Equity, Diversity and Inclusion Toolkit

Guidance and Resources to Establish
Best Practices in the Technology Transfer Field

Table of Contents

Executive Summary

Progress in tech transfer and the innovation ecosystem depends on the ability to foster constant streams of innovation that tackle the world's most pressing challenges and contribute to the economic vibrancy of the world. Equity, Diversity and Inclusion (EDI) within the tech transfer community of scientists, inventors and entrepreneurs creates an environment that fosters innovation and growth.

EDI has become a major focus of organizations across public and private sectors with the knowledge that organizations that adopt a strong culture and implement programs to achieve measurable impact in attracting and retaining talent and improving team performance and financial results. These organizations also enjoy better profit margins and spread their economic footprint broader than those that lack effective policies to promote diversity.

Of critical importance for tech transfer, studies have shown that diversity and inclusion in Science, Technology, Engineering and Mathematics (STEM) professions in education and industry have declined in the last several decades. Reversing the tide has proven a formidable challenge despite the standard of mandatory diversity training present in major institutions. For example, only 18% of computer science degrees were awarded to women in 2012 as compared to 37% in 1985, a 48% decline in gender diversity. The study also revealed that 88% of technology patents were awarded to groups with zero female constituents. In addition, the research study, "Who Becomes an Inventor in America? The Study of Innovation", published in 2019 in the Quarterly Journal of Economics, found that innovation would quadruple if women, minorities and children from low-income families became inventors at the same rate as men from high income families.

AUTM has joined other professional organizations in developing EDI programs to share best practices, resources and tools to support the tech transfer industry. This first edition of the AUTM EDI Toolkit provides guidance in understanding implicit and structural bias, how to measure impact with research and data and how to start or expand your diversity system. It also includes a primer on important definitions and a glossary of terms. The goal is to build an innovation ecosystem that works for everyone. We invite you to join us in this mission.

Introduction

Equity, Diversity and Inclusion (EDI) initiatives provide several advantages in the workplace such as increasing employee satisfaction, promoting teamwork, providing a sense of belonging, retaining talent and acquiring knowledge that fosters technological advancement. Statistics show heterogeneously demographic teams outperform homogenous groups in the areas of innovation, creativity and complex problem resolution. This toolkit includes valuable reading, videos and assessments to enhance the effectiveness of EDI protocols within the technology transfer ecosystem.

This toolkit, developed by AUTM's Equity, Diversity and Inclusion Committee, was created to guide AUTM Members and those in the technology transfer field in identifying opportunities to expand the success of their initiatives.

The toolkit has three objectives:

▶ Promote inclusion and awareness to create an equitable membership reflective of today's world.

▶ Encourage dialogue to inspire members to bring the values of EDI to their personal and professional interactions.

▶ Share best practices, data, guides, and resources to help AUTM, tech transfer/knowledge exchange professionals, and others to advance their EDI efforts.

This toolkit is not intended to be a comprehensive guide to diversity and inclusion; rather, it is focused on resources and tools relevant for the tech transfer field. It is a living document that will evolve as new resources, best practices and other information become available.

How to Use the Toolkit

You can use this toolkit in myriad ways. Primarily, this resource can be used to help improve engagement through a greater understanding of individual experiences. Additionally, you can use this resource for personal awareness and leadership development. The toolkit can provide insight into how to engage and interact with others who may hold different values. The toolkit can be used to guide technology transfer office operations and engagement. Resources provided will help expand the understanding of under-served populations, helping all of us be more aware and welcoming of colleagues and more conscientious of diverse innovator involvement.

Understanding Implicit and Structural Bias

Implicit bias is the process of associating stereotypes or attitudes toward categories of people without conscious awareness. People who genuinely believe in fairness, equity and equality can hold unconscious biases that can lead them to react in ways that are at odds with their values. These unconscious biases can play out in the decision-making process, for example, who we hire for a job or select for a promotion. In contrast, structural (or systemic) bias refers to institutional patterns, policies and practices that confer an advantage to some individuals and disadvantage to others based on identity.

Without fact-based behavioral statistics, the existence of implicit bias is difficult to comprehend, process and address by diverse groups. This toolkit aims to bring clarity and understanding to the existence of implicit bias, the pervasive practices that lead to structural biases, and introduce de-biasing techniques for those engaged in technology transfer/knowledge exchange.

Focus on Identifying Blind Spots Through the Implicit Association Test (IAT)

Implicit bias is usually not evident to individuals until they are challenged or discovered through participation in implicit bias testing. For example, in the Scientific American paper entitled "How to Think About Implicit Bias," the authors suggest that stereotypes arise in our minds all the time. These stereotypes don't make us racist, sexist or whatever-ist. Nonetheless, this tendency for stereotype-confirming thoughts to pass spontaneously through our minds can cause blind spots, also known as implicit bias.

