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FutureForward



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Ohio State ADVANCE



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Managing Director  
Office of Technology Management  
Washington University in St. Louis



## AGENDA

- The Value of Diversity
- Best Practice Programs
- What Drives Program Success
- Lessons Learned & Recommendations
- WI-SIG Women Inventor's Toolkit
- Q&A



**What are the next game changers we will face?**

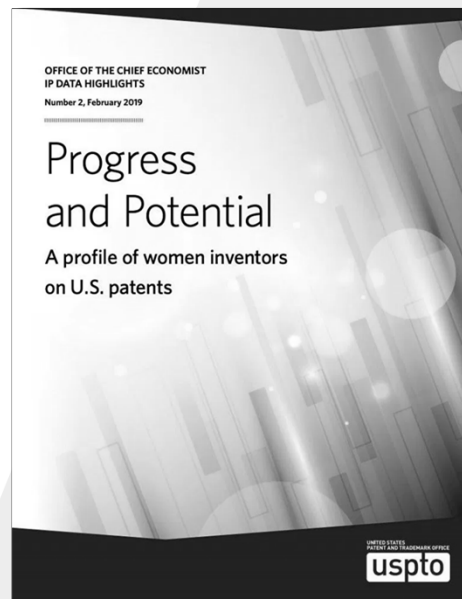


## 53% vs. 12%?

**53%** of PhD awardees in the US are women.

Only **12%** of patents are held by women\*

\* According to the 2019 USPTO Progress and Potential report



## Changing the Paradigm will deliver Exponential Impact



**Jessica Winter**  
Core Quantum Technologies



**Carolyn Durham**  
Renovion



## The Economic Opportunity

Closing the gender and racial gap in the U.S. innovation process could increase U.S. Gross Domestic Product per capita by 2.7 percent.





## **Congress Takes Action**

### **SUCCESS ACT**

Study of **Underrepresented Classes**  
Chasing Engineering and Science

### **IDEA ACT**

Inventor **Diversity** for Economic  
Advancement



## **Best Practices In Women's Entrepreneurship Programs**

### **REACH for Commercialization™**

Ohio State ADVANCE, Ohio State University

### **Women in Innovation & Technology (WIT)**

Washington University in St. Louis

## REACH for Commercialization™

Mary Juhas & Caroline Crisafulli  
Ohio State ADVANCE  
Office of Research

AUTM Webinar  
October 10, 2019

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## REACH for Commercialization™

- NSF ADVANCE IT grant awarded in 2008
- REACH launched in 2010
- Signature program of Ohio State ADVANCE
- Office of Research reporting line
- REACH amplifies the impact of REseArCH!










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**THE OHIO STATE UNIVERSITY**

female inventors and their inventions View 3+ more

						
Grace Hopper	Hedy Lamarr	Mary Anderson	Josephine Cochrane	Marie Curie	Stephanie Kwolek	Marie Van Brittan Brown

Google Blogoscoped

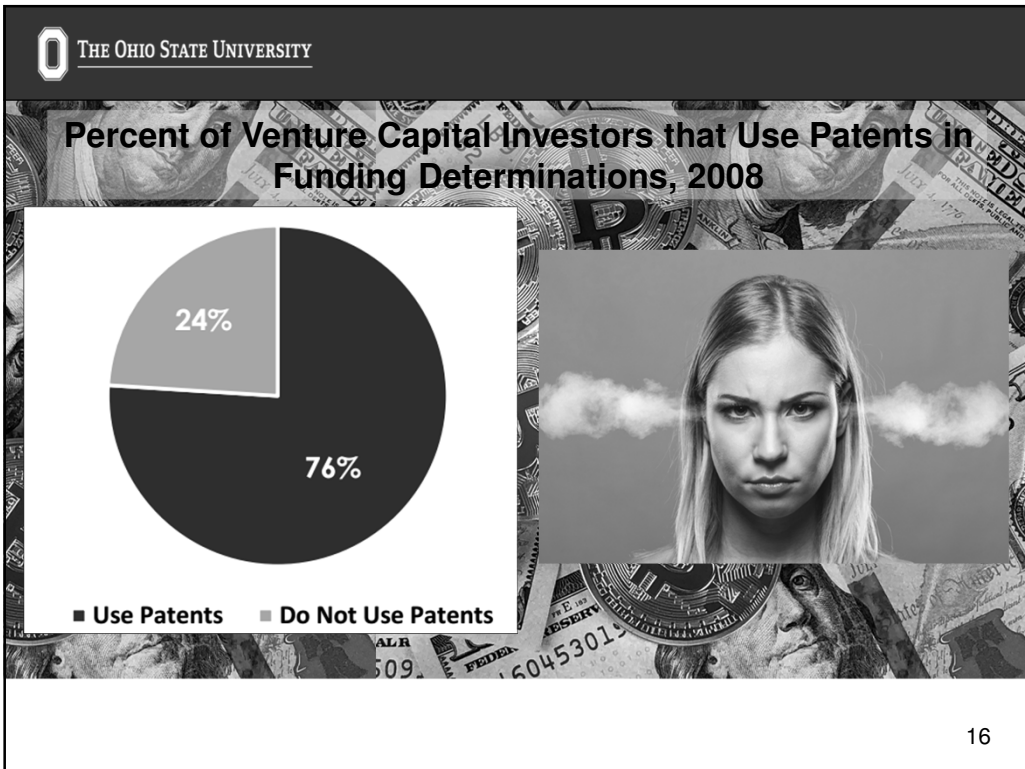
Google Stops "Did You Mean: He Invented" <https://www.blogoscoped.com/archive/2007-05-24-36.html>  
 May 24, 2007 - she invented, -> Did you mean: he invented. she scored, -> Did you mean: he scored.  
 she instructed, -> Did you mean: he instructed.  
 You've visited this page 4 times. Last visit: 10/6/17

