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<b>SUBJECT</b>	Food & Beverage Innovation Centre (FBIC), UBC Vancouver – Board 1
<b>SUBMITTED TO</b>	Property Committee
<b>MEETING DATE</b>	September 8, 2021
<b>SESSION CLASSIFICATION</b>	Recommended session criteria from Board Meetings Policy: OPEN
<b>REQUEST</b>	<p>Action requested - Approval</p> <p>IT IS HEREBY RESOLVED that, with authority delegated by the Board of Governors, the Property Committee grants BOARD 1 approval for the Food and Beverage Innovation Centre (FBIC) as follows:</p> <ul style="list-style-type: none"><li><i>i.</i> approval of project in principle;</li><li><i>ii.</i> approval of preliminary program and schedule;</li><li><i>iii.</i> approval of location;</li><li><i>iv.</i> approval of preliminary capital budget of \$8,151,000 and operating costs as set out in the Appendices of this submission;</li><li><i>v.</i> approval of the preliminary funding strategy as outlined in the section Funding &amp; Financing;</li><li><i>vi.</i> authorization to proceed to schematic design; and</li><li><i>vii.</i> approval of funding release of \$500,000 for the next stage of project development.</li></ul>
<b>LEAD EXECUTIVE</b>	Peter Smailes, Vice-President Finance & Operations
<b>SUPPORTED BY</b>	Andrew Szeri, Provost and Vice-President, Academic, UBC Vancouver Pam Ratner, Vice-Provost and Associate Vice-President, Faculty Planning John Metras, Associate Vice-President, Facilities Jennifer Sanguinetti, Managing Director, Infrastructure Development Michael White, Associate Vice-President Campus & Community Planning Rickey Yada, Dean, Faculty of Land and Food Systems Yale Loh, Treasurer Aubrey Kelly, President & CEO, UBC Properties Trust

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**PRIOR SUBMISSIONS**

The subject matter of this submission has not previously been considered by the Property Committee.

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**EXECUTIVE SUMMARY**

In accordance with the [Capital Projects Policy](#), this Board 1 approval request for Food and Beverage Innovation Centre is provided as part of the project management process for construction projects over \$5,000,000. The Board of Governors has delegated to the Property Committee the authority to make decisions on its behalf for construction projects between \$5 million and \$20 million. The aggregate estimated value Food and Beverage Innovation Centre (FBIC) is \$8,151,000.

## Background and Rationale

UBC's Faculty of Land and Food Systems (L&FS) is one of the world's top-ranking programs in sustainable agriculture, food systems and human health as it relates to food and food production, ranking highest in Canada and #15 among the world's top agricultural sciences programs. L&FS is where science meets society's urgent needs by providing studies and research on protecting water systems and building resilience into the food supply, all with rising temperatures and shifting weather patterns. The Faculty currently has 1,700 undergraduate and 210 graduate students.

The BC Ministry of Agriculture, in collaboration with industry, communities and post-secondary institutions, is developing the BC Food Hub Network to improve local food chains for food security and human welfare and foster growth and innovation in the processing sector through improved industry access to facilities, equipment, technology, technical services and business supports. The Network will consist of a core Food & Beverage Innovation Centre (FBIC) located at UBC's Vancouver Campus, and a series of inter-connected regional Food Hubs to be developed throughout the Province. The goal for the UBC FBIC is to facilitate access to processing equipment, novel technologies, research and development, knowledge-sharing and innovation related services to processors located in and outside BC.

As the central fixture of the proposed hub-and-spoke model, the FBIC will anchor the three main elements of execution:

- Innovate in the processing, packaging and marketing of B.C. agriculture/aquaculture produce;
- Link local food producers with cutting-edge technologies; and
- Develop a test market space within UBC for novel products that could expand exports & access to world markets.

## Project Description

Infrastructure Development has confirmed that UBC does not currently have appropriate space to house the FBIC core facility, and L&FS is proposing construction of a new 8,250 gross square foot (767 gross square metre) building to house the Centre's functions and state-of-the-art equipment.

The FBIC will be a critical facility for L&FS, supporting the Faculty's continuing leadership in food technology research and promoting partnerships and collaboration between L&FS and BC's food processing industry. The FBIC will be used for teaching and laboratory activities in Food Processing & Engineering courses, and will be used to incorporate new laboratory demonstrations and activities for undergraduate, thesis and professional Masters and Doctoral students. The facility will allow successful graduates of the program to learn related hands-on applications of the latest technologies for producing nutritious, safe and convenient food products.

The FBIC will also be a hub for industrial fermentation, which is a proposed collaboration with the UBC Alma Mater Society. The FBIC infrastructure will enable new opportunities for courses with hands-on experience in brewing and winery technologies through the Minor in Fermentations offered by L&FS, setting the stage to expand this area of study within the Faculty. Another opportunity is for FBIC tours to be included as one of the stops in a UBC Farm farm-to-fork journey, with the FBIC providing education in pre-processing, processing, fermentation, packaging and laboratory analysis.

