



## **Institutional Transformation Guided by a Multi-Frame Organizational Analysis Approach**

### **Prof. Margaret B. Bailey P.E., Rochester Institute of Technology (COE)**

Professor Margaret Bailey, Ph.D., P.E. is a Professor of Mechanical Engineering within the Kate Gleason College of Engineering, Rochester Institute of Technology. Dr. Bailey teaches courses and conducts research related to Thermodynamics, engineering and public policy, engineering education, and gender in engineering and science. She is the co-author on an engineering textbook, *Fundamentals of Engineering Thermodynamics*, which is used worldwide in over 250 institutions. Dr. Bailey is the Principal Investigator (PI) for the RIT NSF ADVANCE Institutional Transformation grant. The goal of this large-scale (\$3.4M), multi-year university-level organizational transformation effort is to increase the representation and advancement of women STEM faculty. At the university level, she serves as Senior Faculty Associate to the Provost for ADVANCE and co-chairs the President's Commission on Women.

### **Dr. Carol Marchetti, Rochester Institute of Technology (COS)**

Dr. Carol Marchetti is an Associate Professor of Statistics at Rochester Institute of Technology, where she teaches introductory and advanced undergraduate statistics courses and conducts research in statistics education, deaf education, and online learning. She is a co-PI on RIT's NSF ADVANCE IT project, Connect@RIT, and leads grant activities in the Human Resources strategic approach area.

### **Prof. Sharon Patricia Mason, Rochester Institute of Technology**

Professor Sharon Mason is an Associate Professor in the Department of Information Sciences and Technology at RIT where she has served on the faculty since 1997. Sharon has been involved in computing security education at RIT since its inception. She is the PI of for the Department of Defense (DoD) Information Assurance Scholarship Program (IASP) awards to RIT. These scholarships enable students to study and do research in graduate programs in security, forensics and information assurance. To date, scholarships to RIT students total more than \$800,000.

### **Prof. Maureen S. Valentine PE, Rochester Institute of Technology (CAST)**

Maureen Valentine, P.E., has been a faculty member at RIT for more than 21 years and held the position of Department Chair for the Department of Civil Engineering Technology, Environmental Management, and Safety from 2000 to 2007. She is currently the Associate Dean of the College of Applied Science and Technology and co-PI on the AdvanceRIT initiative. Her scholarly activities recently have focused on women in technology programs and the female faculty who teach them.

### **Prof. Elizabeth Dell, Rochester Institute of Technology (CAST)**

Professor Dell is an associate professor in the Manufacturing & Mechanical Engineering Technology department at RIT. She serves as the Faculty Associate to the Provost for Women Faculty and is co-PI for RIT's NSF ADVANCE project. Her research interests include: characterization of biodegradable plastics and environmental consideration in materials selection for production design, the impact of technology paired with active learning pedagogies on student learning, and effective strategies for increasing gender diversity in STEM disciplines.

# **Institutional Transformation Guided by a Multi-Frame Organizational**

## **Analysis Approach**

### **Abstract**

The goal of an ongoing institutional transformation project (NSF ADVANCE #1209115) at a large private university (hereafter referred to as LPU) is to increase the representation and advancement of women STEM faculty widely by removing barriers to resources that support career success and by creating new interventions and resources. An additional goal is to adapt interventions to address the needs of key subpopulations classified by ethnicity or hearing status. The work of the project, which began in 2012, is to: 1) refine and strengthen targeted institutional structures; 2) improve the quality of women faculty's work lives; 3) align institutional, administrative, and informal systems of power and resources to support and sustain progress toward meeting the project goals; 4) enhance the working environment and support career advancement for women faculty; and 5) establish a sustainable, inclusive, accessible network that supports career goals for all university faculty.

In preparation for creating an appropriate transformational strategy, researchers conducted a self-study (NSF ADVANCE #0811076) from 2008-2011 to identify career advancement barriers for current women faculty to establish how well the university addresses issues found to be important in women faculty's recruitment, retention, and advancement. The results of a 2009 faculty climate survey, conducted in conjunction with an objective data review and benchmarking, led to the identification of barriers in the areas of career navigation, climate, and flexibility in work/life management balance and these have been previously reported<sup>1-4</sup>. In addition, the effectiveness of existing university structures at addressing these barriers was assessed. This assessment led to the creation of a detailed institutional transformation strategy which adopted a multi-frame organizational analysis approach from Bolman and Deal to improve understanding of organizational issues within the university.<sup>5</sup> This approach integrates several aspects of organizational theory, including structural, human resources, political, and symbolic perspectives, and suggests the use of each as a "frame" or "lens" for viewing the organization and the strategic approaches created to change the organization.<sup>6</sup> Use of this approach improves understanding of the organization; ensures that interventions positively impact the university at the structural, human resource, political, and symbolic levels; and, therefore, supports sustainability of key grant activities beyond the length of the grant. The organizational analysis approach also aids in project administration and evaluation.

However, no plan is ever perfect. Even a change process needs to be open to change to be effective. This paper presents the transformational strategy and organizational framework that were proposed and undertaken at the start of the grant and later refined as activities progressed and were evaluated and adjusted to further improve outcomes.

