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## Diversity in Innovation Best Practices Guide

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# HTLI

**HIGH TECH LAW INSTITUTE**

SANTA CLARA UNIVERSITY SCHOOL OF LAW

# Diversity in Innovation

## Best Practices Guide

**Version 1.0**  
**September 21, 2021**

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## Introduction

Santa Clara Law’s High Tech Law Institute (“HTLI”), the umbrella organization that administers Santa Clara Law’s nationally-recognized intellectual property and technology law programs, presents this best-practices manual. This manual is designed to be an “insanely practical” guide to increasing the diversity of inventors within an innovative industry. By “diverse” we mean underrepresented or historically marginalized groups in the United States patent system. As discussed below, the term “diversity” can be interpreted differently in different countries.

The HTLI research team collected this extensive list of over 90 best practice suggestions through 6 roundtable sessions held in cooperation with the USPTO, followed by a survey designed to collect information similar to what was discussed in the roundtables. It consolidates the collective wisdom of 73 Intellectual Property professionals and attorneys from the United States’ leading companies at the time of first publication of this manual.

## The Team

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### **Special Thanks**

Regional Offices of the United States Patent and Trademark Office (“USPTO”), and their Directors and Staff

## Objectives

In 2020, the USPTO collaborated with the HTLI to propose a study designed to increase diversity in the patenting process, specifically targeted to in-house legal / IP department and their practices. The goal of the study was simple - harvesting the collective knowledge of nationwide IP professionals and producing an “insanely practical” guide to expand inventorship to a more diverse inventor population. Because the goal was to unearth practical tips, we intentionally focused our attention away from upper-level management. We focused our conversations on individuals who are directly involved in the patent process and have an intimate knowledge of its challenges. Recognizing that many who want to increase the diversity of inventorship in their companies may not have visibility or influence at the highest levels of their companies, we unearthed some “hacks;” the easily-implemented and/or budget-neutral changes that can be instituted by someone farther down the management chain.

It deserves mentioning that this manual does not attempt to tackle issues relating to diversity in inventorship resulting from factors outside the influence of the in-house IP department. For example, many of our study participants recognized that the inventor population in their company is decidedly non-diverse. The pipeline problem regarding historically marginalized groups in STEM fields is a well-recognized phenomenon. More companies are starting to recognize that a diverse workforce is essential to bolstering a company’s profitability, but the process of diversifying the workforce is a marathon, not a sprint, and the organizations making use of this manual may be at vastly different stages. Recognizing that in-house IP managers are not going to be able to solve these problems on their own, we intentionally focused on

initiatives within their sphere of influence. We sought to find practical solutions to help create parity in the inventor population as compared to the existing employee pool, essentially lowering barriers and making the invention process more inviting and accessible to all of a company's innovative personnel.

### Other Sources of Information

In July 2021, the [United States Intellectual Property Alliance](#) held its inaugural Increasing Diversity in Innovation conference, which was co-sponsored by HTLI, with participation by the USPTO. The [Increasing Diversity in Innovation Pledge](#) was announced at the conference, along with the founding pledgees. Pledging companies with inventorship programs, 30 at the time of this writing, commit to working to understand and address the issue of historically marginalized inventors, and to taking a series of steps over several years to implement best practices in diversity. Supporting organizations (including law firms, non-tech companies, and other organizations), which include HTLI, can support the work by signing a "supporter pledge." Implementation of the pledge is planned to be supported by a Diversity Pilot Clearinghouse, which will facilitate the exchange and evaluation of best practices by pledging companies and supporters. Visit the site (<https://increasingdii.org/>) for more information about supporting or signing on to the pledge, or becoming a supporter organization.

A number of recent studies have identified patent disparities relating to race and gender such as the 2018 study, [Who Gets to Be an Inventor in America?](#) The USPTO's 2016 Progress and Potential Report and its 2020 update on women inventor-patentees in the U.S. indicates that there is still room for improvement. In addition, the USPTO's SUCCESS Act report, released in November of 2020, shows that there is room for improvement with respect to other aspects of diversity and veteran status. While the lack of female engineers and scientists applying for patents is a clearly identified problem, many researchers are still focused on quantifying the extent of this "patent gap".

Recognizing that the United States' long-term economic prosperity relies upon a vibrant innovation ecosystem, lawmakers in Congress are addressing the patent gap through legislation. Congress passed the [SUCCESS Act](#) in 2018 and are now introducing the Idea Act, which would ask the U.S. patent office to collect demographic data on patent applicants on a voluntary basis. This data would allow researchers to identify patent gaps and potentially take action to address them. In March 2020, the USPTO launched a new online innovation platform to improve inventor diversity and launched a government, academia, and industry consortium called the National Council for Expanding American Innovation to study long-term solutions to increasing inventor diversity. The "[Expanding Innovation Hub](#)" provides resources to make the patent process more accessible to diverse inventors and the "[Affinity Group Toolkit](#)" provides information on how stakeholders can establish and maintain their own affinity groups.

Professor Colleen Chien of Santa Clara University School of Law has conducted significant research in the area of inventor diversity. Her article [Rigorous Policy Pilots that the USPTO Could Try](#), in the Iowa Law Review, describes a pilot the USPTO could implement to address the possibility of implicit bias against female inventors in the examination of patents. Her 2021 paper, [The Inequalities of Innovation, examines systemic and other barriers to participation in invention and suggests policy and related steps for dismantling them](#). She provided oral testimony to USPTO SUCCESS Act Hearings held in San Jose in June 2019.

The USPTO sought input for its National Strategy for Expanding American Innovation. Santa Clara Law students in Professor Chien's Patent Law Course submitted [13 comments](#) to the USPTO with recommendations to make innovation more representative of the United States including destigmatizing queerness in STEM.

A more complete list of related literature and resources can be found in [Schedule 1](#).

## Methodology of Study

The study was conducted via several primary mechanisms: a series of roundtables of approximately a half-dozen participants each, individual conversations with company representatives, and an anonymous survey instrument.

### Roundtables

The research team was able to leverage the USPTO regional directors' connections with patent-filing companies to hold roundtables with their in-house experts and inventors. The research team held six 90-minute roundtables over the course of six months, working closely with the USPTO's Regional Offices to identify key innovative companies and inventors in a wide variety of industries and geographies, and to organize a roundtable in each of the regions serviced by the Regional Offices.

### Survey

The research team launched a survey, provided pursuant to institutional review board approval, designed to collect information similar to what was discussed in the roundtables. When taking the survey, respondents may remain anonymous, or optionally provide contact information if amenable to a follow up conversation. None of the survey questions are required, allowing participants to share as much or as little as comfortable or appropriate.

The survey questions are attached to this manual as [Exhibit A](#). The survey remains open as of the latest publication date of this manual and can be found at <https://forms.gle/UbpYVYX3rDWN7jqw6>. We welcome your input, and intend to update this document from time to time, to continue to report on best practices as IP teams implement and experiment with diversity initiatives.

### Conversations

Our research team held conversations with various individuals, either to follow up from survey questions or roundtable discussions, or to engage with additional individuals to verbally collect the survey information.

### Demographics of Respondents

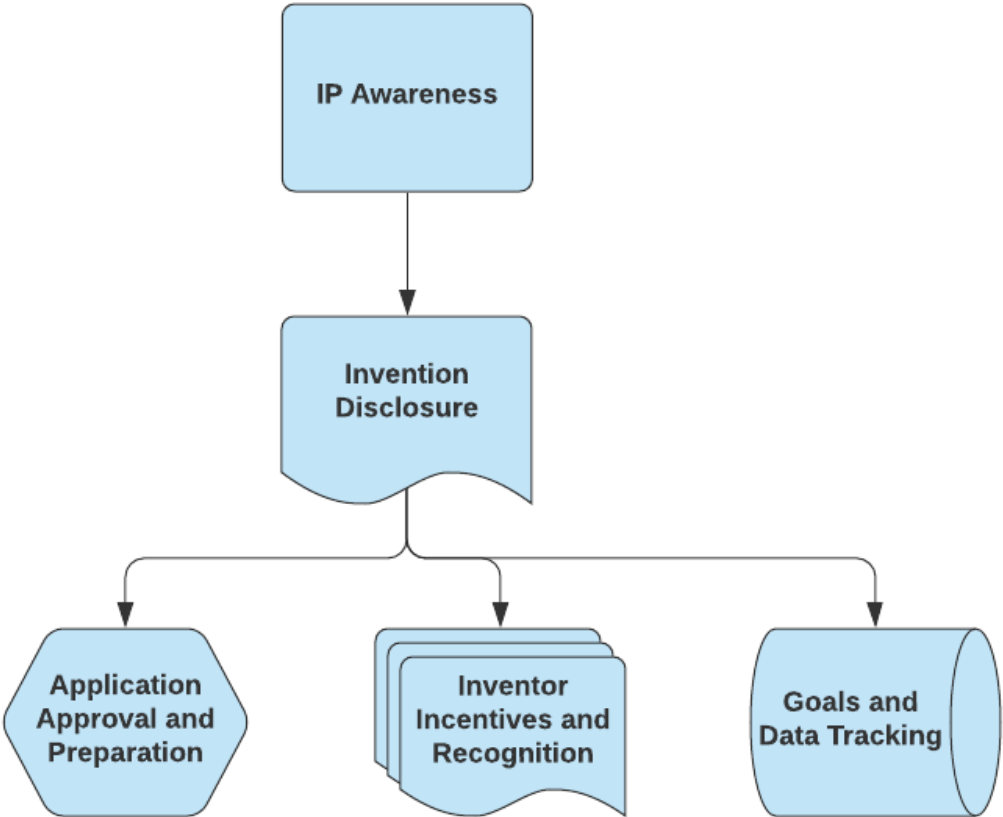
The demographics of participants in the roundtables, survey, and conversations are attached to this manual as [Exhibit B](#).

