



**CAN 2.0:**  
**Accelerating the impact  
of neuroscience in Alberta**



Campus Alberta  
**Neuroscience**



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# Executive Summary

Neuroscientists and mental health researchers in Alberta and beyond work on what is widely considered the final frontier of knowledge: the brain. Campus Alberta Neuroscience (CAN) was established by the Alberta neuroscience community in 2012, with support from the Government of Alberta, to accelerate understanding of the brain and improve brain health through collaboration, to develop the province as a centre of neuroscience excellence and innovation and to improve the quality of people's lives.

CAN brings the academic neuroscience communities at the Universities of Alberta, Calgary and Lethbridge together — and connects neuroscience and mental health researchers and trainees with peers, clinicians and health care professionals, people with lived experience, patient advocacy groups and nonprofit organizations, government, industry, funders and the general public. It is a catalyst for forging collaborations to create and unleash knowledge, a partner in strategy development and an implementation resource broker.

In the past five years CAN has focused its work in education across neuroscience and in research and translation in five focus areas: depression, healthy brain aging and dementia, multiple sclerosis, nervous system injury and neuroimaging. Through this work, CAN has:

- Created a made-in-Alberta approach to neuroscience education that has enriched the experience of trainees and made them more competitive in careers in neuroscience and beyond;
- Built Alberta partnerships across disciplines and among diverse stakeholders that have informed and launched discovery and translation projects in the focus areas of depression, healthy brain aging and dementia, multiple sclerosis, nervous system injury and neuroimaging; and
- Increased the network of connections required to create positive impacts on brain health through neuroscience research, education and translation.

**The next phase in CAN's evolution – CAN 2.0 – will build on success and create greater impacts by connecting the integrated network more effectively with the broader community and external stakeholders, with other disciplines and with national and international brain health initiatives.**

**CAN's mission and vision for the next five years of neuroscience impact are:**



### **MISSION**

**Enabling the neuroscience community to create, share and apply brain knowledge.**



### **VISION**

**Healthier brains through collaborative research, education and implementation.**

To achieve this vision and fulfil the mission, CAN will continue its work in education and its focus areas and undertake four new transformative initiatives:

## 1. Neuroscience Strategic Clinical Network

Partner in the development of a new Strategic Clinical Network to improve brain health in areas of neuroscience not included in existing Strategic Clinical Networks.

## 2. Engage, Inform, Connect on Neuroscience

Putting people with lived experience, families, patients and the community into the centre of neuroscience and brain health work in Alberta.

## 3. Multidisciplinary Training and Research to Accelerate Innovation in Neuroscience

Building on Alberta's excellent university programs to bring engineering, math, computer science and other approaches to bear on neuroscience and mental health problems to create a solutions engine that is connected to entrepreneurs, industry, the health system and the community.

## 4. The Banff International School of Neuroscience

Bringing global leaders to Alberta to solve problems in brain health, train a new generation of leaders and define the future of neuroscience.

## ALIGNED WITH PROVINCIAL INITIATIVES

*CAN 2.0: Accelerating the impact of neuroscience in Alberta* is the roadmap to better brain health. It aligns with the work of partners and stakeholders and it is consistent with the direction of the Government of Alberta for research and innovation, for advanced education and for health. CAN 2.0 aligns with the *Alberta Research and Innovation Framework* through its focus on engaging individuals and communities in a manner that enhances the health and wellbeing of Albertans. CAN 2.0's focus on connecting research and innovation to efforts to improve care and reduce the burden of disease through Strategic Clinical Networks and other mechanisms will directly support the Government's response to *Valuing Mental Health: Report of the Alberta Mental Health Review Committee, The Way Forward: Alberta's MS Partnership*, the anticipated *Alberta Dementia Strategy and Action Plan* and other health initiatives.

**Underlying all of these efforts is a focus on education, creating a single neuroscience campus to ensure students have the tools they need to succeed. CAN 2.0's commitment to excellence in neuroscience will directly benefit the province in research, education, translation and innovation and will improve the pathways to better brain health for all Albertans.**

# CAN 2.0

## QUICK REFERENCE

### MISSION

Enabling the neuroscience community to create, share and apply brain knowledge

### VISION

Healthier brains through collaborative research, education and implementation

### GOALS

1. Enrich the avenues to protect and enhance brain health
2. Advance and apply neuroscience
3. Integrate the Alberta neuroscience network with the broader community

### STRATEGIC PRIORITIES

1. Engage broadly to identify, create awareness of and focus neuroscience on priority needs for Alberta.
2. Further develop the integrated, leading neuroscience community in Alberta.
3. Refine and expand the model for generating new knowledge, applying it and achieving greater results.
4. Advance the education of the next generation of neuroscience leaders in Alberta.
5. Implement a robust and sustainable collaboration model.

### NEW INITIATIVES

- **Neuroscience Strategic Clinical Network** – partner in the development of a new Strategic Clinical Network to improve brain health in areas of neuroscience not included in existing Strategic Clinical Networks.
- **Engage, Inform, Connect on Neuroscience** – putting people with lived experience, families, patients and the community into the centre of neuroscience and brain health work in Alberta.
- **Multidisciplinary Training and Research to Accelerate Innovation in Neuroscience** – building on Alberta’s excellent university programs to bring engineering, math, computer science and other approaches to bear on neuroscience and mental health problems to create a solutions engine that is connected to entrepreneurs, industry, the health system and the community.
- **The Banff International School of Neuroscience** – bringing global leaders to Alberta to solve problems in brain health, train a new generation of leaders and define the future of neuroscience.

