



Information Professionals GmbH
Working Strategies.



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iDSC 2017
Salzburg, Austria

CREATING BUSINESS VALUE WITH AN INTER-COMPANY DATA LAKE

Information Professionals GmbH
John A. Thompson, Founder & Managing Partner
June 13, 2017

Who Needs an Inter-Company Data Lake?



Service Industry Association

✓ BENEFITS OF MEMBERSHIP



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Overview

Service Industry Association (SIA) was founded in 1985 as NCSN (National Computer Service Network) as the leading trade association for companies engaged in the repair of electronic hardware and in support of the high tech service industry. The association was formed to provide business-to-business network to promote partnerships between member companies. The name was changed in 1999 to reflect the association's scope and global reach. Today, SIA **members** include companies from the Americas, Europe, and APAC that support the high technology service supply chain.

Throughout its history, SIA has been instrumental in fighting for the rights of high technology end users. Initiatives have included: the Right to Repair Act (now part of the Digital Millennium Copyright Act established in 1998), friend of the court briefs, white papers and complaints filed with the Department of Justice to the United States, European Council, and Canadian Commission in support of open and competitive service. SIA also supports **Digital Right To Repair** with legislation pending in four states.

Technogroup: a Typical SIA Member

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Maintenance

With a Technogroup maintenance contract, you protect yourself against unplanned additional costs for repairs, support and maintenance, which exceed your budget and can threaten the financing of projects relevant to security.

From hardware maintenance and repairs to telephone support and system monitoring, you get everything you need for a smooth data centre. Thereby, your systems are excellently secured.

Server

The Technogroup maintenance contract for hardware combines proactive system maintenance using the Technogroup Remotetool and direct access to the expertise of the Technogroup knowledge database. This service is complemented by the Auto-Call-System RHS Baseline, which informs the Technogroup control centre about hardware failures of server units. Thereby, a Technogroup technician fixes the error with the right components before you even noticed the error yourself. Using our service, you profit from an exceptional system reliability that is necessary for smooth operations.

Storage

When every minute counts, play safe with a Technogroup service contract for storage systems. The service specifically designed for business critical storage systems provides integrated support for your storage environment, the associated virtual storage manager and the application software. You can adjust the scope of the contract depending on your desired level of availability. Besides support for storage solutions in large and medium-sized companies, Technogroup offers services for SAN infrastructure of all the main manufacturers, especially in heterogeneous system environments – independent of manufacturers.

Network

A flexible business requires a flexible IT. Your LAN, WAN or SAN infrastructure is crucial for the deployment of your existing applications, processes and services. Establish a higher service level while simultaneously allowing a more reliable, secure and dependable delivery of your data to the user.

In the age of virtualisation, a dynamic administration of the network configuration is of vital importance. From SAN via LAN to the WAN infrastructure and despite of using small switches or powerful directors, the Technogroup is your professional service provider for hardware maintenance. Besides Cisco, Brocade and Adva, Technogroup supports all major network products.

