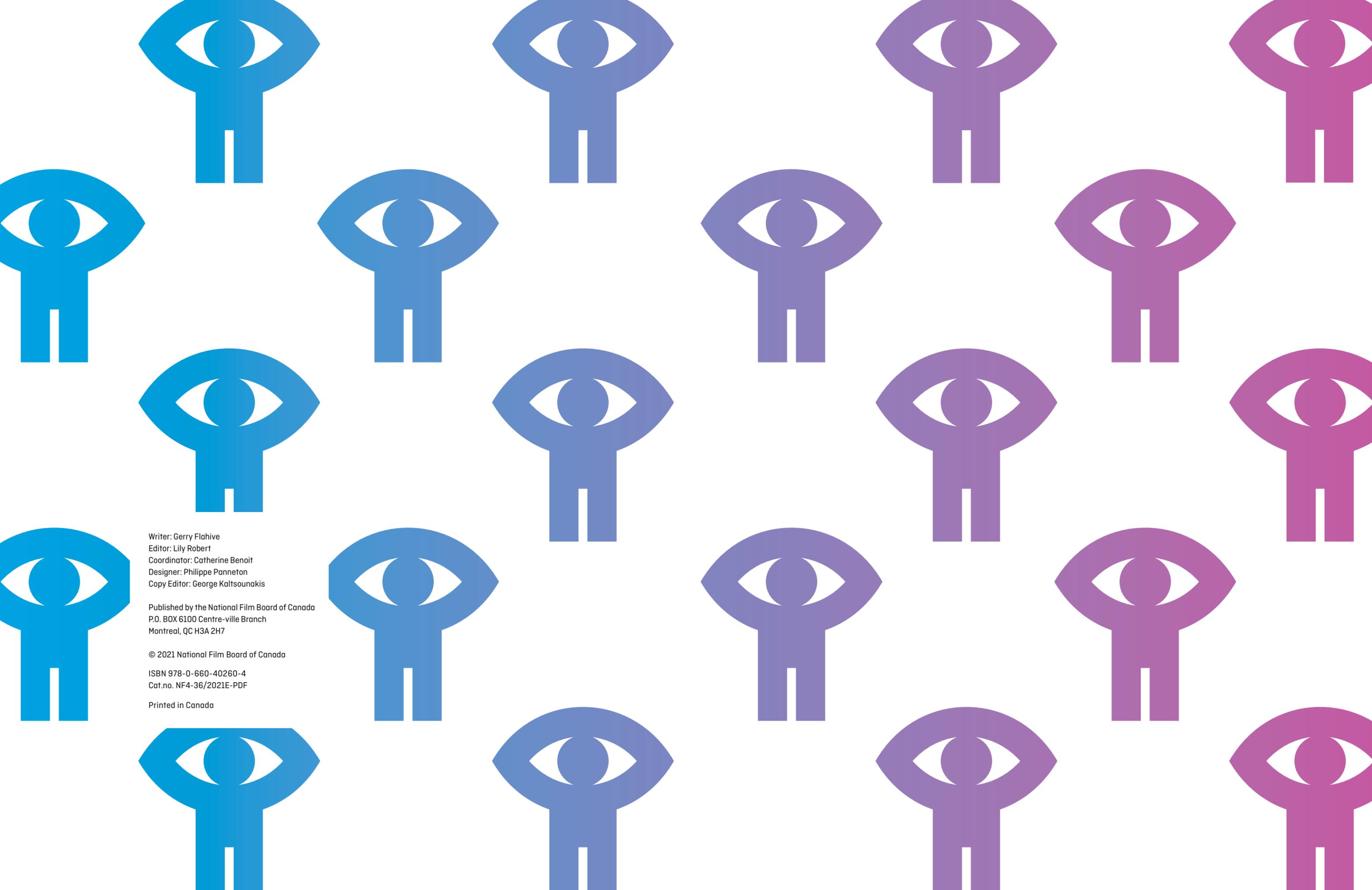


EXPANDED VISIONS

50+ YEARS
OF THE NFB AT
WORLD'S FAIRS





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— THE NATIONAL FILM BOARD SHOWS CANADA TO THE WORLD —

And as with all nations, Canada's presence at world's fairs is part of cultural diplomacy, enlightening others about our country and its people.

The NFB's work does that, and much more.

Its cultural influence goes beyond simply representing the nation through images and sounds. Its work presents the creative innovation of Canadian artists, filmmakers, craftspeople and inventive partners, onscreen and behind the camera in every Expo production.

I am pleased to present this short history of the NFB's eight extraordinary world's fair productions, as well as one that re-interpreted and re-created the seminal experiences of Expo 67 with new technology, and the perspective of a new generation.

Together, these stories paint a picture of an organization that puts creative risk-taking at the centre of its work.

In 1965, as an NFB team was working on what would become the organization's most successful innovation in large-scale cinematic experiences, the *Labyrinth* pavilion at Montreal's Expo 67, the NFB put forward a confident statement of its creative principles, by affirming the vital importance of experimentation: "Experiment is to film what research (pure and applied) is to science and industry. The values of experimentation are often slow to emerge and may remain invisible for a long time in the mainstream of production. But if no experiment is undertaken, an organization tends gradually but inevitably to stagnate. The NFB attempts to encourage all its filmmakers to adopt an experimental approach... in all their work."

The NFB's world's fair productions have been exemplars of this mindset.

In an article published by the Bureau International des Expositions, Nicholas Cull, a professor of public diplomacy, wrote about some of the elements that make for a superb world's fair pavilion. He noted, however, that an emphasis on technology without an equal regard for content is not a path to Expo success. And he singled out Canada, stating that it "has never fallen into this trap. Historically, Canada gained much from partnerships between its pavilions and the National Film Board of Canada, delivering excellent documentaries in astonishing formats at multiple Expos."

While its presence at world's fairs reveals the NFB's creations to new global audiences, its work is always present in Canada and abroad through the ongoing production and distribution of 14,000 documentaries, animated films, interactive projects and public installations, made by a diverse community of artists and craftspeople over its 82-year history.

