CITY OF TULSA
CITY EXPERIENCE
Mayor's Office of Resilience and Equity

Tulsa Women's Commission

Regular Meeting | November 1, 2024 | 12:00 - 1:00 pm

City Hall at One Technology Center | Committee Room 411

Meeting Minutes

Commissioners Present: Premadonna Braddick, Mary Quinn Cooper, Dezeray Edwards, Ashleigh Frohrip, Charisa Jacobs, Dr. Laura Latta, Janet Levit, Amy Mariska, Kate Neary, Maria Carlota Palacios

Commissioners Absent: Susan Crenshaw, Betsy Jackson, Deidra Kirtley, Dr. Meg Myers Morgan

Mayor's Appointee Present: Susan Bynum

I. **Call to Order**
    a. Chairwoman Latta called the meeting to order at 12:05pm.
II. **Approval of Meeting Minutes**
    a. Chairwoman Latta entertained a motion to approve the September and October Meeting Minutes.
        i. Commissioner Quinn Cooper made a motion, Commissioner Someone seconded.
        ii. Aye: 10, No: 0
    b. Motion carried, minutes approved.
III. **Reflections from Abisoye Ajayi's (Tulsa Innovation Labs) Presentation**
    a. Chairwoman Latta prepared a one-page recap of the Abisoye Ajayi's presentation from the October meeting (Appendix 1). Printed copies were made available to commissioners.
    b. Opened the floor for comments related to women's opportunities in the tech industry.
        i. Susan Bynum reflected on how amazing Abisoye was as a presenter.
        ii. Lexi will send a link to October's meeting recording so folks who weren't present can easily watch.
        iii. Commissioner Palacios: Did she talk about how information is going into high schools to get kids excited?
            1. Chairwoman Latta: The group posed this question, knowing that STEM pathways start before higher education. It is a challenge and

need to think about pipeline for women to be trained in these professions.

iv. Chairwoman Latta: It's helpful to know what barriers exist and how to adjust for them.

IV. Discussion: Removing Barriers to Access in Technology Fields/Tech Training Programs

a. Chairwoman Latta asked Commissioner Edwards to share her knowledge and experience with opportunities and barriers for women to access technology fields. They shared a slide presentation with information (Appendix 2).
b. Commissioner Edwards reviewed many of the sub-specialties within the tech industry and what desired education/certifications are.
c. Chairwoman Latta shared what the Tulsa Higher Education Consortium offers as a resource – search for tech-related degrees and will show results for all degree program options across all higher education institutions in THEC. There are programs out there, but still specialized certifications are hard to come by.
    i. Susan Bynum noted that each program has a unique focus.
d. Commissioner Levit: How many seats available in all of these programs? Want to know what percentage of students are women. There are many disincentives for women to come to Oklahoma.
e. Commissioner Edwards noted gap in certification programs which are needed to prepare folks for next level edge in a competitive job market.
    i. Many of the major players in tech (ie Google, Amazon, Microsoft, Cisco) have created their own certification programs to address need for tech industry professionals to know how to use tools and equipment.
f. Chairwoman Latta: There are many intersecting issues that make it difficult for women to access these careers.
g. Chairwoman Latta: What is within our control? Opportunity to advocate for women's training programs or other mechanisms to support women in these fields. We have this information, now what?
    i. Commissioner Palacios: Make it public, motivate people to talk about it.
h. Commissioner Jacobs: Is Tulsa Tech up to date on what is coming? Is training updated to prepare students to be ready for these new opportunities?
    i. Commissioner Edwards: The tech industry is changing so much, information can quickly become outdated. Tulsa Tech is good at fulfilling the niche of foundational networking technicians and company IT support.
i. Commissioner Mariska: Are there indicators in state testing for students to know that they have aptitude for a tech related career?

j. Chairwoman Latta brought us back to the process moving into the next year. Will learn about a topic and put together an information one pager. Is this a helpful way for us to explore the gaps and needs for women?
    i. Commissioner Palacios suggested assembling a booklet, can have focus groups and distribute throughout community.
k. Commissioner Levit: What is the TWC's web presence on the City's website? Putting out that list of jobs could be powerful.
l. Lexi will send the one pager and slides with the October meeting recording link.

