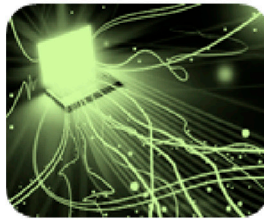


Turning Austerity into Opportunity

Growing IT opportunities in Sustainable Clients



camboium



Introducing the IT for Sustainability (IT4S) market opportunity

This paper has been written for the leaders of innovative, Information Technology (IT) businesses in the UK. It brings positive news as it identifies a large and growing market opportunity that can be invested in with confidence.

This market is the use of IT to support Sustainability as a business strategy. This segment called IT for Sustainability (IT4S), is still at an early stage but major global pressures mean it is set for massive growth. It is a market, where innovative IT vendors can obtain significant revenue growth.

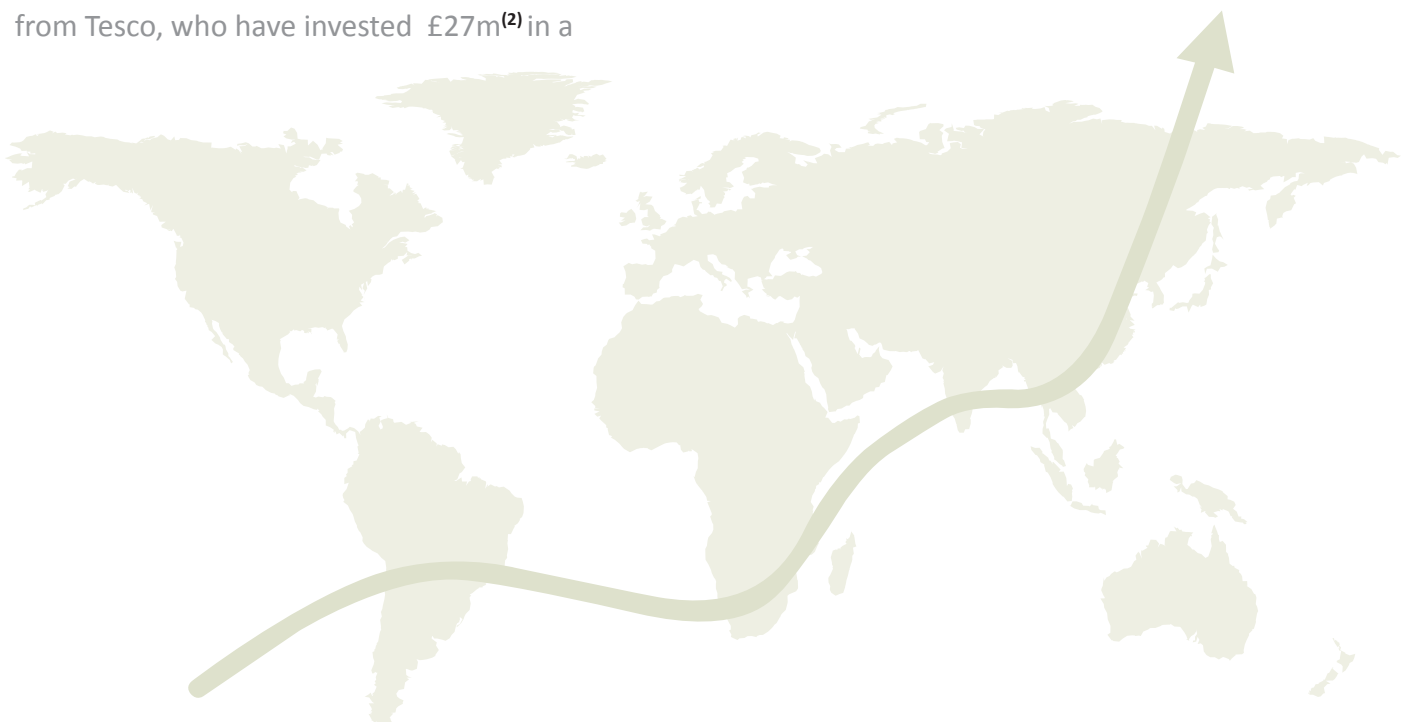
The UK IT4S market is growing at least three times faster than the wider IT market⁽¹⁾. It currently has low barriers to entry and its growth is driven by compelling legislation that is catalysing big investments in hardware, software and services by large organisations. This market will be worth nearly £10bn by 2020.

