

European Edge-Compute M&A across Towers, Fibre and Micro Data Centres

An Evidence-Led Framework for Cross-Asset Synergy, Site Readiness, Integration and Transaction Value

Authored by Chennakeshav Adya

Independent Researcher

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Abstract

Europe's tower, fibre and distributed-compute assets are increasingly discussed as parts of one edge-infrastructure system. The strategic logic is plausible: tower sites can supply distributed locations, fibre can provide backhaul and route diversity, micro data centres can host local compute, and telecom or enterprise relationships can support customer distribution. The transaction case remains conditional. Ownership of passive infrastructure does not by itself create a usable compute node, a sellable service or an enforceable cash flow.

This paper develops an evidence-led M&A framework for combining tower sites, fibre networks and micro data centres across European markets. It separates five sources of value: stand-alone infrastructure cash, site conversion options, contracted edge services, operating synergies and platform or exit value. Each source is tested against legal control, usable power, resilient fibre, permitted use, technical readiness, customer demand, integration cost, regulatory constraints and cash collection. The approach avoids capitalising proximity, announced capacity or strategic narrative before the underlying service is accepted and paid.

The policy context supports continued investment while leaving execution risk with investors and operators. The European Union targets 10,000 climate-neutral and highly secure edge nodes by 2030. The Commission's Edge Observatory reported substantial deployment growth through 2024, while the 2025 Digital Decade assessment identified continuing gaps in advanced connectivity and foundational technologies. The Gigabit Infrastructure Act supports access to existing physical infrastructure and coordination of civil works. BEREC research also shows that infrastructure sharing can improve deployment economics while raising competition, wholesale-access and geographic market-power questions. These sources support a disciplined transaction thesis rather than a universal edge premium.

The worked case is wholly hypothetical. It tests the acquisition and integration of 1,200 tower and rooftop locations, six metropolitan fibre rings and eighteen operating micro-data-centre nodes across four European markets. An initial screen identifies 180 candidate sites; sixty enter phase one and twenty-four are assumed to reach accepted edge-compute service by year three. Initial uses total EUR 2.15 billion. Sources comprise EUR 780 million of senior acquisition debt, EUR 420 million of infrastructure or asset-backed debt, EUR 770 million of sponsor equity and EUR 180 million of vendor or customer commitments. The central case produces EUR 54 million of year-three net run-rate synergy after recurring enabling costs. The combined downside assumes site delay, lower workload conversion and higher integration expenditure. These assumptions do not describe any announced buyer, target, lender, customer or transaction.

The conclusion is practical. Cross-asset M&A creates value only where the buyer can convert controlled sites into accepted services at a cost and pace supported by contracted demand. Investment committees should value each asset class separately, release conversion capital through site gates, deduct enabling

capital and recurring service costs from synergy, test competition and access obligations by market, and retain separation routes. The strongest acquisition case is a portfolio of verified site-to-service-to-cash pathways; the weakest is a large inventory of locations labelled as edge optionality.

JEL Classification: G12, G31, G32, G34, L86, L96, O32

Keywords: edge computing, towers, fibre, micro data centres, digital infrastructure, mergers and acquisitions, synergy valuation, Europe, acquisition finance, integration

1. Define the transaction decision

The investment committee must decide whether the combined assets produce more distributable cash than their stand-alone businesses after purchase price, conversion capital, integration, regulation and financing. [1][2][3][4] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with asset perimeter, legal entities, purchase agreement, stand-alone plans, site rights, fibre maps, node inventory, contracts, capital plan and financing terms. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that strategic adjacency substitutes for an auditable bridge from assets to accepted service and cash. The practical response is to approve only value supported by controlled rights, executable conversion and contracted demand. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

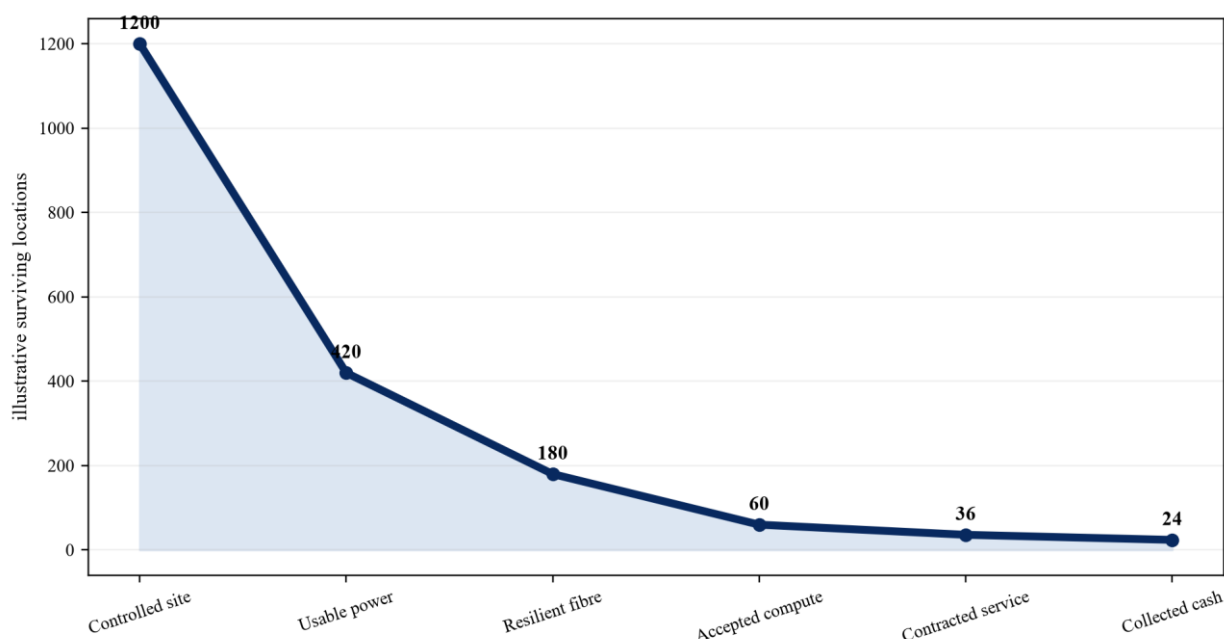
2. Separate the asset classes before combining them

