

Is the Future in **Technicolour?**



Trends for
the future
of exterior
refurbishment

By Sylvia O'Brien



IMAGINE A large cube-shaped building made of translucent tubes recycled from CD cases ... tubes that house multi-coloured LED lights. The unique exterior of this building can change colour on a regular basis through a computerized light system. The interior has a misting system that cleans and cools the air and catches the light show from the exterior, creating a hazy look to the structure. Like something from a science fiction movie, this building actually existed ... as the Shanghai Corporate Pavilion at last year's World Expo.

OK, let's stop dreaming ... for now. In the real world changing needs and technologies are helping redefine architectural solutions. Many highrises in Ontario were built at a time when energy was cheap. Now they contribute a significant amount, not only to greenhouse gas emissions, but also to the deple-

The future of exterior cladding – 60 Richmond Street East a LEED Gold certified building.

Photo: Shai Gil

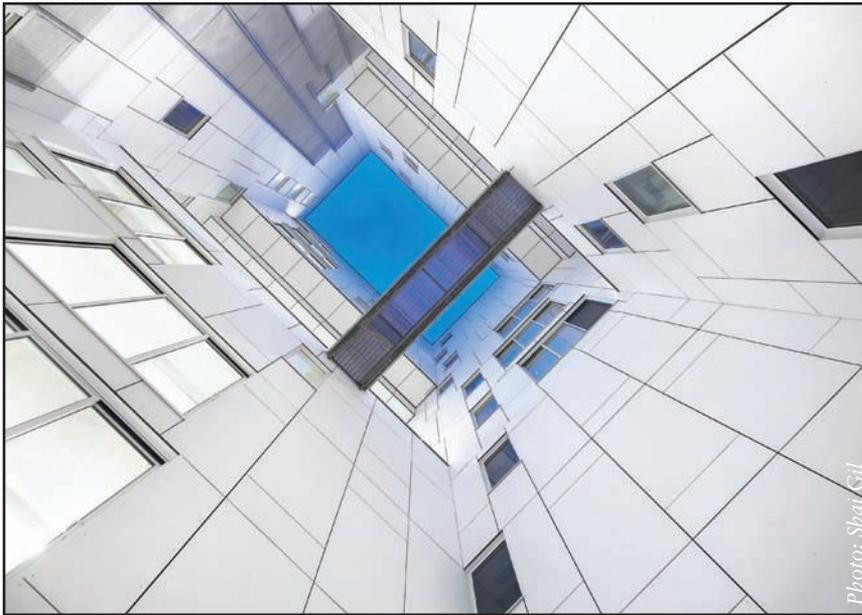


Photo: Shai Gil

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tion of the condo operating budget.

Trends going forward include environmental awareness and long-term thinking in our decision-making. According to Brian Burton, a building scientist with Kleinfeldt Consultants, the building envelope (walls, windows and roofing systems) in modern buildings are no longer required to serve as structural components of buildings. As a result the emerging trends have been toward the use of lightweight rainscreen cladding, or ‘overcladding’ systems that are comprised of layers of materials where each layer serves a function.

Aesthetics are a major factor and of course colour selection is a very important consideration. “Not only is the exterior cladding one of the most expensive parts of building, it is also a key component of aesthetic value for both the public and the occupants. As a result colour coordination should receive close attention and is an essential component of the design function.”

John Losak, manager of building science, also with Kleinfeldt, provided his read for the future. Losak’s feeling is that planning for the long term and addressing sustainability is of key importance. Regarding the building envelope, overcladding seems to be the clearest answer. Overcladding systems that are reasonably new in North America have functioned well in the

U.K. and Europe for decades.

■ What are the Advantages of Overcladding Systems?

- 1) Improving thermal efficiency (therefore generating future long-term energy savings)
- 2) Carbon reduction
- 3) Updating the appearance, hence the marketability of an older building
- 4) Minimizing tenant disruption (retrofit pipes can hide between overcladding and original curtain wall instead of tearing apart unit interiors to accommodate)
- 5) Eco-friendly noncombustible exterior paneling offers many materials, textures and hundreds of colour options to help define and distinguish your building.

Envelope materials for overcladding include (among others) high density fibre cement board, engineered wood and zinc. Each of these materials has sustainability, high performance for our brutal and varied climate and between them offer many options for bringing texture and colour to our landscape. These textural and colour differences might well be what defines an exterior, bringing character and life to what would be a monochromatic, or blank, canvas.

■ What Part does Colour Play?

Overcladding offers hundreds of

options in texture and colour, allowing an opportunity to reinvent to address a changing marketplace. More and more there is demand for variety and brand definition, especially in our urban centres.

As Canadians, we are getting bolder with our exterior colour choices. There is definitely a movement away from simple greys and beiges. They are being replaced with coloured neutrals, more complex deeper tones, contrast and even strong colours. Colours taken from the earth and sky (anyone facing north on John Street and glimpsing the blue cladding on the south side of the new AGO can feel the influence colour has) warm yellows and reds are emerging. Our inclusion in the global village has a strong influence on a shift in colour acceptance. How we translate this is a complex question.

■ The Real World

A great example of this mix of sustainability, technology and new aesthetic is seen in 60 Richmond St. East in downtown Toronto (see page 13).

Teeples Architects was commissioned to design this structure. This LEED Gold standard building addresses global urban style as well as environmental benefits. Ventilated rainscreen fibre cement overcladding, high performance fenestration, sophisticated systems for heat recovery and mechanicals, a living roof and rainwater harvesting bring a green environment to our urban landscape. From a design point of view, the sculptural newness and intrepid use of colour make a very strong and timely statement. The grey overcladding isn’t just any grey ... it’s a deep resonant grey with an influence of blue. The white sections bring interest with their contrast and the hits of yellow green, orange and red take it from a monochromatic colour scheme to something far more than the sum of its parts in terms of visual articulation.

I spoke about trends to John Kubassek of Engineered Assemblies, the firm engaged for fabrication and installation of the overcladding of 60 Richmond East. He explains, “As market demands change, façade design will evolve further. Capturing

solar and wind energy through the façade itself is growing in interest. However the methods and systems have yet to be developed to meet code and performance criteria.”

■ **Materials for Overcladding**

Another exciting overcladding material is ceramic. An ancient technology reinvented to bring beauty and variety to our environment, ceramics come in many colours (actually any colour) as well as various textures and finishes.

Museum Brandhorst in Munich is a superb example of where colour in architecture is going. Its overclad exterior consists of 36,000 ceramic rods in no less than 23 distinct colours. Its look changes and seems to actually shimmer, depending on the angle it is viewed from.

■ **Future**

Looking further into the future, we hope to see widespread use of a new type of photovoltaic transparent material that collects sun energy in indirect sunlight. The technology is in the development stage at this point but is expected to cost much less than current options. Picture coloured Plexiglas ... red, cobalt blue, chartreuse, fuchsia ... this is what the panels look like. Vibrant clear colour on exterior walls and rooftops will speak to a new generation that insists on smart solutions. Imagine the lively vernacular this material will bring, creating a statement of sensory variety and generating energy at the same time. ■

Sylvia O'Brien is creative director of Colour Theory, a Toronto-based commercial colour and design firm specializing in the building exterior, for both refurbishment and new construction. An ACMO Associate member, Sylvia is one of eight colour experts selected from North and South America to help develop colour forecast trends for Global Color Research and the Comex paint conglomerate for 2011/12. Her motto regarding colour is "Get it right before you start." She can be reached at 416-766-6789 www.colourtheory.net info@colourtheory.net