

GREEN AND SMART BUILDING

STRUCTURES FLOOR COVERINGS INSULATING MATERIALS
STRUCTURAL ENGINEERING PREFABRICATED SYSTEMS
DOORS/WINDOWS CURTAIN WALLS GEOTHERMAL
ARCHITECTURE ENERGY CONTROL/MANAGEMENT
SIDINGS BUILDING MECHANICAL ENGINEERING
LIGHTING REAL ESTATE DEVELOPMENT
CONSTRUCTION PROJECT MANAGEMENT



© Photos: Stephane Groleau

POSITIONED AS THE CONSTRUCTION INDUSTRY'S NICHE OF THE FUTURE, THE GREEN AND SMART BUILDING MARKET IS GROWING BY LEAPS AND BOUNDS WORLDWIDE. THE QUEBEC CITY REGION HAS EARNED AN ENVIABLE POSITION BY FOCUSING ON ENTREPRENEURIAL EXPERTISE AND INGENUITY.

The Quebec City region has distinctive expertise, including innovative development projects and innovative design practices, technologies and materials. Championing an approach that takes into account cost, comfort and flexibility objectives (smart building) as well as environmental impact reductions (green building), the industry is spurring growth and fostering the development of healthy, productive and profitable environments for the benefit of building owners and occupants.

Located within striking distance of various large markets (e.g. Boston, New York, Washington, Montreal, Ottawa and Toronto), the Quebec City region is taking on a cutting-edge role as it leverages its high-export-potential expertise.



GREEN AND SMART BUILDING INDUSTRY IN THE GREATER QUEBEC CITY REGION

295 companies

6 500 jobs

\$1.7 billion in annual revenues

\$156.4 million in annual salaries

\$2.5 billion in sustainable building projects underway or announced

Photo: Marc Cramer

Data compiled for the Quebec City census metropolitan area (CMA) by Québec International



BILLIONS OF DOLLARS IN SUSTAINABLE INVESTMENTS

The construction industry is booming in the Quebec City region, with more than 160 major projects scheduled for completion between 2011 and 2020 generating \$8.3 billion in investments. Approximately 10 projects valued at \$2.5 billion (i.e. 30% of the total) are focused on sustainable development and green technologies. Green neighbourhoods are also beginning to take shape. In the wake of these initiatives and the rapid growth in the number of real estate developments meeting new environmental standards, the region's green and smart building sector is also booming. Drawing on a wealth of sustainable building expertise and the presence of increasingly innovative manufacturers, the region has earned an enviable position.

SCIENCE SERVING INDUSTRY

Laval University, the only post-secondary institution in Quebec to offer expertise in architecture, mechanical engineering, wood engineering and civil engineering, fosters industry growth through high-tech research and training programs that meet industry needs.

www.ulaval.ca

As the world's largest non-profit forestry research institute and as a global leader in the area of wood product research and technology transfers, **FPInnovations - Forintek Division** is a key player in Canada's wood product industry. www.fpinnovations.ca

For more than 40 years, the **Quebec Centre for Industrial Research (CRIQ)** has provided invaluable assistance to sector companies. By supporting technological innovation among manufacturers of construction materials and systems, the Centre enables them to offer distinctive high-value-added products. www.criq.qc.ca

As an international environmental leader, the **National Institute for Scientific Research's Water Earth Environment Centre** has specific expertise in the areas of environmental sanitation and waste recycling.

www.ete.inrs.ca

ENERGY PERFORMANCE

The Quebec City metropolitan region is home to major manufacturers of conventional and pre-fabricated curtain walls. Made from aluminum and wood, the products marketed by Epsylon Concept, Gamma Industries and IC² Technologies offer optimal thermal performance and the best energy efficiency available on the market.



© Photos : Stéphane Groleau

ENGINEERING PROWESS

Setting a new standard of excellence, a number of wood-based construction projects have gone on to acquire pathfinder status. One prime example is the Fondation CSN building in Quebec City, a six-storey wooden structure and the first of its kind in North America. This building has been awarded several distinctions, including a US Forest Stewardship Council Award in 2010.

BENEFITS OF WOOD

Wood-based construction is growing in popularity throughout the Quebec City region. This should come as no surprise in light of the fact that wood is one of Quebec's most important natural resources; the use of wood is also helping to reduce greenhouse gas emissions. Across a wide range of projects (concert halls, sports stadiums, university buildings, commercial buildings and office buildings), developers are tapping into the region's homegrown R&D, engineering, architectural and construction expertise to reap the benefits of wood's unique characteristics (e.g. beauty, resilience, CO₂ capture capacity, low thermal conductivity and insulating properties). All of these qualities are desirable from a sustainable development perspective.



