

PTC® Live Global

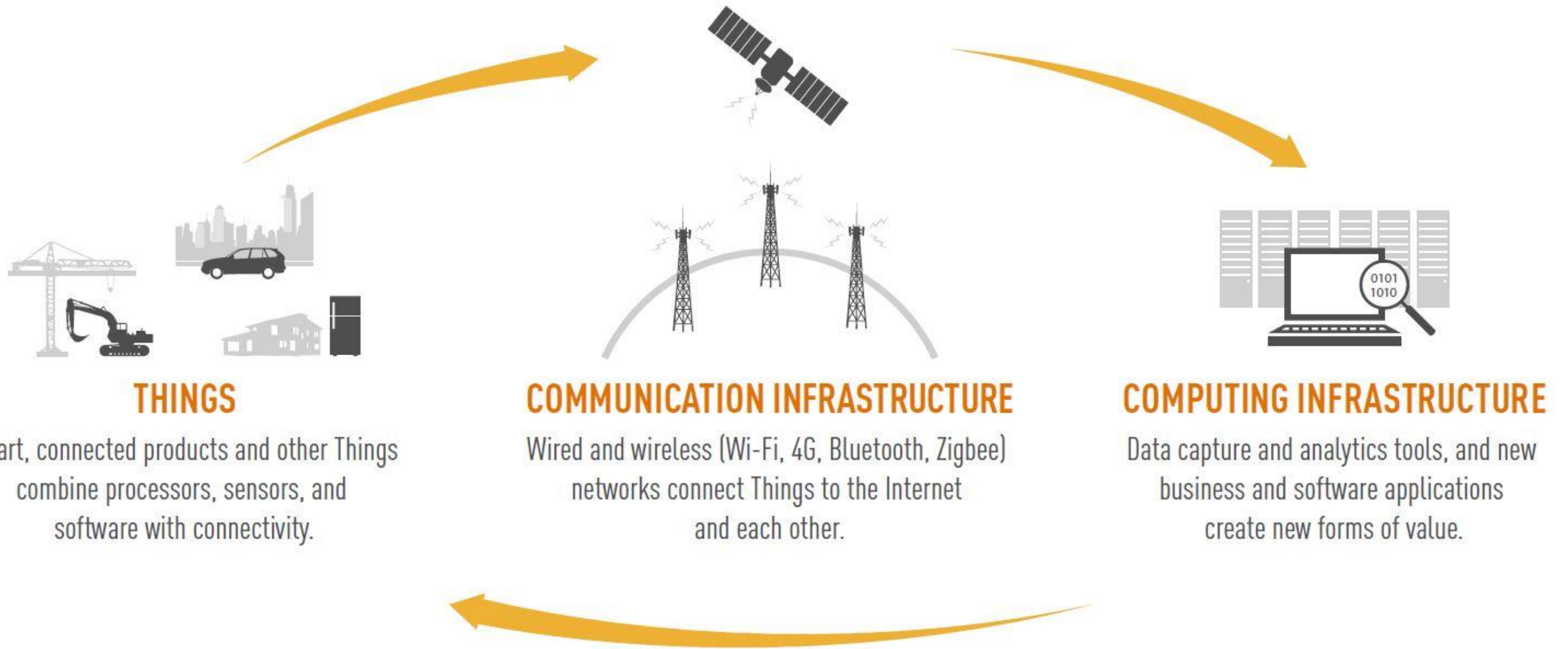
PTC 307 Connecting PLM to PTC: Improving Support and Maintenance

Graham Birch
Walid Saad

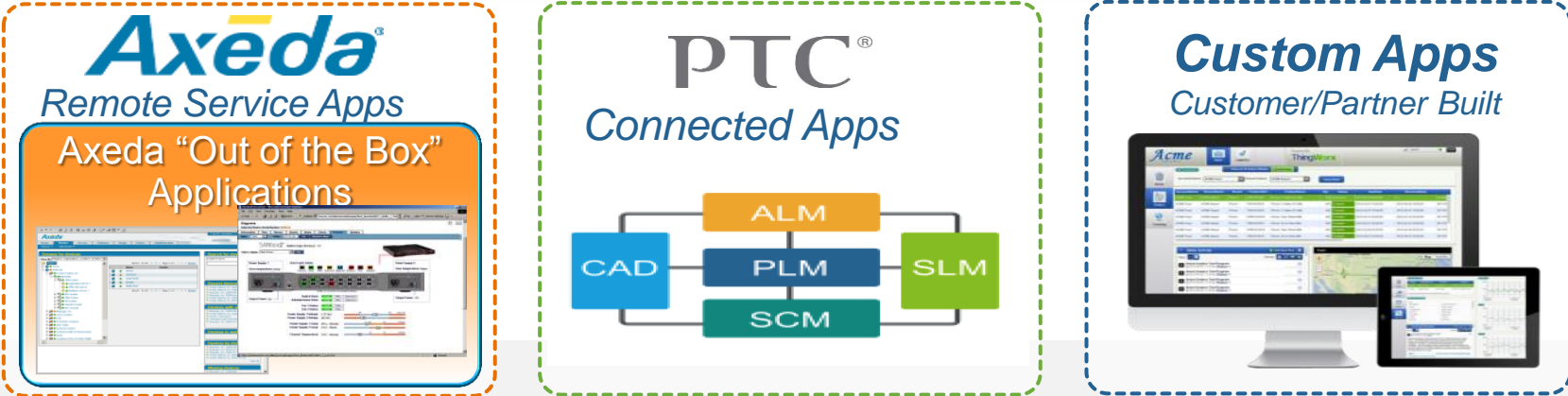
6/10/2015



SmartThings connected through a network to a computing infrastructure that create new forms of value



