A Forrester Total Economic Impact™
Study Commissioned By Microsoft
July 2017

The Partner Opportunity For The Modern Desktop

A Total Economic
Impact™ Partner Opportunity Analysis

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ABOUT FORRESTER CONSULTING

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Business Opportunity

Total five-year gross margins (present value) from managed services:

$48.1 million

Year 5 practice gross margin:

27%

Year 5 practice operating margin:

14%

Executive Summary

Widespread business upgrades to Windows 10 Enterprise, in conjunction with converging customer, market, and technology trends, are enabling a host of annuity revenue opportunities for Microsoft partners ready to make the transition to a solutions-focused, relational business model. While professional services, including assessments, proof of concepts (PoCs), pilots, and full deployments, will see strong demand over the next three to four years, vanishing migration revenue will force traditionally product- and project-focused systems integrators, licensing solution providers (LSPs), and value-added resellers (VARs) to evolve their business models toward fully managed services and solutions. Furthermore, the broader Modern Desktop opportunity, composed of Windows 10 Enterprise, Office 365 Professional Plus, System Center Configuration Manager (SCCM), Intune, and Azure AD products and services, along with modern Windows 10 devices, enables myriad multiyear recurring revenue opportunities for partners of all types and sizes. The Modern Desktop opportunity is empowering partners to better engage with existing and new customers to increase profits and create long-lasting customer relationships.

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study to examine and demonstrate the business opportunity and return on investment (ROI) Microsoft partners may realize by developing or expanding their practice areas to include comprehensive Modern Desktop managed services. The purpose of this study is to provide partners with a framework to evaluate the potential business opportunity of building a comprehensive Modern Desktop practice by delivering a diverse range of managed and bundled solutions delivered as a service, professional services, value-add software solutions, and Microsoft stack technology solutions.

To better understand the revenues, margins, expenses, and risks associated with a Modern Desktop managed services practice, Forrester interviewed 10 existing partners with multiple years' experience delivering Modern Desktop professional services and managed services.

Partner Revenue And Margin Opportunities

The table below shows the risk- and present-value adjusted revenues and gross margins available to Microsoft partners at Year 5 of the analysis, at which point the partner's overall revenue opportunity and revenue mix has shifted heavily toward its portfolio of managed services. This revenue opportunity analysis, built on a composite partner representative of the partner interviews, is intended to be used as a framework for partners to understand the total business potential associated with their Modern Desktop customer base. The services and solutions below are ordered in chronological order based on their sequence in a typical customer's journey to Windows 10 and are not based on their contribution to partner profitability.

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Five-Year Financial Summary (Risk- And PV-Adjusted)

ROI
104%

Total gross margins (PV)
$66.4 million

NPV
$33.8 million

Payback
16 months

- **Windows 10 professional services and consulting.** Full-scale Windows 10 deployment initiatives generated multiple professional service and consulting project opportunities for partners. In virtually all cases, the customer journey to Windows 10 began with an upfront strategic consulting and Windows 10 pilot project, where the partner would assess the customer's applications, build a future-state strategy, and validate the business case around Windows 10 and Modern Desktop solutions. Strategy, assessment, and pilot engagements naturally led to full-scale Windows 10 deployment engagements, and often, end-to-end managed services and bundled solutions delivered as a service.

- **Modern Desktop managed services.** Our partner interviews revealed that the convergence of multiple technological and customer dynamics is catalyzing the adoption of end-to-end managed services and bundled solutions delivered as a service around the Modern Desktop opportunity. In response, partners indicated that they were working quickly to build and package a robust portfolio of managed services, and bundled solutions delivered as a service, to meet a variety of organizational need levels and price points. These managed and bundled services often included a combination of fully managed services, along with Microsoft stack and proprietary value-add software subscriptions, helping partners bolster margins and create ongoing annuity streams.

- **Complementary Microsoft stack license channel margin and implementation services.** Partners may provide Windows 10, Secure Productive Enterprise (SPE), and other Microsoft stack software licenses, along with a variety of hardware, including laptops, phones, and tablets. Subscription licenses and hardware were increasingly being packaged into broader PC-as-a-service, desktop-as-a-service, and subscription plus end-to-end managed services offerings, which partners indicated were all seeing growing demand from their customers. Lastly, partners offered a variety of professional and managed services to help plan, prepare, and stand up complementary software solutions across the Microsoft stack.

- **Value-add intellectual property (IP).** Many partners built proprietary software and solutions around common customer pain points and business challenges. They could package and sell these solutions to multiple customers running Windows 10. A common offering was a Windows 10 migration and acceleration product that automates and streamlines the Windows 10 migration process. Several independent software vendors (ISVs) had built solutions that capitalize on Windows Hello and APIs. Ultimately, the Windows 10 release cadence allowed partners and ISVs to align their solutions with the Windows updates schedule, enabling them to transition to a subscription-based, recurring revenue model.

Year 5 Risk- And PV-Adjusted Revenue And Margin Opportunity (USD '000)

REVENUE CATEGORY	YEAR 5 REVENUES	YEAR 5 GROSS MARGINS	YEAR 5 GROSS MARGIN %
Managed services	$85,383	$28,754	34%
Professional services	$1,594	$530	33%
Complementary Microsoft licenses (LSP and CSP) and implementation services	$27,831	$1,751	6%
Value-add IP	$300	$240	80%

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The partner pro forma revenue opportunity chart below shows the potential revenue and gross margin opportunities available to Microsoft partners that build managed services practices around the Modern Desktop market opportunity, as applied to the composite partner. It depicts the holistic business opportunity for partners that offer end-to-end, comprehensive Modern Desktop products, services, and complementary solutions.

Modern Desktop Partner Pro Forma Revenue Opportunity: Five-Year Analysis USD ('000)

REF.	REVENUE CAT.	METRIC	CALC	2017	2018	2019	2020	2021
PL1	Managed services revenue	Managed services contract recurring revenue		$664	$14,485	$46,602	$71,140	$85,383
PL2		Managed services recurring GM (risk-adjusted)		$189	$4,368	$14,431	$22,911	$28,754
PL3		Managed services recurring GM % (risk-adjusted)	PL2/PL1	28%	30%	31%	32%	34%
PL4	Prof. services revenue	Total professional services revenue		$5,025	$13,176	$18,960	$6,103	$1,594
PL5		Total professional services GM (risk-adjusted)		$904	$3,855	$5,886	$1,954	$530
PL6		Total professional services GM % (risk-adjusted)	PL5/PL4	18%	29%	31%	32%	33%
PL7	Microsoft stack license and services revenue	Total Microsoft stack license sales revenue		$819	$7,168	$17,490	$24,351	$27,187
PL8		Total Microsoft stack solution service revenue		$221	$1,590	$2,012	$1,509	$644
PL9		Total Microsoft stack license GM		$71	$445	$1,059	$1,407	$1,526
PL10		Total Microsoft stack solution service GM		$77	$556	$704	$528	$225
PL11		Total Microsoft stack license GM %	PL9/PL7	9%	6%	6%	6%	6%
PL12		Total Microsoft stack solution implementation service GM %	PL10/PL8	35%	35%	35%	35%	35%
PL13	Value-add IP revenue	Total ISV/proprietary value-add software revenue		$200	$1,625	$2,538	$1,075	$300
PL14		Total ISV/proprietary value-add software GM		$160	$1,300	$2,030	$860	$240
PL15		Total ISV/proprietary value-add software GM %	PL14/PL13	80%	80%	80%	80%	80%
PL16	Grand total	**Total all revenues**	**PL1+PL4+PL7 +PL8+PL13**	$6,929	$38,044	$87,602	$104,178	$115,109
PL17		**Total all gross margin**	**PL2+PL5+PL9 +PL10+PL14**	$1,441	$10,946	$25,169	$28,967	$32,816
PL18		**Total gross margin %**	**PL17/PL16**	21%	29%	29%	28%	29%

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Partner Investments

In addition to the direct delivery costs, such as delivery consultant and engineer salaries, which are included in the gross margin calculations in the Financial Analysis section of this study, interviewed partners made a number of investments to build out new practice areas and scale their Modern Desktop managed services practice. The expense analysis in the table below captures the investments made by the composite partner:

- **Staffing expenses.** These are incremental salary and human resource expenses for incremental account managers, presales engineers, and customer technical support professionals.
- **Marketing expense.** This is the incremental marketing spend associated with driving lead generation and building awareness of the partner's robust and growing portfolio of end-to-end managed services. For this analysis, we assumed marketing spend equated 6% of gross sales in 2017 and 2018, gradually declining to 3% of gross sales as the partner's managed services business became more mature.
- **Product and service research and development (R&D) expenses.** These are internal R&D expenses for the design and development of new managed services offerings and capabilities, value-add IP, and internal tools, templates, systems, and processes to expedite the delivery of the composite partner's growing services and solution portfolio.
- **Training expenses.** These are the expenses to provide ongoing Microsoft training to consultants, engineers, and sales staff.
- **General and administrative expenses.** G&A expenses are assumed to be 5% of gross sales annually.

