



# AIRPOXY

Thermoformable, repairable and bondable smart epoxy-based composites for aero structures

**Deliverable 7.1**  
**Public Website**

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## Revision history

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## Authors

Beneficiary	Name
ARTTIC	A. Wittmann, J. Maho, H. Yousef



## Content

Revision history .....	2
Authors .....	2
List of Figures .....	4
Glossary .....	5
1. Executive Summary .....	6
2. Objectives and target audience .....	6
2.1. Objectives .....	6
2.2. Target audience .....	7
3. Structure and contents of the website .....	7
3.1. The homepage .....	7
3.2. AIRPOXY in a nutshell .....	8
3.3. Results .....	13
3.4. News .....	13
4. Conclusions .....	13



## List of Figures

Figure 1: Top banner and menus on homepage of the AIRPOXY public website .....	8
Figure 2: Possibilities of contacting the project beneficiaries on each page.....	8
Figure 3: Screenshot from the section “About AIRPOXY” .....	9
Figure 4 Screenshot of the subpage “Objectives” .....	9
Figure 5: Screenshot of subpage “Work Plan Structure” .....	11
Figure 6: Screenshot of subpage “AIRPOXY Impacts” .....	12
Figure 7: Screenshot of subpage "Who we are" .....	12

## Glossary

Abbreviation / acronym	Description
<b>AGA</b>	AIRPOXY General Assembly
<b>AMGA</b>	Horizon 2020 Annotated Model Grant Agreement
<b>APO</b>	AIRPOXY project office
<b>CA</b>	Consortium Agreement
<b>DOA</b>	Description of action
<b>EC</b>	European Commission
<b>GA</b>	Grant Agreement
<b>IPR</b>	Intellectual Property Rights
<b>PDER</b>	Plan for dissemination and exploitation of results
<b>PMO</b>	Project management office
<b>RWD</b>	Responsive web design
<b>WP</b>	Work Package

## 1. Executive Summary

This document describes the structure and contents of the public website set up for AIRPOXY as part of the project dissemination strategy in order to inform the various target audiences about the main project objectives with regular updates on the project results. The website is accessible under the URL <https://www.airpoxy.eu> and maintained by the AIRPOXY Project Office (APO).

It is based on Responsive web design (RWD), which provides an optimal viewing and interaction experience – easy reading and navigation with a minimum of resizing, panning, and scrolling – across a wide range of devices from desktop computer monitors to mobile phones.

The first version of the AIRPOXY public website comprises details about the project objectives and work plan, together with the list of participants. Throughout the project, the website will become a major tool to present the project outcomes to a wide audience beyond the scientific community. On-going activities will also be regularly updated and communicated through the media center and its subsections.

The images used for the first issue of the website will be updated throughout the project to include as many non-confidential images from the project as possible.

## 2. Objectives and target audience

### 2.1. Objectives

The public AIRPOXY website can be reached at <https://www.airpoxy.eu>. It promotes the main benefits resulting from the project highlighting six specific objectives:

- To bring the Technology Readiness Level (TRL) of new 3R thermoset resins from proof of concept (TRL3) to validation in industrial environment (TRL 5) for aircraft applications
- To reduce the costs of manufacturing thermoset carbon composites parts by over 35% vs autoclave manufacturing, developing a 3R- Thermoforming technology.
- To reduce the current costs of maintenance, repair and overhaul operations associated to the reparation or replacement of thermoset carbon composites parts by 50%.
- To reduce the costs of current adhesive bonding of thermoset carbon composites parts by over 50% and increase of their robustness by 20%.
- To quantify the environmental advantages of the recyclability of the 3R carbon composites parts at the end of life vs traditional carbon composites parts, using Life Cycle Assessment & Life Cycle Cost methodologies.
- To ensure proper dissemination & future exploitation of the developed 3R technologies by suitable measurements to reach from TRL5 to 9 after the project ends.

The web site explains the technical and administrative approach for the public at large to achieve the ambitious objectives introduced above. Furthermore, the website promotes expected results and industrial achievements of the project.

