# Ireland's Data Hosting Industry

# 2019 Q3 Report

"An Industry of Substance"

Host In Ireland

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## 2019 Q3 Update

November 2019

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## Foreword

As we get closer to the end of another year, data centre investment and construction announcements continue at a steady pace over Q3 2019.

At a time when the construction sector appears to be approaching a slowdown with the Ulster Bank Construction PMI indicating the steepest monthly decline in activity since June 2013, the pace and trajectory of data centre construction remains consistent.

Earlier this year, data centres were projected to bring in over €4.5bn in direct investment by 2025, which remains on course despite uncertainty due to Brexit fears. This may become crucial to the construction sector, should it see a slowdown in other segments of the market.

Data centres provide a necessary part of our modern digital existence economically and socially as highlighted by Mark Foley, CEO of Eirgrid, at their recent 2020-2025 strategy launch: "Data centres are a manifestation of that transformation... the reality of the situation is they are responding to the needs of business... to the needs of society. Our job is to make sure we have the capacity to connect them, and that the generation capacity is there to supply"*.

EirGrid's commitment to supply 70% of the grid (a further 10,000 MW), through renewable sources and investment of €2 billion, is welcomed by the industry and viewed as achievable.

Data centres are core infrastructure of the new digital economy. They are also key component of Irelands FDI proposition, which underwrites more than 100,000 jobs in the ICT sector. This sector produces €69.3bn in exports making it the largest export sector in the economy. From analytics that measure weather patterns to social media usage, data is a growing part of our day to day life.

The sector has directly funded renewable energy projects here in Ireland. The most significant to date has been Amazon's decision to invest almost €200m in the construction of a windfarm off Donegal without subsidies. This is the first of its kind in Ireland. It's expected that such investments will continue to be made in the coming years. Wind power produces 37% of electricity on our grid and has seen a 100% increase in capacity since 2012.

Demand for data centres will continue to grow internationally, centred on consumer and economic needs. As a result large scale data centre construction will continue, but the industry remains focused on reducing its carbon footprint by focusing on a renewable-only policy and driving further efficiencies in their operations.

Major announcements this quarter include that of the K2 data centre construction which has been approved for construction in Ballycoolin. The attraction of the two, three-storey data centre facilities, spanning around 29,000 square metres each, further highlights Ireland's growing position as a market leader, supported by its growing sustainability agenda.

We have seen other major clusters in the Dublin area progress, including the Grange Castle cluster, with CyrusOne data centre group beginning construction of their €400M development. EdgeConneX have also lodged a planning application to double the size of their campus in the same location.

Internationally, Google has recently announced a $3 billion investment in its next generation of 'Green' data centres. More progress needs to be made but we remain positive that the industry will play its part in the sustainability agenda.

We look forward to the developments in the industry in 2020 as data centres positively impact Ireland's commercial construction and energy sectors.

Garry Connolly
President & Founder - Host in Ireland

Host In Ireland

* https://www.rte.ie/news/business/2019/0926/1078317-eirgrid-plans-70-renewable-energy-by-2030/

# Data Market Developments Since 2017

Two years on from our Data Hosting Industry report in 2017, we have seen the data industry grow by more than 50% in operational capacity. In 2017, there were 41 operational data centres, with an estimated 420 MW of power capacity. In Q3 2019, there are 54 operational data centres, with a power capacity of 642 MW. 13 new data centres have been completed since 2017, with an average size of 17 MW each.

In 2017, we predicted that 1,000 MW of data centre capacity would be built by 2024. Based on currently approved planning permissions, this is now expected to reach 1,500 MW, with an additional 350 MW also possible.

The scale of construction is up by 35%. Over the past two years, between 6 and 10 data centres were under construction during any single quarter. Currently there are ten data centres under construction with an average size of 20 MW each. This represents an investment of approximately €1.5 Billion.

