



The Cognitive Era: Let's take a tour through IoT at an imaginary company.....

Greg Gorman

Director, Offering Management

Watson IoT Internet of Things

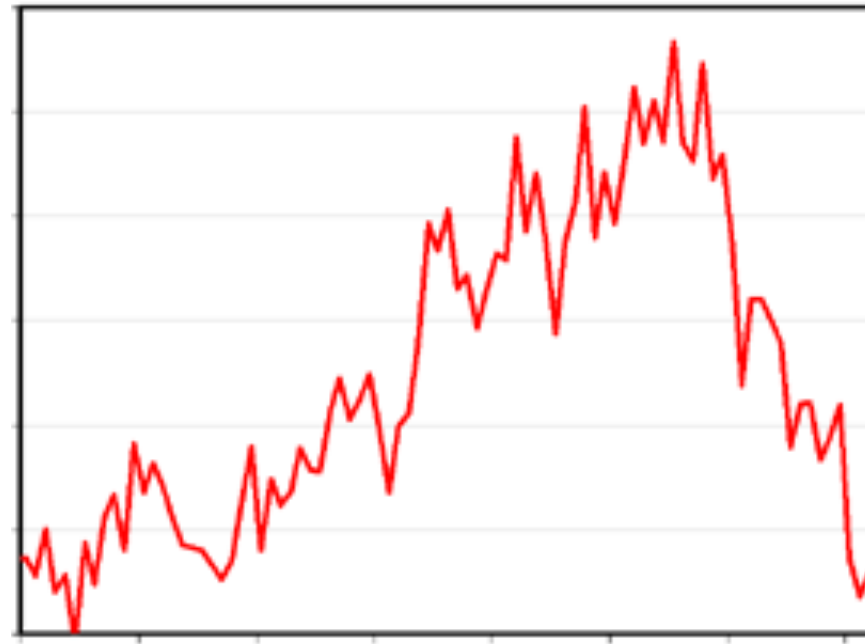




Meet Bob Owner of Bob's Elevators



Bob has a problem.
Sales in Arizona are plummeting.