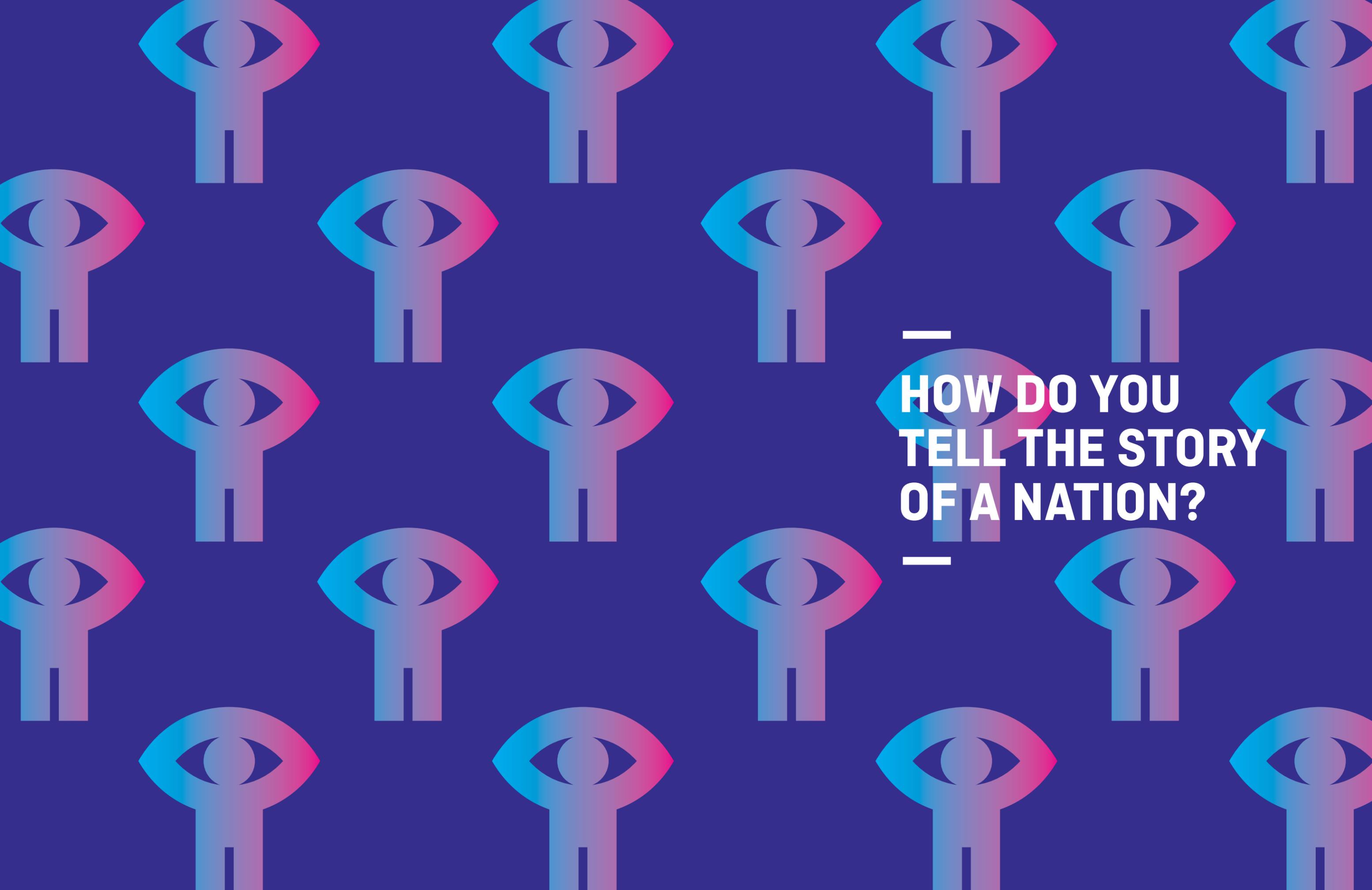
The NFB's works provide artistic and oftentimes deeply personal takes on this country, and I wish especially to thank those talented people whose signature achievements are documented here, and in the history of cinematic and artistic innovation.



CLAUDE JOLI-COEUR

A handwritten signature in black ink that reads "Claude Joli-Coeur".

Government Film Commissioner
and Chairperson
National Film Board of Canada



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**HOW DO YOU
TELL THE STORY
OF A NATION?**
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At every world's fair, countries present their image to the world, through architecture, food, design, performance, spectacle—and often through films.

Canada has done so with some spectacular success since the sensational homegrown triumph of Expo 67, and with a distinct advantage: it has a national cultural agency, the National Film Board of Canada, whose very mandate matches the task at hand: “to interpret Canada to Canadians and people of other nations.”

At world's fairs from Montreal to Osaka, from New Orleans to Vancouver, from Seville to Shanghai, with multi-media installations, large-format films, animated lightboards, wide-screen photography collages and now, at the Expo in Dubai, through an intimate, immersive sculptural experience, the NFB has done so in ways that are as diverse as the country itself.

Inventing, reshaping and completely re-imagining storytelling technologies along the way—as it has always done throughout its 82-year history—the NFB has placed its trust in its artists and artisans to eschew the expected and to creatively interpret Canada and present it in a new light. Avoiding the conventional, embracing the untried, and digging deep to reflect a country whose continuous development rejects easy summary, the NFB's world's fair productions are often introspective, poetic and, like Canada itself, huge.

The NFB has also collaborated with companies and institutions large and small, with results that shine on the screen and resonate in the economy and in technological developments for decades after.

THE LIST OF MORE THAN FIFTY YEARS OF WORLD'S FAIR EXPRESSIONS BY THE NFB ENCOMPASSES ISSUES AND IDEAS THAT MATTER.

The list of more than fifty years of world's fair expressions by the NFB encompasses issues and ideas that matter. A journey to the heart of what it means to be human. An aerial expression of the Canadian landscape. A playful animated fantasy of the urban impetus. Massive, high-definition and multi-dimensional depictions of transformation, movement and the endless flow of water. An impressionistic collage of thousands of photographs of an imagined city. And now, a sculptural experience of memory, consciousness and environmental loss.

This year, as a key attraction at the Canada Pavilion at Expo 2020 Dubai, *TRACES*, the NFB's latest world's fair creation, will draw visitors into an immersive and interactive artistic experience. It will be one that brings urgency and emotion “to the imminent disappearance of our landscapes and its wildlife, caused by climate change.” For one of its creators, artist and architect Rami Bebawi, *TRACES* is an art installation built around the connection between the senses and the mind—“you need to touch the heart, you need to educate the head, and promote change through the hand, you need to have an emotional attachment. And I think you can do that with objects of beauty.”

So how do you tell the story of a nation? The NFB does it every day, every year, cumulatively through 14,000 documentaries, animated films, interactive works and installations, as well as productions that defy standard industry categories.

As we dig into the story of NFB cinematic and technological innovations on the world stage, we can see how its ongoing work is reflected in the world's fair spectaculars. And how such work informs and feeds the development of new projects, within the NFB itself and beyond.



**MANUFACTURING
MAGIC: THE NFB
BUILDS NEW WAYS
OF SEEING**



LABYRINTH AT EXPO 67 IN MONTREAL

Two days before the NFB was created by an Act of Parliament in 1939, the New York World's Fair, known as "The World of Tomorrow," opened—but without an NFB film, of course. The Canadian pavilion there eventually acquired a 3D film from Hollywood about the very Canadian Dionne quintuplets.

It would be almost thirty years before Canada would have a significant presence at a world's fair, and before the NFB was invited to showcase its skills to celebrate the Canadian experience. But when it did finally happen, it opened the eyes of the world to Canadian optimism and invention, and it happened in the NFB's own backyard.

Montreal's Expo 67 is widely seen as the most audacious and groundbreaking event of its kind of the 20th century. Held as the key event of Canada's Centennial celebrations, Expo represented a leap forward in creativity and confidence for a country whose international profile at world's fairs had been often limited to dour presentations of its industrial methods and agricultural products.

Expo changed all that, and the world took notice. Its scale and creative scope were such that its aim was described as providing "an explanation of the world we live in to each and every one of its visitors, so that they may realize that we are all jointly and severally answerable for and to each other" and that what divides people "is infinitely less important than that which links them together."

Films were at the centre of much of what came to be seen as transformative experiences for Expo attendees, with the NFB vying for attention in the most competitive such environment one could imagine.