Madonna as Influencer: The 9 Major Cultural Trends That She Invented <https://www.wmagazine.com/story/madonna-influence-culture-trends-yoga-fashion>  
 1 day ago - In celebration of Madonna's 60th birthday, a look at all the cultural trends we to thank her for. The world would look different without Madonna in ...

Paris Hilton Said She Invented the Selfie. We Set Out to Find the Truth ... <https://www.nytimes.com/2017/11/20/style/paris-hilton-selfie.html>  
 Nov 20, 2017 - The hotel heiress tweeted that she and Britney Spears had pioneered the method in 2006. Here's our investigation.

She was the one who invented the miniskirt - CodyCross Answers [codycrossanswers.com](http://codycrossanswers.com) > Game  
 Here are all the She was the one who invented the miniskirt answers. CodyCross is an app developed by Fanatee. Are you looking for never-ending ...

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## REACH 2019 Cohort



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**WHAT IS REACH?**



 THE OHIO STATE UNIVERSITY



# Learning the Landscape


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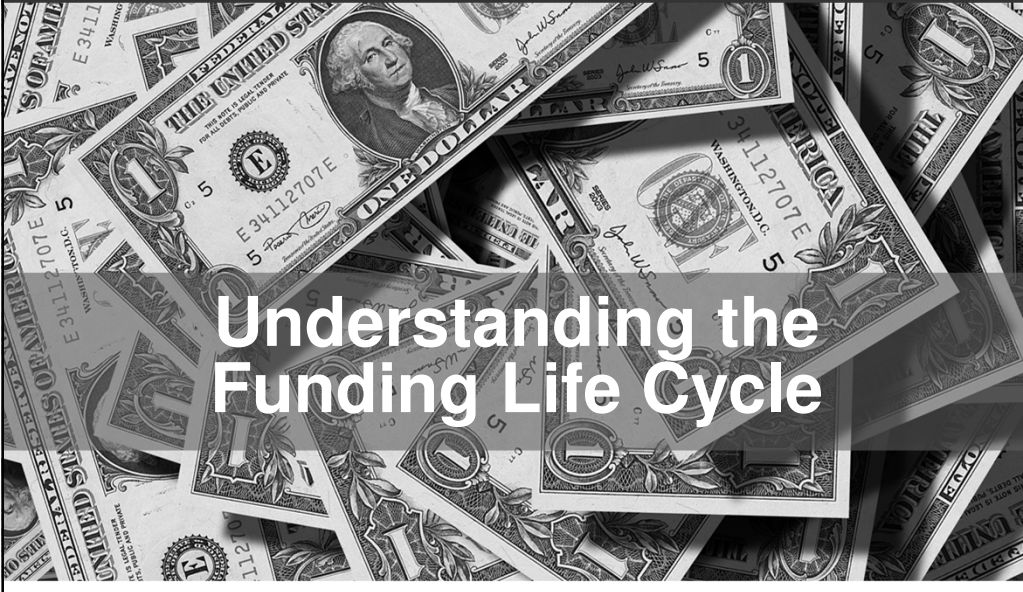
 THE OHIO STATE UNIVERSITY



