2030 Alberta, Canada World Expo:

A PLAN TO REIMAGINE AND REBUILD AN EVEN BETTER ALBERTA AND CANADA.

ALBERTA WORLD EXPO BID COMMITTEE





The project is equal measures of pragmatism and inspiration. We know that we must quickly and profoundly transform aspects of our economy in Alberta and other parts of the country to embrace the challenges and opportunities of the next decades. We also know that we need inspired thinking, creativity, and wisdom from all parts of our society if we are to be successful in that effort.

Together, we envision a Canadian World Expo bid for 2030 as a unique decades-long platform to focus attention on transforming our country around three powerful areas of opportunity:



NEW ECONOMIC PATHWAYS

Growing and diversifying our national and regional economy within an innovation-driven low carbon framework that fosters creative cities and the growth of a resilient, future-ready workforce across sectors.



AN INTENTIONAL CANADA

Building national unity through values-driven and authentic connected conversations that bring Indigenous and underrepresented leaders to the forefront, to tap into even more inclusive sources of wisdom about building forward.



EMBRACING LEGACY

Revitalizing our focus on social and cultural development that showcases our creative human spirit as Canadians, builds new infrastructure and communities, and allows us to convene the world on transformative social, cultural, and economic issues.

Since their founding over 150 years ago, World Expos have been a focal point for national and global aspirations, spawning innovative connections and creative exchanges across peoples. With a view to better economic, social and environmental futures, Canada can once again take a global stage by hosting a World Expo in 2030. We last did so 34 years ago in Vancouver at Expo '86, and more than 50 years ago at Expo '67 during our Centennial celebrations.

An Alberta-based Canada World Expo in 2030 would be the first World Expo to be held in a North American venue since the Specialized Expo transformed Vancouver in 1986, and ours would be the first to host a full World Expo across multiple cities.

NEW ECONOMIC PATHWAYS: A TRANSITION IMPERATIVE

Alberta and Canada are at an economic intersection. We sit at the nexus of transition between resource-driven sectors that have long formed the core of our national wealth, and the sectors now positioning to embrace next generation economic opportunities in world-leading technologies and manufacturing. This cannot be a zero-sum game between industrial sectors or regions of Canada, as the transition from one form of economic livelihood to another must be part of an integrated and structured approach. Both demand that we draw on the best of our creative genius and foster innovation, whether it is making energy cleaner and vastly more efficient, or developing entirely new sectors.

For Alberta, the phased transition from carbon-heavy resource sector industries represents an especially crucial pivot point in the province's future economic plans.

Together, Canadians face difficult choices in how to move rapidly and effectively toward a

low-carbon future that demands drastic carbon emissions reductions by 2030, and a carbon-neutral world by 2050. Simultaneously, the transition process needs to substitute new opportunities for the more than \$71.5 billion that the energy sector contributes annually to nominal Canadian GDP and find new roles for the roughly 415,000 Albertan and other workers employed within or connected to the sector.

The very nature of this challenge — as in other industrial sectors across the country — calls upon the World Expo 2030 bid to act as a catalyst for innovative thinking and concerted action around economic transition in Alberta and nationwide.

The World Expo serves as an inspiring stage for dialogue around common economic transition concerns and innovative solutions based on a shared creative economy mindset and people development goals rather than continuing a divisive debate about current and future have and have nots in our economy.



Key economic transformation opportunities for Alberta in the decade out to 2030 that can form a showcase for a Canadian World Expo include:

- + Emerging as a global leader in carbon fibre materials and carbon nanotube manufacturing and engineering innovation. This is based on our existing carbon natural resource base and world-leading engineering/STEM talent in both industry and academic research centres of excellence. Already in 2020, Alberta Innovates has identified the market for carbon fibre and other non-combustion asphaltene products as being worth an estimated \$84 billion annually.
- + **Transitioning** parts of our existing energy sector capabilities to the low-GHG extraction and processing of raw materials for lithium ion batteries from existing oilfield brine wastewater. Alberta could become a trusted and stable net-zero supply chain resource for North America in a global battery sector currently valued at USD\$10.5 billion annually and projected to grow 600% within the decade.
- + Harnessing a growing capability for robotics manufacturing and associated machine learning and artificial intelligence (AI) systems for the energy sector within an industry expected to be valued at more than USD\$150 billion globally by 2025.

A Canadian World Expo does not, by itself, solve these transition challenges. Instead, an Expo acts as a platform to accelerate and coordinate the aspirational thinking of many Canadian industry leaders and governmental bodies around a new generation of Canadian opportunities for Alberta and other regions of Canada within a North American and global economy.

Current projections are that the World Expo would directly generate more than 50,000 jobs in the decade up to 2030, with similar or greater economic effects in the subsequent decades as new industries take hold. As such, the Expo acts as a powerful attractant for the diversified workforce needed into the next decade and beyond: a potent mix of Alberta's skilled trades capable of building and operating the physical infrastructure for new industries and those currently being positioned to take up our place in the world's advanced digital industries.

AN INTENTIONAL CANADA: BUILDING INCLUSIVE LEADERSHIP

Reimagining what we want Canada to be over the next fifty or one hundred years is an unparalleled opportunity to engage in nation-building. In today's world of uncertainty, it is a design challenge that is equally or more profound than the one faced by the architects of Confederation, and an immensely more pluralist opportunity to spark imagination and excitement around the future of our nation. We can emerge from the process with more than dreams: we will possess a rare social blueprint for continuing to evolve one of the most unique democracies in the world.

Once again, this cannot be a zero-sum game for Canadians: all of us must have the opportunity to contribute to our mutual aspirations for a Canada that soon will be entering the final decades leading up to our bicentennial. Where Expo '67 coincided with our Centennial celebrations as a country, a World Expo in 2030 would fall within Alberta's 125th celebration of our joining Confederation.

Many of our national debates on future pathways have lacked the active voice of the Indigenous peoples and the leadership wisdom associated with traditional ways connected to the land. Within our broadly pluralist society, many other important voices are not regularly present in the debate on options.

Our exploration of a World Expo bid puts these voices at the heart of our efforts. Including different perspectives in the decision and planning process is not simply to acknowledge diversity, but to actively embrace an ethic of pluralism by making specific and intentional

decisions to value the insights that come from our different backgrounds and perspectives.

Our bid committee includes representation and support from senior leaders within the Treaty 6 and Treaty 7 territories that are at the heart of our World Expo plan and will be expanded to include additional Treaty 8 and Métis perspectives. The bid approach establishes a key role for the Indigenous Peoples to host global conversations about indigenous issues within a new Indigenous Leadership conference centre in Red Deer. This will expand the legacy of the first such conversations that occurred in Montreal during Expo '67 around the injustices of residential schools, in the process contributing to an even greater legacy of highlighting Indigenous leadership on the world stage.

Further, we have actively sought input from a range of socio-cultural groups that traditionally have been under-represented in large bids of this nature. We commit ourselves to equal representation across gender, to the strong and active inclusion of youth leaders from all regions of the country, and to representation from as many cultural, religious, and ethnic groups as we possibly can engage, including la Francophonie.







The Canadian Native Flag designed by Kwakwaka'wakw artist Curtis Wilson.