### OUTPUTS

- Create a single Alberta neuroscience campus
- Attract best and brightest students
- Provide superior educational experience
- Leverage educational assets
- Accelerate research discovery and translation
- Expand strategic research capacity
- Increase impact of neuroscience
- Elevate Alberta’s reputation

### OUTCOMES

- Improved avenues to address the brain health of Albertans
- High impact partnered approach to research, priority setting and translation of knowledge into practice
- Better support for evidence-based brain health programs
- Quicker implementation of brain health improvements
- The development of more-successful neuroscience graduates
- Global recognition of Alberta as a leader in neuroscience research and education
- Growth, innovation and entrepreneurship in neuroscience and related industries

# Coming together to solve the great mysteries of the brain

Neuroscientists in Alberta and beyond work on what is widely considered the final frontier of knowledge — not outer space, but inner space: the brain. They devote their careers to solving mysteries and unlocking the promise of better lives.

Few lived experiences are more destructive and frightening than brain disease. Often raging unseen, its impact and cost is measured in the quality of people's lives and in personal and societal finances. These costs are ultimately carried by every Albertan and every Canadian. Neuropsychiatric illnesses and dementia care combined currently cost the nation more than \$25 billion every year. A growing population and an aging society are predicted to push the number for dementia care alone to \$150 billion each year within a generation. This makes understanding brain health — all areas of neurological disease and neuroscience research, including brain and mental health, neuromuscular disorders and spinal cord injuries and disorders — vitally important and increasingly urgent.

**Campus Alberta Neuroscience (CAN) was established in 2012 to accelerate Alberta's investigations into brain health and to establish the province as a centre of neuroscience excellence and innovation.**

By bringing the academic neuroscience communities at the Universities of Alberta, Calgary and Lethbridge together with stakeholders, researchers and clinicians from neuroscience and other disciplines, CAN creates and fuels a powerful, interconnected network with the potential to create and unleash knowledge and make a significant and lasting impact on lives.

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Neuroscience is the study of how the nervous system develops, its structure and what it does, and also with what happens to it when people have neurological, psychiatric and neurodevelopmental disorders, and how to address these disorders. This definition encompasses mental health, including the study of mental wellness and the understanding, treatment and prevention of mental illnesses.

**“Overall, CAN has had a major positive impact, significantly increasing the quality and impact of neuroscience in Alberta.”**

**CAN External Review  
October 2016**

The foundational first step of that work — the inaugural strategic plan, “CAN 1.0” — is ongoing and an independent external review (completed October 2016) confirms CAN'S impact:

- the effective distance between the universities has been greatly reduced, and beneficial partnerships forged, through strategic collaborations in education, research and translation;
- significant gains have been made in education and training; and
- CAN is recognized as a focal point for neuroscience in Alberta.

Building on these achievements, it is now time to reach higher to achieve the larger goal. Building on input from the neuroscience community and external stakeholders through consultation and a formal external review, this document lays out the key steps required to position CAN and the neuroscience community on the forefront of brain, spine, nerve and mental health research, education and knowledge translation — and to solve mysteries that will improve the lives of people in Alberta, across Canada and around the world.

The following pages describe the approach and progress in CAN 1.0 as well as the strategic extension of this work to create greater impacts in ***CAN 2.0: Accelerating the impact of neuroscience in Alberta.***

# Laying the foundation for collaboration, education, innovation and impact

In Alberta, timely and strategic investments by government, philanthropists and universities — and engagement of some of the best researchers in the world — fueled the rise of strong centres for neuroscience:

- Canadian Centre for Behavioural Neuroscience at the University of Lethbridge;
- Hotchkiss Brain Institute and the Mathison Centre for Mental Health Research & Education at the University of Calgary; and
- Neuroscience and Mental Health Institute at the University of Alberta.



Given the complexities of brain health, however, even hundreds of dedicated researchers could achieve only so much if they were to tackle this enormous challenge on their own. To move from strong to extraordinary, they recognized the need to work together, from the ground up, in a new and different way.

Campus Alberta Neuroscience was born of this realization in 2012. Funded by the Government of Alberta and led by a steering committee from the institutes and the broader neuroscience community, CAN promotes and propels strategic collaborations with diverse stakeholders across the province. It aims to elevate the impact of neuroscience research, education and translation in the province, transforming the neuroscience landscape in order to make a positive impact on people’s lives and on the province itself.

CAN is a catalyst, broker and connector. It defines community broadly, bringing together the contributions, perspectives and passions of researchers, applied scientists, trainees, clinicians and health care professionals, people with lived experience, patient advocacy groups and nonprofit organizations, government, industry, funders and the general public. Through a lens that spans the neuroscience spectrum and crosses multiple disciplines, CAN sees and engages a wide community of stakeholders essential for advancing brain health.

<p><b>CAN MISSION</b></p> <p><b>Enabling the neuroscience community to create, share and apply brain knowledge</b></p>	<p>.....</p>	<p><b>CAN VISION</b></p> <p><b>Healthier brains through collaborative research, education and implementation</b></p>
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CAN brokers research and translation funding support for neuroscience from traditional and non-traditional sources. CAN does not directly fund research activity in Alberta.

**CAN recognizes that its efforts must be strategically focused in critical capacities where true impact can be realized. The following four themes are at the core of CAN's activity and are necessary to understand the brain and to apply that understanding to improve brain health.**

#### THEME 1

### The Importance of Research and Discovery

CAN has focused on creating a province-wide perspective within the academic neuroscience community. Integrating the knowledge-generation activities of neuroscience researchers with those of outside individuals and organizations — among them, researchers in complementary disciplines beyond neuroscience, people with lived experience, advocacy and support organizations, and government agencies and policy-makers — helps to cast a brighter light on growing societal needs, augment the application of new knowledge in the health system and promote wider dissemination of knowledge to all Albertans.

