

Green Means Business

Future-proofing the London Economy

London Sustainable Development Commission (LSDC)

The Commission was established in 2002 to advise the Mayor of London on ways to make London a sustainable, world-class city. The Commission is an independent body challenging policy makers to promote a better quality of life for all Londoners, both now and in the future, whilst also considering London's wider global impacts. In practice, achieving a better quality of life is about:

- Having access to quality education, jobs, services, housing and leisure;
- Living in an environment which is healthy, resilient and stable now and into the future;
- Living and working within a society which is democratic, just, engaged, diverse, responsible, supportive and vibrant;
- Being fulfilled, healthy and with sufficient personal resources to enjoy life.

Whether as individuals, communities, businesses or governments, our journey towards sustainability means we need to think about the social, economic and environmental impacts of everything we do. We must make the most out of available opportunities, designing out negative impacts and minimising them as a last resort. The Commission is made up of individual experts from the economic, social, environmental and London governance sectors. Commissioners give their time voluntarily, promoting sustainable development, embedding sustainability into London wide strategies, and helping make sustainability a meaningful and understandable concept for all Londoners.

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Green Means Business: Recommendations

Foreword

The London Sustainable Development Commission has been exploring the amazing potential of green entrepreneurs. We want to show the rest of the world that green business means great business and make London the global green capital. We already have form. London's green economy is currently growing at a much faster rate than the overall economy. We want to raise our collective ambitions and help accelerate the pace of that growth.

The green economy must be one of the biggest global growth sectors in the 21st century if we are to tackle the enormous challenges of sustainability. London's green economy already generates around £28bn per year for the capital. Some 9,000 businesses employing 160,000 people are driving a sector that is currently growing at a rate of 6% per year. In addition by 2035 the population of London is expected to rise by 1.5 million to around 10 million. We need to embrace that growth sustainably.

Our aim has been to identify emerging economic opportunities, unpick financial, legislative and organisational barriers and to develop specific, tangible actions and recommendations that will unleash the potential of London's green entrepreneurs.

London can truly pioneer a successful and cost effective transition to a low carbon, resource efficient economy. It has many inherent strengths that will help this process: the significant size of its own market; its world leading position in

**“Green
Entrepreneurs
are the people
that will enable
London to
become a
genuine world
leader in the
green economy.”**

—
Boris Johnson,
Mayor of London

financial and business services; it's world class Research and Development sector; and the stated desire of its national government to be 'the greenest government ever' and lead by example in the big global shift to a low carbon economy.

The Mayor of London has already set a series of ambitious targets for the capital, for carbon reduction, delivering decentralised energy; improving energy efficiency; reducing emissions from transport and tightening waste targets.



These are aimed at capturing the environmental and economic benefits of making London a low carbon city. However the step changes that are needed will not be achieved through policy and legislation alone. We need a movement that is also social and populist. We all need to do much more. We need to do things differently.

Green Entrepreneurs, whether working in their own companies or as part of a larger team, strive to actively change the market and inspire their customers into new behaviours whilst producing economic and social benefits for London. They are the ones who will generate the momentum away from business as usual. They will generate the highest levels of genuinely sustainable economic growth, whilst protecting the environment and creating the right, meaningful jobs for the future.

Great entrepreneurs don't always follow convention. They are mavericks. Daring to think beyond the status quo, experimenting with new ideas, approaches, processes and pathways. They constantly strive for better mechanisms of delivery, better business models and better solutions. Green Entrepreneurs are the people that will be vital in enabling London to become a genuine world leader in the green economy.

This report shows how important Green Entrepreneurs are for our collective success and sustainability. We show how London can and should support them to achieve our mutual objectives of a better

environment and a stronger economy that provides worthwhile, satisfying and purposeful employment for Londoners.

We are grateful to Futerra, Innovas, Thomson Reuters Point Carbon and to all those who have contributed to this report. We have been impressed by the passion, enthusiasm and commitment demonstrated by the talented people working in this area, and their willingness to donate their time and effort so generously en route.

This report is just the first step in a longer journey. Enormous global challenges lie ahead for all of us, from food security to climate change. As a global 'mega-city' London has a crucial role to play in navigating these interdependent and interconnected problems. We have begun to write a new narrative for business – that uses innovation and enterprise to truly serve both people and planet. In doing so we are convening a taskforce to take forward the recommendations in this report and we invite others to join us. The stakes could not be higher, but we are building on firm foundations. It is time to realise our bold aspirations and make London an exemplar for the world.

John Plowman

John Plowman
Chair, London Sustainable Development
Commission 2009-2014

Why this report and now?

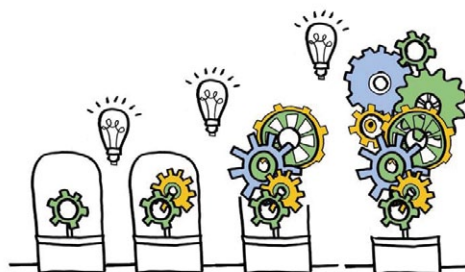
Our Work

The London Sustainable Development Commission's 'Green Entrepreneurs' work theme has been exploring the potential of green entrepreneurs. The aim has been to identify opportunities, unpick barriers and develop specific, tangible actions and recommendations to unleash the potential of London's green entrepreneurs.

Who Should Read this Report and Why?

This report is aimed at anyone with an interest in making London the greenest and best place to do business and who can help us to make this ambition a reality. This includes:

- Key stakeholders who are responsible for the policies and strategies that drive London forwards and who commission and fund green projects and initiatives e.g. the London Enterprise Panel
- Existing green entrepreneurs who will deliver these projects as well as entrepreneurs in other sectors who have the ability to diversify and exploit green opportunities
- Other partners across London and beyond who have the resources, skills and expertise to drive change e.g. investor groups, business incubators



The report contains a series of recommendations that, when implemented, will help to support potentially world-changing businesses and nurture nascent entrepreneurs, to transform the green economy in London and, in turn, the wider economy.

