

# PROCRAFT

## Participation of PI4 (CEMES) and PAs

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Visio, 05/11/2020  
Kick-off meeting

# Actions in WP2 : Corpus selection

- Requirements for PROCRAFT transmitted to APs
- Selection of aircraft parts (corpus) :



Aerocherche (AP15)



He 177 (1943)



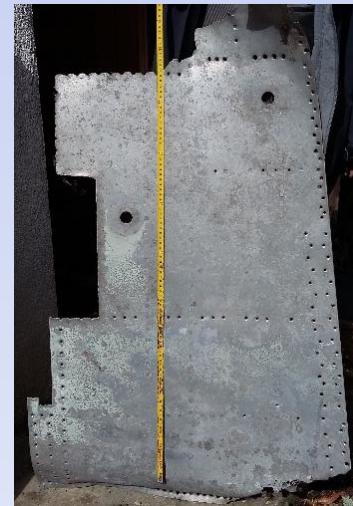
Junker 88



Dornier 217 (1943)



FW 190



## Dewoitine D 338



Aérothèque (not AP yet)

Vedal (AlClad)



Projet Aérothèque  
Sauvegarde et Restauration d'un tronçon DEWOITINE D338



# Actions in WP2 : Corpus selection

Toulouse Métropole (AP3) – Envol des Pionniers

## Merlin XX engine from Avro Lancaster (1944)

- Cast aluminium alloy + other metallic materials



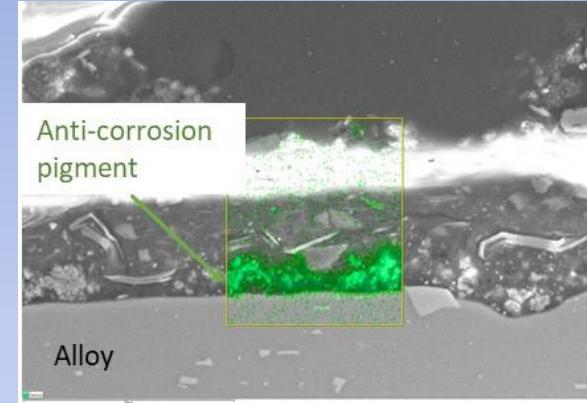
*Crédit photo: Materia Viva*

# Actions in WP2: Materials analysis

Post-doc : 6 months in CEMES from 01/01/2021

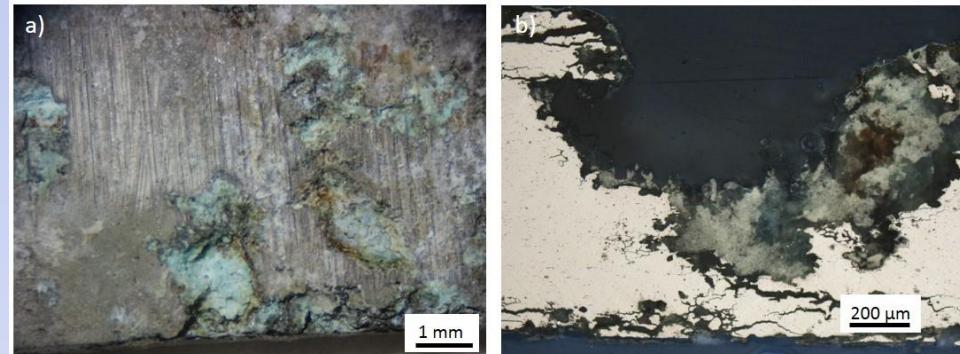
## ■ Identification of materials :

- Metallic alloys : SEM-EDS, TEM
- Protective coatings: OM, SEM-EDS, XRF, FT-IR, Raman, XRD



## ■ Diagnostic on corrosion :

- OM, SEM-EDS, XRD



## ■ Choices to transmit for WP3 and WP4:

- Model materials : 1 wrought alloy, 1 cast alloy
- Real materials (from corpus)

# Actions in WP2: Data base

Master student : 6 months from 01/01/2022 – codirection FRAMESPA

## ■ Project database: internal



The screenshot shows a digital workspace titled "planet Espaces collaboratifs". At the top, there are buttons for "Sélectionner", "Créer...", "Ajouter un document", and "Eléments sélectionnés...". Below this is a sidebar with sections for "Documents" (listing "Administrative documents", "Communication", "Library", "Management", and "Proposal Documents") and "Fichiers" (listing "Documents", "Administrative doc", "Communication", "Library", "Management", and "Proposal Document"). The main area displays a list of five items, each with a small icon, a title, and a modification date by "Elodie GUILMINOT". At the bottom right, there are navigation links "1 - 5 sur 5 << 1 >>".

## ■ Open access database:

- HAL (CNRS)
- Aeroscopia's database (AP7)

The screenshot shows the homepage of the Aeroscopia AP7 database. It features a background image of a library filled with books. Overlaid on the image are several blue circular buttons with white text: "ACTUALITÉS", "EXPLORER", "PARTENAIRES", "EN PRATIQUE", and "FILIERS ET MÉTIERS". Below the image, there is a section titled "ARCHIVES" listing various historical collections and their details. At the bottom, there is a search bar with the placeholder "Taper ici pour rechercher" and a standard Windows taskbar.

# Actions in WP4 and WP5

Master student : 6 months from 01/01/2022 – codirection CIRIMAT (AP5)

- Assessment of protective coatings developed by UNIFE and UNIBO :
  - Advanced characterization :
    - Adherence tests
    - Micro-nano characterization (FIB-SEM)

M. Aufray, C. Josse, An. Balbo, C. Monticelli, E. Švara Fabjan, L. Škrlep, T. Kosec, N. Gartner, C. Martini, G. Masi, C. Chiavari, E. Bernardi, M. C. Bignozzi, L. Robbiola, M. Babnik, T. Koršič, M. Kete, *Practical adhesion measurements of protective coatings on bronze by 3-point bending Test*, Journal of Coatings Technology and Research, 2019, 16(5), pp. 1465-1477

# Actions in WP6

Collaboration with CTU (PI 3) / Toulouse Métropole (AP3) / Materia Viva (AP19)

- Merlin Engine = case study for definition of micro-climatic conditions
  - ⇒ Showcase design
  - ⇒ Choice of sensors for monitoring materials alteration
  - ⇒ Monitoring of the conservation conditions (HR, T°C, O<sub>2</sub> etc) and of materials alteration inside the showcase
    - Data for CTU model

# Actions in WP7: Communication

- Workshop organization (26/01/2021): with Aéroscozia
- Participation in the elaboration of protocoles / Guides for associations in charge of aircraft
- Conferences (specialized and/or vulgarization)



toulouse  
métropole