#### THEME 2

### Education is the Heart of Progress

Through education, research comes to life and new generations of skilled researchers and leaders are prepared and inspired. Equipping trainees with the tools and expertise to excel in an evolving research environment requires collaboration and multidisciplinary problem-solving approaches that will augment their projects and enable them to make an impact more quickly. CAN works with stakeholders from across the neuroscience community to grow education and training through unique multi-institutional and multidisciplinary opportunities that highlight and complement the strengths at each institution. By increasing access to neuroscience expertise across the province, CAN helps to enrich the educational experience for Alberta's trainees and contributes to a unified and comprehensive neuroscience campus.

#### THEME 3

### Translation is Essential

The need for the neuroscience community to inform and engage more fully with the broader community is increasingly evident, and made all the more urgent by the rapid pace of discovery, the magnitude of the brain health issues, global dissemination of knowledge and evolving clinical practice. By fostering greater connections among researchers, clinicians, trainees and other stakeholders, CAN helps to enable and empower the community to play a stronger role in neuroscience discovery and application. Over time, the benefits of this collaboration will return to the neuroscience community, as diverse perspectives and insight will result in a broader, more-integrated neuroscience community able to deliver greater impact.

#### THEME 4

### Accelerating Innovation

CAN has built strong connections with industry partners in its first four years to support research discovery and translation in Alberta. Through its signature initiatives, CAN 2.0 will introduce new opportunities to engage innovators and industry. The growing international connections and the strong multidisciplinary approach to solving brain health, coupled with Alberta's neuroscience strength, will create an engine for discovery and translation that can be connected to industry and entrepreneurs to accelerate innovation in Alberta neuroscience.

# CAN IS DELIVERING ON ITS PROMISE

CAN has helped to create a single multifaceted, interconnected neuroscience community and laid the foundation for Alberta to become a force to be reckoned with on the world neuroscience stage.

CAN has created the environment in which to engage experts from a multitude of backgrounds and disciplines, and expand knowledge and skills, in order to propel discovery and deepen the impact of neuroscience. Since 2012, CAN has:

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## Spurred creation and growth of cross-campus research and translation teams

- Depression
- Healthy brain aging and dementia
- Multiple sclerosis
- Nervous system injury
- Neuroimaging

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## Created a made-in-Alberta approach to neuroscience education

- Increased student mobility across campuses
- Created specialized training in advanced neuroscience techniques delivered collaboratively across campuses
- Increased professional development through workshops, internships and networking opportunities at provincial and international symposia

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## Built partnerships across disciplines and among diverse stakeholders

- For example, collaborations between Alzheimer Society of Alberta and Northwest Territories, Alberta Innovates Health Solutions, the Seniors Health Strategic Clinical Network, Brain Canada and Alberta's Healthy Brain Aging and Dementia research and translation team

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## Launched discovery and translation projects

- Using biomarkers and magnetic resonance imaging to improve diagnostic approaches
- Using animal models to understand disease progression
- Creating platforms such as the National Neurophotonics Platform (co-led from Alberta)
- Expanding the Rick Hansen Alberta Spinal Cord Injury Registry

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## Attracted the world to Alberta

- Israel Alberta Neuroscience Symposium (June 2015)
- Promoting Healthy Brain Aging and Preventing Dementia international conference (May 2016)
- Visits by 20 world experts through the International Scholars Program

# MEASURES OF SUCCESS



**2:1**

Research, education and translation investment for every CAN dollar spent



**25+**

Strategic partnerships formed with community groups, non-profit organizations, government agencies and other stakeholders to drive outcomes and impact



Of Alberta neuroscience and mental health researchers participated in CAN programs, projects and the CANdex: Alberta's neuroscience database

More than

**3,200**

Days of trainee workshops, education and networking since 2012



**200+**

Average participation of Alberta collaborators and partners at CAN Annual Symposium



First funded project to improve diagnostic tools

4

University courses shared to trainees across the province



Everything you have done, currently do and will do going forward has, does and will benefit millions of people living with dementia every day.

A person with lived experience of dementia speaking at the 2016 Campus Alberta Neuroscience Annual Symposium



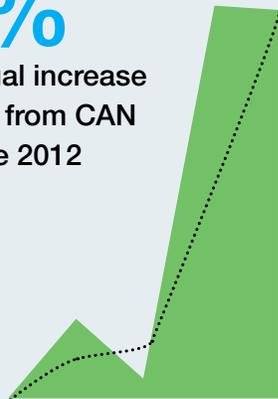
168%

Average annual investment increase into collaborative engagement through CAN funding programs



635%

Average annual increase in investment from CAN partners since 2012



A unique opportunity from CAN brought me to Alberta and has made it possible for me to be the bridge between researchers, clinicians and the community who otherwise would be unable to collaborate.

A University of Alberta postdoctoral fellow working in collaboration with the University of Calgary to improve rehabilitation outcomes



Trainees include undergraduate students, graduate students, postdoctoral fellows and residents at CAN's affiliated institutions.

## Charting the path for the future

Achievements to date reflect both the benefit of CAN's collaborative approach and the tremendous long-term potential to increase the impact of neuroscience in Alberta and beyond.

Opportunities to realize the full promise of CAN lie at the intersections between knowledge generation through research and the application of that knowledge in the clinic, community and industry.

The ability of the neuroscience community to positively impact brain health depends on high-functioning teams, the connection of those teams to the community at every stage of the endeavour, training the next generation of researchers, clinicians and translators and harnessing technological advancements in data and devices.

The next phase in CAN's ongoing evolution – CAN 2.0 – builds on early successes and connects an integrated neuroscience community more effectively with external stakeholders, with other disciplines and with national and international brain health initiatives.