The website will also be a portal to disseminate AIRPOXY scientific publications, and to present the main activities and next steps to be taken. The website contains information about the consortium, with detailed descriptions of the partners involved and the Coordinator and the APO as contact points.

The main page has a simple and clearly arranged structure and shows the main thematic sections on the top as well as the main contents of these sections. These are created as links, this means that only the headlines are displayed and need to be clicked in order to navigate to the relevant information.

## 2.2. Target audience

The AIRPOXY public website is targeting a wide range of audiences, such as:

- Funding authorities, including the EC
- The general public
- The scientific/technical community
- Policy makers
- Aeronautics industry
- Industrial partners not involved in the project (strategic partners of the main AIRPOXY industry partners)
- Press representatives/journalists

## 3. Structure and contents of the website

### 3.1. The homepage

The website is programmed in responsive web design (RWD). RWD is an approach to web design aimed at crafting sites to provide an optimal viewing and interaction experience – easy reading and navigation with a minimum of resizing, panning, and scrolling – across a wide range of devices from desktop computer monitors to mobile phones.

Either from search engines or when typing <https://www.airpoxy.eu> in the browser's address bar, the user will most of the time reach the website homepage, where an overview of all content available on the website is displayed. The visitor will then be able to directly access any content of the website via the menu bar.

Upon entering the website, a slider with three automatically revolving images summarises the main elements of the project. An example image from the slider is shown in Figure 1 below.



Figure 1: Top slider and menus on homepage of the AIRPOXY public website

In each of the revolving images in the banner, a short text places AIRPOXY in a broader scientific and societal context, describing objectives, scientific approach and impact in more detail.

At the bottom and on the right side of the page (see Figure 2 below), the visitor can directly access the contact form in order to leave a message, ask a question, give feedback to the project coordinator or for instance to a specific partner. Furthermore, on each page on the right side, four buttons give the user access to social networks related to AIRPOXY such as its dedicated page on Twitter, LinkedIn, Facebook and Google+.

These functions are constantly displayed on every section of the website.



Figure 2: Possibilities of contacting the project beneficiaries on each page

### 3.2. [AIRPOXY in a nutshell](#)

With a click on the first tab on the menu bar (right side of the homepage), the visitor will be able to access one of the following sub topics:



### About AIRPOXY

This page provides explanations on what the project aims and key project related facts: approach in section “How?”, budget in section “How much?” and the link to the consortium partners under section “Who?”. A screenshot of this page is shown in Figure 3 below.

## ABOUT AIRPOXY

### WHAT?

The aim of AIRPOXY is to reduce the production and maintenance costs of composite parts in the aeronautic sector by introducing a novel family of thermoset composites that preserve all the advantages of conventional thermosets, but can also be easily processed and repaired, and even recycled.

### HOW?

This is will be achieved by the further development and validation of a **family of ground-breaking thermoset resins which present reversible or “dynamic” bonds**, recently developed by CIDETEC (patent pending). These dynamic chemical bonds enable a series of “smart” properties, creating a new generation of thermoset composites that **preserve their high performance**, in terms of easy fibre impregnation and overall stability, **while showing new unprecedented features** once the composite is completely cured, such as Re-processability, Reparability and Recyclability (3R).