It also suggests that these recommendations will help London to achieve a growth rate above current projected forecasts in the Low Carbon and Environmental Goods and Services sector.



Executive Summary

The Green Economy is Driving Growth in the Global Economy

The green economy will be one of the biggest global growth sectors in the 21st century. Given our international challenges, such as climate change, it is necessary to stay competitive in the future and ensure London's reputation as the global green capital. London's green economy already generates around £28bn for the capital. Some 9,000 businesses employing 163,000 people are driving a sector that is already growing at a rate of 6% per year¹. This is changing the way we need to do business.

The Mayor of London has set a series of ambitious targets for the capital. These include a 60% reduction in carbon emissions by 2025, delivering 25% of London's energy through decentralized systems, improving energy efficiency of its buildings, reducing emissions from transport and ensuring the economic benefits of making London a low carbon city are felt by its citizens. The Greater London Authority (GLA) estimates that this will require around £40bn of investment to deliver and that current Mayoral programmes have the potential to attract up to £14bn by 2025, leaving a 'gap' of £26bn of investment to be galvanised by green entrepreneurs, the national government, international policy and markets².

“London's green economy is booming”

—
Boris Johnson,
Mayor of London

Our definition of a green entrepreneur is one who uses sustainable technology in their production of goods and services, as well as entrepreneurs who operate in specific “green” and social innovation sectors. Critical to their success is a passion for putting people and the environment at the heart of what they do. They take a business-like approach using their understanding of the marketplace or their access to finance for all stages of business growth. Green entrepreneurs are open to new technology, business models and finance mechanisms to develop sustainable and profitable businesses. ‘Green’ is used as a short hand throughout this report for both environmental and social innovation.

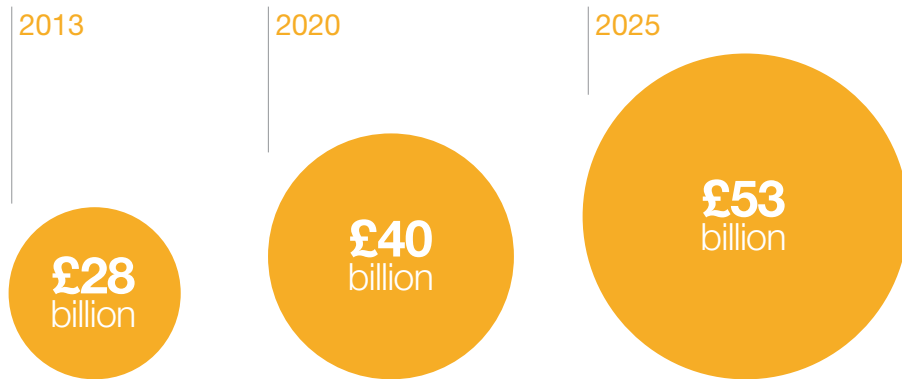
¹ London LCEGS sector study – Innovas (2011) and 2013 update kMatrix

² Thomson Reuters Point Carbon – Green Entrepreneurship in London – Barriers and Opportunities (2013) www.londonsdc.org/lcdc/greenentrepreneurship.aspx

Green Economy Potential

Current rates of growth indicate that the size of the Low Carbon & Environmental Goods & Services (LCEGS) sector in London will be £40 billion by 2020 and £53 billion by 2025 with an increase in employment of about 40,000³ jobs.

The forecast growth in London alone provides a wealth of opportunities for entrepreneurs. This forecast growth is based on a raft of legislation, policy and environmental targets stated by the UK Government, Greater London Authority and Mayoral directives as well as underpinned by EU directives. These targets are often not attached to distinct pathways and technologies, which leaves



Low carbon and environmental goods services — London

³ London LCEGS sector study – Innovas (2011) and 2013 update kMatrix

a great deal of flexibility and scope for entrepreneurs to develop new products, services and ideas which can be used to meet them.

Green entrepreneurs have themselves stated that there are a number of areas where they need support. A large-scale workshop convened by the LSDC and attended by a diverse mix of different stakeholders in the green economy identified these challenges:

1. **Finance for business growth and projects**
2. **Public policy and procurement**
3. **Developing skills and clarity of support – what is available, where it is and how to make the most of it**

The case studies and experiences of our green entrepreneurs featured in this report show how it is possible to take innovative ideas and get them into the market successfully. The difficulty they face however is that making a start in the market is one thing, obtaining the finance to ensure continuous commercial success is another. There exist great opportunities for the development of finance mechanisms, which enable green entrepreneurs to take their organisations from early stage to larger scale commercial success. The transition to a low carbon economy presents an exciting future with huge market opportunities.

Supporting the Green Economy and Green Entrepreneurs

There are already respected initiatives such as low carbon competitions and the London Leaders programme⁴. These are to be commended and expanded. The three priority themes with the most potential short-term impact were:

1. **Developing and strengthening the thread around the green sector**
Green entrepreneurs struggle to find the right information about business support and finance options quickly. Similarly potential procurers struggle to find accurate information with ease

studies on alternative or green products and services. Recommendations would include: The development of a web based portal to provide a coherent and comprehensive resource for both the green entrepreneur and those wishing to procure green products and services is essential. Any portal should be part of an existing platform such as the LEP web based presence rather than a completely separate entity.

“London is a hotbed of entrepreneurial activity”

—
Julie Walters,
UK president of the Entrepreneur's Organisation

⁴ See <http://www.londonsdc.org/londonleaders/> for more details

2. Development and expansion of green finance mechanisms

There is a lack of green focused finance options for those green organisations wishing to expand their operations and move from the early stage development and trialling of products/services to the next stage of business growth. London's position as a world leading financial centre combined with its history of developing and providing innovative finance solutions makes it ideally placed to develop new mechanisms. These should seek to meet the green entrepreneurs need for finance, adapt current mechanisms to be 'green entrepreneur friendly' and improve links to current providers and investors via a portal. The LEP is already convening and funding similar connections for businesses generally and is therefore the ideal partner to take this forward.