# Building a Team

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 THE OHIO STATE UNIVERSITY

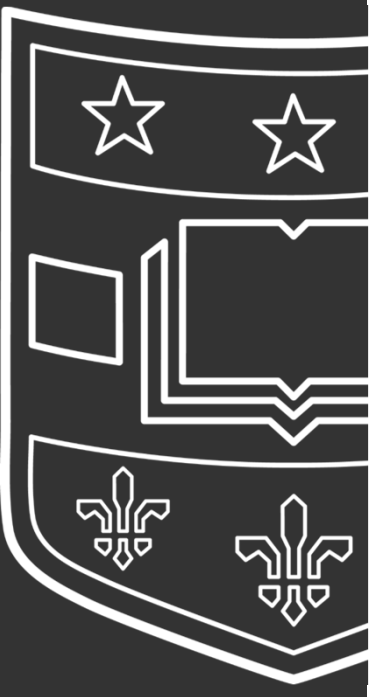



# Understanding the Funding Life Cycle

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Washington University  
Women in Innovation &  
Technology (WashU WIT)


Primary Goals/Objectives



 Washington University in St. Louis



## Addressing the Gap



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Lack of previous exposure to commercial activities

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Not invited to participate

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Difference in risk profiles

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Uncomfortable with "selling" their science or making "grandiose" statements

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Extracurricular activity – work and home trade-offs

---

Lack robust networks

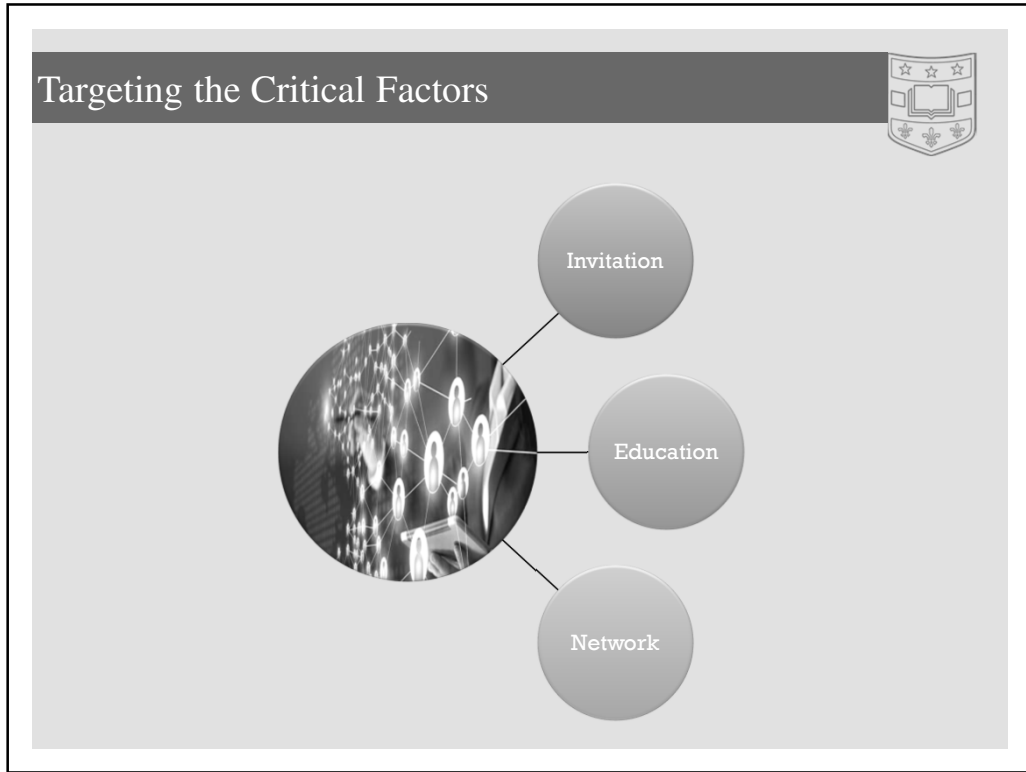
Stephan, 2007

## Providing the Opportunity



If women are educated in the "language" of commercialization, then female academics participated at similar rates to their male counterparts.

