A Forrester Total Economic Impact™ Study Commissioned By OVHcloud In Partnership With VMware March 2020

The Total Economic Impact™ Of OVHcloud Hosted Private Cloud In Partnership With VMware

Cost Savings And Business Benefits Enabled By Hosted Private Cloud



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Benefits And Costs



Avoidance of high and unpredictable third-party public cloud costs:

€410K



Reduced time-to-revenue:

€25K



OVHcloud Hosted Private Cloud cost:

€320K

"Cost has been a huge improvement for us with OVHcloud. We have standardized technologies and infrastructure. For us it was much easier."

CSO, cybersecurity

Executive Summary

OVHcloud is a global hyperscale cloud provider of multicloud platforms that can help customers scale as they grow, with simple and predictive costs. OVHcloud, in partnership with VMware, commissioned Forrester Consulting to conduct a Total Economic Impact $^{\text{TM}}$ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying OVHcloud Hosted Private Cloud. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Hosted Private Cloud on their organizations.

Forrester's research shows that hosted private cloud delivers a practical solution for many use cases. For some, it is an affordable way to solve compliance, security, or architectural issues; for others, it accelerates the journey to cloud supported by the expertise of a service provider.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed one customer with several years of experience using Hosted Private Cloud. The cybersecurity company offers various services including security monitoring, fraud prevention, and risk management, requiring a large and reliable infrastructure environment. With many financial services customers, data sensitivity and location are important considerations. This solution ensures control and security of an on-premises infrastructure, with the added flexibility provided by cloud capabilities. This reflects market sentiment: In a recent survey, 55% of global infrastructure decision makers said they are implementing, planning to implement, or upgrading/expanding their implementation of hosted private cloud, up from 33% in 2016.1

Prior to using OVHcloud's Hosted Private Cloud, the customer's infrastructure comprised of services from a large global public cloud provider, on-premises servers, and some OVHcloud services. However, increasing complexity was pushing costs higher and the infrastructure was not standardized. The customer had to make a change and decide on a different infrastructure strategy to support its future growth.

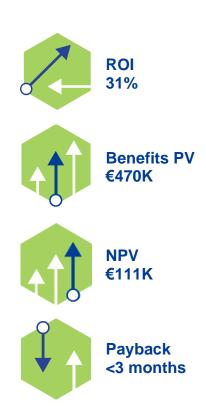
According to Forrester Research, the adoption of hosted private cloud solutions continues to grow. European infrastructure and operations (I&O) professionals find local options, greater comfort with familiar technologies and isolation, and a focus on customer service as key deciding factors for adopting a hosted private cloud solution.

Key Findings

Quantified benefits. The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the company interviewed:

- Avoidance of third-party public cloud costs. With the OVHcloud Hosted Private Cloud integration, the customer avoids much higher third-party public cloud infrastructure costs. As a present value, the amount avoided comes to €410,000 Furthermore, most third-party public cloud service providers include a traffic charge, which can be unpredictable; OVHcloud does not charge for traffic. This not only reduces costs, but it also makes working with them more predictable.
- Avoidance of third party public cloud migration costs. Not choosing the public cloud also means the related migration, which come to just over €35K, are also avoided.





> Reduced time-to-revenue: €25K or 5% of total benefits. For many organizations, the location of their data is an important consideration, because of regulations such as GDPR. With OVHcloud, the customer has various European and North American location options and additional business continuity certification. This helps to reduce the time to acquire clients with a shortened sales cycle.

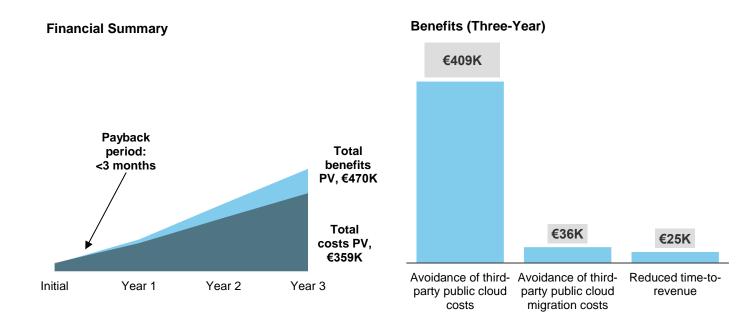
Unquantified benefits. The interviewed organization experienced the following benefits, which are not quantified for this study:

- > Less infrastructure-related issues. One of the biggest long-term benefits is better control over infrastructure, particularly as it scales its business. Improved hosting, improved disaster recovery, and the integration of external services with a hosted private cloud environment contribute to reducing risks. OVHcloud also helped this customer gain ISO 22301 business continuity certification.
- **Enhanced user efficiency.** Due to localization, the platform increases user efficiency as the latency and response time are improved.

