



ev•o•lu•tion

... the gradual growth and expansion of our purpose, especially in relation to the needs of the communities we serve...

> The H.R. MacMillan Space Centre Society began 2020 in transition. While we had no idea of the full impact of what was to come, our team began to examine and redeveloped our reason for being. We reimagined our main objective: where is the H.R. MacMillan Space Centre going and what does it look like?

The outcome, a fresh approach and inclusive perspective, is our north star and speaks to the reason we exist.

Our Purpose

INSPIRING EXPLORATION

We use the universal appeal and science of space as a cultural bridge, bringing people together to activate curiosity, creativity, and community.

Our Mission

LEARNING WITHOUT FRONTIERS

We create an accessible environment where people are encouraged to explore and take risks.

Our Vision

CREATING EXPERIENCES OF WONDER

We dream of a world filled with inquisitive, openminded individuals who embrace their differences, connected through discovery and united through a deeper sense of shared humanity.

Our Values

COURAGEOUS

We are always willing to say yes to new things and fail – in our pursuit of wonder!

CREATIVE

Inclusive, resourceful, curious and bold. We are imagination explorers!

WOW

Our experiences external and internal are mind blowing and leave you saying AH-HA!



Message from the Board Chair and Executive Director

The building blocks of STEAM literacy are found all around us. Mastering STEAM literacy is a milestone moment in most learners' lives. The H.R. MacMillan Space Centre Society was built on the foundations of literacy; we have served as a hub of information, to nurture learning, and to champion truth and democracy. While these core values remain today—perhaps stronger than ever—the H.R. MacMillan Space Centre Society is proud to be part of building new literacies as we support the creation and sharing of knowledge in new and entertaining ways.

This report is a tribute to the all-encompassing literacy building you will find at the H.R. MacMillan Space Centre Society. Literacy that gets to the heart of people and their needs. We are adapting our services to answer the call from our communities, and as we write this report, our society is going through a massive shift of identity and structure due to COVID-19. The H.R. MacMillan Space Centre Society has risen to the challenge. Even while our building was closed in March, we were adapting our services to meet emerging needs and remain connected with the people and our communities. Our shift to remain connected initially was online, with our first program produced in April in celebration of Earth Day. We continued to develop online programs all the while planning our re-opening, which we were able to do in June.

What we learned in those initial months of lockdown was our broad approach to connection and STEAM literacy is more relevant than ever. Understanding scientific concepts and processes required for personal decision-making, participation in cultural and economic productivity – that is civic literacy. Talking about being part of the LGBTQ+ community—that is socio-cultural literacy. Using the internet to engage with community—that is technological literacy. And interacting and engaging with helpful staff who care about your wellbeing and safety? That is social and health literacy: human connection at its best.

Traditional science centre service—the development of exhibitions, telling of stories through programs, and stewarding of fact driven information—will always remain. In fact, these practices inform how we deliver new literacy tools, programs, and experiences. This annual report is our alphabet of literacy.

Finally, we could not do this amazing work without the dedication of our board and staff. In times of great challenge, our team goes above and beyond to reach out to the community, inspire hope and joy, and bring people together, even when we are separated. We are proud to share just a few stories with you, and we look forward to our next chapter.



Jonathan Burke

Chair, Board of Directors



Raylene M. Marchand Executive Director

Our Board

We would like to extend a warm thank you to our Board of Directors who continue to serve with passion, dedication and commitment. We extend our deepest gratitude for their significant and valued contributions.

Matthew Anthony (Past Chair)
Keith Acton (Treasurer)
Dr. Aaron Boley
Jonathan Burke (Chair)
George Hemeon
Derek Lew
Larkin Mackenzie-Ast (Vice-Chair)
Paul Moore
Greg Stanway (Secretary)
Roger Watts

Children's Healing **Experience Project** This year we worked with Straightline Designs to design and build a scale model of our solar system for the Children's Healing Experience Project at Sunny Hill Health Centre. Sunny Hill provides specialized developmental assessments and rehabilitation services to BC Children and youth and their families. Beautifully painted and highlighting unique features of each of the nine planets (Pluto was included!), this miniaturized solar system will spark wonder and curiosity in everyone visiting Sunny Hill.

