Riding the Next Wave

A Case Study of Areim's Acquisition of EcoDataCenter

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Abstract

Over the last decade, the Nordics have witnessed a rapid expansion of data center development driven by an exceptional match between site selection criteria and Nordic market characteristics. This has led Nordic-based real estate and infrastructure private equity funds to explore data centers. One of these funds is Areim, a Swedish real estate private equity player that invested in data center developer EcoDataCenter in 2018. The aim of this paper is to understand the key factors that led to the investment decision, as well as the strategies and circumstances that led to the successful buildout of the EcoDataCenter platform. By employing a case study methodology based on interviews with executive management at Areim and EcoDataCenter, the paper gives an up-close insight into the strategies and decision-making within data center private equity. The paper has four main findings: (1) Areim invested into Swedish data centers to gain exposure to the data growth and sustainability mega-trends as well as Sweden's attractive location in terms of renewable and cheap power; (2) EcoDataCenter's unique state-of-the-art sustainable offering and attractive build-site were key investment criteria; (3) Areim built an in-house platform with industry experts while handling capital raising at the ownership level which enabled the rapid expansion of EcoDataCenter; (4) Under Areim's ownership, EcoDataCenter underwent a full commercial restructuring which shifted focus to hyperscale and AI-native customers which opened access to larger expansion opportunities. We conclude that the investment in EcoDataCenter has been highly successful due to Areim's platform approach and external market factors.

Keywords: Case Study, Private Equity, Data Centers, Artificial Intelligence

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Abbreviations

PE	Private Equity
GP	General Partner
LP	Limited Partner
IPO	Initial Public Offering
LBO	Leveraged Buyout
PERE	Private Equity Real Estate
REIT	Real Estate Investment Trust
OREF	Open-Ended Real Estate Fund
CREF	Closed-End Real Estate Fund
NAV	Net Asset Value
AUM	Assets under Management
LTV	Loan-to-Value
IRR	Internal Rate of Return
MOIC	Multiple on Invested Capital
MW	Megawatt
AI	Artificial Intelligence
CPU	Central Processing Unit
GPU	Graphics Processing Unit

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1. Introduction

"*When we first decided to invest in EcoDataCenter, we saw the inherent potential in sustainable data centers to meet the rising demand for digital infrastructure. A lot has happened since, and data centers now form fundamental building blocks of this infrastructure."*
- Leif Andersson, Founder of Areim & Chairman of EcoDataCenter, 05.03.2025

The above words are part of the press release issued by Areim AB, a Nordic real estate private equity fund manager, upon the successful closing of its significantly oversubscribed capital raising round in early 2025. What first started in 2018 with a small investment of SEK 200 million into the Swedish data center operator EcoDataCenter, which led Areim to explore and gain access to the data center space, had evolved into something much bigger. In essence, EcoDataCenter develops, builds, and operates highly sustainable data centers for high-performance computing needs. Starting with an empty building shell of 2 MW in capacity in 2018, Areim built out a data center platform through EcoDataCenter, which now comprises 40% of Areim's equity allocation. Furthermore, it established a dedicated data center fund vehicle, for which the announced funding round increased the total capital raised to SEK 9.8 billion, with plans to develop a mega-site in Borlänge with a power capacity of up to 240 MW. In the meantime, EcoDataCenter has been recognized by NVIDIA as the worldwide industry standard in sustainable, high-performance, state-of-the-art data center design. It is also building the first-ever NVIDIA DGX GB200 super-cluster, powering one of the fastest supercomputers worldwide, and was awarded the title of the most sustainable data center company in the world.

However, Areim is not alone in its expansion into Nordic data centers. Over the last decade, an explosion in big data, artificial intelligence, and cloud computing has driven immense demand for high-performance computing, ultra-fast connectivity, and secure data storage (Deloitte, 2024). In addition, artificial intelligence requires substantial computing power to process deep learning algorithms, which is increasing the demand for the newest frontier data centers (Savills, 2024). The Nordic market is ideally suited for data center infrastructure, given its access to the most affordable and reliable energy grid in Europe, a cool climate that facilitates energy-efficient cooling, and a skilled workforce. As a result, private equity players,

who have traditionally invested in real estate and infrastructure, have begun acquiring data centers in pursuit of more opportunistic returns (IPFA, 2022).

1.1. Problem Formulation

The immense surge in demand for artificial intelligence applications, which require sophisticated data center infrastructure for training and execution, was hardly foreseeable in 2018, when Areim acquired EcoDataCenter (M. Hesselvall, personal communication, March 4, 2025). In addition, Areim had previously only invested in pure real estate projects, such as office, residential, and retail, making it an entirely new asset class that did not fully fit into its existing fund mandate and with which Areim had no previous experience. In the words of one of our interviewees and chief sustainability officer at EcoDataCenter, John Wernvik, "*the dependencies [data centers] have in terms of political landscape, the value chain in terms of servers, chips, clients, compute, and networking make it a lot more complex than traditional real estate*" (J. Wernvik, personal communication, February 26, 2025). This leads to the first research question:

Why did Areim decide to invest in data centers in 2018, and what were the motivations to do so by acquiring EcoDataCenter specifically?

The years following the acquisition were marked by scaling EcoDataCenter's capacity, raising capital, securing key tenants and partnerships, and establishing a stable investment platform through which Areim could build its exposure to data centers. Simultaneously, artificial intelligence led to a rapid expansion in the data center market, from fundraising to building capacity, requiring the right strategies and decisions to navigate such a rapidly expanding market environment. Therefore, the second research question is:

What circumstances and strategies led to the successful buildout of the EcoDataCenter platform?

1.2. Purpose and Contribution

This Master's thesis aims to provide the reader with an in-depth, real-life perspective on a new frontier in the private equity market: data centers. It highlights the investment philosophy of a key private equity player in the Nordic market,

captures the thoughts, strategies, and decision-making processes of decision-makers at one of the world's leading data center companies, and deeply explores the perspective of a data center customer. This three-dimensional approach presents a unique review of the data center investment process, highlighting key challenges to success. Due to the limited academic research available, this thesis lays the groundwork for academics to comprehend the complexities of data center investment from a private equity perspective, using a specific case study as a basis.

1.3. Outline

The thesis is structured into six distinct sections, beginning with a literature review that examines private equity in the real estate and infrastructure sectors, providing an overview of data center fundamentals. Next follows a section on case methodology detailing the interview process. The third section provides a case background on both Areim and EcoDataCenter, covering their history and strategy. Fourth, the thesis delves into the entire case, highlighting Areim's entry into data centers, its doubling down on the investment thesis, the valuation of a typical data center investment, and capital raising efforts. The fifth section discusses the case and relates the findings to the research questions. Last, the thesis presents a conclusion on the case study.

2. Literature Review

The following section presents a review of the literature as related to the thesis topic. It is organized in four distinct parts, first diving into private equity and an overview of real estate in private equity. What follows is an outline of the emergence and development of infrastructure as an asset class, including infrastructure investment strategies, various asset types, and their corresponding return characteristics. This naturally leads to the final section on data center fundamentals.

2.1. Private Equity

Private equity (PE) has developed into a key platform of global financial markets, with the impact flavouring the corporate governance, capital allocation, and their investment appeals. The industry has been the subject of academic scrutiny, as in Kaplan and Strömberg (2009) and Brown et al. (2020), which provides some perspective on its structure and performance and its effects on the economy.

2.1.1. Structure

Kaplan and Strömberg (2009) divide the PE industry into three primary components: firms, funds, and transactions. PE firms are typically organized as limited partnerships, with general partners (GPs) managing the investment process and limited partners (LPs), such as institutional investors and high-net-worth individuals, providing capital. These funds are closed-end in nature, meaning that capital commitments are locked in for the fund's lifespan, typically ten years. The investment phase lasts approximately five years, during which the GP deploys capital into portfolio companies, followed by a holding period of five to eight years for value creation and exits. More recent research suggests that funds utilizing alternative vehicles, such as co-investments, parallel fund, and discretionary vehicles, have increased substantially, accounting for nearly 40% of all PE commitments by 2017 (Lerner et al., 2022). These alternative structures create a wider opportunity to deploy capital and are generally less expensive for LPs while introducing new governance and risk allocation complexities.

A unique characteristic of PE is its reward system that is structured to provide the same interests for investors and managers. GPs typically make their money by charging a 2% management fee on assets under management and a carried interest share of the fund’s profits, typically about 20% of returns in excess of a specified

hurdle rate. Additionally, GPs may receive deal and monitoring fees, further incentivizing active engagement in portfolio management (Kaplan & Strömberg, 2009).

2.1.2. Investment Strategies & Value Creation

PE firms utilize various investment strategies, such as buyouts, growth equity, and distressed investing. The dominant approach, LBO, is characterized by the use of high leverage when purchasing target companies, where PE on average finances 60–90% of transaction value through leverage (Kaplan & Strömberg, 2009). PE firms try to improve company profit through financial restructuring, cost cutting, strategic redirection, and prepare for an eventual exit via IPO, secondary buyout, or trade sale.

2.1.3. Performance & Risks

PE investments have historically delivered strong returns relative to public markets. Brown et al. (2020) highlight that PE buyout funds outperform public equity markets by an average of 300–400 basis points annually, with outperformance varying based on fund vintage and deal selection. However, returns are highly dependent on the quality of the fund manager, as there is significant dispersion between top and bottom-performing PE firms.

Kaplan and Strömberg (2009) note that target companies are often acquired at a 15–50% premium, which increases pressure on the PE firm to extract value through operational improvements and revenue growth.

2.1.4. Economic & Social Impact

More generally, private equity influences the wider economy, and there are debates about the effects on jobs, investment, productivity, and corporate performance. Although some detractors claim that LBOs result in economic austerity and job losses, Brown et al. (2020) provide evidence that PE-backed firms experience higher productivity, long-term growth, and stronger innovation. However, the economic effects could differ between industry sectors. Manufacturing and retail, for example, could cut more workers than technology or health care, both sectors in which PE often ramps growth, they will be there. An important focus is the private equity regulatory regime. Brown et al. (2020) highlight PE firms' use of tax-efficient structures, including carried interest, to

maximize returns. These practices have raised questions about fair taxation, corporate responsibility , and transparency.

2.2. Real Estate Private Equity

2.2.1. History of Real Estate Funds

Private Equity Real Estate (PERE) was formed in the late 20th century and has developed from a niche investment strategy to a major asset class in the global financial market. The modern PERE industry took shape in the late 1980s, with pioneering funds such as the Zell-Merrill I Real Estate Fund and AEW Partners Fund I, both established in 1988. The early funds introduced a private equity structure to real estate investments, concentrating on acquiring, managing, and enhancing property assets to achieve significant returns (Linneman & Ross, 2002)

The early 1990s represented a critical turning point for private equity real estate (PERE), driven by the "savings and loan crisis" in the US and the creation of the Resolution Trust Corporation (RTC). Early PERE funds, such as Zell-Merrill and Goldman Sachs, capitalized on distressed assets, prompting other firms like Apollo, Blackstone, Lehman Brothers, and Starwood to enter the market. (Linneman & Ross, 2002).

As the PERE sector matured, it diversified into various investment strategies, including core, core-plus, value-added, and opportunistic funds, each characterized by different risk and return profiles. European private real estate assets under management increased from about $7 billion in 2000 to over $390 billion by mid-2024, reflecting an annual growth rate of around 18.7%.

Alongside PERE, real estate investment trusts (REITs) have played a significant role in shaping the landscape of real estate finance. While both PERE funds and REITs provide institutional and high-net-worth investors with access to real estate, they differ in terms of structure, risk exposure, and return expectations. REITs, typically publicly traded, focus on stabilized, income-producing properties with a long-term operational strategy, offering annual equity returns in the range of 10% to 14%. In contrast, PERE funds pursue higher-risk, higher-return investments, often targeting opportunistic or value-added properties with a shorter investment horizon of three to five years, aiming for returns exceeding 15% and often above 20%. Furthermore, PERE funds typically use higher leverage and actively manage assets through

development, redevelopment, and loan workouts, unlike REITs, which follow a more passive ownership model (Linneman & Ross, 2002).

2.2.2. Fund Types

Real estate funds comprise a range of investment vehicles structured around real estate as their underlying asset. The two primary types of real estate funds are open-ended real estate funds and closed-ended real estate funds, each offering distinct liquidity structures, investment horizons, and risk-return profiles (Real Capital Analytics, 2025).

2.2.2.1. Open-Ended Real Estate Funds

Open-ended real estate funds (OREFs) are designed with an indefinite lifespan, allowing investors to purchase or redeem shares at regular intervals based on the fund's net asset value (NAV), which provides a degree of liquidity not typically associated with direct real estate investments (Schoenberg & Sodhi, 2023). Open-end real estate funds typically hold cash or liquid assets to manage potential redemption requests. During times of increased redemption activity, these funds might struggle to quickly fulfill withdrawal demands without selling real estate, a process that can be slow and may not achieve optimal pricing (Real Capital Analytics, 2025).

Furthermore, open-end funds allow managers to invest for the long term without a set end date. This gives them the flexibility to adjust to market changes and pursue growth opportunities over time. However, investors should be aware that the liquidity offered by OREFs is not absolute in extreme market conditions, funds may suspend redemptions to protect the interests of all investors (Schoenberg & Sodhi, 2023).

2.2.2.2. Closed-Ended Real Estate Funds

In contrast, closed-end real estate funds (CREFs) have a set lifespan of 8 to 12 years (Real Capital Analytics, 2025). During the initial subscription period, they raise a fixed amount of capital and do not permit additional investments or redemptions thereafter. Investors commit their capital for the entire fund duration, aligning with the long-term nature of real estate investments (Spitz, 2024).

This structure enables fund managers to focus on asset acquisition, development, and eventual disposition without managing liquidity for potential redemptions (Real Capital Analytics, 2025). Closed-end real estate funds typically pursue value-added or opportunistic strategies by actively managing, improving, developing, or converting assets. At the same time, these investments offer limited liquidity, making it challenging for investors who seek flexibility since capital is tied up until the fund ends. However, this lack of liquidity allows managers to focus on long-term strategies without the pressure of redemption requests (Real Capital Analytics, 2025).

2.2.3. Fund Strategies

Real estate funds can be categorized into core and non-core funds, reflecting different investment strategies in the institutional real estate market. This classification helps in understanding market participation, investment trends, and the analysis of fund strategies and their risk-return profiles. (INREV, 2024). See Table 1 in Appendix B for a detailed view of INREVs' fund style classification criteria. The capital raised in the European real estate segment has decreased over the past few years, peaking in 2021, when a total of $37.1 billion was raised, and then declining to $13.2 billion in 2024 (Figure 2, Appendix A).

2.2.3.1. Core

Core real estate investments primarily focus on acquiring and managing stabilized, high-quality assets that generate consistent income with minimal risk. These assets typically include fully operational and well-leased office buildings, retail centers, industrial properties, and multifamily residential complexes in prime urban markets. The primary objective of core funds is to generate stable and predictable cash flows over the long term, making them highly attractive to institutional investors such as pension funds and insurance companies seeking low-volatility investments (Shilling & Wurtzebach, 2012).

Unlike value-added and opportunistic investments, core investments require minimal active management, as properties are already well-maintained and leased to high-credit tenants under long-term agreements. Additionally, leverage is typically limited, with loan-to-value (LTV) ratios generally low at 50%, which helps reduce financial risk and stabilize returns. The target internal rate of return (IRR) for core real estate funds ranges from 8% to 12%, reflecting their emphasis on stable,

long-term income generation rather than speculative gains (Shilling & Wurtzebach, 2012).

2.2.3.1. Non-Core: Value-Add & Opportunistic

Value-added and opportunistic real estate funds target higher returns than core funds by engaging in active asset management, redevelopment, and riskier investment strategies. According to Shilling & Wurtzebach (2012), these funds are typically underwritten to achieve leveraged IRRs between 12% and 18% for value-added strategies and above 18% for opportunistic investments. Opportunistic funds take on higher risk, often involving new developments, distressed assets, or complex repositioning projects with uncertain cash flows.

The fee structure for these funds reflects their higher risk and active management requirements, where management fees typically are between 1% and 2% of AUM, similar to core funds, but with a higher performance-based incentive fee (carried interest) set at 20% of profits above a hurdle rate. This hurdle is usually 8% to 12% (Shilling & Wurtzebach, 2012).

Opportunistic funds have LTV ratios over 65%, while value-added funds range from 50% to 65%. These strategies rely on favorable market conditions and access to cheap debt to achieve high returns. Investors seeking higher return potential in exchange for greater volatility and more extended holding periods often allocate capital to these funds with the expectation that fund managers' expertise in asset repositioning and development will generate above-market returns (Shilling & Wurtzebach, 2012).

2.3. Infrastructure

2.3.1. Investment Characteristics

Traditionally, classic infrastructure investments aim to generate long-term stable cash flows with low volatility through real tangible assets that provide necessary services (Duclos, 2019). Typical infrastructure investors seek opportunities that require large-scale upfront capital deployment, followed by minimal operating costs and limited maintenance capital expenditures throughout the holding period. From a cash flow perspective, this combination translates into positive cash yields and

high operating margins that allow for high recurring capital returns in the form of dividends to equity owners (Brinkman & Sarma, 2022).

Typical infrastructure investments generate highly predictable and stable cash flows. In particular, returns have very low exposure to equity markets, commodity price risk, demand fluctuations, or other external risks such as economic recessions (Brinkman & Sarma, 2022). Infrastructure's predictive nature arises from two primary sources. First, revenue is often secured through long-term contractual arrangements with governments or highly creditworthy enterprise counterparties that drastically reduce or eliminate commercial risk. For example, solar farms can enter into long-term power purchase agreements with off-takers, or waste management facilities can establish contractual relationships with local municipalities. Second, infrastructure provides essential services to society, which renders them crisis-independent (Duclos, 2019). Often, these factors together create significant barriers to entry via stable demand flows in a regulated monopoly or long-term contractual structure.

