
Subject: Brock University LINC

Report to: Planning and Economic Development Committee

Report date: Wednesday, August 7, 2019

Recommendations

1. That this report **BE RECEIVED** by the Planning and Economic Development Committee (PEDC) for information.
2. That the funding request for Brock University's LINC facility **BE REFERRED** for consideration as part of the 2020 budget process.

Key Facts

- The purpose of this report is to seek Council's consideration to provide \$1.5 million to Brock University to fund the makerspace within the new Brock LINC.
- Niagara Region has an opportunity to support a core feature of the Brock LINC that will drive economic growth and generate benefits in Niagara for years to come. The LINC will create and grow start-ups and businesses that will eventually spin-off into the community creating jobs and driving economic growth and diversification in the region.
- The LINC will be a collaborative hub that offers a full range of support, including access to physical space, state-of the-art technologies, business development services, and importantly linkages to Brock's research faculty and resources, to help innovative entrepreneurial individuals grow and transform ideas into successful start-ups, businesses, and new products and services that will grow and diversify the Niagara economy.
- The Makerspace will be a core feature of the Brock LINC that will be an important pillar for entrepreneurship and innovation. It will be a collaborative space that is designed to bring together people from across the community including local business owners, entrepreneurs, community members as well as Brock faculty, researchers, and students.
- In total, the Rankin Family Pavilion will add 41,000 additional square feet of space dedicated to research, innovation and commercialization, and entrepreneurship through programming offered by the LINC.

Financial Considerations – Brock University

Project costs for the Rankin Family Pavilion, which includes construction, furniture, equipment, and technology total \$19,723,866.02.

Brock has received the following funding for this project:

Source	Amount
Donations	\$2,000,000
Federal Government	\$8,470,000

While Brock has received generous support from the federal government and donors for the Brock LINC, the project still needs financial support to complete the construction of this legacy project and make it a reality.

Financial Considerations – Niagara Region

Brock is requesting a one-time \$1.5 million contribution from Niagara Region to support the Brock LINC. Funding from the Region will be directed to costs associated with the construction and completion of the makerspace, a core feature of the Brock LINC that will support business and economic development. Funding will ensure that the full vision of the LINC is realized for the benefit of Niagara for years to come.

Budget pressures have been outlined by staff in the following table as presented to Budget Review Committee including the above estimate, to illustrate the potential levy impact estimated for the 2020 budget. Any items being referred to the 2020 budget process should be considered along with the following items:

	Council Report	Levy Amount (M\$)	Levy Increase %
Previously identified reports			
Suicide Prevention Initiative	PHD 8-2019	0.200	0.05%
Niagara Airports	CAO 04-2019	2.240	0.61%
Waterfront Investment Program – Base funding	CSD 40-2019	1.000	0.27%
Smarter Niagara Incentive Program – Base funding	CSD 40-2019	0.600	0.16%
Brock LINC request for funding	ED 9-2019	1.500	0.41%
Niagara Regional Transit - phase in cost	CSD 40-2019	6.213	1.70%
NRPS 2019 position hiring deferral	BRC-C 7-2019	0.706	0.19%
Long-Term Care Home Redevelopment capital funding	COM 32-2019	5.899	1.62%
GO Implementation		TBD	TBD
EMS Central Hub capital funding	CSD 40-2019	0.390	0.11%
Potential request to-date		\$18.748	5.12%

Analysis

General Description

Brock's newest facility, the Rankin Family Pavilion will house the Brock LINC (Learning, Innovation, Networking and Collaboration). This facility will add 41,000 additional square feet to the main campus dedicated to research, innovation and commercialization, and entrepreneurship.

Objectives

The LINC has been designed to leverage Brock's research strengths to advance the prosperity and growth of the Niagara community. The objectives of the LINC are:

- Support research across different disciplines and sectors as well as innovative projects that bring together faculty, students, partners, and businesses to develop new solutions to complex real-world problems. An early venture from Brock that reflects this type of initiative was the establishment of the Cool Climate Oenology and Viticulture Institute (CCOVI), which brought together expertise from different fields including biological sciences, chemistry and business to examine all aspects of the wine industry and solve industry challenges.
- Extend the University's capacity to support commercialization and the application of new technologies.
- Incubate start-ups and accelerate small and medium enterprises (SMEs).
- Develop skilled workers with the research, entrepreneurial, intrapreneurial, and practical skills demanded for economic growth in Niagara.