EMBRACING LEGACY: A DECADE OF CANADA

Innovative thinking and action are not restricted to achieving economic and technological outcomes. Building a more inclusive, resilient, and imaginative society across all of Canada is a direct legacy of the way a World Expo can shape cultural institutions and broaden individual and societal mindsets.

From our committee member who was inspired to be an architect while viewing the futuristic buildings at Expo '67, to the ongoing cultural vibrancy of downtown Vancouver neighbourhoods that were a product of Expo '86, the potential legacy of a 2030 World Expo in Alberta takes many forms.

Our bid is itself the product of audacious thinking: it represents the first time that a World Expo would be held simultaneously in three separate cities as part of a single Expo: Edmonton, Red Deer, and Calgary. Although these cities already represent one of the densest economic corridors in Canada and North America, they remain disconnected in fundamental ways. By 2030, the Edmonton-Calgary corridor is expected to be home to more than 4.16 million Albertans, which represents a potent scale on the North American and global level if properly connected into what we conceptualize as the Alberta Economic Zone.

We would seek to connect these cities, and their respective surrounding rural areas, into a unified social, cultural, and economic cluster of innovation. Whether through building on existing high-speed rail technologies, where Canadian firms are already world leaders, or embracing the almost futuristic potential of

hyperloops, we must create sustainable change for the future of transportation and logistics infrastructure in Alberta. Catalyzing conversation around connecting the 300km-long Edmonton-Calgary corridor is an important outcome of this bid process, and one that others are already beginning to explore. This opportunity would fundamentally change the way we think and act, creating a new scale of social and economic connection while maintaining the very best of what makes each of these individual cities among the most attractive and livable in the world.

The World Expo also puts Canadian social values and cultural assets on stage within a global showcase of more than 174 countries.

It provides a focal point for inspiring a new generation of cultural artists to demonstrate their creativity, for our social groups to find new voices of inspiration and connection, and for all of us to highlight one of our most enduring national cultural assets: the immense land and natural wealth that helps shape our identity as Canadians. Our natural land assets likewise are a powerful attraction for international visitors to the Alberta venue region.

We explicitly recognize that 2030 is the focal point of many global aspirations for social justice, economic, and environmental change. From the United Nations Sustainable Development Goals reaching maturity to the ambitious goal of cutting greenhouse gas emissions in half by the same year, 2030 is set to be a year for taking stock and setting new targets. Canada should host that conversation.

WORLD EXPO BID PROCESS: HIGHLIGHTS

World Expo bids are managed through the Bureau International des Expositions (BIE), the intergovernmental organization established in 1928 to regulate these events. Returning Canada to full membership within the BIE is an essential component of an Expo bid. Having withdrawn from the BIE in 2012, we recently took steps to re-engage as a national exhibitor at the Dubai 2020 (now 2021) World Expo. Now is the time to resume our place within this influential intergovernmental organization, and to utilize its inherent convening power to help bring the world to Canada in 2030.

The bid process is highly competitive and begins in January 2021 when the submission window for the 2030 World Expo position opens. Once the first country submits, all others have six months to submit their initial application. We expect the 2030 bid period to run between January and June 2021.

A detailed bid timeline is outlined in Tab A.

Within this timeframe, the Government of Canada is asked to submit a letter of intent to

bid. This must reference the city (or cities), the proposed theme and dates, the duration of the Expo (typically 6 months in the case of a full World Expo), provide a guarantee of the fulfilment of its obligations, and confirmation of the legal status of the organizers.

Between July 2021 and June 2023, the BIE manages a bid process that includes the submission of a formal bid dossier (expected to be August 2021), various presentations to the BIE General Assembly and country visits by BIE delegations through 2022, and final preparation of a BIE bid presentation for June 2023 as part of the final selection process.

The winning country is announced in 2023, starting the process of registering participating countries and building out the selected sites over the period up to 2030.

Our planned World Expo period would be April 27 to October 29, 2030, with the current working theme of "Love" (of land, people, enterprise, culture, and more.)

CORE BUSINESS CASE

We will be completely frank: on its financial merits alone, the business case for a World Expo is fraught with many unknowns. The following represents the best information we have been able to gather during our pre-feasibility study and requires additional exploration and validation as part of a more extensive feasibility study.

Public and private investments in facilities and infrastructure beyond the Expo is a known requirement. While the actual World Expo period from April to October 2030 stands to break even or make a small surplus based on core operational revenues and operating costs, we are transparent that several components of associated

infrastructure require public and/or private investment to enable the Expo itself to operate.

In our planning, we have selected prospective sites where there is existing public or private interest in remediating and upgrading currently under-developed lands for future mixed-use communities, or which represent existing municipal aspirations for new infrastructure. In other cases, our assumptions include existing infrastructure projects that are underway or set to start within the projected World Expo rampup period out to late 2029.

At the same time, we emphasize that the business case to hold a World Expo is not simply or even primarily financial. Instead, it is a deliberate investment in the development of new business opportunities, stimulating our societal creativity, and connecting the people of Alberta and Canada.

VISITOR AND OTHER REVENUE PROJECTIONS

We currently project \$2.47 billion in direct revenue sources.

Our visitor projections are that we could see up to **37.6 million visits** to the World Expo during its 180 days of operation spread across the three sites and our digital (online only) engagement options.

More specific calculations and assumptions are outlined in Tab D.

These projections are based on a hybrid World Expo approach that combines traditional inperson visits with a new form of digital-only engagement using advanced virtual/augmented reality and robotics technology to provide an immersive real-time visitor experience. While this may seem futuristic today, the basic enabling technology is evolving so rapidly that we believe such experiences will be a core expectation for international visitors a decade from now. These

technologies also would be developed by Canadian companies already leading in this field.

These revenue streams project approximately 24.6 million in-person visits and at least 13 million visitors through virtual experiences.

Apart from being representative of the technology showcase embedded within the Expo, the virtual experiences dimension is also a component of achieving a carbon net-zero event.

Within our revenue model, direct visits of all types would generate \$1.95 billion of our projected total. The revenue model also contains the additional assumption of between \$450 and \$500 million in sponsorships and other commercial revenues (memorabilia, licencing, and miscellaneous.)

CORE OPERATING EXPENSES

We project \$2.42 billion in operating expenses, with a net surplus of \$50 million at current figures.

Additional details are contained under <u>Tab C</u>.

The most significant variable that could impact these costs is the security dimension, which we have estimated at \$868 million to account for the multi-site nature of the Expo. This number itself represents a cost-sharing arrangement with local police and emergency services and is an area where our ability to accurately project costs requires much more dialogue with municipal and government security experts.

A significant challenge for any World Expo is covering the administrative and secretariat expenses during a long ramp-up period based on revenues received only during the 180-day operating cycle of the actual World Expo. While we project a break-even on this front, there is a need to find operational funding for the secretariat/administrative group in the years preceding the actual Expo, and in the wind-down period afterward.



CAPITAL COSTS

The overall probable capital cost to develop the sites is CDN \$2.965 billion (in 2020 dollars.)

Of this total, and for the purposes of this study, it is assumed that approximately fifty countries (50) will self-build their pavilions, meaning that they will finance, design, construct (using local construction companies in one way or another), commission, operate, decommission and remove their pavilions utilizing their own money.

Full calculations are outlined in <u>Tab B</u>.