Specific examples of the scale of this investment in both the private and the public sectors come from Tesco, who have invested £27m⁽²⁾ in a

new software infrastructure and the Ministry of Defence, who have invested £105m⁽³⁾ in energy efficiency innovation. Both of these investments are related to the management of only one sub-segment of this massive market, specifically their need to comply with legislation to reduce greenhouse gas emissions and to save energy.

In this paper we explain how IT suppliers can profit from this IT for Sustainability (IT4S) opportunity and offer the reader the opportunity to discover:

- The importance of Sustainability to business
- What do major businesses mean by Sustainability?
- The crucial role of IT as an enabler of Sustainability
- Powerful forces driving growing demand for both Sustainability and IT
- The size of the market opportunity
- How to capitalise upon this market opportunity



The importance of Sustainability to business

For leading UK based businesses such as: Aviva, BP, Marks & Spencer, RBS, SSE, Unilever, Virgin and Vodafone to name but a few, their interest in sustainability is a vital business issue.

For these organisations and many others like them sustainability is about:

- maintaining growth in shareholder value
- ensuring their long term profitability
- recruiting and retaining key talent
- retaining investor confidence in their business
- responding to the rapidly changing demands of their customers
- protecting their brand and reputation

For some it is also about accessing new markets and developing profitable new revenues by providing innovative products and services to help their customers to become more sustainable.

So, if you plan to sell your technologies or services to organisations like those above in the coming decade, then understanding why sustainability is a key boardroom agenda represents essential new knowledge. It is a vital business agenda that your sales and marketing teams must understand if they are to be successful and deliver sustainable revenue growth for your company from these clients.



What do major businesses mean by Sustainability?

The notion of sustainable development was defined by the Brundtland Commission, a subsidiary body of the United Nations in 1987. It was defined as:

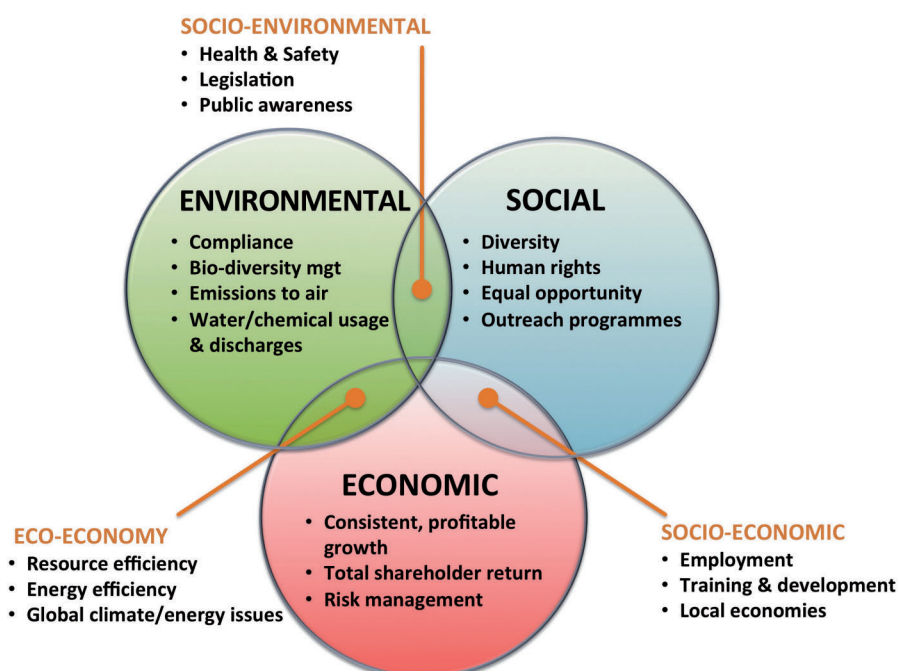
“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”

Subsequently, this notion has been extended for application by business to the adoption of an approach to developing sustainable business strategies in the Triple Bottom Line (TBL) model (see diagram below).

This model recognises the importance of delivering sustainable economic value to shareholders in the form of a rising share price, by focusing upon the bottom line profit that is generated. However, it also considers that if a business is to be sustainable in the longer term it needs to consider its performance in terms of the equivalent environmental and social “bottom lines”.