In her book *Ecstatic Worlds: Media, Utopias, Ecologies*, scholar Janine Marchessault wrote of the cornucopia of film presentations on offer at Expo: "Moving pictures were presented in approximately 65 percent of the pavilions and complexes, many of which dazzlingly displayed a new flexibility of the screen and the new synesthesia of visual cultures of the world as mediated by technology in the 1960s....nothing that had come before compared to Expo 67's reinvention of screens and theaters to accommodate new forms of projections and spectatorship."

The fair elevated the idea of Canada as a unique place. It inspired the NFB to create not a travelogue about Canada, but something completely new: *Labyrinth*. The leading film critic of the day called it "mind-expanding" and "by far the most ambitious enterprise in Canadian film history." Another called it "a supreme artistic experience." A multi-screen, multi-space immersive production, it foreshadowed everything from the surround environments of IMAX 3D cinemas, amusement park rides and interactive museum exhibits to today's virtual reality.

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THE LEADING FILM CRITIC OF THE DAY CALLED IT "MIND-EXPANDING" AND "BY FAR THE MOST AMBITIOUS ENTERPRISE IN CANADIAN FILM HISTORY." ANOTHER CALLED IT "A SUPREME ARTISTIC EXPERIENCE."

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The fair's official guide described *Labyrinth* as subjecting attendees to sensations "so strong that some will want to grip the handrail," and that as they face the installation's "multiscreen battery of unparalleled scope... areas of the mind are exercised that almost certainly have not been exercised before."

It was years in the making, and of sufficient scope and ambition that it led its co-creator, legendary NFB filmmaker Colin Low, to turn down the chance to work with Stanley Kubrick on his extraordinary science-fiction classic, *2001: A Space Odyssey*. As we shall see, Low came to be pivotal in the creation and technological advances of many of the NFB's world's fair cinema experiments.

Academics Jonathan Lovell and AnnMarie Brennan described it this way in their study, *The Labyrinth as immersive multimedia environment: Marshall McLuhan at Expo 67*: "Once inside, the audience passed through three unique forms of theatre architecture which narrated the hero's journey. The Labyrinth is a significant, eloquent example of architecture's potential as a narrative medium."

The project team of NFB directors Roman Kroitor, Colin Low and Hugh O'Connor collaborated with sociologist Fernand Cadieux and literary scholar Northrop Frye (the latter's influence in academia rivalled that of Plato, Marx, Freud and Shakespeare in terms of citations) to root the project in a deep framework of mythology and the archetypal stories generated over centuries.



Labyrinth was a truly immersive experience that blended the emotional, psychological, physical and cinematic elements of a huge three-chamber purpose-built structure to take audiences on an interior voyage to the heart of what it means to be human. It was the physical manifestation of the theme the multi-screen presentation explored: a labyrinth of the soul—a journey through a world representing "the threads of a person's life," from childhood to death and rebirth.

Kroitor felt that "the pattern for the whole experience comes from the life journeys of legendary heroes, only in this case the hero will be mankind, and the adventure, the discovery of our planet." When audiences entered Chamber 1, they heard this narration: "This is a Labyrinth in modern dress. It has been constructed from appropriate bits and pieces of this planet. You in the balconies, each one of you, is the hero of this story."



Multi-screen cinema had a long history prior to Expo 67, but *Labyrinth* was to be its most elaborate and fully controlled execution, with the NFB filmmakers given complete control over the design of the building that would house it. One observer wrote of the NFB pavilion that it "looms above Expo... like a monolithic medieval-modern fortress."

The NFB undertook experiments a few years prior at the Canadian National Exhibition in Toronto with more than a dozen projectors and a kind of open-ended flow of motion picture images, and then, in the lead-up to Expo, with massive prototypes built and tested at an aircraft factory in Montreal. These tests laid the groundwork for many of the ideas to be deployed on a gigantic scale in *Labyrinth*.

As innovative and technically challenging as the final installation at Expo would be, the work needed

to capture the images was equally extraordinary. For an astonishing five-screen cruciform arrangement in one of *Labyrinth*'s chambers, the NFB team assembled an elaborate robot-like machine of five synchronized 35mm cameras that would provide the kilometres of global footage and variety of images the architectural-cinematic experience would deliver.

And what images they were, from across the spectrum of human experience and across the globe—from Russian astronaut training to a ballet school, from a Greek Orthodox baptism to the faithful bathing in the river Ganges, from Winston Churchill's funeral procession to a painful goodbye to a family leaving on an immigrant ship, and from a Canadian snowstorm to the nighttime hunt in Ethiopia for a crocodile.

The first of *Labyrinth*'s three chambers was a spectacular arrangement of giant 70mm screens, one on the wall and one on the floor. Vertiginous viewing from four tiers of balconies accentuated the power of a new cinematic experience. A complex mix of sounds and music connected the two screens in an exchange of images and ideas that exploded the very notion of what it meant to watch a film. The second chamber, a corridor of mirrors, lights and impressionistic sounds, was intended, according to Marchessault, "to disorient viewers, to dissolve boundaries between identities, between human and nonhuman, creating an endless, acoustic, decentred space."

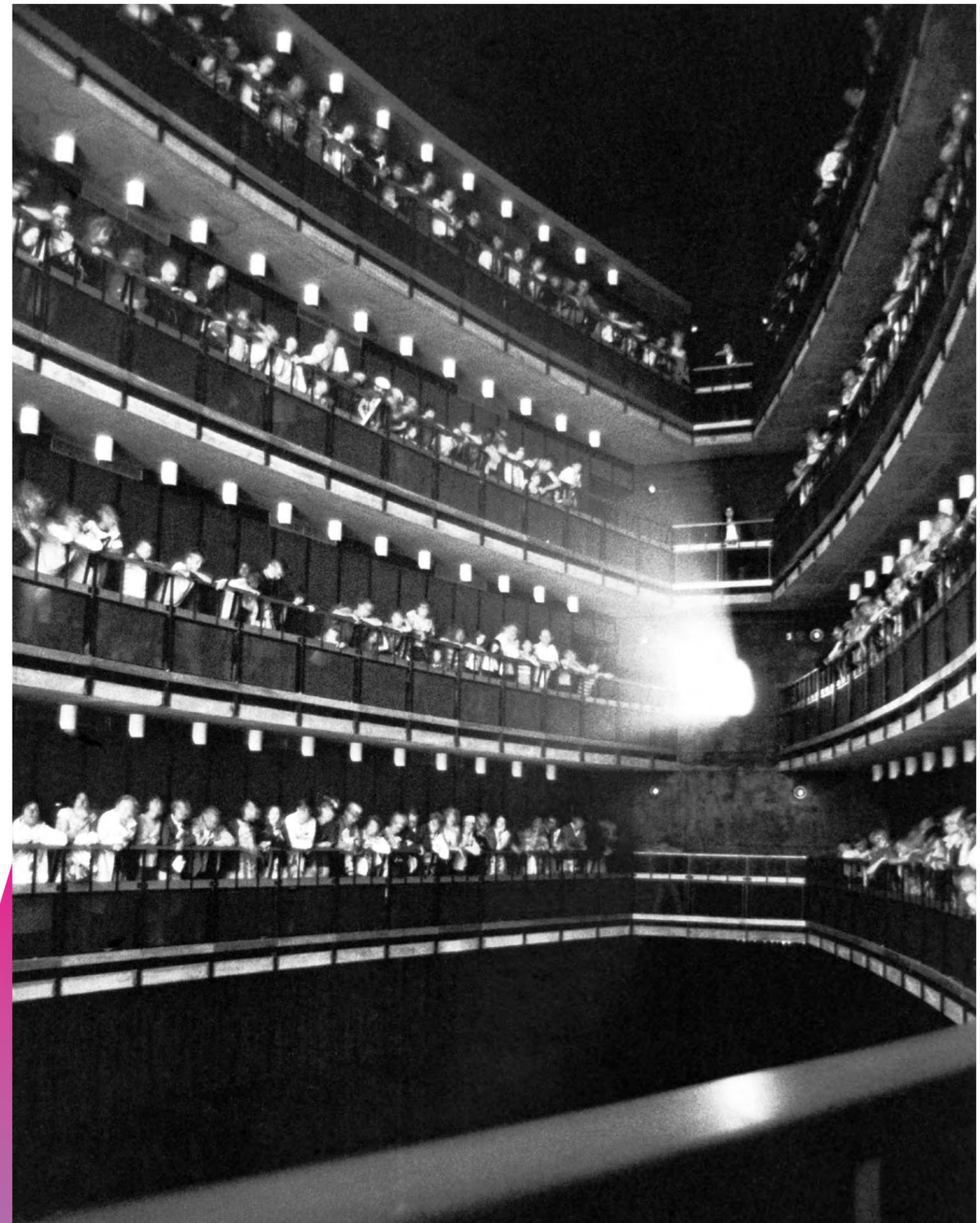
The third chamber, which presented a twenty-minute five-screen experience in which images were "in dialogue" with each other and a multi-varied soundtrack, fulfilled what Low explained were the opened-up cinematic possibilities of the power of simultaneity, and the poetic ambitions of *Labyrinth*: "Poetry uses an amalgam of thoughts, feelings and word images poured in quick succession as an assault on the unconscious."

