Orchestrating an Improved Customer Experience

Utilize Splunk ITSI Insights to Drive Automation

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Today's Speakers

PATRICK COMBS

TCS, Data Analytics Leader

SCOTT HAMRICK

PwC, IT Director – Operations Analytics

PricewaterhouseCoopers

Our purpose is to build trust in society and solve important problems

- Globally - 223,468 people in 743 locations in 157 countries
- 46k partners and staff in the US
- Provide industry-focused assurance, advisory and tax services for over 90% of the companies in the Fortune Global 500 list

PRICEWATERHOUSECOOPERS

Problem Statement

Implementing & Measuring Analytic Value

Sub-optimal IT processes

- Large, complex environment
- Frequent Change Requests
- Random outages
- Slow resolution time for failures
- Lack of confidence from end users

Overall Impact

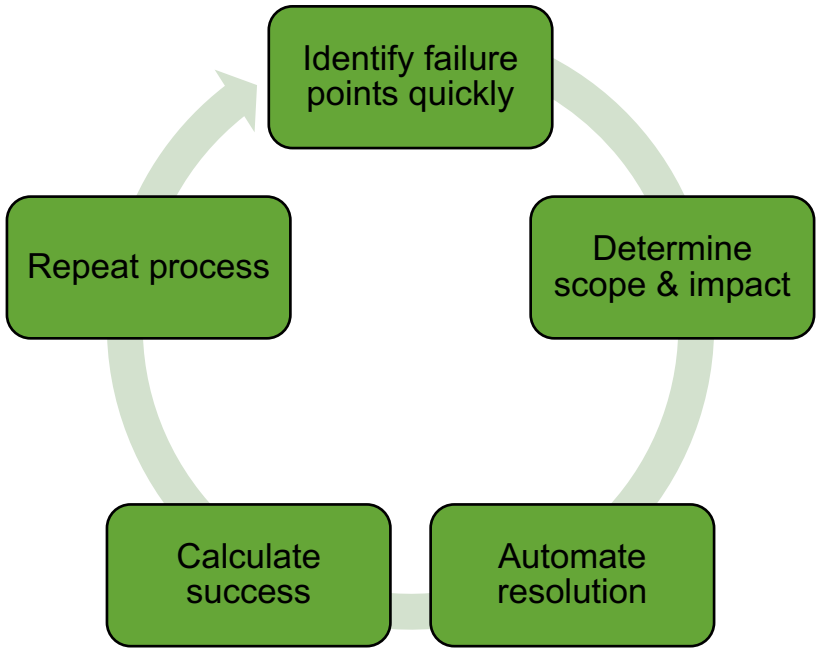
- Increased support costs
- Extensive manual effort
- Extended unplanned downtime
- Negative customer feedback
- Rogue IT efforts

Utilize analytics to automate issue resolution

Imagine the Possible: What If?

Implementing & Measuring Analytic Value

Anomaly detection



Measure Improvement & Impact

Reduce cost

Automate manual tasks

Eliminate unplanned downtime

Reduce MTTR for Incidents

Quantify / Track User Experience

Data leads to action…action to results…results to value

IT Operations Analytics

“Sunlight is said to be the best of disinfectants”

Justice Louis D. Brandeis

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PwC ITOA Mission

Enabling & Measuring Superior Client Experience

Holistic approach to data analytics

- Become “The” source of information
- Aggregate all relevant data
- Organize complex data sources
- Offer guided navigation
- Provide targeted data detail

