

Bits to Bytes Solicitation 2018

1. Summary

The Massachusetts Life Sciences Center (“MLSC”), in line with its mission to support life sciences innovation, R&D, and commercialization, is pleased to issue this Solicitation for interested parties to apply for the new “Bits to Bytes” capital call. The goal of this call is to support the generation and analysis of large datasets to answer pressing life science questions, and to attract and train data scientists. The call will consist of a competitive process to identify novel uses of large datasets to advance life sciences innovation, while also developing the skillsets of data scientists in Massachusetts.

Non-profit partners (“Applicant”) are eligible to apply for grant funding to cover capital expenses for each selected project, provided that they have secured at least one industry partner (“Company”) for the project to leverage the impact of the MLSC investment. Projects will be evaluated, in part, based on the level of support offered to the Applicant from the Company in a support letter which delineates the amount of cash, in-kind, and/or other contributions (equipment donations etc.) to be provided to by the Company. In addition, the Company will be required to fund the salary, for the duration of the project, of a data scientist (either graduate student or postdoctoral fellow) that will be appointed at the Applicant to work on the project. The appointment can be dual between the Applicant and Company, if appropriate, and if so needs to be a new FTE relative to current Company employees. Proposals should include a project plan to be completed within three to four years of award announcement. There is no limitation on the number of proposals that may be submitted by each non-profit institution.

Applicants will be required to clearly identify the opportunity or value proposition for funding the project by articulating the problem to be solved, the benefits of solving this problem and how this can be uniquely done using large datasets, and how data scientists will be trained and deployed to analyze these data in life science applications.

Top applicants may be invited to meet with the judging panel, which may include members of the Center’s Investment Committee, Scientific Advisory Board, and/or a Data Science Advisory Panel. Final recommendations on Awardees will be brought to MLSC’s Board of Directors for approval.

Applications to the competition are **due no later than February 15, 2019 at 12:00 p.m. EST** via an online submission.

2. Who We Are

The Massachusetts Life Sciences Center (Center) is an investment agency that supports life sciences innovation, research, development and commercialization. These investments create jobs and support advances that improve

health and wellbeing. The Center offers the nation's most comprehensive set of incentives and collaborative programs targeting the life sciences ecosystem. These programs propel the growth that has made Massachusetts the global leader in life sciences. The Center creates new models for collaboration and partners with organizations, both public and private, around the world to promote innovation in the life sciences. For more information, visit www.masslifesciences.com.

3. Eligibility Criteria

- Applicants must be non-profit institutions, including research institutions and academic medical centers.
- Each application must be submitted by a Project Team, consisting of a principal investigator(s) (PI) at Applicant and one (or more) Company(s).
- The PI must have a full-time or part-time faculty position at a college, university, or non-profit institute in Massachusetts. The Company, and if more than one Company is participating, the lead Company who is providing the data scientist support, must have a presence in the Commonwealth of Massachusetts and registered to do business in Massachusetts.
- The requested funding must support the performance of translational research that is intended to accelerate the understanding of critical healthcare issues or develop new treatment methods based on the analysis of large datasets. **The requested funds can only be used to support capital costs (equipment, supplies, reagents) at the Massachusetts non-profit institution.**
- Projects will be evaluated, in part, based on the level of support offered to the Applicant in a support letter(s) which delineates the amount of cash, in-kind, and/or other contributions (equipment donation, etc.) to be provided by the Company and any other sources (federal grants, etc.). The greater the lever of MLSC dollars by additional third party support, the stronger the application. In addition, Awardees will be required to provide documentation of a cash component to support at least one data scientist for the duration of the project following grant award.
- Applicants must demonstrate how they will work collaboratively with the Company to execute the project.
- These funds are intended to catalyze *new* life science discoveries using modalities that generate large data sets (sequencing, proteomics, imaging, etc). Therefore, sponsored research agreements (or other similar arrangements) executed before February 15, 2019 between the parties will not be considered as part of the letter of support for this program.
- The Applicant and Company must be in compliance with all other Center agreements, if any.