Having a bias is a problem, but not managing your bias is an even bigger problem. The first step is to recognize your blind spots. Then you can use various methodologies to manage those biases and their impact on others.

Tools to Gain Understanding of Individual Bias, Support Action

The existence of bias is undeniable once tests or situational challenges expose them. Extensive research has been conducted to better understand the root cause of bias and the best methods to intercept and interrupt the thought patterns and behaviors that stem from their influence.

Harvard University offers several IATs that can be used to measure individual bias. These tests, found here include:

- Gender-Science
- Disability
- Gender-Career
- Native American
- Religion
- Sexuality
- Race
- Transgender

- Asian American
- Weapons
- Weight
- Age
- Arab-Muslim
- Presidents
- Skin-tone

Documenting the existence of structural bias without constructing a new paradigm for change has proven to be ineffective in diversifying organizations to better reflect the globally heterogeneous general population. More practical measures of inclusion that affect visible change are being studied, applied to various industries, and demonstrating measurable improvement in innovation and profitability.

Measuring Impact: Research, Data and Benchmarking

Before beginning to develop EDI initiatives and programs, it is important to identify the desired outcomes for your organization.

A good place to start is by striving to understand the demographics of your office as well as those submitting invention disclosures and/or starting new companies via race/ethnicity, gender, ability, veteran status, age, etc.

Look at your demographics by department, manager, reporting lines, inventors or founders. Where are teams largely homogeneous? Where is there diversity? Are there patterns you can detect immediately, or do you need to dig into additional data?

Turnover

Hiring for diversity is just the beginning. EDI initiatives will not work unless your diverse teams can thrive and feel like they belong, are valued, and have the same opportunities as others. If not, you will see high turnover.

Check your turnover demographics. Look for patterns by location and manager. When you see higher than normal turnover, consider if there are specific concerns in one area or overall cultural issues.

Reasons for People Leaving

Sometimes this data is collected through exit interviews. It is important when considering this data to understand where it comes from. In some instances, the reliability and insights might be limited. However, the data could also highlight areas where a manager or other individual is causing people to leave.

Career Path and Promotion

It is essential to understand whether employees see opportunities to advance their career in the office or department, have access to management and skills training programs, and whether there are career paths open to everyone. A key to improving EDI is to ensure everyone is considered for promotion no matter who they are, if they are qualified to take on the next opportunity.

Another important metric to consider is how long employees are in their roles before they are offered or get a promotion. Look for patterns of certain demographic groups being likely to get those opportunities or being in roles longer than others who have been given those opportunities.

Invention Disclosure Submission

Look at the demographics of invention disclosures submitted to your office. Is there diversity among the innovators? If not, consider prioritizing efforts to promote greater parity, such as an anonymous application process.

Start-up Company Formation

Look at the demographics of start-ups being created from your office. Is there diversity among the founding team or board of directors? If not, consider prioritizing efforts to promote formation of start-ups by underrepresented groups.

Benchmarking to Anchor Your Numbers

You will want to establish ways to benchmark your efforts against other relevant external data. The data must be applicable to your organization based on where you are applying your diversity and inclusion efforts: hiring and retention, supplier diversity, inventor diversity, etc.

Sources of benchmark data include:

- ▶ US Census
- ▶ Geographic
- ▶ American Community Survey
- ▶ Integrated Postsecondary Education Data System (IPEDS)
- ▶ Internal HR
- ▶ AUTM Women Inventors SIG

Other Useful Benchmarks

AUTM Biennial Demographic Survey

In 2020, AUTM conducted an EDI survey to obtain demographic data about its Members. The survey focused on criteria such as race/ethnicity, gender identity, age, sexual orientation, veteran status, and ability status, etc., both across the membership, and on a career level (e.g., entry level professional, manager, etc.), different sectors within the profession (e.g., business development, licensing, intellectual property management, finance, etc.), the size of the office, and geographic location. These results guide AUTM as it develops tools and programs to help Members reach their goals.

The Rooney and Mansfield Rules

In 2002, a study regarding minority NFL coaches concluded that Black coaches outperformed white coaches in virtually every object criterion, including having better records when fired. As a result of this study, the NFL created the Rooney Rule, which requires that for every job opening, one or more diverse candidates be interviewed for that position. At the NFL, the Rooney Rule requires teams with a head coach, general manager, or equivalent front office position vacancy to interview at least one "diverse" candidate from outside the organization or from a list of NFL-suggested candidates.

