



SOLUTION SNAPSHOT

# Digital Employee Experience (DEX) Solutions in the ServiceNow Partner Ecosystem

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## Solution overview

Over the last half-decade, the importance of the employee experience has grown, especially with the advent of the work-from-home (WFH) and work-from-anywhere (WFA) arrangements introduced during, and then extended beyond, the height of the global pandemic. However, the ability to measure employee experience isn't yet something that's natively included within IT service management (ITSM) tools, with third-party solutions required to deliver the insight necessary to drive the experience-enhancing improvements that ultimately deliver better business operations and outcomes.

There are many different approaches to experience measurement and management – with no standard industry definition of what experience management is let alone how best to measure and improve it. For example, some experience management solutions focus on capturing employee feedback (or sentiment) on IT's performance, some use technology to assess IT performance (from an employee's experience perspective), and some do both – and the term currently used to describe and differentiate the latter two solution types from the first is “digital employee experience (DEX) management.”

In ITSM.tools' opinion, experience management capabilities are now an ITSM and wider-IT imperative to:

- Identify and close the gap between IT service provider and end-user perceptions of performance caused by traditional IT metrics, and
- Focus future IT investments on the areas that positively impact business operations and outcomes the most

For an organization seeking to improve the employee experience delivered by its IT service provider (either internal or outsourced), and with it the level of employee productivity, the variety of experience management solutions already available in the market – and DEX solutions in particular – is likely confusing. Especially given the different approaches taken, the various capabilities offered, the technologies employed, and each solution's respective functional focus.

To assist such organizations, this Solution Snapshot is aimed at helping ITSM professionals to better understand what can be achieved by a small sample of DEX solutions. It's not intended to promote one solution over another, simply to help inform the reader of the common DEX solution capabilities and “the art of the DEX possible.”

## Solution snapshot focus and research method

To keep this Solution Snapshot both focused and manageable, it only highlights the various DEX capabilities, alternatively called “digital experience monitoring” or “digital experience management (DEM)” capabilities, available to meet ITSM-related needs for employee experience improvement. Plus, given that ServiceNow has both the largest ITSM tool market share and the broadest partner ecosystem, its coverage is focused on the DEX solutions provided by three ServiceNow partners.

So, readers of this Solution Snapshot need to be aware that:

- ServiceNow might not be the most suitable ITSM tool for their organization (and there are many other ITSM tools available)
- There are other DEX solutions available in the market not covered by this Solution Snapshot
- DEX is not the only approach to IT experience management

Finally, please note that the high-level information presented within this Solution Snapshot has been sourced via desk-based research rather than individual vendor submissions, associated demos, and an accuracy-based review cycle.

### IDENTIFYING THE MAIN “DEX SOLUTION FOR SERVICENOW” PROVIDERS

There’s a wide range of experience management and DEX solutions available. To consider them all in a single, high-level comparison paper that covers more than ITSM use cases would be a case of trying to “compare apples to oranges” along with a variety of other fruits. In ITSM.tools’ opinion, most organizations would struggle to deal with what might be considered a “fire hose” experience of DEX solution information. Hence this Solution Snapshot, like those focused on individual ITSM tools, takes a Pareto Principle approach to provide readers with “up to 80% of the information they need in less than 20% of the time.”

As an example of this, identifying the DEX solutions available for ServiceNow – without knowing the provider names – isn’t easy. While initially researching for this Solution Snapshot, a search of the ServiceNow Store for:

- “Digital experience management” brought back just one result – Lakeside Assist for ITSM
- “Digital employee experience management” brought back no results
- “Experience management” brought back just five results, of which three related to HappySignals’ Employee Experience Management Platform which, while laser-focused on experience management, isn’t a DEX solution
- Related terms without the use of quotation marks was unhelpful in easily identifying suitable solutions

Meaning that it’s likely hard for a ServiceNow customer organization to quickly see, understand, and assess the available DEX solution options.

