



W I S E L I

*Women in Science & Engineering Leadership Institute
University of Wisconsin-Madison*

NSF ADVANCE

**Institutional Transformation Award at
UW-Madison**



Setting the Stage:

Where to focus ADVANCE efforts?

- UW-Madison conceptualized as a “Living Laboratory” to be coordinated by a multidisciplinary research center (WISELI)
- Needs assessment during proposal development
 - Interviews with multiple stakeholders
 - Literature and document review
 - PI’s with local experience
- Town Hall meetings after award



- Life Cycle Research Grants
- Creating Space
- Celebrating Women in S&E Grants
- Conversion to tenure-track
- Awards and honors
- Endowed Professorships for Women in Science
- Leadership Development for academic staff

- Climate Workshops for Department Chairs
- Workshops for Search Committee Chairs
- Workshops on building effective research teams
- Senior women initiative
- Documentary Video
- Evaluate existing programs

- Resource Study
- Interviews with women faculty and staff in S&E
- Study of Faculty and Academic Staff Worklife at UW-Madison

- Discourse analysis of women's communication strategies
- Ethnographic study of gendered interactions in the laboratory setting
- Study of Career Choices in Engineering



Three Themes in All Activities/Initiatives

- **Use *evidence-based* approach to drive institutional change**
 - Research focus has gotten the attention of faculty
- **Foster individual *behavioral change***
 - Improvement of campus climate an important mission on a campus with all the “right” policies
- **Ensure *sustainability* of the transformation**
 - Partner with campus offices to institutionalize initiatives
 - Maintain WISELI as a driver of future research and to revise initiatives as needed to keep them current
 - Employ multiple methods for dissemination



Looking Back 3 Years: Successful Strategies

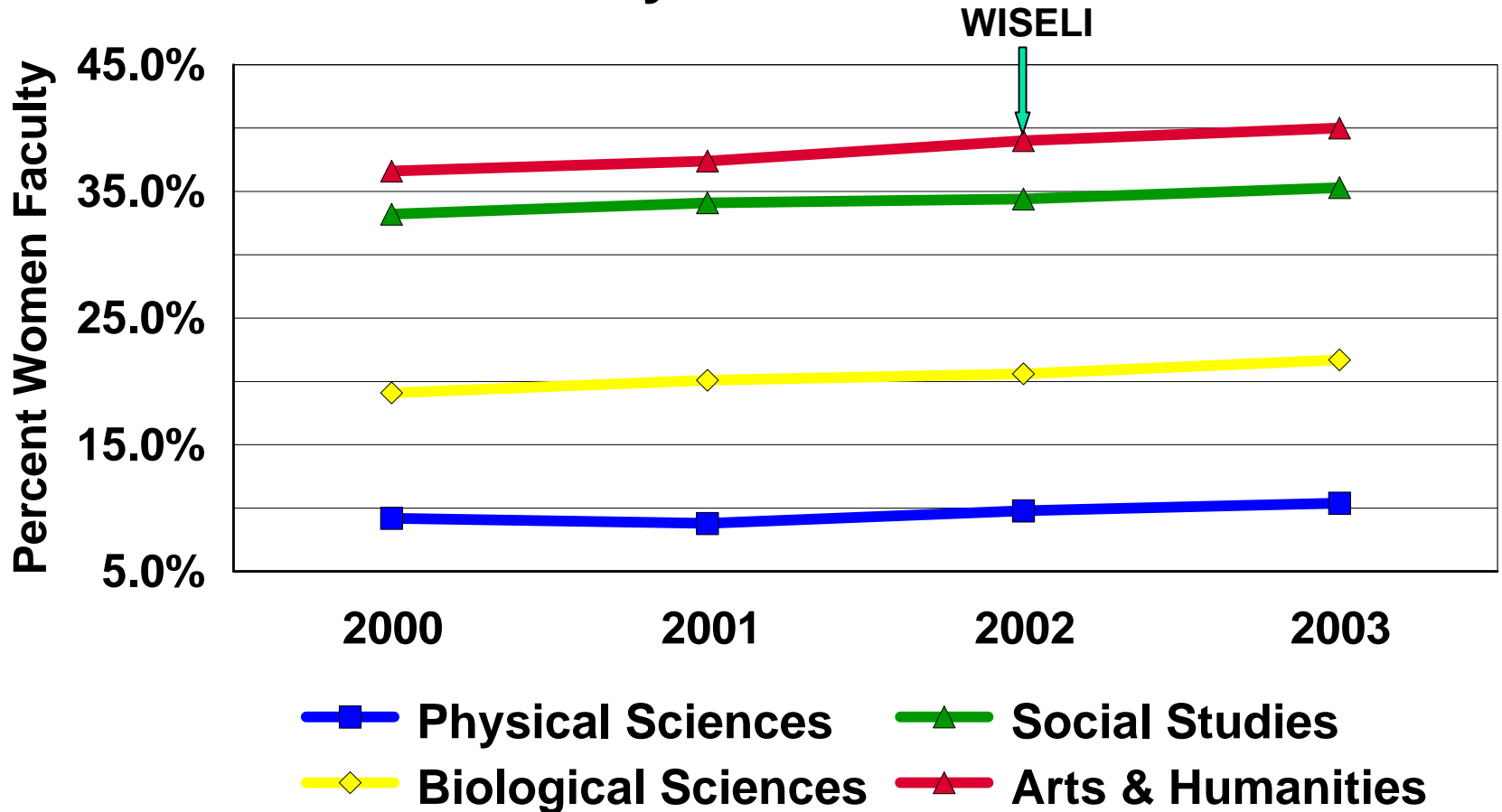
- Involving all stakeholders at all stages & in multiple formats (“the meeting is the tool of institutional change!”)
 - e.g. Town Hall meetings, senior women faculty, multiple meetings at all levels (Deans, Schools, Depts., committees)
- Educating and infiltrating critical entry points
 - e.g. Hiring committees
- Keeping the focus on research
 - Present issues in a neutral way; don’t blame the men
 - Success in valued metrics: publications and professional presentations
- Empowering the women
 - Any way, any how! (educate, coach, advise, cheer!)
 - Selectively advocate for individual women



