



Terese Coady

AIA, AAA, MAIBC, FRAIC, LEED® AP CEO, Bunting Coady Architects

Ms. Teresa Coady is the Chief Executive Officer and Founding Partner of Bunting Coady Architects, one of Canada's leading architectural practices. A Fellow of the Royal Architectural Institute of Canada and Vice-President of the Architectural Institute of British Columbia, Ms. Coady is also a current board member of the USGBC (US Green Building Council) and CaGBC (Canadian Green Building Council), Cascadia Chapter. She has also acted as an advisor to the British Columbia Energy Code and has recently been appointed to the BC provincial government's Climate Action Team (CAT).

Under Ms. Coady's leadership, **Bunting Coady Architects** has won over 50 awards for design quality and building performance, including the BOMA Earth Award on four separate occasions.

A past recipient of the YWCA Woman of Distinction award, Ms. Coady was also a member of SB08, (Sustainable Buildings 2008) 'Team Canada'. This select group of individuals showcased Canadian achievements to the World Sustainable Building Conference in Melbourne, Australia in September 2008.

Natural **Solutions** for a Man-Made world.

We are at a critical juncture in the evolution of architecture, engineering and real-estate development. The international modern style of a monolithic glass tower is fast losing credibility as a viable architectural expression. Buildings are evolving towards a more sophisticated and complex structure in response to social, climate and development influences. This represents a fundamental shift in architectural theory.

Since the development of the electric elevator in the late 1880's, it has been possible to build higher and higher buildings. This eventually led to the evolution of the skyscraper, a building that is as disconnected from the earth as any human expression has ever been. Add to this the invention of artificial ventilation systems, mechanical heating and cooling systems, water pumps and fans, and you have a complete independent 'building-as-a-machine' culture: 'perfectly' conditioned, cleaned and lit spaces with no natural input. Paradoxically, humans have to fit into the spaces between the windows and the mechanical services core, where we're categorised as 'odour and heat emission sources', contaminating the otherwise pristine environment of the perfectly conditioned edifice. Provision also has to be made for power, gas, water and sewer lines not to mention roads and car lanes. In North America, we currently devote fifty per cent of the space within our cities to the creation of roads and parking lots, leaving few green spaces or recreational areas for our relief and enjoyment. Our population has increased by seventeen percent in a single generation, while our urbanisation of land has soared by forty-six percent, with disastrous results for the environment.

'Living Breathing Building'™ that imitates nature in all her sophisticated efficiency and splendour.

However, with the dawn of a new century has come a healthier, more creative way of looking at buildings. Partly as a result of our computational processing power, we are now able to effectively model the performance of our buildings at ever more sophisticated levels using the 'fuzzy logic' of natural systems. This is leading to softer, and more efficient organic forms, that connect natural systems with building mechanical systems in the form of natural daylighting, ventilation, geo thermal heat exchange and green roofs. This is not a fad, but rather a natural progression in our understanding of physics expressing itself in building engineering science. Such progressive changes are excellent for society but the real question evolves around what these scientific breakthroughs mean for construction. It's clear that the traditional mechanized building form – as typified by building booms in China and Dubai - has now peaked, and we are beginning to see viable alternatives beginning to develop on a global scale. In Austria and Germany the Passivhaus movement, where new and refurbished buildings are conditioned to heat and cool themselves, (hence the term 'passive'), is more the way of the future. In North America, the focus in the Cascadia region is on the creation of the 'Living Breathing Building'™, which provides a healthy and beautiful environment for the inhabitants while supporting the repair of the planet. There is a growing belief amongst architects and developers around the globe that the future of buildings and real estate development lies in the creation of natural, passive systems, rather than mechanical ones. These systems also actively support and enhance the eco-systems of their sites, instead of paving them. This approach favours humane development, the creation of community building initiatives that are deliberately people-focussed. Just as the LEED® wave took off in the early years of the twenty-first century, we are now seeing a definite shift towards the 'Living Breathing Building'™ that imitates nature in all her sophisticated efficiency and splendour. This act of embracing and emulating nature, known as 'biomimicry', has also stimulated the growth of 'biomimetics' in buildings. Nature inspires us to create buildings that arc and curve to follow the solar radium, buildings that blend and roll into the earth to connect eco-corridors and buildings that use geothermal preconditioning to ameliorate mechanical loads. Solar and wind power as renewable energy sources are also be-

ginning to exhibit the 'natural intelligence' that will be the hallmark of future construction. This is the way of our future...



Front Entrance, Kwantlen University College Library at dusk.

This newly renovated and expanded library is at the heart of the Kwantlen University campus. Targeted LEED® Platinum, this durable, flexible and efficient facility incorporates a wealth of sustainable design features.

ARCHITECTS Bunting Coady Architects



Atrium & inter-connecting staircase, Kwantlen University College Library.

This new 57,000 sq.ft. facility is the essence of a modern library and provides a dynamic centre dedicated to successful learning.

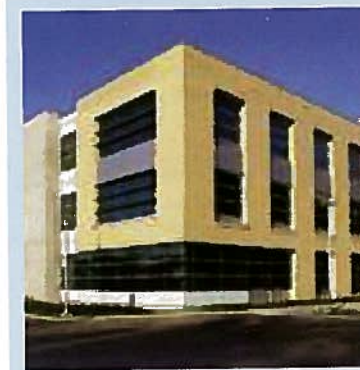
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Atrium, Kwantlen University College Library.

Only non or low VOC (volatile organic compound) emitting materials were used in interior adhesives, sealants, paints, carpets, agrifibers and woods. More than 95% of the virgin wood used in this project is FSC certified.

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Extension exterior, Kwantlen University College Library.

The building orientation, massing and individual façades were specifically designed to respond passively to the outside environment. Over 90% of all occupied spaces within the facility have extensive views to the outdoors.

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