February 23, 2021

Drew Hirshfeld
Performing the functions and duties of the
Under Secretary of Commerce for Intellectual Property and Director of the USPTO
P.O. Box 1450,
Alexandria VA 22313–1450
Via email: http://www.regulations.gov/

RE: USPTO Request for Comments on the National Strategy for Expanding American Innovation

Dear Mr. Hirshfeld:

The Intellectual Property Owners Association (IPO) appreciates the opportunity to respond to the request for comments on the National Strategy for Expanding American Innovation published in the Federal Register on 12/23/20.

IPO is an international trade association representing a "big tent" of diverse companies, law firms, service providers and individuals in all industries and fields of technology that own, or are interested in, intellectual property (IP) rights. IPO membership includes over 125 companies and spans over 30 countries. IPO advocates for effective and affordable IP ownership rights and offers a wide array of services, including supporting member interests relating to legislative and international issues; analyzing current IP issues; providing information and educational services; and disseminating information to the public on the importance of IP rights.

IPO's mission is to promote high quality and enforceable intellectual property rights and predictable legal systems for all industries and technologies. Our vision is that this will result in the global acceleration of innovation, creativity, and investment necessary to improve lives.

IPO has an affiliated 501 (c) 3 education foundation (IPOEF) with a strategic objective to promote innovation and creation by, within, and for underrepresented communities.

Section 1. General

1. Inventors and entrepreneurs come from all walks of life and are not always employed by a large corporate or educational institution. How can people and organizations in the innovation ecosystem better support them?

Some examples of or ideas for USPTO support include the following. First, expansion of the pro bono programs to assist with providing information on the patenting process and, if applicable, assistance in drafting patent applications. Second, information on who to contact (patent practitioners in the field) listed on the USPTO website would also be beneficial to ensure people have an appropriate contact in the field.

See also comment to question 6 that pertains to what organizations can do to enhance the opportunities to those underrepresented potential inventors.

2. Women and some minorities have not participated proportionally in the patenting of inventions. What barriers to innovation inclusion are specific to underrepresented groups? What supporting role should government organizations play in helping underrepresented groups overcome these barriers?

Some of the barriers to innovation inclusion specific to underrepresented groups include (1) lack of knowledge of the invention process, (2) confidence gap including perfectionist tendencies, and (3) self-awareness as an inventor. Additionally, underrepresented groups also have to be in the positions within organizations that generally create intellectual property, i.e., limitations to access. These barriers are discussed in greater detail in the IPO Gender Diversity in Innovation Toolkit[1], a toolkit that IPO initially released in 2019 for public use. The toolkit is a resource for organizations to use for awareness of the issue and to move toward gender parity in innovation.

The lack of knowledge of the invention process could certainly be supported by government organizations simply through updating the material for the Inventors Assistance Program to ensure ease of understanding and accessibility.

The confidence gap is a theory that particularly female inventors are deterred from submitting their inventions for consideration because they only submit once they feel confident that their submission is perfect, or practically perfect. This confidence gap can result in females not submitting their ideas for consideration for patenting in comparison to males. As provided in the next question, mentoring and coaching can help solve the confidence gap problem.

Government organizations can and should continue to promote self-awareness as an inventor and spotlight underrepresented inventors so those in similar positions can see themselves as an inventor in the future. The USPTO has done a great job of this in the last few years, with diverse inventor fireside chats available on webcast as well as Twitter and LinkedIn posts on this topic. The promotion of underrepresented inventors could be simply an email communication, or a social media post highlighting minority and female inventors, or through a more formal recognition process including an underrepresented inventor award. More information about and ideas to improve innovation culture can be found in IPO's Gender Diversity in Innovation Toolkit (link).

Notably, an African American woman has never been inducted into the National Inventor Hall of Fame despite nomination of many excellent candidates. Notable exclusions of this type perpetuate the barriers. Government organizations can play an important role in remedying these exclusions.

3. Mentoring and networking have been shown to be effective tools in supporting and encouraging underrepresented inventors and entrepreneurs. How can organizations and

[1] The IPO Gender Diversity in Innovation Toolkit, created by IPO's Women in IP Committee, can be found at https://ipo.org/index.php/diversity-in-innovation-toolkit/. The toolkit is also undergoing a revision that is due to be released in 2021. Any additional comments to the material or collaboration with the USPTO is welcome.

intellectual property practitioners in the innovation ecosystem better connect underrepresented innovators to each other and to mentors, both internally and across organizations?

Internally, organizations can help in encouraging underrepresented inventors by providing awareness throughout the organization for the intellectual property process specifically providing information on who to contact and how to reach out. Intellectual property professionals can understand the experience level of the inventor and educate or provide additional support if necessary. Some examples include IP office hours, ask an attorney email, or can provide a classroom style training given by IP staff to employees.

Increasing awareness of the disparity throughout the organization (and industry) allows people to be aware and consider potentially leaving someone off that qualifies as an inventor on a particular patent application. Increasing awareness of the disparity issue at various levels of the organization is beneficial. Some examples could include affinity groups within your organization including Women's Leadership Programs or Groups, African Americans Network, Hispanic Networks, Pride Networks, Asian Americans Networks, etc. Awareness to leaders and managers is necessary to ensure success and to ensure appropriate engagement.

Mentorship and coaching for the IP process can be highly beneficial not only to the individuals involved by also to the organization itself. In particular, mentorship with a female that has been through the process could be highly beneficial. Additionally, certain affinity groups for diverse inventors could provide a relaxed atmosphere of a network of colleagues to guide underrepresented inventors through the process. Management training can also prove beneficial to help guide employees through this confidence gap and to ensure that there is no bias in the group on determining job responsibilities or potential inventors. Additionally, and certainly not least, diversity and inclusion training to all employees, including hands-on training, can certainly prove beneficial to improve diversity attitudes and behavioral intentions and create an inclusive, respectful, and productive team.

Additionally, a program that is led by or highlights underrepresented innovators is a great way to allow those in the same or a similar situation to imagine they can excel in the intellectual property field. For example, if a female inventor was to speak at a company presentation regarding her IP, it would allow other females to imagine themselves in the same position.

As a basic matter for supporting and encouraging underrepresented inventors in an organization, there is little substitute for organizations focusing on attracting, developing and retaining diverse talent. For intellectual property practitioners to supporting and encourage underrepresented inventors in their organizations, this talent must exist in their organization. Intellectual property practitioners may be positioned to help raise awareness through patent-related data they may uniquely have access or navigate. Governments can help raise awareness and access of this data to intellectual property practitioners.

Lastly, mentoring those in an underrepresented group is a great way to introduce people to the IP field. A program set up by St. John's University School of Law and partners with the Ron Brown Prep Program is a great example of this mentorship experience. This program connects students to a legal professional for mentorship while navigating the requirements for law school and the

law school admission process and one of the requirements is that students are from an underrepresented group.

