About me

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– Profile –

Since 2006, Jary supports enterprises in IT projects, improving the technical performance and reducing operating costs. In the last seven years he focused on SAM area, working on Software License Compliance and Optimization projects especially related to Microsoft, SAP,, Oracle and engineering technologies.

A process-driven approach mixed with a deep technical background that enable filling the gap between people, needs and technology.

– Education –

- Master degree in Computer Science, University of Padua
- ITIL Expert – PRINCE2 Practitioner
- MBA, CUOA Business School

– Experience –

More than 10 years of experience in enterprises IT projects, focusing on inventory and asset management through different framework and tools.

Project leader for more than 100 baseline and license optimization projects, aiding various organization worldwide with the ever-present challenges of Software Asset Management.

Deep understanding of Vendor license programs, metrics, and terms and conditions.

License Benchmarking: compare alternative licensing models against licensing arrangements proposed by the Vendors and/or their Business Partners.

Reviewing and benchmarking of license contracts, entitlements and based on industry common practices, global best practices and international experience.

Coaching and support in preparing for contract negotiation and alignment with future trends.

Assessment, design and implementation of Software Asset Management process based on ISO/IEC 19770:2012 and outline activities and initiatives necessary to achieve the SAM vision and goals

As head of NETCOM SAM Department, he coordinates the SAM consultancy team.

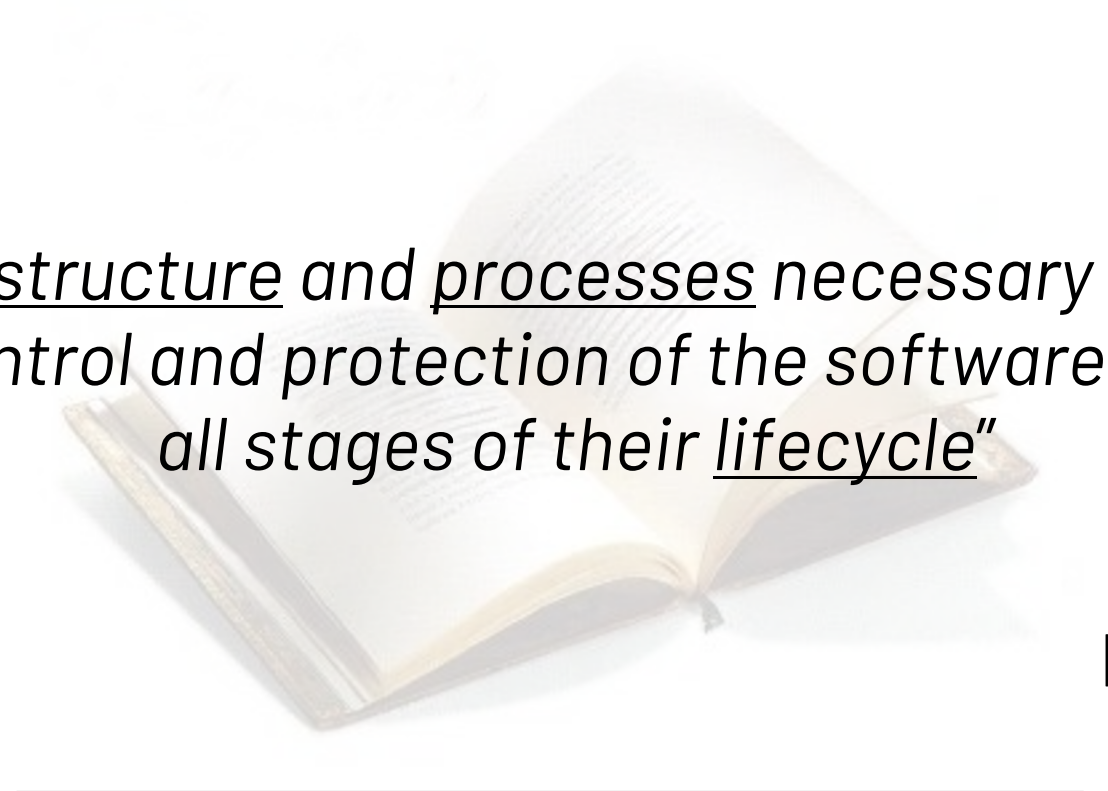
Agenda

- Introduction to SAM 4 Cloud
- The Cloud Journey
- A case study
- Q&A

Did you remeber SAM?

Software Asset Management Recap

Software Asset Management



"all of the infrastructure and processes necessary for the effective management, control and protection of the software assets throughout all stages of their lifecycle"

ITIL's Guide to SAM

SAM Dimensions

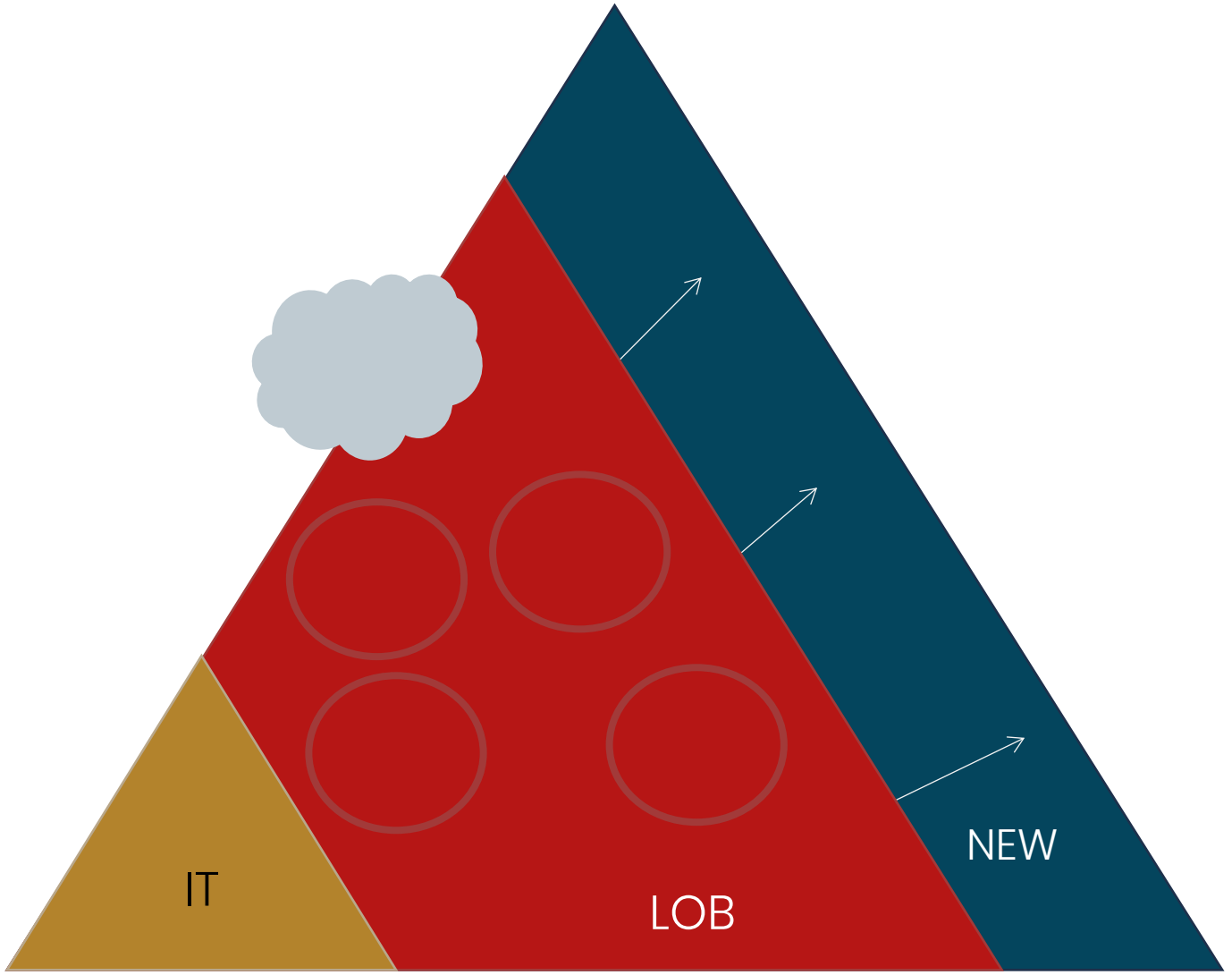
PRACTICE

TECHNOLOGY (PRODUCTS)

PARTNERS

COMPETENCE (PEOPLE)

New challenges



SAM4Cloud

Software Asset Management and the Cloud Journey

Cloud Journey

- Many factors lead companies to consider a move to the Cloud
  - Strategic changes
  - Corporate reorganizations
  - M&As
  - Contract terms
  - Product EoL products
- What are the evaluation criteria?
- How important is the price?

