Now on Now: How we use HAM to streamline and automate the ITAM process in IT and cloud hosting
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Introduction

In these rapidly changing times—with business models, operating models, and workforce paradigms shifting dramatically—it’s critically important to have visibility into the hardware, software, and cloud resources in the IT environment, including the many home offices that now exist throughout the world. This visibility is essential to optimize IT spend, surface risks, and improve speed, efficiency, and employee productivity.

In this case study, we’ll share examples of how we are using our own ServiceNow technology, more specifically, ServiceNow® Hardware Asset Management (HAM), to more effectively run both the IT and Cloud hosting sides of our business.

Below, we’ll walk you through specific enhancements we’ve made in the Paris release, as well as the products we plan to adopt in our recent Tokyo release.

Section 1: IT use case

Our challenges

Asset management is very dynamic, and it’s critical that we adjust quickly to changes. There’s no better example than the COVID-19 pandemic, which introduced multiple challenges at ServiceNow:

COVID-19 work from home
ServiceNow has been fortunate to be able to make the shift from a primarily office-based workforce to virtually all-remote. But that shift brought new challenges to how we manage our assets.

Dependency on internal resources
Recently, we relied on our internal IT staff to respond to user requests, such as computer refreshes and laptops for new hires. With many of our IT employees now working remotely, we needed to rethink that process.

Onsite inventory management
To enable our IT staff to provide assets to our growing workforce—most of which was office-based at the beginning of 2020—we had built up local inventories of laptops and other equipment. When COVID-19 hit, accessing and managing those inventories became increasingly difficult.

We needed to create a faster, automated way to deliver assets. To do that, we turned to our own Now Platform®.
One of the best examples of ServiceNow HAM in action is our Zero touch delivery process for employee computers, which we implemented in 2020.

Zero touch delivery

Digital transformation is fundamentally changing how we deliver assets. To boost productivity and improve operational and financial efficiencies, we created a streamlined asset delivery process called "Zero touch" to automate the ordering, asset tagging, delivery, and setup of new hire and employee computer refresh orders. Everything is tracked and processed by the system.

Ordering: Every employee is eligible for a computer refresh after three years of use. The user goes to the Employee Portal, views the assets assigned to them, and can report an issue or—if the asset is beyond its retirement date—request a replacement. When they click "Request a replacement", they are taken to a list of available PC options. Once they select the model they want, they’re shown the model specs and the PC they are retiring. Since they are working from home, they enter their delivery address and click "Submit."

Approval: If the employee is eligible for a refresh, the system automatically approves the request, notifies the employee that the order has been submitted, and sends the request to the Value-Added Reseller (VAR).

Delivery: The VAR pulls an asset from their inventory and ships it to the employee along with a shipping label to return the old asset. Our system sends notifications to the employee when the laptop is shipped, and when it’s delivered. The delivery notice asks the employee to confirm receipt. If the answer is “Yes”, the asset is automatically created in the ITAM database, information is sent to finance, and the depreciation process begins. If the answer is “No”, the system automatically alerts the IT team to investigate.

Hardware lifecycle processes

ServiceNow HAM provides visibility throughout the entire asset lifecycle. When we implemented HAM, we redesigned vendor workflows, and streamlined and automated our lifecycle processes end to end.

![Hardware lifecycle processes diagram](image)

IT creates a catalog purchase request, which goes through financial approvals. A purchase order (PO) is cut and sent to the vendor.

The vendor sends us an advance shipping notice, which is automatically associated with the PO.

Once we receive the hardware asset, technology operations acknowledges receipt. A record is automatically created in our asset repository. Fixed asset records are updated as well.

When new hire laptops, replacement PCs, or loaners are deployed, the asset state is automatically updated.

Should the asset’s state change, for example, or if a laptop is reported missing, the asset state is automatically updated.

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Setup: We fully automated the setup process using the Now Platform and Microsoft Autopilot. When the employee logs in with their credentials, setup begins and only takes about 20 minutes.

**Zero touch value outcomes**

- **Financial efficiency**
  Using Zero touch, we save 30 days in depreciation and warranty expense on each asset. We have saved $437,000 so far.

