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Data Governance

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PROBLEM STATEMENT

In the last two years, the University has approved new policies with respect to data governance (UNIV 1.51, UNIV 1.52, RSCH 1.05). These policies properly assert that data has great value to the University and that maintaining it is essential to the institution's administrative function and research mission. Despite this, policies regarding administrative and research data are not well aligned; the policies are not broadly or well understood; limited resources have been committed; and implementation has suffered.

Anyone attempting to develop effective policies for data governance can expect to confront a core challenge: good data management requires detailed attention by experts close to the data as well as coordinating directives from officials empowered to commit necessary resources, who are unlikely to understand specific procedures and requirements for maintaining the data. The committee will focus on this fundamentally organizational challenge: how effectively to wed administrative and ground-level decision-making, how to align resource allocation with specific local priorities and needs, and, within that context, at what point or points should decisions about administrative and research data connect?

INVESTIGATION METHODS/DATA/CONCLUSIONS

We define data governance as the decision-making process that prioritizes investments, allocates resources, establishes policies, and measures results to ensure that data access, security, quality, and retention support the University's mission. UNIV 1.51 offers further specifics and provides helpful definition of the roles of "data trustee," "data steward," and "data custodian." As used in this report, these terms respect those definitions. Our investigation involved:

1) Review of current UNIV 1.51 and 1.52 and implementation status with CDO Mike Kelly.
2) Review of RSCH 1.05.
3) Review of literature on date governance, including policies and procedures at a few other institutions (see Appendix 1).
4) Discussion of whether the current decision-making hierarchy for administrative data governance envision by UNIV polices is appropriate. We concluded that it is, but that it needs to be implemented.

5) Discussion of both "top down" and "bottom up" initiatives to encourage implementation, clarify roles and responsibilities, and facilitate coordination, where beneficial, in governance of research and administrative data. We concluded:

a. There is a need activate data stewards council defied by UNIV 1.51. We developed plan to do so (see Recommendations).

b. There is a need to clarify and communicate roles and responsibilities described in UNIV 1.51.

c. There is a need to activate the Data Information & Strategy Council (DISC) envisioned by UNIV policies and to cultivate an executive sponsor or sponsors for data governance. We discussed the composition of the DISC (see Recommendations)

d. There is a need to extend the "data steward" concept to faculty PIs and to align UNIV and RSCH policies to reflect this role, and to provide PIs/Data Stewards resources to enable them to serve effectively in that capacity.

e. There is a need to develop a coordinating and planning body on the research side/; this new body would fulfill the role of the data trustee for research. RSCH 1.05 should be revised to define this body and its role (see Recommendations).

EXECUTIVE SUMMARY

- Current UNIV polices to address governance of administrative data are well conceived, but deliberate top-down and bottom-up initiatives are required for successful implementation.

- Governance of research data urgently needs sustained attention in the context of an overall review of how central DoIT resources for research computing are funded and managed.

RECOMMENDATIONS/ACTIONS

- As part of the rollout of the recently acquired Data Cookbook currently planned for September 2018, the CDO should convene a first Stewards Council with the aim not only of introducing the product but of encouraging functionally related teams of stewards to work independently to develop statements of shared challenges and/or best practices. In addition to implementing the Data Cookbook, this "bottom up" activity should have the following aims: 1) to clarity whether appropriate individuals have been identified to serve in the steward role; 2) to identify obstacles to effective decision-making that changes to the governance structure might remove, and 3) to improve data quality as quickly as possible.
- The University President is encouraged to constitute the Data Information & Strategy Council (DISC) per UNIV 1.51 as soon as possible. We recommend the following members: CDO (chair), Provost, Vice-President for Research, CFO, Registrar, Vice-President for Student Affairs, Vice-President for HR, Vice-President for Advancement, a representative from the system campuses, a representative from the Dean's Council, and the Faculty Senate IT Committee Chair.
- The current ad hoc approach to governance of research data is untenable in light federal grant requirements. Unmet commitments, duplicated efforts, and inefficient use of resources are the predictable results. DoIT, University Libraries, and VPR each have a role to play, but the current approach does not specify responsibilities, such that no unit has a mandate or funding to act. To begin to address this situation, the Faculty Senate IT committee should propose a revision of

RSCH 1.05 to create a responsible coordinating and planning body for data governance (and perhaps research computing more broadly).

  - This new body would function as the "data trustee" for research data. It should include representation from the Office of the Vice-President for Research, the University Libraries, DoIT, the Dean's Council (a representative of a revenue generating units), at least two representatives of the Research Faculty, and someone representing the system's comprehensives (perhaps from the HPC group). A member or members of this group should also serve on the DISC.
  - Currently, RCSCH 1.05 asserts University ownership of research data while making PIs responsible for maintaining it. Revision should make clear that "ownership" entails responsibilities and that this new body would administer, functioning to clarify and coordinate the functional responsibilities of VPR, Libraries, DoIT (CDO, RCI, Data Center, Networking), and PIs.
  - In proposing revisions to RSCH 1.05, the Faculty Senate IT Committee should take care to align the PI role with the role of data steward and should consider how appropriate supportive tools and services might be provisioned.

- The new budget model should make transparent and public the percentage of "chargeback" devoted to human and technology support for research computing. It is especially vital that the community be able clearly to understand what proportion of IDC is devoted to central research computing support, so that reasonable conversations about priorities can occur.

RESOURCE REQUIREMENTS AND STRATEGIES

The committee is convinced that the University would be wise to devote significant additional resources to data governance. Two variables make it impossible to make more concrete recommendations at this time: 1) the precise structure and likely effects of the new budget model on funding for central IT; 2) the current state of implementation: until there is a DISC to think strategically and Stewards' Council to make needs concrete, it will be very difficult to understand data governance costs and opportunities comprehensively enough to set priorities. Given the importance of standing up a functioning structure, it is hoped that the CDO's assignment of duties might prioritize that task.

APPENDIX 1

Works Consulted

Barnhardt, Jon and Joe LeMaster. "Developing an Institution-Wide Data Management Policy." Education Advisory Board, Washington, D.C., September 2012.

Chapple, Mike. "Speaking the Same Language: Building a Data Governance Program for Institutional Impact." *Educause Review*, November/December 2013.

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National Institute of Standards and Technology.“ NIST Information Security Handbook: A Guide for Managers.” NIST Special Publication 800-100, October 2006, https://nvlpubs.nist.gov/nistpubs/legacy/sp/nistspecialpublication800-100.pdf

Seiner, Robert S. “Rules for Becoming a Data Steward.” February 1, 2016. http://tdan.com/seiners-data-steward-rules/16867.

Stanford Data Governance Organization. Chart.

Stanford Data Governance Maturity Model

U.S. Department of Education - Privacy Technical Assistance Center (PTAC).“Data Governance and Stewardship.” https://nces.ed.gov/programs/ptac/pdf/issue-brief-data-governance-and-stewardship.pdf .