Looking for assurances

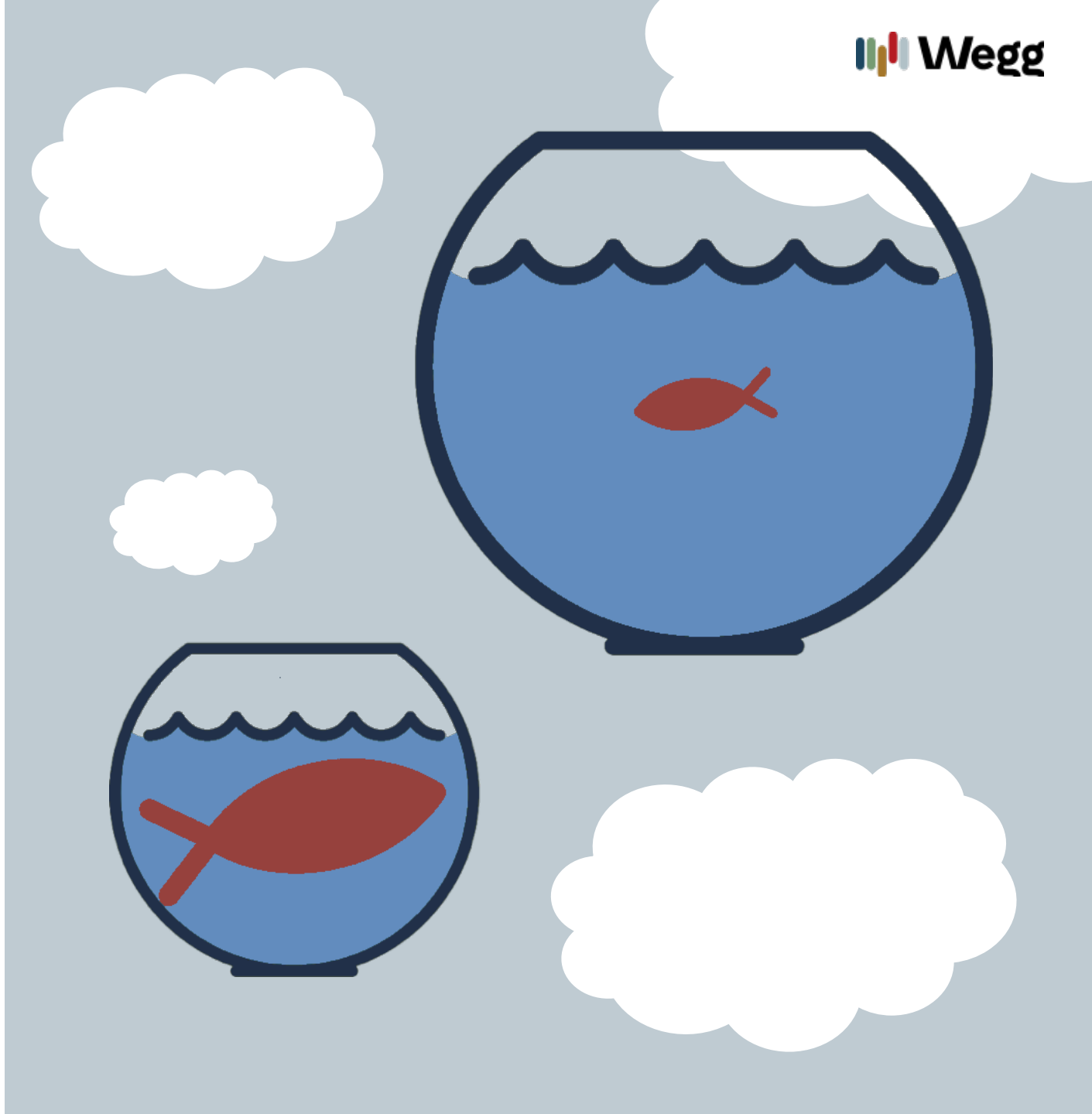
- The price *seems* a certainty
  - Quantitative parameter
  - Measurable and comparable
- But is it really a certainty?
  - What cost elements were considered?
  - How many companies are able to calculate the service TCO?

Price comparison

- If the on-premise price is normally underestimated it is important to avoid overestimating the needs in terms of the Cloud
- How often is the choice of Cloud plans based on the characteristics of the customer's hardware and not on real existing needs?
  - Has the customer carefully sized their hardware resources?
  - Did the companies that provided the software support the sizing?
- According to Gartner, in the first 18 months, cloud resources are overestimated by 70%.
  - Does it make sense in the Consumption Economy?

Right-sizing

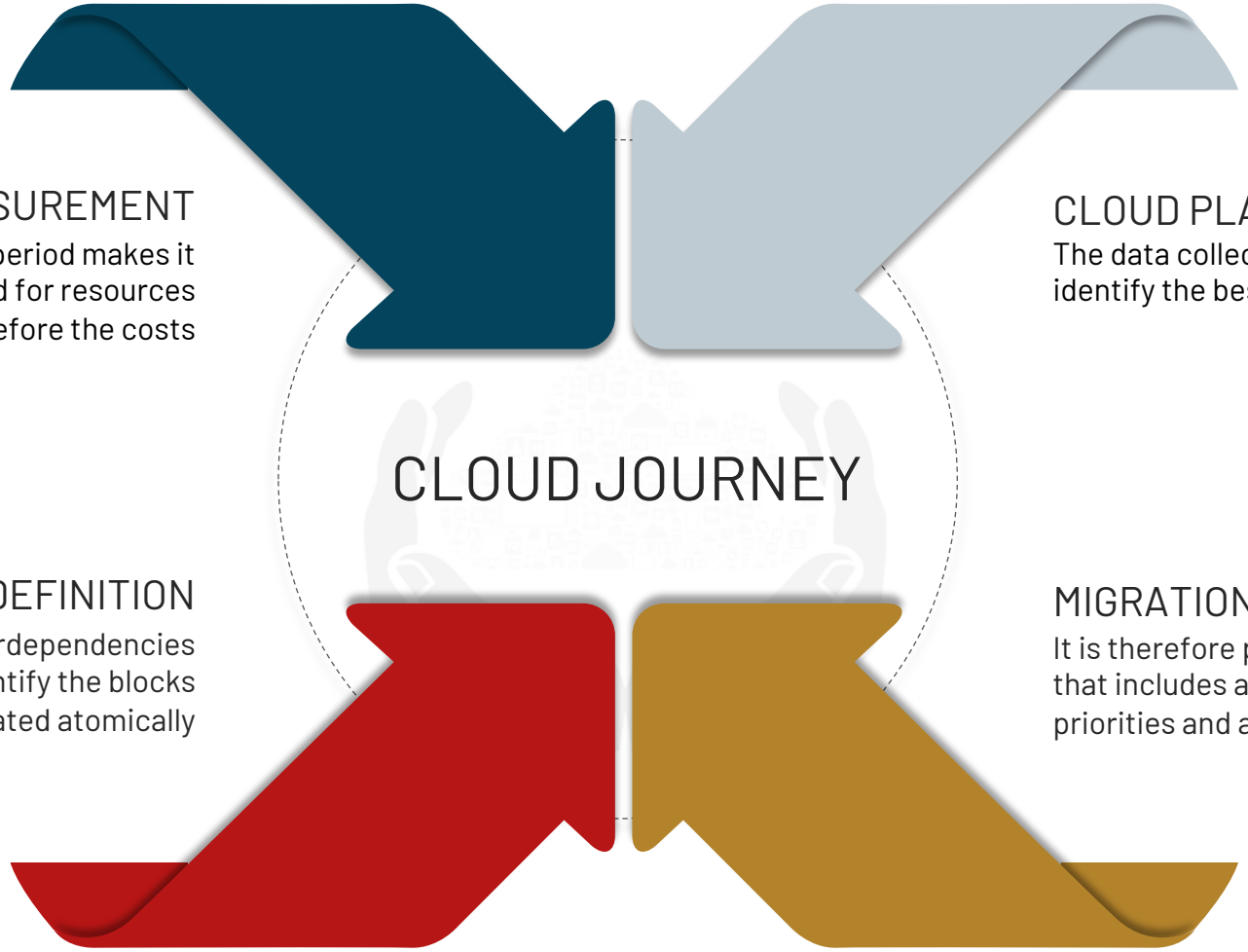
- Measurement is an essential activity for correct sizing
  - It allows a more correct comparison of costs
  - It reduces the risk of surprises
  - It makes the customer perceive a prudent investment of resources
  - It supports the next steps (Design,Implementation)



Useful data

- HW and SW inventory
- Effective consumption
  - CPU
  - Memory
  - Network
  - Storage
- SW Dependencies

Wegg



CONSUMPTION MEASUREMENT

The hardware measurement for a pilot period makes it possible to precisely identify the need for resources and therefore the costs

CLOUD PLAN SELECTION

The data collected allows us to scientifically identify the best possible cloud subscription

FUNCTIONAL UNITS DEFINITION

The measurement identifies the interdependencies between systems and allows to identify the blocks that should be considered and migrated atomically

MIGRATION PLAN

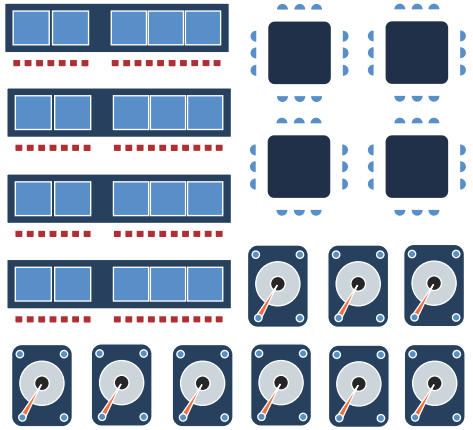
It is therefore possible to define a migration plan that includes an analytical definition of costs, priorities and activities

Consumption Measurement

AUTOMATIC SCAN

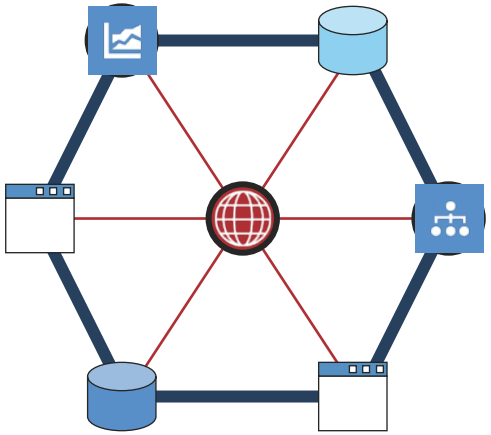
Measurement based on bots that do not require the installation of software on the measurement perimeter

The bot remains resident in the target server's memory for the expected measurement duration. Upon reaching the deadline, it removes itself.



