

RECRUITING, RETAINING, AND ADVANCING A DIVERSE TECHNICAL WORKFORCE

*DATA COLLECTION AND STRATEGIC
PLANNING GUIDELINES*



Increasing the meaningful participation of women and other underrepresented groups in computing requires careful and strategic planning. In general, this planning requires two key components:

1) Collecting baseline data

2) Developing goals and a strategic plan for meeting these goals

Following are some general guidelines for implementing these two components. See the NCWIT Industry Strategic Planning Guide for more information: www.ncwit.org/industryworkbook.



COMPONENT 1: COLLECTING BASELINE DEMOGRAPHIC AND EXPERIENTIAL DATA

The first step in increasing diverse participation is to gather data on the current state of affairs in your company. In general, this involves **1)** collecting demographic data on relevant metrics in your company, **2)** comparing and contrasting these data with national and international benchmarks, and **3)** conducting a climate analysis to collect experiential data about employee perceptions of the current environment.

STEP 1: Collect baseline demographic data.

The following kinds of metrics are most important and useful in collecting data on the technical workforce within your company:

- **Number and percent of technical positions held by women and racial/ethnic minorities** (disaggregated by kind of technical position – e.g., project management, developers)
- **Number and percent of technical positions held by women and racial/ethnic minorities at each level** (typically 4 levels – entry, mid-level, senior, executive)
- **Number and percent of technical new hires who are women and racial/ethnic minorities**
- **Attrition rates for technical women, men, and racial/ethnic minorities**
- **Promotion rates for technical women, men, and racial/ethnic minorities**
- **Patenting rates for technical women**
- **Salary ranges for technical women, men, and racial/ethnic minorities in various positions and levels**

Of course, determining what job titles to include, how the attrition rate is determined, and so on, will vary by company and will need to be part of the initial discussion and plan for collecting these data. You will need to determine what makes sense for your company, and it will also be helpful to know how national and international benchmarking data has been collected so you can compare your results against these data (see Step 2).



STEP 2: Compare your demographic data to national and international benchmark data.

NCWIT members typically use the following kinds of data sources for benchmarking purposes: U.S. Department of Labor Current Population Survey data for computing occupations, Oxford International Database for computing occupations, U.S. Patent Office patenting data, Dice.com salary data. Companies can also access the Towers Watson Global Diversity Survey. ***NCWIT research scientists can help you navigate these data and determine how to decide upon titles, definitions, and other criteria for measurement.***

STEP 3: Conduct a climate analysis to determine baseline experiential data.

Experiential data will help you understand how employees perceive and experience the corporate environment, identifying areas where they are more or less satisfied. Based on the latest research, the Industry Change Model in Figure 1 identifies the key areas affecting underrepresentation in technical companies. Survey (and/or interview) employees about their perceptions and satisfaction with the different areas of this model. This will help you narrow your focus on the areas where change is most needed. NCWIT can work with you to develop and tailor an effective survey or interview protocol (also see the Appendix for sample interview questions).

COMPONENT 2: SETTING GOALS AND DEVELOPING A STRATEGIC PLAN

It is important that companies take a systematic or “ecosystem” approach to these change efforts. Isolated or piecemeal efforts are not enough for sustained change. The Industry Change Model (Figure 1) can help you use the data collected earlier to set goals and develop a strategic plan. Top leadership support and supervisory relationships are at the center of the model because they are foundational components. These two factors need to be an important part of any strategic plan for change; otherwise, efforts in the outer circle of the model will be less effective. NCWIT research scientists can assist you with the following steps for creating a strategic plan:

STEP 1: Select the demographic and experiential metrics that you want to target and set goals for improvement.

Set both demographic goals (e.g., increase in # of women in technical leadership positions; reduction in attrition rates) and experiential goals (e.g., increased satisfaction with managerial relationships or work-life policies). The [NCWIT Industry Strategic Planning Guide](#) can help you further assess your strengths and weaknesses in each area. NCWIT research scientists can help you prioritize and set goals related to the baseline data you collected.

STEP 2: Develop a *strategic plan* that identifies promising practices you will implement in each area and a *timeline* for implementation.

You can use the [NCWIT Strategic Planning Guide](#) to help you through this process and/or consult with NCWIT research scientists. Connecting these objectives and evaluation measures to your overall metrics and goals as determined during the baseline data collection phase is important (e.g., determining which practices are designed to decrease attrition, increase % of female new hires).

NCWIT research scientists also can help you find additional tools, which include the following:

- **Analysis of recruiting practices** (e.g., job description analysis, examining selection processes and criteria)
- **Analysis of employee management, performance evaluation, and promotion systems** (e.g., kinds of mentoring, sponsorship, and leadership development programs available; if and how employees are selected for these; analysis of implicit biases in performance evaluation and criteria)
- **Analysis of flexible work policies and their accessibility**



APPENDIX: SAMPLE QUESTIONS FOR INTERVIEWS OR FOCUS GROUPS BASED ON THE INDUSTRY CHANGE MODEL

Below are sample questions with prompts and possible follow-up questions included. Rarely, if ever, would you use all of these questions in one interview or focus group, but we have provided a range of possible questions so that you may pick and choose those that best fit your company's culture and particular focus.

