Now on Now: How we measure self-service effectiveness
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“Shifting Left”: Our self-service vision

At ServiceNow®, our self-service goal is to empower our employees and customers with the right technology to seamlessly find answers to their questions.

We have more than 23,000 employees using 34,000 devices. In 2023, we logged more than 1.3 million employee self-service interactions. Our employees and customers are supported by our self-service Virtual Agent, ServiceNow Community forums, Knowledge Base articles, and automated requests. All of these channels are built on our platform to power a seamless self-service experience and elevated with the infusion of GenAI through Now Assist.

Supporting self-service is a critical priority so we measure and track the results of our self-service solutions closely. To share our experiences along this measurement journey, we documented the fundamentals of our approach to measuring self-service, including:

• How we measure avoidance across our self-service solutions.
• How we use Now Platform capabilities to track and dashboard our self-service measurements.
• Lessons learned while problem-solving the trickier elements of measuring self-service (including measuring deflection and handling unauthenticated users).

How we measure avoidance

Measuring avoidance gives us insight into our self-service effectiveness, including identifying where we can enhance user experiences.

We measure avoidance as the percentage of support inquiries resolved through our self-service solutions: Virtual Agent, ServiceNow Community forums, Knowledge Base (KB) articles, automated requests, and Now Assist. We aggregate these five solutions and divide by total attempts at self-service plus all human-assisted interactions.

We saved $180 million in 2023 by enabling self-service options that decreased the need for employees and customers to request support.
Our self-service solutions span a wide range of business units. It’s important that business units adopt uniform criteria for all successful self-service resolutions and have stringent criteria to avoid double-counting. Here is how we approach avoidance.

**Engaging with self-service solution:**
- **KB:** user spends 30 seconds on KB or scrolls down 50%
- **Community:** user views at least one question with an answer
- **Now Assist:** user views Now Assist response for at least 15 seconds OR gives ‘thumbs up’ to the response

Virtual Agent
A successful Virtual Agent (VA) conversation provides answers to user questions and eliminates the need for live agent intervention. To tally our successful VA conversations, we look at all our VA conversations and exclude:
- Abandoned conversations.
- Conversations with negative feedback, even if the issue was resolved.
- Information topics which would not likely have led to ticket creation. For example, a Virtual Agent conversation on topics such as statutory holidays or street addresses are unlikely to lead to someone escalating to a ticket, so we don’t count them in our avoidance numbers. We have over 300 topics in our Virtual Agent. We partner with the business unit who creates the conversation to determine if the conversation is informational or self-service. It is deemed self-service if we believe the absence of this topic would result in a ticket.
- Conversations that direct users to other self-service solutions. (These conversations are excluded to avoid double-counting.)
- Conversations that are completed but the user opens a ticket for the same or similar issue within 24 hours. We use **similarity modeling** to distinguish between similar and different issues.

Similarity modeling improves our accuracy.

Similarity modeling is a predictive intelligence framework that checks the similarity of the texts or user inputs in a ticket opened after a self-service interaction. Simply put, we don’t count a completed virtual agent, KB, or community view as a self-service interaction if the user opens a ticket for that issue within 24 hours. Similarity modeling assists in determining if that ticket was for the same or similar issue by providing a confidence score, which matches user input to the description/short description of the matched ticket. If the similarity is above 70%, we don’t attribute the self-service as self-resolved and exclude it as a successful self-service interaction.
Knowledge Base views

Knowledge Base (KB) article views are foundational to our self-service strategy. While KB views tell us if people are opening articles, the information that’s most helpful to acquire is how successful our KB is at meeting user needs and avoiding live support. We take the following approach in our assessment:

- Users often view multiple articles to find what they need. We do not count every KB article view towards avoidance. Instead, we focus on sessions where users access at least one KB article. Multiple KB article views for the same issue in a single session are considered a singular avoidance.
- We also consider the duration of the KB article engagement. If a user spends less than 30 seconds without scrolling down 50% of the article, it is not deemed self-service.
- We incorporate user feedback and exclude any KB article interaction if a user rates the article as unhelpful.
- Like Virtual Agent conversations, if a user raises a ticket within 24 hours after viewing a KB article covering a similar issue, we do not attribute that interaction to self-service.

Search effectiveness is key to how well our KB supports self service.

At ServiceNow, we think of search in terms of its effectiveness and content. Approximately one in four of our KB article views are initiated with search. A KB can’t support self-service if search isn’t providing the right content.

