

## ABSTRACT: 2019 ELAM Institutional Action Project

**Project Title:** Embracing excellence: Implementing a faculty-centric and data-driven approach to evaluating research performance in a school of medicine

**Name and Institution:** Jennifer Sharpe Potter, PhD, MPH, Joe R. & Teresa Lozano Long School of Medicine, UT Health San Antonio

**Collaborators and Mentors:** Courtney Peebles, MPH; Mark Nijland, PhD; Brian Cartee, Monique Lopez, MBA, Gabe Hernandez, MBA

**Topic Category:** Administration

**Background, Significance of project:** The Long School of Medicine Office for Research strategic plan contains four strategic priorities including: *Embracing research excellence: align investment with our strategic priorities; invest in productive faculty; and use standard benchmarks and metrics to review performance.* Implementing a common set of elements by which to evaluate faculty, department, and institutional research productivity is the first step in accomplishing this strategic priority. An environmental scan of current internal processes indicated no standard approach and multiple inefficiencies in research performance reporting. Additionally, no means existed to reliably aggregate data across faculty and/or departments. This limits our ability to make meaningful, equitable comparisons for evaluating performance and, importantly, allocate resources accordingly. Measuring faculty research productivity is not without controversy. Thus, we conducted a 1-year planning and pilot period to identify a research performance reporting system best suited to our organization.

**Objective:** Our year 1 objective was to 1) develop and pilot a standard data capture, aggregation, and reporting system; and 2) develop a change management strategy to promote adoption of this reporting system and dashboard.

**Approach:** We assembled a cross-functional team that included institutional leaders (Vice President for Research, Information Management, Library, Office of Sponsored Programs, School of Medicine Finance), staff, and faculty stakeholders. Guiding principles for the system included: ease of use, low administrative burden for faculty and staff, benefit to all stakeholders, consistent use in performance evaluation, and data visualization. One challenge was including scholarship metrics (e.g., publications, H-index, citations, Altmetrics, and journal impact factors) because of wide variation in faculty reporting requirements and sources throughout the school. After evaluating multiple vendors, Elsevier Pure was selected to extract publication and scholarship metrics. After acquiring Pure, the project was divided into projects with formal charters and timelines: 1) technical optimization; 2) reporting and analytics; and 3) change management.

**Outcomes/Results:** Initial delays in technical optimization resulted in modifications to year 1 objectives. Technical Optimization. We created a data repository of validated, objective faculty scholarship data. While challenges existed, HR data and Pure data were linked successfully, creating an integrated data feed for each faculty member. The resulting data feed was linked to existing financial and human resource data reporting using Power BI, a data visualization software.

Reporting and Analytics. We developed and tested dynamic reporting of faculty research activities (publications, proposals, extramural funding). The reporting system included: faculty profiles, department profiles, publications and other scholarship, and awards/proposals.

Change Management. To ensure school-wide “buy-in”, it is essential that the reporting system is promoted, and stakeholders trained to ensure uptake. The final stage utilizes best practices in change management to engage stakeholders in the development and rollout of the new reporting system and its capabilities. This activity is ongoing.

**Discussion/Conclusion with Statement of Impact/Potential Impact:** Despite carefully articulated timelines and project charters, technical optimization delays led to revisions to the timeline. Despite delays, we demonstrated the value of the reporting system to key stakeholders and leadership. Next steps include rollout of reporting and data visualization tools to a broader audience of end users. The new reporting system will be compared to the current system to evaluate benefit.

# Embracing excellence: Implementing a data-driven approach to evaluate research performance in a school of medicine

Jennifer Sharpe Potter, PhD, MPH, Courtney Peebles, MPH; Mark Nijland, PhD; Brian Cartee; Monique Lopez, MBA; Gabe Hernandez, MBA  
Joe R. & Teresa Lozano Long School of Medicine, UT Health San Antonio

## Background and significance

The Long School of Medicine Office for Research strategic plan contains four strategic priorities including: *Embracing research excellence; align investment with our strategic priorities; invest in productive faculty; and use standard benchmarks and metrics to review performance.* Implementing a common set of elements by which to evaluate faculty, department, and institutional research productivity is the first step in accomplishing this strategic priority.

