

# Gestion des coûts dans Azure

Geoffroy Chargeboeuf | 12 Mai 2020 | Webinar



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## Geoffroy Chargeboeuf

■ Expérience de 10 ans dans la gestion des licences Microsoft :

- Licensing Sales Support
- Contract administration
- Software Asset Management
- Managing customer lifecycle



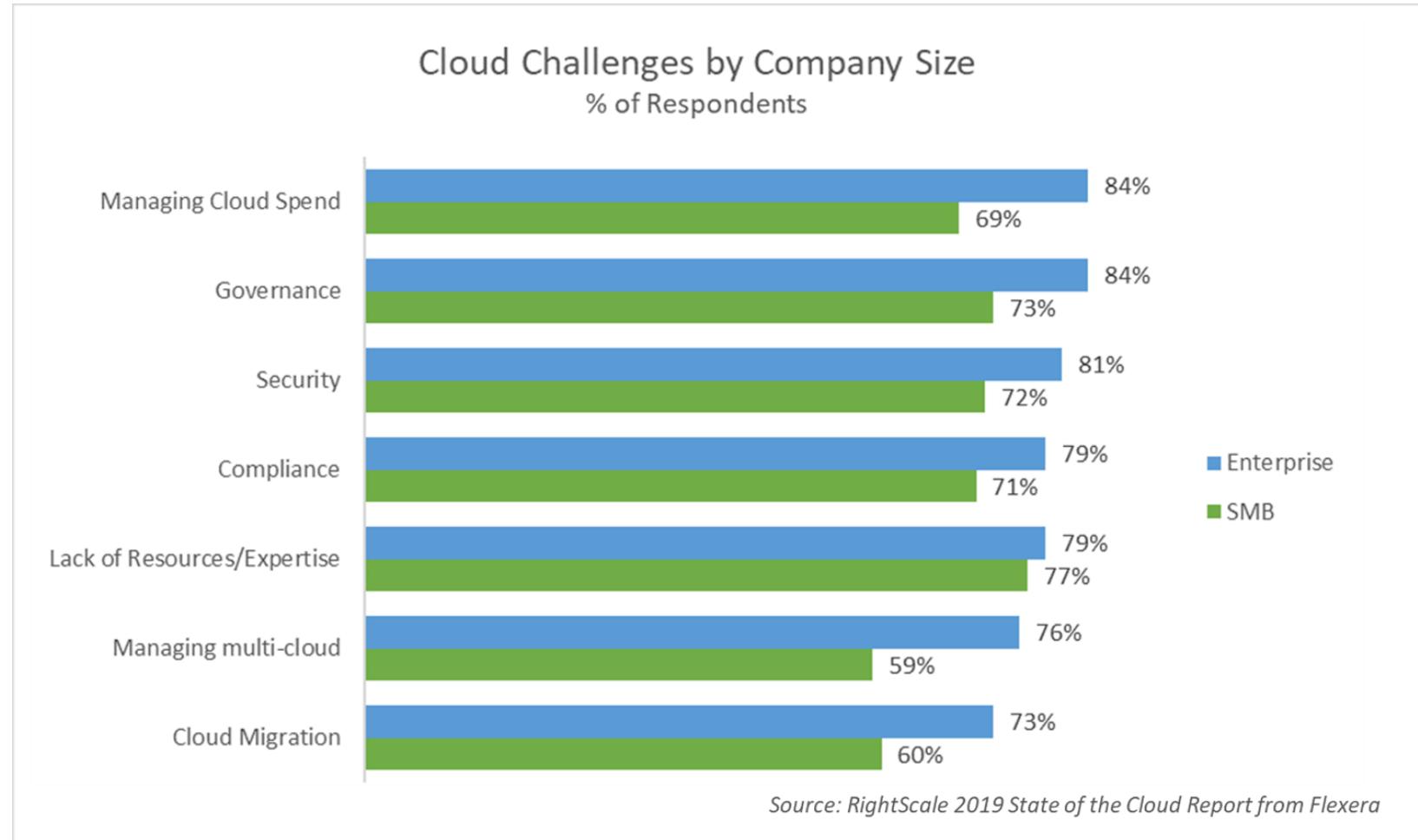
Bechtle SAM

# Agenda

1. Le challenge lié aux coûts du cloud public
2. La gestion réactive
3. L'approche proactive
4. Offrir la visibilité en interne
5. Les prérequis : Tagging, gouvernance, etc.
6. Les bonnes pratiques
7. Q & A.

# Les challenges

# Les principaux challenges liés au cloud



## Ce que nous entendons chez nos clients

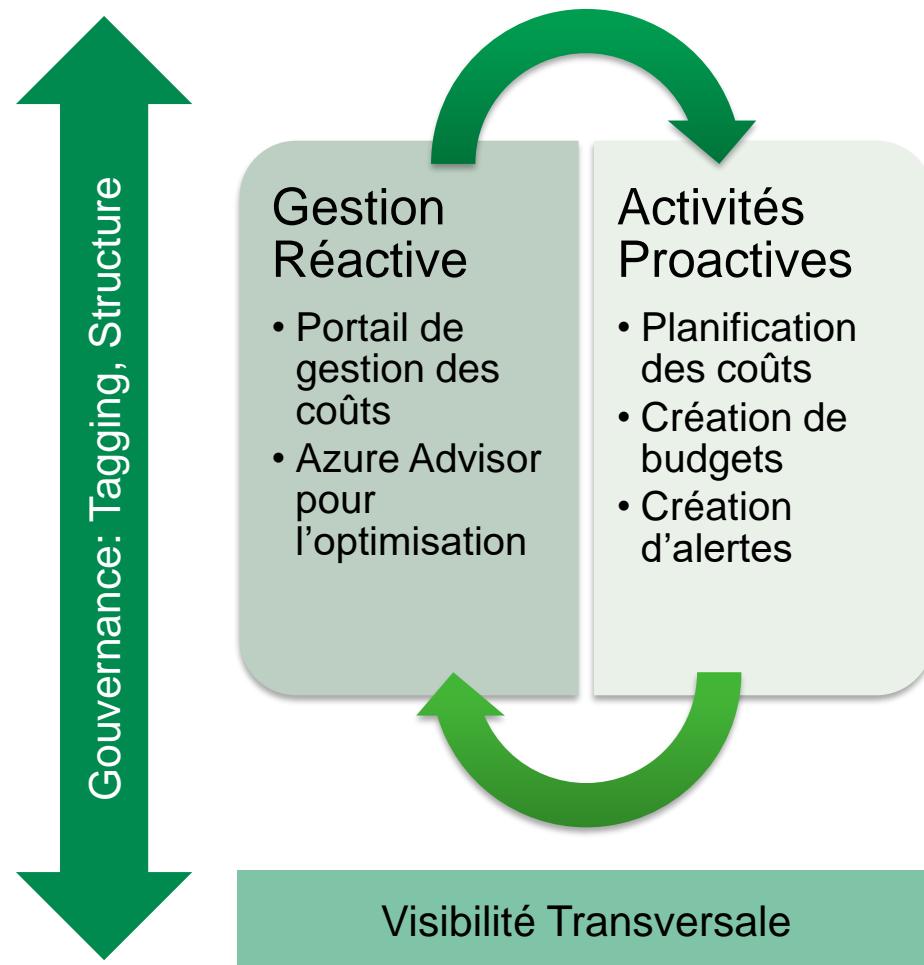
*Je reçois une facture tous les mois mais je ne comprends pas les variations de montant...*

