

# ONGOING PROJECT: ANDDURO

ANalysis of Defects and DURability Optimisation

**Objectifs** : Master Powder Bed Processes for aerospace applications

Perform LBM benchmark

Support M&P specifications for industrial deployment

Increase knowledge on peculiar metallurgy of AM products

Develop in-situ process control



17,2 M



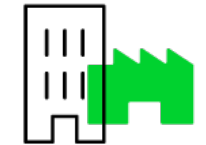
57 months



AIRBUS DS,  
AIRBUS, ALTRAN,  
DAHER, ELEMENT, Deliverables  
FUSIA,  
LATECOERE,  
LAUAK, LIEBHERR,  
LAAM,  
MECAPROTEC,  
OERLIKON,  
PRISMADD, SATYS,  
SAFRAN, STELIA



46



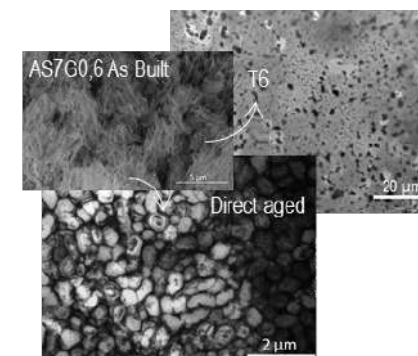
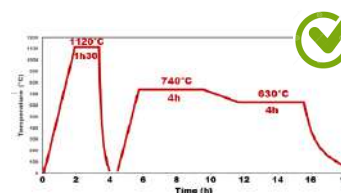
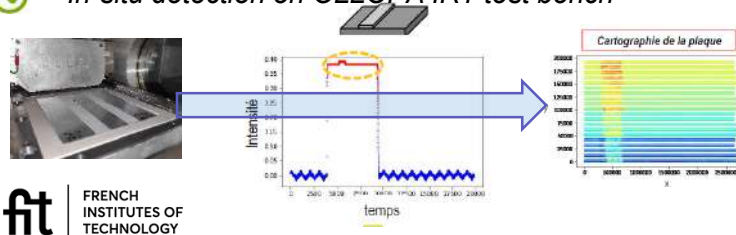
18,5 FTE

Machine benchmark  
✓ Parametric study

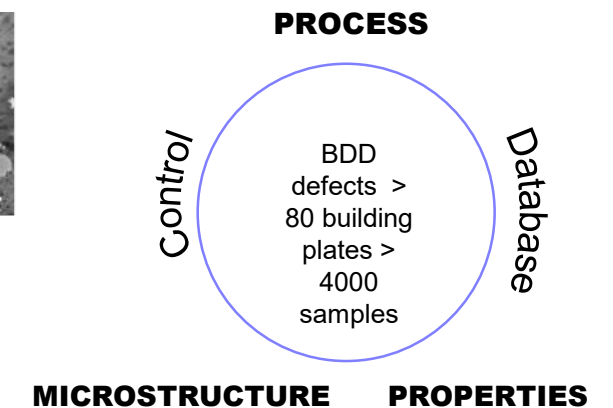
## Principale Activities

- Full scale demonstrators
- Defects databases, Materials properties databases
- Assessment of Mechanical properties variations: anisotropy, paving...
- Effect of defects, acceptance criteria & NDT vs. targeted application
- Multiscale microstructures characterizations (scale effects)
- Phase transformations diagrams & innovative heat treatments
- Thermo(mechanical) ageing database
- LBM test bench and in-situ process control systems

✓ In-situ detection on OLLOPA IRT test bench



Post fabrication optimized heat treatment: Ti64, Ni718, AS7G

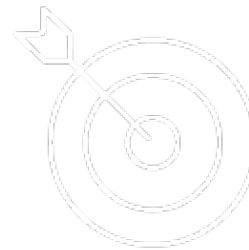


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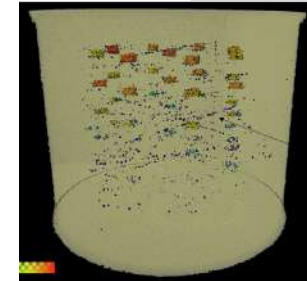
ANalysis of Defects and DURability Optimisation



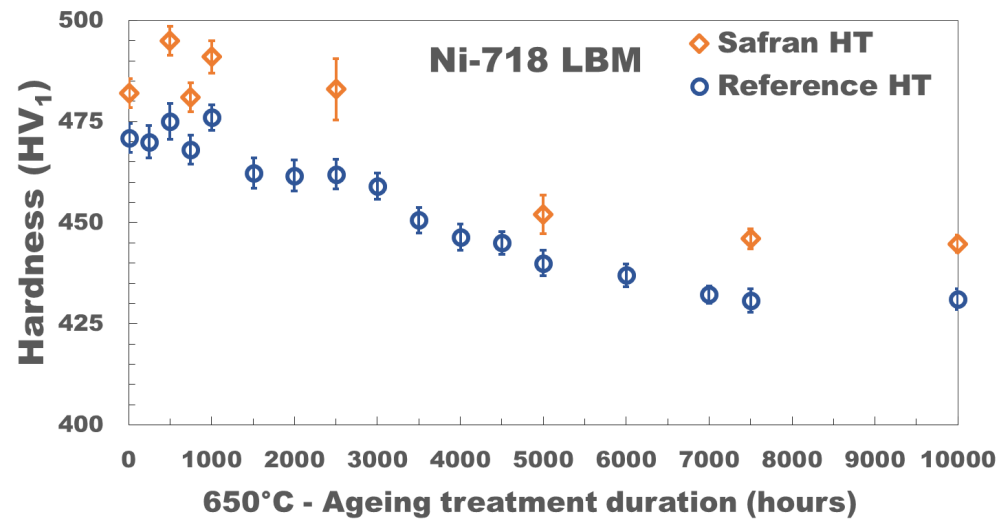
Alloys: Ti64, Ni718, AISi7Mg0.6, Ni625, AA...



On-demand defect generation (size position)



Properties evolution up to 10 000 h of thermal ageing



Effect of defect on mechanical properties

