DIGITAL

CALL FOR INNOVATIONS THAT GROW HOUSING PRODUCTION CAPACITY IN B.C.

PROPOSAL CALL GUIDE

NOVEMBER 16, 2023

VERSION 1.0

A. OVERVIEW

PURPOSE OF THE CALL

This call is building a challenge project portfolio funded by the Government of B.C., as part of the Digital Housing Construction Initiative, to use data and digital innovation to support the rapid growth of housing production capacity in British Columbia.

FOCUS

For years, B.C. has not been building enough housing. The size of the gap between what we have and what we need to build is enormous. The Government of British Columbia's "Homes for People" action plan includes more than $11B of investment, but even more can be done with digital innovation. The Canada Mortgage and Housing Corporation (CMHC) report "Housing shortages in Canada: Updating how much housing we need by 2030" forecasts that B.C. will need to add hundreds of thousands of new housing units by 2030.

DIGITAL is here to help. Under our Housing Growth Innovation Program, we're working with collaborative project teams to develop new ideas, find what works and action solutions that grow our construction sector and build more homes for British Columbians.

As a result, we're looking to harness data driven digital innovation to help grow housing production capacity. To that end, this call focuses on developing projects targeting three areas of interest:

- ***Digital Design*** focuses on the front end of the system during project due diligence and design stages. It looks at how the use of information, exploratory design and planning tools and set configurations can minimize service cycle times while enabling streamlined production options.

- ***Scaling Partnerships*** focuses on execution during construction and post-construction stages. It encourages the use of common digital tools, software, data and value chain engineering across multiple organizations to drive productivity growth.

- ***Catalysts*** is an open category focused on responding to pressure points as they emerge. By defining problems as they surface, developing solutions, testing and sharing the ones that work, this helps remove or mitigate friction points that slow growth.

TARGET OUTCOMES

Our focus recognizes the importance of amplifying support for the rapid growth of housing production capacity in B.C. We've designed a call strategy with three areas of focus that enable us to improve planning, improve execution and respond to systemic pressures or limits to growth. Successful projects will:

o **Assemble Great Teams**. Bring multiple organizations together to harness their creativity, passion and expertise to make a difference in addressing the housing challenges we see in B.C., across the country and around the world.

o **Grow Housing**. Projects make an impact towards the production of new housing stock and accelerate the growth of housing production capacity.

o **Strengthen Digital Collaboration**. Projects improve how data and digital technologies can be used to strengthen alignment and coordination in digital permitting and construction. Teams will be free to select the productivity metrics and service standards they wish to prioritize.

o **Share Knowledge**. The results and learnings from projects will be shared across the innovation network to help others learn and grow. By sharing knowledge and practices, we can help accelerate the growth of production capacity.

o **Grow B.C.-Based Companies**. Projects help grow B.C.-based companies anywhere in the housing supply chain. As we grow together, B.C. becomes a North American leader in housing, including digital construction and permitting.

The net result will be growing B.C.'s housing stock, growing B.C. companies, scaling the supply chain and taking a meaningful step forward to make B.C. a North American leader in digital construction and permitting.

B. PROPOSAL DEVELOPMENT

ELIGIBLE PROJECT TEAMS

We treat innovation like a team sport. We believe that when you bring together complementary, motivated organizations that share a project vision we build stronger, more powerful solutions to big challenges and housing is definitely a big challenge. An eligible team consists of at least 3 organizations delivering projects aligned with the purpose of this Call in British Columbia.

Guidance on forming eligible project teams:

o Each team will consist of a Project Lead who will be the primary point of contact for the team. Any type of organization can act as Project Lead and submit an expression of interest for consideration. An organization does not need to be a DIGITAL Member or Associate to submit an idea or Expression of Interest.

o The Project Lead must be a Canadian or a multi-national enterprise, not-for-profit or public sector organization legally registered to operate in Canada with an operational presence in British Columbia.

o Project partners can be drawn from any mix of organizations that can provide a meaningful contribution to the project's success. Teams may recruit organizations from outside B.C. to access relevant capabilities and expertise.

o Academic partnerships are encouraged with opportunities to support researchers, graduate or coop students working on the project. Academic partners can contribute to the project through cutting-edge research, independent evaluations or other forms of studies.

o Foreign organizations without a registered business presence in Canada can be a project participant. Any project activities undertaken by these organizations are not eligible for DIGITAL co-investment unless pre-approved by DIGITAL as a foreign cost.

o All participating organizations must comply with all economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by the Government of Canada.

PROJECT TYPES

Within each area of interest, there are two types of projects that will be considered for funding:

o **Discovery Projects**. Discovery projects are feasibility studies, assessments and proof of concept work to study needs, define potential solutions and complete preliminary tests. DIGITAL will co-invest between $50K to $250K for terms of up to 1 year to a maximum of 50% of total project costs.

o **Trial Projects.** Trial projects take defined solutions that have had some form of preliminary assessment and conduct pilot projects or full-scale trials. DIGITAL will co-invest between $400K to $800K over a two-year period to a maximum of 50% of total project costs.