The value of this self-build contribution component is CDN \$1.455 billion (in 2020 dollars), resulting in Canadian-based governments and private parties needing to contribute an estimated \$1.51 billion to the effort.

JOB CREATION AND ECONOMIC OFFSETS

Our pre-feasibility analysis projects that more than 50,000 jobs would be created by the World Expo activity in the decade-long period starting in 2023 if our bid is successful. Job creation would start with the site build-up and construction phase from late-2023 to late-2029, which includes issuing RFPs to develop next

generation assets for virtual experience robots and augmented reality. This would increase during the period of the pavilion fit-out and core World Expo operating phase from late 2029 through to the end of the World Expo in late October 2030. Although falling off during the post-Expo wind-down phase, this is mitigated by the stimulus effect of the Expo itself on surrounding sectors such as tourism, and new industry opportunities.

The calculation of specific economic effects requires a deeper level of discussion and analysis together with government during our full feasibility study.

At the same time, other Expo bids that we have assessed for Canada and internationally demonstrate the following scale of economic return can be expected immediately surrounding the Expo: over \$4 billion in boosts to GDP and direct tax revenues of over \$1.2 billion to government.

Not including even longer-term economic returns and induced economic impacts, this indicates a 3.5x return on initial capital investments by various layers of government.

Additional impacts are outlined in <u>Tab E.</u>

2030 ALBERTA, CANADA WORLD EXPO

KEY DECISIONS

- 1. We ask the Government of Canada to set aside an approximate amount of \$250,000 in the 2021 budget cycle to support an initial letter of intent to pursue a 2030 World Expo bid. This amount includes the necessary bid deposit of €150,000 (approximately CAD\$232,000 at current rates) that accompanies submission of our letter of intent to bid, plus estimated membership fees to rejoin the BIE (approximately CAD\$35,000.)
- 2. Further, we ask that the Government of Canada confirm its commitment to collaborate with us in the development of a detailed feasibility study and proposal package for the World Expo 2030 bid. This would be done jointly with representatives from the Government of Alberta and the involved municipalities of Edmonton, Red Deer and Calgary. Together with funding from private contributors, this would involve participating in the shared funding of the study, which is anticipated to cost up to \$250,000 plus a public engagement study budgeted at \$95,000.

These initial decisions position the Government of Canada to explore options once the World Expo bid period opens in January 2021, and do not immediately commit the government to a bid.

NEXT STEPS

Our bid committee will undertake a final feasibility study and bid package preparation process in the period up to April 2021, permitting the Government of Canada to withhold final decision until the competitiveness of a Canadian bid can be more accurately assessed.

Throughout that period, we commit to honest conversations with all layers of government about the considerations surrounding the bid process, and our fundamental bid concept.

OUR THANKS

It is with great pleasure that we submit this briefing, and our bid committee and citizen champions thank you in advance for your consideration. Together, we represent the ambitions of many other Albertans and Canadians to seek new and innovative solutions to many of the challenges and opportunities we have outlined.

The names of our main committee members and citizen champions follow on a separate page, along with the voices of those who have had early input on our concept.

SUPPORTING INFORMATION

- Tab A 2030 World Expo Bid Timeline and Process Overview
- <u>Tab B</u> Initial Capital Costs Analysis
- <u>Tab C</u> Preliminary Operational Costs Analysis and Considerations
- Tab D Visitor and Revenue Projections
- Tab E Estimated Legacy and Economic Benefits

COMMITTEE MEMBERS + CITIZEN CHAMPIONS

Rob Allen Rosy Amlani Lisa Baroldi Senator Doug Black Ken Brizel

Malcolm Bruce Stephen Carter

Bill Chomik James Chorley

Camilla Coates

Satya Das Jim Dewald Sonia Dhillon Mark Dzenick Yangyang Fang

Sapideh Fatemi Morris Flewwelling Naren Garg Sagar Grewal Farahnaaz Habib Ian Holloway Elizabeth Hurley Thato Isaac

Gordon Linden
Alastair Luft

Lesley MacDonald Ian McLennan

Darryl Mills Mary Moran

Chief William Morin Farhad Mortezaee

Darcy Mykytyshyn Shahzia Noorally

Chuk Odenigbo

Jonathan Perkins

Bill Peters

Jung-Suk Ryu

Rikia Saddy

Rahim Sajan

Mike Shaikh

Brian Singh

Curtis Stange

Adrian Stimson

Doug Stollery

Colleen Thiessen

Georgine Ulmer

Lori Van Rooijen

Billy Wadsworth

Camille Weleschuk



2030 ALBERTA, CANADA WORLD EXPO

VOICES FROM CITIZEN CHAMPIONS + CONTRIBUTORS

Some thoughts by Albertans on what the 2030 World Expo would do for them and those they care about.

66 The opportunity of Alberta to be a positive, inclusive and unifying force in Canada. This is where we take the ingenuity and pioneering spirit of the West to invest in something bigger than ourselves."

66 In a rapidly evolving world, positioning Alberta at the cutting edge of innovation, ingenuity and visionary thinking will be critical to embracing the future of work and enhancing quality of life for all."

IIIIIIIIIIIII FAUZIA LALANI

66 The World Expo will be an opportunity to promote the United Nations 2030 Sustainable Development Goals and to inspire our citizens and guests to long term sustainability and prosperous development."

IIIIIIIIIIIIII MARK DZENICK

66 Expo 2030 is an exciting project that can unite Albertans and bring global focus to our communities. All Albertans and Canadians would benefit from the relationships forged, investments deployed, and infrastructure created for this initiative. I look forward to seeing Alberta once again host the world and showcase all we have to offer."

HILLIHI SENATOR DOUG BLACK

66 Although today's world is in turmoil, Alberta has been particularly hard hit due to its faltering economy brought on by the recent collapse of

our energy industry coupled with the current pandemic. News that Canada will be hosting a World Exposition in Alberta in 2030 will most certainly have its critics, but I truly believe that a large majority of Albertans and Canadians will see this a much-needed sign of a positive future. This installation of hope will empower Albertans and Canadians to become more engaged with their communities. It will evince greater pride in their communities and their country. It will instill a level of confidence that is currently waning. There is nothing more uplifting than seeing light at the end of the tunnel."

HILLOHOMIK BILL CHOMIK

66 Five years ago, when I first moved to Calgary, none of my international friends had heard of the city before. The few who have were my colleagues in sports broadcasting, who will mention the '88 Olympics and the Rocky Mountains. I'd like this place to be known and remembered by more than just it's natural beauty and one historic sport event. World Expo 2030 is a once in lifetime catalytic event that can put Alberta on the map and change the course of the province's singular oil & gas narrative by showcasing to the world it's richness in culture, arts, diversity, healthcare innovation, agriculture, architecture, and more."

66 World Expo 2030 is an exciting opportunity for Alberta to show the world the best of our province and the wealth of talent in Canada. The

development of Word Expo 2030 will provide a diversification of opportunity for Albertans while enabling the province to improve on infrastructure projects that will benefit generations to come. Focusing on this incredible community project for the next decade will also help the youth of Alberta through job creation and civic engagement. The younger generation of Albertans will play an integral part in presenting Alberta and Canada on the world stage and allow them to learn more about themselves and the world. While current challenges abound, an ambitious project like World Expo 2030 will be an empowering endeavour for Albertans and will no doubt inspire all who take part and visit."