The adoption of sustainable business models therefore requires organisations to move away from making investment decisions based solely upon narrow metrics of value, i.e. the financial or economic bottom line. Instead sustainable businesses focus upon creating long term value for their key stakeholders, e.g. consumers, employees and investors, by including a consideration of environmental and social impacts in combination with the traditional economic measures.

It is the adoption of this Triple Bottom Line approach that characterises the development of a sustainable business or organisation. This Triple Bottom Line is often summarised as a co-ordinated business strategy that ensure that the business aligns its goals with positive outcomes for People (Social), Profit (Economic) and the Planet (Environmental).



The crucial role of IT as an enabler of Sustainability

What is the role of IT in supporting the wider innovation needed to enable businesses to advance their Sustainability goals as per the definition on the previous page?

Sustainable innovations can provide a business with a number of benefits that are not only underpinned by a solid economic business case, but that also improve the environmental and/or social impact of the organisation.

The demand for IT and these innovations is being driven by the desire of some businesses to become more efficient in their use of key resources such as energy or raw materials with the objective of reducing their operational costs or to ensure security of supply. Other organisations are looking to reduce their environmental and social impacts to meet rising expectations of their key stakeholders such as customers or employees.

Many businesses are building new supply chains to capitalise on the significant market opportunities being created by the transition of the UK to a sustainable economy. The adoption of sustainability by business is itself a growth opportunity.

For suppliers of IT these new markets offer the opportunity to significantly grow their sales if they can help businesses to become more sustainable by helping them to achieve their goals in areas such as:

- Asset Management
- Buildings / Estate Management
- Corporate Social Responsibility
- Employee Engagement
- Energy Efficiency
- Factories and Production Lines
- Supply Chain Management
- Sustainability Reporting
- Transport and Logistics
- Waste Management

For some time IT innovators have been aware of the importance of ensuring that the assets within the IT function of a business have reduced environmental impact. This has been traditionally called “*Green IT*”. However, the need to deploy more intelligence outside of IT in order to support the businesses’ wider Sustainability goals is a much bigger opportunity. This is the deployment of new IT for Sustainability (IT4S) and it constitutes a major new IT market.



Sustainability demands more IT

It is not overestimating the case for additional IT investment to state that without it the Sustainability goals of any enterprise will not be achieved.



Effective sustainability management by business requires the measurement of many new business variables, such as the use and consumption of resources and their associated Environmental impact. It requires a business to understand and monitor the opinions of its key stakeholders as expressed via traditional channels as well as the new Social media.

The achievement of sustainability goals is therefore dependent upon not only collecting this data, but then analysing it to derive new insight and to take action, for example, to optimise the use of a specific resource such as energy. These new measurement, monitoring and management regimes all create additional demands for new information via the collection, process and analysis of increasingly large data sets (big data).

There is also an opportunity for IT to play an extended role alongside the deployment of new sustainable innovations within an enterprise e.g. the deployment of a renewable energy investment such as a local wind or solar power installation.

This role commences with the collection of the key data that underpins the business case for investment in the innovation. IT will be essential during the implementation of the innovations for example via the collection of real-time data to optimise the operational performance.

It is this application of intelligence through the use of more information technology that will increase the effectiveness of other innovation efforts to make energy generation, building management or transport and logistics more sustainable or 'smarter'.



Powerful forces driving growing demand for both Sustainability and IT

The growth of interest in Sustainable Innovation business, and with it the growth in IT4S, is being catalysed by three compelling global megatrends:

- New **Economic** Realities
- **Environmental** Constraints
- Increasing Expectations of Businesses to be **Socially** Responsible

New Economic Realities

The dynamics of global economic power is shifting from West to East and North to South. These shifts are creating global major structural trends that are affecting all organisations, but especially businesses. They include the following:

Global Population Growth

Since 1950 the global population has risen from 3 billion to 7 billion today and is expected to reach 9 billion by 2050. This means that the population of the planet will have trebled in 100 years. Most of this population growth will happen in Asia and Africa. Growing populations will continue to migrate from rural areas to live in cities. India already has more than 100 cities with a population of greater than 1 million people, whilst China has over 200⁽⁴⁾.

Demand for Commodities

This growth in population in rapidly growing economies is being accompanied by the rapid emergence of a more affluent middle class, whose aspirations for traditional Western lifestyles and consumption are creating new global competition for resources, such as energy and raw materials.

