

Research Report

Switching Things Up

Understanding the challenges of the energy distribution specification process in the commercial space, from the viewpoint of specifying consultants and electrical contractors.

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Foreword.

If we are to be more efficient in the way commercial buildings continue to be designed, specified, and built, it is important that we understand the ongoing challenges facing two vital stakeholders – specifying consultants and electrical contractors. They select and work with appropriate, cost-effective and high-performing electrical energy and power distribution product solutions that enable commercial spaces to come alive.

Prevailing attitudes and views around the electrical energy and power distribution specification process; the challenges faced, expert views on available product solutions and spec breaking, the role of value engineering and the support provided by product manufacturers, all need to be understood. This will underpin greater levels of effectiveness about where energy-related improvements can be made across commercial buildings.

As a manufacturer that provides the electrical power solutions that make commercial buildings thrive and function efficiently, Hager is committed to unearthing the key opinions held by both consultants and contractors. This is so we too can further strengthen and improve our partnerships across the specification and installation supply chain.

In a world impacted by COVID and the Hackitt Review, the dynamics of commercial space development are shifting. It is vital to gather insight around perceived risks, highlight attitudes to issues such as spec breaking that can alter a design specification further down the line, as well as better appreciate the primary factors for consultants and contractors as they deal with electrical energy and power distribution.

Hager is determined to remain at the heart of this ongoing conversation so we can continue to deliver innovative electrical distribution solutions consultants want to specify, and contractors want to install.

We are keen to explore how we, as an electrical energy and power distribution product solutions manufacturer, can best support the sector and, in particular, truly appreciate the pain points and challenges consultants and contractors face every day.

To help fuel debate and support a wider understanding, we commissioned research which unpicks just how consultants and contractors in the commercial space are feeling around topics linked to electrical energy and power distribution.

The results are shared in this report. We hope you find them of interest and illuminating as commercial building development continues to evolve.



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Executive Summary.



- **Value engineering** is an expected practice on commercial building projects – but the best results are obtained by adopting a systematic approach.
- Consultants believe a **focus on overall cost** by project managers and clients is prioritised, whilst not enough consideration is given to the efficient **operational use of the building** once it is ready for occupation.
- Specifying consultants acknowledge that **‘spec breaking’** will inevitably occur further down the supply chain.

- Contractors think many projects are **over specified**, leading to excessive project costs. This trend is also creating growing concerns around skills shortages and the ability of installers to implement the type of electrical energy product selections advocated by consultants.
- **Sustainability** is a key topic but is higher on the agenda for contractors.
- **Safety, technical information,** and **closer collaboration** across the supply chain, are the most important aspects to drive project success, but the issue of **cost dominates** thoughts.
- Sticking with tried and trusted product solutions and long-established manufacturing partners is now seen as less important. There is an **increasing inclination to consider alternative supply options** that deliver innovation, added value, cost effectiveness, and high performance, when it comes to electrical energy and power distribution.
- The **challenge of operating in a COVID-restrictive world** has been a real issue for contractors, whilst contractors believe the implications of the **Hackitt Review** have already **changed the specification process**.

Section One: Consultant Challenges and Concerns.

When consultants were questioned about what they thought the biggest challenges are when specifying products for electrical energy and power distribution in commercial buildings, three main points of consideration came to the fore.

1. Too much focus on cost from the project/building teams.
2. Spec-breaking further down the supply chain.
3. Not enough focus given to the operational use of the building.

The majority (63%) said there is ‘too much focus on cost from the project/building teams’.

The second biggest challenge was ‘spec breaking further down the supply chain’ – 37% believe this is an issue.

For a third (33%), ‘not enough focus given to operational use of the building’ was another significant challenge.



Interestingly, considering the heightened awareness of the need for a more sustainable approach to creating future buildings, it appears that 'meeting targets associated with net zero carbon emissions by 2035', is not seen as a major current challenge.

Just 11% of consultants saw this as a priority.

The specification industry feels the pressure of cost from project owners through the entire process. This could have implications on the product decisions made to optimise the final electrical energy and power distribution functionality of a commercial building.

This is supported by the belief that there will be an element of 'spec breaking' further down the project as the supply chain becomes more involved. Potentially, this could compromise the original design concept for the building, with a third of consultants also convinced more focus needs to be given to the future operational use of the space.

Over half (56%) of consultants think there are some areas of weakness in the current specification process.

These include:



Legacy opinion:

“It sometimes doesn’t come from the specification; a lot of the time the clients are stuck in their traditional ways and a lot of times don’t like changes/advances in technology. They won’t entertain solar/fossil fuel as a supplier for example, they only want lighting wired a certain way instead of the later plug and play technologies.” **Consultant**



Meeting standards:

“Non-compliance with approved standards, highly specialised services, additional maintenance contracts required.” **Consultant**



Poor planning:

“An organised approach to providing the functions in a project at the lowest cost.” **Consultant**



Expectation:

“Variations of clients’ needs. Difficulty in communicating with the client to meet their needs. Limitations of buildings due to age.”
Consultant



Appropriate specification:

“Lack of fluency with end user requirements, sometimes specification can be too high for the use of the building with over complicated technology and a lack of coordination with mechanical works.”
Consultant



Sustainability and skills shortages:

“Not enough emphasis on sustainability and lack of skilled people to write specifications.”
Consultant

Section Two: Contractor Challenges and Concerns.