Costs. The interviewed organization experienced the following risk-adjusted PV costs:

- > OVHcloud Hosted Private Cloud costs of €319,309. These are the ongoing hosting costs for the OVHcloud Hosted Private Cloud solution powered by VMware. With growing infrastructure needs, these increase from €100K in Year 1 to €150K in Year 3.
- Planning and implementation costs of €39,375. While the whole migration process takes a year, two FTEs spend around a quarter of their time in total migrating to the Hosted Private Cloud, including planning and implementation.

Forrester's interview with an existing customer and subsequent financial analysis found that the interviewed organization experienced benefits of €469,867 over three years versus costs of €358,684, adding up to a net present value (NPV) of €111,183 and an ROI of 31%.



TEI Framework And Methodology

From the information provided in the interview, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing OVHcloud Hosted Private Cloud powered by VMware.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that OVHcloud Hosted Private Cloud can have on an organization:

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders



DUE DILIGENCE

Interviewed OVHcloud and Forrester analysts to gather data relative to Hosted Private Cloud.



CUSTOMER INTERVIEW

Interviewed one organization using Hosted Private Cloud to obtain data with respect to costs, benefits, and risks.



FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interview using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organization.



CASE STUDY

Employed four fundamental elements of TEI in modeling OVHcloud Hosted Private Cloud's impact: benefits, 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 OVHcloud in partnership with VMware 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 OVHcloud Hosted Private Cloud.

OVHcloud 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.

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



The Hosted Private Cloud Customer Journey

BEFORE AND AFTER THE HOSTED PRIVATE CLOUD INVESTMENT

Interviewed Organization

For this study, Forrester interviewed one OVHcloud Hosted Private Cloud customer, the details of which are:

INDUSTRY	REGION	INTERVIEWEE	NUMBER OF EMPLOYEES
Cybersecurity	Headquartered in Spain	Chief strategy officer (CSO)	~500

Key Challenges

The customer shared the following challenges and pain points that drove its investment in the Hosted Private Cloud solution:

- The high cost of third-party public clouds. The customer was facing the choice of having to invest substantially more for the third-party public cloud services option.
- The complexities associated with migrating to a third-party public cloud. Some of the existing technologies were not prepared for thirdparty public cloud installation, and therefore would have not integrated well into that environment.
- The complexities associated with infrastructure spread across multiple domains. It was complicated to manage infrastructure, as some areas of the business were either using a third-party public cloud, the OVHcloud, or in-house servers and virtualized infrastructure.

Key Results

The interview revealed that the key results from the Hosted Private Cloud investment include:

- Avoidance of high and unpredictable third-party public cloud costs. The customer is now able to keep its costs substantially lower with OVHcloud Hosted Private Cloud, compared to moving to a thirdparty public cloud. These costs are also predictable with OVHcloud.
- **> Full access and control over the platform.** The technical team is able to exploit all the possibilities of the platform without restriction, and the learning curve becomes negligible.
- Improved efficiency, processes, and workflows. Due to the more organized nature of the OVHcloud platform, powered by VMware, the efficiency of employees is increased; furthermore, OVHcloud manages all the provisioning.

"We were used to having the full power of our own infrastructure, so using the OVHcloud hosted private cloud, we have the same benefits as if we were using our own hardware."

CSO, cybersecurity



"There were no hidden costs. OVHcloud doesn't charge you for the traffic. So, it was very easy for us to analyze what will be our cost for any project, for any monitoring clients."

CSO, cybersecurity



"It's much easier to keep everything under control. I don't know if it is a direct cost benefit, but at least it's a huge control benefit. We reduce the risk, definitely."



Analysis Of Benefits

QUANTIFIED BENEFIT DATA

Total Benefits							
REF.	BENEFIT	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Avoidance of third-party public cloud costs	€0	€112,500	€187,500	€202,500	€502,500	€409,373
Btr	Avoidance of third-party public cloud migration costs	€35,625	€0	€0	€0	€35,625	€35,625
Ctr	Reduced time to revenue	€0	€10,000	€10,000	€10,000	€30,000	€24,869
	Total benefits (risk-adjusted)	€35,625	€122,500	€197,500	€212,500	€568,125	€469,867

Avoidance Of Third-Party Public Cloud Costs

One of the biggest drivers of the customer's investment in the OVHcloud Hosted Private Cloud is the avoidance of the third-party public cloud costs. These costs are significantly higher than the Hosted Private Cloud costs, resulting in this important benefit. The cost difference between these two solutions is defined by the fact that OVHcloud, powered by VMware, does not include traffic charges.