*Nous utilisons Azure pour plusieurs entités mais nous ne savons pas précisément qui consomme quoi...*

*Nous avons observé une hausse des coûts significative seulement après avoir reçu la facture, avec un mois de délais !*

*Nos coûts ont augmenté avec l'utilisation d'Azure, notre CFO aimerait savoir s'il existe un moyen d'optimiser notre utilisation.*

# L'approche suggérée



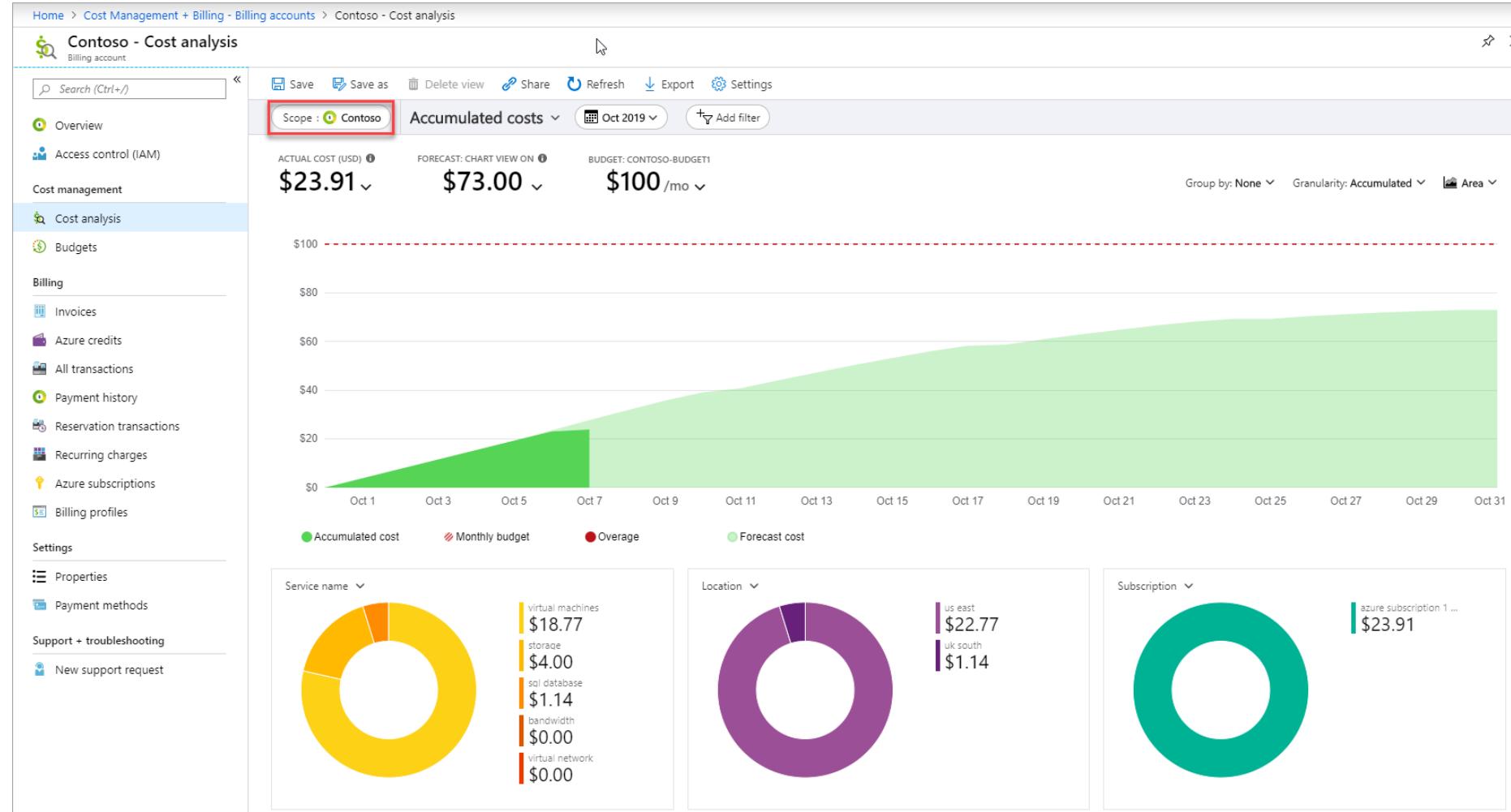
# Les modèles de facturation

Points de comparaison	Enterprise Agreement (EA) / Server and Cloud enrollment (SCE)	Programme de fournisseur de solutions cloud (CSP)	OPEN
Minimum requis	500 postes et plus CHF 1000.- / année	Souple	CHF 100.- sur 12 mois
Conditions de paiement	À l'avance, annuelle	Mensuel	À l'avance
True-up Billing	Annuellement	Non disponible	A tout moment
Termes de contrat	3 ans minimum avec quelques mises en garde	Payez au fur-et-à-mesure	Pas d'engagement, crédit valable 12 mois
Services fournis	Tout	Pas de support Premier / Unified Support	Tout
Possibilité:	Ajout de crédit ou dépassement	Pay-As-You-Go (PAYG)	Ajout de crédit seulement, pas de dépassement
Multi-tenant	Disponible	Indisponible	Indisponible

# La gestion réactive

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# Portail de gestion des coûts



# Azure Advisor – recommandations d'optimisation

The screenshot shows the Microsoft Azure (Preview) interface for 'Trey Research R&D Playground - Advisor recommendations'. The left sidebar includes links for Events, Cost Management (Cost analysis, Budgets, Advisor recommendations), Billing (Partner information), Settings (Programmatic deployment, Resource groups, Resources, Usage + quotas, Policies, Management certificates), and a search bar. The main content area displays a summary of advisor recommendations:

- Total recommendations: 1
- Recommendations by impact:
  - High impact: 1
  - Medium impact: 0
  - Low impact: 0
- Impacted resources: 2
- Potential yearly savings: 5,973 USD

A callout box provides a link to 'Azure Cost Management' for more cost management and optimization capabilities. Below this, a table lists the recommendation details:

IMPACT	DESCRIPTION	POTENTIAL YEARLY SAVINGS*	IMPACTED RESOURCES	UPDATED AT
High	Right-size or shutdown underutilized virtual machines	5,972.83 USD	2 Virtual machines	10/24/2019, 9:30:48 AM

At the bottom, a note states 'Recommendations are powered by Azure Advisor. [View all recommendations in Advisor](#)' and a blue button asks 'Are these recommendations helpful?'. A decorative footer bar at the bottom right features colored squares.

