



Airline Safety – The future with Data Analytics

Stimulating Digital Innovation and Collaboration

March 2018



A Rolls-Royce
solution

R² Data Labs

Recommended Actions
Data is only as good as the actions you take to improve it.

Dublin Connolly	Belfast Central	length	Dublin Connolly	Belfast Central	length	Dublin Connolly	Belfast Central	length	Dublin Connolly	Belfast Central	length
07:05	09:40	02:05	07:05	09:45	02:00	07:05	09:25	02:15	07:00	09:25	02:05
09:35	11:40	02:05	09:35	11:47	02:12	09:35	11:25	02:15	09:00	11:25	02:25
11:05	13:05	02:00	11:05	13:15	02:10	11:05	13:25	02:15	11:00	13:25	02:25
13:35	15:25	02:00	13:35	15:35	02:15	13:35	15:25	02:15	13:00	15:25	02:25
15:05	17:25	02:09	15:05	17:29	02:09	15:05	17:25	02:15	15:00	17:25	02:25
16:35	18:45	02:10	16:35	19:05	02:15	17:05	19:25	02:15	17:00	19:25	02:25
19:05	21:05	02:00	19:05	21:09	02:05	19:05	21:25	02:15	19:00	21:25	02:25
20:45	22:50	02:05	20:50	22:59	02:09	21:05	22:25	02:15	21:00	22:25	02:25
Average		02:03			02:11	Average		02:15			
Overall average		02:04	Overall average		02:09	Overall average		02:15			



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**collaborating
with best-in-class
to power an analytics
ecosystem**



**Airline customers
express a need for
more insight**

**to do more to
improve safety?**

- **Airline customers express a need** for more insight to enable them to FOCUS their PROACTIVE care where it's needed more
- **Can we** integrate Safety Management (SMS) data with continuous operational data (QAR & Weather & more)



“we want to help aviation safety
by using captured safety management knowledge
to develop predictive analytics
from ALL available operational data”

Digital Innovation

How to provide earlier awareness across the operation to inform its safety management care?

early Awareness, quicker Help



- **factors growing their affect in fleet risk**
 - Line Operations: gaining personal perspective
 - Flight Training: early insight into where to review
 - Safety Management: growing risk and emerging cause

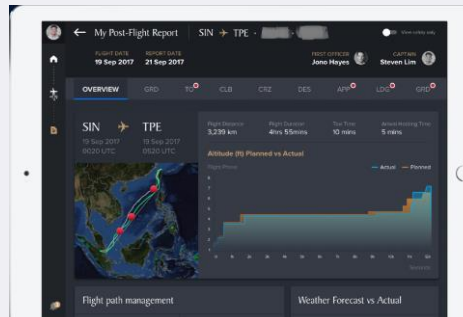
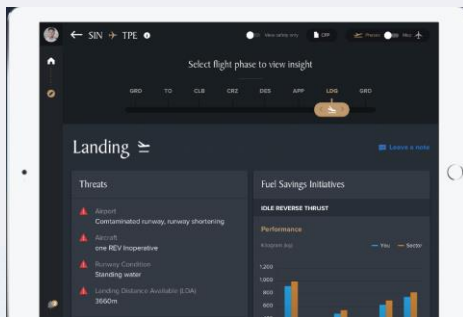
Line Operations, gaining personal awareness

Digital Innovation

How can I be more aware of what lies ahead?

How can I look back upon this flight?

How can I see how I compare to fleet?



• Pre-Flight

- What do we know about this route?
- What lies ahead today?

• Post-Flight

- How did that flight go, would I have done anything differently?
- How do I compare to the fleet average, is this improving?

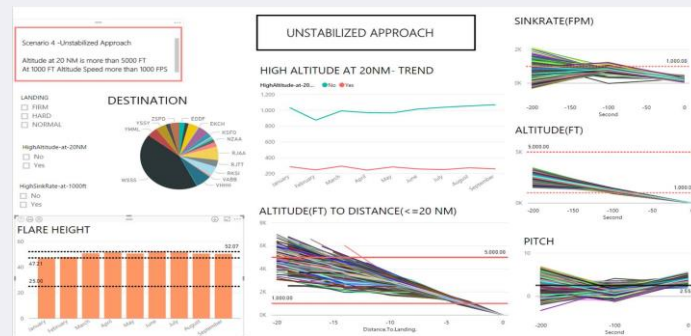
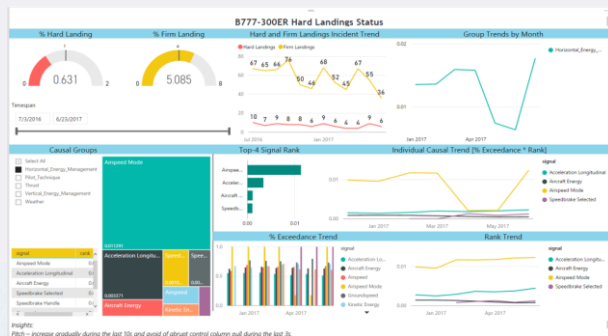
Flight Training, quicker to understand

Digital Innovation

What is changing in the fleet?

Should we change the training program?

Should we help in a more specifically?



• What can I see more quickly and more clearly

- What can the data tell me? - what is changing across the fleet
- How can I gain a quicker ability to look for what I know?

Digital Innovation

How do we bring the expertise closer to big data?

How can I find new patterns that could grow without mitigation?

Safety Management, what can I find?



- **How can I gain quick access to ALL data**
 - to explore to find unprotected risk
 - to change the shape of the operation
 - to protect against future threats

Data & Perspective

How can we gain more airline
operational perspective ?

Collaborate across the skies



- **Can we give more to Individual Airlines**
 - managing a risk innately, doesn't mean it is not there
 - Really finding useful insight ... depends on its contrast

Can we share our data, in a safe place, for a safe pursuit...

Agility

Innovation

Acceleration



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solution

R² Data
Labs

Making data think