Machine Vision in the United Kingdom

Mark Williamson
Director – Corporate Market Development
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AGENDA

► The United Kingdom
► The UK Economy
► UK Manufacturing
► UK Machine Vision Market
► Machine Vision Manufacturers
► Culture and the Irish difference
► The Future
► And Finally .....
Our mission is to provide the users and developers of imaging technology with competitive advantage by adding value in the supply of quality components, expertise and support.

- STEMMER started in 1972
- Imaging business split off in 1982
- UK Company started in 1997 as Pinnacle Vision
- 18% Compound Growth
- Grown through acquisition and organic growth
  - UK was first acquisition in 2004
- Over € 6 million of stock available for next day delivery
- Manufacturer of CVB
THE UNITED KINGDOM EXPLAINED

- UNITED KINGDOM ?
- GREAT BRITAIN ?
- ENGLAND ?
- IRELAND ?
- BRITISH ISLES ?
THE UNITED KINGDOM – A COUNTRY OF COUNTRIES

Northern Ireland (Northern Irish)

Scotland (Scottish)

England (English)

Wales (Welsh)
The United Kingdom of Great Britain and Northern Ireland
WHERE IS GREAT BRITAIN

The British Isles

Great Britain
WHERE IS IRELAND

Northern Ireland
(Northern Irish)

Ireland

Republic of Ireland
(Irish)
British Isles

United Kingdom

Ireland

Republic of Ireland

Northern Ireland

Great Britain

Scotland

Wales

England

IT'S THIS SIMPLE
UNITED KINGDOM POLITICS
ENGLANDS POSITION POLITICALLY

BFFs 4-EVA USA?
Meh...
Yay!

?
DID YOU KNOW

- Population 63 million
  - England 53 M, Scotland 5.3 M, Wales 3 M and N Ireland 1.8 M
- Land Area 245,000 square kilometres
- 8,000 kilometres of coastline
- The highest mountain is Ben Nevis at 1340 meters
- The UK has 28 UNESCO World Heritage Sites
- London is the largest destination for inward investment in to Europe
- The UK leads Europe in Life Sciences, ICT and Creative business sectors
MORE IMPORTANTLY

The UK has held the land speed record for longer than any other country.
A HISTORY OF INVENTION

1698  Tom Savery invented the first steam engine

1804  Dick Trevithick built the first steam locomotive

1821  Mike Faraday invented the electric motor

1846  Scotsman Bert Thompson patented the first pneumatic tire

1925  Scotsman John Baird invented the television

1930  Frank Whittle invented the jet engine

1989  Tim Berners-Lee developed the World Wide Web
UK GDP FORMATION 2015

UK GDP 450 billion

Total service sector: 70.4% of GDP

Source: Germany Trade & Invest
MANUFACTURING OUTPUT

Top 10 $ billion 2013

- US
- China
- Japan
- Germany
- South Korea
- France
- Italy
- UK
- India
- Taiwan
MANUFACTURING OUTPUT PER HEAD

Top 10 $ 2013

- Switzerland
- Singapore
- Ireland
- Germany
- Japan
- Austria
- Taiwan
- Sweden
- South Korea
- Finland

UK
MANUFACTURING OUTPUT % GDP

Swaziland
South Korea
China
Taiwan
Germany
Ireland
Japan
France
Italy
USA
UK

2013
Out of 237 countries, 1=highest
Manufacturing turnover as a percentage of UK total, 2012

- **0 to 5%**
  - NORTHERN IRELAND: 3.4%
  - LONDON: 4.3%

- **5 to 10%**
  - NORTH EAST: 5.1%
  - SCOTLAND: 6.7%
  - SOUTH WEST: 7.2%
  - WALES: 8.1%
  - EAST OF ENGLAND: 8.7%
  - EAST MIDLANDS: 9.0%

- **10 to 15%**
  - WEST MIDLANDS: 10.5%
  - YORKSHIRE AND THE HUMBER: 11.1%
  - SOUTH EAST: 11.9%
  - NORTH WEST: 14.1%

Source: ABS Regional Results, 2012
Top 10 countries importing UK manufactured goods

1. USA £32.2bn
2. Germany £24.7bn
3. France £15.6bn
4. Netherlands £11.1bn
5. Irish Republic £10.3bn
6. Belgium £9.8bn
7. China £9.7bn
8. Italy £7.2bn
9. Spain £6.4bn
10. UAE £5.4bn