One of the other major goals of the proposed Centre is for FBIC members to work collaboratively with Musqueam Elders to extend awareness of the benefits of traditional Musqueam foods and medicines in order to ensure sustainability of these important crops. For example, the FBIC intends to explore the drying and preservation of root vegetables and soft fruits including berries through advanced technologies like Radiant Energy Vacuum Dehydration

and Dehydrofreezing. Developing activities around the importance of a fish-based diet and its benefits as a component of a healthy diet is another important example of future collaboration between the Musqueam community and the FBIC. It is hoped that these activities will also bring economic and socio-cultural benefits to the Indigenous communities.

The FBIC is strongly aligned with all four core areas of UBC's strategic plan *Shaping the Next Century 2018-2028*, [UBC Strategic Plan, 2018-2028](#), and in particular:

- People and Places – Strategy 3: Thriving Communities
- Research Excellence – Strategy 7: Research Support, and Strategy 8: Student Research
- Transformative Learning – Strategy 13: Practical Learning
- Local and Global Engagement – Strategy 16: Public Relevance, and Strategy 17: Indigenous Engagement

### Preliminary Program

A Functional Program has been developed with the Faculty of Land and Food Systems:

Program Component	Net Area (square metres)	Net Area (square feet)
Research and Teaching Labs	444	4,779
Office Space	55	592
Back of House	12	129
<b>Total Net Area</b>	<b>511</b>	<b>5,500</b>
Gross-up @ 1.5	256	2,750
<b>Total Gross Area (sq m/sq ft)</b>	<b>767</b>	<b>8,250</b>

### Site

The proposed site for the new building is open space north of the Health Sciences Parkade on Hospital Lane (refer to *Attachment 1 – Context Map of Location*). Close proximity to the existing Food, Nutrition & Health (FNH) building will support the academic mission by facilitating interaction between physical food process engineering in the FBIC and the chemical/microbiological/sensory and formulation research activities ongoing in the nearby FNH building. Close proximity to other chemical and biological engineering and microbiology/fermentation facilities will support inter-faculty collaborative research. The site was recommended by the New Building Site Selection Committee (NBSSC) on November 16, 2020 and unanimously endorsed by the Property Planning Advisory Committee (PPAC) on December 15, 2020.

### Funding Sources & Financing

The capital budget for the project is estimated at \$8.151 million, to be funded as follows:

Funding Source	\$
Donor Fundraising (received)	\$500,000
Internal Loan - AMS Contributions	\$800,000
Oyster River Endowment	\$1,376,000
Faculty of Land and Food Systems	\$5,475,000
<b>Total</b>	<b>\$8,151,000</b>

The donor fundraising, Oyster River Endowment and Faculty funding portions of \$500,000, \$1.3 million and \$5.5 million, respectively, are expected to be immediately available to fund the project costs at the beginning of the construction period. L&FS is expected to have sufficient reserves in its operating budget and will not require an internal loan to finance its contribution. The AMS internal loan of \$800,000 is expected to be repaid through AMS contributions and assumes a term of 5 years matching the AMS contribution timeline at an interest rate of 4.25%. In the event that AMS contributions cannot fully service the internal debt requirements, L&FS is expected to backstop the repayment obligations. The terms and amount of the internal loan / AMS contribution has not been finalized and may be subject to change.

As the project commences, liquidity required to fund construction is forecasted to be \$0 in FY2023, \$4.7 million in FY2024 and \$1.5 million in FY2025. The liquidity impact, annual principal and interest payments of the loan are shown in the table below.

Forecasted Liquidity Impact (In \$000s)	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
Construction Costs	(560)	(5,995)	(1,520)				
External Funding <sup>1</sup>	560	1,240	0				
Total	0	(4,755)	(1,520)				
<u>Loan Principal &amp; Interest Payments</u>							
Student Fee Loan (4.25%)			(181)	(181)	(181)	(181)	(181)

1 Assumes donor fundraising and Oyster River Endowment received during construction period

### Sustainability Objectives

UBC does not require new buildings that are less than 1000 square metres in size to pursue LEED certification. The project team will work towards defined energy and carbon performance targets as well as meaningful sustainability goals that are relevant for the project type and size. These goals will be defined and articulated in the project's Design Brief and reported at Board 2.

### Risks

- Infrastructure Development and UBC Properties Trust advise that the current construction market is extremely volatile and there is widespread concern that many trade prices are trending upward due to supply chain disruptions, and potential post-pandemic local labour shortages. An escalation contingency of \$510,000 has been included in the cost estimate to reflect this risk.
- Size, location and program components require detailed planning and consultation which may impact the project delivery schedule. The preliminary schedule includes an allowance to reflect this risk.

### Preliminary Schedule

The schedule below has been developed in consultation with UBC Properties Trust.