Whittington, 2011



### WashU WIT Program Focus

Washington University in St. Louis

The slide has a dark background. On the right side, there is a large, white-outlined crest logo of Washington University in St. Louis, featuring two stars at the top, a shield in the center, and two fleur-de-lis symbols at the bottom. The text 'WashU WIT Program Focus' is positioned on the left side, and the full name 'Washington University in St. Louis' is at the bottom left.

## Piloting a Women's Innovator Program



- Initial Commitment from WashU Provost
  - Grant recipient of Provost Award for Diversity and Inclusion
  - Aim 1: Track female innovator activity at Washington University
  - Aim 2: Design programming to build a community of women innovators based on education and building networks
- Data Gathering
  - Gender data directly from HR and mapped to employee ID
    - Self-reported gender to HR
    - HR is the “keeper” of demographic data
  - Data mapped to engagement in various tech transfer activities
  - Other data collected includes title per HR, tenure status, date of tenure
- Barriers to Data Gathering



## Designing a Program



### Cohort Model 2014-2016

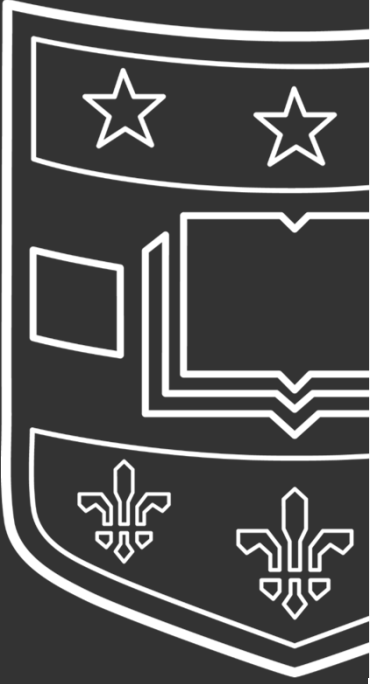
- Run for 3 years
- Approximately 20 individuals/year (mostly faculty, some post-docs)
- 4 event commitment
  - Understanding tech transfer
  - Seminar
  - Translating academic research
  - Seminar
- Every event included heavy representation from ecosystem with networking


### Current Model 2017-present

- Modular & flexible to accommodate schedules & bring more voices to the conversation
- 2 core events
  - Initial gathering – usually a luncheon
  - Symposium
- Ad-hoc events
  - Industry visits
  - Breakfast speakers
  - Educational topics (SBIR/STTR)