These objectives will be achieved through services and offerings of the LINC. Some key features include:

Makerspace

The makerspace will be a flexible space with reconfigurable physical furniture that supports business and community-based applied research and development. This lab will include idea boards, multi-touch interactive screens and will also include state-of-the-art technologies, such as 3D printers with technical support and a range of turnkey support services provided by professionals and students. For example, designers will be able to 3D print prototypes of products, allowing them to test model and concept designs.

The Makerspace will be a place where innovative individuals and/or companies can begin in the early stages of product development, test ideas, design prototypes, and

explore technology. Designed to be a hotbed of innovation, it is where individuals and groups will be able to explore ideas and develop them into prototypes and potential products. It is expected that they will then transform these ideas into either new businesses or offerings from existing businesses in the Niagara community. The Makerspace will be a foundation for idea exploration within the LINC.

The Augmented Reality, Virtual Reality and Sensory Reality Consumer Lab (R3CL)

Many of Brock's departments and research hubs have existing relationships with local industry. For example, the Cool Climate Oenology and Viticulture Institute (CCOVI) works with local grape growers and wineries to provide research, support, and educational programs that support the local industry. CCOVI's existing impact to the region is significant, generating \$58 million annually in local economic impact and \$91 million to the Ontario economy.

While significant, CCOVI's capabilities have been limited due to space restraints and outdated technology. This first of its kind lab will provide CCOVI, and others, with over \$1 million in new state-of-the-art technologies that will drive their impact even further. Using advanced AR/VR technology, Brock will make research and technology accessible to regional companies seeking to develop and launch products. The lab will be flexible enough to support a range of product and service testing – from digital to winetasting – using a range of approaches from research and observation to digital tracking.

Ready/Sett/Grow & Business Consulting

Embodying a play on the name for a badger's den, the Ready/Sett/Grow space provides early stage start-ups with physical space and access to resources they need to start and grow their businesses. Moreover, it will provide entrepreneurship development, executive education, and consulting services to support the economic development and success of businesses in the Niagara Region.

In sum, access to state-of-the-art technologies, physical space, and resources to test, design and explore ideas in combination with business development services will provide a full suite of support to assist individuals and entrepreneurs with starting and expanding businesses that will grow and create jobs in the broader community.

Outcomes and Benefits to the Community

Building off a history of success working with businesses in Niagara, Brock through the LINC will further enhance economic development in the region providing start-ups, for-profit, small and medium sized companies with space, technology, and partnership opportunities to expand and grow their businesses in a range of sectors including, but not exclusively, agriculture, food and beverage products, health services, and digital

technologies. It will provide physical space in combination with access to Brock's researchers and resources to facilitate the development and commercialization of new products and processes for new and existing Niagara companies enabling them to scale and grow. Furthermore, when applying for federal funding, the LINC received previous letters of support from Niagara Region, The City of St. Catharines, The City of Thorold, The Town of Lincoln, and from the local Chambers of Commerce as a means to support regional economic growth and development.

Specific outcomes of the Brock LINC include:

Further leverage Brock's research capabilities and resources for the benefit of community economic development and vitality.

Brock researchers' already partner with industry to bring innovations to market, contributing to the economic growth of the local region. For example, in 2018, Brock researchers engaged with nearly 50 external companies. Since 2012, approximately 100 of Brock faculty members have engaged with external partners and the University has seen over 125 new commercialization partnerships, two-thirds of which are with companies, SMEs, or community partners located in Niagara, Hamilton or the GTA.

Through the LINC, Brock will be able to further expand on existing research partnerships as well as create new ones, with even greater potential. Providing access to new technologies and innovation space, as well as potential partnership opportunities with Brock, researchers will provide businesses with greater opportunities to commercialize new products or processes that will drive economic growth locally. The makerspace will be a core part of this process by providing a space for Brock researchers, innovative entrepreneurs, and businesses to explore ideas that could be expanded into prototypes, products, or processes.

As Niagara's economy continues to diversify and transition into a knowledge-based economy, the LINC will be an important hub for contributing to economic growth in the region. Leveraging Brock's research and resources will be increasingly important as part of supporting this transition to a diversified economy, retaining talent, and ensuring the long-term prosperity of Niagara.