Infrastructure deals can take on three forms. Greenfield projects entail building the infrastructure from scratch, brownfield projects, which are partially operational but require significant capital expenditures to improve the asset, and secondary-stage deals, where no further investment into developing the asset is needed (Andonov et al., 2021). Infrastructure investments can be exposed to risks related to development, technology, and commercialization. Development risk encompasses delays in construction, incorrect procurement decisions resulting in higher capital expenditures, and other related factors (McKinsey, 2013). They can also be exposed to significant technological risk where technology embedded in the infrastructure becomes obsolete or uncompetitive against newly emerging and disruptive standards (PwC, 2024). For instance, 4G technology, which was launched in late 2009, and the infrastructure that enables it are being replaced by more advanced 5G technology just 15 years later. Failure to integrate these new technologies into the infrastructure project can lead to obsolescence, making the legacy system less future-proof. Lastly, such projects face a myriad of commercial uncertainties, including economic developments, risks in the financing strategy, and competitive developments. Naturally, greenfield and brownfield investments are inherently riskier, as they are exposed to varying degrees of development risk. In contrast, fully operational secondary deals with regulated contracts may face minimal technological or commercial risk. Overall, secondary deals account for 73.5% of deal

observations in the period from 1990 to 2020, while greenfield and brownfield deals account for 18.1% and 8.4% of executed deals, respectively (Andonov et al., 2021).

In contrast to real estate assets, infrastructure deals often involve some degree of privatization and participation from public entities, such as governments and municipalities (Poole, 2024). For greenfield deals, governments identify a need for development and award long-term concessions via competitive processes that can last between 30 and 50 years. On average, 10.7% of deals involve such concession rights (Andonov et. al, 2021). For brownfield deals, governments typically sell or long-term lease existing infrastructure that needs modernization efforts.

2.3.2 The Evolution of Infrastructure Asset Classes & Strategies

In the early 2000s, the private equity market and institutional investors hardly considered infrastructure investments as a separate asset class – infrastructure assets were merely associated with bridges, toll roads, ports, and similar assets (Goldman Sachs, 2020; Kemp, 2023). Twenty years later, the cumulative amount of capital raised by the top private equity investors crossed $1 trillion, and infrastructure as an asset class has matured. This is primarily attributable to the fact that the allocation of institutional capital from pension funds, sovereign wealth funds, university endowments, and insurance companies into infrastructure has surged significantly (Andonov et al., 2021). Due to its characteristics, such as little correlation to equity markets and often inflation-hedged cash flows in regulated industries, many institutional investors perceive infrastructure as a natural fit to their long-term liabilities. This natural fit, combined with the significant need for privately financed infrastructure, has led to the rapid growth of private equity investment funds in infrastructure (Poole, 2024).

Andonov et. al (2021) classify traditional infrastructure investments into six distinct categories. First, *renewable energy* projects include wind energy, solar energy, hydropower, biomass plants, and geothermal power facilities. Second, *traditional energy* sources include coal and nuclear plants, natural resources, pipelines, and refineries. The third category, *transportation*, refers to investments in toll roads, parking lots, tunnels, bridges, railroads, airports, and seaports. *Social infrastructure* investments are hospitals, medical facilities, senior homes, education facilities, public buildings, and prisons, among others. Fifth, *utilities* include water treatment

plants, water and power distribution networks, and waste management projects. Lastly, *telecommunications* infrastructure investments go into mobile towers, internet, and satellite networks. Figure 3 (Appendix A) shows the distribution of limited partner deals by asset type. Accounting for the fact that fund investments expose limited partners to multiple asset deals, 28.2% of deals went into renewable energy, followed by 28.0% into traditional energy, and 18.3% into transportation. Utilities and telecommunications constitute the smallest deal category, with 7.3% and 5.4%, respectively (Andonov et al., 2021). Figure 4 (Appendix A) also shows the amount of capital raised by infrastructure private equity funds by asset type, where renewables have dominated fundraising as well.

Different strategies within infrastructure have emerged targeting various risk-return profiles and investor preferences. Core infrastructure funds are low risk, low return, and constituted 29% of the total amount raised by infrastructure private equity funds in 2024 (see Figure 5, Appendix A). They typically target assets with long-term prospects of stable cash flows and low correlation to other asset classes with high barriers to entry (Alves & Zimmermann, 2025a). Examples are transport-related assets, including toll roads, bridges, and airports, which carry some moderate degree of demand risk (Goldman Sachs, 2020; Kemp, 2023).

As the asset class grew, a need for more granular distinction between different infrastructure projects arose, which led to the emergence of super-core and core-plus funds (Kemp, 2023). Super-core funds have the lowest risk and return profile. They invest in contracted revenue, such as regulated utilities like water distribution networks, public-private partnership projects, and other related assets with little volume variation (Brinkman & Sarma, 2022). On the other hand, core-plus funds, which accounted for 19% of infrastructure fund capital raised in 2024, target less risk-averse investors who are willing to invest in assets that carry more risk in exchange for returns that approach traditional buyout fund returns in the private equity market (Alves & Zimmermann, 2025a). This broadening of fundraising has emerged rapidly over the last decade as infrastructure has drawn in continuous investor interest with varying risk preferences. A natural consequence of this is also a widening geographic spread into developing markets as funds need to look further for opportunities (Kemp, 2023).

As Brinkman & Sarma (2022) point out, private equity funds with expertise in infrastructure are now rapidly moving to raise opportunistic or value-add funds,

similar to those in PERE. A primary drive towards this development is that investor demand to deploy capital into infrastructure has far outstripped the supply of attractive targets, which has led private equity funds to seek opportunities that retain core elements of infrastructure (Goldman Sachs, 2020). These vehicles invest in projects that form the future of infrastructure with inherently different risk profiles. Examples include electric vehicle charging networks, battery storage facilities, hydrogen distribution networks, smart motorway and rail technology, 5G telecom networks, and data centers. Some general partners go as far as setting up separate funds with varying return profiles to cater to the specific preferences of limited partners, especially to pursue opportunities in the energy transitions, and transfer assets into their core infrastructure funds once they reach a more mature stage. In 2024, value-add and opportunistic funds accounted for 34% and 8%, respectively, of global private equity infrastructure fund capital raised (Alves & Zimmermann, 2025b). Notably, such opportunistic projects differ from core infrastructure in that they tend to require more capital expenditures and often incur negative cash flows for the first few years. In addition, these investments tend to be particularly exposed to development, technology, and a myriad of commercial risks.

Another evolution in infrastructure investment is how private equity principals approach their cross-deal strategy. As Kemp (2023) outlines, ten years ago, general partners, along with capital contributors, sought after investing in single-deal hard assets where the actual management of the asset is separated from the asset itself. Over time, however, general partners have shifted towards a platform approach, in which management is fully integrated with the asset. As a result, mandates to invest in several assets of the same type have increased.

2.3.3 Risk-Return Profile

Different fund strategies and asset types carry varying degrees of risk and return potential. In their broad study covering global private equity funds from 2002 to 2018, Andonov et al. (2021) analyze the average returns for infrastructure, real estate, buyout, and venture capital funds. Infrastructure yields an equally weighted internal rate of return of 9.92% across the sample, which is lower than real estate funds, which generated 10.58% on average. It is also significantly lower compared to buyout and venture capital funds, which yielded 14.52% and 13.33%, respectively. The observation that infrastructure as an asset class yields lower returns than other private equity opportunities, on average, is widely supported by the market, with

average return expectations across strategies settling in between 9% and 11% (Deloitte, 2024; Goldman Sachs, 2020).

2.4. Data Centers

As humanity and the world move online, exponentially growing amounts of data are generated, creating a significant need for digital infrastructure (Christensen et al., 2018). Data centers are essential for meeting the growing demand for information and technology services, from data creation, collection, storage, and analysis to support for devices, data-intensive media, robotics, industrial technology, and artificial intelligence applications. Over the last decade, particularly, an explosion in big data, artificial intelligence, and cloud computing has driven immense demand for high-performance computing, ultra-fast connectivity, and secure data storage (Deloitte, 2024). Artificial intelligence requires substantial computing power to process deep learning algorithms, increasing the demand for the newest frontier data centers that can handle such a computational workload (Savills, 2024). This activity is visible in Europe's total data center electricity need of 45 TWh, which accounts for 1.6% of Europe's total electricity footprint. This has created unprecedented incentives for infrastructure investment in that space, from data centers that enable computing to fiber optic networks that support connectivity. Therefore, over the last decade, private equity players who traditionally invested in real estate and infrastructure have started acquiring data centers in pursuit of more opportunistic returns (IPFA, 2022).

2.4.1. Fundamentals

At its core, a data center hosts information technology infrastructure, including central processing units (CPUs) and graphics processing units (GPUs). Typically, the data center operator neither owns nor sponsors the CPUs and GPUs but provides all the networks, systems, applications, and in-house data center infrastructure, such as power, cooling, racks, and cabling, to keep the equipment fully operational at all times (Equinix, 2022).

There are four distinct data center setups. First, the most common form of data center setup is called *colocation*; the data center is owned and operated by an independent service provider who hosts multiple enterprises in the same facility; the so-called tenants rent space, computing power, cooling, and the management of the data center through long-term leases to multiple cloud, enterprise, and

hyperscale customers. For colocation customers, high-security standards at the site, rigorous uptime guarantees, and backup power redundancy measures are crucial (Christensen et al., 2018). Often, large colocation providers have multiple data center sites to cater to the needs of their customers. In Europe, 67% of 1,350 data centers have a colocation structure, and some well-known colocation providers such as Equinix have dedicated colocation sites close to Stockholm (Christensen et. al, 2018; Savills, 2024). Second, *hyperscalers* are large data centers built for purpose, typically have more than 20 MW, and are operated by the enterprise they support. Typically, enterprises build and run these sites to host their service platforms for social media, search engines, communication, entertainment, artificial intelligence applications, or e-commerce. For hyperscalers, closeness to the power grid, redundancy measures, power abundance, and large land plots to secure future scalability are crucial. An example is Meta's hyperscaler data center in Luleå in the North of Sweden. Third, *cloud-built-for-purpose* data centers are owned and operated by cloud service providers. They have multisite regional setups with a range of availability zones to secure low latency and high reliability for corporate customers. Local examples include AWS's data centers in Västerås and Katrineholm (Christensen et al., 2018). Last, *enterprise* data centers serve to host and operate corporate infrastructure in-house. Because developing and running a data center is highly complex, more and more enterprises are moving to replace such setups, and only 7% of data centers in Europe are owned proprietarily. A Nordic example of an enterprise data center is Ericsson's sites in Linköping and Stockholm.

Running a data center, from servers to storage equipment, backups, and power cooling, requires an immense amount of energy. Therefore, one of the most crucial steps in developing and operating a data center is securing reliable access to affordable and abundant power sources (CBRE, 2021). Most commonly, data center developers do so by entering long-term power purchase agreements with grid operators. For hyperscale data centers, even small savings and optimizations in power consumption can lead to significant cost reductions and CO2 emissions reductions. In addition, latency is a key metric when prospective tenants select their data center site (R. Björk, personal communication, February 14, 2025). Latency measures the time it takes for data to go to the user and back, measured in round time. According to Björk, Areim's investment manager for data centers, more than 85-95% of use cases tend to work below 20 milliseconds round time. Low-latency figures are typically achieved by building last-mile fiber networks to connect data

flows to long-haul fiber networks through local interconnection hubs (CBRE, 2021). Data center developers and tenants seeking computing capacity face a key trade-off between abundant, inexpensive power and low latency.

In the data center industry, there is zero tolerance for downtime (CBRE, 2021; R. Björk, personal communication, February 14, 2025). Data center operators enter extremely tight service-level agreements with their tenants. This has multiple implications for the development of data centers. For instance, it is common for data center operators to implement multiple layers of redundancy in their power infrastructure to mitigate the impact of power outages, grid instabilities, or natural disasters. Redundancies involve duplicating and extending critical components in the data center infrastructure, such as powerful Diesel-based backup generators and cooling systems. Hyperscale data centers experience significant cost economies due to the most cost-effective procurement possibilities (Savills, 2024). Apart from meeting tight service-level agreements, data centers have another incentive for deploying expensive crisis-proof systems; tenants are willing to pay substantial premiums for such peace of mind.

2.4.2. Data Centers in Private Equity

Data center investments are more opportunistic than traditional infrastructure, targeting internal rates of return in the range of 14% to 22%. However, they share multiple similar investment characteristics with infrastructure. First, data centers are future-proof assets that are critical to the digital infrastructure ecosystem, concentrating computing and networking activities essential for companies and society (CBREIM, 2020). Their cash flow is secured contractually through inflation-protected leases that last an average of 18 years, often with creditworthy customers such as mobile carriers, large technology companies, and other industry leaders. In addition, the immense initial capital needs and expertise required to build and operate data centers create significant barriers to entry. Lastly, data center occupancies are highly sticky and unaffected by market cycles that tend to impact real estate and infrastructure asset classes. Once customers sign a lease, they purchase and deploy GPUs and CPUs in the data center, making the data center an integral part of their computing infrastructure. This leads to high switching costs and sticky customer retention (CBREIM, 2020). For instance, as Wernvik (personal communication, February 26, 2025) explains, cabling between the racks in a data

center can be more than ten kilometers long, requiring over 50 installers, which makes reversing this setup incredibly laborious and costly.

Investing in data centers exposes private equity investors and their financial sponsors to several risks. If powered land is acquired and the data center is built during the holding period, investors are exposed to significant development and commercial risks that exceed the risk level of traditional infrastructure investments (CBREIM, 2020). In addition, they bear considerable technology and obsolescence risk; data centers with outdated and older-generation facilities and systems risk losing tenants who are looking to upgrade their infrastructure once their leases expire (IPFA, 2022). Data center operators also need to spend significant resources navigating the complexity and restrictiveness of policies and regulations.

The unique opportunity and risk profile has made data centers a new investment asset class that is attracting new backers and funders, among them real estate and infrastructure private equity funds that have not traditionally invested in data centers (Savills, 2024; IPFA, 2022). In 2024, global M&A activity for data center deals soared to $73 billion, a 133% increase compared to 2023 (Synergy, 2025). This illustrates that the exit market for data center private equity is becoming robust, with multiple bidders typically involved in any data center sales process (IPFA, 2022). In addition, although most data center acquisitions have been majority-financed through equity due to their risk profile, debt providers and private equity investors are starting to build and securitize key customer agreements to fund capital expenditures and expansions (IPFA, 2022). This development illustrates that data centers are becoming more bankable and are increasingly considered a distinct asset class.

3. Case Methodology

This section presents the methodology used in this case study. First, it presents the research design and the rationale for conducting a case study. Secondly, it describes the data collection process, including an overview of the sources used. Lastly, the research quality is evaluated, covering aspects of validity and reliability.

3.1. Research Design

The research is conducted through a case study method, in which we analyze the transaction by Areim of EcoDatacenter. A case study is particularly useful for exploring issues where the boundaries between the phenomenon and its context are not clearly defined (Yin, 2018). Data center transactions of this scope in the Nordics are still relatively new, making this method appropriate for understanding decision-making, influencing factors, and implementation processes. Case study research is commonly used to develop theories from empirical data, especially in fields where prior research is limited (Eisenhardt, 1989).

3.2. Data Collection

Both primary and secondary data were collected to ensure a comprehensive analysis. Primary data were obtained through face-to-face semi-structured interviews with representatives from Areim, EcoDatacenter, and Arctic Space Technologies, which allow for a combination of predefined themes and open-ended responses (Adeoye-Olatunde & Olenik, 2021). The authors selected the interviewees based on their relevance to the case in order to ensure that they had direct knowledge and experience with the transaction. Additionally, some interviews were conducted to gather knowledge on broader industry trends as well as the strategy and market position of Areim and Eco Datacenter. All interviews were conducted in person to facilitate more detailed discussions and allow for better engagement rather than doing them online or over the phone. (Sturges & Hanrahan, 2004). Each interview was recorded for transcription and analysis.

In addition to interviews, publicly available materials, such as industry reports, company reports, press releases, investor materials, and relevant documents from Areim and EcoDataCenter, were utilized. All the assumptions and forecasts in the valuation and analysis are based on market research and investor materials, as

specific transactional data regarding the letter of intent, share purchase agreement, and rental agreements are confidential.

Table 2

List of Interviews

Date	Company	Participants	Role	Length
14.02.2025	Areim	Robert Björk	Investment Manager	90 min
26.02.2025	EcoDataCenter	John Wernvik	Chief Marketing & Sustainability Officer	60 min
04.03.2025	Areim	Mikael Hesselvall	Chief Investment Officer (in 2018)	80 min
11.03.2025	Independent	Jonas Kjellstrand	Senior Advisor	60 min
12.03.2025	EcoDataCenter	Peter Michelson	Chief Executive Officer	60 min
14.03.2025	Arctic Space Technologies	Felix Hessinger	Chief Technology Officer	20 min
20.03.2025	Areim	Erik Vikbladh	Chief Investment Officer	60 min
21.03.2025	Areim	Elinor Ek	Senior Associate	60 min
27.03.2025	Areim	Leif Andersson	Founder	45 min
02.04.2025	Areim	Robert Björk & Elinor Ek	Investment Manager & Senior Associate	60 min

3.3. Research Quality

Case study research has various criticisms, such as causal determinism, non-replicability, subjective conclusions, and biased case selection (Idowu, 2016). Additionally, case studies expose the authors to verification bias, as they tend to confirm the researchers' preconceived ideas, which can negatively impact the scientific quality of the results. As Yin (2018) argues, criticisms regarding the scientific quality of case studies often come from weaknesses in the data collection process. For that reason, this case study uses a systematic approach to data collection in order to ensure that the results are transparent and reliable. For instance, the authors have used multiple data sources, including interviews, industry reports, and public information, instead of only taking the interviewees' perspectives for granted. Considering multiple data sources and interviewees confirm the same facts, this increases the validity of the study, allows for cross-checking of results, and minimizes potential biases.