4. Developing organizational metrics to document the effectiveness of diversity and inclusion initiatives is necessary to track outcomes of action plans and initiatives. What are best practices that organizations can internally employ to measure their own progress, particularly in the area of intellectual property protection?

As previously stated in Question 3, organizations can focus on attracting, developing, and retaining diverse talent as a foundation to their organization. For intellectual property practitioners to support and encourage underrepresented inventors in their organizations, this talent must exist in their organization.

Organizations can use data and metrics to track the effectiveness of their best practices. For example, tracking the number of presentations to certain affinity groups each year or tracking the gender of the lead inventor working on each application.

As for data metrics, organizations can analyze their inventorship rates and information on their patent filings and granted patents to internally measure progress, while considering privacy laws. In addition to tracking metrics, setting goals for what the organization wants these metrics to be in 1, 3, 5, and 10 years is essential to creating real change. External publication of these goals and metrics is the crème-de-la-crème of this behavior and will ensure that an organization is held accountable to achieving these goals or at least having programs and efforts in place to attempt to achieve these goals.

Organizations can track data internally or use the gender-name dataset from the PTO, the Census Bureau, or WIPO. However, there are caveats with this data. The gender-name dataset is a great resource but does make assumptions in regard to gender names and is not 100% accurate. Internally, an organization would have to look at what is the ratio of females and males in positions that are likely to file intellectual property. A way to look at this would be to analyze a subset of the organization by analyzing departments that have high inventorship and compare the male to female employee ratio and also male to female inventorship rates.

5. Measuring national progress in realizing greater inclusion and diversity in invention, entrepreneurship, and intellectual property may take years, and it will be critical to identify complementary short- and long-term metrics that are precursors to and indicators of expanding innovation. What are some specific, meaningful, and relevant measures that can be used to: a. Support year-over-year performance of action plans and initiatives in the short-term? b. Demonstrate the long-term creation of diversity and inclusion in the innovation ecosystem while complementing short-term performance metrics?

Awareness, engagement, and celebration of successes are necessary to support year-over-year performance of actions plans and initiatives in the short-term. This could include a release of metrics (like the WIPO data) in a timely fashion to show the progress and if necessary, to adjust the program or metrics themselves. Ideally, the USPTO could allow for self-reporting of metrics on all diverse aspects including gender and race and could then provide a clean data set (for privacy considerations) for analysis. While in the short term, these metrics could provide some benefit, in the long-run, once an established data set has been gathered, it could prove highly beneficial for data and trend analysis.

Some specific, meaningful, and relevant measures in terms of metrics could include:

- Comparison of the nationality, age, gender of inventors as well as veteran, disability, and LGBQT status overall as well as by technical field, region, etc.
- How many applications include at least one inventor from an underrepresented community? In other words, reports for each underrepresented community identified, including females.
- How many granted or commercial patents include at least one inventor from each underrepresented community? In other words, reports for each underrepresented community identified, including females.
- How many new female inventors were there in a given year compared to the number of new male inventors in a given year?
- Percentage of inventors from each underrepresented community listed on a patent application compared to those in non-underrepresented communities listed on a patent application, and then the same metrics per patent unit area/technology field/geography etc.
- How many inventors from each underrepresented community are repeat inventors compared to those in non-underrepresented communities?
- Inventor rates as described above within certain art units and comparison of change over time.
- Percentage of unique male versus unique female inventors listed on an application in a given year – this would allow for analysis of a caveat that potentially a small group of males are responsible for a large number of filings.
- Percentage of unique inventors from each underrepresented community listed on an application in a year versus unique inventors from non-underrepresented communities
- The number of different employer or organization applicant associated with a male versus female or underrepresented community inventor.

b. Demonstrate the long-term creation of diversity and inclusion in the innovation ecosystem while complementing short-term performance metrics?

If the USPTO was to allow self-reporting of information including age, it would seem that comparisons can be made in the long run to analyze different diverse factors in age groups to evaluate the changing landscape. However, given the studies showing gender bias in the PTO, segregating this information may be prudent.

6. Invention, entrepreneurship, and intellectual property protection have been shown to be concentrated in certain areas of the country and among individuals from higher socioeconomic groups. What new or existing channels could be created or utilized to more effectively deliver information and resources to prospective innovators from all demographic, geographic, and economic backgrounds?

It is without a doubt that individuals among higher socioeconomic groups or those concentrated in certain areas of the country have more opportunity and awareness to innovation, entrepreneurship, and intellectual property protection.

A potential way to reach lower socioeconomic groups is a program targeting middle or high schools as a way to introduce innovation to prospective innovators from all demographic, geographic, and economic backgrounds. In particular, some corporations partner with local high schools to host an intellectual property day for a series of presentations and hands-on projects. The students attend the company worksite for half a day or a day and learn about an introduction to the technology field and is focused around intellectual property. The USPTO could support this initiative by providing a video or presentation to be used in support of hosting middle or high school students. IPO Education Foundation (www.ipoef.org) is developing programs of this type and would be pleased to partner with NCEAI on complementary initiatives.

A sort of 'virtual career day' could be hosted by the USPTO where high school students can attend and listen in to a variety of topics introducing intellectual property and innovation, and also hear about potential career opportunities within the intellectual property field. The USPTO field offices around the United States could partner with schools close by to bring awareness to this career day.

It's understood that our educational system must continue to undergo transformation to support our national ambitions for advancing innovation. Current public middle school and high school curricula lack meaningful reference and education in intellectual property. While ad hoc projects and programs can be helpful, a more substantial incorporation of the importance of intellectual property in mainstream public school STEM and art programs will enhance and elevate improved understanding of IP and its importance.

Ideally, to solve this inequity problem within the innovation field, we would target those even younger than middle school students. A simple handout for teachers with young children to go through as an in-class exercise could be a wonderful teaching opportunity as an introduction.

Section II:
Creating Innovators - Preparing People to Obtain the Skills and Interests to Become Innovators, Problem Solvers, and Entrepreneurs

7. Research has shown that "invention education"—the infusion of transdisciplinary education in problem identification and problem solving—is critical to developing innovation skills in learners. How can educational institutions at all levels (pre-kindergarten through post-graduate) successfully infuse concepts of invention, entrepreneurship, and intellectual property education into curricula?

Building the skills essential to deliver innovation requires applying appropriate resources at all levels of education– from early childhood education, through elementary, middle and high schools to vocational training and universities. This is the foundation of efforts like InventEd, an initiative launched by The Lemelson Foundation with various partners, including the U.S. Patent & Trademark Office, to help formalize and promote "invention education."[2] InventEd provides a framework to assist educators teach the unique ways inventors find and solve problems. It includes tools for enhancing curricula, and incorporating STEM, computer science, entrepreneurship, maker education and project-based learning. A fundamental tenet of the

[2] https://inventioneducation.org.

approach is tasking students with solving real-world problems that have a positive impact on others in their local community or elsewhere in the world.