The filmmakers strove for—and achieved—something far beyond an array of images and an assembly of sounds that would seem novel. It was a new form of storytelling, enabled and driven by new technological approaches to cinema. Roman Kroitor anticipated that "new kinds of storytelling and new audience tastes will result from this technology. A new language is going to develop. There are ways in which shaping the relationships of images cuts through the superficial realities and reaches something deeper."

**"FAR AND AWAY
THE MOST AMBITIOUS
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THIS IS, INDEED, THE
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HAS EVER BEEN DONE."**

The impact of *Labyrinth* was unmistakable: 1,324,560 people saw it, some waiting as long as seven hours to get in. *The New York Times* described *Labyrinth* as "Far and away the most ambitious and successful of the multi-element shows at Expo 67... This is, indeed, the most ingenious and complete construction of an audio-visual experience that has ever been done."

For the NFB itself, Expo 67 proved to be transformative, as cited in its 1967 annual report: "*Labyrinth* projected the National Film Board, clearly and indelibly, into the public consciousness. It established the Board as an innovator of ideas far ahead of the film industry as we know it today; it gained for the Board a world-wide stature greater than it had ever enjoyed." That standing was to have implications for its work in the decade ahead—and as another world's fair loomed only three years later.





THE LAND AND THE CITY OSAKA – EXPO 70

The impact of *Labyrinth* and the explosion of experimentation in multi-screen and other evolving forms of large-scale cinema continued to resonate all the way to Osaka, resulting in new approaches for the NFB at Expo 70, Japan's first-ever world's fair.

A year prior to *Labyrinth*'s opening at Expo 67, the NFB was considering its potential adaptation for Osaka. But aside from the reality that there could not be a purpose-built structure reproducing the *Labyrinth* full experience constructed there (any NFB production would have to be shown inside an already-designed Canadian pavilion), there were concerns that some of *Labyrinth*'s thematic elements (the hero myth, as centred on the individual's journey) might clash with religious beliefs in Japan. There were even considerations to create an additional chamber "stating the universality of man... and the statement of harmony in all things."

The recommendation was to wait to see how it worked with audiences in Montreal, but, ultimately, it was not to be, as a primary goal for Canada at Osaka was to speak to a non-Canadian audience who didn't know much about Canada. As one preliminary report put it: "there are many reasons for participating in an exhibition, and we feel ours, at Expo '70 in Japan, is to give a people to whom we are relatively unknown, a sense of our existence."

While *Labyrinth* was less about Canada than about the larger human experience, it had helped pave the way for a more complex and less-linear form of cinematic spectacle, suited to what journalist Alan Edmonds described, in the groovy parlance of the late sixties, as "the many-mirrored multi-screened green-gabled aurora-borealised McLuhanistic electronic face of Canada at Expo 70." The challenge now was to depict the country in a new way—or, as it turned out, given the NFB's historical strengths in both documentary and animation—in several new ways.

The impact of *Labyrinth* influenced the creation of both large-screen and multi-screen offerings at Osaka.

Allison Whitney wrote in her thesis, *Labyrinth: Cinema, Myth and Nation at Expo 67*, that "Japanese planners for Osaka's Expo '70 attended Expo '67 and were so impressed by *Labyrinth* that they asked the production team if they would agree to do a similar project for the Fuji Bank pavilion. Colin Low proposed a triptych of vertical 70mm screens. The Japanese architect's design would accommodate only a single screen, so they decided to combine three 70mm images on a single 15-sprocket film, which was the first IMAX film." That film was *Tiger Child*, directed by NFB veteran Donald Brittain and produced by Roman Kroitor (though the film itself was not an NFB production).

Under the broad Canada Pavilion theme of "Discovery," the NFB tackled the storytelling challenge by tabling two projects, one celebrating and exploring, in documentary imagery, the nation's spectacular landscape, the other, via animation, its burgeoning urbanization.

Continuing to embrace the large-screen format, the documentary *The Land*, directed by Jean-Claude Labrecque and Rex Tasker, was presented in 70mm, showcasing spectacular airborne images of Canada, from the Arctic Ocean to Newfoundland fishing villages, and from Percé Rock to Niagara Falls, on a most unusual massive triangular screen,



which was flanked on both sides by rectangular screens for still photo projections. The ambition to capture the country was so large that the NFB issued a news release assuring Canadians that they "ought not be alarmed at a mysterious aircraft skimming about their area taking a low-level look at their neighbourhoods—it's just the National Film Board doing its bit for the 1970 World's Fair."

Tasker and Labrecque embraced the possibilities of multi-screen, but in a way quite different than was done at Expo 67. In the spirit of the sixties still lingering in the culture, the filmmakers proposed the project as having the feeling of a "happening": "Forget, for the moment, about 'a film.' Think instead of the audience being in a large dark space... there they will experience *The Land*. It will be a happening in which images will come out of the darkness and disappear back into it. They will be

surrounded by sound and image and will be forced to participate by locating the image (as in real life). Sound cues would also signal to audiences to watch for pending visual changes, in the film itself and two huge rectangular walls on the side of the screen projecting images that complement or expand the meaning of the 'establishing' film images, enhancing mood, or details through close-ups....The images must not be something 'presented' to the audience whilst they watch in passivity—rather they must happen 'to' the audience. And the audience must 'discover' them."

