

19th March 2007



Commercial Solutions from Nanotechnology

www.oxonica.com

Dr. Kevin Matthews (Chief Executive Officer)

Richard Clarke ACA (Chief Financial Officer)

“To build a leading, international group by developing innovative commercial solutions for global markets using Oxonica’s expertise in the design and application of nanomaterials.”

Oxonica: 2006 Highlights

	FY '05	H1 '06	FY '06 Expectations	FY '06 Actuals
Turnover (£'m)	1.25	1.28	9.2	10.2
PBT Loss (£'m)	4.4	3.1	2.9	3.0
Cash @ period end (£'m)	5.1	2.7	1.2	6.8

- Acquired and integrated Nanoplex: accelerated Earn Out in Feb 07
- Three landmark deals:
 - Envirox™ – Petrol Ofisi deal = £7.6m revenue in H206
 - Nanoplex™ – License and research deal with Becton Dickinson
 - Optisol™ – Consolidated relationship with Croda

Oxonica: Overview

- Oxonica is a leading international nanotechnology company
- Spin-out from Oxford University in 1999
- Multi-sector business: Energy, Healthcare, Security, Materials
- Major investors: raised c.a £20m to date
 - Richard Farleigh, Foresight VCT, Trivest VCT
 - BASF, Alavita Inc, Stagecoach, Seighford, Becton Dickinson
- Listed on LSE AIM market: OXN
- Oxonica has three sites: Oxford, UK; Mountain View, CA; Singapore
- 60 employees – mix of strong academic and industry experience
 - Oxford – 31 employees, focused on Energy and Materials, ISO 9000 accredited
 - Mountain View – 27 employees focused on Healthcare and Security
 - Singapore – 2 employees on Energy

Oxonica: Divisions & Products

Oxonica Energy

Envirox™

Fuel savings of 5-11% in diesel



Oxonica Healthcare

Nanoplex™

Disease detection



Oxonica Materials

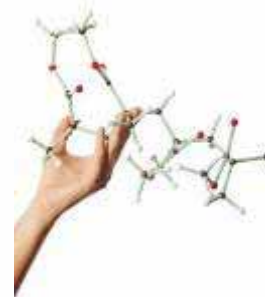
Solacor™

UV protection of materials



Optisol™

UV Sun Protection & Anti-ageing



Oxonica Security

Nanobarcode™

Brand protection

Oxonica: Multi-Sector Business Concept

Balanced Portfolio
Risk Management

Lower Risk
Shorter time to market
Lower Rewards

Higher Risk
Longer time to market
Higher Rewards

*Optisol*TM

*Solacor*TM

Security

*Envirox*TM

*Nanoplex*TM

←
Product
Substitution /
Enhancement

In-house
Applications &
Product Development

→
Product Invention
/ Supply Chain
Re-engineering

Oxonica: Leveraged Business



CRODA



Oxonica Energy: Envirox™

IDENTIFIED PROBLEM:

- High fuel costs
- Environmental pressures
- Addressable market \$3bn*



OXONICA'S SOLUTION:

