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ISSUE PAPER

TRUE COST OF OWNERSHIP FOR UNIFIED COMMUNICATIONS

How Vendor Selection Impacts ROI

By Robin Gareiss
President, Nemertes Research

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True Cost of Ownership for Unified Communication
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Compass Direction Points:

- **IP Telephony costs down.** Capital and operational costs have dropped, reflecting more competition and shorter learning curves, respectively. Those evaluating true costs over multiple years and basing vendor decisions upon those figures must carefully assess the components of ongoing operational costs.
- **ShoreTel, Avaya, Interactive Intelligence, Cisco (in order) cost least.** This year, these four providers are below median for first-year, on-premises IP telephony costs.
- **Cloud is an investment.** Many IT leaders believe they will save immediately when moving to the cloud. For small organizations, that's typically true, but for midsize and large organizations, cloud will cost more in the first two years—and for good reason.

Executive Summary

Nemertes' annual study on IP Telephony/Unified Communications (UC) real-world Total Cost of Ownership finds organizations spending less on their on-premises IP telephony and UC deployments, driven by extreme competition between vendors, which are offering previously unseen prices for capital and licensing, and by improved knowledge among IT staffs. ShoreTel posts the lowest first-year and operational costs for on-premises IP telephony and the lowest first-year, operational and implementation costs for on-premises UC. What's more, when viewing five-year TCO among all vendors with enough responses to be counted individually, ShoreTel has the lowest costs.

Though nearly 75% of organizations provide IP telephony from on-premises deployments, about 84% are considering or already using the cloud. Today, about 29% of companies already deliver IP telephony and 25% deliver UC from the cloud. We expect these figures to grow moving forward.

The Research Project

Nemertes interviewed 26 IT leaders and surveyed an additional 238 to gather data points on IP telephony and UC. We focused on their primary providers, though if our interview participants had equal rollouts of more than one vendor, we gathered data on all. We evaluated both on premises and cloud deployments. Nemertes collected data and conducted calculations to gather the following cost metrics:

For On-Premises Deployments
- *Capital cost per endpoint*: Includes PBX, endpoint devices and licenses, servers, other hardware. In some cases, bundled licenses include certain UC apps
  - = Total capital costs / number of endpoints
- *Implementation cost per endpoint*: Includes staff time and third-party consultants and integrators
  - = ((Staff time * loaded hourly rate)+3rd party costs)/ number of endpoints
- *Operational cost per endpoint*: Includes staff time, equipment maintenance, 3rd party managed services, training and certification
  - = ((Number of FTEs * average annual loaded salary) + equipment maintenance + managed services + training/certification) / number of end points

For Cloud Deployments

- _Capital cost per license_: Includes endpoint devices and licenses, servers, other hardware purchased up front as capital.
  - o = Total capital costs / number of licenses
- _Implementation cost per license_: Includes staff time and third-party consultants and integrators
  - o = ((Staff time * loaded hourly rate)+3rd party costs)/ number of licenses
- _Operational cost per license_: Includes any monthly service fee, plus staff time, equipment maintenance (if applicable), 3rd party managed services, training and certification
  - o = (Monthly service fee + (Number of FTEs * average annual loaded salary) + equipment maintenance + managed services + training & certification) / number of licenses

For IP telephony costs, we asked IT professionals to isolate IP telephony costs from UC apps. In many cases, organizations had rolled out IP telephony separately from their UC deployment. Where they were integrated from the same provider, the IT professionals separated capital and licensing costs, and they estimated what percentage of implementation and operational costs went toward IP telephony vs. UC.

For UC costs, we gathered which applications were deployed and used as part of their rollouts. We are therefore able to show mean cost per app, which helps level-set the costs by number of apps in use.

Research Findings: On-Premises IP Telephony

Overall, on-premises IP telephony costs declined by 30% this year. The median first-year cost—which includes capital, implementation, and first-year operations—across all companies in 2014 was $935 per end unit; in 2015, it's $717. First-year costs for four vendors—ShoreTel, Avaya, Interactive Intelligence, and Cisco—are less than median. NEC, Unify, Alcatel-Lucent, Mitel, and Microsoft have costs greater than median. (Please see Figure 1.)