V. Chair/Vice Chair Report

a. Chairwoman Latta shared the Childcare and Working Families Month proclamation was delivered from Mayor Bynum for the month of October. A press release went out on October 31st sharing the Childcare Report and Proclamation.
    i. Will announce to everyone who participated in the working groups but aren't on the commission.
    ii. Lexi sent the press release in the November Title V Commission Blast.

VI. New Business

a. Pinnacle Awards is April 4. Nomination Committee has reviewed nominations and the meeting to finalize awardees is next week.
    i. Feedback from Commissioners who participated in this committee is that the window of time to score nominations was too short. YWCA staff could also screen out some nominees were clearly not contenders.
    ii. Event Planning Committee is working on fundraising.

VII. Old Business – no old business

VIII. Announcements/Public Comments

a. Commissioner Frohrip shared TWC's childcare website with Rue Ramsey at the Tulsa Regional Chamber after a company approached her asking about childcare in Tulsa.
b. Chairwoman Latta: Equality Indicators Summit is on Monday, November 4
c. Will do a photo with the proclamation after the meeting concludes.

IX. Adjournment

a. Chairwoman Latta entertained a motion to adjourn.
    i. Commissioner Cooper made a motion, Commissioner Mariska seconded.
    ii. Aye: 10
b. Motion carried, meeting adjourned 1:01 pm.

CITY OF TULSA
CITY EXPERIENCE
Mayor's Office of Resilience and Equity

APPENDIX 1
Tulsa Women's Commission Presentation Summary
Tech Innovation and Training Programs
Friday, October 4th, 2024
Featured Speaker: Abisoye Ajayi-Akinfolarin, Community Relationship Manager, Tulsa Innovation Labs

Summary: Tulsa is emerging as a significant tech hub with an opportunity to focus on gender equity, aiming to create 20,000 new tech jobs for women by 2033 through strategic initiatives, workforce development programs, and a $100 million investment in building an inclusive innovation ecosystem.

About Tulsa Innovation Labs
Tulsa Innovation Labs (TIL), founded by the George Kaiser Family Foundation, is transforming Tulsa into a leading tech hub. The organization's strategic advantage lies in Tulsa's affordability and visibility compared to larger tech hubs like Boston and New York, making it easier for individuals to get noticed and make meaningful impact.
Recent Achievements of TIL

- Secured a $39 million grant for advanced mobility
- Designated as one of 31 tech hubs by the US Department of Commerce
- Awarded $51 million for Tulsa Tech Hub - the largest award tied to the tech hub designation
- Obtained $100 million in funding for the next 5 years

TIL's Strategic Initiatives
1. Applied Research Commercialization
2. State-of-the-Art Testing Environments
3. Tulsa Advanced Research and Manufacturing Acceleration Coalition (TARMAC)
4. Greenwood AI and Autonomous Systems
5. Comprehensive Workforce Development Pipeline

Focus on Women in Tech- Current State

- Only 33% of the region's tech workforce consists of women
- Significant opportunity for growth and improvement in gender representation
- Cyber Skill Center achieving 60% women graduates
- OU Polytechnic Institute (woman-led) launched
- Notable success stories in non-traditional pathways (i.e. women in commercial air conditioning industry)
- Support through programs like OSU's Women in Engineering

Development Programs (Strategic Initiative #5)
Autonomous System Workforce Program

- Goal to add 6,000 people to the workforce
- Specific targets for BIPOC individuals and women
- Multiple channels for talent training through partnerships with TCC, TU, OSU-Tulsa, OU-Tulsa

Ambitious Goals for 2033

- Capture $1.6 billion of the $1.4 trillion global market in autonomous systems
- Create 56,000 new jobs- 20,000 of those jobs specifically targeted for women
- Build a comprehensive ecosystem for innovation and growth
- Focus on trustworthy and equitable systems