**“We were greatly impressed both by CAN's initial achievements and by its potential future role in the Alberta economy.”**

**Excerpt from the external review,  
October 2016**

This is how the full impact and value of CAN will be delivered in education, research and translation initiatives within neuroscience communities locally, nationally and internationally – and how CAN will accelerate the impact of neuroscience in people's lives.

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## **FUTURE DIRECTIONS GUIDED BY PARTNERS AND STAKEHOLDERS**

The perspective of stakeholders charts the way for CAN's next steps. Following a formal external review process and consultation with CAN members and partners, CAN 2.0 sees clear opportunity to continue to build on progress while also introducing new initiatives for greatest impact.

### **CAN will focus its energies on:**

- making a positive impact in lives and in research
- connecting and sharing with the broader community
- building research and education capacity
- educating the next generation of leaders
- increasing awareness of neurosciences' and CAN's role and potential
- unleashing the power of collaboration

CAN 2.0 aligns with the work of partners and stakeholders and it is consistent with the direction of the Government of Alberta for research and innovation, for advanced education and for health.

CAN 2.0 aligns with the *Alberta Research and Innovation Framework* through its focus on engaging individuals and communities in a manner that enhances the health and wellbeing of Albertans. CAN 2.0's focus on connecting research and innovation to efforts to improve care and reduce the burden of disease through Strategic Clinical Networks and other mechanisms will directly support the Government's response to *Valuing Mental Health: Report of the Alberta Mental Health Review Committee, The Way Forward: Alberta's MS Partnership*, the anticipated *Alberta Dementia Strategy and Action Plan* and other health initiatives. Underlying all of these efforts is a focus on education, creating a single neuroscience campus to ensure students have the tools they need to succeed.

The recommendations from CAN's members, partners and stakeholders are essential to building the strategic vision of CAN 2.0. The following pages describe CAN's approach to increasing the impact of neuroscience research, education and translation through expansion of current successes and the introduction of four signature initiatives to bring its vision to life.

# **CAN 2.0:** **Accelerating the impact of neuroscience in Alberta**

In its inaugural strategic plan, CAN laid out the blueprint for accelerating neuroscience research and translation. It targeted heightened collaboration among Alberta stakeholders to create an effective, sustainable model for working together to achieve more than would be possible through independent activity. This foundation is in place.

CAN 2.0 lays out the strategic steps for CAN and its stakeholders to become the “big engine” of discovery, education, knowledge dissemination and application. It sets ambitious goals and endeavours to create and help fuel the themes, focus areas and initiatives that will achieve results more quickly and at a higher level.

<p><b>CAN MISSION</b></p> <p>Enabling the neuroscience community to create, share and apply brain knowledge</p>	<p><b>CAN VISION</b></p> <p>Healthier brains through collaborative research, education and implementation</p>
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To fulfill this mission and achieve the vision, CAN’s activities over the next five years will be driven by three core goals:

## CAN 2.0 GOALS

### GOAL 1

#### Enrich the avenues to protect and enhance brain health

CAN promotes and consolidates activities that leverage knowledge, expertise and funding, enabling the neuroscience community to markedly increase knowledge creation, dissemination and application, making a positive impact on the brain health of Albertans.

### GOAL 2

#### Advance and apply neuroscience

CAN catalyzes knowledge creation and ensures that knowledge is disseminated to the community so it can be applied to improve the lives of Albertans and to significantly elevate the work and impact of neuroscience in Alberta, in education, in health and in the economy.

### GOAL 3

#### Integrate the Alberta neuroscience network with the broader community

CAN fosters connections among diverse stakeholders, creating an integrated multidimensional community focused on developing and applying new knowledge. CAN promotes information sharing and application of research to advance science and practice, and improve people’s lives.

To reach these goals, CAN has worked with the neuroscience community and stakeholders to design four new signature initiatives that build on current activity and progress and set Alberta up for success on the world stage.

## CAN 2.0 SIGNATURE INITIATIVES

To extend the current work in education, research and translation, CAN will launch four new initiatives designed to increase the impact of neuroscience. These initiatives will dramatically increase the connectedness of Alberta neuroscience with the broader community, the international neuroscience effort, the health system and industry as they look to define the future of neuroscience in Alberta.



### INITIATIVE 1

#### Neuroscience Strategic Clinical Network

Having already facilitated multi-institutional and interdisciplinary neuroscience collaborations involving the Seniors Health and Addiction and Mental Health Strategic Clinical Networks, and with the teams in multiple sclerosis, nervous system injury, neuroimaging and other emerging CAN teams, CAN is ideally positioned to be a partner in the establishment of a new **Neuroscience Strategic Clinical Network**. Such a network would work through CAN with the Alberta neuroscience community to further increase the impact of discovery, education and translation in brain health areas not included in existing Strategic Clinical Networks.



### INITIATIVE 2

#### Engage, Inform, Connect on Neuroscience

Through **Engage, Inform, Connect on Neuroscience (EiCoN)**, CAN 2.0 will catalyze broader community engagement by increasing dialogue and interaction with and among an ever-growing and widening number of community stakeholders. EiCoN will connect with existing outreach mechanisms in the community to enrich the knowledge exchange environment with all of Alberta's brain health organizations. Doing so will enable and empower the community to play a role in steering the course of neuroscience discovery, in translating that discovery into practice and policy that improves people's lives and ultimately unleash the power of neuroscience and community collaboration to improve brain health.



