

IS TENDER EXCLUSION NEXT DUE TO LACK OF SUSTAINABLE IT INVESTMENT?

A sobering look at why it's time up
for greenwashing AEC companies still
using power hungry workstations to
design sustainable buildings, whilst
hiding behind carbon offsetting



Many industries are still to put their house in order when it comes to environmental issues. Architecture, engineering, and construction (AEC) is front and centre. A renewed focus on the race to net zero means carbon offsetting is increasingly frowned upon when bidding for green projects.

The message is clear: what's needed is fundamental behavioural change, starting with how people use and consume technology in the workplace.

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This white paper examines how AEC companies can ‘walk the walk’ through smarter choices that positively impact environmental, social and governance (ESG) credentials.



In April 2022, the UK Government passed two ESG disclosure laws. For AEC practices the move serves as a warning shot for what's to come. With buildings responsible for nearly 40% of global energy consumption and 33% of greenhouse gas (GHG) emissions AEC companies are right in the firing line. And that doesn't even take account of emissions associated with cement and concrete production, which have doubled over the last 20 years and currently make up 8% of total CO₂ globally.

Another massive generator of CO₂ is legacy IT solutions and processes that have plagued the industry for years. Enterprise technology accounts for about 1% of total GHG emissions globally. This might not sound like a lot. Yet it equals about half of all emissions from aviation or shipping and is the equivalent of the total carbon emitted within the UK.

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MANDATORY ESG REPORTING IS HERE

HIDING BEHIND ESG MARKETING CLAIMS WON'T CUT IT

Fundamental behavioral change, starting with how people use and consume technology in the workplace is needed.

CRN latest research found that over 60% of organisations admit they are under increasing pressure from customers to maintain ESG credentials, with 42% further feeling the weight from investors.

Unfortunately, many AEC companies don't practice what they preach and seem content to hide behind a marketing

smokescreen. Often because their business messaging is totally disconnected from daily IT operations.

For example, it's not uncommon that AEC professionals continue to work on bids for smart, eco-friendly projects using power-hungry workstations. Once the project kicks off that non-green IT behaviour is multiplied many

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times over as cross-functional teams, specialists, partners, and extra resources are drafted in. And it's likely that only a little of that collaborative effort is being powered from renewable energy sources.

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super-charged V8 and then planting a few trees to claim carbon neutrality.

So, it's easy to see why procurement teams are starting to see through marketing speak and call time on AEC firms hiding behind carbon offsetting claims.

TENDER EXCLUSION WILL BE NEXT

The idea that reforestation somehow exonerates bad practice misses the point and is wearing thin. To the extent that some AEC firms could soon be excluded from tenders unless they can provide sustainability evidence against an industry-set scale.

Research and technologies exist to start decarbonising, but what's been lacking is collective will. The UK Architects' Declaration currently under publication seeks, together with clients and partners, to commission and design buildings, cities, and infrastructures as indivisible components of a larger, constantly regenerating and self-sustaining system.

Crucially, the declaration shifts accountability to CIOs and IT directors. The central thrust is that greener IT is not just about reassessing infrastructure to drive carbon reduction – it's about working practices, operations, and solution efficiency.

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AEC IT TEAMS CAN BE THE BIGGEST ENABLER AND BARRIER

There are a number of practical green initiatives that IT teams can take, such as deploying virtual desktop infrastructure (VDI), launching cloud migration projects or converting to energy-efficient data centres.

So, what's stopping them? Lack of experience and technical skills, complex integration and testing, prohibitive costs, and busy day jobs are all valid reasons. Another big

elephant in the room can be fear of change and moving outside comfort zones. Or the belief that they may lose control and become redundant.

Whereas in fact the opposite is true. When done correctly, engaging a managed service provider (MSP) helps upskill and transfer valuable knowledge, and releases internal IT staff for more fulfilling work.

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GETTING STARTED



One of the ways to address the ESG challenges outlined in this paper is adopting virtualisation via desktop as a service.

Creative ITC has been providing customised enterprise-class AEC solutions since its formation. In 2017 we took that commitment to a higher level. Back then (and still today) off-the-shelf remote working solutions weren't ever designed for heavy graphics users handling large-scale applications like CAD, Revit, Photoshop, and InDesign. As a result, architects, engineers, project managers and construction professionals couldn't effectively control data and exchange large files.