ENVIROX™ fuel borne catalyst

Diesel fuel savings: 5-11%

Commensurate reduction in green house gas emissions

Reduced emissions including CO₂ and particulates**



* Top and Jefferies 2003

** Oxford Brookes University Study, Ricardo 2003, MIRA 2003

Envirox™: Fuel Economy

Benefits demonstrated in

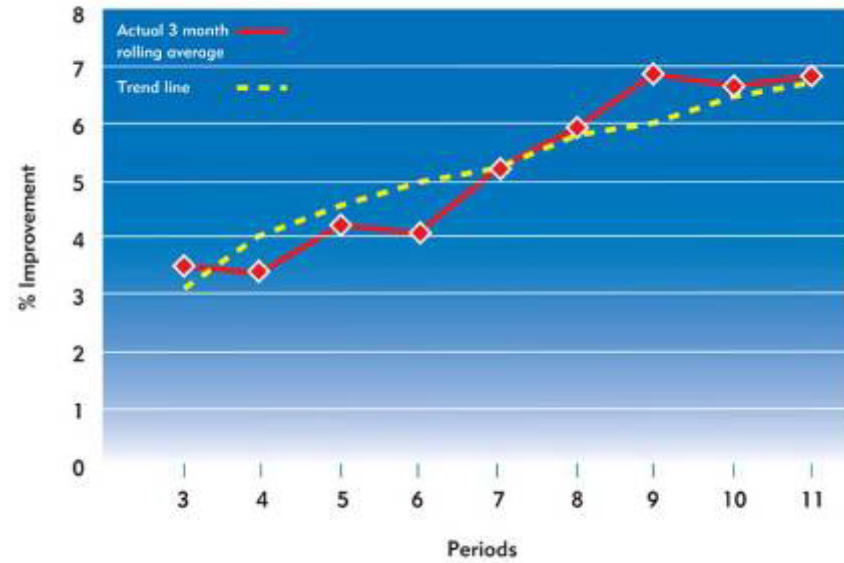
Field Studies



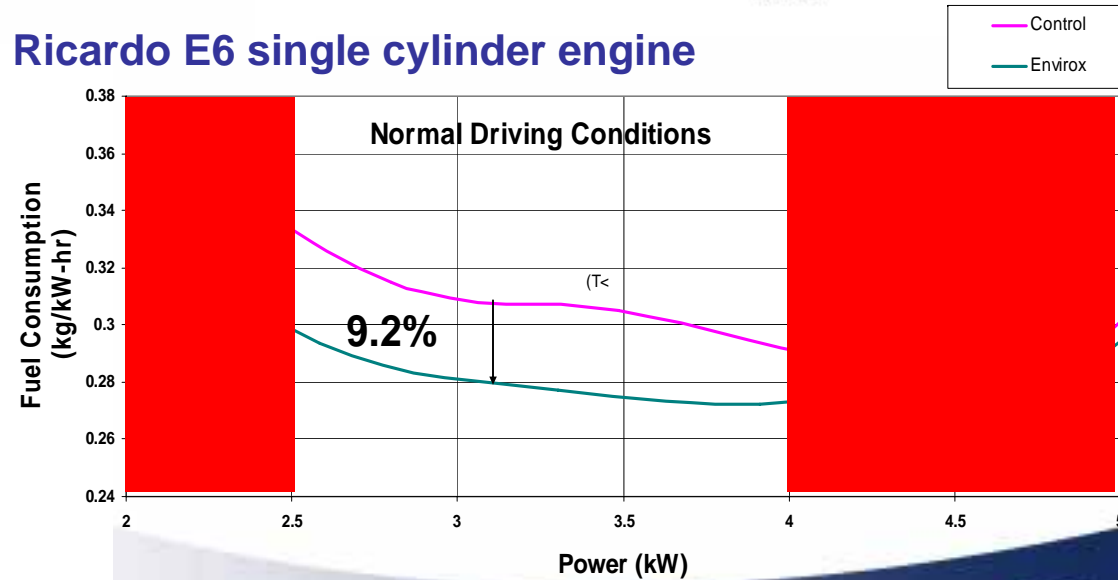
Laboratory Studies



Rural Trial Area
Mean Difference in Fuel Economy



Ricardo E6 single cylinder engine



Envirox™: Petrol Ofisi

- Petrol Ofisi – Turkish national oil company: turnover \$8.8bn
- Envirox™ added to diesel fuel across Turkey
- Revenue of £7.6m in second half of 2006
- PO / Oxonica evaluation: expected to complete Q2



Oxonica Materials: Optisol™

IDENTIFIED PROBLEM:

- Skin cancer on the increase
- Skin ageing
- Both linked to UVA
- Addressable market \$300m*



OXONICA'S SOLUTION: OPTISOL™ UV absorber

- Provides enhanced and longer-lasting protection against UVA
- Reduces free radicals generated by UV – anti-ageing
- Stabilises other sensitive components in cosmetic formulations