4. Evaluation Criteria

For this solicitation, MLSC is particularly interested in supporting applicants whose research will lead to significant healthcare advances using data-driven approaches and who will recruit and train data scientists in the life science field. While the MLSC recognizes that different areas of translational research have different time horizons, successful proposals will explain a clear path, with executable milestones, that leads to new discoveries in

partnership with the Company. To this end, the following criteria will be considered in determining the competitiveness/strength of an application:

- Opportunity/Value Proposition
 - Importance of the data set in advancing current knowledge of a given disease state or healthcare problem
 - Feasibility of demonstrating improved understanding of the condition or development of new treatments through proposed approach
 - Impact in and on Massachusetts - either in the context of local business or research partnerships, local purchasing, local prototyping, benefit to patients, etc.
 - It is likely that shared datasets will encourage discovery and development outside of Massachusetts, too, which is encouraged, but the benefit to Massachusetts must be clearly articulated
- Science/Technology/Product
 - Clarity and reasonableness of research endeavor and methodology
 - Potential to succeed in addressing important healthcare challenges
 - Capabilities of the parties to develop and implement a work plan that is likely to achieve the specific tasks and activities
 - Reasonableness of timeframe and proposed budget to accomplish proposed goals
 - Commitment and ability of the Applicant to structure and share data in a standardized way
 - MLSC acknowledges that the data may be kept proprietary to the parties for a reasonable amount of time, but ultimately will need to be made available to the greater life science research community
- Team and Qualifications
 - Identification of individuals or staff at the research institution and the Company(s) who will be involved in pursuing the project's objectives and working toward the final product or outcome
 - Qualifications, experience and expertise of such individuals (PI, postdocs, research personnel, etc.)
 - Teams employing diverse areas of expertise, including engineering, biology, and data sciences, to tackle the problem through a convergence of approaches are especially encouraged to apply
- Work Plan and Budget (including contribution from Company(s))
 - Clarity and identification of specific tasks, milestones, and timeframes associated with activities for which funding is sought
 - Reasonableness of funding as it relates to such activities

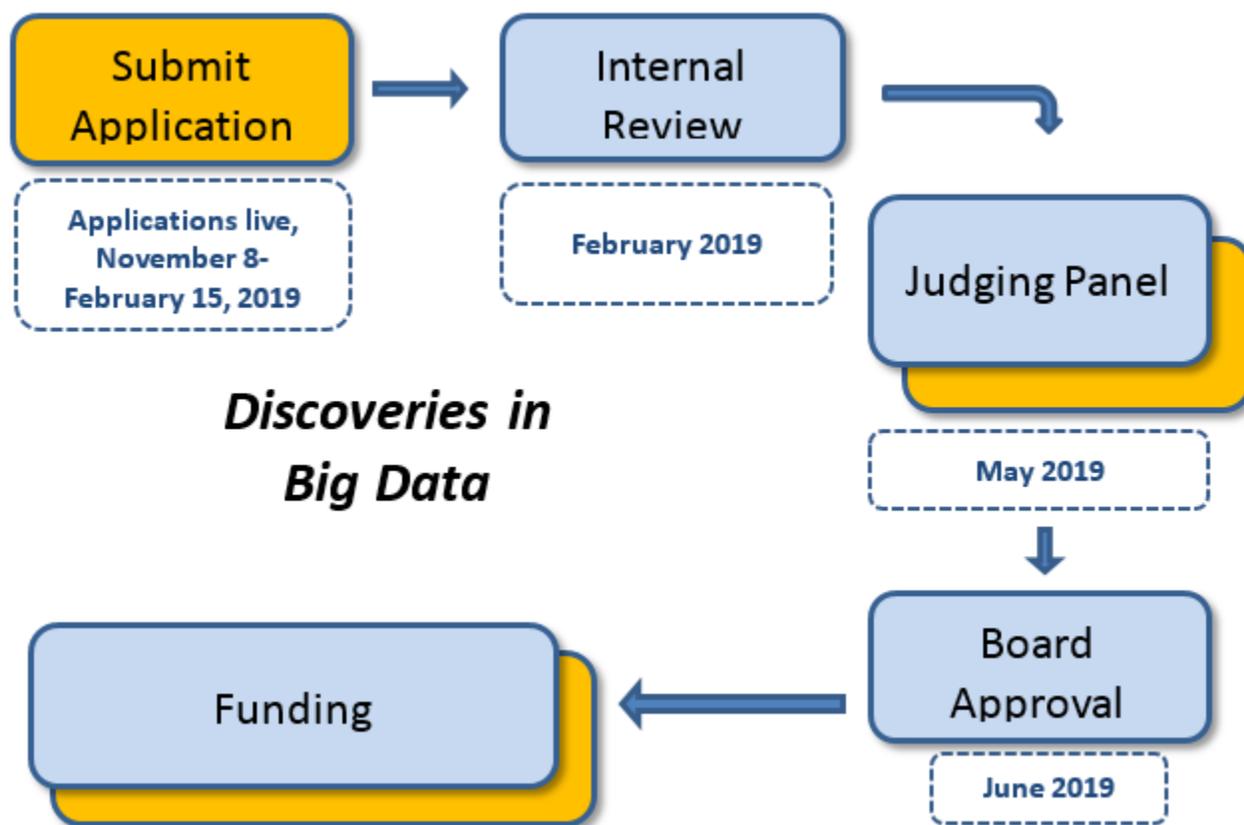
- If additional funding will be required to accomplish project goals, sources have been identified and funds have been committed

