Pathway Goal: Research, Scholarship, and Creative Activity

Action Item # 2-3

Report:
☐ Mid-Year: December 2016
☒ Year-End: April 2017

Action Item Description:
Information and Data Management

Submitted By:
Name                Department
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Working Group Members:
Name                Department
Annette Day        Library
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Christina Drum     Decision Support
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Kate Korgan        Graduate College
Rama Venkat        College of Engineering
Mike Ellison       Office of the Controller
Tondre De          VPFA

Provide a written overview of the year-long process for your working group.

The committee met four times to date. We systematically addressed the groups charge and developed the accompanying report.
2016-17 Accomplishments

Updated the RSCA Key Measures Spreadsheet (linked in accompanying report). Developed recommendations for the support of an organization-wide faculty activity reporting system and the implementation of a Top Tier RSCA Steering Committee (see attached for details).

Recommendations

See attached

2017-18 Next steps

- What should the goals / activities be for the subcommittee?
- Who should be responsible?

The committee recommends the development of a Top Tier RSCA Data Steering committee. The charge, membership, and activities are detailed in the attached report.

Please review the list below and “X” the appropriate box(es).

- Potential resources required
- Any reports generated by this working group
  - Information and Data Management Subcommittee 2016-17 RSC 2-3
  - UNLV Tools Available for Supporting Data Reporting (Key Systems (DSRG spreadsheet))
- Metrics to be used
- No additional reference material

Any additional information you wish to share.
Committee: Kendall Hartley (Chair), Annette Day, Mike Sauer, Janine Barrett, Christina Drum, Kivanc Oner, Lori Temple, Joe Lombardo, Tondre De, Kate Korgan, Rama Venkat, & Mike Ellison.

Charge

1. Assessment of technology and systems
   1. needs
   2. gaps
   3. challenges
   4. proposed solutions

2. Assess & coordinate
   1. data dashboards
   2. reporting
   3. access to support top tier goals

Current Technology & System Needs

1. Needs
   a. Agreed upon measures to determine progress towards research, scholarship, and creative activity goals
   b. Systematic collection, maintenance, governance, and reporting tools
   c. It appears as though the necessary information is currently collected (see Key Measures Spreadsheet)

2. Gaps
   a. Some measures lack concrete definitions and data stewards
   b. Collection and reporting is often manual and not systematic
c. Level of detail is not sufficient for comprehensive reporting

3. Challenges
   a. Lack of an agreed upon mechanism and infrastructure to support the needs noted above
   b. Disruption resulting from implementation of Workday.

Recommendations

1. Faculty Activity Reporting System (FARS)
   1. UNLV must have a consistent digital repository of faculty activity used by all faculty.
   2. This tool would be used for official annual reporting of faculty activity
   3. ORCID ID implementation across the university
      1. Faculty
      2. Doctoral students
      3. Other students should be considered
   4. Establish an infrastructure to support the faculty activity reporting system
      1. Identify appropriate systems of record for incoming data
      2. Identify outgoing data for which FARS will be the system of record
      3. Integration with other systems
      4. Develop systems to support FARS innovation, implementation, training, and maintenance
      5. Identify appropriate staffing

5. Communication
   1. The campus community must understand the needs being met by the system and the benefits that will result.
   2. New Top Tier RSCA Data Steering Committee
1. Charge

   1. Coordinate and identify the support necessary to achieve the Top Tier Research, Scholarship, and Creative Activities goals. This includes, but is not limited to, systems, data, and infrastructure.

2. Membership

   1. Decision Support (dashboards / systems)
   2. Library (faculty productivity, data management)
   3. Graduate College (graduate degrees awarded)
   4. EVP&P (faculty activity reporting system)
   5. VPR / OSP (research expenditures)
   6. ESS (dashboards / systems)
   7. Dean’s Council representative
      
         1. Needs to represent entire council (including professional schools)
   8. Department Chair representative

3. Tasks:

   1. Provide to the Data Services for Reporting Group (DSRG) the key measures and reporting needs of Research, Scholarship, Creative Activity
   2. Identify clear stewardship
      
         1. Formalize stewardship responsibilities and accountability,
         2. Provide necessary support
         3. See current UNLV Data Policy
   3. Key measures
      
         1. Updating with current information
         2. Reviewing metrics for additions and/or deletions
   4. Ongoing data requests
1. Including request for data that is not currently captured
5. Coordinating with DSRG
6. Prioritization
   1. Data requests
   2. System needs
7. Dashboard and reporting coordination
8. Cataloguing internal and relevant external systems collecting and managing RSCA information (in coordination with DSRG).