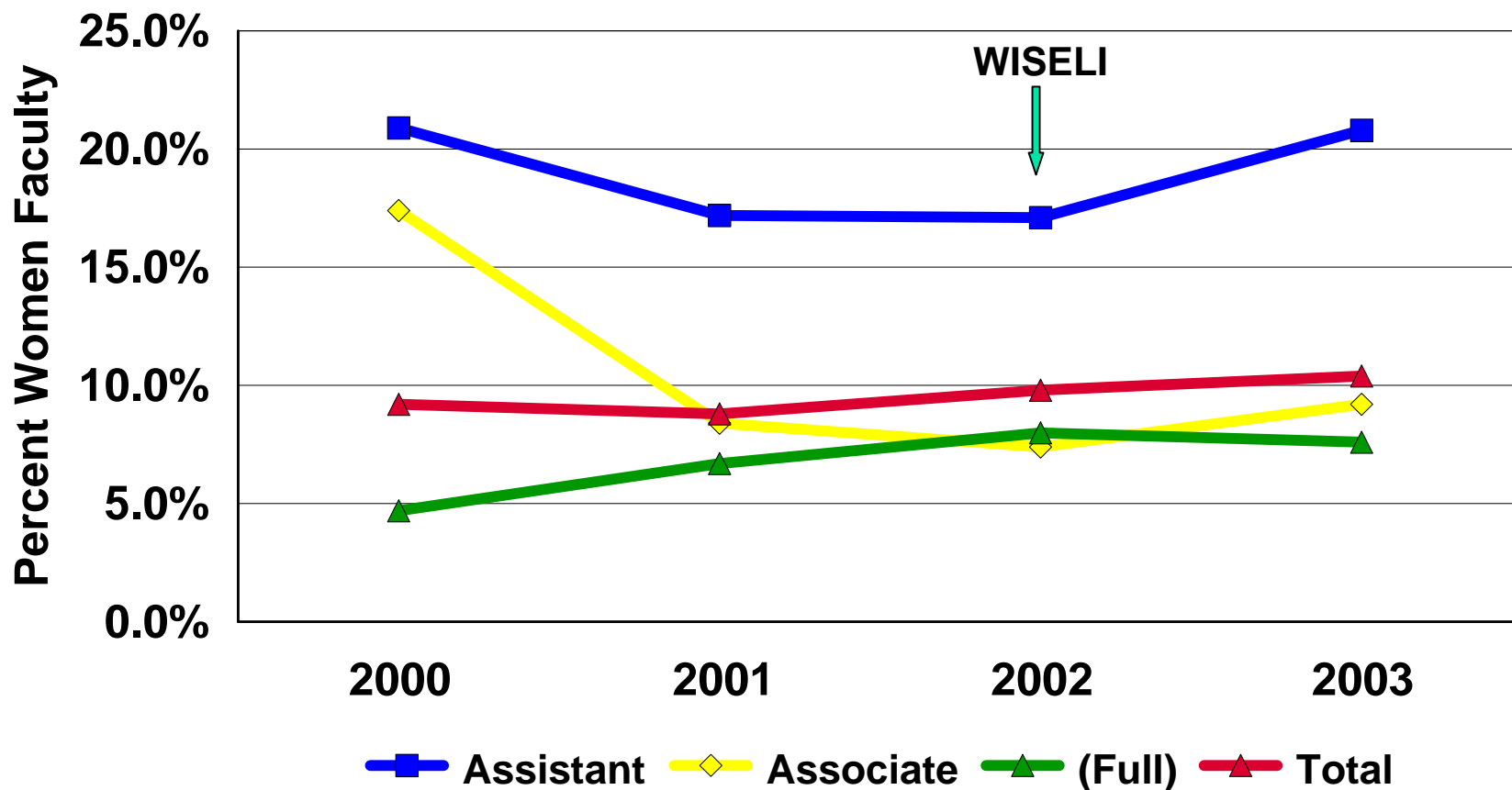
Looking Back 3 Years: Successful Strategies (continued)