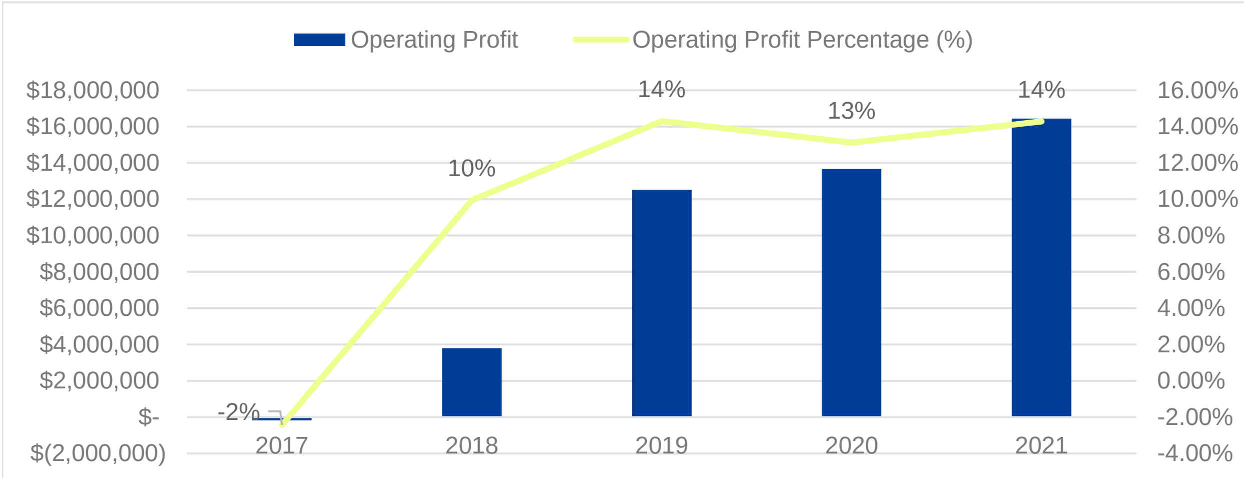
Expense Analysis USD ('000)

REF.	METRIC	CALC	Initial	2017	2018	2019	2020	2021
CST1	Staffing expenses	Gt		$558	$1,594	$2,294	$2,912	$3,565
CST2	Marketing spend	Ht		$416	$2,283	$3,504	$4,167	$3,453
CST3	Product and service R&D expenses	It	$1,323	$00	$279	$287	$296	$305
CST4	Training expenses	Jt		$67	$119	$151	$138	$160
CST5	General and administrative expenses	Kt		$346	$1,902	$4,380	$5,209	$5,755
CST6	Total costs	Sum(CST1:CST5)	$1,323	$1,387	$6,177	$10,616	$12,722	$13,239

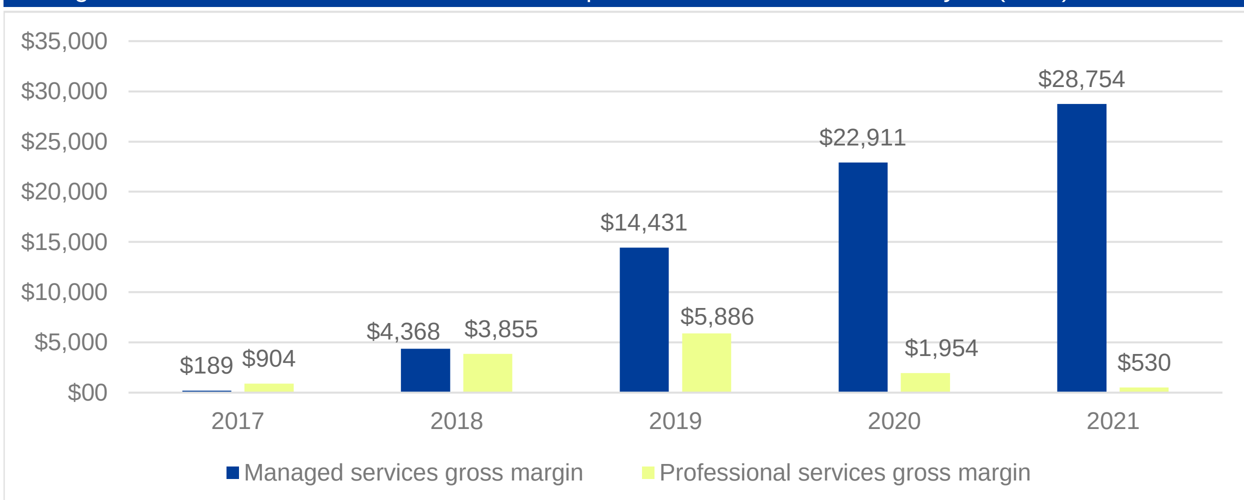
Partner Outcomes

Forrester's interviews with 10 existing partners and the subsequent financial analysis found that a composite organization based on these interviewed partners experienced benefits of $66.4 million over five years versus investment and overhead expenses of $32.6 million, adding up to a net present value (NPV) of $33.8 million and an ROI of 104%. As seen in the table below, by Year 5 of the analysis, the composite partner was generating 14% operating margins from its Modern Desktop practice. Lastly, as the composite partner's Windows 10 migration revenue peaked in the third year of the analysis, managed services became an increasingly critical component of the organization's business mix.

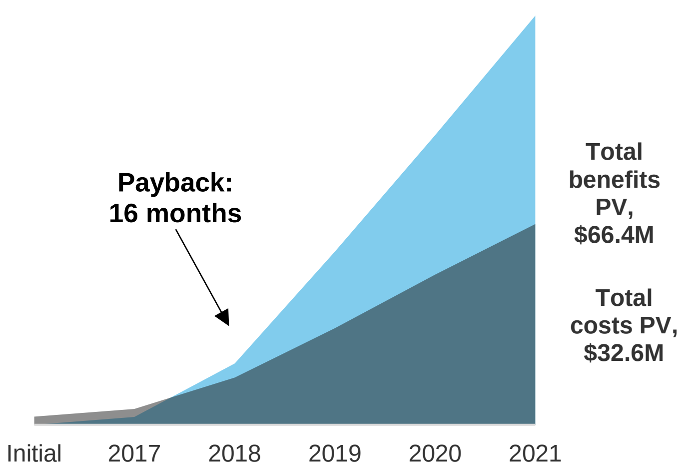
Operating Profit: Five-Year Analysis (USD)

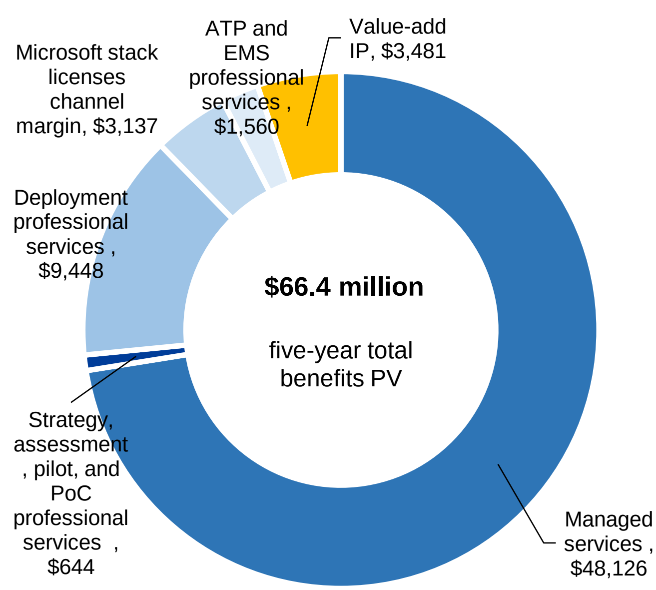


Managed And Professional Service GM For Composite Partner: Five-Year Analysis (USD)



Financial Summary





TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those partners building out a Modern Desktop managed services practice.