Applications



Axeda Apps
PTC C-Apps
Custom Apps built by customers, partners

Application Enablement Platform



Application Development Tools and Runtime Platform

Secure, Scalable Communications



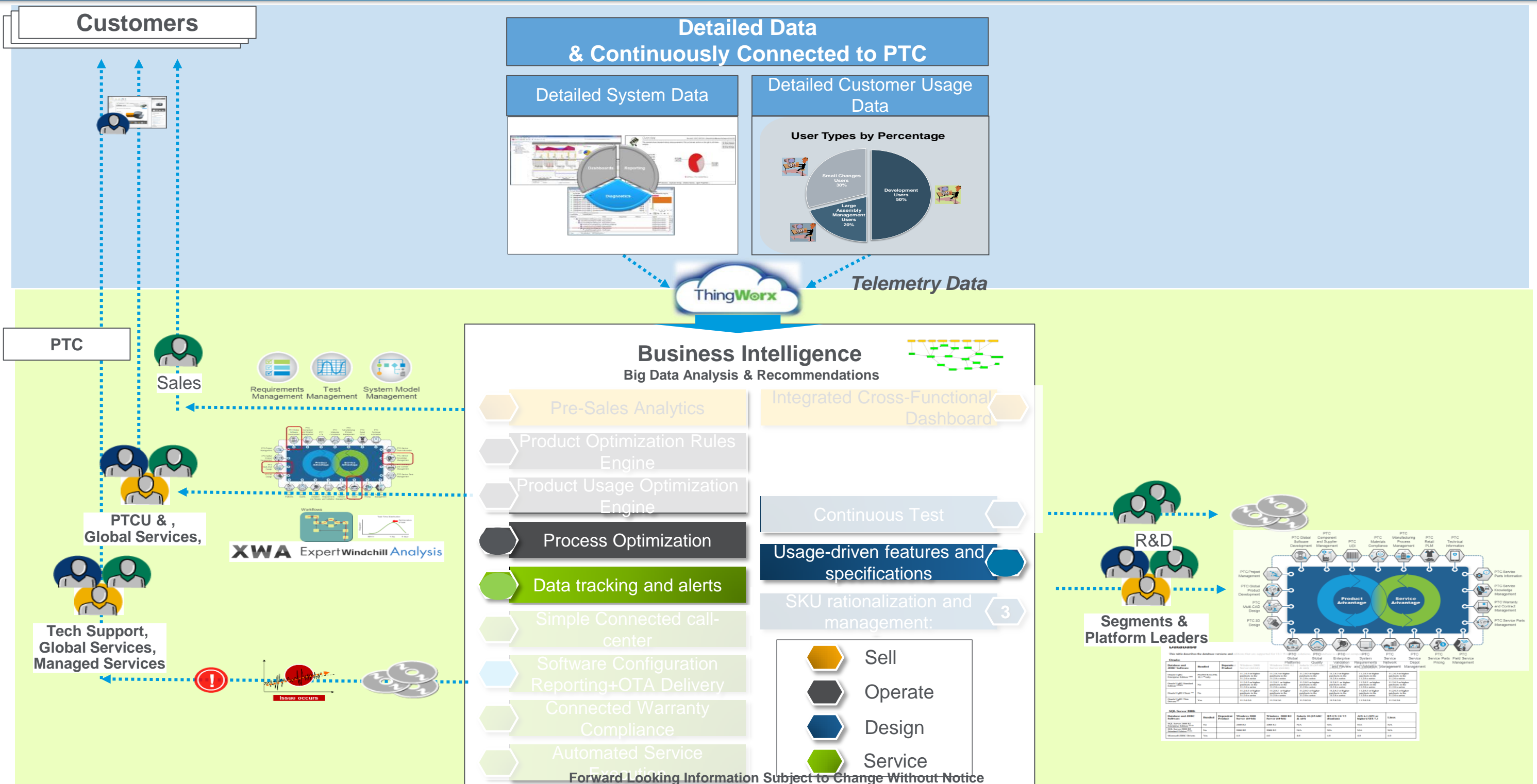
Device Management and Connectivity

Sensors, Devices & Equipment



Support for connected assets using ThingWorx Agent, Axeda Agent, or direct

Focus on Three Use Cases for Smart Connected PTC Products



PTC's Products Provided the Initial Building Blocks for Making PTC's Products Smart & Connected

