



expo17 a World's Fair in Montreal

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Overview



Montreal, 1967

ON APRIL 28TH, 1967, against virtually impossible odds and time constraints, the city of Montreal officially opened the gates to one of the most successful world's fairs of all time. Expo 67 was the first Category 1 exhibition ever held in North America and it was roundly hailed as an engineering and architectural miracle. Situated on two man-made islands in the middle of the St. Lawrence River, Expo 67 redefined the concept of world's fairs while introducing a host of cultural and technological "firsts" into the public realm, including the catchword "expo" itself.

Though Expo was the crowning event of Canada's centennial, it was more than a landmark in Canadian history. It contributed significantly to an emerging *identité Québécoise* and it catapulted Montreal onto the world stage. The improvements to the city and the international prestige derived from Expo 67 are still evident today, almost forty years after the exhibition officially closed its gates.

This document is a proposal for another world's fair, in the year 2017, in the city of Montreal. It is not a feasibility study, it is a call to action.

Expo 17 would achieve the following:

- Encourage unity and self-esteem by recalling the glory of Expo 67. Expo 17 would celebrate Canada's 150th birthday and the 50th anniversary of Expo 67.
- Address changing demographics and secure the future for families and community in Canada. This objective would be accomplished with Habitat 2017, a model urban community of high-density, family-oriented housing based on affordability and environmental sustainability.
- Enhance and expand Montreal's harbourfront and public transit infrastructure. Expo 17 would enable the realisation of many of the objectives outlined in the Vision 2025 report published by the city and the Société du Havre de Montreal.
- Save the Saint Lawrence River. Expo 17 would launch the environmental remediation of Montreal's southwest shore. By utilising the same construction methods which created the islands of Ile Notre Dame and Ile Ste. Hélène for Expo 67, the architects of Expo 17 would lower and extend the shoreline of the Montreal Technoparc and eliminate the flow of dangerous toxins into the Saint Lawrence River.

MONTREAL, once the cradle of Canadian industry and formerly the largest and most progressive metropolis in the country, is in need of a catalyst to propel itself into the 21st century. A preliminary blueprint has been laid out by Vision 2025. A major event, such as a world's fair, will kick-start the development of the city's future and re-establish Montreal on a global scale.



SOCIÉTÉ DU FAUVRE DE MONTREAL

Purpose of an Exhibition

Traditionally, the world's fair has functioned as a showcase for technology and culture while providing an economic boost and international prestige for the city and nation in which it is held. Properly executed and sufficiently attended, a world's fair can generate tourist and other income well beyond its specified duration.

Increasingly, the world's fair has also facilitated the social and environmental rehabilitation of city sectors affected by downturns or shifts in commerce and industry. Recent examples include Expo 86, which revitalised the run-down waterfront area of Vancouver, and Expo 98 in Lisbon, which initiated the remediation of an abandoned oil storage and chemical manufacturing site on the Tagus River.

The main objectives of Expo 17 will include the remediation of the southwest shore of Montreal, the creation of a model community based on urban rehabilitation and sustainability, the improvement and expansion of public transit and other forms of environmentally-conscious

transportation, and the salvation of the St. Lawrence River. These issues will be discussed in more detail in Section 2.

Name of the Exhibition

The official name would be Expo 17. This is not only easier to articulate and promote than "Expo 2017," it has the added appeal of youth and vitality, the "teens" of the new millennium.

Type of Exhibition

The governing body of international exhibitions, the Paris-based Bureau des Expositions Internationales (BIE), presently divides an officially sanctioned world's fair into two categories: "registered" and "recognised" exhibitions. A registered exposition (formally "universal" exposition) is larger in magnitude and takes place for up to six months. A recognised exposition (formally "special" exposition) is reduced in scale and thematic structure and normally held for up to three months. As a reference, Expo 67 in Montreal



GRUPO PARQUE EXPO LISBON



Before and after: Expo 98 in Lisbon was staged on a former oil and chemical storage site on the Tagus river. For the cleanup, Lisbon adopted environmental guidelines from Canada.



Housing Expo 2001: With the Turning Torso skyscraper as a centerpiece, the city of Malmö converted its abandoned shipyards into the City of Tomorrow. Sources: Malmö, HSB Turning Torso (© Pierre Mens)

would now be classified as a registered exposition while Expo 86 in Vancouver would be considered a recognised exposition.

The BIE also governs other forms of “special” exposition, most notably horticultural exhibitions such as the international Florales. In fact, this type of horticultural exhibition, or “flower expo,” is beginning to rival the traditional world’s fair in size, scope and, more significantly, attendance. Horticultural expos are jointly regulated by the BIE and the International Association of Horticultural Producers (AIPH).

Aside from BIE expos, another form of exhibition has recently emerged in Europe, the International Housing Exposition. A prominent example of this type of expo, the “City of Tomorrow,” was held in 2001 in Malmö, Sweden. It involved the reclamation of a waterfront industrial site and the creation of a brand new community based on sustainable urban development.

The city of Newcastle in northern England plans to hold the next housing expo around 2008. In a recently issued Invitation to Tender to private developers, Newcastle outlined its objectives:

“The ambitions for a Housing Exposition are to act as a catalyst for regeneration in the West End of the city. The Expo is to be located in Scotswood, an area that exemplifies urban decline over recent decades, with huge population loss, high unemployment, disadvantage and stigmatisation.”

This proposal will explore the three main forms of BIE exhibition as well as the International Housing Exposition. Emphasis will be placed on a BIE-sanctioned recognised exposition, possibly combined with a horticultural and/or housing expo. This is in line with the proposed objectives of Expo 17 and also involves one of the crucial factors in staging large-scale events: the timing of the exhibition itself.



Expo 90, Osaka. The International Florales, or Flower Expo, is beginning to rival the traditional world’s fair in size and scope.

Timing of the Exhibition

Since the formation of the BIE in 1928 there have been numerous revisions and exceptions concerning how – and how often – a world’s fair should take place. After the 1980’s, which saw a series of back-to-back exhibitions that continued into the 90’s and, at one point, ran concurrently and in competition with one another, the BIE put new regulations into force concerning the scale, classification, and timing of international exhibitions:

- The official span between one registered exhibition and the next is five years. Hanover (Germany) held the first expo of the new millennium in 2000 and Aichi (Japan) recently hosted Expo 2005. Though these expos were originally sanctioned under previous regulations, they generally adopted new rules and timing. The first registered exhibition operating fully under new regulations will be Shanghai (China) in 2010.
- One recognised exhibition is allowed between registered exhibitions. The first recognised exposition under new rules will be hosted by Zaragoza (Spain) in 2008. Thereafter, a recognised expo will presumably be held around 2012 and 2017.
- A specific nation is granted the right to hold a BIE-approved exposition (registered or recognised) every fifteen years. A horticultural exposition such as the Florales is permitted every ten.

* As of 02 November, 2006, bidding for Expo 2015 has closed. The next available registered exhibition will be 2020.

In order to encourage public support and financing and to achieve the highest attendance possible, a hosting nation will normally link a world’s fair to a significant event in its own history. For example, Expo 67 commemorated Canada’s centennial. Expo 86 celebrated the 100th anniversary of Vancouver. Expo 2000 in Hanover ushered in the new millennium and marked the 10th anniversary of German reunification, while Expo 92 in Seville commemorated five hundred years since the historic voyage of Christopher Columbus.

After Shanghai in 2010, the next registered exposition would categorically take place in 2015. However, the year 2017 will mark Canada’s sesquicentennial as well as the 50th anniversary of Expo 67 and would therefore be a more appropriate date for a world’s fair. In other words, it would be in the city’s best interest to hold a smaller, recognised exhibition in 2017 rather than a larger, registered exhibition in 2015.*



While Expo 67 marked the 100th year of Canada, Expo 86 celebrated 100 years since the founding of Vancouver and the west coast link of the CPR.



A timeline of world’s fairs since 1958. Except for the New York world’s fair of 1964-65, all were BIE-sanctioned exhibitions. Source: Urso Chappel



Location of the Exhibition

An appropriate location would be the original Expo 67 islands – now Parc Jean Drapeau – and Cité du Havre and the southwest shore of Montreal. These areas are already included in the Vision 2025 plans of the Société du Havre and are slated for eventual development.

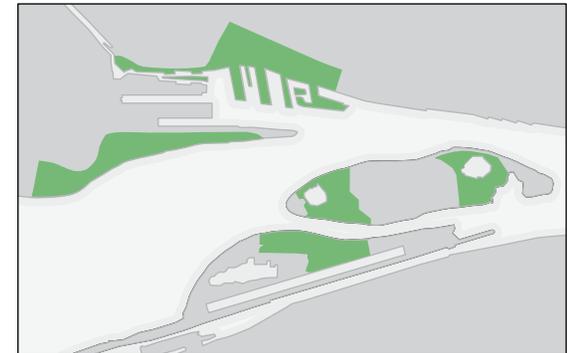
The primary goal of Vision 2025 involves reuniting Montrealers with the shores of the St. Lawrence River while defining three strategic areas of action:

- reclaiming the waterfront
- reclaiming urban space
- sustainable urban development

The most formidable obstacles to such an undertaking, technically as well as financially, are the Montreal Technoparc and the Bonaventure expressway along the southwest shore. The expressway, originally constructed

to bring visitors to Expo 67, has unfortunately separated the citizens of Montreal from the riverbanks of the St. Lawrence and effectively isolated a large chunk of land and a once-thriving community from the rest of the city. Vision 2025 considers the relocation of the expressway to be an indispensable component of any redevelopment scheme in the area. The Technoparc, situated on a landfill site on the St. Lawrence river, has been leaching toxins into the water and is in urgent need of remediation.

Addressing the above challenges will be an essential element of the proposed exhibition.



The proposed area for Expo 17. See map on page 45 for more details.



By day or by night, Expo 67 was a dazzling exhibition. Polls conducted during the fair revealed the architecture to be the most significant draw.

Architecture

A survey of what attracted visitors to Expo 67 revealed the architecture to be the most significant draw. This is no surprise, given the tremendous assortment of shapes and sizes on site and a magnificent setting on two islands and a peninsula. Visitors to Expo 67 even likened the experience to a state of euphoria, the “expo feeling”, as it was called at the time. Many were content to do nothing more than wander the grounds and admire the pavilions.

In recent times, conceivably to reduce construction costs, the world’s fair has acquired the looks and layout of an industrial park. Expo 2000 in Hanover, for instance, secured special permission from the BIE to use existing trade halls for part of the fair and to provide pre-fab, re-usable boxes for much of the rest. Though a number of pavilions were more imaginatively designed, the overall look and layout of the fair were eventually cited as a contributing factor to the disappointing

turnout at Expo 2000 – possibly the lowest in history for a fair of its size.*

Traditionally, the design of national pavilions for a registered exhibition is up to the participating nations themselves, providing fertile ground for innovative – and often dramatic – architecture. The recognised exhibition, on the other hand, does not normally allow for participating nations to design and build their own pavilions. Instead, the hosting nation provides all structures for the fair while visiting nations install only their exhibits. While a certain degree of structural uniformity is customary under these rules, the BIE does not necessarily dictate the visual aspect of national pavilions, nor does it regulate the size or appearance of theme pavilions.