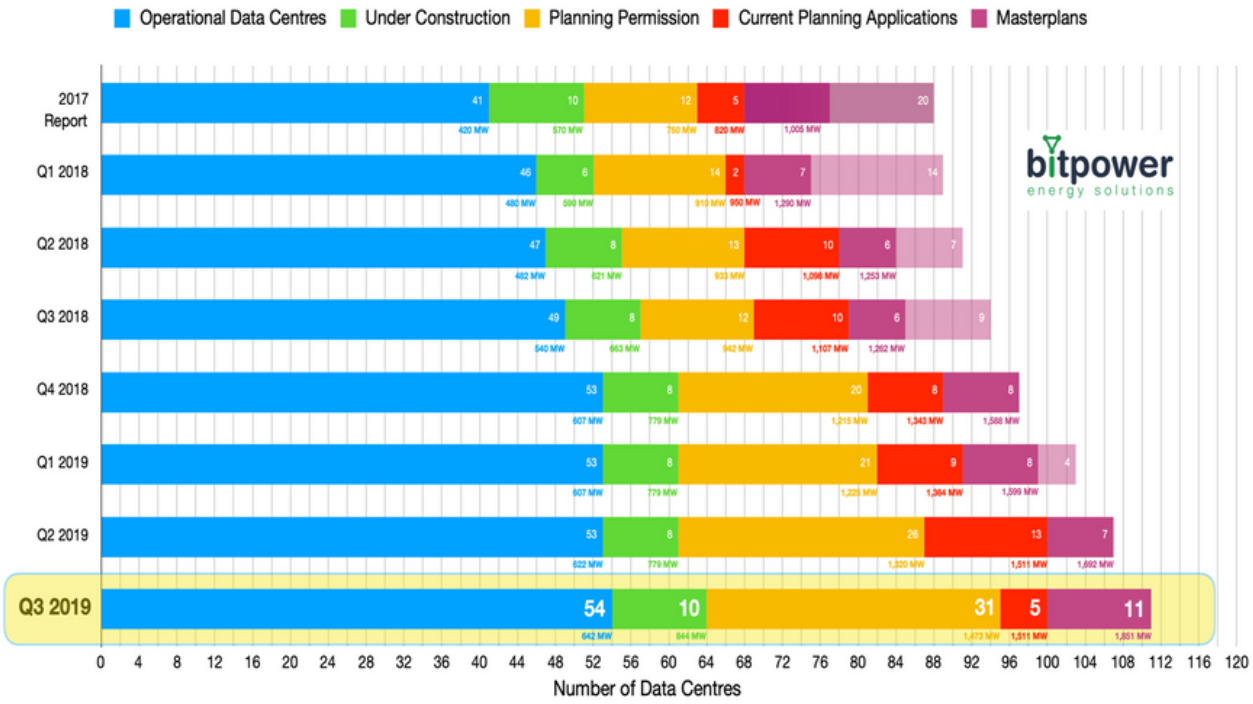
Aggregated data indicates investment of approximately €1.3 Billion per annum, expected to continue over the next 3-4 years. Investment here refers to buildings, on-site infrastructure, power and cooling equipment, and excludes IT equipment such as servers and racks.

Planning approvals moved on apace too in 2019. We have seen faster turn-around times with developments applying for planning permission in one quarter and receiving planning approval by the next quarter. There is a pipeline of 31 facilities of approximately 20 MW each with planning permission in Q3 2019. There are five data centres in the planning application process.

See Figure 1 for a comparative analysis of our previous eight quarterly market reports.

Dave McAuley
Founder & CEO - BitPower

Figure 1 - Evolution of Ireland's Data Centre Market since 2017



# Data Market Developments in Q3 2019

There are now a total of 54 data centres in Ireland, with 642 MW of grid-connected power capacity. These reside mostly in the Dublin Metro area. This represents an increase of 20 MW with the opening of one new data centre in Q3. If the smaller, private facilities are excluded, this equates to about 622 MW of cloud and managed services capacity.

While Hyperscale remains the dominant datacentre type, with 73% of capacity, the colocation wholesale market has grown from almost zero to 12% in the past 3 years. Reference Figure 2.

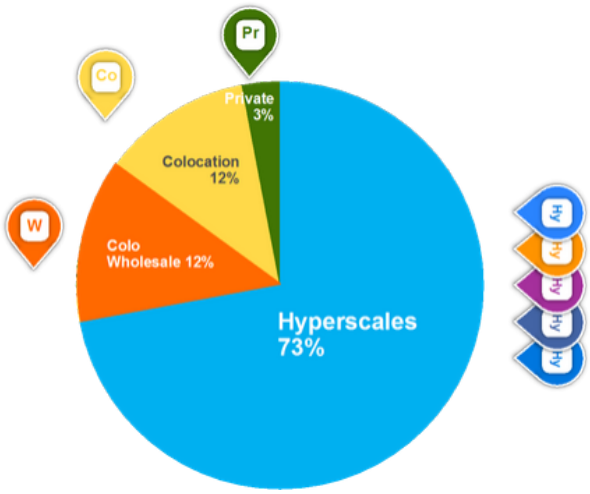



Figure 2 - Relative scale of digital hosting types in Ireland in Q3 2019.

## Private Data Centres

This sector accounts for smaller facilities not explicitly leasing-out space in their buildings. They provide internet services for business and have a regional spread. We are unaware of any significant construction growth in this this quarter, though dedicated facilities are likely to appear in the near future to support new technology innovations. This remains at 20 MW in total.

## Hyperscale Data Centres

**Facebook** continue to develop the Clonee site, with ground being broken on their latest datacentre building at the location in Q3 2019. AWS progressed their construction projects in Clonshaugh and Tallaght in Dublin. Microsoft's three new buildings at Grange Castle are at an advanced stage of construction.