Training

Serviceability & Performance

Usage Data

Sensors, SW, UI & Connectivity

Customer

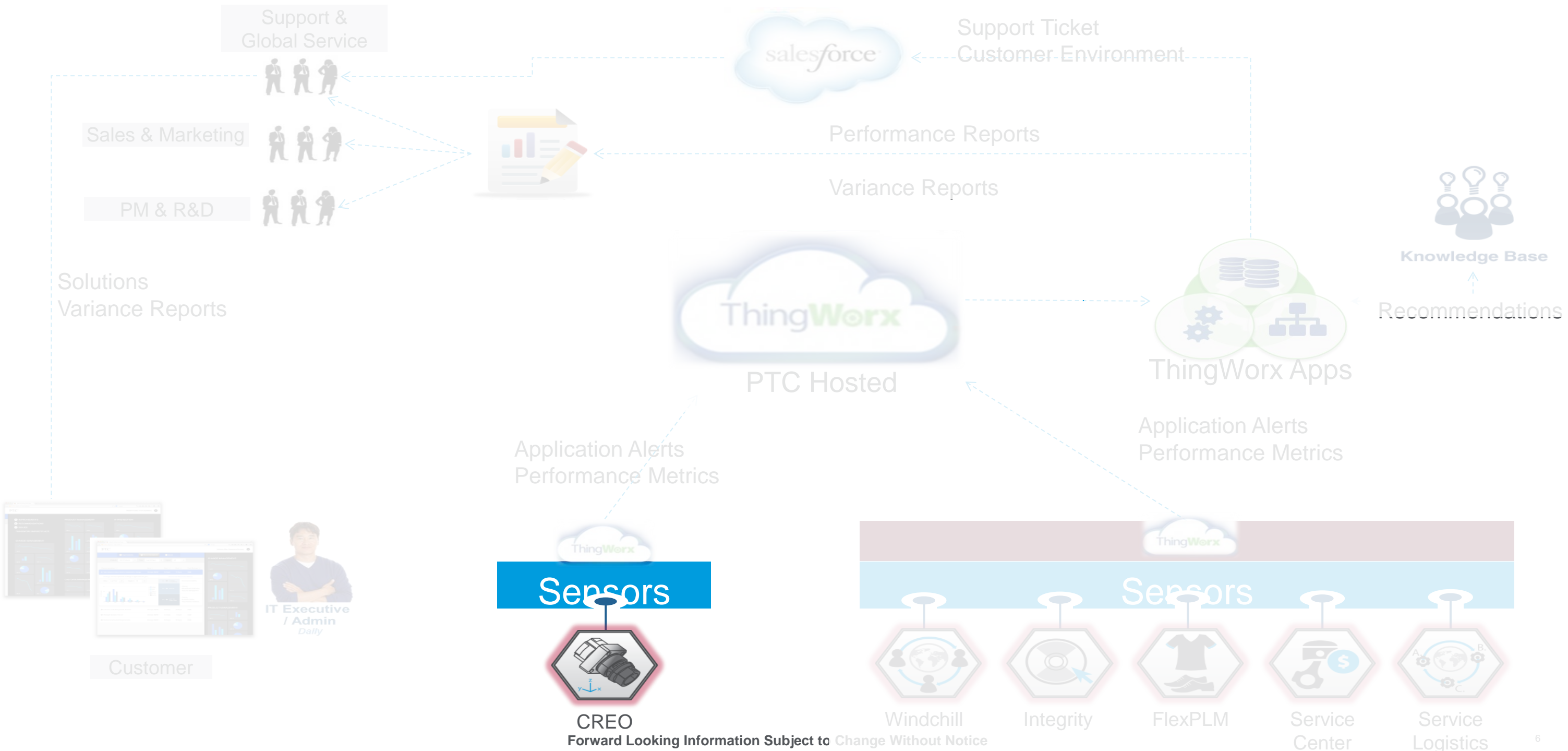


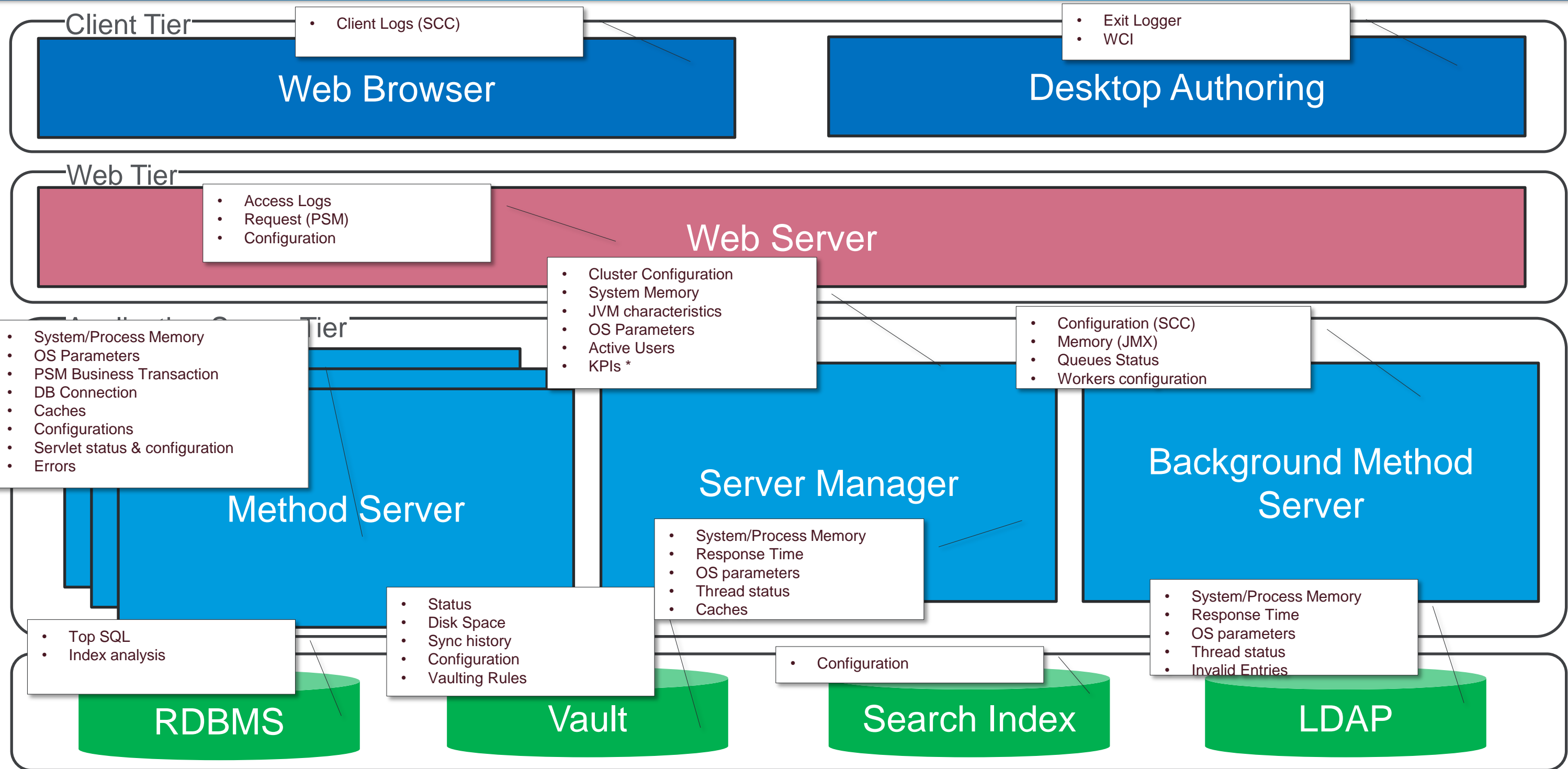
Learning
Connector

PTC

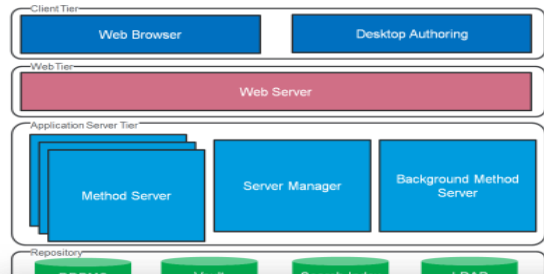


Performance Advisor for CREO and PTC Windchill

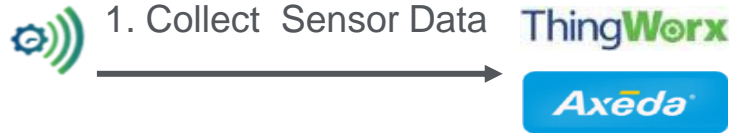




Customer Environment



PSM
Diagnostic Data



PTC Cloud



```
SELECT 'wt.workflow.work.WorkItem',A0.actionPerformed,A0.blob$context,A0.completedBy,
0,context,A0.description,A0.eventSet,A0.classnamekeyD4,A0.idA3D4,A0.classnamekey
A2ownership,A0.idA3A2ownership,A0.classnamekeyC4,A0.idA3C4,A0.classnamekeyB4
,A0.priority,A0.reassigned,A0.required,A0.role,A0.classnamekeyA4,A0.idA3A4,A0.statu
s,A0.taskURLPathInfo,TO_CHAR(A0.createStampA2,'dd mm yyyy
hh24:mi:ss'),A0.markForDeleteA2,TO_CHAR(A0.modifyStampA2,'dd mm yyyy
hh24:mi:ss'),A0.idA2A2,A0.updateCountA2,TO_CHAR(A0.updateStampA2,'dd mm
yyyy hh24:mi:ss'),A0.variablePermissionMap FROM WorkItem A0,WfAssignedActivity
A1 WHERE ((A0.idA3A4 = A1.idA2A2) AND (A1.idA3domainRef = ?))
```

Reco

Details

Database

SQL:

```
SELECT 'wt.workflow.work.WorkItem',A0.actionPerformed,A0.blob$context,A0.completedBy,
0,context,A0.description,A0.eventSet,A0.classnamekeyD4,A0.idA3D4,A0.classnamekey
A2ownership,A0.idA3A2ownership,A0.classnamekeyC4,A0.idA3C4,A0.classnamekeyB4
,A0.priority,A0.reassigned,A0.required,A0.role,A0.classnamekeyA4,A0.idA3A4,A0.statu
s,A0.taskURLPathInfo,TO_CHAR(A0.createStampA2,'dd mm yyyy
hh24:mi:ss'),A0.markForDeleteA2,TO_CHAR(A0.modifyStampA2,'dd mm yyyy
hh24:mi:ss'),A0.idA2A2,A0.updateCountA2,TO_CHAR(A0.updateStampA2,'dd mm
yyyy hh24:mi:ss'),A0.variablePermissionMap FROM WorkItem A0,WfAssignedActivity
A1 WHERE ((A0.idA3A4 = A1.idA2A2) AND (A1.idA3domainRef = ?))
```

Type: Oracle

Database Name: pplink10

Database Host: oradbprod2.ptc.com

Connection Pool Name: -

User Name: -

User Name (default): -

Connection String: jdbc:oracle:thin:@oradbprod2.ptc.com:1521:pplink10

Row count: -

Round trips: -

Time	Average	Minimum	Maximum	Sum
Exec Time [ms]:	11334.04	10573.99	12094.10	22668.09
Acquisition Time [ms]:	-	-	-	-
Response Time	per Execution	per calling Transaction	per Transaction	Total
Response Time [ms]:	11334.04	11334.12	0.46	22668.09

Copy Selected Copy All Close

PTC Knowledge Sources



Solutions

4. Identify solution based on condition and secondary customer data

Document Information

Type	Article
Date Created	25-Jun-2012 15:20:07 EDT
Date Last Updated	27-Nov-2013 11:02:28 EST

Document Details

Title: Poorly performing WProcess SQL identified by the Oracle diagnostics report in Windchill

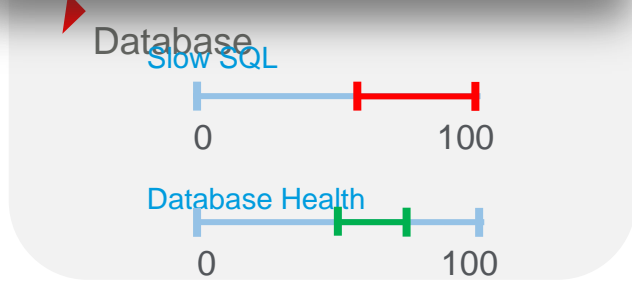
Description: Poorly performing WProcess SQL identified by the Oracle diagnostics report:

```
SELECT 'wt.workflow engine WProcess',A0.adSQEN,A0.alertTime,A0.blob$context,A0
hh24:mi:ss),A0.deadlineDuration,A0.description,A0.classnamekeydomainRef,A0.idA3
hh24:mi:ss),A0.eventConfiguration,A0.eventSet,A0.inheritedDomain,A0.wfkey,A0.nam
mm yyyy hh24:mi:ss),A0.state,A0.suspendTime,A0.teamid$hh:mm:ss),A0.classnamekeyB
hh24:mi:ss),A0.markForDeleteA2,TO_CHAR(A0.modifyStampA2,'dd mm yyyy hh24:mi:ss
FROM WProcess A0
WHERE ((A0.idA3AS = -1)
AND ((A0.state = :2) OR (A0.state = :3) OR (A0.state = :4) OR (A0.state = :5) OR
AND (A0.markForDeleteA2 = 0))
```

Applies To: Windchill family 9.1, 10.0 all datecodes

Cause: -

3. Initiate analysis job based on key thresholds



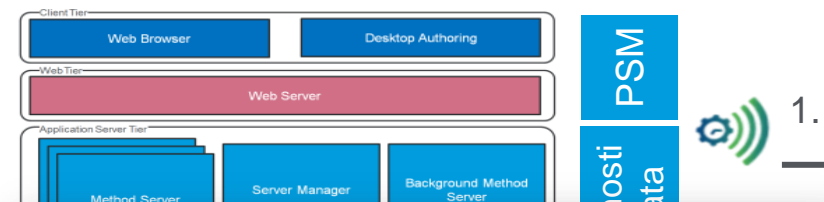
5. Present customer with solution through ThingWorx App

31 Views

DB Index Recommendations

KB: CS57248 – Assignments list loads slowly in Windchill

Customer Environment

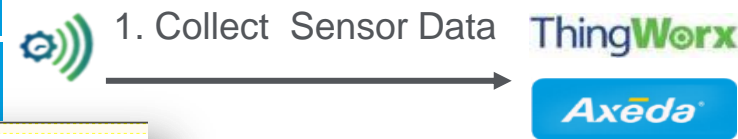


```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE Configuration
SYSTEM "xconf.dtd">
<Configuration xmlns:xlink="http://www.w3.org/1999/xlink">
  <Property name="wt.java.cmd" overridable="true" targetFile="codebase/wt.properties"
  value="C:\ptc\Windchill_10_2\Java\jre-bin\java.exe"/>
  <Property name="installedProductLocation.Apache" overridable="true"
  targetFile="codebase/WEB-INF/ieWebServerLocation.txt"
  value="C:\ptc\Windchill_10_2\HTTPServer"/>
  <Property name="ie ldap.serverHostName" overridable="true"
  targetFile="codebase/WEB-INF/ieStructProperties.txt"
  value="en2k8-wnc-x24.ptc.com"/>
  <Property name="wt.ra1.server.hostname" overridable="true"
  targetFile="codebase/wt.properties"
  value="en2k8-wnc-x24.ptc.com"/>
  <Property name="ie ldap.managerDn" overridable="true"
  targetFile="codebase/WEB-INF/ieStructProperties.txt"
  value="cn=Manager"/>
  <Property name="wt.servlet.jsp.minPort" overridable="true"
  targetFile="codebase/wt.properties"
  value="8010"/>
  <Property name="ie shortcut.folder.name" overridable="true"
  targetFile="codebase/WEB-INF/ieShortcutFolderName.txt"
  value="C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs"
  <Property name="ie ldap.serverPort" overridable="true"
  targetFile="codebase/WEB-INF/ieStructProperties.txt"
  value="389"/>
  <Property name="ie ldap.managerPw" overridable="true"
  targetFile="codebase/WEB-INF/ieStructProperties.txt"
  value="encrypted.ie.ldap.managerPw"/>
  <Property name="installedProductLocation.Tomcat" overridable="true"
  targetFile="codebase/WEB-INF/ieWebServerLocation.txt"
  value="C:\ptc\Windchill_10_2\Windchill\tomcat"/>
</Configuration>
```

