

PROFILE

SPACE FOR LIFE: A PLACE, A COMMITMENT, A MOVEMENT

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ABSTRACT: The Montréal Space for Life is a C\$189 million project that brings the city's Biodôme, Insectarium, Botanical Garden, and Planetarium together in one place to offer an integrative experience that fosters immersion, connection, and participation; and a public square that creates new means of gathering, inhabiting a space, and building and experiencing everyday life. Canada's largest natural sciences museum complex is being transformed into the first space dedicated to humankind and nature.

RESUMO: O Espaço para a Vida, de Montreal, é um projeto no valor de 189 milhões de dólares canadenses que reúne o Biodôme, o Insectarium, o Jardim Botânico e o Planetário da cidade num lugar que oferece uma experiência integradora que fomenta a imersão, a ligação e a participação; e uma praça pública que cria novas formas de reunião, de habitação de um espaço e de construção e experiência da vida quotidiana. O maior complexo museológico de ciências naturais do Canadá está a ser transformado no primeiro espaço dedicado à humanidade e à natureza.

Biodiversity refers to all forms of life on Earth. We know that 25% to 50% of all species will disappear by the end of this century. We also know that our survival depends on biodiversity, which provides us with countless services. It feeds us, cares for us, and even determines the quality of the air we breathe. In fact, biodiversity provides us with so many services that it is very difficult to assign it economic value. This was suggested by the report entitled *The Economics of Ecosystems and Biodiversity*, directed by economist Pavan Sukhdev, who heads Deutsche Bank's Global Markets business in Bombay. For instance, bees and other pollinating insects are estimated to contribute U.S.\$190 billion annually to world agricultural output. From 25% to 50% of the pharmaceutical market, the equivalent of over \$300 billion, depends on genetic resources. The organic food and beverage market was valued at \$46 billion in 2007, having grown by 300% in less than a decade.

A record 18,000 individuals, politicians, and experts gathered at the Nagoya Summit on Biodiversity, held in 2010 under the aegis of the United Nations, to discuss biodiversity-related issues. At that event, 193 countries signed an agreement that observers described as historic. Most of the governments represented agreed to act to preserve world biological diversity. We are convinced that what is needed now is a vast movement rallying all members of society to ensure that these official efforts have a lasting impact.

We need to bring humankind closer to nature. That is the key message of *Space for Life*, which consists of the Montréal Biodôme, Insectarium, Botanical Garden, and Planetarium: four prestigious institutions whose outreach, conservation, research, and educational activities help people enjoy nature to the fullest.

Space for Life draws on the expertise and collections of the four institutions and their popularity with nearly two million visitors every year. It represents their commitment to speaking with one voice as a way of amplifying their message. It embodies their efforts to foster a unifying, authentic, participatory movement aimed at bringing humankind closer to the natural world and encouraging close contact to show people that they are physically part of nature.

This sort of informed contact teaches people through experiences of all kinds – immersive, festive, and entertaining ones. During the Butterflies Go Free event presented by the Insectarium, for instance, visitors walk among thousands of butterflies from various species. Sometimes one lands on a child's shoulder – a priceless souvenir to last a lifetime. At the Botanical Garden, the Courtyard of the Senses also offers an unusual experience: visitors discover the smell, taste, and texture of plants without seeing them as they tour the garden blindfolded. Several times a year, the public is invited for an exclusive look behind the scenes of the Biodôme to learn how the machinery that keeps the ecosystems going works, to help prepare meals for the animals, and to watch the veterinarians perform their jobs. The goal is to make such ongoing contact part of Montrealers' daily lives, their concerns, rituals, and leisure activities. Space for Life invites visitors to look at nature in a new light, and stresses nature's intelligence, ingenuity, and creative and participatory wisdom.

In this respect, Space for Life utilizes creativity and talents of all kinds. By urging us to rethink our bonds with nature and to strengthen our ties with plants, insects, and animals, it is undertaking a tremendous co-operative project – bringing citizens together with experts, and with one another.

Simply put, Space for Life is inviting us all to cultivate a new way of living. Space for Life is a living space that is inspired by nature in its operations and

that evolves with its milieu – its visitors, its neighbourhood, its city, and the whole world. This philosophy is evident throughout the organization, from the visitor experience to the buildings, their layout, services, programming, communications, and even management. It also translates into an ambitious C\$189 million project whose development principles are environmental, economic, and social sustainability, and include coexistence, experience, participation, transparency, and a joyful approach to life. The largest natural science museum complex in Canada is in the process of becoming the first space in the world dedicated to humankind and nature.

This brings me to our future plans. With the arrival of the new Rio Tinto Alcan Planetarium on the Olympic Park site, Space for Life will physically bring together all four institutions (see Figure 1). They will be linked by a vast public square, the Grande Place, where we will demonstrate how getting closer to nature can play a central role in our daily experience, and how we can incorporate it into every aspect of our lives.