### **Institutional Context**

Founded in the early 1800's, LPU was an early pioneer in practice-based and cooperative education. Today, it is one of the largest technical institutions of higher education in the United

States. Over the past several years, the LPU incoming classes have not only increased in size but also have improved in quality and diversity. Likewise, the faculty has become significantly larger and more diverse. LPU offers a broad array of undergraduate and graduate programs in its nine colleges, which include a college focused on serving students who are hearing-impaired.

LPU is a student-focused and tuition-driven university. The vast majority of students are enrolled in a STEM major and in the fall of 2014, undergraduate students comprised 83% of the total (over 18,000) student population. The majority of graduate students are enrolled in masters programs, with approximately thirty each year receiving doctorates. Roughly 30% of entering freshmen are minority and international students and the approximately 1,200 deaf and hard-of-hearing students enrich the community in unique ways. However, gender diversity has historically been a challenge for LPU with a ratio of male to female students of 2:1. In the past twenty years, LPU has committed substantial resources to diversifying the university population and to developing educational, structural, and policy measures to ensure its ongoing health and prosperity. Under a former president, a University Diversity Action Plan was written (1998); the position of assistant provost for diversity was created to oversee the implementation of the action plan; and a unique and highly successful African American, Latino American, and Native American (AALANA) faculty recruitment program was developed. As a result the percentage of AALANA tenured and tenure-track (T/TT) faculty has grown to 9.8% (Fall, 2014). In the first year of his presidency (2007), the current university president inserted two gender-related performance commitments to support the strategic goal of student success focused on increasing both the percentage of entering undergraduate women and the percentage of female T/TT faculty.<sup>7</sup> Several aligned initiatives support these goals and additional diversity-related commitments are currently underway. Among these are the formalization of a President's Commission on Women; and the creation of Faculty Associate positions (part-time) within the Provost's Office to support women and AALANA faculty.

The goal of an ongoing institutional transformation project (NSF ADVANCE #1209115) at LPU is to increase the representation and advancement of women STEM faculty widely across ethnic, social, and cultural backgrounds. Those goals would be accomplished by removing barriers to resources that support career success and by creating new interventions and resources. An additional emphasis adapts interventions to address the needs of key sub-populations classified by ethnicity or hearing-status. The work of the project, which began in 2012 is to: 1) refine and strengthen targeted institutional structures; 2) improve the quality of women faculty's work life; 3) align institutional, administrative, and informal systems of power and resources to support and sustain progress towards the project goal; 4) enhance the working environment and support career advancement for women faculty; and 5) establish a sustainable, inclusive, accessible network that supports career goals for all university faculty.

In preparation for creating an appropriate transformational strategy, researchers conducted a self-study (NSF ADVANCE #0811076) from 2008-2011 to identify career advancement barriers for current women faculty and to establish how well the university addresses issues found to be important in their recruitment, retention, and advancement. Results of a 2009 faculty climate survey conducted in conjunction with an objective data review and benchmarking, led to the identification of barriers in the areas of career navigation, climate, and flexibility in work/life

management balance on which there has been previously reporting<sup>1-4</sup>. In addition, the effectiveness of existing university structures at addressing these barriers was assessed. This assessment led to the creation of a detailed institutional transformation strategy which adopted a multi-frame organizational analysis approach from Bolman and Deal to improve understanding of organizational issues within the university.<sup>5</sup> This approach integrates several aspects of organizational theory, including structural, human resources, political, and symbolic perspectives, and suggests the use of each as a “frame” or “lens” for viewing the organization and the strategic approaches created to change the organization.<sup>6</sup> Use of this approach improves understanding of the organization; ensures that interventions positively impact the university at the structural, human resource, political, and symbolic levels; and, therefore, supports sustainability of key grant activities beyond the length of the grant. The organizational analysis approach also aids in project administration and evaluation.

However, no plan is ever perfect. Even a change process needs to change to be effective. This paper presents the transformational strategy and organizational framework which were proposed and undertaken at the start of the grant, and subsequently refined by project evaluation to aid in the project’s execution. Table 1 outlines the distribution of LPU STEM and SBS (Social and Behavioral Sciences) female faculty in 2010 and 2013. The representation of women faculty remained relatively unchanged over this three-year period. The overall representation of 26% in 2013 of T/TT female faculty in STEM and SBS is significantly below the 34% average of doctoral scientists and engineers employed at Master’s granting colleges and universities in the U.S.<sup>8</sup> While the representation of STEM faculty has more than tripled over the past twenty years, the representation of women STEM T/TT faculty has grown more slowly at LPU - from 16% in 1995 to 24% in 2013.