66 Expo ought to showcase the next frontiers of societal development, as the world gropes its way within the covid pandemic. With changing societal norms, and a forced transformation in how human societies work, the post-covid world will bear little resemblance to the world as it once was, in the first decades of the 21st century. As a repository of every stream of the human experience, and proven expertise in intercultural cohabitation, Albertans have much to showcase: from social-cultural norms to the frontiers of innovation. As a living experiment in inclusive and pluralist societal development, Alberta is an apt host to those who seek new paths forward in a world transformed. Thus an Expo theme might do well to reflect our transition from the Covid isolation to a more inclusive and collaborative future for humankind. As a thought leader who has written extensively on the betterment of the common good and the common-wealth, I would welcome Expo as a showcase, and thereafter an ongoing forum, for best practices in building pluralism that works for all."

IIIIIIIIIIIII SATYA BRATA DAS

66 Expo means a digital future for Alberta. As our province's technology ecosystem is moving from the start-up stage to the scaling, growth phase of its evolution — we are in a prime position to compete. We know that Calgary is home to approximately 225,000 professionals with STEM backgrounds making it Canada's top headquarters for such workers. We also know that innovative healthcare (e-health) and green energy solutions are two of Edmonton's top technology-driven focus areas. And, we are home to one of the largest Al research clusters in Canada and world-class institutes like the Alberta Machine Intelligence Institute. How might we build on what Alberta is known for today, and position ourselves as the jurisdiction with the most incredibly thoughtful, creative, hardworking and caring people on the planet? When I think of Alberta 2030 — I think of a place where you can live your best life, surrounded by an abundance of opportunities for everyone and immense pride in the accomplishments of my fellow Albertans."

66 As a creative, I'd like to see the EXPO proactively employ Canadian creatives. The EXPO organization should reach out and make sure it is planned, designed, decorated and built by Albertan and Canadian architects, designers, writers, filmmakers, engineers, technologists, artists, entertainers — the list goes on. This would add immensely to Canada's capacity and reputation to take on large complex projects in Canada and around the world. As a Canadian creative it would give me access to EXPO project work and build my capacity and reputation as well."

HIIIIIIIIIIII ALBERTAN

66 Expo will lead to improved societal resilience. There are a number of ways this could potentially happen, although as a minimum, developing and improving relationships both intra- and interprovincially would go a long way to breaking

down barriers and setting the foundation for improved collaboration across the country. This could potentially be a way to look at innovation in a social construct. At the same time, the infrastructure could potentially be developed with this dual-purpose theme in mind."

IIIIIIIIIIIIIII ALASTAIR LUFT

46 Je vois l'Exposition universelle 2030 comme une occasion de faire rayonner la francophonie albertaine. La population francophone en situation minoritaire de l'Alberta se classe au troisième rang après celles de l'Ontario et du Nouveau-Brunswick et le français est la langue parlée le plus couramment après l'anglais en Alberta. Voici une province riche dans son histoire francophone et riche dans la pluralité de cette francophonie. Nos francophones viennent de partout au monde et s'identifient fièrement comme Albertaine ou Albertain. L'Exposition universelle 2030 nous donnerait l'occasion de se montrer sur la scène albertaine, canadienne et mondiale. Quel honneur!"

IIIIIIIIIIIIIII CHÚK ODENIGBO

66 We are a province at the end of an era, in need of inspiration, rich with human resources. Expo could be the catalyst for a new vision, of a scientific and innovative powerhouse, where green technology and sustainable energy is created. This would have the potential to attract new minds, develop new educational programs, drive entrepreneurship, and reinvigorate a stale economy.

Most of all, Expo would provide the community much needed hope. What Alberta needs now more than ever is forward thinking, community connection, and unity with the singular goal of moving forward into a future we can see, but have only just begun to realize."

IIIIIIIIIIIIIII AMY COOPER

66 The development of the Expo sites will offer employment to thousands of people. It will involve hundreds of Canadian businesses and organizations, most of these Alberta-based, all of whom will benefit on many fronts from participating. Many industries including, among others, the design, construction, legal, marketing, transportation and hospitality industries will gain from this initiative. We desperately need jobs and commerce in Alberta today and into the future – Alberta Expo 2030 will be the catalyst to make that happen, significantly."

HIIIIIIIIIIII BILL CHOMIK

66 I was privileged as a Calgary student to visit Expo'70 in Japan – a world-class exposition that dazzled and inspired me. Strolling through the Osaka fairgrounds with high school classmates was like visiting a global village from the future. The pavilions were architecturally stunning. Inside each pavilion, participating nations shared stories of their cultures in larger than life colours and sounds. It was at Expo '70, for instance, that IMAX — a Canadian company — premiered its first film. Viewing a moon rock that had been brought back to Earth by Apollo astronauts left me in wide-eyed wonder. Corporate partners in other pavilions showcased technological advances such as early mobile phones, local area networking and Maglev trains.

This occasion to experience world cultures for the first time and to learn about cutting-edge innovations was illuminating for me, a young adolescent. Life opportunities suddenly became more international and broader than what I had previously thought possible. The Expo'70 festival presented a promising vision of the future and clarified my career ambitions. For me, it was a pivotal life moment.

IIIIIIIIIIII DR. ROBERT THIRSK



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September 30, 2020

Email: ibrahim.gedeon@telus.com

Prime Minister Office Attention: Mackenzie Hird

Regional Advisor, Prairies and North at Office of the Prime Minister

Subject: Letter of support for Alberta's bid for 2030 World Expo

Dear Mr. Hird:

Hope this letter finds you well despite our challenging times. As we continue to navigate what the future holds, I am sharing my support for Alberta's bid to host the 2030 World Expo. At TELUS we pride ourselves in building strong, connected communities, bridging the digital divide and putting our world-leading technology to work to give Canadians a global competitive advantage. By hosting the 2030 World Expo in Alberta this will help create meaningful change and opportunities for Albertan and Canadian businesses, big and s mall.

This audacious bid is grounded in the aspiration to create an even better Alberta, and an even better Canada, by uniting us from coast to coast in a common goal. A collaborative Decade of Canada celebrating our innovation, ingenuity and resilience has the opportunity to bring together our citizens to showcase our collective identity on the global stage. We are confident that the integrated economic, cultural, community-building, and innovation goals of the World Expo 2030 bid will allow our company and many others to showcase the capacity of Canadian business and access new markets in the decade ahead, and beyond.

As we continue with our commitment to invest considerably in Alberta over the next three years, we know that the Decade of Canada envisioned by hosting the World Expo will provide a multiplier effect to our own investments and those of other sectors. The digital infrastructure we are laying down now will support realizing the rich digital architecture, experiences, and connectivity being envisioned by the Alberta World Expo 2030 team.

We look forward to supporting this bid in the coming years and please don't hesitate to contact me should you wish to discuss further.

Warm regards,

Dr. Ibrahim J. Gedeon Chief Technology Officer TELUS

Letter of support from Telus

Appendix

SUPPORTING INFORMATION

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- Tab B Initial Capital Costs Analysis
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- Tab D Visitor and Revenue Projections
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TAB A: 2030 WORLD EXPO BID TIMELINE AND PROCESS OVERVIEW

KEY PHASES AND CONSIDERATIONS

January to June 2021: Initial Bid Period

The World Expo bid process begins with the submission of a bid application by a member country when the 2030 bid window opens in January 2021, after which others have six months to submit applications. All bids are managed through the intergovernmental Bureau International des Expositions (BIE) organization based in Paris.