Outside the U.S., such initiatives are commonly part of a national strategy to inspire and engage students at all levels in science and technology education. As an example, in 2003, the Korean Industrial Property Institute (KIPO) published a report entitled Korea's Invention Promotion Activities,[3] which addressed strategies for cultivating young inventors, including:

(i) ***Invention clubs*** were established in select schools across the country to provide opportunities for students (and the public) to turn their ideas into inventions. The clubs are supported with full-time IP teachers.

(ii) ***Invention classes***, first introduced in the 1980s, are offered in elementary, middle and high schools, with activities ranging from performing practical skills for making inventions to visiting sites where inventions are developed.

(iii) ***Annual students' invention exhibitions*** are special events aimed at promoting inventions by students from elementary schools, middle schools, high schools and universities. Prize-winning inventions are publicly recognized and displayed.

Similarly, the Government of India, in its 2020 release of the draft 5th National Science, Technology, and Innovation Policy (STIP),[4] recommends a National School and Higher Education Mentorship Program to focus on innovation education and nurture early talent to pursue career paths in science and technology. For example, students of all educational levels will be given opportunities for exposure to the nation's leading scientific laboratories.

Approaches to invention education range from formal to informal programs and techniques, but all aim to provide engaging and inclusive learning environments that promote discovery and innovation at all age and grade levels.

8. To supplement formal education, how can community institutions, particularly in rural and economically disadvantaged areas, build awareness of, and skills and interests in, invention, entrepreneurship, and intellectual property among students of all ages?

The reach of innovation-focused K-12 programs centered around large research institutions in major cities can be broadened to rural and economically disadvantaged areas by providing focal programs that replicate the program's experience, which avoids the cost and time associated with travel to the program's home institution. For example, the K12 InVenture Prize program,[5] which includes teacher professional development, a semi-structured curriculum, and an online platform for feedback, and culminates in a student invention competition at the Georgia Institute of Technology (Atlanta, Georgia), expanded its program to reach more rural counties by providing multiple regionally-centered, in-person events, which catalyzed event participation in the underserved areas more than previously attempted recruitment efforts, including financial

[3] www.kipo.go.kr/upload/en/download/KoreaInventionPromotionActivities.pdf.
[4] https://dst.gov.in/draft-5th-national-science-technology-and-innovation-policy-public-consultation.
[5] https://inventurechallenge.gatech.edu/.

support and meetings with school teachers.[6] The focal programs can provide on-ground staff support within the regions, as well as engage the local community and businesses to provide support. Remote hub programs therefore can provide regional access to larger programs, while avoiding the time and cost of new programs for particular areas, as aspects of the larger programs can be directly extended to rural areas.

At the undergraduate level, rural institutions can provide intellectual property / technology / patent track options, much like pre-medical track option. For example, George Washington University (Washington, D.C.) includes a Technology and Law Track option for students considering a career in patent law or intellectual property law, which covers topics related to engineering and law.[7] Such a program would increase awareness of intellectual property and legal career options for students with technical backgrounds. Even if students do not ultimately pursue careers in intellectual property or patent law, they are exposed to the idea of innovation and the value of intellectual property before graduating with their technical degree and have an awareness of intellectual property that may help them in the future. Providing students with an intellectual property / technology / patent track option at undergraduate institutions in rural and economically disadvantaged areas will increase exposure to intellectual property, and thereby increase the likelihood that they will gain an interest in innovation and perhaps entrepreneurship.

Incorporating education on IP should go hand-in-hand with national student creativity and innovation awards across all economic groups. Long-standing awards programs like Scholastic's Annual Art & Writing Awards[8]—in existence since the 1920s with notable winners including Stephen King and Andy Warhol—provide only limited reference to intellectual property and the crucial role it plays in protecting and elevating the very submissions these programs are collecting. Awards programs like these reach many students and educators across the nation, extending beyond privileged environments to the rural and economically advantaged thanks to the efforts of these program managers and leaders. Nevertheless, IP awareness opportunities can quickly be lost at crucial moments like the applications process if the importance, encouragement and support of IP is not featured as part of the value and protection in the considerations for young inventors, writers and artists.

9. More can be done to help teachers, even those with a formal science, technology, engineering, or mathematics (STEM) background, incorporate concepts of innovation into their teaching methods. What new or existing professional development opportunities, resources, and programs could train teachers to incorporate invention education concepts into their instruction? How could these efforts be leveraged and scaled so that similar resources and opportunities are accessible to all teachers?

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[6] Newton et al., Delivering K-12 Invention & Entrepreneurship to Rural Areas: Programming, Teacher Experiences, and Student Outcomes in a Partner Hub, American Society for Engineering Education, 2020, Paper ID #28963, file:///C:/Users/TDorr/Downloads/delivering-k-12-invention-and-entrepreneurship-to-rural-areas-programming-teacher-experiences-and-student-outcomes-in-a-partner-hub%20(2).pdf.

[7] See https://www.cs.seas.gwu.edu/non-technical-tracks.

[8] http://mediaroom.scholastic.com/press-release/98th-annual-scholastic-art-writing-awards-now-welcoming-submissions

As early as early elementary school, the patent bar and other bar associations and organizations (e.g., Intellectual Property Owners Association (IPO), the American Bar Association (ABA), the American Intellectual Property Law Association (AIPLA), state bar associations, etc.) can provide training and resources to teachers and schools on innovation. Teachers could also work with organizations, such as the Boys & Girls Club of America and other like organizations, to incorporate programs into after school and summer offerings. Established programs, such as Camp Invention, by the National Inventors Hall of Fame®,[9] can be incorporated into the regular school curriculum to introduce intellectual property concepts, including innovation, at early ages to all students, not just those taking advantage of Camp Invention programs which have limited availability geographically (and sometimes pose a financial barrier to many students). For example, the IP Patch program sponsored by IPO[10] could be expanded or updated to help provide an introduction and awareness of intellectual property in schools. Further, after school programs with a focus on innovation, e.g., the robotics clubs or FIRST® Robotics Competition[11] could be added to encourage students to get involved early and allows more flexibility for fun activities and programs, without taking anything away from the already required curriculum. Through partnerships with these organizations, teachers could develop a "What is Intellectual Property" curriculum that can be used in the school system to introduce students to the concepts early, using examples appropriate for the age level. These already established programs and materials provide a starting point for teachers to build upon and do not require the teachers to start from ground zero.

Incorporating education on IP should go hand-in-hand with national student creativity and innovation awards across all economic groups. Long-standing awards programs like Scholastic's Annual Art & Writing Awards[12]—in existence since the 1920s with notable winners including Stephen King and Andy Warhol—provide only limited reference to intellectual property and the crucial role it plays in protecting and elevating the very submissions these programs are collecting. Awards programs like these reach many students and educators across the nation, extending beyond privileged environments to the rural and economically advantaged thanks to the efforts of these program managers and leaders. Nevertheless, IP awareness opportunities can quickly be lost at crucial moments like the applications process if the importance, encouragement and support of IP is not featured as part of the value and protection in the considerations for young inventors, writers and artists.