An environmental scan of current internal processes identified no standard approach existed and multiple inefficiencies in research performance reporting. Additionally, no means existed to reliably aggregate data across faculty and/or departments. This limits our ability to make meaningful, equitable comparisons for evaluating performance and, importantly, allocate resources accordingly. Measuring faculty research productivity is not without controversy. Thus, we conducted a 1-year planning and pilot period to identify a research performance reporting system best suited to our organization.

**Objective:** Our year 1 objective was to 1) develop and pilot a standard data capture, aggregation, and reporting system; and 2) develop a change management strategy to promote adoption of this reporting system and dashboard.

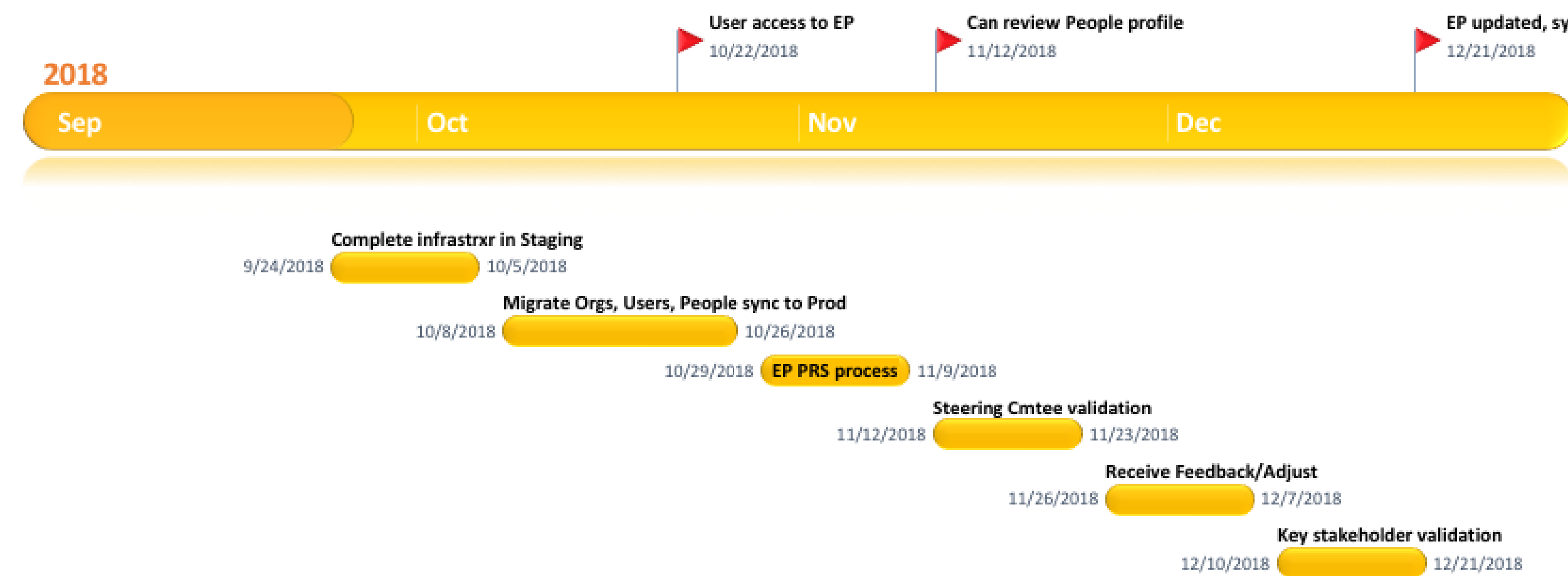
## Rationale for research dashboard project