# Azure Advisor – recommandations d'optimisation

Shut down or resize your virtual machine

[Feedback](#) [Download as CSV](#) [Download as PDF](#) [Create alert](#) [Manage alert rules](#) [Configure recommendation r...](#)

Recommendation details

We've analyzed the usage patterns of your virtual machine over the past 7 days and identified virtual machines with low usage. While certain scenarios can result in low utilization by design, you can often save money by managing the size and number of virtual machines. [Learn more ↗](#)

potential yearly savings\*  
**5,972.83 USD**

Impacted resources

Trey Research R&D Playground ▾ No grouping ▾

Active (2) Postponed & Dismissed (0)

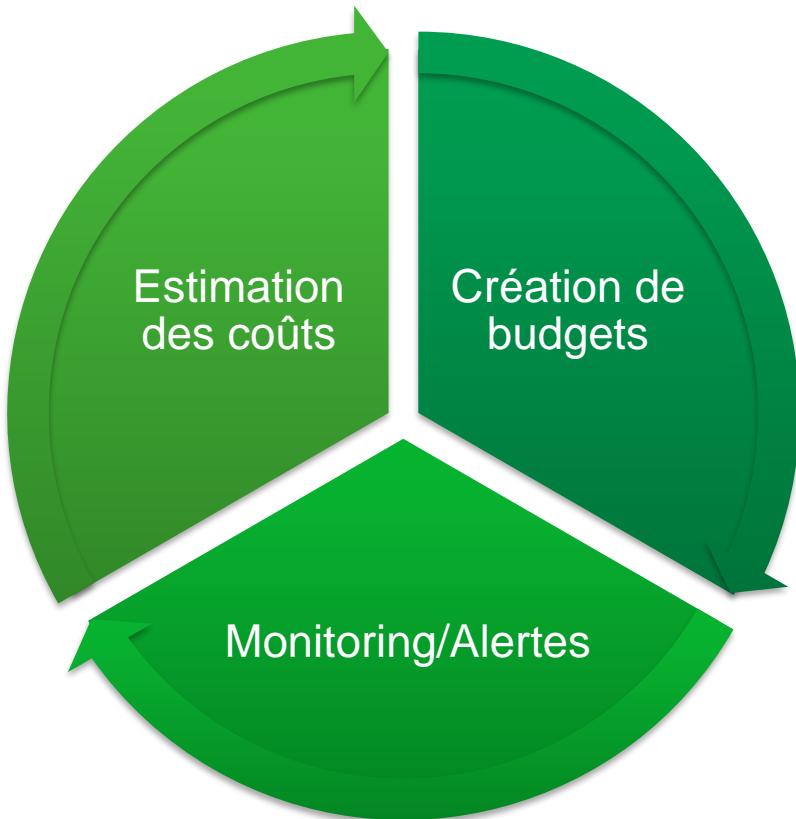
Postpone  Dismiss

SELECT	VIRTUAL MACHINE	RECOMMENDED ACTIONS	POTENTIAL SAVI...	SUBSCRIPTION	RECOMMENDATION RULE	UPDATED AT	ACTION
<input type="checkbox"/>	 SynthDriver1	<a href="#">Resize Standard_D8s_v3 to Standard_D2s_v3</a> <a href="#">View Usage Patterns</a>	<b>3,348.00 USD</b> (75%)	Trey Research R&D Playground	CPU utilization < 20%	10/24/2019, 9:23:23 AM	<a href="#">Postpone</a>   <a href="#">Dismiss</a>
<input type="checkbox"/>	 testAvi	<a href="#">Resize Standard_DS12_v2 to Standard_DS2_v2</a> <a href="#">View Usage Patterns</a>	<b>2,624.83 USD</b> (63%)	Trey Research R&D Playground	CPU utilization < 20%	10/24/2019, 9:30:48 AM	<a href="#">Postpone</a>   <a href="#">Dismiss</a>

# L'approche proactive

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# Une vision itérative



# Estimation des coûts – Calculatrice de prix

## Calculateur Microsoft

# La gestion par budget

The screenshot shows the Microsoft Azure portal interface. The left sidebar contains navigation links such as 'Create a resource', 'Home', 'Dashboard', 'All services', 'FAVORITES' (Resource groups, App Services, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor), and 'External services'. The main content area is titled '<SubscriptionName> - Budgets' and displays a list of budgets. The table includes columns for NAME, SCOPE, RESET PERIOD, START DATE, END DATE, BUDGET, CURRENT SPEND, and PROGRESS. The progress bar for most budgets is at 100% or very close to it.

NAME	SCOPE	RESET PERIOD	START DATE	END DATE	BUDGET	CURRENT SPEND	PROGRESS
AdamTestBudg...	847e9a39-4c9...	Monthly	1/1/2019	12/31/2020	\$5.00	\$99.42	1,988.39%
hadarsTest	847e9a39-4c9...	Monthly	1/1/2019	12/31/2020	\$11.00	\$99.42	903.81%
AviTest	847e9a39-4c9...	Quarterly	2/1/2019	1/31/2021	\$1,000.00	\$99.42	9.94%
AviTestS2	847e9a39-4c9...	Monthly	2/1/2019	1/31/2021	\$1,000.00	\$99.42	9.94%
Test2	847e9a39-4c9...	Monthly	2/1/2019	1/31/2021	\$1,000.00	\$99.42	9.94%
hadarsTest2	847e9a39-4c9...	Monthly	2/1/2019	1/31/2021	\$1,000.00	\$99.42	9.94%
Budget1	847e9a39-4c9...	Monthly	2/1/2019	1/31/2021	\$10,000.00	\$99.42	0.99%

# Création d'alertes

Create a budget  Set alerts

Configure alert conditions and send email notifications based on your spend.