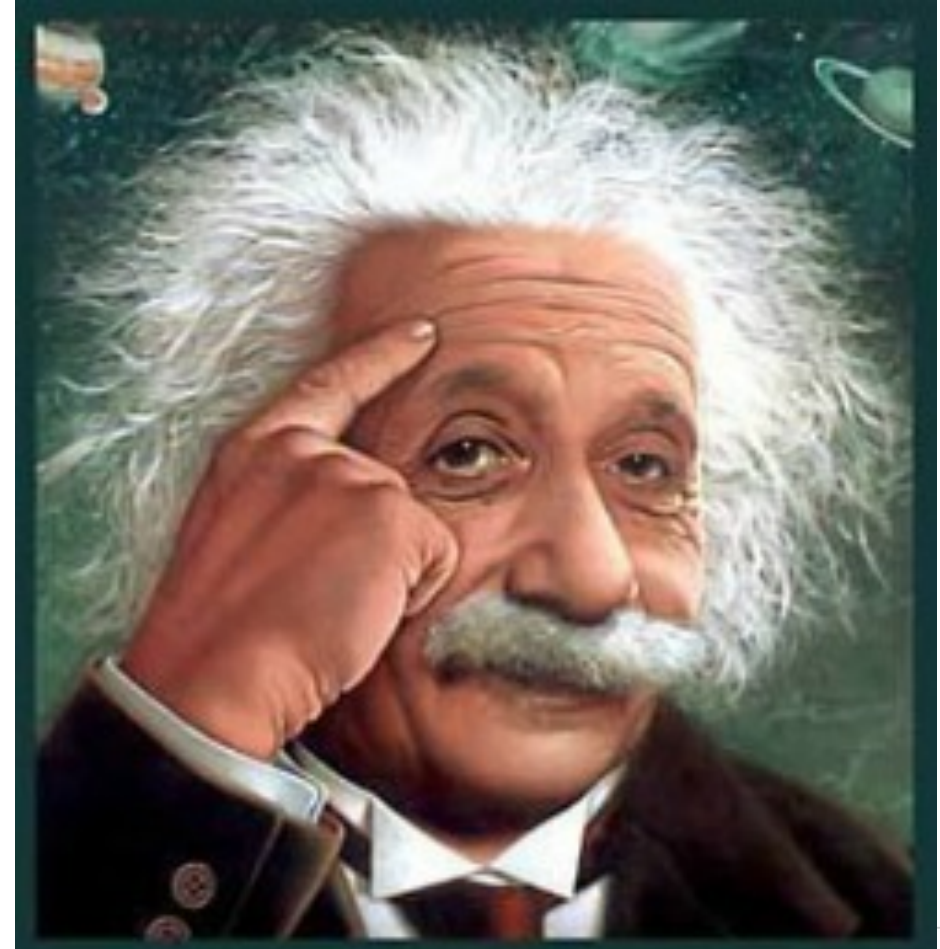


Old Way:
Fire the VP of sales for Arizona.



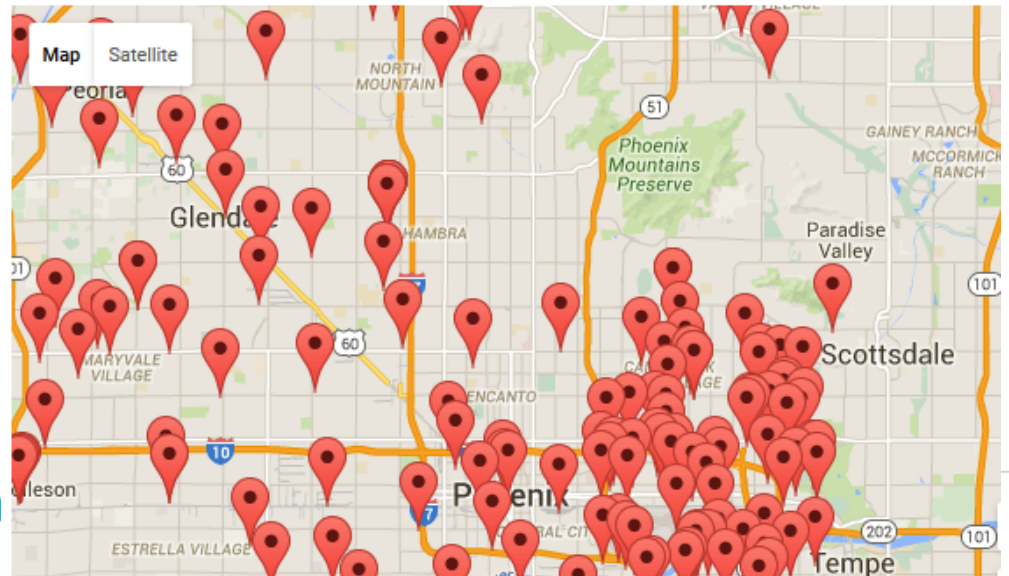
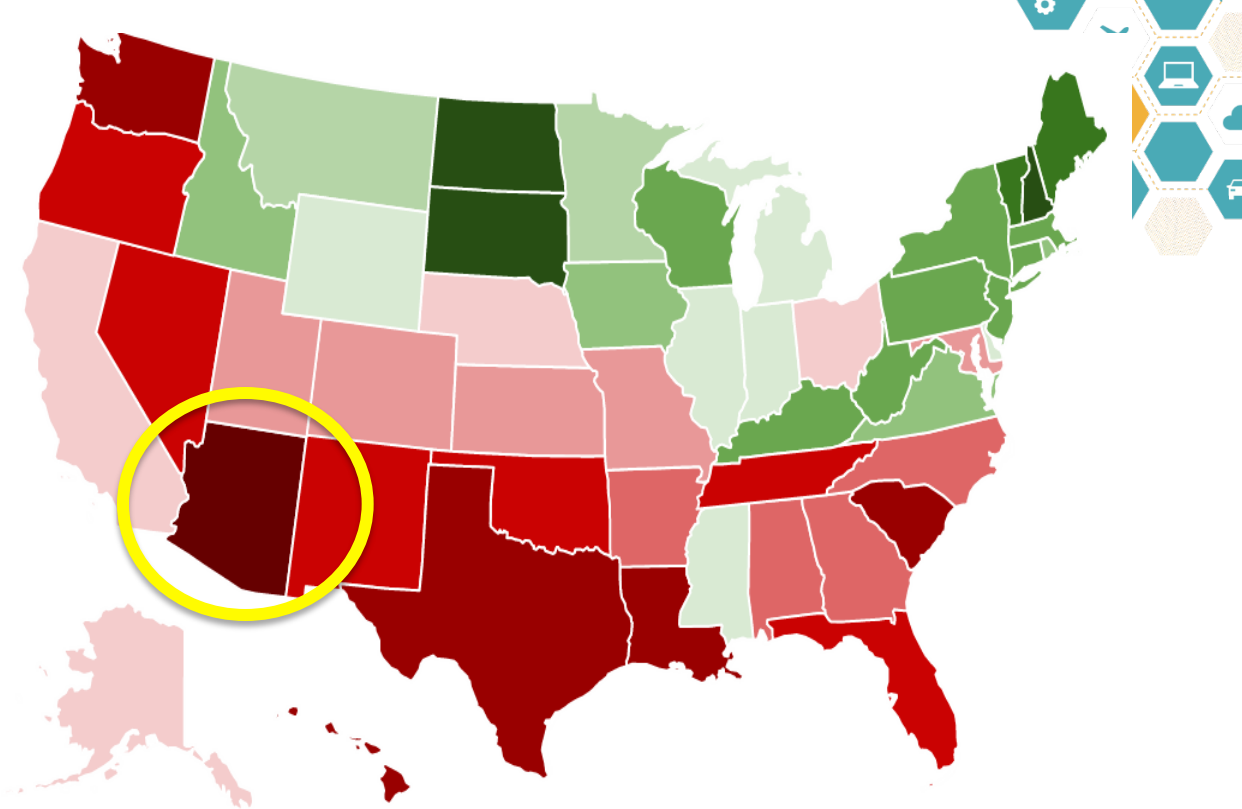


