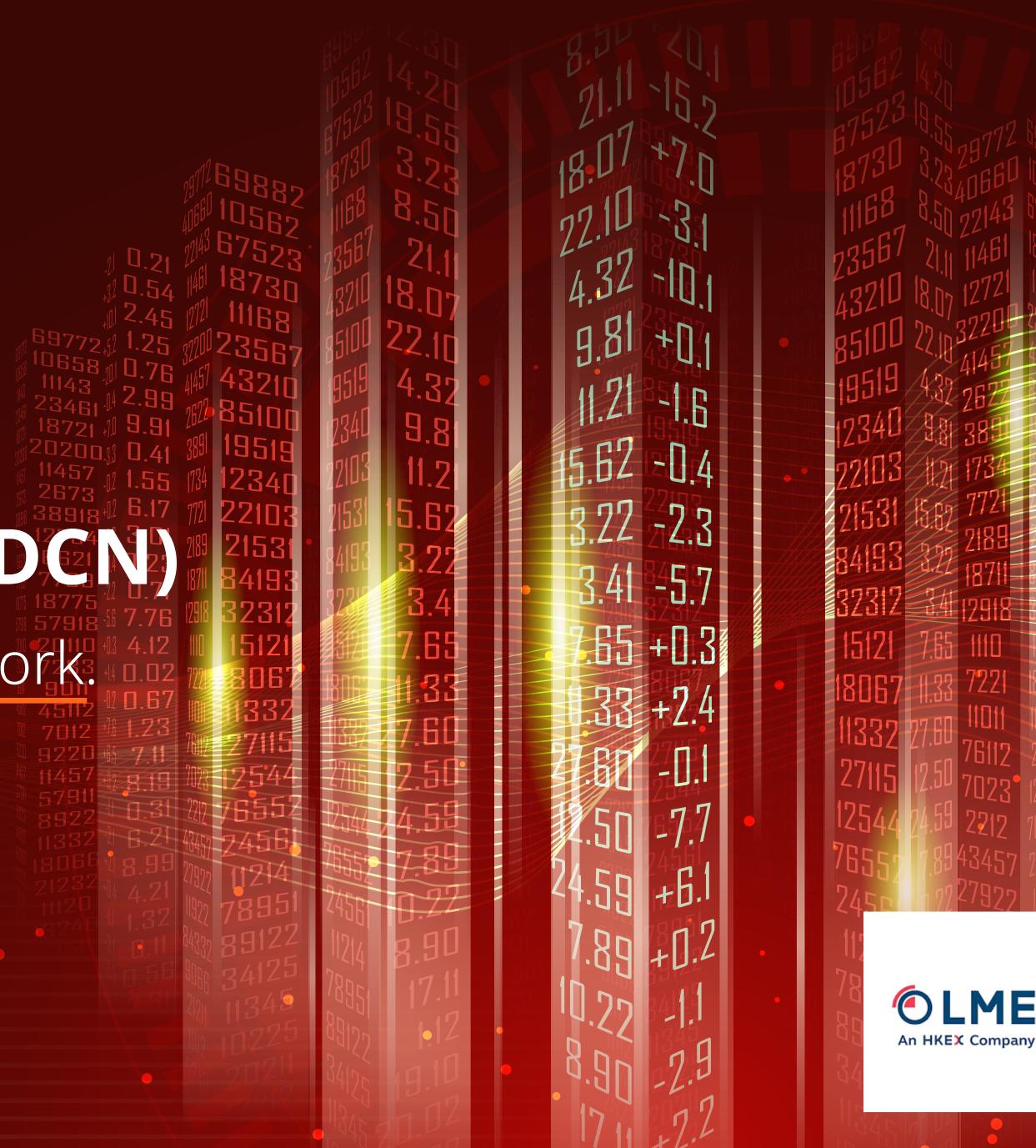# A Strategic Framework for Developing your Data Centre Network (DCN)

How to plan for your future network.

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Introduction

As your business continues to evolve with the needs of the market, you will need a Data Centre Network (DCN) that supports and enables it. The DCN will need to be efficient, stable, scalable, and secure, enabling London Metal Exchange to focus on the core activities that make you unique.

There will of course, be some challenges in moving from the current design to the new infrastructure your organisation will need in the future. Not least because current DCN performance and stability will need to be maintained to support corporate objectives while the groundwork for your improved and future-ready solution is prepared and implemented. Widespread people and skills shortages in IT make it challenging when you're trying to drive change.

At BestPath, we want organisations to enjoy the benefits of the latest networking technologies. With extensive expertise in developing bespoke networking solutions for our clients, we've put together this guide on some of the main areas to focus on, and questions to ask, when creating a proactive strategic framework to develop your Data Centre Network (DCN).

There are links to additional resources throughout. If this guide raises any practical questions or you'd like some additional expert advice, get in touch.

Hear us discuss key networking topics in our podcast!

