Product & Description
An application running on an Apple iPad® (iOS) which contains a performance tool for Fokker aircraft with the functionalities as included in the next pages.

Benefits for the operator:
- Increased flexibility
- A lower wear on engine due to increase flex take-off
- Better en-route landing decision

A demo App can be downloaded from the Appstore to get an impression of the capabilities, lay-out and calculation speed for the Fokker 50. https://itunes.apple.com/us/app/f50-takeoff/id599271855?mt=8

The application is based on the compiled, current Fokker Take-off and Landing SCAP module, with no additional functionalities. The graphical user interface (GUI) can be tailored within certain limits to the operators needs. Fokker Services as the OEM of the Fokker Fortran SCAP modules has verified the calculation results of the compiled version on the iOS operating system. Additional functionalities as described in the attachment to this proposal will be implemented in the GUI.

Fokker Services will assist the operator in gaining operational approval of the application.

The product includes a server back-end module to be run on either the customer’s server or on a server of the supplier. This module is needed for administration and updating (software, database) of the customer’s iPad. The requirements for the backend system are roughly:

- a server running Linux with PHP/MySQL
- 2 CPU’s (vCPU on a Virtual Machine is fine)
- 8 GB of RAM
- 100 GB of disc space

Excluded is the delivery of the airports and obstacle database. Such a database and its update service shall be arranged by the customer. The Take-Off and Landing Analysis application is capable to exchange data with airport and obstacle databases of various suppliers.

Also other aircraft types can be included, however the customer needs to provide the SCAP module in Fortran and its associated documentation to FS.

Lead Time
The lead time of the execution of your order will be 12 weeks after receipt and our acceptance of your purchase order.

Fixed Price
A licence fee per aircraft per month is applicable.
### Take-off

**Input**
- Aircraft Type and Registration
- Airport + runway + intersection (both ICAO and IATA format)
- RWY shortening
- Line-up distance depending on entry (90/180/no)
- Runway Surface Condition (as defined in AFM)
- Wind speed and direction
- Ambient Temperature
- QNH
- MEL/CDL items
- Max TO thrust and Reduced (FLX) option
- Anti-Icing options
- FLAP setting (fixed or opt)
- V1/VR (fixed or opt)
- V2/VS (fixed or opt)
- minimum Acc Alt
- Actual TOW

**Output**
- Regulated TOW and limitation (including warning if this is less than actual TOW)
- Actual TOW and associated field length margins in (TOD, TOR and ASD)
- 2nd and 4th segment climb gradients for actual TOW
- FLAPS, Thrust setting, TFLEX, V1, VR, V2, VFR, VFTO, Acc. Alt for actual TOW (see note 3)
- EOSID procedure (obtained from Airport and Obstacle database) (see note 3)

**Notes:**
1. Some input parameters are repeated on the output page for pilot’s awareness of selections made
2. All output is numerical except for the wind speed and direction related to the runway direction. This is also shown in the input page as soon as the required data are filled in with indication if wind limitations are exceeded
3. Will be presented on a separate uncluttered page (card) to be used during the actual take-off

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Notes:
1. Runway and obstacle data are obtained from database to be supplied by customer
2. Optionally some defaults can be hidden from the input page (line-up distances, min Acc Height, wind limitations)
3. Other Runway Surface Conditions can be implemented in the GUI and translated into a condition that is presented in the AFM
4. GUI will exclude (grey-out) or warn if unsupported input combinations are selected
Landing (dispatch)

**Input**
- Aircraft Type and Registration
- Airport + runway (both ICAO and IATA format)
- RWY shortening
- Runway Surface Condition (as defined in AFM)
- Wind speed and direction
- Ambient Temperature (for climb limitations, for field length limitation IAS is taken)
- MEL/CDL items
- Approach type (CAT I/II/III)
- Anti-Icing options
- Presence of residual ice
- FLAP setting (fixed or opt)
- expected LW

**Output**
- Regulated LW and limitation (including warning if this is less than expected LW)
- Expected LW and associated field length margin.
- Approach and Landing Climb gradients for expected LW
- FLAPS, VREF for expected LW

**Notes:**
1. Some input parameters are repeated on the output page for pilot's awareness of selections made

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Notes:
1. Runway and obstacle data are obtained from database to be supplied by customer
2. Optionally some defaults can be hidden from the input page (landing distance factors, wind limitations, Approach type)
3. Other Runway Surface Conditions can be implemented in the GUI and translated into a condition that is presented in the AFM
4. GUI will exclude (grey-out) or warn if unsupported input combinations are selected
Landing (en-route)

Input

- Aircraft Type and Registration
- Airport + runway (both ICAO and IATA format)
- RWY shortening
- Runway Surface Condition (as defined in AFM)
- Wind speed and direction
- Ambient Temperature
- QNH
- MEL/CDL items
- In Flight Failures
- Approach type (CAT I/II/III)
- Threshold speed increment (for very slippery runways only)
- Reverse level (for very slippery runways only)
- Anti-icing options
- Presence of residual ice
- FLAP setting (fixed or opt)
- actual LW

Notes:
1. Runway and obstacle data are obtained from database to be supplied by customer
2. Optionally some defaults can be hidden from the input page (landing distance factors, wind limitations)
3. Other Runway Surface Conditions can be implemented in the GUI and translated into a condition that is presented in the AFM

Output

- Actual LW and associated field length margin.
- Approach and Landing Climb gradients for actual LW
- FLAPS, VTHR
- FLAPS, Vclimb (AEO and OEI) for missed approach for actual LW

Notes:
1. Some input parameters are repeated on the output page for pilot’s awareness of selections made
2. All output is numerical except for landing distance margin and the wind speed and direction related to the runway direction. This is also shown in the input page as soon as the required data are filled in with indication if wind limitations are exceeded.

4. GUI will exclude (grey-out) or warn if unsupported input combinations are selected