

Independent market research and competitive analysis of next-generation business and technology solutions for service providers and vendors

**HEAVY  
READING**  
**WHITE  
PAPER**

# **On-Premises Service Innovation: The Rise of uCPE**

*A custom Heavy Reading white paper produced for Enea*

**ENEAA**

AUTHOR: JIM HODGES, CHIEF ANALYST, HEAVY READING

---

## INTRODUCTION

On-premises services, similar to all enterprise services, have been profoundly reshaped by the adoption of cloud-based services. One of the most noticeable impacts has been how enterprise customers now purchase and consume these software-based services. Specifically, this has led to an increase in the uptake of managed services, as well as fueling on-premises universal customer premises equipment (uCPE)-based services innovation.

This white paper presents several key findings of a global enterprise market research survey launched in 2Q20 designed to document on-premises service innovation drivers and managed services delivery implementation trends. The white paper also documents call-to-action principles that progressive managed services providers should consider to align their uCPE execution strategies with the survey trends.

The survey created by Heavy Reading in collaboration with Enea was distributed by email to Light Reading's global list of enterprise employees, attracting a global mix of 93 qualified enterprise respondents.

## ON-PREMISES SERVICES INNOVATION: UNDER NEW MANAGEMENT

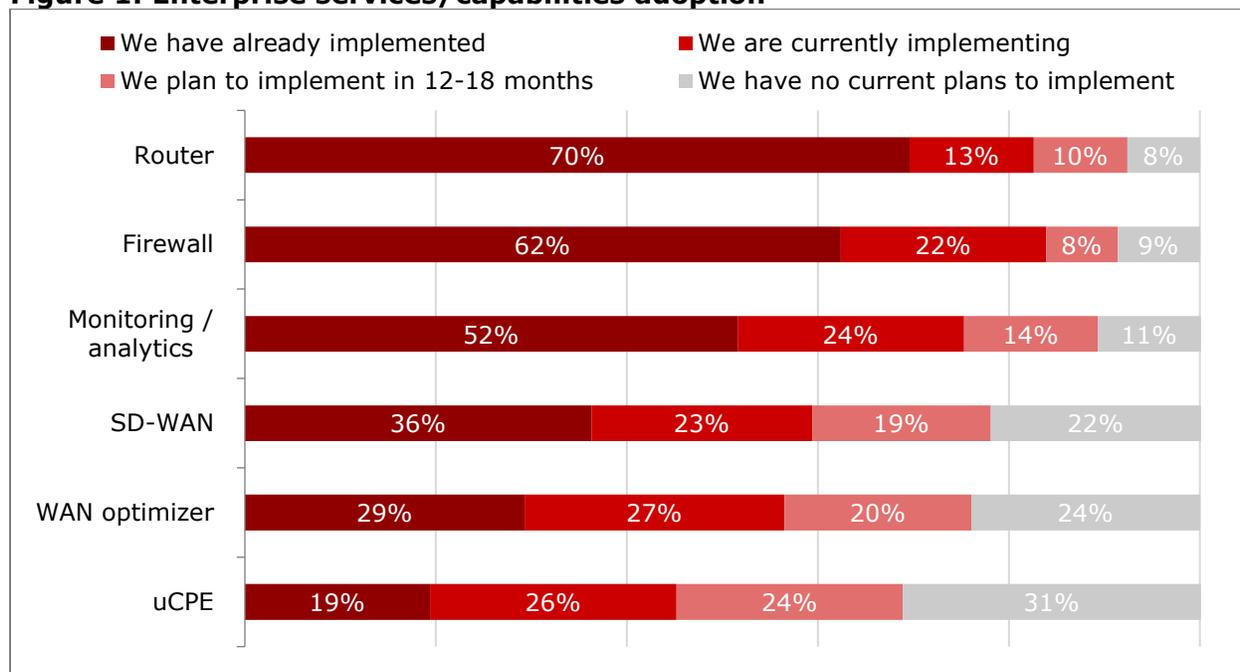
One of the hallmarks of the natural evolution path of on-premises services is the expansion beyond traditional staples, such as firewalls and routers. This expanded implementation scope, as shown in **Figure 1** below, includes programmable services, such as a software-defined wide area network (SD-WAN) and uCPE.

