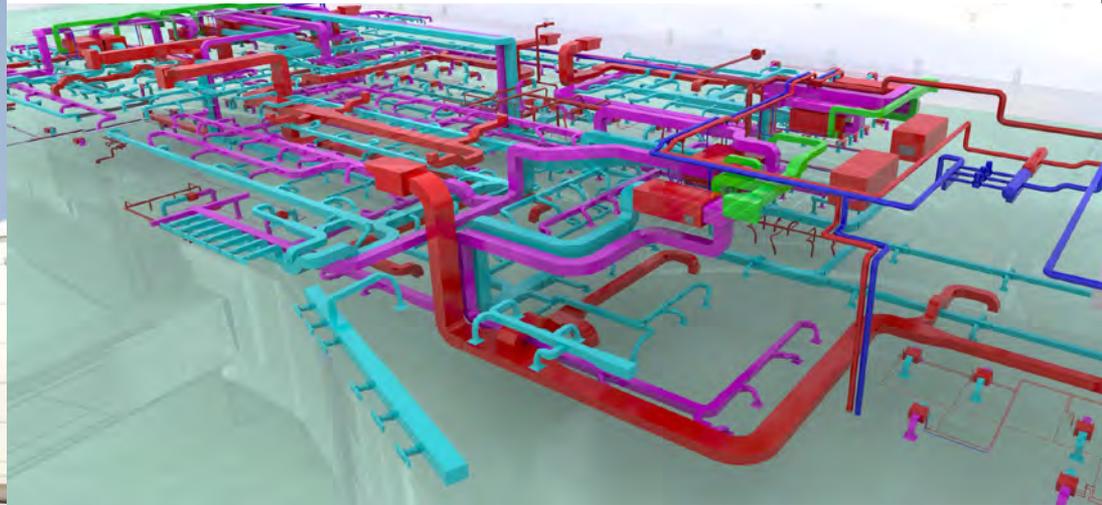




**BUILDING INFORMATION
MODELING**
FOSTERING SUSTAINABLE PERFORMANCE



An aerial photograph of an airport terminal and tarmac. The terminal has a large, curved, light blue roof. The tarmac is paved with yellow and white markings. Several aircraft are visible, including a large white and blue jet on the left. A semi-transparent blue rectangular box is overlaid on the center of the image, containing white text.

At the heart of VINCI's **integrated model**, VINCI's subsidiaries form an **unrivaled worldwide network of expertise**. The **efficient use of BIM** – from project set-up to operations and maintenance – on building and infrastructure projects and processes adds **value** and delivers **new services** to clients and users throughout the entire project lifecycle of the structure.

Given the need to ensure **robust and sustainable** building information models, we undertake all **BIM management** assignments into our projects.

We leverage our **acquired lifecycle expertise** in our concession activities to meet requirements stipulated in the various types of contracts (set-up, construction, operation) under which we operate.

VINCI SHINES AT BIM D'OR AND AT PUCA

BIM d'or

The 2016 BIM d'Or was awarded to VINCI Facilities (VINCI Energies' dedicated Facility Management brand) for the "BIM for FM experimentation" project carried out in co-innovation with its client, Thales, as part of building operations at Hélios, a recently built complex in Vélizy-Villacoublay in the French department of Yvelines. On this project, BIM was used in the maintenance and operation phases to the benefit of occupants, the tenant, the owner, and the facility manager.



International

In the "International" category, the 2016 BIM d'Or was awarded to VINCI Construction Grands Projets for its renovation of the historic building that houses the Mandarin Oriental Hotel in London, a project conducted in consortium with Petit (VINCI Construction France). The use of BIM made it possible to undertake the building's rehabilitation by modelling the existing structure in accordance with a schedule of works that enabled the hotel to stay open and operational during the course of the project.



Infrastructure

In the "Infrastructure" category, the 2016 award went to VINCI Autoroutes for its streamlined management of a road-connection construction project on the Nantes ring road in the French department of Loire-Atlantique. Thanks to the use of BIM, there was no need to model any component twice. The project team focused on developing models for roads, bridges, and networks in accordance with Industry Foundation Classes (IFC) building guidelines.



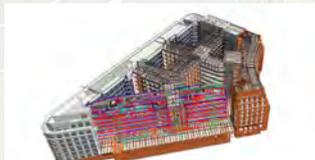
New project

In the "New 5,000 to 40,000-m² Project" category, the 2015 award was presented to a 53-unit collective housing project in Rouen in the Seine-Maritime department led by SOGEA Nord Ouest, a subsidiary of VINCI Construction France. The use of digital modelling in every phase of the project enabled research activities and the development of consistent, innovative, and effective solutions for one of the most expense-efficient housing projects undertaken for the Habitat 76 property estate.



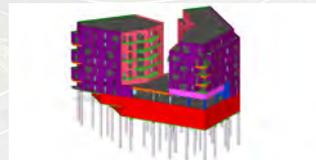
Renovation project

In the "Renovation Project" category for properties exceeding 40,000 m², the 2015 prize was awarded to the Îlot Fontenoy-Séguir restructuring project in Paris led by CBC and BATEG, subsidiaries of VINCI Construction France. This facility will house the offices of France's Prime Minister and other administrative authorities. The use of 3D laser scan technology in conjunction with BIM will allow the builders to supply a technical framework ready for operations at delivery.