## Format of Manual

This Manual is presented in easy-to-read tables organized in three categories:

<b>Do it Now</b>	Practices that are likely to be budget-neutral, easily implemented, and within the authority of an in-house attorney or IP manager without the buy-in at the highest levels of the company.
<b>Do it This Year</b>	Practices that may require 3-9 months of planning, e.g., because they require coordination with other groups or departments, or creation of content, tools or systems.
<b>Do it Next Year</b>	Practices that will likely take 6-12 months of planning to implement, e.g. because they need to be coordinated with different departments, require moderate or significant budgetary planning, or require buy-in from high level management.

We organized the sections into categories representing steps within the patenting lifecycle at a company; namely:



**Recurring Themes**

When engaging with study participants, we noticed some recurring issues and themes that came up time and again. Given the pervasiveness of these issues, we highlight them here.

<p><b>Issue:</b> How to identify and connect with the diverse inventor population.</p>	<p><b>Issue:</b> How to make the patent process seem accessible to diverse inventors.</p>	<p><b>Issue:</b> How to increase invention disclosure by diverse inventors, and increase likelihood of success that those disclosures will get approved for filing.</p>
<p><b>Solution:</b> Leverage and partner with the Company's DEI Initiatives.</p>	<p><b>Solution:</b> Change the language from "inventions" to "what's new" or "what have you been doing," and publicize inventions by diverse inventors.</p>	<p><b>Solution:</b> Create a mentoring or sponsorship program for diverse inventors.</p>

**1. Leveraging and Partnering with the Company's DEI Initiatives**

Diversity, Equity and Inclusion ("DEI") programs have become more widely adopted by companies recently. Many programs include affinity groups such as Employee Resource Groups. The existence of an affinity group has the benefit of already identifying and attracting a diverse target audience and providing a ready-made infrastructure for communications. The IP department can partner with these groups to hold targeted IP training or harvesting sessions, and to create an inventor recognition program amongst group members.

**2. Change the Language and Publicize Inventions by Diverse Inventors**

The term "inventor" may be unrelatable to diverse inventors, in part because the celebrated historical inventors from U.S. history tend to be non-diverse. During our study, we heard from diverse inventors that they thought they were "just solving a problem," or "just helping on a project." They never thought they were inventing anything until somebody (usually a mentor, a boss, or an IP attorney) connected the dots for them.

To address this issue, we heard from survey respondents who changed the language so they were no longer asking "what have you invented lately," and instead asked "what have you been working on (or doing) lately?" Additionally, they were publicizing their diverse inventors, through channels such as the company intranet site(s), at company meetings, in IP newsletters, and in press releases. Some survey respondents use those diverse inventors as ambassadors to engage and inspire other inventors, and help them navigate the patent process.

**3. Mentoring or Sponsorship Programs for Diverse Inventors**

We heard from diverse inventors that filing the first patent application is the most difficult. We also heard that the entire process of identifying an invention, disclosing an invention, and navigating the patent review and approval process can feel complicated and unfamiliar. The IP department often has limited bandwidth to assist new potential inventors with the disclosure process. Various companies are tackling these issues through mentorship and sponsorship programs. Mentorship programs are focused on connecting the would-be inventors with experienced inventors, often within their same diversity affinity group. Sponsorship takes it a



step further, where someone partners with the potential inventor to actively engage in the process in one or more ways, for example by drafting a disclosure form or draft a claim based on the diverse inventor’s contribution, or having the sponsor present the invention to the patent committee for approval. In either case, the diverse inventor is not left to their own devices to navigate the patenting process.

## IP Awareness

Developing a more diverse inventor pool starts with IP Awareness. If a company is lacking in this area, potential inventors might not even recognize that their ideas are inventions that could add value to the company. Increasing IP Awareness in the company can be as simple as adding an inventor tagline in an email signature block or inviting anyone in the company to attend IP training.

### *Inclusive Training Encourages Innovation*

If possible, encourage all employees to attend IP training. Expand the audience for training to include diverse groups such as marketing, testing, and product management. One way to do this is to implement IP training and awareness into the onboarding/orientation process. During this training, incorporate examples of patented inventions and innovations from incremental to fundamental to make inventions seem more attainable. Finally, leveraging affinity groups such as Business Resource Groups or Employee Resource Groups is a great way to reach diverse inventors and help them to recognize inventions and innovations and to remind current employees to be cognizant of IP and IP issues.

### *Make IP Fun*

A great way to increase IP awareness is to make learning about IP fun. For example, one company celebrated World IP Day. Engaging in a company-wide Shark Tank or other competitions are other ways to encourage new ideas. One company even played IP Jeopardy to encourage participation. One company gave away cool swag as an incentive to create a buzz and get people talking. IP Jeopardy questions and other fun games can be acquired from USPTO Regional Offices and “Spot the IP” lessons are available at

<https://www.uspto.gov/kids/spot.html>.

### *Innovations are valuable IP too*

Multiple companies emphasized that it is just as important to recognize innovations such as trade secrets and know-how as it is to recognize patented inventions. Both can be incredibly valuable to a company. Highlighting these other forms of innovation can include covering more than just patented inventions during IP training and in IP incentive plans.

Diverse innovators can be spotlighted on the company intranet or at company meetings. One company recognized innovators at a Quarterly Innovator’s Circle where five people and their innovations were featured on the company web page. These innovators included more than just patented inventors. For example, an innovator may come from a “non-traditional” patenting group, such as metrology or testing.

### **IP Awareness Case Study**

One simple way this company increased IP awareness was to include an inventor tagline in the signature block on business cards or in email. The tagline is tiered to the type of innovation or number of patents. “I’m an Innovator” for non-patent innovations. “I’m an inventor” for patenting an invention. “I’m a master inventor” for 3-5 patented inventions. “I’m an epic inventor” for 5+ patented inventions.

## Do It Now – IP Awareness

- Celebrate World IP Day.
- Invite anyone in the company to attend IP training.
- Discuss disclosure obstacles with would-be inventors, management, patent decision-makers, and employee affinity groups.
- Recognize and brag about diverse inventors. Create a “rising star” academy for newer inventors or potential inventors.
- Work with business unit managers to highlight new inventors at their meetings.
- Recognize all IP not just patents.
- Incorporate examples of patented inventions into training or stories to make invention seem more attainable.
- Include Inventor Tagline in Signature block (business cards or email).
  - For example:
    - I’m an Innovator (non-patent innovations)
    - I’m an inventor (1 patented invention)
    - I’m a Master Inventor (3-5 patented inventions)
    - I’m an Epic Inventor (5+ patented inventions)
- Attend, participate, or judge hackathons or other similar events where employee would-be inventors may be innovating.
- Utilize word of mouth to promote IP awareness, e.g. by enlisting ambassadors or other representatives that are familiar with the IP disclosure process.
- Hand out cool swag as an incentive that creates a buzz and starts a conversation about IP and inventorship.
- Take advantage of resources from the National Inventors Hall of Fame [<https://www.invent.org/>].

## Do It This Year – IP Awareness

- Spotlight diverse inventors on the intranet or at company meetings. Circulate internal marketing campaigns about IP.
- Create an internal website presence for the IP department.
- Expand the audience for training to include diverse groups such as marketing, research & development, or special projects.

## Do It This Year – IP Awareness

- Create opportunities to speak to affinity groups such as Business Resource Groups or Employee Resource Groups with a diverse employee focus.
- Implement IP training and awareness into the onboarding and orientation process to plant the seed early. Include examples of past inventions from incremental to fundamental.

## Do It Next Year – IP Awareness

- Develop an “IP Skills College” and/or an “R&D University” where innovators can receive in-depth IP training.
- Select a certain number of people to highlight in a “Quarterly Innovator’s Circle”. Feature a story about them and their innovations on the company web page. Remember that innovators include more than just inventors listed on a patent.
- Implement IP training for all newly acquired groups or companies.
- Have the IP group create an Employee Resource Group for diverse inventor groups, e.g. Women in Inventing.
- Make your IP awareness mobile. Take your IP training on a roadshow to different sites.
- Work with company managers to incorporate patent filing goals into employee expectations and the review process.
- Create an annual companywide innovation or awareness event, such as a “Shark Tank”- like pitch session, design competition, or “Jeopardy”- style IP trivia game.