In 2017, recognizing a lack of diversity in its leadership positions and inspired by the Rooney Rule, more than 64 law firms implemented the Mansfield Rule to address the lack of diverse leadership in law firms. Named for Arabella Mansfield, the first woman to practice law in the U.S., the rule requires law firms commit to "considering at least 30% historically underrepresented lawyers – women, lawyers of color, LGBTQ+ lawyers, and lawyers with disabilities" for a variety of roles, including equity partner promotions, senior lateral hires, client pitches, and leadership positions.

Section III

Building Your System: Best Practices in the Diversity Toolbox

As you begin to develop — or continue to expand — the EDI strategy and system for your organization, you will want to consider the stage of your efforts and then write a strategic equity, diversity and inclusion plan. This diagram provides a roadmap:

The EDI Strategy and System Continuum
Where is your organization in the continuum?

Level 1

Baseline

There is an acknowledgement that EDI exists but there are no plans in place to define or achieve desired outcomes.

▶ Little to no leadership involvement

▶ No measurement strategy

▶ No resources allocated

Level 2

Understanding

EDI is increasingly recognized as a benefit to the success of an organization. It is defined in a broad way to align with the mission of the organization.

▶ Leadership accepts some responsibility for EDI efforts

▶ Metrics are based on organizational values

▶ Minimal staff and budget resources are allocated

Level 3

Application

Leadership recognizes the benefits of diversity and inclusion and can demonstrate that implementing EDI strategies create an inclusive environment.

▶ Leaders create EDI goals and accountability

▶ Metrics capture the growth of awareness, education and understanding within the organization

▶ Additional resources are distributed among staff and members

Level 4

Integration

EDI is fully integrated into the day-to-day activities of the organization and the strategic vision of the organization. Leadership is committed to creating an environment that supports EDI efforts and encourages inclusive behaviors.

▶ EDI is seen as an essential leadership competency

▶ Metrics focus on culture change and leadership impact

▶ Operational functions receive resources to incorporate EDI into all facets of the organization

Level 5

Transformation

EDI is a part of the organizational culture and embedded into the day-to-day operations. It drives the strategy and mission of the organization.

▶ Leaders are EDI change agents

▶ EDI outcomes are regularly evaluated for impact and improvement

▶ Resources are allocated to all functions of the organization

Source: Raybourn Group International; Adapted by Brook Pritchett & Karen Maples

Best Practices to Consider

Anonymous Application Process for New Employees or Inventors

The goal of anonymization or de-identification of the applicant is to minimize the risk of implicit bias by the reviewer. Industries that have adopted anonymity techniques in their selection process have reported marked improvement in the diversification of their profession. For example, "blind" orchestra auditions were found to reduce sexual-biased hiring and increase the number of female musicians: In the years after these changes were instituted, the percent of female musicians in the five highest-ranked orchestras in the nation increased from 6% in 1970 to 21% percent in 1993.

The development of a de-identification strategy is achieved under the guidance of the institution's human resources office or a third-party security firm. The program should include a risk assessment to safeguard against re-identification and compliance policies to be agreed upon by the stakeholders involved. To ensure the success of the de-identification program, the requirements should be properly documented in the program plan and instituted at the onset of the program. The use of submission management software is recommended to reduce the risk of implicit bias.

As you consider anonymous applications for new employees or inventors, it is important to consider the following:

▶ Initiate the de-identification process at the earliest stages of the interview or commercialization process, preferably at the receipt of each employment application or invention disclosure form.

▶ Establish a unique identification number for each participant in lieu of using their name or other identifying factors. For example, Washington University TTO uses an HR number.

▶ Establish safeguards to reduce re-identification and ensure these policies are carefully followed throughout the commercialization process.

▶ Require proper authorizations and approvals for any exceptions for re-identification. Create a policy to inform the institution of its obligation to potential employees, or protect the IP, integrity and stewardship of the inventors as well as provisions for protection and privacy.

People First Language

People First Language is a way of communicating that reflects knowledge and respect for people with disabilities by choosing words that put a person before a diagnosis. For example, use phrases such as "person with a disability" instead of "the disabled." Another term to use is "ability status," rather than "disability." For more insights, read "People First Language" by Kathie Snow.

Supplier Diversity

Supplier diversity is a business strategy to include diverse businesses when procuring goods and services for your organization. Diverse businesses include minority-owned, women-owned, veteran-owned, LGBTQ-owned, service-disabled veteran-owned, historically underutilized businesses and SBA defined small business vendors as suppliers. Today, supplier diversity is embraced by many major corporations and non-profits as well as federal, state, and local governments. Research shows that supplier diversity helps organizations achieve greater profitability.

▶ Examine your current base of suppliers.

▶ Set goals and establish benchmarks.

▶ Collaborate with your organization's procurement office.

▶ Expand outreach to identify diverse businesses.

▶ Establish formal and informal request for proposal and request of quote priorities to include diverse businesses.

▶ Track the performance of your office's efforts to diversify.