3.3.1. Validity

Validity in case study research is typically evaluated through construct validity, internal validity, and external validity (Yin, 2018). Internal validity is a concern more relevant for explanatory case studies that examine causal relationships. Since this study focuses on understanding decision-making and implementation rather than causality, internal validity concerns are minimal. External validity relates to whether findings can be generalized beyond the specific case. While case studies do not allow for generalization in the statistical sense, external validity is ensured by aligning findings with established theories in private equity and business strategy. This method enables theoretical insights that can be applied in similar contexts (Idowu, 2016).

3.3.2. Reliability

In qualitative research, reliability ensures consistency and transparency in the data collection process and during analysis (Yin, 2018). While exact replication is challenging in qualitative studies, reliability is strengthened through systematic documentation and clear research procedures (Stenbacka, 2001). To improve the reliability of this case study, the authors carefully documented the interview questions and key discussion topics. However, as qualitative research involves human interactions, factors such as interview dynamics and context can influence responses and follow-up questions (Sturges & Hanrahan, 2004).

4. Case Background

Data is the driver behind the evolution of artificial intelligence, which has and continues to drive an immense demand for digital infrastructure and energy to support it. Indeed, over the last 15 years, data usage has increased a hundred-fold, and more data has been created during the previous three years than in the entire history of humankind (Klimczak, 2024). The creation, processing, and storage of an increasingly large amount of data create an immense need for power, which is further accelerated by artificial intelligence. To illustrate, large language models such as ChatGPT require ten times the power traditional search engines require per search query, while artificially created videos require 10,000 times the power consumption of an internet search (Klimczak, 2024). This development has led to an increased need for data center infrastructure to store and process data. Because a key challenge in developing and operating data centers is cheap and reliable access to power, the Nordics have become the most promising area for growth in the data center industry over the last years, with significant development to come. The attractiveness of the Nordic data center market has led Nordic-based private equity funds in the infrastructure and real estate sector towards exploring data centers. One of these funds is Areim, a Swedish real estate private equity player who decided to invest in the data center developer and operator EcoDataCenter in 2018. The following sections will delve into an in-depth presentation of the case companies Areim and EcoDataCenter.

4.1. Areim

4.1.1 History

Areim was founded in 2003 by Leif Andersson, starting as the operating partner for Blackstone's Nordic real estate investments. In its early years, the firm also worked with ING Real Estate to help build its Nordic presence.

"That's how Areim got created basically – as an operating partner to Blackstone, for their investments into the Nordic real estate space". (L. Andersson (personal communication, March 27, 2025)

Andersson's background at the AP funds and in the INREV network meant he had already built a name among global investors (L. Andersson, personal communication, March 27, 2025). This allowed Areim to establish credibility quickly

and grow from a boutique advisory shop to a trusted partner on major real estate transactions. Early hires, such as the one of Therese Rattik, helped scale the platform and by 2006–2007, the firm transitioned from being solely an operating partner to raising its own capital, launching Areim Fund I with €225 million in committed capital from three of the world's largest institutional investors (Areim, 2024).

Over the following decade, Areim raised a series of larger funds, broadening its investor base beyond Blackstone's capital. Each fund grew in size and scope, reflecting investor confidence in Areim's strategy. For instance, the firm's fifth value-add fund reached €877 million, well above its initial target. In 2023, Areim also closed a pan-European logistics joint venture with VGP. See Table 3 in Appendix B for a detailed fund overview.

4.1.2 Investment Strategy

Areim focuses on value-add real estate investments, targeting properties where value can be created through redevelopment, repositioning, or ground-up development. According to Areim's current chief investment officer, Erik Vikbladh, the core of Areim's strategy is to *"capture and follow market cycles"* (E. Vikbladh, personal communication, March 20, 2025), identifying sectors that offer mispriced opportunities and adapting accordingly.

This strategic flexibility is visible in Areim's evolving sector focus. In 2007, nearly all of Areim's capital was invested in office properties. But as shown in the sector allocation chart (Figure 6, Appendix A), the portfolio mix has shifted significantly over time. By 2022, investments in data centers, logistics, and light industrial assets had become major components of the portfolio. For example, light industrial, almost non-existent in 2007, now accounts for a substantial portion of invested capital, driven by long-term structural shifts like e-commerce and supply chain decentralization. The firm's early entry into sustainable data centers via EcoDataCenter in 2018 further illustrates its ability to identify and build exposure to emerging segments (E. Vikbladh, personal communication, March 20, 2025).

From an operational standpoint, one of Areims' unique selling propositions, compared to other Nordic real estate players, is that they have an in-house asset management team working hands-on with development, leasing, and repositioning. The firm is not a long-term holder and typically plans exits early in the investment

cycle. Vikbladh emphasizes that while *"cash flow is always the baseline"*, the firm adapts its risk profile depending on the market, pursuing more income in downturns and capital appreciation during upcycles (E. Vikbladh, personal communication, March 20, 2025).

4.1.3 Sustainability

Sustainability is a core pillar of Areim's investment philosophy. The firm has committed to net-zero emissions across its operations and asset portfolio by 2030 (Areim, 2024). ESG objectives are embedded in business plans from acquisition onward, including requirements for renewable energy, green leases, and certification standards like BREEAM or LEED. This is not only a compliance issue but a value lever. As Andersson puts it, *"sustainability and profitability need to go hand in hand"* (L. Andersson, personal communication, March 27, 2025).

GRESB, which operates annual sustainability assessments of real estate assets and funds, has consistently rated Areim's funds highly in its sustainability assessments, with several earning 4- and 5-star ratings in 2023. ESG considerations are not treated as separate from returns but as integral to the value-add model (Areim, 2024).

4.1.4 Leadership

Areim has grown from a small founder-led advisory firm into a multi-office investment manager with a pan-Nordic footprint and a global investor base. Leif Andersson led the firm from its founding until 2013, when Therese Rattik was appointed chief executive officer.

Rattik oversaw significant growth, including the firm's expansion into new countries and asset classes, and played a key role in institutionalizing ESG across the platform.

In 2024, Henrik Brinck Landelius took over as chief executive officer, bringing experience from large-scale development at NCC. Vikbladh, who joined in 2013 and now serves as chief investment officer, leads the investment strategy and fund operations. The wider leadership team includes specialists across real estate, digital infrastructure, sustainability, and investor relations.

4.2. EcoDataCenter

4.2.1. History

EcoDataCenter was founded in 2014 as a cooperation between the municipality-owned local energy company Falu Energi & Vatten, as well as the data center operator EcoDataCenter (R. Björk, personal communication, February 14, 2025). The company was founded by several serial entrepreneurs with extensive experience in various industries such as IT and telecom, as well as people with previous data center development experience. The planning started in 2014 when both parties created a blueprint concept for a novel data center that could redistribute the excess heat generated by intensive computing operations into the district heating facility in Falun (R. Björk, personal communication, February 14, 2025). Michael Hesselvall, Areim's chief investment officer at the time, lays out that the idea centered around building highly eco-friendly infrastructure towards hyperscalers and big data loads, and managed to secure 80 MW in power, as well as the land plot in Falun (M. Hesselvall, personal communication, March 4, 2025). In 2017, the company started building a single data center shell aimed at 2 MW and required more capital to fuel the development and build-out.

4.2.2. Strategy

EcoDataCenter's strategy at the time was centered around developing a cutting-edge data center in terms of design and operations and becoming an industry leader in sustainable data center solutions focused on being an integral part of the circular economy (EcoDataCenter, 2025a). To achieve this, EcoDataCenter aimed to build a state-of-the-art facility optimized for high-density applications in Falun, offering excellent connectivity and scalability, and providing the ideal environment for customers to scale (EcoDataCenter, 2025b). The location in Falun proved highly suited for this, considering the strong grid connection and close collaboration with Falu Energi & Vatten. EcoDataCenter focused on investing heavily in technology that could enable state-of-the-art computing capability, which meant investing heavily in liquid cooling technology to enable support for the newest GPUs and modern compute needs, but also to avoid refit capital expenditures. With sustainability at its core, EcoDataCenter constructed its data centers from locally sourced cross-laminated wood instead of concrete, minimizing the carbon footprint from construction while also accelerating construction time

and easing the building process, making the entire construction more sustainable, efficient, and cost-effective (EcoDataCenter, 2025a). In 2018, when Areim invested SEK 200 million into EcoDataCenter, the data center developer had only built a data center shell and had no clients, only potential leads (L. Andersson, personal communication, March 27, 2025).

5. Case

5.1 Venturing into Data Centers

5.1.1 Investment Rationale

One of the principal investment rationales was the strong market fundamentals in the data center segment and the Nordics' favorable position to capture a large share of that growth.

"*You could have looked at any graph at that time and seen what was happening. With a growing world population and the number of connected devices increasing, smartphones, iPads, TVs, everything being part of the Internet of Things, it just becomes intuitive that data usage and storage are exploding*" (M. Hesselvall, personal communication, March 4, 2025).

The amount of digital data generated was expected to grow from 33 Zettabytes in 2018 to over 175 Zettabytes by 2025 (Coughlin, 2018). Also, Gartner (2017) projected that we would go from 8.4 billion devices in 2017 to 20.4 billion devices by 2020. Areim was strategically positioned to capitalize on this megatrend through the acquisition of EcoDatacenter.

The Nordic countries possess unique conditions that enable operating data centers at reduced costs and risks due to several factors, giving the region an overall advantage compared to other key data center hubs in Europe. In the past, European data center hubs have been built in the so-called FLAP-D markets, which refers to the cities Frankfurt, London, Amsterdam, Paris, Dublin, and their surrounding area primarily due to their closeness to customers and company headquarters in the cities, as well as proximity to international subsea cable networks and internet exchanges (Christensen et. al, 2018, R. Björk, personal communication, February 14, 2025). Over the last decade, global technology giants such as Facebook, Google, Apple, and AWS, as well as colocation providers like Equinix and Interxion, have expanded their data center presence in the Nordics due to an exceptional match between essential factors in data center site selection and the Nordic market characteristics (Christensen et. al, 2018). This has led to an investment boom in the Nordic data center construction market that is projected to attract €4.3 billion annually, adding up to 580 MW of capacity per year. Figure 7 (Appendix A) maps out the most significant data center investments in Sweden, Norway, Denmark,

Finland, and Iceland in 2018, the year Areim invested in EcoDataCenter. Notably, the overview shows strong traction from foreign direct investing initiatives in self-built hyperscale data centers as well as sites built for cloud services and colocation structures.

One of the major reasons for the shift towards the Nordics is a cheap and reliable power supply. The Nordics, including Sweden, have an extremely stable power grid with little to no power outages. With the best-performing grids in Europe, the low risk of interruption is highly attractive for data center operators (Christensen et. al, 2018). Furthermore, the Nordics have abundant access to renewable energy sources, including hydropower, wind, and geothermal energy, which results in electricity prices that are approximately 50% lower than in FLAP-D markets (Areim, 2023). Figure 8 (Appendix A) illustrates that this power discount has persisted consistently over time, with Sweden being in the mid-range of the Nordic energy prices over time. Considering these are the most competitive energy prices in Europe, it allows a significantly lower total cost of ownership for the tenants. In the words of Kjellstrand, "*if you have the cheapest energy, you have the cheapest compute - and cheapest compute wins*" (personal communication, March 11, 2025). In addition, it provides a sustainability angle for data center owners and operators seeking to meet the European Union's environmental goals while reducing their energy costs; it also helps attract investment from investors with sustainability mandates (Savills, 2024). Another environmental windfall for data centers is the cold climate, as it allows further optimization for the power utilization and cooling infrastructure, leading to cost savings. Further, the Nordic market has deregulated wholesale and retail power markets, which simplifies direct purchases of renewable energy via power purchase agreements (Christensen et. al, 2018). Overall, the Nordic market presents a unique and highly favorable combination of very cheap and abundant power from sustainable, domestic, and reliable energy sources, enabling a low total cost of ownership.

The Nordic markets are also characterized by high political stability, good connectivity, and outstanding human capital. Political stability allows data center developers and operators to count on transparent and predictable policies that reduce investment risk (Christensen et. al, 2018). In addition, the Nordics, Sweden in particular, have developed a very business-friendly environment with swift regulatory approvals and fewer procedures. For instance, authorities tend to be quick and agile in handling zoning and local planning, permits, and have lean

procedures that lead to time and cost savings in the data center permitting and construction phase. Further, the Nordics are strategically located with fast data connections to established internet hubs and subsea cables, which keep latency in check. Last, the Nordics have a highly competent workforce with the highest fraction of specialists in information and communication technology in the European Union. This gives data center operators more ease in hiring the highly skilled labor required to face the complexities of running a data center.

Given the limitations on power and land and the comparatively higher energy costs in the FLAP-D markets, a substantial portion of energy-intensive data loads, such as high-performance computing and AI training, are being moved into the Nordics (Areim, 2023). Considering the variety of advantages and unique conditions the Nordics offer compared to FLAP-D markets, hyperscalers, cloud providers, and colocation data centers have realized and acted on the attractiveness of the Nordic data center market, with immense demand especially in the high-performance computing segment and for sustainability-focused investors.

Another central aspect of the investment rationale was EcoDataCenter's strong ESG profile, which was emphasised in several of the interviews.

"*EcoDataCenter was founded in 2014 in order to build and operate the world's first climate-positive data center. By integrating the data center into an energy ecosystem, the company reused the heat to produce wood pellets, replacing fossil-based sources used during wintertime"* (J. Kjellstrand, personal communication, March 11, 2025)

EcoDataCenter's model was based on circular energy logic, repurposing heat and reducing embodied carbon via construction innovations such as cross-laminated timber. These features helped it position itself as a pioneer at a time when such considerations were still emerging in the industry.

"*Obviously, EcoDataCenter had a very strong focus on ESG. So that was a tick on the box for us, with true ESG, not greenwashing. Also, at that point in time, especially building in wood, no one did that.*" (M. Hesselvall, personal communication, March 4, 2025).

Connected to their robust ESG profile was the future-proofness of the Falun site. Although AI was not mentioned at the time of the acquisition, it would nevertheless

dramatically impact the requirements for a high-quality data center. The physical and technical requirements of AI infrastructure differ significantly from conventional server environments. GPUs and other AI chips require higher power density, liquid cooling, and floor structures that can withstand greater weight. As Kjellstrand explained,

"*Traditional racks weigh about 650 kilos. AI-dense racks now weigh three tons. If your floor can't handle that, you're out. Retrofitting isn't just costly, it's often not viable.*" (J. Kjellstrand, personal communication, March 11, 2025)

In this respect, EcoDataCenter's design was ahead of the curve. It had been over-engineered from the start with heavier floor loads, advanced cooling systems, and modular capacity, features that were originally considered a hedge, but that have since become prerequisites for modern AI workloads.

"*EcoDC was always ambitious when it came to technical specifications. They could handle the water cooling. They could handle the weight. They were prepared for what was coming, even if they didn't know it would be called AI.*" (J. KJellstrand, personal communication, March 11, 2025)

These design choices are now paying off. The explosion in AI adoption was largely unforeseen at the time of acquisition, but it has only strengthened the investment case.

"*What we've seen with generative AI is exponential, an order-of-magnitude jump in demand that no one really predicted back in 2018. But because of how they had built the data centers, we were positioned to capture that upside.*" (E. Vikbladh, personal communication, April 20, 2025).

5.1.2 Due Diligence on EcoDataCenter

The due diligence process for the EcoDataCenter investment was an intensive, learning-oriented process, reflecting Areim's limited prior experience in the data center sector. The team approached EcoDataCenter much as a real estate venture, leveraging familiar principles like land value and location to ground their analysis.

"*We saw it as a land play. Location is super important for data centers, and we saw it as real estate because it was about location.*" (L. Andersson, personal communication, March 27, 2025)

This focus on fundamentals meant identifying the Falun site's advantages, a strong power grid connection, access to fiber, cheap land, and a cool climate, as key success factors. At the same time, Areim recognized that a data center is "*something different*" from their usual property deals and that they would "*have to think differently about this*", as Hesselvall noted, given "*the big difference is all the technology that goes in there*" (personal communication, March 4, 2025). Accordingly, the team underwent a steep learning curve, engaging external experts to supplement their in-house knowledge. They spent a considerable amount of time on the market to understand the sector and consulted with experts, recalled Hesselvall, describing how Areim sought third-party insights on cost benchmarks and technical requirements to validate EcoDataCenter's plans (M. Hesselvall, personal communication, March 4, 2025).

However, by today's standards, the technical due diligence was light, and Hesselvall admitted they did not use specialized data center engineers at the time, relying instead on "*traditional real estate guys"* (M. Hesselvall, personal communication, March 4, 2025). This combination of external consulting and in-house real estate perspective helped Areim get comfortable with unfamiliar metrics (such as viewing cost in terms of per-megawatt capacity rather than per-square-meter) and to translate the opportunity into their own investment language.

