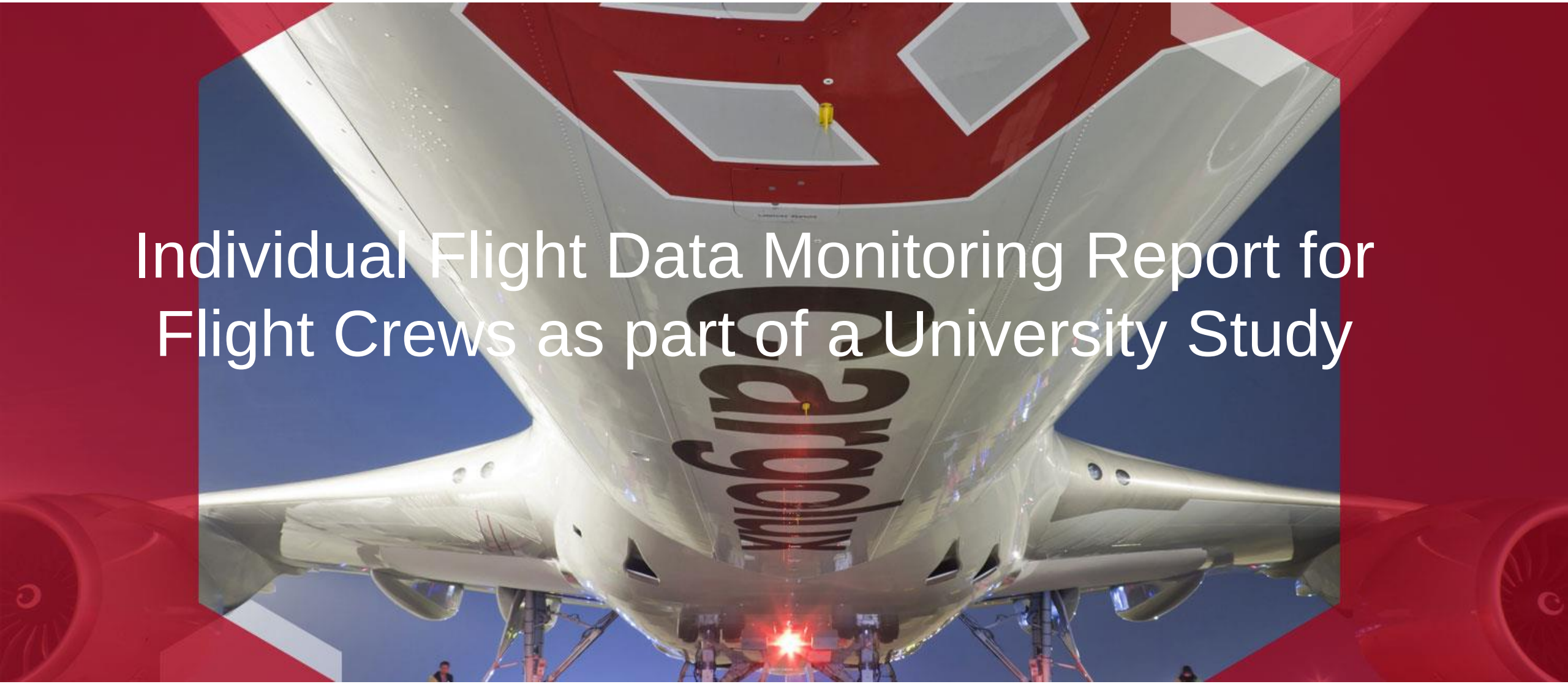
cargolux
you name it, we fly it !



Individual Flight Data Monitoring Report for Flight Crews as part of a University Study

cargolux
you name it, we fly it !

