



Leveraging Service Management "beyond IT" to Smarter Infrastructure

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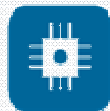
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Pulse2013
Optimizing the World's Infrastructure

Turning Opportunities to Outcomes

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Organizations are investing to optimize increasingly complex, dynamic business infrastructures to sustain delivery of business value



INTERCONNECTED

People and systems interact in entirely new ways



INSTRUMENTED

Measure, sense and see the exact condition of everything



INTELLIGENT

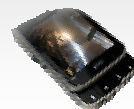
Processes & assets respond quickly and accurately



Transitioning to Smarter, flexible infrastructures



Converging Digital & Physical Assets



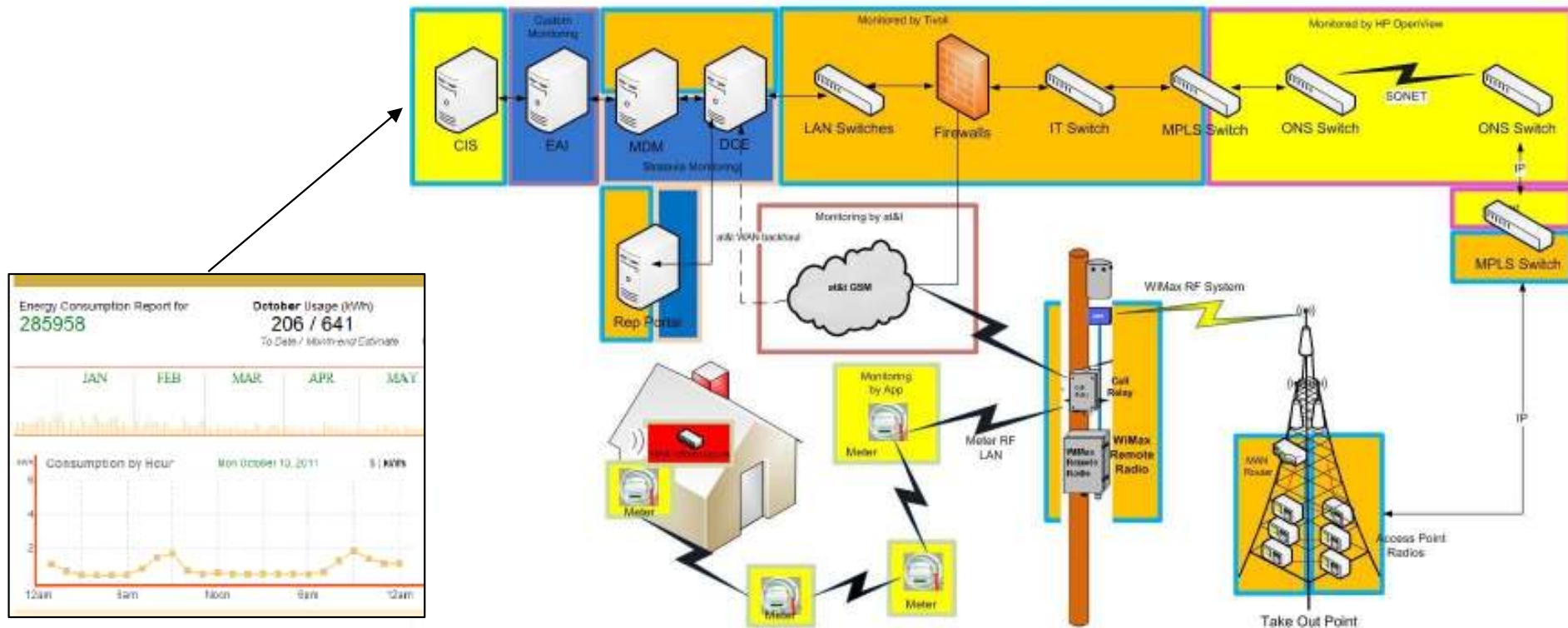
Leveraging Mobile & Web Endpoints



Addressing data growth, threats, & compliance

Centerpoint Energy: Smarter Utilities

- Centerpoint Energy has rolled out millions of smart meters in the Houston area. This allows their customers to get near-real-time data (graph) on the electricity consumption in their home (or building).





Next generation of service management demands an innovative approach to managing assets and changes

Fading boundaries across business and IT assets

Physical and infrastructure assets are increasingly embedded with software and resemble assets in traditional IT environment.