Towers, rooftops, ducts, dark fibre, lit networks, powered shells, compute equipment and managed services have different rights, lives, margins, risks and buyers. [2][3][5][6] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with title, lease, concession, wayleave, access agreement, network design, equipment register, service contract and cash record. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that one blended multiple is applied to passive infrastructure, connectivity, technology and uncontracted pipeline. The practical response is to value each cash-flow cohort separately before adding evidence-backed synergy. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Figure 1. Cross-asset edge value stack



Proposed framework; value is recognised only where rights, service and cash are evidenced.

Table 1. Asset-class rights and cash flows

Asset class	Core right	Primary cash flow	Principal value risk
tower or rooftop	occupation and equipment rights	rent and tenancy	lease expiry and use restriction
duct or dark fibre	route and capacity rights	lease or indefeasible-use fee	route, repair and access
lit network	service and operating control	bandwidth and managed connectivity	churn and operating intensity
micro data centre	power, cooling and secure space	hosting or capacity fee	utilisation and refresh
edge service	software, compute and SLA	contracted service revenue	performance and portability

Proposed framework; documents and operating evidence determine final classification.

3. Map tower and rooftop control

A distributed location creates an option only when the acquirer controls occupation, access, permitted use, equipment loading, power works, fibre entry and contract transfer for a sufficient period. [2][5][7][8] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with site agreement, renewal, assignment, landlord consent, structural survey, loading capacity, access hours, exclusivity and termination rights. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that site count is treated as deployment capacity even where rights do not permit compute use or transfer. The practical response is to classify every location as controlled, conditional, remediable or unavailable and value only the relevant state. Management estimates should be identified in

the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

4. Test usable power at every site

Micro data centres require deliverable capacity, connection works, redundancy, metering, tariff clarity and heat rejection. A nearby supply point or nominal site allocation does not prove usable compute power. [1][9][10][11] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with connection offer, available capacity, voltage, protection, upgrade scope, programme, tariff, backup design, cooling load and commissioning test. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that portfolio megawatts aggregate requested, reserved and operating capacity without state reconciliation. The practical response is to run a site-level power gate and deduct all enabling cost and delay before recognising value. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

5. Test fibre and backhaul

The service path depends on route diversity, carrier access, peering, cloud on-ramps, restoration performance and capacity under representative load. Fibre proximity is not the same as a resilient service. [1][3][12][13] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with route maps, splice and duct rights, carrier agreements, cross-connects, measured latency, loss, jitter, congestion and restoration history. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that straight-line distance or route kilometres substitute for tested end-to-end performance. The practical response is to require diverse commissioned paths and a priced service design before conversion capital is released. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

6. Classify edge workloads

Industrial vision, retail analytics, content delivery, private networks, connected transport and regulated data processing have different latency, control, resilience and economic requirements. [1][14][15][16] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with application owner, request profile, response deadline, data volume, compute stack, operating consequence, service window and alternative architecture. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that all local processing is described as latency-sensitive and assigned to the nearest site. The practical response is to place each workload at the lowest-cost tier that satisfies its accepted requirements. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Table 3. Workload placement requirements

Workload	Edge driver	Evidence	Alternative
industrial vision	response and data volume	traced deadline and control outcome	on-premises node
private-network analytics	local continuity	traffic and failure test	regional node
content delivery	user distribution	traffic, cache hit and price	CDN or metro cloud
retail analytics	bandwidth and privacy	store profile and data design	batch regional processing
regulated processing	control and location	legal analysis and audit	sovereign regional cloud

Proposed classification; application evidence determines placement.