Not all metrics that comprise first-year, on-prem IP telephony costs are falling. Capital and operational costs declined year over year by 46% and 22%, respectively, while implementation costs increased by 32%. Implementation increased because IT staffs are spending more time on initial planning, engineering, and implementation driven by the need for more integration. Capital declines reflect a more competitive market for licensing, software, and hardware. Reduced operational costs signal a shorter learning curve for IT staffs. Microsoft is most notable here. In the past few years, its operational costs have been significantly higher than the competition. Though Microsoft's overall operational costs for all companies, all sizes, remain high at $350 per end unit, Unify actually posts the highest overall operational costs this year, at $361 per end unit.

First-Year Costs, IP Telephony 2015

ShoreTel: $566
Avaya: $605
Interactive Intelligence: $683
Cisco: $711
NEC: $800
Unify: $805
Alcatel-Lucent: $814
Mitel: $817
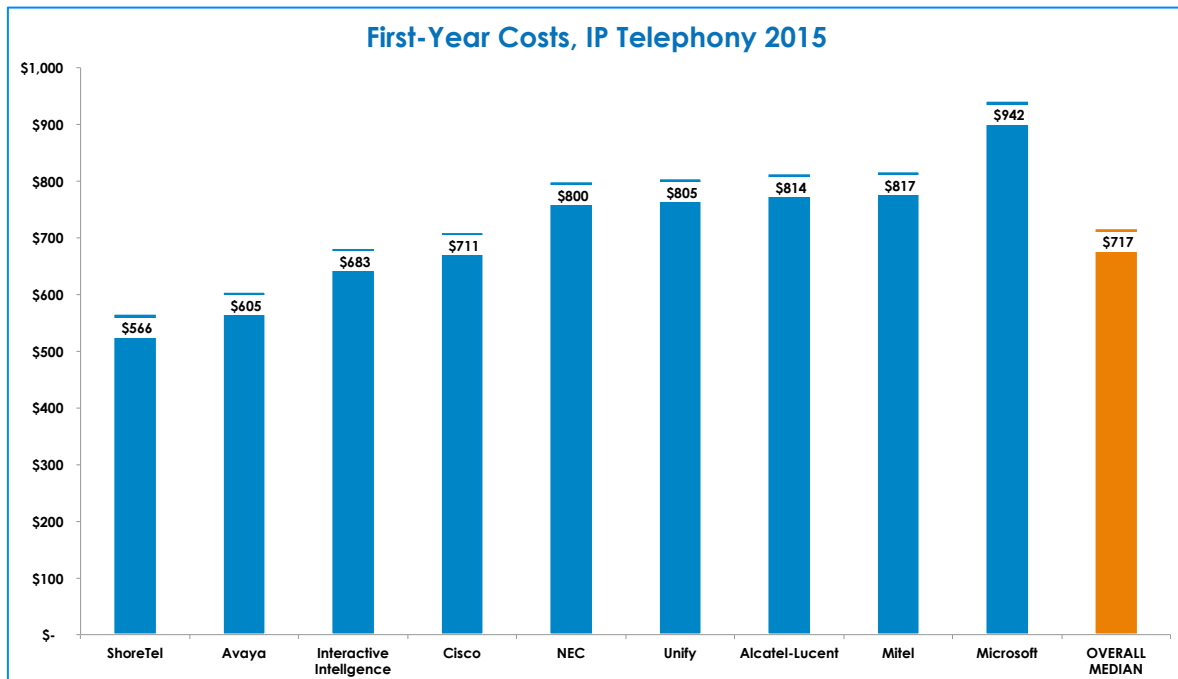Microsoft: $942
OVERALL MEDIAN: $717

Figure 1: First-Year Costs, IP Telephony

Obviously, the cost per end unit varies by the size of the rollout. First year, median costs for rollouts with fewer than 1,000 endpoints are $975, but are $529 for those with more than 1,000. Figure 1 shows all costs for all sizes of rollouts, providing a decent benchmark for rough-order-of-magnitude budgeting, but not accurate enough for a detailed and specific cost model.

Still, when evaluating costs in more detail by number of endpoints, ShoreTel maintains its position as lowest cost across all size bands Nemertes evaluated, and the same four vendors that are below median first-year cost in Figure 1 maintain that status, in general, in most other size bands. No single vendor is lowest or highest across the board in all three categories (capital, implementation, and operational). But the key category when evaluating the real-world findings is the ongoing operational costs. Capital and implementation are one-time costs, typically applicable to the first one to three years of deployment for a midsize or large deployment. Very large deployments can go on for years, but even so, companies only pay once per endpoint for capital and implementation. Operational costs continue year after year. In this year's study, ShoreTel has the lowest operational cost for both size bands measured, and Microsoft has the highest.

