TNO

Aeolus
Human Performance Innovation

- Simulation & Game design
- Human-System Interaction
- Training Didactics & Artificial Intelligence
- Knowledge areas
- Physiology / Ergonomics
- Perceptual & Vestibular Science
- Occupational Health

Human Performance Innovation
Aeolus
Soesterberg

- Air Forces
- Applied Research Institutes
- Stakeholders
- Partners
- Industry
- Universities
- SMEs
- Desdemona
- Collaborative Training Environment (CTC)
- Human centrifuge
- Facilities
- Hypobaric Chambers
- Climatic Chambers
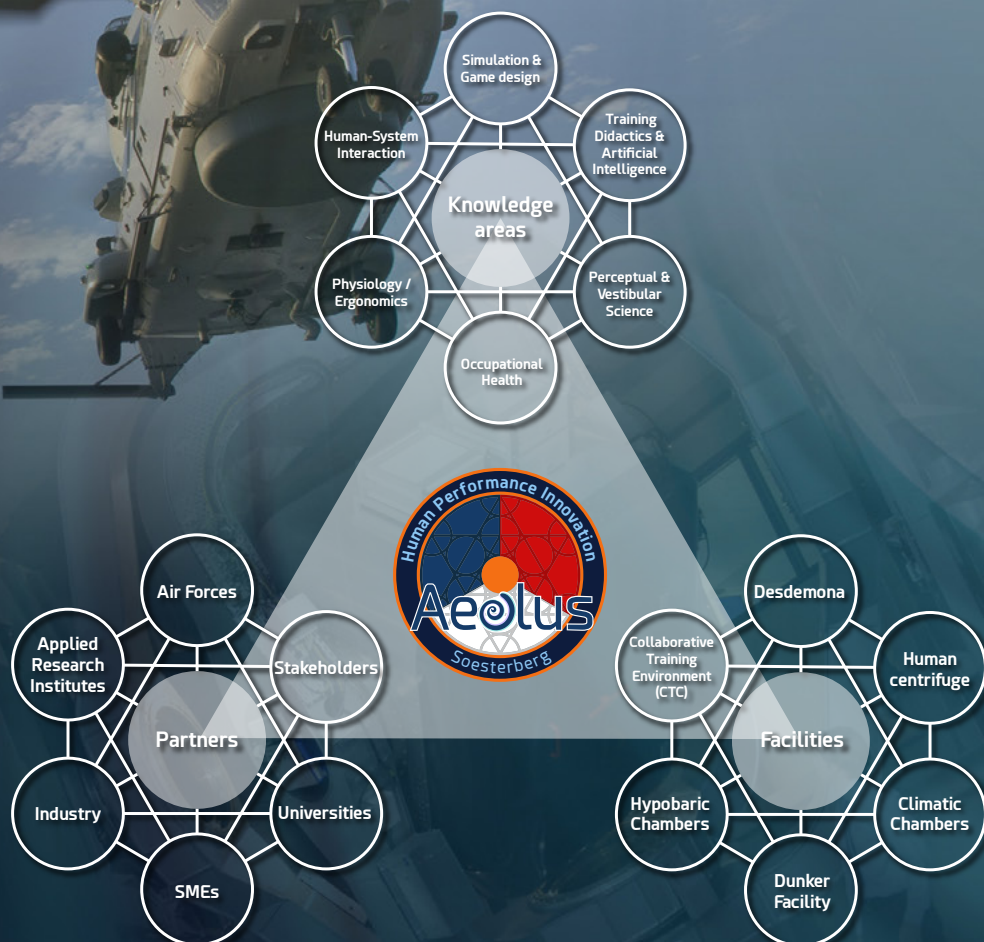- Dunker Facility

Human Tech Campus
Kampweg 53 / 55
P.O. Box 23
3769 ZG SOESTERBERG
THE NETHERLANDS

"Will you fly the AEOLUS way?"

www.aeolus-hpi.org

TNO

Aeolus
Human Performance Innovation

AEOLUS is the joint innovation center on Human Performance under Extreme Conditions in Military Aerospace. It is our mission to improve the readiness and operational effectiveness of military pilots, aircrew and maintenance personnel by creating more and faster access to innovative products and services.

Royal Netherlands Air Force and TNO founded AEOLUS to **accelerate the innovation cycle** for international air forces, research centers and industry using
- our high-end multi-disciplinary knowledge, and
- our world-class facilities
- with trusted partners.

As an independent center, AEOLUS programs innovate **Wearable Technology and Systems** and enhance **Human Factors Simulation & Training**, with the development of multi-stressor training environments.

AEOLUS is part of the **Human Tech Campus** of both founding institutes and provides access to unique research & test facilities, world-class scientists, military pilots and defense industry. The **F-35 Pilot Readiness Center** on our campus provides unique opportunities for innovation!

AEOLUS: the place of choice to take warfighter readiness to the next level."

AEOLUS Human Performance
Innovation Center
Human Tech Campus
Kampweg 53 / 55
P.O. Box 23
3769 ZG SOESTERBERG
THE NETHERLANDS

- Knowledge areas

Human Performance Innovation
Aeolus
Soesterberg

- Partners
- Facilities

www.aeolus-hpi.org

Aeolus
Human Performance Innovation

TNO

Wearable Technology & Systems

- Pilot flight equipment
- Fitting, comfort, scalable protection
- Helmet, HMDS, visor, oxygen mask, comms ear plugs
- Flight suit, G-suit, cooling system
- Smart and adaptive clothing / textiles
- Physiological monitoring – sensing shirt

Human Performance Stressors

- G-load
- Spatial disorientation
- Hypoxia
- Degraded visual environment
- Thermal burden
- Noise
- Information overload
- Automation surprise / startle
- Fatigue

Human Performance Innovation

Aeolus

Soesterberg

Operation Oriented Simulation & Training

- 5thGen multi-stressor environments incl. VR
- Hypoxia training in motion sim
- Enhanced motion cueing
- Distributed LVC-simulation incl. NVG
- Sensing methodology for training effectiveness

Flight Sensing Shirt

Mobile Hypoxia Trainer for F-35 Pilots