





# Closing the professional skills gap – The role of private entities

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Dr. Jetzabel Maritza Serna-Olvera  
CEO, Co-founder

*“Driving Cybersecurity Forward: Simplifying and Empowering for Tomorrow's Challenges”*

 | [+49 176 / 567 20 564](tel:+4917656720564) |  | [www.cs-sapar.com](http://www.cs-sapar.com) |  | [Jetzabel.serna@cs-sapar.com](mailto:Jetzabel.serna@cs-sapar.com)

 | Mergenthalerallee 15-21, 65760 Eschborn



# The Road Ahead: Increased Risk and Talent Gap

The automotive industry stands to lose over **\$500 billion** by 2024

 **Top 1**

[Business Risk](#): Cybersecurity

 **\$10.5T**

Projected [Cybercrime Impact](#) by 2025

 **82%**

[Breaches involving the Human Element](#)

 **500K**

[Cybersecurity Skill Gap in Europe](#) in 2022

 **3.5M**

[Open Cyber Jobs Worldwide](#)

 **24%**

Gender Gap - [Women in Cybersecurity](#)

# Navigating Complexity: Ecosystem, Regulations and Skills Gap

The skill gap ...

Hampers the automotive industry's ability to innovate and defend their critical infrastructure.

Exacerbates the challenge of securing our digital ecosystem

Calls for moving beyond awareness.

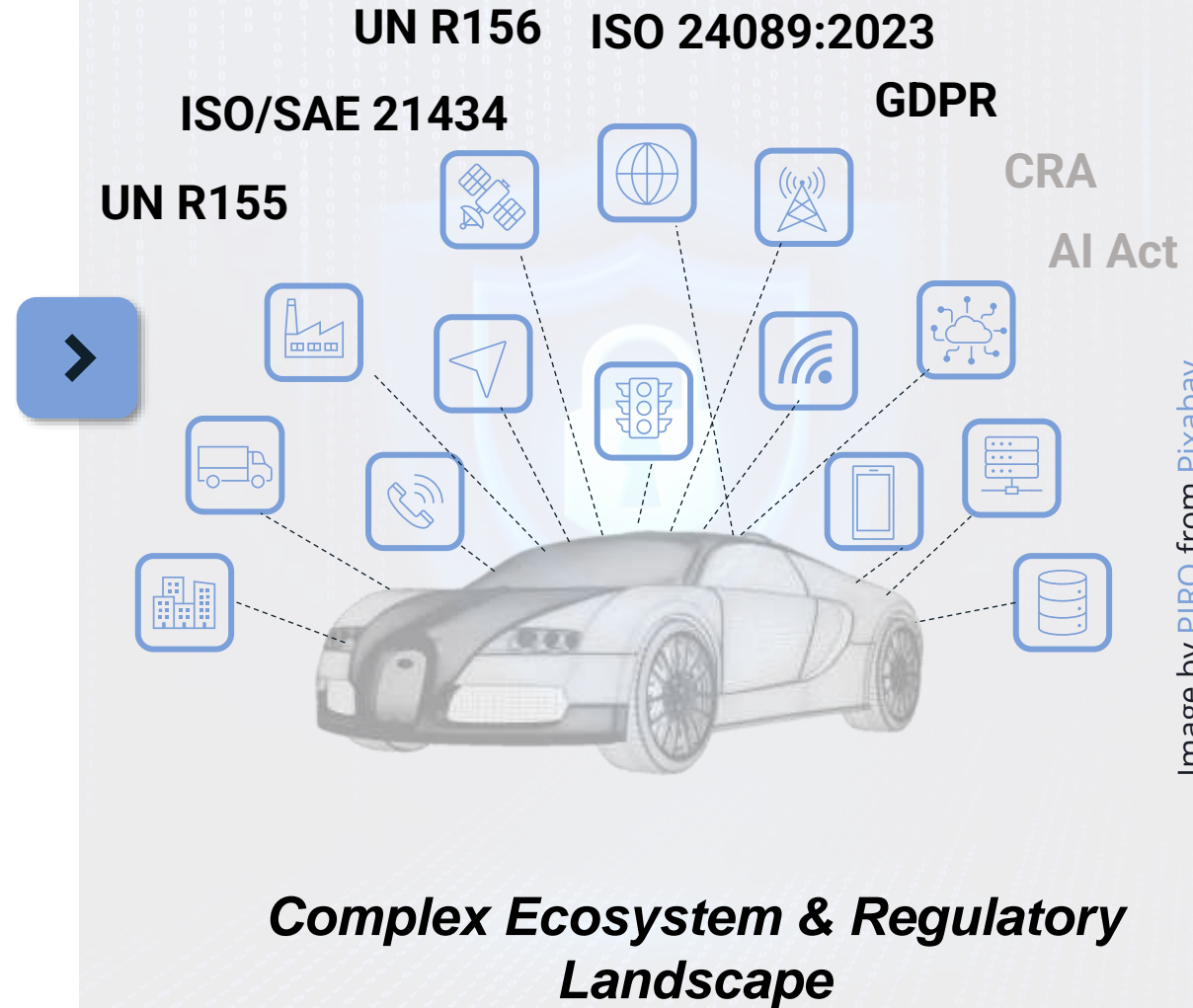
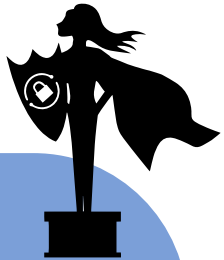