A central part of Areim's due diligence was assessing the operational and financial risks inherent in EcoDataCenter's early-stage business. Unlike a stabilized property, the company in 2018 was essentially pre-revenue with hardly any income and with a partially built facility and no assured tenants (M. Hesselvall, personal communication, March 4, 2025). Areim thus treated it as a high-risk, value-add investment rather than a core infrastructure asset. Given this, it would not fit within Areim's sister infra fund, Infranode. As Andersson explained, the investment simply did not fit within Infranode's mandate:

"*It wasn't even operational, essentially just an empty shell. If it had been a fully developed, income-producing data center, it could likely have fit within Infranode. But the risk level was too high for that mandate. Given Infranode's investment*

restrictions, it simply wasn't possible. If the fund had been structured as a more opportunistic product, then perhaps it would have been a better fit." (L. Andersson, personal communication, March 27, 2025)

At the time, the site in Falun was under early development, with the first data hall (B1) under construction, a second hall (B2) planned, each with a capacity of 3.75 MW, and a larger high-performance compute facility (B3) designed to host up to 30 MW for a potential anchor tenant.

The deal carried notable risks. At the time of acquisition, EcoDataCenter's platform was still under development, both operationally and organizationally. Areim was effectively investing in a private operating company with its own management and over 30 shareholders. The fragmented ownership structure also necessitated the negotiation of a tighter shareholder agreement to secure long-term strategic control. In parallel, Areim faced commercial risk as no binding contracts had been signed at the time, exposing the project to significant revenue uncertainty.

During the due diligence phase, Areim also gave thought to eventual exit routes. From the outset, they recognized that data centers, operating at the intersection of real estate and infrastructure, could attract a wide range of prospective buyers, technology firms, infrastructure players, or even utilities, seeking to expand their digital presence. IPO or trade sales were the main routes explored at the time of the acquisition (R. Björk, personal communication, February 14, 2025)

"An IPO was always on the table," recalled Hesselvall, *"but only if we could show that the concept worked at scale and the business model was robust enough for public markets"* (personal communication, March 4, 2025). In parallel, Areim's team weighed the pros and cons of these exits relative to EcoDataCenter's growth trajectory. "*A trade sale typically offers quicker cash returns if you find the right buyer, but an IPO can unlock higher valuations if the market believes in the long-term story,*" added Hesselvall (personal communication, March 4, 2025). Much like other aspects of their due diligence, Areim approached exit planning with a mix of real estate-informed logic and external market advice, ensuring they had a clear view of the operational milestones needed for a successful sale or listing.

5.1.3 Deal Structure & Financial Analysis

In 2018, Areim invested SEK 200 million into EcoDataCenter through its Areim Fund III, acquiring a majority stake in the company. While the specific ownership percentage remains confidential, for valuation modeling purposes, the transaction is treated as a full (100%) equity acquisition, implying a total enterprise value of SEK 400 million. This assumption reflects confidentiality regarding the exact ownership structure. See Table 4 in Appendix B for a detailed view of the model.

"*Getting traditional bank financing early on simply wasn't realistic, so we had to fund the deal entirely with equity up front*" (R. Björk, personal communication, April 2, 2025).

The development model covers three data halls – B1, B2, and a larger anchor tenant hall (B3) – over a six-year horizon. B1 and B2 were viewed as lower-risk; B1 was already under construction, and B2 had tenant interest from major firms. B3, on the other hand, was dependent on a hyperscale tenant that had not yet signed at closing, so only 50% of its capacity is included in the model to reflect that uncertainty.

We assume capital expenditures of SEK 50 million per MW for B1 and B2, reflecting typical build costs at that time (E. Ek, personal communication, April 2, 2025). For the anchor tenant, we assume a higher cost of SEK 60 million per MW to reflect the expected complexity and higher technical requirements of a hyperscale build. Today, Areim calculates around SEK 100 million per MW (E. Ek, personal communication, April 2, 2025)

Revenue is based on rental pricing per reserved kW per month. Ek explains that average rent levels are between SEK 900 and 2,000 (E. Ek, personal communication, April 2, 2025). The model, based on the author's view on the tenant mix, assumes SEK 1,200 for B1 and B2, and SEK 1,000 for the anchor hall, indexed at 2% annually.

The exit valuation assumes a 20× EBITDA multiple on stabilized year-6 earnings, supported by 2012–2017 M&A transactions where multiples ranged from 15–22× (see Figure 9, Appendix A). Globally, there were several listed companies dominating the market, which can be split up into wholesale data center providers, e.g, Digital Realty Trust, CyrusOne, Switch, and colocation data center providers, e.g., Equinix. Operators such as Equinix and Digital Realty traded at EV/EBITDA

multiples of approximately 20x during the period, and given EcoDataCenter's business model at the time, which focused on colocation services, Equinix is likely the most comparable out of them (see Table 5, Appendix B).

In the base case, our model generates a 20.5% IRR and a 2.8x equity multiple. This is in line with Areim's return expectations at entry (M. Hesselvall, personal communication, March 4, 2025).

The sensitivity analysis highlights the deal's dependence on timely lease-up, stable pricing, and a supportive exit market. Returns are particularly sensitive to delays and underperformance in EBITDA. For example, if lease-up is delayed by two years and EBITDA reaches only 80% of the base case, the IRR drops to 9.1% with a 1.7x multiple. Conversely, achieving 20%+ exit EBITDA, with no delay yields, the IRR goes to 27.1% with a 3.9x multiple (see Table 6, Appendix B). The business case offers solid downside protection on rent levels, as a 20% rent reduction still results in an IRR of 15.2% and a multiple of 2.2×. However, it is more sensitive to the exit multiple, with a reduction to 16× significantly impacting both the IRR and the multiple (see Table 7, Appendix B).

5.2. Doubling Down on EcoDataCenter

Between 2018 and 2025, EcoDataCenter underwent a significant transformation, evolving from a regional data center operator into a leading provider of sustainable, high-performance digital infrastructure and being recognized as the world's leading data center design leader by NVIDIA and awarded as the most sustainable data center company in the world (P. Michelson, personal communication, March 12, 2025). This evolution was marked by strategic acquisitions, a focused shift towards hyperscale clients, and substantial expansions in key locations. This section explores how EcoDataCenter underwent this major transformation and expansion.

5.2.1. Falun Build-out & Merger with Fortlax

Once Areim had acquired ownership of EcoDataCenter in 2018, the management and board put full focus on building out the first data centers in Falun to an operational level, securing key tenant contracts to fill up capacity, and expanding EcoDataCenter's geographic footprint across Sweden. To achieve this in the quickest way possible, EcoDataCenter merged with Fortlax AB in 2019. Fortlax, a Swedish data center developer and operator that was founded in 2004, had already

built out two data centers, which were fully powered by renewable energy from hydropower (Calvert, 2019). The data centers, which are located close to Piteå, Northern Sweden, proved to be a strong fit for EcoDataCenter's development portfolio, and already had existing tenants in place. With 4.5 MW of available power readily available, this proved to be an efficient way to expand and diversify geographically to cater to the different needs of EcoDataCenter's customers (EcoDataCenter, 2025c). For instance, while round time latency to key network points in Amsterdam might be slightly lower compared to the Falun site, temperature is much lower, which gives additional cost benefits. In addition, Fortlax had put significant emphasis on security and hence had a unique angle for customers with an explicitly sharp focus on data center security, for instance, Arctic Space Technologies, a satellite communication provider (F. Hessinger, personal communication, March 14, 2025).

Subsequently, in 2020, the company acquired two modern, energy-efficient data centers in Stockholm, offering an aggregate 3MW capacity. These acquisitions allowed EcoDataCenter to offer low-latency services in Stockholm while leveraging the sustainable infrastructure of Falun for larger data volumes. Lower latency is especially sought after by tenants active in IoT, 5G networks, and smart city applications.

In parallel, EcoDataCenter accelerated its development efforts on its flagship facility in Falun, a central part of its growth strategy. From 2018 to 2025, the company built out a total capacity of the Falun site to 41 MW across 35,000 square meters (see Figure 10, Appendix A). The ability to offer scale in capacity to prospective customers led to interest from major new customers. For instance, it enabled EcoDataCenter to secure BMW as an anchor client (Moss, 2020). In addition, the fact that the Falun data centers were designed with high-performance computing use cases and AI applications in mind meant increased interest from customers in that space. For instance, GPU-as-a-service company CoreWeave and AI-based translation service DeepL became tenants of EcoDataCenter.

5.2.2. Building a Platform

Apart from an aggressive build-out of capacity, Areim also reshaped EcoDataCenter's governance and internal direction. Initially, Areim had entered EcoDataCenter with the intention of holding the company for the medium term until

exit. However, as the data center sector evolved rapidly and demand surged particularly due to the cloud and AI boom, Areim decided to take full control of the company in 2023 by buying out the remaining minority shareholders and moving the investment into a dedicated data center fund (L. Andersson, personal communication, March 27, 2025). Upon assuming complete ownership, Areim continued a comprehensive overhaul of the management structure and governance, which included hiring Peter Michelson as the new chief executive officer in 2023.

Areim realized early on that a change in strategy is needed for EcoDataCenter compared to regular real estate deals. While Areim manages its real estate deals directly, this was not applicable here, as outside expertise in the data center industry was needed. This meant Areim started building a platform with key expertise that could be leveraged to build out its data center portfolio through EcoDataCenter. It brought in professionals with deep infrastructure experience, from operators and engineers, who had deep market insights from suppliers, customers, and construction partners, and who knew how to run a data center (R. Björk, personal communication, February 2, 2025).

As a result, Areim focuses on its central role in raising capital needed for the build-out, aiding the executive team in strategic decisions, financial oversight, and key hiring decisions, such as hiring EcoDataCenter's new chief financial officer in 2025. With the data center sector being capital-intensive by nature, Areim's backing gave EcoDataCenter a significant advantage. As Michelson notes, "*there is a huge benefit to being owned by Areim*" (personal communication, March 12, 2025), especially in terms of accessing institutional capital as well as the trust and brand reputation of Areim, along with its deep local connections and track record. To cover day to day operations and form strategic alignment between owner and portfolio company, Areim employs Troika meetings every third week between the Chairman of the Board, the investment manager, and the CEO, a practice typical of private equity (L. Andersson, personal communication, March 27, 2025).

Beyond internal restructuring, EcoDataCenter also underwent a legal transformation to align its ownership and financial structure with its long-term financing goals. This included creating holding structures and legal entities suitable for interaction with large-scale banks, bond issuers, and institutional investors. This transformation was not just a formality, but in place to create optionality and flexibility to ensure EcoDataCenter could pursue the most efficient financing

strategy at each stage of growth, while keeping exit routes flexible for Areim (P. Michelson, personal communication, March 12, 2025; R. Björk, personal communication, February 14, 2025).

5.2.3. Strategic Focus to Hyperscale and AI Infrastructure

When Areim first entered as a majority stakeholder in EcoDataCenter, the initial business plan revolved around colocation, a model that capitalized on the growing trend among enterprises to outsource their data center needs (E. Vikhblad, personal communication, March 20, 2025). Hesselvall points out that early customer targets included data-intensive corporates such as BMW, which used the data center for compute-heavy simulations in areas like crash testing and aerodynamics (personal communication, March 4, 2025). These clients required high-performance computing capacity, but only in relatively small allocations. While strategically valuable at the time, these cases lacked the scale required to drive transformational growth.

As Kjellstrand highlights, the years after the acquisition were marked with fundamental technical shifts within AI infrastructure and rapid growth in hyperscale computing and AI workloads, all demanding much higher power capacity (personal communication, March 11, 2025). In particular, AI applications demand extremely high compute density, with server racks weighing almost five times the weight of a traditional rack, and requiring advanced water cooling systems, which EcoDataCenter was well positioned for.

When Peter Michelson joined the company in 2023 as chief executive officer, he conducted a thorough strategic review and noticed that EcoDataCenter tried to serve all customer segments simultaneously, without a clear focus (personal communication, March 12, 2025). This marked the start of a comprehensive sales strategy overhaul that ultimately led EcoDataCenter to what it has become today. EcoDataCenter's internal business functions were split into three groups: build (develop data centers), sell (find tenants to fill the capacity), and deliver (maintain high service and uptime standards). Each function was assigned a dedicated leadership team and performance metrics, which also had implications for EcoDataCenter's customer mix. The company would no longer pursue every inbound request for proposal. Instead, it would focus intensely on a handful of strategic customer relationships that could bring immense, large-scale deals with

them. Such relationships could include hyperscalers, which are large, proven global tech companies such as Google, Amazon, and Microsoft, which are highly bankable. In the words of Björk, "*credit-wise, Microsoft is like a smaller Nordic country in terms of GDP size or bankability"* (personal communication, February 14, 2025).

From a commercial perspective, the transition from enterprise colocation to hyperscale clients offered not just greater revenue potential but also operational leverage. As Hesselvall notes, whereas corporates typically request a few megawatts at most, hyperscalers often require 10-20 megawatts in a single deal, with optionality to scale further in the future (personal communication, March 4, 2025). Further, it allowed EcoDataCenter to capitalize on its value proposition of highly sustainable capacity that can support the latest technology, which is far better recognized by hyperscalers who are willing to pay a premium for performance, reliability, and sustainability. In 2024, EcoDataCenter increased prices, which illustrates the immense value customers see in its offering (P. Michelson, personal communication, March 12, 2025). Therefore, EcoDataCenter has shifted from pursuing a broad customer base with hundreds of customers to a sharp focus on growing 7-8 key customers, which account for 95% of the revenue.

To succeed in this space, the company has improved its executional discipline between capital, capacity, and sales. In particular, Michelson stresses the critical interplay between raising capital, building capacity, and closing deals (personal communication, March 12, 2025). In the data center industry, each of these functions is deeply interdependent. Without capital, new data centers cannot be built; without available capacity, sales cannot close; without sales, capital becomes harder to raise. This has led the company to a tightly managed operational rhythm. In addition, EcoDataCenter has adopted a highly disciplined customer due diligence process. According to Michelson, customer due diligence includes extensive research, financial analysis, and a clear understanding of the end-use case. Engagement cycles can be lengthy, typically spanning 20 to 24 months for major customers, and contracts often extend for 7 years or more, with mutual extension clauses.

EcoDataCenter's technical design has earned praise from the industry. According to Michelson, NVIDIA has described the company's infrastructure as having "the world's leading design", and one of EcoDataCenter's globally active customers ranked the company second among its global supplier base, placing it in the top 1%.

5.2.4. Customer Value Proposition

The partnership with Arctic Space Technologies is a compelling example of what value EcoDataCenter provides to its customers, why its offering is at the forefront of the market, and what selection criteria matter for prospective customers. As Felix Hessinger, chief technology officer, explains, Arctic Space Technologies is a ground station operator that operates moving antenna systems that track satellites in orbit, enabling secure, real-time communication for their customers (personal communication, March 14, 2025).

In 2020, to ensure minimal latency and high-speed data transfer, Arctic Space Technologies established a direct fiber-optic connection to EcoDataCenter's facility in Piteå. This move eliminated the need to build and maintain its own data center on-site, avoiding significant capital expenditures and moving costs on an operational basis. What compelled Arctic Space Technologies to partner with EcoDataCenter in particular is high levels of redundancy and reliability, with gated security and backup power systems including uninterruptible power supply units, additional generators, and advanced liquid cooling systems. These technical attributes are essential for Arctic Space Technologies and its customers, whose core requirements include reliability, redundancy, and security, particularly for the sensitive or high-priority data that Arctic Space Technologies handles. Furthermore, Felix Hessinger emphasizes that EcoDataCenter's service personnel are exceptional, which significantly contributes to a successful partnership. For EcoDataCenter, this partnership also comes with benefits. Once a data center operator can service the space industry, it follows the highest security standards and, in Felix Hessinger's words, "*is ready for anything*" (personal communication, March 14, 2025).

5.2.5. Building the Next Megacampus in Borlänge

Building on the success of developing and operating the Falun site, EcoDataCenter acquired a substantial land plot in Borlänge in Fall 2024, just twenty minutes from the Falun campus (see Figure 11, Appendix A). With over 150 MW in secured power, this site represents the next chapter in EcoDataCenter's growth strategy, essentially a scaled-up replication of the Falun project (E. Ek, personal communication, March 21, 2025). With power already secured in place and a confirmed partnership with Eleveo, the regional electricity provider, the site has the potential to scale its power capacity up to 240 MW. Figure 12 in Appendix A shows the full blueprint buildout of

the megasite. The area's existing industrial infrastructure, including strong power distribution and connectivity, makes it a perfect foundation for expansion. In addition, from a logistical and operational standpoint, Borlänge offers substantial synergies with Falun. The proximity between the sites allows the reuse of construction personnel and operational teams, ensuring cost-efficiency. Further, the site is already equipped with infrastructure such as hydropower access, proximity to the Dalaälven River for cooling, and integration capabilities with Borlänge Energi's heating plants. A vision for the Borlänge site is also to further integrate the data center megasite into society by providing waste heat to industrial players in the area. And according to Michelson, EcoDataCenter is well capitalized and positioned to execute their vision for the buildout (personal communication, March 12, 2025).

5.3. Data Center Economics: The Borlänge Acquisition

This section backtraces the full valuation that Areim conducted for EcoDataCenter's acquisition of the Borlänge site. The model first sets up an operational model for the data center site from an EcoDataCenter perspective and then analyzes various exit scenarios from Areim's perspective as an investor.

5.3.1. Development, Timing & Capital Expenditures

As Ek explains, the average time to build a data center is about 20 months (personal communication, March 21, 2025). In addition, two data centers can be built simultaneously with the existing construction resources and personnel. For the Borlänge site, which has secured 150 MW in power with the possibility to scale up further, we assume that 16 data centers will be built in total, with a total capacity of 192 MW. Based on the above assumptions, the first data centers will become operational in mid-2027, and construction will finish in 2033.