Optisol™: UV and Free Radical Benefits Enhanced Photo-stability of Cosmetics

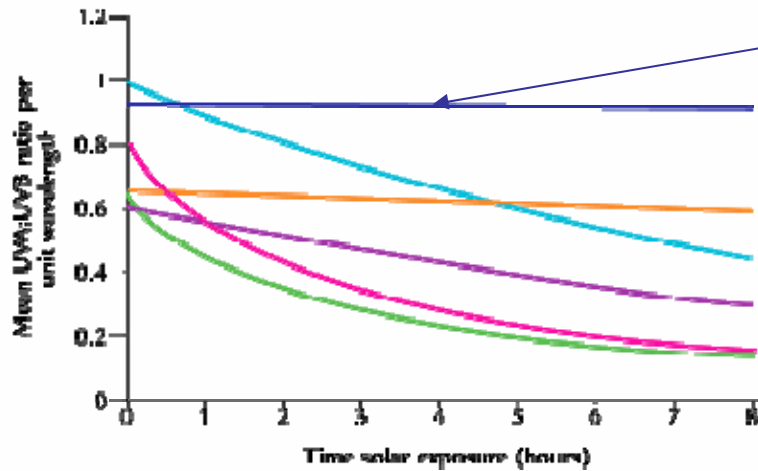
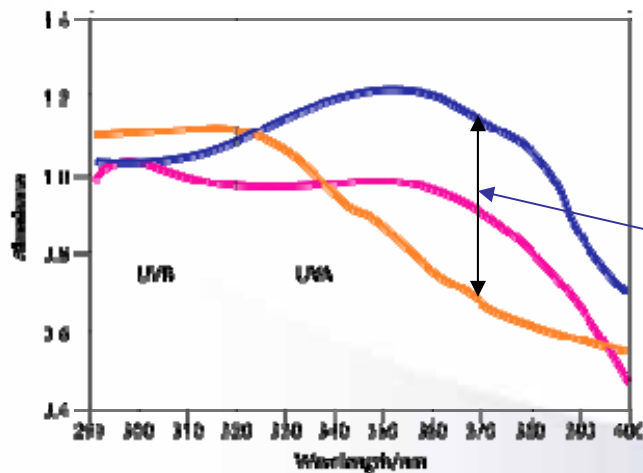


Photo-stable protection over time



27 formulations, 14 customers
in 9 countries



Improved UVA protection

Oxonica Security: Nanobarcode™

IDENTIFIED PROBLEM:

- Increasing security concerns
- Addressable market \$440m*



Accuracy rate	# SERS($\times 10^{10}$) per gram ink.
0.999999	22.88
Accuracy of 1 false hit in 1 million reads of tagged items	

OXONICA'S SOLUTION:

NANOBARCODE™ security tags; providing secure, unique labels

- Multiple markets and users from currency to pharma
- Revenue generating co-development activities ongoing



Oxonica Healthcare: Nanoplex™

IDENTIFIED PROBLEM:

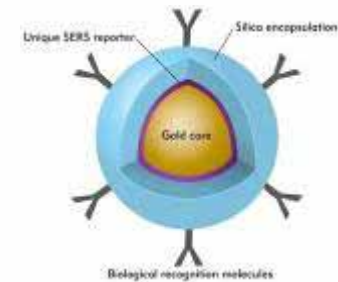
- Improvement in clinical outcomes / controlling costs
- Application of cost effective, reliable and flexible diagnostics
- Lateral Flow market alone estimated at \$2.2bn*



OXONICA'S SOLUTION:

NANOPLEX™ biotags based diagnostic platforms

Providing clinical diagnostics with improvements in
Multiplexing
Sensitivity
Transparency to biological systems including whole blood
Robust, direct (no-wash) assay formats



PERSPECTIVE



Going for the Gold: Multiplexed Optical Detection Tags Based on SERS-Active Gold Nanoparticles