Of course, when conducting a technology and vendor evaluation, organizations should evaluate many factors, including feature/functionality, customer service, security, existing staff expertise, and more. But when isolating a cost evaluation, Nemertes

recommends considering vendors 1.) with costs generally below median; and 2.) with the lowest operational costs. These figures serve as benchmarks, and each company's true costs will vary based on the following:

- How successfully they negotiated capital and licensing costs
- How successfully they negotiated third-party implementation costs, in addition to their own expertise to assist with the implementation
- The condition of the existing environment: Is there a lot of work to do with upgrades? Is it a completely new vendor and technology that requires a steep learning curve?
- The expertise of the IT staff or managed service provider.

True Cost of Ownership

In evaluating on-premises IP telephony costs, most organizations assess costs over a five-year period. Nemertes conducted a five-year analysis for three sizes of companies, using data gathered from companies in those size bands in our research project. Figures 2-4 show the results of this analysis.
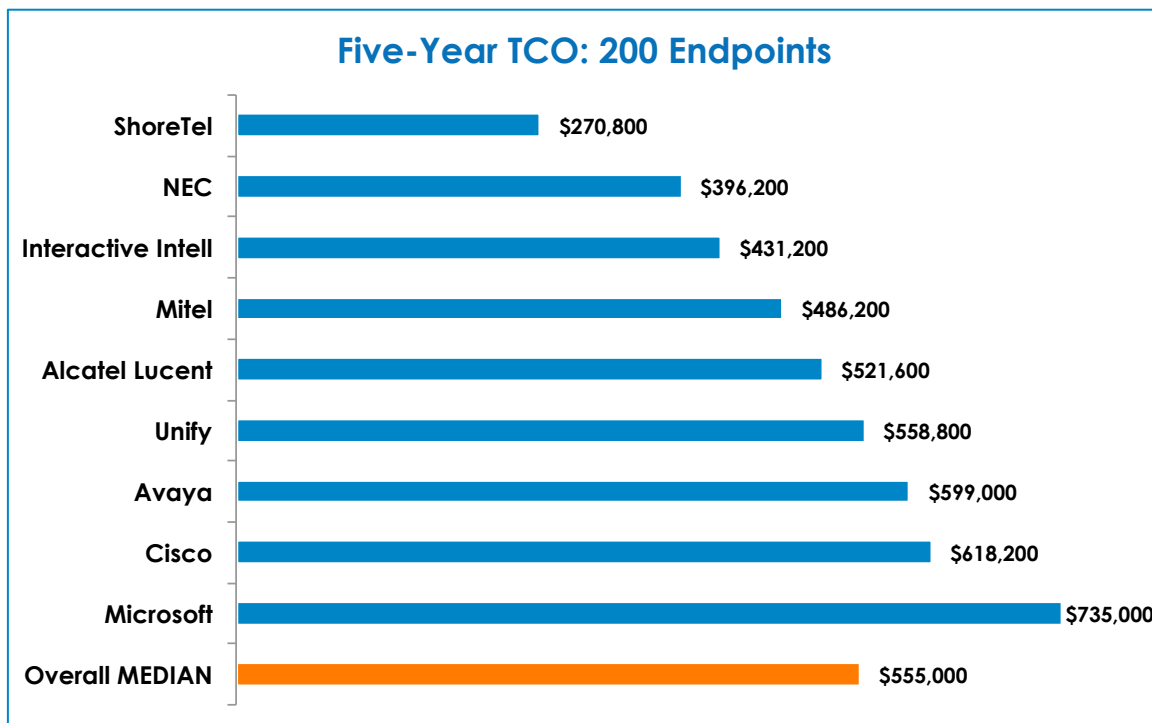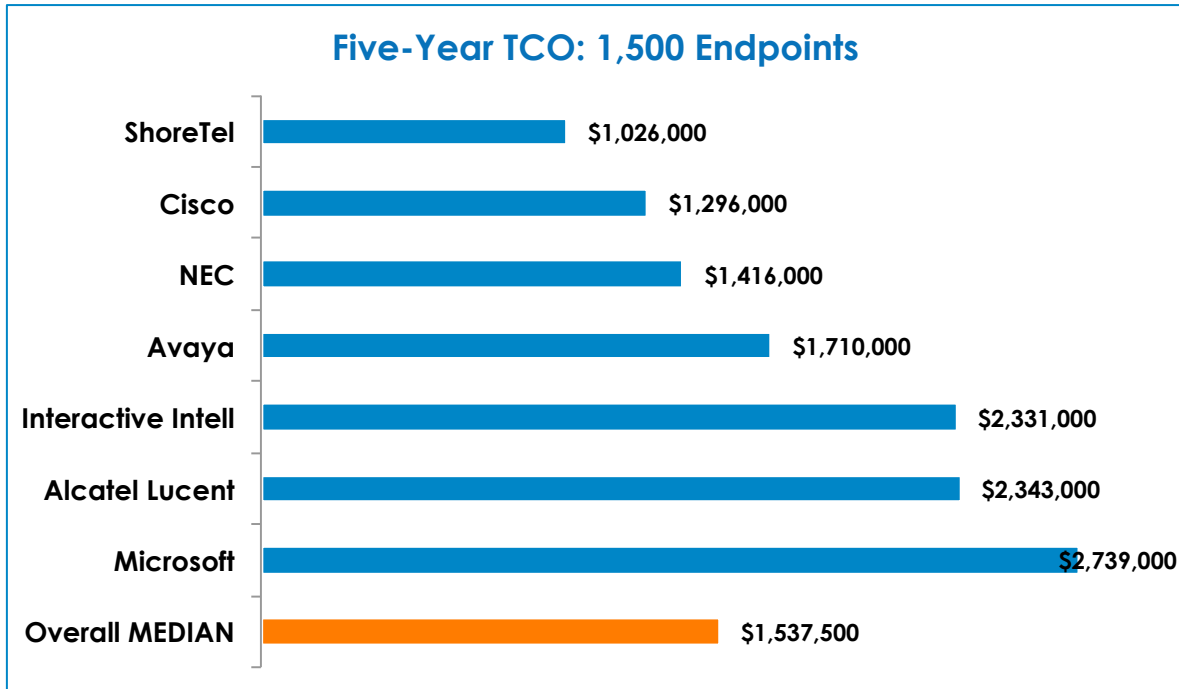