There are two major components to the capital expenditures EcoDataCenter faces for the Borlänge buildout. First, it acquired the land site, including the secured power for SEK 400 million in Fall 2024 (Swinhoe, 2024). Second, approximately SEK 100 million per MW is required for data center construction, which is scheduled to begin in 2025. That culminates in a total of SEK 20,738 million in capital expenditures, including the land acquisition. As Figure 13 (Appendix A) shows, for a typical data center, the majority is spent on electrical systems, including measures

for redundancy. At EcoDataCenter, redundancy measures such as backup power systems and diesel generators account for about 25% of total capital expenditures.

5.3.2. Income Streams

The Borlänge data center build-out will yield four different types of income streams (see Table 8, Appendix B). First, the customer pays colocation fees, which are billed in kW per month and are highly dependent on the customer. On average, contracts can range from SEK 900 to 2,000 per kW per month. However, hyperscalers tend to pay less per kW, given the large capacity of these contracts, while also having more negotiation power (E. Ek, personal communication, March 21, 2025). Smaller tenants, including AI-native customers, on the other hand, pay higher fees that are closer to the upper range. Given EcoDataCenter's strategy to focus on large-scale customers and hyperscalers, we assume an average price of SEK 1,100 per kW per month, which translates to approximately SEK 13.2 million per MW on an annual basis. In addition, we assume a 5% natural vacancy rate where built capacity is not let out. When customers have signed a lease agreement, they pay for the full capacity, even though only a part might be actually utilized. Further, lease agreements are typically inflation-adjusted. In addition, the customer is fully responsible for the servers, and EcoDataCenter provides only the infrastructure and technical installation.

Second, the customers pay for all the power they consume (E. Ek, personal communication, March 21, 2025). However, given that EcoDataCenter has these costs on the balance sheet, these income streams are passed through to 100%. Only some customers are charged a minor markup, which we disregard in the Borlänge valuation model. Nevertheless, although these costs do not significantly impact the valuation, they are crucial for the customer, as lower power costs make a data center site more attractive.

Third, EcoDataCenter is exploring how to reuse waste heat for residential heating or industrial plants in Borlänge. Despite that, these income streams are negligibly small compared to colocation revenue and are seen as a way to integrate the data center into society.

The last income stream is ancillary services, which comprises the maintenance of hardware and servers. While larger customers and especially hyperscalers typically have their own team on-site to handle their own servers, some customers do not. In

that case, EcoDataCenter offers maintenance in-house in exchange for a fee. This is a growing area for EcoDataCenter and in the data center industry in general. For valuation purposes, we assume that ancillary services generate approximately SEK 1 million per MW annually, or approximately 7% of total colocation revenues.

5.3.3. Operational Expenditures

For data centers, costs largely depend on scale. Operational expenses include personnel employed on site for maintenance, monitoring server activity, and assisting with technicalities and hardware systems (E. Ek, personal communication, March 21, 2025). Such expenses are typically proportional to the capacity installed. Some operating expenses are fixed and shared among the data centers on the site, for instance, security systems and personnel. Selling, general, & administrative expenses are highly dependent on the platform and management team in place. For the Borlänge acquisition, we have assumed operational expenses and selling, general, & administrative expenses at 25% and 10% of colocation revenue, respectively. For selling, general & administrative expenses, we take the baseline SEK 39 million from EcoDataCenter's Q4 2024 filings. As Table 8 in Appendix B shows, as a result, EBITDA margins hit 50% across the build-out, excluding any power-related revenue and cost items, which is also typical for the data center industry (E. Ek, personal communication, March 21, 2025). A key metric closely followed in the real estate and data center space is yield on cost, which measures EBITDA over cumulative capital expenditures. As a result of the author's assumptions, the end-of-build yield on cost comes in at 10.4% (see Table 9, Appendix B).

5.3.4. Capital Structure & Financing

Powered land with significant development risk, as is the case in Borlänge, is typically hard to finance through bank loans. This puts large equity requirements on the developer, which is why EcoDataCenter has pursued an alternative financing route through unsecured bonds as a layer on top of equity. In September 2024, EcoDataCenter issued a senior unsecured floating rate bond with up to SEK 2,000 million in volume (EcoDataCenter, 2024a). The bond is linked to STIBOR and comes with a spread of 4.75%. In the bond prospectus, it clearly states that the proceeds can be used for the Campus Borlänge acquisition as well as financing the construction of data centers. As Ek points out, once development starts, a more

balanced capital structure is pursued, aiming at a 60% loan-to-cost ratio, implying that 60% of development is financed through debt (personal communication, March 21, 2025). Figure 14 in Appendix A shows the loan-to-cost ratio and overall development of the Borlänge site's solvency metrics, such as interest coverage and debt-to-EBITDA ratio. This profile of moving towards more solvency is typically seen in such projects.

5.3.5. Exit

Exit multiples largely depend on the customer mix, and there can be big discrepancies between platforms that serve only smaller enterprise customers and hyperscalers or fast-growing AI clients. Buyers are willing to pay a higher price for highly bankable customers like hyperscalers and those with the capacity to scale further. For mega-sites, EBITDA multiples of 20-30x are commonly observed in the European market (E. Ek, personal communication, March 21, 2025). In contrast, enterprise-focused data centers are trading at around 15x on average. However, given the limited transaction numbers in the Nordics and highly uncertain outcomes, Areim always conducts a full sensitivity analysis for exits in terms of timing and multiples. Based on the exit scenarios by year presented in Table 10, Appendix B, we have put together a similar sensitivity analysis for both IRR and MOIC metrics in Table 11, Appendix B. Overall, assuming Areim sells the project in 2032, eight years after the Borlänge site acquisition took place, for an EBITDA multiple of 25x, it captures a 30.0% gross IRR and gross MOIC of 3.2x. The exit returns are highly sensitive to the exit multiple and timing. For instance, delaying the exit to 2034 and achieving a lower exit multiple of 18x EBITDA would result in 20.4% IRR and 3.1x MOIC.

5.4 Raising Capital

Given the immense capital needs for EcoDataCenter's buildout as well as time-considerations in the development timeline, Areim's and EcoDataCenter's financing strategy can be described as breaking down the business plan into chunks that are associated with specific capital needs, and then filling those needs based on equity or debt financing (P. Michelson, personal communication, March 12, 2025). This is evident in the past fundraising events for the platform buildout of EcoDataCenter.

5.4.1. Data Center Fund

Initially, Areim's SEK 200 million investment in EcoDataCenter was included in the third value-added fund and financed through 100% equity. Due to fund limitations regarding asset classes and available capital, EcoDataCenter was included under a 10% flexible allocation within which Areim has freedom to deploy capital to more opportunistic opportunities, and allowed Areim to initiate its data center strategy despite real estate-focused fund parameters (M. Hesselvall, personal communication, March 4, 2025).

As EcoDataCenter scaled and required more capital, Areim introduced Fund IV into the ownership structure. However, this dual-fund ownership raised governance and valuation challenges, particularly around pro-rata investment rights and potential conflicts of interest between the two funds (M. Hesselvall, personal communication, March 4, 2025).

To address these issues and create a dedicated growth platform for Areim's data center strategy, it launched a separate fund in 2022, designed to support EcoDataCenter's long-term growth (Areim, 2023). At final close in 2023, the fund secured EUR 446 million in committed capital from a group of leading institutional investors. According to Hesselvall, who led the capital raising for Areim's data center fund, this dedicated structure allowed Areim to consolidate the ownership of EcoDataCenter fully into one fund, buying out the minority investors, and offering existing investors a route to get their proceeds and exit (personal communication, March 4, 2025). This meant that, from investing in 2018 to transferring EcoDataCenter into the data center fund, the financing was entirely through equity, making it a very cash-intensive journey. In 2024, Areim raised an additional round of capital into the data center fund, totalling a significantly oversubscribed raise of EUR 450 million, bringing the total equity raised to SEK 900 million. As Hesselvall alludes, the fact that data centers sit between the asset classes of real estate and infrastructure has helped in the capital raising process, as it attracts interest from both sides, broadening the potential LP base compared to narrower categories.

The data center fund is structured similarly to other private equity funds and is very similar to the real estate funds that Areim runs, which are domiciled in Sweden (E. Vikhblad, personal communication, March 20, 2025). Notably, the data center fund captures the same fee levels of a 1.5% management fee and 20% carry as other real

estate funds typically do and is not differentiated in that regard. Given the platform risk of EcoDataCenter, development risk, and operational challenges required to build a stabilized data center asset, the fund targets opportunistic returns of 15%+ net of fees (R. Björk, personal communication, February 14, 2025).

5.4.2. Bond Issuance

After Areim had invested about SEK 4 billion into EcoDataCenter and the company started to gain traction in the market, it started raising debt to fuel the expansion (M. Hesselvall, personal communication, March 4, 2025). As Björk points out, if a Tier 1 hyperscaler is a tenant, there is much less risk involved, which allows hiking up leverage significantly and positively impacts IRR targets (personal communication, February 14, 2025). For that reason, EcoDataCenter was able to secure a EUR 170 million debt facility in 2023 and raised EUR 90 million in secured bond financing in 2024. The senior unsecured bond has issuance volumes up to SEK 2,000 million, is linked to STIBOR, and has a floating margin of 4.75%, which is a typical market premium for such issuances (EcoDataCenter, 2024a; R. Björk, personal communication, April 2, 2025). In total, this lifted total capital raised in a short time span of three years to about EUR 1.2 billion in combined equity, debt, and bond capital, and will enable the finalization of the Falun campus with additional 24 MW in capacity, as well as initiating the first two data centers of 24 MW in Borlänge.

5.5 Epilogue

5.5.1. Selling EcoDataCenter

Private equity firms rely on returns from their investments, and while the Areim's data center is not structured as a closed-end fund, its investors still expect to receive their capital back along with a return eventually. Therefore, Areim has several potential exit routes at its disposal, with each reflecting future market dynamics and investor preferences.

One increasingly common exit structure in the data center industry is a so-called YieldCo/DevCo model, in which EcoDataCenter would sell its stabilized, fully developed, and income-generating data centers into the YieldCo portfolio, while development projects remain in the DevCo (E. Ek, personal communication, March 21, 2025). This structure would enable Areim to recycle its capital by selling off

stable assets, returning capital to its investors while capturing the carry compensation, and unlocking new capital that funds further new development projects. For example, in the future, EcoDataCenter could sell off part of its Falun campus to fuel the build-out of the Borlänge site. By monetizing fully-leased assets in this way, it can create a virtuous capital cycle for both EcoDataCenter and Areim.

Another exit route is a direct sale to infrastructure funds or specialized core investors interested in lower-return, stabilized data center assets (R. Björk, personal communication, February 14, 2025). For example, PGIM recently raised a substantial fund dedicated to buying stabilized data centers. Such buyers typically require lower-risk profiles and want to avoid speculative projects with development risks. A sale of partial data center assets or the entire EcoDataCenter platform to such an investor would be an attractive exit route for Areim.

Finally, Björk mentions that an IPO is a possible exit route. If EcoDataCenter achieves sufficient scale and steady cash flows, listing the platform as a public company could unlock liquidity for Areim. However, this would require favorable market conditions and sufficient investor appetite for data center assets, which is very dependent on the market. All in all, as Andersson notes, "*the key thing is to do as good an exit as possible*" (L. Andersson, personal communication, March 27, 2025), in order to maximize returns and ensure investor satisfaction.

5.5.2. Powered Land

Considering the difficulty and localized process to secure access to shovel-ready powered land, as well as contracted power capacity from a local energy provider, powered land could be the next strategy for Areim. Powered land, a growing model for data center development, involves acquiring and entitling land, securing power infrastructure, and subsequently selling the shovel-ready site. Adopting this strategy would allow Areim to avoid operational responsibilities and obsolescence risks, while they would give up recurring cash flows and potential long-term value increases (CBRE, 2024). In the future, powered land in Sweden will be a scarce resource (P. Michelson, personal communication, March 12, 2025). EcoDataCenter is uniquely positioned to gain access to land through its deep local connections and track record, and has the resources to install the complex piping and grid connections required for a data center build. As a new powered land strategy, Areim

could then sell its powered land projects to internationally operating hyperscalers like Google and Microsoft, who have difficulty securing powered land.

5.5.3. AI Bubble

The growth of AI and cloud computing has driven unprecedented investment in data center infrastructure. This boom raises a critical question: Is the industry experiencing a sustainable growth curve or a speculative bubble?

"Technology shifts like these tend to become [...] a bubble. And I'm sure the AI advancement has the same effect [...] because money is dumb. It happens every time. So if it's not the PC bust, it's the dot-com bust, the IOT bust, or some other bust. What's important, then, is to pay attention to the underlying demand. That it's going to be constant." (J. Kjellstrand, personal communication, March 11, 2025)

This sentiment is echoed by industry leaders. For instance, Alibaba's chairman, Joe Tsai, recently cautioned that the rush to build AI data centers may be "*outpacing initial demand*", noting "*the beginning of some kind of bubble*" (Butler, 2025), as projects launch without confirmed customers.

On the other hand, as Kjellstrand explained, the underlying demand for AI infrastructure is strong. The surge in generative AI and machine learning workloads is fueling significant data center utilization, reflecting not just hype but a deeper economic transformation.

"The perceived value of what generative AI can give society by augmenting human capabilities is grossly underestimated, and even academics are now acknowledging that the economic impact of generative AI has been significantly underestimated." (J. Kjellstrand, personal communication, March 11, 2025)

While there is a risk of an AI-driven bubble, the fundamental demand for computational resources points to a lasting and transformative trend. Furthermore, Björk and Andersson both recognize that the data center sector is currently experiencing a phase of rapid expansion, but not one without eventual limits.

"We're probably in the most aggressive growth phase right now, the steep part of the S-curve. At some point, it will flatten out. But how that plays out depends a lot

on where you sit in the value chain and what type of clients you serve." (L. Andersson, personal communication, March 27, 2025).

A key aspect of EcoDataCenter's positioning is its focus on hyperscale clients with exceptionally strong credit profiles and long-term infrastructure needs.

"Just leaving AI completely outside and just looking at what's happening with cloud migration — that's enough to make a good business case. Then you put the AI thing on top. That's why you're moving in a crazy direction right now." (L. Andersson, personal communication, February 14, 2025).

6. Discussion

This section answers the two main research questions posed in the introduction section of the thesis. It takes into account the views and reflections of the interviewees as well as the authors' own viewpoints.

6.1. Areim's Decision to Acquire EcoDataCenter

The first key research question of this thesis explores the underlying motivations that led Areim, a traditionally real estate-focused investment firm, to enter the data center market through the acquisition of EcoDataCenter in 2018. The question is:

Why did Areim decide to invest in data centers in 2018, and what were the motivations to do so by acquiring EcoDataCenter specifically?

The core of Areim's investment philosophy and strategy is to capture and follow market cycles, both in terms of economic cycles and sector-specific movements (E. Vikbladh, personal communication, April 20, 2025). This meant that when Areim got approached by one of their LPs with this investment opportunity, they had an open mind to explore the opportunity despite its risks.

First and foremost, the fact that data centers were and are positioned at the intersection of two megatrends, sustainability and digitalization, made it an attractive area to explore (L. Andersson, personal communication, March 27, 2025). What Areim could already see in 2018 was a maturing data center industry in the United States, where institutional capital had already started to shift towards digital infrastructure. In addition, data generation and storage had rapidly grown, with annual growth rates in the range of 20-25% (R. Björk, personal communication, April 2, 2025). At the same time, enterprises began to migrate their digital computing operations increasingly to the cloud, creating a demand for dedicated cloud infrastructure. Because data centers would expose Areim to exponentially high growth trends in compute and data, EcoDataCenter proved to be a compelling investment opportunity.

Second, Areim saw that the immense growth in computing and data needs created a demand for sustainable computing infrastructure. Data centers in general require very high energy consumption for processing and cooling, which convinced Areim that Sweden is a perfect location for a large-scale data center platform (R. Björk,

personal communication, February 14, 2025). The fact that Sweden's power grid is highly reliable, which is crucial for data center operations, but also that the country's power comes largely from renewable clean energy sources, makes it a factor favoring the investment in EcoDataCenter. Furthermore, Björk emphasizes that the total cost of ownership is a crucial factor for potential customers when selecting a data center. Customers who use more sophisticated hardware require more power, which can quickly increase electricity bills. Therefore, enterprises and individuals working in research and development began to seek out Nordic data center solutions to migrate their computationally intensive data processing away from more expensive data centers in the FLAP-D markets. Such fundamental demand drivers made the investment in EcoDataCenter highly attractive in the long term (M. Hesselvall, personal communication, March 4, 2025). What made an investment in EcoDataCenter especially compelling was its vision for state-of-the-art, sustainable data center design, as well as its ability to leverage Sweden's local resources and cold environment. In the words of Hesselvall, EcoDataCenter was about "*true ESG, not greenwashing, such as building in wood which no one did*" (personal communication, March 4, 2025). For Areim, this proved to be a strong factor to invest in, considering it is the core of the value proposition customers were seeking at the time. Interestingly, obsolescence and risk of futureproofing was not a key consideration in its initial investment thesis.

Considering that Areim's fund III mandate was to invest in real estate, the company had to evaluate how an investment in EcoDataCenter would fit into the fund and if it could even be funded with its given mandate. Areim had to "*think differently about this because it is something different*" (M. Hesselvall, personal communication, March 4, 2025). Therefore, Areim primarily invested in EcoDataCenter from a location perspective. Specifically, the location in Falun offered key advantages such as strong grid access with secured power, existing infrastructure from previous industrial activity, and proximity to a district heating system for a circular reuse of the excess heat generated by the servers. Ultimately, this led Areim to view EcoDataCenter through a location-driven and land-based perspective with long-term upside in the case of the successful buildout of the data centers. As Andersson sums up, "*while data centers may be a hybrid between real estate and infrastructure, EcoDataCenter resembled a land play with infrastructure upside*" (personal communication, March 27, 2025). Therefore, a strict criterion for Areim's investment became a back-to-back agreement which made sure that Areim could

buy the underlying land plot which EcoDataCenter had previously leased (M. Hesselvall, personal communication, March 4, 2025).