Tagging and detection used to identify, verify, track and/or quantify objects both in the macroscopic world (e.g. pharmaceuticals, heavy metals) and the microscopic world (e.g. proteins, DNA) calls for a variety of means including dyes, pigments and colorimetric assays. While the most widely used in the clinical marketplace today is colorimetric, fluorescence and phosphorescence have been ubiquitous in the laboratory for the last 50 years. When combined with ultraviolet-visible or near-infrared light, photons are emitted from the electronic excited states of these species at characteristic frequency ranges on the nanoscale, micrometer to millimeter range. Fluorescence or phosphorescence is used to identify and/or quantify objects, including both detection and quantitation.

However, these excited-state processes suffer from many limitations. These include the width of the emission spectra, which significantly limits the number of unique types of signals that can be generated. Additionally, these species are intrinsically unstable, highly reactive, optically susceptible to environmental influences, photobleaching, quenching is very dependent on pH, temperature, and ionic strength, and the ability to be observed in solution that can require long, bright, excitation light sources (e.g. lasers). Accordingly, the need exists for a new type of optical detection tag that offers a high degree of multiplexing, the ability to detect many different types of analytes, ambient, dry, stable, and the capability to be used in clinical diagnostic markets. The need is acute. It is a clinical diagnostic market that is growing considerably but offers an immense, unexplored optical detection tag market that we see as a critical step.

Oxonica has developed a series of novel multiplexed biotags based on SERS-active gold nanoparticles that are used in a variety of assay formats. These biotags are used to identify and/or quantify objects, including both detection and quantitation. The biotags are used to identify and/or quantify objects, including both detection and quantitation. The biotags are used to identify and/or quantify objects, including both detection and quantitation.

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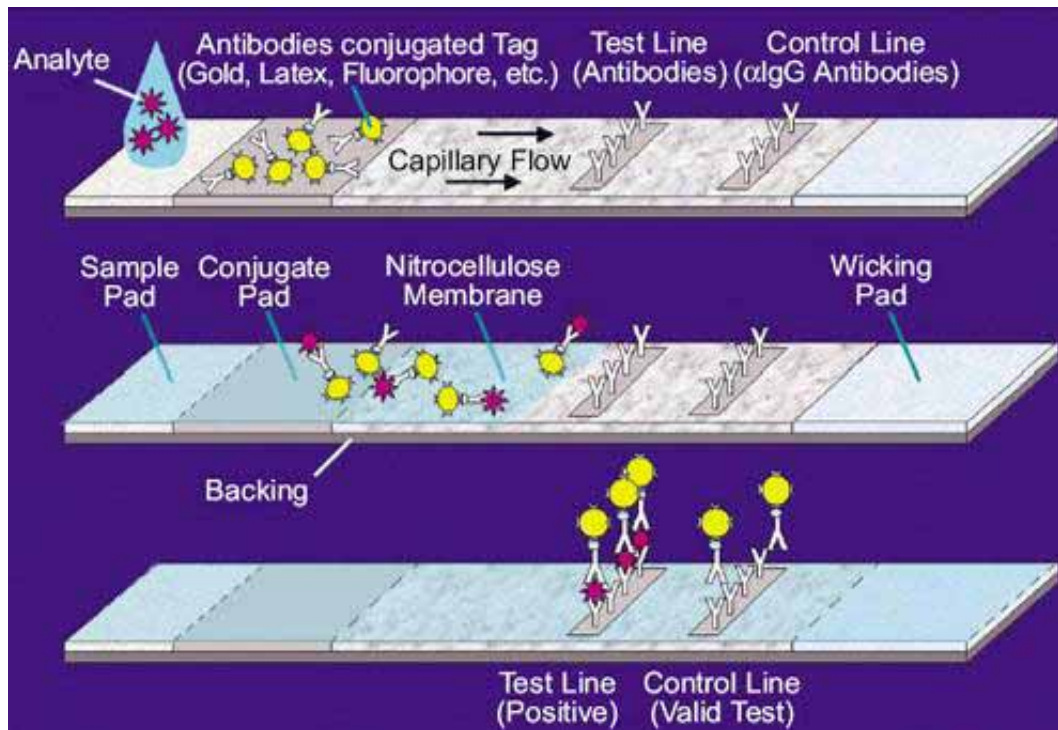
Nanoplex™: Market Segmentation