Current state	Desired state
<ul style="list-style-type: none"> <li>Disaggregate</li> <li>Paper and Excel</li> <li>Inconsistent</li> <li>Ad hoc request</li> <li>Limited strategic decision making</li> <li>Vulnerable to manipulation</li> <li>No standard definitions</li> <li>KPI not fully leveraged</li> <li>No standard benchmarks</li> <li>Idiosyncratic</li> <li>Repeated requests</li> <li>Universally disliked by faculty, staff, administrators</li> </ul>	<ul style="list-style-type: none"> <li>Common data source</li> <li>Common assumptions</li> <li>Data visualization</li> <li>Data aggregation and rollups with ability to drill down to individuals and department level</li> <li>Common definitions and standard benchmarks and KPIs</li> <li>Alignment with strategic plan</li> <li>Evaluation at multiple levels</li> <li>Dynamic and reports available on demand (standard and customizable)</li> </ul>

## Approach

We assembled a cross-functional team that included institutional leaders (Vice President for Research, Information Management, Library, Office of Sponsored Programs, School of Medicine Finance), staff, and faculty stakeholders. Guiding principles for the system included: ease of use, low administrative burden for faculty and staff, benefit to all stakeholders, consistent use in performance evaluation, and data visualization. One challenge was including scholarship metrics (e.g., publications, H-index, citations, Altmetrics, and journal impact factors) because of wide variation in faculty reporting requirements and sources throughout the school. After evaluating multiple vendors, Elsevier Pure was selected to extract publication and scholarship metrics. After acquiring Pure, the project was divided into projects with formal charters and timelines: 1) technical optimization; 2) reporting and analytics; and 3) change management.

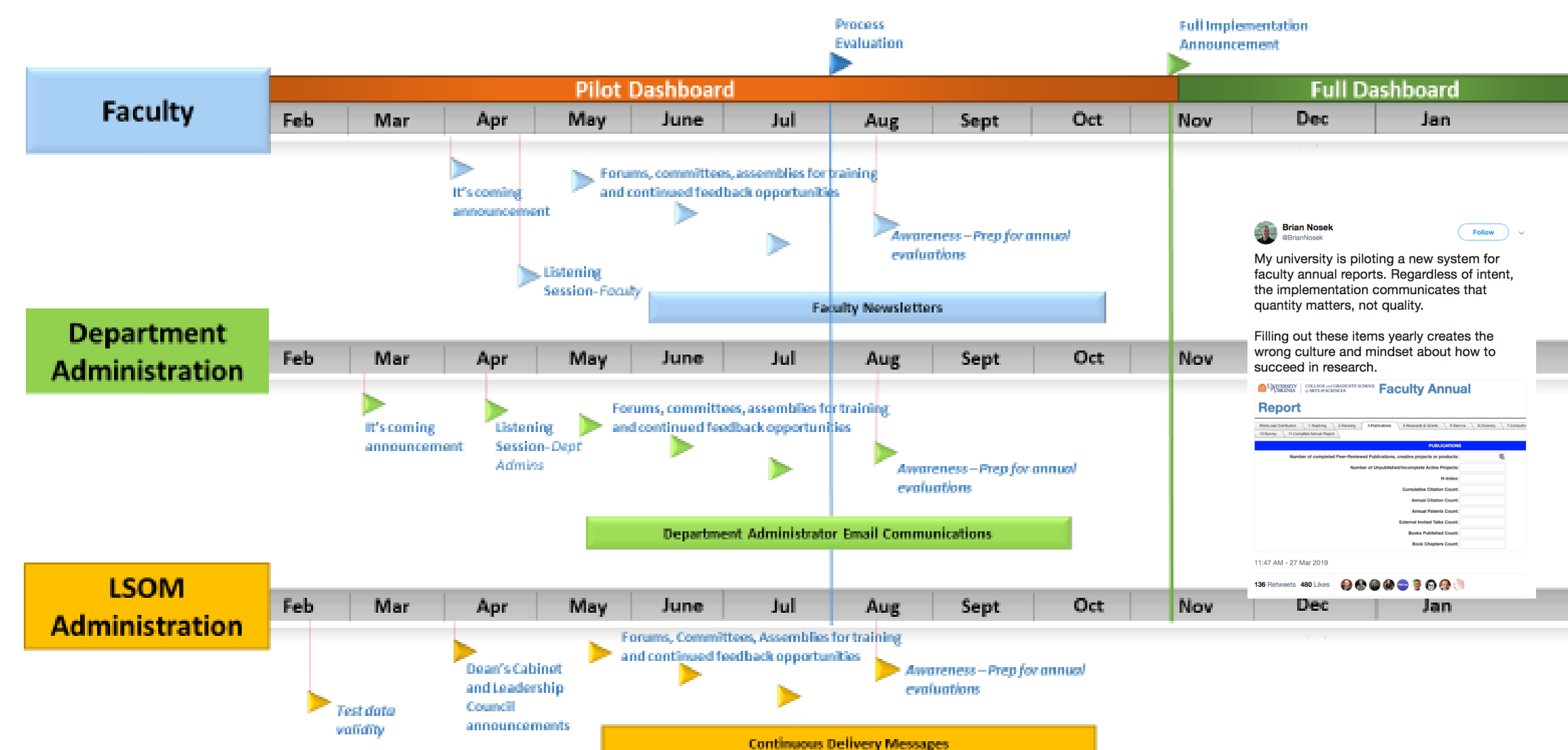
## Elsevier Pure technical integration timeline