Five-Year TCO: 200 Endpoints

Vendor	Cost
ShoreTel	$270,800
NEC	$396,200
Interactive Intell	$431,200
Mitel	$486,200
Alcatel Lucent	$521,600
Unify	$558,800
Avaya	$599,000
Cisco	$618,200
Microsoft	$735,000
Overall MEDIAN	$555,000

Figure 2: Five-Year TCO for 200 Endpoints

Five-Year TCO: 1,500 Endpoints

ShoreTel	$1,026,000
Cisco	$1,296,000
NEC	$1,416,000
Avaya	$1,710,000
Interactive Intell	$2,331,000
Alcatel Lucent	$2,343,000
Microsoft	$2,739,000
Overall MEDIAN	$1,537,500

Figure 3: Five-Year TCO, 1,500 Endpoints

Five-Year TCO: 10,000 Endpoints

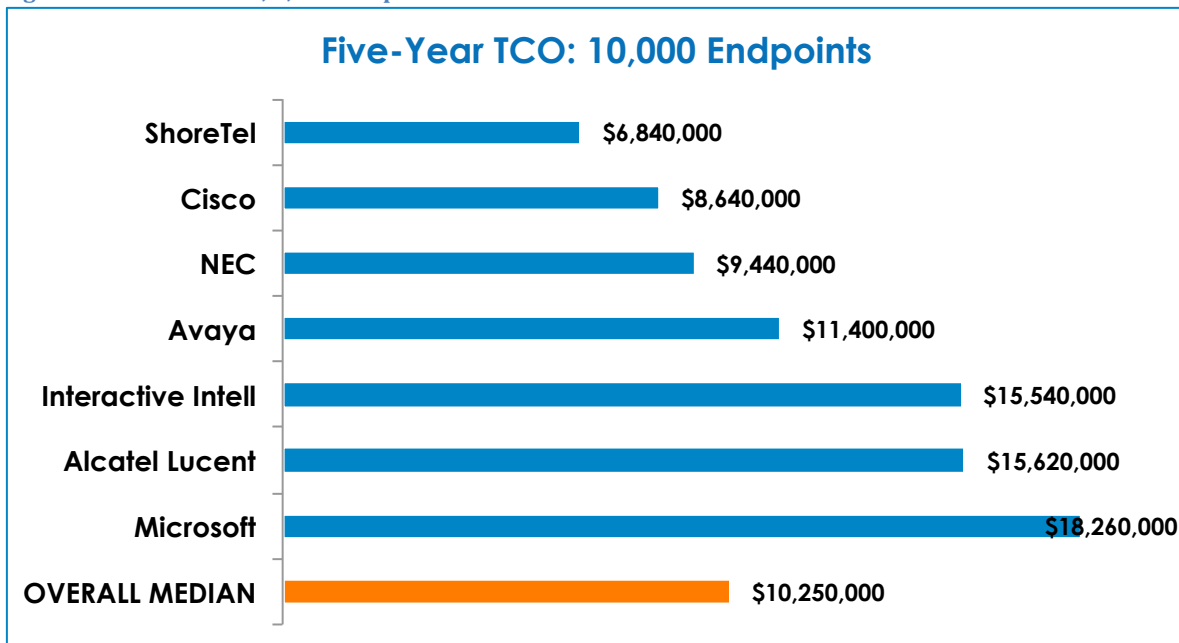|	
ShoreTel	$6,840,000
Cisco	$8,640,000
NEC	$9,440,000
Avaya	$11,400,000
Interactive Intell	$15,540,000
Alcatel Lucent	$15,620,000
Microsoft	$18,260,000
OVERALL MEDIAN	$10,250,000

Figure 4: Five-Year TCO, 10,000 Endpoints

For the TCO analysis, we factored initial per-end-unit capital and licensing costs, based on the actual prices companies are paying in our research. As stated, actual costs per company will vary based on negotiation skills, VAR specials, and IT staff expertise. We then add five years worth of operational costs (which include staffing,

maintenance, managed services, and training/certification). We do *not* include costs for the WAN/LAN, management tools, or UC licenses—or any costs for capital upgrades that may happen during the five-year period.