Using Google as an alternative search method, a search for ServiceNow “digital experience management” – as the industry term that preceded the ascent of DEX – highlighted three relevant results based on this Solution Snapshot’s coverage areas:

1. 1E – <https://www.1e.com/solutions/digital-experience-monitoring-and-employee-engagement>
2. Lakeside Software – <https://www.lakesidesoftware.com/integrations/servicenow>
3. Nexthink – <https://www.nexthink.com/>

For reader clarity, these three DEX solutions are included based on the breadth of capabilities offered across both technology-based monitoring and people-based feedback mechanisms.

## Vendor overviews

DEX solution providers often started in another technology management area and have extended, or repositioned, their focus to help IT service providers better understand, manage, and improve the digital experiences they provide.

### 1E

1E was founded in 1997 to help organizations to reduce Windows PC and server management costs. Its solutions have ranged from content distribution, software asset management, user self-service, PC power management, to “Green IT” and 1E now offers DEX capabilities that combine experience and sentiment analytics with endpoint automation and management and software asset intelligence capabilities.

The 1E solutions relevant to this Solution Snapshot are:

- 1E Tachyon Experience
- 1E Tachyon Sentiment
- 1E ITSM Connect
- 1E Virtual Assistant
- 1E CMDB Connect

Plus, there’s the [Tachyon Exchange](#) which is described as “a community platform and library of automation modules (product packs) for systems management” that contains 83 product packs, 780 instructions, and 17 policies.

The 1E experience management view covers four perspectives: responsiveness, stability, performance, and sentiment, and a key area of its focus is enabling its customer work-from-anywhere (WFA) strategies.

### LAKESIDE SOFTWARE

Lakeside Software was incorporated in 1997 and its marketing states that it “develops software that helps IT have clear visibility into their environments in order to design and support productive digital workplaces. Our customers use Lakeside Software’s Digital Experience Cloud, powered by SysTrack, to perform intelligent analytics, digital workplace planning, proactive IT service operations, and IT asset rationalization.”

The Lakeside Software solutions relevant to this Solution Snapshot are:

- Digital Experience Cloud platform (powered by SysTrack)
- Lakeside Assist for ITSM (which runs as a stand-alone app or integrated with ServiceNow ITSM)
- SysTrack for Asset Optimization

Where SysTrack is the Lakeside digital experience monitoring solution that gathers and analyzes data across a stated 10,000+ data points.

## NEXTHINK

Nexthink was founded in 2004 from a research project in artificial intelligence at the Ecole Polytechnique Fédérale de Lausanne in Switzerland. It states that it “is a software company focused on helping IT teams power productivity and performance for their employees around the world.” This entails real-time analytics, instant remediation, automation, and employee feedback across endpoints and applications. Nexthink uses the term “DEX management” to describe the organizational need to deliver “superior technology experience to every employee, at every moment.”

The Nexthink DEX solution is Nexthink Experience – a platform that contains five key elements:

- Analyze
- Act
- Engage
- Integrate
- Experience

Plus, to better enable its customers, there’s a [Nexthink Library of content packs and integrations](#) that contains over 100 use cases.

## Common DEX solution functionality

There are many key capabilities offered by DEX solutions. But not all of these capabilities are available within all DEX solutions and the breadth and depth of each differs across solutions too. The capability list below does, however, provide a spectrum of capabilities that can be used by organizations to compare and contrast different DEX solution offerings and their respective abilities to monitor, manage, and improve the delivered employee or end-user experience:

- Technology-based experience and performance monitoring
- Employee/end-user sentiment capture
- Experience scoring
- Root cause analysis
- Real-time automated remediation
- End-user-initiated remediation
- Preventative capabilities
- Analytics and reporting
- Integration with other IT tools and systems
- Machine learning use across capabilities

In terms of understanding the relative differences between DEX solutions, a good example is how technology-based monitoring is undertaken. Where a DEX solution might employ one or more of the following three experience monitoring techniques:

- Real user monitoring
- Endpoint monitoring
- Synthetic transaction monitoring

Another good example is that the available end-user sentiment measuring capabilities differ across solutions.

# Defining the experience management needs of IT(SM) organizations

While knowing that the capabilities of different DEX solutions vary is important, it's imperative to understand the customer-organization perspective. Where what one organization needs (from a DEX solution) will likely differ from another. Although, as with ITSM tools, the employed capabilities will no doubt ultimately be influenced, and perhaps limited, by those of the chosen DEX solution.