- Bring the data back to the participants
- Match the messenger to the message
 - e.g. Engineering faculty present to College of Engineering
- Collaborate with other diversity efforts
 - Keep gender in the diversity discussions
 - Keep diversity in gender discussions
- Use a discovery-based approach to educate faculty

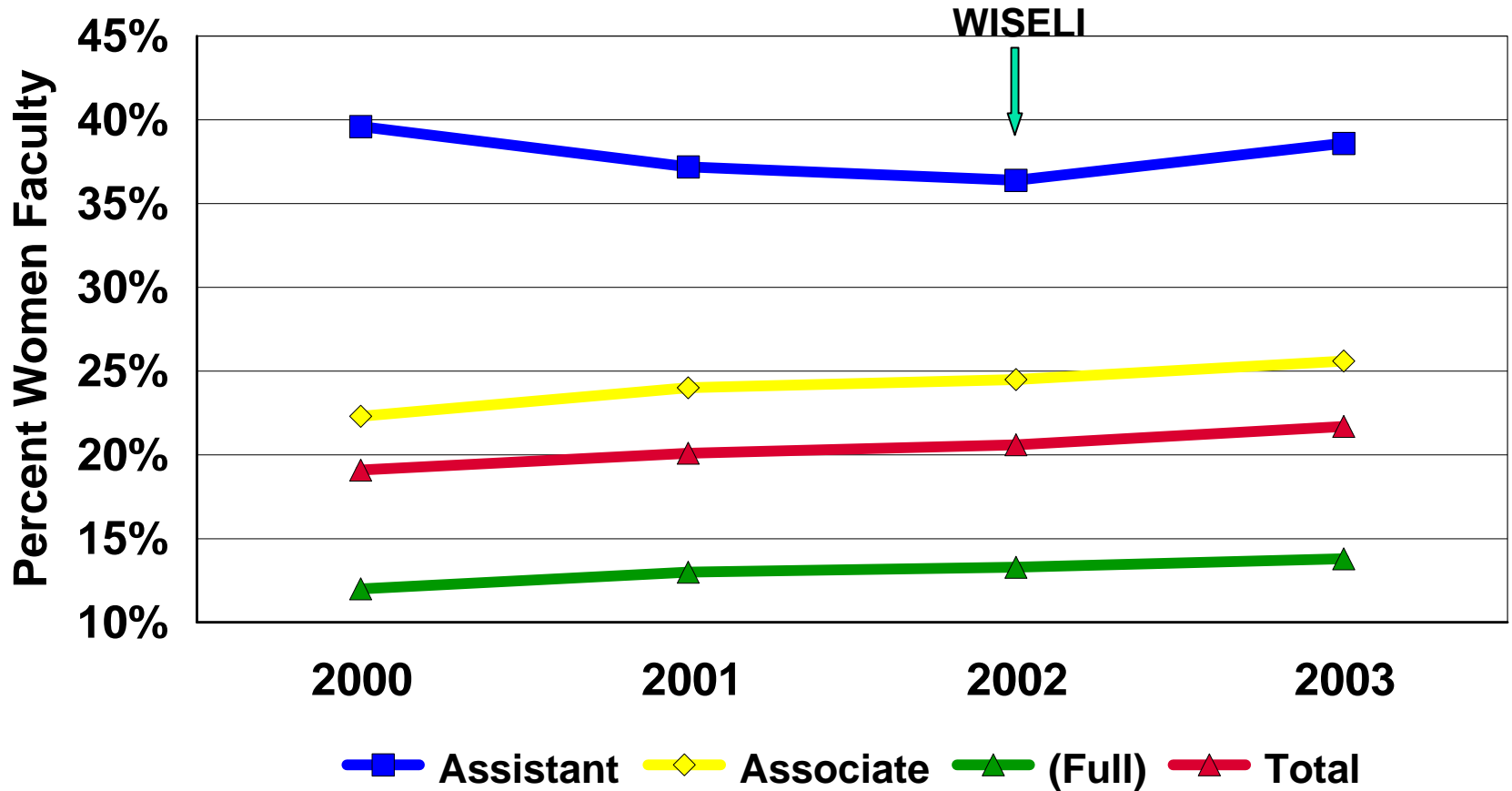
Percent Women Faculty, by Division University of Wisconsin-Madison