HARDWARE MEASUREMENT

Constant measurement of the use of hardware resources that affect cloud infrastructure costs such as: CPU, RAM, Hard Disk, Network. Determination of the need for performance terms such as, for example, the number of IOPS required.



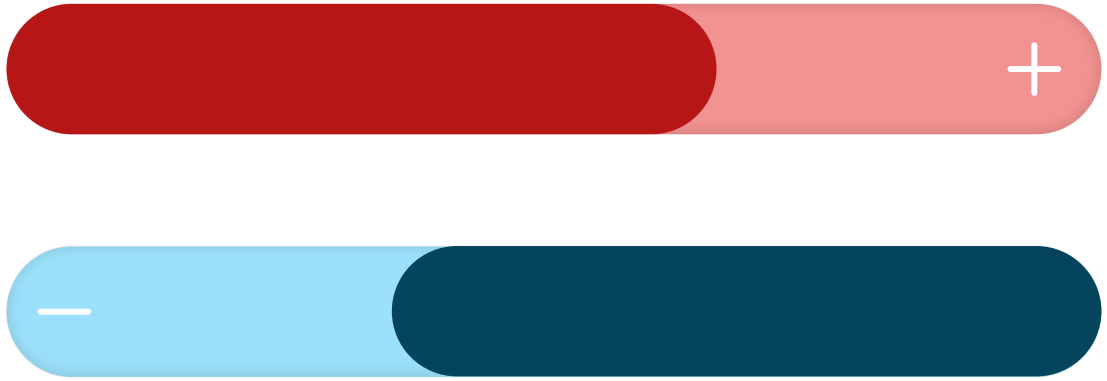
SOFTWARE MEASUREMENT

Determination of applications (DBMS, Web Server) that may require greater performance. Identification of the dependency relationships in place between the systems measured. Classification of requests on a geographical basis

Cloud Plan Selection

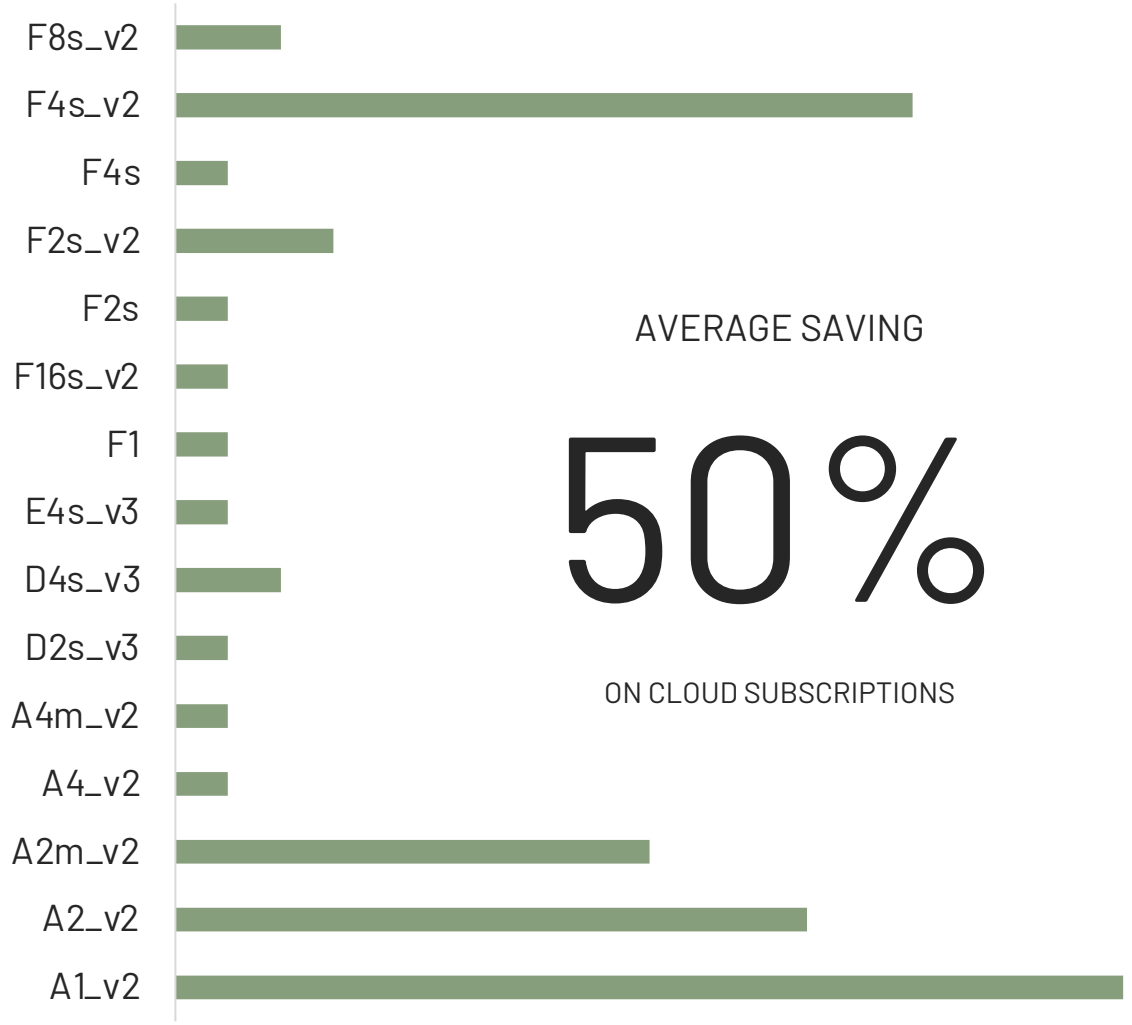
ON PREMISE SIZING

The choice of the Cloud plan is made on the resources currently configured in the on-premise environment



RESOURCE CONSUMPTION SIZING

The choice of the Cloud plan is made on the actual (measured) usage to support consumption peaks

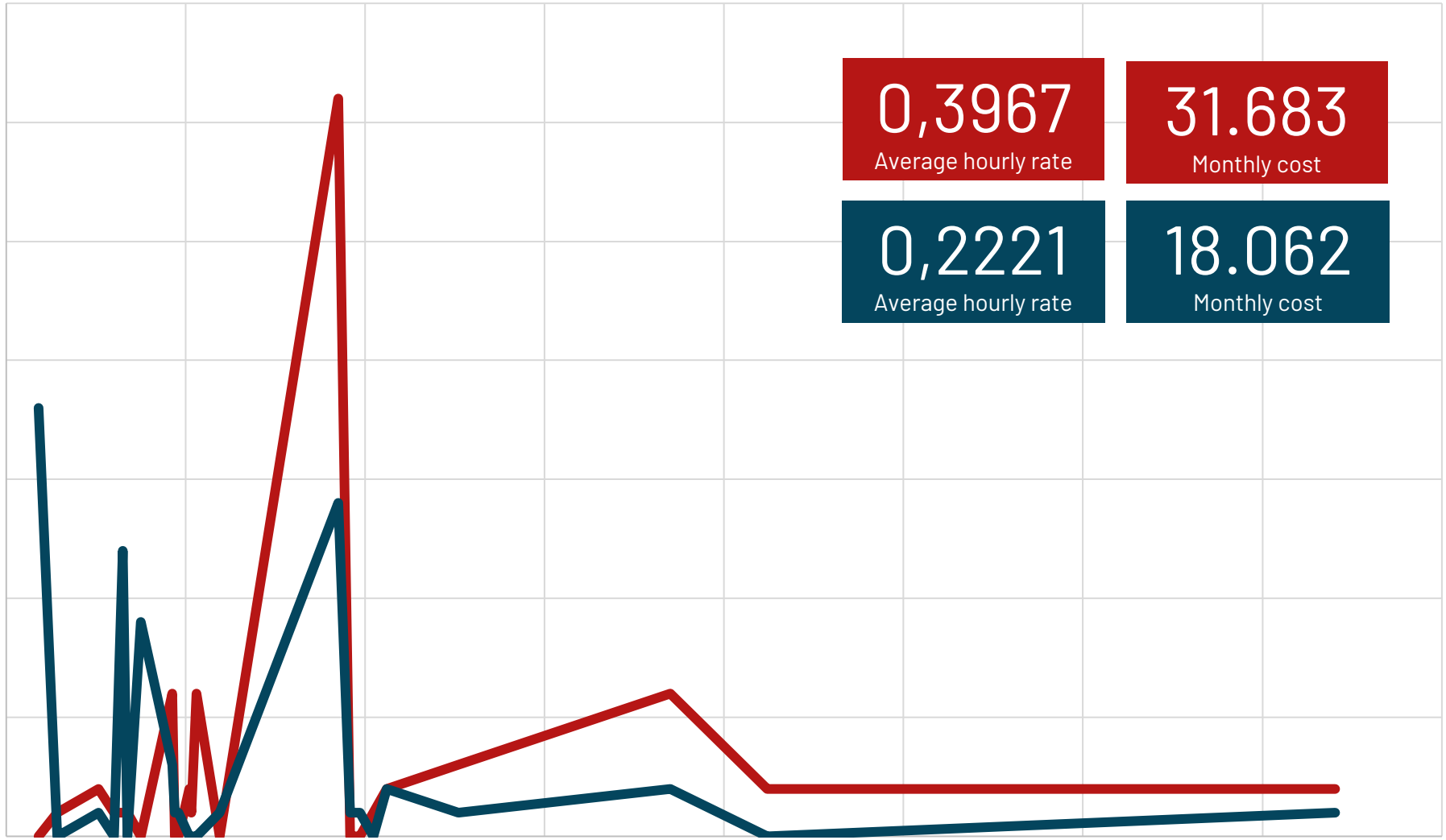


AVERAGE SAVING

50%

ON CLOUD SUBSCRIPTIONS

Hitting the mark!