Velocity of changes impact business agility

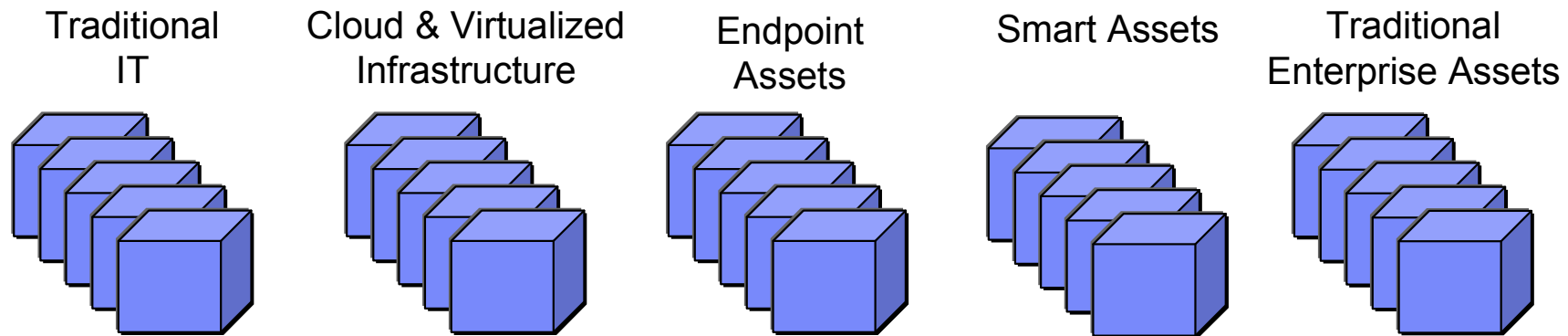
Manual processes cannot keep up with

- .Rate of change driven by a cloud or virtualized environment
- .Planning and scheduling work across IT and operations line of business

Business users interacting with service management

Increasing population of non-technical users request access to business services

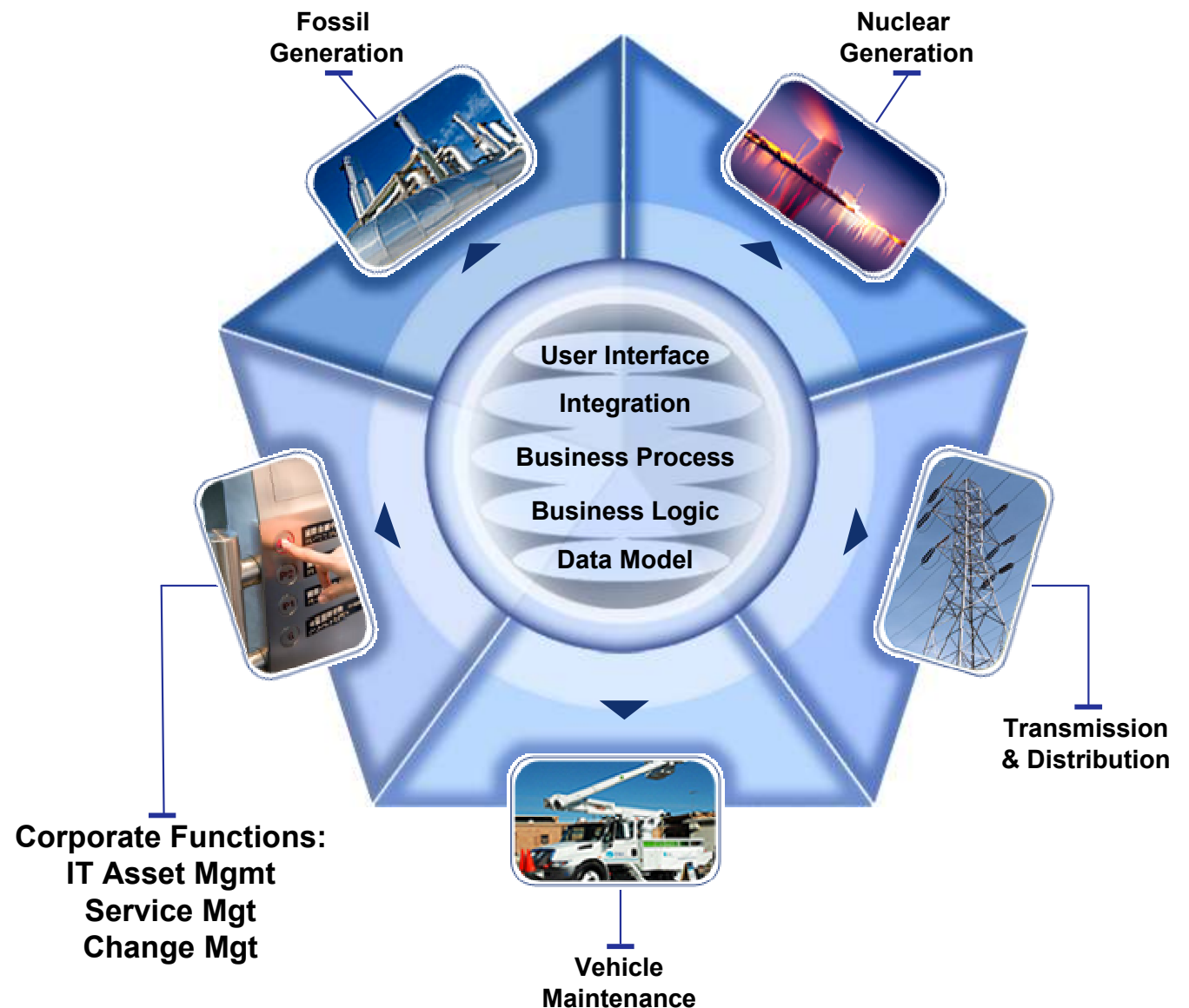
So what does service management across the enterprise look like today? Typically disjointed and siloed.