### INITIATIVE 3

## Multidisciplinary Training and Research to Accelerate Innovation in Neuroscience

CAN 2.0 will implement **Multidisciplinary Training and Research to Accelerate Innovation in Neuroscience (MTRAIN)**, a comprehensive and inclusive approach to training that looks beyond the core of neuroscience. MTRAIN will bring trainees and faculty of many disciplines together, equipping them with the knowledge, tools and expertise to excel in evolving research and professional environments that require collaboration and multidisciplinary problem-solving approaches. MTRAIN will build on and further connect Alberta's excellent university programs and enrich the province's competitiveness in entrepreneurship and neurotechnology that support brain health solutions.

**These four signature initiatives will create synergies within and beyond neuroscience research, education and translation in Alberta. By connecting today's and future neuroscience teams with the community, with a broad array of complementary perspectives and approaches and with leading researchers, clinicians, educators and innovators from around the world, CAN will create a platform to discover and launch new and innovative approaches to brain health solutions.**



### INITIATIVE 4

## The Banff International School of Neuroscience

CAN 2.0 will launch the **Banff International School of Neuroscience (BISoN)**. BISoN will bring global experts to Alberta to solve problems in brain health, train a new generation of leaders and position Alberta at the forefront of neuroscience innovation worldwide. As an international, interactive learning environment, BISoN will connect trainees and experts across disciplines for knowledge generation, innovative solutions and focused training approaches that reflect the neuroscience of tomorrow. BISoN will introduce new international symposia, multidisciplinary think tanks and workshops, and provide focused training to develop young researchers and leaders, all in a context of focused connection and collaboration.

# STRATEGIC PRIORITIES

Underlying CAN's goals and new initiatives are five strategic priorities that have been at the core of CAN 1.0 and will remain the conceptual core of CAN 2.0.

## PRIORITY 1

### Engage broadly to identify, create awareness and focus on priority needs for Alberta.

- Engage with the community and policy makers to establish neuroscience priorities, inform research, enable translation
- Increase involvement of people with lived experience, trainees and the community in CAN strategy development and implementation
- Enhance awareness of brain health, neuroscience discovery and impact across Alberta

## PRIORITY 2

### Further develop the integrated, leading neuroscience community in Alberta.

- Increase engagement of researchers, clinicians, students, organizations and stakeholder groups — in neuroscience and other disciplines — with each other and with CAN as a provincial team
- Increase integration among provincial neuroscience research institutes
- Work with partners to develop and integrate innovative technology, data and devices to drive impact
- Create increased opportunities for Alberta teams to engage across disciplines, nationally and internationally

## PRIORITY 3

### Refine and expand the model for generating new knowledge, applying it and achieving greater results.

- Partner and network where greater impacts can be achieved
- Align, network and attract human, financial and infrastructure resources to the neuroscience community by brokering connections among research teams, stakeholders, people with lived experience and funders
- Engage and partner with industry and health delivery stakeholders to accelerate discovery and application

## PRIORITY 4

### Advance the education of the next generation of neuroscience leaders in Alberta.

- Continue the development of a single Alberta neuroscience campus
- Attract, develop/train, and network neuroscience students to achieve success and impact
- Attract students in non-neuroscience disciplines — including computer science, physics and engineering — to the field through multidisciplinary educational initiatives aimed at understanding and improving brain health through collaboration

## PRIORITY 5

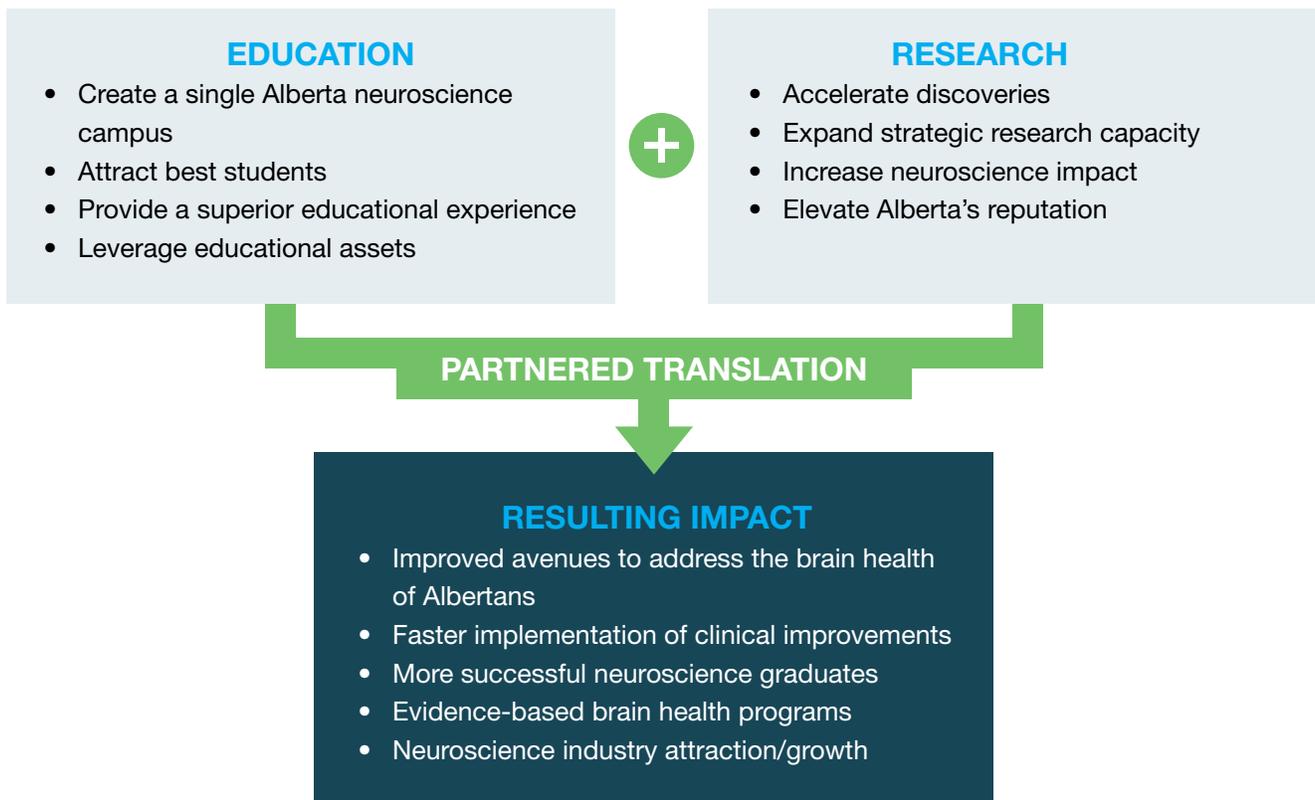
### Implement a robust and sustainable collaboration model