The raw power of cinema on this scale, and with this level of kinetic change and density, was embraced by the team. Tasker wrote of the challenge of the triangular screen that the pavilion's architecture had presented them with: "It soon became apparent—through testing—that static shots, pans

and tilts just drew attention to this awkward shape, so we had to devise a style which would turn the format to advantage. This we did by almost exclusively using movement—toward or away from the camera—at speed. The frame then became a sort of tunnel through which the audience would be continually traveling. Thus, the natural answer to how to present a picture of Canada on a triangular screen was to mount a camera in the nose of a plane and fly over the land.”

It worked. A newspaper reported that “one young lad fell off the railing (seats) because he became so excited at seeing a moose. Most Japanese have never had a chance to see a vast herd of animals and are enthralled.”

As immersive and engaging as this was, the directors weren’t able to proceed with one other sensory element they had considered: introducing smells, “probably unfeasible because of replacing one with another every 60 seconds.”

The ability of the NFB to create a diverging range of content, and to play with technology and approaches to story, was also on display with animator Kaj Pindal’s remarkable short celebration of urban life. Called *The City*, it was “screened on a huge lighted panel made up of thousands of 5-cm-wide luminescent wafers. The panel was the backdrop to a three-dimensional exhibit and a light show on the theme of life in the city.”

Inspired by Academy Award-winning animation pioneer Norman McLaren—as so many were, during and after his long career at the NFB—Pindal and his producer, Robert Verrall, adapted techniques used by McLaren in his audacious 1961 Times Square film, a Canadian tourism publicity clip consisting of paper cut-out animation and thousands of light bulbs triggered by the film’s images.

Pindal, born in Copenhagen, joined the NFB animation department in 1957, having established his artistic and socially engaged credentials by having his first drawings published in an underground publication during the German occupation of Denmark. His wit and ability to communicate through strikingly simple and universal images meant audiences for *The City* would see Canada as open and inclusive, and the compelling silhouette-style character designs of people and buildings would appeal to the sophisticated Japanese design tastes.

The Land and *The City*, projecting both an astonishing sense of scale and an animated taste of wit and speed, helped promote a new image of Canada in Japan, so much so that the Canadian pavilion attracted 20 million viewers (almost as many people as the entire population of Canada in 1970), exceeding attendance at both the U.S. and U.S.S.R. pavilions, and was voted the favourite of Japanese youth.

The NFB would continue to “go big” in the years to come as its teams contributed to the startling development of the IMAX viewing experience.



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“EMOTION THROUGH MOTION”: BIG COUNTRY, BIG SCREENS

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In the years that followed Expo 70, world's fairs continued to be sites of invention and spectacle for creators of moving images—and for nations seeking to tell their stories in as big and immersive a fashion as possible.

As IMAX technology continued to be refined, and the company founded from the NFB's *Labyrinth* experiment grew, the NFB collaborated with IMAX Systems Corporation on three big-screen productions in eight years at world's fairs in New Orleans, Vancouver and Seville, pushing the possibilities of immersing audiences through bold cinematic choices and experiments with 3D and high-definition imagery.

As IMAX's large-screen vision began to spread around the world, Kroitor's colleague at the NFB, Colin Low, remained a close collaborator on the development of new approaches to “big” storytelling, including as a design consultant on what became

the first-ever IMAX film, *Tiger Child*, made for Osaka. Low's creative partners benefited from his astonishing versatility, as seen in such landmark films as *Universe*, witty animations like *The Romance of Transportation in Canada*, haunting documentary portraits like *Corral*, and the deeply rooted, community-based social-issue films of the *Challenge for Change* program. Low brought a rich mix of ideas, filmmaking solutions and a marriage of art and purpose to everything he did at the NFB.

The Large Format Cinema Association (LFCA) presented him with a lifetime achievement award in 2002, describing the contributions of Low and the NFB as “a major force in the emergence of large-format cinema and the development of IMAX.”

So it's not surprising that Low was involved in the NFB's three IMAX films that were created for three world's fairs in the eighties and nineties.



RIVER JOURNEY NEW ORLEANS – EXPO 84

It might be said that one of the most powerful things a documentary can do is to show you something you *think* you've seen before. The films that are most memorable are those that do so in a completely new way, and give you an utterly new perspective.

In the NFB's first IMAX film created for a world's fair, a massive moving image, taken from a swooping helicopter, captures a peaceful river, surrounded by a thick pine forest. This being Canada, the scene could be thousands of kilometres from the nearest town, a glimpse into the quiet of nature. But the camera rises, and we are in fact over Toronto's Centre Island, and then flying straight towards the city's towering skyline, our expectations excitingly subverted. This final scene underlined the power of one of the hits of 1984's Louisiana World Exposition in New Orleans, the NFB's *River Journey*, which was, according to one U.S. journalist, "stunning, outclassing all other film productions at the fair." It managed to knit together in cinematic fashion seemingly every river in a country with thousands of them.

This was only the NFB's third appearance at a world's fair, but its participation in Expo 67 and Expo 70 left a strong impression, with the *Chicago Tribune* stating that "when it comes to producing world's fair films, nobody does it better than the National Film Board of Canada."

Low, who with NFB colleagues had created the NFB's first-ever IMAX film, *Atmos*, in 1980 (an early plea for action on climate change), recruited veteran NFB filmmaker John N. Smith to direct *River Journey*.

Smith wrote at the time of how the NFB was extremely well-positioned to tackle this kind of filmmaking: "The NFB is particularly well-equipped to take on this challenge just because of our special ability to put teams together. We are Canada's largest production house, almost completely integrated in terms of our ability to do almost all the craft work that makes up a film with our own experts and equipment. The fact that we are in constant production means that our shooting teams, our post-production teams, our studios, etc. are already geared up for the kinds of demands that this film will make on everyone."

River Journey is without narration; as Smith puts it, "the score is the narration." The sweeping majesty of the music matches that of the visuals. The challenges of the large-screen format were apparent from the first day of filming for Smith, who hadn't directed an IMAX film before. "One of the things we learned after talking with the IMAX camera people and talking to people going through some IMAX screenings was... that you basically had to put what you wanted people to see in the bottom third of the frame. You would have a shot, but since the sky dominated the entire frame, the sky had to be perfect. And if it wasn't, you didn't shoot. It was really about sky and that was why it turned out, [on] average, in IMAX terms... you shot a finished minute a week."

He quickly embraced its potential.

"Because the screen is so huge and all-encompassing... the viewer can be transported as never before in a theatre. In an IMAX film you do not simply sit and watch the action on the screen. You are in the action."

The sheer scale of the IMAX experience propels a director to take advantage of its aural and visual possibilities—ideal for a film rooted in natural imagery and sounds like *River Journey*. "What you can do is you can start sound off-screen, because of the way the theatre is built, and bring it on screen, and then have it move across. So it's very, very highly sophisticated."

And then there were the challenges of filming in remote areas of the country, without ready access to the production resources at the NFB's HQ in Montreal. Associate Producer Elizabeth Klinck remembers having to find a theatre to screen rushes in small-town Alberta, where the only

available "screening room" was a drive-in. "We sat through a James Bond double header, and then the projectionist let us watch our golden 70mm moments of caribou hunt on the Nahanni River. We were sitting in a rental van, straining to see the quality through a bug-stained windshield!"

The astonishing clarity and sweep of the film brought together the natural and urban realities of Canada in one spectacular sequence after another, seemingly tailor-made for the IMAX experience. And it whetted the appetites of NFB filmmakers to take the large-screen storytelling platform to new levels of quality and spectacle.