### Invention Disclosure Process

Our study attempted to uncover the strategies and techniques most likely to increase the number of invention disclosures from diverse inventors. An invention happens when someone discovers a never before known (new, useful, and non-obvious) product or process. Whether they are incremental or fundamental, these discoveries can be valuable. Different companies have different ways of ferreting out a new invention, including these common methods:

- **Invention disclosure form:** typically an online form that anyone who thinks they have an invention can fill out by answering questions about their idea, and submitting it to IP Legal. These forms can feel two-dimensional, dry, and unfamiliar.
- **Blue Sky meeting:** typically an open-ended meeting between likely inventors and IP Legal to discover whether anyone has any new ideas about anything that might relate to the business. Often the same inventors are invited over and over.
- **Patent Harvesting meeting:** typically a meeting between people working on a particular project or technology and IP Legal to discover what new things are going on in that

project or technology. Often the same people invent over and over because, even when diverse or junior engineers who work on a project are invited, they may not feel comfortable speaking up to be recognized as an inventor.

No matter what the invention disclosure process, once a potential invention is recognized, someone has to decide whether the company should file for a patent application on that invention. This decision is important because a patent is an asset with a 20-year life. When a company agrees to file a patent application, they are agreeing to fiscally support that decision for up to 20 years. Over its lifetime, a patent filed in just one country can cost more than \$50K. A patent filed in multiple countries will cost much more.

### **Invention Disclosure Process Case Study**

One company noticed that neither young engineers nor diverse engineers were using the company's on-line *Invention Disclosure Form*. After some discovery, they realized this was because these young and diverse engineers did not see themselves as "inventors." By replacing one word in the title of the form, the IP group reframed the focus.

Specifically, the company changed the name of the form from *Invention Disclosure Form* to *New Product Disclosure Form*. Although the questions in the form never changed, because most engineers see themselves as people who work on new products, more engineers now participate in filling out the form. When participation increased, so did the diversity of inventors and therefore the diversity of ideas now available to the company.

To make these patent filing decisions, most companies use a review process. The review process could be one person who makes all decisions. However, in most cases, there is a patent review committee who makes these patent filing decisions. At one extreme, in some companies the patent review committee is a behind the scenes committee that doesn't really communicate with inventors. At another extreme, in other companies, inventors must present their inventions to the committee and answer questions. Whatever the process, the output of these committees is often a go/no-go decision on whether to file for a patent on a given invention.

Inventors, and particularly diverse inventors, may find the disclosure process unfamiliar or uncomfortable. Being recognized as a contributor on an invention disclosure form may require an unusual level of assertiveness.

Getting an invention approved for filing may require a corporate review process and scrutiny by some of the most seasoned experts in the company. It's not surprising that engagement in the process is often limited.

Depending on each particular company's invention disclosure and review process, the chart below provides in-depth advice on techniques that might be used to make the process more inviting to diverse inventors.

## **Do It Now – Invention Disclosure Process**

- Change the perspective:
  - rename "Invention Disclosure Form" to "Product Development Form";
  - instead of saying "inventor," say "participant to invention"; and
  - change the invention harvesting approach, so instead of asking "what have you invented lately?," ask "what excites you?" and "what cool problems have you solved lately?"

## Do It Now – Invention Disclosure Process

- Include non-technical staff and technical marketing personnel in brainstorming sessions.
- Implement a “Rooney Rule” process, *e.g.* every diverse potential inventor gets an interview, intended to give the individual an opportunity to contribute to the patent. More about the Rooney Rule: [<https://www.si.com/nfl/2018/12/31/rooney-rule-explained-nfl-diversity-policy>].
- Get inventorship right the first time by:
  - educating on what it means to be an inventor, and that it is important to get inventorship right by including all inventors; and
  - without management present, individually ask each identified inventor who contributed to an invention.
- Make sure engineers know they should include an IP review at defined times in the product development process, such as before discussing it externally or publishing.

## Do It This Year – Invention Disclosure Process

- Diversify patent review committees.
- Create a Mentor Program:
  - assign mentors to all potentially new inventors;
  - mentors spearhead identifying inventions;
  - mentor helps write invention disclosure; and/or
  - mentors responsible for sponsoring / championing invention through the company's invention disclosure process.
- Simplify Invention Disclosure Form (“IDF”) to:
  - encourage new inventors to submit nascent ideas; and
  - create easy to use online IDF training on a website or portal.
- Breakdown Barriers:
  - implement an easy online request for “15 minutes with an IP attorney,” open to all employees;
  - implement an “early disclosure” process, to allow for disclosures of ideas that may not yet be fully formed inventions; and
  - create a process where inventors do not have to go through a manager or supervisor to make a disclosure.
- Insert IP attorneys into activities and meetings where product development is being discussed.

## Do It Next Year – Invention Disclosure Process

- Diversify outside counsel.
- Anonymize the invention disclosure and review process.
  - anonymize the inventor's identification (e.g., number not a name); and/or
  - invite anonymous peer review.
- Establish in person or virtual “office hours” where patent attorneys sit and work with anyone who wants to talk about whether they have an invention or make a disclosure.
  - If the company has multiple locations, then rotate office hour locations.
- Create design challenges that are widely circulated to employees to encourage innovation in groups that may not be as involved daily in innovation.
- Create “blue sky” type harvesting meetings, ensuring a level of trust in the room (consider leaving managers or leadership out), and with a variety of degrees/ backgrounds/ functions.
- Restructure IP group so IP attorneys / patent engineers are in the product groups themselves and therefore in the meetings where inventions are discussed.
- Open up disclosure processes and portals to independent contractors as well as employees.

### Inventor Incentive Plans and Inventor Recognition

Companies large and small offer inventor incentive plans to reward employees for developing new ideas, especially those that can be patented. These programs serve as a corporate communication tool to create awareness about the patent process, and signal to the organization that innovation is valued and rewarded. Incentive plans also aim to compensate employees for work related to obtaining patents, as the process is time intensive, can take place outside of work hours, and can be viewed as a “side of desk” activity by some managers.

Our research revealed that designing an incentive plan with empathy to diverse groups is an important next step to furthering diversity in innovation. We found that incentive plans are often designed to incentivize employees that are currently participating in the system, not to incentivize new, diverse inventors.

#### *Increase the types of awards offered*

Throughout our study, we consistently heard comments that the pathway to patents needs to be demystified. Increased exposure to the invention recognition process could enhance an inventor's likelihood to submit additional ideas. Companies can expand an incentive program to include different types of intellectual property or innovations. For example, by including trade secrets, “know how,” non-patentable product features, trademarks, and copyrights, as well as recognizing individuals who win innovation competitions, publish academic papers, make defensive publications, or make open-source contributions, the reputation of the creators or innovators receiving the awards increases, as does the company's incentive program and value to the bottom line.

Similarly, incentive plans can expand the types of recognition offered for ideas, and can be designed to spotlight diverse inventors to encourage others in historically marginalized groups to invent. Recognition is often more noticed and appreciated than swag, yet less expensive and easier to implement. Our survey participants shared that recognition such as simple shout outs at team meetings, acknowledgment on internal websites or digital bulletin boards, or monthly innovation celebration events can be part of an effective incentive plan, and can also serve as part of a communication and awareness campaign designed to encourage diverse employees to envision themselves as inventors.

*Increase eligibility status for awards*

Other ideas for creating a more inclusive incentive plan include extending the eligibility for awards to those outside the definition of an “employee”, including interns and contract employees. Expanding the definition of “employee” to include these groups could potentially expand the diversity of inventors (see, <https://www.gigeconomydata.org/basics/who-participates-gig-economy>). Some employers continue to provide incentives to employees after they leave the company to ensure they continue to cooperate and invest time in pending applications.

**Inventor Incentives and Recognition Case Study**

One company decided to approach the re-tool of their inventor incentive program with a design thinking mindset. Specifically, employing the “empathy” step of design thinking first, the company deployed a widespread survey of female inventors. What they discovered was that some female inventors were not engaging in the invention process because their time was being split between responsibilities at home and work. Filling out an invention disclosure was something that took valuable time away from the many responsibilities she was juggling. With this new understanding of the mindset of the female inventor, the company could focus on an incentive program that motivates the busy female inventor.

Another suggestion we received was to create rewards or recognition for “helpers” or key participants in an invention even if they were not a named inventor. This type of incentive could be given to mentors or team members who helped an inventor receive a patent. Small incentives, or recognition, could also be given for invention or inventor “referrals” which could turn employees such as product managers or marketing partners into innovation scouts.

**Do It Now – Inventor Incentives and Recognition**

- Review current inventor incentive plan with a diversity lens and consider making updates
  - Do awards align with the needs of diverse groups?
  - Should you incentivize more than patent filings, e.g. trade secrets, defensive publications, know how, product features?
  - Consider creating rewards or recognition for helpers or key participants in an invention even if not a named inventor
- Raise awareness about current incentive plan, such as through company intranet or word of mouth with Employee Resource Groups. (see Awareness table, above)
- If no incentive plan, research if company should implement one and begin to engage stakeholders (Executives, Human Resources (including Compensation & Benefits), Finance, Business, Legal, Employee Resource Groups)

## Do It Now – Inventor Incentives and Recognition

- Introduce “Inventor” designation or logo in employee email signature block or business card (see IP Awareness section for more discussion).
- Order laptop decals for inventors, or implement digital badges that can be used on LinkedIn profiles, or other low-cost recognition ideas.