Table 1. Percent (Number) of T/TT (excludes research faculty) Women Faculty in STEM/SBS

Area	Oct 2010 % (Number) Women	Asst: % Women	Assoc: % Women	Full: % Women	Oct 2013 % (Number) Women	Asst: % Women	Assoc: % Women	Full: % Women
Total STEM	23% (86)	31% (36/115)	24% (35/148)	16% (24/154)	24% (95)	33% (33/101)	24% (41/169)	16% (24/147)
Total SBS	36% (31)	43% (13/30)	43% (16/37)	17% (4/24)	37% (33)	43% (10/23)	46% (17/37)	14% (3/22)
STEM /SBS	25% (117)	34% (49/145)	28% (51/185)	16% (28/178)	26% (128)	35% (43/124)	28% (58/206)	16% (27/169)

The period between 2008 and 2013 saw increases in most STEM/SBS colleges, but within colleges there were wide variations between disciplines. For example in 2010, 42% of the life sciences faculty was female, as opposed to 15% in the physical sciences (in line with national trends). Additionally, four STEM units did not have any women represented in T/TT faculty and half of STEM departments had a representation of women faculty that was below 20%, a critical mass threshold.<sup>9,10</sup> A comparison (Table 2) of LPU’s women faculty representation to national availability data reveals low levels in all areas except computer science.<sup>8</sup> The reverse trend in computer science could be attributed to a relic of past hiring practices in which a high percentage

of LPU women T/TT computing faculty have master's degrees as their terminal degree. From 2007 - 2010, the percentage of women applicants for STEM positions was 19%, which is below availability in the national pool. Subpopulations of T/TT female faculty, which are studied within the project, include women faculty who are deaf or hard-of-hearing (D/HH) and AALANA with approximate population sizes of 30 and 20, respectively.

Table 2. Representation Comparison of LPU Women T/TT Faculty with National Availability

	LPU % Women (2010)	National % Women
Engineering (not Engr. Technology)	12%	21.6%
Physical Sciences	17%	29.3%
Computer Sciences	29%	22.0%
Mathematics and Statistics	16%	31.1%
Biological Sciences	44%	50.6%
Psychology	40%	72.0%
Social Sciences	36%	48.6%

In general, women faculty at LPU tend to be successful in terms of securing supporting types of high-level administrative positions, accounting for over 60% of associate/vice dean positions in the predominately STEM colleges. Among all colleges, the representation of women in dean positions is far lower.

### Self-Study Overview and Findings

In the self-study (NSF ADVANCE #0811076) from 2008-2011, the research team addressed six primary research questions with the intention of creating an appropriate institutional transformational strategy: 1) What is the distribution of STEM faculty by gender, rank, and department? 2) What are the outcomes of institutional processes of recruitment and advancement for men and women? 3) What is the gender distribution of faculty in leadership positions? 4) What is the allocation of resources for faculty? 5) Are there barriers to the recruitment and advancement of women? 6) How successful are existing structures at addressing these barriers? A faculty climate survey<sup>1</sup> was conducted as part of this project in 2009 with an overall response rate of 66%, and a women response rate over 71%. The results of this survey, in conjunction with objective data review and benchmarking, led to the identification of barriers in the areas of career navigation, climate, and flexibility in work/life management balance.<sup>2, 3</sup> These barriers are key and statistically significant findings are aligned with similar studies and the objective data review. Summative results of the self-study are presented in this section.

On average, men were more satisfied than women with their distribution of time, overall research/scholarship, long-range career map/plan, and position overall. With respect to their time distribution at work, 50% of women respondents were dissatisfied compared to 32% of men. Professors were more satisfied than assistant professors and STEM faculty was less satisfied than non-STEM faculty. Of all ethnic categories, the AALANA group was the least satisfied with the overall scholarship/research dimension of their careers.

Although promotion and tenure (P/T) success rates did not differ statistically by gender, women considered delaying P/T at higher levels than men with the highest levels reported by AALANA women (56%). A related finding revealed that AALANA faculty were the least comfortable asking questions about P/T which would be necessary in the case where a delay was sought. Regarding work/life balance, more women faculty agreed that their careers had been slowed by personal responsibilities (50% of women compared to 23% of men) and that they often gave up personal activities for professional responsibilities (66% of women compared to 47% of men). Overall T/TT faculty data for 2002-2009 revealed higher levels of attrition for women faculty than men faculty. For example, as of October, 2010, 28% of the 87 women faculty hired from 2002 – 2009 had left LPU compared with 14% of the 174 men faculty hired (rates varied considerably by college). Similarly, the attrition rate for AALANA faculty hired was 27%, considerably higher than that for non-AALANA faculty at 17%.

Issues related to career navigation may be attributed to women's weaker self-agency and negotiation skills, coupled with a lack of "sponsorship" from more seasoned faculty and/or administrators;<sup>11,12</sup> either could seriously hinder the success of female faculty in obtaining advantageous start-up packages, assignments, compensation, and promotions.<sup>13</sup> Climate issues are often exacerbated by women's view of the workplace in personal terms, as opposed to a more male process-oriented view, meaning that issues of connectedness, support, and interpersonal relations are important to their success.<sup>14-17</sup> Finally, managing work/life balance through flexible work arrangements, available and convenient child care, and tenure clock adjustments may lower stress and increase satisfaction, thus possibly contributing to better retention of all faculty. A review of the multiple reports affirms the barriers that women faculty were facing, yielding two general categories of barriers: workplace issues and personal challenges. Workplace issues can include feelings of isolation or marginalization,<sup>14, 18-20</sup> lack of mentoring<sup>14, 18-22</sup> and sponsorship by senior colleagues.<sup>11,12</sup> The outlined issues can lead to an accumulated disadvantage over the course of a career,<sup>13</sup> a need to gain credibility or respect,<sup>14, 23, 24</sup> unclear expectations for tenure and promotion,<sup>3, 20</sup> and biases ranging from subtle to open.<sup>10,20,25-27</sup> They can provide personal challenges in childbearing and child-rearing decisions;<sup>17, 28-31</sup> work/family balance,<sup>19, 27, 31, 32</sup> and in controlling the overflow of work life into home life.<sup>33</sup>

