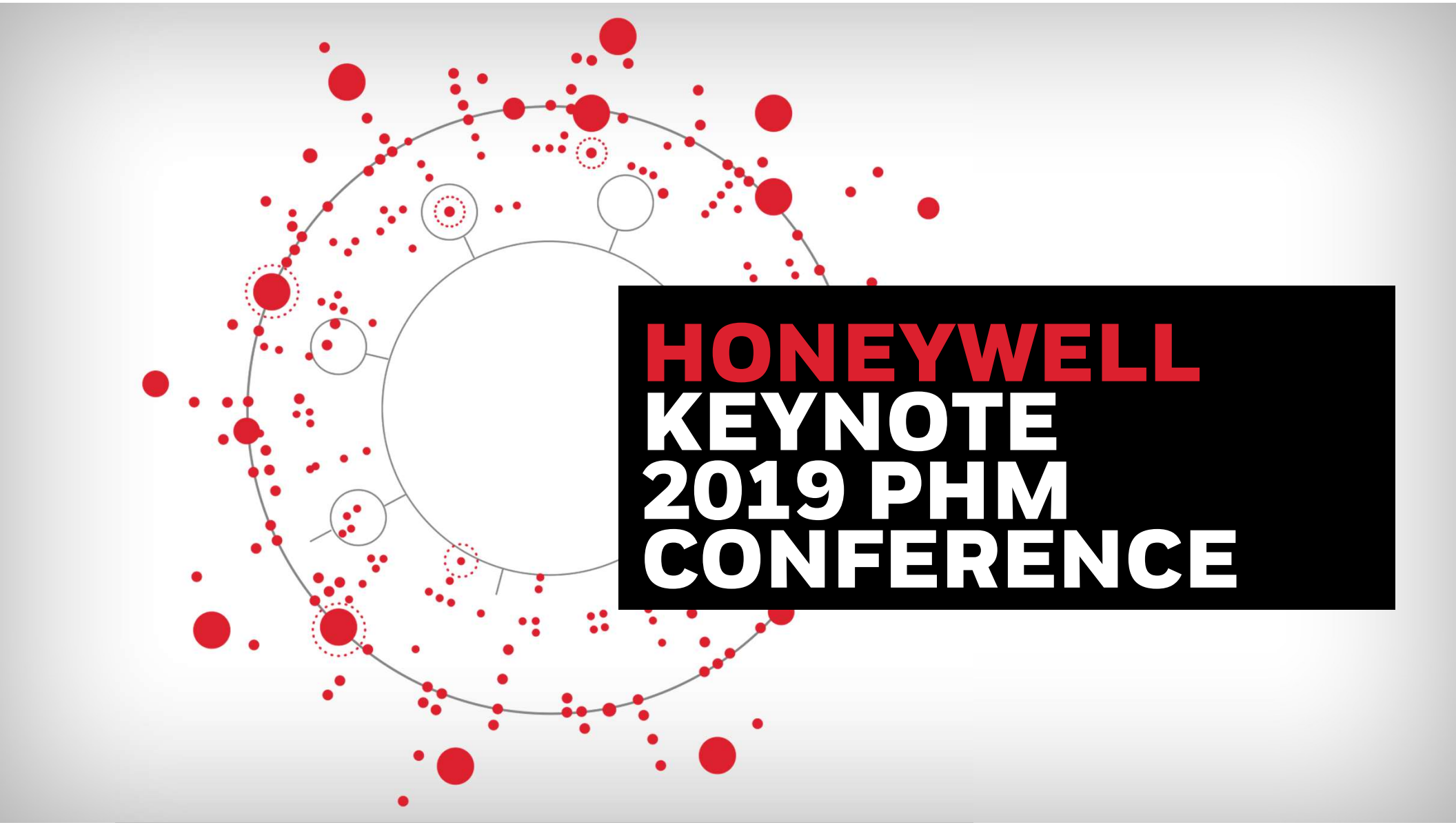
HONEYWELL
KEYNOTE
2019 PHM
CONFERENCE

LESSONS LEARNED IN PREDICTIVE ANALYTICS FOR AIRLINE MAINTENANCE OPERATIONS

PRESENTER:
JOSH MELIN
PRODUCT LINE DIRECTOR
HONEYWELL FORGE CONNECTED MAINTENACE

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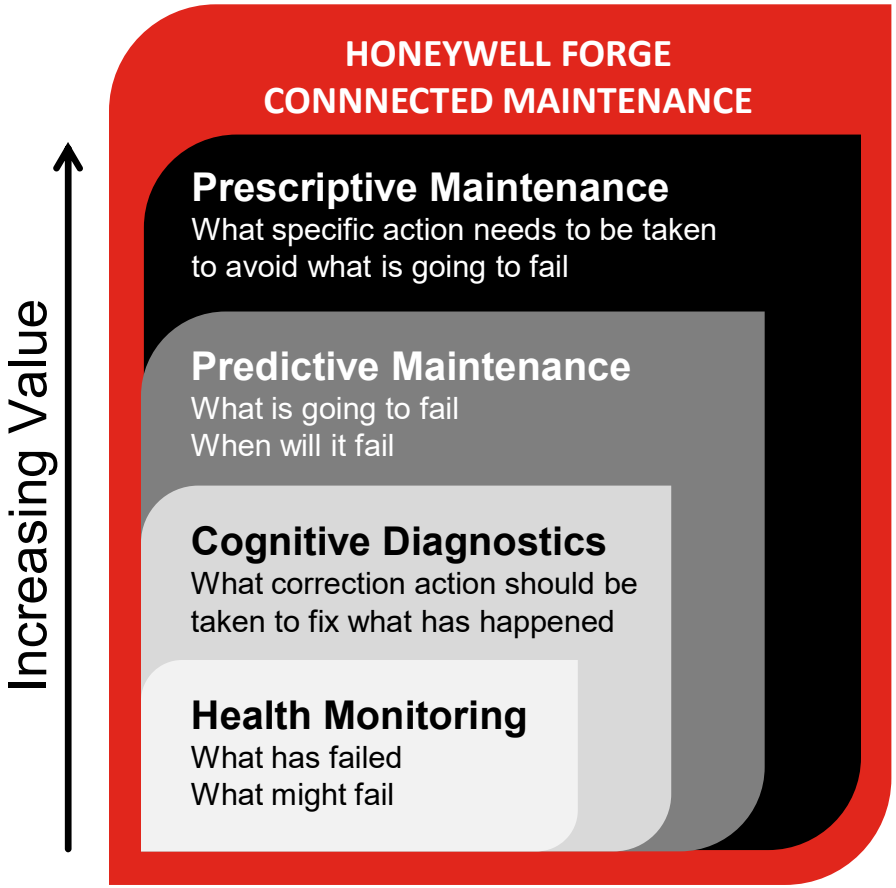
WHAT IS CONNECTED MAINTENANCE

WHAT IS THE PRODUCT?



Scope

- Module in Honeywell Forge for Airlines offering
- Expansive profit maximizing analytics and software platform
- Analytics Breadth & Depth:
  - 5 A/C Types: 777, A320, A330, 737NG, A350
  - 12+ ATA Chapters
  - 100+ Analytics Models
- Reference Customer: Cathay Pacific
- Software only solution that is complimented by Hardware Enablers:
  - Edge Nodes
  - Aircraft Data Gateway
  - Sensors and Data Collection:
  - 737NG ECS (ATA 21 and 36)
  - Wheels & Brakes Caliper
  - Lavatory Vacuum Blower
  - Etc

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WHY CONNECTED MAINTENANCE

VALUE PROPOSITION AND ROI

Operational Impact

Predictive alerts and instant situational awareness dashboards reduce Delays, Cancelations, IFTB, and Diversions.

Fuel

Reduced MEL events by taking action prior to failure thereby reducing fuel penalties from MELs.

Troubleshooting

Reduce troubleshooting time and engineering analysis through self-service analysis tools, dashboards for health, analytics, and trend monitoring as well as alerts that are prescriptive about exact action recommended

Network Effects

Reduce the cascading unseen costs of unplanned maintenance such as ground cart usage for inop APU, overtime, downstream delays, expediting, NFFs, excess inventory, premature removals, communication / reporting, etc.

- Solution that transforms existing time-based manual processes to data driven efficient activities; notify them of incipient problems to avoid flight-line disruptions using planned preventive actions. Solutions that reduce maintenance burden, increase aircraft utilization through condition-based alerting.
- When an LRU fails or the root cause of a flight deck effect cannot be isolated rapidly, it results in delays & cancellations, MELs, flight restrictions as well as scrambling for last minute contingencies like renting ground support equipment from third party.
- Customers are looking for an integrated solution that works with their existing IT systems and does not involve making changes to the aircraft.