Forrester took a multistep approach to evaluate the business impact of Windows managed services for Microsoft Partners:

DUE DILIGENCE
Interviewed Microsoft stakeholders and Forrester analysts to gather data relative to Windows 10, Modern Desktop, and associated managed services.

CUSTOMER INTERVIEWS
Interviewed 10 partners selling Windows- and Modern Desktop-based services and solutions to obtain data with respect to costs, revenues, margins, and risks.

COMPOSITE PARTNER
Designed a composite partner based on characteristics of the interviewed organizations.

FINANCIAL MODEL FRAMEWORK
Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.

CASE STUDY
Employed four fundamental elements of TEI in modeling the business impact of Microsoft managed services: margins, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Microsoft and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in developing a Microsoft managed services practice.

Microsoft reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

Microsoft provided the customer names for the interviews but did not participate in the interviews.

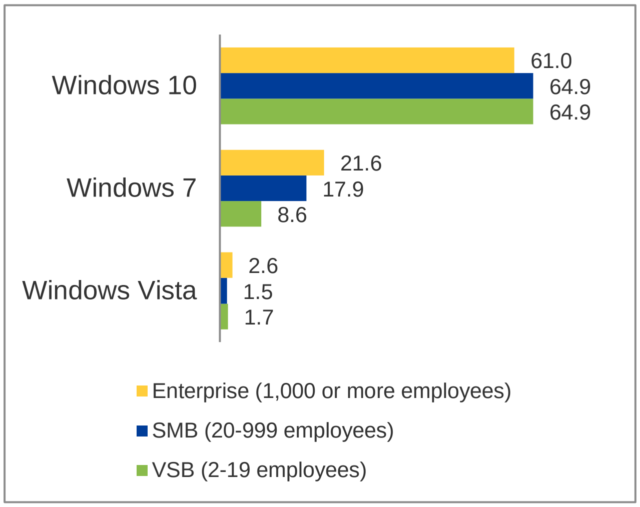
Market Insights: Driving Forces For Windows 10 Adoption

Windows 10 Business Adoption

Widespread interest and adoption in Windows 10 is creating business opportunities for Microsoft partners ready to make the transition from a transactional business model to an ongoing, relational business model. According to the Forrester Data Global Business Technographics® Infrastructure Survey, 2016, of technology decision makers, over 61% of newly purchased PCs during 2017 are expected to run Windows 10.[1] This finding was confirmed in interviews with Microsoft Partners, most of which indicated that they expect business adoption of Windows 10 to reach 80% to 90% by 2019. Interestingly, Forrester's Business data from the same survey also indicates that technology decision makers overwhelmingly plan to deploy Windows 10 widely within their organizations, with 67% of surveyed technology decision makers indicating that they intend to deploy Windows 10 to many or most of the firm's employees, relative to the 15% who said they plan to issue Windows 10 to specific roles or departments.

Front and center in the customer's decision process of whether to migrate to Windows 10 are the new security and privacy features integrated into the operating system. Fifty-one percent of technology decision makers surveyed by Forrester indicated that security and privacy will be the key reason they upgrade to Windows 10. Partners indicated that virtually all their customers who had upgraded to Windows 10 were capitalizing on the new security features integrated in the OS.

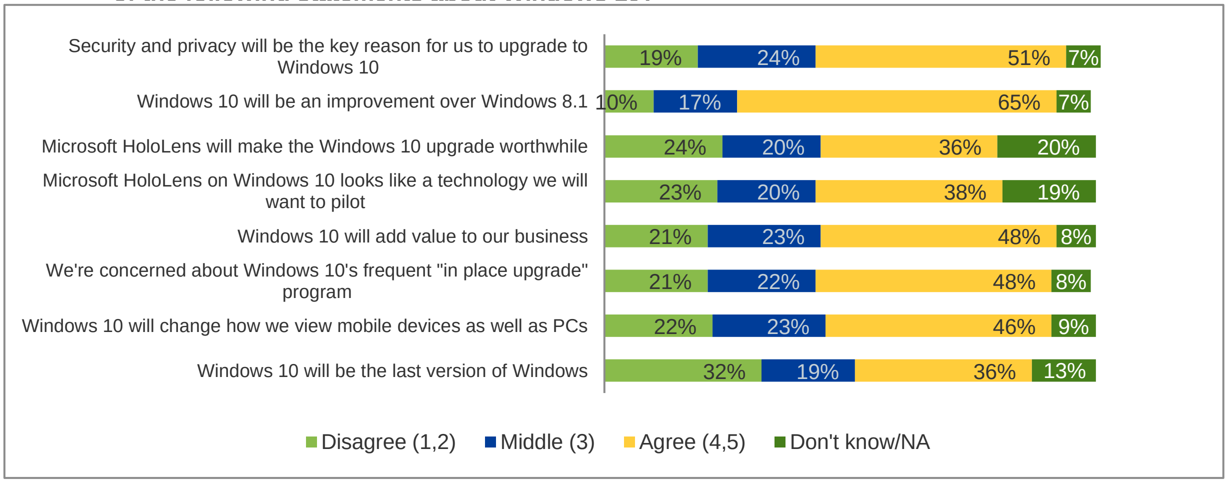
"Now thinking about the new PCs your firm plans to purchase over the next 12 months, what percent of these newly purchased PCs do you expect to run the following operating systems?"



Base: 1,098 infrastructure technology decision-makers whose firms prioritize personal device technology initiatives
Source: Forrester Data Global Business Technographics® Infrastructure Survey, 2016

> "That's something we are seeing. We're not seeing clients upgrade and not use the new security features."
>
> *Director, alliances, NA partner*

"Windows 10 is Microsoft's flagship product for PCs. How much do you agree with each of the following statements about Windows 10?"



Base: 1,098 infrastructure technology decision-makers whose firms prioritize personal device technology initiatives
Source: Forrester Data Global Business Technographics® Infrastructure Survey, 2016

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Another clear driver of Windows 10 upgrades is the need to refresh devices. While devices typically run on three- to five-year refresh cycles, partners interviewed for this study noted that customers that want to take full advantage of the Windows 10 enhanced security and productivity features, or get ahead of the Windows 7 end-of-support date in January 2020, will likely need to expedite their device refresh cycle and acquire a modern device. Additionally, 65% of technology buyers expect Windows 10 to be an improvement over Windows 8, while 48% of technology buyers believe Windows 10 will add value to their business.

Our partner interviews revealed that professional services, ranging from assessments to PoCs, pilots, and full deployments, will see strong demand over the next three to four years. Over the next several years, Modern Desktop, which includes Windows 10 Enterprise, Office 365 Professional Plus, System Center Configuration Manager (SCCM), Intune, Azure AD, along with modern Windows 10 desktops and tablets, will enable a host of multiyear recurring revenue opportunities, including managed and bundled solutions delivered as a service. Partners that capitalize on this large market opportunity will be able to create new recurring, high-margin revenue streams, while creating long-lasting customer partnerships.

Customers are increasingly demanding more comprehensive managed services from their business partners. Today's business customer is less interested in one-and-done projects; increasingly, customers are looking for ways to offload cumbersome IT activities or find ways to leverage expert partners to increase their business agility. These customer dynamics are being compounded by general customer unpreparedness related to continuous management of their OS. As one customer put it: "They ask us to give them guidelines and put plans in place to help them get to Windows 10. That is opening the door for a managed service conversation. Often we hear customers tell us that they don't have the resources to do this on a continuous basis, and they want us to manage this for them."

As Windows 10 migrations peak in coming years, driven by end of support in January 2020, forward-thinking global systems integrators (GSIs), national systems integrators (NSIs), Microsoft Licensing Solution Partners, and VARs will transition their go-to-market model focused on one-off project revenue, enterprise agreements, and device and peripherals sales to a cloud-first model with a business outcomes-based value proposition focused on delivering business efficiency, agility, and profitability.

"We see clients looking at device refresh and modern devices as part of the strategy for Windows 10 adoption. You know, I've got a number of situations where our clients are looking to mobilize the field in a more effective way and doing that with Windows 10 devices."

Director, global partner

"Our customers have also demanded more comprehensive strategic ways to service them. They're less interested in one-and-done projects and more with managed services or ways that they can completely offload components that used to be internally driven."

CTO, NA partner

Analysis

Interview Highlights

For this study, Forrester conducted 10 interviews with existing Microsoft partners with experience building, selling, and delivering Windows 10 and Modern Desktop managed and professional services. Forrester interviewed presidents, CTOs, VPs, and directors at Microsoft partner organizations.