3. Infrastructure considerations
   1. Overview of the current status of information management at UNLV (e.g., Chief Information Officer noted in 2015-16 subcommittee report, and the IT Master Plan).
   2. Resource recommendations:
      1. Resources should follow stewardship (see recommendation 2 - task 2) and priorities (task 6).

The committee recognizes that there are many other data needs across campus. It is important that these recommendations, including the RSCA Data Steering committee recommendation, be reviewed in light of other Top Tier Subcommittee outcomes.

**Sample ****Key Measures** from Top Tier Initiative**

Research (largely finance system - Workday)
   1. Research Expenditures
   2. Proposal dollars submitted
   3. Award dollars received
   4. Source of Funding

Graduate Degrees Awarded (MyUNLV)
   1. Total Doctoral Degrees Awarded annually
2. PhD's Awarded annually
3. Masters - research degrees (typically with thesis)
4. Masters - professional

Faculty Research (largely Faculty Activity Reporting System)
1. Journal Publications # and impact (impact factor, eigenvalue etc)
2. Citation of work (include h-index)
3. Presentations
4. Published books

Key Systems (DSRG spreadsheet)
<table>
<thead>
<tr>
<th>Tool</th>
<th>General Use</th>
<th>Intended use Function</th>
<th>Limitations</th>
<th>Status</th>
<th>Available Data Sources</th>
<th>Type of Tool</th>
<th>Unit Fiscally Responsible</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attunity</td>
<td>Data Replication</td>
<td>Identify data changes for Delta identification</td>
<td>Licensing only for PeopleSoft Two endpoints only</td>
<td>Implementation In progress</td>
<td>PeopleSoft Only</td>
<td>Transportation Transformation</td>
<td>OIT</td>
<td>Replacing Data Stage</td>
</tr>
<tr>
<td>ODI - Oracle Data Integrator</td>
<td>Data Integration, Merging many Sources</td>
<td>ETL, coalesces data from multiple data sources</td>
<td>Must be hosted in an IBM hard partitioned LPAR</td>
<td>Implementation In progress</td>
<td>Unrestricted</td>
<td>Transportation Transformation</td>
<td>OIT</td>
<td>Replacing Data Stage</td>
</tr>
<tr>
<td>Data Stage (ODS)</td>
<td>Data Integration</td>
<td>ETL from PeopleSoft Source</td>
<td>PeopleSoft only End of Life (Nearer to death)</td>
<td>Production</td>
<td>PeopleSoft Only</td>
<td>Transportation Transformation</td>
<td>NSHE (SCS) Integrate Funded</td>
<td>Will be replaced by ODI</td>
</tr>
<tr>
<td>ODL - (Operational Data Lake)</td>
<td>Raw data (not transformation) from multiple data sources (ie Workday, Identity Management, PeopleSoft)</td>
<td>Single point for the gathering of raw data from multiple data sources.</td>
<td>None</td>
<td>Production</td>
<td>Unrestricted</td>
<td>Infrastructure</td>
<td>OIT</td>
<td>Currently only a small subset of Legacy HR, Finance and Identity data</td>
</tr>
<tr>
<td>Data Warehouse - EPM</td>
<td>Historical Data</td>
<td>Currently only Student data Data Stage Licensing limit data scope</td>
<td>PeopleSoft with current limitations ** ODI will make this unrestricted</td>
<td>Infrastructure</td>
<td>NSHE (SCS) Integrate Funded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAS</td>
<td>Suite of Tools</td>
<td>ETL Visualization Analytics Underlying Database Reporting Star Schemas - Define &amp; Manage</td>
<td>None that have been identified</td>
<td>Implementation In progress</td>
<td>Unrestricted</td>
<td>Reporting Analytical Visualization ETL Underlying Database Star Schemas</td>
<td>Enterprise</td>
<td></td>
</tr>
<tr>
<td>Cast Iron</td>
<td>Integration and Extract tool</td>
<td>The extract and integration for multiple data sources.</td>
<td>License? Resources? Data Volume?</td>
<td>Limited Production</td>
<td>Unrestricted</td>
<td>Integration</td>
<td>ESS / OIT?? Enterprise</td>
<td></td>
</tr>
<tr>
<td>OBIEE</td>
<td>Business Intelligence Analytic Reporting Visualization</td>