However, Bob is a smart
business man.



He correlates telemetry collected by IBM IoT Foundation from his equipment across the USA.

He sees that Arizona is abnormally high for equipment failures.





This gets Bob thinking.



He correlates that data with Twitter using IBM Bluemix services.

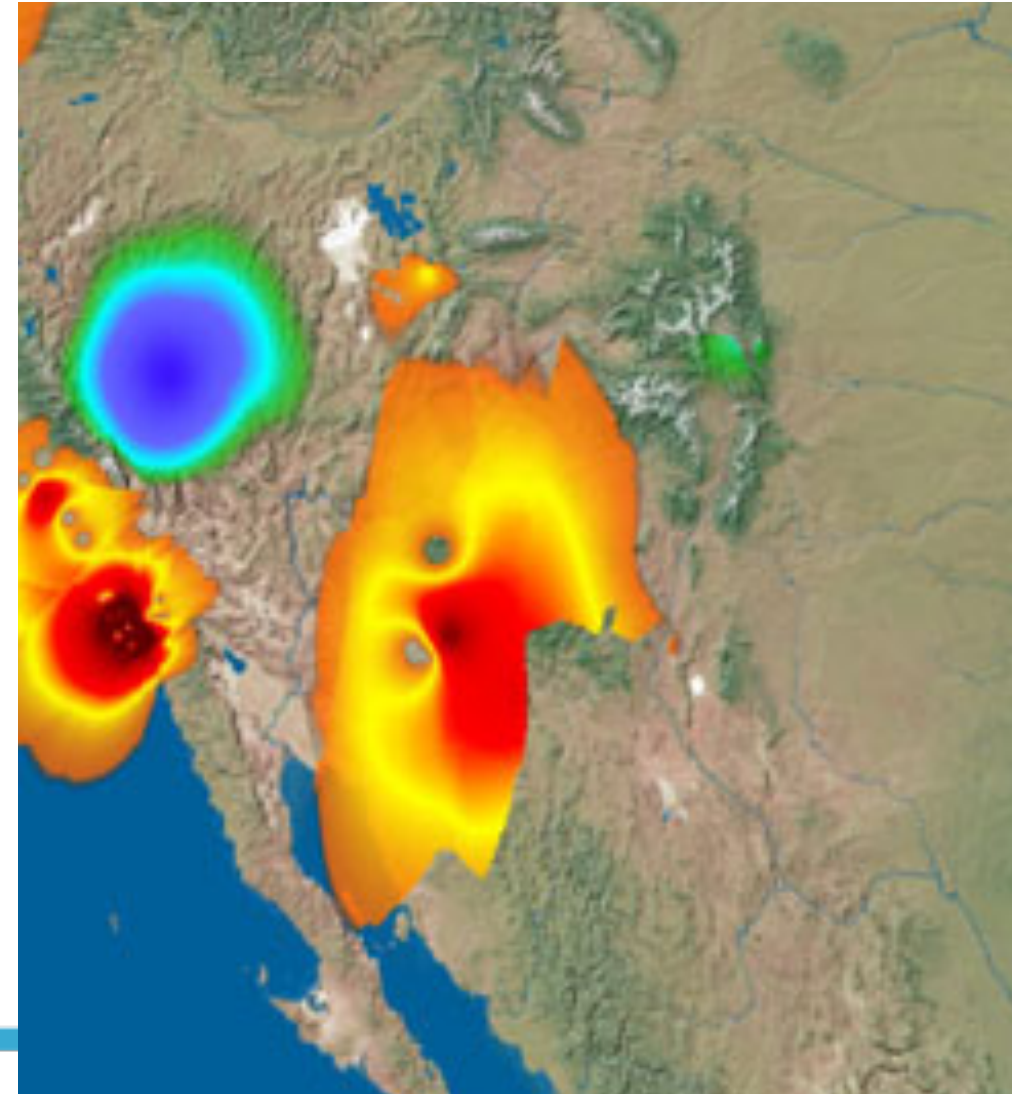
“Help I’m stuck on an elevator!”