Table 12

Key Findings on The Motivation to Invest in EcoDataCenter

- Data centers give exposure to data and sustainability mega-trends
- Sweden is an attractive location in terms of renewable and cheap power
- EcoDataCenter is building a unique state-of-the-art and sustainable offering
- The Falun site is valuable on its own as an investment in powered land

6.2. Strategies to Build the Data Center Platform

The second key research question of this thesis addresses the specific strategies, key decisions, and market factors that led to a successful and rapid scaling of Areim's data center investing platform, EcoDataCenter. The question is:

What circumstances and strategies led to the successful buildout of the EcoDataCenter platform?

One of the central strategies behind the successful scaling of EcoDataCenter was Areim's deliberate shift from a traditional real estate investment approach with direct asset management through Areim to building a platform with in-house operational capabilities. Unlike real estate assets, EcoDataCenter is a company, so Areim made a strategic decision early on to hire the right people with deep knowledge in the data center industry who could navigate its complexities. As Björk explains, to build the platform, Areim required a highly skilled management team for EcoDataCenter, including a new C-suite and operators with expertise in critical infrastructure operations (personal communication, February 14, 2025). Through Areim's close collaboration with suppliers, customers, construction contacts, and EcoDataCenter, it created a constant feedback loop that has become crucial in underwriting decisions, from knowing when to invest and where to build. This platform-building process took time. According to Björk, it required a dedicated effort spanning three to four years to develop the credibility and operational capacity needed to compete. As a first mover in the Nordic market, Areim learned that merely having capital was not enough, but that demonstrating operational

readiness through in-house resources and deep networks in the data center industry is essential in winning trust from hyperscale clients, regulators, and municipalities.

Together with EcoDataCenter, Areim also structured core competencies around three crucial activities: raising capital, building, and selling (P. Michelson, personal communication, March 12, 2025). Given the capital-intensive nature of data centers, Areim strategically positioned itself on the capital raising side of the data center platform. As Michelson alludes, this move has become a huge benefit for EcoDataCenter, as the outsourced capital raising function allows EcoDataCenter to fully focus on the other two pillars, building data centers and selling capacity. The presence of Leif Andersson as chairman further streamlined decision-making, ensuring a clear and efficient chain of command that aligned financial strategy with operational execution. Now, over time, EcoDataCenter is aiming to become more financially self-reliant in terms of in-house financing resources. The newly added role of the chief financial officer in 2025 is signaling that the platform can eventually raise significant capital independently, without Areim. This is an important factor if Areim exits at some point, as both strategic buyers and IPOs require demonstrating in-house capital raising abilities. Nevertheless, the benefits of being owned by Areim have provided and continue to provide a critical backbone for EcoDataCenter's ability to scale quickly.

Another crucial factor in EcoDataCenter's success was the strategic commercial shift from a broad, unfocused customer acquisition approach to a highly targeted strategy on hyperscale and AI-native clients (P. Michelson, personal communication, March 12, 2025). Initially, EcoDataCenter engaged with a wide range of enterprise customers, regardless of their data needs. However, as even smaller cases demand operational implementation comparable with larger deals, EcoDataCenter refocused its commercial efforts on the cloud, hyperscalers, and AI segments, where a few select companies spend billions on cloud and AI. As Michelson explains, an enterprise deal with a low data load has similar operational expenditures and timeline as complex, large-scale deals with big players, despite having much lower expansion potential. This has tilted EcoDataCenter towards a brutal focus on the hyperscaler, cloud, and AI bucket, where three customers now account for 95% of revenues (P. Michelson, personal communication, March 12, 2025). At first sight, this seems risky as it would a single churning or defaulting customer would be a major hit for EcoDataCenter. However, there is more to it. First, the types of customers EcoDataCenter partners with are highly bankable, globally operating

enterprises with low default risk. Second, these companies deeply embed immensely expensive GPUs into EcoDataCenter's infrastructure. The significant investment is not the investment of building a data center, that EcoDataCenter provides, but the GPUs that customers purchase and deploy, which can be 8-9 times the investment of EcoDataCenter (R. Björk, personal communication, February 14, 2025). As Wernvik explains, this investment, combined with the cost of relocating the GPUs, creates strong stickiness, which significantly reduces customer concentration risk for EcoDataCenter (J. Wernvik, personal communication, February 26, 2025). According to Andersson, the full commercial refocus from pricing to marketing is really what made the investment in EcoDataCenter take off (personal communication, March 27, 2025). Another consideration not explicitly mentioned by our interviewees but crucial for Areim's return is exit valuation implications. While data centers with enterprise clients yield EBITDA multiples in the range of 15x, those with hyperscale clients in the AI and cloud space sell for 20-30x, which shows how crucial this strategic shift is for EcoDataCenter's valuation and Areim's financial return.

Further, EcoDataCenter's success is largely based on deep local engagement, which has become an enabler for growth and a key differentiator in an increasingly competitive industry. For a data center development to be successful, the local municipality must permit the development, the grid provider must offer a secure power agreement with the required capacity, and the Swedish national energy organization Svensk Kraftnät must issue the necessary environmental permits. From the outset, the company prioritized building strong relationships with local municipalities, contractors, grid companies, and other stakeholders in Falun and across Sweden. This included sourcing and employing locally, awarding contracts to regional builders, leading to about 60% of capital expenditures flowing back into the local economy. Unlike many international competitors, EcoDataCenter embedded itself in the communities in Falun and Piteå, creating long-term alignment and trust. In the intense competition for Swedish powered land, local grid companies are now calling EcoDataCenter for potential partnerships, unlike large players like Google and Microsoft, which are struggling to gain access to powered land (P. Michelson, personal communication, March 12, 2025). Wernvik elaborates that the acquisition of the Borlänge site would not have been possible if EcoDataCenter and Areim had not built a strong track record in Falun, which shows

that a locally embedded strategy is giving EcoDataCenter an immense advantage versus other players in the market (personal communication, February 26, 2025).

Another major driver behind EcoDataCenter's traction has been its forward-looking technical design focused on futureproofing and a focus on customer maintenance support. From the outset, EcoDataCenter and Areim understood that building data centers capable of supporting future computing needs is key to reducing obsolescence risk. As a result, the data center infrastructure is built with advanced liquid cooling systems, which are required by the newest NVIDIA GPUs, high rack density, and multiple layers of power redundancy. Combining liquid cooling with such levels of redundancy is extremely complex, and according to Wernvik, only 1-2% of data centers globally can handle such technical requirements, giving EcoDataCenter a clear edge (personal communication, February 26, 2025). In addition, as Michelson explains, a key differentiator that makes EcoDataCenter successful is outstanding customer interactions, which have earned EcoDataCenter a net promoter score of 100, an achievement "*unheard of in the industry*" (P. Michelson, personal communication, March 12, 2025). This is particularly important as customers purchase single GPUs for $400,000, which are typically depreciated over 5-7 years. As a result, ensuring the compute is always up and running is crucial (J. Wernvik, personal communication, February 26, 2025). EcoDataCenter's state-of-the-art design has not only attracted top-tier clients but also earned it exceptional recognition in the market, with NVIDIA calling it a global standard for data center design. In a market where reliability is non-negotiable, EcoDataCenter's technical foresight has become one of its strongest success factors.

EcoDataCenter's growth has also been amplified by its positioning at the intersection of powerful demand drivers, namely sustainability, cloud computing, AI, and digitalization (L. Andersson, personal communication, March 27, 2025). While the exponential growth of AI driven by generative models has created a surge in demand for frontier infrastructure, Areim has taken a measured view of this trend. As Andersson explains, it is essential to acknowledge that the AI boom may not provide long-term, sustainable growth for everyone in the value chain. Rather, Areim focuses on laying down the infrastructure that remains valuable regardless of fluctuations in specific technologies. Even excluding AI, the ongoing migration to cloud computing presents a highly stable and scalable business case. As it looks now, however, the boom in generative AI has led to outgrowing Areim's market

growth expectations by multiples, with sustainability and focus on data energy consumption becoming ever more important (E. Vikhblad, personal communication, March 20, 2025). Ultimately, EcoDataCenter's success lies in its alignment with these structural trends without overexposing itself to the AI hype or more risky AI tenants. For instance, while taking in a native AI client with a very narrow value proposition might be risky, EcoDataCenter's partnership with CoreWeave, which provides GPU-as-a-service for the entire AI industry, is less so.

Considering the rising power costs and increasing computational demands, total cost of ownership has become a critical factor for data center tenants over time, particularly those using more sophisticated hardware that is more computationally intensive. Therefore, companies have increasingly looked to the Nordics with cheaper, sustainable, and more reliable power access, allowing them to migrate heavy data workloads from more expensive FLAP-D markets. "*The combination of growth in compute and more acceptance towards data centers being displaced from users made Nordic data centers really take off*" (R. Björk, personal communication, February 14, 2025), Björk illustrates, and is another demand driver that has made Areim's data center investment platform EcoDataCenter successful.

Table 13

Key Findings on The Successful Scaling of EcoDataCenter

- Built in-house platform with industry experts to gain an operational edge
- Handled capital raising at the ownership level to accelerate growth
- Shifted to hyperscale and AI-native clients for scaling and valuation multiples
- Embedded locally to gain stakeholder trust and exclusive site access
- Implemented cutting-edge, future-proof infrastructure with top-tier customer support
- Positioned at the intersection of cloud computing, AI, and sustainability megatrends
- Capitalized on Nordic energy advantages to offer cost-effective, reliable capacity

7. Conclusion

7.1. Concluding Remarks

The Nordic market has become a European hub for data center investment due to its reliable and cost-effective power grid, which is powered by sustainable energy sources, and necessary to fuel the immense growth in data loads required for high-performance computing and artificial intelligence. Literature shows that real estate and infrastructure private equity players are moving in to pursue more opportunistic returns by taking on development and commercial risks for data center buildouts in the Nordics, while adopting platform build approaches to scale their exposure across multiple projects.

The case study thesis uncovers the main motivations and factors that led to Areim's acquisition and successful buildout of EcoDataCenter as a platform for Areim's data center strategy. Based on extensive interviews with executive management at both firms, the paper finds that gaining exposure to the megatrends of data growth and sustainability, Sweden as an attractive location in terms of renewable and cheap power, EcoDataCenter's unique state-of-the-art offering, and viewing the Falun site as a powered land play were the main motivators for Areim's investment into EcoDataCenter. The paper also finds that Areim's approach to building in-house capabilities to build a platform as a foundation to scale, while handling capital raising at the ownership level, enabled a rapid expansion of EcoDataCenter. In addition, Areim benefited from unexpected market factors such as the boom in artificial intelligence applications, which exceeded data growth expectations by multiples. Last, it highlights how a strategic refocus on the commercial level, as initiated by Areim, shifted EcoDataCenter's target customer base to more growth-oriented and valuable hyperscale and AI-native clients, which opened access to larger expansion opportunities. In conclusion, the mentioned factors, strategies, and market circumstances show how Areim, initially a real estate-focused private equity player without prior experience in data center investing, built out one of the most sustainable and state-of-the-art data center platforms in the world.

7.2. Limitations & Further Research

Multiple limitations are embedded in the research process and findings of this thesis. First, the core of the presented research and key findings is based on

interviews with nine specific individuals who share their own biased and circumstantial world views based on their specific anecdotal experiences. This means that further research should be cautious in generalizing these findings and refrain from extrapolating them to other contexts.

Second, despite the fact that the general phenomenon, data center activity in the Nordics, as described in the thesis, is well documented in literature, the case study is very specific and narrow in scope as it focuses solely on one acquisition and all its details. Therefore, further research into the broader development and transaction activity in the Nordics, as well as private equity strategies for data centers, could provide compelling insights.

Third, the thesis findings are impacted by confidentiality restrictions. Specifically, Areim is bound to keep the majority of transaction material for its data center fund confidential and is not allowed to share these with the authors, which impacts the specificity and accuracy of the thesis findings. Further research could focus on more historic cases where more information is shareable with the public.

The last limitation is timeliness. Specifically, the EcoDataCenter transaction and data center fund are still ongoing and will likely continue for the next five to ten years. Because the activity is still ongoing, the key findings in this paper may become obsolete or inaccurate in the future, as the ultimate outcome from a stakeholder and investor perspective is largely uncertain. Future research could add value by comparing these findings to actual outcomes and on a more aggregate market level.

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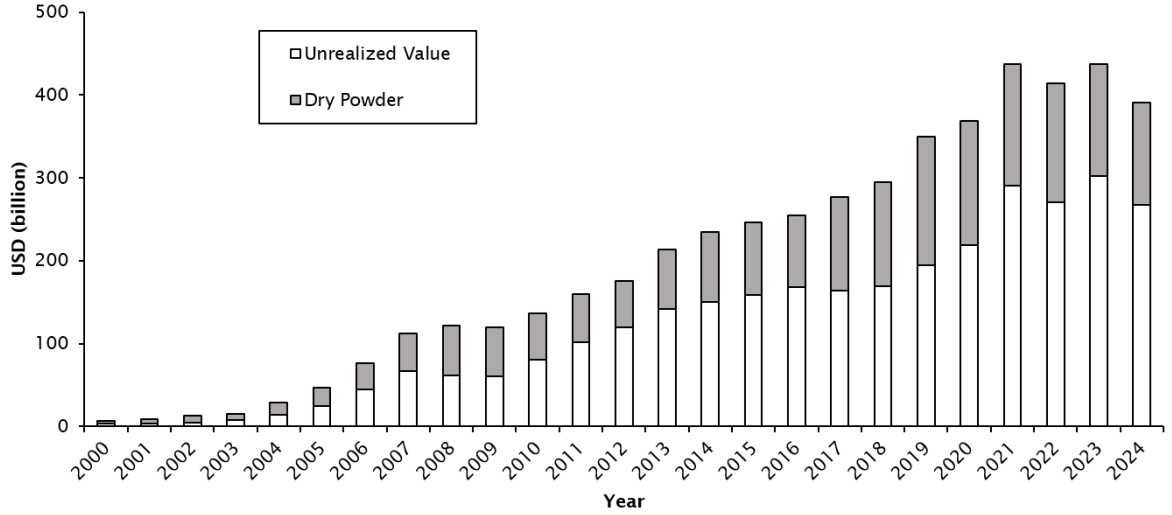
9. Appendix A: Figures

Figure 1

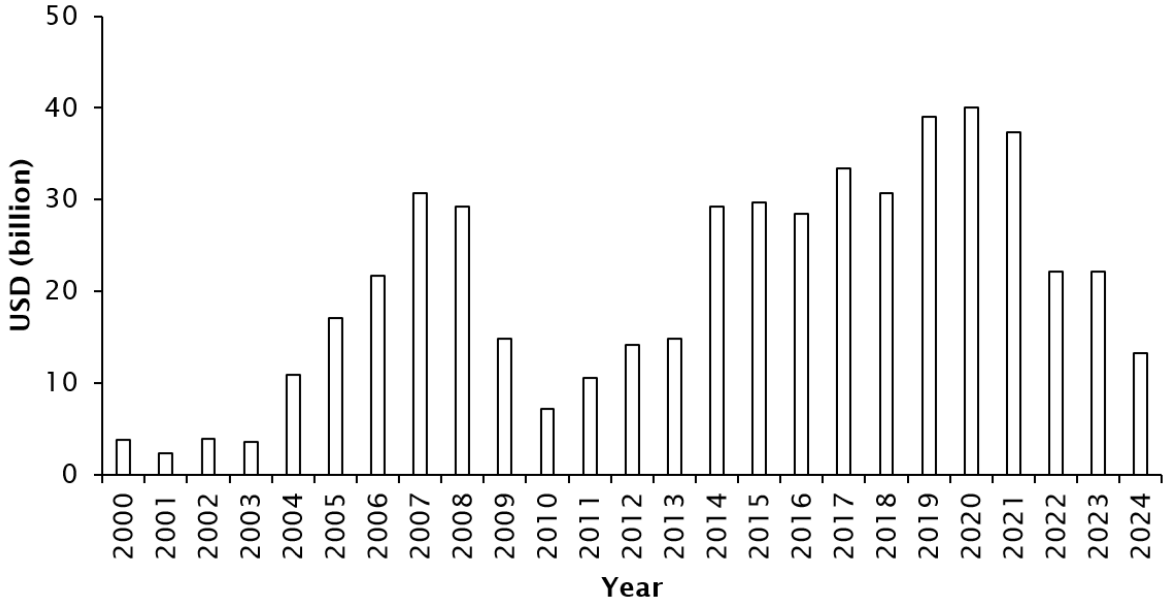
European Private Equity Real Estate Assets under Management, 2000 - 2024



Note. This data is derived from "Assets Under Management By Date" by Preqin, 2025, from https://pro.preqin.com/analysis/dryPowderAUM.