Maintenance

SHARED SERVICES

IT-Maintenance – Your advantage is our daily business

ON DEMAND SERVICE

TG.NESI

ADDITIONAL SERVICES

Dell PowerEdge 2950: A Typical Device

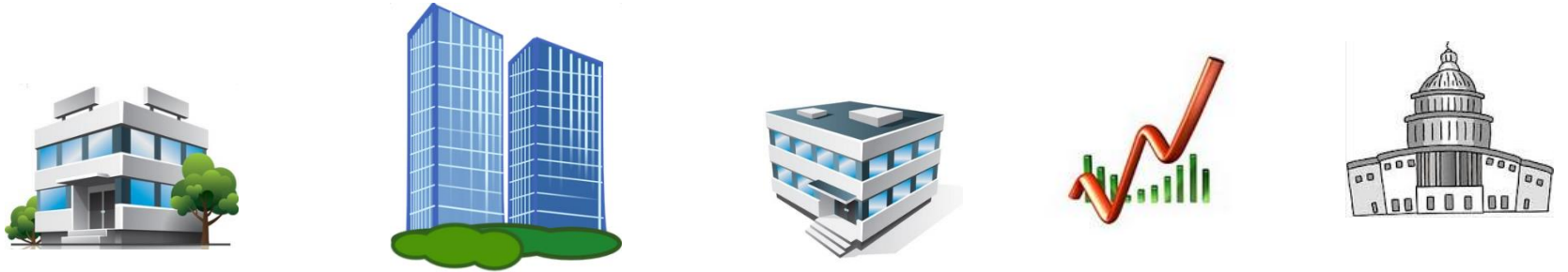


Business Drivers



- The changing market environment:
 - OEMs are discovering post-warranty maintenance as a profitable, stable revenue stream. Though theoretically competitors, TPM companies are increasingly cooperating in response to this threat.
 - OEMs are moving rapidly towards data-driven business. The members of SIA must respond in order to remain competitive.
- The changing technological possibilities:
 - Plummeting cost of storage and processing
 - Big Data
 - Advanced Analytics

What's Been Happening Until Now



Service Data

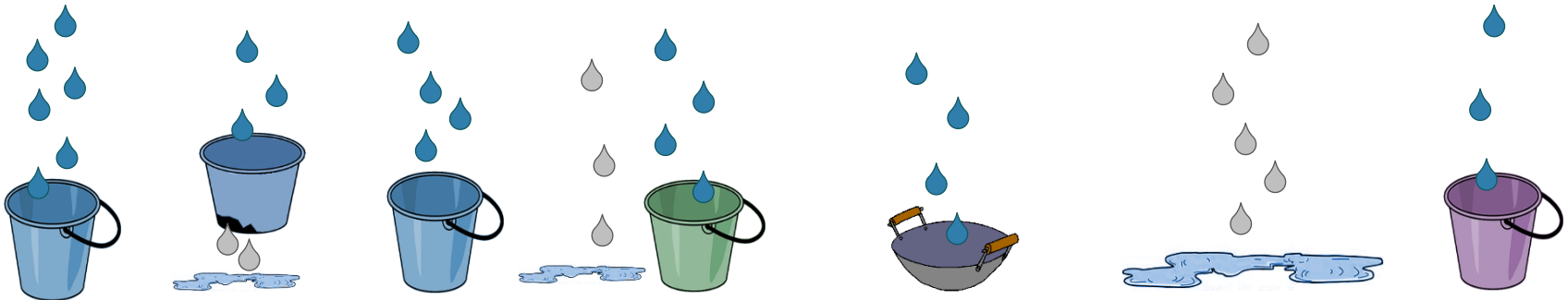
Cost Data

Market Data

Industry Sources

...

Public Data Sources



SIA Big Data Project – Vision

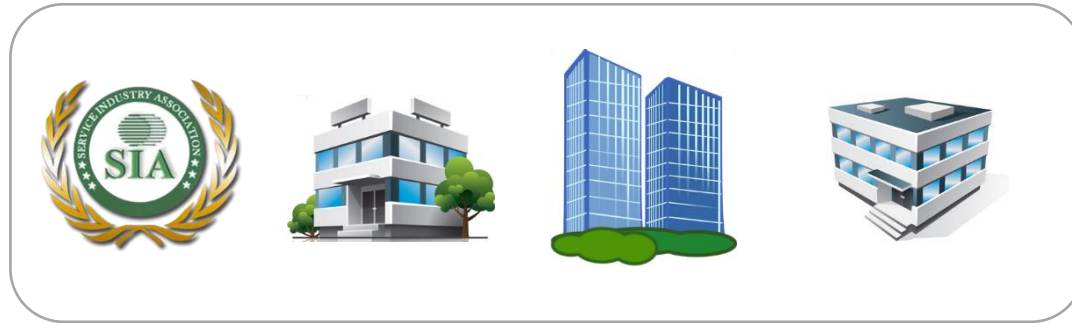
- "Managed Data Lake"
- Analysis based on common, integrated data, using an SIA industry ontology
- Results available to all participating companies
- Secure and confidential, i.e. safe for competitors to use
- Business model to monetize available data