The number is very big. For example China (currently growing at 8.95% in the last quarter

alone) will have 200 million new cars on its roads by 2020. Whilst this is clearly a massive market opportunity, it has other implications. Just consider the numbers: 200 million cars means 1 billion new tyres and 45 billion litres of fossil fuel for each year that they are in operation. This leads us onto our next megatrend.



Environmental constraints

Due to the massive expansion in population and associated demand, the planet's ability to support an ever growing population is under growing pressure and is arguably unsustainable.

Finite Resources

Growth in global population and consumption since the industrial revolution has led to a position where demand for resources for many commodities is starting to outstrip supply. This applies to all natural resources, oil, water, phosphates and the list goes on.

In addition to raw materials and energy, many other natural resources are coming under increasing pressure as supply struggles to keep pace with demand. Other examples include:

- Water scarcity – increasing everywhere, even in the UK
- Agricultural land is declining according to the United Nations
- Declining biodiversity and loss of species

This demand for resources has resulted in massive price volatility of many commodities and obtaining access to some of these resources has been a constraint in some sectors e.g. rare earths.

Climate Change

The UN and most national Governments, especially those signatories to the Kyoto protocol, believe that this change in the Earth's Climate is being accelerated by man's consumption of fossil fuels.

These governments are legislating to mitigate the negative risks of the impact of these changes. An additional motivation has been to reduce dependence on carbon based energy generation.

The UK Government is taking a world leading role in this transition to a low carbon economy. This is forcing businesses to measure, report, and optimise their consumption of energy and their emissions of greenhouse gases.

All of these factors are becoming widely discussed and it is clear that, due to the expansion in population and associated demand, we are beginning to bump up against the carrying capacity of the planet.

This awareness leads on to the final megatrend – the pace and pressure of social change.

Increasing Expectations of Businesses to be Socially Responsible

The social pressures on businesses to act ethically or responsibly are growing. These pressures are stemming from a variety of stakeholders exerting their influence on businesses either directly or indirectly. Stakeholders include Consumers, Employees, Government and Investors all of whom are closely scrutinising the behaviour of businesses. These stakeholders care about how businesses conduct themselves in

carrying out their day-to-day operations and how they generate their profits. These influences are being demonstrated by:

Consumers Demand Sustainable Goods and Services

A recent YouGov market research poll ⁽⁵⁾ indicated that over 70% of UK consumers have the aspiration to live sustainable lives. More and more consumers expect their retailers and product providers to provide sustainable products for them to buy. Most major retailers, following early initiatives such as Marks and Spencer's Plan 'A' programme are rising to this challenge motivated by the power of the green consumer.

Sustainable Supply Chain Pressures

Retailers are expecting leading consumer packaged goods (CPG) suppliers to create and provide them with products that are sustainable. As a result the design, development and marketing of sustainable products are a key business driver in CPG businesses.

This pressure is not limited to the businesses to consumer (B2C) supply chain. B2C companies wishing to be authentically sustainable are now passing this aspiration on to their suppliers. As a result business to business (B2B) companies supplying to CPG businesses are now feeling the same pressures to become more sustainable.



CARBON DISCLOSURE PROJECT



FTSE4Good



Investors want Sustainable Business Investments

Major groups of corporate investors such as the Carbon Disclosure Project (CDP) comprising 655 institutional investors holding US\$78 trillion in assets require transparency into the Environmental, Social and Governance (ESG) policies of the companies that they invest in. This interest stems from a growing belief that sustainable businesses generate more sustainable shareholder value.

Retail investors wish to buy ethical and sustainable investments. For example 53% of UK retail investors believe that taking social and environmental issues into account in financial decisions has an important part to play in the UK's economic recovery, YouGov 2011⁽⁶⁾.

Political Pressures for Sustainable Business

Governments are taking action to incentivise / force companies to adopt more sustainable business models and social responsibility. This is resulting in the growth of regulatory regimes that require more transparent and public reporting of the Environmental and Social impacts of a business.

This trend is particularly evident in the UK, where examples of this pressure to act responsibly include energy efficiency legislation such as the CRC Energy Efficiency Scheme and EU Emissions Trading Scheme (EUETS) as well as mandatory Greenhouse

Gas Emissions reporting for all businesses listed on the main market of the London Stock Exchange⁽⁶⁾.

The Rising Power of Social Networks

Rapidly growing social networks offer easy access to directly communicate with massive populations worldwide. Consequently these networks provide Stakeholder groups with a powerful mechanism with which to hold businesses to account and to act responsibly and sustainably.