- How many service desks does one organization need? Do users know where to go if they have problems?
- Why manage digital assets in one system and physical assets in another?
- Aren't the change processes used to manage changes in digital infrastructure similar to those used in physical infrastructure?

Unified Asset & Work Management is the only way to solve the challenges introduced by the Smarter Infrastructure

- **Single set of common business process tailored for unique requirements of each business**
 - Aligned with the business objectives and processes of each business
 - Driving cross enterprise reporting, adoption of common best practices and cross business sharing of resources – labor, materials, etc.
- **Single instance of H/W, S/W and Database supporting the global enterprise**
 - On a modern Service Oriented Architecture (SOA) resulting in dramatic reduction in system cost and complexity
 - Often very significant reduction in number of applications to support, including pop-up apps





Melbourne Airport Enterprise Asset Management (EAM) & IT Service Management (ITSM) Implementation



Customer Profile

- Australia Pacific Airports Corporation owns Melbourne Airport, operated on long term lease from the Federal Government
- Melbourne is the second busiest airport in Australia, it is curfew-free operating 24 hours a day
- In 2004, the environmental management systems were accredited ISO 14001, the world's best practice standard, making it the first airport in Australia to receive such accreditation

Customer Challenges and Objectives

- Melbourne Airport have been using Maximo v5 since 2005 to manage terminal, civil airside, vehicle and facilities contract maintenance activities
- The existing system has previously required stabilisation work and an upgrade was required from v5
- The IT service desk tool Touchpaper was also operating inefficiently and in need of upgrade
- The objective of the project was to upgrade and enhance the existing Maximo EAM system as well as extend functionality to support core IT Service Management processes on a single automation platform

Solution Overview

- Upgrade to Maximo Asset Management (MAM) v7 with a number of enhancements
- Transform and refine data models for MAM
- Implement Maximo everywhere for mobile triage and fault management
- Implement Tivoli Service Request Manager (TSRM) v7.2, Configuration & Change Management Database (CCMDB) for IT with the Kalibrate ISM overlay
- Integrate with a number external systems for automated fault and incident logging, as well as Active Directory

Business Benefits

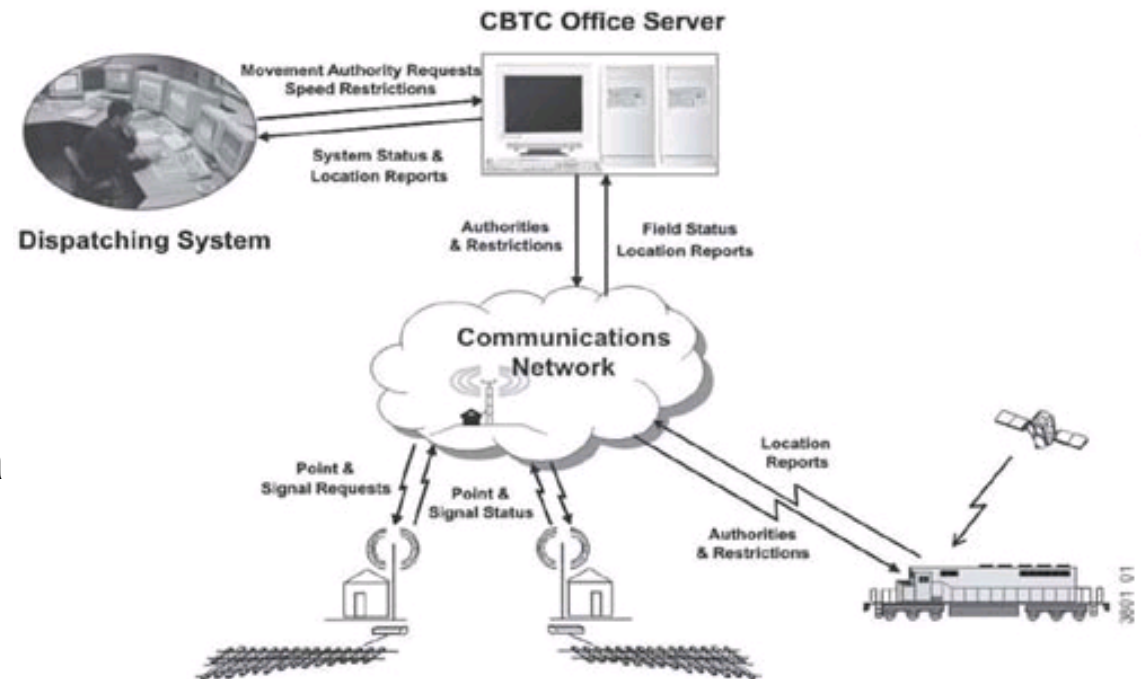
- Enhanced process automation for both the Business & IT – convergence and sharing of tickets & data
- Provides a foundation to continue to strengthen the linkage between the business & IT
 - Future projects may include common service requests, common incident management, common service desk
- Single technology platform & common UI streamline system support & improve ease of use
- Mature ITSM processes deployed for IT (request fulfillment, incident, problem, change)
- Provides users an IT portal for self service & service catalogue