End Results



1. Competitive advantage for SIA members
2. Strengthen SIA's position as a voice of the industry

SIA Big Data Project – Vision

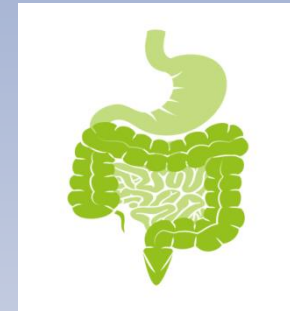


Core Benefits of Sharing Data

Insights from Industry-wide data source:

- Labor planning
- Costs assessment
- Service improvement
- Parts planning
- Risk assessment
- Churn prediction
- Predict Profitability

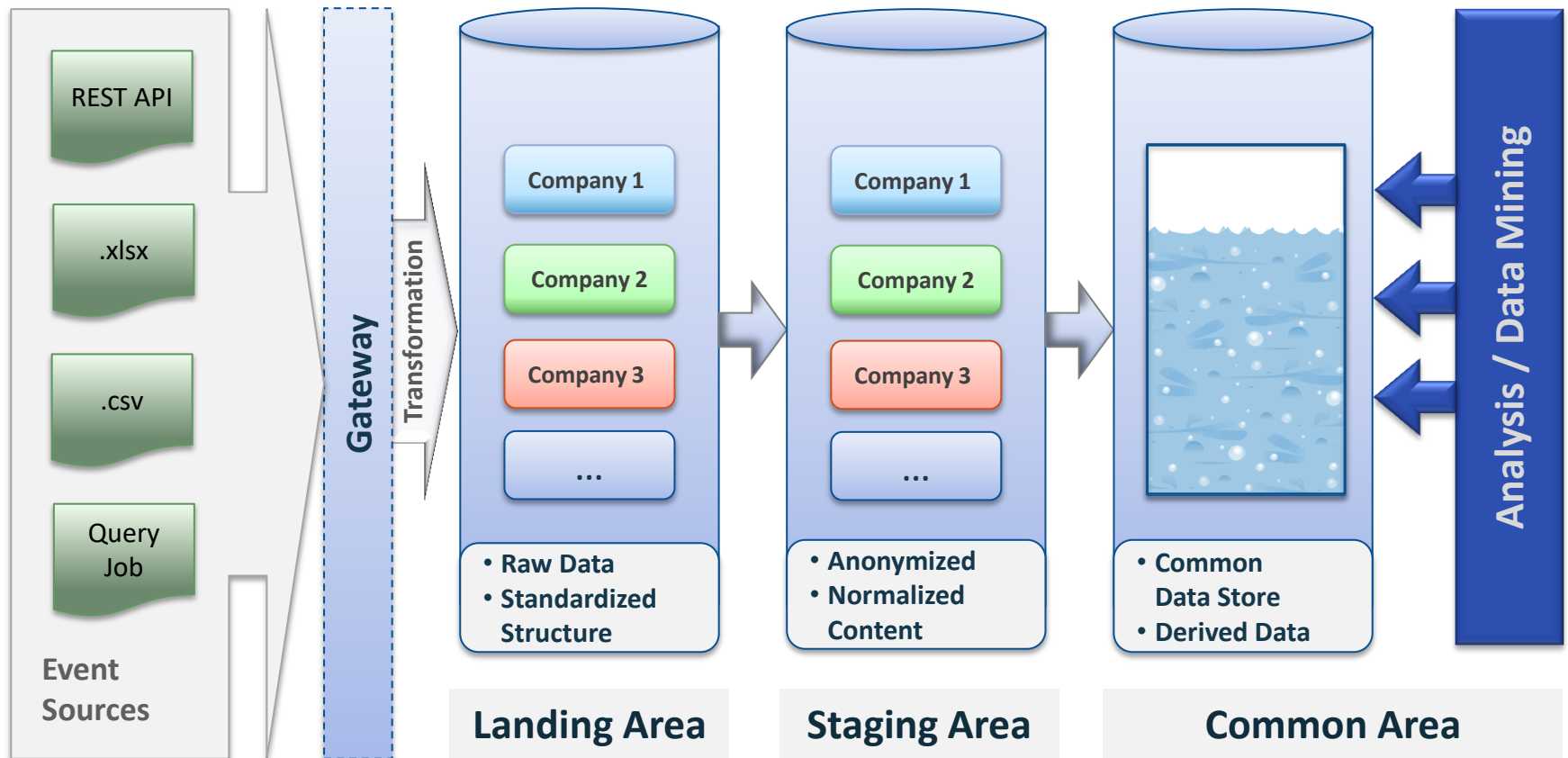
How are you running your business?