Switching up with

Jimbo & Nick

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STEP 1:

Defining objectives and scope

As your DCN forms part of the broader IT infrastructure that supports your organisation's processes, it's clear that your DCN strategy must align with overall business goals and objectives. For this guide, consider your organisation's goals for the next five years, but this can be adapted to your organisation's unique circumstances.

Looking at the corporate goals that have been set for the next few years, including the modernise objectives you have with your stated "Strengthing the Market"[1] strategy, will enable you to define the necessary scope of your project.

[1] https://www.lme.com/en/trading/initiatives/strengthening-the-market#:~:text=The%20action%20plan%20addresses%20recommendations,manage%20risk%20through%20enhanced%20controls

1. Information gathering	**Identify objectives:** • List and prioritise your organisation's goals/objectives for the next five years (or duration of latest strategic plan) • List and prioritise your Data Centre Network strategy objectives • Identify dependencies with broader infrastructure portfolio e.g. Cloud, compute, storage • List any network infrastructure service level agreements
Review	**Are your DCN objectives aligned with the organisation's objectives? If not, how will you align these?**
2. Information gathering	**Where will your organisation be located?** • List your organisation's current workplace locations • List sites where you expect the organisation to be physically located in five years' time
Action	**Define the geographical locations for your Data Centre Network**
3. Information gathering	**Consider how your network may grow:** • What is your current network capacity? • How do you expect your capacity requirements to grow over the next five years?
Review	**Define proposed scope of future DCN**

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STEP 2:

Assessing current state

A detailed review of your current network infrastructure will help you understand what's performing well and the areas for improvement. It will also give you an idea of which parts of the infrastructure are unlikely to be included in your new solution. Collect and collate information, then analyse and assess the data to ensure you have answers for the review questions below.

A network audit will help you identify what is in your network and why and uncover areas of risk.

1. Information gathering	**Evaluate existing Data Centre Network infrastructure:** · Inventory of hardware, software versions, and network architecture · Support coverage of existing infrastructure · When/why were they purchased?	☑
Review	· **Is the existing network design still fit for purpose?** · **What feedback is provided by other infrastructure teams?**	
2. Information gathering	**Collect and analyse network metrics:** · Performance · Capacity · Scalability	☑
Action	**Do the results meet existing SLAs or business commitments? What would better statistics look like?**	
3. Information gathering	**List the security and compliance measures that need to be enforced:** · Security measures · Compliance measures	☑
Review	· **Are these still required?** · **Any feedback/thoughts on their implementation**	
4. Information gathering	**Perform a SWOT analysis of your current DCN infrastructure, i.e. what do you see as the network's:** · Strengths · Weaknesses · Opportunities · Threat	☑
Review	**Prioritise: Rank items in each category to understand priorities for strategic improvements.**	
5. Information gathering	**Document the existing network processes. Evaluate each process and assess whether they can be improved**	☑

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STEP 3:

Identifying future requirements

Having fully assessed your existing network and its capabilities, it's time to consider where your Data Centre Networking capabilities need to be over the next five years. How are the network requirements likely to change? What regulatory developments or market pressures in the industrial metal's market are likely to influence your network performance enhancements?

1. Information gathering

What are key strategic considerations in LME's "Strengthening the Market"[1] action plan are critical to your network plans?

What changes to IT strategy and requirements are you aware of?

Review

What are your initial thoughts about future IT requirements?

2. Information gathering

Estimate what the changes to IT requirements might be, based on the organisational strategy:

- Increased capacity?
- Improved performance?
- Enhanced security?
- Use of emerging technologies?
- Network automation?

Action

Is additional clarity required from other departments to firm up these estimates?

Has LME Clear's horizon scanning activity identified any new potential stress scenarios requiring changes to the IT requirements?

3. Information gathering

How important do you consider the following will be over the next five years?

- Flexibility
- Agility
- Scalability

Review

Is LME likely to grow over the next five years, either organically or via mergers/acquisitions?

4. Information gathering

How do you anticipate usage and user profiles will change over the next five years?

- How will users access the infrastructure? e.g. LME Clear
- Where will users access the infrastructure from? e.g. location
- Where will the business applications be hosted?
- Are any changes to security risks envisaged?

Review

How will hybrid working practices impact your future network infrastructure requirements?

STEP 4:
Reviewing industry and technology trends

Keeping up-to-speed with changes, including regulatory compliance and best practice guidance, is essential for ensuring your infrastructure performs as it should and does not expose unnecessary risks that could compromise your business or your customers' rights.

