


# Edge/Cloud Innovation, Adoption and Infrastructure Financing

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## Cushman & Wakefield: Global Data Center Advisory Group

A global team of elite professionals specializing in the delivery of precise real estate solutions for mission critical users, owners and environments.

- 
- Data Center Building Sales
  - Data Center Land Sales
  - Retail Colocation
  - Wholesale Colocation

40

Global Data Center  
Team Members

39

Global Markets  
In Our Database

29

Average Years Of Real Estate  
Experience Per Team Member

1

Annual Global Data  
Centre Risk Index

# Edge/Cloud Innovation, Adoption and Infrastructure Financing

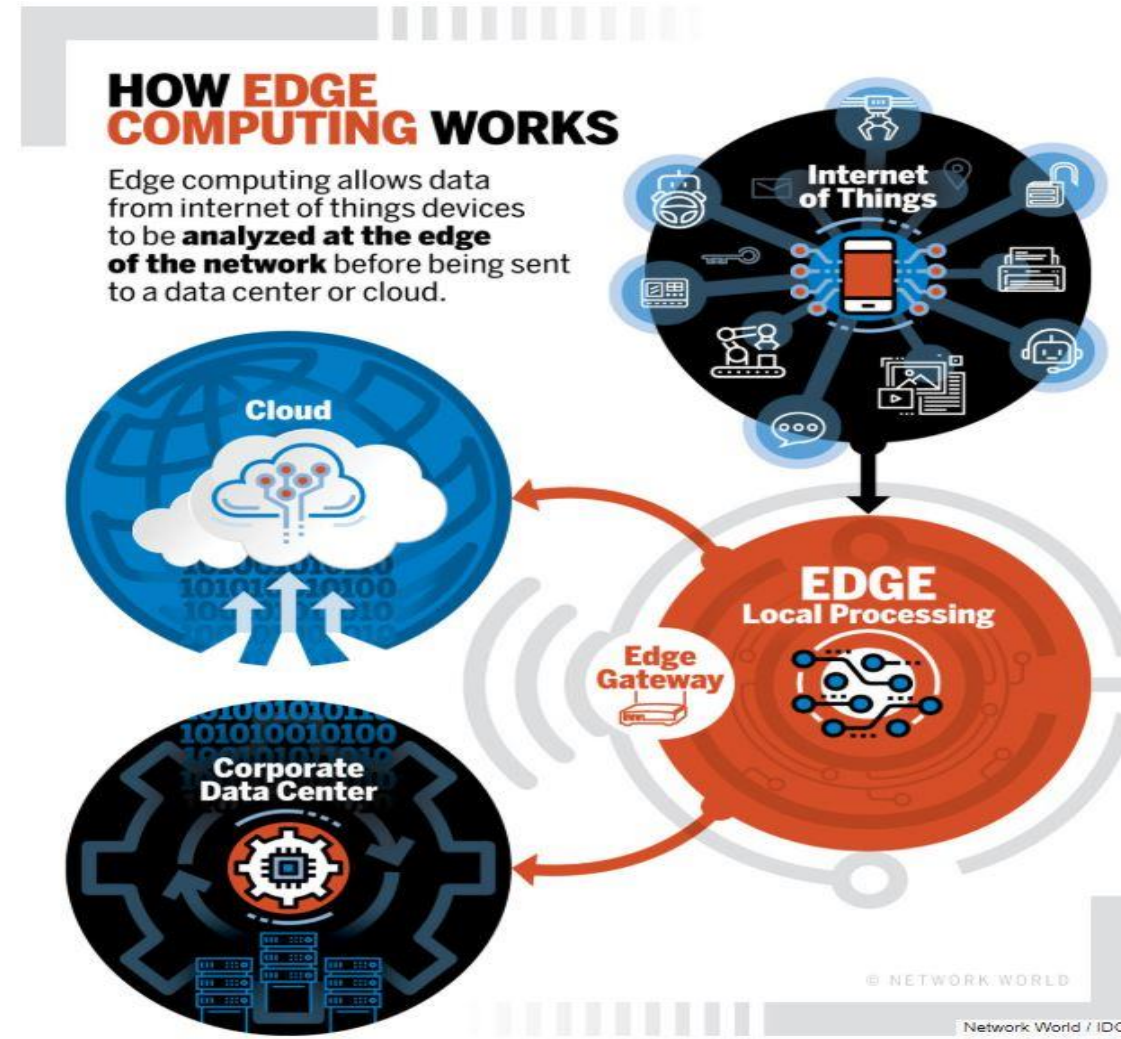
## Cushman & Wakefield: Global Data Center Advisory Group



- **Randolph Borron, Vice Chairman, Cushman & Wakefield**
- 30 years of experience in data center industry
- How has the industry evolved?
- What can we expect next?



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## Edge and Cloud Innovation

How do end users evaluate market options and make business decisions on Edge and Cloud?

- Existing invested infrastructure
- Risks
- Customer data regulatory requirements
- Future needs
- Total costs of occupancy
- Business cases analysis
- Cloud evolution strategy
- Combination of solutions

How do Edge and Cloud providers reach new markets?