Partners and Sponsors

GOVERNMENT PARTNERS

Young Canada Works Province of British Columbia City of Vancouver

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Chevron Canada Ltd.
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UrtheCast

Alysha Collie, 3 Crows Productions

PROGRAM PARTNERS

Catherine Po, Oceanwise
Christopher Rampersad, VP of
Engineering at UrtheCast
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Cynthia Ford, BC Library
Association
Dallas Yellowfly, 3 Crows
Productions
Dr. Aaron Rosengren, University
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Dr. Anna Mittelholz, Postdoctoral
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Dr. Daryl Haggard, Associate
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Dr. Frédérique Baron, Université de Montréal

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Oregon
Emily Doyle-Yamaguchi,

Faculty of Forestry, UBC Hayley Legassie, Joyful Learners Jeremy Hansen, CSA Astronaut Joalda Morancy, University of Chicago

Johanna Wagstaffe, CBC Meteorologist

Jordon Gabriel, Lil'wat Forestry Ventures Joshua Kutryk, CSA Astronaut

Karmella Barr, Drag Performer Kevin Gill, NASA Jet Propulsion Laboratory

Koskas Dan, Lil'wat Nation Elder Morgan Alford, Let's Talk Science, UBC

Masaki Fujimoto, Deputy Director General of ISAS/JAXA

Mihai Cioroba, Lead Effects Technical Director, Industrial Light & Magic

Mike Jutan, R&D Engineer, Industrial Light & Magic Robert Dick Shanda Leer, Drag Performer Stephanie Usher, BC Library

Tonya Smith, Faculty of Forestry, UBC

Association

ORGANIZATIONS/GROUPS

Blonde Diamond
BC Summer Reading Club
Canadian Association of
Science Centres
Canadian Museum Association
Canadian Space Agency
Department of Physics and
Astronomy, UBC
Faculty of Science, UBC
Girl Guides of BC
Let's Talk Science, UBC
Outer Space Institute, UBC
Surrey School District

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Respond...Pivot...Recover...Pivot...

Pivot, pivot — like many organizations throughout 2020, we approached the unique circumstance of a global pandemic and endeavored to understand how our organization needed to respond, plan for recovery, and ultimately thrive again.

A STRONG NETWORK

Our 2020 fiscal year was largely defined by COVID-19. As March arrived, the pandemic reached British Columbia's doors, and the Space Centre, following public health recommendations and requirements, closed our buildings on March 17. Over the past year, we have focused our educational approach on re-invention, re-interpretation and re-visioning. We were fortunate to collaborate and partner with many individuals and organizations that have been committed to providing the best experience under the new and unique circumstances of a global pandemic.

We immediately shifted programming online in the early months and then included onsite programming as we entered the summer. We delivered both online and onsite programs into the fall and winter. When possible, we continued to connect to our community through our traditional outreach programming. We also adjusted our delivery service approach and changed some experiences to hybrid events combining online and onsite. The Gordon Southam Observatory, our beautiful backyard of Vanier Park, and our updated Cosmic Courtyard Gallery became the focal point for our onsite delivery. We rebuilt our programming to provide a visitor experience that was entertaining, collaborative, responsive, educational and safe.

"Thank you for putting this on. What a fun way to learn, in our pj's, in our home!"

- May the Fourth Be With You event attendee



Sharing Out-of-This-World Expertise

May the Fourth Be With You has become a favourite event in the Space Centre calendar. We kicked off the program with an animation contest for children and then hosted an online event for over 350 participants eager explore the Star Wars universe with us. We were joined by some of the creative talent from Industrial Light & Magic, the company responsible for creating the amazing special effects seen in The Mandalorian. Mihai Cioroba, special effects lead, joined us during the event and shared how his background in math and computer animation helped him achieve his dream of working in special effects.

