

# Your location for Advanced Rolling Road Test Cell 2 Manufacturing in the UK

***“Where Essex leads, the  
rest of the country follows”***

David Cameron, UK Prime Minister

**INVEST**  
Essex

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Essex County Council

# Why Essex?

Essex has a large and growing advanced manufacturing sector and is a leading UK and European hub for the manufacturing of . . .

- automotive
- aerospace
- electrical
- ICT
- computer, electronic and optical products
- machinery and equipment

Companies establish their operations in Essex to take advantage of five key benefits . . .

Essex Fact File . . .	Year	Value
Population	2013	1,416,400
Size of economy-gross value added (GBP millions)	2012	30,852
Economic growth (%)	2008 - 12	6.71
Number of advanced manufacturing companies	2013	3,775
Employment in advanced manufacturing	2012	40,916
Number of advanced manufacturing students <sup>1</sup>	2012/13	2,400
Key hubs for advanced manufacturing	2013	Basildon, Braintree, Brentwood, Harlow, Thurrock & Southend

Sources: UK Office for National Statistics, Eurostat, HESA

1: Students enrolled in engineering & technology and computer science courses

## Size of the sector

3,775 companies in the advanced manufacturing sector in Essex – the second largest concentration in the UK<sup>1</sup>.

Large scale companies include Ford, e2v, IPECO, Proctor & Gamble, CNH, Selex ES, Unilever, Musto, Raytheon, BAE Systems, O-I Manufacturing.

Source: 1. WAVTEQ based on NOMIS BRES

## Supply of talent

40,916 people employed in advanced manufacturing – the second highest concentration in the UK<sup>2</sup>.

2,400 students enrolling each year in engineering & technology and computer science courses<sup>3</sup>.

Strong university-industry collaboration; innovation programmes.

Source: 2. WAVTEQ based on NOMIS BRES  
Source: 3. WAVTEQ based on Higher Education Statistics Agency

## Superb access to UK and European markets

Part of the London, Cambridge, Essex innovation hub.

Direct proximity and access to London only 30 minutes away.

Excellent domestic and European connectivity to both road and rail links.

Access to European and global markets, with over 190 international locations served from our airports, more than Barcelona, Berlin, Dublin, Manchester and Warsaw.

3 major ports – Port of Tilbury (London), London Gateway and Harwich International Port.

## Major cost savings

Up to 24% labour cost savings compared to London, Antwerp, Berlin and Toronto<sup>4</sup>.

Source: 4. WAVTEQ

## Excellent location solutions

Strong advanced manufacturing clusters offering a variety of industrial development opportunities, including bespoke units, land and an Enterprise Zone with standing planning permission and business rate discounts.

# Home of innovation

Essex has a proud tradition of innovation and is home to a large number of technology companies such as e2v, BAE Systems, Raytheon and Gardner Aerospace who are established global leaders in their field.

The county has the skills, business infrastructure and collaboration networks to support research and development among small, medium and larged sized businesses within a dynamic innovation community.

## Supplying the space programme

Based in Chelmsford is e2v, the world's leading space imaging company. e2v is a leading global provider of innovative technology solutions for high performance systems across a range of specialist markets.

e2v has been trusted to design and deliver CCD and CMOS imaging sensors and sub-systems for over 150 space missions by the world's largest space agencies, including NASA, ESA, JAXA, CSA and most recently ESA for the Rosetta comet chasing mission.

A billion pixel "camera", technically known as a focal plane array, made by e2v, was launched into space in December last year as part of the Gaia European Space Agency space observatory. It is on a five-year mission to produce the most detailed map of the Milky Way ever produced, allowing astronomers to determine the origin and evolution of our galaxy.

## Multi-award winning EcoBoost Engine

Ford is the biggest motor company in the UK, with seven locations and over 550 dealerships.

The Research and Development Centre in Essex works on new engines, commercial vehicles and transmissions. It is home to over 3,000 engineers and extensive R&D facilities, including high speed and special surface tracks.

It is here that the award winning Ford EcoBoost engine – which fits on a sheet of A4 paper – was developed.