35%	Reduction in operational disruptions
1.5%	Reduced to a 1.5% no fault found rate
100%	Existing data without costly retrofitting
10-15%	Reduction in premature removals

Reduced Maintenance **$40K+** per tail per year

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7 KEY STEPS

BASED UPON OUR LESSONS LEARNED

1. FOCUS ON THE RIGHT PROBLEM
2. MANAGE CUSTOMER EXPECTATIONS
3. MANAGE STAKEHOLDERS
4. SELECT DATA SET WISELY
5. COMMUNICATE[3]
6. FOCUSED IMPROVEMENT
7. REPEAT

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RESULTS CONNECTED MAINTENANCE

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7 KEY STEPS + 3 SYNERGIES

INDUSTRY WIDE OPPORTUNITY FOR THE FUTURE

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1. ADDITIONAL DATA COLLECTION & AGGREGATION
2. DATA SHARING
3. INTEGRATION TO DRIVE COMPREHENSIVE SOLUTIONS

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THE CONNECTED WORLD
WILL IMPACT YOUR
BUSINESS.
THIS IS WHY WE BUILT
HONEYWELL FORGE
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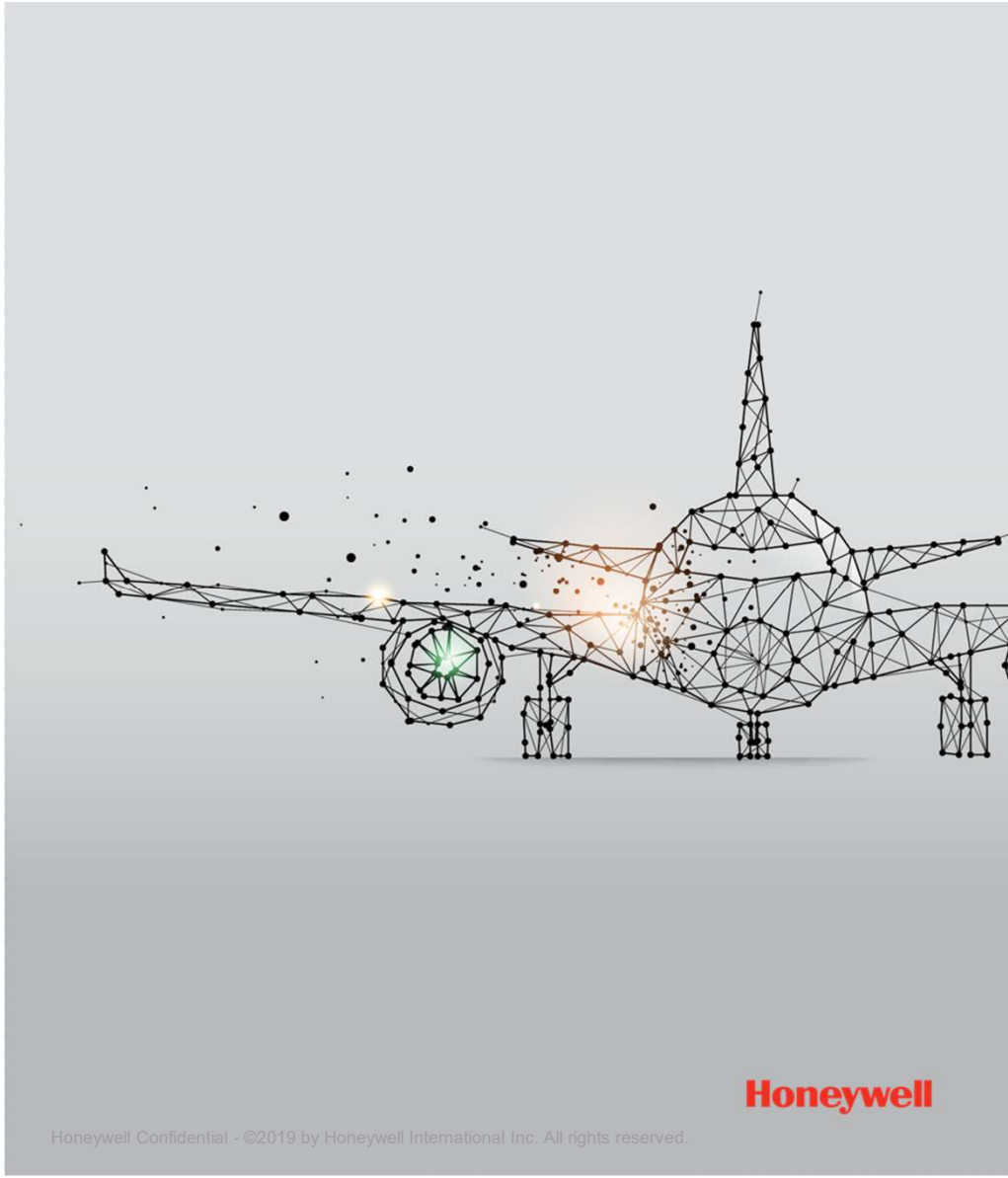
ASK US ANYTHING!