CSX Railroad: Smarter Transportation

- **Problem:** In order to meet federal mandates, CSX and other railroads need to make RR Crossings safer by extending more centralized control over moving trains that can override operators actions.
- **Solution:** CSX intends to implement IT intelligent devices from sensors, RR crossing gates and laptop platforms in locomotives to control train movement and prevent accidents
- **Architectural Implications:**

- Representation of IT components of intelligent assets in locomotives and RR crossing gates
- Integration with control systems to get information about smarter devices
- Display of topology views that include components outside the data center



Overall Approach: Visibility -> Control -> Automation

Visibility

Control

Automation

Holistic Visualization

How can I **visualize** the resources?

- geographically
- physical / spatial
- logical (digital)

How can I see where the issues are?

- **incident overlay**

How can I see where work is being performed?

- **changes / work mgmt overlay**

Manage Work across digital-physical
Minimize truck roll

- Attempt to fix digitally first
(**manual** tasks to digital roles)
- Else send a person

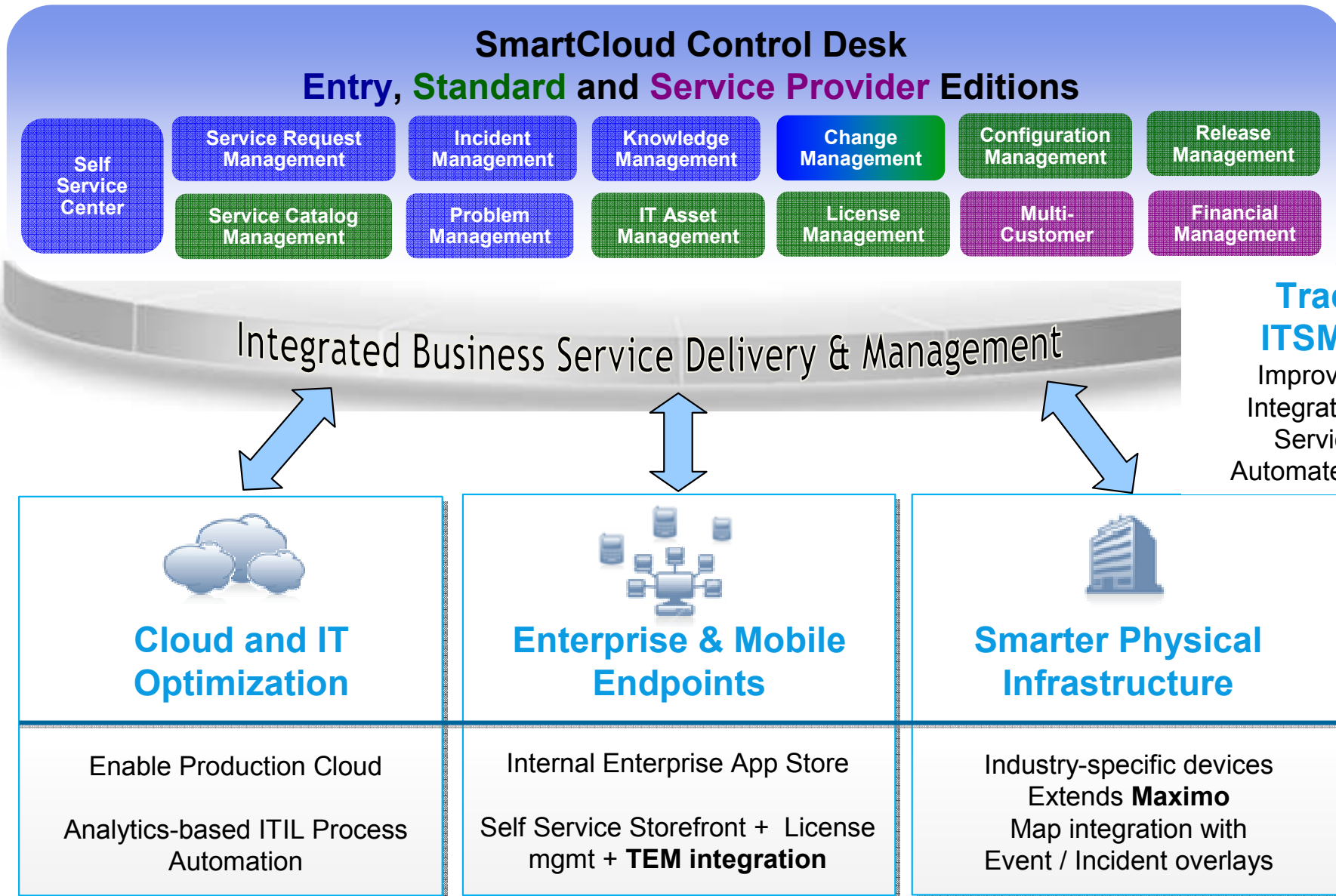
Automate Work across digital-physical
Minimize truck roll

