PowerlandMap

MARKET INTELLIGENCE

Data Center CAPEX & Construction Cost Benchmark

Build a comparable data center development budget and identify which cost differences are caused by geography, design, phasing or exclusions

78
report pages

Extended edition
29 October 2026
Analysis, project evidence and practical models

Original research snapshot dated 4 or 5 October 2026.
Expanded evidence retains its own source-check dates.

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READER GUIDE

Contents and edition guide

This extended edition combines the original research chapters with additional analytical work and a separately dated public-evidence register. The snapshots are not additive.

Section	Pages
Original research snapshot	3-28
Extended methodology and analytical models	29-35
Sources, dates and interpretation	36
Coverage and evidence completeness	37
Expanded evidence dossiers	38-77
Decision register and next evidence	78

Original research coverage

Cost boundaries, published construction benchmarks, public investment cases, IT denominators, development-cost additions, high density, scale effects and budget challenge.

How to read the update

The opening chapters retain the evidence freeze of 4 October 2026, or 5 October for the UAE study. The expansion was assembled on 29 October. Individual records show the date on which their source was last checked. Extraction is not a new operator confirmation.

Use the expanded record when it supersedes an older baseline statement. Capacity bases and phase boundaries remain explicit. Model inputs are labelled as assumptions. The PDF bookmarks provide direct navigation through the expanded sections.

The public sample contains exactly the first four pages. The complete study includes all sections listed above.

EXECUTIVE ASSESSMENT

Executive summary

Cost per MW is only meaningful when the scope and denominator match. Turner & Townsend’s 2025-2026 benchmark uses a defined construction boundary and reports market cost per watt; public project announcements often describe broader investment programmes that can include land, power, multiple phases and non-data-center infrastructure.

Published construction benchmarks include London at US$12.0/W, Frankfurt at US$11.6/W, Oslo at US$12.4/W, Zurich at US$14.2/W, Silicon Valley at US$13.3/W, Tokyo at US$15.2/W and Singapore at US$14.5/W. The same source identifies a 7-10% US construction premium for comparable liquid-cooled AI capacity.

PowerlandMap also retains public project CAPEX. Where both CAPEX and reported IT MW are available, the headline ratio ranges materially - for example Nabiax ADC3 at about EUR 8.0m per reported IT MW, MERLIN Zaragoza-WIND about EUR 8.5m, DC Mudarra EUR 10m, Alto SP01 EUR 10m and Rai Way Pomezia about EUR 11.4m. These ratios are not directly comparable until scope is normalised.

US$11.6/W Frankfurt construction	US$12.0/W London construction	7-10% US liquid-cooling premium signal

EVIDENCE FRAMEWORK

Research methodology and data architecture

Study scope. Selected European markets and US/APAC comparators. Published 2025-2026 construction benchmarks plus public project CAPEX evidence in the PowerlandMap database.

Database snapshot. 5,746 verified supply records across 129 countries; 4,033 live records; 1,713 pipeline records; 67,966.6 MW of sourced IT capacity. The active development pipeline contains 1,671 projects, including 551 under construction.

Canonical identity. PowerlandMap deduplicates campus parents, buildings, acquisitions and operator aliases. A competitor listing is used as a discovery signal, not copied blindly.

Source hierarchy. Primary operator/authority/utility evidence is preferred. Specialist media and directories are used to discover or corroborate records. Unknown values remain unknown.

Quality controls. Capacity basis, evidence grade, confidence, source date, construction stage and RFS provenance are stored separately.

Core field	Rule
IT MW	Only when explicitly supported or separately labelled estimate
Electrical/campus MW	Never silently treated as IT
RFS	Source date/period or labelled PLM estimate
Project status	Canonical pipeline stage
Availability	Requires commercial evidence; site total is insufficient
Source date	Retained for recency review