The top three capabilities "already implemented" on-premises include a router (70%), firewall (62%), and monitoring/analytics (52%). These are core functions, as further reinforced by the small percentage of respondents (8–11%) that indicated they "have no current plans to implement."

Still, as also depicted in **Figure 1**, the adoption of advanced on-premises functions is on the rise. Of these, the leader based on "already implemented" status is SD-WAN (36%), followed by WAN optimizer (29%) and uCPE (19%).

Looking forward, based on "currently implementing" and "plan to implement in 12–18 months" responses, even the bottom two (uCPE and WAN optimizer) have substantial support. By the end of the next 18 months, 76% and 69% of enterprises, respectively, plan to have implemented a WAN optimizer and uCPE.

**Figure 1: Enterprise services/capabilities adoption**



Question: What services/capabilities do you support or plan to support on-premises? (n=91-93)  
 Source: Heavy Reading

Support of these advanced on-premises services can be realized using four distinct implementation options:

- Purchase as a managed service
- Purchase the capability from a vendor and manage internally
- Purchase the capability from a service provider and manage internally
- Use a mix of approaches

As shown in **Figure 2** below, the first three options all have considerable support on a specific core function basis. For example, the largest group range (26–39%) aligned with the vendor purchase and in-house management option. This was followed by the managed services option (16–29%), and then the service provider purchase and in-house management option (13–26%).

The hybrid mix of approaches option garnered a lower range of support (8–14%). This data confirms enterprises are leaning toward a single versus multiple option strategy to meet their on-premises services demands.

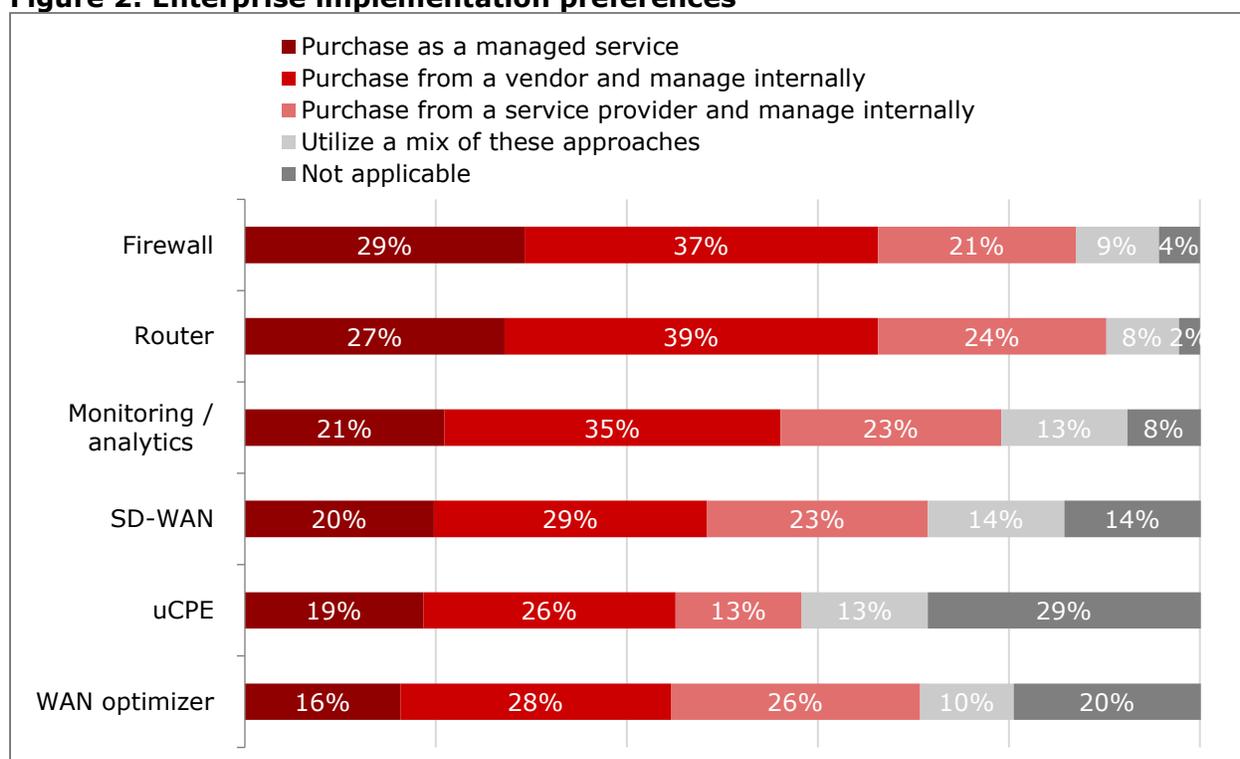
Overall, while roughly a third of the implementation responses favor the vendor purchase option, the data confirms that all the functions (firewall, router, monitoring/analytics, SD-WAN, uCPE, and WAN optimizer) have considerable momentum to be delivered via a managed services model.

