# Closing the Diversity Gap

*Closing the Diversity Gap: Attracting and Retaining Talent*

Roughly 56% of women leave the technology industry by the mid-level point in their careers. These women are often driven out of a promising career in tech by a number of factors including institutional barriers and gender bias. Our question is: What about the other 44% who stay in tech?

We launched a survey to uncover the key factors and winning strategies of the large bench of women who stayed and thrived in their tech careers.

## BENEFITS

— Understanding why women stay provides an opportunity for women in tech and employers to explore new ways to close the technology gender gap.

— Attracting and retaining talented, diverse teams drives product innovation

## IMPLEMENTATION

Capital One's Women in Tech survey contained 36 questions, distributed online and answered by a national sample of women in the U.S. who currently work in technology fields or worked in technology fields in the past.

Conducted by global public opinion and data company YouGov, the Women in Tech survey polled a national sample of 250 women who have remained in tech careers at least eight years and attained senior roles and, to contrast experiences, 200 who left the industry after three or more years and no longer work in tech.

## IMPACT

Beyond identifying how to build robust retention strategies, the Capital One WIT survey helps destroy the myth and stereotype that women don't like tech. Puncturing that myth is critical to both keeping female tech workers in the workforce and attracting young girls and women to the field.

The results of the survey* revealed that most women enjoyed and were good at the technology work itself, whether they left tech mid-career or remained in the industry. This debunks a myth that women aren't well represented in the tech industry because they don't like the work or lack what it takes to succeed.

The survey results highlighted that *something else* went wrong— something about their environment or circumstances got in the way of an otherwise fulfilling career. Of the women who left, the top three reasons were lack of management support, lack of advancement and lack of work/life balance. Only 2% of these women cited being unhappy with the work itself as a reason for leaving. In contrast, the women who stayed cited good and fair compensation and flexibility as top X-factors of success.

The results are closely tied to the work that Capital One has built since the inception of the Women in Tech program in 2014. Our program was formed in 2014 as a working group and has grown into a company-wide movement to connect women and allies of all backgrounds in local chapters across the world. Consistent with the top factors that keep women in tech, we focus on leadership to create role models, creating peer groups and allies, and development and enhancement of our diverse technology workforce. We drive tech training, challenging and purpose-driven assignments, and professional development opportunities to keep our women growing and thriving in tech careers.

* The WIT survey key findings were released in October 2019.

## ACTIONABLE RECOMMENDATIONS

Identify and employ strategies that support women in ways proven to leverage their strengths, foster their growth, and advance their technology careers. Find more context on Capital One's 'Best Practices' in the Women in Tech fact sheet.

**Give women challenging and rewarding work** with opportunities for advancement by identifying the right assignment for the right person and providing visibility.

Value and **leverage problem-solving orientation** and expertise as a differentiator in the recruiting process.

**Target community colleges** for great and driven talent that come from more diverse backgrounds.

**Provide continuous skills development and training** that cultivates a growth mindset culture.

**Ensure that women are paid fairly and promote work-life balance for all employees** by offering flexible work schedules and embracing pay equity practices.

**Increase retention by pledging resources that enable women to connect and engage with mentors and peers** through internal and external networks.

**Empower women** to thrive in technology careers by deepening their sense of purpose which fosters greater resilience and grit.

**Provide education internally and externally about the real reasons women leave tech.** Combat the industry narrative that women don't like the work through regular conversations and intentional presentation of female tech leaders to the workforce.

### CAPITAL ONE WIT SURVEY RESULTS

*X-factors that demonstrate differences between the experiences of women who stayed and women who left:*

**ROLE MODELS:** *Among women who stayed in tech, 75% had women role models at their company, while 44% of women who chose to leave tech did not.*

**PEER GROUPS:** *Women who stayed and succeeded in tech are twice as likely to say that peer groups of other women, both within and outside their companies, are very important for work success (45%) compared with women who left (23%).*

**TRAINING:** *Of the women who stayed and succeeded in tech, 56% agreed or strongly agreed their training was superior to their peers, compared with only 34% of women who left tech.*

### LEARN MORE >

New Capital One Survey Shows How Companies Can Retain More Female Technologists, Forbes

7 Factors Women Look For In An IT Employer — And How To Address Them, CIO.com

Research on women in tech and why they leave the industry: **https://anitab.org/resources/**

### CONTRIBUTORS >

**Julie Elberfeld,** Former Senior Vice President, Card Technology and Executive Sponsor of Diversity and Inclusion for Technology, Capital One

**Christine Chiu** and **Whitney Walton,** AnitaB.org Partnership Success

*AnitaB.org is a social enterprise founded on the belief that women are essential to building technology the world needs. We envision a future where the people who imagine and build technology mirror the people and societies for whom they build it. Learn more about TEF and our other programs at **AnitaB.org/Events-Organizations***

2019 Technical Executive Forum (TEF) Lightning Talks and Roundtable Discussions / **Capital One**

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# CAPITAL ONE CASE STUDY
# Closing the Diversity Gap

**Capital**One®

*Closing the Diversity Gap: Driving Innovation in Conversational AI*

Eno, Capital One's gender neutral intelligent assistant, understands the different ways that customers talk about money. In order to deliver the best possible experience to our users, it was important to build Eno on a platform that deeply understands financial services terms. We trained a language model for banking and we decided to build our own natural language processing (NLP) technology.

Capital One is committed to delivering a human-centered experience each and every time we interact with a customer. Building our own NLP system for Eno was a great way to ensure that.

