Women in Information Security

Where Are They?
“Purl” short by Pixar Studios: https://www.youtube.com/watch?v=B6uulHpFkuo
Meet Laura

• A long journey to get here

• Life took a right turn: 2011

• It’s time for cultural change

• I practice constructive vulnerability
Meet Sarah

• In IT since high school
• Almost 10 years in information security
• Tired of being the only woman in the room
• I totally struggle with imposter syndrome
What we know

• 3.4 million unfilled Information Security jobs by 2020
• Recruiting women in information security is difficult
  • Young women dissuaded from STEM
  • Job ads unappealing
  • Women lack of confidence to apply
  • Unclear understanding of opportunities
  • Misconceptions surround the field
What skills are needed to be successful in information security?

Poll is full and no longer accepting responses
Information Security has an image problem
We also have a retention problem

- 45% - leave the field within 10 years
- 56% - leave by the time they reach mid-level jobs
- Women ages 25-34 cite unsupportive work environments as a major factor in leaving
Problems That Women in IT Report

• Lack of mentors – 48%
• Lack of female role models in the field – 42%
• Gender bias in the workplace – 39%
• Unequal growth opportunities compared to men – 36%
• Unequal pay for the same skills – 35%
How these barriers align with personal experiences
What are your numbers?

Think about how many men and women are in your Information Security Office.

Respond with an approximate percentage of women in Information Security in your organization. Include direct leadership.
Numbers in our Information Security offices

- CU (System wide) – 26%
- UGA EITS – 14.9%
- USG (System wide) – 7%
14 %
US & Canada
24 % Worldwide
No-one is bias free; we are just bias unaware.

People make assumptions about women’s capabilities and interests – and then make decisions for them....
Examining Bias in the Workplace

- Gender discrimination – 51%
- Unconscious bias – 87%
- Delayed career advancement – 53%
- Highlighting of mistakes – 29%
- Tokenism – 22%
- Overt bias – 19%
Women’s key reasons for leaving

• Burnout – lack of work / life balance
• Stress
• No support
• No advancement
• Wage disparity / Better pay elsewhere
• Discrimination / Harassment
• Negative experiences at professional events
Office Environment

- Physical environment
- Visual elements
- Language
- Biases
- Common small exclusions
Common small exclusions

- Assumptions based on gender
- Physical actions that indicate negative judgement
- Repeatedly interrupting
- Bypassing
- Ignoring expertise
- Not including in projects or activities
- Implementing additional checks on work
- Assigning duties associated with gender roles
“That’s an excellent suggestion, Miss Triggs. Perhaps one of the men here would like to make it.”
Office Housework

• Arrange meetings
• Take notes / Maintain task lists
• Clean up after meetings or tidy up the office
• Plan / Organize events
• Order lunch
• Serve on committees not linked to core business goals
• Handle routine work not central to business strategy
Being the ‘Only’ makes things worse

• Disrespectful remarks
• Derogatory language
• Isolated or excluded
• Representative of all
• Constantly on guard
• Abilities challenged
• Scrutinized
• Targeted
## Social Behavior

<table>
<thead>
<tr>
<th>Men Describing Women</th>
<th>Men Describing Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man-Eater / Aggressive</td>
<td>Driven / Motivated</td>
</tr>
<tr>
<td>High-Strung / Temperamental / Bossy</td>
<td>Powerful / Assertive / Great Leadership Ability</td>
</tr>
<tr>
<td>Too Emotional</td>
<td>Sensitive / Caring</td>
</tr>
<tr>
<td>Ice Queen / Cold</td>
<td>Hardworking / Commanding</td>
</tr>
<tr>
<td>Nagging / Shrill</td>
<td>Determined</td>
</tr>
<tr>
<td>Opinionated / Uppity</td>
<td>Knowledgeable / Passionate</td>
</tr>
<tr>
<td>Abrasive / Hysterical</td>
<td>Frank / Straightforward</td>
</tr>
</tbody>
</table>
I wonder who's going to talk?

Are they waiting for me to talk?

Will they hate me if I talk?
How do we influence organizational behavior, practice and culture to create a more inclusive and empowering environment?
Strategies to overcome barriers

- Be an active ally, mentor or sponsor
- Facilitate cultural change
- Challenge discrimination and bias
- Provide training and support
- Encourage leadership development
- Assist in professional networking
- Encourage stretch assignments
- Be visible
Sponsor

• Highly-placed
• Recognize potential
• Offer opportunities
• Encourage advancement
• Networking
• Coaching
• Introductions
• Recommendations
Sponsors help you move up.
Mentors help you skill up.

Sponsors talk about you.
Mentors talk to you.
Mentor

• Any position
• Formal or informal
• Provide guidance
• Give perspective
• Sounding board
  • Listen
  • Believe
  • Validate
• Be vulnerable
Allies

• Observe
• Listen
• Think
• Remain open
• Support
• Encourage
• Are accountable
• Keep trying
Allies are ambassadors for change.

Allies know good intentions are not enough.
Talking about exclusionary behavior

• Studies show that drawing attention to exclusionary behavior works
• Anyone can confront non-inclusive behavior
• You just have to draw attention to it
• Start by examining your own biases and exclusionary actions
How to

• Name the behavior without assuming meaning or intent

• Ask a third party if they noticed the same thing

• Ask what people meant
Can you think of one thing you can do internally to encourage women to remain in Information Security?

Poll Responses:

- Bring someone (junior) along to leadership / training event
- Ask women for their opinion
- Fight the patriarchy!
- Serve as a better mentor and sponsor.
- Work harder to identify my own unconscious bias.
- Recruit
- Talk to younger women
- Help call out bad behavior or comments
- Actively include
- Help to elevate others
- Block and tackle
- Lead by example
- Start the conversation
- Create a safe environment for everyone
- Call out behavior
- Listen

- Build confidence
- Be bias brave
- Encouragement
- Stop assuming
- be visible
- Encourage students
- Become a mentor!!!
- Be available
- Help them get in!
- Question Authority
- Make time for mentoring
- Awareness
- Lead by example
- Mentor
- Be visible
- Be a role model.
- Mentorship
Practice does not make perfect. Practice makes permanent.
So What Can We Do?

• Model the behavior you want to see
• Skill up as an ally, mentor or sponsor
• Start a mentorship program
• Start a Women in IT group
• Invite female presenters if you host a conference
• Increase visibility of female information security professionals
The end…. Or the beginning?
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