- Attempt to fix digitally first
(**automated** tasks via integration)
- Else send a person

Focus areas for SmartCloud Control Desk 7.5.1



IBM SmartCloud Control Desk provides integrated service management across cloud-enabled data centers, endpoints and smarter infrastructure



Traditional ITSM market
 Improved Usability
 Integrated Live Chat
 Service Notices
 Automated Escalations



Improved User Experience for End Users and Staff

New
In 7.5.1!

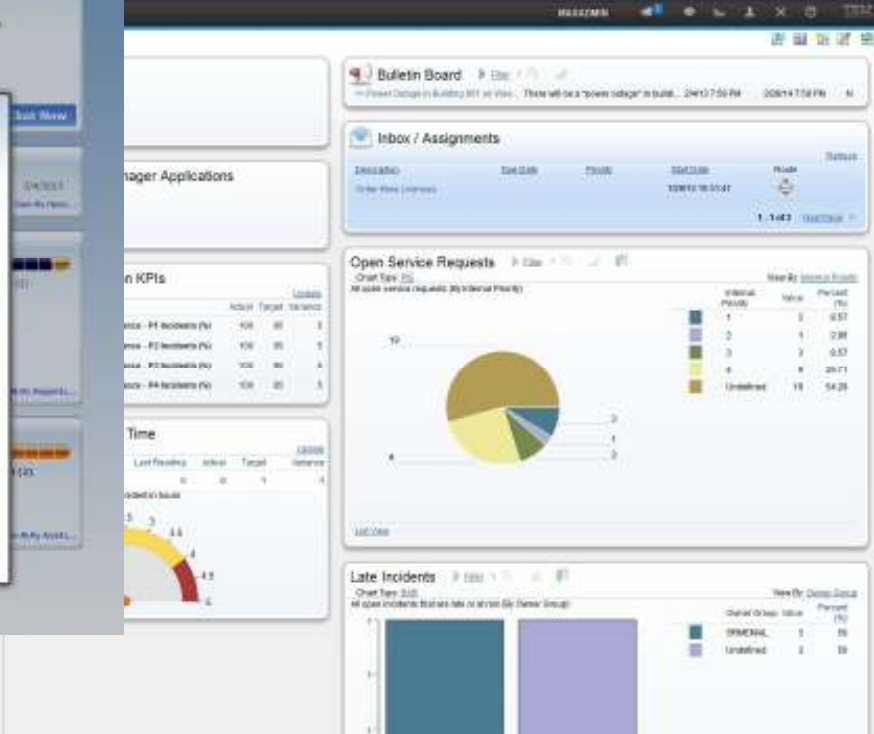
New application headers – understand ticket in **5 seconds**
Simplified and re-designed apps

Improved self service experience



App Store look-and-feel for service catalog

Integrated
Live Chat



New styling leveraging IBM OneUI guidelines

10



Understand and analyze geographic distribution of incidents

Incidents

MAXADMIN

Find incident

All Bookmarks

Go To Applications

Available Queries

All Records

All Bookmarks

Incidents for ownerships to which I...

Changed incident in last 24 hours

Open Global Incidents

All open internal priority urgent incid...

All open incidents that are late or at...

My open incidents that are late at risk

My open incidents

All open incidents

All open reported priority urgent incid...

Incidents resolved by Sitabrata auth...