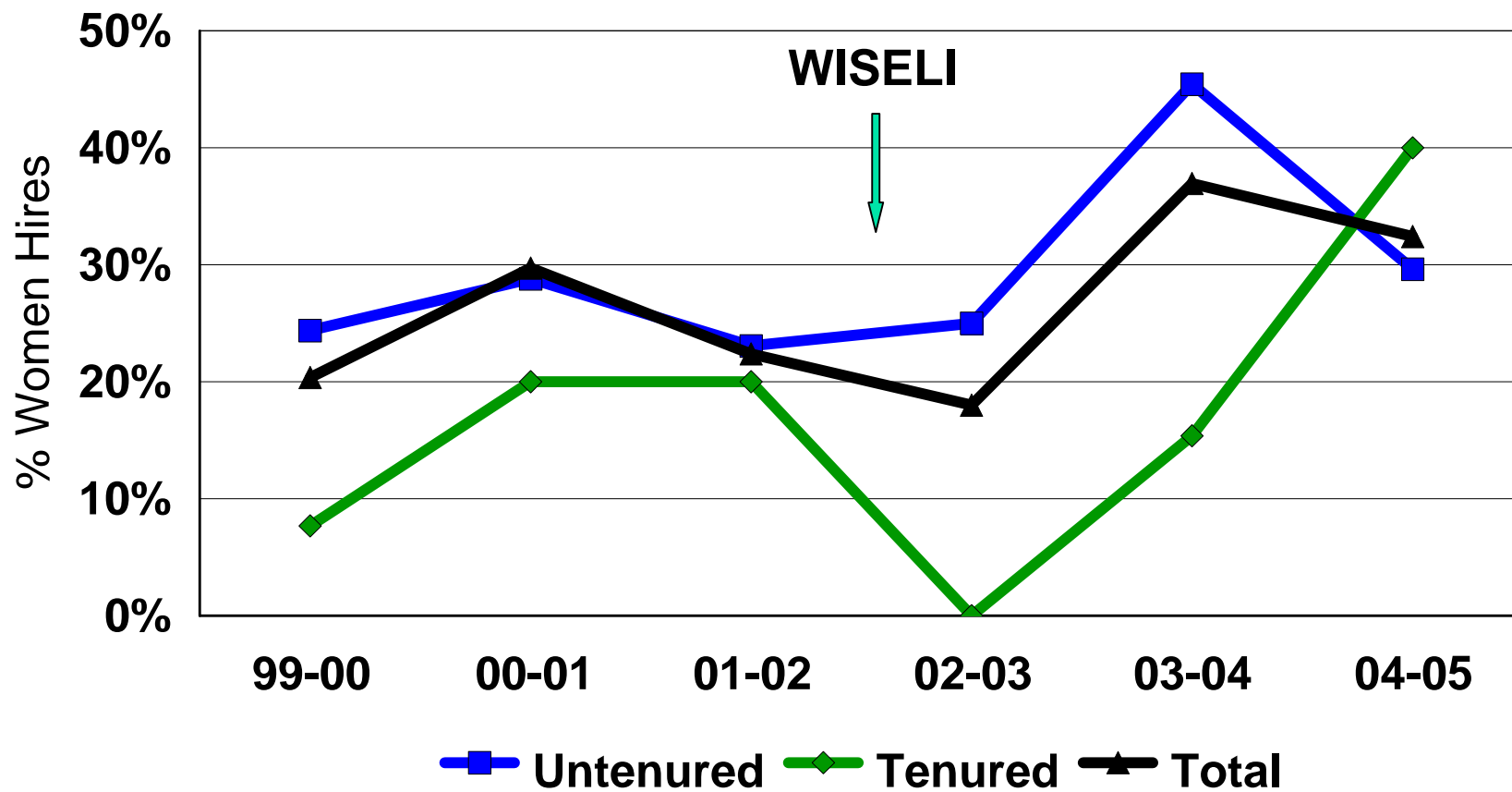
Percent Women Faculty, by Rank Physical Science Departments