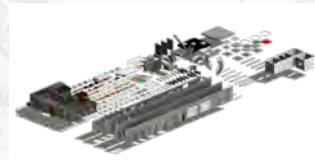
Special citation

In 2014, the special citation from the judges' panel was awarded to VINCI Construction France for a 41-unit collective housing project for Terralia in Pantin in the department of Seine-Saint-Denis. This program has shown how relevant is BIM for the common housing projects sector.



PUCA

In 2015, VINCI Construction France also won a prize awarded by PUCA (Plan Urbanisme Construction Architecture, a French interdepartmental agency) for its BlueBIM Toolbox, developed as part of the digital transition plan for buildings launched by the French government.



Our partnerships



Plan Transition Numérique dans le Bâtiment

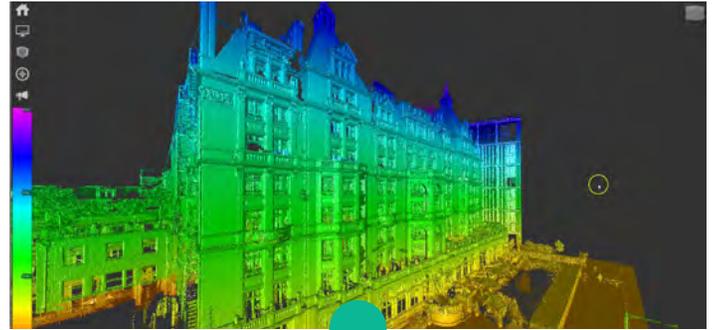


USING BIM TO CREATE VALUE AND NEW SERVICES



BETTER-PERFORMING BUILDINGS & INFRASTRUCTURES

- High-quality development and construction
- New services for users and owners
- Energy efficiency
- High operating performance: predictive, preventive, and corrective maintenance
- Reduced lifecycle costs through effective asset management



EASY ACCEPTABILITY, EASY EVOLUTION

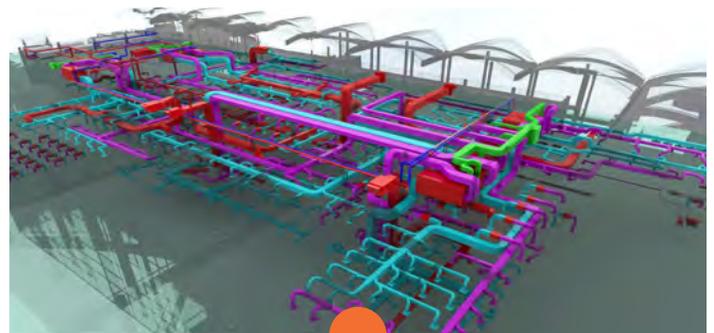
- Customised structure
- Ability to capture pre-existing data
- More harmonious integration of the project in its surroundings
- Continued client operation on project sites
- Optimised use of space

THE POWER OF A COLLABORATIVE PROCESS



FACILITATING COMMUNICATIONS AMONG ALL PROJECT PARTICIPANTS

- Open dialogue for a better understanding and knowledge of the structure
- Project management based on accurate definitions, predictive capacities, auditing facility, and transparency
- Aid to decision-making and validation
- Improved safety