Photos : cecobois

PREFABRICATED SYSTEMS - BONNEVILLE HOMES, MAISONS LAPRISE, MODULEX INTERNATIONAL, MUROX, PRO-FAB, RCM MODULAR LIVING **ENGINEERING** - CIMA+, ROCHE LTD. **DOORS/WINDOWS** - BAILLARGEON DOORS, CARON & GUAY, JELD-WEN OF CANADA, LAFLAMME DOORS AND WINDOWS, MULTIVER, SOLARIS QUEBEC **INSULATING MATERIALS** - ISOLOFOAM **WALLS/CURTAINS** - EPSYLON CONCEPT, GAMMA INDUSTRIES, IC² TECHNOLOGIES

COMBINING INTELLIGENCE AND EFFICIENCY

Building energy efficiency is a major concern. In the Quebec City region, a number of prominent companies operating in the fields of intelligent buildings, energy consumption control, heating and lighting have developed innovative systems meeting increasingly stringent market requirements. Leading companies such as Cristal Controls, Gentec, Regulvar and Sara-Tech are designing and/or installing integrated and open-ended building automation solutions aimed at optimizing building performance and enhancing occupants' comfort and security.



PREFABRICATED AND SUSTAINABLE

The Quebec City region's unique regional expertise stems in part from the presence of several major manufacturers of industrialized building systems. Prefabricated buildings, modules, frames and walls help to reduce costs and construction times while improving quality, sustainability, energy performance and environmental footprints. One example is Modulx International, founded in 1965, which makes factory-built panelized walls and roof trusses used in the construction of environmentally friendly buildings in more than 25 countries.

INNOVATIVE PROJECTS

Committed to sustainable land use development, regional municipalities have undertaken a number of large-scale projects reflecting regional expertise (e.g. Quebec City's green neighbourhoods and Innoparc in Lévis). Various other major initiatives and projects are also poised to transform the regional landscape, including GlaxoSmithKline Biologicals' administrative building, La Capitale's new headquarters, the Promutuel and Delta 3 buildings, the Cité Verte complex, the new campus Desjardins building in Lévis and the recreational/tourism project known as Le Massif.



quebecinternational.ca

FLOOR COVERINGS - FINITEC CANADA, MODEL HARDWOOD, PREVERCO **GEOTHERMAL** - GROUPE BEAUDOIN **SIDING** - GRANICOR, MAIBEC, NOVIK
ENERGY CONTROL AND MANAGEMENT - ARIANE CONTROLS, CRISTAL CONTROLS, DIMONOFF, GENTEC, REGULVAR, SARA-TECH
ARCHITECTURE - ABCP ARCHITECTURE, HUDON JULIEN ASSOCIÉS, TERGOS ARCHITECTURE **PROJECT MANAGEMENT** - DROLET CONSTRUCTION, POMERLEAU, VERREAULT CONSTRUCTION **LIGHTING** - LUMCA **STRUCTURES** - CHARPENTES MONTMORENCY, HONCO, STRUCTURES ULTRATEC



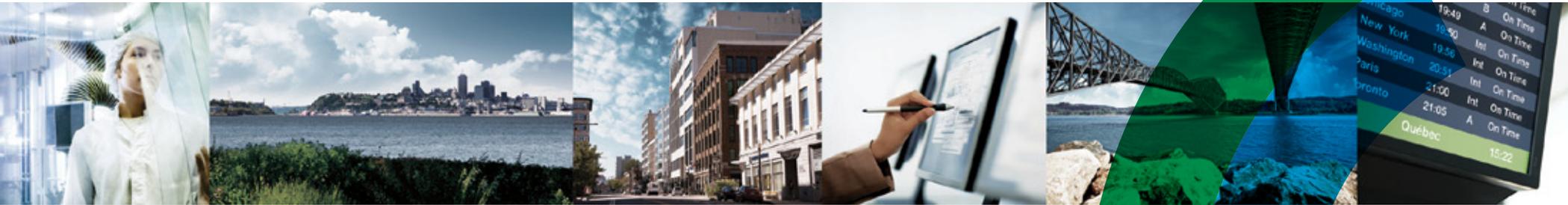
MOBILIZING FOR DEVELOPMENT

The Green and Smart Building Network (GSBN) seeks to mobilize companies and other sector stakeholders in the Quebec City region. As a structured business network, the GSBN aims to promote business development and foster local companies' expertise and global standing with a view to transforming the region into a Canadian and international centre of excellence in the sector.

QUEBEC CITY: #1 IN CANADA AND THE US FOR SET-UP AND OPERATING COSTS

Overall, companies' localization costs are 7.6% lower in the Quebec City region than in comparably sized cities in the US.

Source: KPMG's Competitive Alternatives 2010.



SUCCESS AT HOME
AND ABROAD



QUÉBEC
INTERNATIONAL
Economic Development

quebecinternational.ca

