

# TRENDS & PREDICTIONS

Info-Tech Advisor Premium - Forecast



## About this research note:

Trends & Predictions notes identify emerging issues in the IT space, give insight into their implications, and provide tactical guidance on how IT decision makers can capitalize on these trends.

## Info-Tech's Green Index: How Green Are You?

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Info-Tech's Green Index looks at how concerned IT leaders are about energy efficiency and environmental responsibility, as well as the current level of "green" in enterprise IT. The 2007 index highlights a large gap between what enterprises are thinking about green IT and what they are actually doing.

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## Executive Summary

Given the significant buzz around green strategies, the recent concern about data center energy consumption, and the growing interest in environmental stewardship, Info-Tech set out to quantify just how much mindshare green issues are getting with IT decision makers. This Premium Trends & Predictions note looks at:

- » Interest for green solutions among IT leaders.
- » The current level of overall “greenness” among IT organizations.
- » Green indicators by industry, company size, investment style, and strategic focus.

“Green” IT initiatives that are energy efficient and environmentally sound also tend to reduce long-term operating costs and increase corporate goodwill. Fully one quarter of IT leaders are either “very” or “extremely” concerned about energy efficiency and environmental responsibility.



## Trend Point

Info-Tech's Green Index shows a relatively high interest in, but low adoption of, green initiatives. Faced with high energy costs, capacity shortages for data center power and cooling, and corporate mandates to become more environmentally conscious, many IT leaders are beginning to take interest in greening their operations.

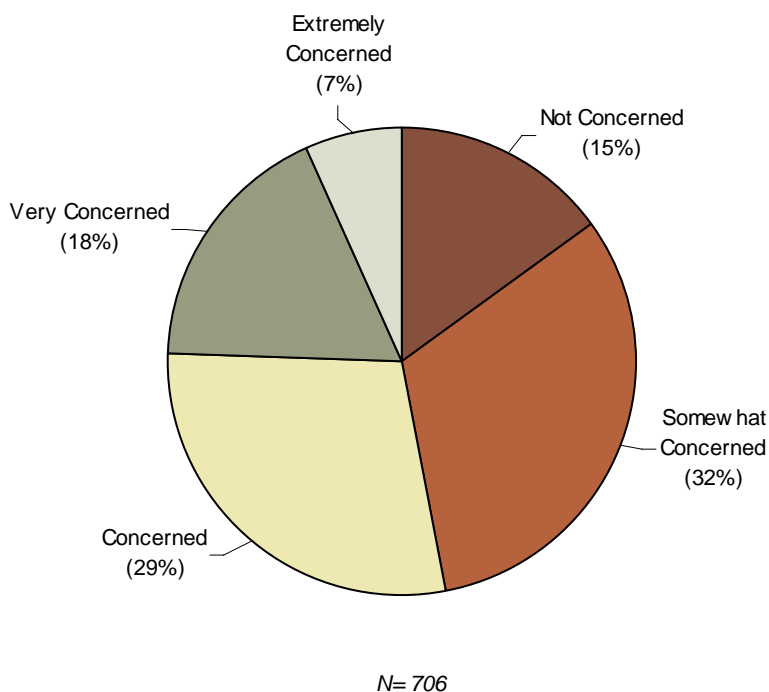
However, the implementation of green strategies is still lagging. Innovative and leading edge enterprises are leading in green technology adoption, indicating a fairly immature yet growing adoption curve.

## Situation Analysis

Many enterprises are beginning to show concern for energy efficiency and environmental responsibility (see Figure 1a); both of which are key drivers for greener IT strategies.

**Figure 1a. Concern for Improving Energy Efficiency and Environmental Responsibility**

Source: Info-Tech Research Group

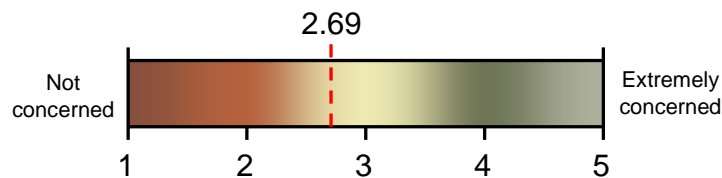




Although the overall index (see Figure 1b) is hovering around 2.7 or “concerned,” there are a surprising number of IT leaders that are very/extremely concerned about these issues (25%). These are likely individuals presiding over data centers where power and cooling capacity are becoming an issue or rising energy costs are getting the attention of senior management.