The engine was named International Engine of the Year three years running, from 2012 to 2014. This is the first time that not only the same manufacturer, but the same engine, has won the award three years on the trot in the awards 16-year history!

## Technology driving down cost

Selex ES based in Basildon, a Finmeccanica company, it is an international leader in electronic and information technologies for defence systems, aerospace, data, infrastructures, land security and protection and sustainable 'smart' solutions.

Selex ES have recently created a Digital Building Operating Systems solution called Di-BOSS™. Di-BOSS is the next-generation Digital Building Operating System Solution that optimizes energy consumption to save money and increase security without sacrificing comfort.

Di-BOSS continuously commissions data from multiple operating systems, floor-level occupancy, and ambient and forecast weather conditions.

The technology has already delivered proven cost benefits. Rudin Management Company, Inc. saved nearly £578,060.96 (\$929,000) in twelve months by implementing strategies identified through Di-BOSS™ at their 345 Park Avenue building in Manhattan.



Images, top to bottom . . .  
Selex ES's Digital Building Operating Systems solution called (Di-BOSS™)  
Ford's award winning EcoBoost engine  
Image courtesy of e2v's sensor technology



# Abundance of talent

Essex has the second largest advanced manufacturing cluster in the UK, with 3,775 companies and 40,918 people employed.

### World class universities

Essex has 2 universities with 2,400 students enrolled in engineering & technology and computer science related degrees each year – giving investors access to a highly talented, young workforce.

**The University of Essex** is placed in all major university rankings including the Academic Ranking of World Universities 2013, The Times’ World University Rankings 2013-2014, and the QS World University Rankings 2013. It offers fully-funded Knowledge Exchange Place-ments which allow Masters students to work on compa-ny projects related to their course.

**Anglia Ruskin University** offers leading teaching, knowledge, expertise and facilities to support the growth of start-up or multinational companies. Invest Essex provide linkages between universities and com-panies.

World renowned Universities in Cambridge and London provide a further pool of high quality graduates within 30 minutes of Essex.

### Helping you to innovate

The Essex Innovation Programme (EIP) helps companies, both established and new, to develop and exploit their creative and innovative commercial development ideas. All free of charge.

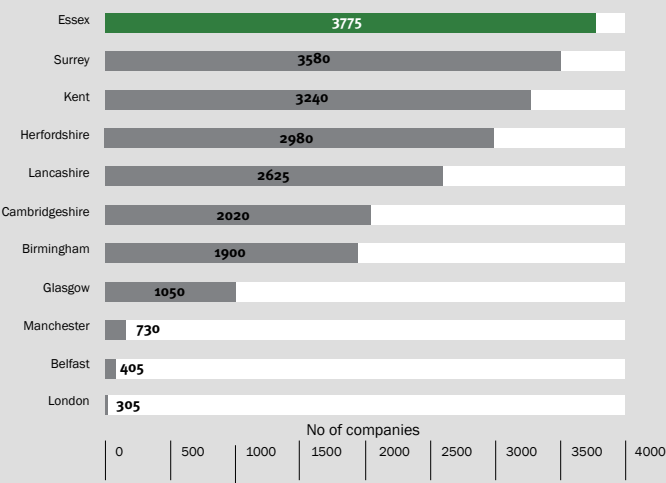
EIP’s team of experienced private sector business professionals work one-on-one with companies and teams to help them to develop and grow.

### Investment aftercare

INVEST Essex offers a range of support services to new and established investors, ensuring businesses can sustain growth and maximise profits through the medi-um and long term.