## **The Conceptual Framework for Institutional Transformation**

The self-study findings led to the creation of a detailed institutional transformation strategy that built upon current university philosophies. Inclusive excellence was the institution's method for coherently and collaboratively integrating diversity and inclusion into its pursuit of excellence.<sup>34</sup> The proposed project plan strengthens the LPU academic culture within a framework of inclusive excellence, to create an environment that promotes innovation and that attracts, retains, and advances more women faculty. The project goals are:

1. Increase the recruitment, retention, and advancement of women STEM/SBS faculty from diverse ethnic, social, and cultural backgrounds.
2. Increase the representation of women at senior faculty and leadership ranks.
3. Advance the careers of women STEM/SBS faculty through improvements in social networking behaviors, increasing their ability to access social resources to accomplish career objectives.

- Institutionalize interventions that support change across the university in line with the project goals.

The conceptual framework (Figure 1) for the project was based upon social resources theory, which posits that an individual accomplishes goals by effectively tapping into his or her social network and identifying and utilizing social resources.<sup>35, 36</sup> Social resources theory has been used to predict career success.<sup>37-39</sup> Moreover, prior research shows that women fail to remain or advance in organizations because of their lack of ability to tap effectively into their social resources.<sup>41-46</sup>

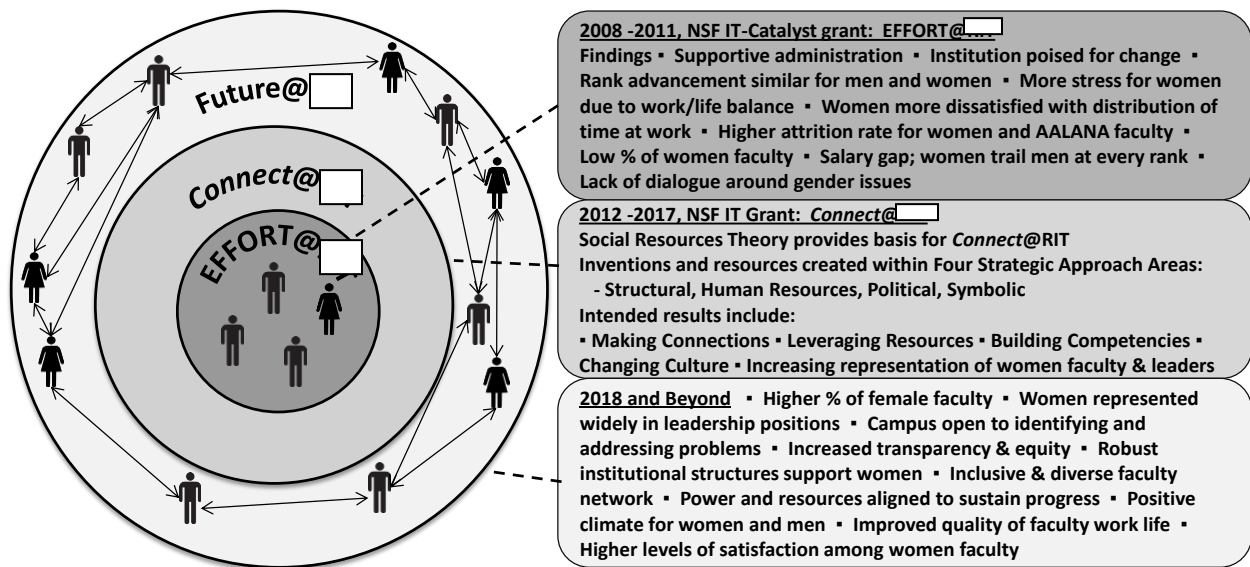


Figure 1. Project Framework for Institutional Transformation

The proposed project conceptual model was based upon the premise that the socializing and social resources of STEM/SBS women faculty influence their Social Networking Behaviors (SNB), which then impacts their retention and advancement at LPU. Project interventions were conceptualized based upon self-study findings and they supported the improvement of faculty SNB. The project has a special focus on AALANA and D/HH women faculty, who face unique barriers to accessing social resources. Faculty characteristics differ across subpopulations and additional effort is placed upon adapting interventions to address the varying needs. Ultimately, the proposed plan predicted that improvements in STEM/SBS women faculty’s SNB would result in improved recruitment and retention, and provide advancement opportunities for women faculty at LPU.