## Do It This Year – Inventor Incentives and Recognition

- Gain insights into meaningful incentives by interviewing diverse groups of potential and current inventors, and then update incentive plan offerings accordingly.
- Consider removing maximum award limits divided by the number of inventors. Limits may actually disincentivize identifying all inventors, especially less junior members of the team (who may be more diverse).
- Consider including eligibility for non-employees such as interns and contractors.
- Update the incentive plan budget to include new incentive features, such as swag, events, cash awards, PTO, and marketing for more inclusive incentives.
- Collect and share baseline data from current incentive plan in support of updated plan, budget and goals.
- Raise awareness of existing or revised plan, including recruiting team, Employee Resource Groups, Human Resources partners, managers, executive management.
- If no current plan, draft a proposed new plan and get approval, including budget approval. Design to capture baseline data, including self-reporting of diversity information if appropriate.
- Make innovating (patent filings, trade secrets and other categories) a part of a positive performance appraisal, including bonus awards.

## Do It Next Year – Inventor Incentives and Recognition

- Implement marketing of new or updated incentive plans, including Employee Resource Groups, managers, and internal communications platforms.
- Collect, review and share data to see if updates to the plan have an impact on the number of incentive awards and diversity of awardees or inventors.
- Continue to review plan and incentive data and revise if needed.
- Review and expand budget if needed.



## Design Features to Consider – Inventor Incentives and Recognition

The table set forth in **Exhibit C** includes incentive plan design feature ideas suggested by companies in our study. While some features are standard best practice offerings, others seek to update the plan to be more inclusive and attractive to diverse populations.

### Application Approval and Preparation

We asked our survey participants for feedback on the process of approving inventions for filing, naming of inventors, and preparation of the patent application. We were particularly interested in whether companies were successfully seeing more diverse inventors after changing their traditional processes regarding patent submission and approval. In addition, we wondered whether IP managers took steps in the inventor determination process to include, or at least not remove, the claims containing contributions of diverse innovators.

#### **Application Approval and Preparation Case Study**

One company recognized that diverse inventors may be more likely to see themselves as inventors if the patent applications themselves include more diverse examples or individuals, e.g. in the figures or examples. Therefore, this company allows inventors to indicate a preference for ethnicities or gender, for use by the patent agent or attorney when drafting the patent application.

#### *An Area Ripe for Change*

We discovered that this is an area where not a lot of change has been occurring. Generally, the companies we interviewed are focusing more on including diverse participants in the invention awareness, training, and disclosure processes. However, some companies are trying to improve diversity by making more intentional and procedural changes. For example, a few companies are taking steps to cross-reference the invention disclosure form versus the product development team and/or publication authors. Others have

instituted procedures where each contributor summarizes their contribution to the product, whether orally or in writing, to be compared with the claims of the resulting patent application.

One company recognized that inventors themselves may be not be comfortable with the patent committee approval process. As such, this survey participant ensures each invention disclosure that is submitted is assigned to a member of the IP team as a “champion” of the invention. The champion is responsible for meeting with the inventor to understand the invention and its value proposition, and then presenting it to the patent committee as the sponsor of the invention. Sponsors take some of the potential intimidation out of the patent approval process because a supportive third party is responsible for presenting to the committee.

We also learned through our study that inventors and potential inventors can become discouraged by the “black box” nature of patent go/no-go decisions. Some inventors may not understand what criteria their invention disclosure form is being judged on, and may not receive an explanation as to why it was or was not approved. Lack of communication can lead to frustration and confusion. Therefore, providing more transparency as to the patent approval process, and substantive feedback following the patent committee decision is recommended.

## Do It Now - Application Approval and Preparation

- Ask all developers / technologists / engineers on projects to send the IP team brief summaries of their contribution to products, then compare with invention disclosures received.
- Set expectations with outside counsel to question inventorship on the invention disclosure form, and prioritize investigating inventors for the claims.
- Have the IP team double check the organization chart for a particular product or design team that submitted a disclosure, to follow up with are any obvious people that may be appropriate inventors.
- Have the IP team hold a claim review and/or inventor meeting after the patent is drafted but before the patent gets filed, to compare drafted claims with inventor list.
- Work with patent firm(s) to pair inventors with patent attorneys that “look like them,” (have similar demographic profile).

## Do It This Year - Application Approval and Preparation

- Train personnel outside the “traditional” product groups to spot inventors and inventions, e.g. marketing, sales, manufacturing, testing teams.
- At the time of clinical trial release, hold an inventorship review.
- Create a “rubric” or roadmap for the patent committee, to make the process for patent approval more transparent to all in the company.
- Implement anti-bias training for individuals involved in the patent disclosure and approval process (such as the IP team, legal department, and the patent committee).
- Work with patent firm(s) to diversify the patent agents and attorneys preparing cases.
- If there are images, photos, names, places, or cultural objects depicted in the patent application itself, diversify these examples to include multiple cultures, races, and identities.

## Do It Next Year - Application Approval and Preparation

- Once the proper inventors are named, use inventor / claim matching charts to keep track of proper inventorship over the life of patent and progeny.
- Once patent claims are drafted, have inventors each describe contribution(s) to each claim.

## Do It Next Year - Application Approval and Preparation

- In industries where publications are the norm, have the IP team (or even develop an automated tool) cross-reference authors on technical publications with inventors listed on related invention disclosure form.
- Revise the invention disclosure form to require each inventor to describe their individual contribution at the time of disclosure.
- IP team gets to know the product development team well, such that they can invite people to be on the patent rather than letting the seasoned inventors take credit.
- Take the emotion out of the patent go/no-go decision by assigning the disclosure to a champion (e.g. in the IP team) who shepherds the disclosure through committee.
- Implement a timely feedback process for inventions that are not approved so that the submitters can improve and iterate on their submissions.
- IP team identifies diverse contributors on a product development team, works with the contributor to write a patent claim that specifically covers their contribution.
- Diversify the makeup of the patent committee itself.

### Goals and Data Tracking

Technology companies are known for their rigor in setting performance goals and measuring actual results as compared to the desired outcomes. Our survey respondents therefore recognize the imperative of collecting and tracking diversity-related data relating to their inventors and potential inventors. However, there are also significant challenges to doing so. We outlined some of our findings regarding these issues in our blog posts: [Invitation to Share Best Practices to Foster Diversity and Inclusion in the Invention Process](#), [Early Impression from Invention Diversity Study: How to Solve Diversity Data Challenges](#), [Three Simple Hacks to Increase the Diversity of Inventors: Early Impressions from Invention Diversity Study](#), and [Reflections from Invention Diversity Study: Getting Diverse Inventors Into the Patent Process](#).

### *Complying With Privacy Laws*

Especially in a global company, there may be privacy laws that prevent the IP team from directly collecting diversity-related information, e.g. via an invention disclosure form. Some companies choose to tackle this problem by measuring diversity after a patent issues, using publicly available tools that are designed to determine the gender of inventor (at the time of this manual, no tool exists to measure other forms of diversity). Both the Intellectual Property Owners Association ([IPO](#)) and Richardson Oliver Law Group ([ROL](#)) offer such a tool. Because these tools rely on publicly available data, the concerns regarding privacy laws are alleviated; however, the tools have limitations.

Another potential solution to the privacy problem is to provide the ability for the IP team to receive anonymized, aggregated data about the inventors in their company. In many companies, the HR department has the information relating to diversity of its workforce, but that information is tightly held and not likely to be shared outside of the HR department. One solution to this problem is to provide an automatic interface between HR information systems and the patent docket systems. We are told this is happening. Another potential solution is to allow the IP department to provide a list of inventors to HR, and have HR return the information in an aggregate form. This approach involves buy-in from HR partners, which may be viewed as a drain on its resources.

### *The Definition of “Diversity” and Appropriate Goal-Setting*

Setting appropriate diversity goals is likely an ongoing process. Diversity goals can be company-wide or set by work site location. They can be defined by gender, by race, ethnicity, sexual orientation, veteran status, etc. It can seem overwhelming or complicated to know where to start in setting appropriate targets. There is no one-stop-shop solution for this problem. We have heard from some companies that are setting goals company-wide, to at least ensure the inventorship data matches the diversity data of its product development employees (i.e. “parity” with the technical or product development workforce). Other companies strive for parity with the entire company workforce population, which may include groups such as manufacturing, testing, sales, and administrative, who would not ordinarily be expected to invent as part of their job description. The message here is clear, even though the success indicator may not be: this is a moving target, and may need to be revisited on a frequent basis, but set a reasonable and hopefully achievable goal, and get started. The table below has some suggestions to get started.

### **Goals and Data Tracking Case Study**

In a company where it was difficult for the IP team to obtain information about the diversity of its inventors, they decided to reframe the idea of diversity. It was a global company, with sites all around the world where in some locations, certain racial or ethnic groups may outnumber others. In other locations, the percentage of female technical workers was higher than in other countries. Rather than attempt to determine and track the individual racial, ethnic or gender markers of the inventors, the IP team instead tracked the site location of the inventor. The intention was to measure and improve each site’s participation in the company’s patenting process, predicting that this would increase diversity in inventorship.

## **Do It Now - Goals and Data Tracking**

- Use available tools to analyze diversity of current portfolio (currently limited to male/female). See literature review section to find link to currently available tools.