Scope of the study

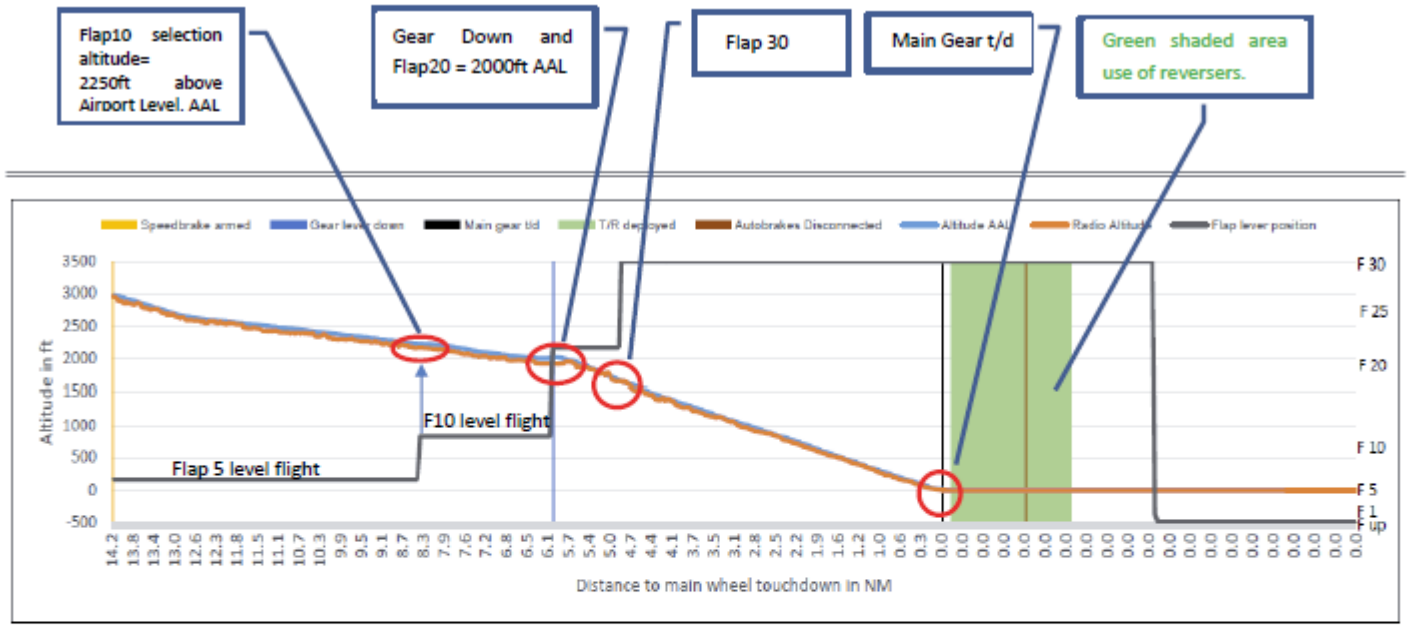
- Data provided to participants (10% of actual pilot group within CV) for a duration of 6 month
- Enable Flight Crews to reflect on landing performance
- Learn from you own mistakes
- Improve PF skills and behavior
- Possible future implementation to all company pilots
- Control mechanism for crews if simulator training was effective

Reflection

Reflection practice can be interpreted as being the practitioner's ability to access , make sense of and learn through work experience to achieve more desirable, effective and satisfying work; Johns, 1995 p.23-24.

Reflection is being used in crew training as part of any advanced training and qualification program as a method called facilitated debriefing.

The report

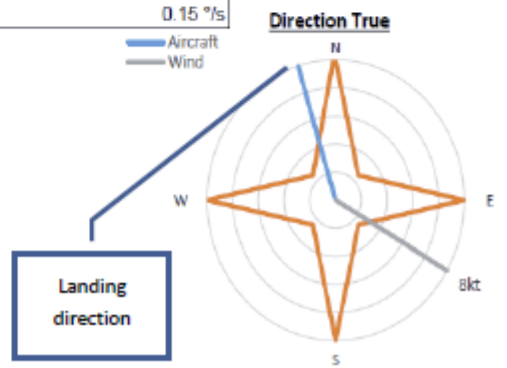


V/S Profile on approach	
1000ft/AAL	-831 ft/min
900ft/AAL	-904 ft/min
800ft/AAL	-908 ft/min
700ft/AAL	-931 ft/min
600ft/AAL	-872 ft/min
500ft/AAL	-917 ft/min
400ft/AAL	-966 ft/min
300ft/AAL	-798 ft/min
200ft/AAL	-821 ft/min
100ft/AAL	-786 ft/min
50ft/AAL	-693 ft/min
MGTD	-200 ft/min