Firewall (29%) and router (27%) are the top two leading capabilities. The top ranking of these two capabilities was not surprising because these two functions had established themselves as network essentials well before the shift to the virtualized cloud commenced.

Interestingly, the largest group of enterprise respondents preferred to purchase network capabilities from the vendor and manage with in-house resources. While there are likely several factors in play, Heavy Reading believes more enterprises feel that using a vendor and managing with in-house resources gives them greater control over the rollout of these still relatively new technologies.

An additional SD-WAN and uCPE consideration is that due to increasing levels of hardware and software openness, it is now possible to implement SD-WAN capabilities on uCPE, which is well-suited to a vendor delivery model.

**Figure 2: Enterprise implementation preferences**



Question: What is your preferred approach for implementing the following capabilities on-premises? (n=91-92)

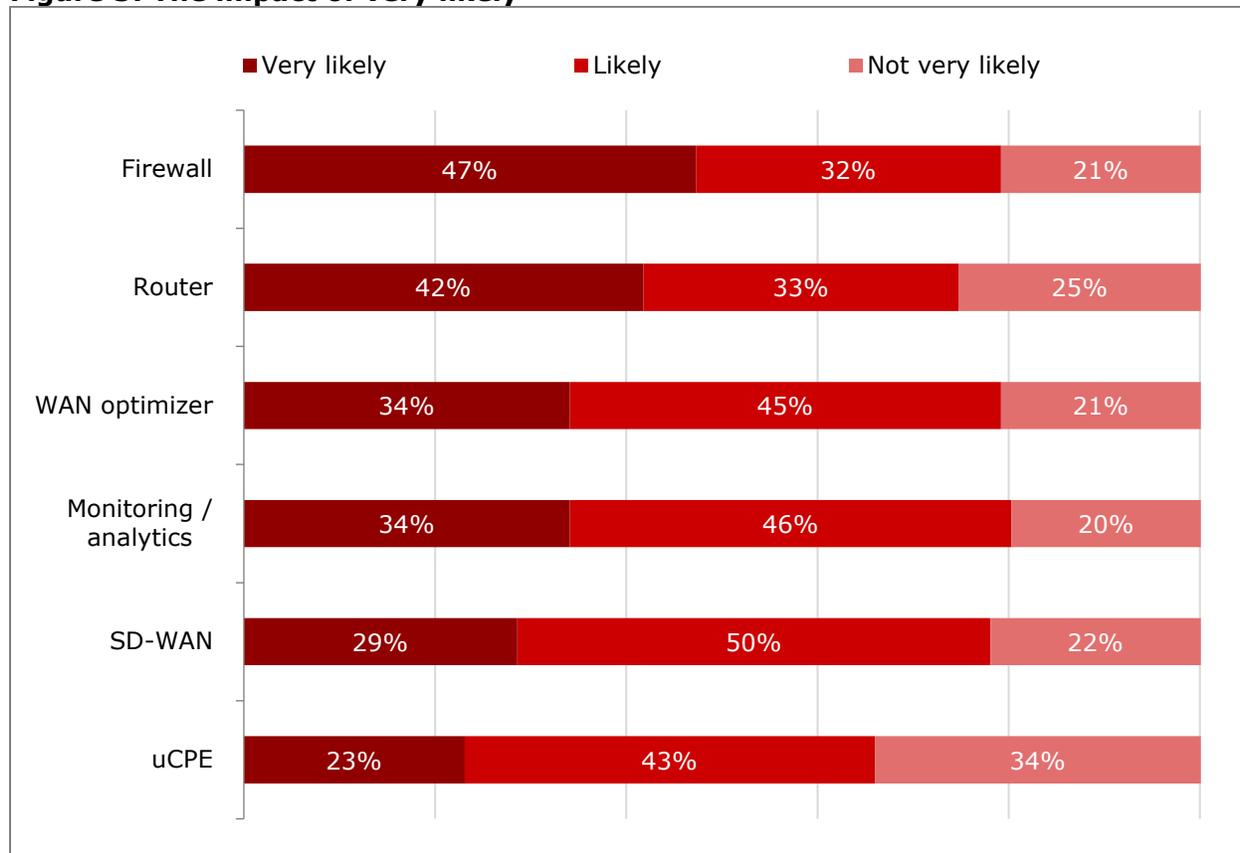
Source: Heavy Reading

Although more enterprises have implemented the vendor direct purchase model than the managed services model, **Figure 3** below confirms the managed services model continues to gain momentum across the board. As a proof point, only 20–34% of those not using managed services for specific core network functions indicated they were “not very likely” to start using managed services in the near future.

In contrast, 23–47% were “very likely” while 32–50% were “likely” to implement managed services. Although this data translates to strong support for the adoption of managed services for all the core services, the top two traditional vendor direct purchase services—firewall (47%) and router (42%)—were also “very likely” to migrate to managed services.

The data reinforces just how powerful the momentum to shift to managed services has become for all services’ capabilities, including SD-WAN, which leads the field with the highest number of “likely” response rates (50%).

**Figure 3: The impact of very likely**



Question: If you are not currently using a managed services provider for these services, how likely are you to do so soon? (n=91)

Source: Heavy Reading

The data presented in this section of the white paper is significant because it validates that on-premises services innovation continues to focus on the delivery of advanced high value enterprise services.

Additionally, the data trends capture that while a range of services delivery implementation options are valid, the managed services-based delivery model continues to gain momentum.

This is good news for service providers currently selling on-premises managed services and a call to action for those service providers planning to enter the managed services market.

