

Invest in Recycling

EnviroBusiness

Guildford, 1st October 2008



NATIONAL INDUSTRIAL SYMBIOSIS PROGRAMME

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NISP South East

Presentation Contents

- The issue – that place called ‘Away’
- What is Industrial Symbiosis
- Key features of NISP & Delivery Model
- Achievements to date
- Case studies
- Where this might lead for investors in recycling

DON'T THROW ANYTHING AWAY THERE IS NO AWAY.

At 1992, we had a vision and that was to create a world where we could live in harmony with nature. What we have done is to create a world where we can live in harmony with nature. We have done this by creating a world where we can live in harmony with nature. We have done this by creating a world where we can live in harmony with nature. We have done this by creating a world where we can live in harmony with nature.



Symbiosis 1:



‘An interaction between two different organisms living in close physical association to the advantage of both’

Concise Oxford Dictionary, 8th Edition

Symbiosis 2:



‘A mutually advantageous association or relationship between persons’

Concise Oxford Dictionary, 8th Edition.

What is '*Industrial Symbiosis*' ?

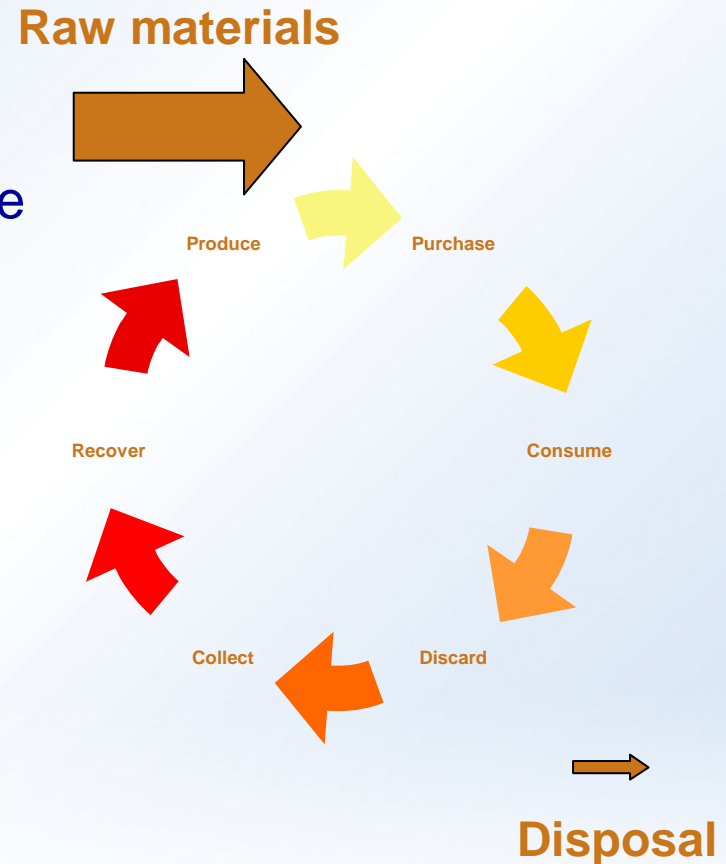
Modified from Chertow, Yale 2000

“Industrial symbiosis engages **traditionally separate industries** and other organisations in a collective approach to competitive advantage involving **physical exchanges of materials, energy, water** and/or by products together with **collaboration on the shared use of assets, logistics, experts and knowledge transfer.**”

Connecting Industry – Creating Opportunity

Waste Strategy 2007

- Signals some important changes in the way the UK deals with waste
- Waste is increasingly being seen as a resource and the management of resources is linked to the changes needed to tackle climate change and effect sustainable development



Whisky – what waste? Hypothetical IS potential.....