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# Skills Misalignment in Job Descriptions



## Roles

Cybersecurity Engineer / Specialist

Product Security Officer  
Product Security Incident Handler

Product Security Officer  
Security Tester  
Security Engineer

(Chief) Product Security Officer  
Security Architect  
Security Tester  
Security Risk Analyst  
Security Assessor  
Product Security Incident Responder  
Product Security Manager

## Product Security Officer

### Cybersecurity Architect

- Knowledge of cybersecurity standards and regulations (UNECE R155, R156, ISO21434).
- Support the CISO in establishing an automotive security program.
- Assess the cybersecurity capabilities of suppliers.
- Establish and foster security culture (e.g., trainings and awareness).
- Execution of threat analysis and risk assessments (TARAs)
- Design, Implementation and review of security concepts and security architectures.
- Implementation of security solutions.
- Coordination, planning and execution of security reviews.
- Penetration Testing (IT, OT and IoT)
- Vulnerability identification and management
- Planning and implementation of IT-security certifications and audits.





## Closing the Gap: A Holistic Approach

- Define roles and responsibilities
- Identify the skills required by those roles
- Establish skill-development programs
- Publish open positions
- Harmonization across the industry

# The Road to a Secure Future: Benefits of Closing the Skill Gap

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- 01 Protect automotive systems
- 02 Promote regulatory compliance
- 03 Bolster automotive industry resilience
- 04 Increase competitiveness
- 05 Propel Europe's cybersecurity strategy



Thank You



+49 176 / 567 20 564



Jetzabel.Serna@cs-sapar.com



[www.cs-sapar.com](http://www.cs-sapar.com)



# Key Roles

**(Chief) Product Security Officer**

**Cybersecurity Risk Manager / Analyst**

**Cybersecurity Architect**

**Cybersecurity Implementer**

**Cybersecurity (Penetration) Tester**

**Cybersecurity Auditor / Assessor**

**Cybersecurity Incident Responder**





# (Chief) Product Security Officer

*Manages an organization's **product** cybersecurity strategy and its implementation to ensure that **product related** systems, services and assets are adequately secure and protected*

- Assess and enhance an organizations cybersecurity posture
- Analyze and comply with cybersecurity-related laws, regulations and legislations **impacting products**
- Develop, champion and lead the execution of a cybersecurity strategy for **products**
- Analyze and implement **product** cybersecurity policies, certifications, standards, methodologies and frameworks
- Design, apply, monitor and review **CSMS** (directly or by leading its outsourcing)
- Establish a cybersecurity plan
- Manage cybersecurity resources
- Influence an organization's security culture
- Identify and solve cybersecurity-related issues and implement cybersecurity best practices
- Communicate, coordinate and cooperate with internal and external stakeholders.

**Category: Overseen and Govern**

**Specialty: Cybersecurity  
Management**

# It is Real



Dr. Jetzabel Serna-Olvera · 14:19

Hello again,

I see pentesting as a very technical and specialized task, I also think that excellent pentester is either Enterprise IT (back-end) or embedded (IoT). A person can always take more than one role, however, it always depends on how close are the tasks to each other and how much is the load. I see governance tasks (implementing the security program), security manager tasks (dealing with suppliers), security analysts tasks (doing TARAs), security architect tasks (secure design) .. etc .. and of course the task of security culture shall not be underestimated.

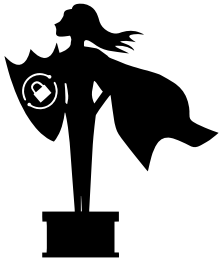
Good luck finding excellent candidates ready to take the challenge.

Jetzabel

Cyber Security Architect

**Ihre Aufgaben umfassen:**

- Erstellen von Cyber Security Spezifikationen und Dokumenten entsprechend der ISO/SAE DIS 21434
- Durchführung von Bedrohungs- und Risikoanalysen (TARA) sowie Ableitung von Securityzielen und Mitigierungsmaßnahmen zur Risikoreduzierung
- Entwicklung & Review von Securitykonzepten und Architekturen für Steuergeräte und Applikationen im globalen Umfeld
- Koordination, Planung und Durchführung von Security Reviews hinsichtlich der angemessenen Implementierung von Security Umfängen sowie der Einhaltung von Vorgaben
- Sicherstellung der Umsetzung der Spezifikationen in den Steuergeräten
- Organisation und Betreuung von Penetrationstests mit Beurteilung der Ergebnisse und Ableitung von Maßnahmen
- Durchführungen bzw. Begleitung von IT-Security Zertifizierungen & Audits
- Kompetenzaufbau innerhalb des Bereichs sowie in den Projekten z. B. durch Durchführung von Schulungen oder Präsentationen



Skills Misalignment in Job Descriptions