- **Operational efficiency**
  Automation saves 45 minutes per asset — an amount that really adds up over time. We have saved 3,280 hours so far. This is time our IT staff can spend on high-value work they were trained to do.

- **Speed**
  The process is 90% faster to start — and the faster the start, the faster the delivery to users. This means employees can be productive sooner.

- **Experience**
  Employees need laptops and equipment to be productive while working remotely. This is especially important for new hires who are also remotely onboarded. Our zero touch approach makes a positive impression of ServiceNow and demonstrates how we care for our employees from day one.

**Hardware normalization**

Previously we implemented hardware normalization, which greatly improves asset record accuracy.

Hardware inventory data typically comes from multiple sources, which are not always consistent. For example, a 15-inch Apple Macbook Pro with the model number MD322LL/A might be listed as “Mac Book Pro 15 Apple” in one source, “MACbook pro 15-inch apple” in another, and “Mac-book Pro 15 apple” in yet another. As a result, identical assets and model categories could be recorded differently.

Hardware normalization uses a product’s unique model number to normalize to one display name. It combines the product name, manufacturer, and model number, and aligns the models with those in the United Nations Standard Product and Services Code (UNSPC), which is the global standard for product recognition:

- Hardware model data is normalized by the ServiceNow Content Library (our team updates this weekly.)
- Updates are sent to local libraries on our customer instances.
- In addition to normalizing the manufacturer, product, and model number in the asset record, the process auto-populates end of sale, end of support, end of extended support, and end of life. With this information we can proactively plan for hardware refreshes.

On the IT side, we’ve successfully normalized duplicate hardware models. We achieved **90% visibility** by the end of 2020.
What’s next: We’re evolving with our Tokyo release

With our latest Tokyo release, we’re continuing our commitment to using more and more of our own ServiceNow products and applications to reduce our own hardware, software, and cloud costs, while offering the consumer-grade user experience our employees expect.

Within ServiceNow DT, we plan to adopt and utilize Tokyo release enhancements related to:

- **EAM (Enterprise Asset Management)**: Streamlines the full lifecycle management of physical business assets to meet operational targets, maximize usable life, and minimize risk. Combining ServiceNow HAM + EAM give us a huge advantage, as we can manage technology hardware and physical business assets in one place.

- **Asset Management Executive Dashboard**: Will give our leadership the data they need to make decisions when overseeing software, hardware, and cloud technology.

- **Technology standards and onboarding workflows (SAM + APM)**: Will help us to evaluate technology and add to the technology standards list or catalog.

- **Software asset management success tracking**: Will help us identify potential and actual savings and report up to the Executive dashboard.

We consider ourselves customer zero, which means that with each new release, we experience our own new products, additional features, and fixes. Then we give direct feedback to our product and engineering teams in the spirit of continuous improvement.

Section 2: Cloud hosting use case

Our cloud supply chain operations team provides end-to-end management of the cloud supply chain, from supply chain design all the way through fulfillment and delivery. The team is also responsible for hardware and software asset management. We have close to 30 physical data centers across the globe and maintain separate instances for federal, commercial, and lab.

Using the Now Platform and ServiceNow HAM, we automated and integrated the hardware asset lifecycle, including full integration with our supply chain partners. We also identified several areas for continual improvement, including inventory audit and asset disposal.

Hardware lifecycle process

We review our hardware lifecycle management processes regularly to drive improvements and achieve tighter integration with our partners.

Order

When a purchase request is submitted, it goes through financial approvals. A PO is then issued and sent to the vendor. The PO and asset information...
are synced with our instance, creating a receiving slip record. A notification with our asset shell information is sent to the vendor the same day.

Ship
When the vendor ships the order, they send two sets of data to our system:

- A ship rest API with shipment details triggers our system to create an advanced shipment notification to alert data center engineers of the upcoming shipment.
- A device rest API sends all hardware build and test data and correlates it with our asset shell, which is then stored in our receiving slip.