PTC Cloud



1. Collect Sensor Data
2. Deliver encrypted and Anonymized data



Recon



3. Initiate analysis job based on key thresholds

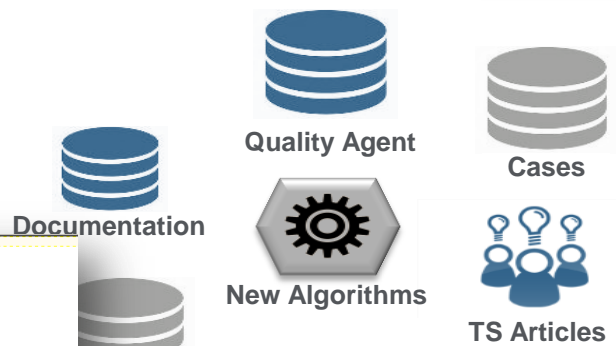
Solution



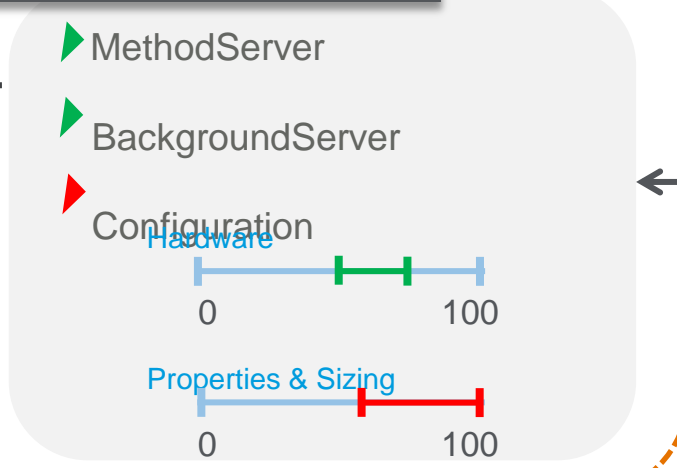
4. Tailored recommendation against Known Good

