

## INPUT

### Aircraft

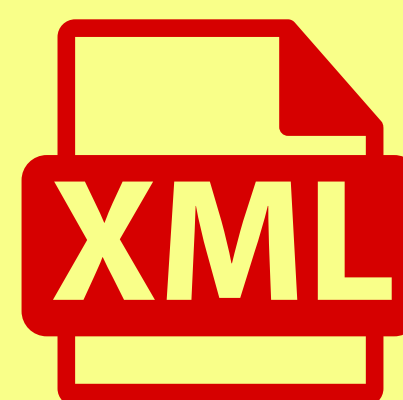
engines  
cabin configurations  
fuselages  
lifting surfaces  
landing gears  
nacelles  
systems



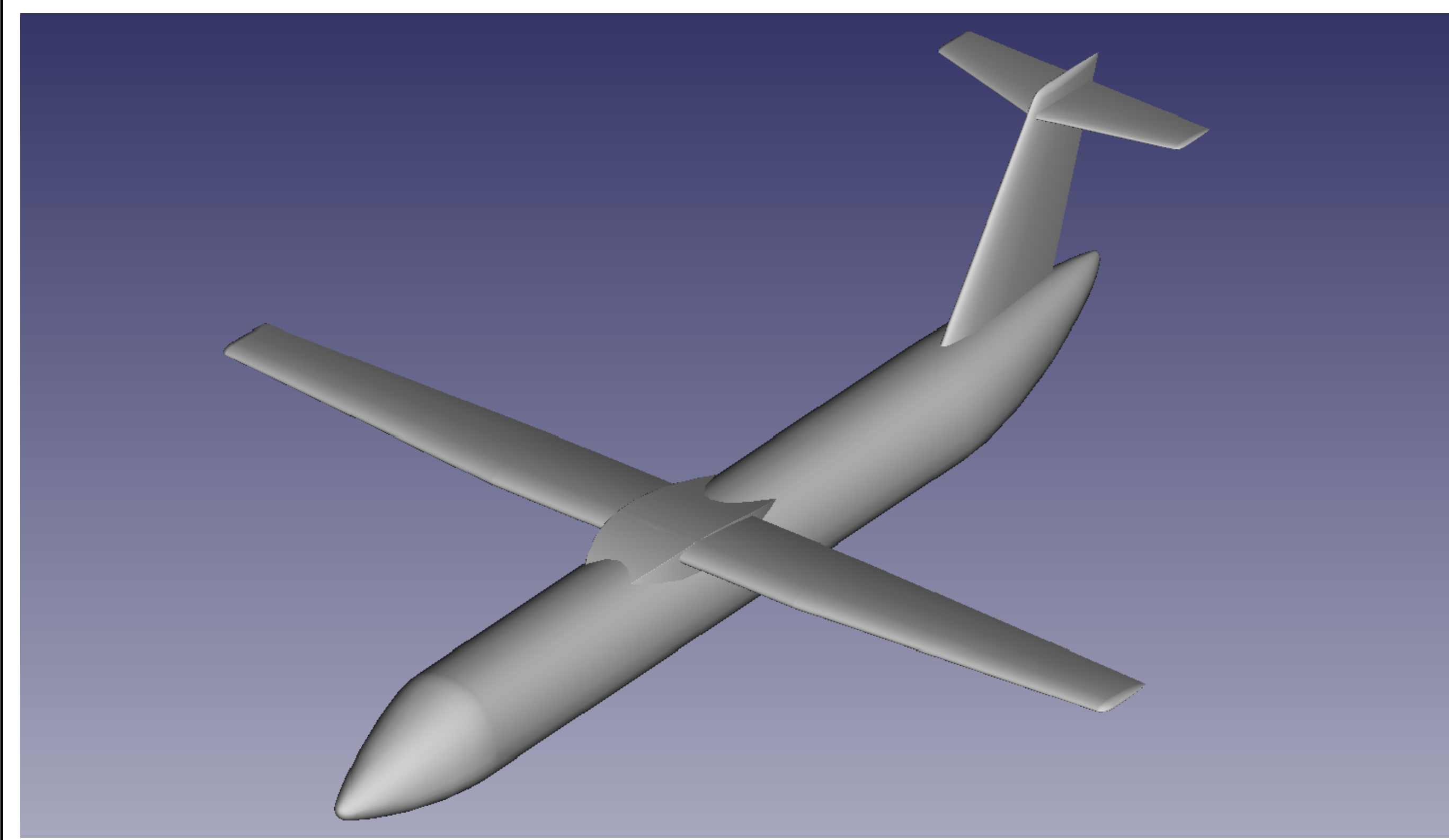
### Operating Conditions

### Analysis

analysis\_weights  
analysis\_balance  
analysis\_aerodynamic\_and\_stability TAKE-OFF  
analysis\_aerodynamic\_and\_stability CLIMB  
analysis\_aerodynamic\_and\_stability CRUISE  
analysis\_aerodynamic\_and\_stability LANDING  
analysis\_performance  
analysis\_costs



## JPADCAD



## OUTPUT

.brep .step .igs

## JPAD CORE

### Analysis disciplines

#### WEIGHTS

Components weight estimation

#### BALANCE

Xcg, Ycg, Zcg  
Balance diagram  
Inertias (Ixx, Iyy, Izz, Ixz)

#### AERODYNAMIC AND STABILITY

#### LIFTING SURFACE

##### LIFT

3D Lift curve  
Lift distributions  
Stall path

##### DRAG

Polar curve  
Drag distributions

##### HIGH LIFT DEVICES & CONTROL SURFACES

2D & 3D effects  
3D Lift curve

##### PITCHING MOMENT

3D moment curve  
Aerodynamic Center  
Moment distributions

#### FUSELAGE & NACELLE

##### DRAG

Polar curve

##### PITCHING MOMENT

3D moment curve

#### AIRCRAFT

##### DOWNWASH

Downwash gradient  
Downwash angle

##### BUFFET BARRIER

##### TOTAL LIFT CURVE

##### TOTAL POLAR CURVE

##### TOTAL PITCHING MOMENT CURVE

##### LONGITUDINAL STABILITY

##### LATERAL STABILITY

##### DIRECTIONAL STABILITY

##### DYNAMIC STABILITY

#### PERFORMANCE

Take-Off  
Climb  
Cruise  
Descent  
Landing  
Mission Profile Analysis  
Payload-Range  
V-n Diagram

#### COSTS

Capital D.O.C.  
Crew D.O.C.  
Fuel D.O.C.  
Charges D.O.C.  
Maintenance D.O.C.

## OUTPUT

.xlsx .csv  
.png .svg

JPAD Aircraft & sub-components

Analysis disciplines