“Elevators down AGAIN...climbing 8 to work”

“These things are TERRIBLE”

“Broken vator”

“I HATE climbing stairs in heels!”

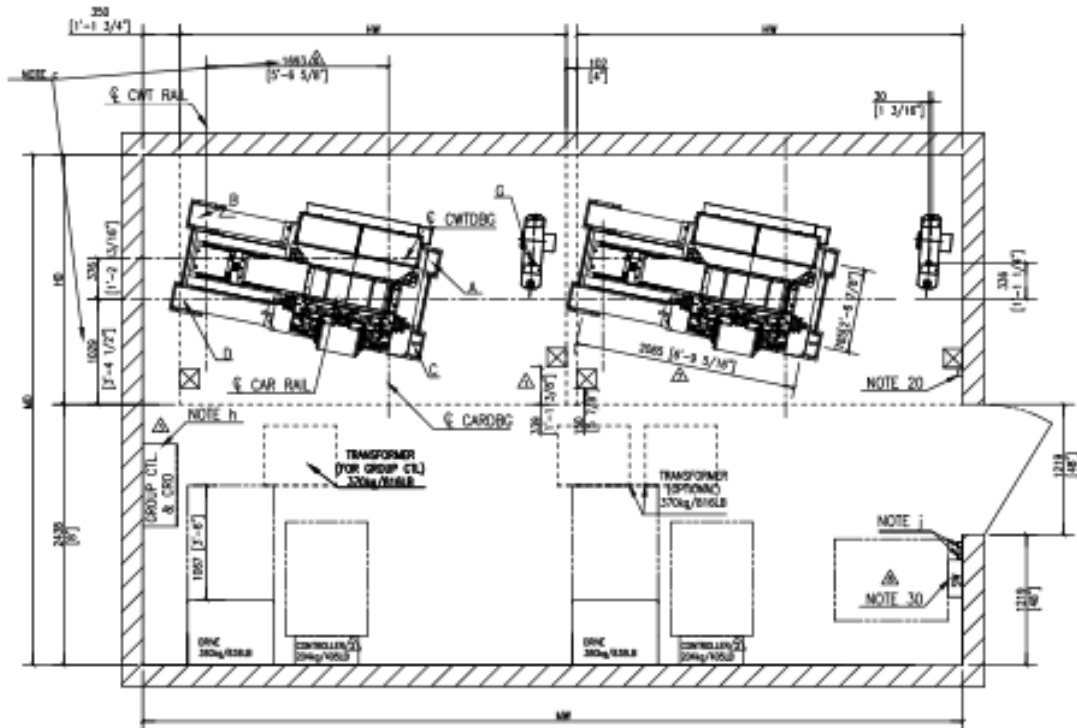


“Poor Reliability.”





