Enterprise Control Towers

A guide to a digital management system, powered by an intelligent platform
A few years ago, we struggled with this question daily.

ServiceNow’s business has grown. We’ve digitized hundreds of key internal processes that connect functions, systems, and teams. We have extensively used the Now Platform® and digital transformation has taken hold within the company. However, it was still difficult to answer these questions. How effectively are we serving our customers, employees, and partners? How are we resolving issues, building products, and managing risk? Essentially, how are we getting things done?

Answering these questions is important to run the company, invest our resources in the right places, exceed customer expectations, manage business risk, and make the company more agile. These are growth imperatives. We came to a crossroads and realized that digitization alone would not be enough to propel us to the next level. We realized it was time to go beyond rolling out digital workflows to enable more visibility.

We needed a digital management system powered by an intelligent platform.

This management system could be a set of dashboards, metrics, prediction models, and cadences that go up and down the organization across multiple levels, rooted in the most important decisions every organization has to make. Ultimately, this system should provide information that can be acted upon to determine whether each action has helped us move forward.

Introducing Enterprise Control Towers*

We have built this management system, called Enterprise Control Towers, on the Now Platform. In no way is the system perfect and complete. We’re learning and optimizing so we can share with customers like you! In the next four sections, we’ll unpack this management system, layer by layer.

Enterprise Control Towers help leaders answer key questions at each level of our organization to see what happened, what’s happening, what could happen, what should happen, and what actions to take.

*As you read, keep in mind that at ServiceNow (and within this booklet) we use the term "Control Towers" and "dashboards" interchangeably.
Enterprise Control Towers

Enterprise Control Towers are a set of cascading dashboards that help ensure accountability, transparency, and alignment across the organization. These three elements are crucial to building an enterprise-wide management system.

- **Accountability** is important because it establishes and clarifies team objectives, and it’s how teams are organized to get work done. Every leader should get a customized view of operations to make business decisions and take action.
- **Transparency** is important because in an organization most of the processes are connected and dependent on other processes.
- **Alignment** is important because the entire operating model of the organization should row in one direction, adapt to changes, and align with the overall strategic direction.

Each layer of the Enterprise Control Towers management system caters to a target audience: CEOs, C-suite members, department or team leaders, and process owners. It’s made up of tools and applications that reveal whether operations are aligning with strategic priorities or not. Using this system helps to create a more efficient operating rhythm. Regular reviews drive decisions and action on a daily, weekly, monthly, and quarterly basis.

**Layer 1: CEO**
**Enterprise visibility**

The CEO dashboard gives the CEO and leadership team a comprehensive and multi-functional view of how work gets done within ServiceNow.

**Layer 2: C-suite**
**Functional visibility**

Each C-suite leader uses their own dashboard to quickly assess day-to-day speed, productivity, and risk within their organization with context and details.

**Layer 3: Department**
**Team visibility**

Department Control Towers, or Workspaces, give teams space to work smarter and faster through daily information sharing and collaboration, all in one place.

**Layer 4: Workflow**
**Process visibility**

Every process, or workflow, needs to be managed to boost operational performance. This is when we utilize the power of process mining and optimization.
Layer 1: CEO Control Tower
Managing the enterprise's speed, productivity, and risk

ServiceNow has hundreds of internal processes to enable the cloud business model. These processes are cross-functional and connect different systems and teams, each with specific operational objectives. It was difficult to get a big-picture view to take the temperature of the entire organization. The operating leaders lacked a view into “how” work was getting done for customers and how we needed to optimize it. We struggled to identify areas to invest in to drive business growth. The sheer number of KPIs was difficult to synthesize, organize, and use effectively. The CEO Dashboard was created to address these challenges.

The CEO Dashboard is the top layer of our management system at ServiceNow and establishes the objectives of our operating model. Here, the most important business-wide questions are asked and answered with real-time data. Leadership sets the thresholds in specific operational areas so they can be notified when thresholds are surpassed. Every other part of our management system rolls up to this layer, providing granular insights and controls, productivity frameworks, and tailored experiences to our leaders.

