

Atos - Data Center Services

Modernization, new DC or Co-Location?
Seven strategic business criteria

21-03-2017

Atos at a glance

Atos is focused on creating business value for clients underpinned by digitalisation and technology to create their business of the future.

Atos is a leader in digital services delivering Systems Integration , Consulting, Managed Services , Business Process Services, Cloud operations, Big Data & Cyber-security solutions as well as e-payments and transactional services.

€12

**billion
annual revenue**

Atos operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline.

100,000

**business
technologists
all over the world**

Atos is a market leader in business technology that powers progress and helps organisations to create their firm of the future.

Atos Datacenters

Key facts and figures

31
countries

108
data-
centers

8
cloud
hubs

As a major global IT services provider, Atos runs a large number of modern datacenters, housing server, midrange, mainframe and cloud computing environments. Sustainability is part of our business model.

72
MW power
capacity

97.000
sqm white
space

1,72
average
PUE

What you will find in common?

Reality

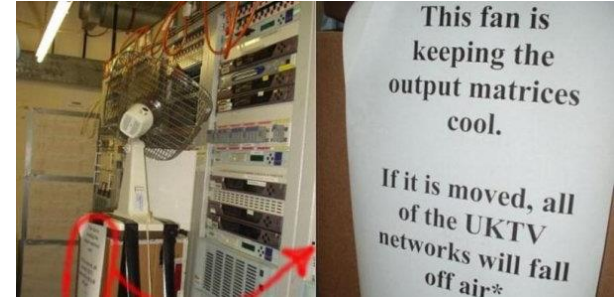
- ▶ Most Data Centers were build in the 90s
 - technical infrastructure is out-of-date & inefficient
 - low security standards
 - poor availability
 - no standards
 - insufficient white space available
- ▶ Small DC rooms grow simultaneously to business demand

Today's demands

- ▶ Sustainable & efficient data center
- ▶ Possibility to grow in dependency to business needs
- ▶ High demands on security features
- ▶ High availability

Way out:

- ▶ Construct new data center; or
- ▶ Renew & optimize existing data center; or
- ▶ Move to local provider



The right solution depends on the business's needs and company strategy

The right criteria?

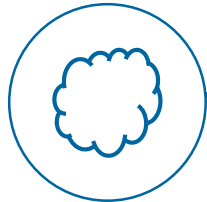
...depends on the business needs and strategy of your company

What do you have at the moment?

Where do you want to go?

With what kind of strategy?

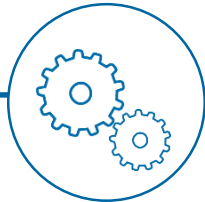
Influencing factors



Cloud



Cost



Carbon



Capacity



Continuity



Cash

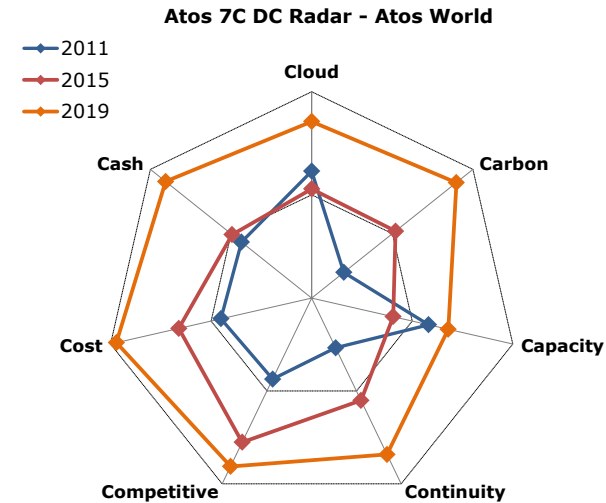


Competitive

Atos DC Strategy in a nutshell

Seven strategic business criteria determine Atos' data center strategy

CLOUD	Provide at least one pair of datacenters per strategic country with appropriate distance for <ul style="list-style-type: none"> • avoiding common risks • providing possibility of active – active application support and • sufficient power density for cloud infrastructure
CARBON	Continuously improve Power Usage Effectiveness (reduce PUE) in existing datacenters by infrastructure improvements and operational optimizations and design new datacenters following highly efficient energy standards
CAPACITY	Size of the capacity to adapt to the demand – short and long term by <ul style="list-style-type: none"> • consolidation of overcapacity • increasing the amount of modular datacenters
CONTINUITY	Reduce the risk of outages by improving the DC infrastructure towards Tier III standards
COMPETITIVE	Increase the amount of state of the art and new datacenters by renewal of existing sites and moving towards new datacenters
COST	Continuously improve unit cost by higher utilization and energy efficiency
CASH	Optimize cash-out in transformation programs with the most appropriate make-or-buy decisions