WashU WIT

Program Target



 Washington University in St. Louis



**WIT Program**

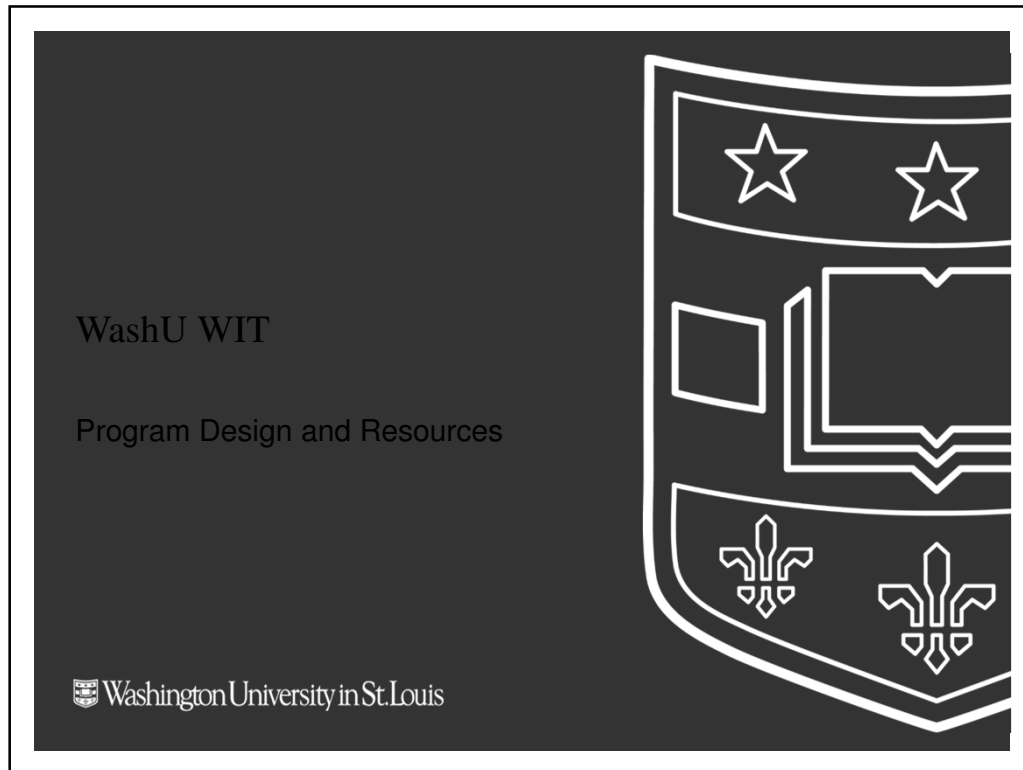
**More than 300 women engaged**

**Flexible Programming**

- Industry visits
- Breakfast speakers

**ore  
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elebratory luncheon  
mposium**




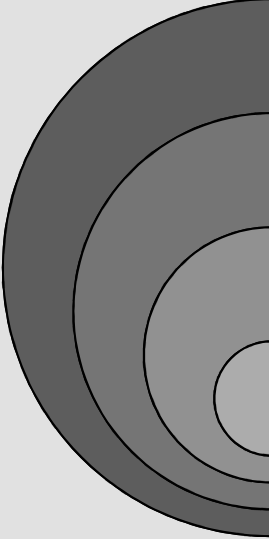


## Outreach & Needs


- Cohort outreach took effort
- Current program is modular & flexible
  - Runs on marketing, reference, personal invitation
- Luncheon & symposium agendas serve previous participants & welcomes new participants
- Ad-hoc events can be by invite only
  - Way to engage university leadership in thinking about issues
  - Way to demonstrate relevancy to university leadership
  - Topics range from industry sponsored research to understanding IP to startup company basics, etc.
- Flexible scheduling enables everyone to be brought into the model and retain network and connections
- Flexible scheduling works for women

## Ongoing Resources



	<h3>Data Collection</h3>	<ul style="list-style-type: none"> <li>• Annual data collection is ongoing &amp; streamlined</li> <li>• HR is a partner</li> <li>• Plans for expansion to support other diversity factors</li> </ul>
	<h3>Time of TTO Staff</h3>	<ul style="list-style-type: none"> <li>• Most costly in terms of effort and time away from core duties</li> <li>• Team loves to be involved – it's an impact effort</li> </ul>
	<h3>Programmatic Events</h3>	<ul style="list-style-type: none"> <li>• Funded by TTO</li> <li>• Sponsorship helps defray the costs</li> <li>• Symposium &amp; initial event are real costs</li> <li>• Ad-hoc events are inexpensive and easy to absorb by the TTO</li> </ul>
	<h3>Commitment of Experienced Individuals</h3>	<ul style="list-style-type: none"> <li>• Community engagement/commitment is amazing</li> <li>• Overwhelming support outside of St. Louis from other female entrepreneurs</li> </ul>

## Considerations for Creating a Program



<b>Program time &amp; length</b>	<b>Commitment required by participants</b>	<b>Creation of the network</b>
<b>Time &amp; resources available</b>	<b>Who needs to buy-in?</b>	<b>Opportunities to partner</b>



# What Drives Program Success?

## Evolution of REACH

	Initial	Current
Career Status	Tenured	Pre-tenure and tenured
Discipline	STEM	All disciplines
Location	On campus	Rev1 Ventures
Offering	4 workshops	Year-round programming
		<ul style="list-style-type: none"> <li>• 4 core workshops</li> <li>• Constellation small group workshops</li> <li>• Individual mentoring</li> </ul>

## Director of Innovation: An Entrepreneurial Therapist

- Former co-founder of venture backed medical device start up company
- Knowledgeable on all aspects of commercialization process
- Dedicated resource available year-round
- Provides concierge service
- Personalized follow up with every participant
- Develops additional programming based upon participant needs
- Connects participants to collaborators and to innovation ecosystem
- Builds confidence through awareness and career development skills

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## Constellation Workshop Topics

**Categories**

- Technology Commercialization Office/Rev1Ventures
- Visibility and Promotion
- Professional Development
- Market Skills and Funding

