Hunting Purple Unicorns

Strategies for rethinking the contemporary cyber workforce

NIAS 2018
Leidos Cyber Workforce Strategy Taskforce mission:
Identify, assess and improve upon organizational gaps in people, processes, rewards and structure resulting in a cyber workforce aligned to business growth objectives.
Cyber Workforce Shortage Revisited

Compared to the general IT workforce, the shortage in cybersecurity professionals is...

- 29% Same as other workforce skill shortages
- 17% Somewhat to far less
- 1% Don't know

Is the cyber workforce shortage really unique?

40% of US employers are having a hard time finding workers with required skills across ALL industries.
Reality Check

What can we learn from others?

Financial Services

Trade and Manufacturing

Health
Hunting for Purple Unicorns

It’s like….

But harder….
2030: Building a Diverse Cyber Workforce

- Females are 50% of global population, but only 11% of global cyber workforce
- Higher job satisfaction due to development programs and sponsorship
- Do we really need a purple unicorn?
- Failing job descriptions: 70% too vague, 30% complex
- Entry-level value
- Innovative branding/recruiting strategies
- Diversity recognition and awards
Understanding Key Motivators

By Level

- 56% of women in tech leave mid-career—double the quit rate for men.

- 8% of mid-career cyber professionals have plans to leave current employer.

- Managers and tenured cyber pros are more likely to work where breaches occurred.

By Individual

- 30% of global cyber workforce comes from a non-IT background.

- The Millennial factor—65% want training + certs, 25% move for enticing perks.

- Females may not apply to job reqs if they do not meet all requirements.

By Skills

- Communication Skills: 66%
- Risk Assessment and Management: 59%
- InfoSystems and Security Operations Management: 60%
- Governance, Risk Management, and Compliance (GRC): 40%
- Virtualization: 30%
- Incident investigation and response: 30%

Source: 2017 Global Information Security Workforce Study, (n = 19,641)
Top 3 Motivators – What do they want?

- Clearly defined career path
- Training, training, training
- Salary

Only 1/3 are covering the cost
Cost of re-hiring and re-training vs. paying a higher salary?
Gap in what they want

Source: Texas Tech University

How well do you think education programs (universities or vocational) are preparing cybersecurity professionals for the industry?

- 23% Fully preparing professionals
- 44% Mostly preparing professionals
- 28% Somewhat preparing professionals
- 5% Not preparing professionals

Center for Strategic and International Studies Survey of cyber experts and IT decision makers from 8 countries (public and private sectors).

Figure 10. Education programs and skill development.
Why do WE Make it Hard?

► Training not being offered and/or lack of defined career path
  ❖ Desire vs. Reality

► Degree requirements
  ❖ Why?

► Retention challenges
  ❖ 31% of countries globally find it difficult to retain workers
  ❖ 21% of cyber workers had changed jobs in the past year

We don't know what we want or where to find it
Where do we Hunt for Purple Unicorns?

Traditional Methods:
- STEM
- University
- Military
- Internal

K
Knowledge

S
Skills

A
Ability
Where do we Hunt? - STEM

What Leidos will do/is doing:

► Develop an intentional outreach plan
► STEM toolkit
► Educate the parents
► Consider the mindset and motivators for each age group
► University partnership to create career aptitude assessment
► STEM champions throughout the business – it takes a village!

Most teens and more than a third of parents mistakenly indicated that IT jobs require a four-year degree and required doing really well in math and science....
Where do we Hunt?

**College/University**
- Intern and apprentice programs
- Social media campaigns
- Course development
- Mentor pairing

**Military**
- Transition opportunities
- Reserve incentives
- ERGs and Operation MVP
- Tailored mentoring

**Why mentoring matters?**
- High importance to 39% of ethnic minorities
- 23% of women globally feel more valued
Solving the Tough Problems

How do we solve for the 10-20% of difficult to fill roles?
Where do we Hunt? – The Homegrown Unicorn

- Identify high in demand/low supply positions
- Train existing workforce - Role-based learning & career paths
- Identify hi-potentials & at-risk, then retention strategies
- Knowledge sharing
- Create an IT pipeline
- Job rotations

If you build it, they will come
Where do we Hunt? – The Homegrown Unicorn

What do security visibility and talent management have in common?
You cannot manage what you do not know exists

Have you performed a skills and cert analysis of your workforce?
Where do we Hunt? – Think Outside the Box

- Enhance existing partnerships
- Integrate cyber within recruiting culture
- Use non-interview based assessment
- Develop recruiting toolkit – help me, help you
- Job description overhaul – inclusionary and aligned to NICE
- Build a cyber incubator for nextgen unicorns
- Automate where possible and evolve skills
Raising the Bar

What’s important & unique to your organization?

Intentional Plans:
- Assess gaps to drive need & culture
- Define the framework, then training

1. Understand Business Strategy
   - Build business leader buy in for workforce strategy
   - Engage with leaders to understand strategic objectives

2. Identify the Capabilities needed to Execute
   - Identify the capabilities most critical for strategy execution
   - Assess the org’s current capabilities based on strategic needs
   - Create scenarios to assess how environmental shifts will impact talent needs

3. Diagnose Talent Risks to Business Strategy
   - Diagnose internal talent gaps and surpluses
   - Identify internal talent alignment gaps
   - Evaluate internal talent retention risks
   - Assess external talent supply

4. Develop Action Plan to address Risks and Gaps
   - Allocate capability investments to fill talent gaps and reduce surpluses
   - Develop a strategy to close gaps
   - Identify and manage potential barriers associated with chosen strategies

5. Track Plan and Execute
   - Reevaluate the plan on an ongoing basis
   - Measure and communicate progress toward talent goals
Measuring Progress

► How do we define success?

► How to measure what we did last year vs. this year?

► Example OKR – WHAT & WHY:
  - **Objective:** Utilize internal talent pipeline
  - **Key Result:** Fill 10% of job reqs. with internal vs. external candidates
The cyber workforce of tomorrow is the workforce of today

Visit: https://www.leidos.com/competencies/cyber