Our Emerging Technologies Group (ETG) owns our search engine and its effectiveness. The self-service content within the search engine is owned across functional areas. As a self-service content owner, we own self-service content quality and availability. There are two measurements we focus on: Click Through Rates (CTR) tells us how effectively search produces results that match the user’s intent and Zero Search Results identifies potential content gaps for self-service.

Automated requests

Automated requests are requests that we automate via a Service Catalog, such as software requests, distribution list creation, and business title changes. No manual intervention is required to fulfill the request (except approvals in some cases). They are easily quantifiable. If the automation flag is enabled, each completed request counts toward our self-service metrics.
ServiceNow Community

ServiceNow uses an internal community that enables employees to post and search for content. Interactions are tracked in system tables that include viewing a post, adding a post/question, liking and/or commenting on a post, marking it helpful, etc.

A Community interaction is deemed successful self-service when a user views a post that has at least one response, and does not create a ticket that matches the category of that Community post within 24 hours.

Now Assist

Now Assist brings generative AI capabilities to the Now Platform. We use Now Assist to improve self-service by generating answers on search result pages.

To measure its success, we look to see if the user:

1. Views the Now Assist-generated response for at least 15 seconds or gives a “thumbs up” to the response.

2. Is not directed to another self-service solution.

3. Does not open a ticket on the same topic within 24 hours.

Measuring unauthenticated users

While our users are not always authenticated (logged in) when they engage with our self-service solutions, we want to measure how effectively we are meeting their needs. We track the content our unauthenticated users explore using persistent cookies. If no ticket is created by the user within 24 hours for a similar issue, we count this as avoidance. If a user views content while unauthenticated and later logs in to create a case, our analytics tool maps the scenario and excludes it from our avoidance calculation.

We follow the industry standard that every ten pieces of content viewed results in one instance of avoidance across our public-facing content, including ServiceNow Community and Product Documentation.

Measuring deflection

As previously discussed, avoidance gives us insight into how well our self-service solutions are working. Deflection is a subset of avoidance that tells us with certainty how many tickets were deflected. Knowing our deflection rates helps our support organizations make strategic decisions about resource and capacity planning, hiring, and training.
Deflection is based on intent to open a ticket. We can identify this intent in two pathways: the ticket creation page and in our Virtual Agent. At this point, the user is prompted to enter a description of their issue and presented with recommended solutions and KB articles through Now Assist. We count it as a deflection when the user uses the Now Assist response and does not open a ticket for the issue.

**We consider it to be a deflection if:**

1. The user does not submit the ticket within 24 hours of the interaction.
2. The user gives a thumbs up to the Now Assist response OR engages with the Now Assist response by scrolling down or expanding the response OR the user spends 15 seconds on the Now Assist response without scrolling down.

We calculate deflection rate by dividing total deflections by the sum of deflections and tickets created.

### Aggregation and reporting insights

ServiceNow uses our own products to run our internal operations. The majority of our data resides in our internal instances, which makes it easier for us to analyze and report on it. We use our Performance Analytics (PA) application to build and analyze self-service metrics using every signal we have available.

We partner with our business owners on key indicators and use these to create a PA dashboard or PA workspace, using different data visualizations, for monthly or quarterly cadence. These metrics and dashboards are continuously updated to reflect internal process changes.

Knowing our deflection rates helps our support organizations make strategic decisions about resource and capacity planning, hiring, and training.
Key takeaways

• **Avoidance** gives us insight into how well our self-service solutions are working. We measure avoidance as a percentage of support inquiries resolved through our Virtual Agent, ServiceNow Community forums, Knowledge Base articles, automated requests, and Now Assist, divided by total attempts at self-service plus all human-assisted interactions.

• **Deflection** tells us with certainty how many tickets were deflected. Knowing our deflection rates helps our support organizations make strategic decisions about resource and capacity planning, hiring, and training.

• **Our self-service solutions** span support across a wide range of business units. It’s important that business units adopt uniform criteria for all successful self-service resolutions and have stringent criteria to avoid double-counting.

• **Similarity modeling** takes us to the next level of accuracy by using a predictive intelligence framework that checks the similarity of the texts or user inputs in a ticket that was opened after a self-service interaction. This allows us to exclude any self-service interactions that were followed by a human-assisted interaction.

Ask your account team to arrange a call with one of our practitioners to learn more about how we measure self-service at ServiceNow.