The CEO Dashboard offers the executive leadership team the ability to look at the entire ServiceNow operating model and zoom into specific functions. The underlying processes that form the operating model are condensed to real-time KPIs for leaders to inspect. There are many vectors through which we can categorize and organize metrics. As ServiceNow grows, leadership wants to make sure customer demands are met, resources are appropriated efficiently, and business risks are actively mitigated. We chose speed, productivity, and risk as the common high-level metrics, or themes, that cut across the company.

Speed

As the organization grows, the speed at which things get done will be the first victim if operations are not managed properly. Slower execution creates bad employee and customer experiences. Using the CEO Control Tower, our leadership can see how fast a department works. This can be accomplished by tracking either a specific enterprise process (i.e., the customer support response time is 8.7 hours) or a composite score for a function (i.e., customer operations are running 6% below the threshold.)

The CEO Control Tower empowers our leadership team to make insightful decisions across key operational metrics. With its unmatched real-time visibility, the CEO Dashboard delivers a meticulous level of detail helping every CEO WIN!

Bill McDermott
CEO, ServiceNow
Productivity

In addition to monitoring the execution speed, the leadership team wanted the CEO Control Tower to provide a clear view of the value being added by the work being performed. By consistently monitoring productivity across the company, the leaders can identify which operational areas are helping to drive real business outcomes and which areas may need more attention. Plus, any productivity gains can be invested back into the company’s growth.

Risk

Risk is the third metric theme that applies to every function in an organization. This includes security, governance, and business risks. To protect and grow the business, leaders need to keep an eye on all three risks. To presume everything is going well and just focus on speed and productivity would be a huge mistake. Guard rails are needed to keep the company secure as it scales.

At any given moment, our CEO and the leadership team can log into the CEO Control Tower and go a level deeper to zoom into a single function, like customer operations. To do this, we needed a uniform and connected view of the department. This functional view offers visibility into everyday speed, productivity, and process risk within customer operations so outcomes can be inspected and managed across all functions within the company.

Layer 2: C-suite Control Towers
Managing towards an outcome

Beneath the CEO Dashboard, a set of dashboards is needed to effectively run each major function led by the C-suite members. These dashboards are custom-built to surface the metrics that matter most to the C-suite members, their organization’s objectives, and their daily operations.

For example, finance may want to know how we’re managing costs or maximizing cash flow, while customer success may want insight into top customer needs and how effectively we’re addressing those needs. Leaders can double-click into insights to take a closer look at the data that matters to them and act upon it. To bring this to life, let’s take a look at the control tower for the CIO.

CIO Dashboard – Maximizing value creation through technology

The CIO Dashboard brings key insights into a single pane from various ServiceNow applications: IT Service Management (ITSM), IT Operations Management (ITOM), IT Asset Management (ITAM), Security Operations, and Strategic Portfolio Management.

The IT function drives digital transformation within ServiceNow. Though we had the data we needed to make decisions and run IT, we still had too many operational dashboards with inconsistent formats and metric definitions. The CIO and the leadership team didn’t have one high-level view of IT operations and the real and measurable impact
on the business. There wasn’t an easy way to measure the effects our investments were having on the top and bottom lines.

That surfaced an important aspect of building these Control Towers. The IT leadership team had to determine the key questions they wanted to answer. What decisions did they want to make every day, week, and month? Although it took some time to converge on the questions, doing so helped surface the right information. Questions formed the blueprint to create the dashboards and offered a shared view of IT performance against the business’s top priorities.

The IT leadership team focused on the five areas – value, usage, security, execution, and sentiment through the following questions:

1. **Value**: What value is IT driving and how is it contributing to growth across the company?
2. **Usage**: Is IT maximizing the return on the investments, quickly resolving issues, and effectively handling requests?
3. **Security**: Is IT managing security vulnerabilities, incidents, and responses and meeting compliance with regulations and mandates?
4. **Executive**: Is the execution on target, on budget, and optimized to deliver results?
5. **Sentiment**: How do end users (customers, partners, and employees) feel about their experiences with IT?

