their knowledge and know-how in the fields of engineering, computer sciences and electronics developed on many research projects, and the results of the INTERREG IEV InTrade project on Flow Management, Online Diagnoses and Tele-operation. MOCIS scientific knowledge has been developed in particular for the detection and isolation of faults in an autonomous vehicle, and in the estimation and fault isolation based on Bond Graph approach applied to an autonomous vehicle).

<http://www.irccyn.ec-nantes.fr/fr/>

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