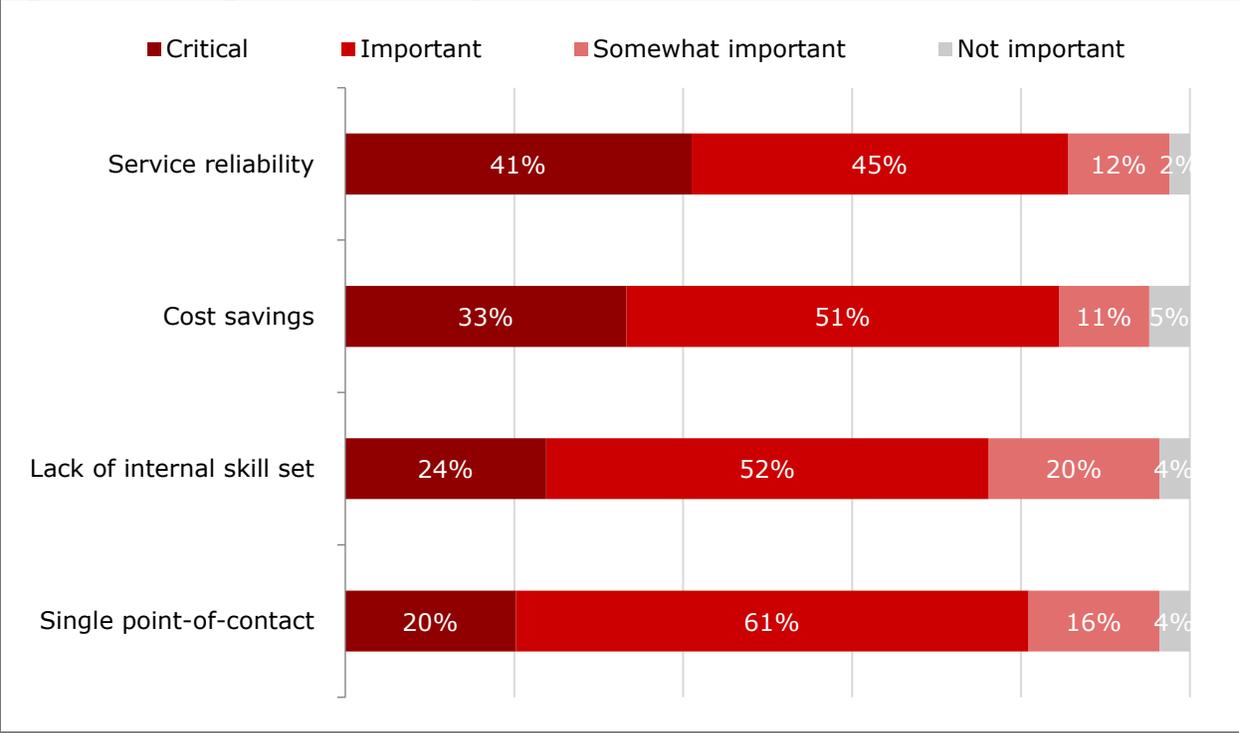
# MANAGED SERVICES ADOPTION ATTRIBUTES

Success for those service providers that sell on-premises managed services or those that plan to enter the market will ultimately hinge on the perceived value proposition of the service offering. The question here is: What key attributes should enterprises consider when they assess the value of managed on-premises services versus managing the service with internal resources?

As shown in **Figure 4**, based on “critical” inputs, the leading consideration was service reliability (41%), followed by cost savings (33%), lack of internal skill set (24%), and single point-of-contact (20%).

The message here is clear: enterprises are balancing several considerations, ranging from in-house skill availability to the unrelenting drive to reduce costs while trying to improve service reliability.