OR



How Do We Do It?: Initial Architecture

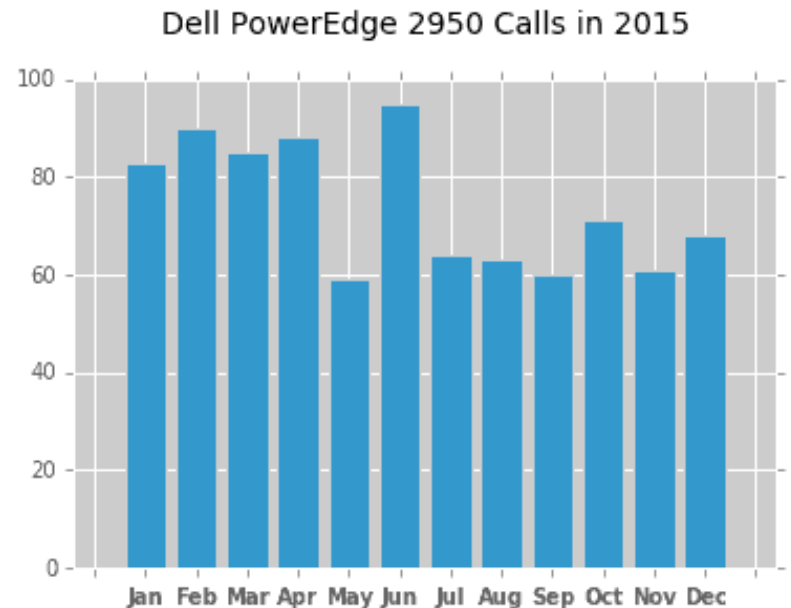


Business Value: Labor Insights

Use Analytics to determine **optimal labor pooling** based on expected call volumes

Dell PowerEdge 2950 Calls in 2015

Number of Service Units:	2439
Number of Calls:	887
Number of Service Days:	490097
Call Rate (calls per year):	0.66



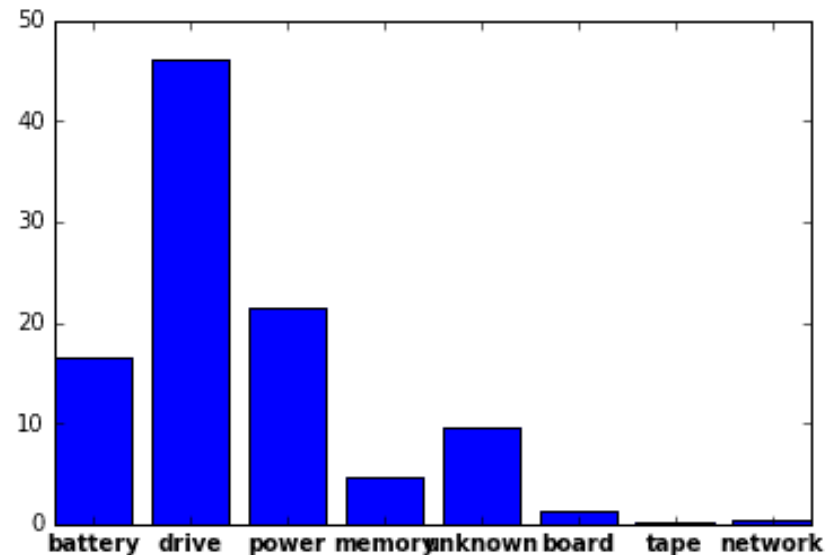
Business Value: Labor Insights

What are the **most common issues** engineers are likely to find on a particular model?