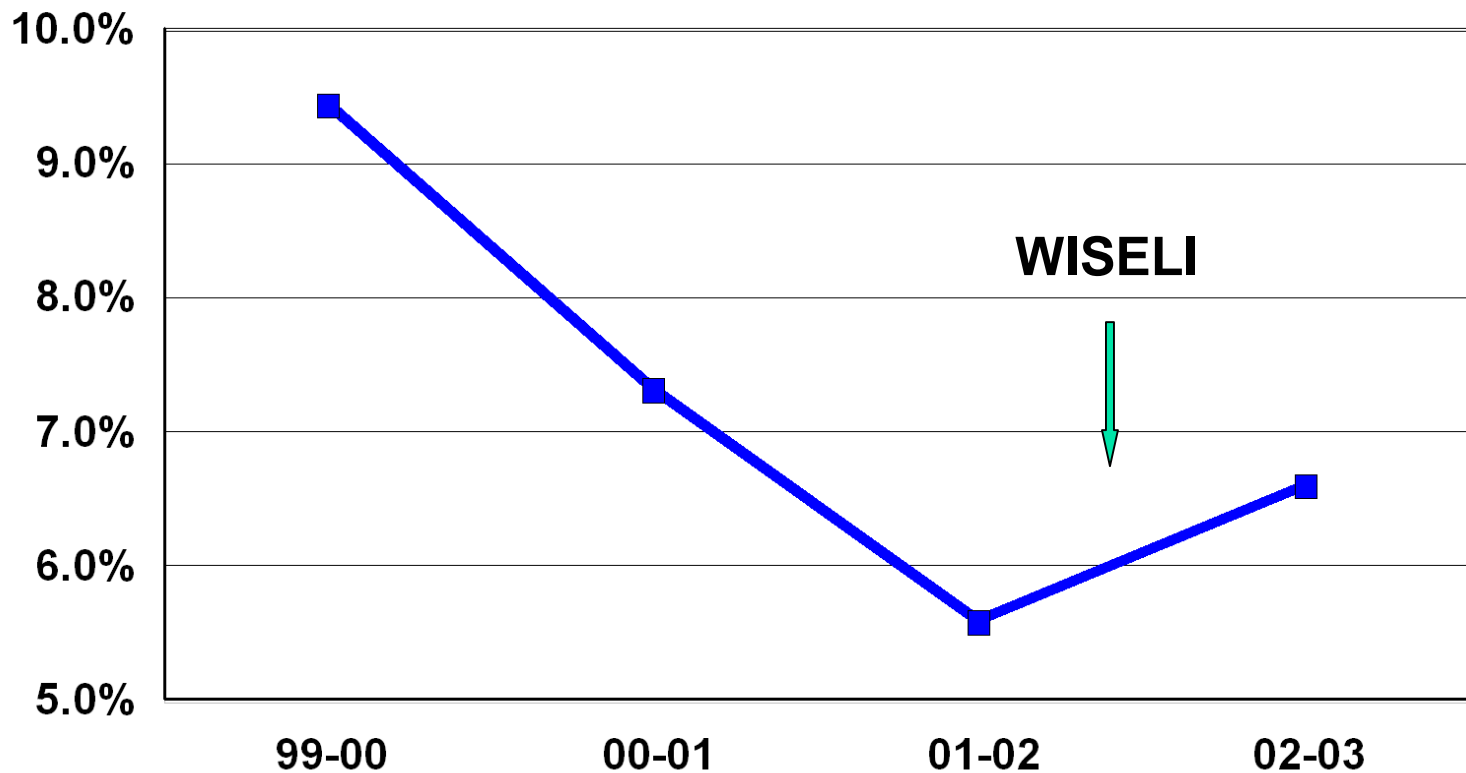
Percent Women Faculty, by Rank Biological Science Departments



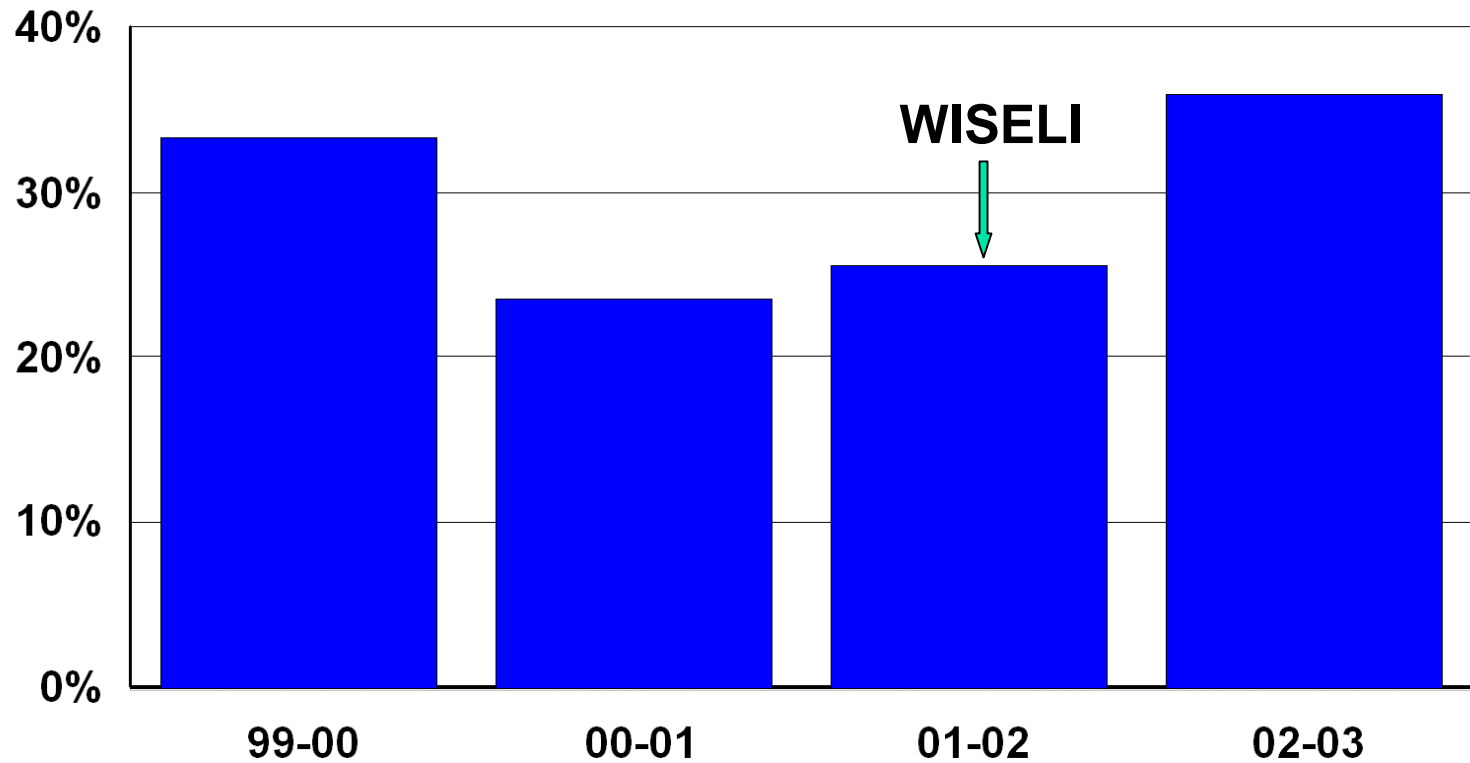
Women as Percentage of New Hires Biological and Physical Sciences