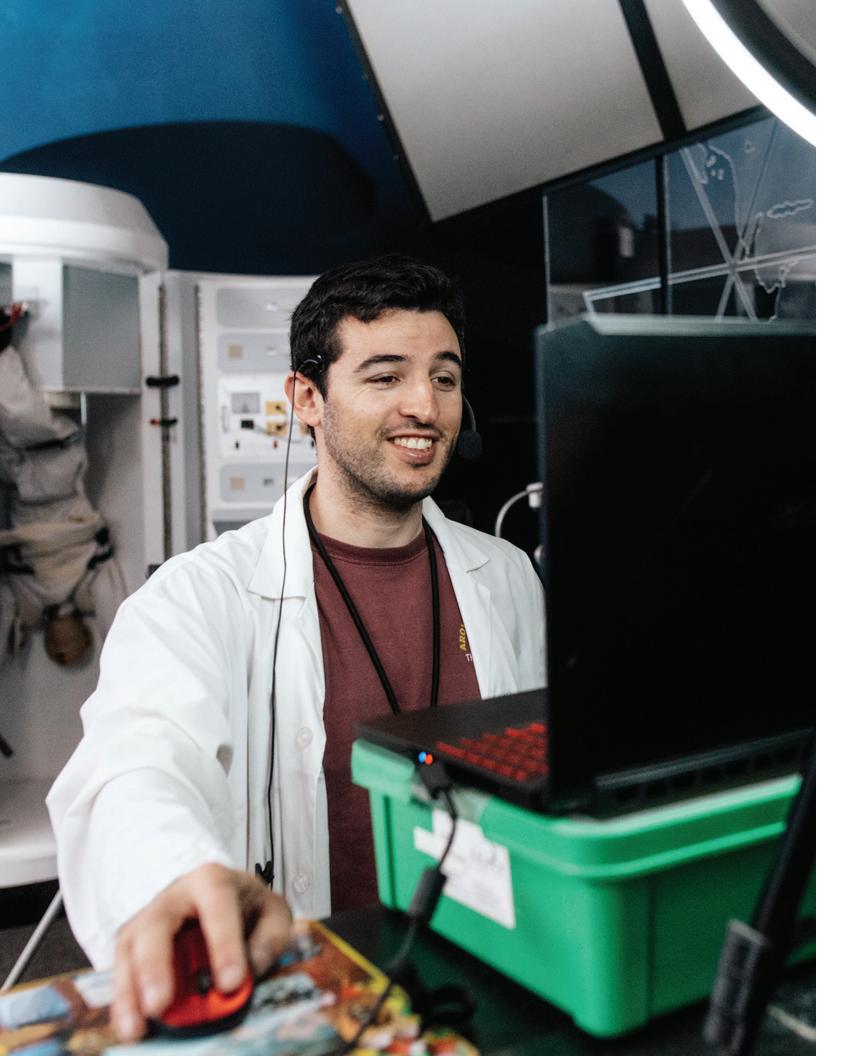
Sharing a Passion for Space

With meetings for community groups like Sparks, Brownies, Guides, Beavers, Cubs and Scouts, canceled because of the pandemic we supported their desire for learning and for community by hosting a series of online conversations about space. We started with an event hosted by BC Guides and were joined online by 1100 curious Guides and Brownies from across Canada to discuss the connections between living in space to exploring the outdoors. We then connected with the scouting groups and explored their motto, "be prepared", by looking at what astronauts would need to consider for living on Mars. In addition to these online jamborees, we continue to bring space education to guides and scouts through our new online program, Beam Us In, where we join regular weekly meetings for an interactive session about space exploration.

Sharing Audiences

Let's Talk Science, UBC, a science outreach program is the science education version of the Reese's peanut butter cup (chocolate meets peanut butter forming the perfect treat). This group of science educators were keen to work with children and we were looking for ways to amplify our staffing resources. We teamed up with Morgan Alford of Let's Talk Science, UBC, and challenged her to help develop activities for each of our new summer programming weekly themes. Morgan, a UBC doctoral student, rose to the challenge and created short videos each week demonstrating activities related to our weekly programming.

2020 Annual Report H.R. MacMillan Space Centre Society



"Thank you so much for providing a safe event for families to attend.
This was the highlight of our winter!!

- Mars: Planet of Robots program attendee

a•dapt

... to make the tools, services, and strengths of the Space Centre suitable for new uses or purposes...

As we focused on adapting and going 'beyond our walls' we also went out in our communities and built relationships. We popped up on Telus Optik TV to talk about the night sky; we worked with our summer intern students to engage our visitors in new ways like a simulcast of onsite/online events; and we collaborated with teachers and students to bring their programs about space and science to life...we are always keen to find new and surprising ways to reach new people and places.

Making the Most of Physical Distance

What kind of in-person program supports physical distancing, is fun and helps kids wonder about the universe? A program about scale and distances in the solar system. This summer we offered a fun, physically distanced program for community centres. Set up outside, participants and our staff had fun creating a large scale model of the solar system and discovering more about planets, moons and other objects in our solar system.

Shooting Stars in Our Own Backyard

This year we wondered, could we see the Perseid showers in our own backyard of Vanier Park? The answer is yes! We hosted an evening of meteor shower viewing and conversations about the night sky and were treated to streaks of light that characterize this annual event. Wanting to expand our reach, we also simulcast the event on YouTube reaching viewers beyond the lower mainland.