All open incidents that are late

My open incidents that are late

Common Actions

- New Incident
- Change Status
- Settle Owner
- Take Ownership
- Create KPI
- Incident in queue
- Incident in progress
- Pending Incident
- Resolve Incident
- Create Report

More Actions

- Attachment Library/Folders
- Run Reports
- Cognos Reporting

Use this application to view, create and modify incident records. To show My Location on the map, you need to allow the browser to share your location with the server. After the permission is granted, you may need to click the refresh button. Only the records which have the service address defined will be shown on the map. [More information](#)

List Map - Side by Side Map - Below

Incidents filter 1-6 of 6

Incident	Summary	Internal Priority	Zip/Postal Code
1004	Smarter Infrastructure - Smart Grid Issues, Smart Meter Connectivity Issue	3	78733
1005	Smarter Infrastructure - Smart Grid Issues, Smart Meter Connectivity Issue	2	78733
1006	Smarter Infrastructure - Smart Grid Issues, Smart Meter Connectivity Issue	2	78733
1010	Smarter Infrastructure - Smart Grid Issues, Smart Meter Connectivity Issue	2	78733
1011	Smarter Infrastructure - Smart Grid Issues, Smart Meter Connectivity Issue	2	78733
PULSE1016	SmartGrid Cell Relay Wireless Connectivity Issue	1	78733

Select Records

Map Satellite

Search and Analyze by Incident Priority or Zip Code



View informational overlays

Incidents

Find Incident

All Bookmarks

Go To Applications

Available Queues

All Records

All Bookmarks

Incidents for ownargroups to which I...

Changed Incident in last 24 hours

Open Global Incidents

All open internal priority urgent incid...

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PULSE1016	SmartGrid Cell Relay Wireless Connectivity Issue	1	78733

Select Records

Map Satellite

PULSE1016
SmartGrid Cell Relay Wireless Connectivity Issue
Address: 117 River Hills Road117 River Hills Road, Austin, TX 78733, USA
Status: INPROG
Owner:
More Information...
More Information...
Asset Details
Drill Down
View Work Details

View information overlays combining map data with SCCD data about the ticket and the resource.



See the street view of the facility with the incident

The screenshot shows the 'Incidents' application interface. On the left is a navigation sidebar with sections like 'Go To Applications', 'Available Queues', and 'Common Actions'. The main area displays a table of incidents and a map view.

Incident #	Summary	Internal Priority	Zip/Postal Code
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1011	Smarter Infrastructure - Smart Grid Issues, Smart Meter Connectivity Issue	2	78733
PULSE1016	SmartGrid Call Relay Wireless Connectivity Issue	1	78733

The map view shows a street view of a facility at 111 River Hills Road, Texas. The image shows power lines, a tall tower, and a sign for 'SECURITY SERVICES'.



Drill into the details of the incident

The screenshot displays the IBM Pulse incident management interface. The top navigation bar includes 'Incidents', 'MAXADMIN', and various system icons. The main content area is titled 'PULSE1016 SmartGrid Cell Relay Wireless Connectivity Issue'. It shows the incident owner as CINDY, owner group as BRNDESK, and internal priority as 1. A progress bar indicates the incident is currently in the 'Queued' state. Below this, the 'User Information' section lists 'Reported By' and 'Affected Person' as MAXADMIN, with fields for Name, Source (EVENTMANAGEMENT), and Customer. The 'Incident Details' section is divided into two columns. The left column contains a 'Summary' field with the text 'SmartGrid Cell Relay Wireless Connectivity Issue', a 'Details' field with the text 'The Cell Relay #1 is not functional', a 'Classification' field with the value 'SPI-SMARTGRID-CELL-RELAY-WIRELESS-ISSUE', and a 'Classification Path' field with the value 'SPI-SMARTGRID-ISSUE | SPI-SMARTGRID-CELL-RELAY-W'. The right column contains fields for 'Service Group' (FACILITY), 'Service' (MAINT), 'Vendor' (EM), 'Site' (PMSCRTP), 'Asset' (CELL-RELAY-1), 'Location', 'Configuration Item' (CELL_RELAY_1), and 'Cell Relay 1'. A left-hand sidebar contains navigation options like 'Go To Applications', 'Available Queries', and 'Common Actions'.



Understand the logical (digital) topology of the infrastructure inside and outside the data center

The screenshot shows the IBM TRM Configuration Items (CI) topology view. The interface includes a left sidebar with navigation options like 'Available Queries' and 'Common Actions'. The main area displays a hierarchical diagram of infrastructure components across categories: Business Applications, Application Servers, Databases, Computer Systems, Networks, and Operational Services - Take Out Points. A yellow callout box highlights the logical topology from external cell relays to internal business applications. Another yellow callout box points to 'caution' icons on nodes, indicating open incidents. A pop-up window at the bottom right shows 'Open Incidents for: CELL_RELAY_1' with details: 'PULSE1016 SmartGrid Cell Relay Wireless Connectivity Issue'. The right sidebar contains filters and classification lists.

Logical topology from external cell relays to internal business applications.