Key Strategies for Success

- Multiple educational pathways and certifications
- Hands-on learning opportunities
- Continuous learning programs
- Advanced certifications to maintain competitiveness
- Focus on cybersecurity, AI, and software training
- Building strong support communities for women in tech

Vision for Tulsa

- Create compelling career opportunities for local talent
- Develop a robust tech innovation ecosystem
- Provide pathways for women in traditionally male-dominated fields
- Foster an environment where young talent chooses to stay and contribute to Tulsa's growth

Appendix 2

Earning Potential in Tech Roles

- **IT Technician**: $32,200 to $59,696
- **IT Specialist**: The average annual salary is $71,270
- **IT Professional**: $86,800 to $123,761
- **Cyber Security Professional:** The average annual salary is $129,511
- **Software Engineer**: The average annual salary is $92,000
- **Data Scientist**: The average annual salary is $105,000
- **Cloud Solutions Architect**: The average annual salary is $135,000
- **AI Sales Specialist**: US Base Salary is $129,000 to $194,000
- **Data Center Services Manager:** US base salary is $165,000- $248,000
- **Quantum Computing Research Scientist**: US base salary is $237,7000 to $337,000

What THETA is focusing on with the Tulsa Tech Hubs project

Exploring The Technology Industry- What's out there?

Data Science & AI - Careers in data science, artificial intelligence, and machine learning are growing rapidly. These roles involve analyzing data, building predictive models, and developing AI solutions

- **Desired Skills & Education:** Undergraduate and/or graduate program in Computer science, data science, statistics, mathematics, AI, or related discipline. Professional certificates in Data Science and AI are valuable.
- **Local Employers & Remote:** DataAnnotation, InTulsa Initiative, Laredo Petroleum, Magellan Midstream Holdings Microsoft, Hubspot, ServiceNow, Cisco Meraki, Wiley, Sprinklr, Deepwatch ,Slack

Cybersecurity- Women can work in cybersecurity to protect organizations from cyber threats. This field includes roles such as security analysts,SOC analyst, information security analyst, ethical hackers, and security architects.

- **Desired Skills & Education:** Undergraduate and/or graduate program in computer science, information technology, cybersecurity or related discipline. Professional certifications such as CISSP, Certified Ethical Hacker (CEH) and compTIA Security+
- **Local Employers & Remote:** AAON, QuikTrip, NSU, City of Broken Arrow,ONEOK, BOK Financial, Deloitte, Verizon

Cloud Computing:Careers in cloud computing involve managing and deploying cloud-based solutions. Roles include cloud architects, cloud engineers, and cloud consultants, technology account managers

- **Desired Skills & Education:** Bachelors and or Master's degree in Computer Science, Information Technology, Cloud Computing, Computer Science or related discipline. Professional Certifications from cloud service providers like Google Cloud, AWS and Microsoft Azure.
- **Local Employers & Remote:** Lumen, Cherokee Federal, Canonical,Family & Children's Services, Pricewaterhousecoopers, Tierpoint

IT Support - IT specialist help people by troubleshooting problems so computers and networks run properly. This field includes roles such as IT technician, tech support specialist, help desk technician and more

- **Desired Skills & Education**: Undergraduate degree with a focus on computer science, information technology or related field. Professional training program or bootcamps focused on CompTIA A+, CompTIA Network+ and Microsoft Azure Fundamentals
- **Local Employers & Remote**: Bixby Public Schools, Cherokee Nations Businesses, Holland Hall School, Case & associates, OSU Medical Center, Amazon.com Services, Saint Francis Health Systems

UX/UI Design:- User experience (UX) and user interface (UI) designers focus on creating intuitive and engaging digital experiences. They work on the design and usability of websites, apps, and other digital products.