From a contractor perspective, the primary project challenges focus on the initial specification, as well as worries about the practical, skills-based implementation of specified products.



More than half (52%) said ‘specification impacts the cost of the project too much.’

About a third say electrical energy and power distribution product specification is ‘too costly’.

When it comes to installing specified products, 44% said there ‘is a lack of skilled labour’ to carry out the work, leading to concerns about getting the job done and on schedule.

Contractors seem to feel more strongly when compared to consultants about the sustainability aspects of product selection, for 28% ‘there is not enough focus on sustainability in specification’.

Unlike consultants, when it comes to acknowledging apparent weaknesses in the specification process, the contracting community are more positive.

Over two thirds (68%) do not believe there are some weaknesses in the specification process – a figure that drops sharply to 22% when the same question was posed to specifying consultants.



However, there were some challenges and weaknesses identified by contractors.

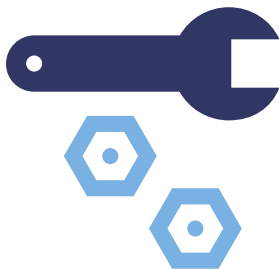
They include:



Regulatory and logistical:

“Getting the correct goods to the site with the correct spec and having the right access and documentation to fit said goods without having the whole process delayed. Commercial buildings have so many stipulations and regulations – you can encounter all sorts of issues.” [Contractor](#)

“The specification process is fine – it’s the delivery and time scales that sometimes show weaknesses.” [Contractor](#)



Skills worries:

“Lack of skilled electricians.” [Contractor](#)



Energy efficiency:

“Most commercial buildings aren’t energy efficient, or they could be a lot better. Electrical power supply is not always specified in construction contracts for new projects. Not enough discussions on sustainability.” [Contractor](#)



Pre-planning:

“Poor development plans, not including all costs and not including time taken to complete projects and considering all impacts.” [Contractor](#)



Section Three: What Does Value Engineering Stand For?

Seeking cost savings without compromise to functionality.

When questioned about what the term ‘value engineering’ meant to them, both consultants and contractors were in general agreement as to its purpose and potential impact.



The need to balance cost savings without compromise to project functionality seems to be the key objective. Many of the responses advocate a systematic approach which follows a set process to identify where cost efficiencies can be implemented, whilst striving to allow the required functions set out within the specification to remain in place.

There is also a view held by some that client expectation and budget availability do not always align, and the value engineering process is a way of attempting to bring disparate elements closer together.

Observations from both consultants and contractors include:

“Value engineering is beneficial to a project where the budget is too high, so any engineering ideas which could lead to design changes which could lower the cost and reduce the programme durations. It is an important phase of the tender process. In general, offering materials/technology/alternate methods at a lower cost without sacrificing functionality.” Consultant

“It simply means providing necessary functions in a project at the lowest cost by using an efficient and logical approach.” Consultant

“It varies from project to project. Generally, it means that client aspirations do not align with their budget. Therefore, a value engineering process looks at how to reduce project cost whilst still meeting the client’s needs. Are there any luxury items that can be scaled back? Are the needs still being met? Is there a cheaper alternative? On some projects it may be driven by the contractor wanting to reduce costs at fit out and looking for ‘cheaper’ alternatives to specified products.” Consultant

“Value engineering in my field means to me, a systematic, organised approach providing the necessary functions in a project at the cheapest cost/tender. Value engineering is the substitution of materials and methods with less expensive alternatives, without sacrificing functionality, practicality and finance.”

Consultant

“Substituting expensive materials with inexpensive ones that perform the same. Without affecting the quality performance or integrity.” Contractor

“To me it is a systematic approach taken to get the best possible value of products or services by taking steps to reduce unnecessary costs and overheads.”

Contractor

“Value engineering is an exercise that involves most of the project team as the project develops. It is about taking a wider view and looking at the selection of materials, plant, equipment and processes to see if a more cost-effective solution exists that will achieve the same project objectives.” Contractor

Taking a value engineering approach is both commonplace and, indeed, expected on many projects. Whilst it may well compromise the original product specification vision, stakeholders in the process understand that by implementing a form of value engineering, expenditure can be saved to satisfy budget constraints whilst at the same time satisfying the expectation of clients and how the building will function.



Section Four: Key Areas of Importance.



The research sought to rate the importance of aspects of a power distribution product installation within a commercial building. Both consultants and contractors were asked to consider areas such as safety, technical information, manufacturers' support, sustainability, cost, timescales, and specification.