MILESTONE	TARGET DATE
Executive 1	Nov 2020
New Building Site Selection Committee	Nov 2020
PPAC <sup>1</sup>	Nov 2020
Executive 2+3 <sup>2</sup>	Jun 2021
Board 1	Sep 2021
Board 2	Jun 2022

Board 3	Dec 2022
Construction Start	Jan 2023
Construction Completion	Feb 2024
Occupancy	Mar 2024
Board 4	Apr 2026

- 1 Property & Planning Advisory Committee + Senate Academic Building Needs Committee
- 2 The FBIC was previously embedded in the project “The Hive @ UBC Farm: A Food Hub and Innovation Centre from Local to Global”, which received Executive 3 approval on April 10, 2018.

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## APPENDICES

1. Context Map of Location
2. Costs – Preliminary Capital Budget and Operation Costs

## PRESENTATIONS

1. Food and Beverage Innovation Centre Board 1 Approval

Appendix 1 – Context Location Map



## Appendix 2 - Preliminary Capital Budget and Operation Costs

### Preliminary Capital Budget

UBC Properties Trust has provided the following project cost estimate for the Food and Beverage Innovation Centre. This is a class D estimate with an accuracy of +/-20-30%.

<b>Project Capital Cost Breakdown</b>	<b>\$</b>	<b>\$/gsf</b>
<b>Construction Costs</b>		
Construction	4,610,000	
Public Realm <sup>1</sup>	200,000	
UBC Building Operations	50,000	
Site Services	500,000	
Contingency	320,000	
<b>Total Construction</b>	<b>5,680,000</b>	
<b>Cash Allowances</b>		
FF+E	110,000	
Program Specific Unique Equipment	TBD	
Design Contingency	230,000	
UBC IT	100,000	
Secure Access/Signage/Moving	25,000	
Audio Visual	25,000	
<b>Total Cash Allowances</b>	<b>490,000</b>	
<b>Soft Costs</b>		
Consultants	710,000	
IIC's	-	
Preconstruction/Permits	140,000	
<b>Total Soft Costs</b>	<b>850,000</b>	
<b>Building Subtotal</b>	<b>7,020,000</b>	
Project Management	420,000	
<b>Building Total</b>	<b>7,440,000</b>	
Construction Period Financing	1,000	
Retained Risk	80,000	
Escalation	510,000	
GST	120,000	
<b>PROJECT TOTAL</b>	<b>8,151,000</b>	
<i>Total Building Area (Gross Square Feet)</i>	<i>8,250</i>	<i>988</i>

<sup>1</sup> Assumes no changes on adjacent Hospital Lane.

### Operation Costs

Annual operating costs will be calculated at the standard rate (\$8.60/gsf for new buildings) for the Faculty of Land and Food Systems (LFS). Based on the current area estimates, the approximate annual operating and lifecycle costs will be as follows:

<b>Food and Beverage Innovation Centre</b>	<b>\$/gsf</b>	<b>LFS</b>
Total Gross Area (gsf)		8,250
<b>BUILDING OPERATING COSTS<sup>1</sup></b>		
Annual Operations + Maintenance	\$ 6.37	\$52,553
Utilities	\$ 2.23	\$18,397
<b>Total O+M Cost</b>	<b>\$ 8.60</b>	<b>\$70,950</b>
<b>LIFECYCLE CAPITAL COSTS<sup>2</sup></b>		
Cyclical Maintenance	\$ 3.51	\$28,958
Modernization / Upgrade	\$ 0.93	\$7,672
<b>Total Capital Renewal Cost</b>	<b>\$ 4.44</b>	<b>\$36,630</b>

- 1 Final costs will be based on actual built areas and are subject to change pending final design and construction.
- 2 Lifecycle Capital Costs are covered by Central Finance.



# **Food & Beverage Innovation Centre Board 1 Approval Request**

September 8, 2021

**John Metras, Associate Vice-President Facilities**



# Introduction and summary



Proposed Food & Bev. Innovation Centre will:

- Support BC Min of Agriculture's Food Hub Network
- Support continued leadership of L&FS in food technology research
- Be a hub for industrial fermentation, including collaboration with AMS

# Additional details



- FBIC will be 8,250 sq ft (767 sq m) facility
- Includes lab facilities with support and offices
- Part of hub & spoke model for innovative food processing technologies & research partnerships
- Opportunity to collaborate with Musqueam Elders to extend awareness of trad. food & medicines

## Additional details



- Capital cost estimate is \$8.151 million
- Funding from Faculty, AMS, confirmed donors and Oyster River Endowment
- Site just north of Health Sciences Parkade, providing adjacency to other L&FS facilities

# Additional details – Site Map



# Discussion and decision points



## Board 1 approval of the FBIC project:

1. approval of project in principle;
2. approval of preliminary program and schedule;
3. approval of location;
4. approval of preliminary capital budget of \$8,151,000 & op costs;
5. approval of the preliminary funding strategy;
6. authorization to the University administration to proceed to architect selection and schematic design; and
7. funding release of \$500,000 to commence schematic design.