**Aerospace** plays an **important role in the mobility sector**, besides branches such as automotive and logistics.

Furthermore, Aerospace is also a significant cross-industry issue that affects and is **affected by other areas** such as IT security, new materials, lightweight construction, additive manufacturing, robotics, networked systems and fiber composites.

## **AEROSPACE INDUSTRY IN BAVARIA**

**BUSINESSES** 

## **EMPLOYEES**

### **PRODUCTION**



More than 38.000 employees in the aerospace industry

This means that Bavaria accounts for more than a third of all employees in Germany in this field



Over **550 businesses** 

The corporate landscape ranges from small suppliers to innovative start-ups to global corporations



Manufacture of civil and military aircraft, helicopters, satellites, guided missiles and unmanned aerial vehicles (UAVs)

Components for space vehicles and communication technologies for innovative applications in space and aviation are also developed

Bavaria plans to launch a special technology support programme for aerospace in 2021

## REASEARCH AND DEVELOPMENT

#### **STRONG NETWORK**



Strong network of research activities in the aerospace industry

Bavaria supports joint projects (partners from research and industry) with special technology funding programs

Businesses, universities research facilities and institutes work hand in hand to drive innovation forward and set new impulses in mobility

Well-trained specialists and a constant stream of young experts for the further development of mobility

## **UNIVERSITY DEPARTMENTS**



The TUM Department of Aerospace and Geodesy at the Technical University of Munich is the largest department of this kind in Europe

The "TUM Center for Automated **Urban Aerial Mobility**" bundles competencies in the field of flight systems and researches the technical and practical implementation of air

**TUM** has already been successful in international competitions with the prototype of the "Hyperloop" passenger capsule

Further examples:

**University of the Federal Armed** Forces Munich, Department of Aerospace Engineering

Technical University of Ingolstadt, Application Cluster "Unmanned Flying"

University of Würzburg, Center for Telematics

#### **FURTHER RESEARCH INSTITUTIONS**



German Aerospace Center

"Deutsches Zentrum für Luftund Raumfahrt (DLR)"

German Space Operations Center (GSOC) "Deutsches Raumfahrt-Kontrollzentrum"

"Galileo-Kontrollzentrum (GCC)"

"Bauhaus Luftfahrt e.V."

"Ludwig Bölkow Campus"

# **BAVARIAN AEROSPACE CLUSTER AND START-UPS**

# **CLUSTER**



**Cluster Aerospace** 

**BavAlRia e.V.** has been managing the cluster since 2006

Responsible for:

research landscape

- Connecting businesses with the

- Identifying and promoting Bavarian core competencies in aviation, aerospace and space applications
- these industries on a global level

- Increasing the competitiveness of

# **BIG PLAYER**



**Airbus Defence and Space** 

**Airbus Helicopters** 

**MTU Aero Engines** 

Rohde & Schwarz

# **START-UPS**



Isar Aerospace

**HPTex GmbH** 

(cooperation of HPS GmbH and Iprotex GmbH & Co. KG)

Lilium

Quantum-Systems GmbH 

Where start-ups can grow

Bavaria (ESA BIC Bavaria)

**ESA Business Incubation Center** 

**Brigk Air in Ingolstadt** 



https://www.stmwi.bayern.de/innovation-technologie/schwerpunkte/luft-und-raumfahrt/

https://esa-bic.de/by/