SIA Labeled Call Categories

```
battery: 16.51%  
drive: 46.11%  
power: 21.44%  
memory: 4.55%  
unknown: 9.49%  
board: 1.33%  
tape: 0.19%  
network: 0.38%
```

SIA Labeled Call Categories



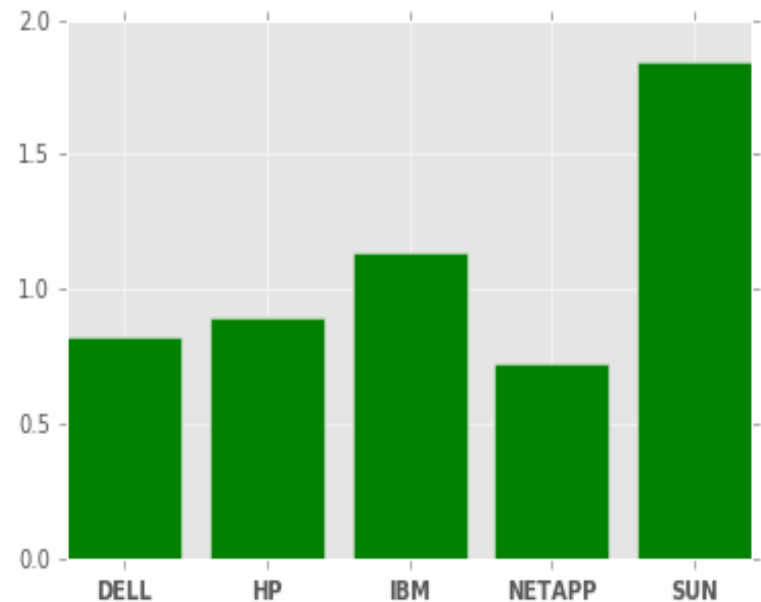
Business Value: Cost Assessment

Average Time per Call

DELL: 0.819
HP: 0.896
IBM: 1.137
NETAPP: 0.725
SUN: 1.848

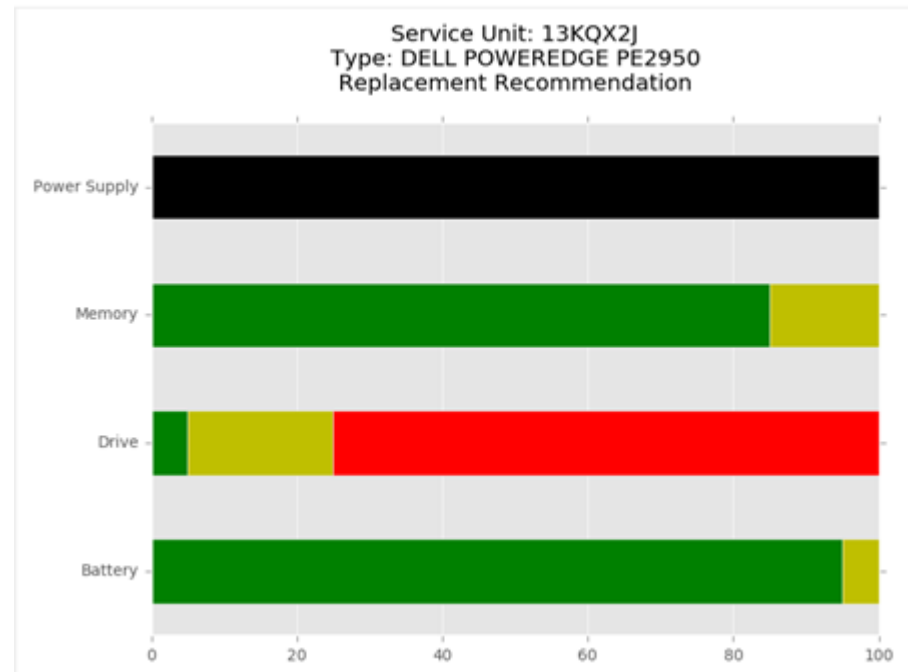
Data also reveals average onsite labor hours to **plan workforce**