Eno was designed rapidly, in less than three months, using machine learning methods to incorporate a wide range of diverse user needs into the product. Capital One's design process for Eno enabled the benefits of diverse thinking to serve the widest possible audience.

## BENEFITS

— Building and designing technology for humanity improves our customer interactions.

— Having a diverse and inclusive team led to the decision to have Eno be intentionally gender-neutral and continue to be reflective of the broad customer base we serve.

## IMPLEMENTATION

Margaret Mayer, Managing Vice President of Software Engineering, led a team that helped to create the technology behind Eno. Creating the sophisticated NLP architecture to ensure Eno could understand nuances in human communication took an amazing amount of hard work, creativity, and collaboration.

Eno was built using real customer conversations from chat logs. Our algorithm and platform leads worked closely with customer support teams to analyze hundreds of thousands of web chats between customer service representatives and real customers. Developing a backstory for Eno and deciding how it "views the world and itself" was critical for designing how it would show up in an experience and what language and words it uses in order to be reflective of the broad customer base Capital One serves.

In building Eno, the team focused on:

— Incorporating things Eno likes and doesn't like and its sense of humor (ask Eno for a rhyme or a dad joke).

— Being transparent that Eno is a bot to avoid people inadvertently believing they are communicating with a human being.

— Designing character flaws, for building empathy and understanding with customers, a visual representation and identity, and developed character boundaries.

## IMPACT

Capital One machine learning engineers trained Eno on real customer conversations and leveraged their corporate culture and values, building a rich and layered language model and diversity, equity, and inclusion into their product. Putting effort into careful character design allowed the Capital One team to bring humanity into the customer experience and create a product to reflect, mirror, and inspire the society we have today.

## ACTIONABLE RECOMMENDATIONS

**Leverage corporate culture and values** to build diversity, equity, and inclusion into the development of teams and inclusive products and services that mirror society.

**Create DEI checkpoints throughout the entire product development process** by building diverse teams from the beginning, including recruitment teams and interview panels who are aware of the company resources.

*Eno's gender-neutral persona was the result of a diverse team for its launch and is critical for its continued evolution.*

**Encourage inclusive design by asking your teams:**

*How do we design character and humanity for a non-human system?*

*How do we innovate artificial intelligence and machine learning by building products that mirror our own society and the wide variety of people's backgrounds, interests, and representation?*

**Educate and inspire customers** by addressing bias, harassment, and inequity through technology.

**Evolve your teams and services along with technology** (web, mobile, SMS) for maximum innovation

**Reframe limitations** as an opportunity to innovate

MORE ABOUT ENO:

*The NLP system allowed Eno to deliver a human-centered experience to its customers by being equipped with:*

— *A deep understanding of financial services terms*

— *Knowledge of more than 2,200 terms and emojis people use to ask about their account balances, including recognizing synonyms, misspellings, and abbreviations*

— *Ability to respond to conversations, not commands, i.e. customers don't need to respond "yes" or "no" and can respond with any combination of responses from "yep" to a thumbs up or thumbs down emoji*

— *Conversational context where interactions can be continued where they left off during a several hour window*

### LEARN MORE >

PRESS ABOUT ENO:
Margaret Mayer MVP of Conversational AI at Capital One Talks Voice Assistants, Alexa, and Eno, Voicebot.ai

Capital One's Intelligent Assistant: Why We Built Eno's NLP Tech in House, Medium

### CONTRIBUTORS >

**Margaret Mayer,** Managing Vice President, Software Engineering for Messaging, Conversational AI and Innovation Platforms, Capital One

**Christine Chiu** and **Whitney Walton,** AnitaB.org, Partnership Success

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**CLOSING the DIVERSITY GAP: FROM ATTRACTING & RETAINING TALENT to DRIVING INNOVATION and CONVERSATIONAL AI**

with JULIE ELBERFELD & MARGARET MAYER

10·3·19

graphic footprints ALICIA BRAMLETT

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**① "You don't want a job in tech"**

"Retention is an important corporate strategy for ensuring the health and competitiveness of a company's technology team. Beyond identifying how to build robust retention strategies, the Capital One WIT survey helps destroy the myth and stereotype that women don't like tech. Puncturing that myth is critical."

**② "Leaving tech vs. moving to a different tech company?"**

Capital One's Tech College program offers over 250 online and in-person training classes from the latest dev ops practices, to machine learning, to newer mobile languages, to how to create better presentations. It's open to associates in technical and non-

technical roles alike, as we believe in supporting learning regardless of role or background.

**③ "X-Factors for the 44% of women who stay in tech"**

"Companies wishing to remain competitive by attracting or keeping more female tech workers must find ways to provide them with challenging and rewarding work, fair pay and a clear path for advancement, the right training at the right time, and opportunities to connect with mentors and peer networks."

**④ Gender neutral**

"Capital One deliberately created Eno to be gender-neutral and have a gender-neutral name. Making Eno gender-

neutral freed us in a sense because we didn't have to worry about evoking any biases. We could just focus on solving customer problems."

**⑤ SMS Channel**

"Texting with Eno is like texting with a friend. Customers can communicate naturally and conversationally — and don't have to adapt to a machine's way of talking in binary code."

**⑥ Diversity of experience unlocks innovation**

"Creating the sophisticated NLP architecture to ensure Eno could understand nuances in human communication took an amazing amount of hard work, creativity, and collaboration with a diverse team."