## Do It Now - Goals and Data Tracking

- Determine if company HR department has diversity information about employees in a separate database.
- Request outside patent firms to report diversity of patent prosecutors working on company's patents.
- Determine if company has diversity in hiring / workforce goals.
- Evaluate diversity of patent decision-makers in company, such as patent review board.
- For a global company, track inventorship by the country or site location of inventors, which may be one indicator of diversity.
- Request self-identification of diversity within invention disclosure form (with considerations to privacy laws).

## Do It This Year - Goals and Data Tracking

- Get company to sign the Diversity Pledge (at <https://increasingdii.org/pledge/>).
- Measure diversity of submitted product or invention disclosures, rather than measuring only filed or issued patents.
- Measure how many unique inventors / single inventors exist in the company (as a measure of how many different people in the company are really involved in the patenting process).
- Work with HR to agree that if IP team provides list of patent inventors, HR will generate aggregated anonymized data of inventors.
- Measure diversity of source of invention disclosures (e.g. by function, title, or group in the company), to include employee roles and functions that may have more diverse individuals.
- Set diversity goal to be at least parity with the company's existing diversity statistics, or of technical or product development groups.
- Work with the Diversity, Equity and Inclusion function and/or HR representatives to set diversity goals consistent with company structure / values (e.g. economic, gender, ethnicity).

## Do It Next Year - Goals and Data Tracking

- Whatever form of tracking diversity that is chosen, begin a regular reporting mechanism so company management and employees are aware of progress.
- Work with management to incorporate diversity goals into employee bonus and incentive plans.

### Conclusion

Whether you are an IP manager, law firm attorney, policymaker, engineer, or someone else involved in innovation, we hope that our results spark ideas and create action towards increasing engagement in the in-house invention processes. Efforts are underway in a multitude of companies, firms and agencies to shrink the “patent gap” and diversify the individuals involved in innovation. As these efforts play out, we intend to collect and report on best practices. To that end, please feel free to continue to share your ideas, attempts, failures, or successes with us via our confidential survey found at <https://forms.gle/UbpYVYX3rDWN7jqw6>.

Thank you again to all of the participating companies and individuals who have supported us in publicizing our survey and gathering these best practices.

## Schedule 1 RELATED LITERATURE AND SOURCES

### **Studies**

Bell et al., *Who Becomes an Inventor in America? The Importance of Exposure to Innovation*, 134 QUARTERLY J. OF ECON. 647 (2019),

<https://academic.oup.com/qje/article/134/2/647/5218522>.

Summary: Study found that “exposure to innovation during childhood has significant causal effects on children’s propensities to invent” and that “these exposure effects are technology-class and gender specific.”

Graham et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L. J. 255 (2009),

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1429049](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1429049).

Summary: In 2008, Berkeley conducted a patent diversity survey 1,332 U.S.-based technology startups to uncover their patenting preferences. Survey did not mention gender of inventor as a factor to be considered.

Jensen et al., *Gender differences in obtaining and maintaining patent rights*, 36 NATURE BIOTECHNOLOGY 307 (2018), <https://www.nature.com/articles/nbt.4120>.

Summary: This study examined the prosecution and maintenance histories of approximately 2.7 million US patent applications and found that women have less favorable outcomes than men.

Silbey, *Patent Variation: Discerning Diversity among Patent Functions*, 45 LOY. U. CHI. L.J. 441 (2013-2014),

<https://heinonline.org/HOL/LandingPage?handle=hein.journals/luclj45&div=17&id=&page=>.

Summary: Qualitative study of patent diversity conducted via interviews with inventors, their lawyers, and business partners.

### **Reports**

JENNIFER BRANT ET AL., WORLD INTELL. PROP. ORG., POLICY APPROACHES TO CLOSE THE INTELLECTUAL PROPERTY GENDER GAP - PRACTICES TO SUPPORT ACCESS TO THE INTELLECTUAL PROPERTY SYSTEM FOR FEMALE INNOVATORS, CREATORS AND ENTREPRENEURS (2019),

[https://www.wipo.int/export/sites/www/ip-development/en/agenda/pdf/policy\\_approaches\\_close\\_the\\_ip\\_gender\\_gap.pdf](https://www.wipo.int/export/sites/www/ip-development/en/agenda/pdf/policy_approaches_close_the_ip_gender_gap.pdf).

Summary: Report identifies 5 challenges to contributing to the IP gender gap including lack of data, women are less likely to be encouraged to enter STEM, and lack of understanding of IP and proposes 5 best practices including determining with greater certainty what data is being collected and what challenges are being faced and promoting awareness-raising and targeted capacity-building programs.

JOZEFINA CUTURA, WORLD INTELL. PROP. ORG., CHALLENGES FOR WOMEN INVENTORS AND INNOVATORS IN USING THE INTELLECTUAL PROPERTY SYSTEM - A LITERATURE REVIEW (2019),

[https://www.wipo.int/export/sites/www/ip-development/en/agenda/pdf/literature\\_review.pdf](https://www.wipo.int/export/sites/www/ip-development/en/agenda/pdf/literature_review.pdf).

Summary: A summary of academic work available in 2019 that addresses challenges faced by women inventors and innovators.

ANDREI IANCU & LAURA A. PETER, U.S. PAT. AND TRADEMARK OFFICE, STUDY OF UNDERREPRESENTED CLASSES CHASING ENGINEERING AND SCIENCE SUCCESS: SUCCESS ACT OF 2018 (2019), <https://www.uspto.gov/sites/default/files/documents/USPTOSuccessAct.pdf>.

Summary: One of the reports mandated by the SUCCESS Act of 2018.

U.S. PAT. AND TRADEMARK OFFICE, PROGRESS AND POTENTIAL: 2020 UPDATE ON U.S. WOMEN INVENTOR-PATENTEES (2020), <https://www.uspto.gov/sites/default/files/documents/OCE-DH-Progress-Potential-2020.pdf>.

Summary: USPTO's 2020 update on U.S. women inventor-patentees.

WORLD INTELL. PROP. ORG., WORLD INTELLECTUAL PROPERTY INDICATORS 2020 (2020), [https://www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_941\\_2020.pdf](https://www.wipo.int/edocs/pubdocs/en/wipo_pub_941_2020.pdf).

Summary: WIPO's annual IP Indicators Report. Shows improvement in the share of women among listed inventors in PCT applications. Gender of inventor is based on world-gender name dictionary.

WORLD INTELL. PROP. ORG., PATENT COOPERATION TREATY YEARLY REVIEW 2021 (2021), [https://www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_901\\_2021.pdf](https://www.wipo.int/edocs/pubdocs/en/wipo_pub_901_2021.pdf).

Summary: The share of women inventors has grown in each of the world's geographical regions over the past 10 years, but the extent of the gender gap varies considerably between countries.

### **Articles & Papers**

Colleen V. Chien, *Inequality, Innovation, and Patents*, Santa Clara Univ. Legal Studies Research Paper No. 2018-03 (2018), <https://digitalcommons.law.scu.edu/facpubs/955>.

Summary: This article explores the relationship between patents, innovation, and inequality. Shifts in patented innovation have contributed to broader social and economic shifts away from manufacturing-based, domestic, and independent innovation towards digital, corporate and foreign innovation. This article argues that more attention should be paid to inclusion in innovation and on tracking the amount and distribution of innovation to minimize the risk of inequality-driven stagnation and maximize the social benefits of innovation.

Colleen V. Chien, *Inequality, Innovation, and Patents*, Santa Clara Univ. Legal Studies Research Paper No. 2018-03 (Revised Mar. 2021),

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3157983](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3157983).

Summary: This article is revised from Chien's 2018 *Inequality, Innovation, and Patents* article also cited in this literature review. This article addresses how the patent system can promote equitable growth through invention by 1) reporting on "invention equity metrics" like first time patenting, 2) leveling the invention playing field, 3) accelerating innovation to address underserved needs, and 4) improving the patent system's intersections with public law.

Colleen V. Chien, *Increasing Diversity in Innovation by Tracking Women, Minority, and Startups Innovators that Patent and Supporting Experimentation in Inclusive Innovation* (2019),

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3413805](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3413805).

Summary: This paper is the written version of oral testimony provided to USPTO SUCCESS Act Hearings held in San Jose in June 2019. This paper argues four points: 1) the USPTO should collect data from patent applicants and disseminate it in bulk-reported form, keeping it separate from the examination process, 2) the PTO should collect data about assignees that support the tracking of startups, small businesses, independent inventors, minority-and veteran-owned businesses and should track not only patent application data, but data from the entire patent lifecycle, 3) the PTO should support investigations of the possibility of bias on participation in the patent system, and 4) the USPTO should work with companies to uncover the practices that lead to greater rates of participation in inventing.

Colleen V. Chien & Ernest Fok, *Comments to the National Strategy for Expanding American Innovation* (Feb. 23, 2021), <https://digitalcommons.law.scu.edu/facpubs/986/>.



Summary: The USPTO sought input from the public to guide its Strategy for American Innovation. Santa Clara Law students in Colleen Chien's Patent Law Course submitted 13 comments to the USPTO with recommendations to make innovation more representative of the United States. This paper contains those comments.