Source: HMRC, Overseas Trade Statistics, 2013
TOP UK MANUFACTURING EXPORTS

-50%
-30%
-10%
10%

Aircraft & Spacecraft
Vehicles
Pharmaceuticals
Oil

5 year change
-50% -30% -10% 10%

Billion US $
UK MACHINE VISION MARKET DISTRIBUTION

UK Market

- Energy & Utilities
- Automotive
- Infrastructure (Traffic, Rail, Road)
- Packaging
- Food
- General Integrator or Machine Builder
- Education
- Security & Surveillance
- Logistics
- Print & Document Handling
- Scientific Research
- Reseller
- Pharma, Cosmetics & Healthcare
- Medical
- Scientific Imaging
- Broadcast/Media/Sports/Entertainment
- Electronics
- Defence/Aerospace/Marine
- Bulk & Raw Materials
- Energy & Utilities
- Logistics
UK Car production is making more cars than ever
  - Most car manufacturing plants are designed outside the UK and shipped in
  - Jaguar/Land Rover is the exception
  - Automotive market share is probably a lot higher than reported

Non manufacturing applications are significant
  - Sports/entertainment/.broadcast
  - Infrastructure
  - Medical
  - Food
VISIBLE MACHINE VISION REVENUE

Integrators
- Bytronic
- Acrovision
- Fisher Smith
- Industrial Vision Systems
- Olmec
- RNA Automation
- Scandinavian Machine Vision
- Optimal
- SIGA Vision
- ITS
- Crest (Ireland)

Excludes one man consultants, European players such as ISRA and vertical market suppliers such as Dimarco
MACHINE VISION COMPONENTS MARKET MAKEUP

Components Market £30-£40 Million

- **Direct Sales**
  - Cognex
  - Keyence
  - Omron
  - IDS
  - SICK
  - Baumer
  - Microscan

- **Distribution**
  - STEMMER IMAGING
  - Clearview Imaging
  - Multipix Imaging
  - Alrad
  - Lambda Photometrics
  - Framos

- **UK Manufactured**
  - £22,000,000; 61%
  - £11,000,000; 31%
  - £3,000,000; 8%
UK MANUFACTURED COMPONENTS

Included: Machine Vision

- Active Silicon
- Gardasoft
- ODOS Imaging
- ProPhotonics
- Global Laser

Not Included:

- E2v - Sensors
- Thermotechnix - Thermal
- SXCCD – Low light
- Raptor Photonics – Low Light
- Andor - Scientific
- Scientific Digital Imaging

Components

- £3,000,000; 21%
- £11,000,000; 79%

Domestic Market  Exported
The British tend to have a lower national loyalty when purchasing goods.

Economic approach is heavily influenced by the US compared to Europe.

Strong Innovation and can do attitude.

Irish have a stronger culture of personal Irish to Irish business.

Ireland has had strong government incentives for manufacturing:
- Strong in contract manufacturing.
- Ireland has attractive corporation tax regime for selling in to Europe.
- Many global mv companies sell from Ireland in Europe.
BREXIT
WHAT ARE THE CHANCES

EU REFERENDUM

BETTING BAROMETER
REFERENDUM OUTCOME BASED ON LIVE ODDS

% CHANCE LEAVE  % CHANCE REMAIN

11/4  26%/74%

2/7
THE ECONOMY IS SLOWING

Source: ONS; UniCredit Research
UNCERTAINTY IS ELEVATED

Source: ONS; Bloomberg; GfK; CBI; PolicyUncertainty.com; UniCredit Research
INVESTMENTS ARE SLOWING

Source: BoE; UniCredit Research
If Brexit does NOT happen
- Exchange rates likely to rally to 1.35 €/£
- Investment uncertainty will lift
- Expect a recovery of recent softening of the market

If a Brexit happens
- Exchange rates will drop to 1.1 €/£
- GDP will be 6% lower than it otherwise would be by 2030
- Likely to enter recession within 2 years

Information provided by unicredit
Any Questions

STEMMER IMAGING Ltd
The Old Barn, Grange Court
Grange Road, Tongham
GU10 1DW
Phone: +44 1252 780000
m.williamson@stemmer-imaging.co.uk
www.stemmer-imaging.co.uk
Your contact: Mark Williamson
Thank you!

STEMMER IMAGING Ltd
The Old Barn, Grange Court
Grange Road, Tongham
GU10 1DW
Phone: +44 1252 780000
m.williamson@stemmer-imaging.co.uk
www.stemmer-imaging.co.uk
Your contact: Mark Williamson