Support existing businesses and incubate/scale new ones through access to space and state-of-the-art equipment.

The LINC will provide start-ups, for-profit, small and medium sized companies in Niagara with incubation space, access to innovative technologies, and partnership opportunities to expand and grow their businesses. It will provide new and existing businesses with space to facilitate the development and commercialization of new products and processes. Start-up businesses will grow out into the Niagara community generating long-term economic benefits for years to come.

The makerspace specifically will provide additional space to explore and test ideas with new state-of-the-art technologies. Brock will be re-locating its current makerspace into the LINC expanding its capacity ten-fold. The makerspace will also house a wide-range of new and innovative technologies allowing entrepreneurs and businesses to explore their uses for early stage research and development. While these technologies may exist in other parts of Niagara, the advantage of the Brock LINC makerspace is that they will all be housed in a single space for full idea exploration and testing alongside Brock researchers and students. The makerspace will act as an on-ramp to innovation for business growth and development in Niagara.

Moreover, the R3CL will be unique in the global landscape through its offering of AR/VR equipment for the purpose of consumer testing. Established by CCOVI, this lab will be the world's first mediated-reality wine laboratory, where researchers can combine sights, smells, and sounds to help study the science of consumer choice in the wine industry. With applications applicable to many industries, others interested in consumer research and innovation will benefit from learning how a wide-range of consumer choices impact purchasing decisions.

The LINC will be supporting local industry by providing access to innovative equipment and opportunities to team students and researchers with local industry and community partners to create and/or grow their businesses. Local innovators, entrepreneurs, and companies can utilize, through partnership with Brock, the technologies and resources available in the LINC to explore and test ideas, develop new products and services, and grow their businesses. By supporting the LINC, Niagara Region will be instrumental to the foundation of a critical organization that builds existing and future companies for Niagara.

Job creation, skills development, and increased prosperity for the local region.

Through its support for start-ups and business development, the LINC will create new businesses and ultimately jobs in the Niagara community. The LINC will also support the expansion of existing businesses that explore new product and service development through LINC services. The makerspace will be critical to early stage research and development of ideas that will be the foundation for new businesses, products, and services. By creating new jobs and businesses in Niagara, the LINC will contribute to a larger, more prosperous and diversified tax base to support public services and community vitality. The LINC will also support the retention of talent and youth in the community through increased job and business development opportunities. Overall, the LINC will be a key asset to the long-term prosperity and economic growth of Niagara.

The students, entrepreneurs, researchers and companies who utilize the LINC will live, work, and start businesses in Niagara, while helping with the growth of Niagara's skilled workforce. The makerspace will also more specifically support digital skills development

and training. Providing hands-on access to new and emerging technologies will allow individuals to explore their uses and potential applications developing their digital skills. These skills will be increasingly important to competitiveness in the modern digital economy.

Conclusion

The LINC will benefit Brock and Niagara Region together by supporting research, innovation, entrepreneurship and business growth that creates local jobs, drives economic development, and builds a prosperous and diverse Niagara for the future. The LINC will be a doorway to opportunities for entrepreneurs and businesses to access space, state-of-the-art technologies, and Brock's researchers and resources that will help them grow and succeed in the region.

The LINC will serve as an important bridge between Brock and the local community. Those who access the LINC will benefit from the research expertise and technology available at Brock that can help their company grow and succeed. Local industry will benefit from access to Brock's state-of-the-art technology available in the LINC's unique facilities, including the makerspace that can be used for research, testing, prototyping, and exploring ideas and technology.

By funding the makerspace, thus supporting the LINC overall, Niagara Region will be supporting those at the early stages of the innovation process who have the potential to succeed and become job creators in the community. This funding will be an investment in a legacy project for Niagara's future that will benefit the community for years to come, through economic growth, job creation, skills development, and innovation support for local businesses and industries. Niagara Region has an opportunity to contribute to building this important institution that will be at the heart of a prosperous, competitive, and modern Niagara economy.

Alternatives Reviewed

None applicable.

Other Pertinent Reports

ED 10-2017 Innovation Partnerships
ED 2-2019 Economic Development Strategy

Prepared by:

Valerie Kuhns
Acting Director
Economic Development

Submitted by:

Ron Tripp, P.Eng
Acting Chief Administrative Officer