Partner Characteristics

The interviewed partners had the following characteristics in common:

- **Burgeoning managed services practices.** Faced with the prospect of disappearing migration and deployment professional services revenues, partners were moving swiftly to invest in building out managed services offerings and capabilities around Windows 10 and Modern Desktop.
- **Heavily involved in strategy, assessment, planning, and small-scale pilot engagements**. Partners were seeing significant professional services deal volumes in strategic consulting engagements and early-stage Windows 10 pilots, with expectations of strong deployment deal volumes in the coming years.
- **Building out domain expertise.** In order to differentiate their practices, partners were building out strong technical domain expertise, with end-to-end offerings around enterprise mobility, office productivity, security, and application development.

"Bundling everything into a service in a single contract that includes devices, management of those devices, application delivery, application packaging, and wraparound services to deliver experience are in growing demand."

Business partner manager, EMEA partner

Key Partner Challenges

The interviewed partners faced a set of common business challenges, including:

- **Shifting customer and market dynamics driving the need for a new, relational business model.** GSIs, NSIs, Microsoft LSPs, and VARs, whose legacy business was primarily focused on one-off professional service projects, resale of perpetual on-premises software licenses, and other transactional customer interactions, found themselves at an inflection point. With Windows 10 migration and deployment revenue expected to disappear in the coming years, and customers increasingly expecting end-to-end solutions rather than a hodgepodge of products and point solutions, partners needed to change their culture, vision, and strategy to adopt a cloud-first, managed services strategy.
- **Long, challenging sales cycles**. Partners noted that sales cycles tended to be lengthy, averaging three to six months for existing customers and six months to a year for new logos. These sales cycle challenges were often compounded by what partners labeled "Windows fatigue," where customers that had migrated to Windows 7 or 8 in recent years felt their operating system was good enough and couldn't justify the expense of moving to Windows 10 until end of support.
- **Convergence of multiple services and solutions into a single, valid value proposition.** While there was a natural customer journey to Windows 10, which began with a pilot and ended with fully managed services, customers were increasingly expecting a comprehensive solution provider from their business partners. This meant Microsoft Partners needed to create a single, comprehensive value proposition that resonated with prospects and customers alike.

"We are trying to converge our products and services into one single, valid proposition, and this is the concept of Smart Workspace. We can advise you, migrate the whole workspace, and we manage it on your behalf. That's the overall vision that we have, and this is where our customers and partners are expecting us to be."

Global business development director, global partner, industry

Partner Best Practices And Success Factors

In the face of evolving customer and market dynamics, partners made a series of strategic investments and business decisions in growing their Modern Desktop and associated managed services practice. During the partner interviews, Forrester discussed what best practices, strategies, and tactics partners employed in successfully building and scaling their Modern Desktop practices. Forrester identified the following key best practices:

> "I am hearing from our security practice folks that security is coming up more and more in conversations with prospects. We often start with an across the board security assessment engagement."
>
> *NA Partner*

- **Sell business outcomes by becoming your customer's trusted partner.** Partners were on a journey to transition from their legacy business and sales model focused on selling one-off engagements, enterprise agreements, and hardware to a cloud-first business model focused on selling end-to-end solutions that improve business efficiency, agility, and profitability. From a tactical standpoint, this meant that partners needed to clearly articulate their Microsoft technology stack knowledge and expertise and start the managed services conversation early in the sales cycle. Furthermore, partners needed to end their obsession with products and adoption, moving their focus to solving business challenges and pain points. Successful partners leveraged their relationships built during professional services engagements to spark an end-to-end services conversation.
- **Build Windows 10 expertise and develop a single, coherent value proposition.** Several partners noted that customers don't fully understand how disruptive Windows 10 will be for their organization. One partner indicated that it often heard back from customers who decided to manage their own Windows updates six months down the road, asking the partner to run and manage the updates for them. In addition, partners indicated that customers didn't fully grasp the new features and functionalities of Windows 10, particularly as it relates to the security features integrated into the OS itself. As such, partners had an opportunity to educate their customers, while creating long-lasting, profitable business relationships.

> "The biggest thing that customers don't understand today is what Windows-as-a-Service means and how disruptive that's going to be to their environment. So, they're not prepared to continuously manage a new operating system with us every six months."
>
> *Director, Alliances, Global Partner*

- **Build a diverse portfolio of managed services and bundled solutions to meet the unique needs of a diverse client base.** While most partners identified migration and deployment services as a near-term profit driver, all partners recognized that this revenue stream would soon disappear as organizations of all sizes move to Windows 10. As such, it was critical that partners build out managed services and bundled solutions at a variety of price points and service levels. However, a one-size-fits-all approach would leave a great deal of money on the table. As one partner put it, "Our larger customers who have their own internal teams are typically using us for advanced services or for new functionality, whereas our customers that are in the small business or lower midmarket range tend to be using us for either white glove support for specific individuals in the organization or fully managed services."
- **Make continual investment in training and R&D.** Partners made continual investments in developing tools, templates, and systems to streamline managed service delivery and provide customers with complementary value-add proprietary software solutions. Internally facing R&D investments enabled partners to streamline their service delivery and grow their service-line gross margins significantly. R&D investments in developing value-add IP enabled the organization to generate incremental high-margin revenue streams by attaching complementary software solutions to managed service deals.

Composite Organization

Based on the interviews, Forrester constructed a TEI framework, a composite Microsoft partner, and an associated business opportunity economic analysis. The composite partner is representative of the 10 companies that Forrester interviewed as part of this study. The composite partner organization is used to present the aggregate financial analysis in the next section. The composite partner that Forrester synthesized from the partner interviews has the following characteristics:

- It is a US-based organization with operations across North America and Western Europe, with an office in South Africa.
- As of 2017, the organization has a total of 100 customers, with 75% of its customer base in the small business segment, 20% in the middle-market segment, and the remaining 5% in the enterprise segment. The organization conservatively projects 5% annual growth in its customer base.
- The organization delivers professional and managed services, along with value-add proprietary and third-party software solutions.
- The partner has a background of being a Microsoft LSP; however, it has recently made the strategic decision to sell to its large business segment as a Microsoft Cloud Solution Provider (CSP) given the attractive partner margins.

Financial Analysis

COMPOSITE PARTNER REVENUE AND MARGIN OPPORTUNITIES

Total Margins (USD '000)

REF.	REVENUE CAT.	2017	2018	2019	2020	2021	TOTAL	PRESENT VALUE
Atr	Managed services	$189	$4,368	$14,431	$22,911	$28,754	$70,652	$48,126
Btr	Strategy, assessment, and pilot professional services	$330	$226	$180	$33	$00	$769	$644
Ctr	Deployment professional services	$574	$3,629	$5,706	$1,921	$530	$12,359	$9,448
Dtr	Microsoft stack licenses channel	$71	$445	$1,059	$1,407	$1,526	$4,508	$3,137
Etr	ATP and EMS professional services	$77	$556	$704	$528	$225	$2,092	$1,560
Ftr	Value-add IP	$160	$1,300	$2,030	$860	$240	$4,590	$3,481
	Total benefits (risk-adjusted)	$1,401	$10,525	$24,110	$27,660	$31,275	$94,971	$66,397

Managed Services

All partners interviewed for the study were actively building, selling, and marketing a wide range of end-to-end managed services and bundled solutions delivered as a service at various service levels and price points, to meet growing demand from their customers. While the maturity of each managed services practice varied across interviewed partners, partners recognized that managed services would be their greatest market opportunity in coming years.

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over five years, the composite organization expects risk-adjusted total benefits to be a PV of almost $66.4 million.

Our interviews revealed that partners offered several bundled solutions delivered as a service that served as the base for other Windows 10, Modern Desktop, and Microsoft stack managed services offerings, including Device-as-a-Service, Office 365-as-a-Service, and managed security services. Partners offered a variety of managed services on top of these bundled solutions, which ranged from Windows-as-a-Service, to premium fully managed desktop services. Managed and bundled services were generally priced on a per user, per month basis, with pricing for basic services starting around $20 per user, per month, growing to around $125 per user, per month for premium, fully managed desktop services. Attach rates varied significantly across service lines. Partners indicated that they could bolster their margins and create ongoing annuity streams by building and packaging bundled solutions coupled with value add managed services.