<td>Must be hosted in an IBM hard partitioned LPAR</td>
<td>Primarily PeopleSoft but can be expanded Reporting Analytical Visualization</td>
<td>Reporting</td>
<td>NSHE (SCS) Integrate Funded</td>
<td>Training is significant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control-M</td>
<td>Job Scheduling</td>
<td>Job Scheduling</td>
<td>Limit to 300 Job Executions per Year</td>
<td>Implementation In progress</td>
<td>Unrestricted</td>
<td>Job Scheduler</td>
<td>OIT</td>
<td></td>
</tr>
<tr>
<td>Cognos</td>
<td>General Reporting</td>
<td>Currently set for Legacy HR</td>
<td>Production limited access Only Legacy HR data</td>
<td>Reporting</td>
<td>OIT</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Tableau</td>
<td>Reporting &amp; Visualization</td>
<td>??</td>
<td>Production in various Units</td>
<td>??</td>
<td>Reporting</td>
<td>Current by individual Units</td>
<td>Need to move to Enterprise service</td>
<td></td>
</tr>
<tr>
<td>Splunk</td>
<td>Analytics and Reporting Visualization</td>
<td>Licensing limited to small number of users</td>
<td>Production</td>
<td>Unrestricted</td>
<td>Reporting</td>
<td>OIT</td>
<td></td>
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<tr>
<td>Financial Data Warehouse</td>
<td>Financial Reports from Advantage data</td>
<td>End of Life (Unknown final date)</td>
<td>Production</td>
<td>Advantage Financial</td>
<td>Reporting</td>
<td>SCS</td>
<td></td>
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</tr>
<tr>
<td>PS Query Manager</td>
<td>PeopleSoft Reporting</td>
<td>Limited reporting and Data Driver generation Only Student application, Reusability and number of users limited</td>
<td>Production</td>
<td>PeopleSoft Student Data</td>
<td>Reporting</td>
<td>OIT/ NSHE (SCS) Integrate Funded</td>
<td>Steep learning curve.</td>
<td></td>
</tr>
<tr>
<td>Focus</td>
<td>HR/Fin &amp; old SIS Reporting and extraction</td>
<td>Reporting &amp; Data Extracts Only HR/Fin data. Sliced to either HR or Fin for report</td>
<td>Production</td>
<td>HR and Finance</td>
<td>Reporting</td>
<td>SCS</td>
<td>Limited knowledge and End of life for current reporting when Workday go-live completes</td>
<td></td>
</tr>
<tr>
<td>Workday Report Writer</td>
<td>HR and Finance transactional and data extracts</td>
<td>Reporting and Data Extracts only HR &amp; Finance data in Workday available for use.</td>
<td>Implementation In progress</td>
<td>HR and Finance</td>
<td>Reporting</td>
<td>NSHE (SCS) Integrate Funded</td>
<td>Steep learning curve</td>
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<td>Metadata Repository System</td>
<td>Populates UNLV data dictionary; tracks metadata; comprehensive documentation for enterprise data management and data infrastructure; contains the common data element</td>
<td>Documentation about defined data elements</td>
<td>Version control - changes to records; not completely built out</td>
<td>In production</td>
<td>Oracle data structures; OBIEE metadata Online data dictionary</td>
<td>Custom built - in house; Provides data about data</td>
<td>Decision Support</td>
<td>Lineage tracking and contextual information for reporting and data analysis (e.g., Data Stewardship tracking); authoritative source for data;</td>
</tr>
<tr>
<td>Faculty Workload</td>
<td>Application that manages and reports on the workload of Faculty</td>
<td>Reporting and possible data source for details and history</td>
<td>Old application that really needs to be moved in the Enterprise Data Warehouse and reported using related tools.</td>
<td>Production</td>
<td>HR and Instructional data</td>
<td>Application Reporting</td>
<td>DSS</td>
<td>Custom application to report instructional faculty workload Currently only source for the combination of HR and Instruction data</td>
</tr>
<tr>
<td>Digital Measures</td>
<td>MS Access via ODBC</td>
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