The entire CIO dashboard is designed around these five questions. The five sections on the overview page and the detailed tabs behind it answer these questions in the form of KPIs, targets, alerts, exceptions, predictions, and explanations. While real-time data from processes can reveal what happened and what is happening, we need predictions to answer what could happen in the future. Predictions are compared against targets and suggested actions are surfaced. Since the processes are running on the Now Platform, the out-of-the-box KPI prediction is a good place to source the prediction data for the dashboards. For more sophisticated operations, a bespoke ML model can be deployed to learn from past performance and predict future performance.

With insights in the dashboard, the CIO and the IT leadership team can zoom in to see what’s going on within any of the five areas. For example, let’s take a look at security.

The security team needs to manage security vulnerabilities, incidents, and responses, all while complying with regulations and mandates. Insights provided in the security category of the CIO Dashboard give the CIO, CISO, and team a read on our risk profile so security gaps can be quickly actioned. Many of the underlying security processes are on the Now Platform where exceptions can be acted upon, right from the dashboard.

Other operating functions are no different from IT, as they all have objectives and own and execute a set of processes to support the company’s business model. As a result, the template for the CIO
Dashboard can be replicated across the business. The rest of our C-suite members have the same type of visibility into their daily operations and outcomes.

**Chief Human Resources Officer (CHRO) Dashboard**

To help our CHRO make informed decisions, we needed a way to report, monitor, and improve across five key decision areas: talent acquisition, talent development, Diversity, Equity, and Inclusion (DEI), people operations, and rewards. Once our HR leadership determined which questions to answer, we built the CHRO Dashboard to track these people-related metrics, including (but not limited to) workforce plans, spans and layers, organizational vitality, time, cost, and quality of hire, candidate NPS and acceptance rate, and diversity.

**Chief Customer Officer (CCO) Dashboard**

While the CHRO is focused on our employees, the Chief Customer Officer needs to be able to check in on the key customer interactions we have every day.

- How are the customer support operations functioning?
- Are we able to meet the customer’s expectations?
- How are customers using our products?
- How is our success team working with our customers and are they able to reach the outcomes they want?

**General Counsel (GC) Dashboard**

To make critical decisions that accelerate legal reviews, boost deal velocity, and help meet compliance, our GC needs data and insights. To construct the dashboard, our legal team identified key decision areas – selling, innovating, employee relations, compliance and privacy, and operations – and confirmed our GC’s most important questions.

We built the GC Dashboard to answer those questions, including (but not limited to) open requests of significant value, open requests by age, closed requests by cycle time, inventions reviewed, new patents filed, out-of-date policies, privacy requests, and compliance training completion rate.
The C-suite dashboards also have a catalog of processes owned by or impacting the corresponding functions. For example, the CIO Dashboard contains a catalog of incident management, request management, change management, DevOps, vulnerability response, etc. The real-time KPIs for these processes and improvement initiatives are a click away within the CIO Dashboard to quickly enable further inspection, inquiry, and exploration.

Layer 3: Department Control Towers
Team alignment and agility

Right below our C-suite dashboards lies the third layer of our business management system — the Department Control Towers. This layer is all about team workspaces. These are dedicated interfaces where departments or teams can view all activities surrounding key competency areas within each function. Within this layer, employees act and measure results. Since all these dashboards are built on the same Now Platform, the business results and metrics in each workspace bubble up to layer two (the C-suite Control Towers) and to layer one (the CEO Dashboard).

Let’s look at a couple of examples of the team workspaces, or Department Control Towers, we use.

Department Control Towers
In the technology function, consistent service availability without disruption is needed to provide high-quality user experiences. Service Operations Workspace is an essential catalyst for driving a unified service operations strategy. It provides a single pane of glass for both service agents and operators, enabling a seamless flow of incidents, problems, changes, and alerts to predict and resolve service degradations.
Delivering ESG objectives is key to building sustainable growth. The ESG Department Control Tower helps to convert ESG goals into action. It is used to connect relevant employees, systems, and data so we can centrally manage all our ESG commitments in one place. It also enables much easier reporting on the progress the company is making on these initiatives.