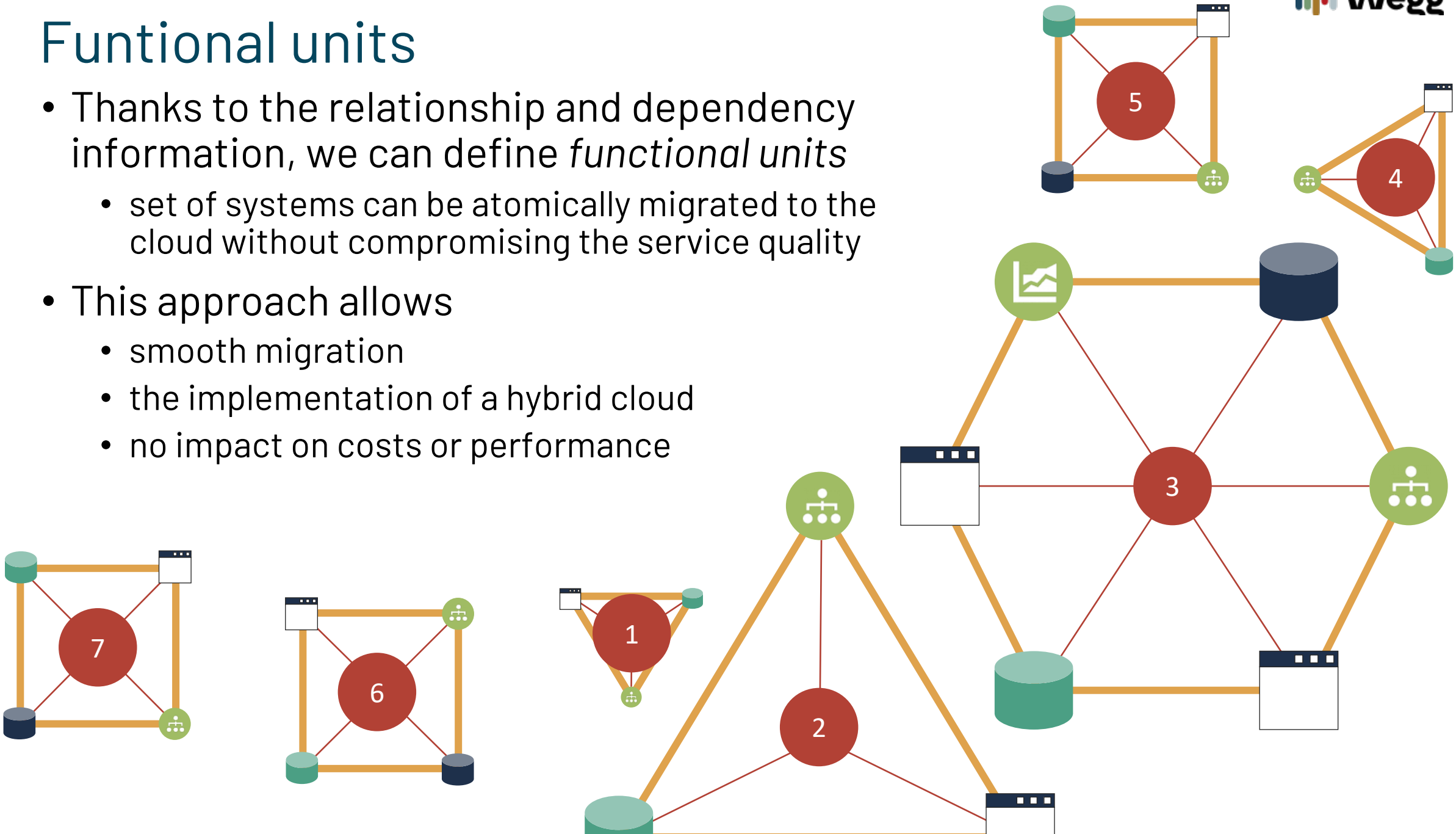
323k/ year
HW SIZING

184k/year
ARC SIZING

139k/ year
RISPARMIO

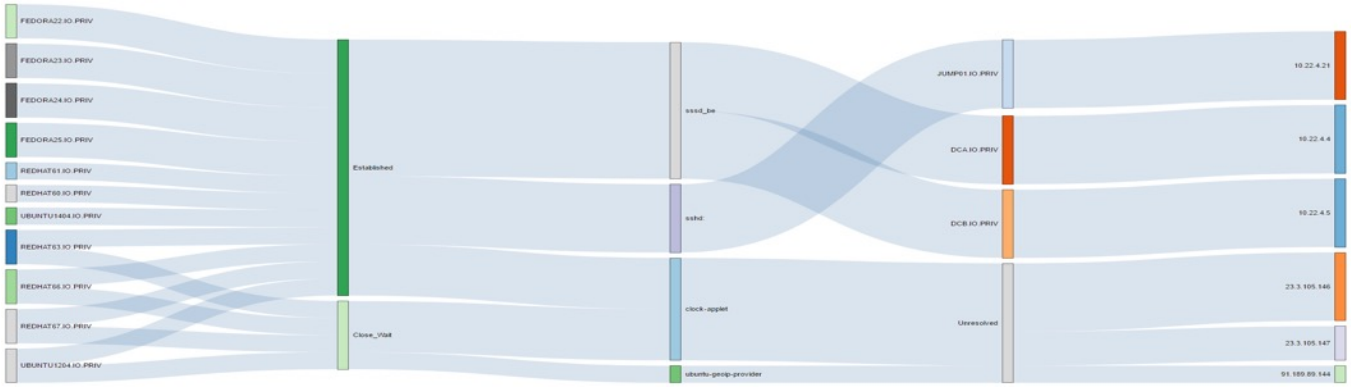
Funtional units

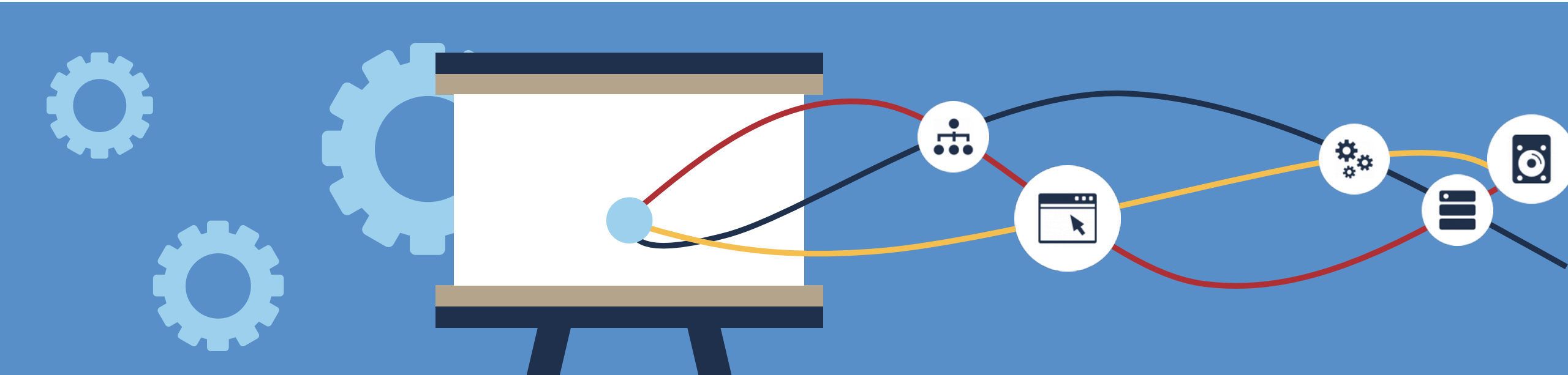
- Thanks to the relationship and dependency information, we can define *functional units*
  - set of systems can be atomically migrated to the cloud without compromising the service quality
- This approach allows
  - smooth migration
  - the implementation of a hybrid cloud
  - no impact on costs or performance