In modeling the revenue and margin impact of managed services for the composite partner, Forrester made the following assumptions:

- Managed services and bundled solutions delivered as a service fell into seven categories: 1) device-as-a-service; 2) Office 365 managed services; 3) security managed services; 4) Windows-as-a-service; 5) subscription plus silver-tier services; 6) subscription plus gold tier services; and 7) fully managed desktop services.
- The initial attach rates, per-user monthly pricing, and gross margins varied across managed services offerings and are reflected in the table below. Note that attach rates across all services categories grew significantly over the five-year analysis period as customer interest and adoption expanded.

› For security managed services, Forrester used the example a partner gave of charging $20 per user per month, as seen in the TEI case study titled, "The Partner Opportunity For Secure Productive Enterprise."[2] Attach rates were conservative, as security services were also included in subscription-plus and fully managed service offerings.

› Managed services contract revenue does not begin until month six of the first year of our analysis, due to the lengthy sales cycle associated with these types of services.

› Partners indicated that managed services churn rates were very low. As such, Forrester assumes an average annual revenue churn rate of 5%.

Year 5 Cumulative Risk- And PV-Adjusted Revenue And Margin Opportunity (USD '000)

MANAGED SERVICE OFFERING	YEAR 5 ATTACH RATE (OF TOTAL SEATS DEPLOYED)	PER USER MONTHLY PRICING	GROSS MARGIN	EXAMPLE MANAGED SERVICE COMPONENTS
PC-as-a-service penetration	20%	$40	15%	• Device, onsite delivery, technical support, configuration, break-fix
Office 365 managed services	5%	$30	25%	• Management of Office 365 updates
Security managed services	15%	$20	35%	• Security monitoring, alerting, and remediation.
Windows-as-a-service and life-cycle mgmt. (WaaS)	8%	$30	25%	• Manage bi-annual Windows 10 updates.
Subscription-plus silver-tier managed service plan	10%	$50	35%	• Modern desktop licenses (device not included), updates; technical support block plan
Subscription-plus gold-level managed service plan	10%	$99	45%	• Modern desktop licenses and devices; updates; 24x7 break-fix, and customer and technical support block plan
Fully managed desktop services	1.5%	$125	40%	• Premium devices, modern desktop licenses; security services; 24x7 break-fix; customer and technical support, complementary third-party apps

The managed services revenue opportunity will vary greatly based on how many total users there are, service attach rates, as well as what services are being offered by a given partner. To account for these risks, along with any overlap that may exist across these managed services lines, Forrester adjusted this benefit downward by 5%, yielding a five-year risk adjusted total PV of $48.1 million.

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

REF	METRIC	CALC.	2017	2018	2019	2020	2021
Managed Services: Calculation Table (USD '000)							
A1	Annual device-as-a-service revenue		$224	$4,218	$13,160	$20,058	$23,600
A2	Office 365 managed services revenue		$50	$1,058	$3,294	$4,176	$4,419
A3	Security managed services revenue		$56	$1,237	$3,956	$6,699	$8,870
A4	Annual Windows-as-a-service and life-cycle management services		$54	$1,193	$3,824	$5,858	$7,446
A5	Annual subscription plus silver-tier managed services plan revenue		$92	$2,191	$7,260	$11,517	$14,636
A6	Annual subscription plus gold-level managed services plan revenue		$177	$4,343	$14,379	$23,503	$29,864
A7	Annual fully managed desktop services plan revenue		$21	$669	$2,760	$4,373	$5,554
A8	Total cumulative managed services churn		$11	$423	$2,031	$5,043	$9,005
A9	Total annual managed services revenue (churn adjusted)	A1+A2+A3+ A4+A5+A6+ A7)-A8	$664	$14,485	$46,602	$71,140	$85,383
A10	Average managed services gross margin percentage (%)		30%	32%	33%	34%	35%
At	Managed services	A9*A10	$199	$4,598	$15,190	$24,117	$30,267
	Risk adjustment	↓5%					
Atr	Managed services (risk-adjusted)		$189	$4,368	$14,431	$22,911	$28,754

Professional Service: Strategy, Assessment, And Pilot Engagements

Our partner interviews revealed that their customers' journey to Windows 10 started with a strategic consulting, assessment, and advisory engagement, followed by a pilot with a subset of customers' users and enterprise applications. In these engagements, partners would analyze and assess each customer's application readiness and infrastructure, build a future-state strategy, and conduct a pilot to help validate the business case for Windows 10. While these engagements were not seen as a profit driver for partners, they naturally led into full-scale, higher margin Windows 10 deployment engagements.

> "In our upfront pilot projects, clients want to understand the new features of Windows 10. What might be the most appropriate for them? They want to build a future-state strategy. And then, the actual pilot is all about proving that to be real."
>
> *CTO, NA partner*

For the composite partner, the analysis assumes a varying number of deals and engagements across customer size segments over the five-year forecast. In modeling the revenue and margin impact of strategy, assessment, and pilot engagements for the composite partner, Forrester assumed the following:

- Fifty percent of small business segment customers engage the composite partner for strategy, assessment, and pilot engagements in 2017, with this figure growing to 100% of its Windows customers by 2019 of this analysis. Based on partner inputs, Forrester assumed that small business engagement revenue averaged $62,500 per project, which assumes a low-complexity environment.

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- Fifty percent of middle-tier business segment customers engage the composite partner for strategy, assessment, and pilot engagements in 2017, with this figure growing to all Windows customers by 2019. Forrester assumed that middle-tier engagement revenue averaged $75,000 per project.
- Forty percent of enterprise customers engage the composite partner for strategy, assessment, and pilot engagements in 2017, with this figure growing to all Windows customers by 2019. Forrester assumed that enterprise engagement revenue averaged $87,500 per project.
- Gross margins for these projects averaged around 10% and were often heavily subsidized by Microsoft and, in certain instances, the partner.
- All of the composite partner's customers are expected to complete their pilots by 2019, with the exception of several newly onboarded customers in 2020.

Over the five-year analysis period, strategy, assessment, and pilot engagement margins totaled a five-year PV of $644,000.

Professional Services: Strategy, Assessment, And Pilot: Calculation Table (USD '000)

REF	METRIC	CALC.	2017	2018	2019	2020	2021
B1	Number of net-new SMB strategy, assessment, pilot, and PoC		$2,375	$1,563	$1,250	$250	$0
B2	Number of net-new mid-tier strategy, assessment, pilot, and PoC engagements, per year		$750	$525	$375	$75	$0
B3	Number of net-new enterprise strategy, assessment, pilot, and PoC engagements, per year		$175	$175	$175	$00	$0
B4	Total strategy, assessment, pilot, and PoC professional services revenue	B1+B2+B3	$3,300	$2,263	$1,800	$325	$0
B5	Gross margin percentage (%)	10%	$00	$00	$00	$00	$0
Bt	Strategy, assessment, pilot, and PoC professional services	B4*B5	$330	$226	$180	$33	$0

Professional Service: Deployment Engagements

Following the upfront strategic consulting and pilot engagement, partners positioned themselves to win a larger, significantly more profitable deployment engagement. Partners indicated that while Windows 10 migration initiatives had become significantly less complex than Windows 7 and 8 migrations, end customers leveraged partners in the deployment process for their expertise in the new features and functionality of Windows 10, deployment automation efficiencies, change management expertise, and application assessment and refactoring capabilities.

Since the scope of a typical pilot engagement covered only a fraction of the organization's application environment, application compatibility and rationalization requirements were two significant factors that drove the average deal size of these engagements up and down. Due to these factors, partners indicated that deployment revenue generally was between two and 50 times the cost of the pilot for a given customer. Deployment project profitability was contingent on the partner's ability to thoroughly identify the migration risks during the upfront pilot engagement. The most profitable deployment engagements saw gross margins as high as 60%.