- **Desired Skills & Education:** Undergraduate degree with a focus on graphic design, interaction design, or human-computer interaction. Professional training program or bootcamps focused on UX/OI design.
- **Local Employers & Remote:** AgentC, Sequoyah Technologies, Xperi, Zeeco, Spherexx, Industrial Piping Specialists

Engineering- Women can pursue careers in software engineering, hardware engineering, and systems engineering. These roles involve designing, developing, and maintaining software and hardware systems

- **Desired Skills & Education**: Undergraduate and/or graduate program in engineering or relevant engineering speciality. Professional certifications in specific engineering speciality.
- **Local Employers & Remote:** QuikTrip, Xyant Services, Jackson Technical, Cox Communication, Google

Tech Training in Tulsa

TULSA HIGHER EDUCATION CONSORTIUM

STUDENTS EDUCATION PROFESSIONALS

Search: Technology

Program	Degree Level	Institution	Link
Applied Technology	Applied Associate's	Tulsa Community College (TCC)	More Info
Aviation Sciences Technology, Professional Pilot	Applied Associate's	Tulsa Community College (TCC)	More Info
Cardiovascular Technology	Applied Associate's	Tulsa Community College (TCC)	More Info
Electronics Technology	Applied Associate's	Tulsa Community College (TCC)	More Info
Engineering Technology, Drafting and Design	Applied Associate's	Tulsa Community College (TCC)	More Info
Engineering Technology, Manufacturing	Applied Associate's	Tulsa Community College (TCC)	More Info
Health Information Technology	Applied Associate's	Tulsa Community College (TCC)	More Info
Surgical Technology	Applied Associate's	Tulsa Community College (TCC)	More Info

Degree Program Options:

TCC: 28+ “Tech” Programs
TCC Cyber Skills Center
OU Polytechnic
NSU: 2 Programs
RSU: 4 Programs
SNU-Tulsa: 2 Programs

Non Degree Options:

Tulsa Tech
Atlas School

Education Options

Colleges, Universities & Tech Schools

- **TCC Cyber Skills Center** - Secure Information Systems Certificate (non-credit)
  - 16 week opportunity to validate your skills by earring IT industry-recognized CompTIA credentials, including A+, Network+, and Security+
- **TCC** A.A Aviation Sciences Technology, A.A. Health Information Technology, A.A Information Technology/Application Development, Certified Drone Operator Prep Course
- **OU** - BS in Applied Artificial Intelligence, BS in Cyber Security, BS in Software Development & Integration
- **OSU**- BT in Cybersecurity & Digital Forensics, BT in Cyber Incident Response, BT in Network Infrastructure. BT in Software Development
- **TU**- offers BS,MS, and Ph.D. in Cyber Studies, B.S.C.S., M.S, and Ph.D in Computer Science, BS,M.E, and Ph.D. in Computer Engineering
- **NSU-** B.S. in Cyber Security, B.T. in Technology
- **Tulsa Tech**- Programs in Information Technology, Manufacturing Technology,
- **Atlas School** - Programs In Systems Programming, Machine Learning, & Full Stack Development

Professional Associations

- **ISSA** - Information Systems Security Association - community of international cybersecurity professionals dedicated to advancing individual growth, managing technology risk, and protecting critical information and infrastructure. **Certifications** - Certified Information Systems Security Professional (CISSP) Certified Information Security Manager (CISM), Certified Information Systems Auditori (CISA)
- **CompTIA -** Computing Technology Industry Association- CompTIA Security +, CompTIA PenTest +, CompTIA Cybersecurity Analyst, A+, Networking +
- I**SACA-** Information Systems Audit and Control Association- **Certifications:** CISA (Certified Information Systems Auditor), CISM (Certified Information Security Manager) etc