Is it installation?



Service?





Using IBM Asset Management, Bob asks: Who does install/service? Is there a common thread?

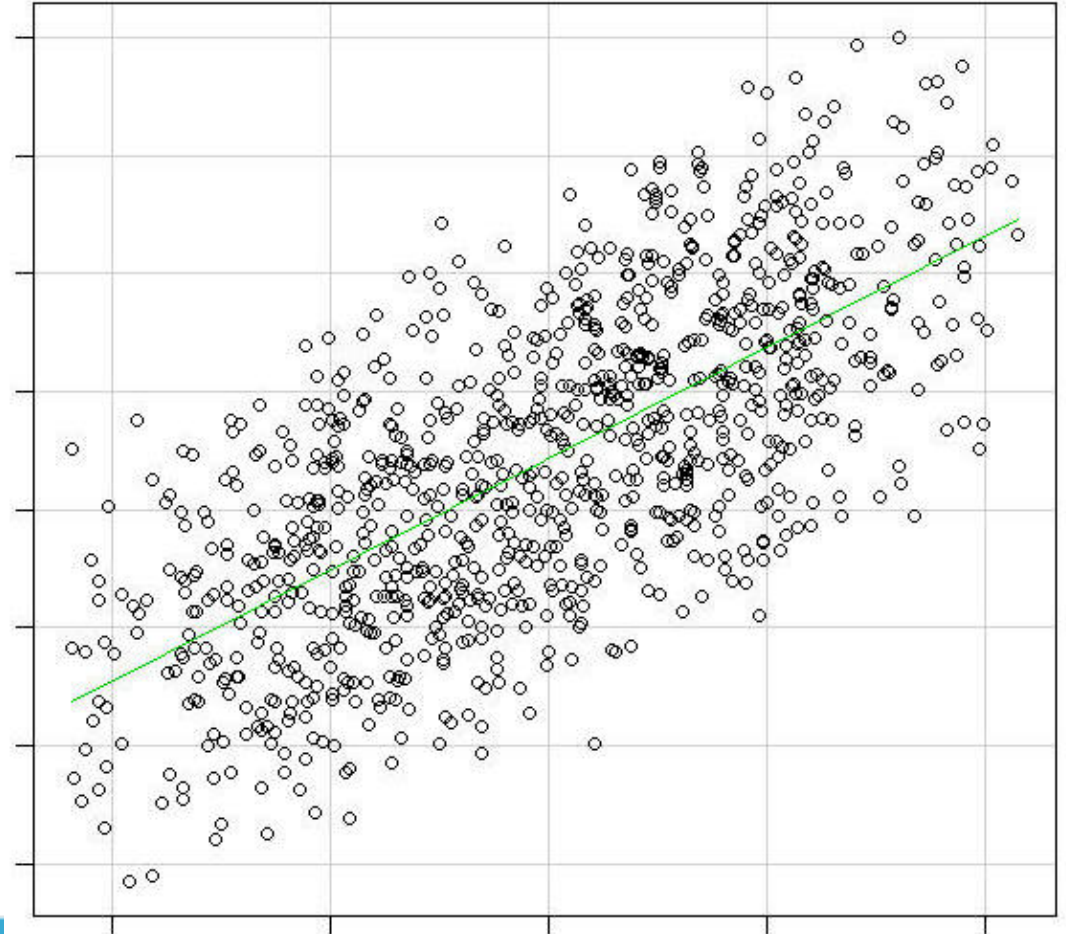
Nothing stands out...

- * Different companies
- * Different installers and maintainers

Is it the environment?