**Layer 4: Workflow Control Towers**

**Optimizing processes**

ServiceNow employees execute 900+ processes across the company. Most of these processes are executed and orchestrated on the Now Platform. Each process generates a wealth of information about underlying business processes within their function. These insights help to understand and optimize every process. To do this effectively, the following components are used to build a control tower for each process: Workflow KPIs, process mining, Continual Improvement Management (CIM), and process automation.

**Workflow KPIs**

Every workflow, or process, needs a few KPIs to measure the objective. One of the most common KPIs is how fast things are running, i.e. Mean Time To Resolution (MTTR). Depending on the objective of the process, other KPIs used are: the number of process runs per day, week, or month, the process runs that are open currently, running beyond an SLA, productivity metrics, customer satisfaction metrics, etc. The KPIs usually answer what happened, what is happening, and if the prediction functionality is enabled, what could happen.
Process mining

Process mining is a method of visualizing a process to find inefficiencies. Every time a process is executed it generates an audit log which indicates the process step and the timestamp. Process mining uses this information to build a process map. The process map is the visual representation of the process and is used to highlight how the process is functioning.

Process Optimization on the Now Platform is used by process owners and analysts to quickly analyze and optimize any process. The objective is to find a set of inefficiencies that can be acted upon. Here are the some of the questions that process mining answers:

- Why does the process take a long time to complete?
- Why are the process outcomes different in different regions?
- Where are we spending/wasting the most time?
- Where do unnecessary rework/loops happen?
- How do we find the root cause behind slow–performing process routes/steps quickly?
- Which teams/assignment groups are performing slower?
- Which channel/vendor/location performance should be improved?
- Where are process bottlenecks?
- How much process deviation do we have?
- Is the process conforming to our expectations?

Process mining gives a snapshot of the reality of what is happening in a process. We can then use this data to address pain points by making adjustments within specific steps.

Continual Improvement Management (CIM)

Once we identify, visualize, and analyze the data to understand any process weaknesses, it’s time to fix them. We use Continuous Improvement Management on the Now Platform to make improvement ideas a reality. CIMs are planned improvement initiatives that describe the action the owner is going to take to yield specific process outcomes. CIMs help prioritize and improve services, processes, and functions by tracking them all in a single location.

Process maps

Traditional maps visually represent our world. On modern maps, you can see paths and places. You can zoom in and out. You can view traffic and find bottlenecks, shortcuts, and the most efficient way to get from point A to point B.

What if we could bring that level of visualization to a business process? That’s what process mining can do. We can begin to see different paths from start to finish. All the process variances and inefficiencies—bottlenecks, checkpoints, wait times, loops in the steps—become visible. Once the process is well understood, we can start optimizing it.
Process automation

Once inefficiencies within a process are identified, it’s time to fix them. Here are the tools we have deployed to make the workflows run faster and more efficiently.

Process redesign

Sometimes we may need to go back to the drawing board and redesign the process. For example, in a service request process, if sufficient information is not captured when the request is created, then the process might run in loops. We’re better off with the auto-collection of information upfront when the request or case is created. Do we have way too many approval cycles? Should we have platform ML classify the request to the right assignment groups? Process mining will continuously find insights to adjust or redesign the entire process. This is especially helpful when a process is migrated from one platform to another. Process mining the existing process provides valuable input on how that process should be designed on the new platform.

Virtual Agent

Virtual Agent helps employees and customers resolve issues faster. It delivers a better self-service experience through personalized conversations. Natural Language Understanding (NLU) provides a flexible foundation for the chatbot to learn and improve over time. If Virtual Agent can’t resolve the issue, it hands it over to a live agent with a few simple clicks.