Zooming into the Classroom

This was a challenging year for teachers and students, and we developed resources to help enrich their learning. We started with providing free E-Resources on our website and hosting our regular *Ask and Astronomer* show on Youtube. In the fall, we launched our brand new online school programs. Each program provides students with two learning playlists, one to prepare them for a 60-minute interactive online program and the second which helps them to extend their learning. The online program, facilitated by our education staff, integrates the best of our on-site programs and provides opportunities for students to ask questions.

Reaching New Audiences

This year we hit the airwaves with Telus Optik with two of our new online programs, *Ask An Astronomer* and *Virtual Cosmic Nights*. Through Telus Optik's community channel we reached viewers across British Columbia and Alberta and were consistently rated the most viewed content on the Telus community channel. We look forward to sharing the wonder of the universe with more Telus Optik subscribers next year.

By the Numbers

THE SPACE **CENTRE AND ME**

78,129 visitors

1284

volunteer hours



EVENT PARTICIPATION

1606

events held

19,711

participants in programs from Cosmic Nights to Summer Solstice to Perseids Summer Star Party



SOCIAL MEDIA ENGAGEMENT

922,400+

facebook reach

265,000+

twitter impressions





YOUNG MINDS

34,475

kids participated in the Library Summer Reading Club program

8861

youth took part in programs like Ask an Astronomer to May the 4th Be with You to Joyful Learners seminars

5257

school program participants

LITERACY ON THE MOVE

9975

viewers of our programming on Telus Optik TV

2275

participants in Chevron Harnessing STEM programs

BEYOND OUR WALLS

208

off site events, out and about in the community







STEAM(ing) Ahead!

In April, like many, our staff were working from home. We moved swiftly to determine: "How can we recreate the Space Centre experience, at home?" and "How can we continue to connect with our audiences—whether that be for accessing space content and news, social connection, or education?"

SHARING & AMPLIFYING

We believe it is our duty to position our platform as a safe space to elevate and amplify the talents, missions, and causes of change makers. As global-scale social and political shifts intersect with information overload, our platform is more important than ever and we are responsible for using it for good.

To this end the H.R. MacMillan Space Centre hosted events ranging from discussions about Indigenous experiences in residential schools, to Drag Queen identity, to in-depth presentations on the effects of climate change. As our 2020 year drew to a close and we leveraged our web and social presence, and community partnerships to answer these questions, the resourcefulness of our team, and the care of our communities, had never been more apparent.

We look forward to telling you the many stories that emerged from—and continue to emerge from—our response to COVID-19, in the months to come.

> "It's like getting together with friends who know a lot of stuff, and it's just enjoyable."

- Virtual Cosmic Nights attendee

in•tel•lec•tu•al free•dom

... the right of every individual to both seek and receive information at the Space Centre, from all points of view, without restriction...

Questioning Our Past

Working with 3 Crows Productions we hosted their multimedia production of *Qwalena: The Wild Women Who Steals Children* in our star theatre for high school students. The production promotes anti-racism and creates awareness of the inter-generational impact of Indian residential schools through story, performance and conversation.

Questioning Our Future

2020 marked the 50th anniversary of *Earth Day* and we celebrated it with our first online Cosmic Night. Our host Program Coordinator Michael Unger was joined by our Astronomer Rachel Wang, special guest CBC Meteorologist and science reporter, Johanna Wagstaffe. We had more than 320 viewers explore climate change and other contemporary issues facing our planet. Special content for the event was also provided by the Canadian Space Agency and UrtheCast.



em•pa•thy

... the Space Centre's approach to operating with 'people at the heart of all we do'...

TRADITIONAL LITERACY

Traditional literacy has its roots in reading and writing. Books, children's reading programs, and learning tools remain an important part of our services.

Taking Summer Reading into Space

We love to work with libraries and librarians and this year we were thrilled to partner with the popular BC Summer Reading Club program run by the BC Library Association. The theme for the summer was *Explore Our Universe* and we supported the program with resources, hosted a professional development event for librarians and two online events for children. We had participants from across the province joining Trish Pattison, Program Coordinator and Rachel Wang, Astronomer to learn more about what to look for in the summer night skies and to answer their questions about astronomy - everything from what would happen if you fell into a black hole to do aliens exist. Our BC Summer Reading Club partners really took up the challenge to explore the universe and even created a fun card game, Mission Control, where players go on an interstellar expedition.