As this proposal will concentrate more on the possibility of a recognised expo, it is assumed that Canada – as hosting nation – would be responsible for all on-site architecture.



USO CHAPPELL

Expo 2000 (Hanover) and Expo 2005 (Aichi). Recently, even the largest exhibitions have scaled back on architectural innovation.

* A combination of factors were involved, however, including choice of city (Hanover over Berlin), insufficient marketing, and unusually high admission fees.



Since the Great Exhibition, world's fairs have left behind landmarks: Crystal Palace (1851-1936), Eiffel Tower (1889-), Atomium (1958-), Space Needle (1962-). Sources: Tristan Nitot, David Gosciny, Space Needle

Consequently, the planners of Expo 17 could offer visually exciting yet energy-efficient pavilions that might be put to good use after the fair. Across the country specific architectural needs – such as a medical clinic or library in a remote community – could be identified beforehand and incorporated into the master plan of the expo site. After the fair, these pavilions would be dismantled and installed in their respective locations. Those pavilions which remain in Montreal would, of course, be planned and utilised accordingly.



The former Yugoslavia pavilion from Expo 67 is now a maritime museum in Newfoundland. Source: DC Hillier



Architectural innovation saw its zenith at Expo 67. The former pavilions of France and Quebec (above) currently house the Montreal Casino.





Theme pavilions Man the Explorer and Man the Producer at Expo 67.

Theme

Choice of theme is possibly the most critical decision for the planners of a world's fair. From at least the seventies onward, the international exposition has been experiencing a mounting identity crisis which recent themes and approaches have yet to fully address. Spawned from industrial fairs in the nineteenth century, the modern world's fair has evolved into a sophisticated technological and cultural event which may very well have peaked in 1967 when environmental disasters and the welfare of the planet had yet to preoccupy the collective psyche. Since then, technology and industry, traditionally the backbone of a world's fair, have been increasingly viewed with skepticism by the general public, particularly in Europe and North America. And it has been postulated often enough that the world's fair has played itself out regardless, gradually becoming less and less significant in a technologically savvy world instantly informed and updated through the Internet.

Recent fairs have made genuine attempts to address these issues, yet popularity and attendance have yet to regain the levels achieved in 1967 in Montreal or 1970 in Osaka. This is despite a much larger global population, higher levels of disposable income in developed countries, and cheaper, more efficient world travel. In fact, the relative ease with which the average citizen may travel the globe has often been cited as making the world's fair redundant.

Though the above concerns invariably provide ammo for the critics, it should be noted that the world's fair has a remarkably long history of being declared dead. Expo 67 itself was roundly expected to be a failure, a costly and senseless foray into the "tired institution" of world exhibitions and a "black eye" on the country. Other than Mayor Jean Drapeau and a small group of Expo planners and officials, virtually no one inside or outside of Canada believed Expo would open on time, let alone attract more than fifty million visitors to Montreal.

Though the success of the fair would never have been possible without the key players involved, the everlasting legacy of Expo 67 can be attributed to a three day conference in Montebello, Quebec. It was here, at a meeting between artists, scientists, intellectuals and planners, that the revolutionary theme for Expo 67, "Man and his World" (Terre des Hommes), saw its genesis. Once decided, it influenced and unified the entire exhibition, from content and colour schemes, to transportation and infrastructure, to lighting and landscaping. Without this theme and its underlying unity, Expo 67 might not have become the success it was.

"The entire development of the exhibition on the site shall reflect the primacy given to human values and aspirations in the theme Terre des Hommes [Man and his World]. It must not be presented as a Terres des Nations or a Terre des Machines."

– Montebello Conference, 1963



Examples of theme at Expo 86 and Expo 90. Careful selection and implementation of theme are crucial to a fair's success. Sources: Susan Chance-Rainwater, Ichiro Masuda

Expo 86, also considered a very successful fair in its category (special exposition), was equally effective in presenting a central theme. Based on transportation and communication (World in Motion, World in Touch), Expo 86, like Expo 67, adroitly maintained a balance between the traditionally commercial aspects of a world's fair and its educational value to the public.

"In the past—at the Paris Exposition Universelle of 1889, for example—technology was celebrated with great optimism because it represented a liberation from the constraints of feudal/agrarian Europe and the advent of a new scientific age. Today, on the other hand, people view technological achievement ambivalently with both enthusiasm and caution, with curiosity and resentment, with awe and (in the case of nuclear proliferation) with outright fear. Highway 86 balances on the cusp of this relationship, humorous but subtly disquieting at the same time."

– Ron Woodall, creative director, Expo 86

Highway 86, described as an "outdoor pavilion", was a massive sculpture comprised of an undulating highway filled with cars and other means of transport eerily devoid of drivers or passengers. Simultaneously entertaining and thought-provoking, it became the signature attraction of Expo 86.

The promoters of Housing Expo 2001 in Malmö, Sweden expressed the primary considerations behind its layout and theme:

"Today, like pre-industrial society once upon a time, we are on the threshold of a new age. Industrialism, which created employment and wealth for the masses, is now being replaced by the ecocycle and IT society. Ecological disasters all over the world signal society's vulnerability...Realisation that everything we humans have to work with is here on earth and that we must be aware of the limits this implies is dawning on more and more people, and before long all of us will be compelled to accept this fact, be it as producers or consumers."

Once a fair's theme is chosen, it becomes its focal point and part of the eventual marketing campaign to attract attendance. Poorly chosen or implemented, the theme of a world's fair can become its Achilles heel, attracting negative publicity and eventually eroding attendance.

To sum up, the world's fair today faces a complex challenge concerning public perception of its central theme. While fairs such as Expo 67 or Expo 86 merely touched upon the difficulties facing humanity, a contemporary exhibition would be expected to present solutions. The hosting city would also need to be a working prototype of what can be done, a source of assurance for the expo visitor and a beacon of hope for the future.

This proposal recommends a provocative theme for Expo 17. It is also believed that the city of Montreal – well before the fair – should strive to realign its infrastructure and transportation around the environmental and social aspects of the exhibition.



A number of cities in Canada, including Toronto, Edmonton and Ottawa, have recently expressed interest in holding an international exhibition. Sources: Leonard G, S Dengler (CC/GNU)

Feasibility Studies & Bidding

Though the city of Montreal has not yet expressed any intention of staging an exhibition, the Vision 2025 report by the Société du Havre already provides much of the groundwork for a feasibility study. A successful bid for a world's fair in Montreal would conceivably enable the realisation of much of the 2025 agenda without protracted delay.

However, a number of cities have recently expressed interest in staging a BIE-sanctioned exhibition, including a large registered expo in 2015* (Edmonton/Toronto), or in 2020 (Vancouver, jointly with Seattle). While the city of Edmonton soon abandoned its intentions for 2015, the city of Toronto commissioned and completed a feasibility study and bid proposal. Unfortunately, disagreement on financing between the city, the province and the federal

government resulted in the bid being canceled just before reaching the BIE office in Paris. Though neither level of government had provided justification for holding such a large event only two years before Canada's 150th birthday, it should be noted that BIE officials were apparently very receptive to a bid from North America, which has not held a world's fair since 1986.

Unless the BIE can be persuaded to move the next available registered exposition of 2020 to 2017, however, the concept of holding a registered exhibition in Canada is, in our assessment, unrealistic. The year 2020 offers no significant relevance to the nation's historical development and would consequently be a hard sell domestically. Registered exhibitions, the rechristened "universal" expos, are also

becoming increasingly difficult to obtain as a mounting number of established as well as emerging nations compete for the honour. Part of the renewed interest in these mammoth events may be due to recent restrictions placed on the smaller, recognised exposition. While a registered expo has few limitations on size or scope, the recognised expo – ostensibly earmarked for developing nations – has recently been reduced to a maximum of 25 hectares exhibition area and is traditionally confined to a simpler theme.**

Since first publication of this proposal, the cities of Hamilton, Edmonton and Ottawa have recently expressed interest in holding a recognised exhibition in 2017. Lilles, France is also a possible contender.

* On 02 May, 2006, Izmir (Turkey) officially submitted the first bid to hold Expo 2015. Under BIE rules, all competing bids had to be received no later than 02 Nov, 2006. As of this date, bidding has terminated and the official candidates remain Izmir and Milan. The next available registered expo will be 2020.

** Expo 2008, the first recognised expo under new regulations, will be held in Spain, which is hardly regarded as a developing nation. (See Section 2)



Financing

Traditionally, the largest portion of financing for a world's fair is provided by the nation state, which is bound by the BIE to ensure completion. In Canada, the next largest share of financing normally comes from the provincial government while the city and private sponsors make up the remainder.*

The funding formula for Expo 67, for instance, required the federal government to absorb 50 percent of the costs, the provincial government 37.5 percent, and the city of Montreal 12.5 percent. A significant number of pavilions and ancillary structures were also funded by various corporations and organisations. The exhibition cost a total of 432 million (BIE, 1967 dollars) and ended with a closing deficit of 211 million** which was partially offset by assets transferred between the three levels of government.

Expo 86 cost 802 million (BIE, 1986 dollars) and resulted in a deficit of 311 million which was quickly eliminated through the transfer of assets and a provincial lottery set up specifically for that purpose.

Though a world's fair commonly produces a deficit in its own books, both Expo 67 and Expo 86 made a substantial profit for the country. Statistics for both fairs show that the federal government earned back many times its initial investment through a surge in tourism, as well as increased revenue from income tax and other sources generated through the construction and running of a world's fair. These figures do not include additional benefits derived from improvements to infrastructure and the international prestige acquired through such events.

Nevertheless, Montreal has only recently finished paying for the 1976 Olympics

(officially paid off Nov, 2006) and would see little value in financing a world's fair or any other large project on a deficit. Quebec, which recently carried the highest per capita debt in the country, would obviously have no interest in increasing its burden any further. However, Montreal urgently needs to improve its harbourfront and transportation infrastructure. Vision 2025 has expressed the situation as critically important to the future of the city and the province – if not the country.

Eventual funding for Expo 17 might be divided into three general categories:

- GOVERNMENT (federal/provincial/municipal)
- PRIVATE (corporate/interest group sponsorship)
- COMBINED (public/private partnership)

* Though Ottawa would officially apply for and guarantee a world's fair, 1995 federal legislation recently cited by the finance minister has apparently shifted responsibility for any resulting deficit to the province and the city in which the fair is held.