Transfer to
neighbouring
company for power

STEAM



Donate to social
enterprise making
furniture

Use to smoke fish
Fuel source



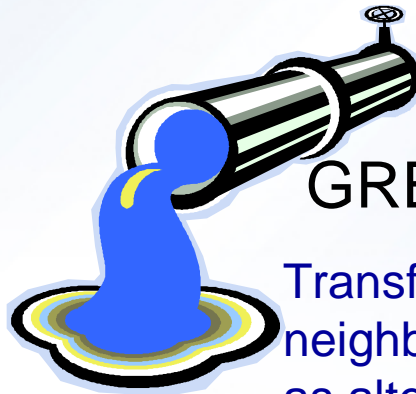
OAK BARRELS



DISTILLERY BY-
PRODUCTS

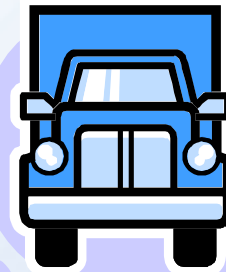
Convert and sell to
local farmer for
animal feed

Whisky Distillery



GREY WATER

Transfer to
neighbouring company
as alternative to
potable



TRANSPORT

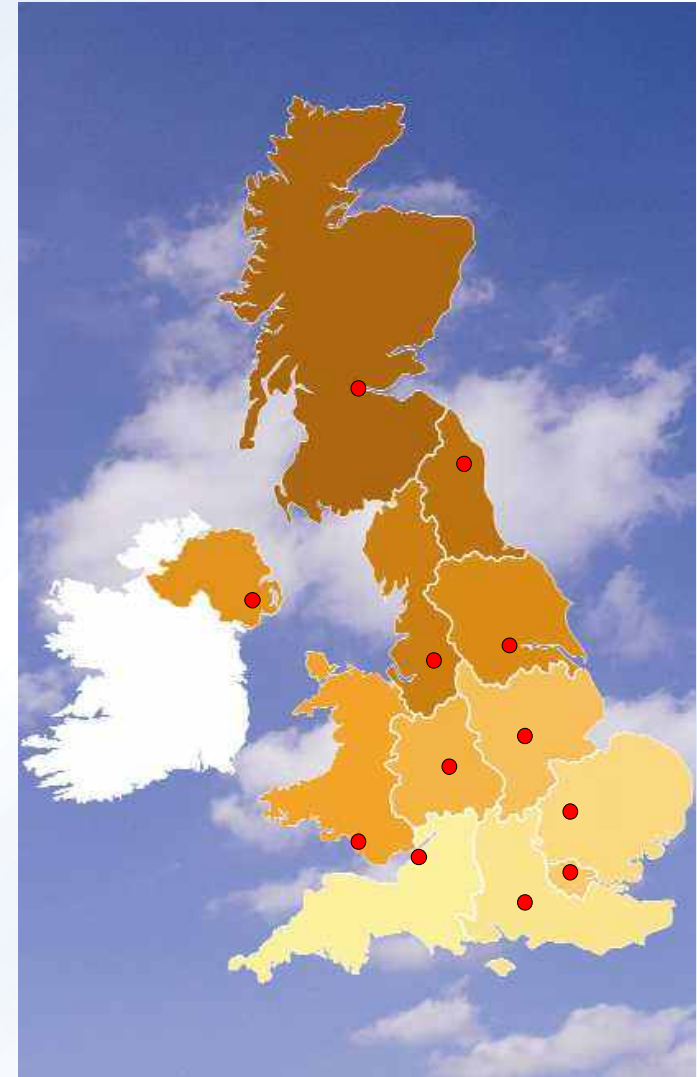
Backhaul with
suitable materials

Key Features of NISP & Regional Delivery Model

NATIONAL INDUSTRIAL SYMBIOSIS PROGRAMME

*'Part of the **SECOND INDUSTRIAL REVOLUTION**'*

- Began as 3 regional pilots in 2002/3, now has 5 years practical experience
- World's first fully National Industrial Symbiosis Programme
- Government funded by Defra
- National coordination, regional delivery: 12 regional offices across the UK
- Business led Programme Advisory Groups
- Independent Board (Governance)



NISP South East's “Hands On” Approach

- Team of 3 NISP Practitioners with specialist knowledge
- Face to face contact leading to:
 - Good understanding of business issues in the South East
 - Key resource ‘haves’ & ‘wants’ logged for potential matches
 - Business meetings and site visits for enhanced info
 - Facilitated workshops and working group meetings leading to bottom line benefits
 - New business opportunities followed through to contract and implementation



How does it work?