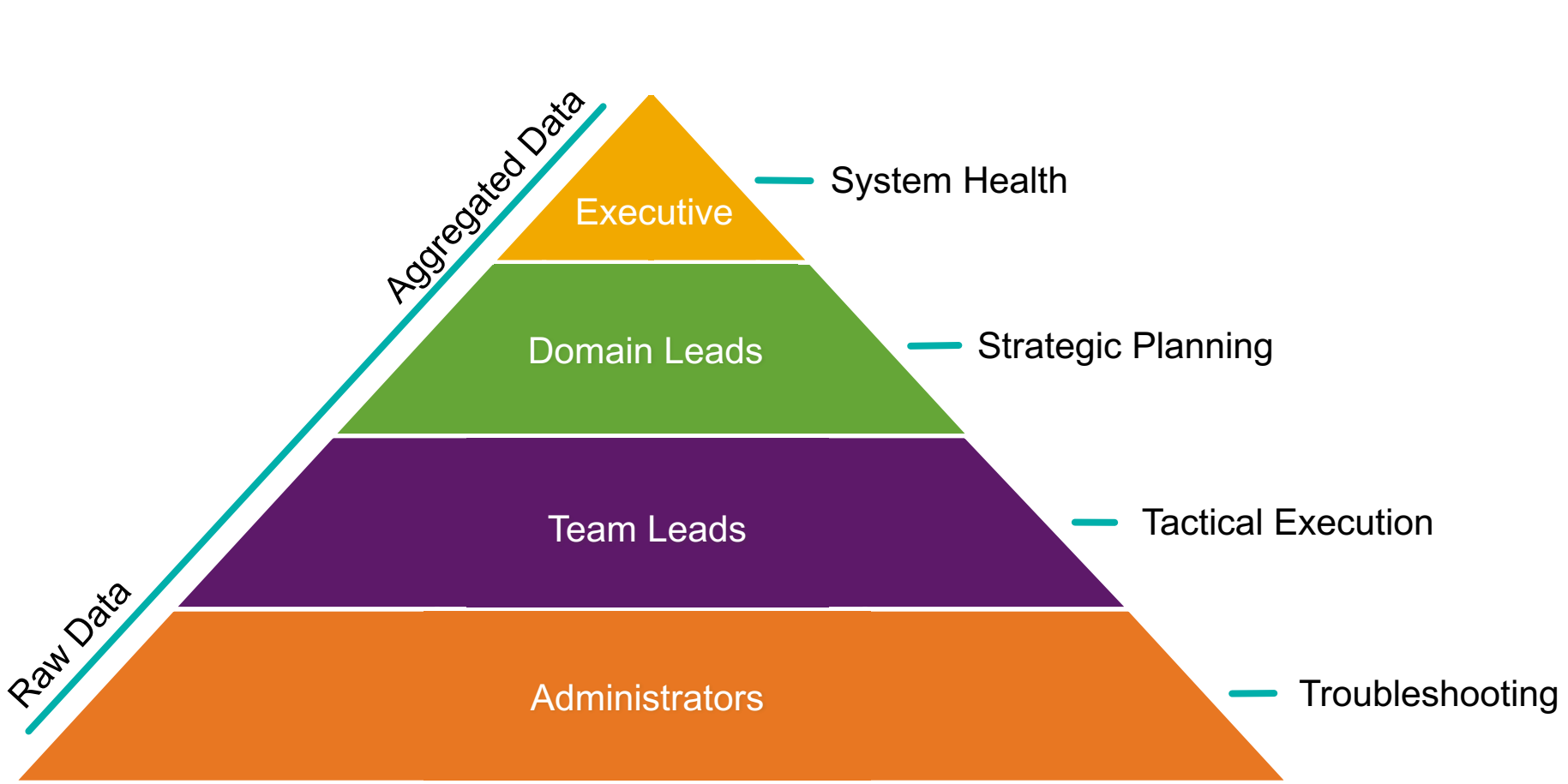
Critical Success Factors

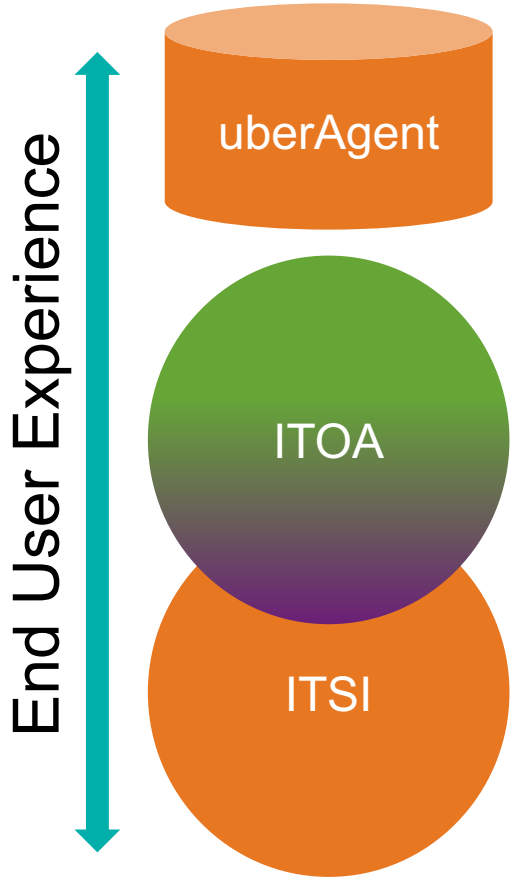
- Quantify / Track User Experience
- Eliminate unplanned downtime
- Reduce MTTR for Incidents
- Improve IT capacity management
- Remove Manual Reporting

Measure and improve end-to-end user experience

Pyramid of Transparency™

Data targeted to organizational role





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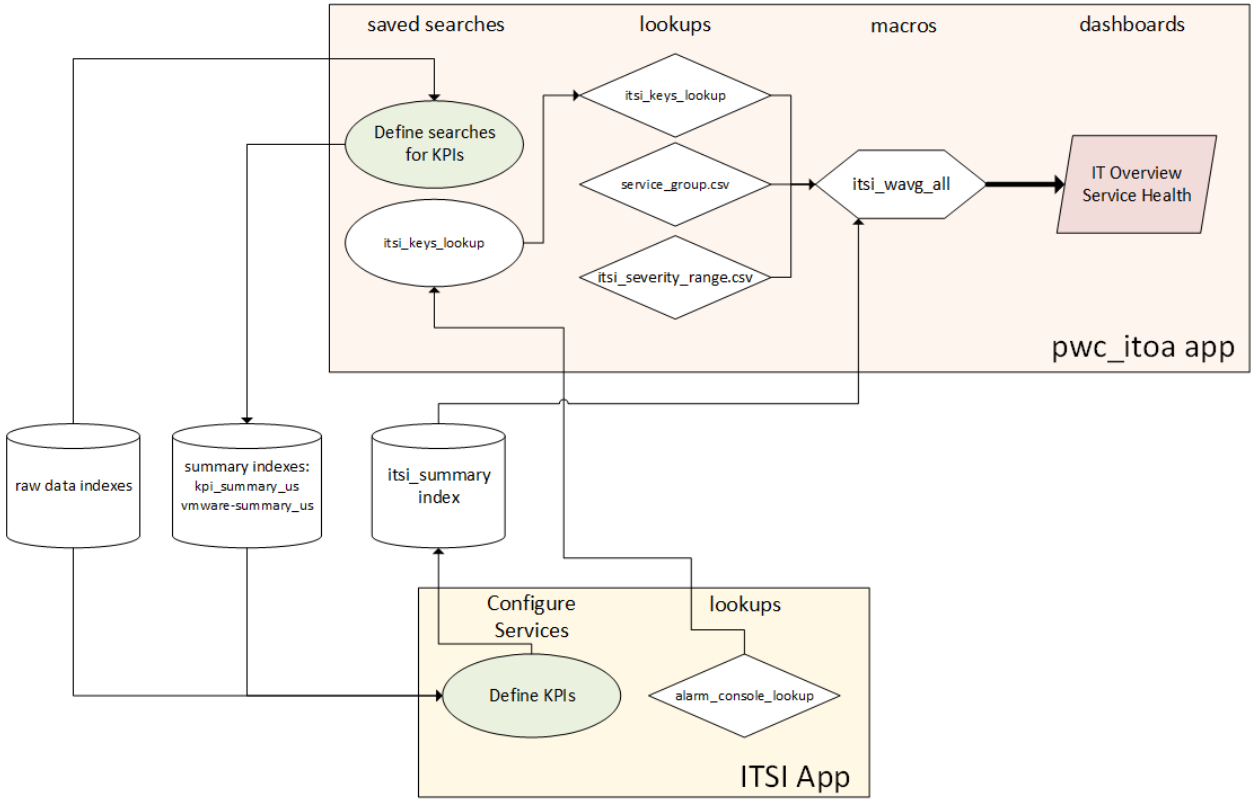
ITSI Driving Applied Analytics Through ITOA