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# Key Partners



TECHNOLOGY  
COMMERCIALIZATION



STRATEGIC PARTNERSHIPS

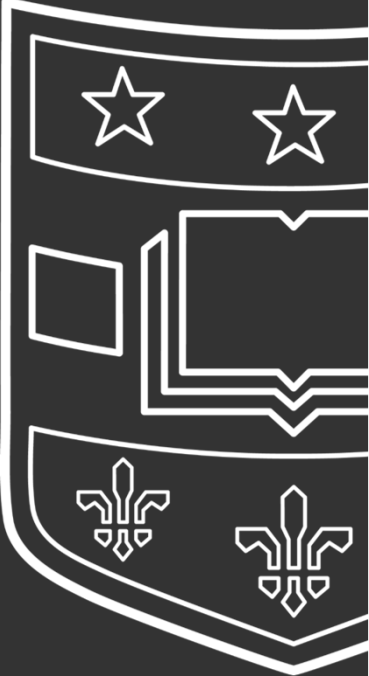



NEW VENTURES




WashU WIT

Measuring Success



 Washington University in St. Louis


# External Metrics



**2018 AAMC  
Innovations in  
Research and  
Research  
Education Award**

The primary goal of this year's awards program is to highlight innovative Institutional Models to Promote Tech Transfer, Entrepreneurship, and Research or Research Education Partnerships with the Private Sector. The three awarded projects were selected by a panel of leaders in biomedical research, education, and training from AAMC-member institutions as well as AAMC staff. Entries were judged on creativity, impact, and feasibility of replication of innovation.

**First Prize Winner -**  
**Women in Innovation and Technology (WIT)**  
*Washington University in St. Louis - Nichole Mercier, PhD*



Technology and Innovation, Vol. 19, pp. 685-699, 2018  
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ISSN 1949-8241 • E-ISSN 1949-825X  
<http://dx.doi.org/10.21300/19.4.2018.685>  
[www.technologyandinnovation.org](http://www.technologyandinnovation.org)

**ENGAGING WOMEN INNOVATORS: ANALYTICAL SUPPORT FOR WOMEN INNOVATOR PROGRAMMING IN UNIVERSITY TECHNOLOGY TRANSFER**

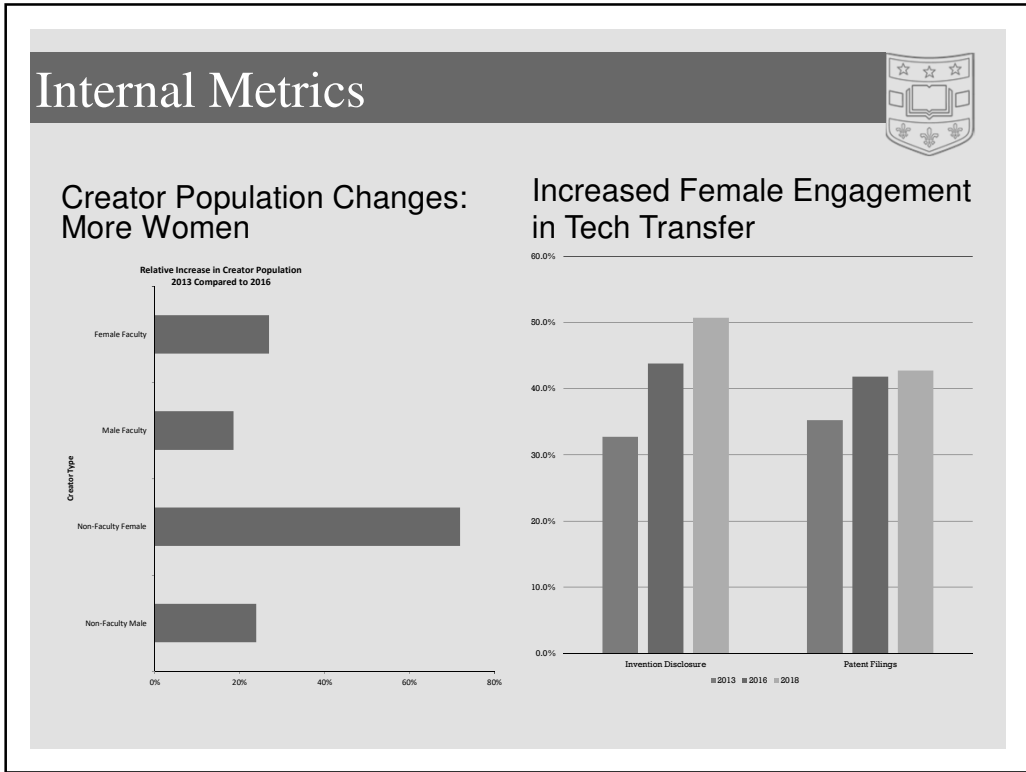
**Nichole R. Mercier<sup>1</sup>, Varsha Ranjit<sup>2</sup>, and Robert J. Reardon<sup>1</sup>**