The Atos DC strategy is implemented by several programs

Design	Use TIA 942 Rated 3 specifications for renewal and upgrade of existing and for newly built DCs
Standardization	Roll out DCIM, Physical security policies, operational policies for racking and cabling, work unit definition and cost
Consolidation	Close 78 datacenters between 2011 and 2021 under global governance
Renewal	Build own DCs only where economies of scale are beneficial, otherwise focus on leasing co-locations. Renew at least 9 own facilities at Tier 3 standard, build two new DCs at Tier 3+ standard

Atos Datacenter Design Standard

for strategic datacenters, new datacenters and major renewals

Building	<ul style="list-style-type: none">▶ Location with no risk of natural disaster and damage from environment▶ Building dedicated to datacenter operations preferably w/o offices for non-DC operations▶ Complete special separation of DC Infrastructure and IT Equipment▶ Physical separation for different technical infrastructure components▶ Floor Load min. 1000 kg/sqm
Power	<ul style="list-style-type: none">▶ Two independently routed external (high-voltage) feeds from power provider▶ 2N redundant power supply in the datacenter from transformer to the UPS. Each IT device is supplied fully redundant by A/B power. Static transfer switches for racks with IT equipment having only one power adapter each▶ UPS battery autonomy with a minimum of 10 min.▶ N+1 redundant emergency power supply with fuel storage for at least 48 hours, refillable during operation
Cooling	<ul style="list-style-type: none">▶ All cooling devices (cooling machines, chillers, air conditioners, pumps, water loops) are at least N+1 redundant▶ Indirect free air cooling preferred, strongly recommended for new datacenters to achieve high energy efficiency▶ Use adiabatic cooling technology depending on the climate conditions
Physical Security	<ul style="list-style-type: none">▶ Four zone access system (fenced area, building, datacenter, data room)▶ 24/7 security onsite, 24/7 monitoring of critical datacenter infrastructure▶ Alarm and intrusion detection system▶ Access control via non-contact chip card and/or biometric scanner
Fire Security	<ul style="list-style-type: none">▶ Fire resistant walls and doors according to country specific standards▶ Early smoke detection system for data room and at least smoke and heat detection for all technical rooms▶ Automatic extinguishing with gas or water mist flooding in the data room and UPS room
Connectivity	<ul style="list-style-type: none">▶ Redundant Network from two diverse and independently routed paths with access to multiple carrier providers▶ Possibility of synchronous data replication with twin site in 5-40 km distance
Energy Efficiency	<ul style="list-style-type: none">▶ For new datacenters at 80% load at PUE of 1.2 – 1.3 according to climate conditions is required▶ Cold aisle compartments▶ Possibility of providing renewable energy

Atos Datacenters

Latest developments in our key locations



Our datacenter in Fuerth (GER) with 3.500 sqm space was completely renewed (power, cooling, security) in 2014/15, now providing a capacity of 2.3 MW, expandable to 3.5 MW.



The datacenter in Eindhoven (NL) received a second power chain in 2015 thus leading to a Tier III design. It was also equipped with a water-mist fire extinguishing system.



In Longbridge near Birmingham (UK) we built in 2014 a modular datacenter expandable to 6 MW with indirect free air-cooling leading to a PUE of 1.12 .



In 2016/17 we will upgrade the datacenter in Trélazé (FR) to Tier III by refurbishing the cooling and power infrastructure.



Two co-location datacenters in Dallas (Irving, Carrollton) are target DCs for Atos largest DC consolidation project running from 2015-2018.



Our cloud hub in Asia is located in Singapore. Currently (2016) we set up the connection between our two sites in Singapore, rented from co-location providers.

Thanks

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The Atos logo is displayed in a white, bold, sans-serif font. The letters 'A', 't', 'o', and 'S' are in a standard weight, while the 'o' is significantly larger and more stylized, with a white dot in the center.

Persönliche Einladung

Interaktiver Workshop: Data Center Transformation

4. April 2017

Automuseum Prototyp
Hamburg

5. April 2017

HDI-Arena
Hannover

Interaktiver Workshop: Ihre Cloud-Strategie

28. März 2017

Allianz Arena
München

29. März 2017

Kunstmuseum Stuttgart
Stuttgart

30. März 2017

Squire
Frankfurt