TRANSITIONS

VANCOUVER – EXPO 86

Five years before Canada would host its second world's fair—this time, in Vancouver in 1986—Colin Low put forward a concept for an IMAX film for the fair that reflected his longstanding relationship with, and advancement of, the very nature of visual storytelling: a film *about* images.

“The real leading edge of communications has to do with images....a totally synthetic image produced through the use of a computer and an electronic screen. A totally synthesized reality or illusion is becoming possible.” He foresaw the possibilities of this years before others.

His role as a filmic philosopher and craftsman, concerned about how we consume motion pictures and television images—how we see—led to the development of what became *Transitions*, the world's first live-action 3D IMAX film. Not only would it capture “the portrayal of the technological development of *carrying* in this country,” from goods to complex streams of information, but it would also incorporate state-of-the-art graphics created by the NFB's then newly formed Computer Animation Centre, blending documentary and synthetic imaging in new ways. *Variety* magazine said, “While most 3D is still a gimmick, these filmmakers have elevated the device to an art form.”

Low described the film as a “lyrical impression of modes of transportation and communication in Canada and of their unique relationship.” As one observer noted of *Transitions*, in revealing the history and potential future, it “offers its own Canadian-produced technology as one of the most astonishing illustrations of the film's thematic content.”

Yet again, the early genius of NFB animator Norman McLaren played an inspirational role.

As Low told *Take One* magazine: “IMAX 3D came out of Norman McLaren's early experiments for the Festival of Britain in 1950–51. The night I first met McLaren, I saw his 3D paintings on the wall of his apartment. He was very enthusiastic about the process, but it never went anywhere for years, because the problem with 35mm is that it moves slightly on the screen, and your eyes cannot tolerate any vertical misalignment.”

The technological challenges would take years to overcome, with the NFB *Transitions* team, including Low, co-director Tony Ianzelo and cinematographer Ernie McNabb, building an entirely original 3D camera rig, new editing and projection systems, and a specially constructed screen and cinema at Expo 86.

“EXCITEMENT EQUALS INVOLVEMENT IN THESE DIMENSIONS—SPECTATORS BECOME ENTRANCED, ENGROSSED AND INVOLVED TO THE POINT WHERE THEY LOSE TRACK OF THE FACT THAT THEY’RE WATCHING A FILM AT ALL.”

To shoot in 3D meant placing two cameras side by side, to mimic and capture the world the way our eyes see it. But the sheer bulk of IMAX equipment made that impossible, so a system of mirrors and absolute synchronization had to be developed. And then this gigantic assembly had to work out in the field, shooting forms of transportation and movement—ranging from canoe portages and steam engine trains to hovering hummingbirds, spinning skaters and Chinese dragon dancers.

Despite the challenges, this method was embraced by the team because of the incredible visual rewards. As McNabb put it: “As you go up in the film gauge, the audience's enjoyment level is enhanced because the image is more realistic, more believable. Excitement equals involvement in these dimensions—spectators become entranced, engrossed and involved to the point where they lose track of the fact that they're watching a film at all.”

That intensity of experience influenced editing decisions for *Transitions* as well. Film editor Michael McKennirey was amazed at “how intimate some of the shots are. You can almost feel the warmth coming off the skin of the acrobats. Almost every shot in the film carries a great deal of information that serves to carry the film forward, so you just have to ride along with it, you don't dawdle or linger too long on anything.”

As with so much of the work done by NFB filmmakers on Expo projects, the depth and intensity of the experience approached pure cinema, and for *Transitions*, Low resisted suggestions of narration for the film, arguing that “some mystery and indeterminacy” was intended, “otherwise it is boring, believe me!”



MOMENTUM SEVILLE – EXPO 92

If the evolution of the NFB's creations at world's fairs was all about expanding how people see, a natural next step would be to bring an unparalleled clarity of image.

That's precisely what directors Colin Low and Tony Ianzelo sought to do for the world's fair in Seville, Spain, in 1992. *Momentum*, the world's first IMAX HD (48 frames/second) film, was the centrepiece of the Canadian pavilion.

Taking the extraordinary sharpness of the IMAX frame and effectively doubling it, by shooting and projecting the motion picture images at twice the conventional rate, created a viewing experience so fluid that Seville attendees marvelled at it.

Exploring the Canada Pavilion's theme—"Explore Canada, Explore a New World"—the filmmakers used the perfect content for a film exhibited with the most intensely real imagery ever: a 20-minute journey across the country's geographical and social landscape. Touching all three oceans and the border with the U.S., *Momentum* revealed the breadth and diversity of the Canada that the NFB had spent decades documenting, but did so in a way that was immediately immersive and compelling.

Audiences didn't even have a second to get ready for what was in store—not with a giant icebreaker heading, seemingly, right for the camera in the

opening shot. But amidst the unrelenting drive of the film's exploration of prairies, forests, a farm in winter, a speeding dogsled, hummingbirds and an Indigenous community roundup of horses, there is what Low described as "a pacing in this film—breathing moments to build emotion through motion." Like seeing beloved Inuit artist Kenojuak Ashevak drawing, the HD format inviting us to contemplate her work with her.

The massive camera set-up required ingenuity and patience on the part of the filmmakers, especially when in the wild. To accustom birds in the Squamish region of British Columbia to the noise of the camera, a recording of it was made and played near them for three days prior to the shoot. For wild horses near Lethbridge, it took days of gradual adaptation to settle them down to the idea of being filmed. However, the sled dogs in Saint-Michel-des-Saints just wanted to run, camera or no camera!

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Low wrote passionately of what the experience of making *Momentum* meant for him and his colleagues: "To our group everything about this country is epic—and mythic. *Momentum* was the work of veterans of many artistic odysseys to every corner of the country. The team built the storyboard out of their favourite memories and best expectations. Kenojuak is epic or mythic beyond the imagination of most....her spirit drawings of the dream culture transcend the geographical barriers of the world—and the time barriers of history."

The marriage of cinema technology and epic storytelling ambitions evolved in the years that followed Expo 92. As the giant-screen approach to cinema became mainstream, with Hollywood features available in IMAX theatres around the globe—aided to some extent by the NFB's early contributions—the NFB would move into a more "molecular" level of Expo filmmaking: reinventing the very nature of filmmaking tools and the screens themselves.



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**NEW VOICES,
NEW TECH:
GLIMPSES,
EXPO 67 LIVE AND
TRACES**

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GLIMPSES
SHANGHAI – EXPO 2010

In the years between the Seville world's fair in 1992 and the Shanghai world's fair in 2010, a digital revolution had advanced in filmmaking and, indeed, in every aspect of communications. World's fairs have always introduced, with dazzle and fanfare, new technologies—domestic appliances, the idea of superhighways, computers and robots that subsequently become part of our daily lives, or are about to.

In recent decades, though, the time between invention and implementation, between a science-fiction possibility and the science realities in our own lives, has been massively compressed. And so, world's fairs, and the audiovisual wonders presented at them, have needed to change too, becoming less about spectacle and more about intimacy and human connection.

In the 18 years between world's fairs for the NFB, the organization itself had changed, perhaps more so than any time in its history. Deep budget cuts, the ending of the staff filmmaker system, a final shift from film to video to digital formats, a burgeoning independent filmmaking sector and, of course, the rise of the Internet, meant that the NFB had to re-invent itself.

