



**EASA**  
European Aviation Safety Agency

# Additive Manufacturing and DOA

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**28 - 29 September 2016**

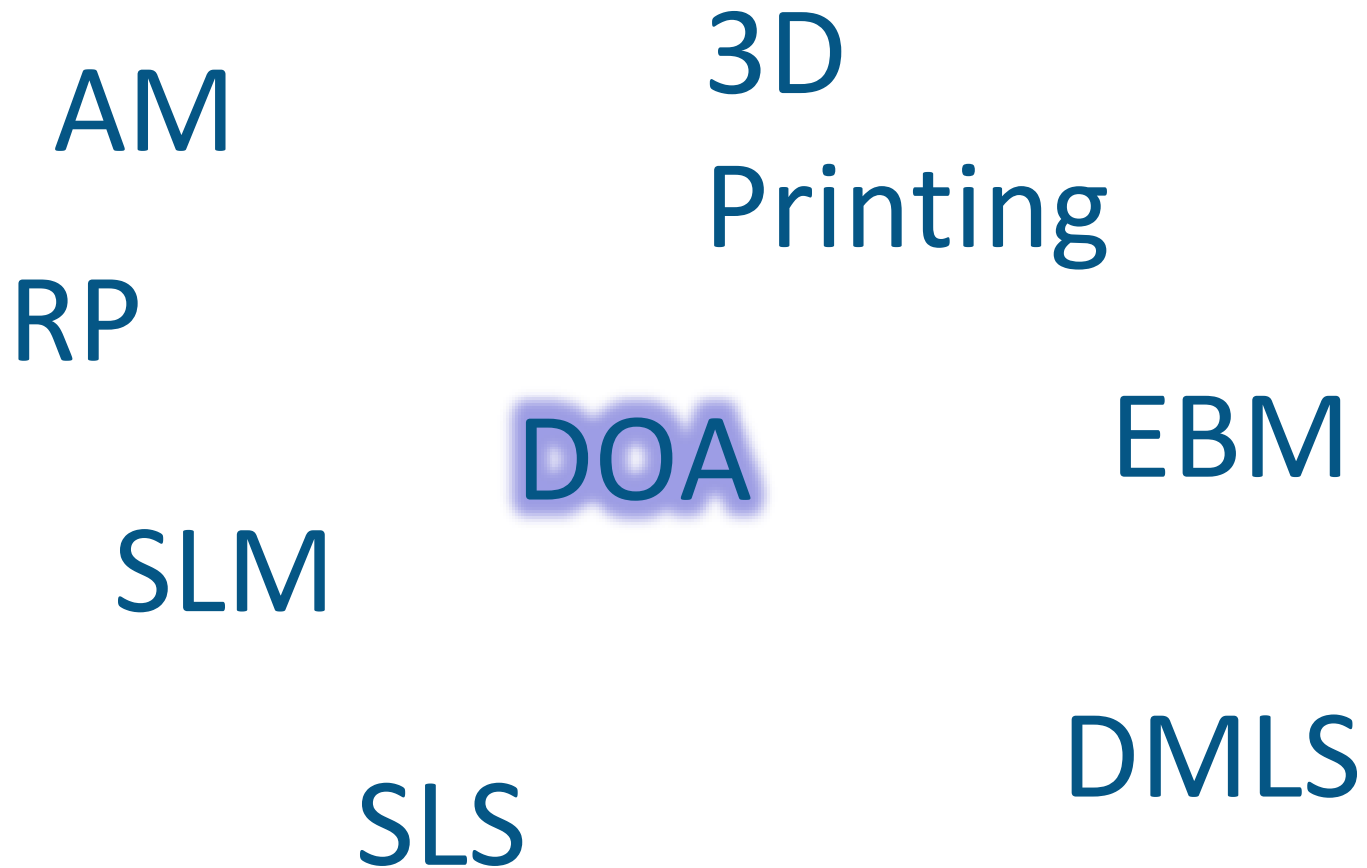
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TE.GEN.00409-001



