

## eWeek - Understanding "Green Tech"

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"Green" talk is everywhere. Toyota will sell you a green car to get to your green office where you can power up your green Apple laptop and access your green Earth friendly webmail while being green by not printing a document at all but instead viewing it as an online document. Green technology abounds, all apparently providing the means to avoid something horrid happening to those polar bears that were pictured on slide three of the nice vendor's PowerPoint presentation.

But what exactly, aside from being a cheerful alternative to beige, does "green" actually mean in relation to technology? What does it deliver and why do you need it?

It's worth starting with what the problem is that needs to be solved - with just a passing reference to the polar bears. The problem is that the demands human activities are placing on Earth's systems exceed the capacity of the systems to deliver, while still remaining in an overall equilibrium conducive to the existence of a wide range of complex life (including us and the polar bears). Today, we have collectively exceeded the recharge rate of so-called renewable resources, while destabilising ecological systems that act as counterbalances to natural and anthropogenic pollutants. The problem might more often be expressed in economic terms, or with vague references to "carbon emissions" but that is the simple crux of it. We must understand the problem if we are to successfully solve it.

The solution to that problem is also simple: We need to reduce the net global impact of humanity's presence. How much? Enough to leave sufficient planetary carrying capacity for other species to get a reasonable share, and enough for the recharging capacity of various systems to be able to renew resources that we all (including industry) rely upon, such as fresh water, forests and a viable atmosphere. In terms of climate change, current estimates call for an 80% overall net (not "net per capita") reduction

in greenhouse gas emissions over 2000 levels, achieved in a smoothly sliding scale by 2050. Climate change is really only one issue by the way, and in reality is in addition to other ecological degradations and resource shortages that we must eventually deal with such as fish stocks and so on.

"Green" however currently connotes "dealing with climate change" rather than dealing with these other problems. So a reasonable definition for "green tech", if we are to have one, is "technology that contributes in a measurable way towards achieving the necessary reductions in green house gas emissions". In fact, you have there the most important RFP question to pose to any vendor of "green technology" - "Please describe specifically how your proposed solution will demonstrably contribute to a net decline in GHG emissions, and what will the net GHG reductions be over the entire lifetime of the solution?".

For technology to be considered "green" it ought to do one of two simple functions. Firstly, it might provide a method for reproducing the outcomes of currently performed and highly polluting activities, while reducing their environmental impact. For example simple video conferencing and telepresence are "green tech" because they enable effective multi-modal communication over long distances and in doing so provide an alternative to business travel. Secondly, it might provide the specific means to accurately measure emissions, while actively tuning them down through machine speed management decisions thus achieving maximised efficiency. Smart electricity grids for example are enabled through the profligate use of embedded technology throughout the grid structure.

Everything else might be best described by a colour label you probably won't find on a standard Dulux paint chart; "Dubiously Green". Dubiously Green is smack between the colour Red (i.e. "Not Green"), the colour called "Green Wash", and the colour called "True Green". Examples of Dubiously Green technologies are

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"power efficient servers", "green data centres" and "efficient, virtualised storage arrays". Efficiency is indeed a technique for lowering energy demand (no less august bodies than the IPCC and the IEA say so), however by itself it is not "green". Indeed, in the absence of controlling mechanisms that limit overall net emissions, efficiency efforts are most likely to result in increased demands for services, resulting in a net increase in energy use and therefore a likely net increase in emissions.

In order to understand this new label called "green technology" we need to be mindful of the problem we're trying to solve. It must be recognised that this isn't a pleasant problem to have to face up to, but it is rather an important one.

So we need to get the solution right and to do that we need to be clear what is real and what is marketing distraction. We also need to recognise that this is not a problem that technology (much as we all love shiny technology) can address without structural change to the ways in which markets, businesses and individuals manage their activities. What technology can do is to get us as close as we can to the experience of the status quo, in a fashion that scales to a higher economic participation rate than we have today amongst the world's population, while enabling accurate measurement of our ecological footprint and the means to "manage it down". Green technology – it's very simple really isn't it?

### About Quocirca

Quocirca is a primary research and analysis company specialising in the business impact of information technology and communications (ITC). With world-wide, native language reach, Quocirca provides in-depth insights into the views of buyers and influencers in large, mid-sized and small organisations. Its analyst team is made up of real-world practitioners with first hand experience of ITC delivery who continuously research and track the industry and its real usage in the markets.

Through researching perceptions, Quocirca uncovers the real hurdles to technology adoption – the personal and political aspects of an organisation’s environment and the pressures of the need for demonstrable business value in any implementation. This capability to uncover and report back on the end-user perceptions in the market enables Quocirca to advise on the realities of technology adoption, not the promises.

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca’s mission is to help organisations improve their success rate in process enablement through better levels of understanding and the adoption of the correct technologies at the correct time.

Quocirca has a pro-active primary research programme, regularly surveying users, purchasers and resellers of ITC products and services on emerging, evolving and maturing technologies. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

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