3. Collaboration on solutions

Early discussion and collaboration on major issues such as air quality should be encouraged to take into account involvement from a wide range of stakeholders including the public sector, academics, industry, the community and both green and conventional entrepreneurs.

Organisations such as the GLA and other stakeholders are well placed to take this recommendation forward as they engage across the board and have the wider city presence and knowledge required. The aim is to inspire, educate, develop co-operation, deliver green solutions and create wealth for London's people.

Extending our Ambition

The LSDC believes that London should have an ambition to achieve a growth rate in the Low Carbon and Environmental Goods and Services sector of 3% above the current projected growth forecasts for the sector and will work actively with London's businesses and stakeholders towards this. This would mean an annual growth rate of 9% creating annual sales in the Low Carbon and Environmental Goods and Services sector of over £69 billion by 2025. The opportunity for London's green sector to contribute directly to environmental improvement in London whilst simultaneously developing into a genuinely internationally leading sector, is a prize not to be missed. Indeed London's future depends on it!



Introduction

A Vision for Green Entrepreneurs in London

The green economy will be one of the biggest global growth sectors in the 21st century. In particular the emerging trend towards a circular economy where material outputs are designed to become inputs in other products, processes or services is very exciting. 'Closing the loop' is the future of business.

London itself is a significant market. It is a world leader in financial and business services, a world class research and development (R&D) centre and is the most important city economy in Europe. London also aspires to be a leader in the urgent global transition to a low carbon economy.

We want to show the rest of the world that green business means great business and to make London 'the' global green capital. London's green economy is currently growing at a faster rate than the overall economy. But we want to accelerate the pace of change.

At current rates of growth, London's low carbon and environmental goods and services sector is set to grow from £28 billion in 2014 to £53 billion in 2025. But we would like to see this growth increase further to give an annual market value of £69 billion by 2025 with the creation of an additional 100,000 worthwhile and meaningful jobs.

—
Green entrepreneurs will play a vital part in reaching this stretched target. We believe the recommendations in this report will help this become a reality.

What is a Green Entrepreneur?

Entrepreneurs are vital to economic prosperity, and London is one of the world's most entrepreneurial cities. Entrepreneurs are the people who come up with new ideas, conceive new opportunities, and who take on financial risks in order to turn those opportunities into new businesses. Our definition of a green entrepreneur is one who uses green technology in their production of goods and services, as well as entrepreneurs who operate in specific 'green' and social innovation sectors.

Critical to their success is a passion for putting people and the environment at the heart of what they do. They take a business-like approach using their understanding of the marketplace or their access to finance for all stages of business growth. Green entrepreneurs are not afraid to use new technologies, business models and finance mechanisms to develop sustainable and profitable businesses. 'Green' is used as a shorthand throughout this report for both environmental and social innovation.

—
London is a hotbed of entrepreneurial activity and the potential of London's green economy is huge. It is time to unleash that potential.

Why Green Entrepreneurs Matter for London

London's Green Ambitions

By 2035, the population of London is expected to rise by 1.5 million to around 10 million. Over the same time, the Mayor of London has set a series of ambitious targets for the capital, including⁵:

- A 60% reduction in London's carbon emission by 2025
- Ensuring 25% of London's energy is delivered through more efficient decentralised energy by 2025
- Improving the energy efficiency of London's homes and buildings
- Reducing emissions from transport
- Increasing carbon efficient waste and recycling infrastructure
- Capturing the environmental and economic benefits of making London a low carbon city

Why Green Entrepreneurs are Vital to London's Economy

Providing Innovative Solutions to Support Carbon Reduction

The carbon reduction target is a major ambition (and a real challenge). The Greater London Authority (GLA) estimates that this will require around £40bn of investment to deliver and that current Mayoral programmes have the potential to attract up to £14bn by 2025, leaving

“We need ‘energy miracles,’ in at least five areas, and in each of these areas we need at least two hundred crazy people who think their idea alone can solve this.”

—
Bill Gates

a ‘gap’ of £26bn worth of investment to be galvanised by green entrepreneurs, national government, international policy and markets⁶.

Approximately 80% of London's carbon emissions come from energy consumption and energy supply to our buildings, with the remainder coming from transport. Achieving our city's green ambitions involves thinking about how to solve these existing problems using new approaches.

—
Green entrepreneurs are people who have (or seek out) the knowledge, initiative, and resources to solve these problems or find innovative ways to bring existing solutions to market.

⁵ GLA (2014) www.london.gov.uk/priorities/environment

⁶ Thomson Reuters Point Carbon – Green Entrepreneurship in London – Barriers and Opportunities (2013) www.londonsdc.org/lscd/greenentrepreneurship.aspx

London is uniquely positioned to tackle these challenges and make the most of the opportunities they present, drawing on specific expertise in the capital and our inherent strengths as a dynamic economic centre:

- **Scale:** London is big enough to be able to deliver major low carbon programmes
- **Financing:** London is the world's largest global financial centre
- **Research and development:** there is a cluster of world class research institutions in and around the capital
- **Business services:** London is the world's largest legal and other professional & business services centre
- **Trading:** London is the leading global centre for carbon trading

What does the Green Economy Look Like?

Most studies of the green economy to date have focused on the Low Carbon Environmental Goods and Services (LCEGS) sector. This sector is split into three main areas⁷:

- **Environmental Goods and Services:** more mature sub sectors such as waste management and air pollution control

- **Renewable Energy Technologies:** a mix of mature and new and emerging renewable energy technologies such as wind, solar and biomass
- **Low Carbon Technologies:** mainly emerging technology areas such as alternative fuels and carbon capture and storage. These were previously considered to be on the fringe of the environmental sector, but are now key components of the emerging legislation and policies to deal with carbon emissions.