Landing Parameters	
Vref	144 kts
CAS at 50ft RA	153 kts
Roll angle at MGTD	0.2 °
Tailwind component	5.87 kts
CW component	5.44 kts

Landing Roll Parameters	
Time from MGTD to T/R open	3 sec
Begin T/R modulation to idle	74 kts
Speed at T/R stowed	28 kts
Autobrake disconnect speed	56 kts

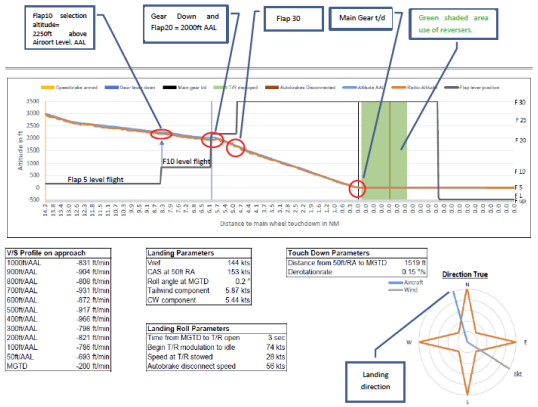
Touch Down Parameters	
Distance from 50ft/RA to MGTD	1519 ft
Derotationrate	0.15 °/s



cargolux
you name it, we fly it !

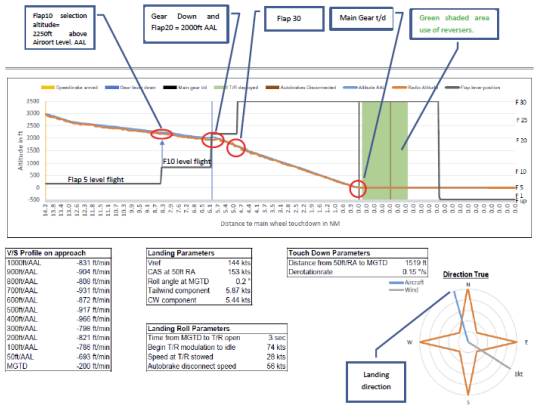
Data Analyses

FEB – JUL 2016



Comparing Data

FEB – JUL 2017



cargolux
you name it, we fly it !

Data Analyses

Autobrake disconnect G/S

T/R modulation to idle

Distance in feet from 50Ft RA till Touch Down

De-rotation Rate

Autobrake disconnect G/S

Boeing Flight Crew Training Manual

- AB should be used at all landings unless NNC/MEL

To be used when conditions are limiting and full stopping capability is required. In limiting conditions, if required, full reverse thrust may be used down to 70 kts, at which point reverse should be modulated so that reverse idle is selected by 40 kts to reach forward idle prior to taxi speed.

- AB should be used until taxi speed (max 30kts)