Education and Training Providers

Certifications from Industry Leaders

- Google Cloud
  - **Foundational Certification** - Validates broad knowledge of cloud concepts and the products, services, tools, features, benefits, and use cases of Google Cloud - **Certification**:Cloud Digital Leader
  - **Associate Certification** - Validates fundamental skills to deploy and maintain cloud projects - Certification: Cloud Engineer, Google Workspace administrator (BETA), Data Practitioner - (Beta coming soon)
  - **Professional Certification** - Validates key technology job functions and advanced skills in design implementation and management of Google Cloud products Certifications- Cloud Architect, cloud Database Engineer, Cloud Developer, Data Engineer, Cloud DevOps Engineer, Cloud Security Engineer, Cloud Network engineer, Machine Learning Engineer
- Amazon Web Services
  - **Foundational** (no prior experience needed)- Cloud Practitioner, AI Practitioner,
  - **Associate** (Prior cloud and/or strong on-premise IT experience needed) - SysOps Administrator, Developer, Solutions Architect, Data Engineer, Machine Learning Engineer
  - **Professional** (2 years of prior AWS Cloud experience recommended)- Solutions Architect, DevOPs Engineer
  - **Specialty** - (Varied advanced experience) - Advanced Networking, Machine Learning, Security.
- Microsoft - Over 75 Certification Options that focus on beginner, intermediate or advanced specialities:
  - **Roles**- Administrator, AI Engineer, App Maker, Business Analyst, Business Owner, Business User, Data Analyst, Data Engineer, Data Scientist, Database Administrator, Developer, DevOps Engineer, Functional Consultant, Identity and Access Administrator, Information Protection and Compliance Administrator, Network Engineer, Security Engineer, Technology Manager
  - **Subjects**- Data Management (Data Analytics, Data Engineering, Databases), Security, Technical Infrastructure (Application management, MIgration)
  - **Products** - Azure (Azure App Configuration, Azure App Service, Azure Arc, Azure Automation, Azure Container Instances, Azure DevOps, Azure Disk Encryption, Azure Files, Azure Kubernetes Service- AKS, Azure Monitor, Azure Policy, Azure Powershell, Azure Virtual Machines, Microsoft Sentinel) Dynamics 365 (Business Central, Customer Engagement Apps, Supply Chain Management) Microsoft 365 (Access, Excel, Office, Outlook, Powerpoint, Word), Microsoft Defender (Microsoft Defender for Cloud, Microsoft Defender for Cloup Apps, Microsoft Defender for Endpoint, Microsoft Defender for Identity). Microsoft Entra ID, Microsoft Fabric, Microsoft Power Platform(AI Builder, Microsoft Copilot Studio, Microsoft Dataverse, Power Apps, Power Automate, Power BI),Office 365, Windows Server
- Cisco
  - Collaboration - **Professional**- Cisco Certified Network Professional (CCNP)Collaboration **Expert-** Cisco Certified Internetwork Expert (CCIE) Collaboration
  - CyberOps - **Entry**- Cisco Certified SUpport Technician (CCST) Cybersecurity, **Associate**- Cisco Certified Cyber Ops Associate, **Professional**- Cisco Certified Cyber Ops Professional
  - Data Center - **Professional** - Cisco Certified Network Professional (CCNP) Data Center, **Expert**- Cisco Certified Internetwork Expert (CCIE) Data Center
  - Design - **Expert** - Cisco Certified Design Expert (CCDE)
  - DevNet- **Associate** - Cisco Certified DevNet Associate, **Professional** Cisco Certified DevNet Professional
  - Enterprise - **Entry**- Cisco Certified Support Technician (CCST) Networking, **Entry**- Cisco Certified Networking Associate (CCNA), **Professional**- CIsco Certified Network Professional (CCNP) Enterprise, **Expert**- Cisco Certified Internetwork **Expert** (CCIE) Enterprise Infrastructure, Expert- Cisco Certified Internetwork Expert (CCIE) Enterprise Wireless
  - Security- **Professional** - Cisco Certified Network Professional (CCNP) Security, **Expert**- Cisco Certified Internetwork Expert (CCIE) Security)
  - Service Provider- **Professional** - Cisco Certified Network Professional (CCNP) Service Provider, **Expert**- Cisco Certified Internetwork Expert (CCIE) Service Provider
- Fortinet
  - Fortinet Certified Fundamentals- Cybersecurity
  - Fortinet Certified Associate - Cybersecurity
  - Fortinet Certified Professional- Security Operations, Network Security, Public Cloud Security
  - Fortinet Certified Solution Specialist - OT Security, Security Operations, Network Security, Secure Access Service Edge, Public Cloud Security, Zero Trust Access
  - Fortinet Certified Expert- Cybersecurity