For the 2030 World Expo, the government of South Korea is expected to be an early and strong competitor with a World Expo bid for the city of Busan. According to press reports, they are projecting a budget of 4.9 trillion South Korean Won (CAD\$5.6 billion) with up to 43 trillion South Korean Won (CAD\$49.2 billion) in economic benefits and the creation of roughly 500,000 jobs during the Expo process.

Typically, six to seven countries submit substantive bids for the full registered World Expos that occur every five years, for which we are bidding. Other types of Expos include Specialized Expos (such as that held in Vancouver), Horticultural Expos, and the Triennale di Milano.

As part of this period, the bid committee and the Government of Canada will need to determine an appropriate legal structure. For the Montreal World Expo in 1967 and the Specialized Expo held in Vancouver in 1986, this took the form of a dedicated bid corporation.

June 2021 to June 2023: Bid Presentations and Awarding of the Expo

The submission of a bid application triggers an extensive series of interactions with the BIE, including the submission of detailed bid packages for review. There also are a number of interactions with BIE member countries, including country site visits to prospective hosts by review panels.

The BIE and our own Expo consultants have indicated that non-member countries (as Canada currently is) are at a disadvantage in the bid process. Accordingly, part of the bid process would be for Canada to re-engage with the BIE at the intergovernmental level, through whatever channels it determines would have the best effect.







June 2023 to October 2029: Registration, Site Preparation and Build-Out

If successful, the host country embarks on an intensive process of engaging BIE member countries and other international exhibitors to register as participants at the World Expo. This involves considerable effort both in terms of marketing and promotion by the host country's bid corporation, and efforts by the Government of Alberta at the intergovernmental level.

Our World Expo bid approach of a three-city site creates some risks in this process, as member countries would need to be allocated to one of the two main city sites (Edmonton or Calgary) in some manner.

We also have specifically contemplated a hybrid form of all-digital pavilion for BIE members to accomplish a net-zero Expo. This would be a first-ever innovation, despite some digital components having been included in Expo events since the Shanghai World Expo in 2010. This concept is based on the understanding that the World Expo structure also needs to evolve in pace with surrounding society toward 2030.

The Canada World Expo of 2030 should model responsible net-zero carbon planning, and allow

the digital platforms we create to both showcase our innovation potential in this space while being inclusive of international visitors who wish to participate without physical travel.

October 2029 to April 2030: Site Fit Out

This period allows national pavilions to be ready for fit-out and occupation in advance of the event.

April 27 to October 29, 2030: Core World Expo Period

This is the period during which the World Expo would operate, spanning core tourism-intensive periods through the Spring, Summer, and Fall of 2030.

November 2030 to December 2031: Wind-Down and Site Transfer

Following the World Expo period, we anticipate at least a one-year wind-down period to transfer existing site assets to other locations where applicable, and to transfer the site to post-Expo stakeholders for future development. This would include the multi-use plans for the physical sites in Edmonton and Calgary, and confirming the ongoing operational status of the permanent Indigenous Leadership and conference site in Red Deer.

TAB B: INITIAL CAPITAL COSTS ESTIMATE

A SHARED COSTS MODEL

The development of the three sites in the cities of Edmonton, Calgary, and Red Deer involve shared financial inputs from the Government of Canada, Government of Alberta, City of Edmonton, City of Calgary, City of Red Deer, other municipalities in the proposed Alberta Economic Zone along the Edmonton-Calgary corridor, visiting countries, visiting corporations from countries outside Canada, Canadian corporations, and Canada-wide organizations including the design, construction, supply, legal, development, finance, travel and hospitality industries.

SUMMARY

The overall probable capital cost to develop the sites is CDN \$2.965 billion (in 2020 dollars.)

Of this total, and for the purposes of this study, it is assumed that approximately fifty countries (50) will self-build their pavilions, meaning that they will finance, design, construct (using local construction companies in one way or another), commission, operate, decommission and remove their pavilions utilizing their own money.

The value of this self-build contribution component is CDN \$1.455 billion (in 2020 dollars), resulting in Canadian-based governments and private parties needing to contribute an estimated \$1.51 billion to the effort.

TIMELINE

The timeline for development of the lands requires that master plans for the sites be completed by January 2024. Serviceable land for all three sites will have to be assembled in coordination with the master site plans.

Deep and shallow utilities, primary roadways, and two temporary site administration buildings —one in Edmonton and one in Calgary (to be later converted into a Service and Operations Building for each site) — will have to be completed by January 2026.

Construction of the pavilions and other structures, including site improvements and most hard and soft site landscaping, will have to be completed by October 2029 to allow a six-month exhibit fit-out and commissioning period. Opening is scheduled for late April 2030.

CORE ASSUMPTIONS

The probable capital costs that will be incurred by various parties to fully develop commissioned sites in the three cities are based on the following conditions and assumptions:

- In keeping with sound environmental practices, pavilions and support facilities will be built to a smaller footprint than typically provided at prior World Expositions.
- 2. The cities of Edmonton, Calgary and Red Deer will secure and donate serviceable, applicably zoned and developable lands sufficient to sustain the needs of the exposition.
- 3. Rapid transit infrastructure connecting the three cities is excluded from this estimate.
- 4. The cities of Edmonton, Calgary and Red Deer will, if necessary, augment existing local transportation networks servicing the sites to support the access needs of visitors and non visitors, including service and emergency vehicles. This is excluded in this cost estimate.
- 5. Fifty (50) countries will self-build their pavilions. These may also include nation-specific food options outside the central food facilities mentioned elsewhere.

- 6. Thirty (30) countries will rent pavilions from the organizer which are built and paid for by the organizer (the "organizer" is the host country funded by the governments of Canada and Alberta, and potentially the municipalities, as well as private parties that may come forth.)
- 7. The Canadian Pavilion will be in one city—either Edmonton, or Calgary.
- **8.** The Theme Pavilion will be in one city—the alternate to 7, above.
- **9.** There will be one Multi-Purpose Hall/Performing Arts Centre in each of Edmonton and Calgary.
- 10. There will be one Multilateral Pavilion providing space for non-government and not-for-profit organizations in each of Edmonton and Calgary.
- 11. There will be ten (10) Corporate Hospitality/
 Media Pavilions split between Edmonton and
 Calgary. These will be built by the organizer,
 themed by each corporation at the occupying
 corporation's expense, and rented to the
 corporations by the organizer before, during and
 after the World Expo.
- 12. The proposed Indigenous Leadership Pavilion/ Conference & Convention Centre will be built in Red Deer and will include retail, restaurant, and other commercial uses. This will remain as a permanent facility for the community and the province post-Expo.
- 13. Eight (8) separate restaurants will be split between Edmonton and Calgary (not including nation-specific food outlets within self-built pavilions.)
- 14. Food Fairs will be developed utilizing food trucks and pop-up facilities paid for entirely by the private sector who shall rent the land space from the organizer.
- 15. There will be one (1) Retail Store in each of Edmonton and Calgary. This approach assumes that visitors to the two cities will purchase most tourism-related memorabilia (including licenced Expo-branded items) outside the Expo sites