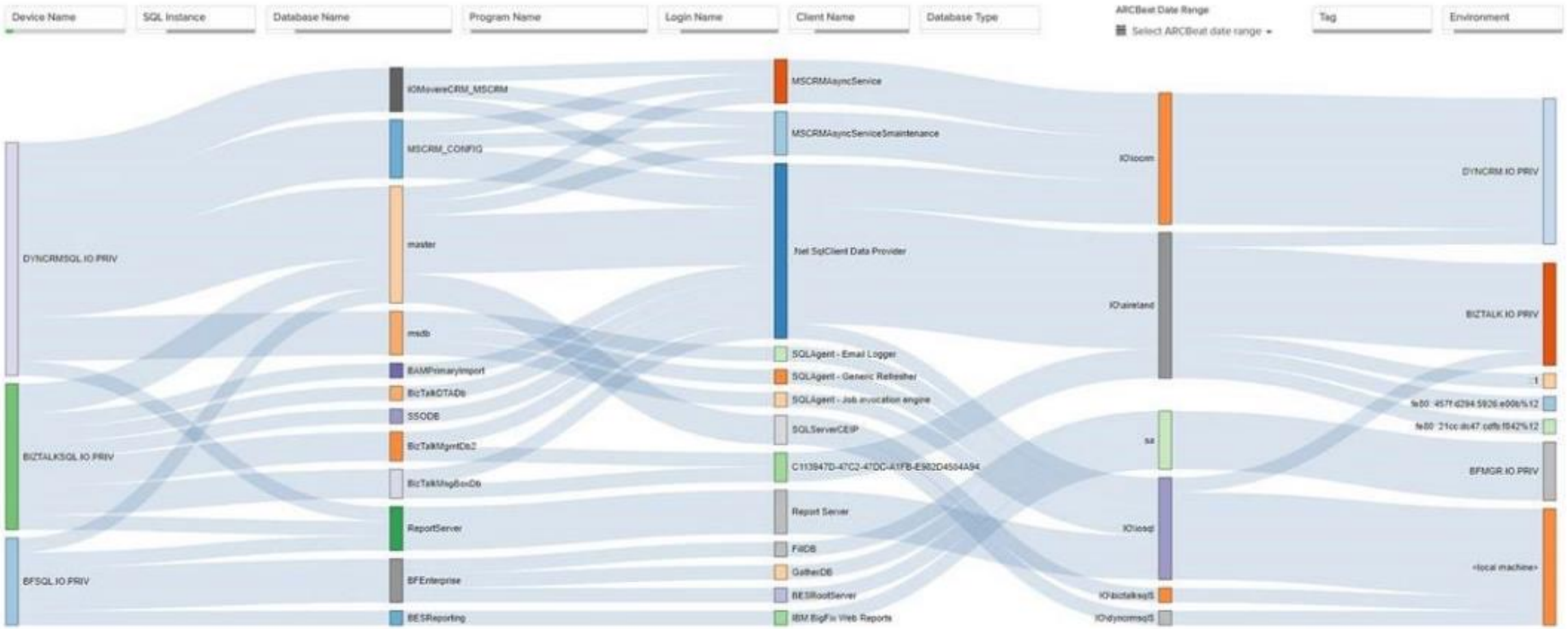
Dependency mapping

- Actual Resource Consumption
  - Products installed/executed
  - Network connections/consumption
- It’s possible to determine the dependency between the systems

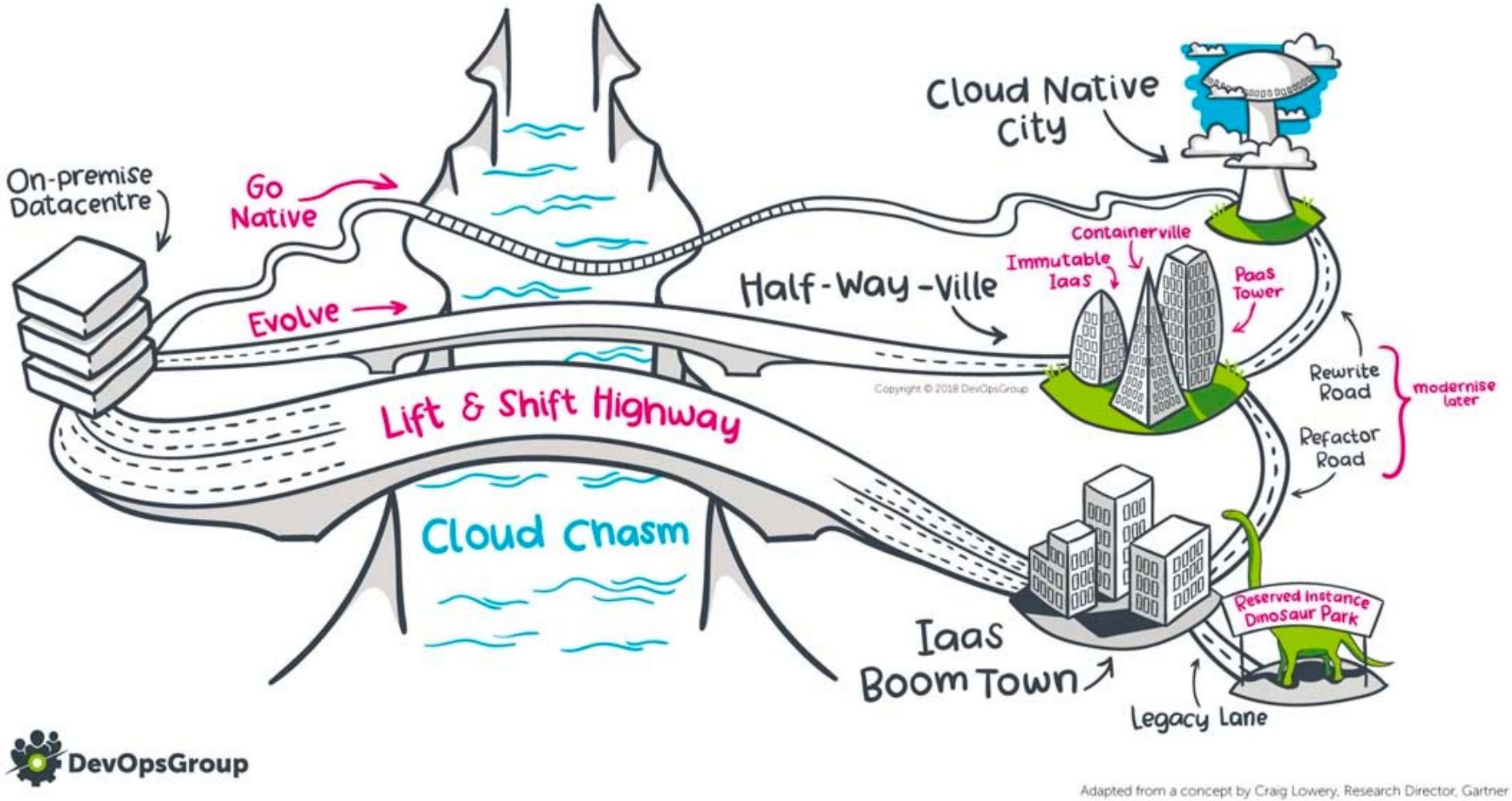




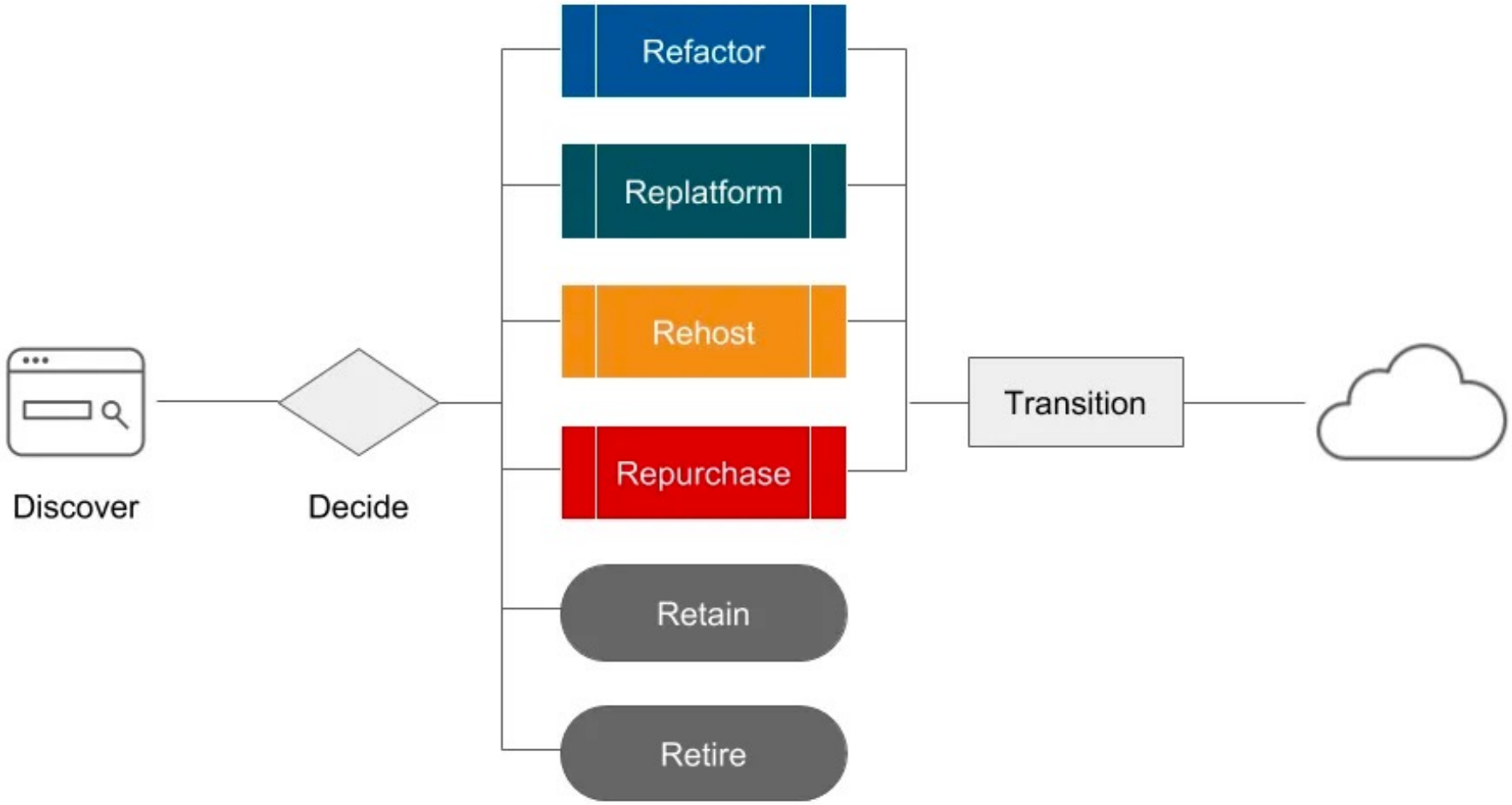
From the database, to the app, to the user