In all size scenarios, ShoreTel is the least expensive, followed by NEC for 200 endpoints, and Cisco for both 1,500 and 10,000 endpoints. Microsoft is most expensive in all scenarios, driven primarily by operational costs, even though these have been declining in the past three years. Although Microsoft makes initial licensing appealing to its enterprise customers, the ongoing opex brings costs up over a five-year TCO analysis.

Research Findings: Cloud IP Telephony

Most organizations are now doing something with cloud IP telephony. That "something" ranges from full deployment to evaluation. Only 16% say they have no plans. (Please see Figure 5.)

Cloud IP Telephony Plans

Planning for 2017 or later 5%
Planning for 2016 9%
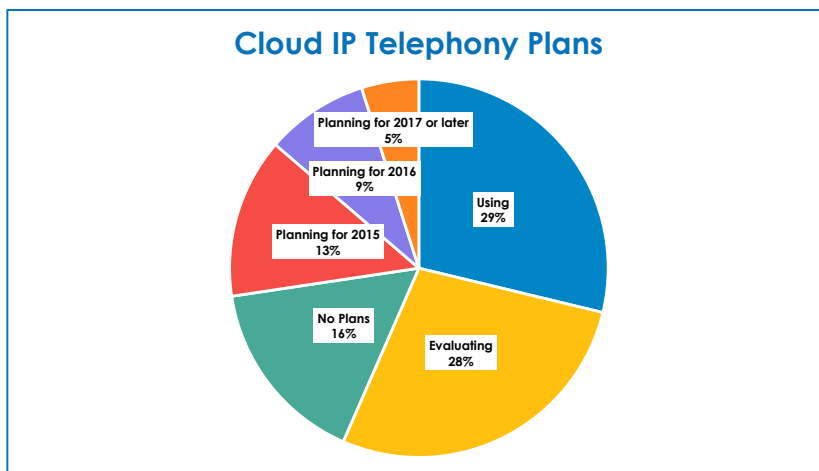Planning for 2015 13%
No Plans 16%
Using 29%
Evaluating 28%

Figure 5: Cloud IP Telephony Plans

On average, companies spend $19.83 per month per license on basic cloud IP telephony service, which includes voice only. Add additional features, including voicemail, audioconferencing, Web conferencing, and the monthly per-user cost increases to an average of $37.50. This does not include other features, such as operator assistance, integration with enterprise apps or mobile extensions. It's important to note that some organizations start with a cloud IP telephony solution and then add additional collaborative applications, crossing the line into a unified communications solution.