Overlays of “caution” icons indicating open incidents on particular nodes

Open Incidents for: CELL_RELAY_1
PULSE1016 SmartGrid Cell Relay Wireless Connectivity Issue
For more information, right click on the CI and select, View Work Details.

Attempt to fix digitally – using built-in Runbook Automation

The screenshot displays the IBM Pulse Runbook Automation interface. The top navigation bar includes 'Incidents', 'MAXADMIN', and various system icons. The left sidebar contains navigation options like 'Go To Applications', 'Available Queries', and 'Common Actions'. The main content area shows an incident record for 'PULSE 1016' with the title 'Smart2Go Cell Relay Wireless Connectivity Issue'. Below this, a table lists several workflows:

Description	Process	Process Revision
Run diagnostics on WAS server - Automated	RBADIAG	1
Run diagnostics on WAS server - Interactive	RBADIAGINT	1
Ping Server - Automated	RBAPING	1
Ping Server - Interactive	RBAPINGINT	1
Get the list of Windows Computer Systems using REST API	RBARESTAPI	1
Reset Cell Relay	RBASNRESET	1
Reset CISCO3540 Router to default settings	RBARECONF	1

Ping resources over the network.

Run diagnostic routines electronically.

Collect log files from remote nodes.

Execute reset operations to attempt to digitally fix the issue.

If digital resolution is unsuccessful – send the TRUCK!

The screenshot displays the Maximo Incidents application interface. On the left is a sidebar with navigation options like 'Go To Applications', 'Available Queries', and 'Common Actions'. The main area shows a map with a blue route and a directions window. The directions window lists the following steps:

1. Head northwest toward Burnet Rd 93.1 mi
2. Turn left onto Burnet Rd 0.6 mi
3. Turn right onto W Braker Ln 0.8 mi
4. Turn left onto N Mopac Expy 0.4 mi
5. Turn right onto N Capital of Texas Hwy 8.5 mi

The directions window also shows a total distance of 14 mi - 22 min and a starting point of 11501 Burnet Road, Austin, TX 78758, USA. A 'Layers' window is also visible, showing 'Trucks' as a selected layer.

Provide driving directions

Overlay with current traffic conditions to help plan the best route

Also works from mobile device – will use mobile device GPS to calculate route from current location

For advanced use cases in scheduling the field workforce, purchase the “Maximo Scheduler” add-on.



Smarter Infrastructure Management Enhancements

- **Location Awareness & Map integration**
 - Support for Google Maps, Bing Maps, ESRI Maps
 - Integration adapters provided out-of-the-box
 - Map data access has to be independently licensed from provider
 - Incidents, CIs, Assets overlay on maps

- **Improved visualization and topology views**
 - Ability to associate images with device classifications
 - Integrated IT-OT logical and geographical views
 - “What-if” Impact analysis
 - Incident overlay on logical view and geographical views

- **Data Model Extensibility beyond IT:**
 - Ability to represent resources beyond traditional IT
 - Classifications for new device types in other industries
 - Relationship Rules

- **Flexible Data Import**
 - Direct IDML Loader
 - Support for other namespaces beyond the CDM for IT