- Create a sustainability model that allows for a robust, durable collaboration-focused community
- Establish an external advisory committee to provide the knowledge and perspective of experts from outside of the Alberta research and translation environment
- Measure progress (of CAN and the community overall) and disseminate results

# DELIVERING GREATER RESULTS

The impact of CAN 2.0 will ripple far and wide, adding value to the neuroscience community and making a positive difference in the lives of people across the province and beyond.

With its many stakeholders and partners, CAN will initiate, facilitate and be a lead partner in strategic initiatives and actions intended to:



## CAN 2.0 will lead to the time when:

- There is a robust, durable unifying approach for collaborative high impact neuroscience in Alberta;
- Through partnership, CAN and the community are creating impacts and success through neuroscience discovery and translation;
- The broader community and the public are well informed and have mechanisms to connect and exchange knowledge with the neuroscience research and translation community;
- Alberta is globally recognized as a leading jurisdiction for neuroscience research and education, and becomes a global destination for neuroscience researchers and students;
- Alberta neuroscientists see even greater value in the CAN approach and enthusiastically operate in partnership with the broader community to produce results; and
- CAN and its resulting collaborations have an ongoing and lasting impact.

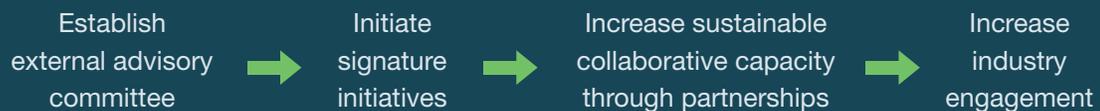
# Action plan

## IMPLEMENTING CAN 2.0

The following provides an overview of key steps for implementation of CAN 2.0 and the four associated signature initiatives.

### CAN 2.0 IMPLEMENTATION STEPS

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1.

## Neuroscience Strategic Clinical Network (Neuroscience SCN)

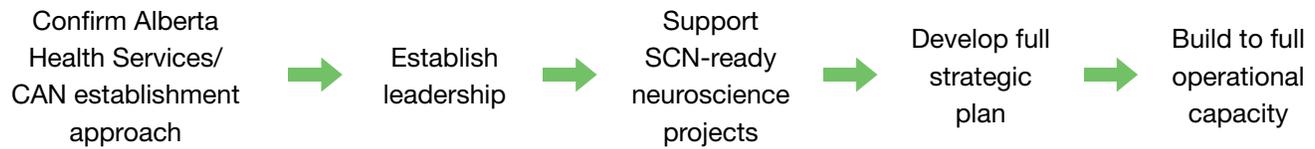
### Increasing Connection

- Creating a mechanism for increased connection between brain health clinicians and the Alberta research enterprise
- Addressing brain health areas not currently included in existing Strategic Clinical Networks

### Translating Discovery to Action

- Supporting research progress through increased connection to patients and the clinic
- Expediting the translation of brain health research discoveries into action
- Improving brain health care for patients

### NEUROSCIENCE SCN IMPLEMENTATION STEPS



2.

## Engage, Inform, Connect on Neuroscience (EICoN)

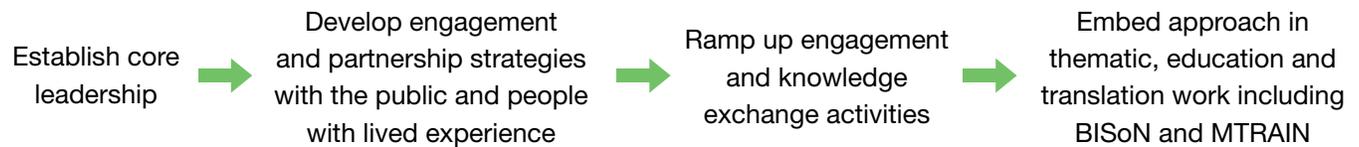
### Broadening Perspectives

- Including trainees, community group representatives, and people with lived experience and their families in the strategic development of research, education and translation initiatives
- Increase visibility and awareness of brain health and neuroscience in the community

### Exchanging Knowledge

- Create a platform for the public to engage with CAN and its members
- Support the development and expansions of trials and registries

### EICoN IMPLEMENTATION STEPS



3.

## Multidisciplinary Training and Research to Accelerate Innovation in Neuroscience (MTRAIN)

### Connecting to Develop Collaborative Solutions

- Physics, engineering, computer science, mathematics, arts and humanities
- Allied health
- Industry and community

### Equipping Trainees with New Knowledge and Resources

- Neuroscience fundamentals for non-neuroscientists
- Tools and technologies
- Data and devices

### MTRAIN IMPLEMENTATION STEPS



4.