New and Emerging Areas of Green Growth

Whilst traditional and maturing LCEGS sectors are important, green entrepreneurs are everywhere, and the evolution of a growing circular economy has the potential to change the entire business ecosystem. New areas of innovation not yet measured in current statistics include London's cycling economy, car sharing, online platforms for taxis and low carbon vehicles, sellers of green investment products, community farms, the re-use, upcycling and remaking sectors, businesses using only local produce, 'unwanted food' redistributors, travel logistics and efficiency software solution providers and sustainable landscaping designers, specifiers and installers. These activities will eventually become seen as mainstream, as renewable energy technologies increasingly are.

⁷ Thomson Reuters Point Carbon, Green Entrepreneurship in London – Barriers and Opportunities (2013). www.londonsdc.org/lscd/greenentrepreneurship.aspx

Innovative green businesses operating in non-traditional sectors already growing here in London include:

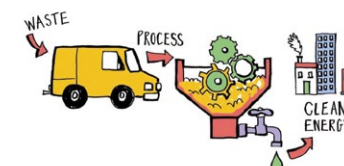
Fiona Disegni

Fiona is the founder of Rentez-Vous, a peer-to-peer fashion rental marketplace which lets budding fashion designers rent out their creations, raise their profile and receive feedback.



Arthur Kay

Arthur founded bio-bean® an award-winning green energy company. They recycle waste coffee grounds into advanced biofuels at an industrial scale.



Helen Steer

Helen runs the Grow Beer Project, a network of groups across London and beyond with an estimated 1,000 people growing their own hops to harvest and take along to a local brewing day in the autumn.



Moni Razzaque

Moni has designed and developed an innovative Ceiling Rose Motion Sensor which saves energy and is designed specifically for the domestic household.



For more details of these projects, see the London Leaders website⁸.

⁸ http://www.londonsdc.org/londonleaders/II_2013.aspx

London policymakers must therefore support all entrepreneurs that provide and produce goods and services that generate environmental, social and economic gains, whatever sector of the economy they trade in.

Entrepreneurs and SMEs drive innovation, growth and job creation. They are critical to the present success and future potential of efforts to support green growth and a useful indicator of measurable success.

A Growing National and Global Green Marketplace

In 2010 the London green economy was worth £23 billion and is likely to top £28 billion by the end of 2014. Over 9,000 businesses employing 163,000 people⁹ are driving a sector that is growing at a faster rate than the overall economy. The average projected annual growth rate for London's LCEGS through to 2020 is 6% – that's twice the expected rate of growth for the whole London economy.

This demonstrates the potential for stimulating green growth in London and we want London to be the low carbon capital that leads the way and makes the most of the global low carbon economy.

⁹ London LCEGS sector study – Innovas (2011) & 2013 update kMatrix

“London is an untapped green gold mine. We consume roughly £12 billion of energy each year and produce 22 million tonnes of waste. In sheer scale, these are both tremendous opportunities for new, low-carbon technologies. If you consider this scale along with London’s world-leading research institutions and financial and business services sector, the capital is tremendously well-positioned to take a lead in catalysing the green economy.”

—
Boris Johnson,
Mayor of London

London’s reputation as a financial hub puts it in a strong position in carbon finance and makes it an increasingly attractive location for the world’s green businesses to take advantage of high levels of growth.

In 2010 the UK green economy was worth £116 billion and is forecast to be worth £131 billion by the end of 2014. The global Low Carbon and Environmental Goods and Services (LCEGS) market was worth nearly £3.3 trillion in 2010 and by the end 2014 is estimated to grow to around £3.8 trillion¹⁰. These levels of growth provide a wealth of opportunities for green entrepreneurs.

London’s Green Economy 2010



Key Drivers of Green Entrepreneur Growth

There are numerous drivers that provide real opportunities for business activity in the green economy. These include EU directives, UK national and London policies with targets that are committed to. There are market opportunities created through increasing energy/resource costs and the reduction in the costs of green solutions. These drivers are described in more detail in the recent report by Thomson Reuters for the LSDC¹¹.

¹⁰ BIS update to LCEGS sector study kMatrix (2013)

¹¹ Thomson Reuters Point Carbon, Green Entrepreneurship in London – Barriers and Opportunities (2013). www.londonsdc.org/lscd/greenentrepreneurship.aspx

London's Commitment to Support Green Growth

Key Mayoral Programmes and Strategies

We know that London is in a great position to take advantage of the essential shift towards a low carbon economy. To accelerate the pace of change, the Mayor has published strategies on air quality, water, waste, climate change adaptation, and climate change mitigation and energy in order to ensure that we identify and seize opportunities and ensure our buildings, infrastructure and services are fit for green 21st century living and working. The key areas of policy focus are retrofitting London's buildings, cleaning London's air, resource efficiency, greening London and maximising low carbon growth through business support for green businesses.

As part of the strand of support for green businesses the Mayor's Low Carbon Entrepreneur competition has been launched and is already generating enthusiasm and activity around many of these specific areas. The competition has continued to flourish and in 2014 there were 350 entries from students at 37 universities and colleges across London.

“The potential of London's green economy is huge, and it is vital that we seek solutions that reduce London's wider [adverse] impact whilst providing jobs for local people.”

—
Deborah Meaden,
Entrepreneur and Dragons' Den Investor

Ideas from prize winners in 2014 included alternative ways of purchasing and funding renewable energy and a scheme to convert disused red telephone boxes into solar powered mobile phone charging stations. The first of these solar boxes went live in September 2014, which created a huge amount of worldwide interest, showing that the competition is not only promoting innovative thinking, it is also supporting active implementation.

London Enterprise Panel

The London Enterprise Panel (LEP) is the local enterprise partnership for London. Chaired by the Mayor, the LEP is the body through which the Mayorality works with London's boroughs, business and Transport for London, among others, to take a strategic view of the regeneration, employment and skills agenda for London. The LEP is also responsible for setting the strategic direction and priorities of the London 2014-20 European Structural and Investment Fund (ESIF), which is worth £600m to the capital, with funding expected to come on stream later this year.

The ESIF provides a real opportunity to support green entrepreneurs and businesses. The money is being managed by London's Enterprise Panel and we need to work together to ensure that these funds are used to support green businesses and to deliver green jobs and skills.