The use of social networks to impact business are visible on a regular basis. Recent examples have included CEOs (RBS) refusing incentive bonuses or being pressured to resign (Barclays) or rapid declines in share prices due to stakeholder sentiment – BP (Post – Macondo disaster in the Gulf of Mexico 2010).

Increasing Risk to Reputation and Brand

Due to these stakeholder groups and their increased ability to exert significant influence via social media, annual general meetings, new legislation and most tangibly at the till in their local supermarket, business has to 'walk the walk' and not just 'talk the talk' in terms of their commitments to be more Sustainable.

Failure to meet these commitments risks significant damage to corporate reputation, brand and ultimately shareholder value.



The size of the market opportunity

A number of studies have estimated the size of these market opportunities. Let us first consider the market opportunity at the Global level.

The Global market opportunity

In 2010 researchers at HSBC made an assessment of the size of the global market for low carbon innovations, which reduce the use of fossil fuels and associated carbon dioxide (CO₂) emissions.

This market is only part of the broader sustainable innovation market as it does not include investment in innovations that cover other environmental and social goods and services, e.g. raw materials and water usage. HSBC estimated this segment alone would be worth \$2,238 bn by 2020⁽⁷⁾. Within this market it was further estimated that energy efficiency innovations would account for \$1,300bn in the same time frame.

In 2012 the UK Department of Business Innovation and Skills (BIS) produced research⁽⁸⁾, which estimated that the market for low carbon and environmental goods and services (LCEGS) in the global market was worth £ 3.3 trillion (\$4.95 trn) in 2010/11 and would rise to £3.85 trillion (\$5.77 trn) by 2014/15.

The UK market opportunity

Organisations based in the UK are being motivated to adopt new technologies to improve resource efficiency and to reduce environmental impacts in order to be compliant with new UK legislation. Successive UK Governments have maintained a globally leading policy and legislative position in their drive to promote the adoption of sustainability by business.

The structure of many of these UK statutes motivates action by business in order to reduce their tax burden or to protect their brands and reputations by encouraging transparency in company reporting. For example in June of 2012, the UK was the first country in the world to introduce mandatory greenhouse gas emissions reporting, impacting all companies listed on the London Stock Exchange⁽⁹⁾.

These additional legislative pressures are catalysing growth in the Sustainable Innovation market of the UK. In 2012 the UK Department of Business Innovation and Skills (BIS) produced research⁽⁵⁾ estimating that the market for low carbon and environmental goods and services (LCEGS) in the UK was worth £122 billion (US\$183 bn) in 2010 /2011. This will rise to £150bn (US\$225 bn) by 2014/2015.

IT is a key sub-segment within the Sustainable Innovation market. Recent research⁽¹⁾ by the authors of this paper, Cambium, has estimated that the IT market opportunity to reduce energy consumption and associated carbon emissions, which is only one part of **the bigger IT4S opportunity, will be worth \$9.74 billion by 2020. This represents an 11% compound growth on current levels and 3.5 times the growth rate of the UK IT market in 2012.**



The 4 Key Questions to capitalise on the IT for Sustainability market

For IT businesses that wish to capture their share of this important IT market it is essential that their sales and marketing teams find sales opportunities where their chances of success are maximised. Early successes in this market will be won one deal at a time by professional, effective sales people working in collaboration with creative marketers to promote a relevant proposition to the best audiences in their selected target market.

Although this sounds straightforward, it is more difficult to achieve in practice. New entrants to the IT4S market must answer four key questions to maximise their chances of early success.

1 Where is the best market opportunity for your sustainable IT product or service?

Sustainability and the adoption of sustainable business models is a relatively new business strategy. Consequently the best practices on how to execute effectively have been developed by early adopters and the wider understanding of these lessons is becoming more and more apparent to the wider market. As a result it is essential to begin by completing initial market research and assessment to find the best place for entry into this market.

2 What is your proposition for the chosen market?

Having selected your initial target market, the development of a winning and repeatable sales process will involve your sales and marketing team refining and tuning their value proposition based on experience. This iterative learning process involves discovering who is involved in the new buying coalitions that are involved in the procurement and selection of relevant innovations in your chosen target market segment.

In order to develop a scalable sales and marketing process as quickly as possible, it is essential that you develop a differentiated initial value proposition before investing in a major sales and marketing campaign.