## The Banff International School of Neuroscience (BISoN)

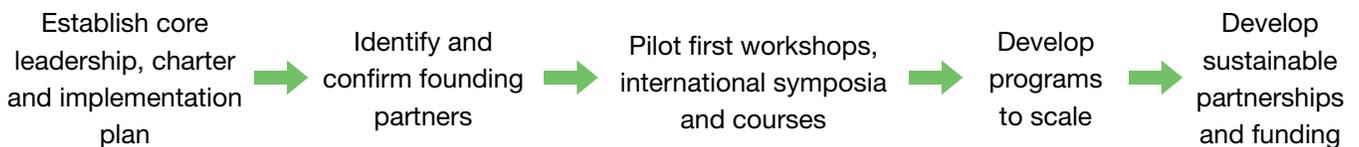
### A Global Approach

- International symposia
- Multidisciplinary think tanks and workshops
- Multinational collaborations

### Connecting to Generate and Apply Knowledge

- Innovative and multidisciplinary solutions that reflect the neuroscience of tomorrow
- Focused training to develop young researchers and leaders
- Bringing the world's experts together to develop brain health solutions
- Knowledge exchange with people with lived experience and the community

### BISoN IMPLEMENTATION STEPS



## CAN 2.0 RESOURCE REQUIREMENTS

To continue CAN's current efforts, and to deliver the new initiatives, goals and outcomes of CAN 2.0 will require a core investment of \$10 million over the next five years. This core investment will then be leveraged at CAN's current 2:1 ratio through partnerships, resulting in a \$30 million impact in neuroscience education, knowledge generation and translation into benefits for Albertans.

## MAKING THE CAN APPROACH SUSTAINABLE

A network is like a new technology: if successful, over time it becomes fully embedded in the environment that it is part of. CAN 2.0 is designed to develop its collaborative, strategic functions to become fully supported by and embedded in the partnerships and institutions that it is part of. The long-term success of the CAN approach relies on its becoming an essential element of the system. CAN sees its future as follows:

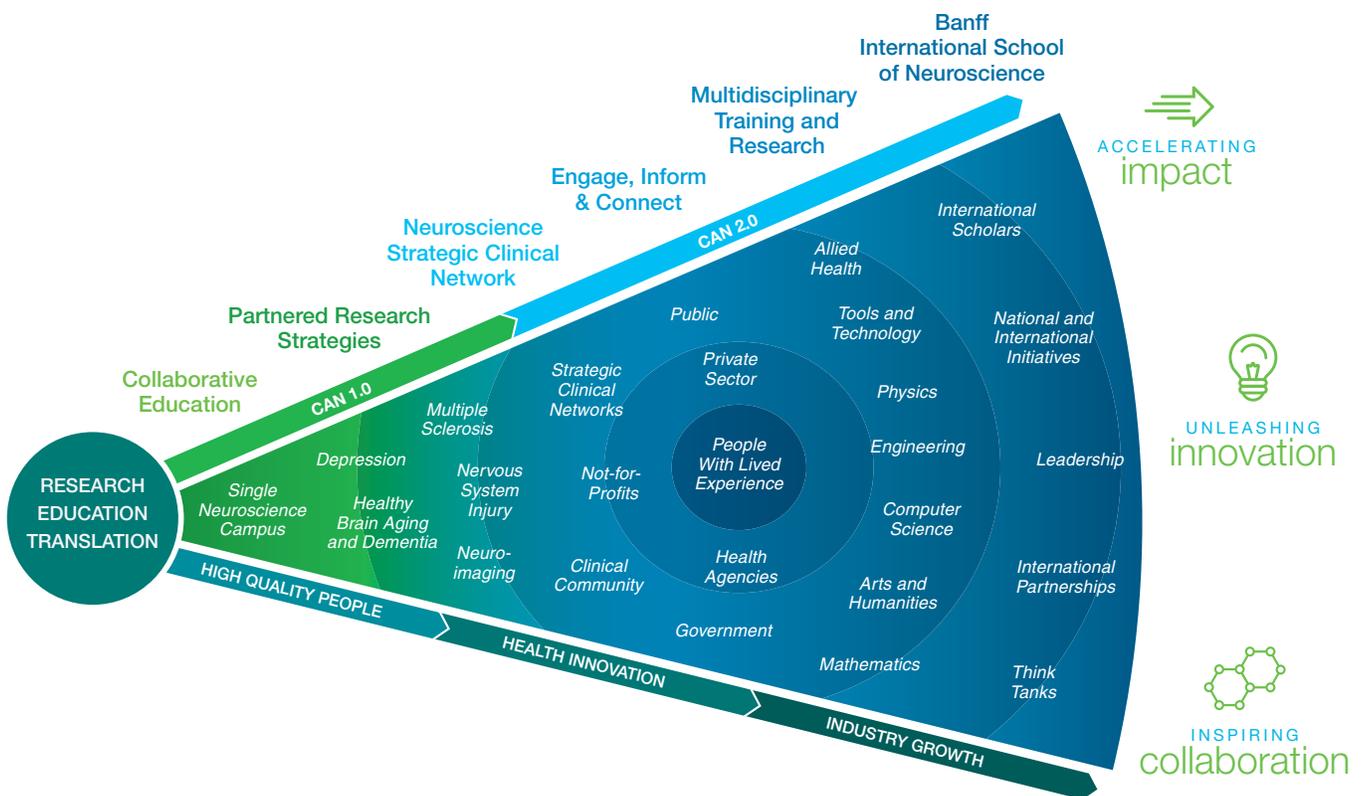
- CAN's focus areas will continue to generate partnerships and a resource pool to support the strategic research and translation of each focus area;
- CAN's signature initiatives will develop a life of their own that will be supported by local, national and international partners who see the value in their work and contribute to their sustainable operation;
- CAN's educational approach will continue to transform the learning environment of neuroscience students and will be adopted increasingly by the universities; and
- CAN's core work of partnership and collaboration will have proven its value and will be supported beyond the five year life of the CAN 2.0 strategy by the partners who benefit from the creation of strategic impact through research, education and translation.