Technology and Innovation, Vol. 19, pp. 671-683, 2018  
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ISSN 1949-8241 • E-ISSN 1949-825X  
<http://dx.doi.org/10.21300/19.4.2018.671>  
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**GENDER DATA GAP: BASELINE OF U.S. ACADEMIC INSTITUTIONS**

**Kathleen Sohar<sup>1</sup>, Nichole Mercier<sup>2</sup>, Lisa Goble<sup>3</sup>, Forough Ghahramani<sup>4</sup>, and Bethany Loftin<sup>5</sup>**



## Role Models in Entrepreneurship

**2014**

No female faculty founders or BOD

**Today**

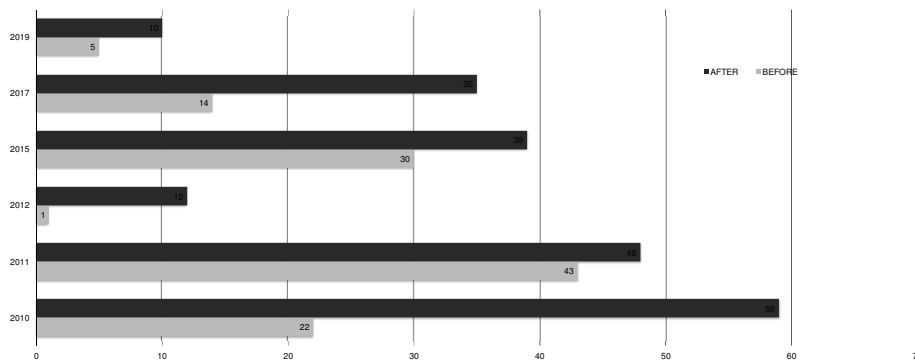
- WashU Startup: SBIR & female faculty founder
- WashU Startup: SBIR, Investor, female faculty founder
- WashU Startup: VC backed & female faculty founder
- 3 IP licenses where female inventor has BOD appt.



# Lessons Learned

## Impact

Effect of REACH on Invention Disclosure Activity



NOTE: 2012 was a 2-day conference with participants from several universities and limited OSU participation.

## REACH: Key Features

### Flexible

- Constant resource, available when fits and when relevant
- Individualized mentoring, meet faculty where they are

### Iterative

- Flash surveys after each session, pre and post assessment under IRB protocol
- Customer Discovery - what do the participants want and not want

### Multidisciplinary

- All disciplines represented, diversity of experience and expertise

### Upstream

- No “product” idea required, encourage even latent ideas
- Safe environment, gain confidence

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## 10 Years of Lessons Learned

- Authentic and relatable speakers – the good, the bad and the ugly
- Supportive university leadership on panels and networking
- During work hours; Friday afternoons; good food, networking and happy hour
- Interactive sessions in safe, confidential environment with vibrant Q & A
- Vetted speakers; no “mansplaining” or “manels”
- Closed sessions; eliminated “observers”
- College-centric recruiting sessions were ineffective
- “Commercialization” in program title is off-putting

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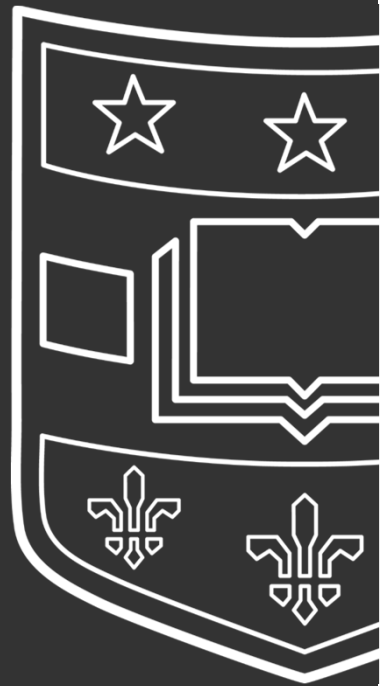
Thank you

Contact

[crisafulli.1@osu.edu](mailto:crisafulli.1@osu.edu)