Connecting with Home Learners

Supporting home learning has always been a focus for us but this year provided an opportunity to expand the ways we engage home learners. With limited access to schools, libraries, museums and science centres, home learners were looking for resources. We developed different ways to support learning: over the summer that expanded and introduced new topics every week and provided resources for participants to explore. We hosted a monthly Home Learners event, and each month we took a deep dive into a theme—from black holes to extremophiles—with children from 5 years to 16 years old. Each session provided opportunities for participants to ask questions, test their knowledge with our trivia game and become inspired.

"The activity was extraordinary."

- Mars: Planet of Robots Webinar attendee

"I enjoy watching all of the live streams. I'm a big space science fan. When I grow up I want to be an aerospace engineer."

- Ask an Astronomer Q&A attendee

DIGITAL LITERACY

Digital literacy and access through technology became even more important as a lifeline for community connection and wellness. Our online activities and resources provided both a connection to the world and to others while we remained apart.

Sparking Curiosity with Ask an Astronomer

We took to the airwaves this year with our new *Ask an Astronomer* show on YouTube. From exploring concepts such as how gravity works, to talking about astronomy in the news, to hosting special guests including Canadian Space Agency Astronaut Jeremy Hansen. Our weekly program hosted by Michael Unger, Program Coordinator and Rachel Wang, Astronomer, developed a dedicated audience of adults, teachers and children. We've even had a chance to meet some of our younger starstruck fans as they joined us in person over the summer at our on-site events.



Sparking Wonder with Joyful Learners

Joyful Learners was started early in the pandemic by a Langley mom and elementary teacher who was on leave from work. Seeing a need to support parents with young learners at home, founder Hayley Legassie, reached out into the community looking for organizations to help enrich their learning. We jumped at the chance to be involved and started a regular program of wondering about space with a very inquisitive group of children. Each 30-minute Zoom lesson was framed around the wonders of space and included activities the children could take out into their own neighbourhood to continue wondering and observing. Our online teaching incorporated lots of opportunities for questions and sharing. For students who had been very restricted with the social interactions this monthly Zoom session allowed them to see, smile and interact with us and each other. This social emotional learning was invaluable for all involved.



in•clu•sion & di•ver•sity
...our approach to welcoming our community in all ways,
especially as we continue to evolve and respond to the
unique world and people around us...

SOCIAL AND CULTURAL LITERACY

We are a space for everyone, and are committed to providing information, resources, and events that support the health and well-being of our community members.

Exploring Identity

We took our second drag event online in the fall with *Splendor in Space: Back to School Edition*. Part talk show, part drag show, and part science lesson, we were joined by local drag performer Shanda Leer and drag artist and schoolteacher Karmella Barr to explore questions about finding our place, who we are on this planet, and our identity in the universe.

Exploring Other Perspectives

We celebrated the longest day of the year with an outside event looking at the Sun, seasons and some storytelling. We teamed up with 3 Crows Productions to celebrate the Solstice with performances of *How Raven Stole the Sun*. Our audiences were treated to a fun and interactive retelling of the story with storyteller Dallas Yellowfly.

Exploring Community

Through sponsorship from Chevron Corporation, we have been privileged to spend the past six years travelling between Kitimat and Mackenzie bringing STEM (science, technology, engineering and math) programming into communities, big and small. We have supported teachers with STEM professional development, provided libraries with materials to loan, and sparked wonder and curiosity in children and adults alike. As an organization we've been enriched too—our educators have learned from Indigenous educators and elders, we've developed new programs, and created new relationships with communities. It has been a joy to share our passion for STEM education throughout the province.

Faces of the H.R. MacMillan Space Centre Society

Achieving our vision requires great work on the part of our board, staff, volunteers, donors, and community organizations that partner with the Space Centre. We are so grateful for those who share their talents, compassion, and ideas with us every day.