In modeling the revenue and margin impact of professional deployment services for the composite partner, Forrester made the following assumptions:

> "If we identify all of the problem applications through the proof of concept and the pilot, by the time we flip to actual deployments, we've mitigated a lot of our risks, so it can be extremely profitable."
>
> *CTO, NA partner*

- Our partner interviews revealed that the majority of clients today remain in the strategy, PoC, and pilot stage of their migration to Windows 10. As such, we conservatively estimated that 15% of the composite partner's small business Windows customer base would migrate to Windows 10 during 2017. In the middle-tier and enterprise segments, 2017 deployments were estimated at 10% of Windows customers. The vast majority of deployment projects are expected to be completed between 2017 and 2019.
- Across the small business, middle-tier, and enterprise customer segments, full-scale deployments grew over the five-year analysis period to 98% of all the composite partner's Windows customers, which assumes a very limited number of businesses would remain on a legacy, unsupported version of Windows after extended support for Windows 7 ends in January 2020.
- Average small business segment deployment engagement revenue was $187,500; average middle-tier business segment deployment engagement revenue was $600,000; and average enterprise segment deployment engagement revenue was $1,238,800. This represents three times, eight times, and 14 times the initial pilot engagement revenues for the small business, middle-tier, and enterprise customer segments, respectively.
- One hundred percent of the customer seats are migrated to Windows 10 within one year in both the small and middle-tier segments. For the enterprise segments, the migration process is assumed to take two years, with 50% of the organization's seats being fully deployed in each year.
- Gross margins on Windows 10 deployment engagements averaged 35%.

As seen in the table below, the composite partner's deployment revenue grows significantly between 2017 and 2019, dropping off sharply in 2020 and 2021, as most of the organization's installed base has fully deployed Windows 10. As mentioned earlier in the study, this drop-in deployment revenue coincides with a sharp increase in managed services revenue. It is important to note that deployment revenues and margins will vary significantly based on a number of factors, including the average rate per billable hour that can be charged to clients and the degree to which the partner can identify deployment project risks in the initial pilot project. To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a five-year risk-adjusted total PV of $9.4 million.

Professional Services: Deployment: Calculation Table (USD '000)

REF	METRIC	CALC.	2017	2018	2019	2020	2021
C1	Net-new SMB deployment engagement revenue		$1,125	$4,875	$8,063	$1,500	$375
C2	Net-new mid-tier deployment engagement revenue		$600	$4,800	$6,000	$1,800	$600
C3	Net-new enterprise deployment engagement revenue		$0	$1,239	$3,097	$2,478	$619
C4	Total deployment professional services revenue	C1+C2+C3	$1,725	$10,914	$17,160	$5,778	$1,594
C5	Gross margin percentage (%)	35%	35%	35%	35%	35%	35%
Ct	Deployment professional services	C4*C5	$604	$3,820	$6,006	$2,022	$558
	Risk adjustment	↓5%					
Ctr	Deployment professional services (risk-adjusted)		$574	$3,629	$5,706	$1,921	$530

Complementary Microsoft Stack Licenses Channel Margin And Implementation Services

There is an opportunity for partners to make incremental margin by selling Windows 10 Enterprise, Secure Productive Enterprise (SPE), and other Microsoft stack software licenses. The amount of margin that can be made by partners depends heavily on whether they are a Microsoft Licensing Solution Partner or Cloud Solution Partner (CSP). Microsoft LSPs typically make 3% margin on enterprise agreements, while CSPs make between 15% and

25% margin. Notably, Microsoft is considering raising the CSP model higher in the partner ecosystem, which may increase the profitability of CSP deals in the future.

In addition, partners offered a variety of professional services to help customers assess, implement, integrate, and deploy Microsoft solutions within their organization. Partners interviewed for this study indicated that these services were particularly prevalent for Microsoft's Advanced Threat Protection (ATP) and Enterprise Mobility and Security (EMS) solutions, and were generally seen as an upsell opportunity that could attach to a Windows 10 deal.

In modeling the business impact of these solution lines for the composite partner, Forrester made the following assumptions:

- Since many Windows 10 Enterprise and SPE licenses were often sold as part of a bundled managed services package, seats without managed services were included in this revenue category.
- Of these license sales, 60% were Windows 10 Enterprise only, while 40% were SPE licenses.
- Partners were only eligible for CSP margins for sales made to the small business customer segment, which consists of customers with 500 seats or less.
- The composite partner sold cybersecurity assessment and implementation engagements around ATP, which typically lasted approximately five to six weeks and averaged $60,500 in revenue per project.
- The composite partner also sold EMS implementation services, including significant architecture and engineering work. Projects averaged around nine weeks, involved a solution architect and senior engineering resources, and averaged $80,400 in revenue per project.
- ATP and EMS professional services generated gross margins of 35%.
- Over the five-year analysis period, total Microsoft stack channel margins yielded a total PV of $3.1 million, while total ATP and EMS implementation services margins yielded a total PV of $1.6 million.

Complementary Microsoft Stack License Channel Margin: Calculation Table (USD '000)

REF	METRIC	CALC.	2017	2018	2019	2020	2021
D1	CSP Windows 10 license annual gross sales (standalone)		$76	$378	$877	$1,110	$1,166
D2	LSP Windows 10 Enterprise license annual gross sales (standalone)		$126	$1,386	$3,427	$4,883	$5,525
D3	CSP SPE license annual gross sales		$224	$1,122	$2,603	$3,295	$3,460
D4	LSP SPE license annual gross sales		$374	$4,114	$10,173	$14,493	$16,400
D5	CSP Advanced Threat Protection license annual gross sales		$07	$36	$84	$106	$111
D6	LSP Advanced Threat Protection license annual gross sales		$12	$132	$326	$465	$526
D7	Total CSP complementary Microsoft stack solution license gross sales	D1+D3+D5	$307	$1,536	$3,564	$4,511	$4,736
D8	Total LSP complementary Microsoft stack solution license gross sales	D2+D4+D6	$512	$5,632	$13,926	$19,840	$22,451
Dt	Microsoft stack licenses channel margin	(D7*18%)+(D8*3%	$71	$445	$1,059	$1,407	$1,526

Complementary Microsoft Stack Implementation Services: Calculation Table (USD ‘000)

REF	METRIC	CALC.	2017	2018	2019	2020	2021
E1	Advanced Threat Protection professional services engagements sold, per year		1	9	12	9	4
E2	Enterprise Mobility and Security professional services engagements sold, per year		2	13	16	12	5
E3	Advanced Threat Protection professional services engagement revenue	E1*60,500	$61	$545	$726	$545	$242
E4	Enterprise Mobility and Security professional services engagement	E2*$80,400	$161	$1,045	$1,286	$965	$402
E5	Total Advanced Threat Protection and Enterprise Mobility and Security professional services revenue	E3+E4	$221	$1,590	$2,012	$1,509	$644
E6	Total Advanced Threat Protection and Enterprise Mobility and Security professional services gross margin percentage (%)	35%	35%	35%	35%	35%	35%
Et	ATP and EMS professional services	E5*E6	$77	$556	$704	$528	$225

Value-Add IP

Partners made ongoing R&D investments to create and package intellectual property around common customer pain points and business challenges that they could sell to multiple customers. Some partners built proprietary software to help expedite and automate complex Windows 10 migrations, while limiting the disruption caused by these migration efforts.

Others had built industry- and job role-specific applications and workflows to address common customer challenges, often taking advantage of new Windows 10 security features, Windows Hello, and Windows APIs. Furthermore, the Windows 10 release cadence allowed partners to align their IP to Windows 10 updates, enabling them to put out more regular releases and oftentimes transition to a services model, creating an ongoing annuity stream.

For this analysis, Forrester assumes that the composite partner built IP to help assist with the migration process. In modeling the economic impact of the composite partner’s value-add IP, Forrester made the following assumptions:

> “We talk to customers about our value-add IP while we are talking to them about Windows 10 readiness and sell the Windows 10 program. Generally, everything is linked together with a back-end digital strategy.”
>
> *Director, product management , global partner*

- The number of users with paid IP licenses is the same as the number of seats deployed each year.
- Revenue per small and middle-tier seat was $25, while revenue per enterprise seat was $20. All licenses were sold on a perpetual model.
- An 80% gross margin was used, as reported by many of the partners.

Over the five-year analysis period, the composite partner generated total discounted margins of $3.5 million.

Value-Add IP: Calculation Table (USD)

REF.	METRIC	CALC.	2017	2018	2019	2020	2021
F1	Total number of net-new user seats (SMB and mid-tier)		8,000	53,000	71,500	19,000	6,000
F2	Total number of net-new user seats (enterprise)		0	15,000	37,500	30,000	7,500
F3	Revenue per SMB and mid-tier seat		$25	$25	$25	$25	$25
F4	Revenue per Enterprise seat		$20	$20	$20	$20	$20
F5	Total ISV/proprietary value add software	(F1*F3)+ (F2*F4)	$200,000	$1,625,000	$2,537,500	$1,075,000	$300,000
F6	Gross margin percentage		80%	80%	80%	80%	80%
Ft	Value-add IP	F5*F6	$160,000	$1,300,000	$2,030,000	$860,000	$240,000

Flexibility

The value of flexibility is clearly unique to each partner, and the measure of its value varies across organizations. There are multiple scenarios in which a partner might choose to invest in their Windows 10 managed services practices and later realize additional revenue and margin opportunities.