Holly Fechner & Matthew S. Shapanka, *Closing Diversity Gaps In Innovation: Gender, Race, And Income Disparities In Patenting And Commercialization Of Inventions*, 19 TECH. AND INNOVATION 727 (2018), [https://www.cov.com/-/media/files/corporate/publications/2018/06/closing\\_diversity\\_gaps\\_in\\_innovation\\_gender\\_race\\_and\\_income\\_disparities\\_in\\_patenting\\_and\\_commercialization\\_of\\_inventions.pdf](https://www.cov.com/-/media/files/corporate/publications/2018/06/closing_diversity_gaps_in_innovation_gender_race_and_income_disparities_in_patenting_and_commercialization_of_inventions.pdf).

Summary: This paper identifies the disparities in the patenting and innovation process and proposes recommendations for policymakers concerning ways to close the gender, race, and income gaps.

Richard Levin, *A Patent System for the 21st Century*, 20 ISSUES IN SCIENCE AND TECH. 49 (2004), [https://www.jstor.org/stable/43322544?casa\\_token=GtDJT5pwjkoAAAAA:S6EV0b6hOX2-jA9kKP-JZG30fTbcZKTfjS54yz5CdA17GFoVPnoutWPF8BfzkvOPQYBnKb3gS54YKvJyWpo3u4GCubV5NEi2OHkuVAkxHf6fB03TXc&seq=1](https://www.jstor.org/stable/43322544?casa_token=GtDJT5pwjkoAAAAA:S6EV0b6hOX2-jA9kKP-JZG30fTbcZKTfjS54yz5CdA17GFoVPnoutWPF8BfzkvOPQYBnKb3gS54YKvJyWpo3u4GCubV5NEi2OHkuVAkxHf6fB03TXc&seq=1).

Summary: An early paper recognizing that “to meet the challenge of rapid technological and economic change, we must continue to study and refine the U.S. Intellectual Property regime.”

### **Statutes**

IDEA Act, H.R. 4075, 116th Cong. (2019-2020), <https://www.congress.gov/bill/116th-congress/house-bill/4075/text>.

Summary: The IDEA Act, currently pending in Congress, empowers the USPTO to collect patent diversity data including gender, race, military or veteran status, country of residence, and state of residence on a voluntary basis, and requires the USPTO to report on any such data provided.

SUCCESS Act, H.R. 6758, 115th Cong. (2018), <https://www.congress.gov/bill/115th-congress/house-bill/6758/text>.

Summary: The SUCCESS Act, passed by Congress in 2018, directs the USPTO to study and report to Congress on the number of patents applied for and obtained by women, minorities, and veterans and by small businesses owned by these groups. Additionally, the USPTO must provide legislative recommendations to increase the number of women, minorities, and veterans who apply for patents.

### **Other Diversity Projects**

Cardozo/Google Patent Diversity Project, CARDOZO LAW, <https://cardozo.yu.edu/CardozoGoogleProjectforPatentDiversity> (last visited Jul. 16, 2021).

Summary: Google and Cardozo law school are partnering together with the goal of increasing the number of U.S. patents issued to women and inventors of color. Students and faculty help entrepreneurs navigate the U.S. patent system and connect qualifying inventors with pro bono service providing attorneys.

Meyer & Kim, *Patent Diversity Project: Addressing Racial and Gender Disparities in the U.S. Patent System*, PROSKAUER (2021), <https://www.proskauerforgood.com/2021/03/patent-diversity-project-addressing-racial-and-gender-disparities-in-the-u-s-patent-system/>.

Summary: The law firm Proskauer is collaborating with Cardozo Law School to redress gender and racial inequities and increase the number of U.S. patents issued to women and people of color by providing pro bono legal services to a diverse set of prospective patentees.

### **Miscellaneous**

Articles and Publications, INCREASING DIVERSITY IN INNOVATION, <https://increasingdii.org/articles-publications/> (last visited Sept. 20, 2021).

Joyce Bedi, *Diverse Voices: Women Inventors*, SMITHSONIAN NAT'L MUSEUM OF AM. HIST.: LEMELSON CTR. FOR THE STUDY OF INVENTION AND INNOVATION (Mar. 22, 2021), <https://invention.si.edu/diverse-voices-women-inventors>.

Summary: The Smithsonian Museum of American History is displaying several exhibitions: "Picturing Women Inventors" and "Inventive Minds: Women Inventors". These exhibitions are organized by the Lemelson Center for the Study of Invention and Innovation and highlight both past and present women inventors in a wide range of industries, from electrical engineering to skateboarding.

*Black Inventors and Innovators: New Perspectives*, SMITHSONIAN NAT'L MUSEUM OF AM. HIST.: LEMELSON CTR. FOR THE STUDY OF INVENTION AND INNOVATION (Aug. 3, 2021), <https://invention.si.edu/diverse-voices-women-inventors>.

Summary: This website summarizes a webinar series organized by the Lemelson Center for the Study of Invention and Innovation on the topic of "Black Inventors and Innovators" that took place in November 2020. It includes a summary of the presentations and discussions on the topic, session recordings, key findings, and further action steps.

Dan L. Burk, *Bridging the gender gap in intellectual property*, WORLD INTELL. PROP. ORG. (Apr. 2018) [https://www.wipo.int/wipo\\_magazine/en/2018/02/article\\_0001.html](https://www.wipo.int/wipo_magazine/en/2018/02/article_0001.html).

Summary: Data indicates that there has been a persistent gender gap in IP since the beginning. This gap is too complex to be solved by simple numbers parity and will require creative solutions such as eliminating gender bias in IP laws.

Kenneth Coats, *Diversity Drives Innovation: Are You Investing In It?*, FORBES (Dec. 1, 2020), <https://www.forbes.com/sites/forbestechcouncil/2020/12/01/diversity-drives-innovation-are-you-investing-in-it/?sh=577bb65254b2>.

Summary: Diversity is essential because it creates an environment where "different and often conflicting ideas, experiences and challenges intersect." Coats gives 3 reasons diversity matters for companies: 1) it's good business, 2) it opens more opportunities, and 3) it attracts the best talent.

*THE DIVERSITY PLEDGE*, INCREASING DIVERSITY IN INNOVATION, <https://increasingdii.org/pledge/> (last visited Aug. 29, 2021).

GENDER DIVERSITY IN INNOVATION TOOLKIT, INTELL. PROP. OWNERS ASSOC., <https://ipo.org/index.php/diversity-in-innovation-toolkit/> (last visited Jul. 16, 2021).

Summary: Gender Diversity in Innovation Toolkit for members of the Intellectual Property Owners Association.

*Gender Equality, Diversity and Intellectual Property*, WORLD INTELL. PROP. ORG., <https://www.wipo.int/women-and-ip/en/> (last visited Jul. 16, 2021).

Summary: WIPO homepage for Gender Equality, Diversity and Intellectual Property.

*IDEA Act Passed Out of Senate Judiciary Committee*, IP WATCHDOG (Apr. 29, 2021), <https://www.ipwatchdog.com/2021/04/29/idea-act-passed-senate-judiciary-committee/id=132917/>.

Summary: The IDEA Act has been passed out of the Senate Judiciary Committee.

Ron Katznelson, *Why the IDEA Act is a Bad Idea*, IP Watchdog (Mar. 24, 2021), <https://www.ipwatchdog.com/2021/03/24/idea-act-bad-idea/id=131357/>.

Summary: Arguments against the IDEA act.

Bruno Lefeuve et al., *Women and the international patent system: encouraging trends*, WORLD INTELL. PROP. ORG. (April 2018), [https://www.wipo.int/wipo\\_magazine/en/2018/02/article\\_0008.html](https://www.wipo.int/wipo_magazine/en/2018/02/article_0008.html).

Summary: The gender gap is “all-persuasive”. This article explains what the UN and WIPO are doing to address this issue.

Stuart R. Levine, *Diversity Confirmed To Boost Innovation And Financial Results*, FORBES (Jan. 15., 2020), <https://www.forbes.com/sites/forbesinsights/2020/01/15/diversity-confirmed-to-boost-innovation-and-financial-results/?sh=22ab89cfc4a6>.

Summary: Generally, organizations that prioritize diversity and inclusion as a strategic priority perform better than less diverse peers. Leaders recognize that they are not doing enough to maintain a welcoming and inclusive culture. Diverse teams drive results by better positioning themselves to “unlock innovation that drives market growth” and poising themselves to “recognize new and different market opportunities.”

Carolina Milanesi, *Closing The Gender Gap In STEM Inventions - A Conversation With Qualcomm’s EVP & President Of The Technology Licensing Business - Alex Rogers*, FORBES (Mar. 8, 2021), <https://www.forbes.com/sites/carolinamilanesi/2021/03/08/closing-the-gender-gap-in-stem-inventions-a-conversation-with-qualcomms-evp--president-of-the-technology-licensing-businessalex-rogers/?sh=6e09f9c56ef7>.

Summary: An summary of an interview with Alex Rogers, president of Qualcomm Technology Licensing (QTL) and Global Affairs. Rogers talks about why inventors lack diversity, why diversity matters, and the importance of diversity in making the innovation economy thrive.

