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Press release

VINCI and ParisTech renew the
Chair in Eco-design of Buildings and Infrastructure

- Research that has validated the life cycle analysis concept for buildings and infrastructure
- €4 million in funding to 2018
- A partnership that is part of VINCI's collaborative innovation programme

VINCI and ParisTech, public scientific cooperation institution, entered into a five-year partnership in 2008 to focus on the eco-design of building complexes and infrastructure. It was supported by an innovative sponsorship of three French graduate schools of engineering (MINES ParisTech, Ecole des Ponts ParisTech and AgroParisTech). The partnership created a Chair designed to generate new concepts and tools for use in eco-urban and biodiversity planning and notably created some 15 measurement tools and methodologies that have become benchmarks in the field, such as nova Equer[1], Biodi(v)strict[2] and ParkCap[3].

Between 2008 and 2013, the Chair focused primarily on eco-neighbourhoods, refurbishment of built structures, materials life cycle analysis, biodiversity and sustainable mobility. VINCI's subsidiaries served as a testing ground, offering pilot sites for experiments and welcoming researchers and interns. The Group's employees also took part in designing teaching modules for students. The results of this work were made available to urban stakeholders (designers, builders, operators and users), notably via some 25 conferences.

VINCI is now renewing this partnership for the period up to 2018 and increasing funding for the five-year period from €3 million to €4 million. For this second sequence, the research work will be even more application-oriented and have a broader international reach, notably via the presence of British and Swiss-German experts in its governing bodies. The main themes in the new period will be energy performance, urban agriculture, smart grids, smart cities, renewable energies, recycling and more targeted topics such as the socio-economic impact of the *Grand Paris* light rail stations.

Vinci has opted to focus part of its innovation work on supporting research, debate and public-private initiatives. In doing so, it promotes a shared approach to research. Innovation is driven by improvements in knowledge and in its dissemination. Vinci's research and development policy concentrates on the major issues addressed by its business activities: eco-design, energy performance, sustainability of infrastructure and new mobility services.

To find out more:
www.chaire-eco-conception.org
www.vinci.com/vinci.nsf/en/newsroom/pages/innovation_at_the_heart_of_vinci_s_business_lines.htm

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[1] Application on the scale of a neighbourhood of Equer, the building life cycle analysis tool that is used to estimate the environmental footprint of a building based on 10 environmental indicators (energy consumption, materials, water consumption, construction processes used, waste, etc.) to ensure that, over the entire life cycle of the project (construction, operation, renovation, demolition), one type of pollution is not replaced by another. Nova Equer covers several buildings and the public spaces of a neighbourhood (green spaces, streetlights, etc.). It is used in particular to estimate the influence of a block plan on the energy and environmental performance of a "city segment".

[2] A tool for assessing biodiversity in an urban setting, Biodi(v)strict draws up a review of the areas able to support biodiversity. Biodiversity indicators are assessed on the basis of representative species counts (nesting birds, reptiles, butterflies). The team in charge of a project can make proposals for relevant adjustments based on these indicators.

[3] A model that simulates parking in an area in which the capacities of the various transport resources (vehicles, road infrastructure, parking spaces) are shown and compared with the mobility needs in the area under consideration. The simulated levels of utilisation can be used to draw a variety of conclusions concerning travel time and convenience, quality of user service and the environment. More particularly, the simulation of the distance travelled to find a parking space in a highly congested area is an original innovation that can be used to assess needs in terms of the parking facility capacity and pricing.