

# Commercial Solutions from Nanotechnology

[www.oxonica.com](http://www.oxonica.com)

Interim Results 2006



*“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 Overview

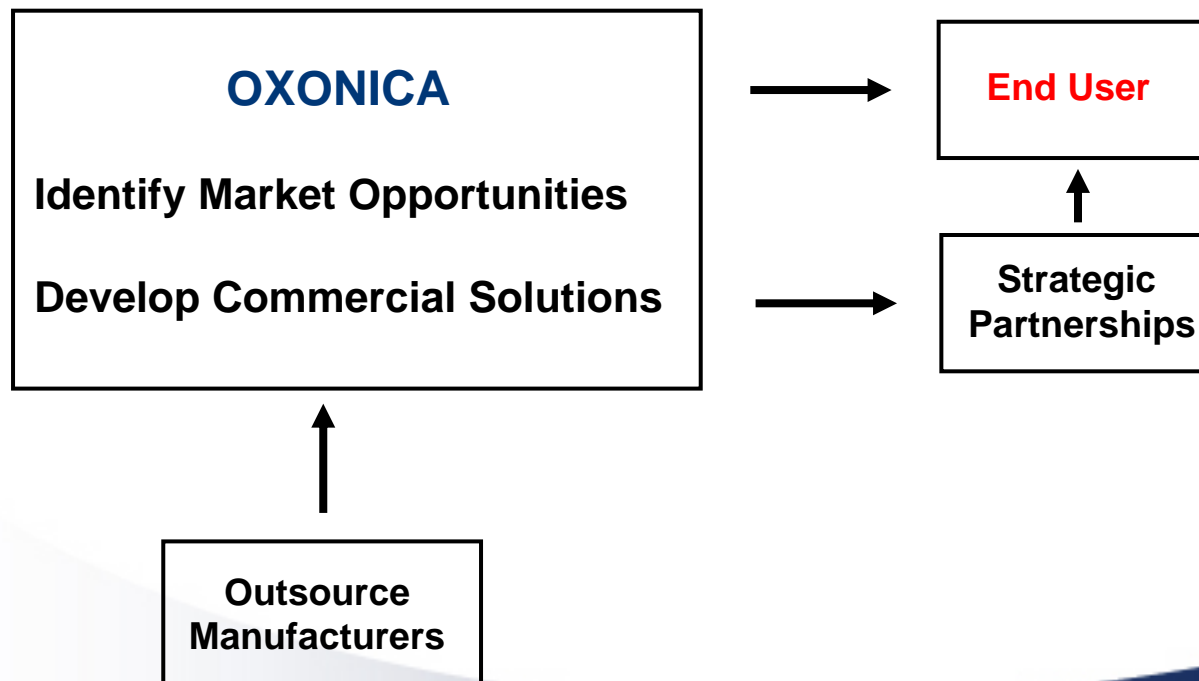
- Oxonica is a leading international nanotechnology company
- Technology originally from Oxford University
- Major investors include BASF, Becton Dickinson, Stagecoach
- Multi-sector business: Energy, Healthcare, Security, Materials
- 2003 - Envirox™ fuel catalyst launched
- 2004 - Optisol™ innovative UV absorber launched
- 2005 - Oxonica floats on AIM
- 2006 - Oxonica acquires Nanoplex, leading US nanotech company
  - Supply agreement for Envirox™ with Petrol Ofisi
  - Licence agreement with Becton Dickinson for Nanoplex™