- Innovations in design & technology
- Market evolution on site selection
- Network capacities and cost
- Latency
- Sustainability
- Efficiency
- Expansion
- Regional risks
- Own vs lease

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## Edge and Cloud Adoption

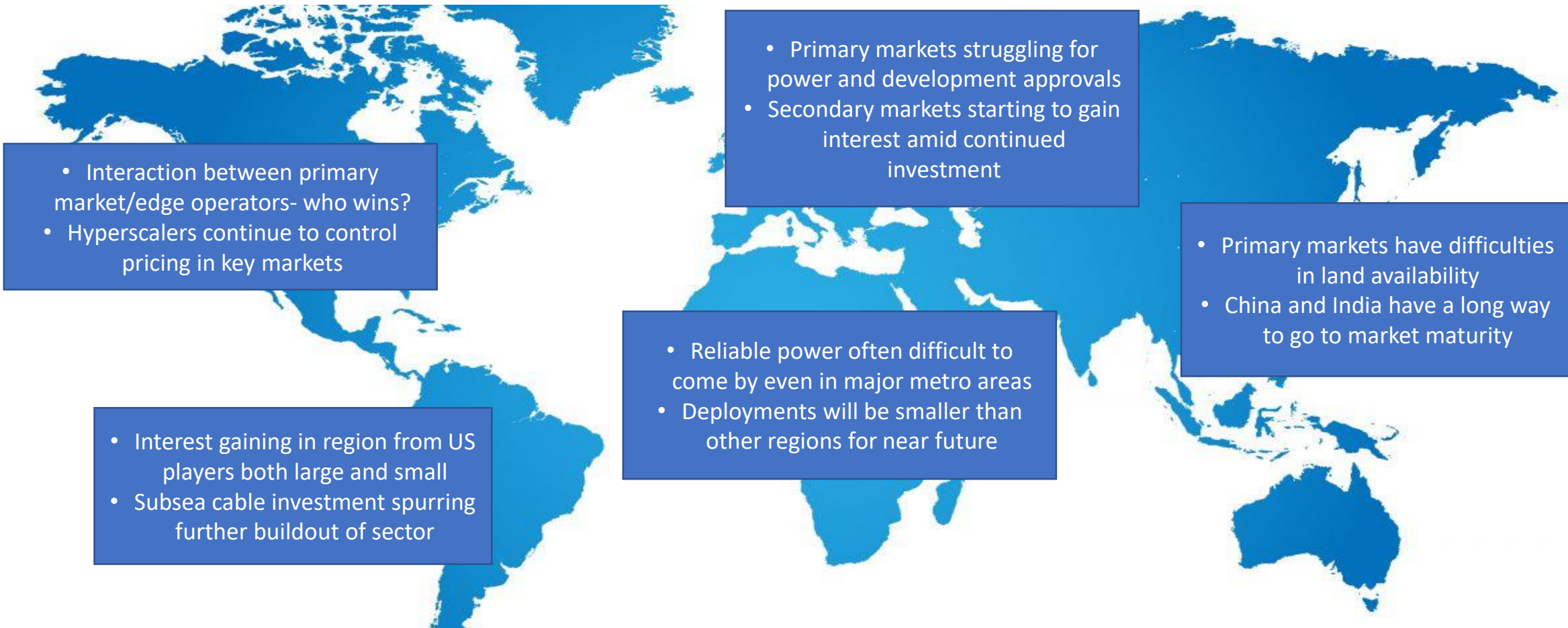
### Pros

- Multi-Market Expansion Opportunities
- Hub and Spoke deployments (centralized vs decentralized)
- 5G Network – connecting us like never before

### Challenges

- Limited capital – too many markets
- Multi-market needs
  - deploy many sites in short period
- Understanding each market can be difficult

## Market Landscape

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- Interaction between primary market/edge operators- who wins?
  - Hyperscalers continue to control pricing in key markets

- Interest gaining in region from US players both large and small
- Subsea cable investment spurring further buildout of sector

- Primary markets struggling for power and development approvals
- Secondary markets starting to gain interest amid continued investment

- Reliable power often difficult to come by even in major metro areas
- Deployments will be smaller than other regions for near future

- Primary markets have difficulties in land availability
- China and India have a long way to go to market maturity

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## C&W Site Selection Methodology

C&W has developed a thoughtful methodology to determine the best location for a data center

- Twelve factors are considered and weighted accordingly, with the model based on a study of 1,200 individual data centers worldwide
- This includes power cost, incentives, taxes, cloud availability, and much else
- Research uncovered several markets that we deem undervalued, particularly in the Western US



# Edge/Cloud Innovation, Adoption, and Infrastructure Financing

## Appendix- Infrastructure Financing

**\$100Billion of  
M&A  
Activities between  
2010-2019**

**\$25 Billion of  
M&A  
activities in  
2019 alone**

### Major 2019 Deals in Progress

**\$8.4B**



**interxion™**

**\$8.2B**



**zayo®**



**Investors with \$500B of assets under management  
looking for further deals!**