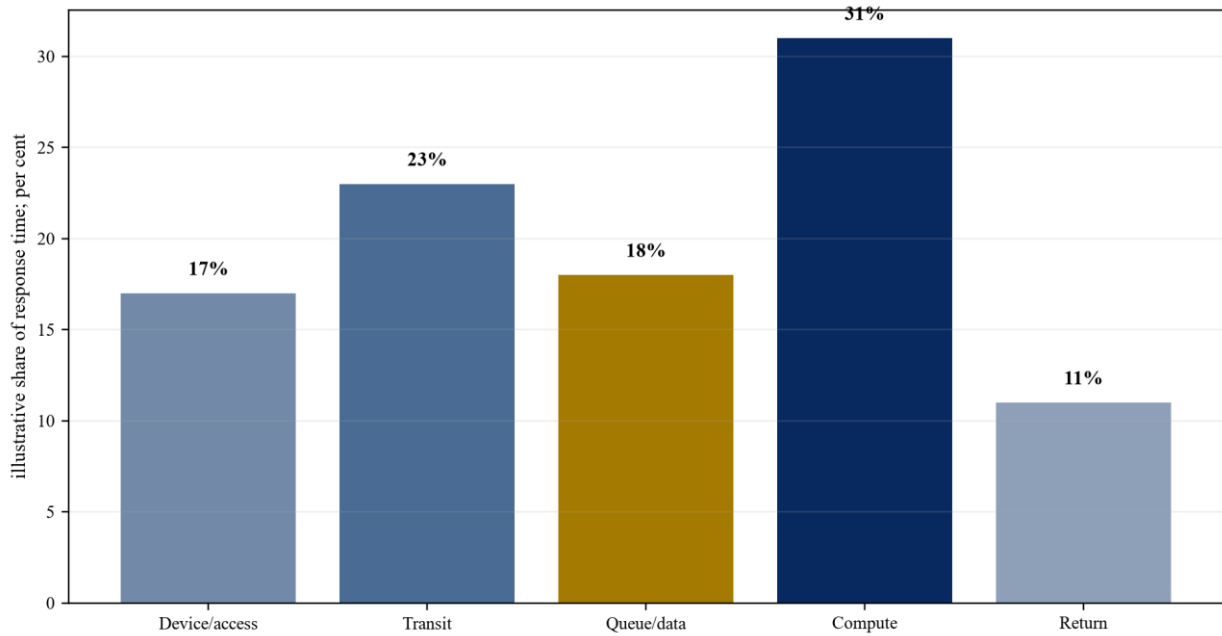
7. Measure end-to-end latency

Customer outcome includes device, access network, routing, queue, data retrieval, model execution and response delivery. Server time alone cannot demonstrate the location advantage. [12][14][15][17] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with timestamped application traces, network paths, load conditions, retries, queue depth, model execution and user acceptance. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that a laboratory benchmark or geographic radius is capitalised as customer value. The practical response is to test the complete path under representative load and reconcile results to the service contract. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Figure 3. End-to-end edge service path



Proposed measurement model; percentages are illustrative and must be replaced by traced service data.

8. Establish paid customer demand

Technical feasibility becomes financeable when a creditworthy customer commits to a defined service, location, quantity, acceptance process, price and term. [4][6][18][19] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with customer contract, technical schedule, minimum payment, ramp, service credits, termination, security, invoice and cash. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that letters of interest, market forecasts and channel relationships are treated as contracted utilisation. The practical response is to size each deployment phase to enforceable demand and hold pipeline outside debt sizing. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

9. Define a compute-ready site

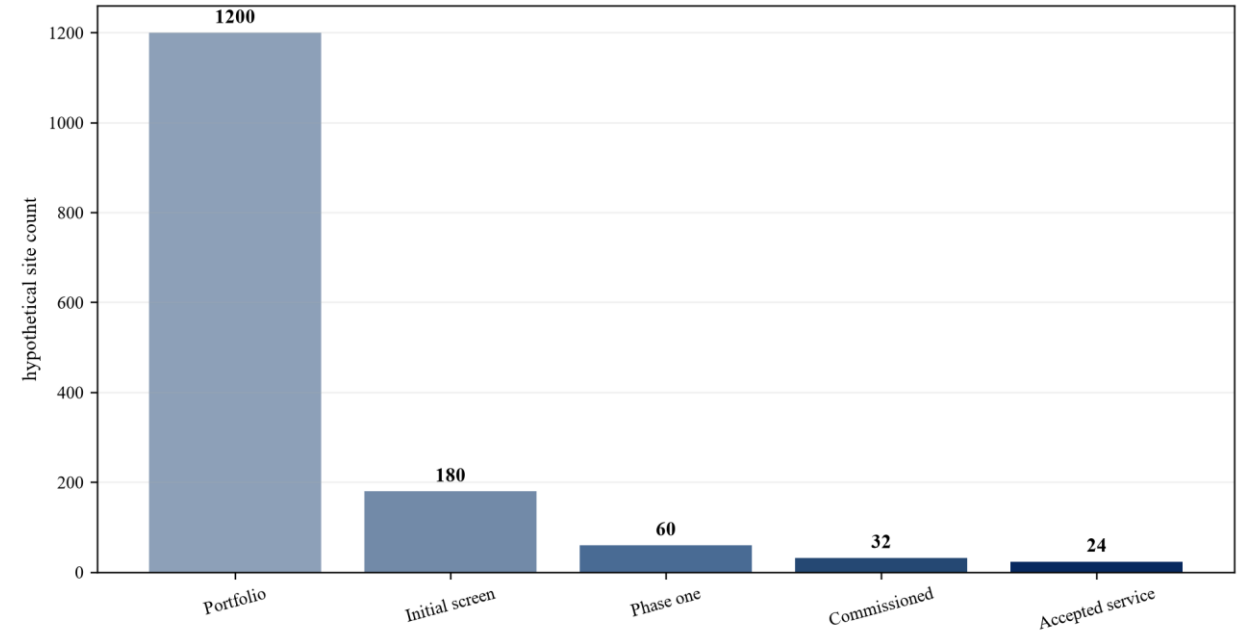
A compute-ready node needs legal control, structural capacity, usable power, cooling, resilient fibre, physical security, monitoring, maintenance access, permits and an accepted operating design. [1][9][12][14] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with site readiness checklist, design, surveys, permits, equipment bill, construction scope, commissioning records and acceptance certificate. Each record should state scope,

definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that a tower compound or fibre point is described as edge capacity before the physical and operating system exists. The practical response is to apply a binary minimum gate and retain a separate costed remediation plan. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Figure 2. Candidate-site gating funnel



Wholly hypothetical; the funnel demonstrates attrition between inventory and accepted service.

Table 2. Site-readiness evidence

Gate	Required evidence	Failed-state action
legal control	transferable site and access rights	exclude or renegotiate
structure	survey and equipment loading	redesign or remediate
power and cooling	connection, tariff and tested capacity	resize or defer
fibre	commissioned diverse routes	procure or reject
permits and security	approvals and operating controls	condition precedent
customer service	accepted product and SLA	hold revenue and value

Proposed minimum gate; local requirements may add conditions.

10. Separate operating nodes from candidate locations

Operating, commissioned, under-construction, permitted, power-reserved, fibre-adjacent and merely identified sites carry different probabilities and capital needs. [1][2][3][14] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with state definition, evidence owner, effective date, expiry, remaining conditions, enabling cost and next decision. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that the transaction presentation adds all candidate sites to current edge capacity. The practical response is to publish a candidate-to-service waterfall and prohibit double counting between states. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

11. Reconcile permits and land-use rights

Compute use may trigger planning, noise, generator, cooling, fire, security, environmental and building requirements beyond passive telecom use. Requirements vary by country and municipality. [7][9][20][21] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with planning opinion, permit register, environmental review, fire and safety approvals, landlord consent and appeal exposure. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that telecom permission is assumed to authorise data-centre operation and auxiliary plant. The practical response is to obtain jurisdiction-specific confirmation and price every condition, delay and community constraint. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

12. Test competition and wholesale-access constraints

Infrastructure consolidation can change local alternatives, bargaining power and access conditions. European and national authorities may examine geographic market power, discrimination and foreclosure. [2][5][7][22] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with market definition, competing routes and sites, customer switching, wholesale terms, exclusivity, remedies, regulatory status and merger filings. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that national market shares conceal local bottlenecks or access obligations that change economics. The practical response is to model remedies and open-access duties by geographic market before signing. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory,

technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

13. Design the operating model

The combined company must decide who sells, provisions, secures, monitors, bills and supports the service across passive infrastructure, networks and compute. [14][18][23][24] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with target operating model, decision rights, service catalogue, systems map, staffing, vendor model, control framework and service desk. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that the deal model captures revenue synergy while leaving product ownership and operational accountability undefined. The practical response is to fund the operating platform and appoint accountable owners before customer migration. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

14. Preserve network and provider neutrality

A platform can widen demand when customers can choose carriers, clouds and hardware. Exclusive arrangements can simplify delivery while reducing addressable demand and exit flexibility. [1][12][16][23] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with carrier policy, cloud and hardware compatibility, cross-connect terms, software licences, data portability and switching tests. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that the model assumes ecosystem revenue while contracts restrict interoperability or alternative providers. The practical response is to price exclusivity explicitly and preserve tested portability where neutrality supports value. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

15. Build a synergy evidence ladder

Synergy should move through identified, designed, contractable, accepted, billed and collected states. Probability and capital treatment should tighten at each step. [4][18][19][25] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing

remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with synergy owner, action, dependency, cost, date, customer, contract, acceptance, invoice and cash evidence. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that the headline run-rate includes overlapping, unsupported or gross benefits without enabling costs. The practical response is to maintain a source-to-cash ledger and recognise only the stage approved by governance. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Table 4. Synergy evidence ladder

State	Minimum evidence	Valuation treatment
identified	named source and owner	exclude from base value
designed	costed action and dependency	scenario only
contractable	customer and commercial terms	probability weighted
accepted	commissioned service and acceptance	eligible operating forecast
billed	valid invoice and no dispute	working-capital adjusted
collected	bank receipt and reconciliation	realised cash

Proposed governance; recognition increases only as evidence matures.