A multi-frame organizational analysis approach from Bolman and Deal<sup>5</sup> was adopted to improve and understand the organizational concerns at LPU and lead to institutional transformation. This approach integrates several aspects of organizational theory and suggests the use of structural, human resources, political, and symbolic perspectives as a “frame” or “lens” for viewing the organization and the strategic approaches created to change the organization.<sup>2</sup> Based on this organizational analysis method, the institutional transformation project objectives follow:

1. Refine and strengthen targeted institutional structures, and install practices promoting representation and advancement of women faculty. This objective directly maps to the structural strategic approaches.
2. Improve the quality of women faculty work life, professional development, and incentive/reward structures. This objective directly maps to the human resources strategic approaches.
3. Align institutional, administrative, and informal systems of power and resources to support and sustain progress by shaping the political frameworks that impact representation and advancement of women faculty. This objective directly maps to the political strategic approaches.
4. Enhance the working environment and support career advancement for women faculty using symbolic measures that emphasize issues of meaning (e.g., the importance of inclusion) within LPU. This objective directly maps to the symbolic strategic approaches.
5. Establish a sustainable LPU network that includes all faculty members in supporting their career goals, while uncovering unique faculty needs of women of color and deaf and hard-of-hearing women faculty to ensure full participation in the formal and informal LPU network.

### **Institutional Transformation Activity Plan**

The institutional transformation strategy proposed the interventions listed below to support the project’s goals and objectives. In Table 3 interventions are organized by structural, human resources, political, and symbolic approaches. Details of the activity plan for Institutional Transformation, an activity timeline, and evaluation details are provided in the full proposal.

Table 3. Institutional Transformation Project Interventions

Strategic Approach Area	Intervention
Structural	Campus-Wide Faculty Survey Faculty and Department Head Annual Review Template Academic Policy/Procedure Revisions
Human Resources	Faculty Exit Interviews Refine the LPU Faculty Mentoring Network Launch Leadership and Career Development Program and Grants Program Launch <i>Connectivity</i> Series Administer Faculty Salary Studies Create Childcare & Personal Needs Committee
Political	Align LPU Office of Diversity and Inclusion with AdvanceLPU Initiative Analyze and Disseminate NSF ADVANCE Indicators Formalize the President’s Commission on Women Advisory Team for Unique Circumstances Related to Gender-Related Bias Launch Department Head Education and Grants Program <u>Launch Faculty Life-Cycle Advisor Program</u>
Symbolic	World-Wide Exposure and Local Dissemination Eminent Scholars Program External Advisory Board Input to LPU Upper Administration



## Organizational Structure and Administration

With a leadership team that is gender-equitable and inclusive of faculty from assistant professor to president, and a commitment to the project from all levels of institutional administration, AdvanceLPU was positioned to have the support it would need to be highly successful. The organizational chart and leadership team are described below and in Figure 2.