% Women in Administrative Positions (Dept. Chair, Deans, Center Directors)



% Female, Major UW-Madison Faculty Awards*



* Vilas Associate, Hilldale, Romnes, Kellett



Summary

- Gain and disseminate understanding about why it is so difficult to diversify academic leadership even when individuals and institutions are committed and well intentioned
- Hit the issue from all angles so that people are “singing it in the shower!”
- Make WISELI endure to continue institutional research



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Life Cycle Research Grant Program



Life Cycle Research Grants

- Grants given to faculty whose personal crisis is affecting research at a critical career juncture
- Goals:
 - Recognize that life events outside of one's control happen
 - Both men and women experience such events, but women are more likely to experience them early in the career, when they are more vulnerable
 - Reduce turnover by providing research support for faculty in crisis
 - Understand what events are problematic and which career junctures are most critical
 - Understand what faculty need when they are in crisis



Life Cycle Research Grants

- **Implementation**
 - Pilot program ran Fall 2002 through Spring 2004
 - Four rounds of applications, 14 applicants
 - Seven awards
 - Funding from both WISELI and the Graduate School
 - \$215,000 in direct costs awarded
 - ~\$30k/grant

LCRG Awards, 2002-2004

Application Deadline	# of Apps	# of Awards	Grantees	Grantees' Circumstances
11/29/02	2	2	1 female Assistant Professor 1 male Professor	-Sick child, new baby, new hire -Major surgery
3/31/03	6	2	1 female Asst. Prof 1 female Associate Professor	-Spousal care, care of child -Major illness
3/31/04	6	3	1 female Assistant Professor 1 female Associate Professor 1 female Assistant Professor	-Care of child, change in marital status -Change in marital status, department change, care of child -Care for dying parent and two young children



Life Cycle Research Grants

- Evaluation
 - Formative evaluation: *Adjusted Call for Proposals*, refined selection criteria
 - Summative evaluation:
 - Purpose: *provide information about the impact of the program on the recipients of the grants.*
 - Focused on years 1-2
 - In-depth interviews with 4 recipients
 - Follow-up emails and calls
 - Five main themes emerged



Life Cycle Research Grants

- Evaluation (continued)
 - The only grant based on personal need, not professional merit
 - Came at a critical juncture in their personal and professional lives
 - Provided psychological support
 - Had impact on others' lives, as well
 - Is an investment in the grantees' futures and the University's



Life Cycle Research Grants

- Evaluation (continued)
 - Productivity attributed to the Life Cycle Research Grant (first four recipients only):
 - 13 papers
 - 7 presentations
 - 8 grant proposals for over \$6 million (with \$2.5 million pending)



Life Cycle Research Grants

- Evaluation (continued)
 - Small investment led to significant outcomes, both qualitative and quantitative
 - The interviewees identified NO negative impacts from receiving the grant
 - All are completely supportive of the program
 - Significantly impacted their professional progress, ability to function personally, and decision to stay at the University



Life Cycle Research Grants

- **Dissemination**
 - 2 presentations
 - To be featured in WISELI documentary video
- **Sustainability**
 - To be offered as a faculty program available through the Provost's Office
 - Funding currently supplied through partnership of Provost and Graduate School
 - Seeking long-term funding from Vilas Trust, the Women in Philanthropy Council, and the UW Foundation



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Celebrating Women in Science and Engineering
Grant Program



Celebrating WISE Grant Program

■ Description

- Small-grants program, open to departments, centers, or student groups, to fund outside speakers for events in line with the goal of promoting the participation and advancement of women in science and engineering