The new security and productivity features inherent in Windows 10, along with rapid evolution and expansion of the Windows ecosystem, are creating new business and investment opportunities for managed services providers and independent software vendors. In addition, the Windows 10 release cadence is opening novel opportunities for ISVs to convert their existing on-premises solutions into subscription-based software and service agreements, opening these organizations to new annuity revenue streams. While no future opportunities were incorporated as part of this business case and ROI analysis, forward-thinking partners and ISVs will undoubtedly look for new service and value-add software solution areas to invest in to better win, serve, and retain customers.

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

Total Costs (USD '000)

REF.	COST	Initial	2017	2018	2019	2020	2021	TOTAL	PRESENT VALUE
Gtr	Salary expenses	$00	$558	$1,594	$2,294	$2,912	$3,565	$10,923	$7,750
Htr	Annual marketing spend	$00	$416	$2,283	$3,504	$4,167	$3,453	$13,823	$9,888
Itr	Product and service R&D expenses	$1,323	$00	$279	$287	$296	$305	$2,490	$2,161
Jtr	Training expenses	$00	$67	$119	$151	$138	$160	$635	$466
Ktr	Total SG&A expenses	$00	$346	$1,902	$4,380	$5,209	$5,755	$17,593	$12,309
	Total costs (risk-adjusted)	$1,323	$1,387	$6,177	$10,616	$12,722	$13,239	$45,464	$32,574

Direct delivery costs, such as consultant labor, are included in the Revenue And Margin sections in the form of gross margin calculations. The costs below are related to setting up and managing a comprehensive Windows 10 managed services practices

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over five years, the composite organization expects risk-adjusted total costs to be a PV of more than $32.6 million.

Staffing Expense

The Microsoft partners interviewed for this study revealed varied staffing requirements for their Modern Desktop practices, which were affected by many factors, including the size of the organization, the organization's managed services portfolio, and the degree to which technical and engineering resources were used cross functionally across service delivery and sales activities. Notably, partners indicated that managed services sales required new competencies, particularly for partners with more traditional, reselling backgrounds.

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.

The salary and human resource expenses for incremental sales professionals, presales engineers, and end user and technical support professionals needed to drive the growth in the partner's services business are identified below in the table titled "Salary Expenses: Calculation Table." Note that all staffing costs include the salary overhead burden rate, which is assumed to be 25% in this analysis. Over the five-year analysis period, total incremental salary costs were a PV of $7.8 million.

Staff Salary Assumptions

POSITION	BASE COMPENSATION	FULLY LOADED SALARY
Sales staff	$100,000.00	$125,000.00
Engineers for presales project delivery	$90,000.00	$112,500.00
Software developers	$125,000.00	$156,250.00
Back-office, technical, and customer support	$56,000.00	$70,000.00
Consulting project managers	$110,000.00	$137,500.00

Salary Expenses: Calculation Table (USD '000)

REF	METRIC	CALC.	2017	2018	2019	2020	2021
G1	Number of incremental salespeople		3	8	10	12	14
G2	Number of dedicated end user and technical support staff personnel		1	3	5	7	9
G3	Number of presales engineers		1	3	5	6	7
G4	Overhead rate		25%	25%	25%	25%	25%
G5	Sales staff salaries (fully loaded)		$375	$1,030	$1,326	$1,639	$1,970
G6	End user and technical support staff salaries (fully loaded)		$70	$216	$371	$535	$709
G7	Presales engineers staff salaries (fully loaded)		$113	$348	$597	$738	$886
Gt	Salary expenses	G5+G6+G7	$558	$1,594	$2,294	$2,912	$3,565

Marketing Expenses

While interviewed partners varied in the marketing strategies and tactics they employed to build brand awareness, generate qualified leads, and convert leads through the sales cycle, all partners invested significantly in marketing their Modern Desktop solution portfolio. Actual incremental marketing budgets varied significantly across partners, ranging from bootstrap marketing operations to multimillion-dollar digital marketing campaigns. Many partners benchmarked their marketing spend as a percentage of gross sales, with several partners budgeting up to 10% of gross sales on educating the marketplace on their new managed services offerings.

For the composite partner, Forrester assumed that total marketing spend was 6% of gross sales in 2017, which enabled the organization to educate the marketplace on its emerging services portfolio. Over time, annual marketing spend as a percentage of gross sales declined as the composite partner's service offering became more mature. The partner spent its marketing dollars on email, digital, and content marketing campaigns to drive marketing-qualified leads into the sales pipeline, along with events and deep-dive technical sessions intended to further qualify, and, eventually convert, leads into opportunities and closed business. Over the five-year analysis period, the composite partner spent a total of $9.9 million on marketing after adjusting for present value.

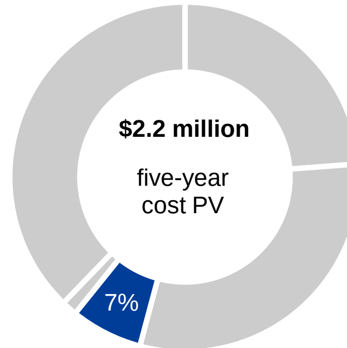
Annual marketing spend

3% to 6% of gross sales

Marketing Expenses: Calculation Table (USD '000)

REF.	METRIC	CALC.	2017	2018	2019	2020	2021
H1	Total gross sales		$6,929	$38,044	$87,602	$104,178	$115,109
H2	Marketing spend as a percentage of revenue		6%	6%	4%	4%	3%
Ht	Annual marketing spend	H1*H2	$416	$2,283	$3,504	$4,167	$3,453

Product And Service Research And Development



Every Microsoft partner interviewed for the study made significant research and development investments in bringing new managed services and value-add IP to market. Partner research and development investments fell into three categories:

- **Managed services development.** All partners invested heavily in building out and optimizing the delivery of their managed services portfolio.
- **Internal tools, templates, systems, and processes.** These included a diverse set of efficiency-enhancing tools and processes to help streamline project and service delivery functions. One partner created a set of internally facing scripts and tooling to automate the Windows 10 migration and testing process. Another partner invested significantly in dashboards, customer communications, and billing systems to streamline its back-office customer support and billing functions.
- **Value-add IP.** Partners made a number of investments in building proprietary software around common customer pain points that it could package and sell to multiple customers.

For the composite partner, Forrester assumes that the organization's proprietary migration software was developed over 12 months, leveraging a team of five full-time equivalent (FTE) software developers. Furthermore, the organization commissioned a four-FTE blended team consisting of senior engineers and software developers to plan, design, and build out the tooling, systems, dashboards, reports, and scripting to deliver and scale the organization's growing portfolio of managed services offerings. Combined, the composite partner invested over $1.3 million in the initial investment period to build out and deliver its managed services and value-add IP.

In subsequent years, the composite partner made incremental investments in maintaining and optimizing its managed services offerings, which required two FTEs from the blended engineering and development team. Over the five-year forecast period, the composite partner invested a total PV of $2.2 million in product and service research and development.

Product And Service Research And Development: Calculation Table (USD '000)

REF.	METRIC	CALC.	INITIAL	2017	2018	2019	2020	2021
I1	Number of developer resources to build proprietary IP			5				
I2	Number of product development and engineering resources to build out managed services offerings, tools, and templates			4		2	2	2
I3	Average annual developer fully loaded salary			$156				
I4	Average annual fully loaded salary for managed services development team (blended rate)			$135		$139	$144	$148
It	Product and service R&D expenses	(I1*I3)+(I2*I4)		$1,323		$279	$287	$296

Training

Partners interviewed for the study indicated that they invested heavily in training their sales staff, consultants, and engineers on the features and functionalities of Windows 10 and other Microsoft solutions. Partners indicated that it was critical to educate staff on the security and productivity-enhancing features and functionality, with most interviewees indicating that their staff participated in quarterly trainings and seminars. All organizations interviewed for the study indicated that they relied heavily on free or subsidized Microsoft content, events, workshops, and technical boot camps, which helped control partner training expenses.

For the composite partner, Forrester assumes that sales staff spent one day a quarter in training, while engineers and consultants spent a total of 15 days in training, technical boot camps, and seminars annually. Over the five-year analysis period, the composite partner spent a total PV of $466,325 on training.