There are, however, some common potential customer needs that can be used to at least start the creation of an organization-specific list. These are different from the DEX solution capabilities mentioned previously and instead take the customer organization, rather than the technology, perspective. To help, Table 1, also maps some example customer-organization needs to the aforementioned DEX solution capabilities. Please note that this is not always a one-to-one mapping and in both directions.

Your organization might have different and potentially additional DEX-related requirements beyond those listed in Table 1, so it's important for it to remember to stay focused on what's needed rather than being beguiled by what's possible with any given DEX solution. In ITSM.tools' opinion, the use of similar customer needs – ideally brought even closer to the customer organization's actual needs based on organizational pain points and goals – is the necessary starting point for DEX solution consideration and evaluation (not the available solution capabilities). Such that while customer-organization needs are focused on employee experience and productivity improvement they'll likely be driven by business strategy needs that are aligned with some variant of "better, faster, cheaper" business operations and outcomes.



Table 1: Example Customer-Organization Needs Mapped to Key DEX Solution Capabilities

EXAMPLE CUSTOMER-ORGANIZATION NEED	DEX SOLUTION CAPABILITY
To understand and improve employee experiences and the adverse effect on productivity	Technology-based experience and performance monitoring
To understand and improve employee experiences and the adverse effect on productivity based on employee views and perceptions	Employee/end-user sentiment capture
To quantify the provided employee experience as a baseline from which to drive and report on improvements	Experience scoring
To understand the cause, or causes, of experience and productivity affecting issues	Root cause analysis
To improve the capabilities of IT support personnel through improved access to real-time performance and device information	Technology-based experience and performance monitoring
To increase the productivity and reduce the cost of IT support activities	Real-time automated remediation
To reduce the cost of IT support by encouraging end-user adoption of self-service capabilities as part of a “shift-left” strategy	End-user initiated remediation
To allow end-users to periodically self-check and remedy issues that might be affecting their current or future productivity	End-user initiated remediation
To identify and address issues that while currently hidden to end-users will, if not addressed, eventually affect their productivity	Preventative capabilities
To gain insights into end-user experiences with different IT services and the associated improvement opportunities and their progress	Analytics and reporting
To benefit from interoperability, whether related to data sharing, automated workflows, or other business needs	Integrations with other tools and systems
To leverage new technologies in the pursuit of “better, faster, cheaper” IT operations and outcomes	Machine learning use across capabilities

Source: ITSM.tools

The example customer-organization needs shown in Table 1 can also be translated into the benefits of experience management and the use of DEX solutions.

# DEX solutions for ServiceNow

The three DEX solutions covered by this Solution Snapshot offer a range of capabilities that enhance the native ServiceNow capabilities – based on access to infrastructure data points and automated remediation capabilities – across:

- Incident management
- Change management
- Problem management
- Event management
- Configuration management
- Asset management
- Self-service

These include the use of experience-related data and remediation capabilities by virtual agents.

To achieve this, each of the DEX solution vendors offers a variety of applications and integrations for ServiceNow, with the following list taken from the ServiceNow Store via searching by solution provider name. Further details on each application or integration can be found in the ServiceNow Store.

Table 2: The Available ServiceNow Applications and Integrations

DEX SOLUTION PROVIDER	SERVICENOW APPLICATIONS & INTEGRATIONS
<b>1E</b>	<ul style="list-style-type: none"> <li>■ 1E Virtual Assistant</li> <li>■ 1E ITSM Connect</li> <li>■ 1E Service Catalog Connect</li> <li>■ 1E Core</li> <li>■ 1E Tachyon CMDB Connect</li> <li>■ Service Graph Connector for 1E Tachyon</li> </ul>
<b>Lakeside Software</b>	<ul style="list-style-type: none"> <li>■ Lakeside Assist for ITSM</li> <li>■ SysTrack Asset Optimization</li> </ul>
<b>Nexthink</b>	<ul style="list-style-type: none"> <li>■ Service Graph Connector for Nexthink</li> <li>■ Nexthink Incident Management Connector</li> <li>■ Nexthink CMDB Connector</li> </ul>

Source: ServiceNow Store

Nextthink's ServiceNow collateral also talks to the following "enhancers" that aren't shown in the Store:

- Nextthink Event Connector
- Nextthink's Self-Help Widget for the ServiceNow Service Portal
- Nextthink for Chatbots

In ITSM.tools' opinion, this variety of – and the potential for confusion over – DEX solution "elements" is a key reason for starting with the customer-organization needs rather than the available technology.