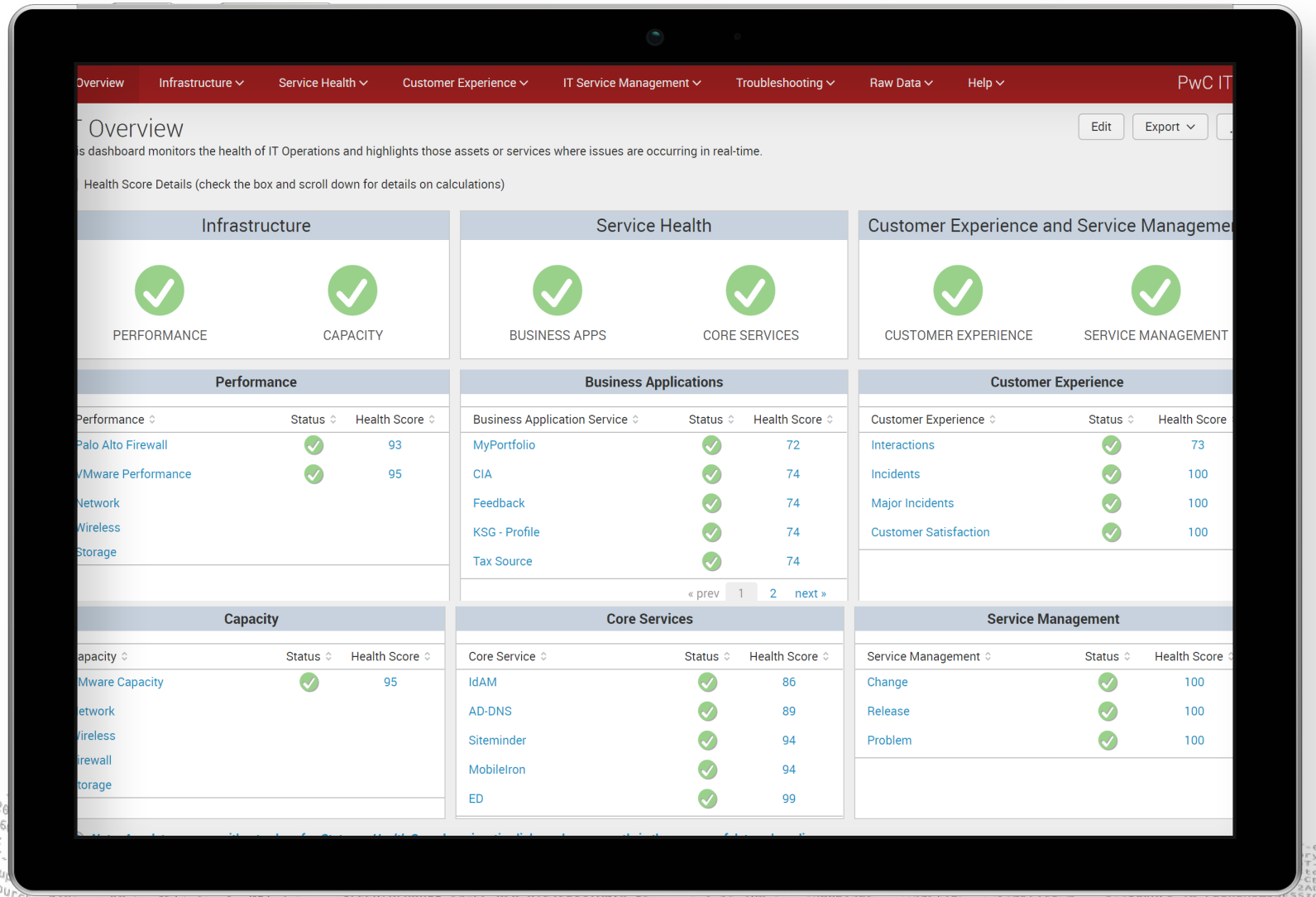
Key components required by ITOA app

- ITSI Service / KPI Definitions
- ITSI Entity and Base Searches
- ITOA Lookups
- ITOA Weighted Average Macro
- ITOA Framework to present results



IT Operations Analytics Product

Executive-level health score overview



Customized app providing near real-time visibility of service health

- Core Services
- Applications
- Infrastructure
- Service Management

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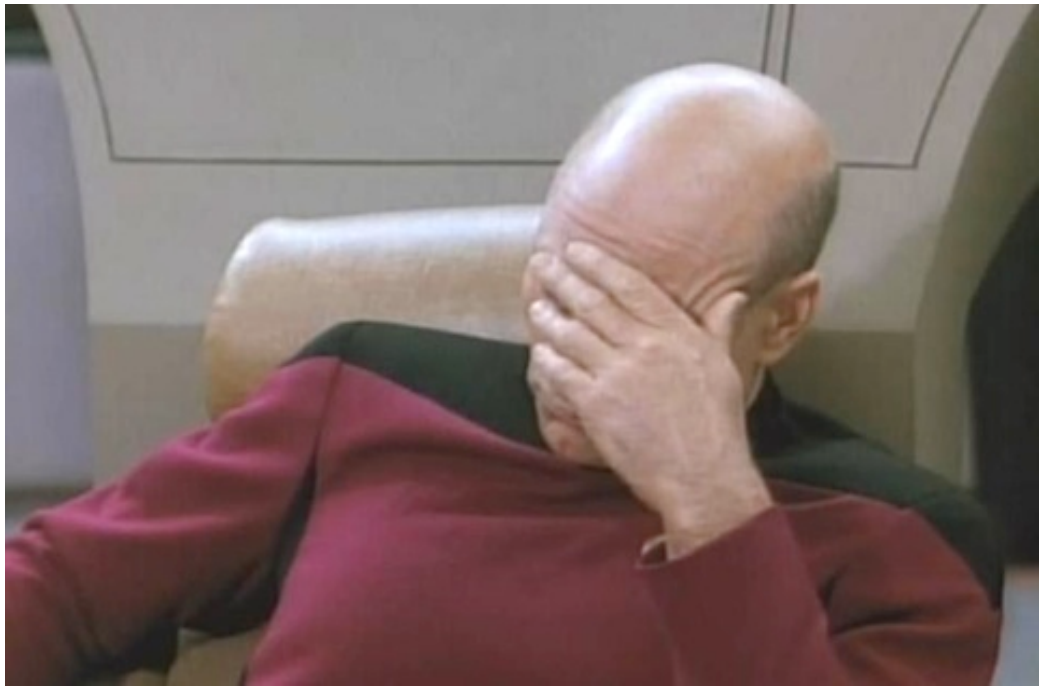
Top 5 Reactions to ITOA

Feedback we most frequently received

1. Splunk is the key to every initiative we have planned for the next 5 years!
2. OK, what's next??
3. What does Splunk say about…
4. That's great, but can it do _____?
5. Wait…what??



Applied Analytics

“Analytics without action are less valuable”

Anonymous CTO

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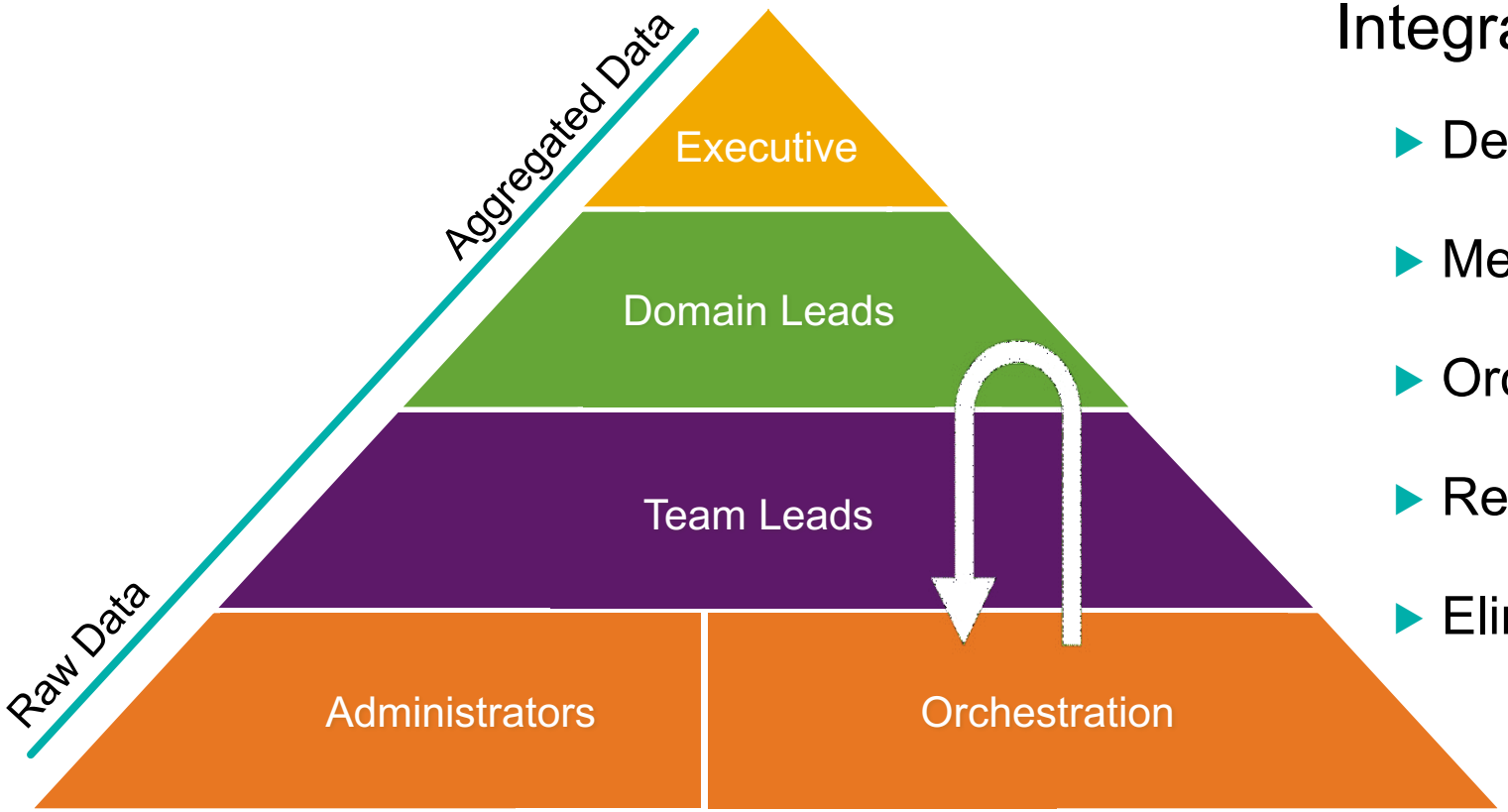
New ITOA Mission