MANAGEMENT

Raylene M. Marchand Executive Director

Samaneh Badiei Director of Finance

Lisa McIntosh
Director of Learning

Annika Penner
Director of Human Resources
and Operations

Skyler Thompson
Director of Fund Development

VOLUNTEERS

Arman Athwal Kieran Duffy Bryon Elliot Karen Lee Rob Lo Vida Morkuna Nicole-Ann Poitras

ADMINISTRATION

Bethany Andriulaitis Archives Intern

Rachel Carlson Archivist

Ella Guzman
Accounting and Finance Clerk

Justin Low Marketing Intern

Jennifer MacDonald Marketing and Communications Coordinator Cheryl Sweeney

Bookings and Administration Assistant

GUEST AND RENTAL SERVICES

Jasmine Coble
Guest and Rental Services Supervisor

Therese Edwards
Guest and Rental Services Supervisor

Patrick Fergusson
Guest Services Supervisor

Crystal Lai

Guest Services Supervisor

Grant Malo Guest Services Supervisor

GUEST SERVICES STAFF

Jonathan Fung
Dicle Kolukisa
Shelley Preston
Allan Soone
Terry Soone
Daniel Vera

LEARNING SERVICES

Christine Henderson Head Interpreter

Mike Koziniak Digital Media Producer

Mily Mumford
Multi-Media Producer

Trish Pattison
Programs Coordinator

Jonathan Teague Head Interpreter

Rachel Wang Astronomer

Michael Unger Programs Coordinator

Jasmine Zhang Programming Intern

INTERPRETIVE STAFF

Simran Badial Matthew Beaudoin Stephane Bernard Colleen Bignell Matthew Cimone Pablo Finkel Mackenzie Fleming Shannon Gilchrist Erin Green Raphael Kepinski Kenneth Lui Casey Mok Mark Moraes Hikari Rachmat John Reid Jawad Sakarchi Michelle Sz

TECHNICAL SERVICES

Jason McRae Chief Technician

Dave Sale
IT Consultant



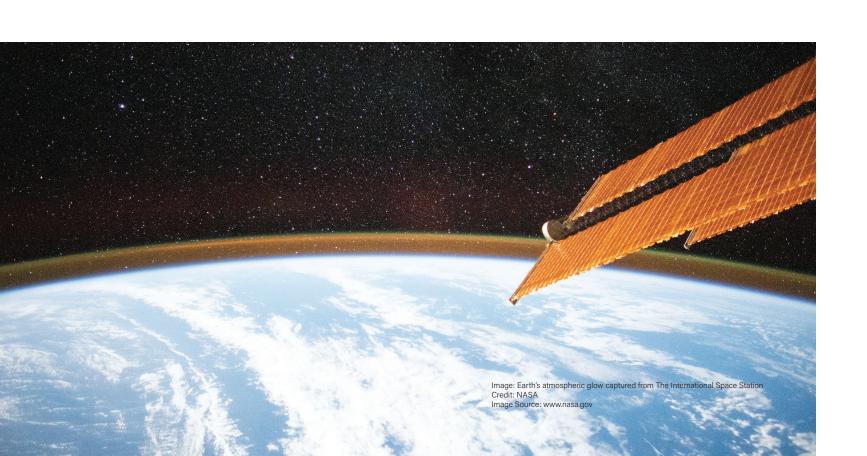
2020 Financial Summary

The H.R. MacMillan Space Centre Society receives the majority of its government funding from Vancouver Municipality and the Province of British Columbia. In 2020 we also received funding over and above our traditional support from the federal government for summer interns, under CEWS (wage subsidy). We are incredibly grateful for the support of our corporate and foundation sponsors and our generous community members. 100% of donations support our programs and services—taking it from operational to extraordinary.

As the Space Centre evolves, we're doing even more in our spaces and communities, and staff and board members are the driving force behind this evolution.

To ensure our spending aligns with identified priorities, the Finance Committee of the H.R. MacMillan Space Centre Society Board oversees the financials. This year's budget priorities included programming and

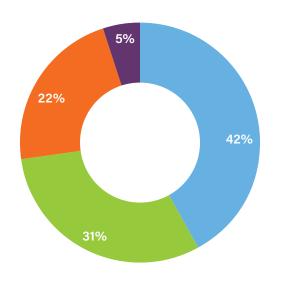
content development, our marketing approach, and fund development campaigns. When we closed our physical spaces to help prevent the spread of COVID-19, the Board quickly responded by supporting staff to further improve the Space Centre's e-resources, outdoor and indoor programming. These improvements help to further diversify programming in underrepresented areas such as Indigenous, Black, and LGBTQ+ communities.