In general terms, the areas considered to be of most importance were:



A focus on safety – with 81% saying it was very important.



Technical information/CAD/BIM – 73% said it was very important.



Collaboration across the supply chain – 65% said it was very important.

The areas considered of least importance were:



A focus on cost – 50% saying it was very important.



More time – 35% said it was very important.



Sticking with manufacturers/products specified or used before – it was very important to just 23%.



Within the two sets of responses, some notable differences were observed.

The largest divergence of opinion was seen in areas such as the focus on safety, sustainability, and cost. Contractors viewed the importance of each area in far stronger terms than consultants. Indeed, **100%** of the contractors asked said that a focus on safety was very important, compared to **63%** of consultants.

Both were at about the same level of agreement about the importance of manufacturers' support and advice, as well as the availability of technical information/CAD/BIM.

From a sustainability standpoint, again more contractors (68%) viewed this as very important when compared to just over 50% of the consultants questioned.

Finally, the importance of sticking with manufacturers/products specified or used before came bottom of the ranking. Only 36% of contractors thought this was important, a figure that drops to just over one in ten for consultants.



Section Five: The Impact of Outside Events on Specification and Product Installation.

Following the practical and logistical challenges set out by the COVID pandemic, and after industry evaluation of the recent Hackitt Review which focussed on issues related to high-rise residential buildings, the research sought to discover if such events had affected or changed both specification and the installation of electrical energy and power distribution products within the commercial market.

Looking at specification, just under half of consultants (44%) said processes had changed due to the Hackitt Review or COVID.

From an installation perspective, COVID has had the most significant impact according to contractors. 48% cited the pandemic as an agent of change to the installation of products, with just 16% pointing to the implications of the Review. However, a third of contractors did not believe either event has led to any changes in the way they approach and undertake projects.



“A number of poor procurement practices have been reduced since the Hackitt Review. There are slightly better designed tender specifications and fewer last-minute contractor appointments. There is more appropriate engagement with the supply chain and contract forms which no longer prioritise low-cost solutions at the expense of building safety.” Consultant.

“Many variations to the specifications due to delayed materials. More emphasis on fire rating of specific materials, a whole sign-off and compliance period now required for fireproofing. Planning obligations have become stricter making the process more difficult. Sourcing products from abroad is more challenging due to travel bans.” Consultant.

“Safety and risk are of much higher importance – even more so than pre-COVID.” Consultant.

“There is more focus on defining specific requirements and compliance – hence more time is spent on the specification processes.” Consultant.

Conclusions.

This research has pinpointed some important distinctions and a degree of commonality when unpicking the views of the consultant community, and contractors charged with implementing the product solutions that help power life and function into a commercial building.

Value engineering is commonplace.

Both audiences are of the view that the practice of value engineering is commonplace and an expected part of the project process. It is seen as playing a role in delivering cost efficiencies without compromise to desired building functionality. The key is always to adopt a systematic approach.



Cost considerations, client pressures and the expectation that ‘spec breaking’ will take place further down the supply chain dominate consultants’, thinking. Many state that initial cost focus from clients outweighs strategic consideration of the building’s future use, so that the originally designed vision of the building’s operational capability can be devalued to some extent.

Over specification and skills shortages.

Conversely, contractors say they think many projects are over specified leading to excessive project costs. In addition, this is also creating concerns amongst installers around skills shortages and finding enough talent to implement the electrical energy product selections the consultant community is advocating for commercial spaces.

Differing sustainability focus.

Both consultants and contractors acknowledge the role and importance of sustainability and appropriate product selection for a greener future. Whilst a key topic for both, the research indicates that it is an area currently of stronger concern for contractors. This is perhaps surprising when it would be expected to witness consultants take a holistic approach to a commercial building’s long-term use and a natural focus on sustainable solutions at this time.

Whilst safety, technical information, and a call for better collaboration across the supply chain were cited as among the most important aspects of successful commercial projects, again the issue of cost appears to cause a divergence of opinion.

Cost challenges.

The largest discrepancy between consultants and contractors was on the topic of cost, with over twice as many contractors believing that cost considerations around electrical energy and power distribution were important when compared to consultants. This perhaps echoes the overall belief of consultants that a focus on cost from project and building owners takes away from other equally valid areas for consideration such as operational use, 'spec breaking' further down the supply chain, and long-term building performance.

Open to manufacturer choice.

Interestingly, sticking with tried and trusted manufacturers and products previously specified was the lowest rated when it came to what was considered 'very important'. This provides an opportunity for innovating manufacturers who can develop added value, cost-effective and high-performing product solutions.



A changing landscape.

Finally, it should be acknowledged that events such as the Hackitt Review and the recent pandemic have and are impacting both the specification process and the installation of products.

Nearly half of all respondents said things had ‘changed’. Whilst the regulatory oversight of the Review will ensure that such changes remain in place, it is hoped that some of the practical and logistical contractor challenges caused by having to work in a COVID-safe manner will be eased as time goes on.



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