### Figure 1b. Info-Tech Green Index: Level of Concern

Source: Info-Tech Research Group

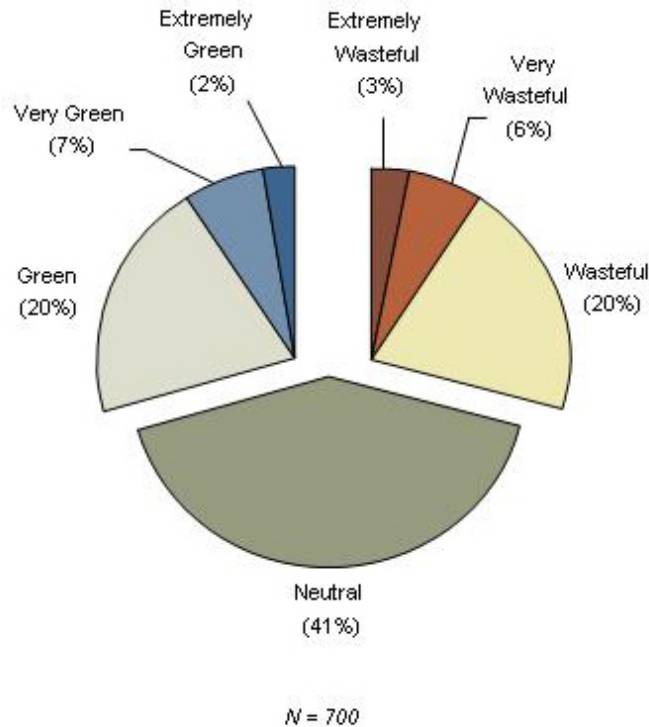


Enterprise IT departments are equal parts green and wasteful (see Figures 2a and 2b). Given the high cost of energy, it is surprising to see that so many enterprises in the very/extremely wasteful categories. Part of this could be attributed to the existence of inefficient legacy systems in some enterprises, but there also seems to be a significant number of enterprises that are simply not motivated to go green. In terms of cost savings, there is a significant opportunity for enterprises to save money by reducing waste and optimizing IT operations.



## Figure 2a. How Green Are Your Enterprise IT Operations?

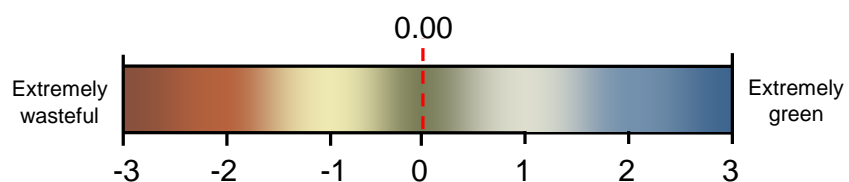
Source: Info-Tech Research Group



The green vs. wasteful responses are so evenly split that Info-Tech's Green Index reads completely neutral down to two decimal points. However, since respondents self-selected into either wasteful or green, we expect that there is a slight bias in the responses towards green, thus the true state might actually be marginally more wasteful than the numbers indicate.

## Figure 2b. Info-Tech Green Index: Practicing a Green Strategy

Source: Info-Tech Research Group

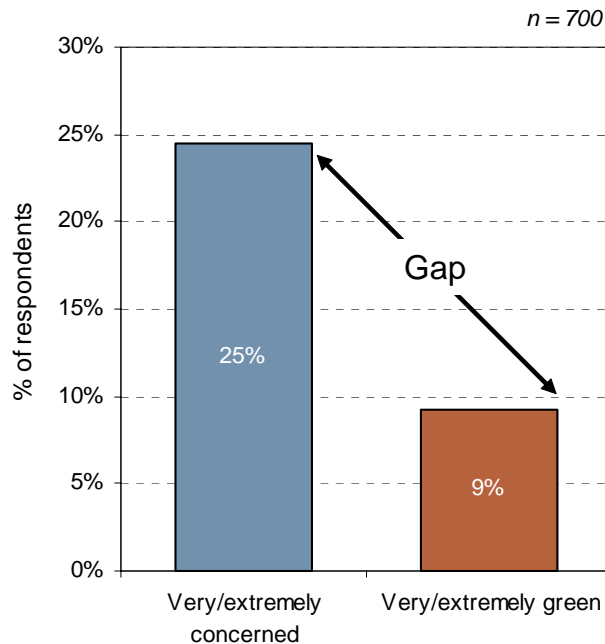




The two aspects of the index highlight a large gap between interest and execution (see Figure 3 below). Although a quarter of respondents are very/extremely concerned, only 9% have actually implemented green best practices. This suggests a fairly new trend and significant opportunity for growth in the green market.