Data Science Innovation Topic Areas:

Some examples of healthcare topics of particular interest to MLSC include improved understanding of biomarkers and pathophysiology of neurodegenerative diseases, impact of microbiome on human health including causative links to disease, target identification and validation for women’s health diseases/disorders, personalized medicine approaches, reducing time and costs of drug approval, decreasing clinical trial failure rates, etc. This list is not meant to be exhaustive, but rather representative of the types of pertinent healthcare issues that can particularly benefit from large datasets to catalyze discovery.

5. Program Process

In the following Figure, we highlight the overall process by which the applications are submitted, evaluated and the decisions are communicated. Note that the yellow shaded boxes focus on the Team’s activities and the blue shaded boxes represent the activities of the Center.



- Applications will be accepted from November 8, 2018 through February 15, 2019 at 12:00 p.m. (noon) EST via an online application at <http://www.masslifesciences.com/programs/bitstobytes>.
- There is no limit on applications from Applicants, but Project Teams are allowed to submit only **one** application for the 2018 Bits to Bytes capital call.

Evaluation and Awards

- An initial screening of each application will be conducted by the Center's staff. The Center reserves the right to ask the applicant to provide more information or clarification at any stage of the process.
- Members of the judging panel, including members of the Center's Scientific Advisory Board (SAB), Investment Committee (IC), and external experts will be assigned applications to evaluate based on their expertise.
- Upon invitation, selected Teams may be requested to meet with the judging panel to present their project proposal and address questions or provide clarification. The Center will notify such Teams in advance and provide additional instructions.
- The judging panel will recommend awardees to the Center's Board of Directors at the June 2019 Board Meeting.

6. Application

Applications will be submitted via an online portal. Applications will contain the following information:

Organization Overview: Applicants will provide an overview of the Principal Investigator(s) and available resources for this project, including other funds, equipment and researchers available to support the proposed project. Applicants will also provide an overview of the Company and information about resources to be committed to this project.

The Specific Project: Applicants will be asked to provide a summary about the specific project, it's goals, its competitive advantage, and the unmet need in healthcare it addresses.

Proposal to the MLSC: Applicants will explain the proposed use of funds and expected outcome of the Bits to Bytes program participation, including the expected advancement to the field of interest, and benefit to patients and Massachusetts.