# H1 2006 Highlights

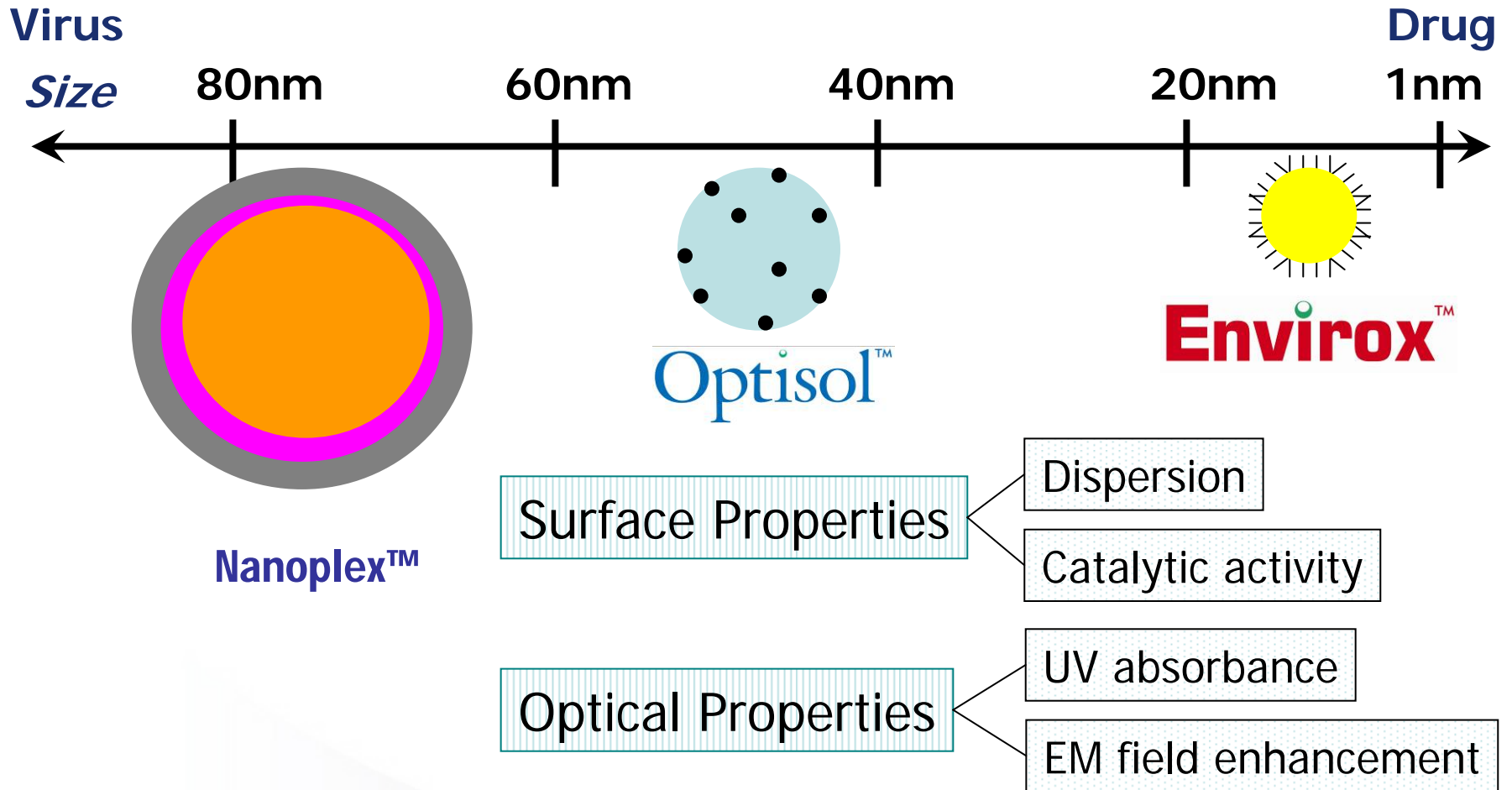
- Turnover up 87% to £1.28m from £0.68m in H105 (FY05 = £1.25m)
- Group established as international, multi-sector nanomaterials business
- Completed integration of Nanoplex (USA) into Oxonica
- Continued commercialisation of two products:
  - **Envirox™** – saving fuel for diesel users
    - Petrol Ofisi deal = \$12.7m revenue in H206
  - **Optisol™** – enhanced sun protection for general cosmetics
    - Successfully incorporated into Boots, Tesco and Coreana products
- Accelerated development of product pipeline
  - License and research deal with Becton Dickinson

# Leveraged Business Model

- Develop patented product applications: 50 patent families, 211 national applications
- Outsource manufacturing arrangements in place
- Access major markets directly and through strategic partnerships with global brands