Key factors:

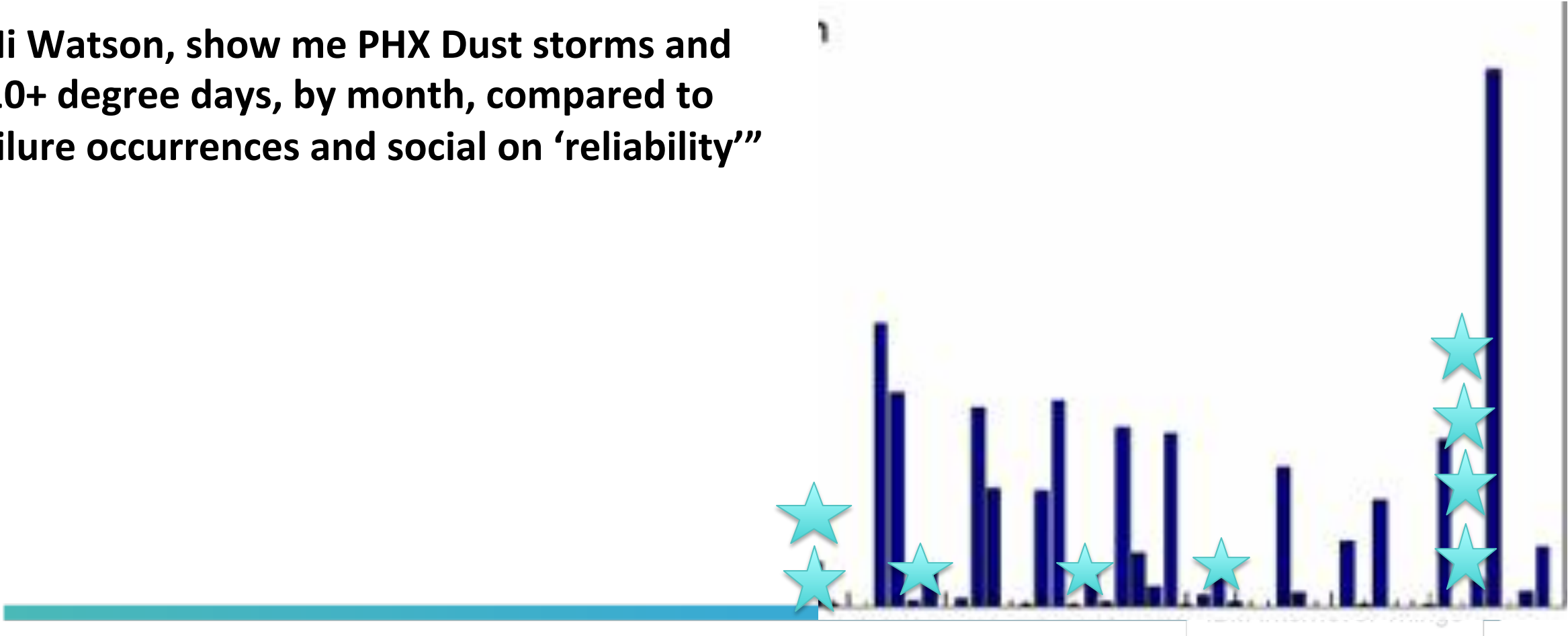
- Hot
- Dusty



So, Bob correlates with The Weather Company data on IBM Bluemix



“Hi Watson, show me PHX Dust storms and 110+ degree days, by month, compared to failure occurrences and social on ‘reliability’”



Dust storms, not heat.

Why are our systems failing shortly after a major dust storm?



Inspecting these locations showed excessively dirty equipment



<http://www.northernchap.co.uk/>



Using IBM Engineering Analytics, Bob traces out his Design.

Blohm + Voss strongly recommends to accomplish the Elevator commissioning with the Blohm + Voss Commissioning Service.

Read manual before first use !

- OK ☐ Check crew is aware of all danger regarding handling the B+V tool.
- OK ☐ Go through manual with crew.

Prior to use of the Blohm+Voss Elevator following checks must be carried out :