All projects must be completed by March 31, 2026

THE APPLICATION PROCESS

1. Collaborative projects are selected through an open, competitive process of continual intake.

2. The process starts when we receive an Expression of Interest (EOI) from a project team. This helps define the potential project opportunity for us to evaluate. Download the EOI template, and when ready, e-mail to grow.housing@digitalsupercluster.ca.

3. Once received, EOIs are reviewed weekly. Feedback typically takes 1-2 weeks after submission. For EOIs that are aligned with the purpose of the call, have a strong team and high impact, an invitation to submit a full proposal will be made.

4. Project teams will receive a proposal template, instructions and a target deadline for submission. Once submitted, the proposal is reviewed for completion quality and if ready, prepared for review. Completed proposals are reviewed by a project selection committee (PSC) staffed with independent reviewers. All PSC members are required to sign both a Non-Disclosure Agreement (NDA) and DIGITAL Code of Conduct.

5. Completed and eligible proposals will be provided to PSC members and evaluated against the Evaluation Criteria. The PSC makes a clear decision for one of three types of recommendations: Approve, Approve with Conditions, Not Approve. This is usually a consensus decision of the PSC members. If no consensus can be reached, then it is a majority decision.

6. The recommendations of the PSC are reviewed and approved by DIGITAL with successful proposal teams moved into contracting.

7. Teams will sign a Master Project Agreement (MPA) which sets out the terms and conditions related to funding, including reporting and compliance obligations.

8. Once contracting is complete, teams move into production and deliver their project.

EVALUATION CRITERIA

Project proposals are assessed against a set of evaluation criteria by a project selection committee (PSC) comprised of independent, expert reviewers. The four categories and specific criteria for proposal evaluation are noted below:

Opportunity
This category is used to assess whether this project represents an opportunity worth pursuing.

o   *Project Deliverables.* The project has a clear set of objectives and target results.
o   *Need.* There is a well-defined need or performance gap that needs a solution.
o   *Reach.* If this problem is solved by this project team, the solution will be relevant to other users and stakeholders.
o   *Team Experience.* The project team has a track record working on these types of problems and solutions.

Solution
This category is used to assess the solution and confirm how it will be evaluated.

- o *Proposed Solution*. The description of the proposed solution makes it clear how the project team intends to solve the problem.
- o *Improvement Target*. The proposed solution is an improvement on how the problem is dealt with today by the target users.
- o *Performance Verification*. The criteria and approach for measuring the performance of the solution is specified.
- o *Performance Validation*. A target end-user or customer is involved in evaluating whether the performance of the proposed solution makes a meaningful difference to the issue.

Team and Approach

This category is used to assess the team and its approach.

- o *Team Composition*. The team has assembled a team with the mix of expertise and capabilities to deliver the project.
- o *Staged Workplan*. The team has a well-defined plan to execute the project.
- o *Reasonable Budget*. The budget is reasonable for the proposed scope of work.
- o *Risk Management*. The team has identified key risks and a mitigation strategy that improves their probability of success.

Impact and Innovation

This category is used to assess the potential impact of the proposed project.

- o *Housing Growth*. If successful, the project can trace how its impact will help accelerate the growth of housing construction.
- o *Digital Collaboration*. The project is improving how data and digital technologies can be used to strengthen alignment and coordination in digital permitting and construction.
- o *Knowledge Mobilization*. The results and learnings from this project can be applied more broadly across the innovation network to help others learn and grow.
- o *Growing B.C.-Based Companies.* The results of this project will help grow B.C.-based companies anywhere in this supply chain.

INTELLECTUAL PROPERTY AND DATA MANAGEMENT

DIGITAL is committed to helping Canadian organizations use projects to strengthen their IP portfolios and establish good data management practices.

DIGITAL takes no interest in or rights to any Foreground IP arising from the project or the Background IP of any project participant. DIGITAL does have an interest in acting as an honest broker to ensure project teams adhere to the following IP principles and requirements:

- o Background IP (to the extent necessary for the purposes of the project) is to be licensed to other project partners on specified terms for the project. This is typically in the form of a license

o grant on a non-exclusive, royalty-free, revocable, limited license for the purposes of the project for the duration that the partner is involved in the project.
o Any required IP generated using DIGITAL co-investment in any other project will be considered as Foreground IP for the purposes of any new or follow-on project.
o The Foreground IP arising through DIGITAL's co-investment must be owned by a project partner that is a registered Canadian entity with substantial operations in Canada.
o Foreground IP, and any existing Background IP required to use the Foreground IP after the end of the project, are to be licensed on fair, reasonable, and non-discriminatory (FRAND) terms, subject to relevant competitive issues.
o Foreground IP developed through DIGITAL's co-investment will be entered into a registry accessible on DIGITAL's Community Portal. We are sensitive to issues surrounding IP disclosures and will reasonably accommodate these concerns.
o Consider whether open-source IP will be used for any part of the project, and if so, understand what it is and what implications, if any, it might have for the IP of each project partner.
o Identify other DIGITAL Members interested in licensing and building upon the Foreground IP to support ecosystem development.