## Reporting elements

Organizational	Faculty	Applications/ Awards	Productivity
Department	Hire date	Proposals	# Publication
• Blue Ridge	Rank	Funding agency	# of citations
• US News Rank	Tenure home	Mechanism	# book chapters
• Divisions	Tenure status	Awards	# abstracts
Institute/Center	Gender	Total budget	# presentations
	Race	Award period	H-Index*
	Ethnicity		Altmetrics*
	Promotion date		Journal impact factor > 5, 10, 15+*
	% research effort		
	% effort on grants		

## Change management and communications timeline



## Initial benchmarks example

### Chair performance measures

#### Department

- Increase organized research expenditures by 7.5% over rolling average of prior three fiscal years
- Increase in clinical trials revenue by 10% over prior fiscal year
- Increase number of first or senior author publications in peer-reviewed journals by one per faculty FTE
- One citation in high impact publication per research FTE where CIF >= 15
- Increase OTL disclosures and provisional/granted patents

#### Individual

- Publish at least one original research paper as first or senior author during the fiscal year
- Extramural support for at least 50% of rFTE

## Results

**Technical Optimization.** We created a data repository of validated, objective faculty scholarship data. While challenges existed, HR data and Pure data were linked successfully, creating an integrated data feed for each faculty member. The resulting data feed was linked to existing financial and human resource data reporting using Power BI, a data visualization software.

**Reporting and Analytics.** We developed and tested dynamic reporting of faculty research activities (publications, proposals, extramural funding). The reporting system included: faculty profiles, department profiles, publications and other scholarship, and awards/proposals.

**Change Management.** To ensure school-wide “buy-in”, it is essential that the reporting system is promoted, and stakeholders trained to ensure uptake. The final stage utilizes best practices in change management to engage stakeholders in the development and rollout of the new reporting system and its capabilities. This activity is ongoing.

## Discussion

Despite carefully articulated timelines and project charters, technical optimization delays led to revisions to the timeline. Despite delays, we demonstrated the value of the reporting system to key stakeholders and leadership. Next steps include rollout of reporting and data visualization tools to a broader audience of end users. The new reporting system will be compared to the current system to evaluate benefit.

Presented at the 2019 ELAM Forum