**Figure 4: Managed services adoption attributes**



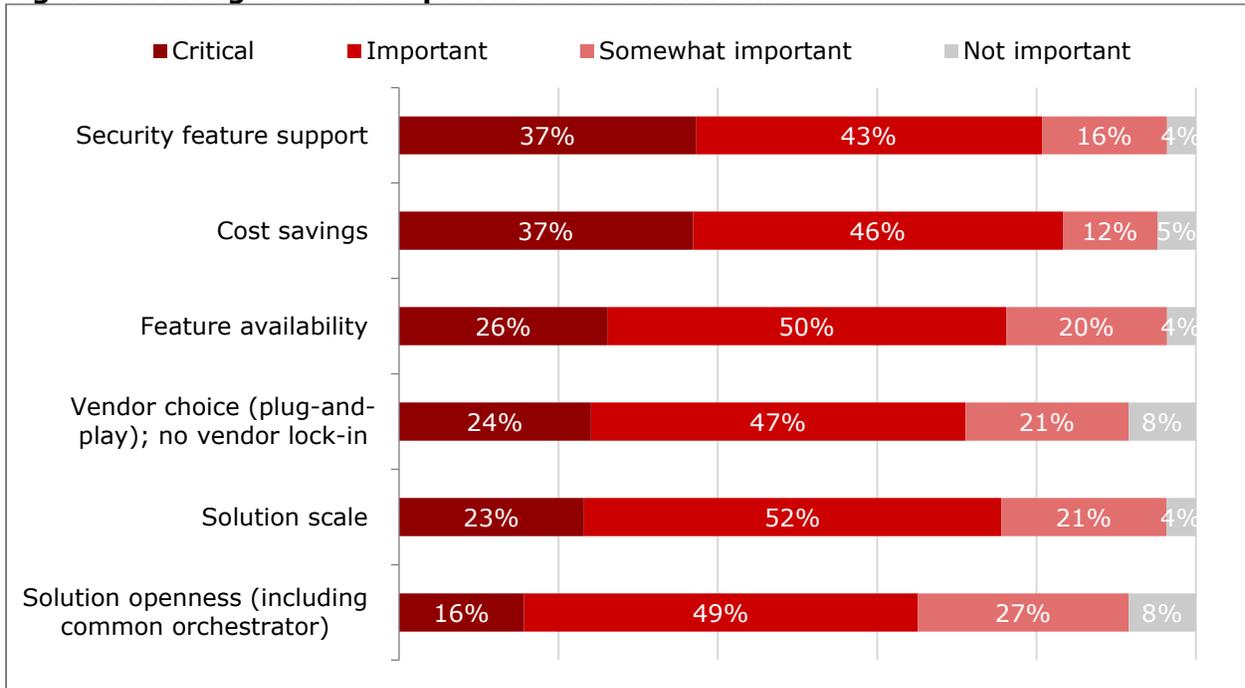
Question: How important are the following attributes in the decision to purchase a managed service vs. supporting the service with in-house resources? (n=83-84)  
 Source: Heavy Reading

Achieving meaningful cost savings is also a key consideration in selecting a managed services provider. As shown in **Figure 5** below, the two leading criteria based on “critical” inputs are security feature support and cost savings (both 37%).

Still, it is also important to document that other attributes based on these same “critical” inputs wield considerable impact in the managed services provider selection process. These include feature availability (26%), vendor choice (24%), and solution scale (23%).

These data points confirm that service providers must execute on several levels to be successful in the managed services marketplace. This includes the delivery of cost-effective, secure, scalable, and reliable solutions that avoid vendor lock-in. To meet these requirements will demand a high level of programmability from the vendor solutions they integrate into their services catalog.

**Figure 5: Managed services provider selection attributes**



Question: How important are the following attributes when selecting a service provider for a managed service? (n=82-84)

Source: Heavy Reading

The data points in this section of the white paper validate that managed services providers' execution strategies must empower cost savings for their enterprise customers without compromising security.

Moreover, the data quantifies that managed services providers' solutions must also be designed with feature availability and scale in mind. To accomplish this mandates that the managed services portfolio is flexible and open enough to avoid vendor lock-in, which reinforces the point made previously that the solutions a vendor integrates into its portfolio must be highly programmable.

In many respects, this data is reflective of the industrywide trend to adopt pure software solutions at the enterprise edge and in the core that leverage flexibility and software reuse. The goal is to lower operational costs while enabling the implementation of a programmable security framework.

---

## THE RISE OF uCPE

Service providers must deliver on many levels to be successful in the on-premises managed services marketplace. This includes the delivery of cost-effective, secure, scalable, and reliable solutions that avoid vendor lock-in.