The London Leaders programme

The London Leaders programme is also helping to drive forward the green entrepreneurs' agenda. The programme, run by the London Sustainable Development Commission (LSDC) and supported by the Mayor of London, demonstrates the power of leadership, collaboration and innovation in tackling the sustainability challenges inherent in global cities such as London.



The programme seeks to identify and nurture some of London's most exciting and innovative new leaders in sustainable business and communities each year, with the aims of demonstrating sustainability in action, and the contribution of green entrepreneurs to the London economy and the city's quality of life. Since the programme was created, 80 London Leaders have been supported with training, pairing with an experienced and relevant mentor, a raised profile and provided with opportunities to network and connect with individuals or organisations well placed to help these green entrepreneurs succeed.

One recent success includes:

Dirk Bischof

Dirk set up One Planet Ventures to support green entrepreneurs through the HATCH Enterprise Incubator¹². The transition from an unsustainable, linear model of consumption to a circular one is a huge financial and environmental opportunity but new businesses need specialist support to scale-up.

For more information, see Dirk's London Leader profile¹³.



¹² www.hatch-incubator.org

¹³ <http://www.londonsdc.org/londonleaders/profile.aspx?ID=81>

Green Market Drivers: Growing Demand for Green Goods and Services

Global demand for green goods and services is increasing, providing business opportunities for London's green entrepreneurs. Key drivers of growth are:

- **Energy Efficiency and Energy Smart Technologies:** increasing costs of energy and fuel are driving investment into energy and process efficiencies.
- **Industrial Process Efficiency:** evidenced by the fact that the UK has over 1,000 participating entities in the EU ETS, accounting for approximately 40% of UK emissions.

- **Clean Energy** investment in renewable energy globally has been growing steadily.

A study commissioned by Global Action Plan (GAP)¹⁴, an organisation dedicated to changing people's behaviour to help the environment, identified future careers that GAP expects to emerge as a result of the growth of the green economy.

The growth in the green economy will create demand for jobs with a higher green element to them. Many of these are adaptations of traditional roles such as engineers being involved in resource/energy efficiency and mechanics dealing with electric, fuel cell and hybrid vehicles.



Green Entrepreneurs Opportunities

London is well placed to lead the country in securing green growth and has strengths including retrofitting buildings, energy smart technologies, carbon finance, low emission vehicles and renewable energies such as solar and geothermal. In a global city like London, entrepreneurs can and should develop products and services to cater to overseas, as well as domestic markets. At a workshop held in October 2013 attended by over 50 entrepreneurs and stakeholders, our green entrepreneurs identified four clear priorities on which partners across London need to work together¹⁵.

1. **Skills:** supporting people with a great idea but who lack business skills, attracting existing entrepreneurs into the “green space” and developing entrepreneurial skills at a younger age
2. **Finance:** ensuring that green businesses stack up financially and that financiers see the economic value in environmental gains
3. **Public Policy:** using public sector procurement to drive green market growth, better understanding the economic impacts of current government green policy, using legislation and regulation to stimulate green innovation, providing financial incentives for green businesses and learning from broader enterprise initiatives
4. **Clarity:** ensuring that entrepreneurs know who to turn to for support and that the support on offer is appropriate and tailored to the entrepreneur's needs

¹⁴ Global Action Plan www.globalactionplan.org.uk/catalyst

¹⁵ Green Entrepreneurs workshop – LSDC – October 2013
www.londonsdc.org/lscd/greenentrepreneurship.aspx

Green Entrepreneurs in Action

Why Become a Green Entrepreneur?

Some entrepreneurs start a green business primarily because of their passion for the environment. They see a need for a green solution and work toward creating a product or service that meets the need. They might be targeting a market niche, but the desire to do something good for the planet is what really drives them.

Others simply want to find new ways to do things, see a market need that also happens to have an environmentally-friendly solution, or have discovered that there is a “green” application to a product that already exists. Marketing an existing product to a new type of customer is a more incremental, less risky approach to green entrepreneurship.

How Green Entrepreneurs are Making a Difference

New businesses in the capital that are leading the way in the green revolution are those that adopt a sustainable business model, produce high quality goods and services that generate

economic, social and environmental benefits. Green entrepreneurs recognise that adopting sound social and environmental principles makes good business sense, demonstrating that sustainability and profit are not mutually exclusive, but rather mutually reinforcing.

Below we highlight some local green entrepreneur success stories. The businesses span a range of sectors, showing that green businesses do not simply operate in niche markets; they are a fundamental part of the overall economy. Critical to their success, and that of any green entrepreneur, are the following:

- A passion for the environment and for doing things differently; recognising that “business as usual” is not an option
- Taking a hard-headed approach to running the business, without compromising environmental ideals
- An understanding of the marketplace, including customers, competitors and suppliers, and how to differentiate their businesses from the rest
- The importance of sustained funding in the early years of the business, allied with need to make a compelling case to investors to persuade them that a green business makes a sound investment proposition

Steven Dring, Zero Carbon Food

Steven Dring founded Zero Carbon Food (ZCF) in 2012 with his friend and business partner Richard Ballard. ZCF utilises redundant underground spaces in London, producing leafy greens, herbs and micro greens using LED lights and hydroponics, producing fresh ingredients with a minimal carbon footprint. Steven's background includes working in management, project planning, operations, finance and sales for a major FTSE 100 logistics company, and he draws on all of these skills whilst working at ZCF.

Drawing on their food and produce backgrounds they decided that the only sustainable way to feed the growing population was to do it without using any carbon and by having no dependence on fossil fuels.

Steven was keen to be part of a business with a completely different culture and ethos to what he had worked in before. ZCF is a commercial business that aims to benefit Londoners, businesses, society and the environment as a whole.



Currently utilizing around 1,000 sq m of underground redundant space some 30 metres below London, the company's produce is for sale within the M25. All produce can be in people's kitchens within four hours of being picked and packed.