So much of the *Labyrinth* era and that which followed relied on the internal teams and in-house technological resources of the NFB. Experimentation throughout the first few Expo decades was largely a product of the NFB's scale, its staff continuity and financial resources allowing it to do what the private sector couldn't always do: take artistic risks that if successful would create new filmic storytelling approaches and tools.

The changing times also meant the NFB looked outward more, forging partnerships, co-productions and collaborations that began to straddle sectors, share talent and pollinate bold new approaches to media making.

The NFB's relationship with audiences was evolving too, most notably with the launch of the NFB's online screening room, NFB.ca, in 2009. Suddenly, several thousand documentaries and animated films were freely available to audiences in Canada and around the world, changing the nature of how people could use its films, share them and re-view them. It made for a more personal relationship between filmmakers and their audiences, and helped advance perceptions of Canada and its creators in new ways.





The NFB, in these years, had also begun to experiment with digital storytelling tools, being among the very first to create interactive web-based works: non-linear, user-driven experiences that combined and re-mixed elements of original and archival images, films, sounds, animation and text to reinvent documentary possibilities. It led *Fast Company* magazine to explain “How Canada’s NFB Became One of the World’s Hippest Digital Content Hubs.” With acclaimed projects like *Bear 71*, *Highrise*, *BLA BLA*, *A Journal of Insomnia* and *Welcome to Pine Point*, filmmakers were no longer limited to what they had captured; it could be infinitely adjusted, altered, mixed—and experienced differently by each viewer.

This was the fluid context within which the NFB and filmmaker Jean-François Pouliot set out to create *Glimpses*. At Shanghai, adopting the Canada Pavilion’s theme of “The Living City,” the NFB team was inspired by new digital tools, and created an experience rooted in a storytelling medium that had been part of the NFB for its first forty years: photography. It was another echo of creative continuity in the NFB, reflecting the legacy of its Still Photography Division (1941-71), an early element of its role as national storyteller.

The project also reflected the vital role—in an NFB now no longer populated by staff directors—of the NFB producer, as a driving creative force and collaborator. René Chénier, the NFB’s Executive Producer, Special Projects, oversaw every element of this era’s Expo projects, synthesizing the creative and the practical in concert with filmmakers to achieve the high standards of originality and technical excellence demanded of an NFB project representing Canada on the world stage.

For *Glimpses*, high ambitions but lower budgets meant that Chénier and Pouliot couldn’t send film crews across the country, but instead developed a collaborative approach with two outstanding photographers, Serge Clément and Claude-Simon Langlois, who, fulfilling the director’s vision, toured several Canadian cities, capturing images of people and places to flesh out the concept of a “collage city.” Indeed, *Glimpses* has the qualities of a drama, and Pouliot and his team mixed directed performers and the images of real people into a seamless, engrossing theatrical experience.

Pouliot’s background made him well suited for this project, as he had a deep understanding of both the NFB’s history and spectacular image productions (he directed the groundbreaking 3D film *Facing Champlain*, released in 2008 to coincide with the 400th anniversary of Quebec City). For him, the “NFB is the only place to do this kind of work... people there understand what experimentation is.”

The intensive attention to detail, with every image nurtured and adjusted as part of an overall painterly effect, contributed to the reinvention of the big Expo film experience. *Glimpses* was presented on a gigantic semi-circular 150-degree curved screen that, as one observer put it, “IMAX could envy: 5 meters high by 20 meters long.”

Glimpses can’t be consumed in one viewing; like immersive IMAX films or *Labyrinth*, it invites viewers to have a “whole” experience, to feel, to think, to consider, to watch, to discuss. As one of the six million viewers of *Glimpses* in Shanghai wrote, “I watched this in Shanghai Expo inside Canada Pavilion. I sat there and repeatedly watched it for about 10 times. Love the music the most....So glad I found it here.”

In words eerily prescient as we experience a global pandemic, Pouliot wrote in his concept document for *Glimpses*: “A city without its millions of inhabitants moving around....is not a city; without the people who define it, the spirit is gone. I chose collage to express the commonplaces that shelter and comfort us....each picture will convey not a single moment but all the similar moments belonging to this place, at this time of day, at this moment in life. I also want to play with the elasticity of emotional time.”

Glimpses used the collage as creative device to expand the visual possibilities of the single screen, but it also opened up the medium, revealing the potential in an absorbing array of images, drawing the audience in as participants and as authors of their own journey through the work. The NFB’s next Expo venture, seven years later, would take this into the physical realm—but not at a world’s fair at all.



EXPO 67 LIVE MONTREAL 2017

For most of its time working in the context of world's fairs, the NFB had to adapt or conform to the designs of Expo pavilions and cinema spaces. But advances in projection technology began to allow 21st-century creators to think outside of buildings—and in 2017, outside the Expo context entirely. Ironically, it was an homage to Expo 67, and all that it meant to Montrealers, that brought a world's fair creation outside, to the streets of Montreal, at a time when the NFB was experimenting at locations in Canada and abroad with installations—in galleries, museums, at festivals and in public spaces—that made the documentary experience more tactile, collaborative and emotional.

For Karine Lanoie-Brien, writer, designer and director of 2017's *Expo 67 Live*, it even involved The Beatles. Denied permission to use the classic song "Lucy in the Sky with Diamonds" in her project, Lanoie-Brien wrote this appeal to Paul McCartney, Ringo Starr and the spouses of George Harrison

and John Lennon: "I am the designer and director of an ambitious film project called *Expo 67 Live*, which will be presented as part of the 375th anniversary of Montreal. I designed the project as a 'cinematic island' in the heart of the city. Thousands of spectators will be surrounded by screens....an immense, immersive experience that tells the story of the world exhibition held in Montreal in 1967. This event transformed our society. The film begins in 1962 and follows the evolution of the city and its people as they work together to welcome the planet. I hope to revive the impetus of this movement that's capable of transporting the heart of the viewer to its essence."

Her letter convinced them, and the song, and many others from that period of joyous musical expression, provided much of the soundscape of *Expo 67 Live*.

It started when she and producer René Chénier met at a think tank meant to foster ideas about rejuvenating the island sites of Expo. Ambitious construction and renovation plans were tabled by various public and private organizations, but when none seemed likely to be advanced, the NFB team proposed a nimble idea: a two-week installation that would plunge viewers into a virtual Expo 67, maintaining the sense of community and shared experience that so many remember from that time.

Lanoie-Brien's artistic background, described by *American Cinematographer* magazine as having "a special focus on the relationship between art and physical space," gave her an especially acute eye and ear for this kind of project.

Twenty-three projectors. Four hundred and thirty-five linear feet of screens, five storeys high. Five giant cubes. Forty-three audio speakers. More than one thousand archival images from 1967. Created by the NFB in collaboration with Place des Arts, the project drew on the enormous archive of moving and still images, and audio files from the fair to create a film that surrounded the nightly audience, with the communal feel of being at a concert.

"In honour of the 50th anniversary of Expo 67, I wanted to offer people the opportunity to relive some of the special moments of this incredible gathering. My hope was that *Expo 67 Live* would engage our bodies in a narrative, just as Expo 67 itself engaged our bodies in meeting the unknown. So I wanted to make sure that this film/experience was as realistic as possible, by using modern tools to provide an authentic encounter with a vibrant past that has strong parallels with the present."