FACTOR	SAMPLE QUESTIONS
<p>Introductory and Holistic Career Path</p> <p><i>Note: We start with a couple of these questions because they are relatively easy to answer, get people talking, and can begin to uncover how important factors or subtle biases may have played out in participants' career paths overall. What comes up in this section might also help determine which categories below you choose to focus on first.</i></p>	<p>Tell me a little bit about your current position: a little bit about what you do and how you came to be in this position?</p> <p>What have been some of the most significant factors influencing your career path? (Prompt: What experiences, what considerations, or other circumstances or influences have shaped the direction you've taken? What kinds of things have had the most influence on the career decisions you've made along the way?)</p> <p>What are some of the most significant things that have helped you advance in your career? (Prompt: What kinds of experiences, what personal characteristics, any particular people, any particular connections, networks, policies, or programs, have helped influence your advancement?)</p> <p>What kinds of things do you feel have made advancement challenging? (Prompt: what have been the biggest challenges or barriers along the way?)</p>
<p>Manager/Supervisor Relationships</p>	<p>Tell me a little bit about the role managers (or your current manager) have played in your career. To what extent have they been supportive of your career goals or not? (Follow-up: Can you think of some specific ways (or instances where) they demonstrated this support or lack of it? What did you do in response?)</p> <p>What kinds of conversations have you had with managers (or your current manager) about your career goals? (Follow-up: How often would you say you have these conversations? How do you feel about these interactions? Are there things you would change about them?)</p> <p>To what extent do you feel you can talk openly with your manager? How do you handle differences of opinion with him or her?</p> <p>What have been some of your best and/or worst experiences with managers and what made these experiences this way? (Follow up: If they talk about best experiences only, follow up by returning to question about any bad experiences and vice versa)</p> <p>For you, what qualities or characteristics are most important for managers to have? (Follow-up: To what extent have your managers had these qualities?)</p> <p>What advice would you most like to give your manager (or managers, in general) if you could? Or what would you most like your manager to know or do differently?</p>

FACTOR	SAMPLE QUESTIONS
<p>Employee Development/ Mentoring</p>	<p>Do you have mentors outside your immediate manager chain? (Follow up: If not, why not? If so, have you benefited from these relationships and how so? Have there been any downsides or difficulties? What makes these relationships successful or not?)</p> <p>What about sponsors? (Prompt: If necessary, explain that a sponsor is more of an advocate, making sure your work is visible with the people and in the places where it needs to be....more public/visible role than a mentor who is more of a private coach) (Follow up: If not, why not? If so, have you benefited from these relationships and how so? Have there been any downsides or difficulties? What makes these relationships successful or not?)</p> <p>Do you feel that the path to advancement in the company is relatively clear? Why or why not? (Follow-up: If not, what kinds of things are unclear? Do you have ideas for how to make these clearer?)</p> <p>What do you see as the key barriers to professional growth and advancement?</p> <p>Do you think everyone faces these same barriers, or is advancement easier for some than others? (Follow up: If the latter, why? Do you think the barriers differ if you're male, female, racial/ethnic minority, (or other kind of difference)?)</p>
<p>Performance Evaluation and Promotion</p>	<p>Do you feel you have the same opportunities for choice projects and advancement as others on your team or in the company? Why or why not?</p> <p>What have been your experiences with performance evaluation in the company? (Prompt: Have you been relatively satisfied or dissatisfied with performance evaluation processes? To what extent has your manager provided clear, helpful feedback or not?)</p> <p>Have you ever felt that you were evaluated inaccurately? If so, what happened and why?</p> <p>What are your thoughts about the criteria used to evaluate performance? (Follow-up: Do you have recommendations for placing more or less emphasis on certain criteria? Including additional or different criteria? Eliminating certain criteria?)</p>
<p>Policies for Competing Responsibilities</p>	<p>What is your experience with flexible work or work-life policies in the company?</p> <p>To what extent do you feel free to take advantage of these policies? (Are employees encouraged to take advantage of these policies? Do you feel that employees who use these policies are (perhaps inadvertently) penalized or not?)</p> <p>To what extent does your manager encourage use of these policies? To what extent do leaders in the company model use of these policies?</p> <p>Do you have recommendations for improving these policies?</p>

FACTOR	SAMPLE QUESTIONS
<p>Subtle Biases and Climate</p> <p><i>Note: Typically we ask these and the next set of questions, below, toward the end because they ask more explicitly about diversity, and we want to see what comes up more organically earlier in the interview.</i></p>	<p>What's it like to work on your team? (Prompt: What works well; what could be improved?)</p> <p>If you could change one thing about your team, what might it be?</p> <p>To what extent do you feel free to express your opinion or differences of opinion with the team? (Follow-up: Do you feel that all team members are equally heard, or are some listened to more than others? Does this change depending on the environment (e.g., one-on-one; small informal meetings; larger, more formal meetings))</p> <p>Are you able to take on the roles and tasks that you'd like to? (Follow-up: Are there roles or tasks you'd like to take on but haven't been able to? If so, why not?)</p> <p>What is the makeup of your team (age, gender, race/ethnicity, other kinds of diversity?) (Follow up: If they are a minority member, ask: Do you think being one of the only women (or other kind of minority member) on the team makes a difference? Why or why not? Would it be different if there were more women (or other underrepresented groups)? If so, how? If they are a majority member, ask: Do you think it makes a difference being a majority or minority member on the team? Would it be different if there were more women (or other underrepresented groups) on your team? If so, how?)</p>
<p>Top Leadership Support</p>	<p>Do you think there are other ways it makes a difference being a man, woman, minority, etc. in the company? (Prompt: Face different challenges? Different successes? Have different interests? Receive different advice? Perceived differently by others?)</p> <p>To what extent do you think top leadership in the company supports diversity and inclusion efforts? (Can leave as open-ended and/or also ask them to rank on a scale of 1-5) (Follow-up: What kinds of things influence your answer?)</p> <p>Are there things you think that they should do differently regarding diversity and inclusion efforts? (Prompt: Ways to make support more clear; actions they should take; place more/less emphasis on it)</p>



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