# Key DEX solution capabilities

As already mentioned, not all of the listed key DEX solution capabilities are provided by every DEX solution. Instead, each DEX solution provider is influenced by a mix of their specialist technology areas and the needs of existing and future customers, along with other factors. To help with reader understanding, the following DEX solution capabilities are covered in this section:

- Technology-based experience and performance monitoring
- Employee/end-user sentiment capture
- Experience scoring, including the use of intelligent capabilities
- Real-time automated remediation, including end-user-initiated remediation
- Preventative capabilities and other “intelligent” use cases
- Analytics and reporting

Please remember that the following content has been gathered via desk-based research and each vendor will need to be examined in more detail to ensure that the available capabilities meet prospective-customer needs.

## TECHNOLOGY-BASED EXPERIENCE AND PERFORMANCE MONITORING

The technology monitoring capabilities of the three DEX solutions covered in this Solution Snapshot can be viewed across three areas:

- The operating systems (OSs) supported
- The hardware attributes reported
- Application monitoring capabilities

Table 3: Technology-based Experience and Performance Monitoring

AREA	HIGH-LEVEL CAPABILITY INFORMATION
<b>OSs</b>	<ul style="list-style-type: none"> <li>■ Windows endpoints are covered by all three DEX solutions</li> <li>■ macOS devices are covered by all three solutions, although some 1E capabilities are not currently available for macOS</li> <li>■ Only Lakeside provides full support for Linux (in terms of its capabilities), with 1E again currently offering a subset of its full capabilities for Linux endpoints</li> <li>■ Please contact the individual vendors to establish their support for other OSs</li> </ul>
<b>Hardware</b>	<ul style="list-style-type: none"> <li>■ As expected, all three DEX solutions collect a wide range of data points related to a customer organization's IT estate. For example, CPU and memory use, boot performance, and patching details</li> </ul>
<b>Applications</b>	<ul style="list-style-type: none"> <li>■ All three DEX solutions collect data points related to the installed applications and their use, including availability, responsiveness, crash history, and errors</li> </ul>

Source: ITSM.tools

Please note that all three DEX solutions use agents to gather asset and experience-related data. 1E Tachyon is the only solution with native synthetic transaction capabilities for capturing experience-related data.

## EMPLOYEE/END-USER SENTIMENT CAPTURE

While the use of technology to monitor performance offers granular insight into IT performance and the end-user experience, this might differ from the perceptions of the impacted end-users. Importantly, there's also the need to better understand what matters most to end-users such that improvement efforts can be focused on the right things.

For all three DEX solutions, this is achieved through the collection of end-user sentiment using built-in survey capabilities. As with all the capabilities covered by this Solution Snapshot, how this is offered differs across solutions. There are, however, many common building blocks for sentiment capture. For example, both pre-built and customizable survey templates. Plus, how and when surveys are presented to end-users. For instance:

- Based on an issue
- Periodical
- End-user initiated

Each DEX solution also offers a range – albeit different ranges – of “finesse” when collecting sentiment data. From targeting survey recipients based on end-user groups or the application and devices they use, to excluding select end-users from surveying.

In ITSM.tools’ opinion, the ability to capture end-user sentiment – and the quality of the available capabilities – should be a critical element in DEX solution selection. Because, while technology-sourced data points are advantageous to experience-related activities such as automated remediation and root cause analysis, it's only through the collection of end-user feedback that:

- The gap between IT and end-user perceptions can be seen
- Insight into what matters most to end-users can be established

For the DEX solutions that don't offer sentiment-analysis-related capabilities, and even those that do, customer organizations can supplement the available capabilities with sentiment-related services from other solution providers.