The production system uses 70% less water versus traditional open-field farming methods, year-round production negates seasonality and therefore the necessity to import produce, drastically reducing food miles for retailers and consumers. In addition to this, the crops are free from pesticides. The company intends to increase production space to 10,000+ sq m within the next few years. The firm also has the high-profile backing of renowned chef Michel Roux Jr.

Electricity is currently bought from a renewable energy supplier, but ZCF has committed to generating onsite renewable energy. A sump system currently pumps huge amounts of water out of the tunnels, water that is suitable for growing. Dehumidifiers also take water from the air expired by the plants, to be recycled.

To date, ZCF has secured some £750,000 of investment funding from a range of sources, including via the Crowdcube crowdfunding platform. The firm has also reached an agreement with County Supplies London, who can distribute ZCF's produce to thousands of sites across London. ZCF currently has four operational staff and has ambitious plans to increase to 20-25 over the next 3 to 5 years.

“Creating a green business has fairly obvious upsides for the environment, but the slipstream benefits are the key to a truly green economy. These are innovations in knowledge and technology, job creation and energy security. Policy makers need to accept that in order to move to a sustainable economy for future generations, behaviours have to change.”

—
Steven Dring,
Zero Carbon Food

Jamie Andrews, Loco2

Jamie Andrews set up Loco2 with his sister Kate in 2007. Their initial motivation came from both their interest in providing solutions to environmental issues, and their experience inter-railing through Europe. Whilst they loved their time exploring new countries and sampling different cultures, they were frustrated by the difficulties they faced in booking train tickets between countries and the lack of online information about low carbon alternatives to flying.

Loco2 is an online travel agent specialising in trains. It is an independent company, not affiliated with any one rail operator.

“Green entrepreneurship needs to become the norm if we are to transform our economy to meet the challenges of climate change. Wide-reaching innovation is needed across many sectors, and the government needs to encourage this shift by taking a nuanced, and well-informed approach to nascent low carbon industries.”

—
Jamie Andrews,
Loco2



Utilising innovative software, it sells train tickets to thousands of European destinations at the same price as booking directly and is now fully integrated with the UK, French, German and Spanish rail booking systems. The company's booking system provides instant ticket delivery via email.

It is the first independent company, not owned by a rail operator, to sell train tickets for destinations on the continent. Taking the train instead of flying can reduce the carbon impact of travel by as much as 90%, and the eight-strong team at Loco2 care passionately about helping people to reduce their travel carbon footprint.

Loco2 believes that the best way to change travel behaviour and combat global warming is to make the alternatives attractive, intuitive and easy to book. The company won the People & Environment Achievement award for responsible travel 2013.

The firm secured small seed funding in 2009, and in 2011 it received its first angel investment round with subsequent investment rounds based on the strength of commercial progress and expanding customer base. Loco2 has raised a total of £1m investment to date and has an annual turnover of around £5m, with profits generated as a margin on ticket sales. The company's current focus is on expanding its coverage of the European rail network and to include accommodation in their product offer.



Kresse Wesling, Elvis & Kresse

Kresse Wesling came to live in London in 2004, moving from Hong Kong. She had a keen interest in recycling and wanted to do something to help to reduce the large amounts of rubbish going to landfill across the capital.

Kresse met with the London Fire Brigade, who each year throws away around 10 tonnes of fire hose. Rather than see this material go to waste, she initially made

some belts and small fashion accessories and started selling them. A new fashion brand was born.

Elvis & Kresse now make fashion items and accessories out of around 15 different reclaimed materials. The company reclaims materials of character, and does anything it can to ensure their second life is as long as possible. All Elvis & Kresse items are hand-made and unique.



ELVIS & KRESSE

Hose is now collected across the UK and 50% of profits from the firm's Fire-Hose Range go to the Fire Fighter's Charity.

Elvis & Kresse also use other reclaimed materials in their range including tea sacks, coffee sacks, sail cloth and parachute silk. Elvis & Kresse make practical pieces: from the belt you leave on your favourite jeans to the bag you couldn't leave home without.

Since the company started trading in 2005, it has rescued over 200 tonnes of materials and has grown to a £500,000 per year business, employing four people in the UK in product design and material processes and eight people at its manufacturing base in Turkey.

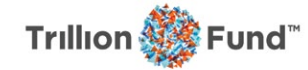
In order to grow their business, Elvis & Kresse have adopted a "no debt, no shareholders" philosophy, expanding organically, which gives them complete control over the direction of the business and the principles underpinning it.

"Innovation has to be where London and the UK focus, and green entrepreneurs are awesome innovators. Our businesses don't ONLY make money; green entrepreneurs kill two birds with one stone, building the economy and sorting out environmental issues. We're a win/win/win."

Elvis & Kresse's principle aim is to help to reduce waste in London. Being able to turn these waste products into profitable goods is what helps to sustain the business financially. The firm was recently approached by IKEA to design a range of home products.



Julia Groves, Trillion Fund



Julia Groves is Managing Director of Trillion Fund. She is an experienced founder and director of early-stage digital and renewable energy businesses.

The Trillion Fund was founded in 2011 by Dr Michael Stein and Phillip Riches to open up opportunities to profit from clean energy to everyone through crowdfunding. They had a big ambition: to help drive forward the \$1 trillion of annual global investment required to reach the scale of clean energy generation needed to prevent further global warming – and to give people good returns on their investment into the bargain.

Trillion Fund is a crowd financing platform for renewable energy projects. It features a number of ways to back projects: peer-to-project loans, bonds, debentures or shares in a local co-operative or fund. One of Trillion's objectives is to enable people to make their own financial decisions without a financial adviser or broker.

A Financial Services Authority approved business, it won interim permissions to operate as a peer-to-peer lending platform in March 2014 and began offering loans directly in June 2014, giving potential investors a range of options, from peer-to-peer loans, to traditional funds, to community share raises. Trillion is privately-owned and has nearly 7,000 members who are committed to investing in new, low-carbon sources of energy generation.