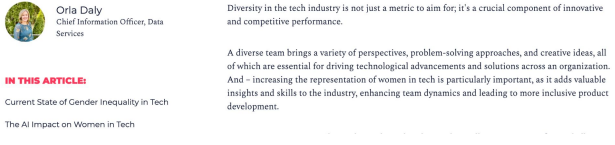
Five common barriers holding back women in tech

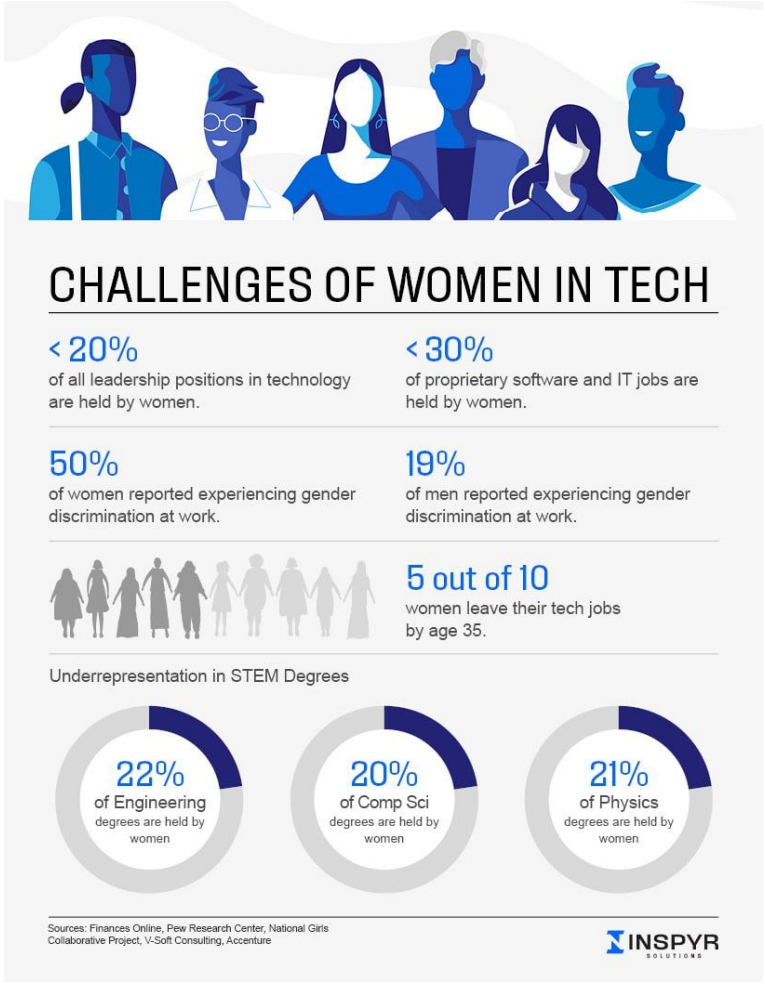
Features By Keri Allan published December 22, 2023

Women in tech still face significant challenges in the workplace

When you purchase through links on our site, we may earn an affiliate commission. Here's how it works.

(Image credit: Getty Images)





Women’s Barriers to Accessing Tech Roles

Access to Education

- Limited STEM exposure
- Cost of training
- Lack of training options
- Need for flexible learning options
- Difficulty in navigating various technology specialties

Economic Challenges

- Equipment costs
- Living expenses during career transition
- Childcare costs

Support System Gaps

- Limited mentorship
- Few visible role models
- Lack of professional networks

A Path Forward

Create flexible pathways

Provide financial support

Build strong communities