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE Configuration
SYSTEM "xconf.dtd">
<Configuration xmlns:xlink="http://www.w3.org/1999/xlink">
  <Property name="wt.java.cmd" overridable="true" targetFile="codebase/wt.properties"
  value="C:\ptc\Windchill_10_2\Java\jre-bin\java.exe"/>
  <Property name="installedProductLocation.Apache" overridable="true"
  targetFile="codebase/WEB-INF/ieWebServerLocation.txt"
  value="C:\ptc\Windchill_10_2\HTTPServer"/>
  <Property name="ie ldap.serverHostName" overridable="true"
  targetFile="codebase/WEB-INF/ieStructProperties.txt"
  value="en2k8-wnc-x24.ptc.com"/>
  <Property name="wt.ra1.server.hostname" overridable="true"
  targetFile="codebase/wt.properties"
  value="en2k8-wnc-x24.ptc.com"/>
  <Property name="ie ldap.managerDn" overridable="true"
  targetFile="codebase/WEB-INF/ieStructProperties.txt"
  value="cn=Manager"/>
  <Property name="wt.servlet.jsp.minPort" overridable="true"
  targetFile="codebase/wt.properties"
  value="8010"/>
  <Property name="ie shortcut.folder.name" overridable="true"
  targetFile="codebase/WEB-INF/ieShortcutFolderName.txt"
  value="C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs"
  <Property name="ie ldap.serverPort" overridable="true"
  targetFile="codebase/WEB-INF/ieStructProperties.txt"
  value="389"/>
  <Property name="ie ldap.managerPw" overridable="true"
  targetFile="codebase/WEB-INF/ieStructProperties.txt"
  value="encrypted.ie.ldap.managerPw"/>
  <Property name="installedProductLocation.Tomcat" overridable="true"
  targetFile="codebase/WEB-INF/ieWebServerLocation.txt"
  value="C:\ptc\Windchill_10_2\Windchill\tomcat"/>
</Configuration>
```

5. Present customer with solution through ThingWorx App



PTC Knowledge Sources

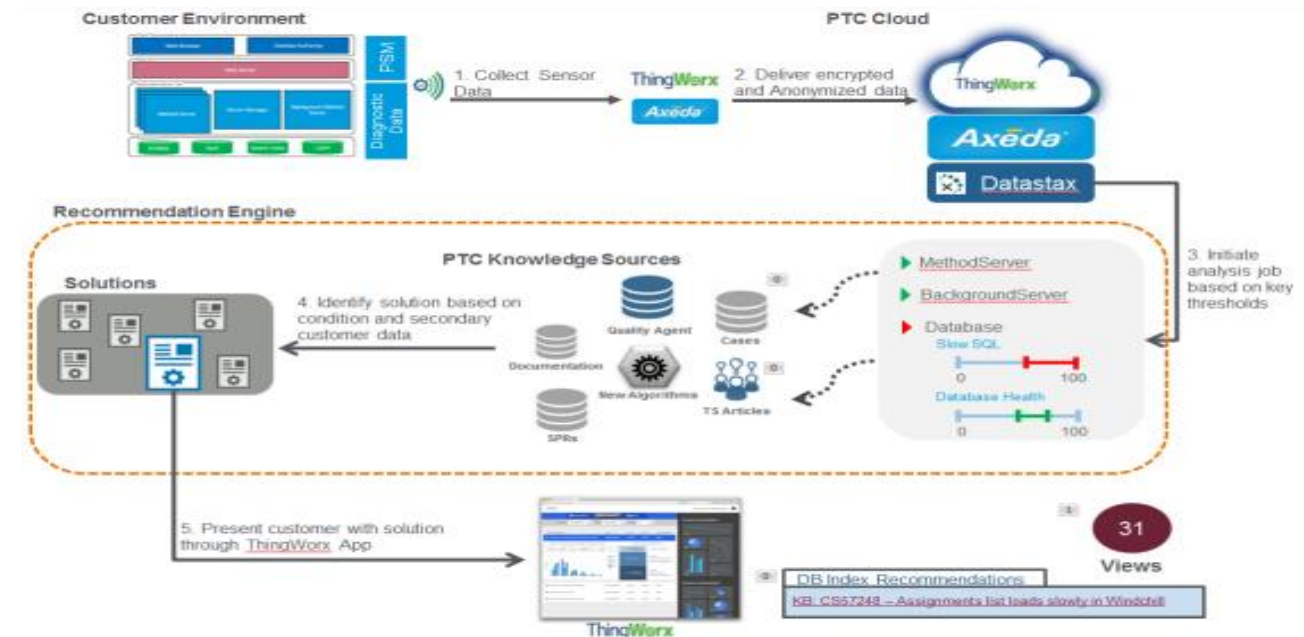


Windchill Tuning Recommendations

Improve Scalability and Performance - wt.property Settings

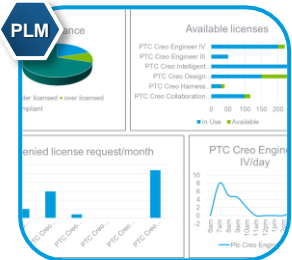
Top Use Cases

- 1 License Usage Reporting
- 2 Windchill Tuning
- 3 Database and SQL Tuning
- 4 WorkGroupManager Stability
- 5 SPR Identification and Update Rec.
- 6 Common Recommendations to Peers
- 7 Feature Usage and Adoption