### Figure 3. The Gap: Expect Growth in the Green Market

Source: Info-Tech Research Group

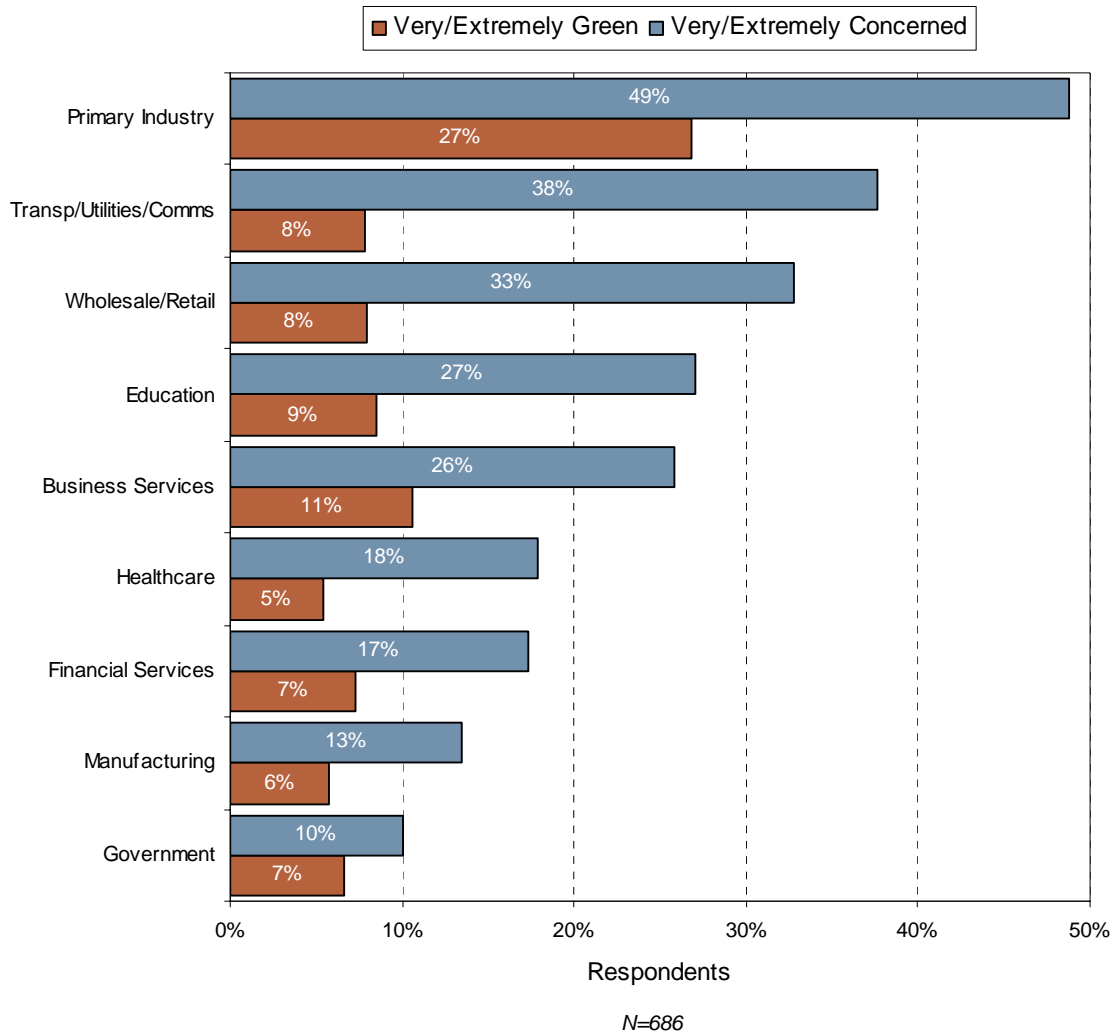


Looking at different industry segments we find that companies in primary industries are much farther along in both aspects of Info-Tech's Green Index (Figure 4 below). This is not surprising given that many of these enterprises are likely green as a result of government regulations and environmental protection laws that require compliance. Ironically, government agencies are at the bottom of the list in terms of green IT and are certainly not leading by example. Although lack of budget is certainly a factor in terms of implementing green initiatives in the government sector, this should not affect level of concern, which is the lowest among all industries. Without a doubt, the private sector is far ahead of the public sector in terms of green IT.



**Figure 4. Primary industry Leading the Green Index**

Source: Info-Tech Research Group

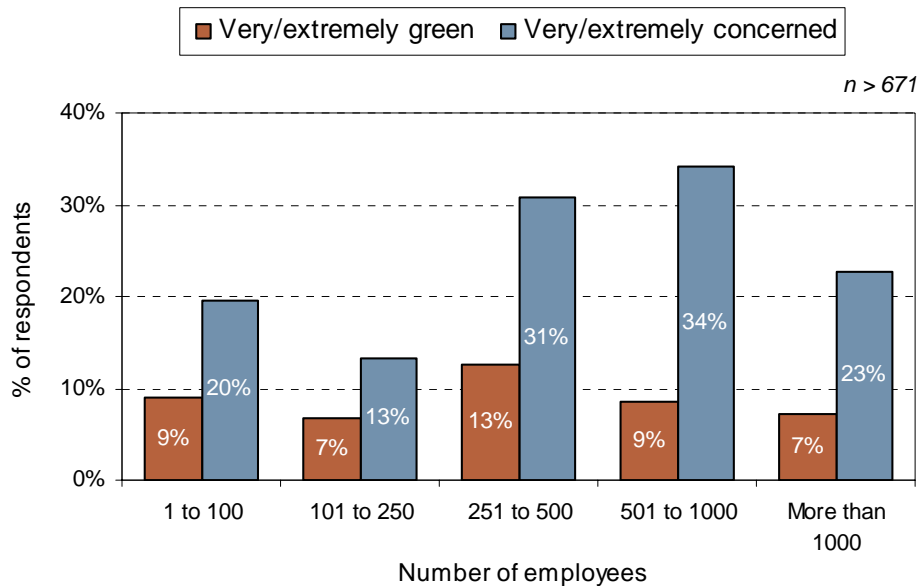


Transportation/utilities/communications is an energy-intensive segment and, not surprisingly, ranks high on the list. In the US, many utility companies are leading energy conservation initiatives by offering incentives to data centers such as rebates for buying energy-efficient servers and implementing virtualization. Wholesale/retail is also concerned about green IT, which makes sense since they (retailers) are consumer-facing and have a substantial upside in terms of customer goodwill as a result of a greener corporate mandate. Surprisingly, manufacturing – a highly energy-intensive sector – ranks extremely low in terms of green IT and concern for energy-related issues.



### Figure 5. Mid-sized Enterprises More Concerned and Greener

Source: Info-Tech Research Group



Mid-sized enterprises are leading the charge when it comes to green IT (see Figure 5). Specifically, we see the highest concern for green issues and more adoption of green technologies among enterprises with between 250 and 1,000 employees.