Robotic Process Automation (RPA)

Robotic Process Automation (RPA) enables automation across the business. Whether automating the entire process or a specific part, RPA reduces rework and speeds up processes. With a combination of UI interactions, element-based automation, and APIs that interact between the various business applications, RPA can emulate user actions and reduce mundane and repetitive tasks.

Gaining insights about a process is one thing, but acting on those insights is the main purpose behind our Workflow Control Towers. When workflow KPIs, process mining, CIM, and process automation are combined, key processes across the company can be optimized.

Business process automation is not something you have to build from the ground up. Process automation tools exist to help you make the transition to effective automation.
What we’ve learned

Creating a business management system for our digital enterprise wasn’t easy. It was built iteratively over many quarters. While the technical build on the Now Platform was relatively easy, the challenge was deciding the right questions to ask and selecting the right business metrics to focus on.

Moreover, it’s difficult to change behavior across an entire organization to adopt a data-driven mindset and begin to run the business more effectively using metrics and connected dashboards. But here’s the good news. It can be done.

Here are a few lessons we’ve learned along the way.

Let the questions guide you.

Figuring out which questions we needed to answer and at what level was the most important step in building Enterprise Control Towers. Getting the questions right clarified our objectives. This is where our teams stormed, normed, and converged on a set of questions getting alignment up, down, east and west in the organization. The most important outcome was…organizational clarity.

Get commitment from your leadership team.

The entire Enterprise Control Tower could be built bottom-up starting at the process level. The Now Platform provided tools to do that and there was significant progress already made in this area. Approaching the problem this way enables teams to operate with speed and agility. However, alignment can become a challenge. We started pushing this top-down and engaged our leaders to make sure we were focusing on their most critical questions.

Adoption is key to success so getting leadership commitment to using Enterprise Control Towers to run weekly, monthly, and quarterly reviews was crucial. Their buy-in and commitment helped cascade adoption throughout the business.

Start with a catalyst.

Some functions might have an edge in digitization. Whether it’s IT, security, finance, marketing, talent, legal, customer operations, or customer success, starting with a function where digital processes already exist on the platform provides a huge advantage. Maybe these functions have existing dashboards at the department level. We found we could reuse these dashboards to create broader C-suite dashboards aligned with functional questions. At ServiceNow, we started with the CIO organization and rolled out the CIO Dashboard. The approach was scalable, so we chose adjacent organizations where there were common workflows. In our case, it was customer operations and human resources. Having consistent templates is a great way to scale across the enterprise.

Know that perfect data doesn’t exist.

In a process that is already running and where many changes have been introduced, its data contains all the history. Without proper context, the process data will be challenging to understand and interpret. Data quality, governance, process maturity, data management—things can get messy quickly. Data will always have its challenges. But we must start somewhere.

We started with the information about how a particular process has been running for the last week – just to understand. It is better to have some information than to have no information at all and seek perfection. Once we began exposing the information about how operations were running, we could scrutinize the data and work to improve its quality over time. No point in stressing out about absolute data quality value. Exposing the information, improving iteratively, and monitoring trends is more effective.

Commit to agility.

The work to develop, maintain, and evolve this business management system will never be done. It must always adapt to change. Creating, implementing, and adopting this management system is an iterative process and we don’t have to get it perfect the first time. We launch and learn how processes are performing and continuously optimize. Continuously learning and self-optimizing operating models are not a dream anymore. At ServiceNow, it’s a reality.
All we need is an intelligent platform to run the workflows, a management system to provide visibility and accountability, passionate people, and a commitment to manage by metrics.

A platform to run the entire operating model of an enterprise is not just a technology platform. It is a technical platform and a management system to continuously monitor and manage operations across the company. It enables visibility and accountability up and down the organization.

About ServiceNow

ServiceNow is making the world work better for people. Our cloud-based Now Platform and solutions deliver digital workflows that create great experiences and unlock productivity for employees and the enterprise. For more information, visit: www.servicenow.com

Now on Now is about how we use our own ServiceNow solutions to help us work faster, smarter, and better. With Now on Now, we’re achieving true end-to-end digital transformation.

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