

Diversity Metrics for Technology Companies

August 26, 2016

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1. Introduction

The Women in Technology (WIT) Leadership Round Table was initiated to develop sustainable solutions that will increase the representation and retention of women in the technical workforce. The first Round Table meeting in November 2015 identified several solutions towards this goal, including a requirement for companies to “be data-informed and collect data” [1]. In particular, a standard set of metrics around diversity enables companies to measure the current state of diversity within their organizations, to track the effectiveness of programs to increase diversity, to provide actionable insights, and to set benchmarks. The Metrics Working Group of the WIT Leadership Round Table was formed to develop a set of meaningful diversity metrics.

2. Metrics Objective

The purpose of the proposed metrics is to measure diversity with respect to women in the technical workforce. The working group considered whether metrics should be collected only around women technologists or for the broader category of women in technical companies that are working in both technical and non-technical roles. Specifically, the following categories of women in the technical workforce were considered as the objective of the proposed diversity metrics:

- Women technologists: women in a technical role, including engineers, applied scientists, and doctors working on medical technology. Women in these roles generally have a background in engineering, applied science, or medicine.
- Women in technology: includes technologists as well as women in marketing, sales, legal, HR, finance, and other non-technology roles who are working in technology companies.

The dominant attrition for women in the technical workforce is among those in technical roles; in particular, 56% of women leave careers in technology [2]. Hence, the working group recommends that companies collect data around the proposed diversity metrics for women technologists. Some companies might wish to track metrics for the broader category of women in technology. In that case it is important to note that female (and male) executives in technology companies are often culled from non-technical positions (typically sales and marketing) [3]. Hence, collecting metrics only for the broad category of women in technology can mask a lack of

representation, retention and promotion among women technologists within both the technical and leadership tracks. It is therefore recommended that when metrics around women in technology are collected, those for women technologists are tracked separately so as to ensure representation, retention and promotion within this group is accurately captured.

3. Quantitative Metrics

The proposed quantitative diversity metrics around women technologists fall into two categories across all roles in the company: stationary metrics on percentages of women at a given snapshot in time, and flow metrics on hiring, retention, and promotion over time. Different roles are categorized as technologist or technology leadership roles, with flow metrics defined within and between these two categories, as illustrated in Figure 1.

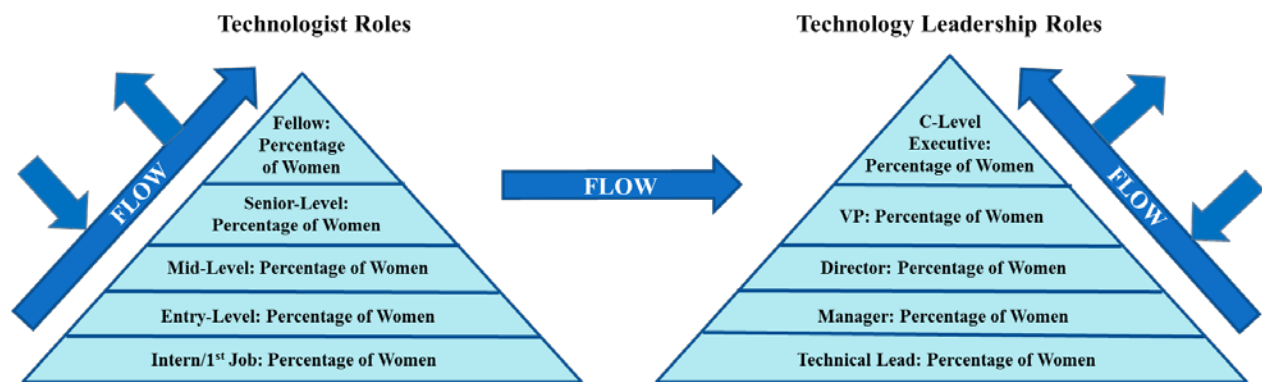


Figure 1: Proposed Stationary and Flow Metrics for Women Technologists: The Percentage of Women at Different Company Levels, and their Flow Into, Upwards, and Out of the Company

Specifically, the proposed quantitative diversity metrics are as follows:

Stationary Metrics: Percentage of women technologists and technology leaders at different levels in the company:

Technologist Roles:

- Interns/first technology job
- Entry-level
- Mid-Level
- Senior-Level
- Fellow

Technology Leadership Roles:

- Technical Lead
- Manager
- Director
- Vice-President
- C-level Executive

A uniform definition for each level of the technologist and technology leadership roles could be developed to ensure uniformity in comparing data across companies. Alternatively, each company could develop the definitions for each level to best fit their internal structure and associated job titles. Companies with flatter hierarchies or earlier in their evolution will generally have fewer job levels than the five enumerated above for each category.

One of the challenging aspects in defining different leadership levels in a company based on title is that the job title alone does not always convey the impact of the role. In particular, the impact of a given leadership role also depends on the role's headcount reporting to it, budget, reporting line to CEO, decision-making authority, and overall scope of responsibility. Hence, these additional impact factors could be used to further stratify leadership levels for roles with the same title.