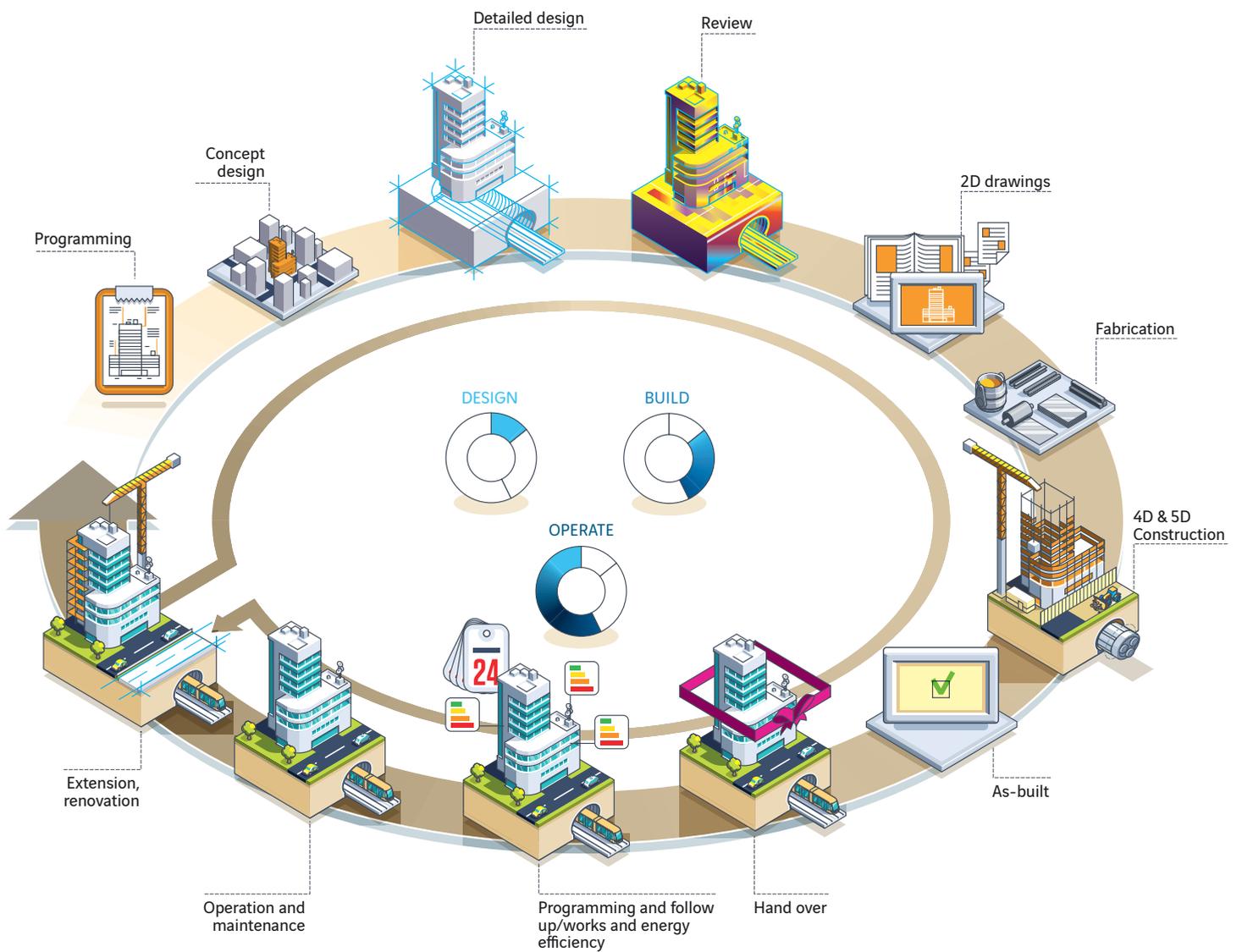


ENHANCED RELIABILITY

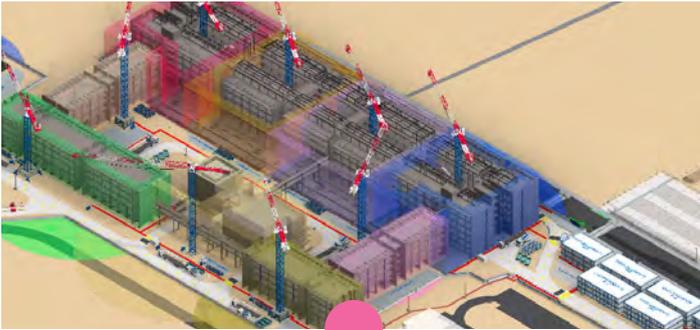
- Easy access to reliable information
- Consistent data and references
- Improved operation simulation and predictive capacity prior to field interventions
- Enhanced digital legacy management

WE DEVELOP AND OPERATE YOUR PROJECT USING BIM

to enhance its performance, value, and ability to evolve through its lifecycle



CONSTANTLY EVOLVING TECHNOLOGIES



THE POWER OF BIM AT EVERY KEY PROJECT STAGE

- Different models for different uses
- Simulation analysis
- Consolidation, sharing and traceability
- Production and distribution of information generated by the models
- BIM to site: supports learning and encourages feedback
- Ability to forestall obsolescence of materials and equipment



COMPATIBILITY WITH OTHER TECHNOLOGIES

- Collaborative platforms
- Geo-tracking and geographical information systems (GIS)
- 3D laser scanning
- Ability to capture pre-existing data
- Computerised maintenance management system (CMMS)
- Integrated workplace management system (IWMS)
- Virtual reality
- Augmented reality
- The Internet of Things (IoT)
- 3D printing
- Centralised management system (CMS) and building management system (BMS)

OUR EFFORTS TO FURTHER THE DEVELOPMENT OF BIM



VINCI GROUP COMPANIES ARE COMMITTED TO THE DEVELOPMENT OF BIM AND RELATED TOOLS IN FRANCE AND AROUND THE WORLD

- In France: involvement in professional associations and BIM research projects (Mediaconstruct, projet national MINnD pour les infrastructures, projet Propriétés des Ouvrages BIM du Plan de Transition Numérique dans le Bâtiment)
- Involvement in standardisation task forces (Afnor and ISO)
- Around the world: involvement in professional associations (BSI), participation in BIM events (BIM World, Autodesk University, European Airport Summit, 5D-Initiative)
- Own investment and R&D initiatives
- Sharing of tools developed with partners in the building and public works ecosystem

R E A L
S U C C E S S
I S T H E
S U C C E S S
Y O U S H A R E



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About VINCI Group:

VINCI is a global player in concessions and construction, employing more than 183,000 people in some 100 countries. The Group designs, finances, builds and operates infrastructure and facilities that help improve daily life and mobility for all.

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