UPTAKE™

UNLOCKING THE POWER OF DATA

IATA MAINTENANCE COST CONFERENCE, PANAMA

13 – 15 SEPTEMBER 2017

How do you turn data …

607028234234589652893403843264950284638201812183620382929347216282936492760920472882664545421235130722615634629476453783840093747393938737200606090048252882735132763946240738392719102371618191810179635241919374528277710 1

1 – 10 TB per flight

iPhone

10TB = 50 iPhones

How do you turn data … into value?

£ € $

607028234234589652893 4

038432649502846382018 1

218362038292934721628 2

936492760920472882664 5

454212351307226156346 2

947645378384009374739 3

938737200606090048252 8

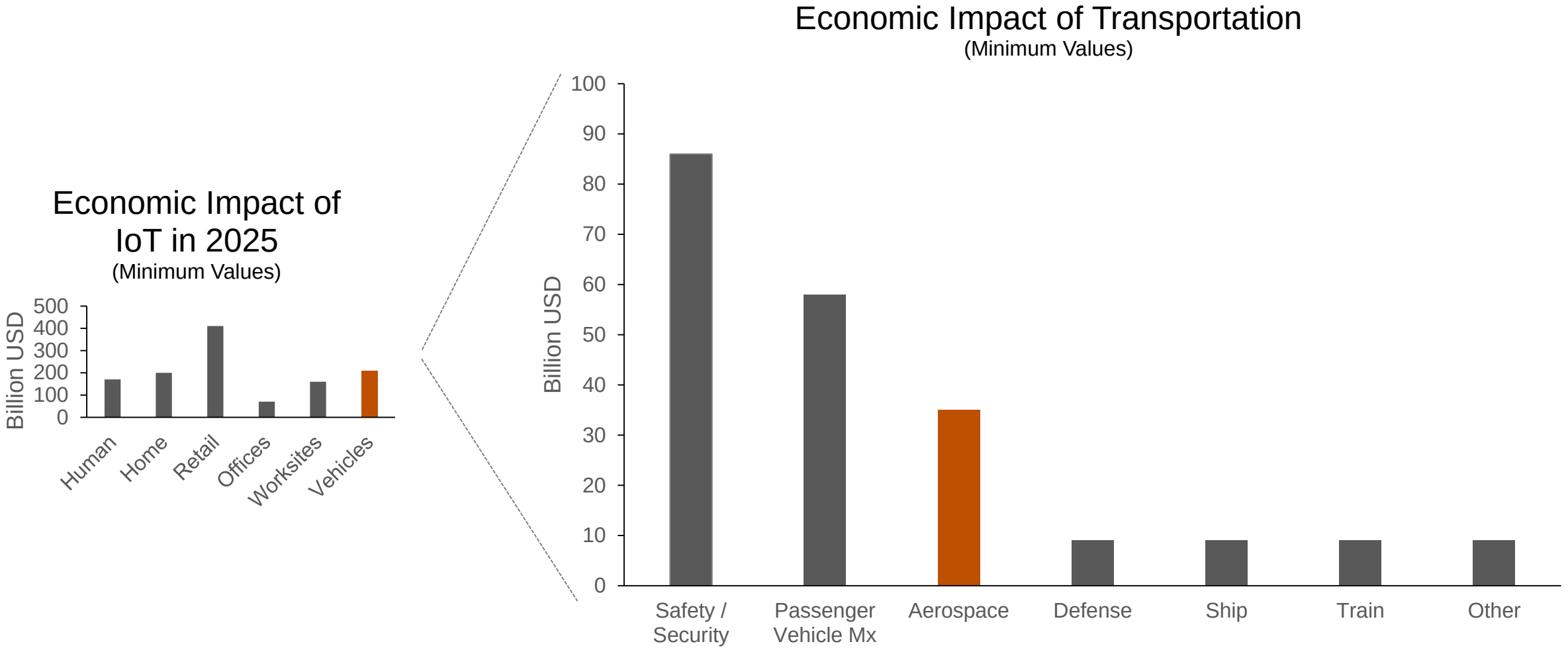
827351327639462407383 9

271910237161819181017 9

635241919374528277701