## Colocation Wholesale

In this sector, we see a trend towards campus-style developments. K2 Datacentres received planning permission for two new data centres in Ballycoolin, as did MIK Developments. The Echelon Datacentres Arklow Campus was approved by An Bord Pleanala. CyrusOne broke ground on their development at Grange Castle, and EdgeConneX are in the planning process for a new development at Grange Castle.

## Colocation Data Centres

No planning or construction activity has been reported by colocation operators in Q3 2019. The fourteen colocation facilities currently operational in Ireland include **Digital Realty**, **Equinix**, **InterXion**, **CIX**, and **Keppel DC**.

**Note on methodology:**

Our analysis counts a data centre as a single building. The buildings of a decade ago fall into the "private" capacity and are below 1MW. Today's new data centres are much larger in size. A campus may include 3 or 4 such buildings. This is typical of the trend we are seeing of campus-style facilities, with blocks of 18-20 MW data centre buildings.

Masterplans are difficult to predict given that our data is compiled mostly from actual planning applications. We have seen applications for developments that were not included in our predicted masterplans.

In terms of MW size, we build our model by applying industry norms (e.g. server density, proportion of white space. etc.) to the physical size of the development.

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# Digital Hosting 2019 Q3 Update

**Q3 2019**

**Masterplans**
11 Estimated
**341 MW**

**Current Planning Applications**
5 Currently in the Planning Process
**37 MW**

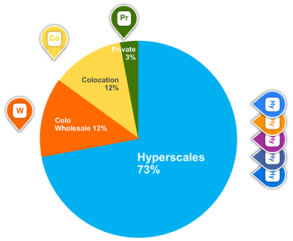
**Planning Permission**
31 with Planning Permission Approved
**629 MW**

**Under Construction**
10 currently Under Construction
**202 MW**

**Operational Data Centres**
54 in Q3 2019
**642 MW**
Includes 20 MW Private


## Data Centre Types

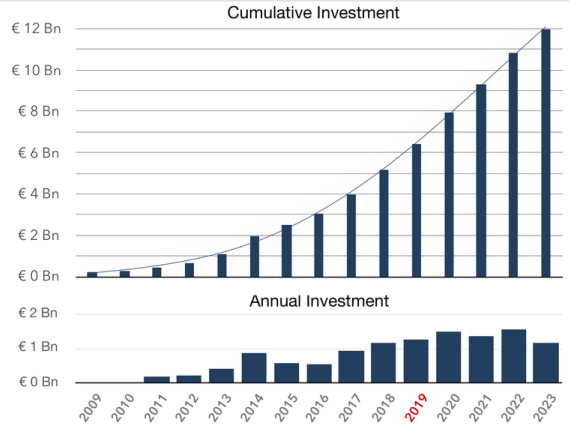
Operator business model




There were fifty-four data centres in operation in Ireland in Q3 2019. Hyperscales continued to dominate in terms of scale, with 73% of the MW capacity.

## Construction Investment 2009 - 2023

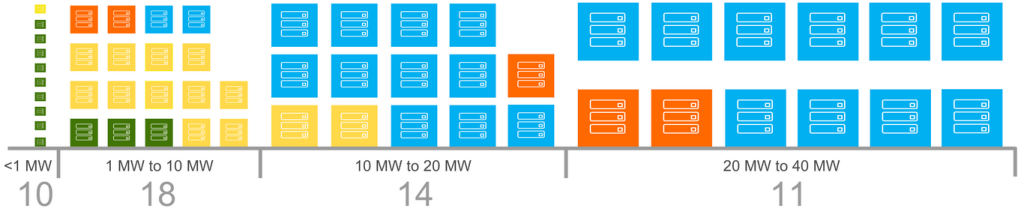
Cumulative and Annual investments in data centres




## Ireland Hosts Commercial Data Centres of all Sizes

Fifty-Four operational data centres in Ireland by Q3 2019

54




## Highlights Q3 2019

The Big Picture

**214 MW**
Newly Approved Data Centres

11 new data centres approved by Planning Authorities

**41**
Data Centres in Development

Under Construction or with approved planning

**€1.3 Billion**
Investment

Average annual investment expected for 2019-2023

**622 MW**
Cloud & Managed Services

Colocation, Wholesale, and Hyperscale Capacity

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## About Host In Ireland

Host in Ireland is an award-winning strategic global initiative created to increase awareness of the benefits of hosting digital assets in Ireland as well as Irish companies that are designing, building, and operating data centres globally.

There are many benefits to hosting in Ireland- access to affordable power, redundant network and bandwidth capacity along with a variety of data centre providers that offer an array of services sustained by the “5 Ps”: Policy, People, Pedigree, Pipes, and Power.

On top of that is a very attractive business management structure, implemented by Ireland, which is keenly interested to bring new businesses into the market.

For more information about Host in Ireland, visit www.hostinireland.com.

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