Roadmap

2015



PTC Windchill License Monitoring

2016



Recommendations



Notifications and Alerts



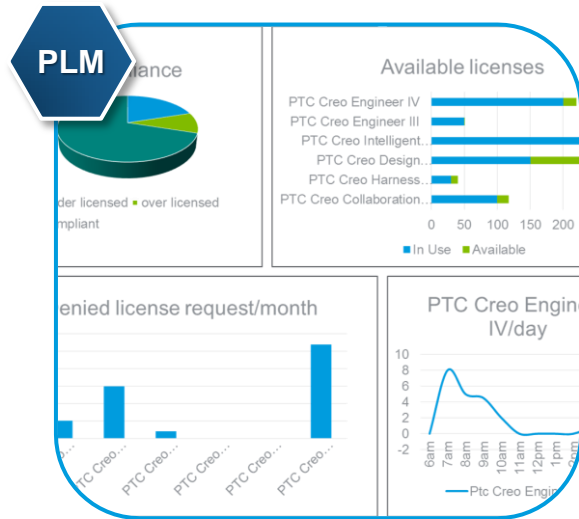
Feature Usage and Adoption



Recommendations

2017

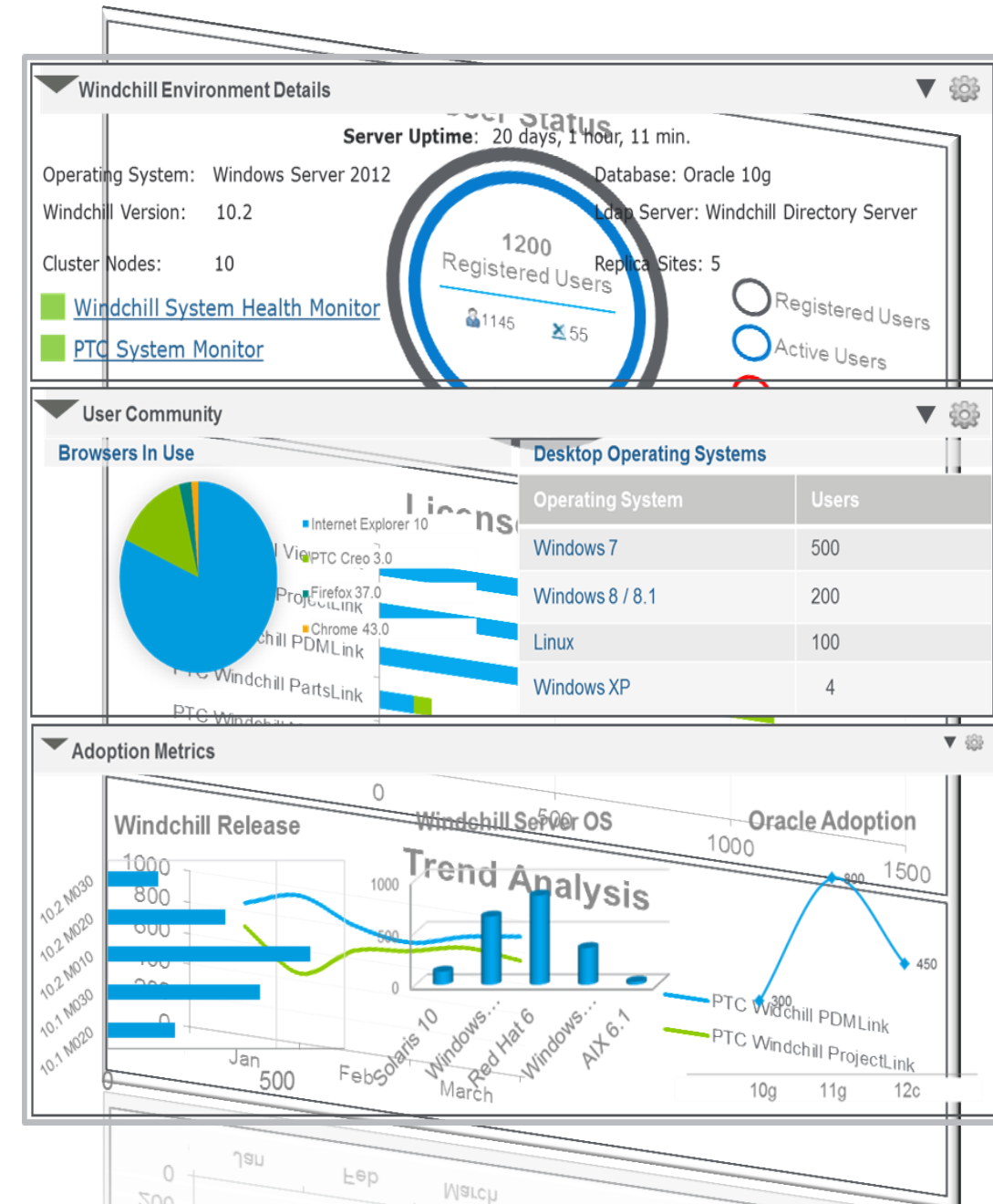




PTC Windchill License Monitoring

PTC Windchill license monitoring provides license usage and compliance information

- Effective licensing management
- Provides single view on PTC Windchill license usage
 - No license shortage
 - Optimized packages and license model
 - Avoid having unnecessary licenses
- Always be compliant with software license agreements
- Environment Details
 - PTC Windchill Version
 - Platform
 - Browser Usage
 - Comparison Reports





Service

Recommendations

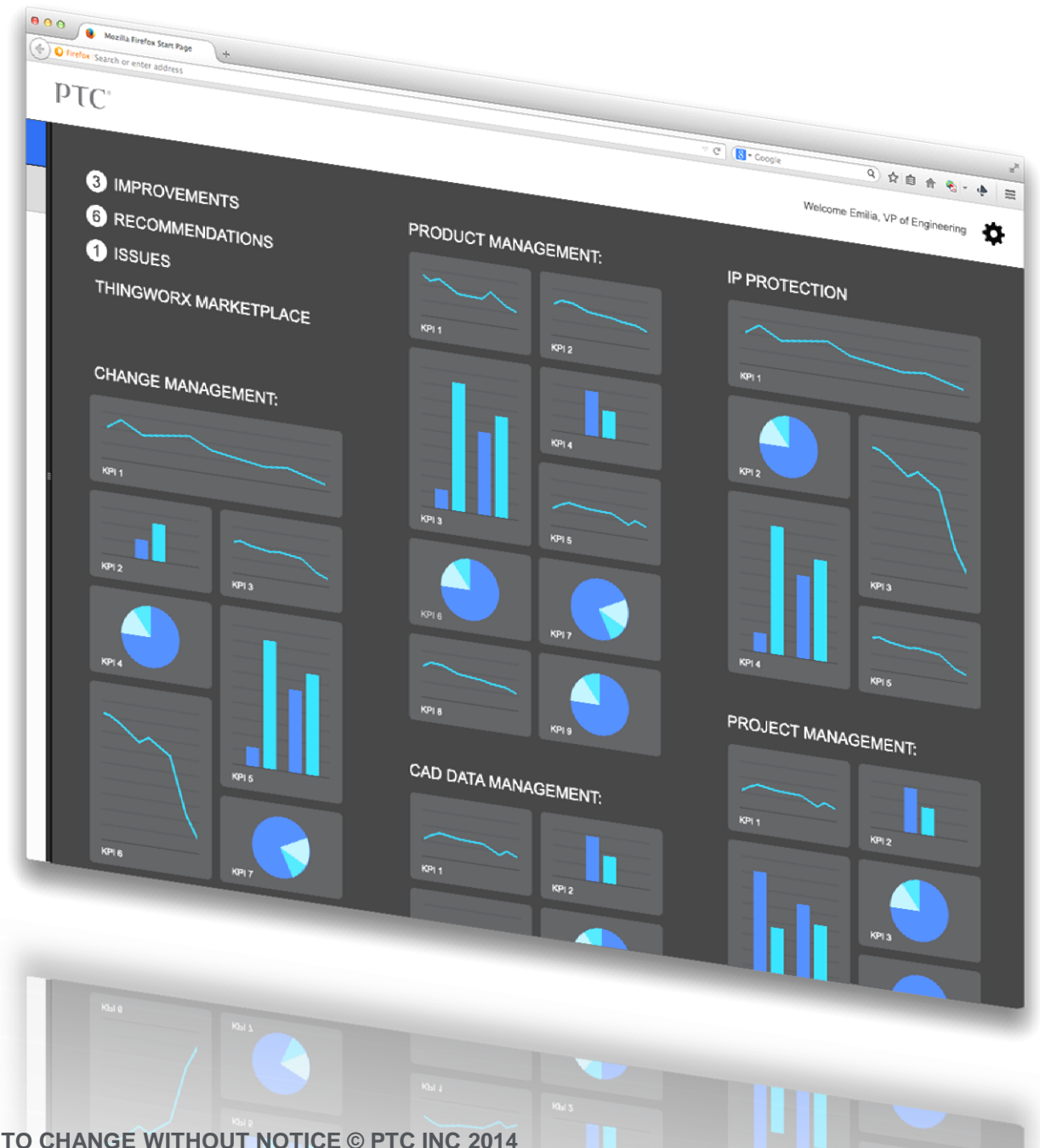
System health monitoring to guarantee uptime and proactive technical support

- **Solution Concept:**

- Proactively detect incidents and provide PTC recommended and proven corrective action before your users are impacted
- Detects incidents based on data gathered by existing tools:
 - Windchill Quality Agent
 - PTC System Monitor, JMX, etc..
 - ...
- Automated SPR identification
- enables rapid diagnosis of the root cause
- Recommendations based on peers

- **Benefits**

- Increased end-user productivity
- Decrease IT's cost of managing PTC Applications
- Decrease incident rate
- Running Secure and scalable applications reducing the business's risk in using PTC Applications





Announcement / Alert [edit](#)

Current State



3 Severe Conditions (1 New)

Condition #1234, 03/11/14, 11:00 AM
 Error Description
[show more...](#)
[\[Follow \]](#) [\[Add Note \]](#) [\[Assign \]](#) [\[Archive \]](#)

[All Errors...](#)

5 Warnings (1 New)

Warning #2854, 03/11/14, 10:36 AM
 Warning Description
[show more...](#)
[\[Follow \]](#) [\[Add Note \]](#) [\[Assign \]](#) [\[Archive \]](#)

[All Warnings...](#)

Server Uptime: 20 days, 1 hour, 11 min.

Cluster Nodes: 10

Operating System: Windows Server 2012

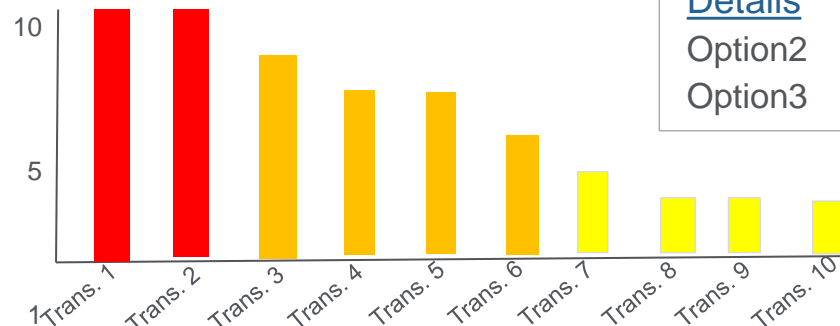
Windchill Version: 10.2

[Windchill System Health Monitor](#)

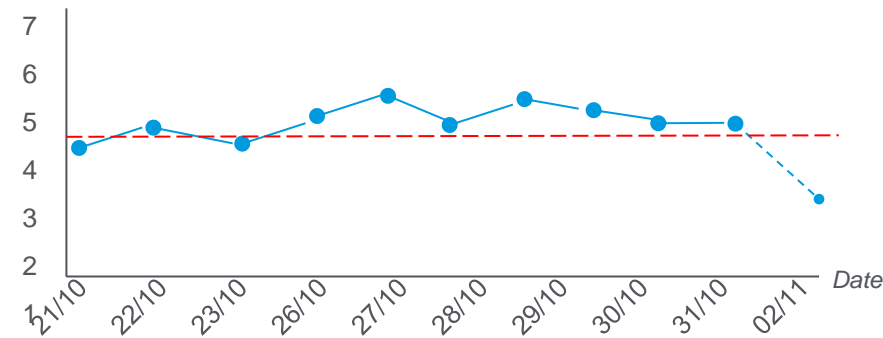