** Official figure from the BIE. Other estimates are between 270- 280 million CAN.



Long winters, combined with inexpensive and abundant electricity, have made Quebec the largest per capita consumer of this resource in North America. Sources: World66 (CC), Khaled, Québec en Images

FEDERAL FUNDING: A considerable amount of construction outlay will involve the environmental remediation of the southwest shore, some of which falls under federal responsibility. According to the final report of the Société du Havre, up to 80 percent of site reclamation costs could potentially be provided by Ottawa. The cleanup of the St. Lawrence – once Canada’s economic lifeline – would conceivably fall into this category as well.

Direct federal funding for the exhibition itself will depend on how the promoters of Expo 17 express its relevance to national unity and Canada’s image on the world stage. Expo 17 could be an excellent opportunity for Canada to restore itself domestically and reassert itself internationally.

PROVINCIAL FUNDING: The province has already hinted at a solution to pay down its debt without increased taxation. This would involve reducing domestic power consumption and selling the surplus amount from existing and/or future hydro operations. Long accustomed to inexpensive and abundant

electricity, Quebec has become the highest per capita consumer of this resource in Canada and possibly the world. Though long winters are a contributing factor, they do not account for an electricity consumption rate of nearly three times the OECD average and almost double that of the United States. If Quebec could achieve, or even approach, the OECD rate of consumption, billions of dollars of electricity could potentially be made available for export. Ontario, which suffers a shortage of electricity and is currently considering a 40 billion dollar nuclear power plant, might be a willing customer.

Wide-scale energy conservation is difficult to encourage and implement, however, without widespread public approval. Expo 17 could be the catalyst to bring this about, providing a launch pad to promote energy conservation and galvanise public support while showcasing Montreal as a modern city dedicated to the environment.

The province might also consider an Expo-specific lottery, in much the same fashion as

British Columbia liquidated the debt from Expo 86. The lottery could possibly be implemented well before the fair, encouraging Quebecers to actively support Expo 17 in advance while providing sound financial backing for the city’s eventual bid to the BIE.

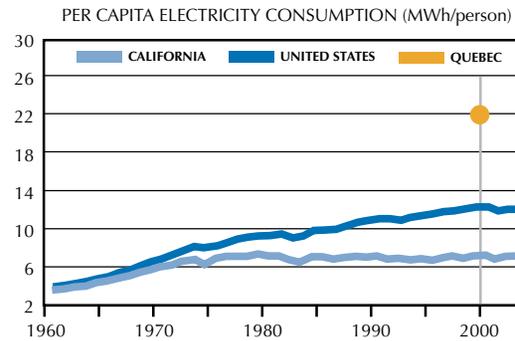
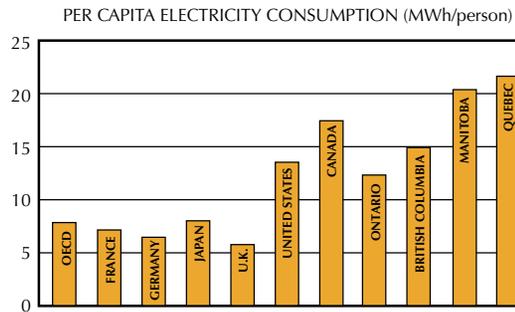
Lastly, the province might introduce a special tax on sugar and/or junk food. First applied to the Expo fund, the tax could thereafter be utilised to support provincial health care.

MUNICIPAL FUNDING: Montreal, with a projected deficit of 273 million for 2008, is urgently in need of new sources of revenue. Unlike other major cities Montreal does not currently have legislative access to more creative – and possibly more socially and environmentally progressive – forms of funding. Instead, up to 80 percent of its annual operating budget is financed through property taxes alone. The city hopes to change this situation through negotiations with the province.* A world’s fair, by uniting government, business and community around a common cause with a specific deadline, might provide the necessary

* Some headway in this area has recently been achieved, though details are not yet available.

Per capita electricity consumption in Quebec is three times the OECD average and twice as high as the United States. In terms of electricity used to produce one dollar of GDP, Quebec rates highest in the world.

Sources: FCPP (FC0013), Energy Probe (Tom Adams); IEA World Energy Stats 2000, StatsCan (57-001-XPB)



The state of California is a working example of the possibility and benefits of conserving electricity. While consumption has nearly doubled in the United States since 1970, it has remained constant in California, which has pioneered and implemented numerous conservation initiatives.*

Sources: StatsCan, http://www.eia.doe.gov/emeu/states/sep_use/total/csv/use_csv (Arthur Rosenfeld)

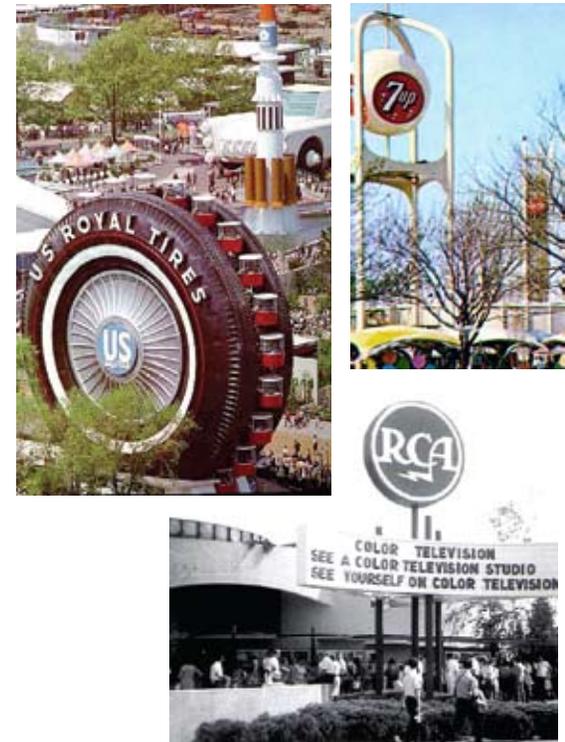
impetus for such change to come about. This would then allow Montreal to adjust its taxation system to better accommodate social and environmental sustainability while balancing its budget. It might also encourage additional commercial investment by making the city less reliant on direct increases in property tax. And, through the use of cause-related fees and levies



Through the application of special measures to regulate traffic and air quality, Montreal might encourage energy conservation while improving the city's transit system and tourist appeal.

rather than flat or hidden taxes, the city might allow the public more choice and participation in Montreal's future.

PRIVATE FUNDING: The world's fair evolved from various industrial expositions in Europe, so it is no surprise that private participation has become a key element as well as an important source of funding. That said, the BIE traditionally views its mandate as educational and does not condone excessive advertising or promotion at its expos. This was one of the reasons the New York World's Fair of 1964-65 was not recognised by the BIE, which ultimately withheld the participation of its signatories including Canada, Australia, the USSR and most of Western Europe.** The general public has also become increasingly sceptical of corporate promotion and would conceivably turn away from a world's fair visibly dominated by private enterprise.



The New York World's Fair was considered too commercial by its critics and the BIE. Source: <http://naid.spsr.ucla.edu/ny64fair> (J Stanton)

* Power outages in 2001, which were widely publicised, were attributed to a combination of energy deregulation and unusually severe weather.

** Unofficial participation of many nations did occur, often through trade and tourism organisations. Other factors which led to the BIE ban included fees charged to exhibitors and a two-season (1964-65) run for the fair rather than one.



Corporate pavilions at Expo 67



Expo 67, possibly more than any other world's fair, managed to integrate a sizable corporate presence without offending the BIE, the critics, or the fairgoers themselves. The exhibition was decidedly "non-commercial" and its planners were determined to make it an educational and enlightening experience. Yet some of the most memorable pavilions were private initiatives and established lasting public recognition for the companies and organisations involved. Canadian and Quebec interests were also promoted through the International Trade Centre and Quebec Industries, both located near Place d'Accueil on the Cité du Havre peninsula. Sheltered from the main core of the exhibition, these two facilities helped foster international business opportunities while providing an exclusive area (Expo-Club) in which to exchange ideas.

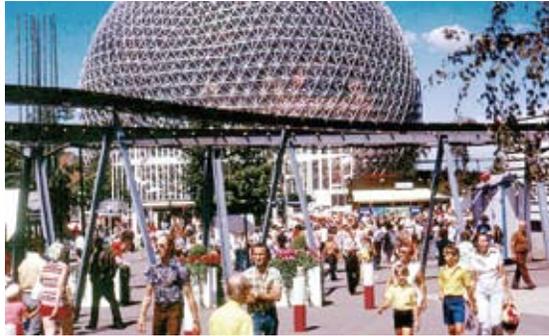
Expo 17 should follow the same model as its predecessor, ie, encourage private sponsorship in a manner which enhances the fairgoer's experience while providing long-term goodwill for the companies and organisations who participate.

COMBINED FUNDING: Both Vision 2025 and Expo 17 foresee a substantial amount of real estate development in the Bonaventure/ Technoparc area, much of which could be financed through the pre-sale of residential and business complexes. The construction of the Habitat 2017 community (see Section 2) and the relocation of the Bonaventure expressway might be partially realised through this method. The environmental remediation of the area would conceivably involve all three levels of government in addition to private participation where real estate development is planned.

In conclusion, it is important that the city and the province demonstrate a firm commitment to Expo 17 and that the public be informed and involved from the very beginning. Through the application of progressive public and private initiatives a sizable share of the exhibition might be covered without running a deficit. Once the fair has closed, these same measures might be further applied to eliminating the provincial debt.



The Kaleidoscope pavilion, sponsored by Canada's leading chemical companies, became a surprise hit at Expo.



Attendance

Attendance at world's fairs has varied considerably and is not necessarily dependent on the actual size of the exhibition or its official classification. Smaller, recognised exhibitions have occasionally performed better than larger registered exhibitions while costing comparably less to put together. Densely populated nations, with a presumably "built-in" attendance guarantee domestically, have sometimes seen less presence overall than a sparsely populated nation heavily reliant on foreign visitors.

Canada, with two* world's fairs in both official categories to its name, has done exceptionally well concerning attendance. Expo 67, originally forecast to attract 26 million, saw over fifty million fairgoers pass through its gates. The city of Vancouver, with Expo 86, continues to hold the attendance record for a smaller, special exhibition. Originally forecast to attract thirteen million, Expo 86 welcomed more than twenty-two million fairgoers.

Foreign attendance was a sizable portion of these figures, making both expos truly international and unmistakably successful in presenting Canada to the rest of the world. This is not only in keeping with the spirit of an international exhibition, it allows tourism and technology to be showcased to a wider audience and potentially opens up new opportunities at home and abroad.