Utilizing Analytics to drive automation

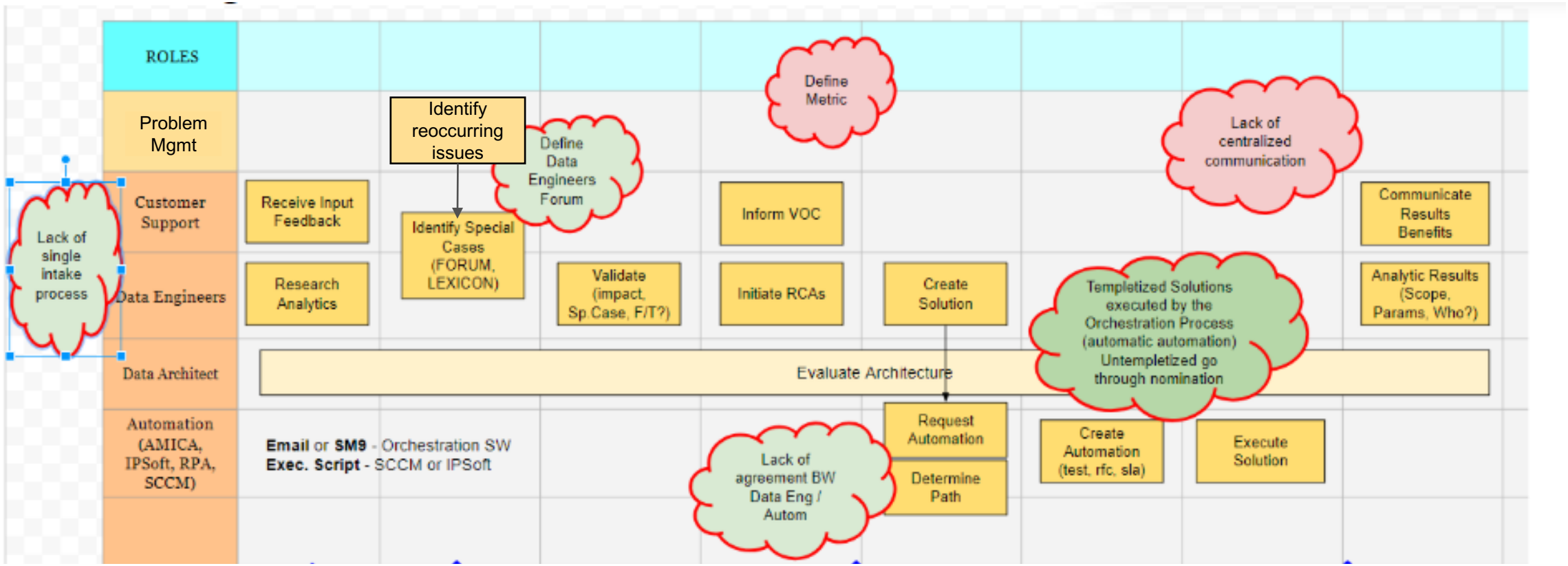


Integrate analytics with Automation

- Define metrics through ITSI
- Measure anomalies
- Orchestrate alerts to initiate action
- Resolve issues near real-time
- Eliminate re-occurrence

This is great…but its only the first half of the solution

Orchestration Workflow



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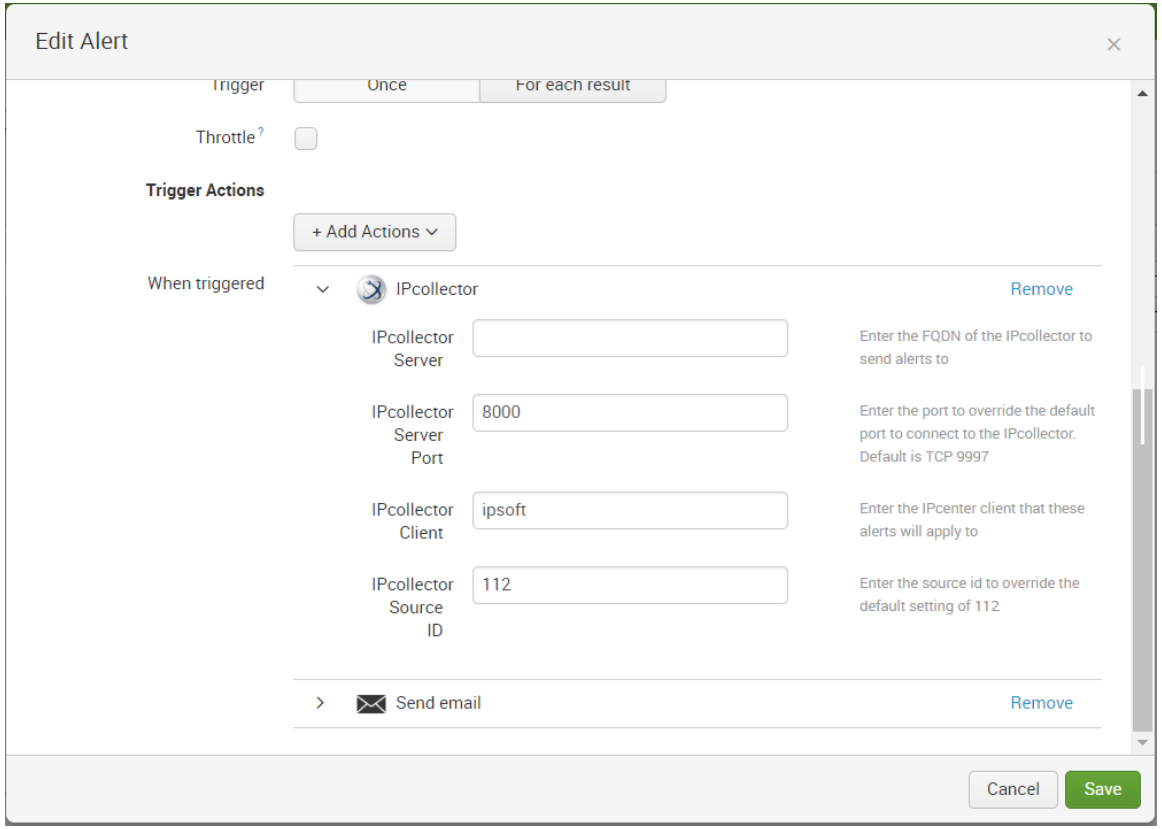
Splunk to Orchestration Architecture