Throughput	IVD/Life Sciences					
1 – 10/hr	Respiratory \$110m (8%)	Diabetes Mgmt \$100m (20%)	Women’s Hlth \$630m (5%)	HIV \$150m (8%)	Oncology \$10m (20%)	
10 – 100/hr	Cardiac \$575m (15%)	Critical Care \$875m (4%)	Autoimmune \$350m (4%)	Infectious Dis. \$355m (8%)	Veterinary \$500m (5%)	
100 – 600/hr	IA Full Menu – Life Sciences \$8.6bn (21%)					
> 600/hr	IA Full Menu – IVD \$5.8bn (9%)					
100 – 600/hr	Molecular Dx Full Menu – IVD \$2.4bn (37%)					

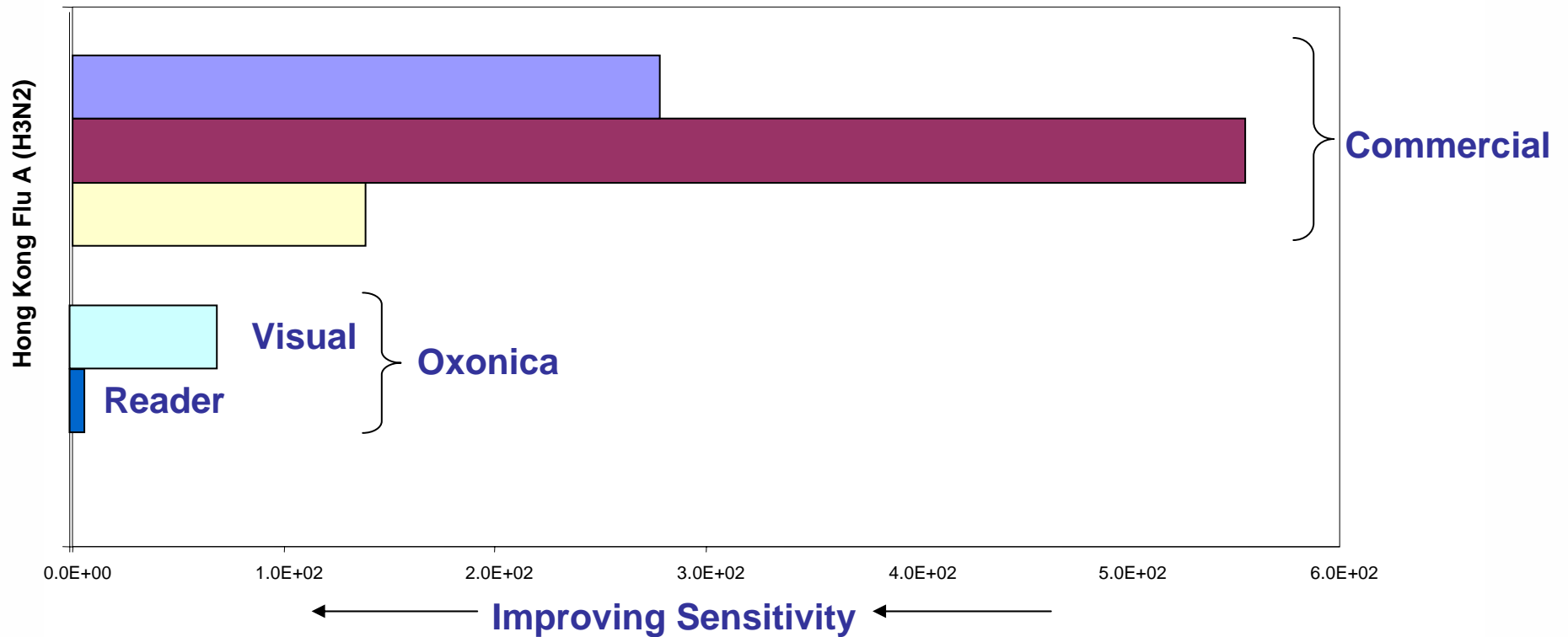
(x%) = CAGR

Nanoplex™: Lateral Flow Assay

- Point Of Care (POC): \$4.8bn market est. for 2008 (excl glucose testing)
 - OTC, Professional & Hospital
 - Women's Health – STD and Pregnancy
 - Infectious Disease, Critical Care & Cardiac
- Opportunity to provide highly sensitive tests for multiple diseases in simple format



Nanoplex™: Lateral Flow Sensitivity improved vs commercial products



IMPROVED SENSITIVITY
39-fold
Antibodies and strip not optimised

Profit & Loss Account

	Year to 31 December 2006 £'000	Year to 31 December 2005 £'000
Turnover (Excl. acquisition)	9,160	1,247
Turnover (acquisition)	1,069	-
Group turnover	10,229	1,247
Gross profit	5,925	661
Development, sales & marketing & admin costs	(8,366)	(5,300)
Share options charge	(353)	(106)
Amortisation of Goodwill & acquired intangibles	(828)	-
Other operating income	377	241
Operating loss	(3,245)	(4,504)
Net interest	115	71
Taxation	114	(93)
Retained loss for the period	(3,016)	(4,526)