Domestic attendance, of course, is also crucial. Montreal, a truly bilingual metropolis, may have a distinct advantage over other Canadian cities in both foreign and domestic attendance. It has the opportunity not only to attract a sizable audience from the English-speaking world, but a significant amount from French-speaking nations. To date, no less than 29 countries use French as their official language. Domestically, Montreal continues to attract a large number of English as well as French Canadians to the city every year. This means

that visitors versed in either language can communicate freely outside the gates of the fair – an important distinction if the city wishes to spread tourist income to other areas and truly integrate itself into the event. Integrating Montreal into the exhibition would have the potential of boosting attendance levels and encouraging expo visitors to extend their stay by offering more than just the fair itself.

Lastly, it is imperative that any Canadian city staging an event as large and costly as a world's fair have a sound cultural/historical reason for doing so. As aforementioned, Expo 17 would have two significant celebrations to offer: The 150th anniversary of confederation and the 50th anniversary of Expo 67.

* Three fairs, actually. Montreal also held the very first BIE-sanctioned horticultural exhibition in North America, the Florales, in 1980 on Ile Notre Dame.

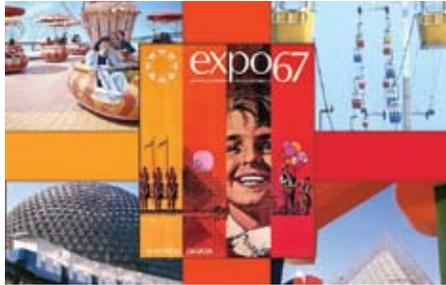


WORLD'S FAIR ATTENDANCE 1958-2005

DATE	CITY	TYPE	DURATION (MONTHS)	PARTICIPATING NATIONS	AREA	ATTENDANCE (IN MILLIONS)
1958	Brussels	Registered	6	42	200 HA	41.45
1962	Seattle	Recognised	6	24	30 HA	9.61
1967	Montreal	Registered	6	62	400 HA	50.31
1968	San Antonio	Recognised	6	23	37 HA	6.40
1970	Osaka	Registered	6	75	330 HA	64.22
1974	Spokane	Recognised	6	10	40 HA	4.80
1975	Okinawa	Recognised	6	37	100 HA	3.49
1982	Knoxville	Recognised	6	16	30 HA	11.13
1984	New Orleans	Recognised	6	26	34 HA	7.34
1985	Tsukuba	Recognised	6	48	100 HA	20.33
1986	Vancouver	Recognised	5	54	70 HA	22.11
1988	Brisbane	Recognised	6	36	40 HA	18.57
1992	Genoa	Recognised	3	54	25 HA	1.70
1992	Seville	Registered	6	111	215 HA	41.81
1993	Taejon	Recognised	3	141	90 HA	14.01
1998	Lisbon	Recognised	4	143	50 HA	10.13
2000	Hanover	Registered	5	155	160 HA	18.00
2005	Aichi	Registered	6	121	173 HA	22.10
<i>1990</i>	<i>Osaka</i>	<i>Horticultural</i>	<i>6</i>	<i>81</i>	<i>140 HA</i>	<i>23.13</i>

Approximate world's fair attendance levels since 1958. Wherever possible, figures have been obtained from the official records of the BIE. For ease of comparison only, the newer terms "registered" and "recognised" have been applied. The following should be noted:

- The majority of the exhibitions listed would normally fall under the categories Special for smaller and General or Universal for larger expos. The first BIE recognised expo will not actually be held until 2008 and the first BIE registered expo in 2010.
- Though larger exhibitions (in bold) have the potential to attract more attendance, their greater size is not necessarily a guarantee of success. From 1985 on, smaller exhibitions of 5-6 month duration equaled or exceeded the attendance levels of their larger counterparts. Expo 86 in Vancouver, for example, which ran for five months, surpassed both Expo 2000 and Expo 2005 in attendance.
- Since 1970, with the exception of Genoa, month-to-month figures for smaller fairs of shorter duration either approach or exceed the attendance levels of larger fairs of longer duration.
- The evident consequences of hosting Expo 92 in Genoa concurrently with Expo 92 in Seville led to the implementation of tighter restrictions on the frequency of future exhibitions. Expo 84 in New Orleans was equally overshadowed by a competing event, the 1984 Olympics in Los Angeles.
- At the Seville and Aichi fairs, foreign visitors accounted for less than five percent of total attendance.
- Of particular interest is Expo 90 in Osaka (listed separately in italics). Classified as a special horticultural exhibition (Floralies), Expo 90 outperformed all other world's fairs since 1970 except Seville.



The Expo passport (far right) was conceived for Expo 67. In lieu of conventional ticket stubs, “passports” were issued which could be stamped at each pavilion. The concept, which narrowly survived a vote at the General Assembly of Commissioners General, encouraged visitors to prolong their stay and visit as many pavilions as possible to obtain a souvenir stamp. The idea has become a favourite at expos ever since.

Marketing

One of the main causes of low attendance at recent world’s fairs has been insufficient marketing. Complaints in this area were loud and numerous following Expo 2000 in Hanover, Germany, which held its first (and the largest) exhibition in history to an unexpectedly small audience. Expo 2005 in Aichi, despite better attendance than Hanover, was also lacking in promotion. In fact, some sources remarked that not only the rest of the world remained uninformed, many people in Tokyo were apparently unaware that a world’s fair was taking place in their own back yard.*

Expo 67, on the other hand, benefited from widespread controversy and effective marketing simultaneously. The project was so ambitious – and seemingly so impossible – that the entire nation, if not the entire world, held its breath in anticipation. Once the gates opened, Expo became the ultimate destination for possibly the largest birthday celebration the world had ever seen. It was the culminating event in a series

of cross-country festivities and it became the crowning glory of Canada’s centennial. This again underlines the importance of attaching a significant anniversary to a world’s fair and promoting it in conjunction with the fair’s theme.

Barring a major domestic catastrophe or world-wide calamity, there is conceivably little to prevent a well-organised and well-marketed world’s fair from being successful. Expo 67 was held at a time when terrorism in Quebec was an ongoing concern and strategically placed bombs had already killed or injured a number of people in Montreal. No less than seventeen heads of state and/or their spouses received death threats during Expo and acute labour disputes threatened to shut down the city more than once. Just before the gates opened at Expo 86, the Challenger space shuttle exploded and the worst nuclear disaster on record occurred in Chernobyl. Both incidents dominated the news and threatened to overshadow Vancouver’s

very first world-class event. Instead, thanks to responsive and well-directed marketing, Expo 86 went on to be the most successful fair in its category in history.

It must be expressly stated, however, that no marketing campaign can save a badly-organised fair which fails to deliver as promised. A world’s fair is a costly, one-off event which has very little time to recover from negative media coverage or contrary word-of-mouth. Expo 67 and Expo 86 were successful because they delivered a great deal more than the public had expected and instantly generated positive feedback. In a world newly dominated by the Internet and the rapid dissemination of information through web sites and forums, such feedback becomes more significant than ever before.



Expo Ernie, the electronic ambassador of Expo 86, was an instant hit with the public.

* Nevertheless, Expo 2005 not only exceeded its projected attendance level, it closed with a profit of ca. 100 million CAN.

SECTION 2

Expo 17– A Proposal

Introduction

This section will provide a more detailed representation of what Expo 17 might look like. For the purposes of this example the following has been assumed:

- The exhibition area can be tailored to accommodate any type of officially sanctioned exhibition.
- The theme of the exhibition would include social and environmental concerns.
- The city, particularly Old Montreal and the southwest shore, would be incorporated into the event and showcased as a working example of the fair's theme and objectives.
- The Bonaventure Expressway would be relocated according to suggestions outlined in Vision 2025. It would continue to provide access to Bickerdike pier for shipping purposes.
- The Montreal Casino might move to a different location, possibly into a multi-tiered hybrid complex on Bickerdike pier which would continue to allow container shipping on the main level.
- The Gilles Villeneuve racetrack would be redesigned and relocated, possibly to the southwest shore.
- La Ronde would be suitably redesigned along the lines of an international exhibition.
- A new Expo Express would run the same route as its predecessor, but would continue across the water from the eastern tip of Ile Ste. Hélène to Old Montreal, then travel west along the old port line to Cité du Havre. Assembly and maintenance shops for the cars would be located in Pointe St. Charles.

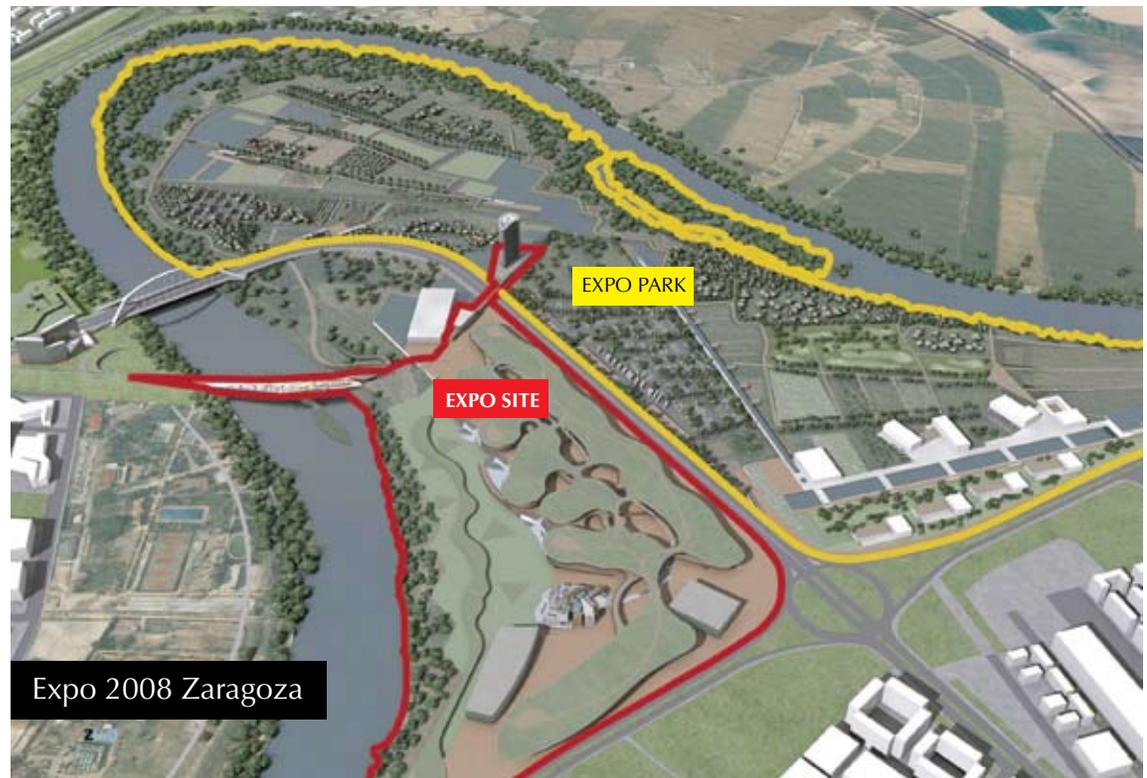
The actual layout of the fair will depend on what sort of exhibition(s) Montreal is awarded. Though the proposed site would be large enough for a registered exhibition, specific attention has been focused on arranging a recognised exhibition combined with a horticultural and/or housing expo. This would not only increase potential attendance and exhibition area, it would be well suited to the geographical layout and environmental aspects of Expo 17. Montreal, with the 1980 Floralties, and Quebec City, with Québec en Fleur, have already acquired considerable experience and recognition in horticultural events. And a housing exposition would go very well with the urban renewal aspects of the fair, most notably the Habitat 2017 community for Area 1.