There must be data integrity in order to achieve results

The value of IoT in aviation

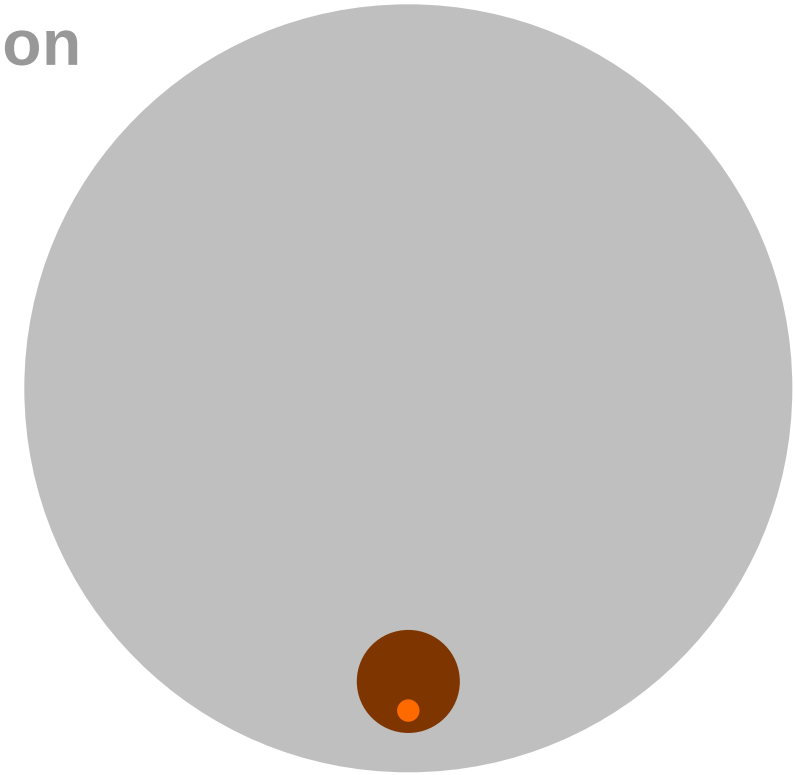


Potential Value: 10–40% reduction in maintenance; 25% fewer delays; 3–5% longer aircraft life

Data must be systematically accessible

Sources of data generation

- Engines
- Component Sensors
- Avionics
- Consumer (IFE)
- Log files
- Maintenance computer



What is transmitted systematically

- Post Flight QAR Data
- ACARS (Real Time)

The vast majority of data created is never taken off the plane

Cost of connectivity is dropping

Satellite & Wireless Data - Costs

"Average mobile cost per megabyte decreased 99 percent between 2005 and 2013."

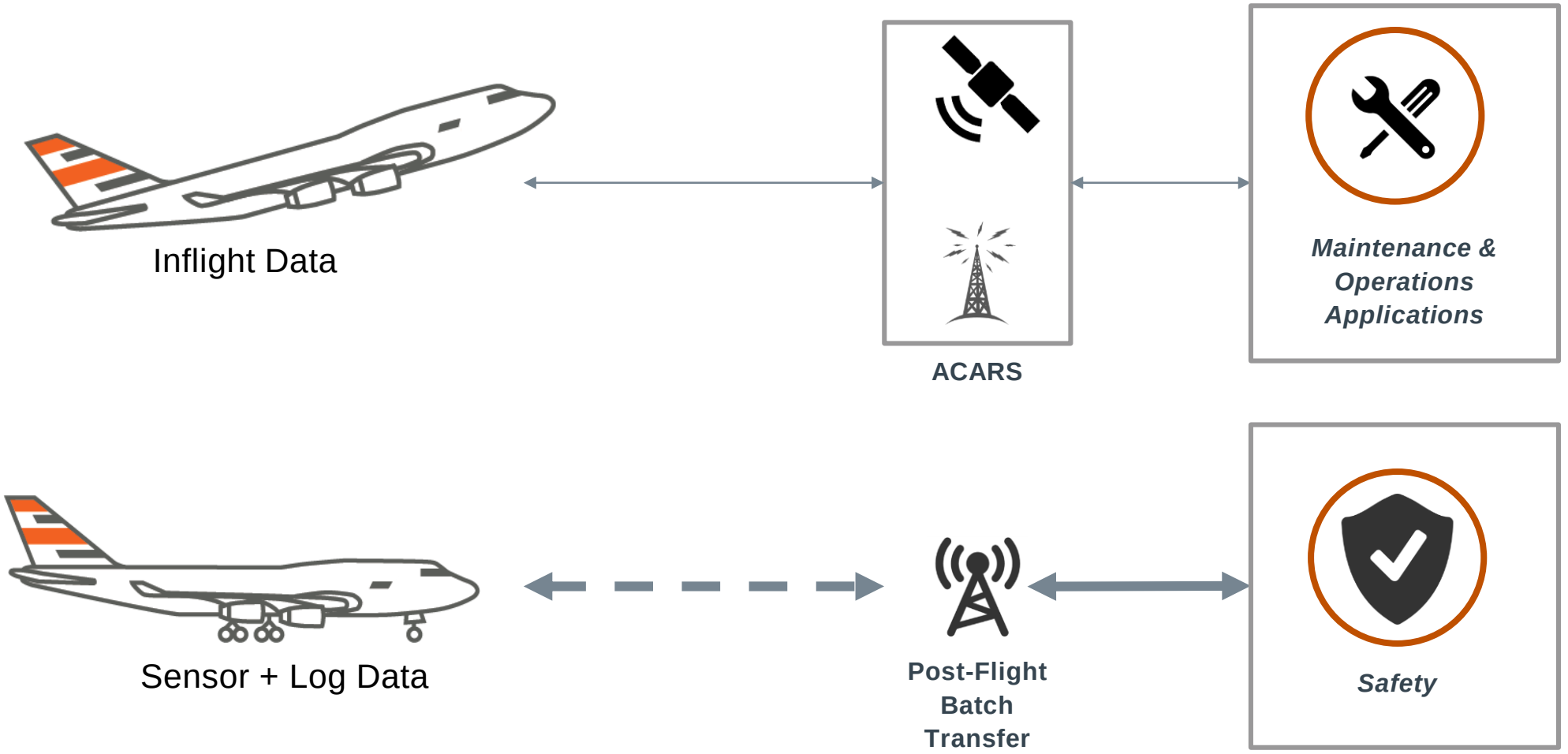
Satellite & Wireless Data - Capacity & Bandwidth