Section IV

Expanding Networks: Leveraging a Global Perspective

The historical and cultural heritage that varies from country-to-country and region-to-region, may influence how EDI is perceived and understood. Political, religious, and other sensitivities may impact perceptions and understanding. For example, some questions that might arise include:

- ▶ How is discrimination perceived?
- ▶ Who are the underrepresented groups?
- ▶ How should data be collected?
- ▶ What is the awareness level among the minorities and the majority in a particular country/ region?
- ▶ What EDI tools are appropriate or relevant in a particular culture?
- ▶ What are the most important values in a particular society or culture (e.g., profitability, social harmony, equality)?
- ▶ What are the priorities in a specific society or culture (e.g., economic growth and stability, political stability, access to safe food or drinking water; access to healthcare for all citizens, etc.)?

We encourage you to get engaged, network and collaborate with a wide variety of organizations. You can start by identifying and networking with other tech transfer offices where you have existing connections. Also, think beyond your region. Here are representative organizations to consider:

Global and National Organizations

- ▶ Worldwide Patent Offices
- ▶ World Intellectual Property Organization (WIPO)
- ▶ Global Equity, Diversity and Inclusion in Technology Transfer (GEDITT)
- ▶ Innovation Council

Technology Transfer/ Knowledge Exchange Organizations

- ▶ ASTP
- ▶ International Strategic Technology Alliance (ISTA)
- ▶ Innovation and Technology Managers Association (ITTMA)
- ▶ Knowledge Commercialisation Australasia (KCA)
- ▶ Korean Association of University Technology Transfer Management (KAUTM)
- ▶ Netval

- ▶ [PRAXIS/AURIL](#)
- ▶ [RedTransfer](#)
- ▶ [Southern African Research and Innovation Management Association](#) (SARIMA)
- ▶ [SNITTS](#)
- ▶ [STEM](#)
- ▶ [TransferAllianz](#)
- ▶ [University Network for Innovation and Technology Transfer](#) (UNITT)
- ▶ [USIMP](#)

Community Specific Organizations

- ▶ [African Women in Science](#)
- ▶ [Invent Together](#)
- ▶ [Women in Bio](#)
- ▶ [FutureForward](#)
- ▶ [FunTech UK](#)

Conclusions and Resources

EDI initiatives provide several advantages in the workplace such as increasing employee satisfaction, promoting teamwork, providing a sense of belonging, retaining talent and acquiring knowledge that fosters technological advancement.

We all need to embrace diversity and inclusion as a responsibility. While it is difficult to make sweeping changes and drive obvious results, tangible change is possible through persistence and patience. Rather than expecting immediate improvement, it is hoped that this toolkit provides tech transfer offices with the tools needed to make meaningful progress in their EDI efforts.

Resources

General Information:

3 Things You Should Know About the Unintended Consequences of Diversity Initiatives

"Diversity Doesn't Stick Without Inclusion." Harvard Business Review, Feb. 2017. hbr.org.

"How Diversity Can Drive Innovation." Harvard Business Review, Dec. 2013. hbr.org.

Implicit or Unconscious Bias:

IATs offered by Harvard University

Brownstein, Michael. "Implicit Bias." *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Fall 2019, Metaphysics Research Lab, Stanford University, 2019. *Stanford Encyclopedia of Philosophy.*

"Checking Your Blind Spot: Ways to Find and Fix Unconscious Bias." *AESC*.

Daumeyer, Natalie M., et al. "Thinking Structurally About Implicit Bias: Some Peril, Lots of Promise." *Psychological Inquiry*, vol. 28, no. 4, Oct. 2017, pp. 258–61. *DOI.org (Crossref)*, doi:10.1080/1047840X.2017.1373556.

Doris, Keith Payne, Laura Niemi, John M. "How to Think about Implicit Bias;" *Scientific American*.

How to Outsmart Your Own Unconscious Bias | *Valerie Alexander | TEDxPasadena - YouTube.*

"Implicit Bias." *Ethics Unwrapped*.

Implicit Bias – UCLA Equity, Diversity & Inclusion.

Researchers Find Everyone Has a Bias Blind Spot University, C., 2020. Researchers Find Everyone Has a Bias Blind Spot - News - Carnegie Mellon University.

Thinking Structurally About Implicit Bias: Some Peril, Lots of Promise University, Carnegie Mellon.

Associations, Certifications, Courses and Workshops

USPTO Council for Inclusive Innovation (CI2)

LinkedIn Learning (Diversity, Inclusion, and Belonging for All)

Diversity Lab (Mansfield Rule)

Institute for Diversity Certification

No More Boxes

Other Toolkits:

Kapor Center

National Diversity Council

National Council on Disability

Racial Equity Impact Assessment