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.

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

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

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.

- 31 countries
- 108 datacenters
- 8 cloud hubs
- 72 MW power capacity
- 97,000 sqm white space
- 1,72 average PUE
What you will find in common?

**Reality**

- Most Data Centers were built 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  - technical infrastructure is out-of-date & inefficient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

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Influencing factors
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
|                  | • 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
|                  | • 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       | ■ 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         | ■ 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       | ■ 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  | ■ 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 | ■ 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  | ■ 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 | ■ 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  

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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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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
Squaire
Frankfurt