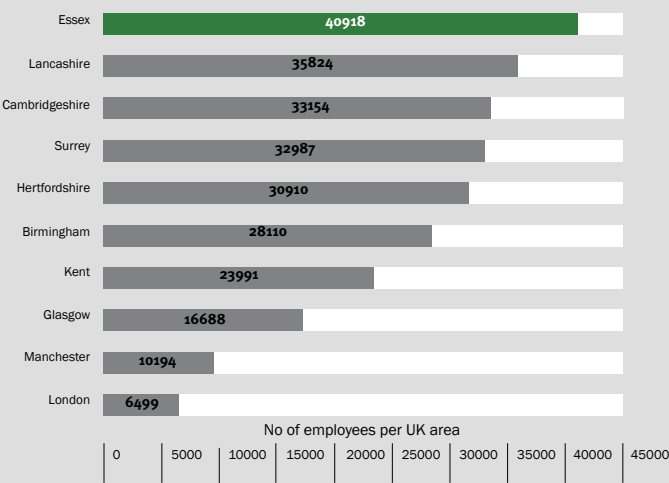
We provide confidential advice on critical business issues such as property and finance, as well as tailored support packages around workforce skills development, as well as introductions to trusted local suppliers and business professionals. INVEST Essex will aim to ensure your manufacturing business can readily tap into the relevant resources to drive successful growth.

Number of advanced manufacturing companies by UK areas (Councils)



Source: WAVTEQ based on NOMIS BRES

Number of advanced manufacturing employees by UK areas (Councils)



Source: WAVTEQ based on NOMIS BRES

# Major cost savings

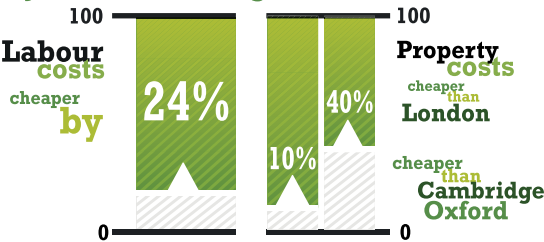
In comparison to rival UK advanced manufacturing centres, businesses in Essex save up to 24% on labour costs when operating a typical R&D test centre.

## Cheaper industrial property

There are major cost saving benefits to be made from locating operations in Essex compared to surrounding areas such as London, Oxford and Cambridge. Per square metre, Essex is 40% cheaper than London and 10% cheaper than Oxford and Cambridge.

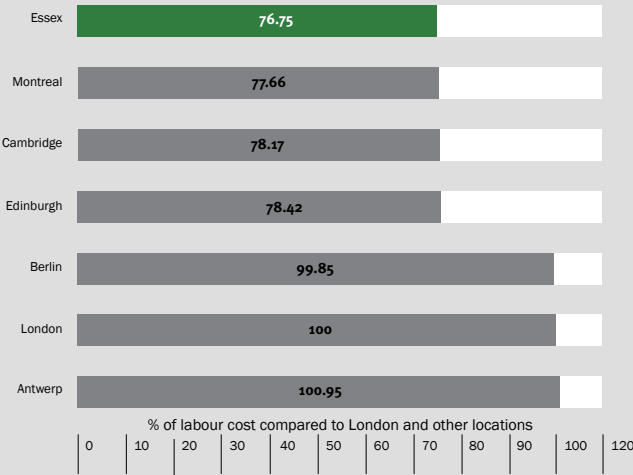


## Major cost advantages



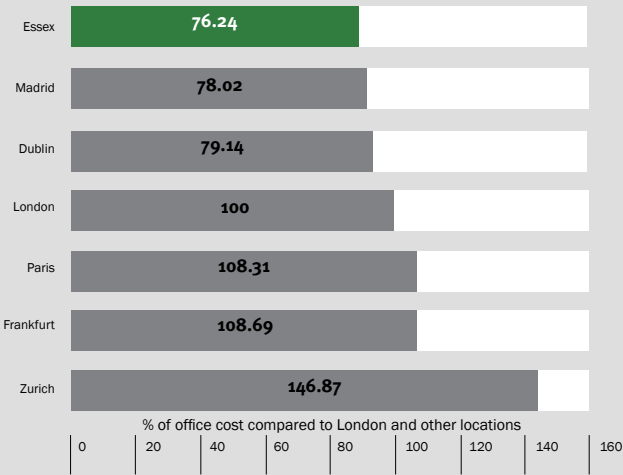
(Source = WAVTEQ 2014; Bidwells Business Space Databook)

## Labour cost comparison for a 50 person electronics R&D centre, 2014 (London =100)



(Source = Wavteq 2014)

## Office cost comparison, 2014 (London = 100)



Source: WAVTEQ 2014

# Access to European markets

Transportation and logistics is a key magnet for advanced manufacturing companies to invest in Essex. Essex is home to two major airports; the UK's 4th largest airport, London Stansted and one of the UK's most recently developed, London Southend.