While stationary metrics provide a snapshot of diversity within a company at a given point in time, flow metrics convey changes to these stationary metrics over time. These changes should capture flow into and out of the company, upwards within each of the technical and leadership categories, and from the technical to the leadership category. In order to capture these flows, the following flow metrics are proposed:

Flow Metrics (For each level defined under stationary metrics):

- Percentage of women hired relative to all hires
- Percentage of women promoted relative to all promotions
- Attrition rates (percentage of departures over a 3 year period) for men vs. women within technologist roles and within technical leadership roles.
- Percentage of women promoted from technologist to technical leadership roles among all such promotions.
- Average time to promotion to next level and average company tenure for men vs. women

Two of the diversity metrics that have received much attention in the press recently are the dearth of women on the Boards of Directors in technology companies, and the issue of pay equity between men and women. The percentage of women board members is easy to determine, whereas pay equity is more nuanced to measure. Nevertheless, several technology companies, including Facebook, Microsoft, and Apple, have recently reported that they have pay equity between men and women in their companies. It is recommended that both of these metrics be tracked in the category of additional metrics, as follows:

Additional Metrics:

- Percentage of women members of the company Board of Directors and any Advisory Boards
- Pay equity between women and men

The quantitative metrics defined above will have increased impact if company goals associated with them are specified. This will allow companies to define their aspirations with respect to diversity metrics, a timeline for achieving them, and the ability to track progress towards these goals. Recommended goals with respect to diversity metrics are as follows:

Metric Goals:

- Absolute goals on stationary and flow metrics with a specific timeline for achievement
- Goals on annual increases in the stationary and flow metrics until absolute goal is reached.

Targets for flow metrics will typically depend on the stationary metric targets; if the percentage of women at a given level of the pyramid in Figure 1 is well below the desired level, then the flow target of women into that position via hiring and promotion (while avoiding attrition of women currently in that position) must be set more aggressively so as to reach the target stationary metric in the desired timeframe. Similarly, as the goals on stationary metrics are reached, goals for the flow targets can be decreased. Programs and policies around hiring, promotion and retention may help in achieving desired flow metrics; these programs and policies are described in the next section on qualitative metrics. International companies might set separate metric goals for different regions of the world given their initial starting points and geographic-specific challenges.

4. Qualitative Metrics

Qualitative metrics capture a company's policies and programs for improving diversity in the technologist and technology leadership roles within the company as well as in the technical profession and pipeline. Tracking such policies and programs can also help companies identify and share best practices within and across organizations. The qualitative metrics proposed fall into four main categories: employee programs, education programs, accountability policies, and outreach programs. Examples of programs and policies in each of these categories are given below.

Employee Programs

- Programs for attracting/retaining diverse talent
- Leadership development programs
- Sponsorship/mentoring programs
- Maternity/paternity leave
- Flex time
- Employee resource groups
- Climate surveys

Education Programs

- Education on the value of diversity and inclusiveness

- Education on implicit bias

Accountability Policies

- Policies to hold people in leadership roles accountable for setting and achieving specific goals on diversity metrics

Outreach Programs

- Programs to increase the pipeline of women technologists
- Publically sharing of stories regarding successful women technologists and technology team leaders (internal and external)
- Engagement with organizations that promote women in technology such as the Anita Borg Institute, the IEEE Women in Engineering (WIE), the Society of Women Engineers (SWE), and Project Include.
- Programs to increase awareness of women-friendly vendors/suppliers.

While many of these programs and policies have been successful within organizations, they can sometimes backfire [4]. The effectiveness of such programs depends in large part on how they are designed and implemented. Hence, in addition to the details of the programs themselves, best practices in implementation as well as their scope, participation, and satisfaction should also be documented.

5. Data Collection and Benchmarks

Collecting data around a set of meaningful diversity metrics is critical to track progress on achieving gender diversity goals within an organization. In recent years some technical companies have started to publicize the diversity data about their workforce [5]. In addition, this year 60 companies participated in the Anita Borg Institute program to identify the “Top Companies for Women Technologists” by submitting their diversity data [6]. These examples indicate that data collection around the proposed diversity metrics is feasible and already-established within some companies.

As publication of the diversity metrics for individual technical companies becomes more widespread, benchmarks may be established based on the top performers. Such benchmarks may vary across different types of companies, as well as across companies of different sizes and in different stages of their evolution.

6. Next Steps

Participants of the WIT Leadership Roundtable will be advocating for their companies to adopt these or similar diversity metrics, create accountability around them, collect data to compute them, and publicize this data. Peer pressure may be helpful in this regard; some companies are currently publishing data around their diversity metrics in the spirit of transparency and a desire to improve them, which will likely be an advantage in their competition for top technical talent.

The WIT Leadership Roundtable will also publicize and promote the proposed diversity metrics and the best practices companies have developed around them via articles on its website, in the national press, and in academic publications, as well as in presentations and discussion groups at conferences (technical conferences as well as those focused on women in technology). It might also partner with other organizations, such as the Anita Borg Institute, to prominently recognize the best companies for women technologists based on the proposed metrics.

References

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