Housing Expo 2001 (Malmö) and Flower Expo 90 (Osaka). A housing and/or flower expo would go well with a recognised world's fair in 2017. Sources: City of Malmö, Ichiro Masuda

It should be noted that Spain will be hosting the first recognised expo under new rules in 2008. The outcome of this fair will conceivably determine how the recognised exhibition will be laid out and regulated in the future.

It should also be stressed that the current 25 hectare limit for recognised world's fairs refers to official exhibition space only. Amusement areas, green space, and any exhibit or area not included in the expo admission fee may be exempted from the prescribed limitation.



Though the official exhibition area (in red) of Expo 2008 is 25 hectares, the complete site is much larger. Expo 2008 will be the first recognised fair under new rules.

Expo 17 would be mapped into three major areas:

AREA 1 - Habitat 2017
(Technoparc - Cité du Havre)

AREA 2 - Parc Jean Drapeau
(Ile Ste. Hélène - Ile Notre Dame)

AREA 3 - Old Montreal
(Marché Bonsecours - Pointe à Callière)



AREA 1 HABITAT 2017

Background

One of the most prominent and popular features of Expo 67 was the Habitat 67 complex designed by architect Moshe Safdie. Essentially a system of pre-fabricated living spaces stacked on top of each other, Habitat was well before its time, espousing high-density urban architecture in an era when residential suburbia was still the norm.

Originally conceived as a self-contained community of just under a thousand living spaces, Habitat was eventually scaled down to 158 units and was not complete by the time Expo opened its gates in April, 1967. As a result, it was displayed as a work-in-progress, which contributed further to its popularity. Fascinated fairgoers were allowed to observe not only the inhabited portions with their stylish interiors and rooftop gardens, but a static display of the on-site fabrication process including a concrete module hanging from a 5-storey crane. Situated at Cité du Havre and recently converted to a strata complex, Habitat

continues to serve as the principal reminder of Expo's unqualified success.

Unfortunately for Habitat's architect, however, the reduction in size to 158 suites resulted in a substantial increase of per-unit construction costs and led to Habitat being regarded by developers as unrealistic and grandiose – at least in 1967. Few, if any, of Habitat's critics took into account the original plans of the architect, which prescribed not only a minimum density of almost a thousand units, but a complex of shops and services underneath to further offset building costs. In addition, outlay for manufacturing equipment, normally regarded as capital investment, was mistakenly attached to the final tally of the finished product, eventually stamping Habitat with a price tag that by no means reflected its original design or intention.

Habitat is probably the only high-density complex in existence in North America which truly offers the amenities of suburban living in



The original plans for Habitat 67 called for a minimum density of nearly 1000 units covering the entire area of Cité du Havre.



A crane places a module onto the Habitat 67 complex.

In many cities, the modern condominium is equipped for everything except a family.

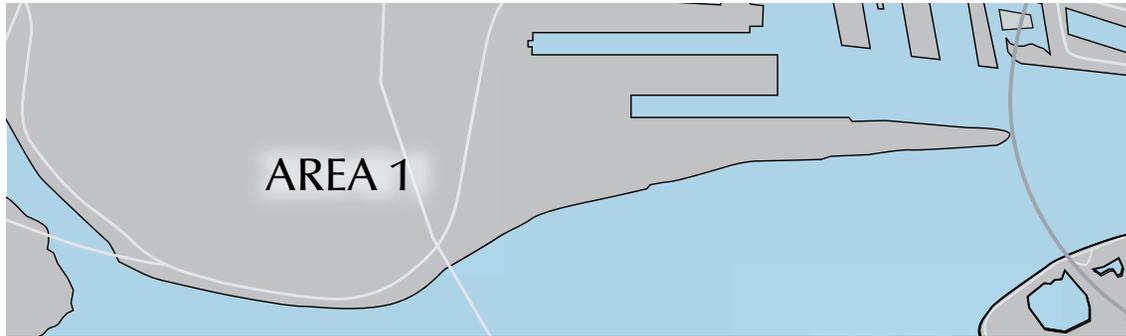
such a compact area. Every unit has its own garden and the entire building was designed to allow maximum privacy and convenience. The Habitat concept might best be described as a suburban neighborhood stacked into an urban pyramid.

Today, despite a pent-up demand for family-oriented, high-density housing, condominium towers continue to rise into the clouds like common office buildings, largely inhabited by well-off singles, professional couples, or empty-nesters who have left child-raising and suburbia well behind. While statisticians observe a declining birth rate in western cities and politicians warn of a demographic “time bomb”, the housing market continues to squeeze young couples into ever-smaller, increasingly expensive living spaces which seldom take children into account. It has yet to sink in (or be clearly demonstrated) that the city itself can contain and nurture the family while providing complete mobility through public transit.



“Our demographic weakness will not only affect the economy. There are fears that we will be caught up in a vicious cycle that will have major social and cultural repercussions... The demographic decline will be exacerbated and will accentuate the threat to the vitality of our cultural institutions. The French fact in North America—already miniscule—will continue to dwindle away.”

— p5, Pour un Québec Lucide



Area 1 • Layout and use

Ideally, a large expo points to the future and offers working alternatives. Habitat 67 managed to achieve this merely as a prototype. Habitat 2017 could pick up where it left off and potentially transform Montreal into the city of the future.

Habitat 2017 could not only be an exercise in urban living, it could be a showcase of conservation and alternative energy sources. Vision 2025 has already alluded to a run-of-river power generator in the St. Lawrence. If such a project could be realised with negligible environmental or aesthetic impact, it might possibly power the entire Habitat community and provide an added feature to the exhibition itself.

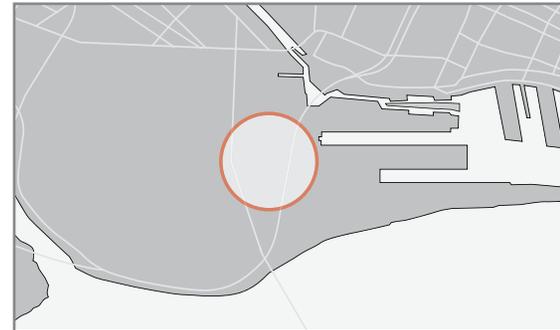
An appropriate location for Habitat 2017 might be an area where it would make the most impact: The shoulder of Cité du Havre and an adjacent section of the Montreal Technoparc. Montrealers today are largely unaware that a considerable swath of Griffintown and the entire community of Victoriatown

were bulldozed in 1964 to make way for the Bonaventure expressway, the recently-dismantled autostade, and thousands of parking spaces where the Technoparc is now located. Habitat 2017 could be a major leap in the opposite direction, replacing an ugly expressway and a neglected area with a brand new community. More significantly, it would finally reunite Montrealers with the shores of the St. Lawrence River.



PACIFIC HYDRO LTD

Though less intrusive than conventional hydro dams, current run-of-river generators still have an impact on aquatic life. A generator in the St. Lawrence would be a significant challenge in terms of preserving fish migration and other factors.



The centre of Victoriatown (above), which was demolished in 1964. The church in Griffintown (below) remained standing until 1970.



SOURCE: [HTTP://POINTSTCHARLES2.HOMESTEAD.COM/DLIL09.HTML](http://pointstcharles2.homestead.com/dlilo9.html)



PHOTOS: SOCIÉTÉ DU HAVRE

Obstacles

The greatest challenges in this area would be the relocation of the Bonaventure Expressway, the environmental remediation of the southwest shore, and the salvation of the St. Lawrence River. This is where a large expo can be very helpful. The main thrust of a world's fair, according to the BIE,

“is the education of the public: it may exhibit the means at man’s disposal for meeting the needs of civilisation, or demonstrate the progress achieved in one or more branches of human endeavour, or show prospects for the future.”

In other words, the BIE is looking for innovation and a tangible future for civilisation – not just an elaborate fair. If the results of recent exhibitions and opinion polls are any indication, the BIE might very well be echoing the sentiments of the general public. A fair which managed to tackle the above challenges would not only stand a realistic chance of attracting a large attendance, it might encourage new ideas for environmental remediation and urban habitation and move Canadian technology and industry in this area to the forefront.

ST. LAWRENCE RIVER - MONTREAL TECHNOPARC LANDFILL SITE Summary of Analytical Results for Specified Sampling Dates Station T-3, Seep Site (at waters-edge)		
PARAMETER	CWQG:PAL-F (UG/L)	20 JAN 02 (WATER) CONC. (UG/L)
Acenaphthene	5.8 (i)	<1000
Acenaphthylene	no CWQG	<1000
Anthracene	0.012 (i)	<1000
Benzo(a)anthracene	0.018 (i)	4500
Benzo(a)pyrene	0.015 (i)	<1000
Benzo(b+k)fluoranthene	no CWQG	<1000
Benzo(ghi)perylene	no CWQG	<1000
Chrysene	no CWQG	<1000
Dibenzo(a,h)anthracene	no CWQG	<1000
Fluoranthene	0.04 (i)	2200
Fluorene	3.0 (i)	<1000
Naphthalene	no CWQG	<1000
Phenanthrene	1.1 (i)	<1000
Pyrene	0.4 (i)	3200
Indeno(1,2,3-cd)Pyrene	0.025 (i)	<1000
Total PCB	no CWQG	8530

CWQG:PAL: Canadian Water Quality Guidelines, Protection of Aquatic Life. Source: EBI



SOURCE: EBI

In its present state the Montreal Technoparc poses an ongoing threat to the St. Lawrence river. Leaching PCBs at the discharge point were measured as high as 8.5 million times the allowable level. Toxin containment booms (above), have been largely viewed as ineffective. It should also be noted that Environment Canada qualifies PCBs as “too dangerous to the ecosystem and to humans to permit their release in any quantity.”