\* Alert conditions

% OF BUDGET	AMOUNT	ACTION GROUP	ACTION GROUP TYPE
90	\$112.5	None	
<input type="text" value="Enter %"/>	-	None	

[Manage action group](#)

\* Alert recipients (email)

ALERT RECIPIENTS (EMAIL)

**VIEW OF MONTHLY COST DATA**  
Jan 2019 - Dec 2019

LAST MONTH	MAX (PAST 8 MONTH)	MAX MONTHLY FORECAST
\$35	\$99	\$125

130  
120  
110  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

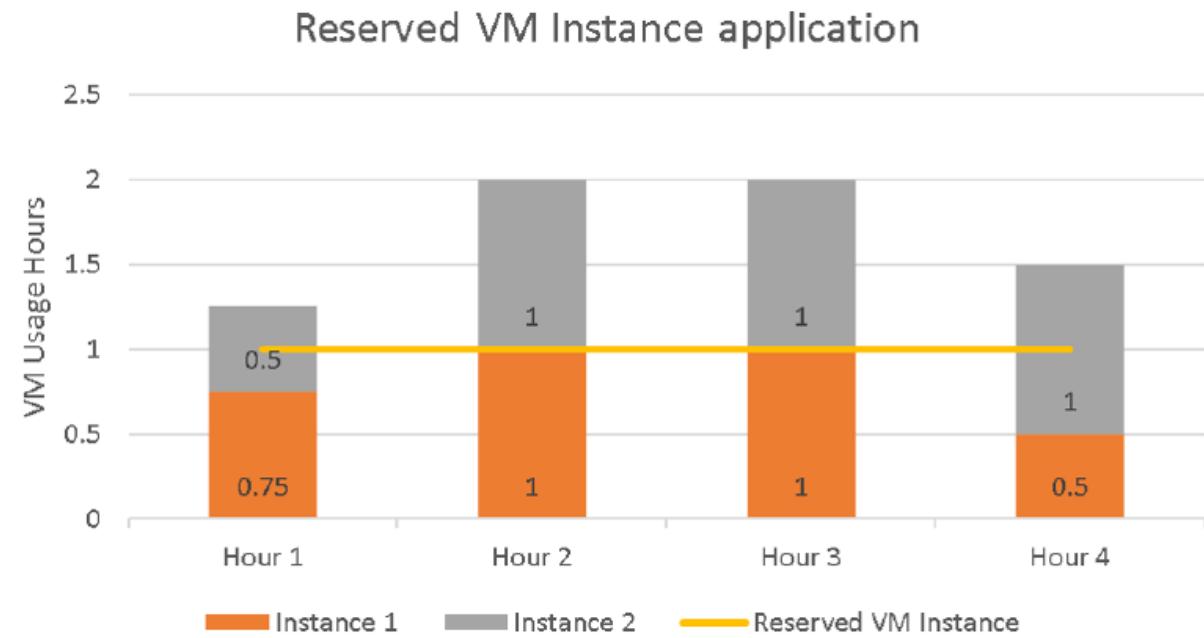
FORECAST  
ACTUAL  
BUDGET  
90 THRESHO...

Month	Actual Cost	Forecast	Budget
Jan 2019	15	10	10
Feb	25	10	10
Mar	20	10	10
Apr	22	10	10
May	21	10	10
Jun	32	10	10
Jul	102	10	10
Aug	125	10	10
Sep	95	10	10
Oct	98	10	10
Nov	92	10	10
Dec	98	10	10

[Previous](#) [Create](#)

# Azure Reserved Instances (RIs)

- Réduire les coûts mensuels de machine virtuelle Azure  
Économisez jusqu'à 54% sur les tarifs du paiement à l'utilisation avec une durée de 1 an ou 3 ans sur les machines virtuelles Windows ou Linux.
- Une réservation sur deux instances de machine virtuelle correspondantes.

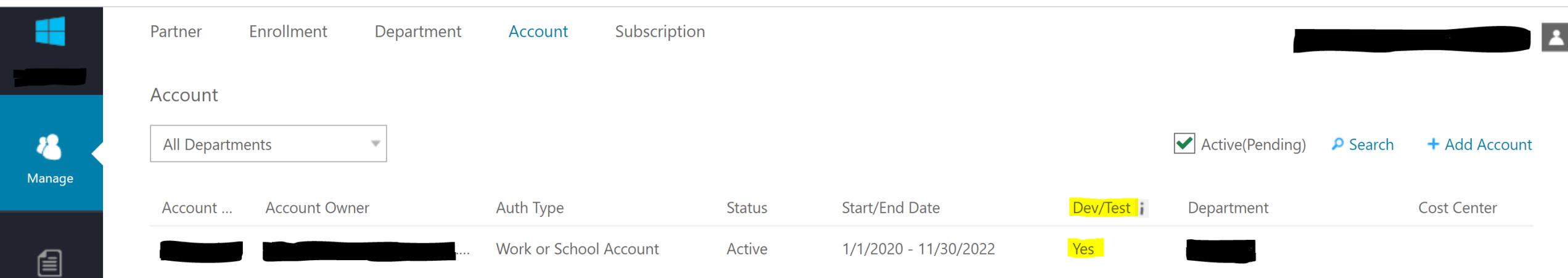


# Tarification Dev / Test

**Réductions sur Azure pour votre développement et testing actuel sur [ea.azure.com](http://ea.azure.com)**

- Aucun frais logiciels Microsoft sur les machines virtuelles
- Remises Dev/Test significatives sur un large éventail d'autres services Azure
- Accès aux machines virtuelles Windows 10