Key components enabling orchestration

- Utilize each platform's strengths
- Tool agnostic
- Utilize standard Splunk alert feature
- Implement new Alert Action
- Deliver only actionable events
- Format data to meet orchestration needs



Orchestration Paths

Alerts generated through IPCollector integration

Notification

- Email
- SMS
- Key field values
  - To
  - From
  - Subject
  - Body
  - Issue Details
  - KB article

Service ticket creation

- ServiceNow API integration
- Incident
- Request
- Key Field values
  - Requestor name
  - Hostname
  - IP address
  - Issue Details

Script execution

- Custom development
- Value assessed
- Script maintained and executed through orchestration platform
- Key Field Values
  - Hostname
  - IP Address
  - OS

Automation Examples

“If nothing changes, nothing changes”

Courtney C. Stevens

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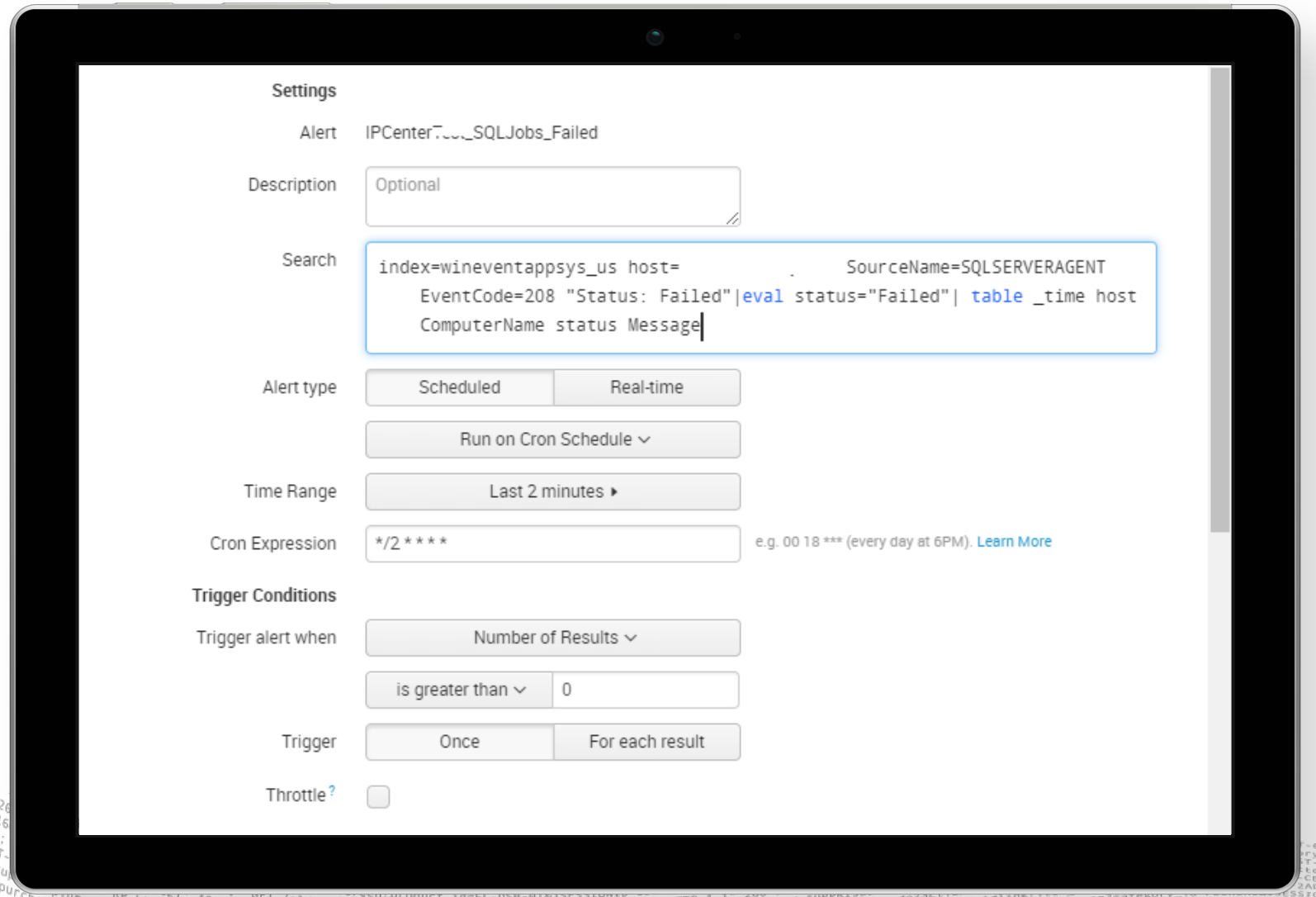
Application Performance

Failed SQL Job Management



Identify and Escalate

- Create standard alert
- Monitor for failed jobs
- Format results as table
- Utilize custom alert action

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Application Performance

Failed SQL Job Management

Deliver to Orchestration

- IPCollector receives alert
- Forwards details to IPCenter
- Actionable Event is created in IPCenter