# Oxonica's Technology



**Value-Added Nanomaterials**

# Oxonica Divisions & Products

## Oxonica Energy

*Envirox™*

*Fuel savings of 5-11% in diesel*



## Oxonica Healthcare

*Optisol™*

*UV Sun Protection & Anti-ageing*



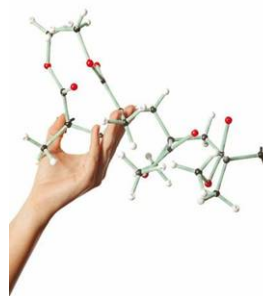
*Nanoplex™*

*Disease detection*

## Oxonica Materials

*Solacor™*

*UV protection of materials*



## Oxonica Security

*Nanobarcode™*

*Brand protection*

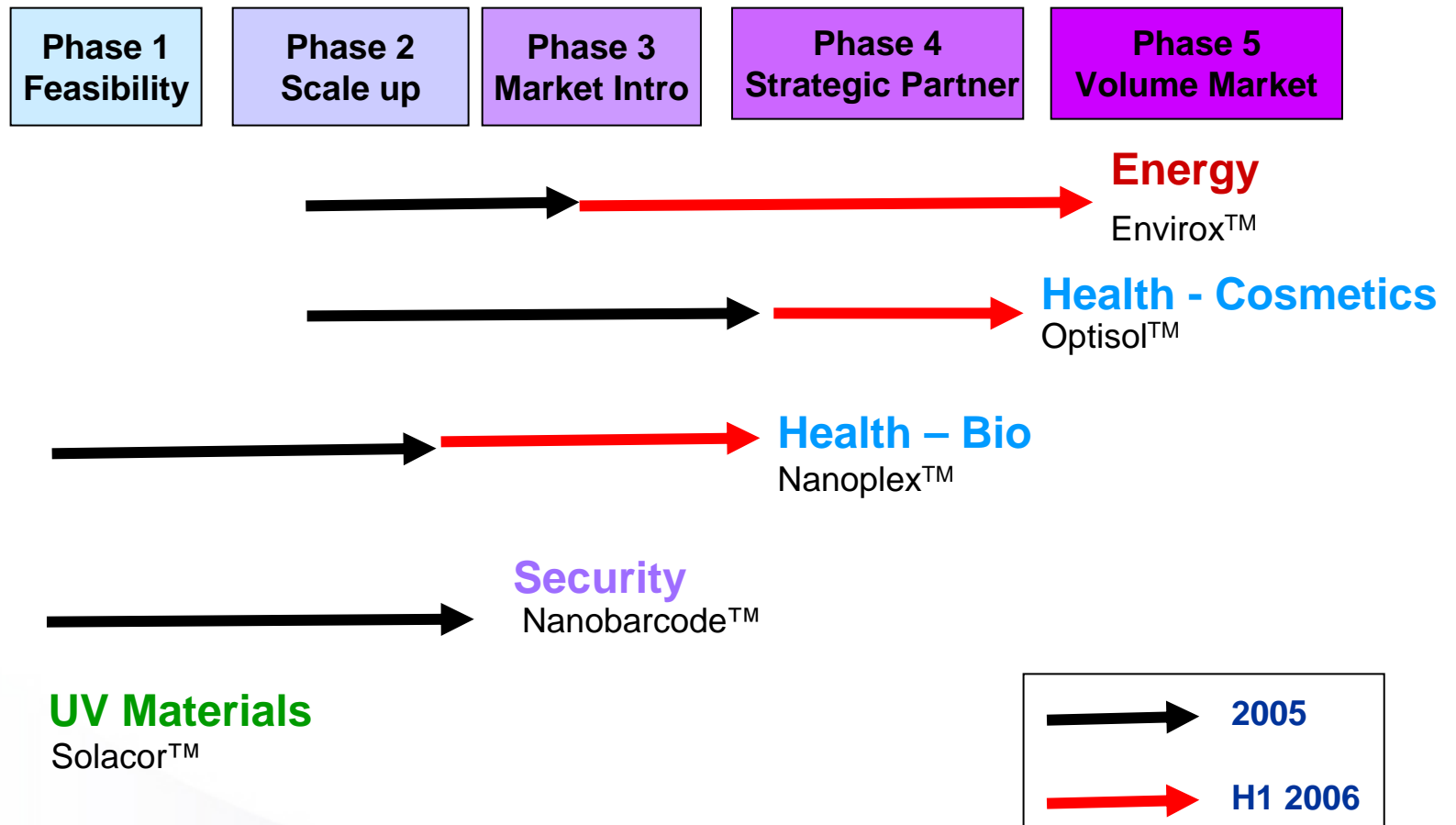
## Customers & Partners



Coréana



# Commercial Development in 2005/H106



# Addressable Markets & Drivers

**Total addressable market estimated > \$10bn**

- **Envirox™** fuel borne catalyst
  - Market size \$3bn
  - Market drivers
    - Increasing fuel costs
    - Reducing CO<sub>2</sub> and other emissions
    - Fuel company product differentiation
- **Optisol™** UV absorber
  - Market size \$300m
  - Market drivers
    - Concerns over lack of protection against UVA
    - Skin ageing

## Addressable Markets & Drivers (contd)

- **Nanoplex™** labels for disease detection
  - Market size \$7bn
  - Market drivers
    - Improving medical outcomes at lower cost
    - Ageing population
    - Increasing focus on developing world
- **Solacor™** UV protection of materials
  - Market size \$2bn
  - Market drivers
    - Improving functional performance of materials when exposed to light
- **Nanobarcode™** labels for brand protection and anti-counterfeiting
  - Market size – estimates of loss: £400bn
  - Market drivers
    - Increasing concerns of revenue loss