**Les réservations pour un engagement d'un an ou de trois ans sur les machines virtuelles et Azure SQL Database**



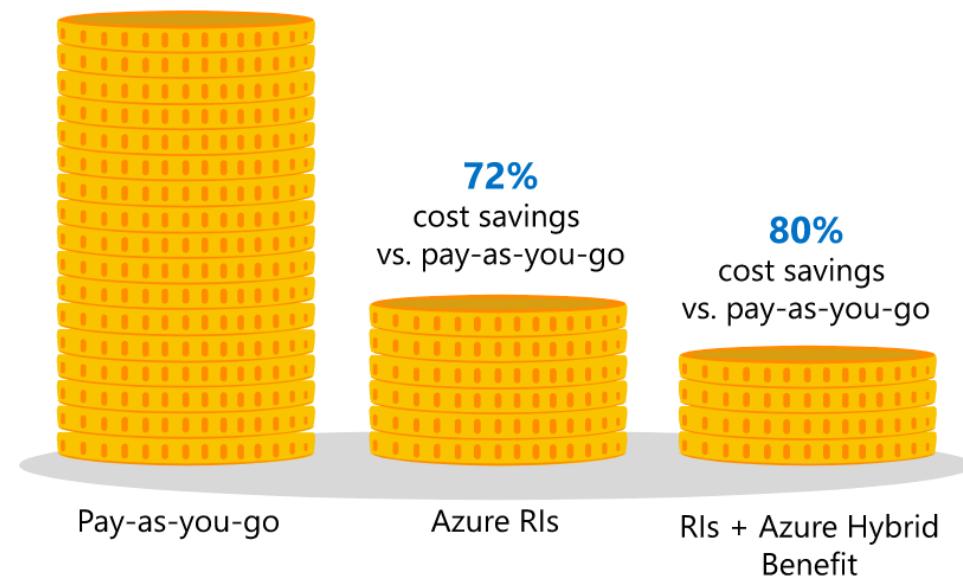
The screenshot shows the Azure portal interface for managing accounts. On the left, there's a vertical sidebar with icons for Windows (blacked out), Manage (blue), and a document (blacked out). The main area has a header with tabs: Partner, Enrollment, Department, Account (which is highlighted in blue), and Subscription. To the right of the header is a blacked-out account name and a user icon. Below the header, there's a section titled "Account" with a dropdown menu set to "All Departments". To the right of the dropdown are three buttons: a checked checkbox for "Active(Pending)", a magnifying glass icon for "Search", and a plus sign for "+ Add Account". Further down, there's a table with columns: Account ..., Account Owner, Auth Type, Status, Start/End Date, Dev/Test (with a yellow highlight), Department, and Cost Center. One row in the table is visible, showing a blacked-out account owner, "Work or School Account" as the auth type, "Active" status, "1/1/2020 - 11/30/2022" as the start/end date, a yellow-highlighted "Yes" in the Dev/Test column, a blacked-out department, and a blacked-out cost center.

# Jusqu'à 80% d'économie en activant ces options

## Azure HybridBenefit

- Utilisez vos licences Windows Server ou SQL Server locales avec une couverture Software Assurance pour économiser jusqu'à 80% par rapport aux tarifs du paiement à l'utilisation lorsque vous profitez en même temps des économies réalisées grâce à Azure ReservedVirtual Machine Instances.

Save up to **80%** with RIs and Azure  
Hybrid Benefit



# Visibilité des coûts

# Extraction régulière des données

The screenshot shows the Microsoft Azure portal interface. On the left, the sidebar includes 'Create a resource', 'Home', 'Dashboard', 'All services', 'FAVORITES', 'Resource groups', 'All resources', 'Recent', 'Cost Management + Bi...', 'App Services', 'SQL databases', 'Virtual machines (classic)', 'Virtual machines', 'Cloud services (classic)', 'Subscriptions', 'Azure Active Directory', and 'Monitor'. The 'Exports' option under 'Cost Management' is selected.

The main content area displays the 'Cost Management: Cost Management Demo - Exports' blade. It shows a list of existing exports: 'TreyCMDemoExport' (Usage) and 'weektodatestest' (Usage). A 'New export' dialog is open, titled 'New export' (Cost Management Demo - PREVIEW). The 'Basics' tab is selected, showing the 'Name' field set to 'CostManagementDemo' and the 'Export type' set to 'Daily export of month-to-date costs'. Below the dialog is a preview of the export data in a grid format:

A	B	C	D	E	F	G
1	DepartmentName	AccountName	AccountOwnerId	SubscriptionGuid	SubscriptionName	ResourceGroupName
2	Ama	AAAA	maeptest3@hotmail.com	1caa5a3-2b66-43	Cost Management	Garda1HourBil
3	Ama	AAAA	maeptest3@hotmail.com	1caa5a3-2b66-43	Cost Management	MAR-CCM
4	Ama	AAAA	maeptest3@hotmail.com	1caa5a3-2b66-43	Cost Management	MAR-CCM

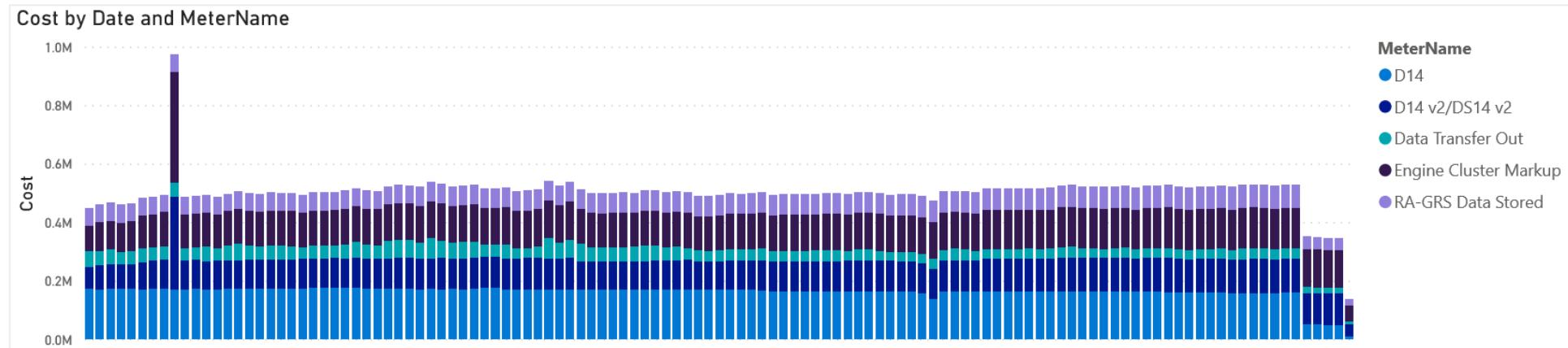
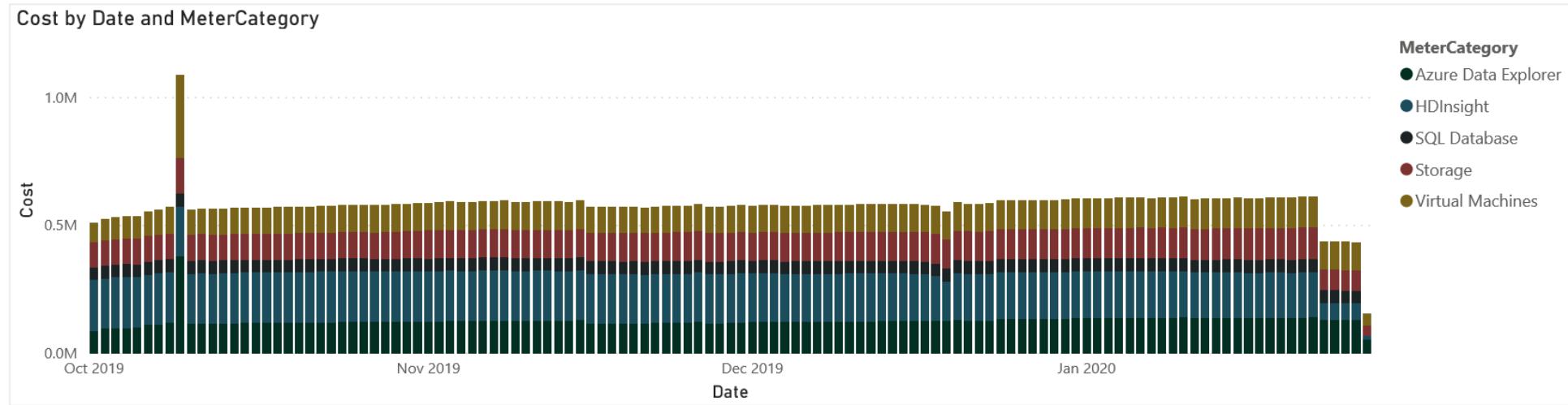
The file name 'CostMgmtDemo\_ec45fa87-7d7e-44e8' is displayed at the bottom of the preview area.