To date, Trillion has helped to finance nine projects in 2013 and 14 already in 2014. Typical yields on capital are between 7% and 9%. A key difference between Trillion and other crowdfunding platforms is that Trillion assists projects with PR, marketing and advertising. It has received three rounds of external investment to date, and is currently seeking to secure further funding. The investment focus is likely to remain on renewable energy, but low-carbon vehicles are expected to become another area of focus, particularly on fleet purchases.

“Green entrepreneurs are entrepreneurs whose innovations are sustainable and who start a new business or create a new market that provide solutions to our environmental challenges. This makes economic sense as well as ethical sense. All entrepreneurs should be green entrepreneurs.”

—
Julia Groves,
Trillion Fund

Green Means Business: Recommendations

The Green Economy is a Growing Economy

There is no doubt that the green economy is expanding rapidly in London. The forecast for further growth provides a wealth of opportunities for entrepreneurs, as well as larger companies. However this potential is still, dependent on a raft of legislation, policy and environmental targets stated by the UK government, Greater London Authority and Mayoral directives as well as underpinned by EU directives. These targets are often not attached to distinct pathways and technologies, which leaves a great deal of scope for entrepreneurs to develop new products, services and ideas which can be used to meet them.

Green Entrepreneurs are Vital to London, but Challenges Remain

Entrepreneurs are able to develop, test and modify new approaches quickly. The difficulty they face is that the financial support required to consolidate commercial success is often extremely difficult to obtain. There exist great opportunities for the development of finance mechanisms which enable green entrepreneurs to take their organisations all the way from early stage to larger scale commercial success.

The adoption of green technologies and services by entrepreneurs and procurers is not an easy task. Faced by a multitude of green options, or those claimed to be green, making the correct choice of products and services is difficult.

The ability to assess competing technologies, particularly where there is often a limited or no track record to base decisions on, and identify the right direction to take for that organisation is one which requires access to accurate information supported by relevant case studies. The green economy does not just depend on the development of new green products, services and approaches but also on increased understanding of them by the procurers.

This is no one way street, as the designers and developers also need to understand the issues facing potential procurers. Greater co-operation, at an earlier stage, between those with the problems and those with the potential solutions, will enable the entrepreneurs to develop more appropriate solutions in line with the customer requirements.

The case study examples included earlier in the report, show how it is possible to take innovative ideas and get them into the market successfully. These case studies not only highlight new products and services but also show that the green economy also provides opportunities for new ways of financing traditionally difficult and risky ventures. London is a world leading financial centre and has the capability to develop innovative and more appropriate financial instruments for green entrepreneurs in London.

Some key points from the case studies highlighted that green entrepreneurs have a strong passion and drive, combined with the leadership qualities needed to bring to the market innovative ideas that meet market demands and that may require behavioural change. They are not afraid to use new technologies, business models and finance mechanisms to develop sustainable businesses. They are also showing that creating profitable businesses does not mean having to compromise ethical and personal values.

There is a large amount of information available regarding business support including finance, however finding the right information which the green entrepreneur needs and can relate to is quite a challenge. Entrepreneurs in London have expressed the need for a more coherent approach to accessing this information in a time efficient way. They have also expressed the desire to network, work with and learn from their fellow entrepreneurs.

The fact that green approaches can be used in just about every area of the economy means that there is massive scope for the development and launch of new green products and services.

There is also a real need for a growth ambition to really drive change in London. This is because the current and forecast rates of growth in the sector will not deliver the ambitious targets set by the Mayor and GLA for 2025. Only an accelerated rate of growth through the agreement and implementation of a growth ambition will do this. London businesses are growing at a higher rate than the rest of the economy. Even so in their report “Green Entrepreneurs: Barriers and Opportunities”¹⁶ consultants Thomson Reuters Point Carbon identified an additional £26 billion of investment over and above that already committed will be required to meet the targets. This equates to an extra 3% per annum. These growth levels are achievable and indeed certain parts of the green economy such as renewable energies have seen far higher levels of growth recently. It has to be stated that these levels of accelerated growth will bring challenges, not least the need to train more people to deliver this growth for local companies, if the full potential of green entrepreneurship in London is to be realised.

Supporting Green Entrepreneurs and the Green Economy

There are good things happening such as low carbon competitions and the London Leaders programme, these are to be commended and expanded. The three main areas for recommendations that were thought to be of most interest and have the most impact in the short term are shown below.

1. Developing and strengthening the thread around the green sector

It is clear from the workshop and conversations with green entrepreneurs that there is a need to support and highlight the green economy. The development of a web based portal to provide a coherent and comprehensive resource for both the green entrepreneur and those wishing to procure green products and services is essential to supporting the high levels of growth required to meet current environmental and green targets would be one such avenue to follow.

The LSDC recommend that the information on any portal should include:

- Why the green sector is vital to the future development and well being of London
- Case studies of green entrepreneurs in London
- Case studies of green projects in London
- Details of a green “rich list” to raise awareness
- Case studies of green entrepreneurs and projects internationally
- Procurers best practice section for green products/services
- Hard factual analysis of the green sector and economy
- Links to appropriate business support
- Links to finance support – both green focused and standard business
- Links to other green focused sites

The portal should be part of a web-based presence such as that being created by the LEP rather than a completely separate entity. It should seek to inform, inspire and support green entrepreneurs and those wishing to procure green products and services and act as a focal point for the green support agencies across London.

¹⁶ Thomson Reuters Point Carbon – Green Entrepreneurship in London – Barriers and Opportunities (2013) www.londonsdc.org/lcdc/greenentrepreneurship.aspx

2. Development and expansion of green finance mechanisms

London's position as a world leading financial centre makes it ideally placed to develop green focused financial instruments and solutions. This is something that business support agencies in London have not always made the most of. The LSDC recommendations include:

- New mechanisms which match the green entrepreneurs need for finance and which can be obtained quickly and sustainably, are identified, supported and promoted. This might include green focused crowdfunding and investor networks
- Current mechanisms are adapted to be more green entrepreneur friendly taking into account market opportunity and risk
- Better links to finance providers and current finance mechanisms are developed and provided in a coherent manner which are accessible and understandable to green entrepreneurs
- As part of the first recommendation a portal is provided stating what is currently available, what is appropriate and providing relevant case studies

The development and support of a green finance broker service which can operate independently is recommended. The London LEP will be providing a linking service to general business and therefore could be the ideal partner to take this forward.