- In Year 1, the customer estimates a €150K cost for all its hosting requirements on third-party public cloud infrastructure. In Year 2, it expects that cost to increase to €250K, and then again in Year 3 to €270K.
- There is some uncertainty to these estimates, particularly given the unpredictability of traffic charges, which typically form part of the thirdparty public cloud service contracts.

To account for these risks, Forrester adjusted this benefit downward by 25%, yielding a three-year, risk-adjusted total PV of €409,373.

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the interviewed organization expects risk-adjusted total benefits to be a PV of nearly €470K.

"Cost has been a huge improvement for us with OVHcloud. We have standardized technologies and infrastructure. For us it was much easier."



Avoida	Avoidance Of Third-Party Public Cloud Costs: Calculation Table						
REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3	
A1	Third-party public cloud costs avoided			€150,000	€250,000	€270,000	
At	Avoidance of third-party public cloud costs		€0	€150,000	€250,000	€270,000	
	Risk adjustment	↓25%					
Atr	Avoidance of third-party public cloud costs (risk-adjusted)		0	€112,500	€187,500	€202,500	

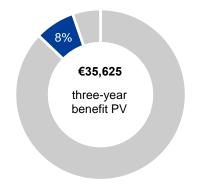


Avoidance Of Third-Party Public Cloud Migration Costs

Due to the customer's in-house skills in supporting a migration to the third-party public cloud or to the Hosted Private Cloud, the cost of migrating to either is roughly the same. The cost of migrating to the Hosted Private Cloud is detailed further below in the Analysis Of Costs section, but here there is an equivalent benefit to avoiding the cost of migrating to the third-party public cloud. It is important to include them both as there are risk adjustments associated with each to account for uncertainty, and therefore the two do not simply cancel each other out.

- Two FTEs are required to spend roughly a quarter of its time over the course of a year to migrate to the third-party public cloud.
- The average, fully loaded salary of these resources is estimated at €75K.
- > There is a small risk that these migration costs could have been lower, which therefore brings down the size of this cost avoidance benefit.

To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of just under €35,625. This is equivalent to 8% of the total benefits.



Avoidance of third-party public cloud migration costs: 8% of total benefits

Avoid	Avoidance Of Third-Party Public Cloud Migration Costs: Calculation Table						
REF	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3	
B1	Number of FTEs		2				
B2	Number of days per FTE	225/4	56.25				
В3	Fully loaded daily salary rate	€75,000/45/5	€333.33			_	
Bt	Avoidance of third-party public cloud migration costs	B1*B2*B3	€37,500				
	Risk adjustment	↓5%					
Btr	Avoidance of third-party public cloud migration costs (risk-adjusted)		€35,625	€0	€0	€0	

Reduced Time-To-Revenue

One of the benefits the customer highlights is the fact that it can choose OVHcloud's infrastructure in Europe. There are two OVHcloud data centers in both France and the US, and there is one site in the UK, Germany, Poland, and Canada. As a managed security services provider, serving many financial services organizations, this can be an important consideration for compliance and regulatory reasons. As a result, it is easier for the customer to start working with new clients because there is no concern about data being hosted in other regions. This benefit shortens the sales cycle and reduces the time-to-revenue.

- It is estimated that the customer brings in €2.5M of revenue every year from new customers.
- It is assumed that: 1) half of this new revenue comes from customers for whom the location of their data is an important consideration and 2) the sales cycle for this revenue is reduced, on average, by 20 working days.
- There is a monetary value to bringing revenue sooner and this equates to just over €11K per year, assuming a 10% discount rate.

To account for some uncertainties in these assumptions, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of €24,869. This is equivalent to 5% of total benefits.



Reduced time-to-revenue: 5% of total benefits

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.

Reduc	Reduced Time-To-Revenue: Calculation Table							
REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3		
C1	Average new contract value			€2,500,000	€2,500,000	€2,500,000		
C2	Portion of new contracts for which sales cycle can be reduced			50%	50%	50%		
C3	Average reduction in sales cycle time (days)			20	20	20		
Ct	Reduced time-to-revenue	C1*C2*(C3/225)*0.1	€0	€11,111	€11,111	€11,111		
	Risk adjustment	↓10%						
Ctr	Reduced time-to-revenue (risk-adjusted)		€0	€10,000	€10,000	€10,000		

Unquantified Benefits

The additional benefits below have not been quantified, but they are still worth detailing separately:

- With OVHcloud, the customer can worry less about its infrastructure, i.e., this long-term benefit comes in the form of reduced risks and greater control being felt as the customer scales its business. Furthermore, working with OVHcloud allows the customer to gain certification for business continuity (e.g., ISO 22301 business continuity certification), which in turn attracts customers and reduces the sales cycle.
- The volume of data transfer to the network is not a concern, OVHcloud does not charge for data transfer and communication, and so there are no hidden or unpredictable costs.