Celebrating WISE Grant Program

■ **Goals:**

- Highlight and celebrate the scientific work of WISE
- Increase the visibility of WISE
- Encourage departments and centers to routinely include WISE in their seminars/symposia/colloquia
- Provide role-models and foster networking for women graduate students and junior faculty
- Increase awareness of issues of WISE



Celebrating WISE Grant Program

- **Implementation**
 - Three rounds of applications, 22 applicants
 - 19 awards
 - Funding frequently matched or supplemented by department or other sources
 - Approx. \$28,600 awarded by WISELI

Celebrating WISE Awards

<i>Biological Sciences</i>	<i>Engineering</i>	<i>Physical Sciences</i>	<i>Other</i>
Comp. Biosciences Dairy Science Forest Ecology & Management Medical Microbiology Neuroscience Nutritional Sciences Population Health Sciences	Biomedical Chemical & Biological Civil & Environmental Engineering Learning Center	Atmospheric & Oceanic Sciences Chemistry Computer Sciences Physics Statistics Women in Computer Science	Graduate Women in Science Committee on Women in the University & the Women Faculty Mentoring Program



Celebrating WISE Awards

■ Implementation

- Typically brought prominent women scientists.
Activities included:
 - Research presentations in department seminar series, symposia, or colloquia
 - Small group luncheons or dinners with women graduate students and/or junior faculty members
 - Presented a lecture in one or more classes
 - Individual meetings with graduate students, faculty members, and post-doctoral scholars



Celebrating WISE Awards

- Implementation
 - Other types of programs included:
 - Career panel of women scientists
 - Conversations with CEO of MentorNET
 - Visit and research presentation by Virginia Valian
 - Upcoming workshop for women in science on “using the art of persuasion”



Celebrating WISE Grant Program

- Evaluation
 - **Number and types of interaction with participants**
 - Large numbers: Lectures attendance averaged 44 people
 - Wide variety of participants: men and women undergraduates, graduate students, post-doctoral fellows, and assistant to full professors
 - Large number of one-on-one or small group meetings with women graduate students and faculty – one visitor met individually with 11 people



Celebrating WISE Grant Program

- Evaluation (continued)
 - **Participant reactions:** Overwhelmingly positive
 - **Interesting** - “lively discussion,” “wonderful insight,” “among the best seminars I ever attended”
 - **Encouraging** - “provided direction for future plans,” “good suggestions on pursuing science & engineering careers”
 - **Inspirational** - “supplied an example of success,” “sparked interest in a new research area or career choice”
 - **Informative** - “learned new information,” “gained insight into a scientific problem,” “learned about a new technique”



Celebrating WISE Grant Program

- Evaluation (continued)
 - **Contribution to goal of advancing women in science and engineering**
 - Provided role models
 - Addressed concerns about balancing family and career
 - Discussed climate challenges women face in science and engineering
 - Provided research support
 - Fostered networking opportunities and mentoring



Celebrating WISE Grant Program

- Evaluation (continued)
 - **PI analysis: On-campus empowering**

Of 22 applicants for grants:

 - 7 Asst. Professors (5 female)
 - 7 graduate students (all female)
 - 1 scientist track Academic Staff
 - 7 Professors (3 female)



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Workshops for Search Committee Chairs



Workshops for Search Committee Chairs

- Development
 - Design committee included:
 - Office of the Provost
 - Office of Quality Improvement
 - Department of Physics
 - College of Engineering
 - Office of Human Resources
 - WISELI
 - Piloted in Summer 2003



Workshops for Search Committee Chairs

- Use a peer-teaching model to effect behavior change
 - Run an effective and efficient search committee
 - Recruit an excellent and diverse pool of candidates
 - Raise awareness of unconscious assumptions and their influence on evaluation of candidates
 - Ensure a fair and thorough review of candidates
 - Develop and implement an effective interview process



Workshops for Search Committee Chairs

■ Implementation

- Offered to all campus search chairs in collaboration with Office of the Provost
- Deans encourage all search chairs to take this workshop/workshop series
- Flexible implementation of workshops within each school/college
 - 3-session workshop
 - Special 1-session workshop designed specifically for an individual school/college
 - A 1-session discussion-oriented workshop comprised of faculty from all campus divisions



Workshops for Search Committee Chairs

■ Results

- Guidebook, “Searching for Excellence & Diversity: A Guide for Faculty Search Committee Chairs” developed
- Brochure, “Reviewing Applicants: Research on Bias and Assumptions” developed as a result of pilot workshop
- 13 separate workshop sessions have been run, with 70 people trained