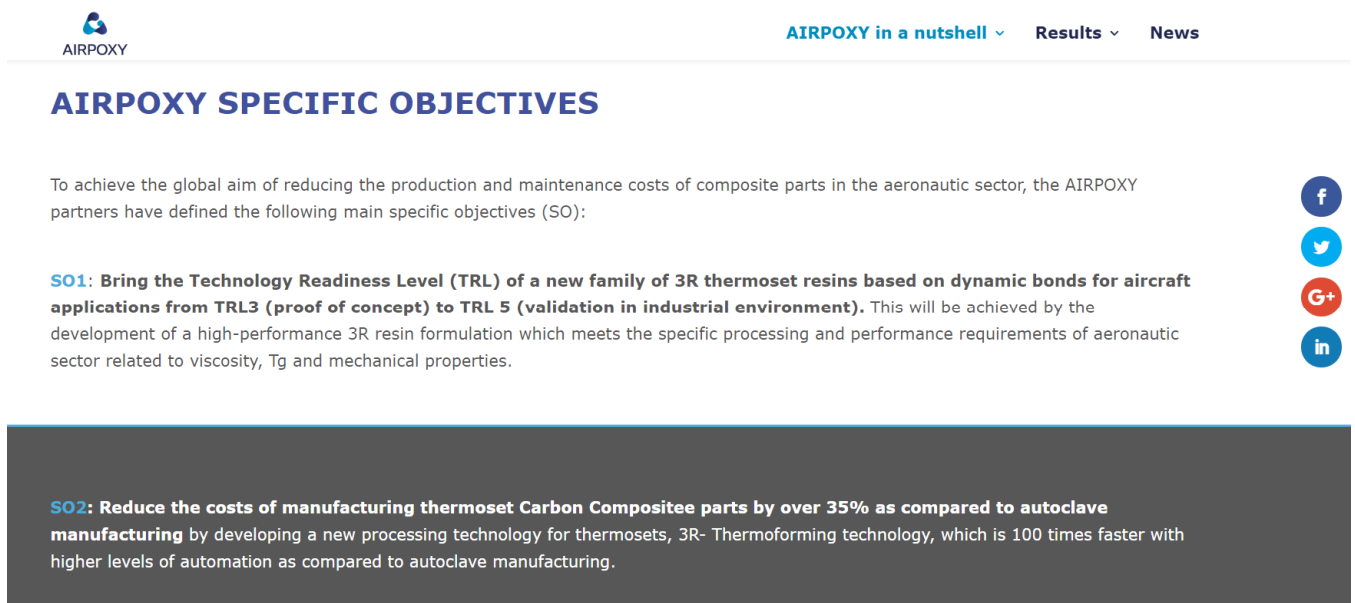
The developed technology will be moved from TRL3 to TRL5 through two representative demonstrators of aircraft panels.



Figure 3: Screenshot from the section “About AIRPOXY”

### Objectives

An overview over the project’s specific objectives with a short description how each objective will be achieved is presented in this section. A screenshot of this section is shown in Figure 4 below.



The screenshot shows the AIRPOXY website header with the logo and navigation menu (AIRPOXY in a nutshell, Results, News). The main heading is 'AIRPOXY SPECIFIC OBJECTIVES'. The text explains the goal of reducing production and maintenance costs. It lists two specific objectives (SO1 and SO2) with their descriptions. SO1 focuses on increasing the Technology Readiness Level (TRL) from 3 to 5. SO2 focuses on reducing manufacturing costs by 35% through new processing technology. Social media icons are visible on the right side.

Figure 4 Screenshot of the subpage “Objectives”



### **Work plan structure**

The AIRPOXY work plan structure is presented in this section. A figure illustrating the all the project’s workpackages (WPs) and the links between them is included to allow for a better understanding of the work plan structure. Each WP description includes the WP title, its objectives as well as the name and logo of the leading partner. The information is provided in a drop-down menu by clicking on each WP title. A screenshot of the work plan structure page is shown in Figure 5.

### **Impact**

This section shows a graphic illustration of the major impacts of the AIRPOXY project as shown in Figure 6.

### **Who we are**

As can be seen in Figure 7, this section includes an interactive “flash” map locating the 11 partners involved in the project helps to have a quick overview of the concerning area throughout Europe.

Below the map, all partners are listed by category by showing their logos. With a click on a partner logo, a text appears below the logos displaying key information on the selected partner as described above, such as its name, a short depiction of the entity itself and its role in the project.