Create and manage exported data

Azure Cost Management + Billing updates

# Tableau Power BI Pour les clients EA - Usage drivers

## Top 5 Usage drivers

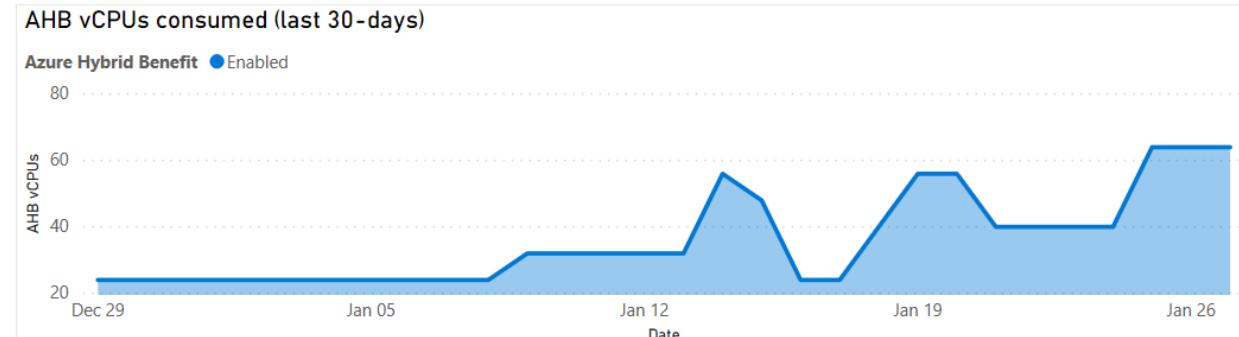


# Tableau Power BI Pour les clients EA - Azure Hybrid Benefit

## Windows Server AHB usage report

This Windows Server Azure Hybrid Benefits usage report shows how many have VMs have AHB enabled, and of those VMs how many AHB vCPUs or cores are being utilized.

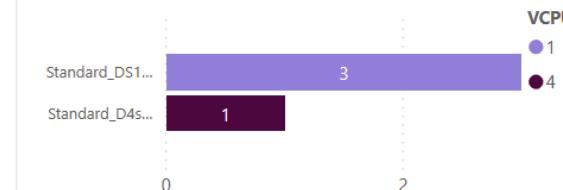
For more information around Azure Hybrid Benefit see: <https://azure.microsoft.com/en-us/pricing/hybrid-benefit/>



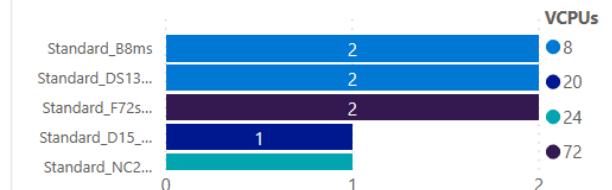
**Windows Server AHB enabled (last day)**

