

# **ACAN for Open Source Housing Market Modelling and Urban Planning Platform and Support**

## **Background:**

Canada Mortgage and Housing Corporation (CMHC) requires a Service Provider to provide a web-based behavioral urban microsimulation platform and related consulting support to analyze housing, land use, and urban infrastructure investments, and model policy and project impacts on the economy, transportation, and the environment.

## **Current Requirements:**

CMHC intends to establish a contract for use of and consulting support for a behavioral microsimulation modelling platform to simulate the evolution of regional housing markets, urban land use decisions, and housing policy impacts. The Contractor will also be required to provide training resources, advice on data sourcing and cleansing, and other modelling related expert opinions on an as required basis.

The scope of work is as follows:

The supplied urban micro simulation platform should be open source and cost effective to support collaboration and model development among multiple scholars, policy analysts, public servants, developers, consultants, and urban planning authorities.

Solution characteristics should also include:

- Agent-based behavioural modelling for household choices and developer decisions
- Delivery of simulations, analytics and 3-D visualizations over the internet, with cloud-based scenario generation that places limited demand on local computing resources
- Planning tools that measure demand/supply-side impacts of policy and public investment decisions on financial, equity and environmental outcomes
- Customizable to permit additional modeling to support housing market and housing finance policy analysis and decision making
- Proven technology with evidence of successful application to policy and infrastructure analysis for multiple large urban regions.

## **Contract Duration:**

This contract is expected to begin on 1 September 2017 up to and including 31 August 2020 with an option to renew the contract for a period of two years. The value of this service contract is expected to range from CDN\$500,000 and CDN\$1,500,000 exclusive of all applicable taxes.

## **Justification For Sole Sourcing:**

It is the intent of CMHC to contract with UrbanSim Inc. of Berkeley, CA, USA for the work outlined above due to our review of alternate models as documented through internet accessible descriptions and documentation. No other platform combined the scope and analytical rigor of

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UrbanSim and the microsimulations that it runs across an entire region. Over more than a decade, a rigorous methodology has been developed by research led by Paul Waddell, a former planner and current Professor of City and Regional Planning at the University of California, Berkeley. The research behind it has been cited in the academic literature thousands of times.

In reviews of advanced models, it has consistently emerged as the most sophisticated, credible, and widely used approach. UrbanSim has become the operational modeling approach for the leading Metropolitan Planning Organizations in the United States, and it has been identified as the recommended solution in a legal settlement of challenges to plans across the country.

Its cloud-computing deployment platform enables all users to harness unlimited computational resources with a beautiful user interface implemented in a web browser, thus minimizing barriers to high performance by any party involved. It saves users from spending resources or time managing hardware and software installations. These features support use at reasonable cost by a broad community of users and mitigates risks to project timelines caused by slower in-house computing or in-house Information Technology complications.

The Founder and CEO of UrbanSim, Dr. Paul Waddell, is the developer of UrbanSim. He has led the design and application of UrbanSim in metropolitan areas across the United States and internationally. No other entity is actively providing customization and training support for UrbanSim applications, and none would be qualified to do so.

An Advance Contract Award Notice (ACAN) allows CMHC to post a notice, for no less than fifteen (15) calendar days, indicating to the supplier community that it intends to award a good, service or construction contract to a pre-identified contractor. If no other supplier submits a Statement of Capabilities that meets the requirements set out in the ACAN on or before the closing date, CMHC may then proceed with the award. However, should a Statement of Capabilities be found to meet the requirements set out in the ACAN, then CMHC will proceed to a full tendering process.

You are hereby notified that CMHC intends to negotiate with the firm only as identified above. Suppliers who consider themselves fully qualified and available to provide the services/goods described herein, may submit a statement of capabilities in writing to the contact person identified in this Notice on or before the closing date. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

Documents may be submitted in either official language of Canada.