It is also on the doorstep of London City, only 30 minutes by train, and within an hours drive of London Gatwick and London Heathrow.

Essex is better connected than almost any other location in Europe with over 180 international destinations served from airports in and around Essex.



**Location of Essex - showing doorstep airports, London Stansted and London Southend, and proximity to London.**

## Number of direct international destinations served (2014)

Location	No of International destinations
Essex	190
Madrid	115
Manchester	102
Barcelona	101
Berlin	99
Dublin	87
Warsaw	62
Budapest	60
Birmingham	56
Glasgow	50
Belfast	13

Source: OAG World Flight Guide 2014. Only includes Airports within 50 miles (80 kilometres) of the location.



2018 will see the opening of the Crossrail service, which will link Essex directly to Canary Wharf, Heathrow Airport and major rail stations Liverpool Street and Paddington.

Crossrail will have a beneficial impact on individuals and companies around Greater London by providing better access to the capital. It will provide strategic interchanges for local, national and international business and leisure travellers.



# Excellent location solution

**INVEST Essex** can assist your company conduct a full site and property search in Essex.

**Skyline 120** has outline planning permission for warehouse and industrial units. This provides flexibility to meet a variety of warehouse space requirements from 2,000 to over 60,000 ft<sup>2</sup> (185 to over 5,500 m<sup>2</sup>).

Skyline 120 also offers the flexibility to deliver bespoke office buildings to meet individual occupier requirements. The complex is situated in a highly accessible location close to the junction of the A120 and A131, providing fast access to Stansted Airport, Chelmsford, the M11 and the national motorway network.

## Gateway Canvey

Located in South Essex, adjacent to the Thames Enterprise Park and London Gateway. The Freehold development site has a gross area of 21 acres/8.5 ha.



## Pre-let opportunities

**Harlow Enterprise Zone** occupies a strategically significant site between London and Cambridge, with its proximity to London Stansted Airport making it a premier business location.

Harlow can offer perhaps the most competitive location in the south east of England, so close to London. Harlow Enterprise Zone provides . . .

- 51 hectares of development opportunity
- Refurbished buildings ready for occupancy in early 2015
- Easy access to London, Cambridge and Stansted Airport
- Simplified planning regime, often not requiring a planning application
- Business rate discounts
- Superfast broadband



Main Image - Skyline 120

# What companies are saying about Essex

*"Essex has proved beneficial in terms of recruiting the high calibre of staff Ford need. Dunton, for example, had very specific requirements for engineers with power train expertise when it became a centre of excellence. Many of the skills were available locally. We also find that the Essex location encourages suppliers, contractors and other partners to co-locate here."*

Oliver Rowe, Ford Britain Public Affairs, Ford

*"Today, a high proportion of our technical, sales and management teams are graduates, and the potential links with the University of Essex and the technology community clustered around mid-Essex give us access to the right people."*

Nigel Clark, Group Financial Director and Company Secretary, CML Microsystems

*"The company has a strong heritage in this area so it means that there is a core of key technical skills and knowledge to draw on ... And our links with universities in Essex and in the East of England provide another valuable resource. We're running a number of important projects and programmes through strategic partnerships."*

James Baker, Director of Technology and Engineering Services, BAE Systems

## Major investors in Essex ...

**MUSTO**

**BAE SYSTEMS**

**Raytheon**

**OLYMPUS**

Your Vision, Our Future

**Gardner**  
AEROSPACE

**FläktWoods**

**Ipeco**

**e2V**



**Selex ES**

A Finmeccanica Company

**Visteon®**



## Contact INVEST Essex

INVEST Essex provides free business growth and research support, property searches and solutions, assistance in establishing networks, guidance on alternative sources of finance, and recruitment linkages.

We act as a single point of contact to help identify the right contacts in local government to address infrastructure, utilities, transport networks, planning and other start-up/operational issues.

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