Introduction

Discovery Themes and Translational Data Analytics (TDA)

The Ohio State University has an important responsibility as a public, land-grant, research university to search for solutions to societal challenges. Through the Discovery Themes Initiative (DTI), Ohio State is positioned to translate its intellectual assets and relationships into transformative improvements to solve real world problems.

As a focus area of DTI, the mission of Translational Data Analytics @ Ohio State (TDA@OhioState) is to connect faculty with the people and resources they need to create data-and-analytics-enriched solutions for research and real-world problems. These solutions are generated through connections among fellow faculty and external partners; through shared data analytics tools and resources; and through novel foundational developments.

We define translational data analytics (TDA) as the application of data analytics theories and methods to generate solutions for real world problems. TDA tackles high-impact problems in all of their complexity, with a focus on those problems whose solutions simultaneously advance scientific knowledge and provide benefits to society. TDA’s focus is on solutions that take existing theories and inform them with data to make decisions—that is, problems at the intersection of data and analytics. While TDA acknowledges the centrality of particular disciplines, TDA also recognizes that solving complex problems requires teams of researchers that transcend traditional disciplinary boundaries. These teams will often extend beyond the boundaries of the university to include partners in the local community, government, and industry.

Consistent with our focus on translation, TDA encompasses both foundational and applied research. Foundational work advances data science theories, methods, toward the discovery and development of data-enriched solutions by translating knowledge across traditional disciplinary boundaries. Applied work in this area focuses on strategies and conditions needed to translate data-enriched solutions into real world settings.

TDA Seed Grant Program

This seed grant program is designed to advance translational data analytics, by fostering a dynamic and interactive community of data analytics research, teaching, and innovation at The Ohio State University. The program supports the creation of a community of scholars...
dedicated to identifying, sharply defining, and providing solutions to problems within the scope of TDA. This is to be accomplished through the formation of new, interdisciplinary teams to generate preliminary study concepts, technologies, data, and results. It is expected that these initial results will foster subsequent applications for extramural funding.

The intent is to maximize transdisciplinary connections among faculty, staff, students and external partners and bringing new talents, expertise, and resources through collaborative work). Proposal applications for grants are expected to generate new opportunities or novel extensions of existing activities, rather than simply provide supplementary funding for existing activities. Proposals likely to produce tangible results will be favored (including, but not limited to, manuscripts, external grant proposals, software modules and prototypes, monographs, or other products that could be included in the data commons).

**Proposal Requirements**

Responsive proposals under this mechanism will **at a minimum** address the following requirements:

- Be led by a PI or co-PIs who are active faculty members at Ohio State (faculty may be involved in more than one proposal, but can only lead a single proposal to ensure equal opportunity);
- Involve the participation of faculty from at least two intellectually distinct disciplines and two colleges. For example, a proposal could involve the participation of individuals from Statistics (A&S) and Public Affairs (John Glenn College);
- Needs to be foundational or applied (or a hybrid of the two)
  - Translation to develop foundational knowledge
    - Result in new knowledge including findings, techniques, and/or insights that generate value for the learning community at OSU
    - Where that knowledge has promise in addressing a real world problem
  - Translation to community partner in a real world setting
    - Include the participation of at least one Ohio State community partner
    - Results in progress to achieving a data science solution to address a community partner’s problem where that solution has a wider relevance to the larger community
- Ensure that all data sets used by or generated by the proposed project are available to the broad TDA@OhioState community, subject to FERPA regulations and Ohio State’s data governance policies; and

**The Ohio State University**
Be completed within 12 calendar months from project initiation. A final report at the end of the funding term will be requested. Time extension requests will be considered on a case-by-case basis. In addition, the principle investigator will make themselves available to TDA for additional follow-up assessment of project outcomes (e.g., inform TDA of extramural funding won subsequent to the project close).

In addition, although not required, proposals that include a cash or in-kind match from at least one college or stakeholder are strongly encouraged.

**Funding Available**
The maximum funding available is up to $30,000 per project for up to 3 projects. The final amount and number of awards will depend upon the merits of the applications received.

Funding may be used for projects that require support in one or more of the following categories:

- Faculty course release time or other direct research costs
- Research funding (i.e., services and supplies)
- Student and staff support

Funds may not be used for capital improvements, to supplement existing grants or research projects or for expenditures outside those described here. The use of funds for faculty salaries is allowable, but must be clearly justified.

Funded teams will be responsible for providing a detailed budget and tracking expenses.

While not required, if including a co-investment match in direct funding and/or in-kind support from the departments and/or colleges (or stakeholders), please include in project budget.

**Letter of Intent**
Teams must submit a letter of intent (LOI), in 12-point font with 1-inch margins, up to two pages in length. The LOI will be reviewed within two weeks of receiving, and must be approved before full proposal submission. The LOI may be returned with suggestions for revision and resubmission.

