

# INNOVATION IN ACTION

## *EPIIC Team Stories\_#3*

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### **MEET STAFFAN NAHLINDER:**

Shaping the Pilot Experience of Tomorrow

*"As systems become more complex, the interface itself must become smarter."*

**STAFFAN NAHLINDER**

SYSTEMS ENGINEERING SPECIALIST Ph.D

SAAB AB



# A Journey Rooted in Human-Machine Interaction

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**From psychology to fighter cockpits**, his professional journey has always been guided by a fascination with how humans and machines interact in extreme environments.

Staffan has a background in psychology and human factors, with a PhD focused on assessing the potential of simulators in military flight training. He spent many years as a scientist at the Swedish Defence Research Agency, working with human-machine interaction in complex operational environments.

That early experience laid the foundation for a career deeply rooted in aviation systems and human performance.

**At Saab, he worked with the development of Human-Machine Interfaces (HMI)** for the tactical functions of the Gripen E/F models. In recent years, his focus has shifted toward collaborative European research, and he is currently the Work Package Leader for Adaptive HMI within the EPIIC project.

His motivation, however, goes far beyond technical development. He has always been fascinated by airplanes, aviation, and space travel. This interest naturally led him toward a career where he could contribute to advanced aviation systems and improve how humans interact with them.



## Leading Adaptive HMI within EPIIC

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**He is the Work Package Leader for Adaptive HMI**, and he also serves as Saab's internal project lead. His responsibilities involve steering and coordinating research and development activities across multiple partners, aligning technical efforts, guiding the development of Adaptive HMI concepts and solutions, and ensuring progress toward the project objectives.

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## Innovation and Challenges

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**What excites him most is being part of highly innovative discussions** and developments in an international context. Contributing to the future of air combat is both inspiring and intellectually stimulating. Of course, the work also comes with challenges. One of the biggest is anticipating future needs in a rapidly changing world. *"We have to align many partners while adapting to evolving technologies and operational requirements,"* he notes.

**A key milestone has been** the development of models describing the inner workings of Adaptive HMI systems, an important step toward intuitive future fighter cockpits.



*"Earlier in my career, I worked with technologies related to astronaut selection and had the opportunity to speak with several astronauts about their work and training experiences — a fascinating insight into another highly demanding operational domain."*

## Professional Growth Through Collaboration

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**Beyond the project itself**, the experience has significantly shaped his professional growth. *"I have learned a great deal about co-creating innovation across organizations, as well as the importance of flexibility when working with emerging technologies,"* he reflects. It has strengthened his ability to lead multi-partner initiatives and deepened his expertise in adaptive systems and future cockpit design.

## Looking Ahead: The Future of Adaptive HMI

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Looking ahead, his vision for Adaptive HMI remains strong and clear. *"I strongly believe Adaptive HMI will play a crucial role in future fighter cockpits,"* he concludes. *"As systems become more complex, the interface must actively support the pilot. With well-designed adaptive solutions, we can improve performance while keeping training demands manageable."*

## Beyond Engineering: Family and Everyday Balance

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Outside of his professional life, his focus shifts to family and everyday balance. *"A large part of his free time is spent being a father of four children,"* he says with a mischievous smile. Family life keeps him busy and is very important. He also enjoys taking care of his house and garden, especially now that winter is behind us.