Scope of supply

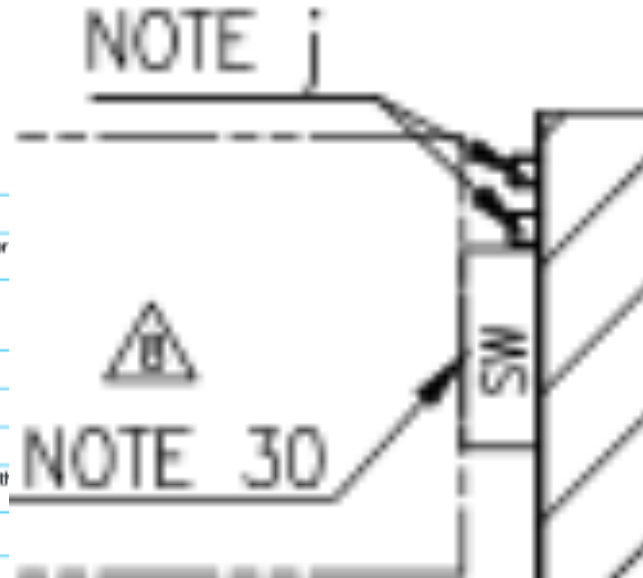
- OK ☐ Cross check all delivered parts

Pneumatic Characteristics

- OK ☐ Operating pressure 7...10 bar (100...140 PSI)
- OK ☐ Volumetric flow 6.8 l/min (240 cfm)
- OK ☐ Air filter and regulator Lubricated and de-watered, air regulator and lubricator installed

Check and Lubrication

- OK ☐ Check elevator is in closed position
- OK ☐ Check Air Supply line is disconnected
- OK ☐ Check for correct sealing of Hinge Pin and latch pin
- OK ☐ Apply grease to all greasing points until grease is visibly coming out of the bores
- OK ☐ Check if elevator is installed as outlined in manual
- OK ☐ OPTIONAL: Connect additional feedback line
- OK ☐ Connect the air supply line to the elevator



Procedures don't specify
air filter orientation!

Air filter can accidentally
be installed backwards!





His team uses IBM Continuous Engineering to Improve the next version of the elevator system

- ✓ Keyed filters
- ✓ More reliable relays
- ✓ Sealed bearings
- ✓ Use IoT Foundation to sense live weather forecasts and schedule filter replacements right after a storm

Requirements Management (/rm)

RM Demonstration

Project Dashboard Artifacts Collections Modules Reports

Richard

Search Projects

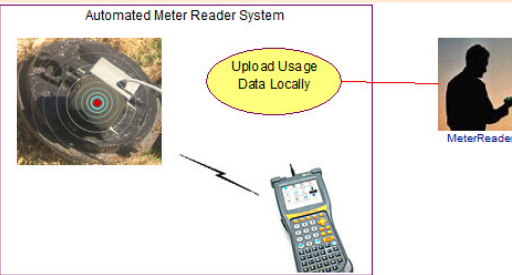
RM Demonstration > 01 Requirements

8: AMR System Requirements Specification

Create New Information

Views

Gold Plating
Trace to Stakeholder Requirements

ID	Contents	Artifact Type	Priority	Satisfies
3		Information		
231	3 System Requirements	Heading		
100	3.1 Functional Requirements	Heading		
228	3.1.1 Handheld device	Heading		
28	The handheld device shall provide for the means for the meter reader to manually enter a meter reading.	System Requirement	Medium	172:The handheld device shall allow meter reader to collect and store information (Stakeholder Requirements Specification)
207	The handheld device shall interfaces with the city's backoffice software.	System Requirement	Low	98:The handheld device shall allow information collected on handheld device (Requirements Specification)
180	The handheld device shall allow for programming of a defined route, adhering to	System		68:The handheld meter reading device

Showing 67 Artifacts 1 selected (Clear All Selected)

IBM.

Overview

8: AMR System Requirements Specification

Description:

Project: RM Demonstration

Team Ownership: RM Demonstration

Content Folder: _AMR System Requirements Specification artifacts

Created On: 14 Aug 2012 11:00:45

Created By: Richard

Modified On: 14 Aug 2012 11:00:45

Modified By: Richard

Is Suspect: Select a profile

Type: Requirements Specification

Format: Module

Approved By:

Approver Position:

Module Baselines

Module Comments

Artifact Comments

Module Links

jazz

Bob's team sends an update
bulletin to system operators
using IBM Asset Management.