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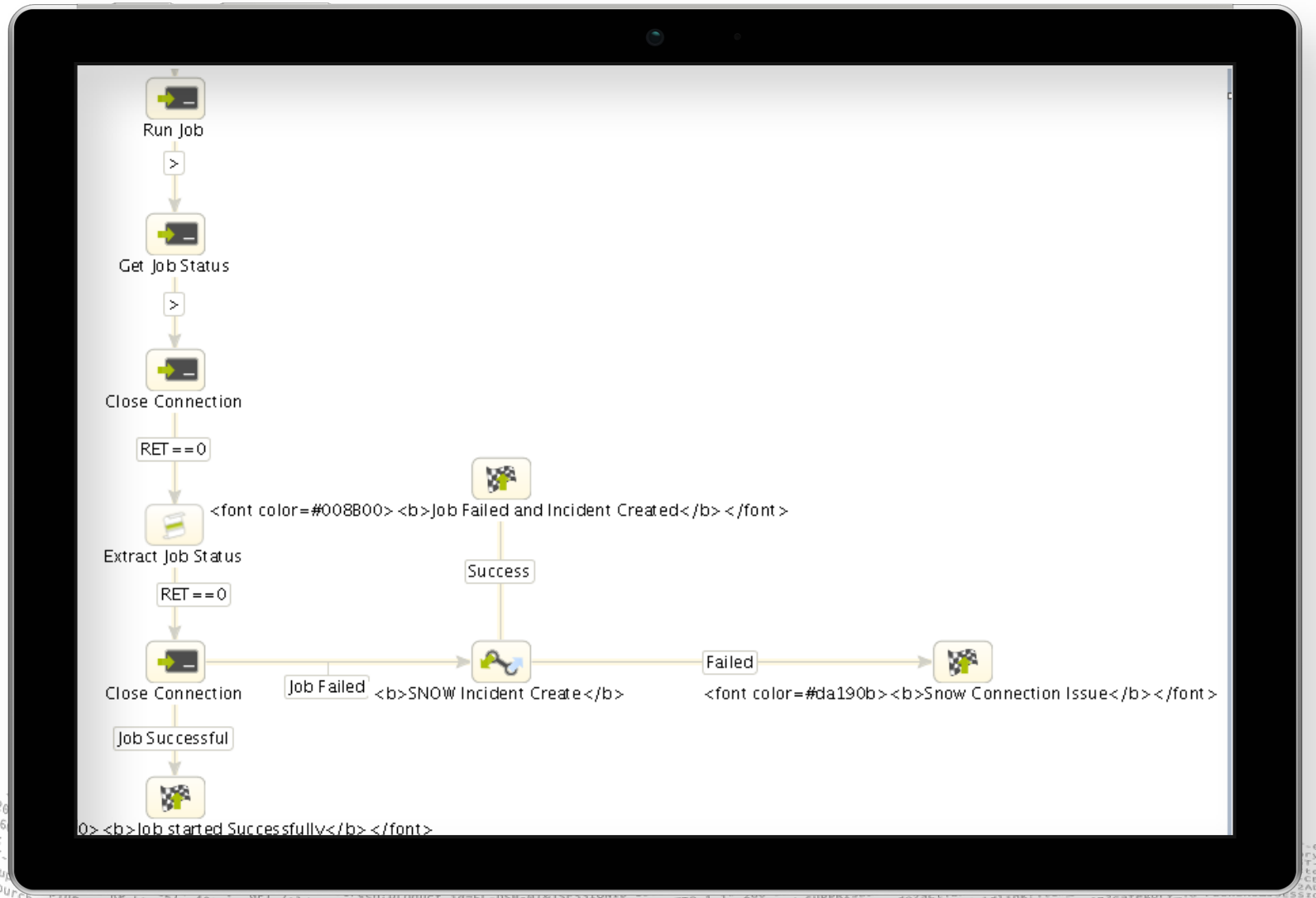
Application Performance

Failed SQL Job Management



Orchestration Takes Action

- Regex matching identifies appropriate workflow
- Branching script tasks initiate
- Success or failure managed by workflow

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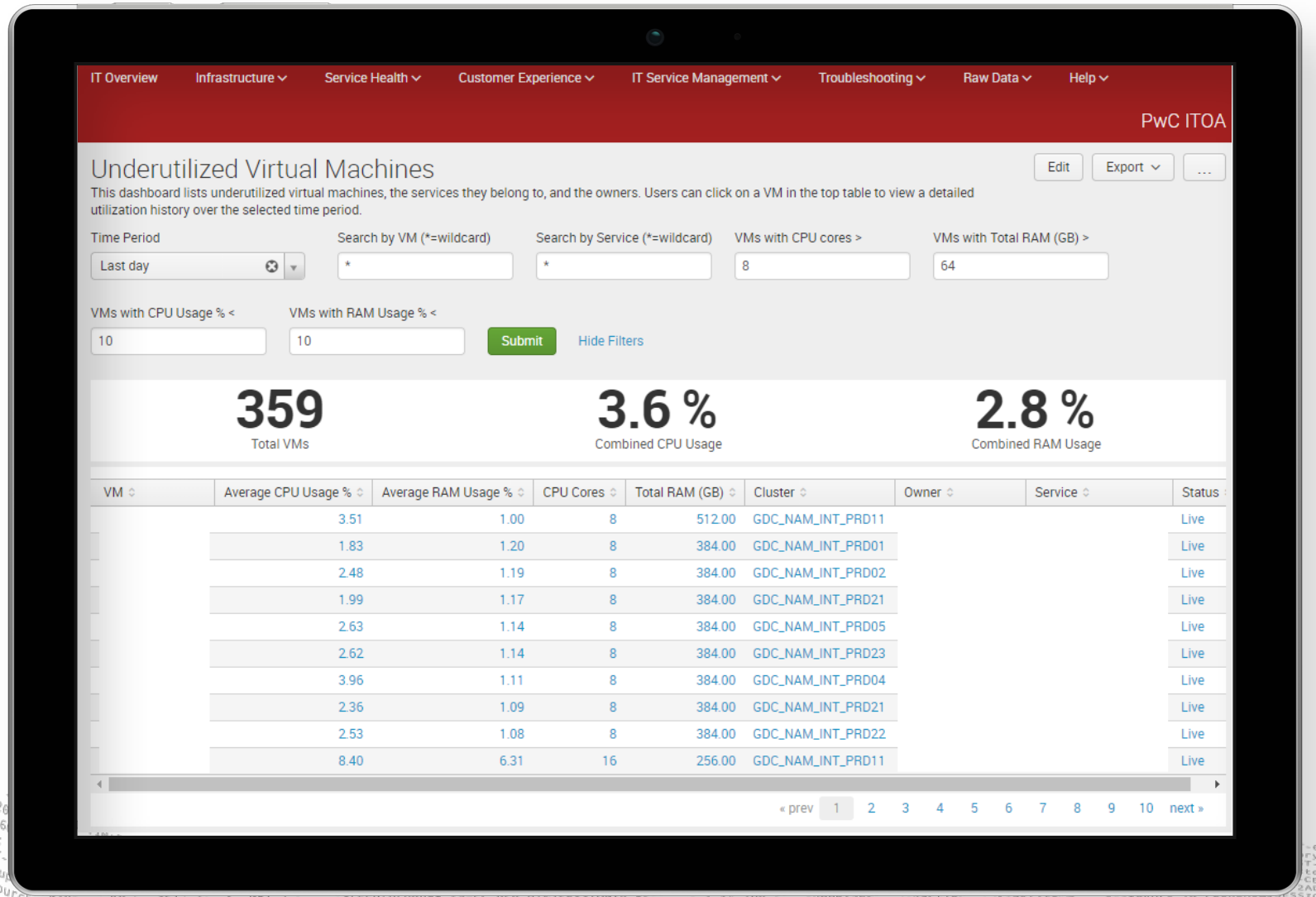
Infrastructure - Platform

Virtual Machine Resource Allocation



Identify Over-Allocated VMs

- Report utilization over time
- Identify VMs for resizing
- Trigger alert to IPCenter to subtract resources based on utilization