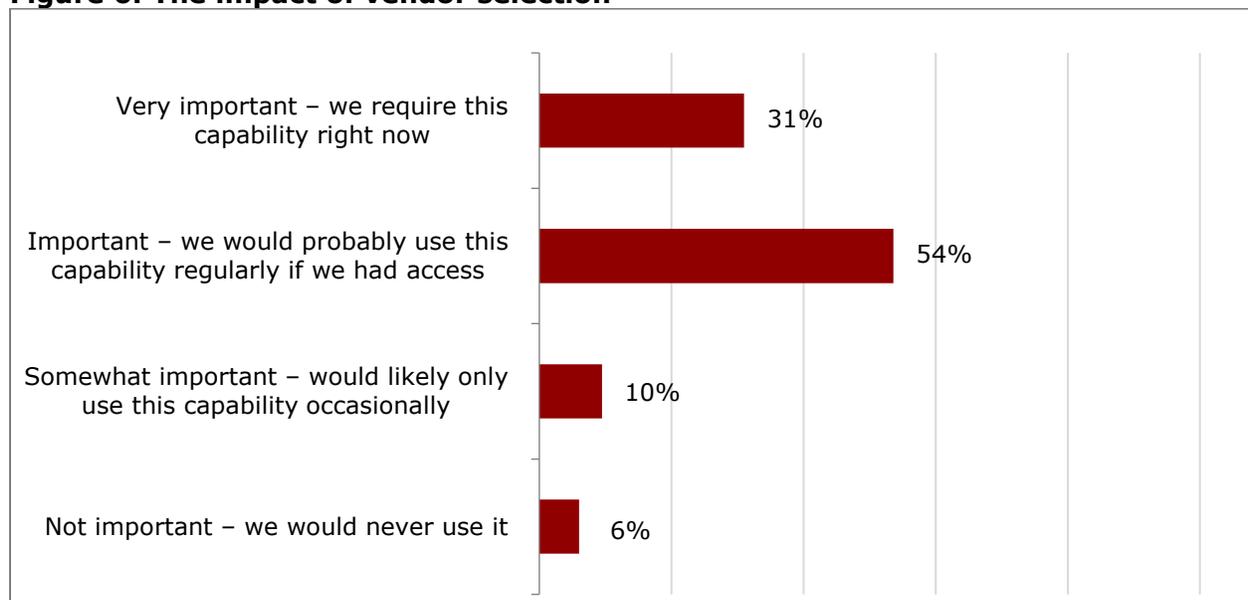
However, the on-premises marketplace is extremely competitive. Going forward, it is clear that *future* success in meeting customer demand will also hinge on even greater flexibility of choice, service reliability, security, and cost efficiency.

The importance of flexibility in a vendor selection context is captured in **Figure 6**. As shown, 85% of enterprises believe it is either “very important” (31%) or “important” (54%) that they can select vendors for specific on-premises services/capabilities they purchase within a managed services arrangement.

This input confirms that the adoption of a more programmable model will enable specific enterprises to create tailored uCPE managed services. In turn, these services will leverage the power of service virtualization to support unrestricted vendor selection on a uCPE platform.

For managed services providers, the programmability of uCPE therefore represents an opportunity to further differentiate their managed services portfolios from those of their competitors to both grow market share and reduce churn.

**Figure 6: The impact of vendor selection**



Question: How important is it that your managed services provider allows you to select specific vendors for on-premises network functions? (n=84)