In order to support innovation programs within schools, corporate and law firm donations and other grants could be leveraged to provide the resources and materials necessary to provide the programs, and the patent bar could be available to assist or be 'guest speakers.' Support from sponsors will increase engagement as well as provide financial support for program scaling.

Section III. Practicing Innovation—Harnessing Skills and Interests to the Act of Innovation

[9] https://www.invent.org/programs/camp-invention.
[10] https://www.ipoef.org/ip-patch/.
[11] https://www.firstinspires.org/about/history.
[12] http://mediaroom.scholastic.com/press-release/98th-annual-scholastic-art-writing-awards-now-welcoming-submissions

10. Recent progress in developing STEM graduates from underrepresented groups has been documented. How can similar rates of invention and entrepreneurship be attained? How can organizations best recruit and retain innovators from diverse backgrounds?

Sharing information about opportunities and resources available, seeing representation in the people sharing the information, and providing grants and outreach programs may be helpful in recruiting innovators from diverse backgrounds.

- Host a panel discussion (and/or round table) with the leaders of programs at universities/colleges that target providing support and resources for inventors and entrepreneurs from underrepresented groups. The panelists/discussion leaders can share with the audience their tips, the challenges they faced, what programs have worked or not, etc. Having panelists/discussion leaders from institutions that have more established programs and leaders from institutions with newer programs would allow the audience to hear both perspectives. For example, the Ohio State University and Georgia Tech have programs that are focused on increasing entrepreneurship from underrepresented groups (at least female entrepreneurship). The program at OSU is around 10 years old, and the program at Georgia Tech is in its second year.
- Have people from underrepresented groups serve on panels and in round table discussions so the audience sees themselves represented in the panelists and discussion leaders.
- When encouraging participation in innovation from members of underrepresented groups, center your language and message around the targeted group and the barriers they may be facing. For example, if the targeted group tends to struggle with perfectionism, speak to this and share resources that are available for them. If the targeted group tends to be motivated by impact rather than commercialization, speak to the impact possibilities.
- Create grants that encourage innovation and entrepreneurship by members of underrepresented groups and address barriers they may face.
- When recruiting new inventors or entrepreneurs, think outside the box about where you look. For example, connect with leaders in the community and in organizations having missions relevant to innovation and entrepreneurship, and ask them where to find potential inventors/entrepreneurs. Talk to schools/universities about outreach programs (e.g., presentations, clinics) to educate students about career options. Host job fairs for internships.
- Providing opportunities to work on interesting, high profile projects to members of underrepresented groups can help with retention. Publicly celebrating/praising these contributions afterwards can also be helpful. In addition, creating inclusive and supportive cultures helps with retention. Ideas for creating these cultures are included in response to the question below.

- Consider utilizing the IPO Gender Diversity in Innovation Toolkit[13], which sets forth various awareness mechanisms as well as programs to address and assist in attaining more representation for underrepresented groups.

11. Inventors thrive when cultural and institutional barriers within workplaces are minimized or removed. What are examples of these barriers, and how can organizations remove them to create an inclusive, innovative workplace culture?

Examples of cultural and institutional barriers include lack of clear feedback, lack of clear expectations, affinity bias in hiring and project assignments, lack of awareness about communication style differences, cultural norms within an organization that may be unnecessary to the mission of the organization and that deter team members from showing up fully, and the threat of emotional or physical harm from micro-aggressions, harassment, and stereotyping. Organizations can remove these barriers by gaining an understanding of them and then identifying how to address them. To gain an understanding of them, it can be helpful to conduct surveys and/or "listening sessions" with team members. The listening sessions can be small group or individual conversations, and the person gathering the information on behalf of the organization just listens to the comments and does not use this time to reply with explanations. It gives the speaker a forum in which to be heard and believed, and it gives the listener a chance to receive the message and the feelings that may go along with the message.

Raise awareness among the team members, especially those in managerial roles, that dominant groups tend to avoid giving clear feedback and setting clear expectations for team members that are outside of their dominant group. Establish feedback mechanisms that encourage clear communications and provide managers and team members resources on language that is helpful. Empower those in the non-dominant groups to seek clarification.

Create affinity groups.

Create a centralized committee focused on diversity, equity, and inclusion. Representatives from each affinity group could serve on the committee or be a liaison to share concerns from their groups (e.g., anonymously).

Establish mentorship programs that include mentors that have been successful or are at least familiar with the invention and/or entrepreneurial process. Mentors with similar backgrounds as the mentees can help mentees visualize their success, but it is possible to have mentors from other backgrounds if they are able to center the mentee in the mentorship relationship.
Have a commitment from leadership (e.g., C-suite, President, or Dean) to support efforts to increase participation by underrepresented groups.

Provide communication and implicit bias awareness training to give the team better tools to create an inclusive environment. For example, managers should be aware of the importance of giving clear feedback and setting clear expectations and how their implicit biases may affect their ability to do this. Managers should be consciously aware of how they are assigning projects so that members of underrepresented groups get valuable opportunities. Team members should be

[13] https://ipo.org/index.php/diversity-in-innovation-toolkit/

actively encouraged to share their ideas. Empathetic listening skills and understanding accountability versus shame could be discussed.

Create small group lunches or group dinners with people of different backgrounds and have them meet periodically to get to know each other and practice having courageous conversations around topics that allow the group to learn more about each person's background, their similarities, and their differences. These groups can be shuffled after several meetings to allow for more opportunities to have these conversations with other members of the team.
The leadership in an organization should consider and seek feedback about any cultural expectations that work against a sense of belonging by members of underrepresented groups. Feeling free to be our true, full selves frees up energy to be creative and collaborate fully with others.

Consider promotion and/or compensation policies that may have an intentional or unintentional negative impact on people from underrepresented groups. Consider if those policies can be changed to create a more equitable impact.

Provide written statements outlining job descriptions and minimum qualifications for leadership roles within the organization. Consider if there is an ability to open up some leadership roles to more junior team members.

The IPO Gender Diversity in Innovation Toolkit[14] is a resource addressing the majority of these issues and considerations (see e.g., Chapter 2 and Chapter 3 of the toolkit).

12. Access to information and resources is pivotal for the development of individual inventors and small businesses. How can the nation better support individual inventors and small businesses with resources so they can successfully translate their skills and creativity into the acts of invention, intellectual property protection, and entrepreneurship?

Create grant programs and/or allocate funding for regional cohort programs that can provide information, resources, and mentorship that may be helpful for individual inventors and small businesses. Some universities sponsor cohort programs (e.g., self-funded or using funding from the government organizations such as the NIH), and it would be helpful to have this support for non-university inventors and small businesses (e.g., through regional technology incubator programs). It may be helpful to have the SBA assist with these grant programs.

The USPTO could provide a more robust, publicly available, and free prior art search engine that allows individual inventors and small businesses to consider the patentability of their inventions in the early stages of development.