### **Advisory Board**

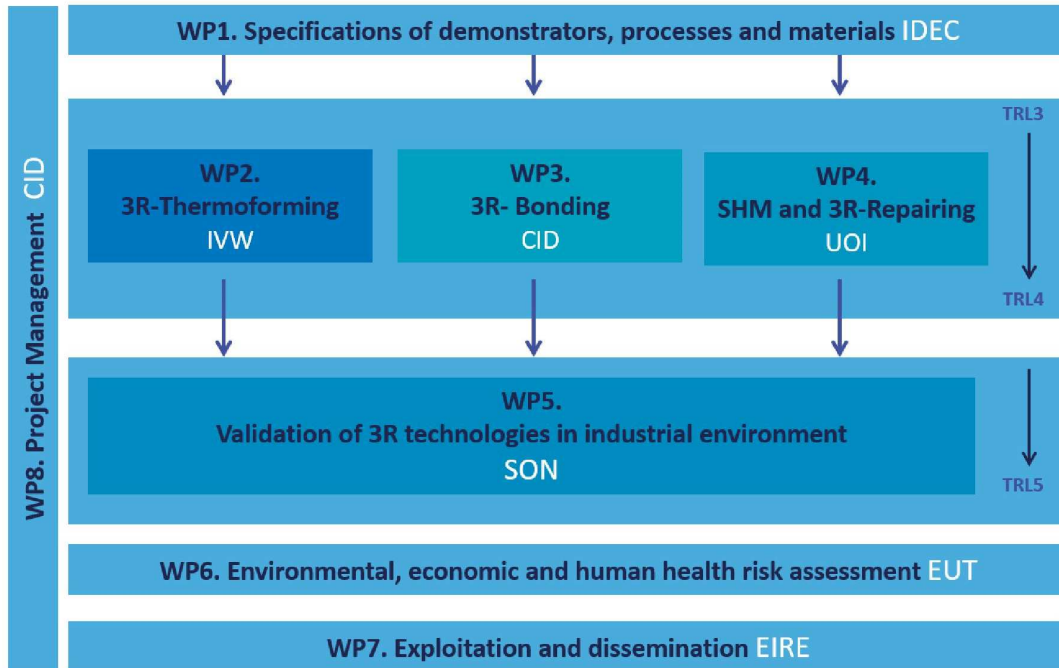
This subpage describes the role of the External Advisory Board, namely the support in the specification definition and in the validation of the project. The subpage also defines the representing entities of the advisory board: representatives from OEMs (AIRBUS and Leonardo), material industry (Huntsman and SGL group) and aeronautical organizations (EREA, through its Spanish representative from INTA).

## WORK PLAN STRUCTURE

To facilitate the work in AIRPOXY, the project contains 8 work packages (WPs). The work packages are subdivided in tasks.

The figure below shows the structure of the project and the interdependencies of the WPs as well as the partners responsible for them.

By clicking on the different WPs you can find out more about the respective tasks and objectives.




**WORK PACKAGE 1: SPECIFICATIONS OF DEMONSTRATORS, PROCESSES AND MATERIALS**

**Lead:** IDEC

**Objectives:**

- To define the **demonstrators** taking into account the needs to demonstrate **thermoforming, bonding and repair technologies**.
- To define the **requirements** (properties) for each demonstrator.
  - Coupon level
  - Sub component level
- To define **raw materials** to be used (resin, fibers, protections) and their properties.
- To define **testing methods** to evaluate the performance and functionalities of demonstrators in order to define the standardisation needs and assessment procedure:
  - Coupon level
  - Sub component level



**WORK PACKAGE 2 – THERMOFORMING**

**WORK PACKAGE 3 - DEVELOPMENT OF 3R-BONDING TECHNOLOGIES**

Figure 5: Screenshot of subpage “Work Plan Structure”