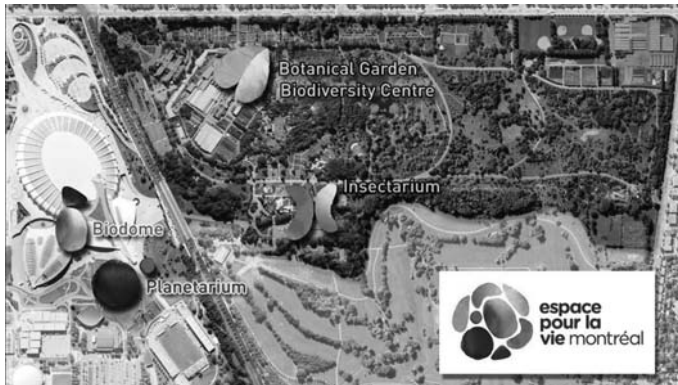


Figure 1. Space for Life is bringing the Biodôme, Insectarium, Botanical Garden and Planetarium together on one site. Image © Espace pour la vie.

We have so many ideas! Solar stations for recharging laptops and cellphones; windmill-powered lighting; alternative means of transportation for getting from one institution to another; inviting street furniture; a treetop restaurant built from bamboo; toboggan runs on the new Planetarium's roof; Ted-talks-style lectures where people share their most innovative and inspiring thoughts for the future; moveable trees, for creating your own shady spot; and why not a landing stage for migrating butterflies ... Both summer and winter, night

and day, the Grande place will evolve along with those who use and make it their own.

Work on the infrastructure for the Grande Place is planned to begin in 2014 and continue until 2017. However, we have already started to occupy the space by holding activities here to encourage the community's feeling of ownership. For example, the first symbolic gesture, in May 2010, was the launching of seed balls to mark the International Day for Biological Diversity; the Space for Life team, along with 4,200 students from Quebec alternative schools, tossed seed balls onto the path linking the Insectarium and Biodôme, to fill it with colourful flowers. The Ephemeral Forest, another symbolic gesture for life, took shape for the first time in early 2011. It has become an annual ritual. This temporary creation near the Biodôme and the Olympic Stadium consists entirely of Christmas trees collected from the homes of citizens after the holidays that then 'take root' in the concrete as a symbol of life. The artistic and ecological gesture involves the public directly. In the spring, the trees are transformed into wood chips, which are handed out to Montrealers to use as mulch for their gardens.

The Biodiversity Centre, officially opened in March 2011 on the Botanical Garden site, houses over 2 million species of insects, plants, and fungi. These collections are shared with 18 universities and botanical gardens across Canada via the Canadensys database network. More than 50 researchers work at the Biodiversity Centre. In addition, it has a public exhibition space that, starting in March 2012 and for the next three years, will be the base camp for Jean Lemire's *1000 Days for the Planet* international sailing mission. Issues related to biodiversity, as well as the players involved (including our own institutions' researchers), are presented here via artistic installations and direct communications with Jean Lemire's crew, among whose members are Space for Life science guides. People are able to experience the voyage as though they are part of the mission themselves; for instance, they can visit the 'seventh continent'. Imagine – thousands of kilometres of garbage from our planet, floating in the middle of the ocean. *1000 Days* will also be an opportunity to focus on this issue; visitors are invited to participate by bringing in laundry detergent bottle caps to create a monumental work producing the sensation of swimming in a sea of plastic. This approach gives the general public the chance to come into direct contact with leading-edge research (see Figure 2).

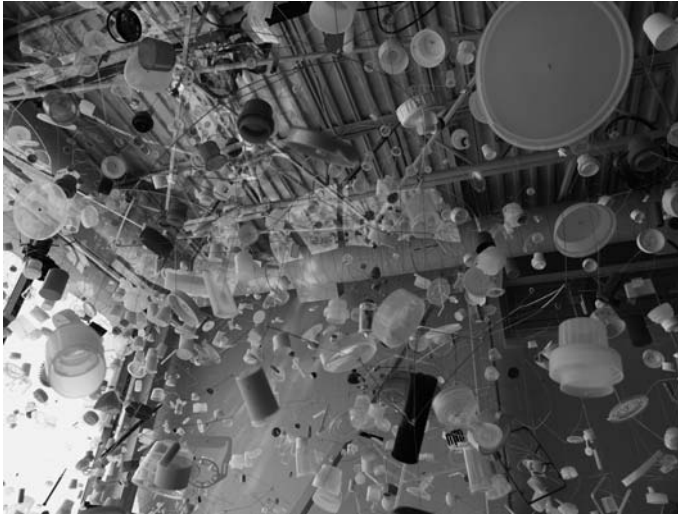


Figure 2. “1000 Days for the Planet” – the seventh continent. Experience the voyage... Photo © Espace pour la vie.

