

ARTELIA, innovative engineering
Winner of the 2016 National Engineering Prize for Industrial projects
Winner of the “Grand Paris de la Mobilité” (Greater Paris Mobility project) prize

Thursday 20 October – On the occasion of the 10th anniversary of the National Engineering Competition, Artelia’s team* was awarded first prize in the Industrial projects category for 2016. The prize-giving ceremony was held at the French Ministry of the Environment, Energy and the Sea in Paris.

Every year, this competition puts the spotlight on engineers who design innovative solutions to address the challenges of tomorrow, from the standpoints of industry (products, processes, construction), buildings, infrastructure (transport, energy, networks), and complex systems and installations.

Artelia is already considered a leader in the field of water, transport and building construction, and

this award further raises its profile in the industrial sector, particularly in the fields of aeronautics, pharmaceuticals, test laboratories, nuclear power and data centres.



Frédéric Ghoulmie, Director of the Transport Department, Luc Tabary, Project Director, Sébastien Verplancke, Project Manager



Thursday 6 October – Société du Grand Paris, in partnership with the Greater Paris transport authority (STIF), declared Artelia winner of the call for projects on the theme of “mobility around the Greater Paris building sites”. Starting today, this experimental programme must provide tangible and innovative responses to a major issue for users: traffic flows and parking solutions during the Grand Paris Express metro construction phase, stretching from now to 2030 (205 km of new lines, 68 new stations in Greater Paris).

These distinctions are the culmination of Artelia’s continuous investment in research and innovation, for which the Group allocates 3% of its annual turnover and mobilises 800 employees in the context of their everyday assignments. Indeed, innovation is an integral part of its activity, the objective being to constantly develop higher-performance, optimised and creative solutions for its clients.

The 2016 prize for Industrial projects awarded to the dynamic test bench for the Lille metro system: a world first

The dynamic test bench is an innovative solution used to replicate the operation of a metro, train or tram unit in a workshop, requiring minimal space to carry out all the tests usually performed on a track measuring several hundred metres.

With this method, the unit is placed on static rollers to simulate its movement on a track and the interactions with the network’s signalling systems. This testing system provides sufficiently realistic conditions to ensure the tests are comparable to a unit running on actual rails, in particular with regard to the safety and availability requirements for this kind of equipment.

Find out more by watching this video: https://www.youtube.com/watch?v=QR7eGev_JB4

The “Mobility challenge” set by Société du Grand Paris taken up using GELITRA

GELITRA (a French acronym for ‘traffic delivery management’) is a digital spatial organisation solution for building sites, structured and optimised using software developed by Artelia in the context of the “Châtelet Les Halles” project in Paris. The objective is to transpose this solution to the Grand Paris Express project in order to implement dynamic management of traffic flows in the works areas to prevent worksite machinery from parking on roads or in any way blocking traffic in the vicinity of the worksite accesses.

<http://www.innovation.societedugrandparis.fr/defi/grand-paris-mobilite/>

Innovation at ARTELIA

Today, the Artelia Group is at the forefront of approaches aiming to improve energy efficiency in buildings (in particular through the systematic use of BIM – Building Information Modelling – for all projects in 2016), as well as in the fields of water engineering and sustainable cities using leading-edge simulation and modelling tools.

The Innovation workshops organised by Artelia across the Group on 20 September were the opportunity to take stock of the main initiatives undertaken by its teams. They concern in particular:

- Use of virtual reality to design the most appropriate solutions by combining the technical calculation systems used by building construction engineers with the best texture replication tools that simulate colours and materials, and by integrating them into a cutting-edge software program used by videogame specialists.
- The best of both worlds - numerical and physical – for increasingly advanced modelling techniques applied to structures such as ports, dams, river development or urban wastewater management infrastructure. Artelia has unique physical scale modelling facilities that are based on the laws of hydraulic similitude: its scale modelling laboratory and the Port Revel shiphandling training centre. Artelia is constantly innovating by developing new measurement techniques, perfecting calculation algorithms, and fine-tuning result presentation methods through collaborative tools shared with clients and partners.
- 4D BIM is taking off thanks to the widespread use of drones. BIM makes it possible to involve all the players, visit all facets of the structure to be built and detect potential conflicts between different trades, thereby avoiding them being discovered during the works and losing precious time. Pushing this logic even further, Artelia has introduced a fourth dimension: the time component, corresponding to the foreseeable day-to-day progression of the works. The drone monitors the gradual erasure of the drawn structure and its replacement with the real structure, and the daily readjustment of the project schedule.

A few words about Artelia:

Artelia is an international, multidisciplinary consultancy, engineering and project management group specialising in the sectors of building construction, infrastructure, water and the environment. With 3500 employees and turnover of €405 in 2015, Artelia is one of France’s leading groups in the sector. Internationally, the group operates 42 offices in Europe, Africa, the Middle East, Asia and South America. Artelia is 97% owned by its managers and employees.

The audit of certified group entities, carried out by AFAQ in June 2015, enabled us to renew our ISO 9001, OHSAS 18001 and ISO 14001 certifications for a new 3-year cycle.

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