[PTC System Monitor](#)

Metrics

Worst-Performing Transactions: Past Week

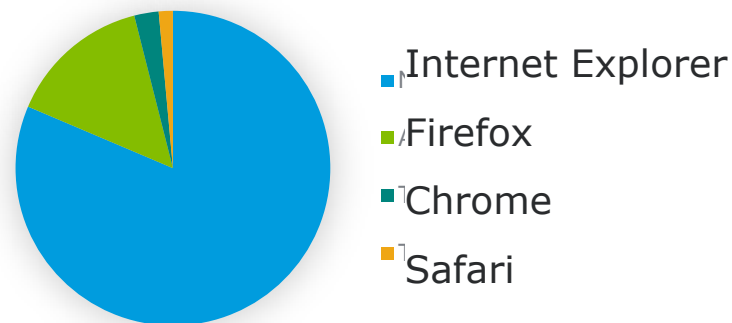


Severe Conditions: Past Week



User Community

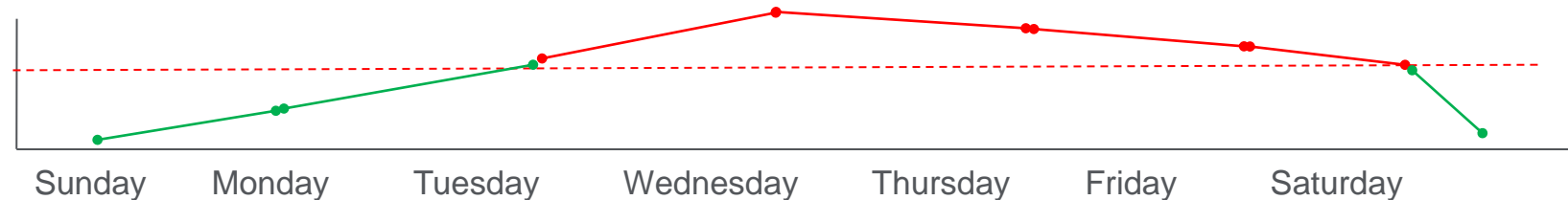
Browsers In Use



Desktop Operating Systems

Operating System	Users
Windows 7	500
Windows 8 / 8.1	200
Linux	100
Windows XP	4

Windchill Response Time: Past Week





Dashboard > Worst Performing Transactions

Recommendation: Patch 56789

Status

Not Installed

Patch 56789 Full Instructions

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit officia deserunt mollit anim id est laborum."

Recommendation: Change Windchill Settings

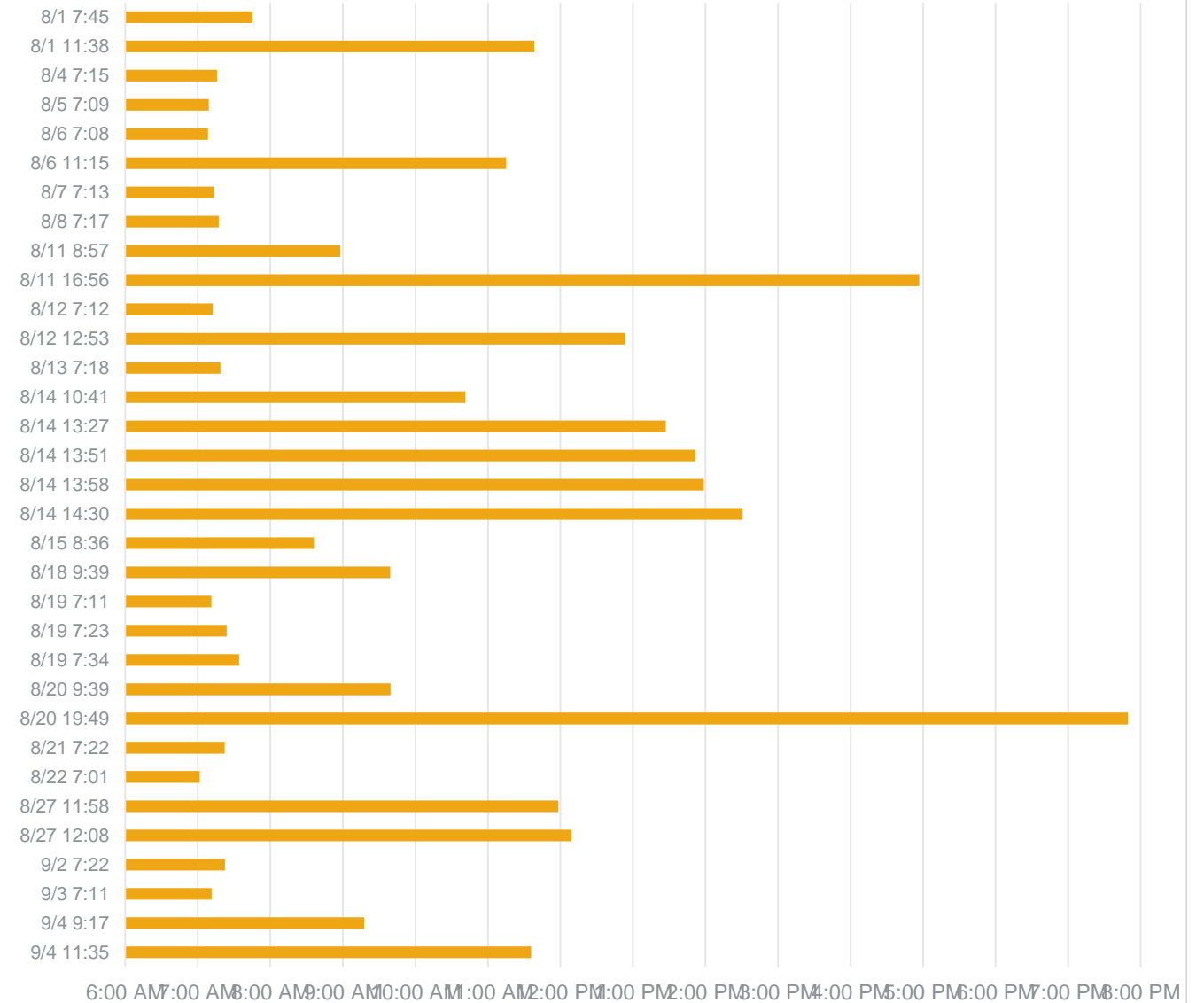
Recommendation: Knowledge Base Article 12345

Recommendation: Knowledge Base Article 67890

Information: Lorum Ipsum Dolor

Information: Consectetur Adpiscing Elit

Transactions: Past Month





Engineering
Mgmt

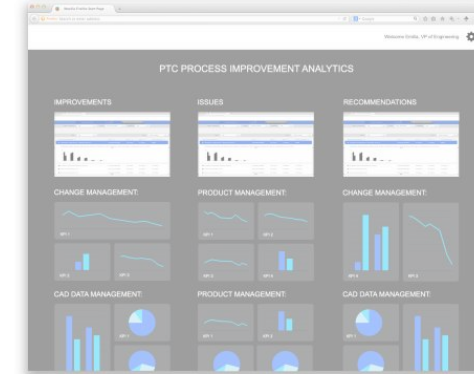
Process and Organization Improvement and Actions

Value Drivers

- Improve global product development
- Reduce time-to-market
- Reduce product development costs

Dashboard Features

- Department and individual team-specific metrics
 - Identify improvement areas (e.g. implementation time)
- Process and employee productivity improvement recommendations



IT Executive
/ Admin

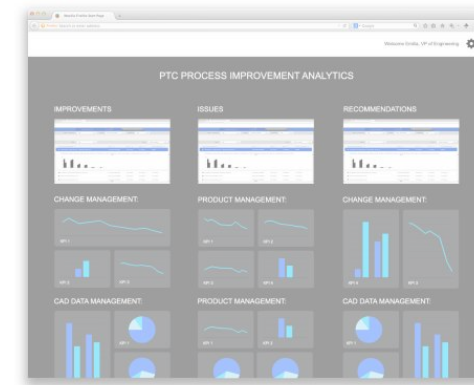
Solution and System Health

Value Drivers

- Improved business support
- IT cost reduction

Dashboard Features

- System and environment performance metrics
- Serviceability predictive analytics
- System health recommendations and actions





Notifications and Alerts

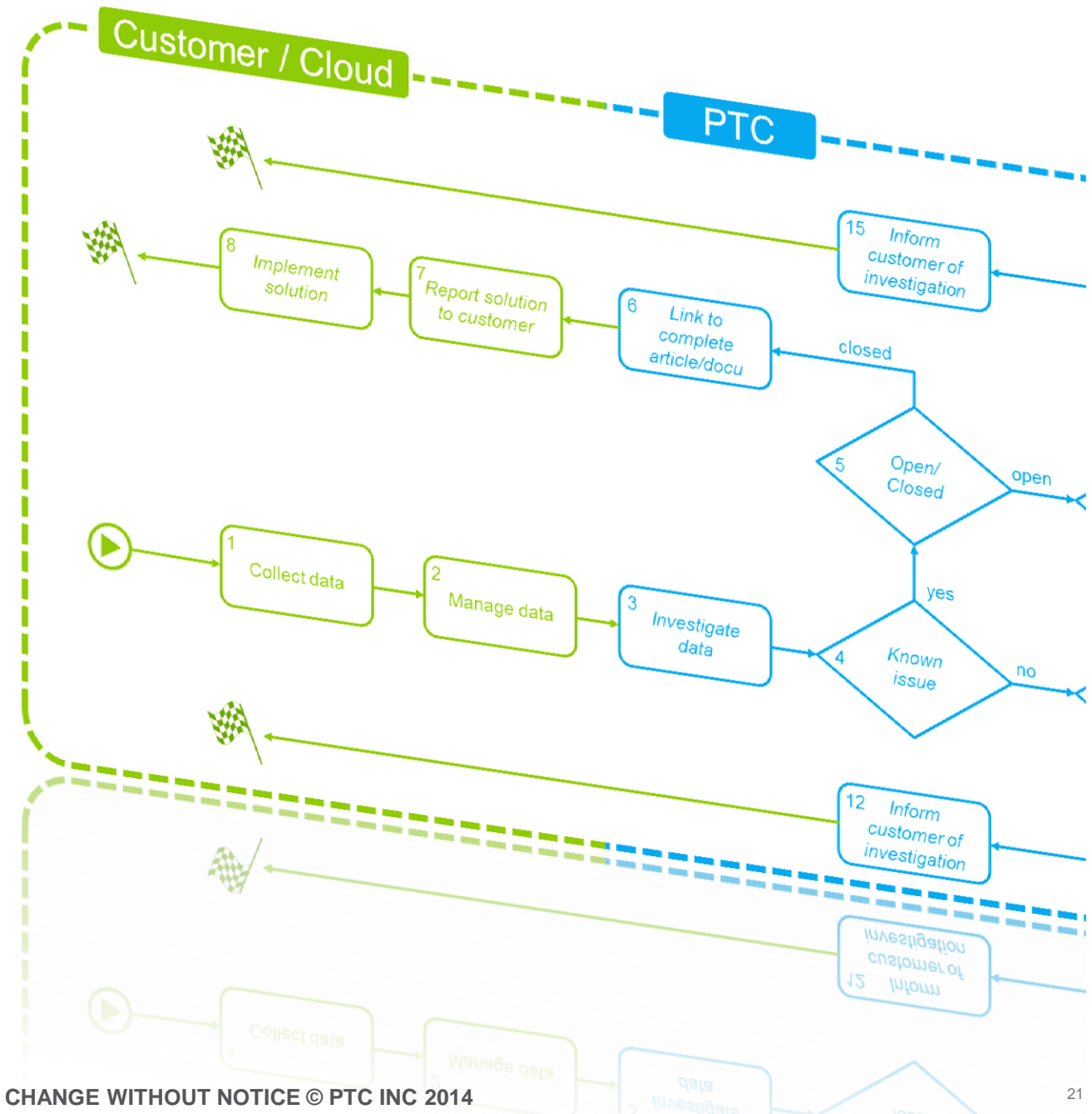
Technical Support Closed Loop Process

- **Solution Concept**

- Notifications and Alerts on critical or time sensitive incidents
- Configurable thresholds
- Support multiple delivery mechanisms
- Integrates with PTC's CRM system
- Ability to initiate Technical Support Cases
- Feedback loop on recommendations and alerts

- **Benefits**

- Visibility into most critical incidents
- Seamless interaction with Technical Support

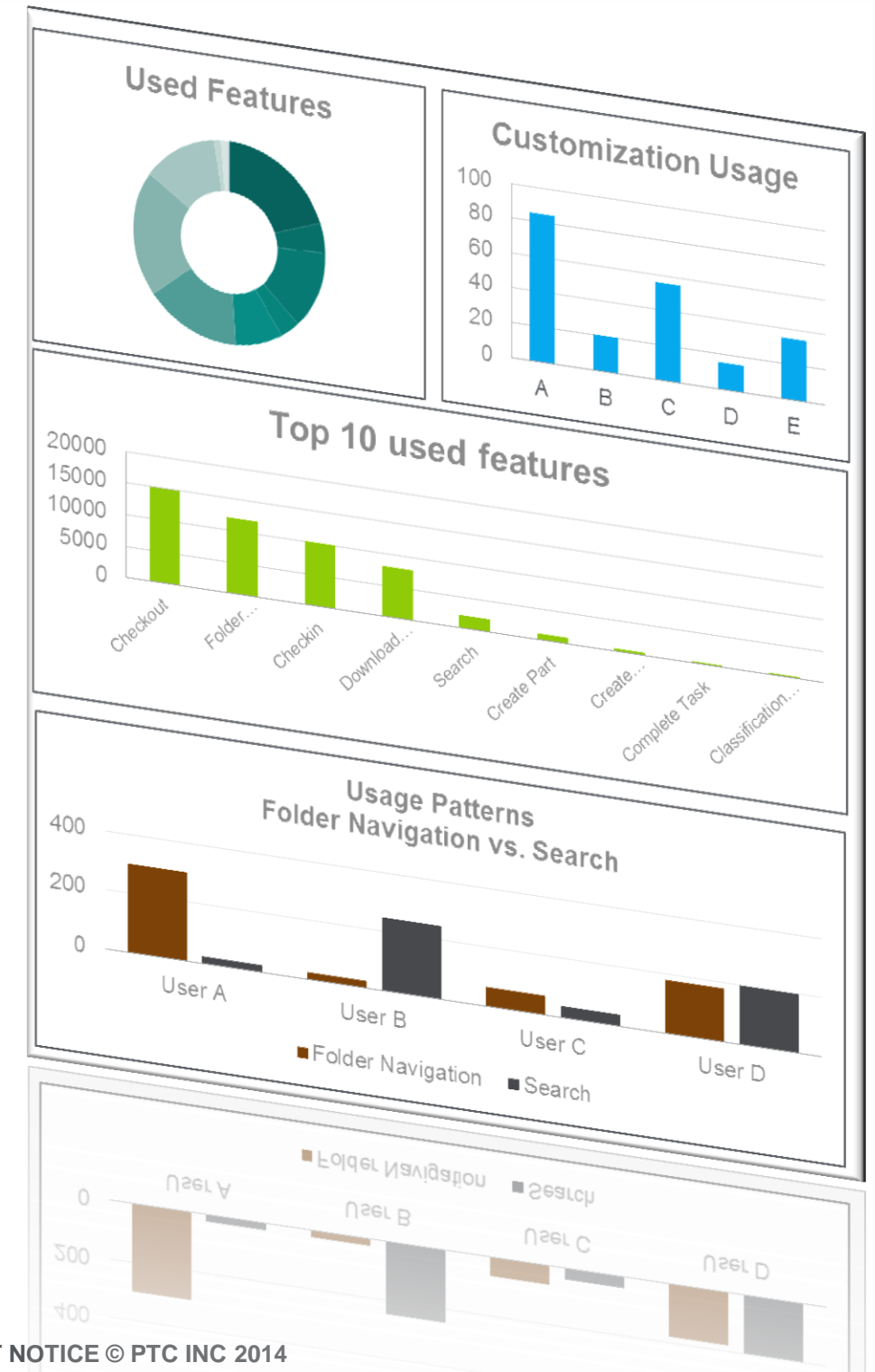