Before and after: Ile Ste. Hélène and seaway (1963); construction (1963-64); Ile Ste. Hélène and Ile Notre Dame (1967)

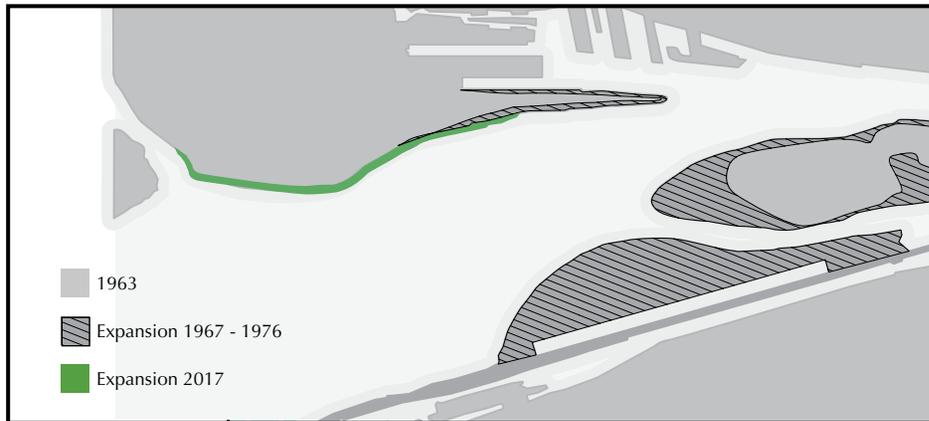
Solutions

A possible engineering solution for the southwest shore might be found by reviewing the challenges which faced the planners of Expo 67 – who were responsible for building two islands in the middle of a turbulent river. The same method of construction which allowed the enlargement of Ile Ste. Hélène and the creation of Ile Notre Dame might be adopted to lower and extend the southern shoreline of Pointe St. Charles. This would automatically create an area for a waterfront esplanade while arresting any toxins leaching from the Technoparc. The Technoparc could then be remediated and a high-tech centre built in conjunction with Habitat 2017. Should the remediation of the Technoparc involve extensive excavation of the area, it might simultaneously allow the construction of an “underground city” similar to Montreal’s existing subterranean network of shops and walkways.

If Montreal were to stage a recognised and a horticultural world’s fair concurrently, the rooftop gardens of Habitat 2017, the waterfront esplanade, and any other green spaces could be incorporated into the combined exhibition. Together with the Technoparc this composite arrangement of eco-technology, high-tech industry, and urban habitation could be an inspiring example of a sustainable future for all the world to witness. And, similar to the original Habitat during Expo 67, any unfinished areas might be displayed as a work-in-progress.



The same construction methods which extended Ile Ste Hélène and created Ile Notre Dame might be used to extend the shoreline of Pointe St. Charles. Source: Société du Havre

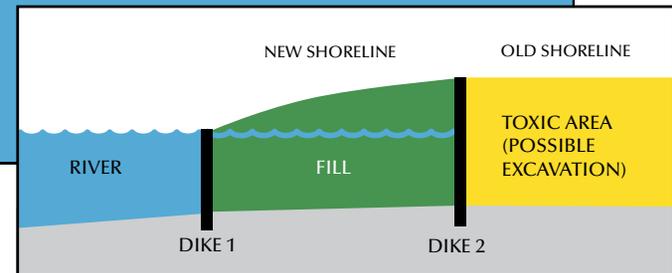


Left: For Expo 67, Ile Ste. Hélène was doubled, Ile Notre Dame built from scratch, and the former Mackay Pier fortified and expanded to create Cité du Havre. The islands alone required the erection of 26,970 feet of external and 21,150 feet of internal retaining walls. They were completed and filled in less than a year.

Centre and below right: Once dikes are placed into the bedrock of the Technoparc shoreline, the area between them can be dredged and topped up with clean fill while automatically lowering the shoreline in the process. Toxic areas close to the shore can then be excavated while other areas might rely on risk management. Excavated areas do not need to be refilled entirely – they can possibly be used to install an “underground city” similar to Montreal’s existing subterranean network.



■ RISK MANAGEMENT
 ■ POSSIBLE EXCAVATION
 ■ NEW SHORELINE (CLEAN FILL)



Before and after: The Angus Project in Rosemont-Petrie Patrie is a recent example of large-scale brownfield remediation and could serve as a valuable template for reclaiming the city's southwest shore. Source: CPR





CATHERINE BUJOLD



CATHERINE BUJOLD

As the grounds and rooftop gardens of Habitat 67 already show, the Habitat concept would fit well into a combined recognised/horticultural world's fair.



CATHERINE BUJOLD



CATHERINE BUJOLD

Even older areas of Montreal are embracing the concept of rooftop gardens.



The Habitat concept has recently been revived through the use of abandoned shipping containers. Source: www.containercity.com



The recently completed Keetwonen housing project in Amsterdam comprises 1000 living units as well as a supermarket, office buildings and a restaurant. The entire complex was assembled with ISO dry freight containers. Source: TEMPOHOUSING

In the Man the Producer pavilion at Expo 67 visitors were entertained with a full-scale model of a future assembly line.



Technoparc 2017? In the heart of Dresden, car manufacturer Volkswagen operates the Transparent Factory, a modern assembly plant which attracts tourists to the city every year. Source: Gläserne Manufaktur

AREA 2 Parc Jean Drapeau



Background

The original Expo islands – now Parc Jean Drapeau – have been suffering an identity crisis ever since the fair officially closed its gates in 1967.

Reluctant to let go of the miracle of Expo, the city kept the fairgrounds going for some years afterwards as Terre des Hommes. The Cité du Havre section was soon dismantled, however, and a trackless Expo Express subsequently stored on the bridge between the two islands. 1976 brought the Olympic rowing events to an otherwise abandoned Ile Notre Dame and 1980 brought the Floralties. Though the former American pavilion lost its acrylic shell in a fire in 1976, the pavilions on Ile Ste. Hélène were still running during the summer months until 1981. By the early nineties, all but a handful of the original structures had finally disappeared.

In a sense, Expo 67 became a victim of its own success. So much promise and self-esteem had been generated in six short months that those who had experienced Expo could be forgiven for not wanting to see it end.

Recent and regular events at Parc Jean Drapeau, such as mega-concerts and car races, have not been kind to the area and contrast markedly with what is now intended to be a natural park. Bits and pieces of Expo are still scattered throughout and various sections of the islands including Place des Nations and the northeastern tip of La Ronde have fallen into disuse and/or disrepair.

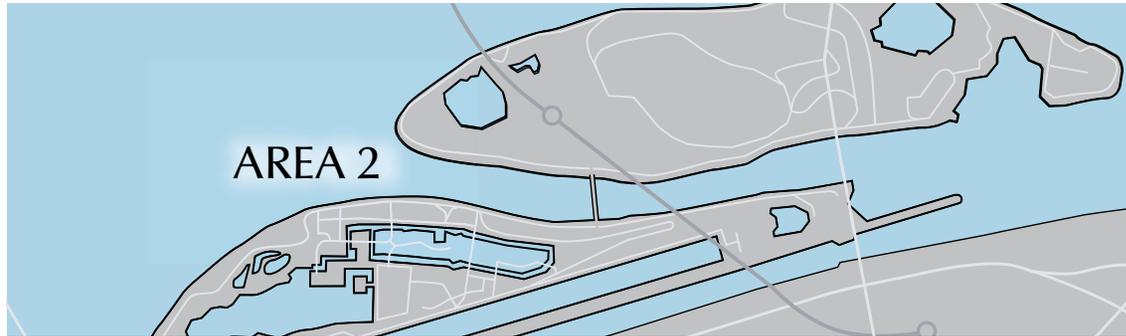
Though the amusement section of La Ronde is now operated privately under a 99-year emphateutic lease, both islands are still owned by the city. This is an incalculable advantage and stems from the sort of reasoning which suggested creating the islands in the first place. When the city agreed to build the exhibition in the middle of the St. Lawrence river its decision was not merely creative. It effectively avoided the complications of land appropriation and real estate speculation which have often hindered or prevented other exhibitions from taking place. Today, the city of Montreal has all the land it needs for another expo.



A fire in 1976 destroyed the acrylic shell of the Biosphere.



The city has recently signed a five-year lease to keep the Grand Prix on Ile Notre Dame.



Area 2 • Layout and use

The planners of Expo 67 had decided – quite rightly at the time – to spread national pavilions across the two islands and avoid segregating themes or countries into specific areas. It might be desirable this time around, however, to devote one island to theme and horticultural exhibits and the other to national pavilions. Part of the reasoning behind this involves the intended use of the islands, notably Ile Ste. Hélène, as a park – a concept which could be incorporated into the exhibition and put to good use afterwards.

ILE STE. HÉLÈNE: One third of this island was already a park before and during Expo 67. Like its sibling across the channel, it is currently a confused mix of green space, paved and unpaved roads, and leftover structures from Expo. The Biosphere, basically the skeleton of the former U.S. pavilion, was refurbished in 1995 but is again showing signs of deterioration. Nevertheless, it is considered a

landmark and could be remodeled and possibly reskinned for the exhibition.

Ile Ste. Hélène would be well suited to the environmental, horticultural and exploratory aspects of the fair. A suitable concept for this area might be based on Gaia – the notion of the earth itself as a large organism of which we are an integral part. A new geodesic dome, possibly comprised of 100 percent sphere, might be a novel architectural challenge and a new landmark for the city. It might also be designed entirely around environmental sustainability and employ enough eco-technology to maintain itself.

Structures, walkways, pools and fountains might be smooth and organic, avoiding harsh lines or abrupt angles. Theme buildings might be tied together with silent minirails and tranquil canals and the expo visitor encouraged to roam the island and experience nature on a first-hand basis.



A future for Ile Ste Hélène? The world-famous Eden Project in Cornwall, England.



A 100 percent geodesic dome. Geodesic domes are the only known structures which increase in strength the larger they get. Source: David Levinson (CC/GNU)



MONTREALAIS (CC/NU)

ILE NOTRE DAME: This could be the more boisterous of the two, the Island of Nations, and possibly the official area of a recognised BIE exhibition. If the Montreal Casino is relocated, the leftover structures might be used as administration facilities for Expo 17 while the rest of the grounds could be occupied by participating countries as well as Canada and the individual provinces and territories. The existing canals might be extended towards the northeastern tip of the island and connected to the rowing basin to allow water traffic in and around the pavilions and along the full length of Ile Notre Dame. A vibrant nightlife could also be offered and national pavilions encouraged to present their own specialties in food and entertainment.

LA RONDE: As aforementioned, the La Ronde amusement park might be redesigned along the lines of an international exhibition, ie, more in keeping with a theme park. The marina might be reopened and extended, and any neglected portions of the grounds properly utilised. The city might also investigate an expanded partnership with the current operator of La Ronde, as well as encourage other partnerships which could enhance the area further.