"We have a much tidier, better organized platform than we had before. It's much easier to keep everything under control, we reduce the risk definitely."





The platform increases user efficiency as the latency and response time improves.

Flexibility

The customer mentioned that the OVHcloud Hosted Private Cloud is much more stable than the combination of the third-party public cloud with its own previous infrastructure. With that said, the OVHcloud, in partnership with VMware, provides a range of solutions that can meet different needs — which might include OVHcloud Public Cloud Compute or the accommodation of a third-party public cloud element, should they want in the future to spread its requirements across different infrastructure environments. (For instance, this might be the case for the deployment of cloud native applications.)

As with most cloud-based solutions, flexible scaling and rapid deployment are important benefits to be able to quickly address new and/or changing customer needs. Strong growth in the customer's business is supported by flexible scalability because the Hosted Private Cloud lets the technical team integrate the systems very easily. In this way, the customer has access to more services and can more quickly launch new applications or add more nodes. OVHcloud provides a range of open and transparent solutions, which allows the customer to respond to changing requirements, improve time-to-market, and thus have more freedom to innovate.

"Regarding the end user, I would say that the new platform is much more stable than the one that combined cloud plus our own infrastructure. The OVHcloud platform helped us a lot to get the ISO 22301 business continuity certification."



Analysis Of Costs

QUANTIFIED COST DATA

Total Costs							
REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Dtr	OVHcloud Hosted Private Cloud costs	€0	€100,000	€140,000	€150,000	€390,000	€319,309
Etr	Planning and implementation costs	€39,375	€0	€0	€0	€39,375	€39,375
	Total costs (risk-adjusted)	€39,375	€100,000	€140,000	€150,000	€429,375	€358,654

OVHcloud Hosted Private Cloud Costs

The most important cost component for the customer is OVHcloud's fees for the Hosted Private Cloud package. An important part of this analysis is the cost comparison between the costs described here, and the comparable alternative of choosing a third-party public cloud service.

- OVHcloud Hosted Private Cloud costing is based on requirements including processing power, storage, networking, and rack space. It includes various services such as anti-DDOS (distributed denial of service), security, and SLAs, including 100% accessibility and 99.95% internet connectivity (except for scheduled maintenance).
- In Year 1, the Hosted Private Cloud costs come to €100K, in Year 2 they come to €140K, and in Year 3 they come to €150K.
- The interviewee highlighted that OVHcloud, in partnership with VMware, does not charge for traffic, unlike many cloud providers, which means monthly costs are predictable. This allows the customer to avoid unexpected charges and better plan its finances.
- As a global cloud services provider, the close partnership that OVHcloud has with VMWare enables OVHcloud to leverage increased innovation, integrated operating environments, and economies of scale. This benefits the customer with cost-effective and flexible purchasing options and rapid deployment.

Given that such costs are based on the specific requirements of the customer, there is no need to make a risk adjustment. The three-year PV of the OVHcloud Hosted Private Cloud costs comes to €319,309.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the interviewed organization expects risk-adjusted total costs to be a PV of just under €360K.



OVHcloud does not charge for traffic, resulting in competitive and predictable costs.

OVHcl	OVHcloud Hosted Private Cloud Costs: Calculation Table							
REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3		
D1	OVHcloud Hosted Private Cloud costs		€0	€100,000	€140,000	€150,000		
Dt	OVHcloud Hosted Private Cloud costs		€0	€100,000	€140,000	€150,000		
	Risk adjustment	0%						
Dtr	OVHcloud Hosted Private Cloud costs (risk-adjusted)		€0	€100,000	€140,000	€150,000		

Planning And Implementation Costs

Before migrating to the OVHcloud Hosted Private Cloud, the customer had a more complicated infrastructure environment, comprising of a third-party public cloud, some hosting of its SaaS solutions on OVHcloud powered by VMware, and its own servers and virtualized infrastructure hosted in its offices. Migrating to a purely Hosted Private Cloud environment took the best part of a year, in total.

- Two FTEs were focused on the migration, and due to the fact that these skillsets were both in house, there was no need for any additional recruitment or outside help.
- > Each of the two FTEs spent around a quarter of their time on the migration. Their fully loaded salary rate is assumed to be €75,000.
- » It is also assumed that FTEs have 225 productive days per year.