16. Model revenue synergy

Revenue can arise from converting controlled sites, attaching connectivity, winning multi-site customers or raising retention. Each case needs quantity, price, ramp, churn and cannibalisation evidence. [1][3][18][19] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with customer cohort, eligible sites, product, sales cycle, contract probability, price, contribution margin, cannibalisation and implementation capacity. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that market size multiplied by a target share becomes transaction value without customer or delivery evidence. The practical response is to build site-and-customer cohorts and include revenue only after cost, delay and attrition. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

17. Model cost synergy

Potential savings include procurement, field operations, network capacity, facilities, systems and corporate overhead. Some costs rise because compute requires security, cooling, monitoring and skilled staff. [4][23][24][25] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with baseline cost, supplier contract, headcount, service requirement, transition cost, redundancy, inflation and timing. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that gross savings omit stranded contracts, dual running, retention, remediation and service-quality cost. The practical response is to calculate net recurring savings after transition, resilience and service obligations. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

18. Deduct enabling capital and recurring service cost

Edge optionality requires investment in power, cooling, fibre, security, equipment, software, systems and customer onboarding. These uses compete with acquisition leverage and distributions. [9][10][18][26] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with site bill of quantities, procurement plan, technology cohort, implementation schedule, capital contingency, maintenance and refresh reserve. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that synergy is presented before the expenditure needed to create and sustain it. The practical response is to measure net present value after all enabling capital, operating cost, tax and financing. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

19. Value the stand-alone businesses

The base valuation should reflect current contracts, renewal risk, capital intensity, market structure and asset lives without cross-asset assumptions. [4][6][25][27] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with historical cash, contracts, tenancy and utilisation, churn, capex, maintenance, working capital, tax and financing. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash.

Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that an inflated strategic base absorbs synergy and obscures the acquisition premium. The practical response is to produce auditable stand-alone cases and reconcile purchase price to each source of value. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

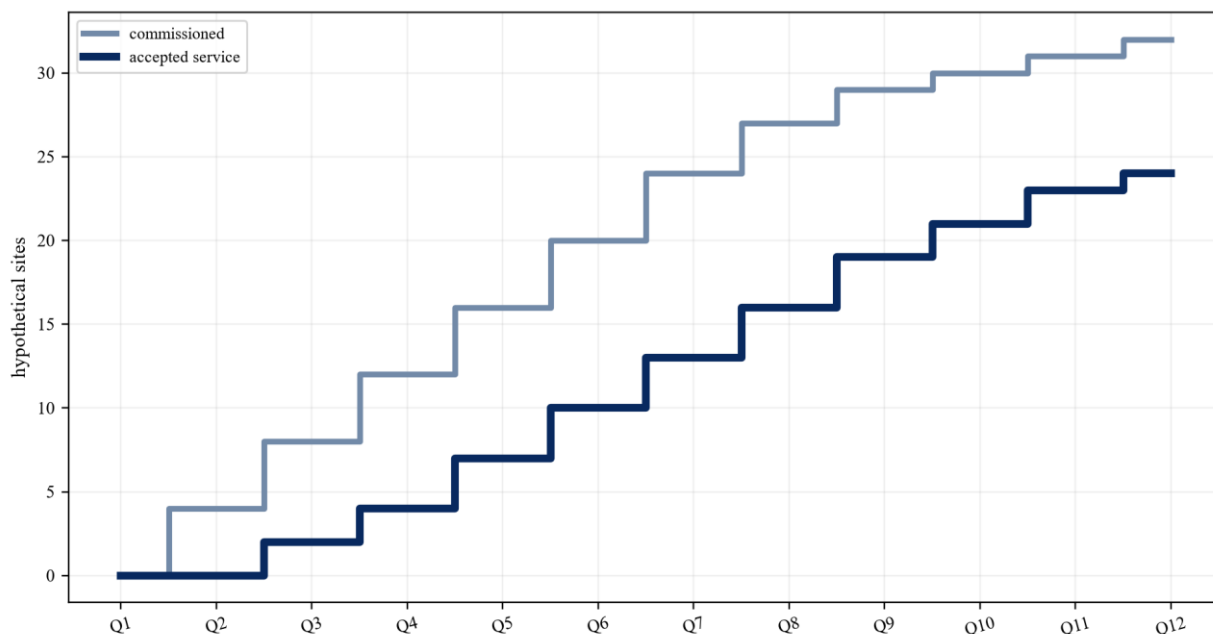
20. Apply a hypothetical multi-country acquisition

The case tests 1,200 locations, six metro fibre rings and eighteen operating nodes across four markets. Only 180 sites pass initial screening; sixty enter phase one and twenty-four reach accepted service by year three. [1][2][3][4] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with hypothetical perimeter, site gates, sources and uses, deployment plan, customer conversion, synergy bridge, financing and downside. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that all 1,200 locations are treated as future nodes or the full synergy is reached without attrition and delay. The practical response is to fund phase one through gates and preserve the right to defer, repurpose or sell assets. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Figure 4. Hypothetical deployment curve



Wholly hypothetical; each cohort requires its own legal, power, fibre, customer and funding release.

Table 5. Hypothetical European edge transaction

Metric	Central case	Gate or downside
portfolio locations	1,200	180 pass initial screen
phase-one sites	60	24 accepted by year three
operating micro nodes at signing	18	separately diligenced
initial uses	EUR 2,150 million	includes conversion and contingency
year-three gross run-rate synergy	EUR 92 million	evidence ladder applies
recurring enabling cost	EUR 38 million	deducted before net synergy
year-three net run-rate synergy	EUR 54 million	lower in combined downside

Wholly hypothetical; figures do not describe an announced transaction.