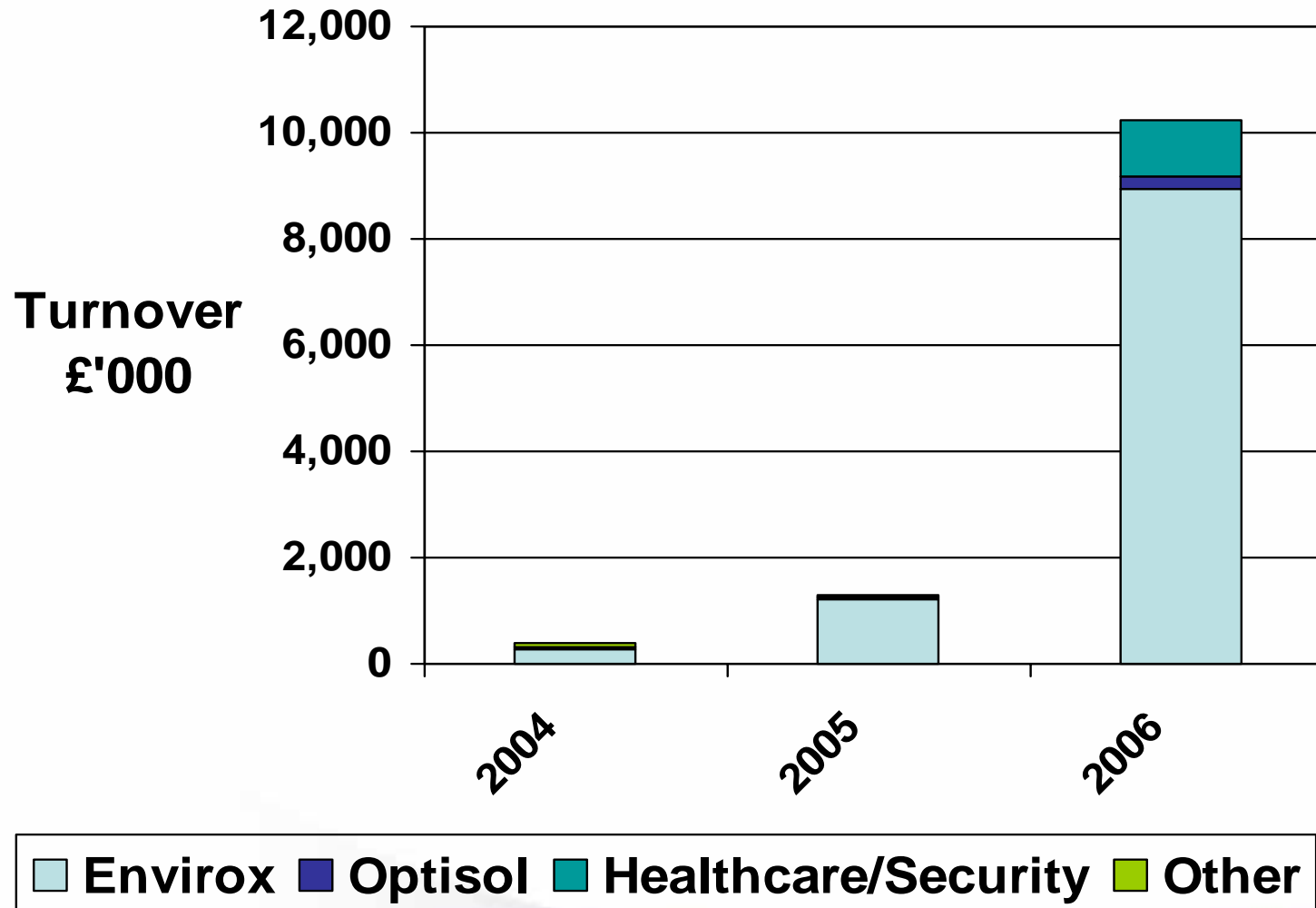
Balance Sheet

	As at 31 December 2006 £'000	As at 31 December 2005 £'000
Intangible fixed assets	12,867	173
Tangible fixed assets	731	734
Total fixed assets	13,598	907
Stocks	477	412
Debtors	852	901
Cash and short term deposits	6,836	5,066
Creditors	(3,717)	(1,287)
Total net assets/(liabilities)	18,046	5,999
Share capital	428	368
Share premium/merger reserve	28,924	19,452
Shares to be issued	4,225	-
Profit & loss account	(15,531)	(13,821)
Equity shareholders funds	18,046	5,999

Cashflow

	Year to 31 December 2006 £'000	Year to 31 December 2005 £'000
Operating loss for period	(3,245)	(4,504)
Depreciation & amortisation	1,189	269
Share-based payment expense	353	106
Working capital decrease/(increase)	2,320	(666)
Cash inflow/(outflow) from operating activities	617	(4,795)
Net interest	115	75
Tax	(5)	-
Acquisition of subsidiaries	(66)	-
Capital expenditure	(318)	(410)
Share issues	1,117	12,191
Loans/leases increase/(decrease)	232	(2,595)
Effect of exchange rate changes	78	-
Cash increase	1,770	4,466

Segment Analysis of Turnover



Oxonica: 2006 Commercial Milestones

- **Corporate**
 - Completed Acquisition of Nanoplex Technologies Inc
 - Met expectations for H1, met significantly increased expectations for H2
 - Establish regional presence in Asia and USA
- **Energy**
 - Entered the volume market – Petrol Ofisi supply agreement
- **Healthcare**
 - Secured strategic partner – BD license agreement and investment
- **Materials**
 - Optisol™ early market acceptance through Croda channel
 - 27 formulations, 14 customers in 9 countries
- **Security**
 - Revenue generated through collaboration agreements
 - Market review conducted and go-to market milestones defined

Oxonica: Outlook & Summary

- Oxonica is a leading nanotechnology company with breakthrough products in multiple markets already generating revenues and deals
- Acquisition of Nanoplex Technologies has allowed the group to accelerate the clinical diagnostics and security businesses
- Outlook:
 - 2007 outlook: anticipate increasing revenues and commercial milestones
 - Completion on Petrol Ofisi evaluation Q2
 - Increasing investment to accelerate development of Energy and Healthcare