Training: Calculation Table (USD)

REF.	METRIC	CALC.	2017	2018	2019	2020	2021
J1	Number of sales staff trained, per year		3	8	10	12	14
J2	Number of engineers and consultants		11	18	22	19	22
J3	Annual number of sales staff training days		4	4	4	4	4
J4	Annual number of engineer, consultant, and support team member training days		15	15	15	15	15
J5	Average daily sales staff fully loaded salary		$481	$495	$510	$525	$541
J6	Average daily engineer, consultant, and support team		$372	$383	$394	$394	$394
Jt	Training	(J1*J3*J5)+ (J2*J4*J6)	$67,115	$119,242	$150,566	$137,631	$160,466

General And Administrative

For the composite partner, Forrester assumes that general and administrative expenses, including accounting and financial staff and practice overhead, average 5% of annual gross sales. Over the five-year analysis period, the assumed general and administrative expense for the composite partner is a total PV of $12,309,288.

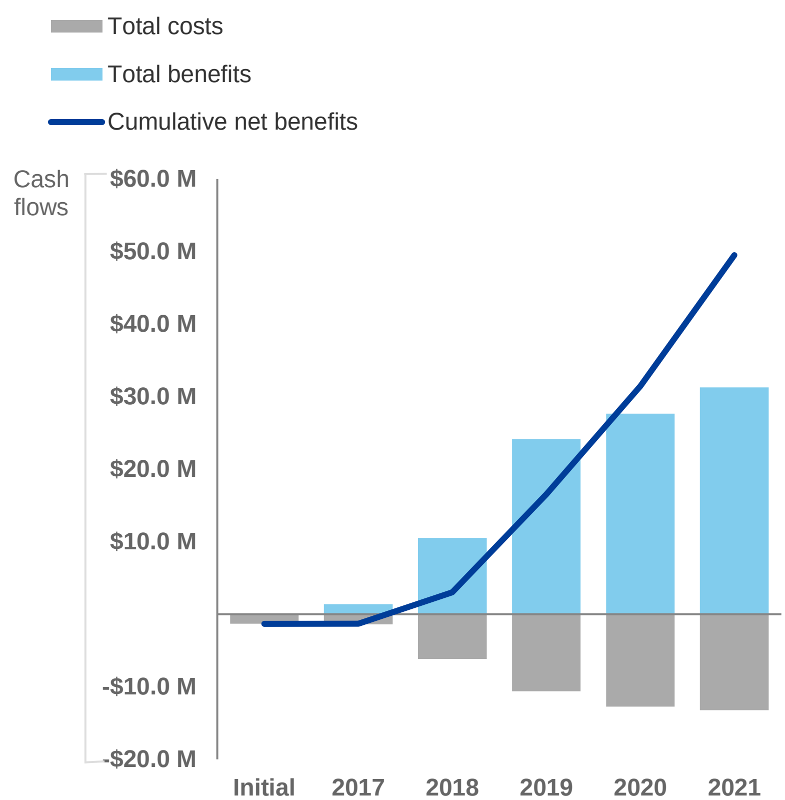
General And Administrative: Calculation Table (USD '000)

REF.	METRIC	CALC.	2017	2018	2019	2020	2021
K1	Total gross sales		$6,929	$38,044	$87,602	$104,178	$115,109
K2	G&A expense (% of gross sales)		5%	5%	5%	5%	5%
Kt	Total G&A expenses	K1*K2	$346	$1,902	$4,380	$5,209	$5,755

Financial Summary

CONSOLIDATED FIVE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Table (Risk-Adjusted)

	INITIAL	2017	2018	2019	2020	2021	TOTAL	PRESENT VALUE
Total costs	($1,323)	($1,387)	($6,177)	($10,616)	($12,722)	($13,239)	($45,464)	($32,574)
Total benefits	$00	$1,401	$10,525	$24,110	$27,660	$31,275	$94,971	$66,397
Net benefits	($1,323)	$14	$4,348	$13,493	$14,939	$18,036	$49,507	$33,823
ROI								104%
Payback period								15.6 months

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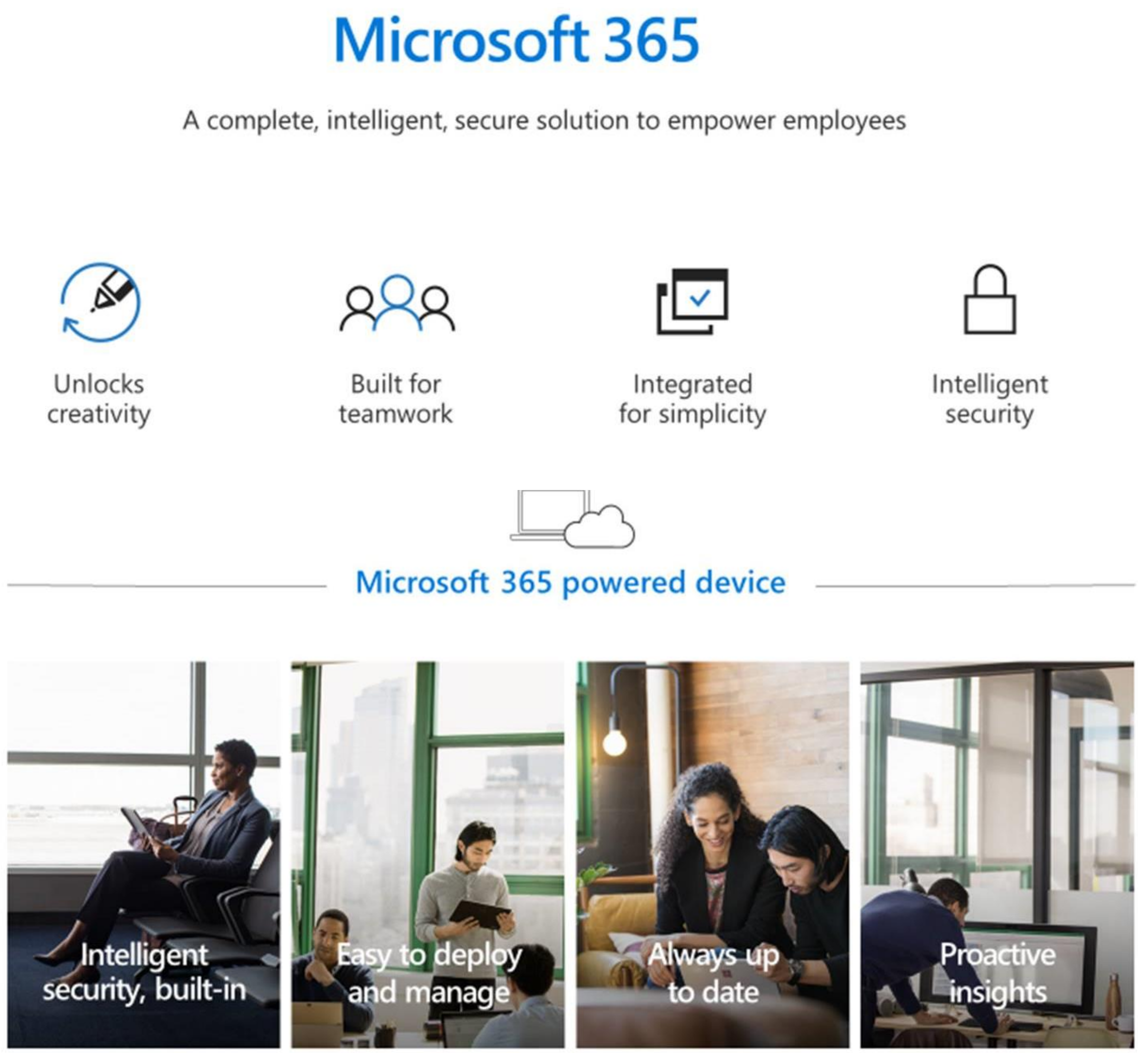
Microsoft 365: Overview

The following information is provided by Microsoft. Forrester has not validated any claims and does not endorse Microsoft or its offerings.



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Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

Total Economic Impact Approach

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.

PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.

NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.

DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.

PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Appendix B: Endnotes

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[1] Source: Forrester Data Global Business Technographics Infrastructure Survey, 2016, Forrester Research, Inc.
[2] Source: "The Partner Opportunity For Secure Productive Enterprise: A Total Economic Impact™ Partner Opportunity Analysis," a commissioned study conducted by Forrester Consulting on behalf of Microsoft.