Research Findings: Unified Communications

In our interviews and surveys on "Unified Communications," we asked about UC suites—or integrated UC apps from a single provider. Though most companies (57%) cite a "strategic" UC provider, few actually only use one provider. They typically use multiple functions from the strategic provider and augment it with apps from other providers.

As with cloud IP telephony, few organizations have no plans for cloud UC. Only 16.6% of companies have no plans. In the cloud, companies are spending $15.44 per month, per license, on average, for UCC, for an average of 4.08 applications, including

Web/audio/video conferencing, instant messaging, presence, email/calendar, but not IP telephony.

IT leaders are devoting resources to cloud UC deployments because they are in the spotlight right now. If they fail, future movements to the cloud for other applications will face incredible scrutiny. Consequently, IT leaders are focused on:

- Developing a strong relationship with the cloud provider. It takes time to establish processes for communications, set expectations, and discuss priorities and strategies to ensure the provider and customer work as a team.
- Training employees to actually use the UC apps. Nothing would be worse for the future of cloud delivery than for the CFO to review the budget and note a sizable sum of money going toward cloud UC—with few employees using it.
- Troubleshooting and integrating with existing apps. If the cloud UC solution doesn't work properly or can't integrate with other cloud or on-premise apps, the rollout will fail. So, IT is focused on these goals, as well.

On-Premises UCC		
UCC Strategic Provider	Opex Per Endpoint	Implementation Per Endpoint
ShoreTel	$ 55.83	$ 88.10
Microsoft	$ 176.58	$ 150.11
Verizon	$ 197.81	$ 345.92
Cisco	$ 210.61	$ 237.92
Combination	$ 275.64	$ 150.92
AT&T	$ 280.17	$ 182.46
Avaya	$ 291.04	$ 174.32
IBM	$ 440.35	$ 383.00
MEDIAN	$ 224.00	$ 234.00
Opex includes staffing, mainenance, managed services, training for on-prem or cloud solution		

Figure 7: On-Premises UCC Costs

Most organizations continue to run on-premises UC deployments. Figure 7 shows the operational and implementation costs per end unit for UCC on premises deployments. ShoreTel, Microsoft, Verizon, and Cisco are below median for operational costs ($224 per end unit), while ShoreTel, Microsoft, Avaya, and AT&T are lower than median for implementation ($234 per end unit). As with IP telephony, ShoreTel has, by far, the lowest cost for operational ($55.83) and implementation costs ($88.10). ShoreTel's lower operational costs are driven by lack of spending on managed services and training/certification. Its customers also spend less on internal staffing. Further, ShoreTel implementations take less time (and thus cost less) than competitors in our research sample.

Conclusion and Recommendations

The IP telephony and UC environments are changing rapidly. Organizations increasingly are moving to or evaluating the cloud for some or all locations. We anticipate a long period of mixed/hybrid environments, with combinations of on-premises and cloud deployments mixed in with lingering TDM telephony. At the same

time, demands will increase for integration with a growing number of collaborative and social media apps.

IT leaders must have a good handle on costs and cost structures, and a dynamic model that makes it easy to adjust inputs to always have an up-to-date picture of the true cost of ownership. For now, on-premises IP telephony and UC deployments are decreasing in price, while the total costs for cloud are more than most are anticipating. That's OK. It's following the normal path of a new technology or technology delivery and requires the appropriate resources to ensure success.

Nemertes recommends the following:

- When running a cost model, factor five years out. This will show how costs change as the IT staff gains expertise. Particularly in cloud environments, the operational costs should drop as employees are better trained, kinks are worked out of the systems, and the cloud provider steps up to be a true partner.
- Negotiate hard with providers, particularly for on-premises solutions. They want your business and are willing to offer low initial capital and licensing costs. Beware, though. They likely will try to make up the difference with higher maintenance costs or additional professional services.
- Leverage Nemertes' cost model data, which provides detail on the crucial cost metrics—implementation and operational costs. It's relatively straightforward to gather initial capital cost data through RFPs. It's not easy to get implementation and operational data without actually using the product or service. This is the data Nemertes has gathered, so be sure to use it.

About Nemertes Research: Nemertes Research is a research-advisory and strategic-consulting firm that specializes in analyzing and quantifying the business value of emerging technologies. You can learn more about Nemertes Research at our Website, www.nemertes.com, or contact us directly at research@nemertes.com.