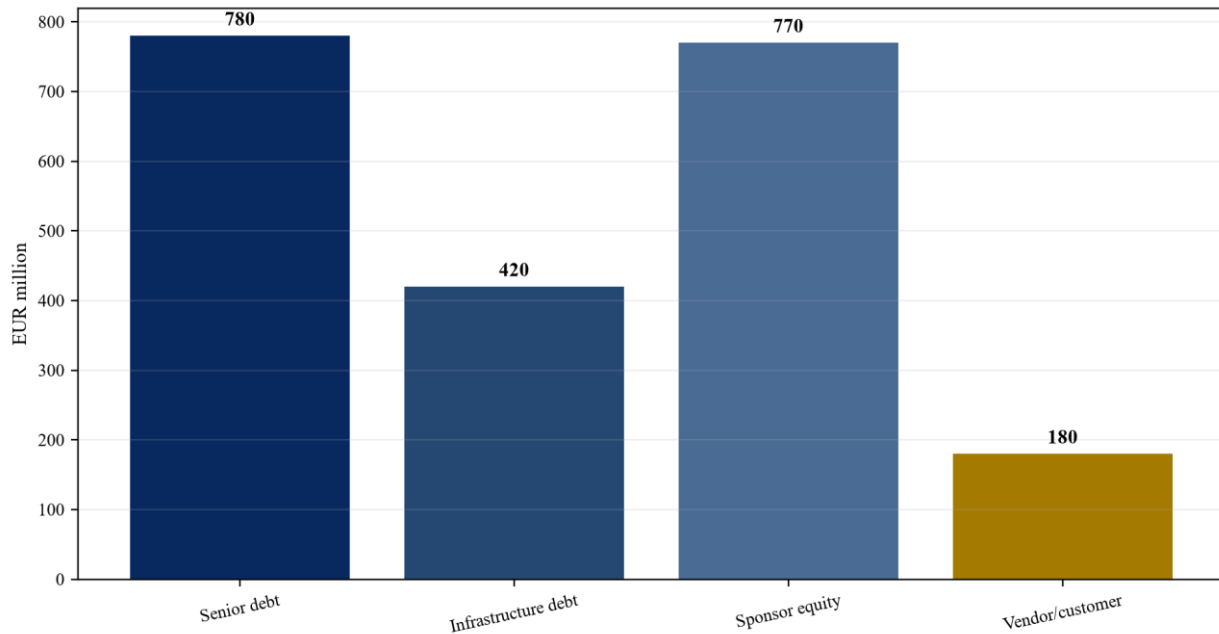
21. Structure acquisition financing

Debt capacity should follow durable stand-alone cash and separately eligible contracted edge cash. Sponsor equity should absorb uncertain conversion, integration and technology risk. [26][27][28][29] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with borrower perimeter, cash waterfall, security, covenants, permitted capex, draw conditions, hedging, cure rights and sponsor support. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that acquisition debt is sized to a synergy case that depends on uncontracted demand and future site conversion. The practical response is to exclude unsupported synergy from base debt sizing and use staged facilities for verified expansion. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Figure 5. Hypothetical acquisition funding sources



Wholly hypothetical; EUR million.

22. Allocate integration and technology risk

Site conversion, network integration, platform migration, cyber control, hardware refresh and customer acceptance sit with different parties. Contracts should allocate each risk to the party that controls it. [14][23][24][26] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with risk matrix, integration agreement, vendor warranty, service credits, insurance, direct agreements, caps, relief and step-in rights. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that the acquisition vehicle retains correlated risks without price adjustment, recourse or liquidity. The practical response is to assign control, establish milestones and reserve for residual correlated exposures. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Table 6. Risk allocation for the combined platform

Risk	Primary controller	Core protection
site and permit	seller and site company	warranty, condition and price holdback
power and fibre	utility, carrier and site company	milestone and direct agreement
equipment and commissioning	vendor and operator	acceptance, warranty and liquidated remedy
customer demand	customer and sponsor	minimum payment and staging
service and cyber	operator	monitoring, insurance and credits

Risk	Primary controller	Core protection
integration and separation	buyer	plan, reserve and stop rights

Proposed framework; final contracts and applicable law govern.