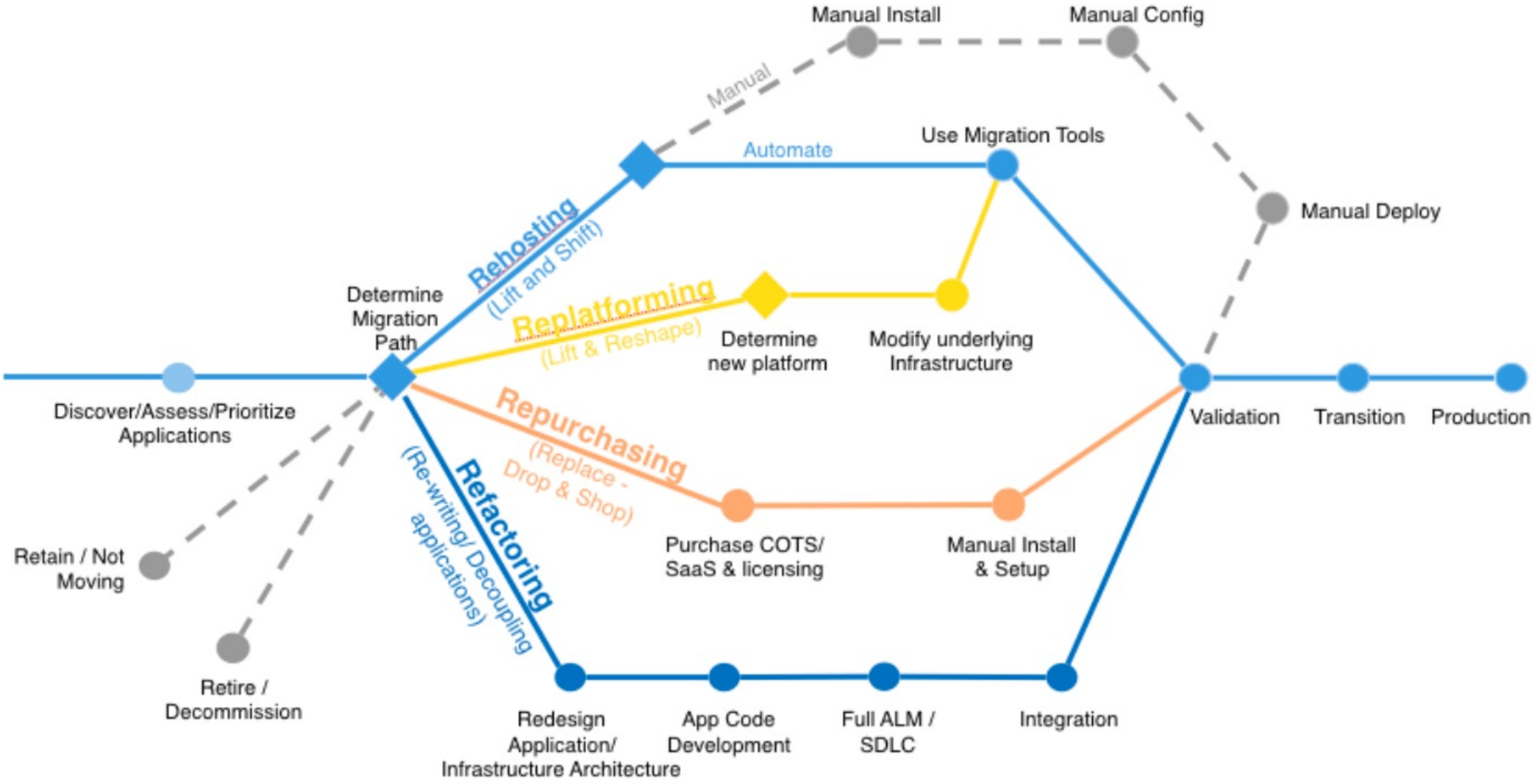
Migration Plan



Opportunities – 6Rs (simple version)