The Rio Tinto Alcan Planetarium, the result of an international architecture competition won by the Montréal firm of Cardin Ramirez Julien, opened its doors in April 2013. Built to meet LEED Platinum environmental certification standards, the Rio Tinto Alcan Planetarium is Montréal’s most environmentally friendly public building. Bathed in natural light, with clean lines and a welcoming atmosphere, it is designed to enhance visitors’ experiences as they discover the Universe in a totally new way through immersive experiences. The Rio Tinto Alcan Planetarium is positioning itself as a leader on the international scene by giving creativity a permanent role in a scientific institution. It combines cutting-edge technology, scientific knowledge, and creativity in two complementary immersive theatres (see Figure 3). This creative approach is evident in the Multimedia Theatre, where the first original production by the internationally renowned Montréal duo of multidisciplinary artists Victor Pilon and Michel Lemieux is presented. The technical wizardry employed in the Astronomical Theatre, for its part, will make it possible to present a clear starry sky in Montréal and carry visitors off on a thrilling virtual journey taking them light-years from Earth. The permanent exhibition, on the other hand, explores exobiology – a rather bold topic for this type of institution.



Figure 3. The new Rio Tinto Alcan Planetarium. The technical wizardry employed in the Astronomical Theatre will make it possible to present the clearest starry sky in Montréal. Photo © Espace pour la vie (Daniel Choinière).

The scientific and artistic approach that has guided us in carrying out this project pushes the boundaries of the field. But we feel that we have taken traditional ways of doing things as far as we can. In May 2012, a number of eminent experts on biodiversity, along with artists, set designers, renowned architects, and experts in cultural practices generously agreed to come to Montréal to discuss one question: How can our institutions devoted to the natural sciences truly fulfil their mission and reconnect humankind with nature? Underlying this day of intense brainstorming and co-creation on the *Insectarium Metamorphosis* was our desire to rethink our spaces and experiences so as to encourage closer bonds between humans and nature – through insects. We want to create an emotional link that is indispensable to a new awareness and to taking action. For instance, if bees were to disappear – and they are at risk – the consequences for humanity would be irreparable. How can we appeal to people’s emotions effectively enough so that everyone grasps the true importance of this information and makes a commitment to biodiversity? These accomplished scientists looked at the questions being asked by *Space for Life* and saw a real desire to reinvent ways of doing things and to reconnect humankind with nature – something they had not really seen anywhere else. One recurring idea emerged from this high-level multidisciplinary exchange: that of a museum that would be constantly evolving. A living museum. A porous museum, open to nature, with no distinct boundaries

between indoors and outdoors. Visitors would move from inside the museum to outside without really noticing. While we know the starting point for this transformation, we have no idea where it will end up – in terms of architecture or the visitor experience. We do know that visitors will become true actors in this setting. All in all, it will be an organic experience. The co-design process continues, and we expect to have a good idea of the building's architecture by the end of 2013. This is the direction in which the Space for Life is headed.

In the same spirit, the Biodôme is working on the urban ecosystem concept. In addition to a new habitat, the entire visitor experience is being rethought so as to emphasize the building's engineering and allow visitors to rediscover the Olympic Velodrome. It will surround them with the fruits of human ingenuity, demonstrating the challenge of how we have to put our intelligence to work as we rethink our lifestyles (opening in 2016).

The Botanical Garden, meanwhile, is designing an all-new phytotechnology garden. From green roofs to plant walls, filtering marshes and phytoremediation, technologies that draw on plants' properties are a fascinating alternative to traditional approaches for solving environmental problems (opening in 2014). The Botanical Garden also has a number of other plans that should be completed by 2017: a refurbished Main Exhibition Greenhouse and a spectacular new glass house to accommodate special events and major horticultural exhibitions.

Space for Life is a partnership between the different levels of government and the private sector, through our Foundation. It will make it possible to significantly boost the institutions' attendance from 1.7 million visitors today to a predicted 2.4 million by 2017. Moreover, Space for Life will generate major economic spin-offs. It is estimated that between now and 2017, it will contribute C\$622 million to Quebec GDP, in addition to supporting 8,300 jobs.

Space for Life is a strategic asset, firmly anchored on its site. It is like Montréal itself: authentic, inventive, committed, and open to the world. A gift for Montréal's 375th anniversary in 2017, it will allow the city of Montréal to stand out on the international scene and will bring well-deserved recognition for its daring and its innovative approach to urban life, its creativity, and its commitment to biodiversity and sustainable development. Space for Life is more than an infrastructure project – it is a vast movement directly involving all players in our society. It will allow Montréal to make its mark as a standard bearer for cities of the future, where citizens, the planet, and the economy all converge.

For more information: www.montrealspaceforlife.ca.