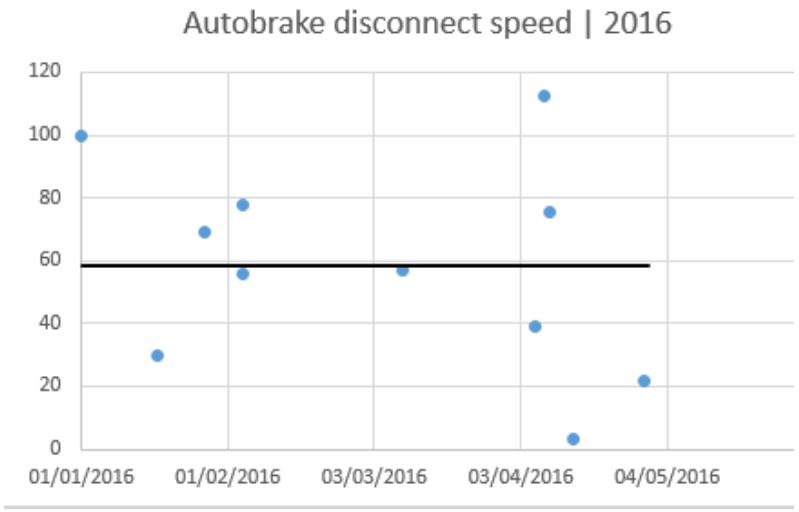
Before taxi speed, disarm the autobrakes. Use manual braking as needed.

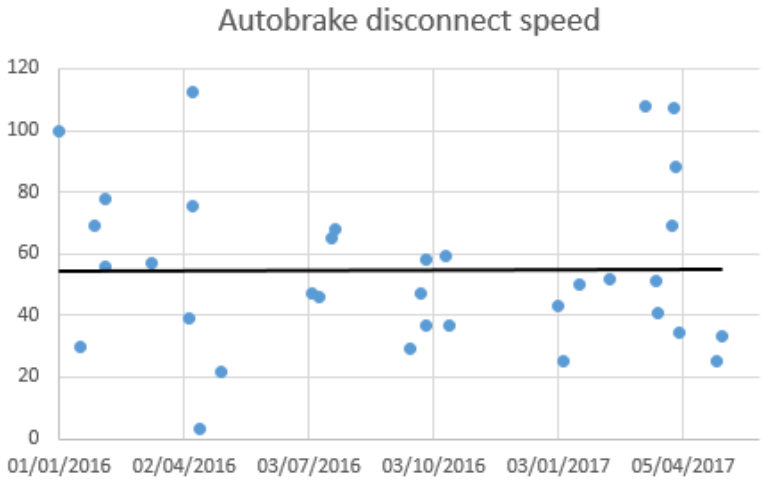
- AB should be disarmed before T/R modulated to idle

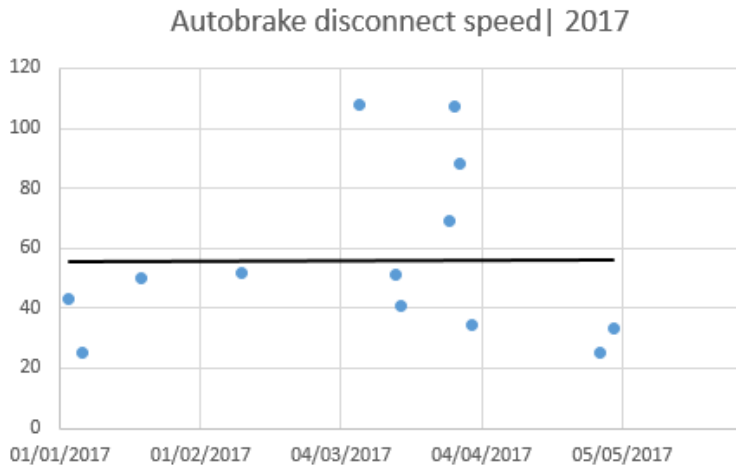
cargolux
you name it, we fly it !