\$
\$519,400
\$386,298
\$ 270,491
\$65,708
\$1,241,897

EXPENDITURES	\$
Departmental Expenses	\$787,475
Programs and Services	\$237,338
Special Projects	\$104,557
Amortization Net of Deferred Capital Contribution)	\$55,520
ГОТАL	\$1,184,890
SURPLUS	\$57,007

Revenues



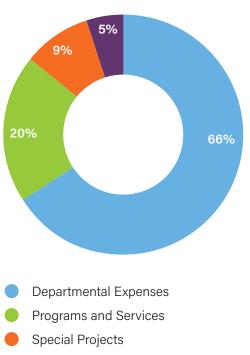
Municipal Grant

Special Projects and Donations/Gifts

H.R. MacMillan Space Centre Generated

Provincial Grant

Expenditures



(Net of Deferred Capital Contribution)

What Is Next?

We will continue to adapt and grow with our community. Our role is to answer the public call by reflecting and honouring our community's needs through the services and resources we offer; and, at the heart of our decision-making, we are anticipating and responding to the ever-present: as we move beyond the pandemic, we are envisioning what's next for the Space Centre...

SUPPORT THE SPACE CENTRE

The H.R. MacMillan Space Centre Society brings the community together. We're committed to providing access for everyone to diverse programs, vibrant spaces, and engaging events.

Whether big or small, your donations help make this possible.

You can find more information and make an online donation by visiting: **spacecentre.ca/donations**

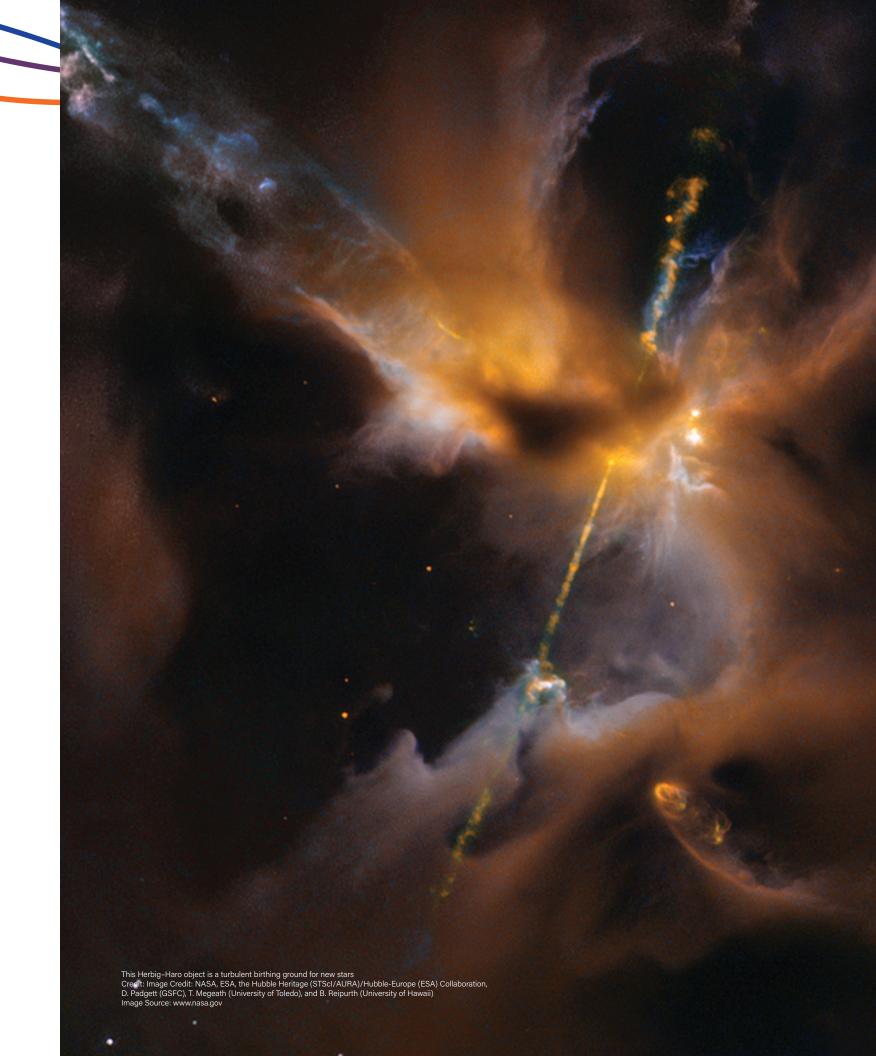
FOUNDER

H.R. MacMillan

PATRON

Mrs. G.T. (Jean) Southam, C.M.

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