Norris et al., *Invitation to Share Best Practices to Foster Diversity and Inclusion in the Invention Process*, MEDIUM (Jan 18, 2021), <https://lauraleenorris.medium.com/invitation-to-share-best-practices-to-foster-diversity-and-inclusion-in-the-invention-process-fdd9f97356b9>.

Summary: Santa Clara School of Law and the USPTO are partnering on a diversity and inclusion study. This Diversity in Invention Study consists of taking a deep-dive to identify, understand, and provide actionable advice about the best practices for attracting and including diverse inventors in the invention and patenting process.

Norris et al., *Early Impression from Invention Diversity Study: How to Solve Diversity Data Challenges*, MEDIUM (Feb. 4, 2021), <https://lauraleenorris.medium.com/early-impression-from-invention-diversity-study-1005eefd7f6e>

Summary: This blog post by the Santa Clara Law Team leading the Diversity in Invention Study identifies two main issues in measuring diversity in inventorship: 1) the collection of sensitive data and domestic and international privacy laws and 2) agreeing on a universal definition of diversity and indicators of success with a global workforce.

Norris et al., *Three Simple Hacks to Increase the Diversity of Inventors: Early Impressions from Invention Diversity Study*, MEDIUM (Apr. 19, 2021), <https://lauraleenorris.medium.com/three-simple-hacks-to-increase-the-diversity-of-inventors-bebd0cbab718>.

Summary: This blog post by the Santa Clara Law Team leading the Diversity in Invention Study highlights 3 hacks from the Study that you can use to increase diversity in inventorship. Hack #1: Reach the Reluctant Inventor By Rebranding. Hack #2: Gather the Innovation Stories. Hack #3: Leverage Affinity Groups.

Norris et al., *Reflections from Invention Diversity Study: Getting Diverse Inventors Into the Patent Process*, MEDIUM (May 18, 2021), <https://lauraleenorris.medium.com/reflections-from-invention-diversity-study-getting-diverse-inventors-into-the-patent-process-ef2b89468a60>.

Summary: This is another blog post by the Santa Clara Law Team leading the Diversity in Invention Study. Diverse inventors often come to the patent process in a roundabout way. This post highlights a variety of ways you can boost the number of diverse inventors capturing value for your company.

*Diversity Tool – General Analysis in Excel*, RICHARDSON OLIVER LAW GROUP

<https://www.richardsonoliver.com/diversity-tool-gender-analyzer/> (last visited Aug. 29, 2021).

Summary: A tool for measuring gender diversity after a patent issues.

United States Intellectual Property Alliance, <https://www.usipalliance.org/> (last visited Aug. 29, 2021).

Summary: The United States Intellectual Property Alliance homepage.

USPTO, *Expanding Innovation Homepage*, <https://www.uspto.gov/initiatives/expanding-innovation> (last visited Aug. 29, 2021).

Summary: The USPTO's "Expanding Innovation" homepage with a variety of resources.

*USPTO Launches New Innovation Platform To Improve Inventor Diversity*, NAT'L L. REV. (Mar. 28, 2020), <https://www.natlawreview.com/article/uspto-launches-new-innovation-platform-to-improve-inventor-diversity>.

Summary: On March 24, 2020, the US Patent and Trademark Office ("USPTO") launched the "Expanding Innovation Hub", an online platform designed to make the patent process more accessible to diverse inventors with resources such as a Demystifying the Patent System toolkit, Mentoring toolkit, and Community Group Resources.

*what the patent gap tells us about diversity in innovation*, VENTUREWELL (Nov. 10, 2020), <https://venturewell.org/patent-gap/>.

Summary: Summary of what's happening in patent diversity in 2020 including several recent studies identifying patent disparities correlating to race and gender and identifying potential solutions such as quantifying the extent of the patent gap, the Congressional Idea Act, and the USPTO's National Council for Expanding American Innovation.

## Exhibit A SURVEY QUESTIONS

1. Do you work for primarily one company or client (e.g. in-house counsel or outsourced in-house counsel, consultant or employee), or as an outside counsel or consultant to multiple clients?

- A. In-House Counsel or Employee
- B. Outsourced In-House or Consultant (one company or client)
- C. Service provider (Attorney or Consultant) for multiple clients (if so, please complete this form for only one specific client)
- D. Other: *(Place to type in answer)*

2. Please describe your job title or role with respect to the invention process at your employer or client.

3. Please describe the size of your client or employer by number of employees globally.

Choose from drop-down menu:

- 0-25
- 26-50
- 51-100
- 101-200
- 501-1000
- 1001-3000
- 3001-5000
- 50001-10,000
- 10,001-20,000
- 20,001-50,000
- 50,001-100,000
- 100,000+

4. Please describe your client or employer's industry.

5. On average, how many patents does your client or employer file per year?

Choose from drop-down menu:

- 1-50
- 51-100
- 101-500
- 501-1000
- 1001-5000
- 5000+

6. Is your client or employer headquartered in the United States? If not, where are they headquartered?

7. Does your client or employer offer any programs designed to increase diversity and inclusion generally? Please describe.

8. Describe the successful programs that your client or employer uses to increase diversity and inclusion in the invention process.
9. Describe the failures or major obstacles that you have encountered or witnessed in trying to increase diversity and inclusion in the invention process.
10. Describe your "aha" moments relating to diversity and inclusion as it relates to the invention process.
11. Awareness: How does someone at your client or employer know when they have an invention?
12. Awareness: Does your client or employer have any special innovation-focused programs for diverse inventors? If yes, how do they promote or increase awareness with diverse audiences?
13. Awareness: Does your client or employer have training programs relating to inventions or IP? Who gets invited? Who does the training?
14. Disclosure: How does an inventor get involved in the patent disclosure process at your client or employer?
15. Disclosure: Does your client or employer have blue sky, brainstorming, or harvesting events? If yes, who gets invited? Do they intentionally include "new" inventors? For example, prior or prolific inventors, R&D engineers, or all employees? Who decides who gets invited? For example, the CEO, a manager, patent attorney, or a project manager?
16. Disclosure: Does your client or employer have a patent committee? Who is on it? How does it work? Does the committee have or discuss diversity goals?
17. Disclosure: Who decides who should be listed as an inventor on a patent at your client or employer?
18. Disclosure: Does your client or employer revisit the inventors listed on a patent or application? If yes, describe the process.
20. Incentives: Does your client or employer have an inventor incentive program? If so, what efforts do they make to include incentives to attract diverse employees?
21. Goals and Data: Does your client or employer have annual patent goals? Company-wide? Individual?
22. Goals and Data: Today, what inventor-related data does your client or employer collect and/or measure?

24. Goals and Data: Does your client or employer have specific KPIs (Key Performance Indicators) relating to diversity in innovation or invention or patents? If so, how are they formulated and tracked?

23. Goals and Data: Does your client or employer have any obstacles to collecting or sharing inventorship diversity data? Does the IP function partner with HR?

25. Additional comments you'd like to share?

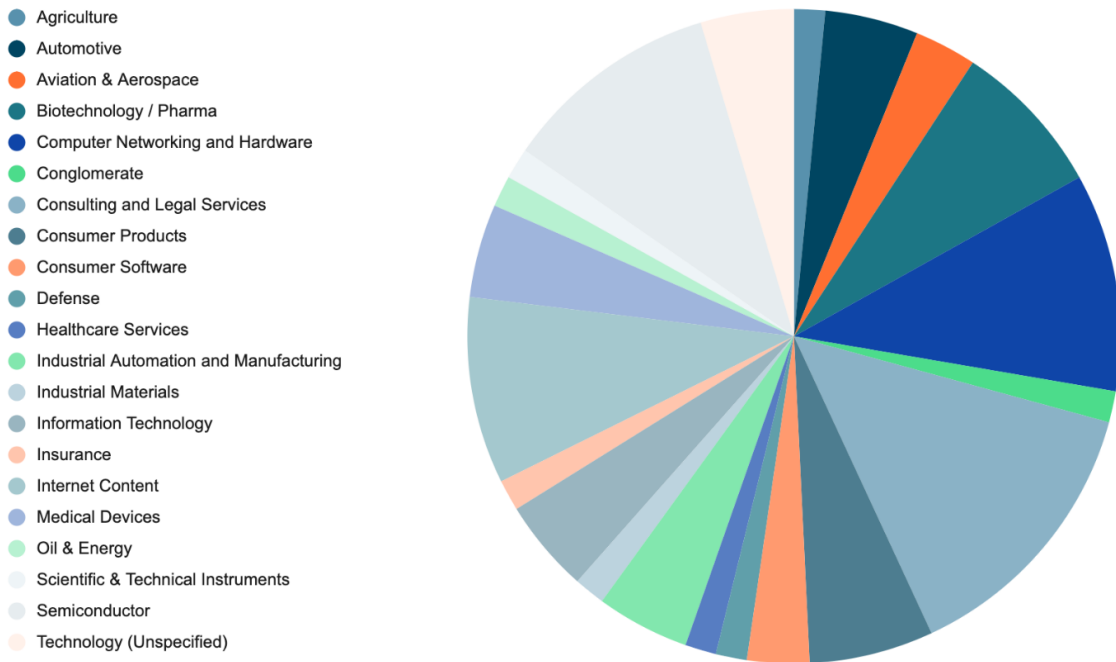
26. Your name and email (optional)

## Exhibit B DEMOGRAPHICS OF RESPONDENTS

35 United States-based companies participated in roundtables; 32 respondents participated in survey; and 6 companies participated in individual conversations, for a total of 73 respondents as of the date of publication of the first version of this manual.