## IDENTIFIED PROBLEM:

- High fuel costs
- Environmental pressures



## OXONICA'S SOLUTION:

**ENVIROX™**  
Fuel borne nanocatalyst

**Diesel fuel savings: 5-11%**  
**Reduced emissions including CO<sub>2</sub> and particulates\*\***



# Petrol Ofisi

- Petrol Ofisi – Turkish national oil company: turnover \$8.8bn
- Envirox™ to be added to diesel fuel across Turkey
- Revenue of \$12.7m in H206
- Oxonica delivering on marketing strategy to access consumer market
- Major clean technology deal – potential to save 200 tonnes of CO<sub>2</sub>



## IDENTIFIED PROBLEM:

- Skin cancer on the increase
- Skin ageing
- Both linked to UVA



## OXONICA'S SOLUTION:

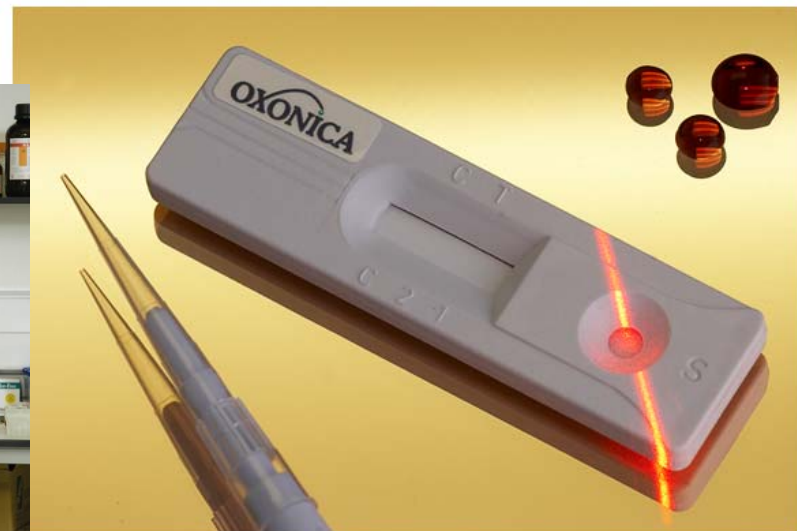
**OPTISOL™**

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



# Becton Dickinson

- Becton Dickinson is a leading medical technology company, FY05 turnover = \$5.4bn
- Validation of Nanoplex™ technology
- Oxonica delivering on marketing strategy to secure co-development partners
- Potential to offer central laboratory performance at the point of care



## Profit & Loss Account

	H1 2006 £'000 Unaudited	H1 2005 £'000 Unaudited	Full Year 2005 £'000 Audited/restated
Turnover (Excl. acquisition)	954	684	1,247
Turnover (acquisition)	326	-	-
<b>Group turnover</b>	<b>1,280</b>	<b>684</b>	<b>1,247</b>
Gross profit	770	375	661
Development, sales & marketing & admin costs	(3,639)	(2,320)	(5,300)
Share options charge	(114)	(53)	(106)
Amortisation of Goodwill & acquired intangibles	(376)	-	-
Other operating income	252	79	241
<b>Operating loss</b>	<b>(3,107)</b>	<b>(1,919)</b>	<b>(4,504)</b>
Net interest	45	(84)	71
Taxation	(9)	-	(93)
<b>Retained loss for the period</b>	<b>(3,071)</b>	<b>(2,003)</b>	<b>(4,526)</b>

## Balance Sheet

	30/6/2006 £'000 Unaudited	30/6/2005 £'000 Unaudited	31/12/2005 £'000 Audited/restated
Intangible fixed assets	13,145	185	173
Tangible fixed assets	783	661	734
<b>Total fixed assets</b>	<b>13,928</b>	<b>846</b>	<b>907</b>
Stocks	417	233	412
Debtors	920	991	901
Cash at bank	2,756	498	5,066
Creditors	(1,647)	(3,706)	(1,287)
<b>Total net assets/(liabilities)</b>	<b>16,374</b>	<b>(1,138)</b>	<b>5,999</b>
Share capital	418	3	368
Share premium/merger reserve	27,841	10,210	19,452
Shares to be issued	4,225	-	-
Profit & loss account	(16,110)	(11,351)	(13,821)
<b>Equity shareholders funds</b>	<b>16,374</b>	<b>(1,138)</b>	<b>5,999</b>