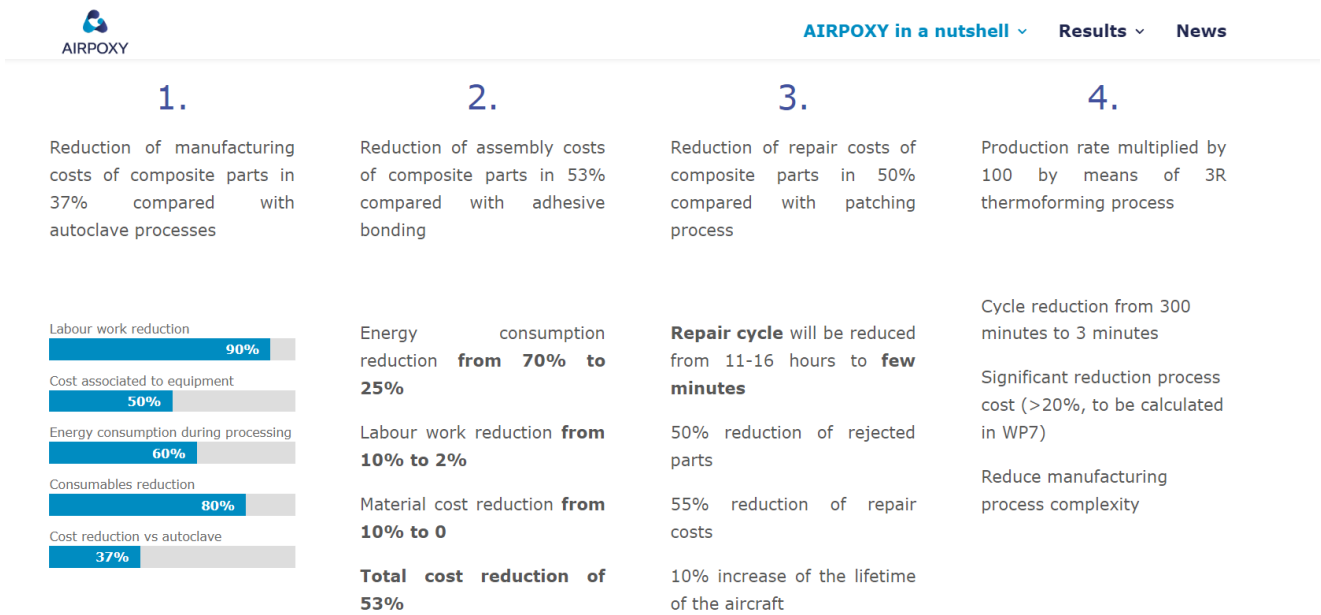


Figure 6: Screenshot of subpage "AIRPOXY Impacts"



**AIRPOXY PARTNERS**



Figure 7: Screenshot of subpage "Who we are"

### 3.3. Results

This section depicts the expected AIRPOXY results using the following dissemination means:

- Scientific publications
- Deliverables
- Presentations
- Other material presenting project results

These pages will be continuously updated with the produced publications, public deliverables, presentations and other publications.

### 3.4. News

The News subsection of the AIRPOXY public website is dedicated to project news and events. In order to communicate about the project evolution over the 3,5 years duration, major achievements will be published as news items in the news section. For instance, news will be published when a significant step is taken, when a test campaign is carried out, as well as when results are obtained (subject to approval by the AIRPOXY GA).

The section will also include an overview of all past and future events, including both events organised by the AIRPOXY project itself, external events where the AIRPOXY project will be presented and which AIRPOXY partners will attend. For public AIRPOXY events, an agenda and relevant information to register and attend the event will be made available on this website.

This News section will also serve as a repository for all press releases that the project publishes over the duration of the project. It will also list, whenever possible, all articles dealing with, mentioning or focussing on the AIRPOXY project. This subsection is especially targeting press, as this is the web page where various material produced within the framework of AIRPOXY dissemination activities are put at visitors' disposal. This will include project logos, flyers, posters, brochures and high-quality images.

The News subsection will be updated regularly.

## 4. Conclusions

The AIRPOXY public website is online and fully operational since 30 November 2018. The page will be updated on a frequent basis. Updates will become more and more frequent as the project progresses, so it should be consulted regularly to get access to new contents. The website will be an important means to disseminate information about the project and to attract all relevant stakeholders.