In terms of data management, project teams are expected to have data governance frameworks and mechanisms to ensure:

o *Security:* policies, procedures and standards for protecting restricted, confidential or sensitive data from unauthorized access or loss (e.g., encrypting data, backing it up appropriately, taking measures to prevent cyberattacks).
o *Data Governance:* policies, procedures and standards around data extraction, standardization, storage and access, including ensuring data is collected for specified, explicit and legally authorized purposes.
o *Data Sharing:* standardized methods to permit data sharing between project partners for the uses of the project.
o *Ethics:* consider having an Ethics Review Committee as part of the governance model to ensure the required data-sharing agreements are in place and assess the impact of what may be considered "high-risk" AI systems considering the evolving regulatory landscape.

SUBMITTING A STRONG EXPRESSION OF INTEREST (EOI)

Here are a few tips to submitting a strong EOI.

1. *Set clear project performance targets.*
   The easier it is for reviewers to understand what the project will do and deliver, the easier it is to make an assessment. Weaker EOIs stay at the conceptual level, sharing ideas and intentions. The problem with that is that concepts often sound promising but they remain too generic to convince reviewers that there is a real opportunity worth pursuing.

2. *Assemble an experienced, balanced team.*
   Project teams that bring a mix of organizations into the project enhance their credibility with

reviewers. It strengthens the validity of the project opportunity as multiple organizations are endorsing it. It also reduces risk. With a broader range of expertise and capabilities for the team to draw upon, they are more likely to build a better plan and able to react to execution issues more effectively.

3. *Aim high, even if that brings additional uncertainty.*
The reviewers aren't looking for a guaranteed result. They are looking to add well executed projects with high impact potential to the portfolio. Even if a well executed project is unsuccessful, the lessons learned will be invaluable to learning how we can use data-driven digital innovation to grow housing production capacity. Part of the reason for DIGITAL's co-investment is to provide the opportunity to stretch and de-risk the project.

4. *Connect the dots to impact.*
Don't assume that a successful project is beneficial. Demonstrate how the project results set in motion related activities or other effects that can be traced to growing housing production capacity and enabling the production of new housing stock.

SUBMISSION

Download the form. When completed, submit to grow.housing@digitalsupercluster.ca. EOIs are reviewed weekly with a decision whether to invite the team to submit a full proposal made in approximately 1-2 weeks.

C. APPENDIX – ABOUT THE PROGRAM

THE DIGITAL HOUSING CONSTRUCTION INITIATIVE

This call is part of a larger initiative called The Digital Housing Construction Initiative. The Ministry of Housing (HOUS) and the Ministry of Citizens' Services (CITZ) are working to digitize the B.C. Building Code and develop and implement an automated code compliance system in 2023/24. This system will integrate with existing local government digital submission tools for building / development plans and seeks to reduce permit review time by local governments.

As a complement to this work, DIGITAL is leading this collaborative, mission driven innovation program to advance the adoption of digital construction technologies and spur step change improvements in the pace and productivity in the way housing is designed, built and developed in B.C. This part of a larger goal and aspiration to make B.C. a North American leader in digital construction and permitting.

This program is organized around three tracks summarized below in Table 1.

Table 1: Program Tracks

PROGRAM TRACKS
1. Collaborative mission Mapping & Engagement
o Benchmarking and research review o Production and evolution of a mission map (with annual updates) o Development of a collaborative innovation network o Production and distribution of knowledge sharing materials
2. Portfolio of Leveraged Challenge Projects with B.C.-based companies
o Develop a portfolio of 18 to 32 projects ranging from feasibility studies, proof of concept work, pilot projects and full-scale trials. o Ensure geographic reach across the Province of B.C. o Support regulatory and supply chain coordination and alignment o Ensure targeted challenge projects address a diversified range of opportunities
3. Adoption Support, Training and Knowledge Mobilization
o Convert challenge project innovations with the highest impact potential into case studies that help accelerate the diffusion and adoption of innovation o Training and workforce development strategy o Support the development of 30 to 60 adoption plans that use case studies, training and financial planning to help deploy innovations in companies. o Annual learning and opportunities report that helps share knowledge and build momentum.

COLLABORATIVE PARTNERSHIPS

Housing is such a massive challenge that we need to mobilize significant resources from a wide variety of programs and organizations. Therefore, we actively seek out collaborative opportunities to align and leverage our portfolio with other public, private and not-for-profit programs and organizations. Through our collaborations, we aim to take advantage of complementary strengths. By aligning our work and interests with other parties, we help create a stronger ecosystem-wide response to using innovation to grow housing production capacity and ultimately, new housing stock.

If you are doing complementary work on the housing challenge and see an opportunity for us to enhance our alignment and work together, please contact us at:

grow.housing@digitalsupercluster.ca.

We'd love to hear from you.