Create more outreach opportunities from the USPTO (and/or partner with regional patent practitioners) and SBA to share information on patent protection and entrepreneurship with individual inventors and small businesses. These outreach opportunities can include presentations, clinics, and publications available on the USPTO and SBA websites.
Create publications written by people from underrepresented groups that speak to the potential for innovation and/or highlight innovation backed by members of underrepresented groups.

[14] https://ipo.org/index.php/diversity-in-innovation-toolkit/

Consider the USPTO fee structure and application submission requirements and how they impact accessibility to patent and trademark protection from individual inventors and small businesses. Track demographics of inventors and SBA loan applicants initially and over time. This data can allow us to see trends and track and study them, leading to a better understanding of participation and success by members of underrepresented groups.

Supporting an anti-bias curriculum and teacher training for pre-K through high school for public schools to drastically reduce the subtle, negative messages that students from underrepresented groups may hear throughout their pre-kindergarten through high school experiences.

13. Another important objective is increasing diversity in the entire intellectual property field. What are ways of promoting diversity in the corps of intellectual property attorneys and agents who represent innovators?

This conversation typically centers around (1) how to increase the number of people from underrepresented groups that study a science or technology field that allows them to sit for the USPTO bar exam, (2) how to encourage qualified candidates from underrepresented groups to attend law school and/or sit for the USPTO bar exam, and (3) how to create inclusive work environments for supporting the careers of IP attorneys and agents from underrepresented groups.

To encourage people in underrepresented groups to study a science or technology field that allows them to sit for the USPTO bar exam, outreach programs may be an effective way to reach potential students. Outreach programs may include career day panels/speakers, shadow programs with local practitioners, or published materials that are distributed to students. Such programs may be useful in targeting middle and high school aged student, students in their first year of college (or before they decide on a major), and students already enrolled in qualifying programs. In addition, outreach programs may be more effective if the speakers represent underrepresented groups.

Career day panels/speakers give students an opportunity to hear more about career path options and ask questions. It may be helpful to coordinate with other organizations having networks and outreach programs in place already.

Shadow programs with local practitioners and local schools to give students from underrepresented groups an opportunity to shadow a local practitioner for a week to get a taste of what being an IP attorney or agent is like and to hear more about what the path looks like. We also support the request from Senators Hirono, Coons, and Tillis to re-consider the guidelines for eligibility for taking the USPTO bar exam to remove unnecessary barriers to entry into this field.

The feedback in response to question 11. regarding thoughts on how to create an inclusive work environment apply to creating an inclusive environment for IP attorneys and agents from underrepresented groups. Creating inclusive work environments encourages entry into an organization from new practitioners and can help retain those already hired.

An additional challenge and hurdle to becoming registered to practice before the USPTO is the cost of and access to adequate exam preparation. USPTO sponsored preparatory programs and basic involvement to help reduce the cost and access barrier can be helpful.

Section IV. Realizing Innovation- Reaping the Personal and Societal Benefits of Innovation

14. Financial support is a critical element in translating an innovation into commercial success. What organizations, programs, or other efforts help promote access to capital to an expanded group of inventors and entrepreneurs - demographically, geographically, and economically?

Recently, there has been an increase in organizations and programs that help promote access to capital to an expanded group of inventors and entrepreneurs. These can be largely divided into the following sectors: Government; Academic; Corporate; and Non-profit. Some of the programs focus on specific diverse groups, such as Golden Seeds, which is a group of investors seeking and funding women-led businesses. Some of the programs focus on establishing scalable ecosystems, such as Accelerating Women And Under-Represented Entrepreneurs (AWARE), which is a National Science Foundation (NSF) funded project that promotes a new approach to encourage participation of female entrepreneurs and entrepreneurs from other under-represented groups. Some programs offer financial support directly, such as Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR), that support innovation through investments from Federal research funds to foster and encourage participation in innovation and entrepreneurship by women and socially or economically disadvantaged persons, while others provide financial support indirectly, for example, Cardozo/Google Patent Diversity Project, that offers indirectly offers financial assistance by providing free legal Intellectual Property services with the mission of increasing the number of U.S. patents issued to women and inventors of color.

Furthermore, there are a few ways the USPTO can indirectly provide financial support in order to build an inclusive innovation ecosystem. The USPTO may provide a one-stop portal to a database of resources that allow entrepreneurs easy access to information regarding financial support focused on promoting access to capital to an expanded group - similar to the database shown in the article, Essential Venture Capital Database for Women Entrepreneurs, and the portal provided by the National Science Foundation. Moreover, the USPTO may provide financial support indirectly by providing accelerated examinations for minority applicants in the form of a pilot program, reduced fees for minority applicants, or a certificate (similar to the awards under the Patents for Humanity program). Additionally, the USPTO may provide a hotline for minority applicants, similar to what is offered by the Pro Se Assistance Program, thereby making the matters before the USPTO more affordable. However, a screening process may be required to certify qualification for such service.

Below are some examples of organizations, programs, and resources that currently focus on building an inclusive innovation ecosystem.

Sector	Programs	Details

Government programs	Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs	The SBIR/STTR programs support innovation through investments from Federal research funds and one of the goals is to foster and encourage participation in innovation and entrepreneurship by women and socially or economically disadvantaged persons.
	National Institutes of Health SBIR/STTR programs	Invests over 1 billion dollars into health and life science companies that align with NIH's mission to improve health and save lives.
	National Science Foundation (NSF)	The NSF provides a portal to find various funding opportunities.
	NSF ADVANCE: Organizational Change for Gender Equity in STEM Academic Professions grant	The NSF ADVANCE program provides grants to enhance the systemic factors that support equity and inclusion and to mitigate the systemic factors that create inequities in the academic profession and workplaces.
	NSF AWARE: Accelerating Women And under-Represented Entrepreneurs program	NSF-funded project that promotes a new approach to encourage participation of female entrepreneurs and entrepreneurs from other under-represented groups.
	Small Business Administration (SBA)	SBA offers free business counseling, business loans, and opportunities to win small business government contracts.
	USPTO Patent Pro Bono Program	Nationwide network of regional programs that match volunteer patent professionals with financially under-resourced inventors and small businesses for the purpose of securing a patent.
	Law School Clinic Certification Program	Certification program for Intellectual Property (IP) Clinics at law schools to allow law students to practice Intellectual Property Law before the USPTO under guidance of a faculty supervisor. This allows entrepreneurs access to free legal IP advice, which otherwise could be unaffordable.
	Patents for Humanity	Patents for Humanity is an awards competition recognizing innovators who use game-changing technology to meet global humanitarian challenges. Awardees receive a certificate to accelerate various matters before the USPTO, which can be a cost-saving mechanism for entrepreneurs.
	U.S. Department of Commerce - Minority Business Development Agency (MBDA)	MBDA promotes growth of minority-led businesses through access to capital, access to contracts, and access to markets.
Academic Programs	Cardozo/Google Patent Diversity Project	Cardozo/Google Patent Diversity Project is a Google-funded project at Cardozo Law School that focuses on increasing the number of U.S. patents issued to