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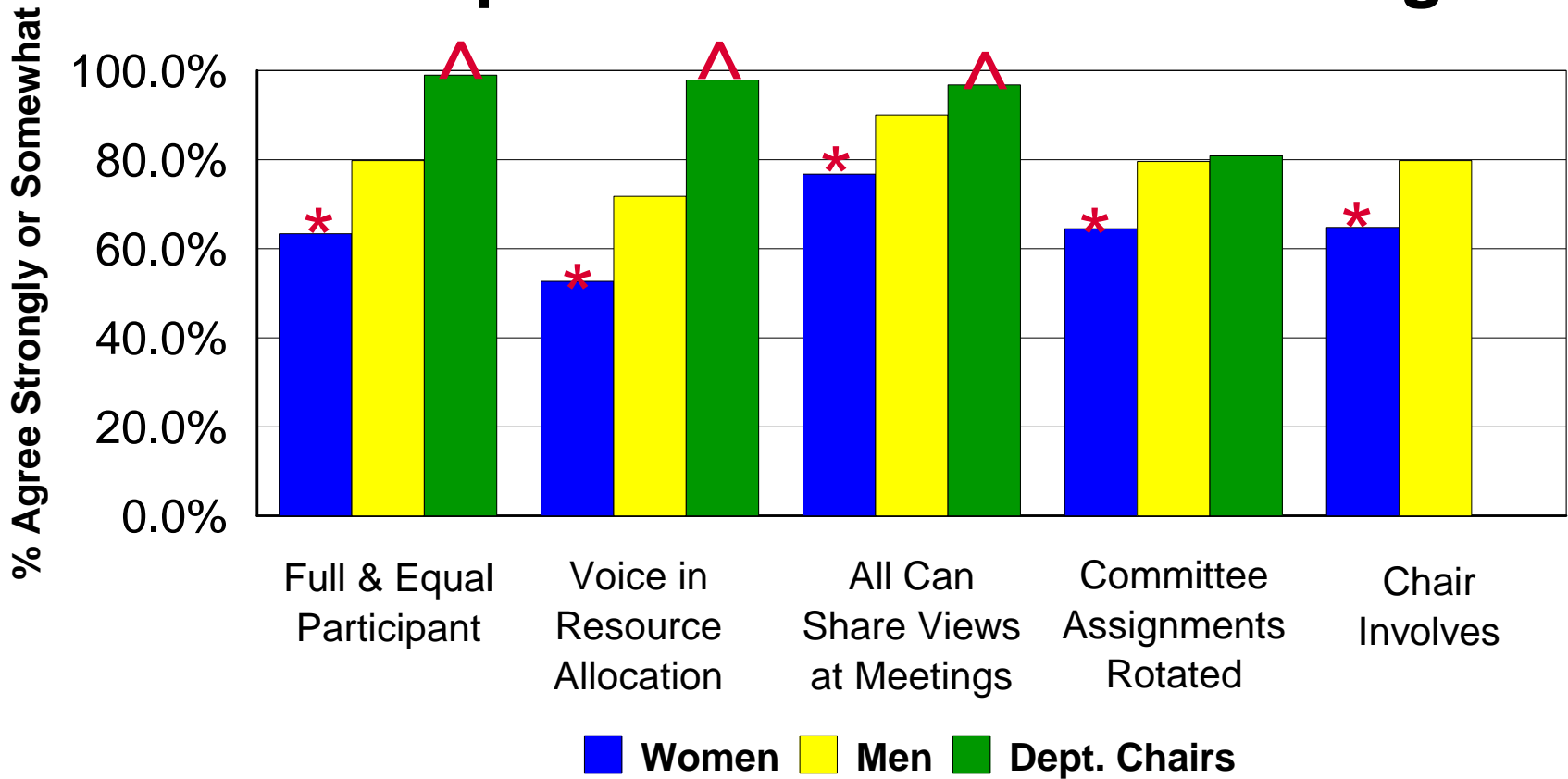
Climate Workshops for Department Chairs



Climate Workshops for Department Chairs

- Rationale for Department Chair Training
 - Interviews
 - Surveys

Departmental Decision-Making



*Gender difference significant difference at $p < .05$.

^Significant difference between dept. chairs and all other faculty ($p < .05$).



Climate Workshops for Department Chairs

- Development
 - Design committee included:
 - Office of the Provost
 - Office of Quality Improvement
 - Department of Physics
 - College of Engineering
 - Employee Assistance
 - Medical School Ombudsperson
 - Non-Represented Classified Staff
 - WISELI
 - Piloted in Fall 2003



Climate Workshops for Department Chairs

- Use a peer-teaching model to effect behavioral change
 - Understand what climate is and how it manifests in their own departments
 - Understand the importance of the chair in creating departmental climate
 - Implement a department-level climate survey and provide chairs with a confidential report of results
 - Brainstorm to design strategies to address climate issues
 - Implement interventions in their departments
 - Develop a network of chairs



Climate Workshops for Department Chairs

■ Results

- 15 department chairs have completed or are in process of completing the 3-part series
- Departmental-level climate survey has been sent to approximately 2,000 faculty, staff and students
 - Response rate averages 52% (range 30% to 75%)
- Developed a resource book for department chairs



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