A small risk adjustment was applied to account for the fact that there is some uncertainty that these costs could have been higher. A 5% risk adjustment was applied, yielding a three-year, risk-adjusted total present value of €39,375.

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.

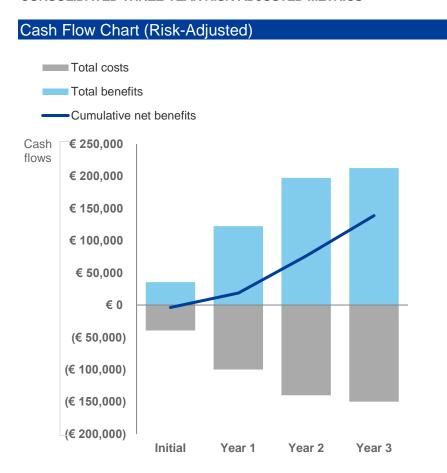


Twelve months Total implementation and deployment time

Plannir	Planning And Implementation Costs: Calculation Table							
REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3		
E1	Number of FTEs		2					
E2	Average daily salary rate	€75,000/45/5	€333.33					
E3	Number of days per FTE	225/4	56.25					
Et	Planning and implementation costs	E1*E2*E3	€37,500	€0	€0	€0		
	Risk adjustment	↑5%						
Etr	Planning and implementation costs (risk-adjusted)		€39,375	€0	€0	€0		

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the interviewed 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.

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	(€39,375)	(€100,000)	(€140,000)	(€150,000)	(€429,375)	(€358,684)
Total benefits	€35,625	€122,500	€197,500	€212,500	€568,125	€469,867
Net benefits	(€3,750)	€22,500	€57,500	€62,500	€138,750	€111,183
ROI						31%
Payback period						<3 months

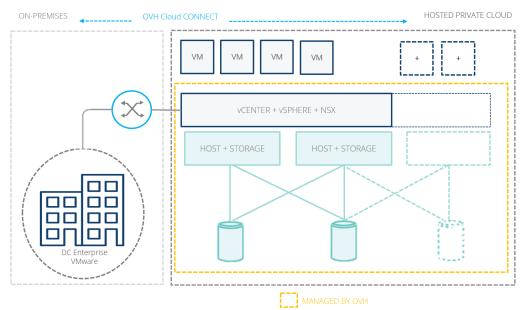
OVHcloud Hosted Private Cloud: Overview

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

Hosted Private Cloud is a single-tenant, dedicated environment, to alleviate security and control concerns. It is offered by OVHcloud as a bundle of VMware virtualisation software and physical infrastructure, including server hardware, storage, network gear, and data center space, with all that is needed to keep it running. The infrastructure is deployed, managed, and maintained by OVHcloud, while virtual machines, applications, and data are operated by the customer.

Based on the foundation of the VMware Software-Defined Datacentre technology, Hosted Private Cloud does not require an IT team to develop a new skill set, built on the same platform you deploy on-premises today, including vSphere, vCenter, NSX, and vSAN.

Thanks to VMware's technology ecosystem, IT managers can choose how they will adopt the cloud. They can outsource resources for all workloads, specific ones, or expand an on-premises infrastructure by building a hybrid cloud.



As the only global hyperscale cloud provider with its headquarters in Europe, OVHcloud is a pure player — its business is completely focused on infrastructure and cloud services. Due to an integrated industrial model, which includes close alignment with manufacturing of components and management of 30 data centers globally, customers benefit from the best performance to price ratio possible.

Transparency is important to OVHcloud, the company maintains simple pricing with no hidden or additional costs. Customers can access multicloud platforms with interoperability, and plan to scale as they grow with simple, predictive costs. OVHcloud is open and reversible, which provides a future-proof hosted private cloud solution.

OVHcloud provides the fastest path to your own hybrid cloud infrastructure. As your organisation evolves, so too must your infrastructure both to ensure your applications and data management deliver the best possible performance results, and to keep costs under control.

To make this journey as effortless as possible, when you connect your data centers to OVHcloud as a true hybrid cloud infrastructure, you can achieve the best of both worlds — be it on-premises and the cloud. OVHcloud provides secure links with which to leverage Public Cloud, Hosted Private Cloud, and dedicated baremetal servers, you have the perfect foundation with which to create your own sophisticated multicloud architecture.



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.



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



¹ Source: "Forrester Analytics: Private Cloud Solutions Forecast, 2018 To 2023 (Global)," Forrester Research, Inc., February 26, 2019.