## EXPERIENCE SCORING, INCLUDING THE USE OF INTELLIGENT CAPABILITIES

The collection of technology-sourced data points and sentiment-based feedback is just the start of what's needed to understand the end-user experience. Because, as already mentioned, the low availability or performance of one application, say, might be less important than the mediocre availability or performance of another – context is needed. The size of the data sets involved also brings with it the need for intelligent capabilities, in particular the capabilities offered by machine learning and natural language understanding (NLU).

Each DEX solution provider again takes a slightly different view of what constitutes the overall end-user experience. For example:

- The 1E DEX approach is explained as: “Performance and Usage + Organizational Context + Employee Sentiment + Analytics and Machine Learning = Insights and Action.”
- Lakeside quantifies a digital experience – “SysTrack does this by collecting data directly from the endpoint, analyzing all aspects of IT that might be impacting the end-user experience, normalizing this analysis into a single score, and providing additional context around what is impacting that score.” End-user sentiment feedback analysis uses IBM Watson technology to calculate a numerical score. The combination of both elements provides an end-user experience score.
- Nexthink provides a Digital Experience Score – “...combining hard metrics and user sentiment data to give immediate visibility and context over your employees’ digital experiences across the key experience drivers.”

All the descriptive quotes used in the above bullets are taken from each of the DEX solution provider websites.

What wasn’t fully understandable from the desk-based research undertaken to complete this Solution Snapshot is exactly how the technology-sourced data and people-based feedback are combined to give the composite experience score for each DEX solution. It’s understandable, with this likely part of each solution provider’s “secret sauce.”

## **REAL-TIME AUTOMATED REMEDIATION, INCLUDING END-USER-INITIATED REMEDIATION**

The beauty of DEX solutions is that once an IT-related issue is identified it can be remedied, or at least an attempt can be made to remedy it, using automated solution capabilities. This can take several forms, including:

- Auto-remediation based on policies
- IT-staff-initiated remediation
- End-user-initiated remediation – either IT-initiated or self-initiated

Importantly, all of these leverage DEX solution capabilities to deliver the required remediation from within ServiceNow ITSM. Plus, automated remediation can be simultaneously applied to groups of, not just single, endpoints.

Of the three DEX solutions considered in this Solution Snapshot, 1E and Lakeside offer the broadest sets of automated remediation capabilities. Only 1E and Nexthink offer self-help remediation via the ServiceNow Virtual Agent. High-level examples of the automated remediation capabilities offered by each DEX solution provider are shown in Table 4. below. These are taken from the provider’s websites and marketing collateral, and interested organizations should seek further detail from the individual vendors.

Table 4: Example Automated Remediation Capabilities

DEX SOLUTION PROVIDER	EXAMPLES
1E	<ul style="list-style-type: none"> <li>■ "...the analyst can run actions to remediate the issue, whether it's applying a hotfix, a software update, killing a process or even performing registry/disk diagnostics. Note that all of this happens without disrupting the user as they are working."</li> <li>■ "Deflect tickets and empower users to resolve IT issues in real-time by extending the ServiceNow Virtual Agent with real-time automation."</li> </ul>
Lakeside Software	<ul style="list-style-type: none"> <li>■ "With Assist, you can empower L1 staff to go beyond the original ticket request and proactively resolve other issues impacting digital employee experience with one-click auto-fixes and a toolkit of automations configured by your IT department. Lakeside provides hundreds of factory automations out of the box written by experts and packaged by use case, making it easy to get started with relevant scripts that work."</li> <li>■ "SysTrack Sensors continuously check for potential problems such as low disk space, high CPU, and app faults. Once detected, only problems with simple resolutions are surfaced in the Self-Help view."</li> </ul>
Nextthink	<ul style="list-style-type: none"> <li>■ "Using an extensive catalog of customizable scripts, IT can manually trigger one-click fixes or automate self-healing campaigns based on defined events to significantly reduce ticket count."</li> <li>■ "Self-help campaigns proactively identify and bring issues to employees' attention. Automated remediation guidance and self-help guidance attached to Engage campaigns empower employees to resolve issues themselves without the need for IT intervention."</li> </ul>