7. Funding

- **Allowable costs for MLSC funds:** equipment, research supplies and reagents (no minimum dollar amount), purchase of hardware and software, generation of data via core facilities, processing of raw data by core facilities, purchase of analytical equipment. Non-fundable expenses include: direct labor, legal expenses, travel, paying off debt, paying board members, paying for operating costs such as rent and utilities, renting space for storage of memory or hard drives, monthly cloud storage fees, other monthly subscription fees, and activities funded by other funding sources.
- Company must commit to providing financial support of at least one data scientist (graduate student or postdoctoral fellow) for the duration of the project, but applications will be strengthened by other types of support from the parties including cash, in-kind, and/or other contributions (equipment donation, etc.) from the parties and other sources (federal agencies, etc.). For applicants selected to be funded by the MLSC, documentation of a cash component to support at least one data scientist for the durations of the project will be required. Project budgets should clearly define the support being provided from each party.
- Following execution of the grant agreement, funds will be provided on a reimbursement basis to the Awardees.
- The number and amount of awards will be determined by the quality of the proposals.
- Typical grant request for this program is up to \$750,000. Teams requesting more than \$750,000 will be asked to describe the compelling circumstances and provide sufficient information to justify this special request. MLSC has up to \$10,000,000 to fund quality applications from this call.
- **The Center reserves the right to adjust the requested amount of funding for each proposal.**

8. Deliverables

Awardees are required to submit the following materials to the Center:

Progress Report– will be submitted by all Awardees every six months during the award period, with receipt of a Final Report no later than 30 days after conclusion of the award period. These reports should describe progress made using the grant, as well as other metrics including, but not limited to any patents filed, abstracts/publications submitted, follow-on funding, etc. Templates will be provided to awardees upon execution of the Grant Agreement.

Post Project Report- will be submitted by all Awardees on the first and second year anniversaries of submitting the Final Report and should describe the progress of the Awardee towards project execution and the impact of the Award on such progress. The report should include additional funds raised by Awardee, number of FTEs, relevant

partnerships, intellectual property filed/optioned/licensed, resulting publications, and other information. Templates will be provided to awardees upon execution of the Grant Agreement.

9. Confidentiality

MLSC is subject to the requirements concerning disclosure of public records under the Massachusetts Public Records Act, M.G.L. c. 66 (Public Records Act), which governs the retention, disposition and archiving of public records, such as written materials, financial statements, statistical tabulations and other documentary materials or data. As a result, applicants should be aware that any information submitted to MLSC is subject to public disclosure as set forth in the Public Records Act.

There are, however, exceptions. "Public records" do not, for example, include documents containing trade secrets, such as commercial or financial information regarding the operation of any business conducted by a company or other institution or regarding the competitive position of a company or other institution in a particular field. In the event that an applicant wishes to submit certain documents to MLSC and believes such a document or documents may be proprietary in nature, the applicant should identify such materials in its application as Confidential. MLSC's General Counsel is the sole authority within MLSC for making determinations on the applicability and/or assertion of an exemption to the Public Records Act. All documents submitted by the applicant, whether designated as "Confidential Information" or not, are not returnable.

10. General Conditions

Contractual Requirements

The Center intends to enter into an Agreement with the Awardees containing certain standard provisions. The Center reserves the right to amend the Agreement without further issuance of another solicitation. Please be advised that this standard Agreement must be executed in substantially the form provided and the terms and conditions therein are non-negotiable.

*Please note, the Center will not include any intellectual property terms in its contract. We recommend all parties begin these discussions as soon as possible to avoid delay in executing the award.

Waiver Authority

The Center reserves the right, at its sole discretion, to waive minor irregularities in submittal requirements, to request modifications of the application, to accept or reject any or all applications received, and/or to cancel all or part of this solicitation at any time prior to awards.

Disclaimer

This solicitation does not commit the Center to award any funds, pay any costs incurred in preparing an application, or procure or contract for services or supplies. The Center reserves the right to accept or reject any or all applications received, negotiate with all qualified Applicants, cancel or modify the solicitation in part or in its

entirety, or change the application guidelines, when it is in its best interests. An application does not constitute an award.

Changes/Amendments to Solicitation

This solicitation has been distributed electronically using the Center's website. It is the responsibility of Applicants to check the Center's website for any addenda or modifications to the Solicitation to which they intend to respond. The Center, the Commonwealth of Massachusetts, and its subdivisions accept no liability and will provide no accommodation to Applicants who submit an application based on an out-of-date solicitation document.

Contact Us

For more information about the Massachusetts Life Sciences Center and this program, please see:

<http://www.masslifesciences.com/programs/bitstobytes>.

Still have questions? Email an industry team member: BitsToBytes@masslifesciences.com.