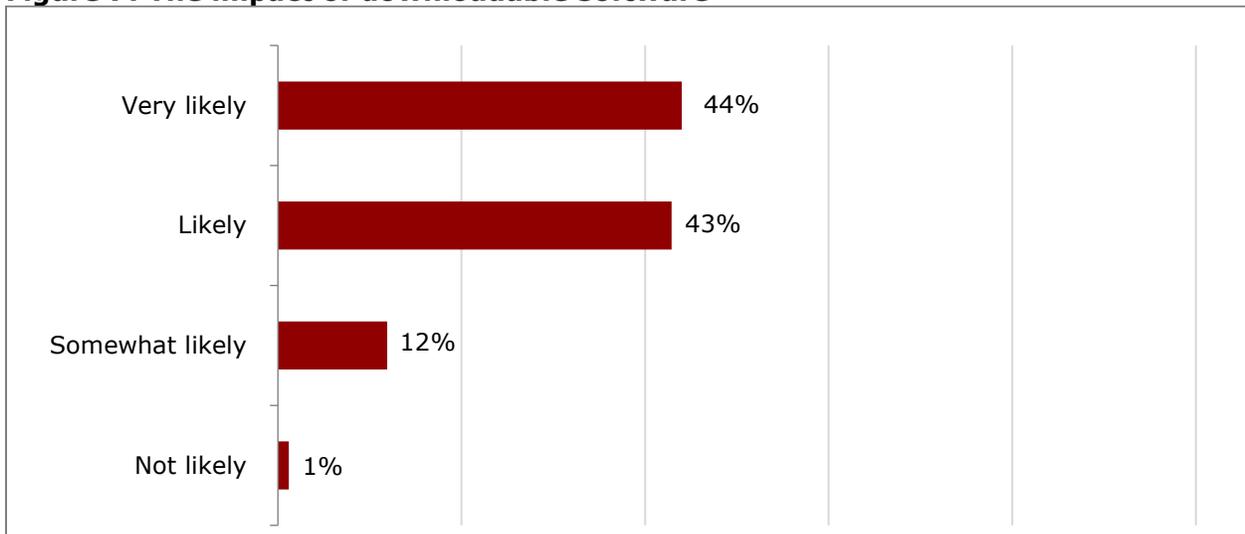
Source: Heavy Reading

---

Flexibility will also drive additional revenue. For instance, as shown in **Figure 7**, more than 8 out of 10 survey respondents (87%) would be “very likely” (44%) or “likely” (43%) to increase their purchase of on-premises managed services if they could simply download software. Doing so would enable them to avoid the complexities associated with integrating a new appliance.

The strong showing of downloadable software confirms that the next wave of on-premises managed services innovation will leverage software flexibility to enhance the uCPE model value proposition. It also reinforces the need for managed services providers to continue to evolve their software-based service portfolio to minimize service delivery complexity.

**Figure 7: The impact of downloadable software**



Question: How likely would you be to increase your purchase of on-premises managed services if you could simply download software and not have to deal with the complexities associated with integrating a new appliance? (n=84)

Source: Heavy Reading

## A CALL TO ACTION

The research contained in this white paper validates that the on-premises uCPE-based market is robust. It continues to transition to a fully programmable fabric that allows vendors or managed services suppliers to deliver a broader range of high value differentiated, scalable, and secure services.

This means that on-premises managed services providers’ service delivery strategies must continue to evolve to seamlessly support programmability, scale, security, and vendor choice to fuel additional market momentum.

In order to meet end-user requirements, Heavy Reading believes managed services providers must institute a call to action based on the principles and strategies illustrated in **Figure 8**.

**Figure 8: uCPE managed services execution: Call-to-action principles and strategies**

Requirement	Principle	Execution strategy
Portfolio vendor flexibility	Software programmability	Use cloud-based software reuse principles to enable onboarding of vendor virtual network functions (VNFs) without restriction.
Appliance avoidance	Software download	Transition uCPE from an appliance with embedded software to a software download model that avoids the need to link software to a new appliance.
Cost avoidance	Harness automation	uCPE service delivery will continue to face the need to reduce costs and automation will play a role. Automation can drive down cost by simplifying processes and leveraging a more intelligent interface that enables end users to self-provision high value uCPE managed services.
Security in an unsecure world	Security as a differentiator	Enterprise customers put a heavy emphasis on security when selecting uCPE managed services providers. This provides an upsell opportunity and a strong differentiator that managed services providers can use in conjunction with other principles, such as software download and software programmability, to differentiate their services.
The unlimited future of feature availability	Any service on any edge device	Continue to focus on a uCPE managed services portfolio that does not assume a fixed number of services, but rather, remains open to implementing new services based on market trends using any service on any edge device model.

Source: Heavy Reading