Please e-mail the LOI in a MS Word or equivalent format by 5 p.m. on September 15, 2016 to tda@osu.edu.
Review and Selection Process
Applications will be evaluated via a peer-review process, with an emphasis placed on the following criteria:

Significance
Does the proposed research topic properly address translational data analytics as defined in the introduction (page 1)? What progress is likely to be made during the project period? How important is the projected progress? What benchmarks for success have the investigators described? Will the project have a lasting impact beyond the project period?

Innovation
Will the research team introduce an innovative technique or insight into translational data analytics at Ohio State? Does the proposed project challenge current research or knowledge on translational data analytics and/or use novel theoretical concepts, approaches or methodologies, or technologies? Is the proposed project routine, or will it stretch researchers or develop a significant innovation for a community member?

Approach
Is the overall strategy, methodology, and analysis well-reasoned and appropriate to accomplish the specific aims of the research? Do the investigators have access to data/materials/methods needed to complete the project? How does the investigator’s approach build on, advance, or add more rigor than alternative approaches?

Project Team
Are the PI, collaborators, and other researchers well suited to accomplish the specific aims of the research? Will the project serve to build the translational data analytics community at Ohio State? Does the project team show solid intellectual diversity?

To ensure successful completion of projects as proposed, it is required that applicants provide at least 1 (but no more than 3) letter(s) of support with their application. Letters of support should indicate: (1) (if appropriate) that the team has secured access to any/all required data sets not in the public domain. This may include, but is not limited to, those data maintained by the OAA Office of Enrollment Services and Office of Institutional Research and Planning (http://oaa.osu.edu/irp/home.php); and (2) (if applicable) has secured appropriate matching support from at least one department and or college of the researchers involved in the application.

For those requesting course release, a letter from the department chair of each respective faculty member requesting release time will be required when submitting final application. The letter(s) must include estimated costs for the release. Note: These letters for course release time will not be included in the maximum application length, nor will they be counted as letters of support.
Important Dates

- Letter of Intent deadline: September 15, 2016
- Application Deadline: October 27, 2016
- Review: November 2016
- Notification of Decisions: December 2016
- Earliest Possible Start Date: Spring Semester 2017

Application Format

Applications must be typed in 12-point font size with appropriate spacing and margins to ensure readability. Charts, tables, and graphics may be used to communicate responses in content areas. Proposal must be submitted as one complete document with all components included.

Application Length

Proposals may not exceed 6 pages in length. Supplementary pages (including letters of support, 3 maximum) may not exceed 6 pages. Submissions may not exceed 12 pages total.

Submission and Application

Proposals must be submitted to tda@osu.edu, no later than 5:00 p.m., Oct. 27, 2016; proposals received after this deadline will not be considered.

Proposal Applications must include (6 pages maximum):

A. Concept.

1. Proposal Title:

2. Principal Investigator(s).
   
   Title:

   Department:

   Contact Information:

3. Document the significance of the project as it relates to Translational Data Analytics, as defined in the Introduction.

4. Summarize how the project addresses fundamental issues related to the stated priority areas.
5. Provide a detailed description of the outcomes expected from the project (e.g., extramural funding proposals, publications, curriculum development, etc.), including new findings and/or insights that will be generated and how activities will be integrated across teaching and research to advance the scholarship of learning analytics.

**B. Collaboration.** Identify at least 1 or more university collaborator(s) from a department, college or unit other than the PI(s) and describe how their role(s) will contribute to success.

1. **Team Members.** Provide a list below of all team members (faculty, staff, and students) (add additional spaces as needed):

<table>
<thead>
<tr>
<th>Team member</th>
<th>Affiliation</th>
<th>Email address</th>
<th>Project roles and responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI, Team Lead:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Document how university and community team members will be integrated in program activities, and include how each will contribute in mutually-beneficial and reciprocal ways.
C. Growth. Identify how resources will be applied to achieve measurable outcomes.

1. Provide a detailed timeline and brief narrative description of key activities, milestones, and outcomes to track and measure success (add additional spaces as needed):

<table>
<thead>
<tr>
<th>Activity</th>
<th>Milestone</th>
<th>Outcome</th>
<th>By Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Discuss the proposed scholarly work(s) to be produced by team members.

### D. Budget Summary

<table>
<thead>
<tr>
<th>Item (and brief description)</th>
<th>Requested Funds</th>
<th>Matching support</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Salaries and Fringes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Outreach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Travel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

($30,000 maximum)

### Checklist for Grant Application.

- Application (maximum 6 pages) including all components in A-D, as outlined above
- 1-3 Letters of Support (maximum 2 pages per letter)

Proposals are due **Thursday, October 27, 2016, at 5:00 p.m.** and **must not exceed 12 pages.** 6 pages for the proposal, 6 pages for supplementary material

**Note:** Any non-electronic documents should be scanned and added to the copy. The entire application is to be submitted **as a single document** with all parts included.

For more information or questions, please contact tda@osu.edu.