

Athens, Greece, 06.10 2017

# **REVOLUTIONARY DEVELOPMENT PROGRAM IMPROVING AIR-CARGO CONTAINERS**

## THE INTERNATIONAL CLEAN-SKY PROGRAM IS BEING PERFORMED BY THREE COMPANIES AND THREE UNIVERSITIES FROM GREECE, UK AND SPAIN.

The program is designed to develop, manufacture and validate a new intelligent lightweight aircraft cargo container (ULD) with integrated functions for restrain, transportation, fire/smoke suppression, with sensing and wireless monitoring capabilities. To keep up with the technological advances of aircraft structures and systems the purpose of the new air-cargo containers are:

- Reduce ULD and aircraft weight
- > Enhance container fire/smoke detection and suppression
- Eliminate permanent moving and locking hardware
- Enhance flight safety
- Loading/unloading logistics and maintenance

The future name for the new intelligent air-cargo containers INTELLICONT, comes from "Development and Manufacturing of **Intel**ligent **Li**ghtweight Composite Aircraft **Cont**ainer".

The container will be a self-moving platform allowing the motion of the ULD inside and outside the aircraft. Built with low-cost and low-energy sensors in the container to track status (ID, location, locking state) and detect critical events, fire/smoke, impacts and accidental misuse. The status of each container will be available to the pilots though a wireless communication network, such that problems would be detected and proper measures would be taken.

The ambition of the project is to provide a major break-through in the state of the art of current ULD technology and aircraft cargo operations. Substantial impact is anticipated on the CleanSky program, the reduction of aircraft payload and weight, safety, maintenance and lean aircraft operation processes.

INTELLICONT will be a game changer for the air-cargo industry with substantial broader impact on air-cargo handling operations.

The CleanSky program is set to run for 3 years.

### THE ASSOCIATION OF COMPANIES AND UNIVERSITIES CONSISTS OF:



#### SCANDINAVIAN AVIONICS GREECE SA – MEMBER OF THE SA GROUP

Scandinavian Avionics Greece SA (SA Greece) is located with two departments in Athens, **SA GROUP** Greece.

With both the EASA Part-145 approval and the ISO 9001 certification SA Greece is able to perform FBO services, as well as Line- and Base Maintenance in a wide variety of aircraft and helicopters.

**Elias Kokkotas** – Director of SA Greece, plays the key role as coordinator and quality/conformity controller of the entire project.

#### WWW.SCANAV.COM



#### **UNIVERSITY OF PATRAS, GREECE**

The Applied Mechanics Laboratory (AML) is part of the Department of Mechanical Engineering and Aeronautics of the University of Patras since 1980. AML is

responsible for educational and R&D activities related to the general field of materials and structures, putting emphasis on composite materials, advanced material & structural concepts, material testing, and structural mechanics and dynamics.

**Professor Dimitris A. Saravanos** – University of Patras (Patras, Greece) is currently a Professor in the Department of Mechanical Engineering and Aeronautics at University of Patras.

#### WWW.UPATRAS.GR



#### PRISMA ELECTRONICS, GREECE

Prisma Electronics SA was established in 1991 in Alexandroupolis, Greece. Through consistent and continuous effort, it has evolved into a specialized Information and

Communication Technology Company, entering in parallel, in the electronics technology field. Characterized by innovation, its main objective is the development of high technology corporate products and services in the field of Electronics, ICT and Energy management. Exports orientation into new-dynamic markets is one of company's priorities.

**Paris Kouris** holds an MSc degree in Advanced Engineering and Management from Sheffield Hallam University and a Diploma in Electrical & Computer Engineering from Democritus University of Thrace. **WWW.PRISMA.GR** 



#### THE UNIVERSITY OF MANCHESTER, UNITED KINGDOM

One of the major research universities in the UK, recognized nationally and internationally, with about 40,000 students, including 3,600 post-graduates spread over 400 degree programmes.

**Professor Constantinos Soutis** – Director of the Aerospace Research Institute, The Northwest Composites Centre and The National Composites Certification and Evaluation Facility.

**Professor Yong Wang** – Professor of Structural and Fire Engineering in the School of Mechanical, Aerospace and Civil Engineering.

#### WWW.MANCHESTER.AC.UK

#### SCANDINAVIAN AVIONICS GREECE SA



#### ACCIONA CONSTRUCCIÓN, SPAIN

Acciona Construcción is a leading European construction company designing, constructing and managing buildings and civil infrastructures under sustainability principles.

**Dr. Silvia Hernandez**. She received her Ms.C degrees in Physics and Materials Engineering from the Universidad Complutense of Madrid (UCM) in 2008 and her Ph.D. in Materials Science and Engineering from Polytechnic University of Madrid (UPM) in 2013.

#### WWW.ACCIONA-CONSTRUCCION.COM

#### NATIONAL TECHNICAL UNIVERSITY OF ATHENS, GREECE

ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ The Control Systems Laboratory (CSL), which belongs to the School of Mechanical Engineering of the National Technical University of Athens (NTUA), brings its recognized experience in Mechanisms, Robotics and Automation Systems, including Space

Robotic Systems.

**Professor Evangelos Papadopoulos** – National Technical University of Athens (Athens, Greece) received a Diploma in Mechanical Engineering from the National Technical University of Athens, (NTUA), Greece, in 1981, and subsequently a MS (1983) and a PhD degree (1991) in Mechanical Engineering from the Massachusetts Institute of Technology.

#### WWW.NTUA.GR