- through a larger overall retail and hospitality strategy focused on supporting local businesses in each of the cities.
- 16. There will be eight (8) Service and Operations Centres split proportionately between Edmonton and Calgary. These will contain: (a) information centres, first aid facilities, multi-faith prayer rooms, family nursing rooms and visitor restrooms; and (b) administration offices, sales offices, security offices, call centres and storage facilities.
- 17. The site development strategy is to prepare master plans for both the Edmonton and Calgary sites that will accommodate vibrant, well-planned mixed-use communities in the post-Expo period. The Expo master plans will be configured to accommodate future effective and efficient use of the lands for other purposes. These may ultimately be developed by the municipalities themselves, through public-private partnerships, or through private development.
- 18. The site decommissioning and building relocation phase will involve the shut-down of most buildings and a careful dismantling for re-construction on another site or material reuse. Some buildings, such as the Multi-Purpose Hall/Performing Arts Centres, Internal Pavilions, Service and Operations Centres and possibly others will stay on permanently as repurposed buildings to support the mixed-use communities that will be developed post-Expo.

PLOT REQUIREMENTS

Plot requirements for the pavilions and all other supporting facilities are calculated as follows:

- **19.** Five (5) countries will require 4000 m² plots each for a total of 20,000 m².
- **20.** Ten (10) countries will require 3000 m² plots each for a total of 30,000 m².
- 21. Fifteen (15) countries will require 2000 m² plots each for a total of 30,000 m².
- **22.** Twenty (20) countries will require 1000 m² plots for a total of 20,000 m². The pavilions built by the organizer to support thirty (30) countries who will rent these for a period before, during and after the Expo, will require a total plot area of 60,000 m².
- **23.** The Canadian Pavilion will require a plot area of 7000 m².
- **24.** The Theme Pavilion will require a plot area of 7000 m².
- **25.** The Multi-Purpose Hall/Performing Arts Centres (2) will require plots of 10,000 m² each for a total plot area of 20,000 m².
- **26.** The Multilateral Pavilions (2) will require plots of 3000 m² each for a total plot area of 6000 m².
- **27.** The Corporate Hospitality/Media Pavilions (10) will require plots of 3000 m² each for a total plot area of 30,000 m².
- 28. The Indigenous Leadership Pavilion/Conference

- and Convention Centre in Red Deer will require a plot area of 33,000 m² (total site includes building(s), parking, vehicular access, and landscaping.)
- **29.** The Restaurants (8) will require plots of 2250 m² each for a total plot area of 18,000 m².
- **30.** Food Fairs (2) will require plots of 5000 m² each (possibly disaggregated throughout the sites) for a total plot area of 10,000 m².
- 31. The Retail Stores (2) will require plots of 1000 m² each for a total plot area of 2000 m².
- **32.** The Service and Operations Centres (8) will require plot areas of 2000 m² each for a total plot area of 16,000 m².

The total plot requirement for buildings which will be split between Edmonton and Calgary is 276,000 m².

A good rule of thumb for Expo sites is that the total site complement is one third (1/3) buildings, and two thirds (2/3) open space. This computes to 828,000 m^2 or 204 acres (82.8 hectares.)

This site area would be split as equally as possible between Edmonton and Calgary, depending on site availability. In addition, Red Deer will require a site of 33,000 m² or 8.16 acres (3.3 hectares) for the Indigenous Leadership Pavilion/Conference and Convention Centre.

COST ESTIMATES

The capital costs for buildings and site improvements estimated below have been extrapolated from past and currently planned World Expositions, and are based upon empirical costing information available through various industry sources.

Estimates are adjusted to recognize the climatic conditions prevalent in Alberta. It also anticipates a highly competitive design, construction, and development market in Western Canada over the next ten years:

Line	Item	Qty.	Size	Cost per Sq.M.	Total Cost (Rounded)
1	Guest-built Pavilions	50	194,000 m ²	\$7500/m ² (Note A)	\$1,455,000,000 (Note B)
2	Organizer-built Pavilions	30	60,000 m ²	\$3500/m ² (Note C)	\$210,000,000 (Note D)
3	Canada Pavilion	1	15,000 m ²	\$7500/m² (Note A)	\$113,000,000 (Note D)
4	Theme Pavilion	1	15,000 m ²	\$7500/m² (Note A)	\$113,000,000 (Note D)
5	MP Hall/PA Centres	2	14,000 m ²	\$4200/m²	\$59,000,000 (Note D)
6	Multilateral Pavilions	2	13,600 m ²	\$4000/m ² (Note C)	\$54,000,000 (Note D)
7	Corporate H/M Pavilions	10	63,000 m ²	\$4000/m² (Note C)	\$252,000,000 (Note D)
8	Indigenous Leadership Pavilion and Conference Centre	1	10,000 m ²	\$4000/m²	\$40,000,000 (Note E)
9	Restaurants	8	12,000 m ²	\$2800/m ² (Note F)	\$34,000,000 (Note D)
10	Food Fairs	2		N/A except poss	ible overhead canopy (Note G)
11	Retail Stores	2	1,400 m ²	\$2150/m ²	\$3,000,000 (Note D)
12	Service/Operations Centres	8	12,000 m ²	\$2800/m²	\$34,000,000 (Note D)
Α	Organizer Building Cost (Note]) Subtotal of Lines 2-12		216,000 m ²		\$912,000,000 (Note D)
В	Total Building Cost (Note H) Subtotal of Lines 1 – 12		410,000 m ²		\$2,367,000,000 (Note I)
13	Site Development (Note K) 12% of Line B				\$284,000,000 (Note D)
С	Total Organizer Building + Site Develo	opment Cos	st		\$1,196,000,000 (Note D)
14	Decommissioning/Removal				\$12,000,000 (Note D)
15	Soft Costs and Contingencies (Note M) 25% of Line C + Line 14				\$302,000,000 (Note D)
D	All Organizer Costs Line C + Lines 14 + 15				\$1,510,000,000 (Note D)
	Total Construction Cost Paid By C)rganizer a	nd Guests		\$2,965,000,000 (Note N)

Note N

NOTES

Note A Includes the cost of exhibits/total interior fit-out; self-build pavilions; visiting countries.

Note B Paid for by the visiting country; self-build pavilions — not an organizer cost.

Note C Excludes the cost of exhibits/total interior fit-out; visiting country pays for this (allowance TBD.)

Note D Organizer cost.

Note E Fully out-fitted conference facility in Red Deer

Note F Excludes furniture, equipment and branding; private operators to pay for this (allowance TBD.)

Note G Paved surface consistent with site servicing included in Site Development Costs below

Note H Total gross square footage to be built by organizer + visiting countries.

Note I Organizer cost: \$912,000,000 + visiting country cost \$1,455,000,000 + interior fit-out allowances (TBD.)

Note J Total gross square footage to be developed by organizer.

Note K Includes (on remediated, generally flat, serviceable and appropriately zoned land) all deep and shallow utilities, roadways, service areas, plazas, walkways, lighting, pedestrian amenities, emergency stations, gateways, visitor drop-offs, bicycle storage, fencing, soft landscaping, and signage/wayfinding.