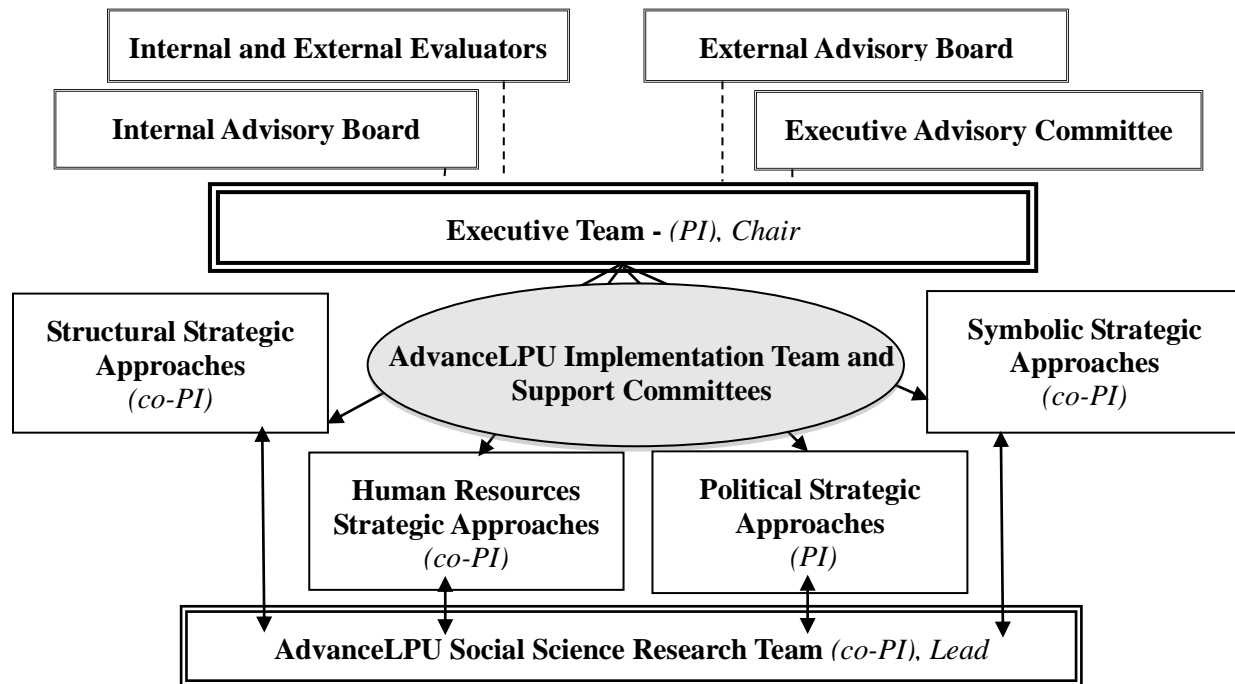


Figure 2. AdvanceLPU Project Management Structure

In the proposed organization, the PI leads the overall project and serves as chair of the executive team, which also consists of the four co-PI's plus key senior personnel. Members of the executive team manage the project implementation, resolve project issues, and ensure that the project is on track for meeting goals and objectives. This team meets biweekly. The executive team seeks input and advice from many viewpoints (see dashed lines in Figure 2) including those from internal and external evaluators. The executive team advisors and the internal advisory boards advise the executive team on the implementation of the project and progress toward meeting goals. The external advisory board includes the vice provost for faculty development and diversity and the deputy to the president, University of Rochester; a professor, Gallaudet University; a retired dean, NTID; the director of ADVANCE, Northeastern University; and a senior fellow, Centre on Governance, University of Ottawa.

The Program Director (PI) provides leadership and supervision on all grant activities and oversees the Program Manager and HR Analyst. The Program Manager runs the program on a daily basis, coordinating and supporting all grant activities. The HR Analyst collects and analyzes HR data related to the grant, and creates structures that will continue to support these efforts after the end of the grant period. The Implementation Team includes the Executive Team

plus the Project Manager and HR Analyst, faculty leading social science research areas, and institutional staff from HR, IR, Wallace Center, Office of Faculty Recruitment and Retention, and Student Learning Outcomes Assessment. Other faculty and staff not yet identified can join the project in a meaningful manner through participation on this team. The Implementation Team meets biweekly. The project PI and co-PI's share leadership of the four Strategic Approach areas and the AdvanceLPU Social Science Research Team.

The support structure for the grant includes a number of committees, each of which is led by a group-selected chair. The Project Manager or Director serves on each committee. The Policy Committee consists of individuals with high levels of institutional knowledge who are strong advocates of proposed policy revisions. The Dissemination Committee spearheads all grant dissemination efforts and includes faculty and staff with marketing, communication, and public relations backgrounds. The Evaluation Committee is a small group of faculty who work with the project's internal evaluator (situated in the Academic Affairs Assessment Office).

The evaluation plan proposed for the AdvanceLPU project includes both formative and summative evaluation guided by the Evaluation Team and the internal and external evaluators. The first two project goals (focus on recruitment, retention, advancement; and leadership representation) are measured quantitatively using NSF Indicators. However, goals 3 and 4 (improved social networking behaviors and institutionalizing interventions) require a more diverse evaluation plan.

### **Institutional Commitment and Sustainability**

The goals of this AdvanceLPU grant are interwoven within the LPU Strategic Plan which was recently completed. At the time of proposal submission, the LPU Board of Trustees, President, Provost, and Chief Diversity Officer all stood firmly behind the proposed effort and were key partners throughout the plan development. LPU has committed to promote successful AdvanceLPU activities beyond the term of the grant itself, to sustain and build upon the momentum and progress the grant enables. The embedded design of this proposal ensured that there would be conversations about the effort and its value throughout many layers of the university, confirming that there will be ongoing support for the activities and aims beyond the end of the grant period. LPU has committed to providing additional support to the grant in order to broaden and deepen its reach, including providing financial support for portions of the grant's management structure and assuring that the grant's leadership participates regularly in both Institute Council and the Provost Council. These actions demonstrate LPU's commitment to the project. By dividing project interventions and resources into categories representing different threads of the university fabric, meaningful and strategic formal relationships have been forged throughout the university. In addition, key LPU administrative leaders are embedded within the project.

### **Refinements to the Institutional Transformation Strategy**

Change is inevitable, even in change processes! Implementation issues, successful concepts, new ideas, and personnel changes have precipitated refinements to the institutional transformation strategy, starting with the organizational analysis approach and project goals.

## Organizational Analysis Approach

Over the first two years of the project, the team successfully used the multi-frame organizational analysis approach,<sup>2,3</sup> as proposed. Recently this approach has been refined to reflect various realities of the project and a reconfigured set of three perspectives to guide the work, namely structural, environmental, and political (Figure 3). Additionally, some of the intervention placement has been shifted within these categories to better map to an evolving evaluation plan.

## Project Goals

Currently, three project goals, displayed on the logic model (Figure 3), map to the original proposal's set of four goals where each related to an intervention grouping of structural, symbolic, human resources, and political. The revised goals contain all the elements of the original goals with a slight variation to group names and intervention placement within groups. As in the original proposal, each group has a corresponding goal. The new goals map to structural, political, and environmental outcomes which combine the original symbolic and human resource areas. This revision also accommodates the shift away from social networking as a conceptual framework to one that more accurately reflects the current social science research, and is captured within the revised second goal.