Figure 2

Funds Raised by European Private Equity Real Estate Funds 2000 - 2024



Note. Data derived from "Historical Fundraising" by Preqin, 2025, from https://pro.preqin.com/analysis/historicalFundraising

Figure 3

Global Private Equity Infrastructure Fund Transactions 2002 - 2018

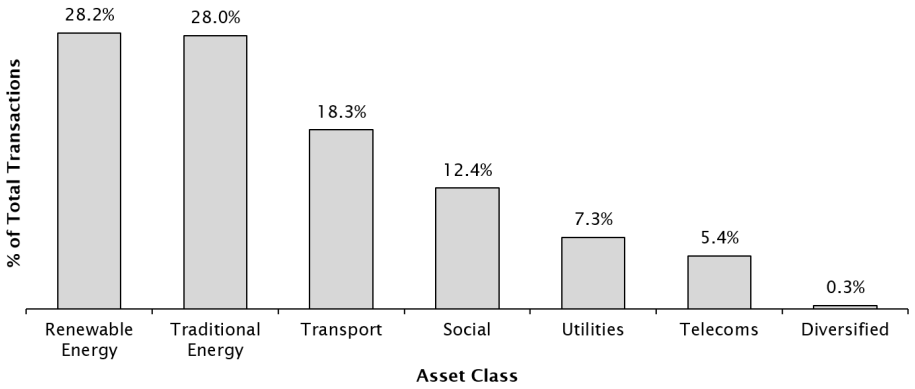


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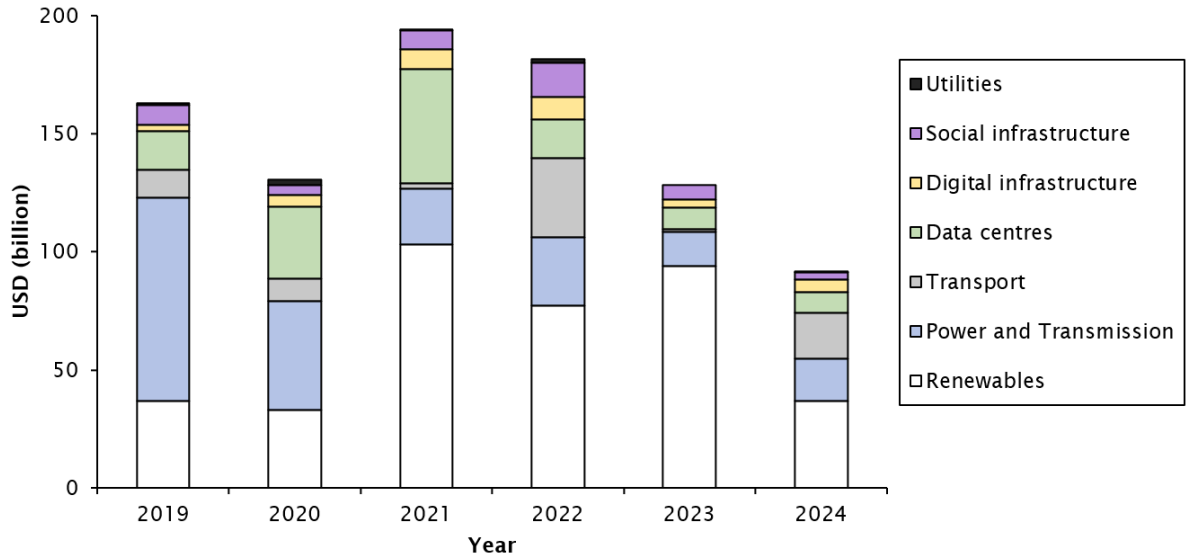
Figure 4

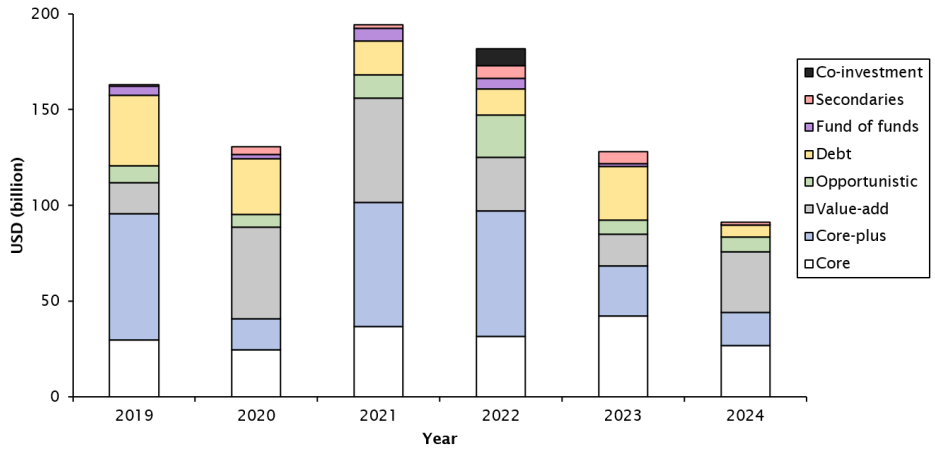
Global Infrastructure Capital Raised by Asset Class 2019 - 2024



Note. Data retrieved from "Q1 sets the stage for a healthy fundraising event" in "Infrastructure Investor" by B. Alves and T. Zimmermann, 2025, https://media.infrastructureinvestor.com/uploads/2025/04/Q1-2025-Infrastructure-Investor-Downloadable-Data.xlsx.

Figure 5

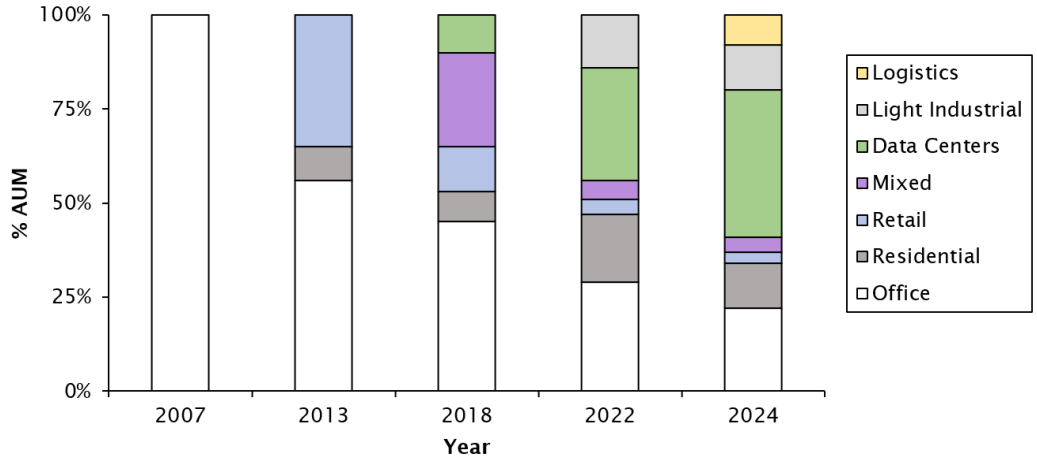
Global Infrastructure Capital Raised by Fund Type 2019 - 2024



Note. Data retrieved from "Q1 sets the stage for a healthy fundraising event" in "Infrastructure Investor" by B. Alves and T. Zimmermann, 2025, https://media.infrastructureinvestor.com/uploads/2025/04/Q1-2025-Infrastructure-Investor-Downloadable-Data.xlsx.

Figure 6

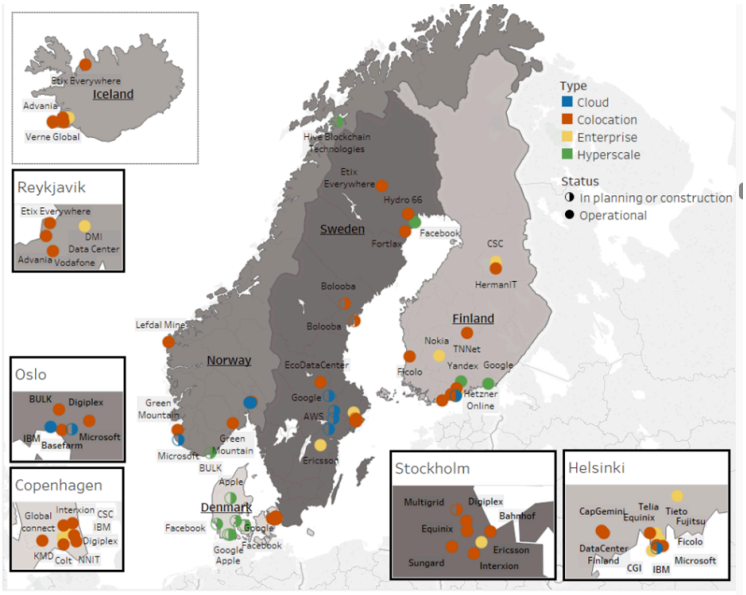
Areim's Equity Allocation by Asset Type 2007 - 2024



Note. Adapted from "Fundraising Material" by Areim, 2025.

Figure 7

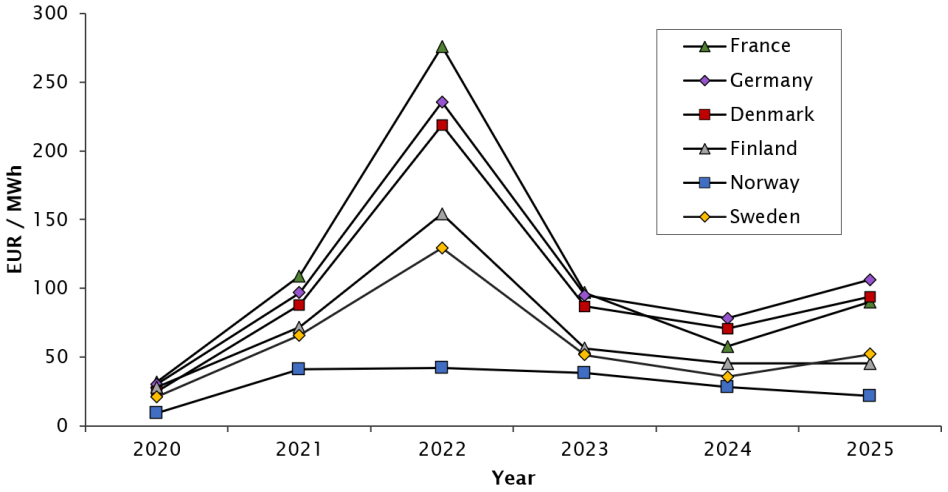
Map of Significant Investment in Nordic Data Centers in 2018



Note. Notably, EcoDataCenter's Falun site is already marked on the map. The image is adapted from "Data center opportunities in the Nordics" by J. Christensen, J. Therkelsen, I. Georgiev, and H. Sand, 2018, from https://norden.diva-portal.org/smash/get/diva2:1263485/fulltext02.pdf.

Figure 8

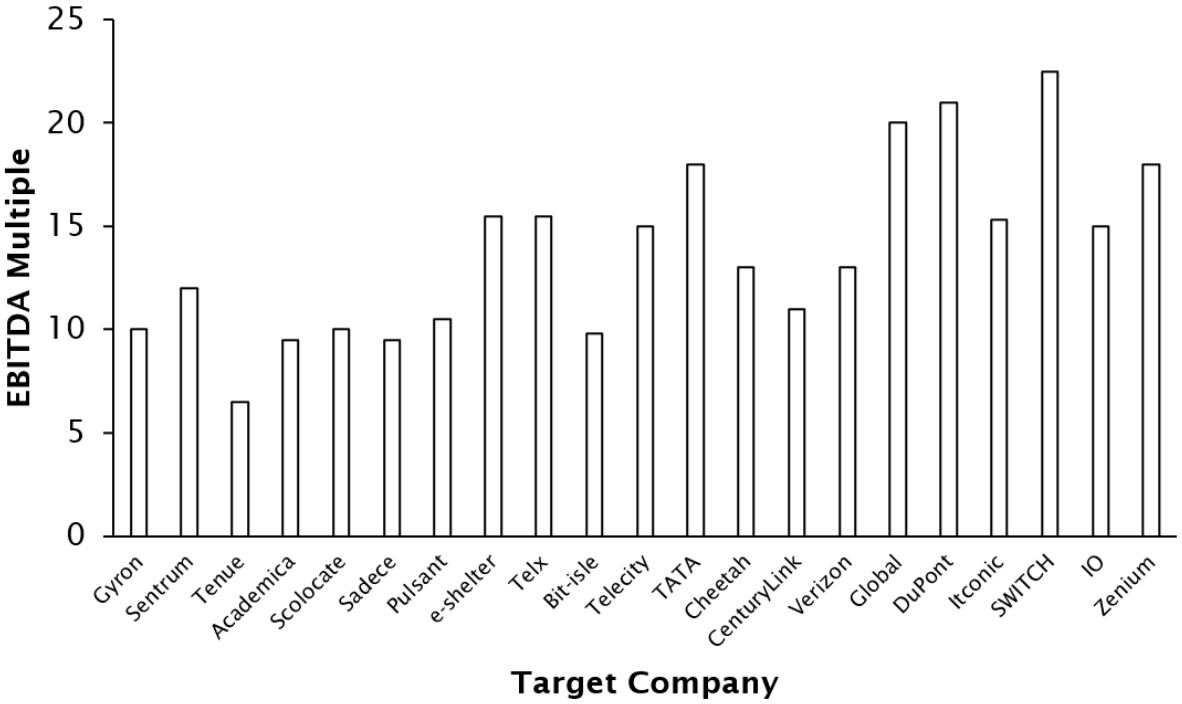
Electricity Prices by Country 2020 - 2025



Note. The data is derived from "Nord Pool Data Portal" by Nord Pool, 2025, from https://data.nordpoolgroup.com/auction/day-ahead/prices?deliveryDate=latest&currency=EUR&aggregation=YearlyAggregate&deliveryAreas=FR,GER,DK1,FI,NO3,SE3.

Figure 9

Valuation Multiples for Select Data Center Transactions 2012 - 2017



Note. EBITDA stands for earnings before interest, taxes, depreciation, and amortization. The data is based on "Q4 2017 Market Review" by JLL, 2018.

Figure 10

EcoDataCenter's Falun Campus with 90 MW Total Capacity, 2025

Note. The image is adapted from "EcoDataCenter" by ByggPartner, retrieved on April 25, 2025, from https://byggpartner.se/byggpartner-projekt/ecodatacenter/.

Figure 11

The Borlänge Land Plot with 240 MW in Secured Power, 2025

Note. Adapted from "EcoDataCenter LinkedIn Post" by EcoDataCenter, 2024b, retrieved on April 25, 2025, from https://www.linkedin.com/posts/ecodatacenter_october-25-2024-will-forever-be-a-significant-activity-7255521161055248385-q5gL/

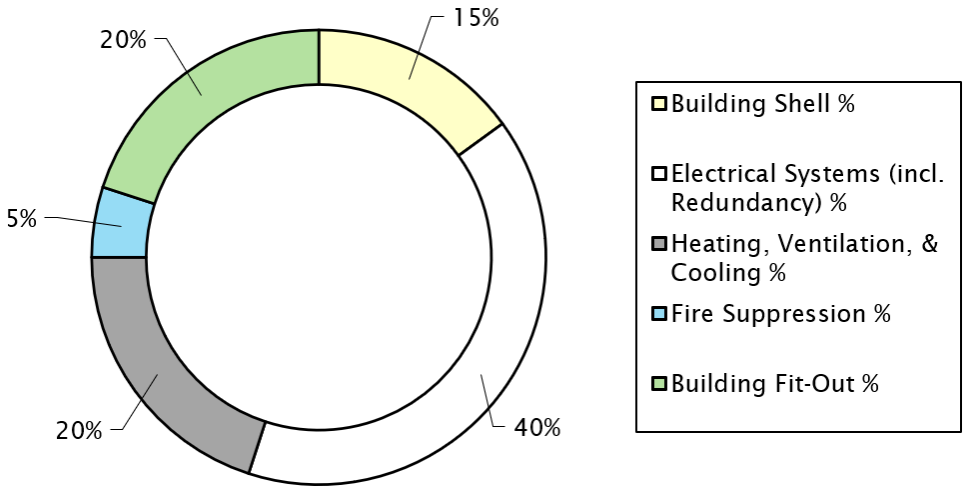
Figure 12

EcoDataCenter's Blueprint of A Fully Built-out Borlänge Site

Note. Adapted from "Press release" by EcoDataCenter, 2024c, from https://ecodatacenter.tech/press/ecodatacenter-foervaervar-del-av-kvarnsvedens-pappersbruk-foer-att-utveckla-vaerldsledande-kluster-foer-ai-infrastruktur-3341241

Figure 13

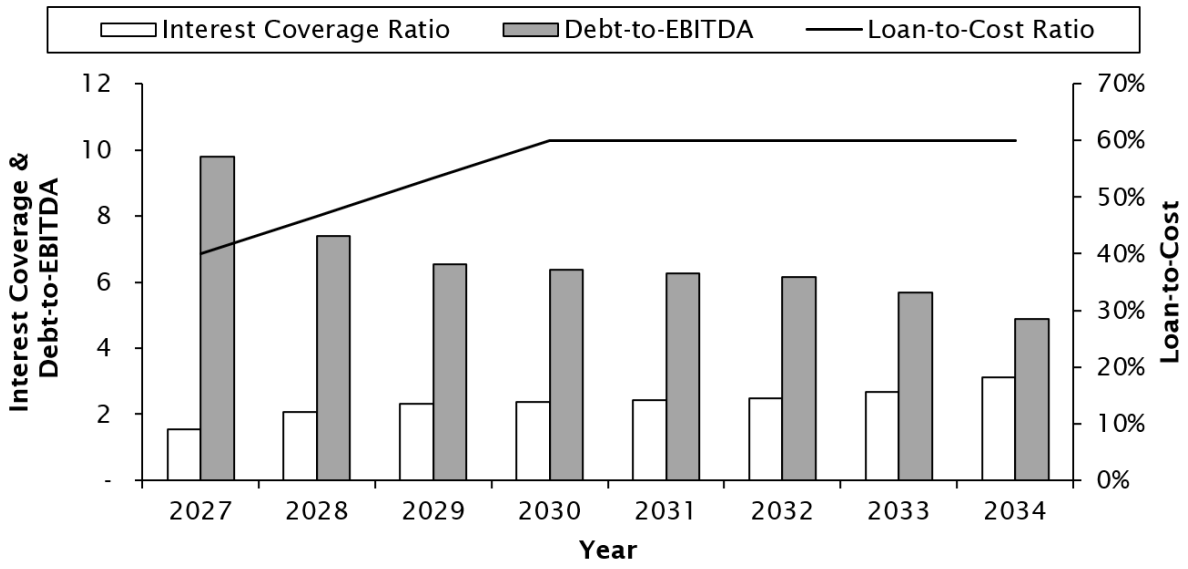
Borlänge Valuation - Data Center Capital Expenditures Distribution



Note. The capital expenditure distribution data is adapted from "How much does it cost to build a data center" by M. Zhang, 2023, retrieved on April 25, from https://dgtlinfra.com/how-much-does-it-cost-to-build-a-data-center/

Figure 14

Borlänge Valuation - Capital Structure & Solvency Development



Note. The left axis plots the interest coverage ratio and debt-to-EBITDA multiple. The right axis plots the loan-to-cost ratio. Over time, as the loan-to-cost ratio approaches the target of 60% and the project matures, solvency metrics improve (debt-to-EBITDA decreases, while the interest coverage ratio increases).