Receive
Once the shipment is delivered, our engineer validates the assets and acknowledges receipt with a single click. The system automatically creates asset records in our hardware asset table. Fixed asset records and the order received date automatically sync with our financial system.

Deploy
Based on the device API data stored in the receiving slip, our capacity management team uses automation to auto-deploy the racks into production. Using Discovery, CMDB records are automatically created and synced with the hardware asset table. We also built automation to auto-populate the asset’s in-service date based on the customer instance provision action.

Track
Until recently, audits were managed manually—a time-consuming and inefficient process. With our previous release (see below) this step is now automated with our mobile inventory audit capabilities.

Dispose
In the past, asset lifecycle activities were handled manually. Activities and information such as asset validation, disposal approval, asset retirement, and disposal documents were captured in email and shared folders. The whole process was time-consuming, inefficient, and lacked traceability. Using the HAM asset lifecycle management workflow, this is no longer the case.

We increased ITAM accuracy from 91% to 98%
With our previous release we implemented three new HAM capabilities: Asset Inventory Audit (mobile), Asset Lifecycle Automation – Flow Designer, and Hardware Normalization. Because we used the Now Platform to run our entire HAM process, implementation was straightforward and fast—from development through production took only about six weeks.

**Asset Inventory Audit (Mobile)**

To fulfill security requirements, we needed to find an alternate way for mobile scanning in our cloud production environment with a hand scanner. Thankfully, the flexibility of our very own Now Platform let us build an effective workaround. As a result, we quickly locked our physical audit schedule and began audit task creation, to the great satisfaction of our data center engineers, asset management team, and accounting team.

Data center audits are now much faster, and we project this new capability will save about 360 hours annually.

Furthermore, ServiceNow’s cloud asset management team started automating global audit tasks in June of 2021. We started off with an 84% match. With enhancements and process improvement, we achieved a 97% match at the end of 2021. Most recently, we achieved a 99% match in our mid-year 2022 audit.

**Asset Lifecycle Management – Flow Designer**

This ServiceNow capability enabled us to build a workflow tailored to our asset lifecycle (resale) process. We created assignment groups, configured the app to automatically send email notifications to task owners and stakeholders, and changed retired date timing based on our company’s rules. Now, when asset disposal is confirmed, the system automatically triggers a workflow with all stakeholders to manage retirement activities, including asset validation, disposal approval, asset quoting, business award to vendor, pickup arrangement, and asset auto retirement.

The workflow keeps all work records and disposal documents in one place, significantly reducing our compliance risks. Future enhancements include enabling our data center engineers to validate retired physical assets using a newly established asset inventory audit. This automated process also allows us to integrate with our buy-side partners. Future asset quotes, business awards, pick up coordination, asset receiving confirmation, and asset disposal reports will all be managed by this integration.

**Hardware normalization**

Along with end user IT, we implemented hardware normalization for our data center, which works across our procurement instance. On the cloud hosting side of our business, we achieved 98% normalization recognition by the end of 2020.

There are some unique aspects to our implementation of Hardware Model Normalization. We are working to sync our financial system with the production instance model data. We also plan to integrate the model table with the data center bill of materials.
part number table. This will make manufacturer lifecycle details available to our engineering and sourcing team and accelerate decision making.

Our cloud asset management team is excited to be working with our Cloud Engineering Automation (CEA) dev team to plan additional automation throughout our DC instance. For example, we want to enable a feature that sends quote requests and allows electronic bill of materials sharing to asset resellers. Our development team is expected to test automation in Q4 of 2022.

Value outcomes
With the new features in our previous release, we have realized multiple benefits, including:

- Complete automation of our end-to-end asset management process, including inventory audit and disposal
- Full traceability throughout the asset lifecycle
- An increase in ITAM accuracy from 91% to 98%

Closing thoughts
IT environments are highly dynamic and managing assets in those environments is an ongoing effort requiring vigilance, adaptability, and innovation. Like our customers, ServiceNow continues to take full advantage of the growing capabilities of the Now Platform to help improve process efficiency, data accuracy, visibility, and employee productivity. With each new release, we use more and more of our own technology to help our own employees and our customers work more efficiently.

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