# What is DOA ?





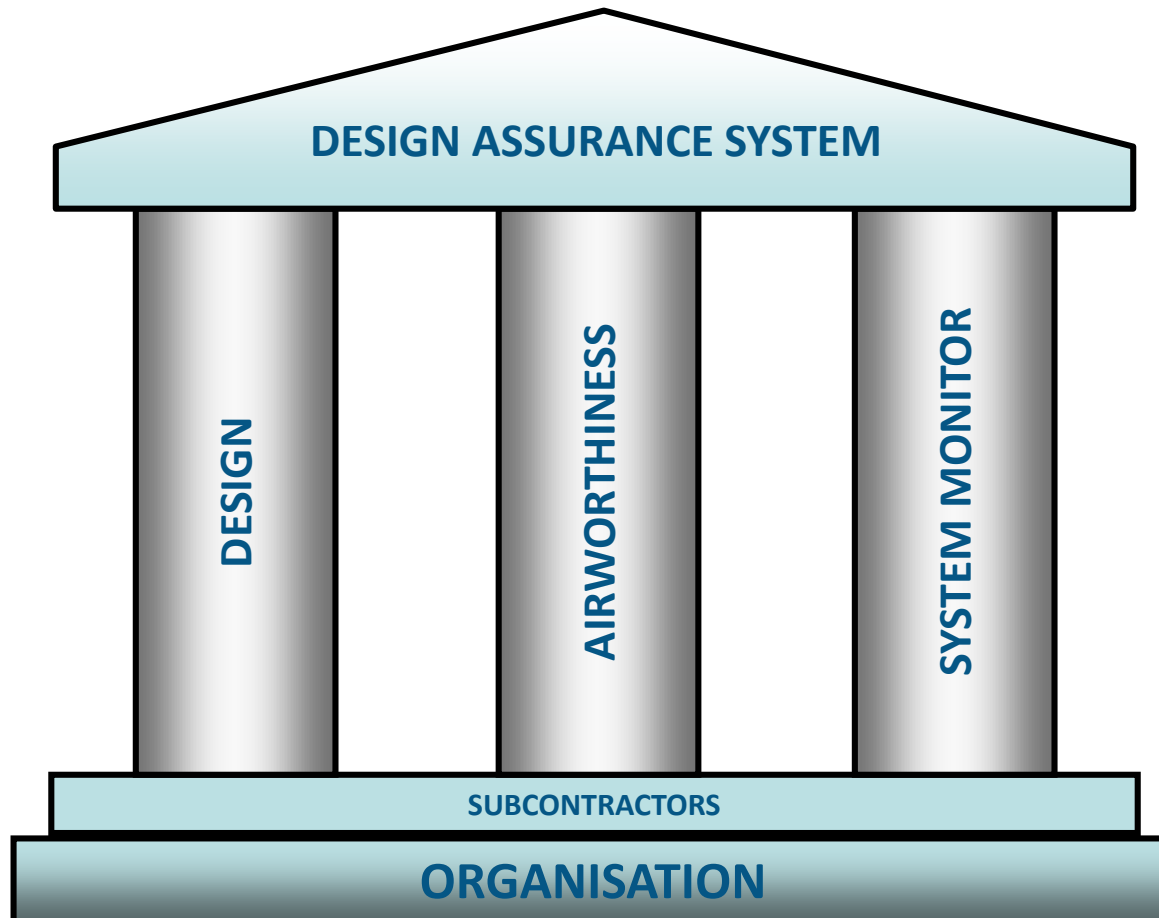
# What is DOA ?

- DOA – Design Organisation Approval
- DOA concept is used to facilitate the product certification processes
- 20+ years old
- Defined in EASA Part 21 (Subpart J)



# What is DOA ?

DOA is based on the establishment of a Design Assurance System





# What is DOA ?

## Design Assurance System

- organisational structure
- responsibilities
- procedures
- resources

A DOA has rights and obligations. Based on the demonstrated capability, EASA grants privileges:

...

- approval of minor changes
- approval minor repairs
- Approval of major repairs (e.g. TC Holder)

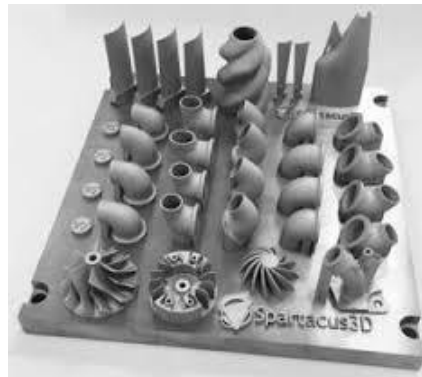
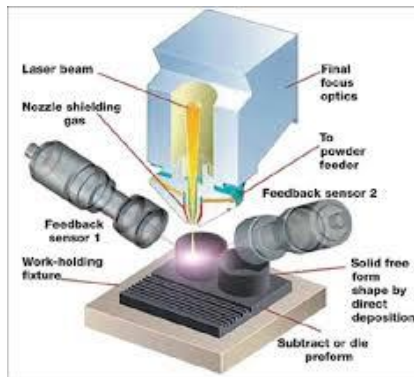