The impacts of implementing this recommendation will be felt immediately with short to medium term gains and increased confidence for the green entrepreneur. It should however be seen as a long term necessity, which underpins the development of the green economy over decades. This will help London meet the ambitious longer term environmental targets to which it is committed.

3. Collaboration on solutions

This area of improvement is that early discussion and collaboration on issues should be encouraged to take into account involvement from a wide range of stakeholders including the public sector, academics, industry, the community and entrepreneurs both mainstream and green. There should be a limited number of these issues per year at city and local level, they should be focused and they should, preferably, have finance support attached.

The process should be inspiring to green entrepreneurs, giving them the chance to develop and propose their ideas, and more importantly give them the chance to obtain business either with the main funding client, or the contractors likely to be given the task of implementing and delivering projects.

It should also provide the opportunity for entrepreneurs not currently engaged in the green sector to assess real green issues for themselves and, as naturally happens to entrepreneurs, see the opportunity to create wealth and employment from these opportunities.

Examples of this could include tackling issues such as air pollution around specific areas such as Oxford Street or energy efficiency in social housing in specific estates in local authority areas or in reducing/reusing waste from retail outlets in central London. One such successful collaboration has been by the Danes who had a rolling programme in the 1970s based around initially energy generation, then energy efficiency and then energy distribution which led to the development of the wind industry, biomass, improved housing designs and extensive district heating systems.

There are already a number of competition based processes for green solutions; these are to be commended and it is recommended that they are expanded and built upon. The Greater London Authority and other stakeholders such as Local Authorities, housing associations and Business are well placed to take this recommendation forward as the solution engages with all the key stakeholders and has a wider city presence and knowledge required. The aim is to inspire, educate, develop co-operation, deliver green solutions and create wealth for London's people.

“As more entrepreneurs gravitate towards the city, this opens up more opportunities for networking and peer-to-peer learning, increasing its appeal as a place to start a business.”

—
Julie Walters
President of the Entrepreneur's Organization

Extending our Ambition

The LSDC believes that London should have the ambition to achieve a growth rate in the Low Carbon and Environmental Goods and Services sector of 3% above the current projected growth forecasts for the sector and will work actively with

London’s businesses and stakeholders towards this. This would mean an annual growth rate of 9%, creating annual sales in the Low Carbon and Environmental Goods and Services sector of over £69 billion by 2025.

Current Forecast Growth for the LCEGS Sector in London up to 2025 — BIS (2013).

Years	2011-12	2014-15	2019-20	2024-25
Market Value (£m)	£25,418	£29,734	£39,528	£52,649

The LSDC believes that there should be an extended ambition for growth in the sector to help London’s green sector develop into a leading one internationally. This extended ambition uses a figure of an additional 3% growth overall per year for the period from 2014-15 to 2024-25

a period of 10 years. The LSDC recognise that it is ambitious but consider it is realistic and achievable as it takes into account the increased level of activity that is needed within the sector to support the global transition to a low carbon, resource efficient economy.

Extended Ambition for Growth in the LCEGS Sector in London up to 2025 — Innovas Consulting (2014).

Years	2011-12	2014-15	2019-20	2024-25
Market Value (£m)	£25,418	£29,734	£45,456	£69,619

This could increase the potential size of the sector in London from £52,649 billion to £69,619 by 2025.

Summing up: Green Means Business

The green economy is growing quickly and is seeing some genuinely innovative and sustainable approaches being developed and successfully launched. Green entrepreneurs are at the heart of this change and it is important for the economic and environmental well being of London that they are encouraged and supported. However the urgency and scale of change is nowhere near enough given the pressing complexity of our environmental and social challenges.

The LSDC feel that the recommendations above will support green entrepreneurs to deliver the faster growth of the green sector that is required to meet the ambitious targets set by London and demanded by the planet. Supported financially long term, this will enable London’s green entrepreneurs to flourish and create wealth and employment for London’s people.

This is an incredible opportunity to demonstrate that truly great, successful twenty-first century businesses can help tackle some of our most intractable problems. That business can do well by doing good. That being green really does mean business. And that London can and should be cheer leading this change for the better.

“This report makes clear Green Entrepreneurs will play an important part in the future of London’s economy. Supporting small businesses is a key priority for the London Enterprise Panel and we are taking forward projects to improve access to finance and a web signposting tool for businesses support that London’s green SMEs will hopefully use to develop and grow to their full potential.”

—
Stephen Howard,
London Enterprise Panel Member
(and Co-Chair of its SME Working Group) and
Chief Executive of Business in the Community

Next Steps: Green Entrepreneurship Roundtable

The LSDC would like to work collaboratively with others in London and set up a round table of key stakeholders, from the public and private sector, small and large business, established and new start-up businesses to innovation hubs – those that can help develop a route map to take forward these recommendations and identify what needs to happen. The LSDC is committed to working on this agenda and has pledged to further develop its London Leaders programme to help showcase green entrepreneurship and innovation in London.

What can you or your organisation commit to or pledge?

If you would like to get involved in the roundtable the LSDC would like to hear from you.

London Sustainable Development Commission

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lsdc@london.gov.uk

Other formats and languages

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Greater London Authority
City Hall, The Queen's Walk
London SE1 2AA

Vietnamese

Nếu bạn muốn có bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

Chinese

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Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείσθε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.

Turkish

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Hindi

यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

Arabic

إذا أردت نسخة من هذه الوثيقة بلغتك، يرجى الاتصال برقم الهاتف أو مراسلة العنوان أدناه

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਖਤਾ ਕਰੋ:

Urdu

اگر آپ اس دستاویز کی نقل اپنی زبان میں چاہتے ہیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