Obstacles

Parc Jean Drapeau presently relies on a mixture of events to provide funding for its upkeep. Any change to the current scenario, most notably the removal of the racetrack, would potentially affect the park's ability to finance its operations and would undeniably affect tourism. A new location for the racetrack – and possibly the casino – would need to be secured well in advance of Expo 17 and the fair itself would need to be planned in such a fashion as to allow the islands to be self-sufficient after the exhibition has ended.

The situation at La Ronde also remains unresolved until the conditions of its lease and the future plans of its current operator are examined in detail.



A future for Bickerdike Pier and the Montreal Casino? As Canada Place in Vancouver shows, large ship terminals can be combined with other facilities. Sources: Société du Havre de Montréal, Canada Place Corporation

Solutions

The revitalisation of the southwest shore (Area 1) may provide a solution to some of the previously mentioned issues.

CAR RACES: The present Villeneuve racetrack, challenging as it may be, cannot be altered any further to allow higher-speed racing or a longer circuit. It is confined to the borders of Ile Notre Dame. At the same time, not every section of Montreal’s southwest shore can be realistically remediated to residential-standard guidelines. Certain areas will need to rely on risk management and/or some form of utilisation which does not require extensive excavation. Such areas might be ideal for a race course. Rather than squeezing the track onto an island, planners would have the opportunity of customising the circuit for a variety of championships and possibly extending the racing season in the process. During Expo 17, in keeping with the green aspect of the fair,

specific races might be held using alternative forms of racing vehicle, including electric, pure-hydrogen, and fuel-cell prototypes.

MEGA-EVENTS: Once the racetrack has been relocated the eastern section of Ile Notre Dame – possibly during and certainly after Expo 17– might be used for concerts and similar events rather than Ile Ste. Hélène. This would preserve the majority of Ile Ste. Hélène as a park while still retaining the western end of Ile Notre Dame as a picnic and bathing facility. Another option might be to preserve the greater part of both islands and relocate any “mega-events” to the eastern tip of La Ronde.

CASINO: Loto Québec has already been examining various options for relocation and expansion of the Montreal Casino, which needs to combine its operations with other venues and facilities to remain competitive.*

If container traffic is preserved at ground level, the casino might be moved into a multi-tiered complex on Bickerdike pier. If container traffic can be relocated downstream, Bickerdike might be converted into a cruise ship terminal, bringing tourists directly to the casino. Either scenario, however, will require sensitive negotiations with the Port of Montreal, which handles up to 300,000 tonnes** shipping per



Race for the future: A fully electric production sports car. Electric vehicles have recently become powerful enough to hold their own on the track. Source: AC Propulsion

* In 2006, 59 percent of casino revenue in Las Vegas was derived from non-gambling venues such as shopping and entertainment. Casinos on the eastern seaboard, most notably Atlantic City, have recently seen a decline in revenues and are actively restructuring to accommodate entertainment and other facilities.

** A recent initiative, HwyH20, hopes to nearly double traffic on the St. Lawrence Seaway. Most of this would involve container shipments from Asia.



year at Bickerdike and has been approached with various development schemes in the past. Should the casino remain on Ile Notre Dame, it might possibly expand once the racetrack has been relocated. During Expo 17, however, the casino would need to be isolated from the fair's daytime operations – while still allowing it to become a prime attraction once pavilions have closed their exhibits for the evening.

TRAFFIC: Transportation to Bickerdike pier, as well as Cité du Havre and the islands, would be provided by the Expo Express. This would allow for better use of areas currently reserved for parking on the islands while substantially reducing car traffic along Avenue Pierre Dupuy.

LA RONDE: The presence of a world's fair would be an obvious economic boost to La Ronde, which earned a profit during Expo 67 and helped offset the costs of the exhibition. The city of Montreal might wish to engage in negotiations with Six Flags International – the current operator of La Ronde – as soon as possible. Depending on the outcome of

these negotiations and the conditions of the current lease, Montreal might either reassume control of La Ronde, or enter into an enhanced partnership which would allow Six Flags to share a portion of the costs for updating the park and installing stations for the Expo Express.

Cirque du Soleil, founded and based in Montreal, might also be interested in La Ronde. The recent cancellation of the Peel Basin project – a joint venture between Cirque du Soleil and the Montreal Casino – has potentially been a setback for both parties as well as Montreal and its harbourfront. The permanent presence of Cirque du Soleil at La Ronde might be a prestigious opportunity for Parc Jean Drapeau.

Should the Montreal Casino stay at its current location, however, Cirque du Soleil might become part of an eventual expansion on Ile Notre Dame. Either way, Expo 17 would be the ideal launch pad for such a venture – in the same tradition, perhaps, as Expo 86 in Vancouver first introduced the world to an emerging Cirque du Soleil.



(Top) During Expo, unique attractions including the Gyrotron turned La Ronde into a world-class amusement park.

(Above) The presence of Cirque du Soleil at Parc Jean Drapeau would be a prestigious opportunity for the city and the islands.

AREA 3

Old Montreal

Background

Arguably Montreal's most recognised historical section and a substantial source of tourist income, Old Montreal is also evolving into a permanent residential community. This has recently led to tensions between condominium residents and commercial interests, most notably sightseeing/recreational tourism operators.

The narrow streets and alleyways of Old Montreal were laid out long before the advent of the motor vehicle and were never meant to carry the contemporary traffic load which invades the area, particularly from spring to fall. Even those who welcome the tourist invasion from an economic standpoint – the restaurant and hotel owners – are feeling the pinch. Historical buildings and pathways are being eroded by traffic and pollution while various establishments and facilities are potentially jeopardized by the reduced air quality, gridlock, and noise created by motor vehicles. It is widely felt that a solution needs to be found for Old Montreal which preserves its historical and residential aspects without adversely affecting tourism.



CLYDURE



CLYDURE



DENIS TREMBLAY

The charm of Old Montreal is increasingly compromised by the presence of cars.



CLYDURE

Old Montreal's historic character makes it the ideal car-free zone.



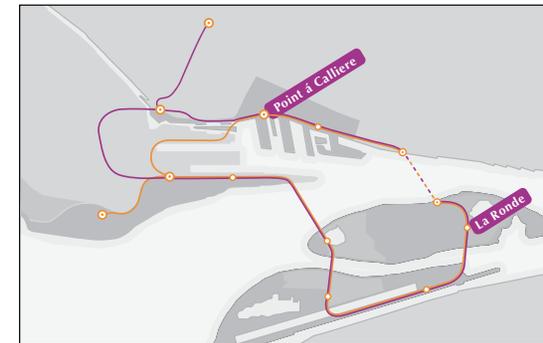
Area 3 • Layout and use

While not officially part of the exhibition grounds, Old Montreal would be intimately connected with Expo 17.

A new Expo Express would traverse a loop from Old Montreal to La Ronde, servicing Cité du Havre and the islands inbetween. The river crossing between La Ronde and Old Montreal would be achieved with a high-speed ferry (AquaTram), thereby completing a circle.

Old Montreal would function as a buffer zone for Expo 17, absorbing fairgoers as they come from the islands seeking refreshment and a change of pace. Nearly every world's fair, including Expo 67, has initially encountered difficulty providing adequate concession and restroom facilities. Incorporating Old Montreal into the fair would not only alleviate eventual congestion on the islands, it would provide additional tourist income to other areas of the city and possibly encourage visitors to extend their stay in Montreal.

Planning for Old Montreal would need to begin well before the exhibition, as the essential feature of this area – and possible solution to gridlock and air pollution – would be the permanent removal of motorised vehicles from the aforementioned buffer zone. Taxi and other services within this area would be operated by caleche and/or other means of alternative transport. Should attendance at Expo increase, additional areas might be isolated from traffic during the fair, especially if the Ville Marie Expressway is covered over and rerouted according to suggestions outlined in Vision 2025.



A new Expo Express would connect Old Montreal directly to the exhibition. A hi-speed ferry would extend the transit system over the St. Lawrence river.



The windows of the Champs-de-Mars metro station are the work of renowned artist Marcelle Ferron. Source: Montréalais (CC/GNU)

Obstacles

Car-free zones stand little chance of gaining acceptance unless transportation alternatives are offered that rival the convenience of owning a car. Additionally, residents and business owners within the buffer zone may not appreciate being separated from their motor vehicles. Commercial establishments which rely on regular deliveries and/or activities may also feel compromised by a car-free boundary.

Solutions

Dedicated planning and investment in public transit, as well as additional walkways and bicycle lanes in and around Old Montreal would be essential. The Ville-Marie expressway would need to be covered over and traffic diverted from the buffer zone. Expanded and fully unrestricted pedestrian access from the Champ-de-Mars metro station to the core of Old Montreal would also be required.

A secure parking area near the buffer zone may also be necessary for residents and business operators. Special permits would need to be issued for delivery services and specific times reserved for any entry into the zone with a motorised vehicle. A contingency plan would be required for any emergency situation.

Once the buffer zone has become established and accepted, it should increase tourist potential and gradually offset any initial expense or inconvenience created by its implementation.

Effective examples of car-free zones can be found in and around many major cities today, from those which have never allowed motor vehicles, to existing and new urban areas that have been planned accordingly. Compared with other cities in its class Montreal is possibly trailing behind and will need to address the situation in order to preserve – and possibly expand – its tourist base.*

* As of 16-07-2006, the City of Montreal released a Pedestrian Charter which focuses on increasing pedestrian safety.



CCO/NU



CCO/NU



Contemporary examples of car-free areas. The newly revitalised distillery district in Toronto (above) is a heritage site spanning over 13 acres. Sources: Distillery Historic District, Vauban.de, Geoffrey George, E Rauch

Transportation

Background

Montreal's public transit system, once the envy of other major cities in North America, has for some years experienced a state of stagnation. Current funding can hardly meet the costs of upkeep, let alone expansion, of the existing network.* At the same time, automobiles are choking the city and negatively affecting the quality of life for many residents. Unless a solution is found for the gridlock and pollution in high-traffic areas, tourism may soon suffer as well.

World's fairs have frequently been utilised as a catalyst to encourage and finance increased public transportation. They also provide the opportunity for a city to showcase new transit technology and modernise existing infrastructure. Both Expo 67 and Expo 86 introduced revolutionary technology in the form of mass transit. In Montreal's case, however, the technology was perhaps too far ahead of its time.

* The province has, however, recently announced additional support for new cars for the Metro.



The original transportation map for Expo 67, with Expo Express emphasized.



The Expo Express on a test run before the fair.

Expo Express • Background

Visitors to Expo 67 were unaware that the trains which transported them back and forth between two islands and a peninsula were controlled entirely by a computer. The Expo Express was the first fully automated rapid transit system in North America. During the fair, eight trains, comprised of six cars each, transported 44 million passengers without incident.*

A world's fair is a celebration of new technology and the computer-controlled Expo Express was a marvel of engineering in 1967. However, the 5.2 kilometre trip from Cité du Havre to La Ronde involved crossing the choppy waters of the St. Lawrence no less than three times in addition to straddling the seaway along Ile Notre Dame. In view of the circumstances, and after considerable debate, it was decided that fairgoers would not feel comfortable riding a self-propelled ghost train at up to 80 kph. "Drivers" were consequently positioned in cabs at the front and one of the more innovative technologies at Expo remained undisclosed to the general public.