6

**AHB enabled SKUs with less than 8 vCPU (last day)**



**SKUs with 8+ vCPUs where AHB not enabled (last day)**



**Windows Server AHB vCPUs used (last day)**

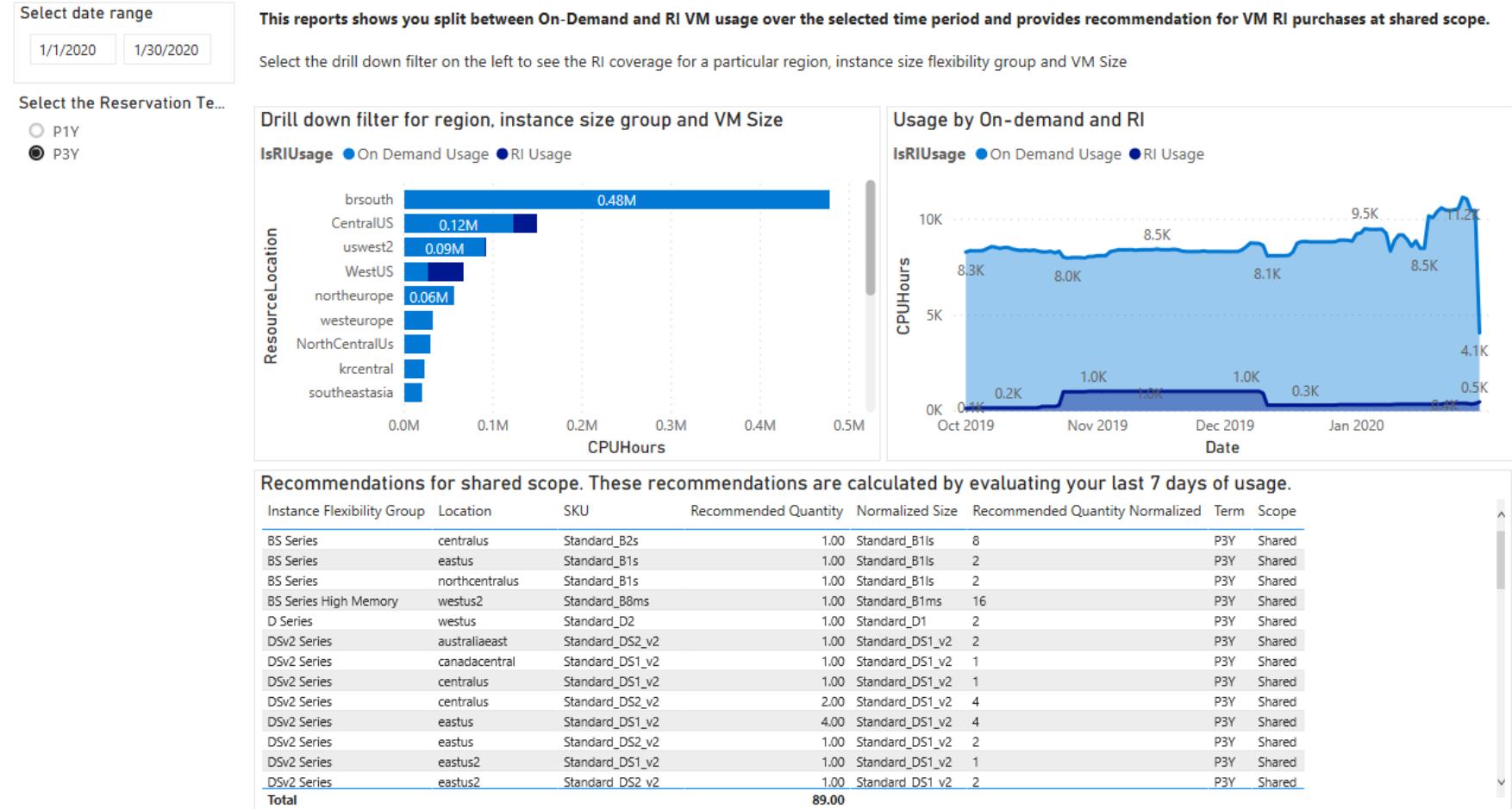
64

**Resource Details (last day)**

Date	SKU	VCPUs	AHB vCPUs	Azure Hybrid Benefit	SubscriptionId	SubscriptionName	ResourceGroup	ResourceName
1/27/2020 12:00:00 AM	Standard_F72s_v2	72	72	Not enabled	73c0021f-a37d-433f-8baa-7450cb54eea6	Trey Research Finance	JUMPER	Jumper3
1/27/2020 12:00:00 AM	Standard_F72s_v2	72	72	Not enabled	73c0021f-a37d-433f-8baa-7450cb54eea6	Trey Research Finance	JUMPER	Jumper4
1/27/2020 12:00:00 AM	Standard_NC24s_v3	24	24	Not enabled	b85af93a-5507-4886-b799-fec6d505b988	Contoso	USAGE	SpotTest2
1/27/2020 12:00:00 AM	Standard_D15_v2	20	24	Not enabled	73c0021f-a37d-433f-8baa-7450cb54eea6	Trey Research Finance	JUMPER	Jumper1
1/27/2020 12:00:00 AM	Standard_H16_Promo	16	16	Enabled	b85af93a-5507-4886-b799-fec6d505b988	Contoso	ADFCOSTTEST	AzureEATest3
1/27/2020 12:00:00 AM	Standard_DS5_v2	16	16	Enabled	1caa5a3-2b66-438e-8ab4-bce37d518c5d	Cost Management Research	formatica	DVM
1/27/2020 12:00:00 AM	Standard_DS13_v2	8	8	Not enabled	9be7120a-cf89-46c8-b091-d341776575e9	TestEA Towboat Customer2	GunnarDC	sql-vm-A
1/27/2020 12:00:00 AM	Standard_DS13_v2	8	8	Not enabled	73c0021f-a37d-433f-8baa-7450cb54eea6	Trey Research Finance	Gekko	GekkoPower
1/27/2020 12:00:00 AM	Standard_DS3_v2	4	8	Not enabled	d5bcaab0-0add-4d7f-b41d-0f2b8e829540	ISO27001	FABRIKAM-SHAREDVCS-ADDS-RG	fabrikam-shared

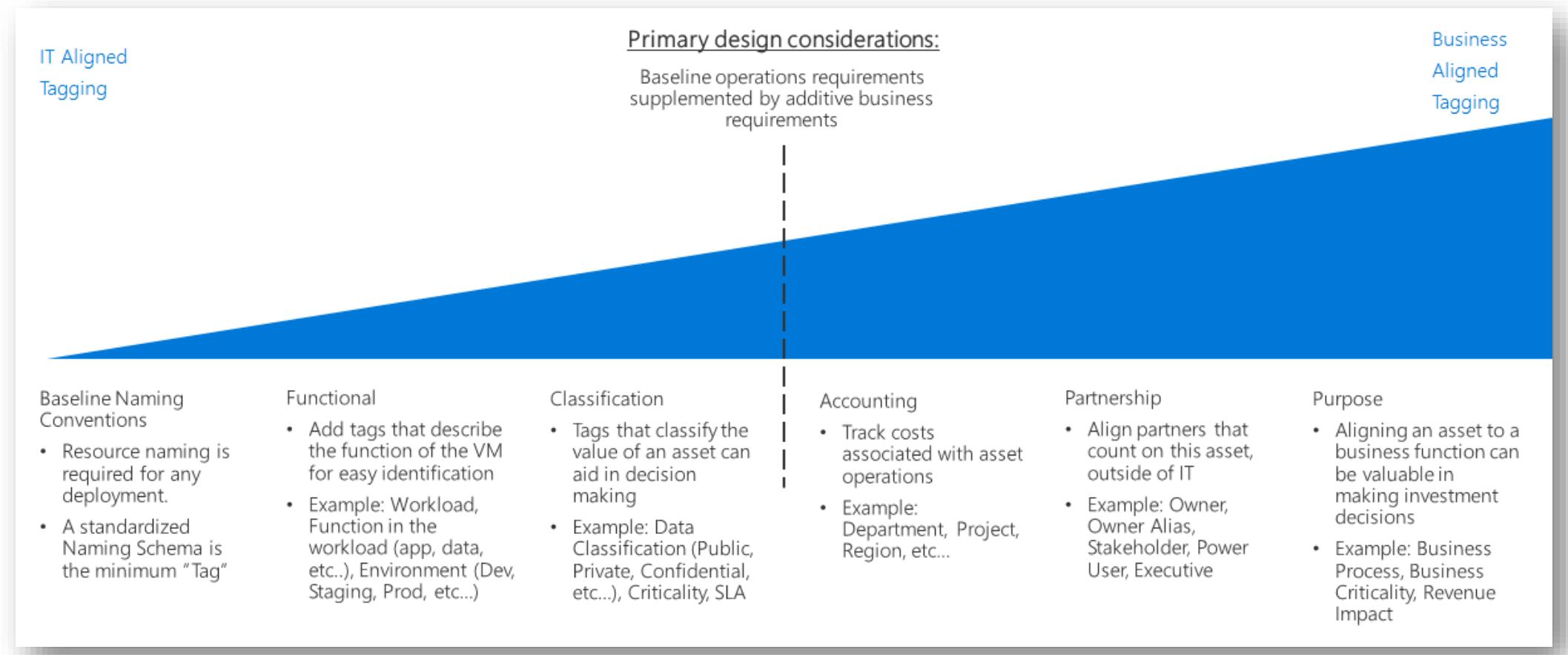
# Tableau pour les clients EA - Reserved Instance Coverage