1. Information gathering	**Research and analyse:** • Latest industry trends and best practices for Data Centre Networks	
Review	**Do you already have plans in place to introduce any of the trending topics or align with these best practices?**	☑
2. Information gathering	**Put a plan in place to keep informed about emerging technologies:** • Check which are the most reliable sources of information • Schedule regular reviews, to ensure important news isn't overlooked	
Action	• **Are they relevant for your trading platforms?** • **What could their potential impact be on your network?**	☑
3. Information gathering	**Check for the industrial metal's market and compliance requirements:** • What are they? • When is the deadline for compliance?	
Review	• **What could their potential impact be on your network?**	☑

STEP 5:
Perform gap analysis

In an ideal world, all gaps between your existing Data Centre Network (DCN) and desired future state should be addressed and fixed. But typically there will be resource limitations on costs, time constraints, and people or skills to action the changes, so priorities must be established.

1. Comparison	Gap analysis:	
	• Compare your current state (STEP 2) and future requirements (STEP 3) answers, to identify any gaps between where you are with your current DCN, and what you would like it to look like in the future	☑
2. Prioritisation	Score each identified gap according to:	
	• Expected impact on business objectives • Feasibility of implementation **Prioritise the identified gaps, according to these impact and feasibility scores**	☑

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STEP 6:
Exploring strategic initiatives

Consider your options for addressing gaps identified, and put plans in place to action London Metal Exchange's chosen strategic initiatives.

1. Strategy	**Develop a set of strategic initiatives to address the identified gaps (STEP 5) in order of priority, aligned with the organisation's goals (STEP 3)**	☑
2. Projects	**Within the strategic initiatives, define key projects/initiatives, such as:** • Network hardware and software upgrades • Security enhancements • Cloud integration • Automation implementation	☑
3. Responsibility	**Assign responsible stakeholders for each project/initiative**	☑
4. What success looks like	**For each project initiative, with the responsible stakeholders, establish success parameters:** • Timelines • Budgets • Performance indicators	☑

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STEP 7:

Prepare risk management measures

Next, the risks associated with strategic initiatives must be established and addressed, so your infrastracture is protected and secure.

1.	For each of your strategic initiatives (STEP 6), identify potential risks/challenges	☑

2.	To minimise disruption and ensure business continuity, for each potential risk, develop:	
	• Risk mitigation strategies • Contingency plans	☑

3.	Consider security risks such as cyber threats and data breaches, and implement robust measures to protect your DCN	☑

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STEP 8:

Planning implementation and execution

With all the information compiled in the previous steps, you're now ready to construct your future-ready Data Centre Network implementation plan. Breaking the plan down into manageable steps will ensure LME can keep on top of the project and modify parts of the plan that are affected by changes in circumstances or that are not meeting defined performance criteria.

1. Define actionable steps	**Break down your strategic initiatives into actionable steps.** **This will form the basis of your detailed implementation plan.**	☑
2. Allocate resources	**For each step, allocate necessary resources, such as:** • Human resources and skillset • Budget • Infrastructure	☑
3. Monitor and evaluate	**For each initiative, monitor progress, with regular evaluation against the parameters defined in STEP 6.**	☑
4. Adjust plan	**Adjust the plan to take account of:** • Changing circumstances • Technology advancements • Business priorities **If the parameters defined in STEP 6 are not being met, reasons will need to be identified, and the plan adjusted if necessary.**	☑

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STEP 9:
Conduct evaluations and review

Evaluations and stress testing will confirm if your strategic initiatives are producing the performance expected, as well as giving the opportunity to make adjustments to strategic initiatives based on changing circumstances.

1. Plan effectiveness	Regular evaluations of the effectiveness of the strategic plan (STEP 8) should be used to assess its impact on the Data Centre Network.	☑
2. Plan review	**Review of the plan can be:** • Annual (or on an agreed regular basis) • As required, based on feedback from stakeholders **The strategy should be adjusted when requirements evolve, due to:** • Changing business needs • Technological advancements	☑

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Getting started with expert support

Getting your future-ready Data Centre Network planned and implemented involves: (a) asking a lot of questions, and (b) knowing what to do with the answers, to identify, optimise, and operate the best network infrastructure for your organisation.

Given stringent regulatory requirement and the pressures of your trading members, at LME your threshold for network performance related issues is almost nil. Getting guidance and support from BestPath, an experienced networking partner with specific expertise in data centre infrastructure and automation, will make a difference to your efficiency and security and help ensure all aspects of planning and transition of you network and its solutions run smoothly.

At BestPath, we'll take you through the whole process, from start to finish and beyond. We keep up-to-speed with the latest networking trends and technologies so you can focus on managing the IT challenges specific to LME's business. Because we've been working in this area for so long, we know how to design, implement and automate networks based on known requirements and often unspoken needs. We'll also advise on how to keep your current network functioning to the best of its ability while your new solutions evolves.

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We're BestPath. The unsung heroes, working quietly and competently behind the scenes to inspire and empower our clients. Combining curiosity with innovation we deliver agile, secure and trusted network infrastructures that enable businesses to deliver exceptional services and outstanding customer experiences. Let's chat about how we can do just that, for the London Metal Exchange.

linkedin.com/company/bestpath/

james@bestpath.io

+44 (0)203 879 4826

calendly.com/james-bestpath

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