– Karine Lanoie-Brien, creator and director of *Expo 67 Live*





TRACES DUBAI – EXPO 2020

Five decades of world’s fair productions by the NFB have revealed the evolution of the institution itself, an extraordinary expansion of possibilities, tools and formats, and a blending of forms: from primarily film-based to video, then to digital and web-based, and then to hybrids of all of these.

The global context for its work has also changed, of course, particularly for the documentary form. The early “informational” films of the NFB led to more observational and socially engaged work, to more explicit points of view, more reflective and universal themes.

So it’s actually not entirely surprising that *TRACES*, the newest NFB project, premiering at Expo 2020 Dubai in October 2021 and running until March 2022, has distinct echoes of Expo 67’s *Labyrinth*. Both use architecture as part of their creative palettes, and both engage audiences with global and personal themes. Who are we? How do we connect with things larger than ourselves? How can we reflect on our possible futures?

This creative evolution has also seen the inclusion of creators who haven’t emerged from the traditional linear filmmaking tradition, instead bringing unique talents and perspectives from a range of artistic forms and backgrounds, to deconstruct and reassemble what an NFB production could be. This year, at Expo Dubai, it’s not a film at all.

TRACES is an intimate spectacle, an installation series of eight “boxes,” all at human scale, which invite visitors to enter, engage and contemplate the imminent demise of so much of our environment. It will carry on after Dubai, on a five-year international exhibition tour, and reach beyond the fair’s environs to a global audience through an artistic simulacrum of the project on the web.

One of the key creators of *TRACES*, architect and artist Rami Bebawi, is the co-founder of KANVA, a collective of architects whose work has gained acclaim for its excellence and sensitivity to public space and cultural meaning, and awards including the prestigious Professional Prix de Rome in Architecture from the Canada Council for the Arts.

TRACES will present visitors with species “fossilized in mid-flight,” as Bebawi puts it, as if their near-extinction had been frozen in the present, within amber-coloured blocks, lit from within, beautiful but profoundly sorrowful.

The “cubic” nature of the installation presented its own challenges to Lanoie-Brien during its development: “Writing for multi-screen is not normal. I had to write in my car because I have a screen in the front... doors, screen[s] on the side.” *Labyrinth* and other such projects were an influence: “When I read about all of these multi-screen films, I knew I had to propose something in harmony with them. Something that answered the question, ‘What was Expo 67?’”

The archives, while richly populated with footage of Expo, presented a challenge, as many of the shots lasted only a few seconds. But working with a team of digital artists at Couleur.tv, Lanoie-Brien found the narrative possibilities in the material by creating split screens and loops to digitally lengthen them, and to map together perspectives that didn’t exist in the original films.

Producer Chénier recalls that in 2014 he “started to think about celebrating the 50th anniversary of Expo 67 in the great tradition of innovation that has marked the history of the NFB. That intention was sustained through the avant-garde vision and multifaceted talent of Karine. Producing her concept

meant bringing together the varied know-how of many artists and experts, in order to produce this absolutely unique, site-specific experience. In the spirit of the NFB, this was a major step forward in the evolution of the art of storytelling—a first in the annals of public film events.”

Moving productions off the screen and into public spaces has been a hallmark of some of the NFB’s work in recent years, with installations and participatory projects that transport audiences—to the Arctic (well, at the Canadian Museum of Nature) via a sensory experience that includes slabs of real ice; through the evolution of skateboarding culture all over the planet while browsing the content on a real skateboard; and to a forgotten corner of 1948 Vancouver, brought back to life by acclaimed artist Stan Douglas, in which “the user’s body becomes the navigational device.”

As one of the new creators of this kind of work, Lanoie-O’Brien’s reflection on her 2017 project and the fair that it honoured offers a perspective that is in synch with what the NFB is doing in Dubai this year: “Expo 67 engaged our bodies in meeting the unknown. My hope was that *Expo 67 Live* would engage our bodies in a narrative.”



That beauty is part of the creator's intention to appeal not just to the viewer's intellect, or to their conscience, but to their emotions. "I don't want to dismiss intellect. But at first, it is so beautiful it creates an attachment. Because I think sometimes humans need to feel good about themselves to do better things. That you can bring the Earth back to life. And that's the whole interactive nature of it. The human actually has a role to play as a participant, as an actor. You're not just there for contemplation."

In his role as an NFB collaborator, Bebawi brings his ethos from his architectural practice: "I think sometimes I'm not sure if we're architects or storytellers, I really haven't figured it out yet. And I'm not sure I need to figure it out. But we always need to have a very deep narrative in everything we do."

Discussing his relationship on this project with the NFB, from when he was first approached by André Picard, the organization's Senior Director, Partnerships and Business Development, Bebawi speaks to the NFB's creative history: "The NFB understands the role of artists, and the NFB also represented an enormous reference during the entire project. For a creator it's as if the NFB has always existed. You have this living encyclopedia, that is so educated in so many fields. So it keeps challenging you. That is very rare, and really precious."

For André Picard, the effectiveness and artistic power of *TRACES* was apparent from the start. "I knew we had something great when I saw Rami's first rendering of the murmuration, drawn with an amber-coloured felt-tip pen. It doesn't often happen that a project's creative potential is so obvious so early. I knew this was going to be something quite different, and that its originality would fit very well within the NFB's history of artistic risk-taking."

"At the NFB, we are used to connecting storytellers and craftspeople whose talents are complementary but not immediately—or obviously—artistically adjacent," says Picard. "The wide array of talents the NFB has brought together for Expo Dubai reaffirm the NFB's long-standing role as a creative laboratory that not only produces new work, but new ways of working together."

The NFB continues to challenge itself, as it takes, alters and creates technologies that explode the possibilities to tell stories in new ways. Looking beyond 2021 and Dubai, its creators and producers are building future-looking projects, including ones that will use artificial intelligence to visualize thoughts and emotions generated by the pandemic, and reshape virtual reality tools to spur society to consider our role in stories of social injustice. Other forthcoming projects will hack social media tech to critically examine their societal impact, and design an interaction through the human voice with an AI entity to probe the beauty of human intelligence.

We can't know the future, but the future knows us when we get there. The Expo 67 thoughts of Roman Kroitor about *Labyrinth* ring true as the NFB prepares *TRACES* for Dubai: "It's an attempt to restore a sense of community in a fragmenting world, and to show that things that unite us are infinitely more worthwhile than those that divide us."

As Janine Marchessault put it: "One can see in the expanded-screen experiments at Expo 67 a foreshadowing of the intermedia networks, the mobility of images, and the cultures of the internet, along with the concomitant multiplication of screens that now pervade everyday life."

In 1939, upon the opening of the Canadian Pavilion at the New York World's Fair, planner and architect Humphrey Carver urged Canada to expand its creative ambitions. "Even in our most cynical moments Canada is, for most of us, a country of thrilling though elusive potentialities. The future of the country depends upon our success in conveying some of this thrill. It is an opportunity to project our national ideals and ambitions into three-dimensional form, that they may be seen and understood. We have plenty of ideas. The World of Tomorrow is upon us already."

With its expanded visions, the NFB is ready for that world.

"IT'S AN ATTEMPT TO RESTORE A SENSE OF COMMUNITY IN A FRAGMENTING WORLD, AND TO SHOW THAT THINGS THAT UNITE US ARE INFINITELY MORE WORTHWHILE THAN THOSE THAT DIVIDE US."