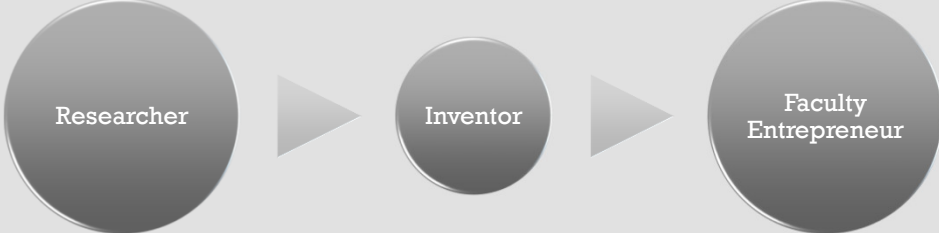
[juhas.1@osu.edu](mailto:juhas.1@osu.edu)

WashU WIT  
Lessons Learned



## WIT Now & Future

- WIT programming “...improve[s] engagement of female faculty at every stage of the process—through education of trainees and faculty that don’t yet consider themselves “inventors,” direct support of those of us who do, and frequent networking opportunities. We are so grateful.” – Dr. Audrey Odom John



```

graph LR
    A((Researcher)) --> B((Inventor))
    B --> C((Faculty Entrepreneur))
  
```

## EQUALIZE – June 24-25, 2020

*A National Symposium & Pitch Competition to Empower Academic Women Entrepreneurs*

- Partnership between Washington University in St. Louis & OUP
- Goals:
  - Take national action around the disparity of female academic inventors forming university startups
  - Create a sustainable effort to drive women-founded university startups.
  - Promote women inventors with startup technology to engage the investor and corporate community
  - Bring together academic researchers/inventors with investors and corporates
- Actively seeking sponsors

<https://equalize.wustl.edu> 

## EQUALIZE: Event Details



### Applications

- *Applications due Nov. 15*
- Applicants:
  - Woman with an academic appointment;
  - Research project that could enter the clinic or marketplace within 4 years;
  - Pending or issued patent held by at least one presenter
- Life sciences focus – therapeutics, med device, diagnostics, tools

<https://equalize.wustl.edu>

### Logistics

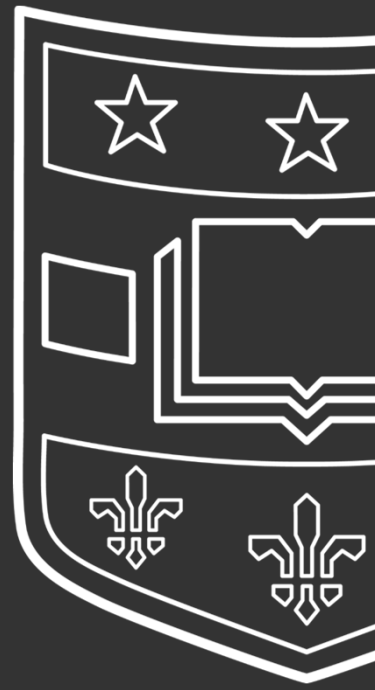
- St. Louis, MO – Cortex Innovation District
- June 24-25, 2020
- 1:1 coaching for applicants by entrepreneurs, investors, corporates
- National discussion around the disparity of women in patenting and entrepreneurship

 EQUALIZE 2020

Nichole R. Mercier, PhD  
nmercier@wustl.edu

314-747-1903

 Washington University in St. Louis





WOULD YOUR UNIVERSITY BENEFIT FROM  
INCREASING THE POOL OF DISCOVERIES  
FOR COMMERCIALIZATION?



The unique perspectives of women faculty and researchers provide a rich untapped source of opportunities for commercialization. Engaging their participation often requires employing new approaches.

*The AUTM Women Inventors Committee is pleased to assist with our newly launched Toolkit for Women Inventor Programs:*  
[autm.net/autm-info/leadership/committees/women-inventors-committee/barriers-subcommittee/](http://autm.net/autm-info/leadership/committees/women-inventors-committee/barriers-subcommittee/)

Check out our website to learn about the insights we've gathered from over ten successful university programs. You will discover:

- Approaches TTOs are using to proactively engage with women faculty, scientists and researchers
- How to define and jumpstart your own initiative
- Ways to get started, even with limited resources

## WI-SIG Women Inventor's Toolkit



### **Equity, Diversity, and Inclusion (EDI) Committee**

Lack of diversity is costly, decreases employee retention, and discourages innovative thinking.

**Purpose:** provide guidance, feedback and support to Board of Directors and AUTM Staff

**Focus:** identify ways to provide AUTM members with tools and actionable suggestions to increase diversity and improve inclusivity in the technology transfer workplace and in the communities they serve