10. Appendix B: Tables

Table 1

INREV Fund Style Classification Criteria

Criterion	Core	Value-add	Opportunistic
Target of Non-Income Producing Investments (% of Fund GAV)	≤ 15%	15% - 40%	> 40%
Target of (Re)Development Exposure (% of GAV)	≤ 5%	5% - 25%	> 25%
Maximum Loan-to-Value	≤ 40%	40% - 60%	> 60%
Target Return Derived from Income	≥ 60%	N/A	N/A

Note. GAV stands for gross asset value. INREV classifies real estate funds based on measurable risk factors rather than target IRR. Adapted from "INREV Style Classification" by INREV, 2012, https://www.inrev.org/system/files/2016-12/INREV_Fund_Style_Classification_Report.pdf

Table 3

Areim Fund Overview

Product	Vintage	Strategy	Total Commitments (mEUR)
JV / Operating Partner	2003 - 2007	Value-add	96
Fund I	2007	Value-add	225
Fund II	2012	Value-add	321
Fund III	2015	Value-add	428
Fund IV	2018	Value-add	535
Fund V	2021	Value-add	704
DC Fund	2022	Value-add	900
Pan-European Logistics Fund	2023	Core	503

Note. Commitments are calculated with the foreign-exchange rate as of the fund's inception date. The data is derived from "Fundraising Material" by Areim, 2025.

Table 4

EcoDataCenter Valuation 2018

CASH FLOW (TSEK)	Year	0	1	2	3	4	5	6
	Date	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
	TOTAL							
Reserved Capacity	1,374,840,000	–	41,245,200	233,722,800	274,968,000	274,968,000	274,968,000	274,968,000
Energy Consumption	532,253,615	–	15,910,784	90,598,220	106,363,301	106,363,301	106,363,301	106,654,707
Add on services	48,119,400	–	1,443,582	8,180,298	9,623,880	9,623,880	9,623,880	9,623,880
TOTAL INCOME	**1,955,213,015**	**0**	**58,599,566**	**332,501,318**	**390,955,181**	**390,955,181**	**390,955,181**	**391,246,587**
Energy	637,248,600	–	18,673,200	118,913,400	124,830,000	124,830,000	125,172,000	124,830,000
Personnel	218,226,000	3,000,000	15,186,780	35,058,420	41,245,200	41,245,200	41,245,200	41,245,200
Maintenance	29,896,800	600,000	2,624,904	4,674,456	5,499,360	5,499,360	5,499,360	5,499,360
Other	133,987,200	6,000,000	21,299,616	18,697,824	21,997,440	21,997,440	21,997,440	21,997,440
TOTAL COST	**1,019,358,600**	**9,600,000**	**57,784,500**	**177,344,100**	**193,572,000**	**193,572,000**	**193,914,000**	**193,572,000**
EBITDA	**935,854,415**	**(9,600,000)**	**815,066**	**155,157,218**	**197,383,181**	**197,383,181**	**197,041,181**	**197,674,587**
Capex	(1,275,000,000)	(1,275,000,000)	–	–	–	–	–	–
Change in NWC	0	–	–	–	–	–	–	–
Taxes	(134,962,561)	1,977,600	1,642,823	(24,280,730)	(28,580,420)	(28,580,420)	(28,580,420)	(28,560,993)
Operating Cash flows	**(474,108,146)**	**(1,282,622,400)**	**2,457,889**	**130,876,488**	**168,802,761**	**168,802,761**	**168,460,761**	**169,113,594**
Sales Proceeds								3,953,491,748
Selling Expenses								(39,534,917)
TOTAL CASH FLOW	**3,439,848,684**	**(1,282,622,400)**	**2,457,889**	**130,876,488**	**168,802,761**	**168,802,761**	**168,460,761**	**4,083,070,424**

Note. The above valuation model shows the EcoDataCenter valuation from Areim's perspective in 2018. It is based on the assumptions presented in-text, as well as the authors' assumptions.

Table 5

EcoDataCenter Valuation 2018 - Multiples from Publicly Traded Peers

Peer Listed Companies	Country	Market Cap ($ billion)	EV/EBITDA
Equinix	US	36.2	20.7
Digital Realty	US	23.9	20.6
CyrusOne	US	5.3	20.2
Switch	US	4.0	39.9
Proact IT Group	Sweden	0.2	8.0

Note. The sensitivity table relates the key performance metrics IRR and MOIC to the exit multiple and rent per kW charged. For example, unadjusted rent levels and an exit multiple of 20x would yield 24.6% IRR and 3.4. The data is derived from "Market capitalization for Equinix, DigitalRealty, CyrusOne, Switch, Proact IT Group, as of 30.06.2018" by FinanceCharts, 2025a, and "EV/EBITDA for Equinix, DigitalRealty, CyrusOne, Switch, Proact IT Group, as of 30.06.2018" by FinanceCharts, 2025b.

Table 6

EcoDataCenter Valuation 2018 - Exit Sensitivity Analysis (EBITDA & Leasing Delay)

EBITDA	Leasing Delay (quarters) 0	+2	+4	+6	+8
-20%	13.1% / 2.0x	12.0% / 1.9x	11.0% / 1.8x	10.1% / 1.7x	9.1% / 1.7x
-10%	16.9% / 2.4x	15.8% / 2.3x	14.9% / 2.2x	14.0% / 2.1x	13.1% / 2.0x
-	20.5% / 2.8x	19.4% / 2.7x	18.5% / 2.7x	17.7% / 2.6x	16.9% / 2.5x
+10%	23.9% / 3.3x	22.8% / 3.2x	22.0% / 3.1x	21.2% / 3.1x	20.4% / 2.9x
+20%	27.1% / 3.9x	26.0% / 3.8x	25.2% / 3.7x	24.5% / 3.6x	23.8% / 3.5x

Note. The sensitivity table relates the key performance metrics IRR and MOIC on the exit EBITDA level and additional delay in leased out capacity (the model already accounts for a staggered lease schedule). In the base case of unadjusted EBITDA and zero delay, it would yield 20% IRR and 2.8x MOIC.

Table 7

EcoDataCenter Valuation 2018 - Exit Sensitivity Analysis (Rent & Multiple)

Rent per Kw	Exit Multiple 16	18	20	22	24
-20%	11.6% / 1.8x	13.5% / 2.0x	15.2% / 2.2x	16.7% / 2.4x	18.2% / 2.6x
-10%	14.3% / 2.1x	16.2% / 2.3x	17.9% / 2.5x	19.6% / 2.7x	21.1% / 2.9x
-	16.8% / 2.4x	18.7% / 2.6x	20.5% / 2.8x	22.1% / 3.1x	23.6% / 3.3x
+10%	19.1% / 2.6x	21.0% / 2.9x	22.8% / 3.1x	24.5% / 3.4x	26.0% / 3.7x
+20%	21.2% / 2.9x	23.2% / 3.2x	25.0% / 3.5x	26.7% / 3.7x	28.2% / 4.0x

Note. The sensitivity table relates the key performance metrics IRR and MOIC to the exit multiple and rent per kW charged. For example, unadjusted rent levels and an exit multiple of 20x would yield 20% IRR and 2.8x MOIC.

Table 8

Borlänge Valuation - Capacity Build-out & Income Statement

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Built Capacity [MW]	-	-	-	24.0	48.0	72.0	96.0	120.0	144.0	168.0	192.0
Contracted Capacity	-	-	-	22.8	45.6	68.4	91.2	114.0	136.8	159.6	182.4
Utilization Rate				95%	95%	95%	95%	95%	95%	95%	95%
Average Price / kW / month	1,100	1,122	1,144	1,167	1,191	1,214	1,239	1,264	1,289	1,315	1,341
CPI Indexation	1.00	1.02	1.04	1.06	1.08	1.10	1.13	1.15	1.17	1.20	1.22
all figures in mSEK											
INCOME STATEMENT											
Revenues											
Colocation Services	-	-	-	319	652	997	1,356	1,729	2,116	2,518	2,935
Power Revenue	-	-	-	123	252	385	524	668	818	973	1,134
Heating	-	-	-	9	18	27	36	45	54	63	72
Ancillary Services	-	-	-	23	46	68	91	114	137	160	182
Total Revenues	**-**	**-**	**-**	**475**	**967**	**1,477**	**2,007**	**2,555**	**3,124**	**3,713**	**4,323**
% Growth					*103.7%*	*52.8%*	*35.8%*	*27.3%*	*22.3%*	*18.9%*	*16.4%*
OPEX	-	-	-	(80)	(163)	(249)	(339)	(432)	(529)	(629)	(734)
Power Costs	-	-	-	(123)	(252)	(385)	(524)	(668)	(818)	(973)	(1,134)
SG&A	(39)	(39)	(40)	(41)	(85)	(100)	(136)	(173)	(212)	(252)	(293)
EBITDA	**(39)**	**(39)**	**(40)**	**230**	**467**	**743**	**1,008**	**1,282**	**1,566**	**1,859**	**2,162**
% Margin (excl. Power Revenue)				66%	65%	68%	68%	68%	68%	68%	68%
% Margin (incl. Power Revenue)				49%	48%	50%	50%	50%	50%	50%	50%
Depreciation	-	-	-	(96)	(195)	(299)	(407)	(519)	(635)	(755)	(880)
Interest	(6)	(28)	(86)	(156)	(238)	(334)	(442)	(552)	(663)	(725)	(725)
EBT	**(44)**	**(67)**	**(126)**	**(21)**	**33**	**110**	**159**	**212**	**268**	**379**	**556**
Taxes	11	17	31	5	(8)	(28)	(40)	(53)	(67)	(95)	(139)
Net Income	**(33)**	**(50)**	**(94)**	**(16)**	**25**	**83**	**119**	**159**	**201**	**284**	**417**

Note. The above valuation model shows a full run-down of a simulated capacity buildout, revenue streams, cost items, and net results on the Borlänge site and is based on the assumptions presented in-text, as well as the authors' assumptions.

Table 9

Borlänge Valuation - Cash Flow Statement & Funding Schedule

CASH FLOW STATEMENT	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Net Income	(33)	(50)	(94)	(16)	25	83	119	159	201	284	417
(+) Depreciation	-	-	-	96	195	299	407	519	635	755	880
(+/-) Change in NWC	-	-	-	(32)	(33)	(35)	(36)	(37)	(39)	(40)	(42)
(-) CAPEX	(400)	(1,176)	(2,449)	(2,475)	(2,501)	(2,527)	(2,554)	(2,582)	(2,610)	(1,463)	-
Free Cash Flow	**(400)**	**(1,176)**	**(2,449)**	**(2,379)**	**(2,305)**	**(2,228)**	**(2,148)**	**(2,063)**	**(1,975)**	**(707)**	**880**
Cash, O.B.	**-**	**-**	**-**	**-**	**96**	**291**	**590**	**997**	**1,516**	**2,150**	**2,906**
FCF	(400)	(1,176)	(2,449)	(2,379)	(2,305)	(2,228)	(2,148)	(2,063)	(1,975)	(707)	880
Bond Issuance	80	314	816	990	1,167	1,348	1,533	1,549	1,566	878	-
Equity Injection	320	862	1,633	1,485	1,334	1,179	1,022	1,033	1,044	585	-
Cash, C.B.	**-**	**-**	**-**	**96**	**291**	**590**	**997**	**1,516**	**2,150**	**2,906**	**3,786**
FUNDING											
Loan-to-Cost Ratio	20%	27%	33%	40%	47%	53%	60%	60%	60%	60%	60%
Bonds Outstanding	80	394	1,210	2,200	3,367	4,715	6,248	7,797	9,363	10,241	10,241
Equity	320	1,182	2,815	4,300	5,634	6,814	7,835	8,868	9,912	10,497	10,497
STIBOR Estimates	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%	2.33%
Floating Rate Margin	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
Interest on Bonds Outstanding	6	28	86	156	238	334	442	552	663	725	725
Interest Coverage Ratio	(6.8)	(1.4)	(0.5)	1.5	2.0	2.2	2.3	2.3	2.4	2.6	3.0
Debt-to-EBITDA	(2.1)	(10.0)	(30.1)	9.6	7.2	6.3	6.2	6.1	6.0	5.5	4.7
YoC	-9.7%	-2.5%	-1.0%	3.5%	5.2%	6.4%	7.2%	7.7%	8.1%	9.0%	10.4%

Note. The above valuation model shows the cash flows and funding schedule of the Borlänge site capacity buildout and is based on the assumptions presented in-text, as well as the authors' assumptions.

Table 10

Borlänge Valuation - Exit Schedule

all figures in mSEK

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
EBITDA	(39)	(39)	(40)	230	467	743	1,008	1,282	1,566	1,859	2,162
EV/EBITDA at Exit	25.0x	25.0x	25.0x	25.0x	25.0x	25.0x	25.0x	25.0x	25.0x	25.0x	25.0x
Enterprise Value at Exit	(965)	(985)	(1,004)	5,759	11,677	18,583	25,209	32,062	39,149	46,476	54,050
(-) Debt	(80)	(394)	(1,210)	(2,200)	(3,367)	(4,715)	(6,248)	(7,797)	(9,363)	(10,241)	(10,241)
(+) Cash	-	-	-	96	291	590	997	1,516	2,150	2,906	3,786
Equity Value	(1,045)	(1,378)	(2,214)	3,654	8,601	14,458	19,959	25,781	31,936	39,141	47,596
Equity Injections	(320)	(862)	(1,633)	(1,485)	(1,334)	(1,179)	(1,022)	(1,033)	(1,044)	(585)	-
Equity Value on Sale	(1,045)	(1,378)	(2,214)	3,654	8,601	14,458	19,959	25,781	31,936	39,141	47,596
Equity Cash Flows at Exit	(1,365)	(2,241)	(3,847)	2,170	7,267	13,279	18,937	24,748	30,892	38,556	47,596
IRR	-	-	-	-	**28%**	**37%**	**35%**	**33%**	**30%**	**28%**	**27%**
MOIC	-	-	-	-	**1.5x**	**2.1x**	**2.5x**	**2.9x**	**3.2x**	**3.7x**	**4.5x**

Note. The above exit schedule simulated the exit outcomes across time and is based on the assumptions presented in-text, as well as the authors' assumptions.

Table 11

Borlänge Valuation - Exit Sensitivity Analysis

Exit Multiple	Exit Year: 2030	2031	2032	2033	2034
16x	12.2% / 1.4x	14.4% / 1.6x	15.1% / 1.8x	16.4% / 2.1x	17.8% / 2.7x
18x	18.5% / 1.6x	19.4% / 1.9x	19.3% / 2.1x	19.7% / 2.5x	20.4% / 3.1x
20x	24.0% / 1.9x	23.7% / 2.2x	22.8% / 2.4x	22.6% / 2.8x	22.7% / 3.5x
22x	28.8% / 2.2x	27.5% / 2.5x	25.9% / 2.7x	25.1% / 3.2x	24.7% / 3.9x
24x	33.1% / 2.4x	30.9% / 2.8x	28.7% / 3.1x	27.4% / 3.6x	26.5% / 4.3x
26x	37.0% / 2.7x	34.0% / 3.1x	31.2% / 3.4x	29.4% / 3.9x	28.2% / 4.7x
28x	40.5% / 2.9x	36.8% / 3.3x	33.5% / 3.7x	31.3% / 4.3x	29.8% / 5.2x

Note. The sensitivity table relates the key performance metrics IRR and MOIC to the exit year and exit multiple. For example, exiting in 2032 at a 22x EBITDA multiple would yield 25.9% IRR and 2.7x MOIC.

11. Appendix C: AI Tool Usage

This section discloses the types of AI tools that have been utilized in writing the thesis, as well as how they were used. First, we have made limited use of ChatGPT in the thesis writing process. Specifically, ChatGPT was used to improve the linguistic appearance and flow of the text and helped the authors in terms of word selection, sentence flow, and overall coherence of some parts of the thesis. However, ChatGPT output was only implemented selectively, considering it failed to capture the more nuanced messages the authors wanted to convey. We often found that ChatGPT failed to improve the text in terms of flow and wording. In such cases, we discarded the output. Second, we used Grammarly, which is based on AI, to correct the spelling of the entire thesis and improve the text through targeted suggestions in terms of clarity. We also employed it to broaden our word diversity by using suggested synonyms. In many cases, however, we found that Grammarly's suggestions to improve engagement and clarity changed the meaning of the text. We recognized these shortcomings by not adopting the suggestions. Third, we used Turboscribe to transcribe the audio files of the recorded interviews into text. This made the data collection and review process much more efficient and allowed a quick review of key findings from the interviews.