3 Who are the most likely early adopter organisations and how to identify them?

Although already significant in size and growing quickly, the IT4S market is still at an early phase in the market's development. The value of IT in supporting Sustainable Innovation is not yet universally understood across the whole business market. Accordingly it is essential that sales and marketing teams are able to identify those markets and sectors that are early adopters of sustainability as a business strategy and therefore more receptive to a sustainable IT offering.

4 What do sellers need to know to sell effectively?

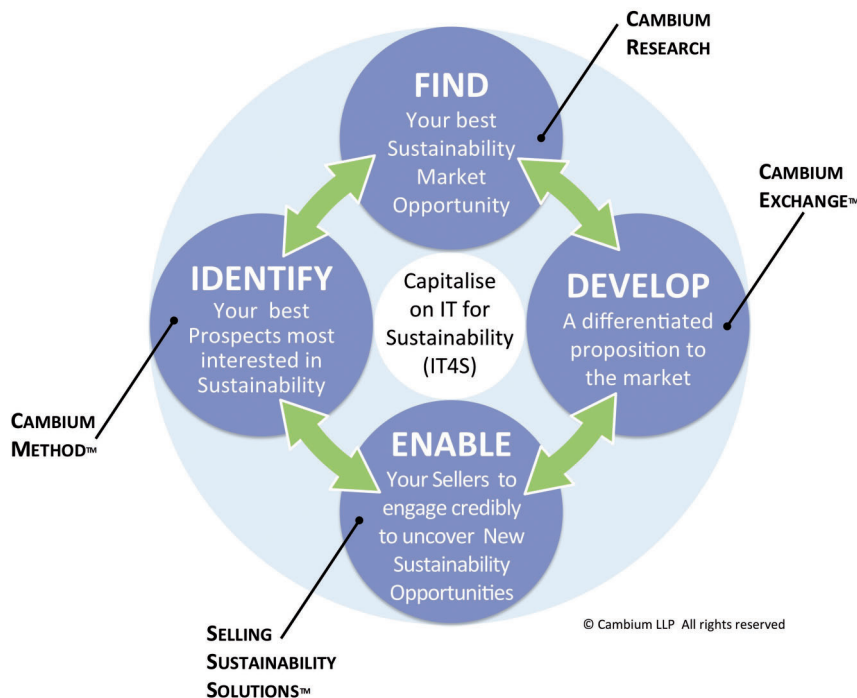
Having carefully researched a target market, developed a compelling proposition and identified a likely prospective client, even excellent sales and marketing teams that have been successful at selling products in other markets may not be successful.

The IT4S market is new with new prospective clients and audiences with new needs and motivations for investing in Sustainable Innovations. As a result your sellers need to understand these different dynamics and to acquire the required new skills and knowledge to engage effectively, perhaps outside their traditional contacts in IT. This potentially offers the additional benefit of earlier entry into new sales cycles as well as discovering new incremental sales opportunities.

As an IT4S market entrant you will need to enable your sales and marketing teams with this new knowledge quickly and effectively in order to maximise your early market success.

Experienced assistance to help capitalise upon this market opportunity

If you are interested in how your business can capitalise on the Sustainable IT4S opportunity, and need help to accelerate your access to this market, then Cambium can help.



Who are Cambium?

Cambium is a unique specialist consultancy based in the UK and launched in 2008. We use a combination of research, consultancy and training to help technology businesses with IT and Clean Technology innovations to accelerate their sales and capitalise on the opportunities as businesses seek to become more sustainable.

Cambium consultants typically come from a scientific, engineering or IT background with excellent skills in research, problem-solving, and collaborating with others to deliver success.

What makes Cambium different is that as well as bringing technical and analytical expertise, we also possess a core competence grounded in many years of successfully selling and marketing Information Technology innovations in business to business markets.

We use this experience and perspective to help our clients maximise their market opportunity. Our services are summarised below and are geared to ensure the success of our clients in the IT4S market. Our client list already includes leading UK IT companies such as HP and IBM.

So, if you are serious about capitalising upon the Sustainable Innovation opportunity, Cambium can help to accelerate your sales success.

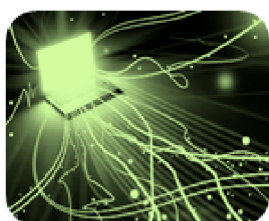
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Alternatively to find out more about us, please visit our website at: www.cambiumllp.com

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