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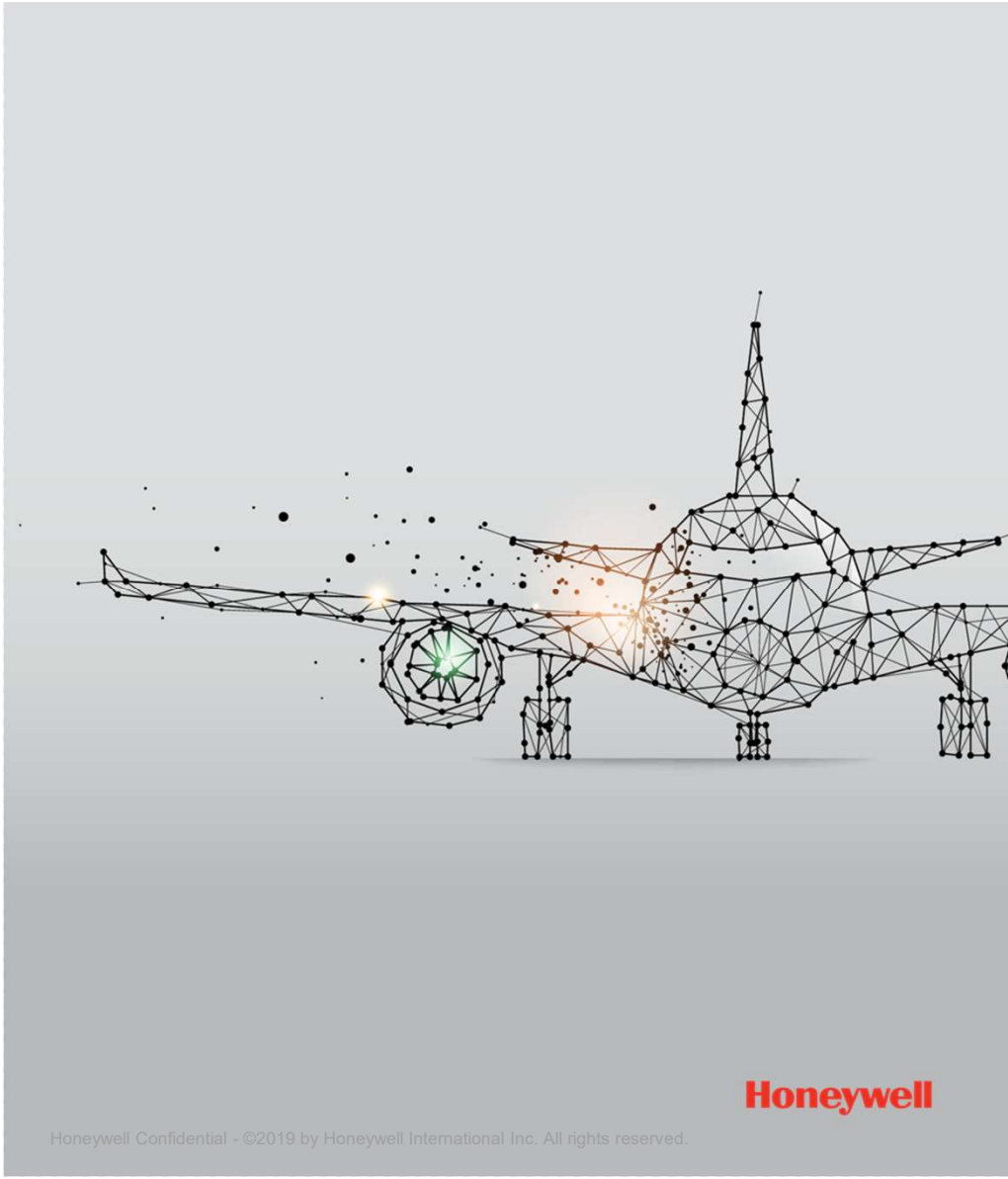
THE FUTURE IS WHAT WE MAKE IT.



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