# Accelerating the impact of neuroscience in Alberta

CAN 2.0 will take Alberta neuroscience and mental health into the future. It will take the core concept of Alberta-wide collaboration, which has been made increasingly real and effective through CAN 1.0, and extend this through new approaches, initiatives and partnerships that will be embedded sustainably in the Alberta neuroscience landscape. Through strong collaboration with the Alberta neuroscience community, CAN 2.0 will achieve the vision of healthier brains through collaborative research, education and implementation.

# FOUNDATION AND EVOLUTION OF CAN

Campus Alberta Neuroscience was established to increase the impact of neuroscience and mental health research, education and translation through province-wide collaboration. This foundation was set in CAN 1.0 through collaborative educational initiatives and partnered pan-Alberta research strategies in brain health focus areas. CAN 2.0 proposes to build on this foundation by expanding CAN 1.0's activities and introducing four new signature initiatives – a Neuroscience Strategic Clinical Network; Engage, Inform, Connect on Neuroscience; Multidisciplinary Training and Research; and the Banff International School of Neuroscience. People with lived experience will be at the centre of all activity, ensuring that more perspectives are brought to bear and that the research and broader community are mutually informed and empowered through the exchange of knowledge. Together, the CAN 2.0 initiatives will increase inclusivity and impact in neuroscience, produce high quality people, catalyze brain health innovation and support economic growth in the province, all contributing to the vision of improving brain health.



## CAMPUS ALBERTA NEUROSCIENCE

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**Keith Sharkey**, University of Calgary

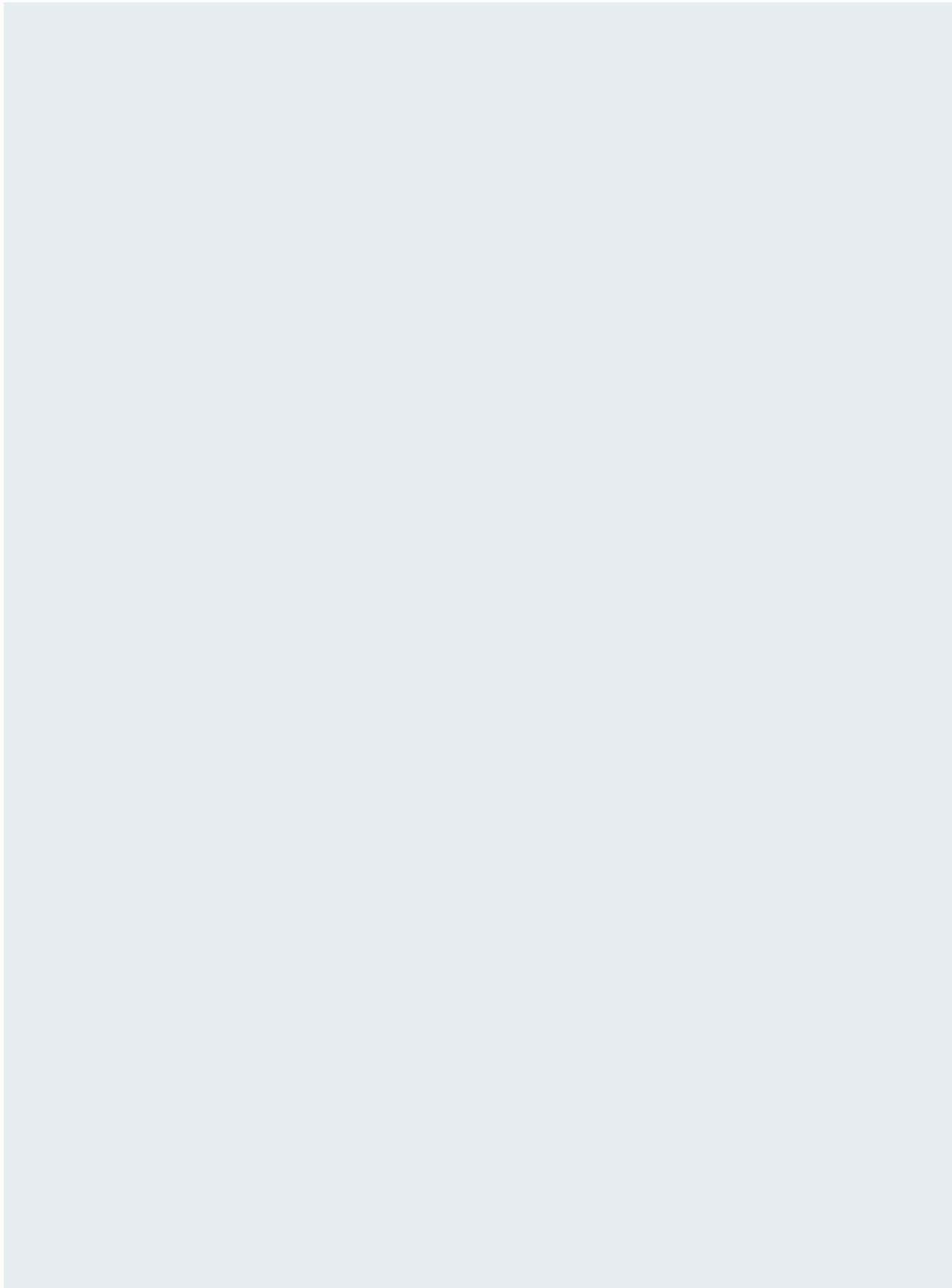
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