# What is the link between AM & DOA ?

## AM

Research / Development

Certification



DOA

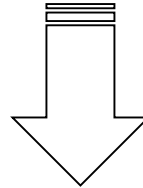


# What is the link between AM & DOA ?

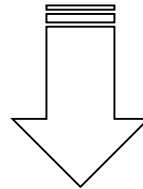
## Certification

### Airworthiness codes

e.g. **CS 25.603 Materials & CS 25.605 Fabrication methods**



**Material / Process Specification**



**Part 21 / 21.A.31**

**Type Design**



# What is the link between AM & DOA ?

- A DOA has to be able to define and control the material specifications and process specifications related to AM
- For this DAS elements (organisation, resources, procedures) have to be defined (when not existent) and used

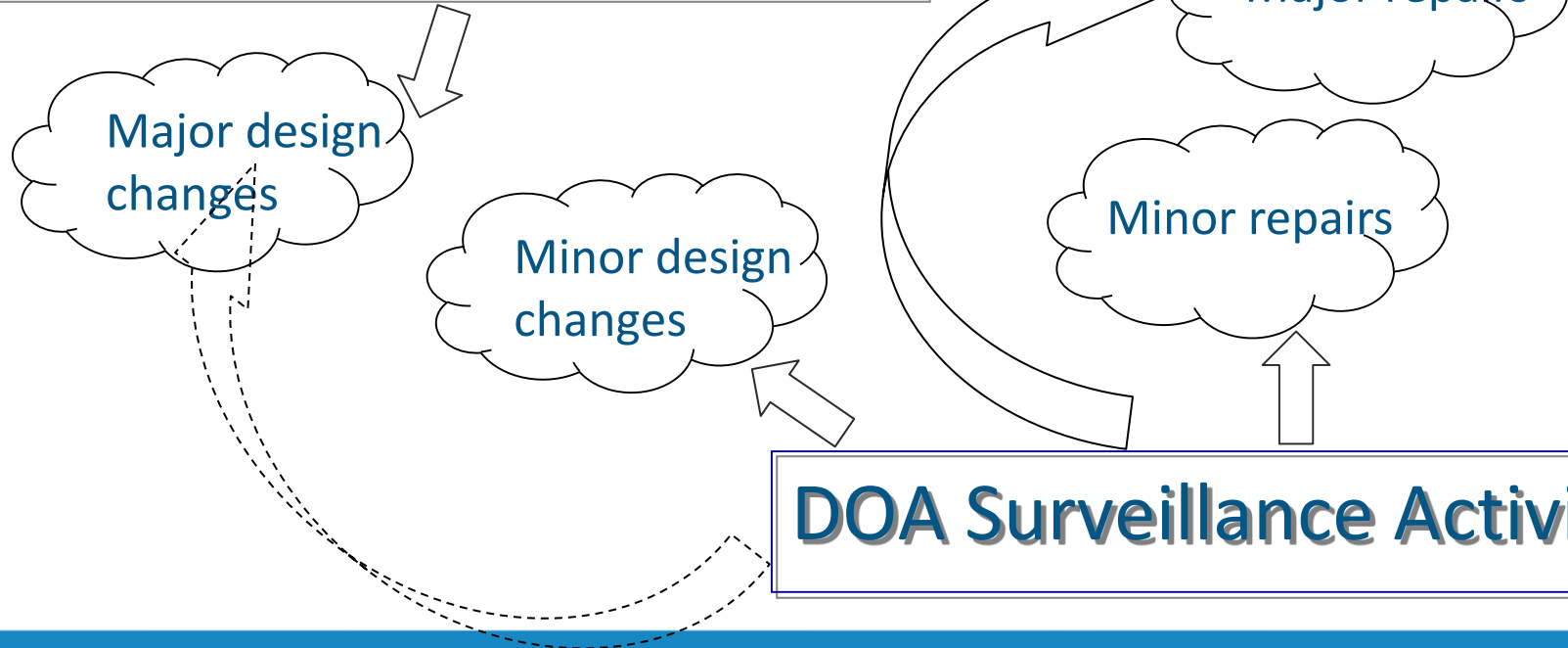




# EASA actions / DOA Surveillance ?

One of the main messages of the CM on AM is to encourage the design organisations to engage with EASA on AM topic

## EASA Cert Team Activities





# EASA actions / DOA Surveillance ?

## DOA Surveillance + Topics



Type design definition  
Configuration control  
Change / Repair  
Classification  
Certification Basis  
Qualification process  
Testing  
Supplier control  
DO-PO interfaces



## DOA Significant Change



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**Thank you**

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