### Reconfigured Goals:

1. **Structural Goal:** Refine and strengthen institutional structures and install practices that promote representation and advancement of women faculty.
2. **Environmental Goal:** Enhance the working environment and support the career advancement of women faculty through empowerment, inclusion, and other symbolic aspects of women's professional quality of life.
3. **Political Goal:** Align institutional, administrative, and informal systems of power and resources to support and sustain progress shaping the political frameworks that impact the representation and advancement of women faculty.

Based on the revised goals and the corresponding evaluation plan, the following project short-term outcomes serve in the assessment of progress towards grant goals.

### Structural Objectives

- Increase the representation of STEM women (and WoC) faculty within targeted STEM departments.
- Increase representation of women within STEM candidate pools with a goal of 30%.
- Achieve higher levels of retention of STEM/SBS T/TT (pre-tenured and tenured) female faculty, with a goal of equivalence to male retention rates.

### Environmental Objectives

- Increase salary transparency and equity among women faculty through professional development and web-based communications.

- Improve climate for women faculty with a goal of the vast majority (at least 70% based on survey responses) of women faculty in every department viewing their department as friendly, diverse, respectful, and nonsexist.
- Develop and implement faculty career flexibility and work-life policies.
- Increase the percentage of women in academic tenure-track leadership positions with a goal of 40%.
- Identify, share, and increase social resources within the LPU network of women faculty.
- Improve the career success/advancement opportunities of women faculty.

**Political Objectives**

- Develop and implement accountability measures at numerous levels within the organization.
- Sustain 100% of the project strategic initiatives deemed as highly effective five years after the award within LPU infrastructure that supports continued progress towards project goals.

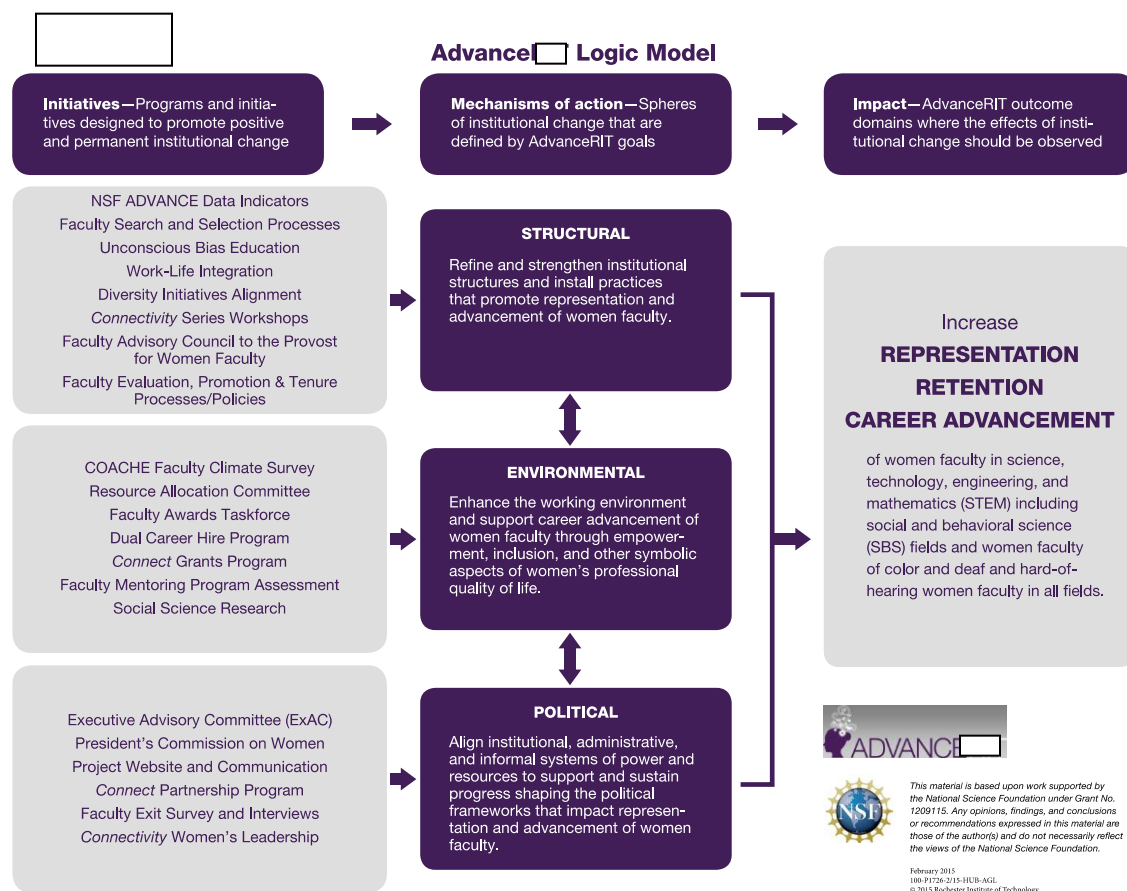


Figure 3: AdvanceLPU Revised Logic Model

**Social Science Research:**

The original proposal had an overarching project theme based on social resources theory, which posits that resources embedded within a social network promote an individual's upward