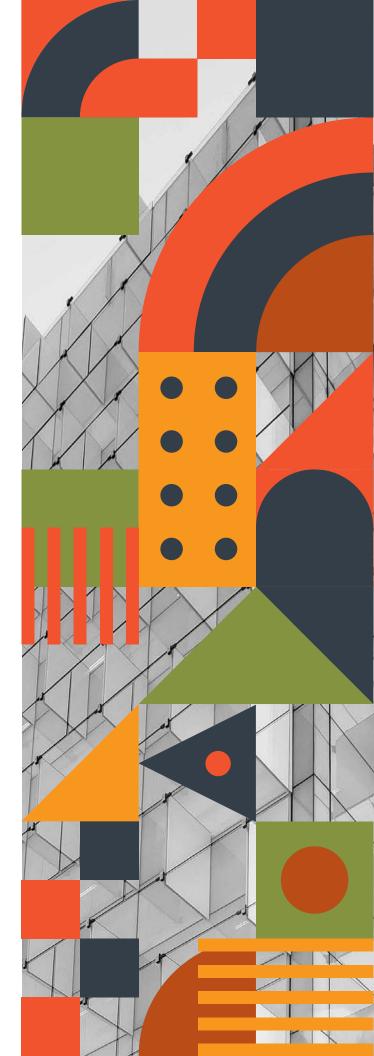
Note L Self-build countries will be responsible for the costs of decommissioning and removing their buildings from site.

Note M Includes design fees (all disciplines including architecture, engineering, exhibit design, specialist consultants) construction contingencies (5%), permits, testing, etc.; self-builds cover their own; excludes escalation allowance estimate at 1.5% per annum; self-build countries will incur their own respective soft costs.

This is the overall estimated capital cost to be paid by both the organizer and the self-build countries, but excludes land costs, external to site costs, fit-out allowances for 42 pavilions, fit-out allowances for the restaurants, operations costs, marketing costs, security costs and other similar costs not explicitly outlined above.

Author: Bill Chomik, Architect AAA, FAIA Senior Principal, Kasian Architecture, Interior Design & Planning Ltd and Canada World Expo 2030 Organizing Committee Member

Date: October 6, 2020



2030 ALBERTA, CANADA WORLD EXPO

TAB C: PRELIMINARY OPERATIONAL COSTS ANALYSIS AND CONSIDERATIONS

PROJECTED OPERATING EXPENSES	CAD\$ 2020
Staffing Costs	168,000,000
Venue and Grounds Maintenance	228,000,000
Programming	330,000,000
Marketing and Communications	240,000,000
Office and Admin	270,000,000
Security	868,000,000
Other	150,000,000
Contingency	168,000,000
TOTAL	2,422,000,000

BID CORPORATION/SECRETARIAT

The basic legal structure for the bid corporation and core World Expo Secretariat would need to be established as part of the World Expo application process, by April 2021.

Through the entire bid period, we anticipate core office and administrative expenses to be approximately \$270M, which encompasses both pre- and post-bid elements for the bid corporation/secretariat.

EVENT STAFFING

Event staffing primarily focuses on the active World Expo period from April to October 2030, inclusive of pre-event training in the final build-out period. Some level of event staffing also is required in the pre-Expo period as part of operating the planned Preview Centre facility.

VENUE AND GROUNDS MAINTENANCE

As implied, this includes the operational maintenance of the main venues, including the pre-Expo Preview Centre facility.

MARKETING AND COMMUNICATIONS

This includes provisions both for the active bidding phase to secure the World Expo opportunity, and the extensive marketing efforts to BIE member countries and individual visitors.

SECURITY

Given the evolving security requirements out to 2030, we find that this is one of the most volatile cost components to project. Our model of compact sites in the three cities both allows some potential efficiency for security operations, but also adds complexity in terms of coordination.

We have built current projections on past bid estimates, but significantly expanded in this case to incorporate more recent estimates generated during the Calgary 2026 Olympic bid.

2030 ALBERTA, CANADA WORLD EXPO

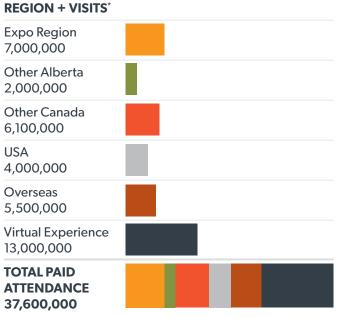
TAB D: VISITOR AND REVENUE PROJECTIONS

PROJECTED METRO POPULATION

CALGARY	CALGARY EDMONTON		TOTAL
1,547,000 2020 Population	1,461,000 2020 Population	128,420 2020 Population	3,136,420 2020 Population
1,929,710 2030 Population (COVID-Revised)	1,764,230 2030 Population (COVID-Revised)	254,570 2030 Population (COVID-Revised)	3,948,510 2030 Population (COVID-Revised)
2,040,770 2030 Population (Growth Scenario)	1,856,320 2030 Population (Growth Scenario)	266,190 2030 Population (Growth Scenario)	4,163,280 2030 Population (Growth Scenario)
49%	45%	6%	100%

Source: ALBERTA TREASURY BOARD STATISTICS

PROJECTED SITE VISITS



*not unique visitors

PHYSICAL VISITS

Our current projections include the potential for multiple site visits by people living within the Expo region, as well as visitors from other parts of Canada and internationally (United States and others.) These numbers do not represent unique visitors, but the total number of visits from the target areas over the full Expo.

Physical visits under these scenarios would total 24,600,000, which we believe is reasonable given the populations available within the local, Canadian, US and global visitor markets, and based on historical tourism trends for Alberta.

VIRTUAL VISITS

A vital component of our World Expo concept is virtual experience visits. These deep and immersive digital experiences are much more than those contemplated for past World Expo concepts, and make the World Expo of 2030 accessible to parts of the global audience who have never before been able to attend in tangible ways.

Our approach embraces the best of current and future augmented, virtual, and extended-reality experiences. Combined with the concept of remotely-controlled robotic insects, virtual visitors are able to see and interact with exhibition pavilions that combine the real architecture with virtual components.

We have been *very* conservative in this area in our projections, estimating a total of 13,000,000 visits as part of the paid revenue stream, with potential

for significant growth. These experiences would command a slightly higher per-visit fee of \$65 compared to an in-person fee of \$45, as they do not involve the added costs of physical travel.

SPONSORSHIPS

The sponsorship component of our projected revenue stream is based upon past historical data, as well as opportunities we have to place sponsors prominently within our virtual experiences space. This includes major industry players in these technology fields, like Apple, with their capacity to support the wide-spread deployment of virtual experiences to our visitors.

OTHER

Additional revenue opportunities include the sale and licencing of merchandise, and associated World Expo branded products, and conference revenue.



PROJECTED OPERATING REVENUE

SOURCE	CAD\$ 2020
Ticket sales from in-person visits@ \$45/ticket	1,107,000,000
 Ticket sales from virtual attendance @ \$65/visit x 13m 	845,000,000
Sponsorship	225,000,000
 Other Revenue (Merchandise, Licencing, etc.) 	300,000,000
TOTAL	2,477,000,000



An artist's rendering shows the proposed Transpod Hyperloop transport system. HO/THE CANADIAN PRESS

TAB E: ESTIMATED LEGACY AND ECONOMIC BENEFITS

DIRECT AND INDUCED ECONOMIC OFFSETS

We will be seeking to comprehensively quantify additional direct and induced economic offsets from the World Expo process as part of our full feasibility study. Our pre-feasibility analysis has highlighted for us that this is best done with specialist input from various layers of government, as there are multiple ways to calculate and value these components.