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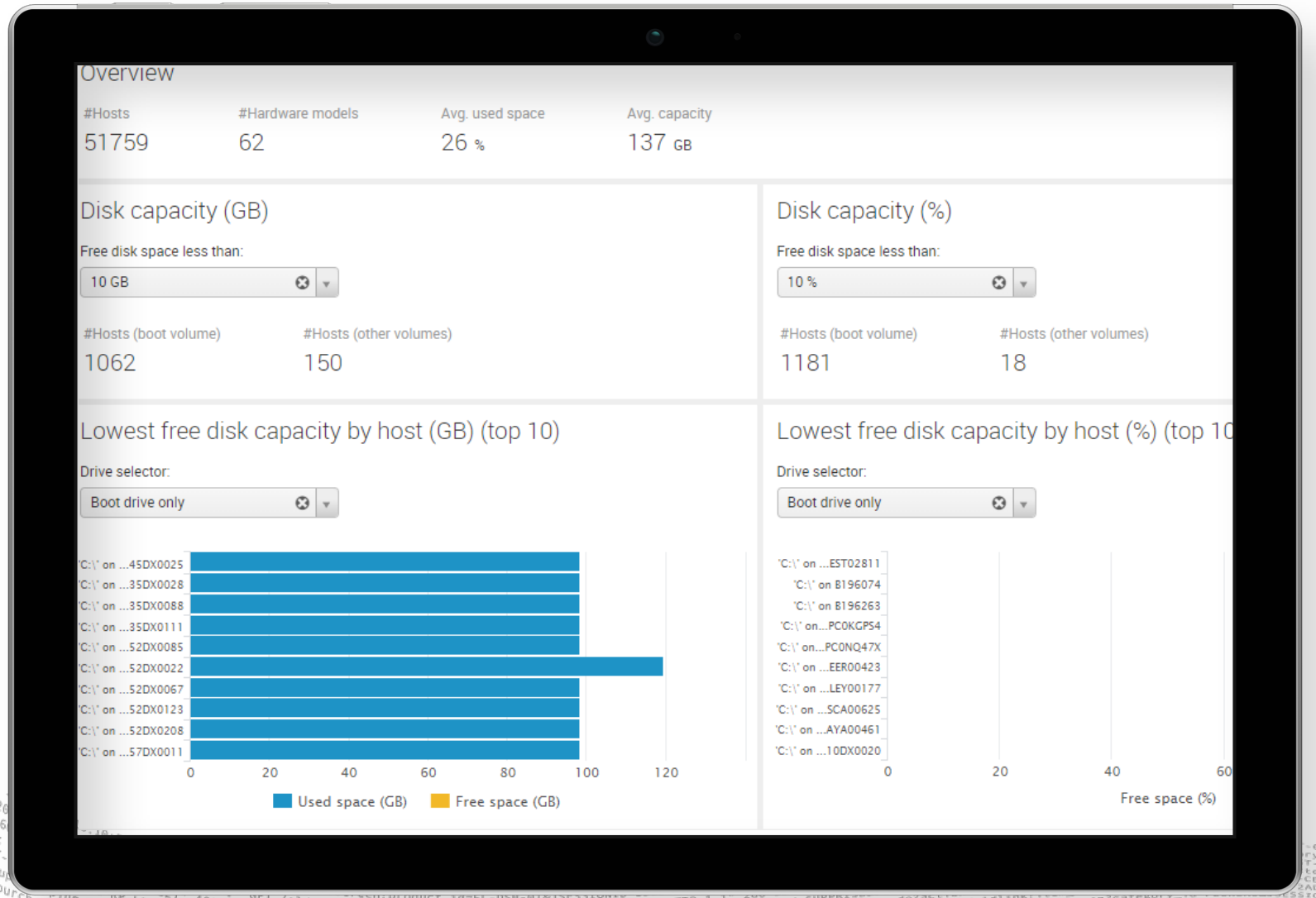
Endpoint Analytics

Low Disk Space



Disk Space Issues

- Identify low disk space on end-user laptops
- Deploy resolution proactively
- Continually monitor for reoccurrence

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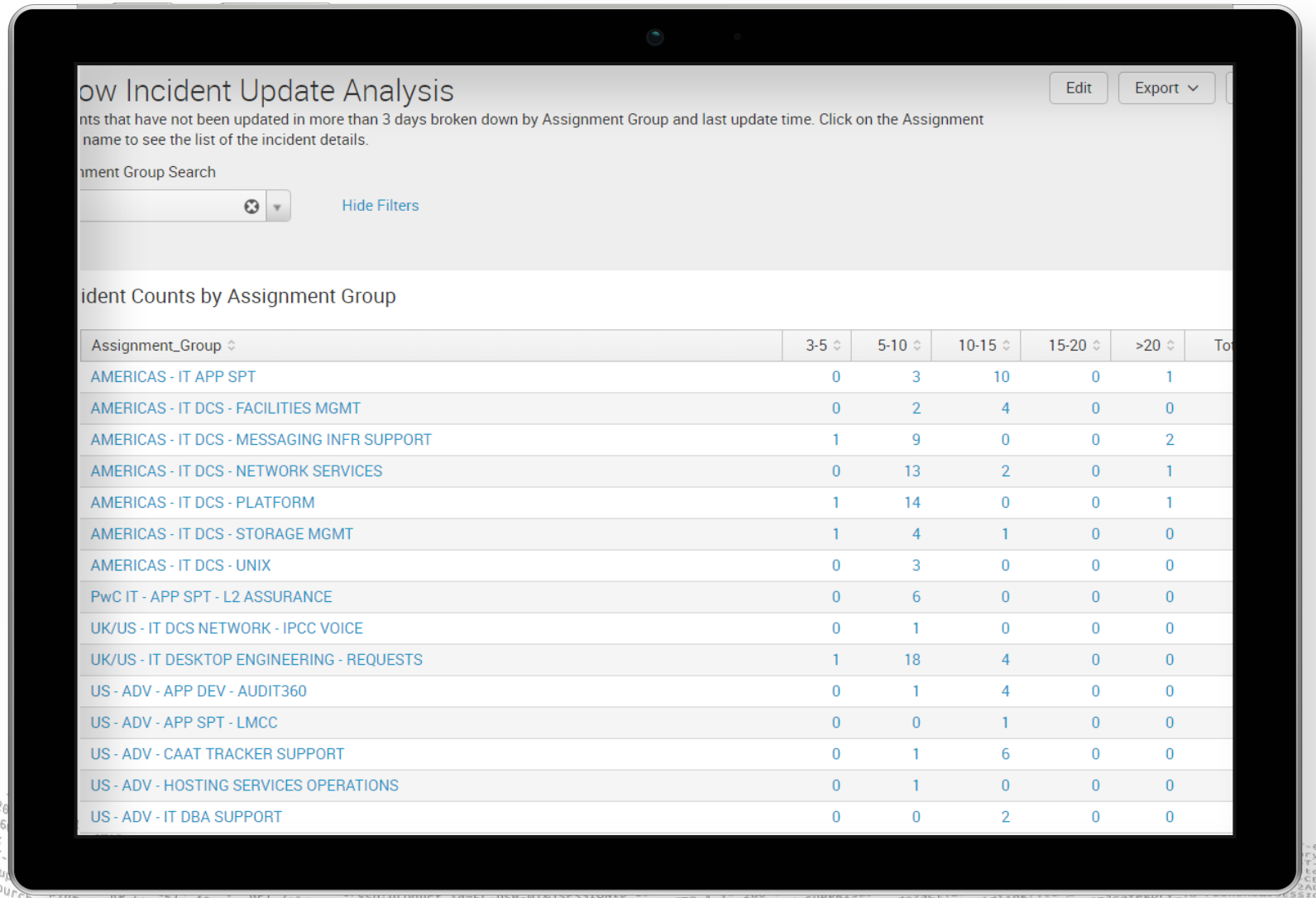
IT Service Management