ALERT SERVICE BULLETIN

P&WC S.B. No. A60059

BULLETIN INDEX LOCATOR 73-10-01

TURBOFAN ENGINE
FMU-TO-MANIFOLD SECONDARY FUEL TUBE - REPLACEMENT OF

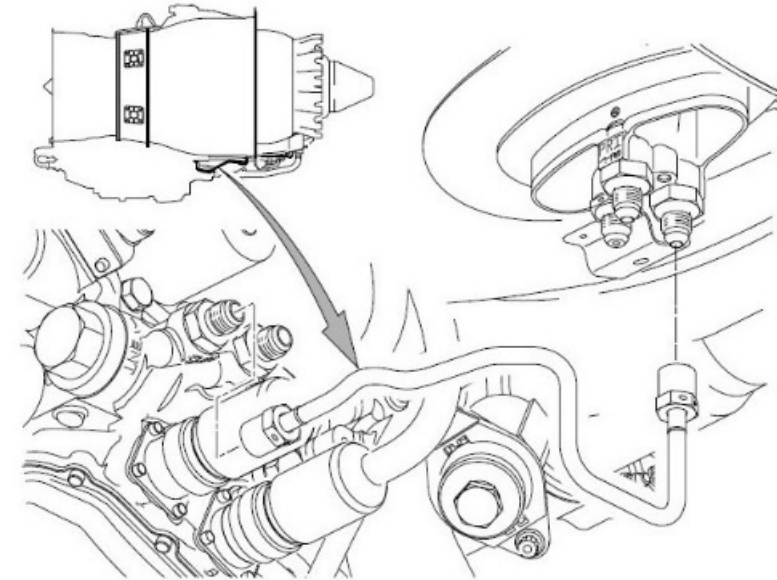
MODEL APPLICATION

PW610F-A

Commercial Support Program No: 1004410

Compliance: CATEGORY 3

Summary: The FMU-to-manifold secondary fuel tube may crack and leak. This service bulletin is introduced to replace the FMU-to-manifold secondary fuel tube on engines which have accumulated less than 200 hours on the tube.



Apr 03/2009

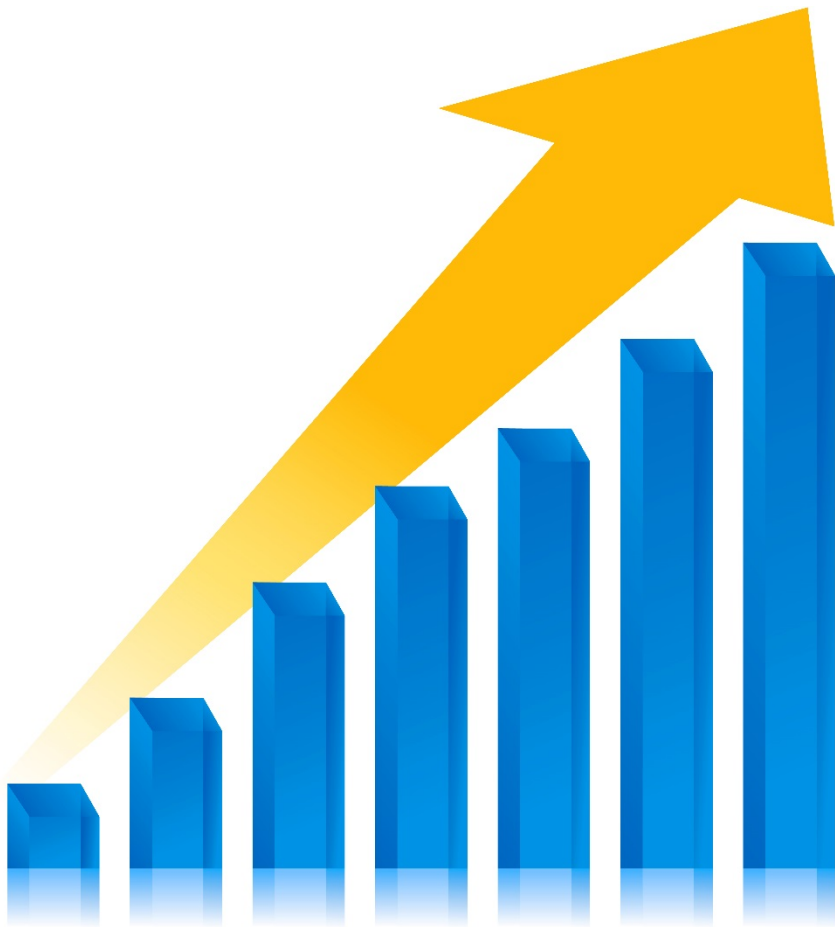
PW600-72-A60059
Cover Sheet

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Continuous Engineering

IoT Foundation

IBM Bluemix

IBM Internet of Things



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Thank You!