Leveraging deep understanding of virtualisation and how AEC applications behave, Creative built its own VDI platform, VDIPOD, entirely in-house.

Designed from the ground up, it enables tens of thousands of users globally to take their desktops with them and reach their data and apps from anywhere.

Moreover, VDIPOD offers AEC firms a path to net zero with metrics and an auditable trail that helps simplify ESG reporting. Creative ITC virtual desktops are hosted from Equinix-powered data centres and are industry-leading when it comes to sustainable technology. They currently run on 95% clean and renewable energy with a firm commitment to reach 100% by 2025.

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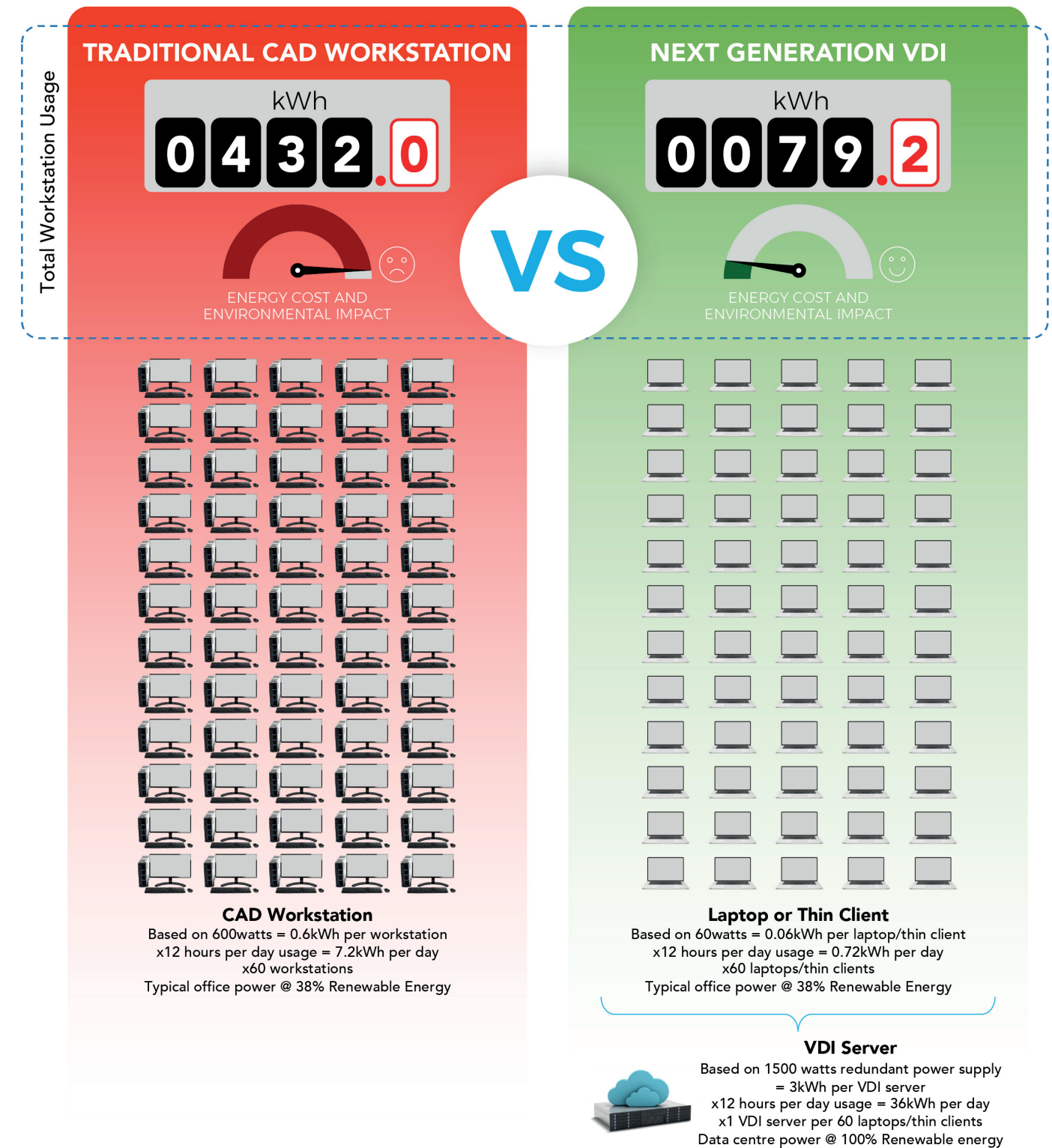
...VDIPOD offers AEC firms a path to net zero with metrics and an auditable trail that helps simplify ESG reporting.