We are very clear in our intent: the detailed analysis of the offsets and broader contributions needs to make sense to both government and individual citizens. Our analysis of other bid documents makes us comfortable to project a combined return of roughly \$5.2 billion in GDP and tax revenue based on a standard formula.

Much of this potential rests upon how site assets are converted post-Expo, such as by conversion to vibrant mixed-use communities and innovation clusters that can themselves generate sustained economic contributions over an extended period.

Speculatively, we are aware that a current strong competitor for the 2030 bid slot, the South Korean government for the city Busan, is projecting as much as CAD\$490 billion in economic returns for their proposed event and 500,000 jobs over the decade. In comparison, Dubai has projected a roughly CAD\$43.8 billion contribution of gross value added as an outcome of its current World Expo process, including 905,200 full-time equivalent (FTE) job years and almost CAD\$14.3 billion invested in infrastructure and other assets.

New Infrastructure

- + High speed people and commercial logistics transportation links. Central to the notion of a three-city Expo would be a sophisticated surface high speed transportation linkage connecting the three host cities of Edmonton, Calgary, and Red Deer. Although such an undertaking would constitute a substantial public investment independent of the World Expo, this type of initiative would bind the three communities into the equivalent of what we term a unified Alberta Economic Zone with a combined population of 4.16 million people by 2030. It will also provide a tourism development catalyst, and assuming it is planned accordingly, will remove significant quantities of greenhouse gases from the atmosphere in terms of more efficient travel for people and commercial goods between the cities compared to existing highway infrastructure.
- + A net-zero design. Theme and other pavilions (including pre and post-Expo presentations) must all be planned with a measurable "net-zero" environmental impact. Solar panels, wind, geothermal and other advanced technologies must be utilized as well as providing an educational and inspirational promotion opportunity. Vertical pavilions (generally speaking a problem in normal Exposition circles) could be ingeniously designed to take advantage of the latest in marketing intelligence in order to maximize the use of land and minimizing negative environmental impacts.

NEW INDUSTRIES AND EMPLOYMENT

A significant potential legacy of the World Expo process is its role in fostering new industry and employment opportunities both for Alberta and other regions of the country. Currently, Alberta is one of the leading centres in Canada for STEM-related professionals. This provides the province with an exceptional talent base for potential transformation into other related sectors, such as those identified in the main report:

- Carbon fibre materials and carbon nanotube manufacturing and innovation. This rapidlyevolving sector (including non-combustion asphaltenes that use bitumen in different ways) is being valued at \$84 billion annually, and has potential to expand significantly.
- + Low or Net Zero GHG extraction and processing of raw materials for lithium ion batteries. This uses existing natural resources to support North American supply chains for advanced battery technologies, supporting the electrification of many energy inputs across industrial processes and consumer goods. Current sector valued at USD\$10.5 billion annually, with projected growth of 600% in the next decade to reach USD\$63 billion.
- + Advanced robotics manufacturing and associated machine learning and artificial intelligence (AI) systems for the energy sector, manufacturing, and consumer applications within an industry expected to be valued at more than USD\$150 billion globally by 2025.

Many of these sectors provide valid pathways for both existing and new members of the Alberta and Canadian workforce over the coming decade and beyond. All levels of government are actively exploring this potential, and our goal is to align with and support the transition strategies being developed. The World Expo process serves to reinforce the prominence of these opportunities, and to explore additional pathways associated with re-skilling and employment sector transformation.

POST-EXPO LEGACY POSSIBILITIES

A national Indigenous peoples museum.

The Red Deer community has expressed the need for a major new conference, trade, and exhibition centre. There is no major museum in Canada devoted exclusively to the compelling stories of the Indigenous peoples, including the Métis and Inuit. Such an institution could be conceived and constructed as the core of the proposed Indigenous Leadership Pavilion

in Red Deer, with the vast bulk of the concept, story-telling, conceptual development, design, architecture, administration and public persona developed by the Indigenous peoples. It would serve as a core site and pavilion for the World Expo period and form an enduring post-Expo legacy for Red Deer.

- innovation clusters. Edmonton and Calgary both have an opportunity to develop several major parcels of land like Northlands or the Blatchford lands Edmonton and the West Village in Calgary. Specifically, these sites would open up the opportunity for substantial environmental remediation as well as providing much-needed low-cost and mixed-use housing as part of a post-Expo multi-use site configuration central to both major cities.
- + A Canadian museum of the True North. There is no major museum in Canada devoted to "the True North." Yet, Canada professes to have a strong orientation to its Arctic territories. An Edmonton facility focused on "Canada from Sea to Sea to Sea" would be an ideal legacy, as well as providing hundreds of thousands of Expo visitors an opportunity to truly appreciate Canada's magnificent North country. Funding for such an Expo pavilion would be part of an on-going national sovereignty initiative and would coincide with the potential location of the Canada pavilion in Edmonton to recognize the provincial capital.
- Stampede organization could be an integral part of the planning for the 2030 World Expo and subsequent facilities and events, given the planned overlap in timing between the two. In coordinating efforts, we might see the potential for an enhanced Stampede incorporating additional international economic and trade presence being held in each of the three years leading up to 2030, and in the ensuing years it could operate at the new, expanded level to continue sustaining economic and trade connections that have been established.

Expanded profile for the Alberta film industry.

Alberta has had a successful history serving the international film industry. In the years leading up to 2030, an aggressive capacity-building exercise in terms of professional development for film and TV producers, technicians, writers and creative directors would be held, including encouraging transition of existing trades and new students to the film industry. In 2030, timed with the Exposition opening, a substantial new and stateof-the-art production facility would be opened in order to serve the regional need for such a facility, and to add to Canada's on-going national need to provide opportunities to develop a cultural voice in the North American and global context. The new film, social media and TV production facility is suggested for Calgary.

- National design competitions. Edmonton, Red Deer, and Calgary can all be expected to commission national competitions to design a unique iconic symbol for each city, each to be introduced in advance of the 2030 Exposition. Cities like Chicago, Brussels and Paris have been eminently successful in doing so in conjunction with various Expos.
- **Architectural attractions.** A substantial Preview Centre built three years in advance of the main event would provide an excellent post-Expo facility for film, performing arts, sports and recreation, elevated amusement, arts and craft as well as being an unparalleled opportunity for creative design — involving either an established Canadian architect or, equally compelling, young up-and-coming architects ready to make their mark. Ideally, it could be a combination of established and young architects. In the post-Expo period, these facilities could be substantive centres for cultural creativity, expression and promotion. Art Centrum in Prague and Society for Art & Technology (SAT) in Montreal provide interesting models. These would also be centres of on-going "Virtual Expos" — in recognition of the new role of an interconnected world in terms of art and culture.

SPIN-OFF BENEFITS TO OTHER **JURISDICTIONS**

Expo sites in Edmonton, Calgary and Red Deer provides ample stimulus for including far and nearby municipalities and obvious tourist destinations like Jasper and Banff within the active Expo structure as well as in the post-Expo legacy period.

study, with the municipalities directly involved in envisioning options for connections.



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