This first pie chart illustrates the wide variety of industries that the participants were representing, consistent with a goal of the study – *i.e.* to obtain feedback from as many different industries as possible, so as to ensure that this manual was helpful to a large segment of the IP community. The industries representing the largest number of respondents included computer networking and hardware, consulting and legal services, internet content, semiconductors, and biotechnology / pharma.

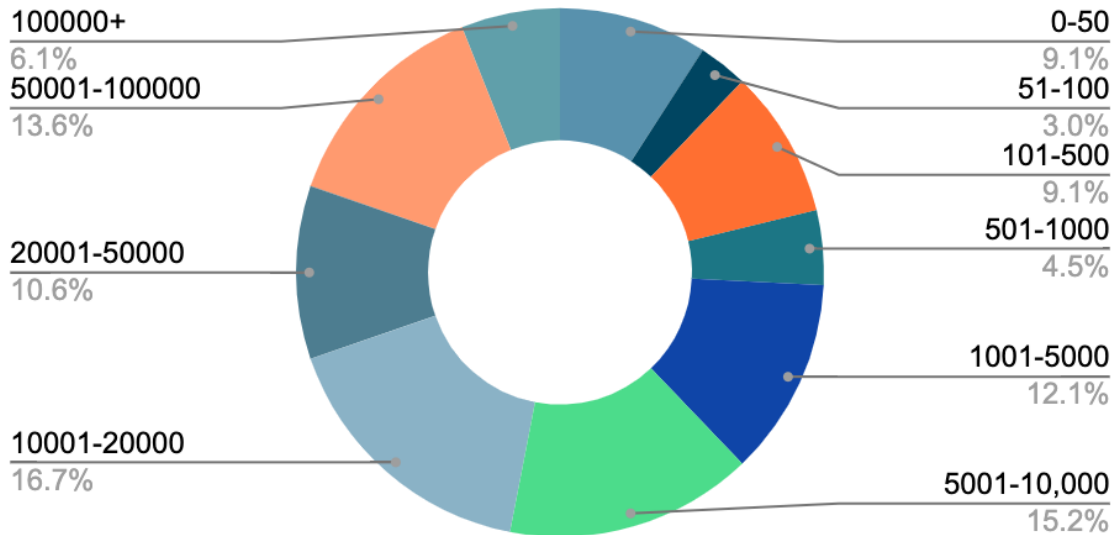
**Industries of Participating Companies**



The chart below illustrates the relative sizes of the participating companies, measured in approximate number of worldwide employees. Once again, the participant pool does not appear to be dominated by companies of one particular size.

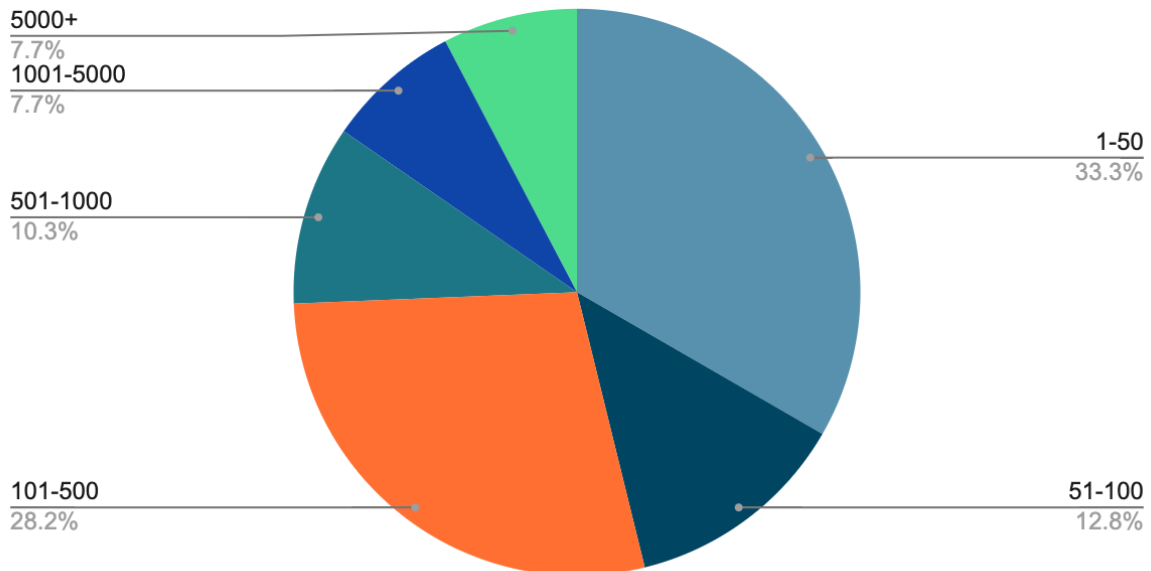


## Size of Participating Companies by Number of Employees



This last chart is the publicly-available information that shows the total number of issued patents of participants in the study. Some companies did not disclose this information and/or such information was not available, because the company identity was not revealed. As such, the below represents 39 of the participants, a little more than half of the total population.

## Total Number Issued Patents of Non-Anonymous Participants (n=39)



**Exhibit C**  
**INVENTOR INCENTIVE PLAN DESIGN ELEMENTS**

<b>What Qualifies? (Milestones)</b>
<ul style="list-style-type: none"> <li>• Submission of Invention Disclosure Statement</li> </ul>
<ul style="list-style-type: none"> <li>• Submission of Product Idea Disclosure</li> </ul>
<ul style="list-style-type: none"> <li>• Provisional Patent Application filed (U.S. or other)</li> </ul>
<ul style="list-style-type: none"> <li>• Utility or Design Patent filed (U.S. or other)</li> </ul>
<ul style="list-style-type: none"> <li>• Patent Issued (U.S.)</li> </ul>
<ul style="list-style-type: none"> <li>• Patent Issued in other countries (<i>i.e.</i> home country of inventor)</li> </ul>
<ul style="list-style-type: none"> <li>• Defensive Publication</li> </ul>
<ul style="list-style-type: none"> <li>• Trade Secrets or “Know How”</li> </ul>
<ul style="list-style-type: none"> <li>• Innovation Competition Winners (may be covered under a separate plan)</li> </ul>
<ul style="list-style-type: none"> <li>• Other Publication of invention <i>i.e.</i> publication in prestigious journals, or being named on a paper</li> </ul>
<ul style="list-style-type: none"> <li>• Industry recognition or award</li> </ul>
<ul style="list-style-type: none"> <li>• Different kinds of IP, including Trademarks</li> <li>• Significant contributions to open source projects</li> </ul>

<b>Who Qualifies?</b>
<ul style="list-style-type: none"> <li>• Submitter of IDS or name included on IDS</li> </ul>
<ul style="list-style-type: none"> <li>• Submitter of product idea disclosure, or named on statement, part of the team</li> </ul>
<ul style="list-style-type: none"> <li>• Determined to be a named inventor for patent filing purposes</li> </ul>
<ul style="list-style-type: none"> <li>• Entire team that wins a competition</li> </ul>
<ul style="list-style-type: none"> <li>• Manager for employee submissions (encourages managers to encourage submissions)</li> </ul>
<ul style="list-style-type: none"> <li>• Mentors of a mentor program to support invention submissions</li> </ul>

## Who Qualifies?

- “Referrals” of inventions by product managers, marketing or project managers/scrum masters or others

## Types of Awards

- Gift cards
- Cash bonus (either taxable or grossed up)
- Customized swag or gifts based on employee feedback (include choices that are attractive to diverse employees)
- Lunch or a meal with your manager or for your team
- Paid Time Off
- Exclusive event with a senior executive, unique training opportunity or conference
- Annual celebration of all inventors, awards ceremony, etc., bi-annual recognition lunch, 1st patent you get to wear a ribbon. Make sure all invited management comes to signal importance, not just the VP of engineering. Recognize that travel may be difficult for some, and if so, plan celebrations that are more accessible.
- Award points if company has a formal employee recognition point platform (similar to airline awards program)
- Patent or Recognition plaques (for employee and on premises). Display in lunch room or HQ wall, one for the employee’s desk
- Percentage of profits related to the new product or invention
- Acknowledgement and influence on performance review, bonus
- Design-your-own based on employee feedback, location and customs

## Recognition and Communications

- Personal letter acknowledging achievement from senior manager, include inventor manager
- Acknowledgment on internal website, companywide digital billboards, or monthly employee emails

## Recognition and Communications

- Acknowledgment on company social media
- Shout outs at team meetings
- Develop “inventor of the month” or “inventor of the Year” type of communication plan that celebrate innovation
- Promote Invention Incentive Plan in hiring communications, employee benefit communications
- Nominate inventors for external awards
- Promote Inventor Incentive Plan to all ERGs, encourage senior management to promote at ERG meetings
- Don’t delay recognition, try to have it at least annually, many have it 2x a year.