THE SMART CHOICE FOR SUSTAINABILITY

VDIPOD uses **81.7% less energy** and runs on a combined level of **89% renewable energy**

*Calculations based on standard Dell high graphic workstations, Supermicro VDI servers and Dell XPS laptops.
All calculations were accurate as of vendor technical specs 2023.*





Desktop-as-a-Service



The following table provides a detailed breakdown of how Creative Desktop-as-a-Service with VDIPOD **reduces CO2eq by 43%** and **positively impacts the E in ESG scorecards**

To bring that sharply into perspective, 60 power-hungry workstations creating 48,000kg over 12 hours is the same in CO₂eq terms as driving 146,000 miles. Now, extrapolate that analysis over a week, a month or a year.

In contrast, AEC clients deploying our VDIPOD service use 90% less energy and 89% in renewable power at source (one server supporting 60 users). That’s on a par with 100% of Creative ITC back-office operations, which have seen a 75% drop in carbon footprint per employee since switching to VDIPOD.



Traditional CAD workstations



Laptops/thin clients running on VDIPOD server



% greener improvement

Total power consumed	360kWh	39.6K kWh	90%
CO ₂ eq produced per device	800kg	350kg	56%
Total CO ₂ eq produced	48,000kg	21,000kg	56%
CO ₂ eq produced by VDI server	—	6,380kg	—
Total CO ₂ eq	48,000kg	27,390kg	43%
Proportion of renewable energy consumed	38%	89%	250%

Calculations based on Dell research and 60 devices used over a 12-hour period.



STAYING AHEAD OF THE CURVE

IaaS is another key area that can address some of the ESG challenges businesses face. Crucially, when AEC firms move to an IaaS model the responsibility of infrastructure management moves to the cloud provider, along with power consumption and carbon footprint. Cloud providers can make intelligent use of virtual machines and containers to reduce the number of servers needed at data centers and can therefore improve sustainability and ESG scores.

By hosting data, applications and IT services with Creative ITC, IaaS clients benefit from smaller carbon footprints from the operation of data centres and servers, for example. Also, they no longer need to maintain on-prem technology, resulting in less energy consumption, lower cooling costs, and less waste from decommissioned equipment.

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APPLYING ESG AS A VALUE CREATOR

Research by McKinsey identified five solid links between strong ESG performance and value creation:



Top-line growth



Cost reductions



Productivity uplift



Fewer regulatory and legal interventions



Investment and asset optimisation

Publically-owned star performers are also more likely to see higher equity returns, less downside risk (potential loss in share value if market conditions decline), lower loan and credit default swap spreads and higher credit ratings.

CASE STUDY

One Creative client, a multi-award winning international architecture, masterplanning and design studio, are well on their way. They migrated 400-plus UK employees to VDIPOD transforming collaboration, workflows and ESG performance with a 90% reduction in kilowatt hours (kWh) per person and a three-fold increase in renewable power use. Those benefits will multiply further still when Creative completes a full global rollout and onboards VDIPOD users in Asia Pacific, the US and Canada.



In conclusion, there's a sound case for privately-run and publicly-traded AEC firms to consider sustainable solutions like VDIPOD and IaaS, which can dramatically reduce carbon footprint and positively impact environmental scorecards. Not only to maximise business opportunities and make more tender lists, but also to strengthen their reputation and commitment in their stakeholders' eyes. Future success will depend upon it.

To learn more about how sustainable
technologies like VDIPOD and IaaS are helping
AEC companies to successfully transform,
go to **creative-itc.com** or contact
enquiries@creative-itc.com



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