## VM RI Coverage (shared recommendation)



# Prérequis

# Stratégie de gestion des tags



# Stratégie de gestion des tags



## IMPLEMENTATION DES TAGS

- **QUOI** – Créer une politique et une liste de tagging comme foundation de votre gouvernance.
- **POURQUOI** – Les tags vous permettront de filtrer les rapports, agrégérer les données et d'assurer la traçabilité des coûts et de l'utilisation au niveau de la ressource



### Tips

- Il faudra veiller à mettre en place la validation des tags via Azure Policy!
- Pour mettre à niveau votre environnement, pensez à scripter l'application itérative des tags

## NOTRE RECOMMENDATION

Commencez avec le MVP Bechtle ci-dessous

Tag Name	Description	Values
CostCenter	Cost Center	8088, 9117, 8392
Environment	Environment	Production, Preprod
Owner	Resource Owner	Joe@fabrikam.com
App	Solution/Application	SAP, Datawarehouse, HRPortal

# Les bonnes pratiques

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# Les bonnes pratiques

Il existe une liste de bonnes pratiques, dont voici quelques exemples :

- Identifier les opportunités de redimensionnement des VMs
- S'assurer que les Skus provisionnés sont corrects
- Arrêt automatique des VM
- Arrêt automatique des composants non productifs
- Suppression des disques orphelins
- Faire les bons choix de géo-redondance

[Et d'autres encore](#)

# Mise en application des bonnes pratiques

## Client 1 : Enterprise Agreement, CHF 4'500'000.- conso Azure / année

- Suppression de ressources non-utilisées (IP Publiques, disques orphelins, double emplois)
  - Right-sizing VM
- => CHF 300'000.- économisés par année.

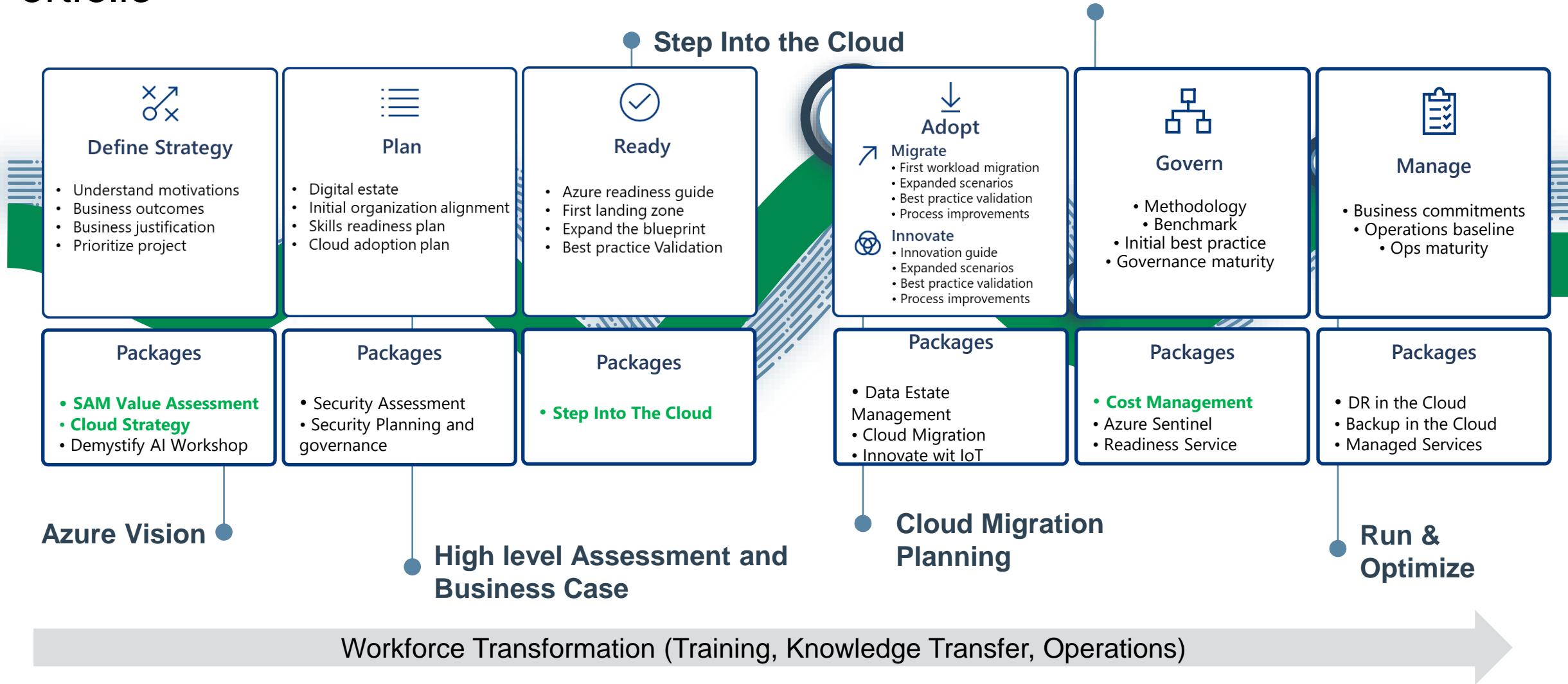
## Client 2 : Enterprise Agreement, CHF 120'000.- conso Azure / année

- Show-back des coûts par tenant, souscriptions et ressource
  - Prévisions budgétaire en vue du renouvellement du crédit Azure
  - Réintégration des abonnements CSP et PAYG au crédit de consommation EA
- => CHF 20'000.- économisés par année.

# Notre portefeuille de services

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# Portfolio



# Q&A

Restons en contact:

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[wiliam.heurdier@bechtle.com](mailto:wiliam.heurdier@bechtle.com)