More about 6Rs



Case Study

Introduction

Perimeter

KICK-OFF MEETING **15.10**

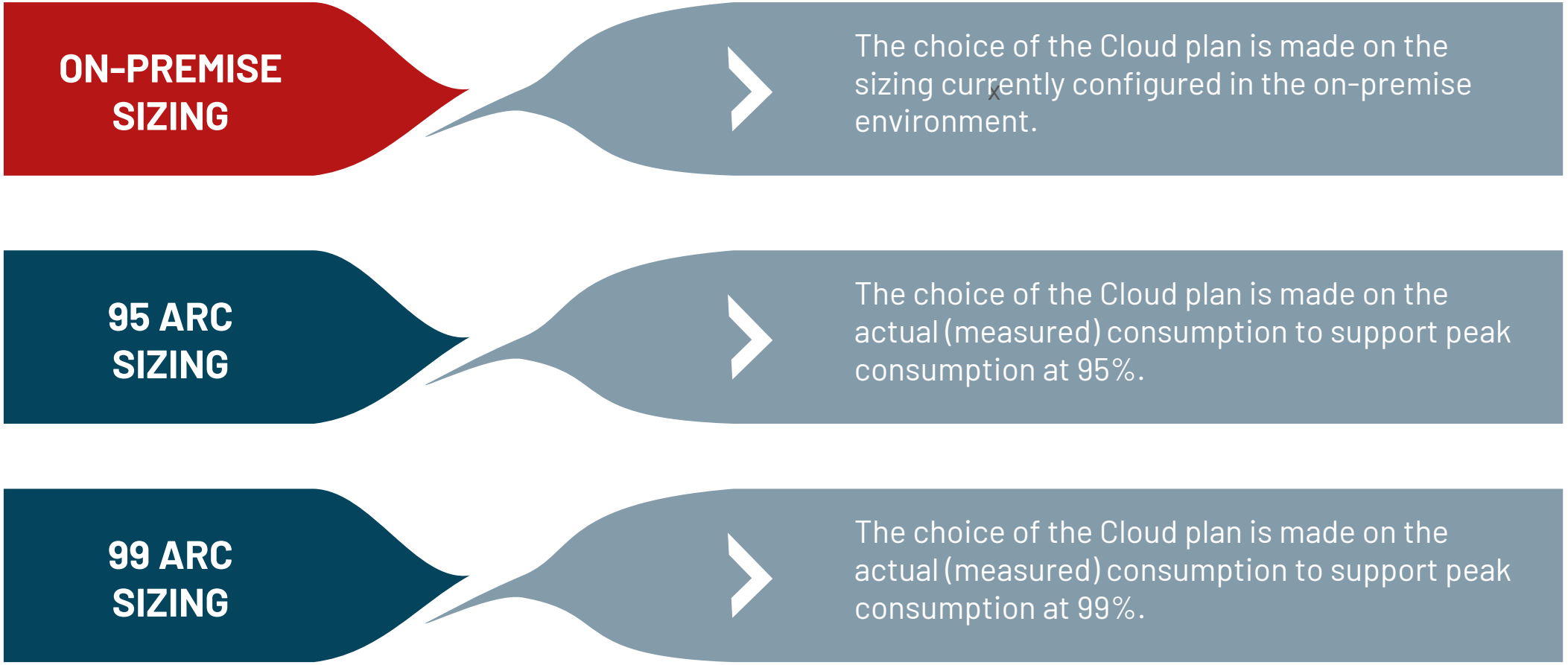
MEASUREMENT START **18.10**

REPORTING **06.11**

CLOSE-OUT **06.12**

OMS
27
Virtual Server
Windows based

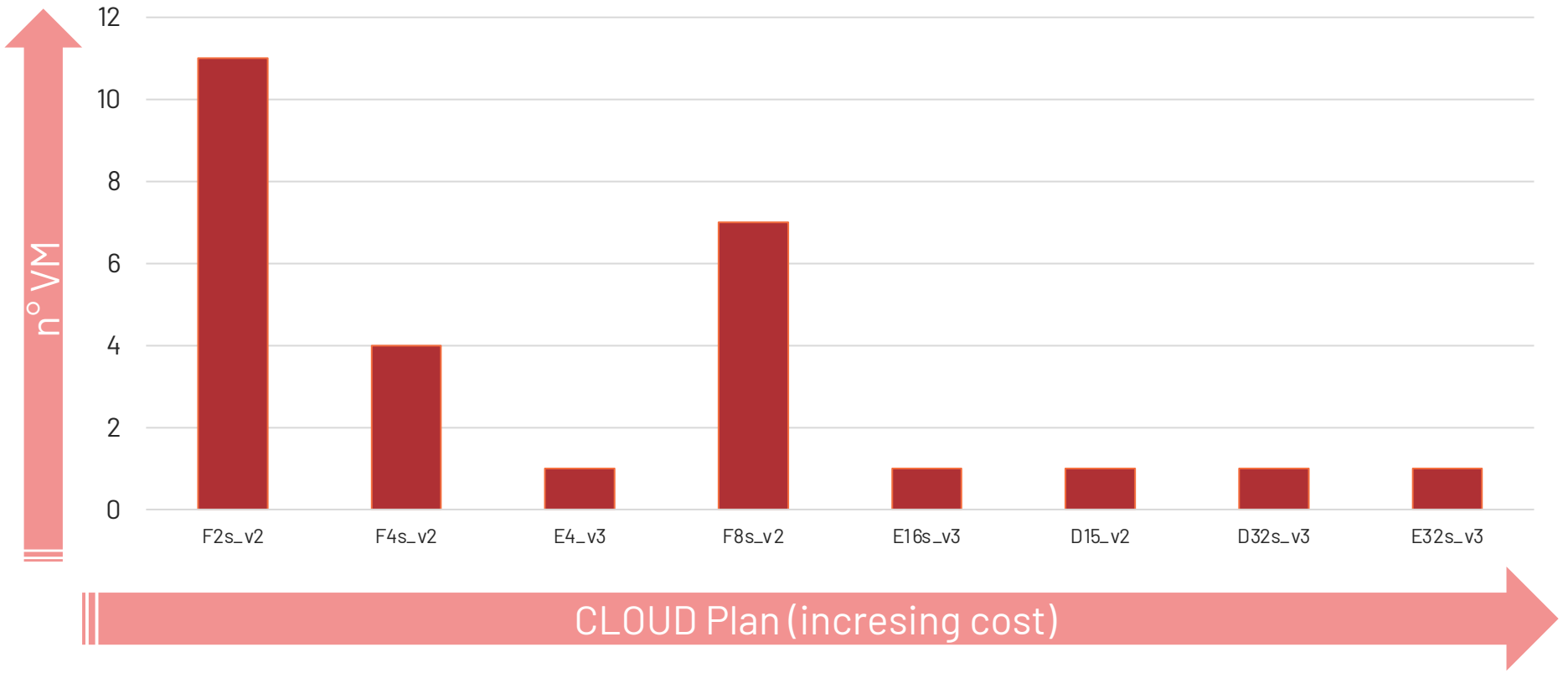
Sizing approaches



Case Study

Resource consumption

On-Premise VM Sizing

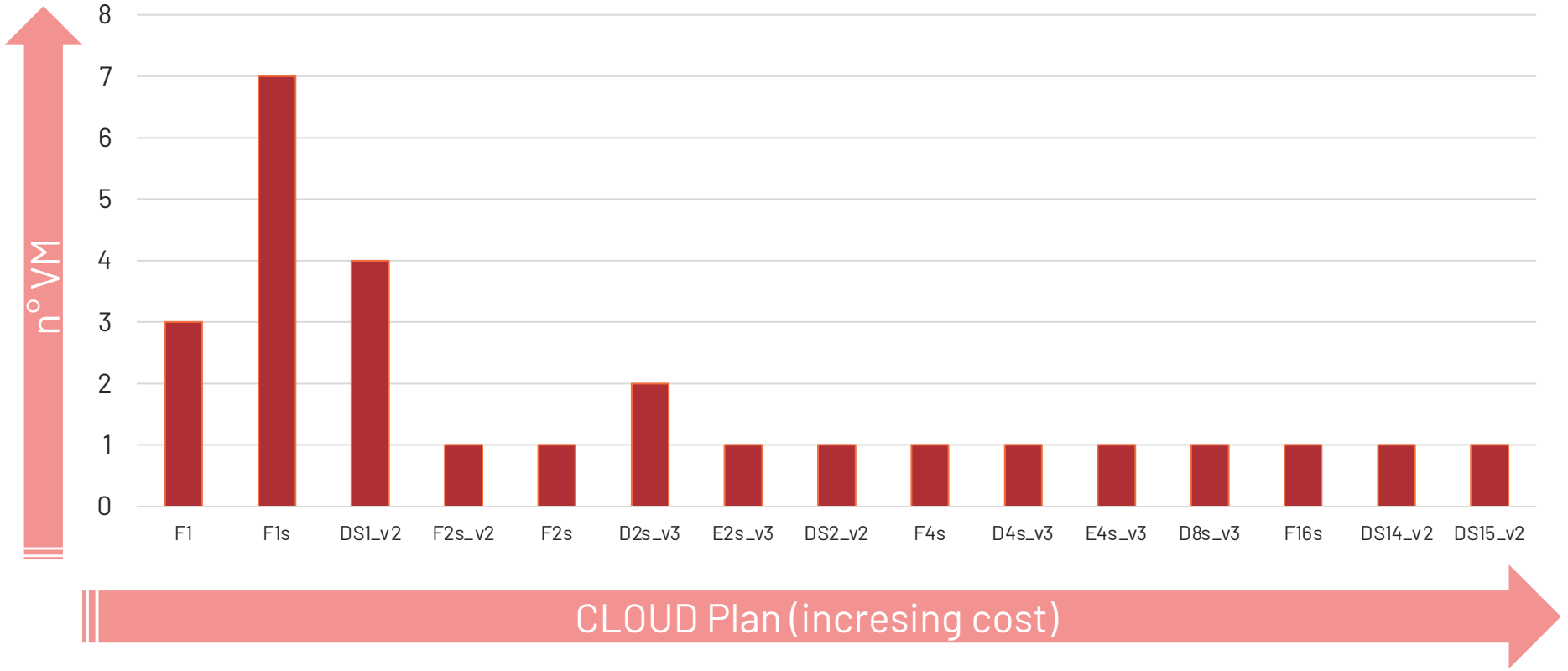


0,563
Average hourly rate (EUR)

1YR RESERVATION

11.100,759
Monthly cost (EUR)

Actual Resource Consumption 99% VM Sizing

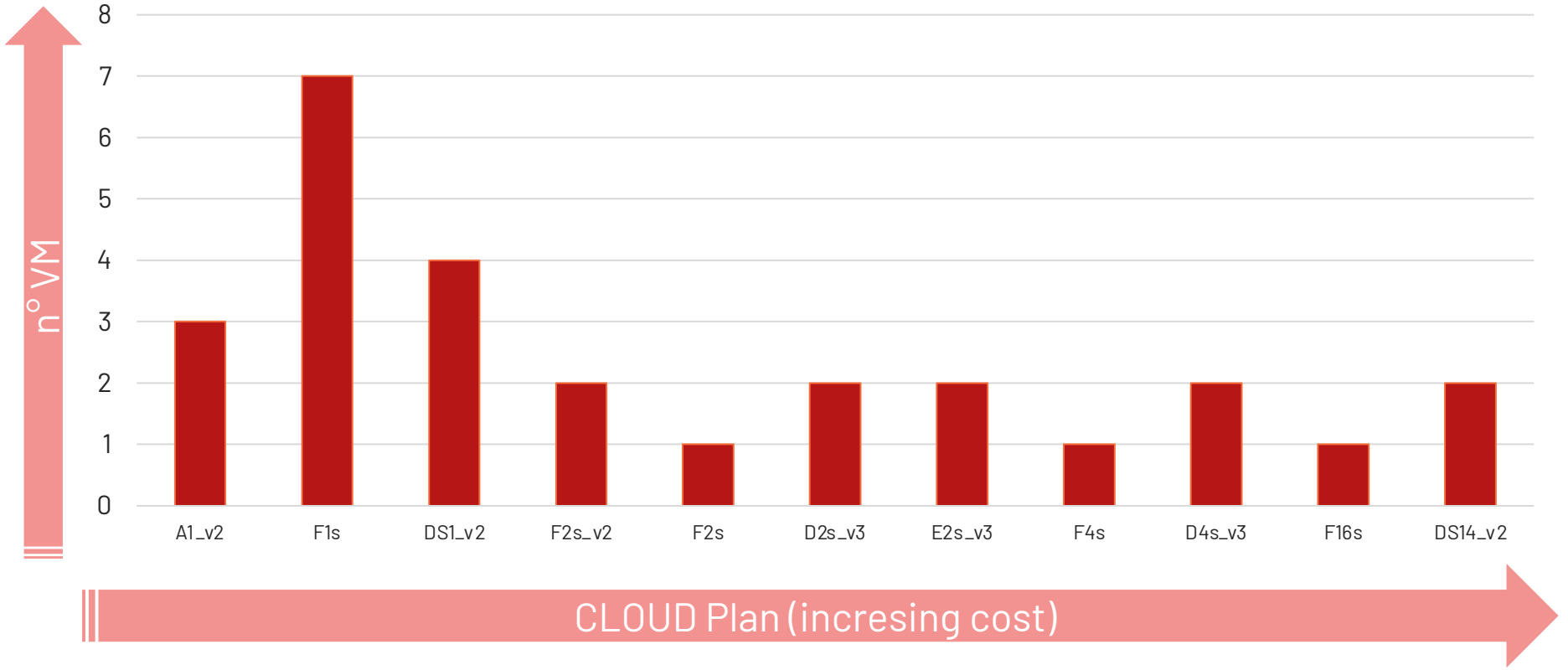


0,312
Average hourly rate (EUR)

1YR RESERVATION

6.145,745
Monthly cost (EUR)