		women and inventors of color. This program indirectly offers financial assistance by providing free legal IP services.
	Columbia Startup lab (CSL)	Co-working space to recent alumni, thereby providing financial support.
	FastForward (JHU)	FastForward helps entrepreneurs navigate funding sources. In FY20, FastForward created 11 new startups, and their portfolio companies raised $278 million in venture funding.
	Fordham Entrepreneurial Law Clinic (ELC)	Free transactional legal services to startups in New York, provided by Fordham Law School.
	Penn Law Entrepreneurship Legal Clinic	Free transactional legal services to entrepreneurs, provided by University of Pennsylvania Carey Law School.
Corporate Programs	Golden Seeds	Golden Seeds is a group of investors seeking and funding women-led businesses.
	Silicon Harlem	Silicon Harlem promotes an innovation ecosystem to under-represented communities in the Harlem neighborhood of New York.
	International Business Innovation Association (INBIA)	INBIA is a global non-profit organization that provides industry resources, education, events, and global programming to entrepreneurial organizations worldwide.
	The Lemelson Foundation	The Lemelson Foundation funds programs and projects in invention education and entrepreneurship.
	Diversity VC	Diversity VC aims to increase diversity in the startup space via venture funding.
Miscellaneous Resources	Essential Funding Guide for Entrepreneurs of Color	An article that provides a list of grants and funds focusing on entrepreneurs of color.
	Essential Venture Capital Database for Women Entrepreneurs	An article that provides a database of VCs looking to invest in women entrepreneurs and diverse founding teams. The database can be filtered to show results in specific industries, regional areas, and funding stages.

15. Successfully commercializing an inventive product or concept requires in-depth knowledge about production processes, market forces, and other pertinent information. What types of mentoring initiatives could be implemented or expanded to help experienced entrepreneurs impart this specialized knowledge to diverse and novice inventors?

Effective commercialization partnership and mentorship programs should provide training in myriad diverse areas including funding, patenting, trademarking, commercialization terminology, business model options, regulatory considerations, ethics considerations, marketing, prototyping, and product development. There exist several programs that provide varying combinations of the

listed competency areas at academic institutions, corporations, non-profit organizations, and governmental initiatives. Examples of such initiatives at academic institutions include the Mentor in Residence program at Johns Hopkins Technology Ventures, Cornell Tech Runway Startup Postdocs, MyStartupXX, AWARE: Accelerating Women And underRepresented Entrepreneurs at University of Illinois Research Park, REACH for Commercialization at Ohio State University, and Collaboratory mentorship and sponsorship through the University of Florida's UF Innovate program. Similar corporate and non-profit initiatives include STEM to Market, New York Fashion Tech Lab, SCORE, EWITS, Anita B, and iNvictus. Some examples of governmental entities that provide access to similar initiatives include New York City's Department of Small Business Services BE NYC Mentors program, the U.S. Department of Commerce office focuses on the development of minority business through its Minority Business Development Agency, and the Small Business Administration Mentor-Protégé program. Additional resources include support provided by institutional technology transfers departments, minority-focused incubator and accelerator initiatives, scholarships dedicated to inclusive innovation, and entrepreneurial law clinics to assist minority entrepreneurs and inventor with their navigation of legal documents and processes.
There appears to be several opportunities for the USPTO to collaborate with some of these programs. This increased outreach may serve as avenues to introduce minority and underrepresented inventors to the advocacy work of the USPTO to enhance the diversity landscape in innovation.

Also, the USPTO could potentially seek to explore the patent gap data provided by Invent Together, which, as described on their website, is a coalition of organizations, universities, companies, and other stakeholders dedicated to understanding the diversity gaps in invention and patenting and supporting public policy and private initiatives to close them. The goal of Invent Together is to close the patent gaps for women, people of color, and low-income individuals to help close wage and wealth gaps, strengthen the U.S. economy, and develop new and different inventions. They believe that everyone should have the opportunity to invent and patent. Their goal is to increase the availability of data and research on the patent gaps and break down barriers based on race, gender, income, and other characteristics.

Additionally, there is a need for the USPTO to pointedly address the historical challenges that minority inventors faced in the patenting process. Live webinars may prove to be a suitable forum for this open discussion. This would assist with fostering a sense of partnership between the USPTO and minority inventors. This candid approach can potentially engender a greater sense of trust of the patenting process by highlighting the enhancements to the overall patenting process and the positive impact on minority patent applicants' ability to receive fair and unbiased examination of their patent applications.

Another opportunity where the USPTO can assist with successful commercialization is the provision of a readily accessible repository of easily understandable web-based content and tools that include step-by-step guidance to minority and underrepresented inventors throughout the patenting and product commercialization lifecycle. These approachable web-based tools should include (simplified example) video content generated by various sources including the USPTO and/or corporations, documentation that a layperson can easily review and understand, live webinars during which applicants can ask clarifying questions, downloadable content, resource links (e.g., to the websites of potential collaborators listed).

Below is a description of some examples of organizations, programs, and resources that provide commercialization-focused mentorship programs that seek to help experienced entrepreneurs impart this specialized knowledge to diverse and novice inventors.

Sector	Programs	Description
Government Programs	Minority Business Development Agency	The U.S. Department of Commerce, Minority Business Development Agency (MBDA) is the only federal agency solely dedicated to the growth and global competitiveness of minority business enterprises.
	BE NYC Mentors	Black Entrepreneurs NYC (BE NYC), an initiative of the NYC Department of Small Business Services (SBS), is a groundbreaking model for a major American city to help create equity of opportunity by advancing Black entrepreneurship.
	Small Business Administration Mentor-Protégé program	Protégés can get valuable business development help from their mentors in several areas, including: ○ Guidance on internal business management systems, accounting, marketing, manufacturing, and strategic planning ○ Financial assistance in the form of equity investments, loans, and bonding ○ Assistance navigating federal contract bidding, acquisition, and performance process ○ Education about international trade, strategic planning, and finding markets ○ Business development, including strategy and identifying contracting and partnership opportunities ○ General and administrative assistance, like human resource sharing or security clearance support
Academic Programs	Mentor in Residence FastForward	Developing a startup into a sustainable business presents unfamiliar challenges. FastForward accelerates the growth of early-stage ventures by providing basic legal and accounting support, access to information resources, networking opportunities and more.
	Cornell Tech Runway Startup Postdocs	The Runway Startup Postdoc Program is part business school, part research institution, and part startup incubator. The program lasts 12–24 months and incorporates academic and business mentorship.
	MyStartupXX	The mystartupXX program is a unique accelerator that was created to increase and encourage diversity in entrepreneurship, particularly women.