"Mobile network connection speeds will increase threefold by 2021."

The industry should not limit its thinking by current bandwidth and data costs

https://www.bcgperspectives.com/content/articles/telecommunications_technology_business_transformation_mobile_revolution/
http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/mobile-white-paper-c11-520862.pdf

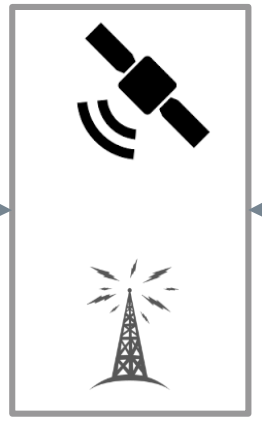
Currently point solutions exist



Insights and data have limited sharing capabilities

Integration of solutions is key to extract additional value

Inflight Edge, Sensor and Log Data



Broadband Connectivity

Program

Maintenance & Operations

Safety

IOT Security Detection

Inventory Optimization

Labor Planning

Customer Decisions

Insights and data are able to flow between solutions

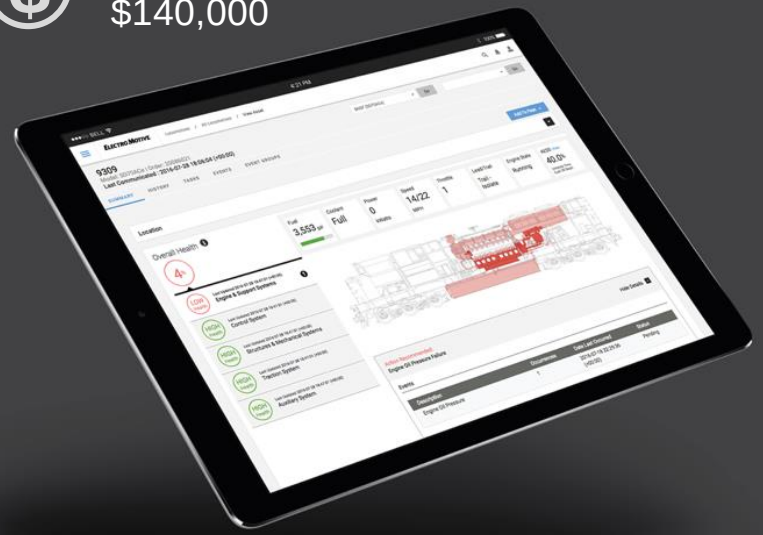
Potential to save a Class I railroad over $98MM/year

Improved failure time prediction by 97%.
Reduced FLY by 0.5

Created over 870 days of “advantage” decision time

Prevented over 260 road failures in 646 pilot set

Value created per loco/year $140,000



Keys and questions for implementation

Keys to watch for	Question to ask
Features and workflow integration	Does this fit into my current workflow well? What is the cost to modify?
Analytic feedback needs	How does the system “learn” and what effort will it require?
Solving the right problem	Predict failure 5, 10, 15 days in advance? What is the expected lifetime of the component?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