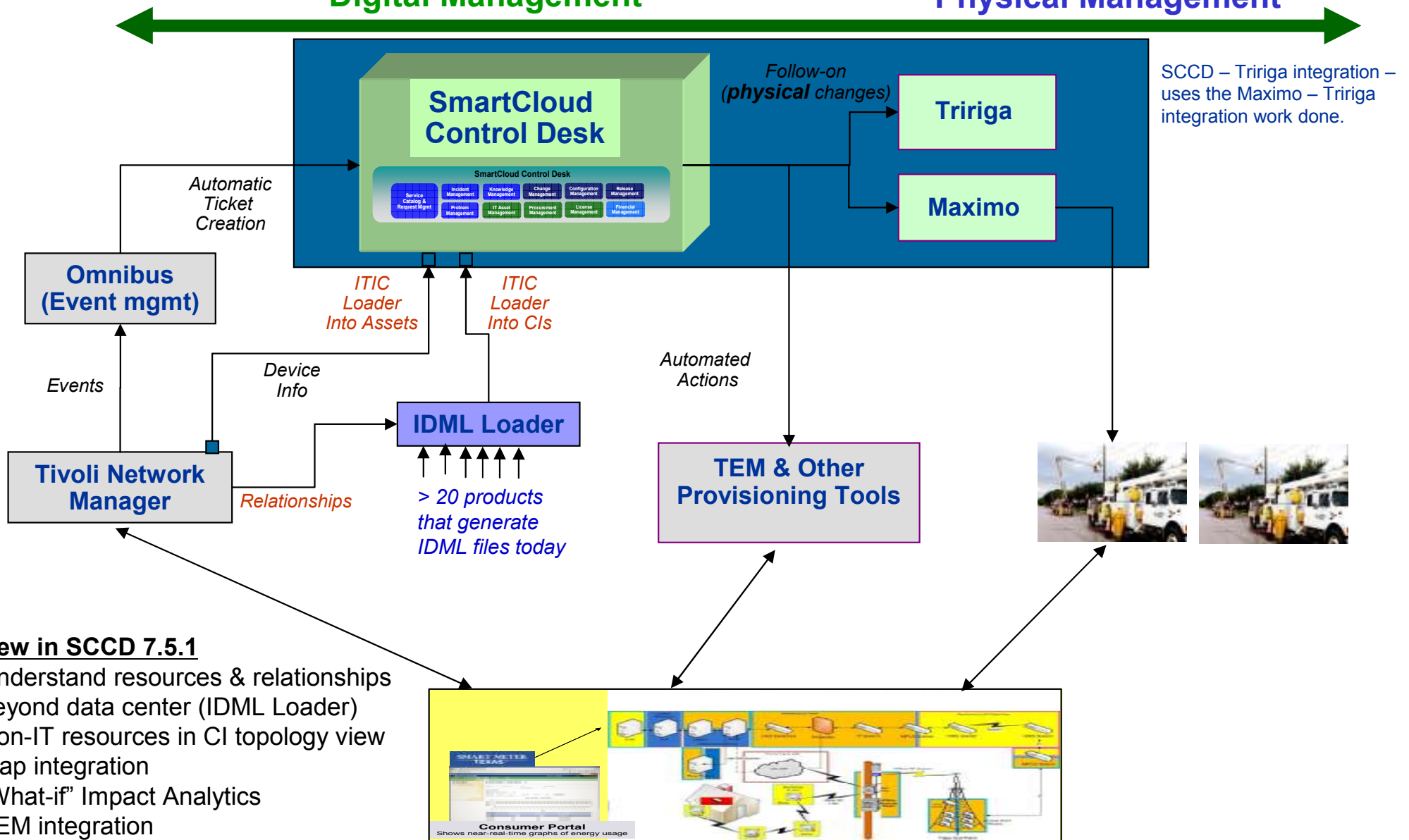
- **Improved Data Cleansing and Reconciliation (foundation for automation)**
 - Supports different representations of manufacturer
 - GUID generation and linking across
 - Authorized CIs, Actual CIs, Authorized Assets, Deployed Assets



Smarter Infrastructure Management – Integration Architecture

Digital Management

Physical Management



New in SCCD 7.5.1

- Understand resources & relationships beyond data center (IDML Loader)
- Non-IT resources in CI topology view
- Map integration
- “What-if” Impact Analytics
- TEM integration



Summary of approach to Smarter Infrastructure Management: Visibility -> Control -> Automation

Visibility

Control

Automation



Automate Work across digital-physical
Minimize truck roll

- Attempt to fix digitally first
(**automated** tasks via integration)
- Else send a person

Manage Work across digital-physical
Minimize truck roll

- Attempt to fix digitally first
(**manual** tasks to digital roles)
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Holistic Visualization

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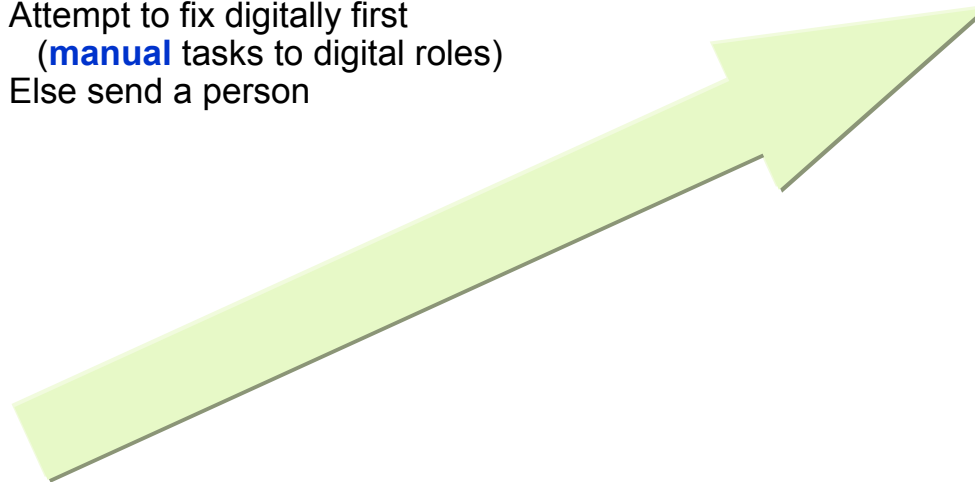
- geographically
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How can I see where the issues are?

- **incident overlay**

How can I see where work is being performed?

- **changes / work mgmt overlay**



Focus areas for SmartCloud Control Desk 7.5.1





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