	AWARE: Accelerating Women And underRepresented Entrepreneurs	The program exists to support entrepreneurship training, counseling, and networking. The AWARE program seeks to aid women and underrepresented entrepreneurs through a proof-of-concept award. The AWARE proof-of-concept award provides funding to potential SBIR/STTR applicants to enable prototype development and accelerate the path toward commercialization. The program includes targeted mentorship, training, and networking opportunities.
	REACH for Commercialization	This segment introduces the commercialization process and features successful women entrepreneurs at Ohio State. Participants explore their own research programs, discuss potential ideas for commercialization and reflect upon the benefits and challenges of taking ideas to market.
	Collaboratory	The Collaboratory for Women Innovators seeks to inspire, educate, and empower women to attain leadership in all phases of the innovation lifecycle. Mentorship is an important component of Collaboratory programming. With the help of a mentor, our participants can grow professionally, overcoming barriers and taking part in new innovative endeavors.
Corporate & Non-Profit Programs	STEM to Market	STEM to Market advances STEM women entrepreneurs, cultivates intentional and inclusive investors, and develops connections across STEM entrepreneurship ecosystems.
	New York Fashion Tech Lab	The New York Fashion Tech Lab was co-founded and is produced by nonprofit venture catalyst: Springboard Enterprises. The Lab connects a select cohort of women-led, b2b, fashion & retail focused technology companies who are fostering iteration, validation, and acceleration of technologies to advance the industry.
	SCORE	Our network of resources, seminars, and classes will guide you in setting up your own minority run and operated business effectively.
	iNvictus	As the HUB of Minority Entrepreneurship iNvictus was launched to foster the entrepreneurial talent already growing in the community. We differentiate ourselves from all other coworking spaces by focusing predominantly on the issues minority entrepreneurs face in business and we address them through our iNvictus EMERGE (Entrepreneurship, Mentorship, Economic Development, Research, Growth & Education) program.
	Invent Together	Invent Together is a coalition of organizations, universities, companies, and other stakeholders

		dedicated to understanding the diversity gaps in invention and patenting and supporting public policy and private initiatives to close them. We want to close the patent gaps for women, people of color, and low-income individuals to help close wage and wealth gaps, strengthen the U.S. economy, and develop new and different inventions. Invent Together believes that everyone should have the opportunity to invent and patent. We can do this by increasing the availability of data and research on the patent gaps and by breaking down barriers based on race, gender, income, and other characteristics.

16. Formalized partnerships like tech transfer offices/conferences, accelerators, and incubators can help streamline commercialization objects such as product development, licensing, and distribution. What can be done to make these partnerships more accessible and effective at supporting all inventors or entrepreneurs?

Currently, there are several resources available to inventors and entrepreneurs. These resources include aid with product development, licensing, and distribution. Some of these resources are listed below.

Sector	Programs	Description
Government Programs	National Science Foundation (Prouct Development)	The National Science Foundation's Innovation Corps (I-Corps™) program uses experiential education to help researchers gain valuable insight into entrepreneurship, starting a business or industry requirements and challenges. I-Corps enables the transformation of invention to impact. The curriculum integrates scientific inquiry and industrial discovery in an inclusive, data-driven culture driven by rigor, relevance, and evidence. Through I-Corps training, researchers can reduce the time to translate a promising idea from the laboratory to the marketplace. NSF is developing and nurturing a national innovation network to guide scientific research toward the development of solutions to benefit society.

	National Inventors Hall of Fame® (Product Development, Licensing, and Distribution)	The mission of the National Inventors Hall of Fame® (NIHF) is recognizing inventors and invention, promoting creativity and advancing the spirit of innovation and entrepreneurship.
	Small Business Innovation Research (SBIR) & Small Business Technology Transfer (STTR) (Product Development, Licensing, and Distribution)	The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are highly competitive programs that encourage domestic small businesses to engage in Federal Research/Research and Development (R/R&D) with the potential for commercialization. Through a competitive awards-based program, SBIR and STTR enable small businesses to explore their technological potential and provide the incentive to profit from its commercialization. By including qualified small businesses in the nation's R&D arena, high-tech innovation is stimulated, and the United States gains entrepreneurial spirit as it meets its specific research and development needs. Central to the STTR program is the partnership between small businesses and nonprofit research institutions. The STTR program requires the small business to formally collaborate with a research institution in Phase I and Phase II. STTR's most important role is to bridge the gap between performance of basic science and commercialization of resulting innovations.
	The White House Initiative on Asian Americans and Pacific Islanders (WHIAAPI)	• Implement pipeline-building programs that identify and cultivate AAPI leaders;

		• Incentivize AAPIs to pursue new skills for the digital/virtual economy that enhance their ability to serve the broader U.S. community; • Ensure equal opportunities for AAPIs to pursue their dreams through higher education; • Increase AAPI representation in federal service, particularly in senior management, as well as in federal internships and in federal pipeline and mentorship programs; • Include AAPIs in diversity initiatives, particularly in workforce development programs and initiatives for entrepreneurs and businesses; • Encourage top 500 U.S. companies to embrace AAPI advancement as a corporate responsibility or priority; • Establish innovative mentorship programs for AAPI entrepreneurs and professionals; • Continue to recognize and celebrate the many positive contributions of AAPIs; and • Recognize the extraordinary challenges currently being faced by AAPI health care workers due to the COVID-19 pandemic, including from anti-AAPI biases and hate crimes.
	Invent Together (Product Development)	Invent Together is a coalition of organizations, universities, companies, and other stakeholders dedicated to understanding the diversity gaps in invention and patenting and supporting public policy and private initiatives to close them. Educating policymakers, practitioners, and the public

		about the patent gaps and the benefits of patent diversity. Supporting new research on the reasons for the patent gaps and how to close them. Promoting public and private sector initiatives to develop and institute best practices for patent diversity. Sharing stories of diverse inventors. Advocating for the Inventor Diversity for Economic Advancement (IDEA) Act, which would direct the USPTO to collect demographic data from patent applicants and owners on a voluntary basis and make this information available to the public.
Academic Programs	Association of University Technology Managers (AUTM) (Product Development, Licensing, and Distribution)	AUTM is the non-profit leader in efforts to educate, promote and inspire professionals to support the development of academic research that changes the world and drives innovation forward. Our members work closely with commercial partners to transform ideas into opportunities, resulting in the creation each year of thousands of products, services and start-ups, and millions of dollars in economic development.
	Collaboratory *(for women Inventors)* (Product Development, Licensing, and Distribution)	Diversity is critical to the success of innovation in the U.S., and research shows that there is still a significant disparity in the numbers of women entrepreneurs and innovators. The Collaboratory seeks to bridge that gap by supporting participants at various stages of personal and professional development.
	Federal Laboratory Consortium for Technology Transfer (FLC)	The FLC was organized in 1974 and formally chartered by the

	(Product Development and Licensing)	Federal Technology Transfer Act of 1986 to promote and strengthen technology transfer nationwide. Today, more than 300 federal laboratories, facilities and research centers and their parent agencies make up the FLC community. Members of the FLC community include world–renowned scientists, engineers, inventors, entrepreneurs, academia, laboratory personnel, and T2 professionals. Over the years, the FLC has made great strides in providing the tools, services, and educational resources that reflect the latest science and technology legislation through the most current technological platforms of the time. Whether it be through improved communications like social media, or by offering T2 strategy training sessions through regional grass–roots efforts, the organization has always sought to create an environment that adds value to and supports the T2 efforts of its members and potential partners. Since its charter, the organization has grown to offer myriad resources and cutting–edge tools and services aimed at making the T2 process as accessible as possible for commercialization successes.
Corporate & Non-Profit Programs	AllStar Innovations™ (Product Development, Licensing, and Distribution)	Allstar Innovations is a leading consumer products company supporting retail brands with an integrated performance-based marketing approach that includes direct response television, digital marketing and social media campaigns.