mobility.<sup>1</sup> Individuals who are able to access these resources effectively benefit through greater career success. The project was proposed to utilize numerous innovative approaches to advance women faculty, with a focus on faculty social networking behavior, an area of expertise for one of the original co-PIs. Interventions were originally planned that promoted network connectivity in conjunction with faculty training to access social resources, targeting increased career goal attainment; and improved recruitment, retention, and advancement of women faculty. Personnel changes on the grant opened up several new possibilities for the grant. As was proposed originally, the project's aim is to increase the representation and advancement of women faculty. An additional emphasis adapts interventions to address the needs of key sub-populations including women of color and deaf and hard-of-hearing women faculty. The team sought additional researchers who can continue past co-PIs preliminary work based on social resource theory. Meanwhile the team's other complementary social science research efforts focusing on understanding the lived experiences of faculty women of color and women faculty who are deaf and hard of hearing continued and flourished to include supporting *Connectivity* Series designed for each of these target subpopulations.

This research has become integral to the AdvanceLPU program and the two efforts involve cross-disciplinary teams of social science researchers studying the impact of institutional climate and personal and professional influences on the advancement of women faculty including the needs of Women of Color and deaf and hard-of-hearing women faculty. Originally proposed initiatives are in phase two of the research agendas. The program is expanding and enhancing its research portfolio. A recently added qualitative research study, *Giving Voice 2 Values*, will investigate internal and contextual factors that impact how women faculty members are able to voice concerns in the workplace.

Qualitative studies using Grounded Theory (discovery of theory through data analysis) provide the current theoretical framework for the research. This framework reflects an adjustment from the initial intent to quantitatively measure faculty's social networking behaviors. Qualitative methods remain the primary form of research to augment existing quantitative measures (COACHE and Faculty Mentoring Surveys, NSF Indicator data, etc.). Professional development remains the core construct bringing both quantitative and qualitative social behavioral science research efforts and findings together. This informs institutional transformation efforts and the design of programmatic offerings to improve advancement opportunities and the recruitment and retention of women and other minority faculty.

#### Project Activities:

Groups of initiatives formerly organized under separate Human Resources and Symbolic headings have been re-conceptualized as addressing a broad environmental goal (see Figure 3) and a new grant goal has been developed. The new environmental goal also repositions the social science research which, as a collection of efforts, is connected by themes of inclusion and empowerment.

Within the structural strategic approach area, the faculty and department head annual review template activity has been combined with the policy/procedure review and the *Connectivity*

Series where the transformation project has hosted workshops and discussions with invited speakers on faculty evaluation.

The originally proposed *Connectivity* Series in the HR strategic approach area now encompasses elements from the proposed leadership and career development program and the department head education program. It now also includes a much more deliberate set of activities aimed at target subpopulations (WoC and women DHH faculty). The proposed salary study has evolved into activities associated with the AdvanceLPU Resource Allocation Committee. The childcare and personal needs committee has evolved into the work-life integration activity area.

Within the political strategic approach area, the proposed advisory team for unique circumstances related to gender-related bias has evolved into a newly conceptualized advisory council for women faculty that the provost is assembling under the leadership of a Co-PI in her new role as faculty associate to the provost for Women Faculty. It is tentatively planned that members of this group along with others will attend a multi-day workshop in June, 2015 at LPU focused on social justice-based mediation, diversity, and mentoring. Within this same area, the faculty life-cycle advisor program has evolved into a more general unconscious bias education activity area where a suitable model for LPU is still under exploration. The Eminent Scholar program, the leadership and career development grant program, and the department head grant program have been combined into the *Connect* Grant program which includes two distinct tracks: one for faculty (including faculty groups) and one for department level grants aimed primarily at department heads. Activities which have been added since the proposal became operational include the addition of the Executive Advisory Committee (ExAC) which functions as the grant's internal advisory committee, the academic awards analysis and supporting activities, and the *Connect* Partnerships program which has many similarities to the *Connect* Grants effort. *Connect* Partnerships are designed to provide funding to campus partners to support activities that are closely aligned with the goals and objectives of the project. *Connect* Partnerships and the *Connect* Grants are similar in this regard; however the funding of Partnership requests often do not lend themselves to the *Connect* Grant structure or timing.

## **Conclusions**

Executing an institutional transformation effort requires changes to practices, policies, culture, and norms. It is not an easy process. The AdvanceLPU project is an ambitious combination of programs designed to increase the representation and advancement of women STEM/SBS faculty by removing barriers to resources that support career success and by creating new interventions and resources. The project addresses issues of climate, recruitment, retention, and advancement of women STEM/SBS faculty. Because of the complexity and difficulty of institutional transformation, these types of projects require the flexibility to adapt to implementation issues, adjust to personnel changes, and embrace successful concepts and new ideas. The refined plan includes an evaluation plan that is logic model driven and goals that reflect the new logic model while maintaining the multi-frame organizational framework.

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