Average Time per Call (hours)
2015 and 2016



Business Value: Service Improvement

Which parts might be replaced **before they cause problems?**



Business Value: Parts Planning

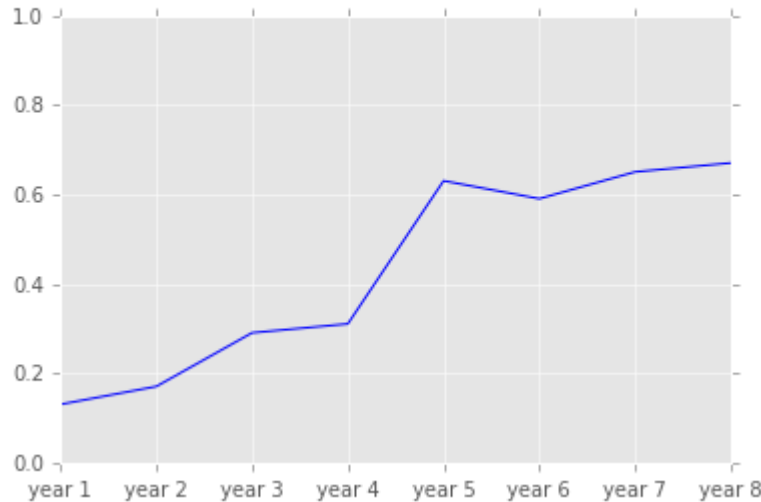
Calculate **optimal levels for spare parts.**

Predict high fail items for local **spare part warehousing.**

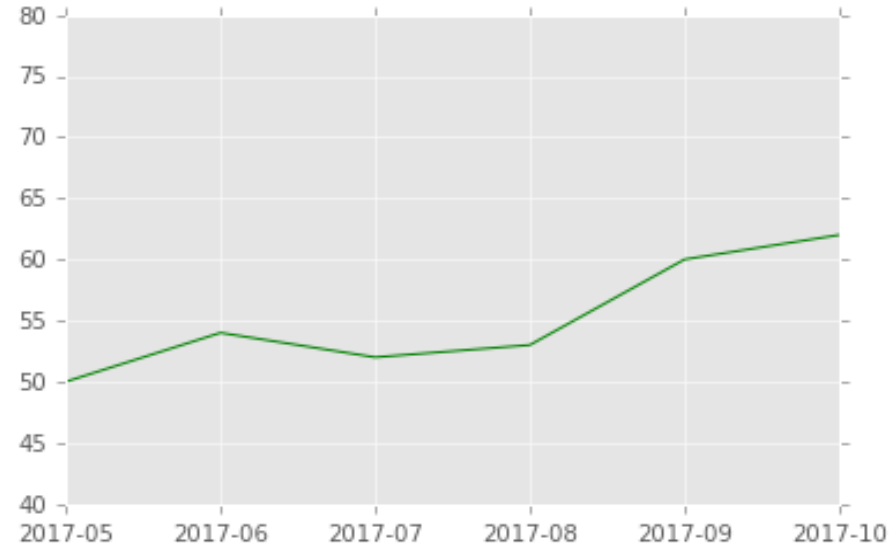
NU209 Battery: Predicted Usage

May 2017: 50
Jun 2017: 54
Jul 2017: 52
Aug 2017: 53
Sep 2017: 60
Oct 2017: 62

NU209 Battery: Predicted Usage
(by Age)



NU209 Battery: Predicted Usage
(by current installed base)