After the fair, despite the efforts of its engineers and the city of Montreal, the Expo Express was eventually cut up for scrap. Though its design was based on the same cars as Toronto's subway system, the track width of the Expo Express had been modified to the world-wide "standard" rail gauge for eventual use on CN's suburban line between Montreal and Deux Montagnes. CN was already losing money on the line, however, and had no interest in spending millions more to adapt its level-grade platforms and stations to accommodate the higher doors of the Expo Express. Numerous attempts were made to sell the trains elsewhere, but by the time potential buyers had been located, the large and outdated vacuum tube-and-relay systems in the control cars had been superseded by solid-state engineering – making purchase or upgrade of the Expo Express increasingly impractical.

The fate of the Expo Express is an annal in history the city of Montreal would not wish to repeat. It should be understood, however,

that the prevailing approach in North America toward public transit constituted the largest contributing factor in the demise of the Expo Express. There was simply no market for it and no public outcry over its eventual destruction. Nor was the Expo Express the only transit system to be scrapped after a world's fair or, more commonly, to be replaced by the automobile and a network of freeways. Even today, nearly forty years on, public transit is a struggling concept in many municipalities.

After Expo 67 it would take nearly two decades for a full-scale, fully automated mass transit system to reappear in North America and it is perhaps no surprise that the technology was again introduced at a world's fair – namely Expo 86 in Vancouver. The Vancouver Skytrain is propelled by linear induction and is the longest steel-wheeled driverless system in the world. Though expensive to build, it is also one of the most reliable.

*One month into the fair a slight derailment did occur, but was righted within an hour.



The Vancouver SkyTrain is the world's largest automated system. Modern light-rail networks (ctr/rt) can service urban/suburban areas simultaneously by using existing rail lines. Sources: Robert Chew, C Palmer (CCGNLU)

Expo Express 2017

The Vision 2025 report already provides various examples of a light-rail (tramway) system to service the old port and Parc Jean Drapeau. Though the proposed line would use existing track along the old port and follow the corridor of the original Expo Express to the islands, Vision 2025 suggests crossing the Le Moyne channel over the Passerelle du Cosmos rather than using the former Bridge of Nations (Pont des Iles). This is presumably to provide a stop at the Biosphere on Ile Ste. Hélène and at the Casino on Ile Notre Dame. In the interests of an expo, however, it might be more useful to retrace the entire route of the original Expo Express, ie, directly over the Bridge of Nations, then eastward along Ile Notre Dame, and finally across to La Ronde again. Though the track was removed from Ile Notre Dame to make way for the Olympic basin, the orthotropic bridge to La Ronde is still intact. The new line could terminate near the former maintenance yard of the Expo Express on Ile Ste. Hélène, where a transit ferry similar to the

Vancouver Seabus would cross the river and join the port section of the light rail system in Old Montreal.

A disadvantage of the original Expo Express was its back-and-forth linear layout and lack of proper connection to the city centre. Passengers wishing to return to Montreal by Expo Express, particularly from La Ronde, were required to travel the full route back to Cité du Havre, then board a bus at Place d'Accueil. The other option was to get off at Ile Ste. Hélène and board the Metro. Either way, the Expo visitor was required to double back, change modes of transport, and pay an extra fee to return to the city.

The new Expo Express would connect to Montreal's core and operate on a circular as well as a linear configuration, allowing passengers to return to the city via Seabus from La Ronde or by light rail via Cité du Havre. As aforementioned, this transit loop would be responsible for integrating Old Montreal into the fair while dispersing any gridlock on the

islands. It would also provide expo visitors with the opportunity to roam the city and explore the shops and restaurants rather than be confined solely to the fairgrounds.

Whether or not a conventional light-rail system will be adequate for the fair itself remains to be determined. Should Montreal attract anything close to the number of visitors during Expo 67, a light rail system may need to be modified to accommodate more carriages and/or attain higher speeds. It should also be kept in mind that tram-style transit systems normally require traditional conductor/operators and can become more expensive to operate in the long run.

Such design challenges are appropriate for a world's fair, however. Studies are already being carried out with fully automated trams, though current implementation is limited so far. France has also installed a level-grade tram system in Bordeaux which runs on a third rail as well as catenary wires.



Crossing Burrard Inlet for 30 years, Vancouver's Seabus requires only two boats and has been out of service only once in its history.

A possible solution for crossing the St. Lawrence from La Ronde to Old Montreal would be Vancouver's own SeaBus. Operating since 1977, the seabus service requires only two boats which criss-cross each other at peak periods and alternate on evenings and weekends. Maintenance is performed on one boat while the other remains in service. Crossing the Burrard Inlet every 12-15 minutes on weekdays and running continuously for almost three decades, the Seabus was briefly out of commission only once in its history, accounting for an unprecedented reliability rate of 99.9%.



Possible transport solution for Bickerdike pier and the Technoparc. As the VW cargo tram shows, light rail systems can transport more than just passengers. Source: Gläserne Manufaktur



The new Expo Express would link the fairgrounds directly with the city. By using a circular as well as a linear layout, the system could be tailored to seasonal requirements and special events.



A tram in Pointe St. Charles. Light rail systems were once a familiar feature in Montreal.

Summary

Like its predecessor, the new Expo Express could provide a unique opportunity to introduce innovative technology into public transit. Unlike its predecessor, the technology behind a new Expo Express would be showcased to the world rather than hidden away and the system itself would become an important part of Montreal's existing transit infrastructure. The new Expo Express could also provide an opportunity, through assembly and maintenance, to revitalise the rail shops and local economy in Pointe St. Charles.

During Expo 17, special consideration should also be given to all other forms of clean transportation. This would include secure storage and mooring areas on the exhibition site, extensive bicycle access, and discounts on admission fees to all visitors who arrive at the fair through alternative, environmentally conscious means.



CITADIS MANUFACTURED BY ALSTOM TRANSPORTATION

By using a specially-designed third rail instead of overhead wires, the Citadis tram system in Bordeaux preserves the historic character of the city. Outside city limits, the tram reverts to conventional catenary power.



This example suggests a hybrid exhibition comprised of three smaller expos (housing, horticultural and recognised). The following should be noted:

- Though the original Habitat 67 complex is included in the overall Habitat 2017 community (housing expo), it is not part of the exhibition.
- Ile Ste H el ene is assumed to house the main horticultural and theme area on one end, and the amusement area (La Ronde) on the other.

- Ile Notre Dame holds the national pavilions and ancillary structures which collectively form a 25 hectare recognised expo.
- The suggested area for the Villeneuve racetrack is one of many options which might be considered.

- The Expo Express is assumed to be a light rail system with conventional track and roundabouts on land and a hi-speed ferry (AquaTram) over the St. Lawrence. Should budget and design allow, the Bonaventure line might be looped through the Technoparc. Though not shown on this map, it is also assumed that an extensive network of dedicated bicycle routes would lead to the exhibition grounds.

SECTION 3 After the Fair



A tranquil moment between mega-events. After Expo 17, Ile Ste. Hélène might be turned into a North American Eden Project.

The wasteful days of disposable pavilions and transit systems are over. All structures built for Expo 17 should be put to good use after the fair. In fact, this may eventually become an essential component for any successful bid with the BIE.

The new Expo Express, of course, would remain a permanent enhancement to Montreal's existing network. The circular layout of the Expo Express and the use of roundabouts would also allow it to be easily tailored to seasonal transit requirements and special events.

The islands, including any structures which remain after the fair, should become a permanent park and recreation facility. Large events should be carefully controlled and concentrated in one area as previously suggested. The city should also continue to encourage year-round use of the islands by offering numerous activities in the winter. The marina at La Ronde should remain open in the summer months and private motor vehicles preferably be banned from both islands.

Habitat 2017 would remain a model community on the southwest shore and continue to grow as additional tracts of land are reclaimed and developed. The heart of Old Montreal would remain closed to motorised vehicles and might serve as a prototype for reducing traffic in other areas.



The southwest shore, 2017 and beyond ?

HSB TURNING TORISO © PIERRE MENIS



TILE CMBH

A new racetrack and permanent maintenance shops for the Expo Express, along with an expanded Technoparc and Habitat complex, could provide housing and employment in a multitude of sectors in Pointe St Charles.



PAUL REHEBER (CCGND)



CLASBNE MANUFACTUR



WILLIAM PLATE JR (CCGND)



TEMPHOUSING



Conclusion

The mayor of Montreal and the planners of Expo 67, despite formidable opposition, redefined the world's fair in the twentieth century. At all stages of planning and construction they debated and re-evaluated the ultimate purpose of an international exhibition. Even the moniker "world's fair" was struck from their vocabulary, resulting in the now ubiquitous "expo." The tireless efforts of the mayor and his team resulted in one of the most original and successful – and truly international – exhibitions of all time. Even today, individuals from around the globe, many not yet born in 1967, have become fascinated with Expo. At the time of this writing, a search on the Internet for "Expo 67" will generate several thousand hits and offer a myriad of web sites devoted to the world's fair in Montreal.

Expo's success has often been attributed to the "feel-good" factor of 1967, the Last Good Year, as author Pierre Burton described it. Yet 1967 was no less tumultuous than today. America

was caught up in the Cold War with the Soviet Union and engaged in a real war in Viet Nam. Nuclear proliferation was out of control and fall-out shelters were being dug in the back yards of suburbia. And not only were Canada's relations with the United States at an all-time low, Canada itself seemed on the verge of breaking up. So when the idea of celebrating the country's centennial was aired a few years before, the suggestion met mostly with apathy and ridicule. Canada, apparently, was in no mood for celebrating – and neither was the rest of the world.

It could be reasonably conjectured, therefore, that Expo 67 offered a ray of hope on a potentially bleak horizon, that for six months the world could be offered a different perspective and possibly even a future, that rival superpowers could be placed right across the Le Moyne channel from each other and intimately connected by a minirail transporting millions of visitors from around the globe.

And Montreal, relatively unknown at the time, could pull off what the city of Moscow* had previously conceded it could not: the most ambitious and most successful exhibition the world had ever seen.

That was forty years ago. Yet even a cursory glance at current affairs would tell us it's time for another paradigm shift. Time once more for Montreal to open itself to the world and redefine the international exhibition in the twenty-first century.

expo17
MONTRÉAL 2017 MONTREAL

* Expo 67 had originally been awarded to the Soviet Union in 1960 but was cancelled by the Kremlin two years later.



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