Data Analyses

Autobrake disconnect G/S



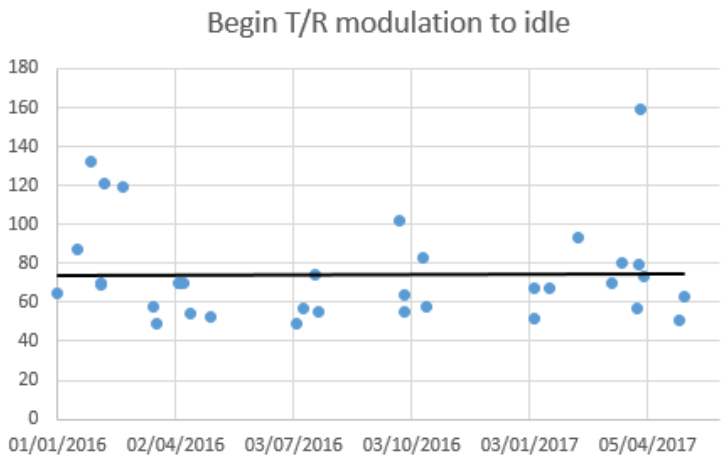


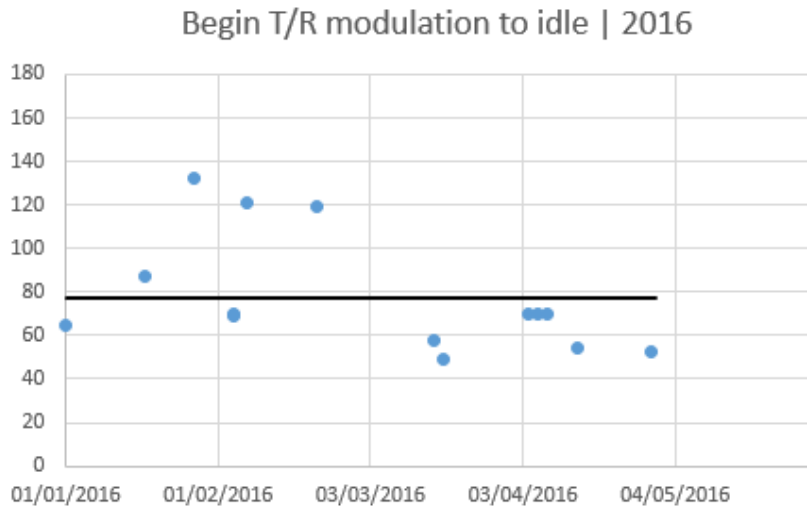


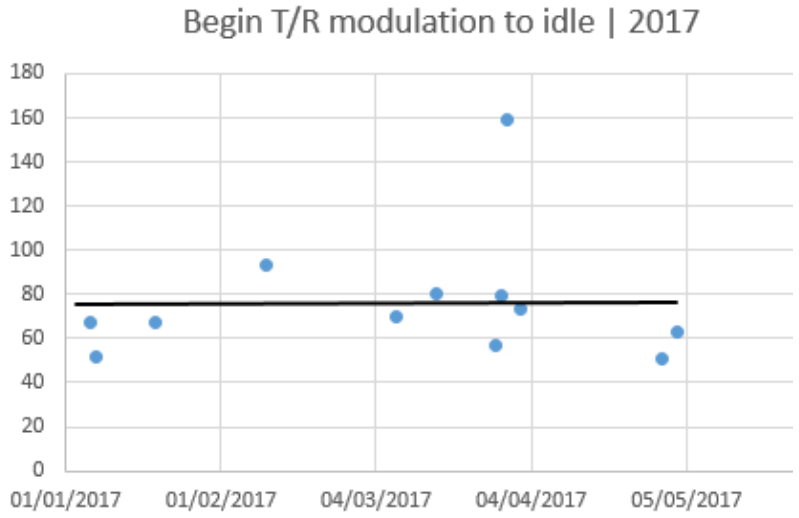
cargolux
you name it, we fly it !

Data Analyses

T/R modulation to idle







Conclusions

- TR modulation to idle occurs nearly according to procedure
- AB occurs early
- Landing roll planning could be questioned
- Correlations between landing roll planning and execution
- Habits or routine errors

cargolux
you name it, we fly it !

Future Development

Except from basic data the individual report could be extended to include training activities which have been identified through the FDM program feeding into ATQP

Example:
Rotation rate on takeoff identified as to low

Therefore:
Rotation on takeoff becomes a topic during simulator training

Individual FDM report:
Additional information added to the report for each pilot to check if his performance is in accordance with trained skills

Frank Hitzbleck – cargolux
Frank.Hitzbleck@cargolux.com