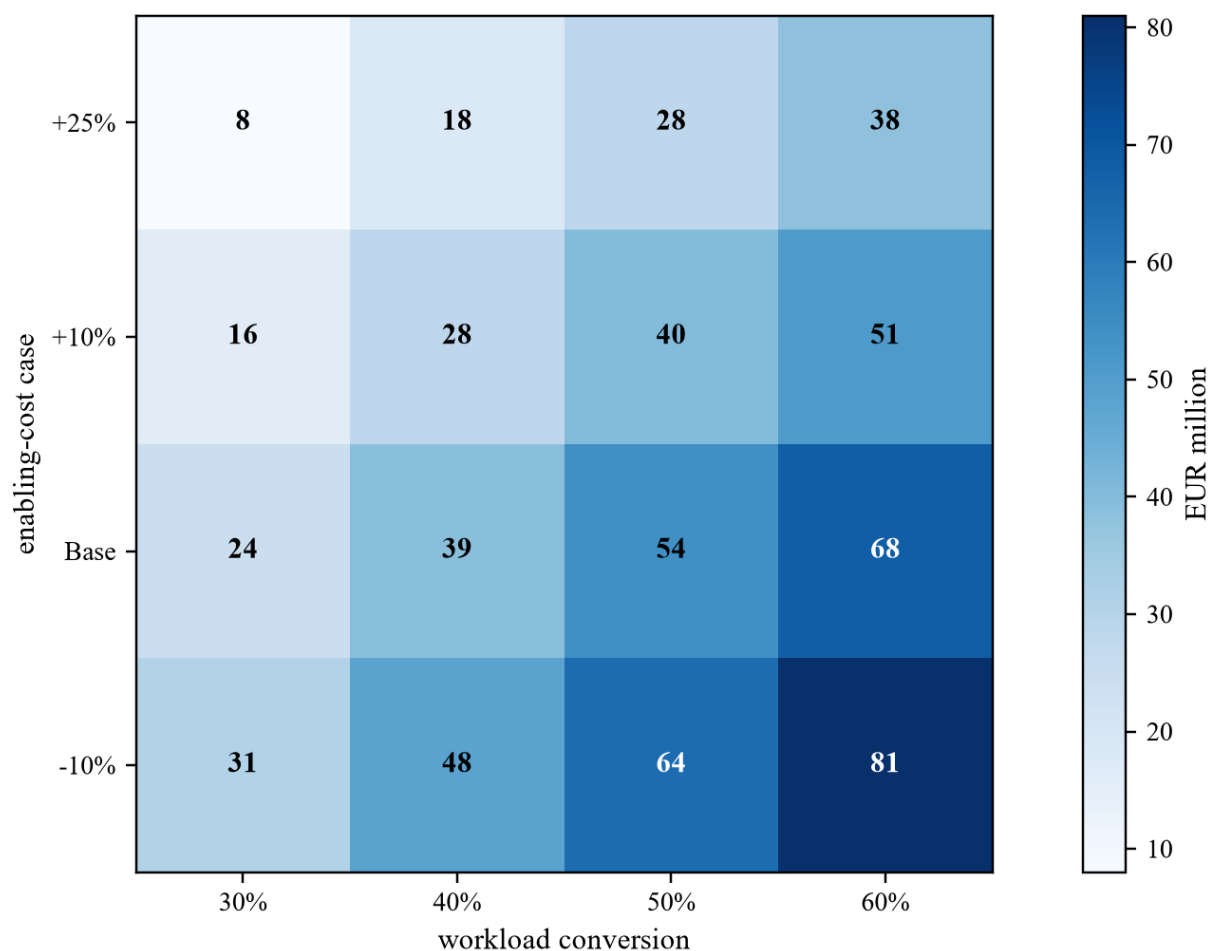
23. Stress delay, demand, power and refresh together

A delayed site can miss a customer date; weak demand can reduce pricing; power upgrades can consume contingency; hardware change can accelerate refresh. These risks can compound. [9][10][18][29] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with base and downside assumptions, dependency map, liquidity, covenant headroom, cure capacity, module deferral and exit options. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that single-variable sensitivities understate the cash effect of correlated integration and market shocks. The practical response is to run combined scenarios and identify the earliest funding, covenant or value failure. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Figure 6. Hypothetical net-synergy sensitivity



Wholly hypothetical; EUR million of year-three net run-rate synergy.

24. Design integration gates

Each site cohort should pass legal, power, fibre, permit, product, customer, funding and commissioning gates before the next commitment. [4][9][12][23] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with gate definition, required documents, approver, date, budget, exceptions and stop authority. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that the integration programme tracks activity and spend without proving service readiness or value. The practical response is to release capital at evidence gates and escalate exceptions to the investment committee. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

25. Monitor site to service to cash

A common data model should connect site rights, power, fibre, equipment, service performance, customer acceptance, billing and collections. [18][19][23][24] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with asset identifier, contract identifier, telemetry, acceptance, invoice, cash, capex, operating cost, incidents and remediation. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that separate dashboards report favourable site counts, uptime and pipeline that cannot reconcile to cash. The practical response is to maintain an auditable site-to-service-to-cash record with accountable owners. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

26. Preserve exit and separation routes

A future buyer may value towers, fibre, operating nodes or the service platform differently. Transfer restrictions and shared systems can destroy optionality. [4][6][25][27] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with asset ownership, transfer consent, licences, shared services, data portability, customer assignment, carve-out cost and buyer universe. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that the terminal value applies one digital-infrastructure multiple to assets that cannot be separated or transferred cleanly. The practical response is to design legal, system and contract separability from signing and test buyer-specific value. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

27. Apply accounting and impairment discipline

Purchase-price allocation, leases, revenue recognition, financial instruments, fair value and impairment affect reported performance and governance after closing. [27][28][29][30] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with valuation files, identifiable assets, useful lives, contract liabilities, leases, debt terms, impairment indicators and disclosure controls. Each record should state scope,

definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that accounting classifications are decided after the commercial model and obscure deteriorating site or technology value. The practical response is to align the transaction model with IFRS analysis and define early impairment triggers. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

28. Reach the investment decision

Approval should require stand-alone value, controlled site rights, deliverable power, resilient fibre, a defined service, contracted demand, net synergy, funded integration, regulatory clearance and downside liquidity. [1][2][4][26] The analysis should identify the legal owner, commercial counterparty, operating controller, customer, financier and party bearing remediation or transition cost. It should distinguish observed data, executed obligations and wholly hypothetical assumptions.