Actual Resource Consumption 95% VM Sizing

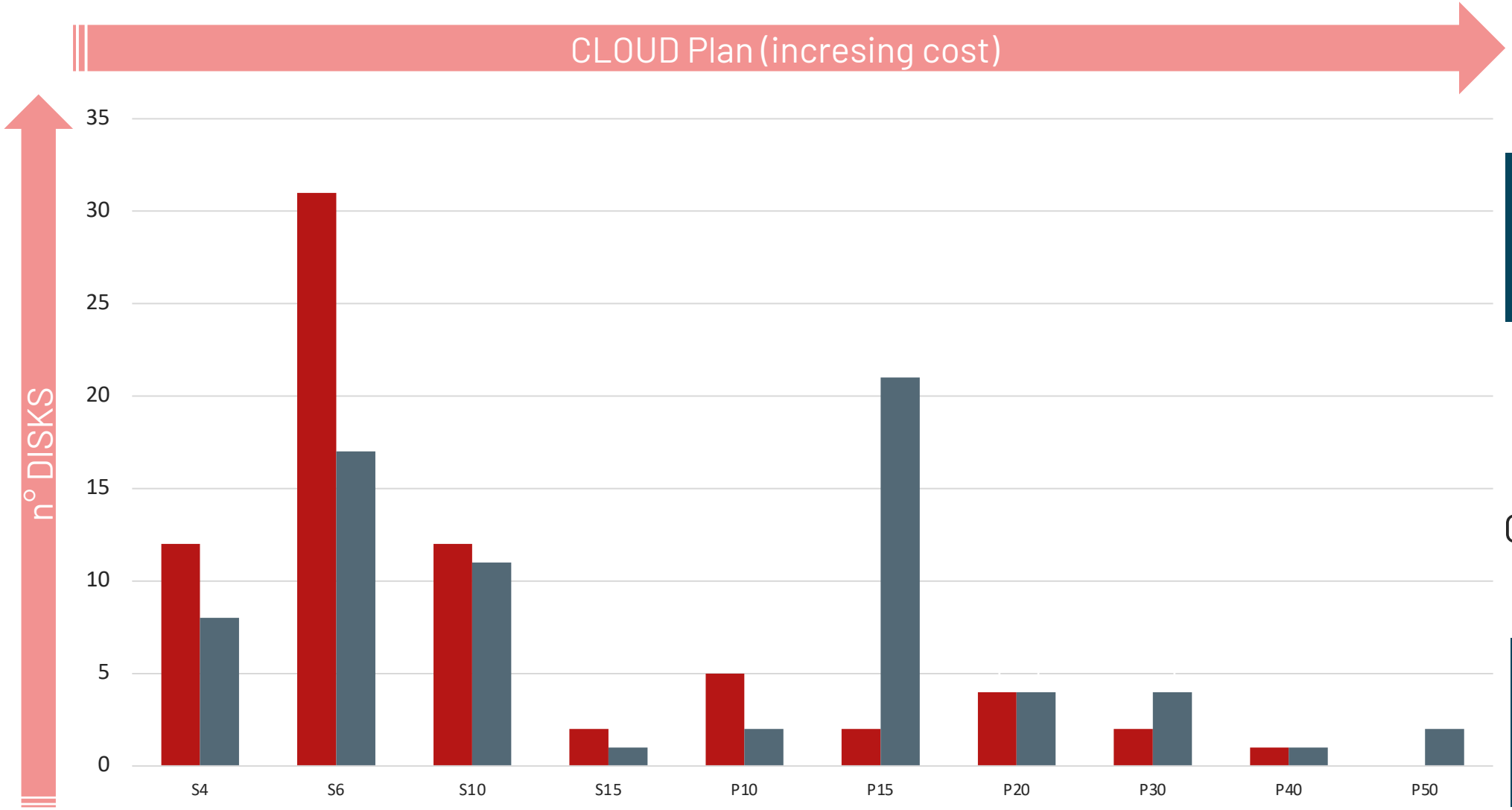


0,276
Average hourly rate (EUR)

1YR RESERVATION

5.445,340
Monthly cost (EUR)

Storage Sizing



1.184
Monthly cost (EUR)
On Premise Sizing

On Premise Sizing
ARC Sizing

COSTI 1YR RESERVED

3.051
Monthly cost (EUR)
ARC Sizing

Economics (1)

	Cost (€/month)	Saving
On-premise Actual Resources	12.285,10	
Actual Resource Consumpion 95%	8.496,52	**3.788,58 (30%)**
Actual Resource Consumpion 99%	9.196,93	**3.088,17 (25%)**

VM Bs Series

Device Name	Azure Profile ARC 99%	VM Bs Series	Avg CPU	Max CPU	Avg IOPS	Avg Disk Throughput (MB/sec)	Disks
SERVER 1	DS1_v2	B2s	10.53%	34.51%	582	6	2
SERVER 2	DS1_v2	B2s	13.53%	37.02%	597	9	2
SERVER 3	DS1_v2	B2s	17.70%	46.98%	985	6	2
SERVER 4	D2s_v3	B2ms	16.67%	61.74%	694	7	2
SERVER 5	F1s	B1ms	16.83%	55.96%	536	7	2
SERVER 6	F1	B1ms	13.66%	53.39%	397	9	2

Economic Summary

	Pay As You Go Cost (€/month)	1yr Up Front Cost (€/month)	3yr Up Front Costo (€/month)	1yr Up Front Saving	3yr Up Front Saving
On-premise Actual Resources	15.416,30	12.285,10	10.469,17	**20%**	**32%**
Actual Resource Consumpion 95%	9.895,46	8.496,52	7.589,74	**14%**	**23%**
Actual Resource Consumpion 99%	10.850,06	9.196,93	8.152,29	**15%**	**25%**

Case Study

Database

Constrained CPU

DS14_v2
16 vCPU, 112 GB RAM

DS14-8_v2
8 vCPU, 112 GB RAM

	VM	VM + SQL Standard	VM + SQL Enterprise
Hourly rate (€)	1,567	3,023	7,027
Monthly cost(€)	1.144,05	2.206,93	5.129,85

COSTI 1YR RESERVED

	VM	VM + SQL Standard	VM + SQL Enterprise
Hourly rate (€)	1,567	2,295	4,297
Monthly cost(€)	1.144,05	1.675,49	3.136,95

Saving (€/month)	**531,44 (24%)**	**1.992,9 (39%)**

Scenario 1: IaaS with Constrained CPU

	SQL Server Cost (€/month)	SQL Server saving
Actual Resource Consumpion 95%	6.111,56	
ARC 95% Constrained	5.048,68	**1.062,88 (17%)**
Actual Resource Consumpion 99%	7.108,01	
ARC 99% Constrained	6.576,57	**531,44 (7%)**

Scenario 2: SQL Server Managed Instance

	Cost (€/month)	Saving
On-premise Actual Resources	10.972,22	
Actual Resource Consumpion 95%	7.314,81	**3.657,41 (33%)**
Actual Resource Consumpion 99%	8.533,95	**2.438,27 (22%)**

Economic Summary

	Standard CPU Costo (€/month)	Constrained CPU Cost (€/month)	SQL Managed Instance Cost (€/month)	Constrained CPU saving	SQL Managed Instance saving
On-premise Actual Resources	23.445,34	23.445,34	17.512,35		**25%**
Actual Resource Consumpion 95%	14.608,08	13.545,20	11.934,70	**7%**	**18%**
Actual Resource Consumpion 99%	16.304,94	15.773,50	13.458,56	**3%**	**17%**

https://azure.microsoft.com/en-us/pricing/calculator/

Pay As You Go vs Reservation

	1yr Up Front saving	3yr Up Front saving
Standard CPU	**9-12%**	**14-19%**
Constrained CPU	**9-12%**	**15-19%**
SQL Managed Instance	**17-20%**	**27-32%**

https://azure.microsoft.com/en-us/pricing/calculator/

Case Study

Network and BCDR

Networking: VPN

	1yr Up Front Cost (€/month)	Info
VPN Gateway (1 Gbps)	568,32	VPN gateway, VpnGw2 layer, 730 gateway hours, 10 site-to-site tunnels, 128 point-to-site tunnels, 3 TB outbound, VPN gateway type VPN
ExpressRoute pay per use (1 Gbps)	466,65	Pay-as-you-go data plan, 1 Gbps port rate, Area 1: North America, Europe, Australia for government, 3 TB additional data transfer, maximum outbound data transfer limit of 328.5 TB / month
ExpressRoute unlimited (1 Gbps)	5.187,00	Unlimited data plan, 1 Gbps port speed
ExpressRoute unlimited (200 Mbps)	1.046,5	Unlimited data plan, 200 Mbps port speed

Networking: Outbound

Our data showed a total of about 18 TB of monthly outbound traffic from the IIS servers * (17 Servers), this corresponds to a cost of 1,429.05 € / month.

The monthly cost estimates for 5 GB outbound traffic cuts are shown below for information

Outbound Traffic	1yr Up Front Cost (€/month)	Info
5 TB	404,96	Zone 1: North America, Europe
10 TB	810,31	Zone 1: North America, Europe
15 TB	1.197,02	Zone 1: North America, Europe
20 TB	1.583,74	Zone 1: North America, Europe
25 TB	1,970.45	Zone 1: North America, Europe

Backup & Disaster Recovery

	Componente	1yr Up Front Costo*** (€/mese)	Info
Azure Backup 27 VMs	Azure Backup	633.49	**Calculated on the current occupation of the disks. LRS redundancy, 30 daily recovery points, 0 weekly recovery points, 3 monthly recovery points, 0 annual recovery points**
Azure Site Recovery (North Europe) 27 VMs	Azure Site Recovery	614,25	0 Customer instances, 27 Azure instances
	Managed Disk	2.785,63	Managed Disks: 37 Standard HDD and 34 Premium SSD
	Cache Storage Account	51,76	Page blob (including unmanaged disks), Standard, LRS redundancy, General purpose V1, 1TB capacity, 10,000 operations per unmanaged disks, 10,000 writes per page blob, 10,000 additional write I / O units, 10,000 read operations per page blob, 10,000 additional read I / O units, 10,000 delete operations per page blob
	Bandwidth	486,02	Zone1: North America, Europe, 6 TB

Wegg
The impact factory

Q&A

Wegg
The impact factory

Thank you!

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