Automate Report Generation and Distribution



Queue Management

- Repurposed dedicated reporting team
- Identify Aging Incidents
- Deliver Reports to large audience

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Delivering Analytic Value

Measuring Results

How are we successful?

- Cost out (--$$$)
  - Hardware Capacity
  - Resource Allocation
  - Manual Administration
  - Labor reduction
  - Eliminate lost time

$1.5M in cost elimination

- Hours saved (++Time)
  - Contact Reduction
  - Report Automation
  - Delivery Notification
  - Incident Resolution Time

6,000 employee & contractor hrs

- Quality (--Defects)
  - Automated workflow
  - Consistent Execution
  - Immediate Response
  - Simplification

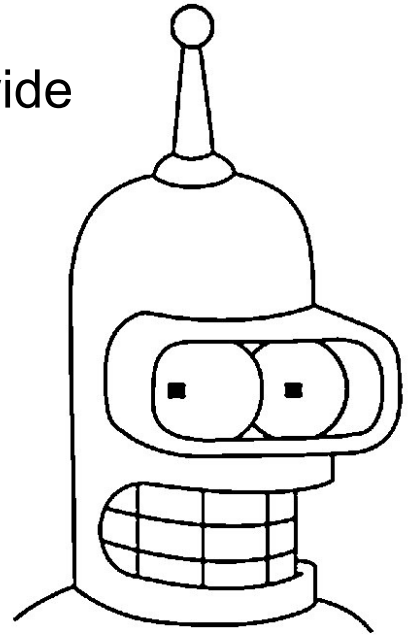
99% reduction in downtime

Next Steps

Enabling & Measuring Superior Client Experience

Analytics Factory

- Expand ITSI Service Creation
- Extend Actionable Analytics platform-wide
- Build Analytic inventory
- Integrate with Orchestration Platforms



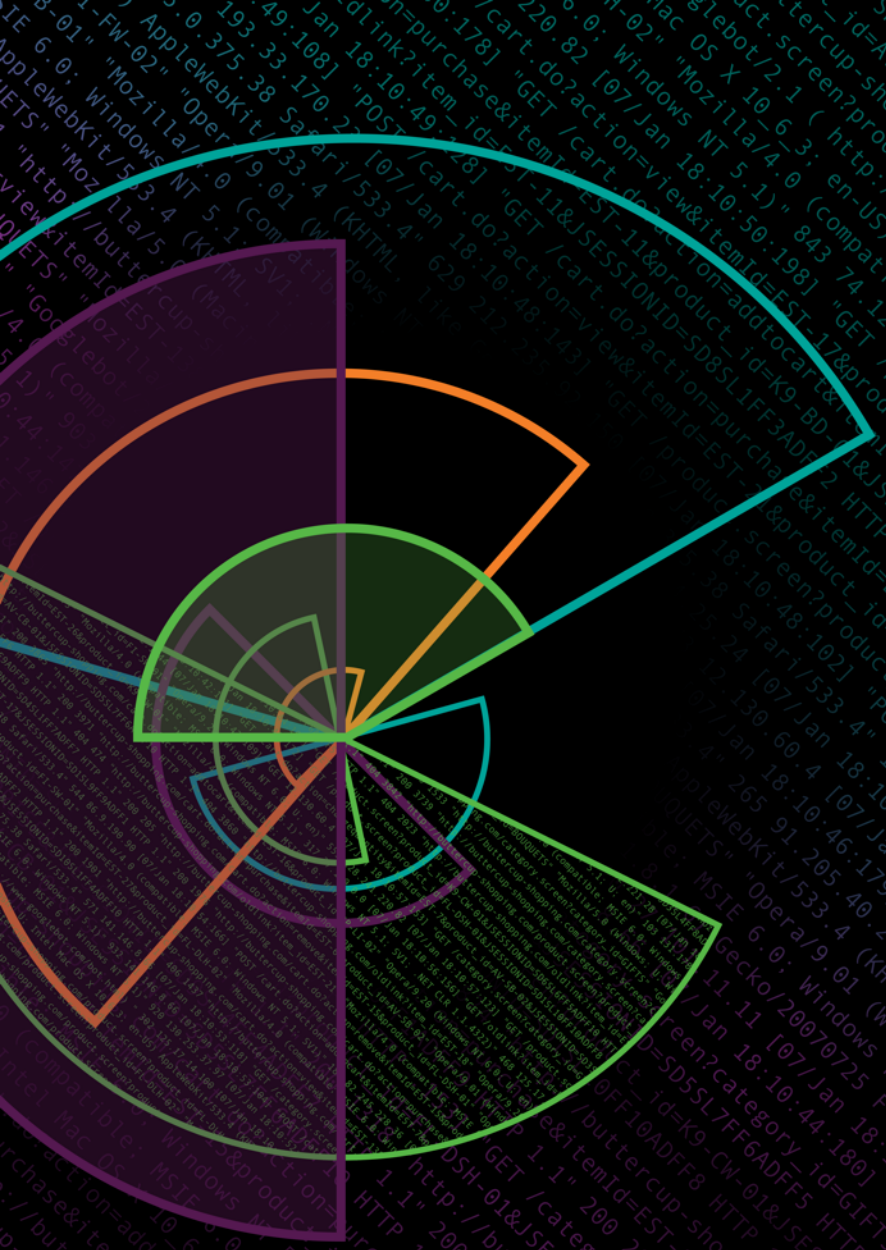
Critical Success Factors

- Reduce customer support calls
- Eliminate unplanned downtime
- Reduce MTTR for Incidents
- Reduce manual administration

"All hail our new robot-overlords!"

Key Takeaways

1. Building an analytics foundation
2. Foundation enabled actionable analytics
3. Factory approach drives value



Q&A

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Thank You

Don't forget to rate this session in the .conf18 mobile app

A Little More About Us...

Patrick Combs

TCS, Data Analytics Leader

- 18+ yrs combined experience at PwC
  - Web Development
  - Database Reporting
  - Platform Services
  - Data Analytics
- Soccer coach and cyclist

Scott Hamrick

PwC, IT Director – Operations Analytics

- 20+ yrs combined experience with GE/PwC
  - Networking (CCNP)
  - InfoSec (CISSP)
  - Data Analytics
- Softball professional, RiffTrax backer