Business Value: Risk Assessment

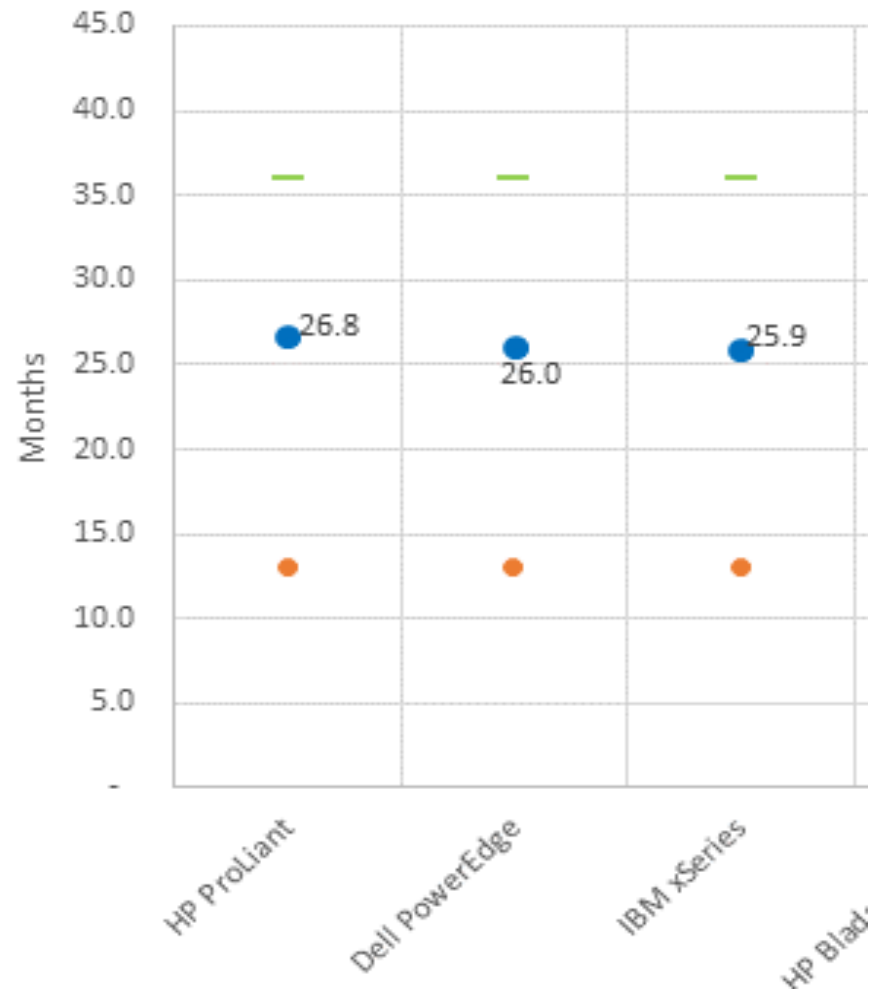
Recognize **problem devices** under maintenance

Call Rate Warnings: Outliers for count of CALLs in 2016 > 20

	ServiceUnitID	count	Company ServiceUnitID	Company	Manufacturer	Model	Part
8072	9ZxnVa8liZb29XcQ	23			NETAPP	NETAPP FAS6080 CLUSTER	FAS6080C
9618	OJcN0LLjbjHrWcBZ	21			HDS	HDS CONTROL FRAME USP-V	DKC610I
15592	uDU8xlooTfkSgBHU	23			EMC	CLARIIION CX4-960C	CX4-960C
18843	n6lrfnAVdOqOSCGF	21			None	None	None
19696	Z3zhDe3zdRqusIsn	25			EMC	DMX3 24 SLOT SYS BAY	DMX3-SYS24-3Y
20745	juP2dqjhteeBZxEg	25			HDS	HDS CONTROL FRAME USP-V	DKC610I
22536	lalBW9wNXrr8agHm	22			IBM	N6060 MODEL A12	2858-A12
30396	K8oOSRHecRTmm6xR	34			None	None	None
33942	QkZA18t4sfvA0V2f	40			NETAPP	NETAPP FAS3170	FAS3170
41170	g3KVr3la4GQX3oil	35			NETAPP	NETAPP FAS6080 CLUSTER	FAS6080C
42054	iv0zgeIwJbxAtYxq	28			IBM	ONTAP DSM FOR WINDOWS MPIO 2858#	2858#8052

Business Value: Churn Prediction

Predict Churn using both aggregate data and in-house analysis



Business Value: Predict Profitability

Use Big Data Analytics to determine **optimal profitability**

*Revenue - (Labor * Hours) + (Parts * Cost) = Profitability*



The SIA Big Data Project

Competitors and Partners:



Share costs, risks and benefits

Accelerate response time

Gain Competitive Advantage



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