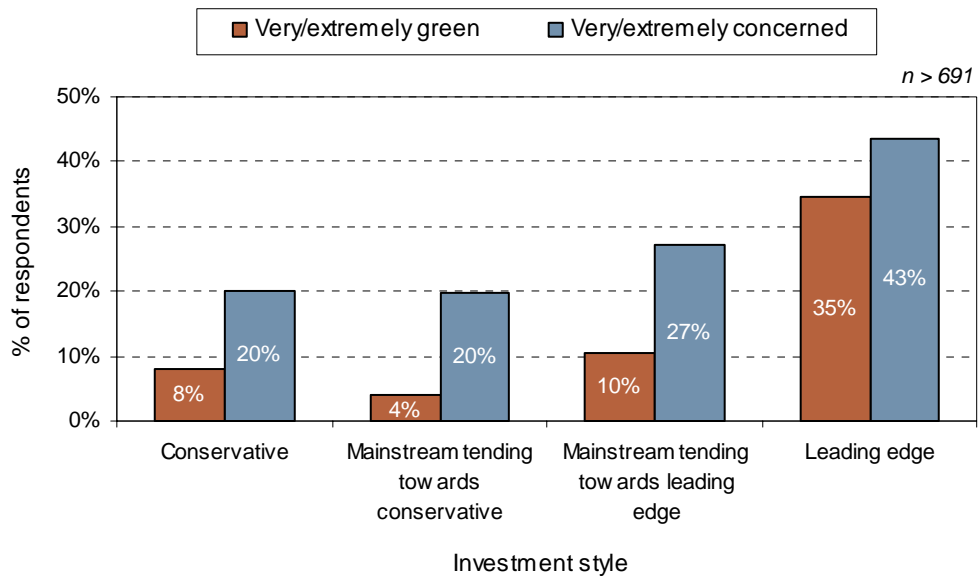
This is consistent with Info-Tech’s other findings about this segment. In fact, mid-sized enterprises lead adoption in several green strategies, including budget allocation for green IT projects, data center energy optimization, rightsizing IT equipment, and green considerations in sourcing and RFPs. This sweet spot could be a result of several factors. Specifically, mid-sized enterprises:

- » Are large enough to feel the sting of high energy costs – concern for green spikes at the 250-employee mark.
- » Have enough budget to invest in innovative new strategies – 26% of enterprises with between 250 and 500 employees have budget allocation for green IT projects compared to only 13% across all other segments.
- » Are still not so large that corporate inertia and bureaucracy hampers adoption plans – mid-sized enterprises are more likely than other demographics to adopt green technologies and tactics.



### Figure 6. Green is a Leading Edge Strategy

Source: Info-Tech Research Group

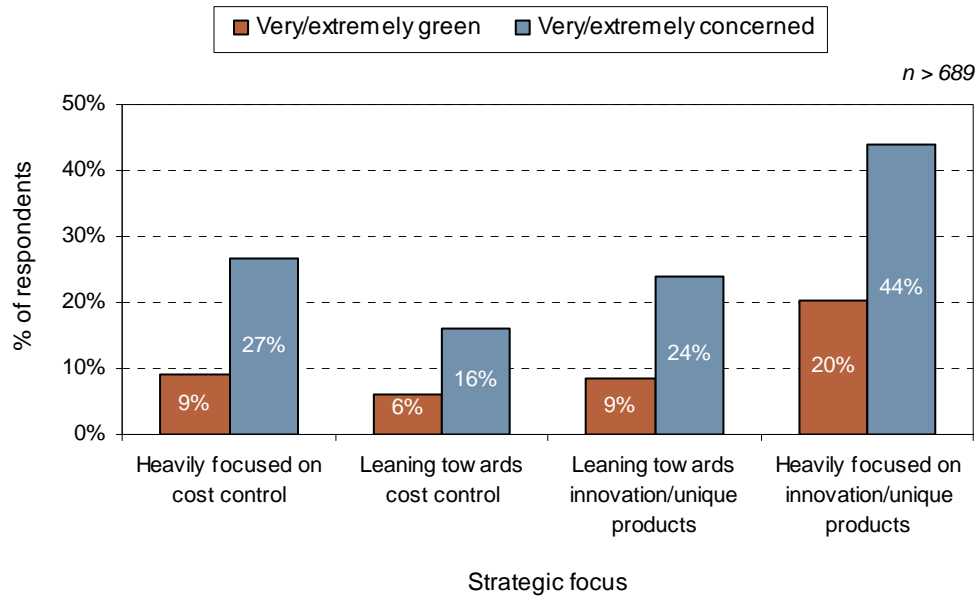


Enterprises that self-identify as being leading edge are twice as likely to be concerned about energy and the environment and are more than three times as likely to have already implemented green best practices (see Figure 6). As discussed earlier, this is highly indicative that green as a strategy is still very much in the early stages of the adoption curve. As leading edge enterprises begin to demonstrate proven results, other enterprises will also take notice and drive up adoption rates.