Operate

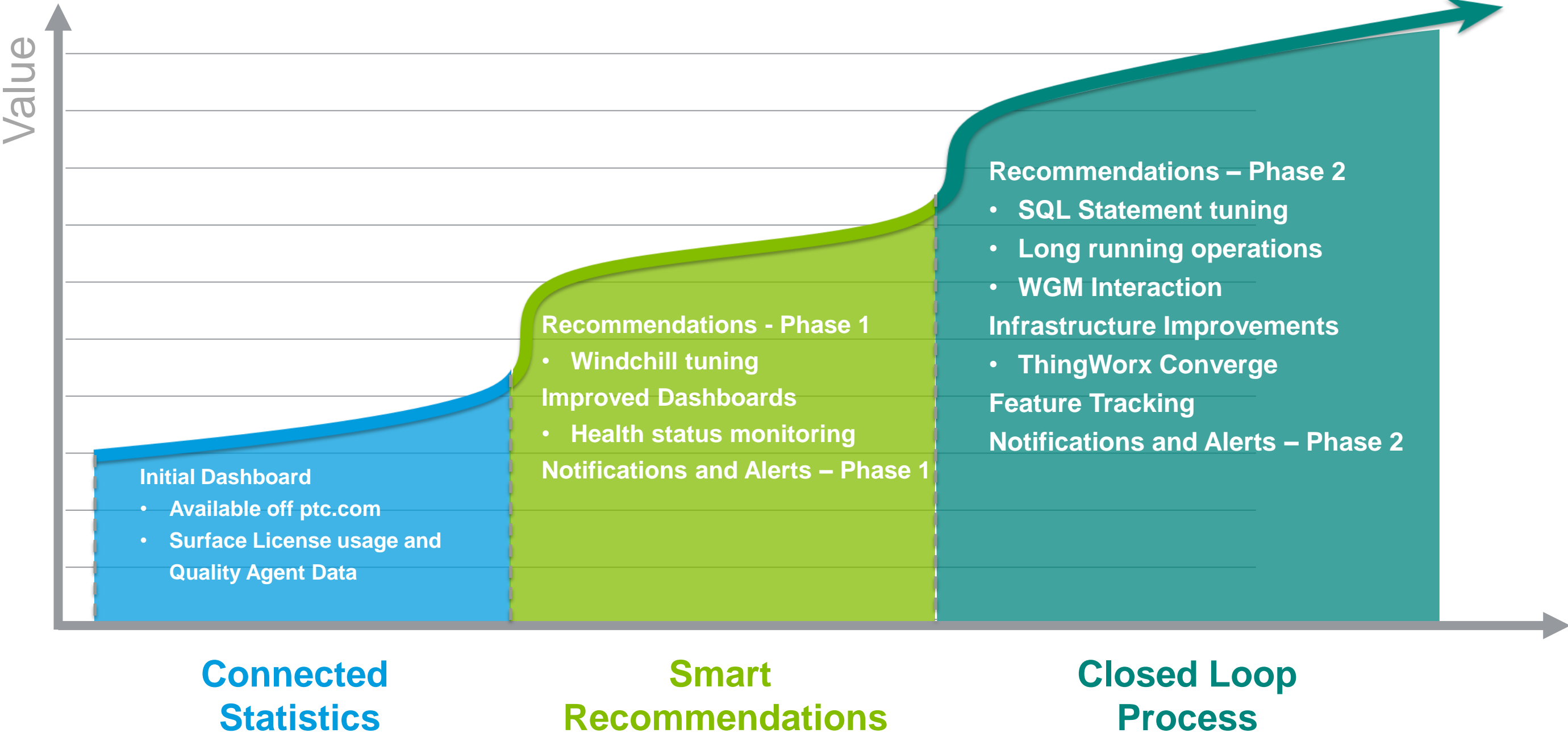
PTC Windchill Feature Usage and Adoption

- **Solution Concept:**
 - Provides Insights in usage of PTC products to improve product development processes
- **Benefits:**
 - Supports being compliant with company standards and business best practices.
 - Monitors usage of costly customizations and helps reduce unnecessary customizations.
 - Focuses testing effort for product upgrades to the most affected product areas.
 - Improves precision learning programs for individual end-user adoption.
 - Helps PTC's product development organization to focus on your needs.



Security and Privacy

- How is the connection made between Windchill and PTC's Performance Advisor?
 - The connection is made over SSL (Port 443)
- Do I have to send data to PTC?
 - No, this is on an Opt-in basis.
- What information will be sent to PTC?
 - PTC Windchill Environment information (OS, Database, Version, etc...)
 - Diagnostic information (Cache metrics, Errors/Exceptions, SQL metrics, etc...)
 - License usage
- How can I review and confirm that data being sent to PTC is the what I want to send and at the interval I want to send it?
 - The Diagnostic Tool is configurable and all data can be reviewed before it is sent.
- How is access to the dashboard controlled?
 - The dashboard is accessed through eSupport Portal authentication and active PTC Windchill SCN paired with 'Support Admin' privileges for a given user.
- How does PTC physically host and secure data?
 - The Data resides on a set of PTC servers where it is hosted and processed. The server's security is rigorously controlled with limited access.
- What is the current adoption of Windchill Quality Agent?
 - 350+ customers sent data to PTC representing 200K+ users
- What is PTC's Privacy Policy for collected Data?
 - Collected Data is covered by the [PTC Privacy Policy](#)



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- Don't miss out on the chance to provide your feedback
- Gain a chance to win an instant prize!
- Complete your session evaluation now

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