# Cashflow

	H1 2006 £'000 Unaudited	H1 2005 £'000 Unaudited	Full Year 2005 £'000 Audited/restated
<b>Operating loss for period</b>	<b>(3,107)</b>	<b>(1,919)</b>	<b>(4,504)</b>
Depreciation & amortisation	520	96	269
Share-based payment expense	114	53	106
Working capital increase	(68)	(614)	(666)
<b>Cash outflow from operating activities</b>	<b>(2,541)</b>	<b>(2,384)</b>	<b>(4,795)</b>
Net interest	45	(84)	75
Tax	(9)	-	-
Acquisition of subsidiaries	(66)	-	-
Capital expenditure	(145)	(176)	(410)
Share issues	-	2,587	12,191
Loans increase/(decrease)	417	(45)	(2,595)
Effect of exchange rate changes	(11)	-	-
<b>Cash (decrease)/increase</b>	<b>(2,310)</b>	<b>(102)</b>	<b>4,466</b>

# Outlook & Summary

- Financial Outlook
  - Met expectations for H1
  - Petrol Ofisi deal of \$12.7m
  - On track for full year
- Oxonica is a leading nanotechnology company with breakthrough products already generating revenues and deals
- Acquisition of Nanoplex Technologies has allowed the group to accelerate clinical diagnostics business
- H206 outlook: anticipate increasing revenues and commercial milestones

# APPENDIX

# Nanotechnology: The New Industrial Revolution?

- **A transforming technology**
- “*The purposeful engineering of matter at scales of less than 100 nanometers (nm) to achieve size dependent properties and functions.*” \*
- **Identified global investment into nanotechnology in 2005 c.\$9bn\***
- **All areas of industry likely to be impacted, major developments in:**
  - Aerospace
  - Defense & Security
  - Environment
  - Medicine and Health
  - Agriculture
  - Energy
  - Information Technology
- **Major Players:**
  - **Governments:** US, EU, Japan, Korea, Taiwan, Singapore, China, India, Australia
  - **Corporates:** GE, BASF, Caterpillar, ChevronTexaco, DuPont, ExxonMobil, IBM, HP and Intel

\* LUX Research, The Nanotech Report 2005

# Regulatory

- Oxonica's health and environmental testing goes considerably beyond what is required by current regulations
- Oxonica is a founder member of the European Nanosafe initiative and Nanotechnology Industry Association
- National Governments are supportive of nanotechnology and hence have commissioned regulatory reviews and public engagement – Oxonica is a member of the DEFRA working party
- Oxonica is actively involved: Royal Society (UK), Committee for Science and Technology (UK), American Chemical Council (USA), Nanobusiness Alliance (USA), Nanosafe (EU)
- Multiple expert presentations as invited speaker including Woodrow Wilson Foundation in Washington and Institute of Nanotechnology regulatory seminars
- Nanotechnology products can offer significant environmental and health benefits such as those developed by Oxonica

# Oxonica Board

## **Executive Directors:**

Christopher Moore – Executive Chairman

Dr Kevin Matthews – Chief Executive Officer

Richard Clarke – Chief Financial Officer

## **Non Executive Directors:**

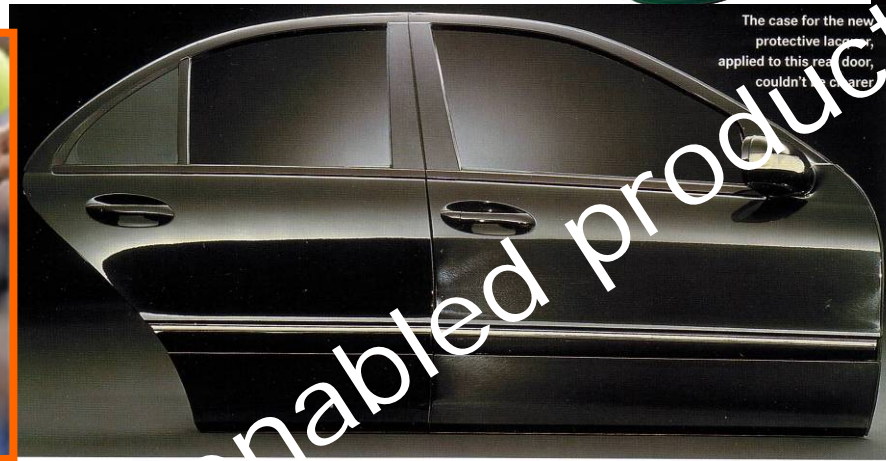
Charles Eld

Bob Pettigrew

Ed Weeks

Martin Hagen

Dr Gordon Ringold



The case for the new protective lacquer, applied to this real door, couldn't be clearer.



Oxonica