**Figure 7. Innovators and Cost-cutters Concerned About Energy Efficiency and Environment**

Source: Info-Tech Research Group



Not surprisingly, those enterprises that have an innovative focus are far more likely to be concerned about green and implementing a green strategy (see Figure 7). However, those with a heavy cost control focus are also taking interest in greener IT (27% very/extremely concerned). This helps bolster the argument that what is good for the environment is also good for the bottom line. Many green initiatives, such as optimizing data center energy efficiency, rightsizing IT equipment, print optimization, and virtualization are also established cost-saving strategies.

## Info-Tech Predicts

Info-Tech expects continued interest in green IT strategies and significant traction among those initiatives that both reduce waste and reduce cost. As enterprises begin to translate concern for green into practice, we expect higher spending in many leading areas, such as data center design, virtualization and consolidation, print optimization, and system management tools.



Green considerations will also make their way into sourcing and procurement decisions. As enterprises become more green savvy, they will also hold vendors accountable and put pressure on them to meet similar green mandates. In terms of industries, this may help push enterprise adoption of green up the channel from wholesalers and retailer back to manufacturers. Given the demand for green technologies, Info-Tech anticipates a significant increase in the amount of green-focused products and marketing collateral from vendors. We are already seeing this from many of the large players, including Dell, HP, IBM, and Sun.

## Key Takeaways

**Waste = cost.** Among those enterprises that classify themselves as wasteful (wasteful/very/extremely), 20% are not at all concerned about energy efficiency or environmental responsibility. This is shocking given that, on average, energy costs comprise 20% of data center spending. These enterprises are likely throwing away significant amounts of money. As an example, a typical 20kW server rack running efficiently (optimized power and cooling) can consume approximately \$25,000/year in energy; however, that same rack left to run in a sub-optimized state could run up an annual bill of over \$40,000 (assuming an electricity cost of \$0.09/kWh). Other examples of waste include unused server and storage capacity, inefficient power supplies, sub-optimized switches and routers, wasted server room floor space, wasted paper and toner from sub-optimized printing, and unnecessary equipment purchasing due to poor asset management.

**Power and cooling capacity issues loom large.** Most data centers that exist today were not built for the heat densities and power consumption that is typical of current server and storage solutions. Capacity planning as well as power and cooling redundancy are becoming increasingly important as enterprises deal with brownouts, physical space limitations, and equipment that is running hotter than ever. For more on data center power and cooling best practices, read the ITA Premium notes, "[Greening the Data Center: Improve Energy Efficiency](#)," and "[Greening the Data Center: Reduce Cooling Requirements](#)."

### Greening the Data Center

For more about green data center strategies and best practices in power and cooling, refer to the following ITA Premium research notes:

- » "[Greening the Data Center: Improve Energy Efficiency](#)."
- » "[Greening the Data Center: Reduce Cooling Requirements](#)."
- » "[Greening the Data Center: Take an Asset Lifecycle Approach](#)."
- » "[Eight Ways to Save on Electricity Bills](#)."



**Getting the budget for green initiatives is a critical first step.** Currently only 16% of IT leaders have this type of allocation. What is encouraging, however, is that even small IT shops and those with a heavy cost control focus are getting spending room for green projects. Fully 16% of enterprises that classify themselves as having a heavy cost-control focus are still allocating budget room for green projects (same as the overall average), as are 11% of enterprises with IT budgets less than \$100K.

**Many TCO models are inaccurate.** Revise traditional TCO thinking and incorporate energy costs into lifecycle planning for IT assets. Power and cooling costs as well as asset disposal costs are often left out of TCO calculations. However, in most cases, the ongoing operating cost of data center technologies far exceeds the acquisition cost. For more on the various aspects of green planning throughout the lifecycle, read "[Greening the Data Center: Take an Asset Lifecycle Approach](#)," from ITA Premium.

**"Green" is a marketing strategy.** There are strategies and principles that companies use for "green marketing." With the growing popularity, vendors will be quick to put a green spin on whatever they can and repackage existing solutions as green. Beware of vendor hype and vet all solutions based on their proven benefits and applicability to the enterprise.

## Bottom Line

Info-Tech's Green Index looks at how concerned IT leaders are about energy efficiency and environmental responsibility, as well as, the current level of "green" in enterprise IT. The 2007 index highlights a large gap between what enterprises are thinking about green IT and what they are actually doing.

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