Source:Vendor Websites

## PREVENTATIVE CAPABILITIES AND OTHER "INTELLIGENT" USE CASES

As already touched on in the experience scoring section, the use of machine learning and NLU are key to handling the volumes of data involved with DEX management. These capabilities are used for a variety of core DEX needs (in addition to scoring), including:

- Preventative issue detection – through both synthetic transactions and pattern recognition
- Problem identification – linking related issues
- Root cause analysis and diagnosis
- Self-healing – both issue identification and remediation

All three DEX solutions offer these intelligent capabilities. Additional use cases include change success assessment, endpoint-state querying using NLU, and intelligent end-user profiling but these capabilities are not currently offered by all three DEX solutions.

## ANALYTICS AND REPORTING

As expected from an IT solution that's focused on providing insight into endpoints and the experience end-users receive when using IT services, all three DEX solutions present real-time and historical trend data in dashboards and offer filtering and drill-down capabilities to get greater granularity related to groups (assets, business units, locations, etc.) and individual endpoints.

However, the desk-based research approach to this Solution Snapshot's creation made it difficult to truly appreciate the quality of each DEX solution's analytics and reporting capabilities, including in the context of ServiceNow ITSM. The different approaches to "marketing" the available capabilities also make it difficult to compare and contrast across solutions.

For example, 1E states that it offers customizable experience dashboard views related to:

- Stability
- Responsiveness
- Performance
- Sentiment
- Devices
- Software
- Users

Lakeside states that it offers the ability to create dashboards using the SysTrack Dashboard Builder that can be viewed using the SysTrack Dashboard Viewer and in SharePoint.

Nextthink states that experience data is "easily leveraged with patented visualization capabilities and pre-built dashboards to gain valuable insight into the actual experiences of your employees and to enhance root-cause diagnosis."

In ITSM.tool's opinion, it's critical that customer organizations appreciate the importance of analytics and reporting to DEX and should again lead with what they need to achieve through their investment in a DEX solution rather than being awed by the available capabilities.



## INTEGRATIONS WITH OTHER IT TOOLS AND SYSTEMS

As with most, if not all, IT tools and systems – DEX solutions need to integrate with other tools and systems to deliver on the needs of customer organizations. Given the focus of this Solution Snapshot, the ability of the DEX solution to seamlessly work with ServiceNow ITSM is a good example.

Each of the three DEX solutions has its own set of pre-built integrations, these include directory services integrations and ServiceNow integrations for ticketing and the CMDB. Only 1E offers a ServiceNow Virtual Agent integration through the ServiceNow Store although Nexthink Integrate is stated to allow customer organizations to “feed Nexthink intelligence to any of your preferred third-party solutions or chatbot technology using a versatile web API, event connector and chatbot software development kit (SDK).” This includes alternative ITSM tools. 1E offers the widest set of pre-built systems management integrations and the aforementioned Nexthink Library includes a variety of pre-built integrations too.

Each DEX solution provider offers a different approach for creating bespoke integrations:

- 1E – Open REST API, Powershell, and an SDK
- Lakeside – Open REST API
- Nexthink – Web API

## Solution summary

The need for experience management capabilities is only going to grow as IT organizations are increasingly tasked with enabling and upping end-user productivity, especially as corporate strategies target “better, faster, cheaper” improvements. In ITSM.tool’s opinion, all three of the DEX solutions covered by this Solution Snapshot deliver much-needed experience management capabilities, particularly for collecting the technology-sourced endpoint data that allow ServiceNow customers to enhance its native capabilities with real-time experience data for:

- Quickly gaining issue insight
- Root cause analysis
- Automated remediation, including end-user-initiated remediation
- Preventative capabilities

The one that best suits your organization’s needs will require additional effort to gain a deeper understanding of the respective strengths and weaknesses of each DEX solution relative to what’s most important.

Readers are reminded though that:

- ServiceNow might not be the most suitable ITSM tool for their organization (and there are many other ITSM tools available)
- There are other DEX solutions available in the market not covered by this Solution Snapshot
- DEX is not the only approach to IT experience management

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