		Allstar Innovations takes products and brands from Concept to Consumer™ and solves problems for consumers by bringing only the best products to market. From product testing, engineering, product branding, performance-based advertising and product development, they have a world-class supply chain function that is unmatched anywhere in the world. Allstar Innovations has longstanding relationships with retailers, wholesalers, e-commerce sites and prides themselves on being nimble, aggressive, fast moving and most importantly, innovative. About Allstar Innovations Founded in 1999, Allstar Innovations has been directly responsible for some of the most successful consumer products in history. Allstar Innovations employs experts in direct response marketing, product development and manufacturing, and retail distribution to simultaneously build brands and drive sales.
	United Inventors Association (UIA) (Product Development, Licensing, and Distribution)	The UIA is a 501c3 nonprofit organization dedicated to providing educational resources and opportunities to the independent inventing community, while encouraging honest and ethical business practices among industry service providers.
	Edison Nation (Product Development, Licensing, and Distribution)	Edison Nation, Inc. (EDNT), is a multifaceted ecosystem which fosters innovation and drives IP, media and consumer products. Edison offers innovation sourcing, product design, sales, manufacturing, and fulfillment

		services. Edison Nation's model is to source innovative ideas to launch internally or license to brand partners. Edison Nation hopes to leverage its television property, Everyday Edisons, to become the recognized leader in the innovator community.
	Quirky (Product Development, Licensing, and Distribution)	Quirky makes inventing and selling products possible by pairing inventors with product designers and big manufacturing companies that can bring their ideas to life.
	Telebrands.com (Distribution)	Launch new consumer products on Telebrands.com that are a demonstrable solution to a clear problem and have good potential for sale in retail stores. Telebrands.com offer fair compensation to inventors on successful new products.

Revitalize USPTO Inventors Assistance Website

The current resources, while several, are scattered far and wide both geographically and electronically. As a result, inventors and entrepreneurs tend to experience difficulties in finding helpful resources. The first step that the USPTO and NCEAI can take is to bring existing resources together onto one easily navigated website. While the USPTO does have a website dedicated to inventors at this time – Inventors Assistance Center – this website is not easily navigated. Further, this website is difficult to find from the USPTO home page. Finally, from a substantive perspective, while this website provides some details on the patenting process, it lacks step-by-step details on the process of invention to commercialization. Certainly, there are no links or details to connect inventors or entrepreneurs with various resources to help with product development, licensing, or distribution.

As such, it would be particularly efficient for inventors and entrepreneurs to have one reliable and trustworthy website to turn to for every question regarding inception to commercialization. To this end, the USPTO/NCEAI could create an all-inclusive website that brings together all different resources for inventors and entrepreneurs in a step-by-step process that is easy to follow. This website could be featured as an easily accessible button on the USPTO website. In addition to the step-by-step process of invention to commercialization/distribution, resources relating to product development, licensing, and distribution could be included via clear links on this website.

Before bringing resources together, the USPTO and NCEAI could consider developing guidelines or minimum standards for assisting inventors and entrepreneurs. These guidelines or minimum standards could serve as a safeguard to protect inventors and entrepreneurs from

misinformation or fraud. Organizations that would meet the guidelines or minimum standards could be made eligible for consideration to be referenced on the USPTO website.

Examples of guidelines or minimum standards could include:

- Only non-profit organizations will be referenced on the USPTO website; and
- Only organizations that actively foster diversity, equity, and inclusion will be referenced on the USPTO website.

Partnerships

The USPTO could create and lead a handful of partnership programs with organizations like IPO and its affiliated education foundation, IPOEF, the National Science Foundation or the Association of University Technology Managers. For an academic partnership example, one national incubation/accelerator program could be established in partnership with a long list of universities and colleges across the US. For a non-profit partnership example, one national incubation/accelerator program could be established in partnership with a variety of non-profit organizations (e.g., Edison Nation and United Inventors Association). For a government partnership example, one national incubation/accelerator program could be established in partnership with a variety of governmental organizations (e.g., National Science Foundation and National Inventors Hall of Fame).

The partnerships could be clearly described and outlined on the new and improved USPTO inventors assistance website described above. These partnerships could offer easy access to product development, licensing, or commercialization opportunities to inventors and entrepreneurs. Additionally, these partnerships can help to cross-promote events/programs from organizations that might not be visible to inventors – especially diverse inventors.

New Resources

Finally, new resources – beyond the ones listed hereinabove – would be helpful. These new resources include some of the ones mentioned hereinabove: a new and improved USPTO inventors assistance website and a select few national partnerships with organizations. Some other new resources that the USPTO and NCEAI can consider creating include: international partnerships with non-profits, universities, and colleges to encourage global product development, licensing, and commercialization opportunities for inventors and entrepreneurs.

17. Please provide any other comments that you feel should be considered as part of, and that are directly related to, the development of a national strategy to expand the innovation ecosystem demographically, geographically, and economically.

An important aspect for moving innovation with respect to under-represented groups is to understand the extent of the issue, and then track improvements with regard to innovation and commercialization.

It is imperative that the USPTO develop a system that tracks diversity in innovation. For example, the SUCCESS Act report to Congress in October 31, 2019 (link) includes a section on data collection. As indicated in the report, over 60% of the written responses suggest that the USPTO collect this data. Other responses suggest that a third party collect this data. For example, the

USPTO may consider partnering with universities on more detailed studies on diversity issues and innovation, or with the non-profit Invent Together. Either way, this information is important, and needs to be collected so that we can track improvement in this area.

This response includes comments prepared by the following members of IPO's Women in IP and Diversity and Inclusion Committees: Sarah Hooson, Michelle Bugbee, Leslie Spencer, Vaishali Udupa, Tina Dorr, Meredith Struby, Krista Kostiew, Shruti Costales, Edward Kim, Ayana Marshall, Elaine Spector, and Sandra Nowak.

Thank you for considering our comments. We welcome the opportunity to provide additional information and express our continued interest in working with NCEAI on our mutual strategic objectives to foster a diverse and inclusive innovation ecosystem.

Sincerely,

Daniel J. Staudt
President