The evidence file should begin with investment memorandum, evidence ledger, model, diligence exceptions, financing, integration plan, risk allocation, scenarios and approval record. Each record should state scope, definition, effective date, expiry or refresh point, accountable owner and its relationship to accepted service and collected cash. Public policy, regulatory and company disclosures establish context; transaction value requires asset-level rights, executed contracts, measured performance and auditable financial records.

The principal failure is that strategic urgency or edge-market growth replaces the evidence required to pay an acquisition premium. The practical response is to approve only staged value with explicit conditions, owners, expiry dates and stop rights. Management estimates should be identified in the model and refreshed when evidence changes. Downside analysis should combine related site, power, fibre, customer, regulatory, technology, integration, financing and liquidity risks rather than isolating each variable. Approval should record the evidence accepted, conditions outstanding and authority to defer or stop expenditure.

Table 7. Investment decision record

Decision	Minimum evidence	Possible action
acquisition premium	stand-alone value and net synergy	accept, cap or reject
site cohort	rights, power, fibre, permits and demand	fund, resize or defer
acquisition debt	stressed eligible cash and security	lend, condition or reduce
conversion facility	costed milestone and customer	draw, hold or cancel
regulatory remedy	market analysis and clearance	accept, reprice or abandon
next cohort	acceptance, cash and liquidity	release, repurpose or stop

Proposed governance; each approval identifies evidence, owner and expiry.

Frequently asked questions

Q: Does ownership of tower sites create an edge-compute business? A: No. A site becomes commercially relevant only when the owner controls the required use, can deliver power and resilient fibre, can install and operate the equipment, and has accepted customer demand.

Q: How should revenue synergy be valued in an edge-infrastructure acquisition? A: Build customer-and-site cohorts, deduct conversion capital and recurring delivery cost, apply evidence-based timing and probability, and recognise value as service moves through contract, acceptance, billing and collection.

Q: Which cash flows can support acquisition debt? A: Base debt should rely on durable stand-alone cash within the borrower and security perimeter. Contracted, accepted edge-service cash can be added under clearly defined eligibility and stress tests.

Q: What is the most important site-conversion gate? A: No single gate is sufficient. Legal control, usable power, resilient fibre, permits, security, customer demand, funding and commissioning must all be satisfied before the site can deliver an accepted service.

Q: How should competition risk be tested? A: Analyse local alternatives, wholesale-access terms, switching, exclusivity and market power by geography and asset class. Model remedies and access duties before signing.

Q: Can a buyer apply one digital-infrastructure multiple to the combined group? A: A defensible valuation separates passive infrastructure, connectivity, powered capacity, equipment, contracted service and pipeline because their risks, asset lives and buyers differ.

Q: What makes modular integration real? A: Each cohort needs defined scope, independent commissioning, a costed budget, customer and funding gates, and a genuine right to defer or stop before the next commitment.

Q: What should the board require before paying a strategic premium? A: It should require stand-alone valuations, a source-to-cash synergy ledger, site-level readiness evidence, regulatory analysis, funded integration, combined downside scenarios and explicit stop rights.

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About the Author

Chennakeshav (CK) is a corporate finance and investment banking executive with 25+ years of global experience in deal origination, structuring and execution across M&A, growth capital and corporate strategy. He has led value-creation mandates for founders, corporates and funds — bridging the boardroom view to hands-on execution and closure.

His career spans Morgan Stanley, HSBC, Lloyds Banking Group, EWEC, ADQ portfolio companies and Emirates Growth Fund, across TMT, real estate, fintech, deeptech, cleantech, infrastructure and energy. He has partnered with C-suite leaders, private equity and venture funds, sovereign wealth funds and family offices to finance complex fund raises and scale-up ventures, and has led M&A due diligence, post-merger integration and business-transformation initiatives to create value.

At Matchpoint Partners, he is Managing Partner and leads the firm's corporate finance, M&A and capital-raising practice. He holds an MBA from London Business School, an engineering degree from VTU and a Master of Laws (LLM, in progress) from UCL London.

An active start-up mentor, CK mentors at Techstars, DIFC FinTech Hive, Startup Grind, Founder Institute and IN5, serves as Entrepreneur Mentor in Residence (EMiR) at London Business School, and judges the Entrepreneurship World Cup.

<https://www.linkedin.com/in/ckadya/>

<https://www.matchpoint-partners.com/team/ck-adya.html>

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