Interested in
joining NISP...?



Details registered on NISP's synergy database



NISP identifies potential synergies (workshops etc)

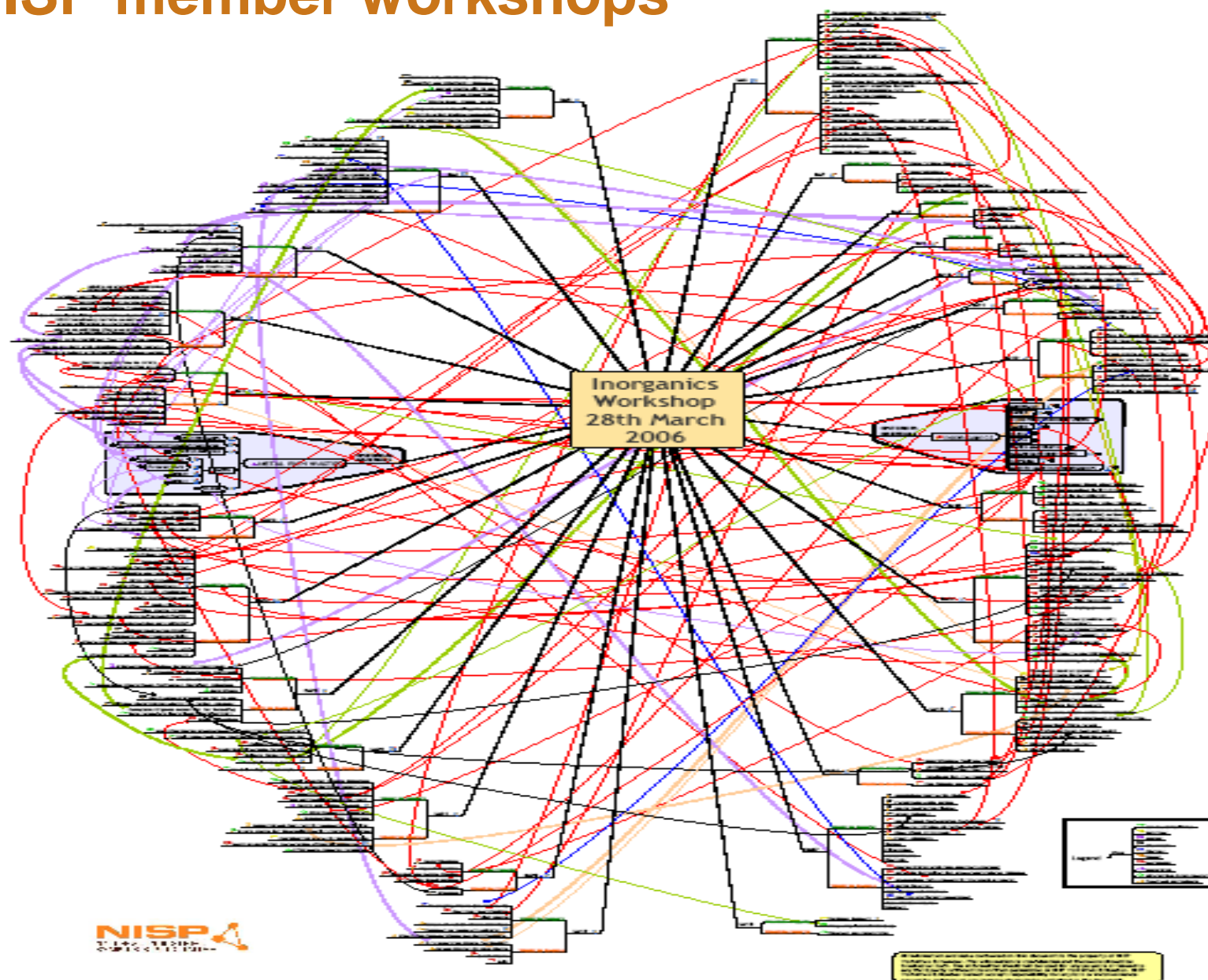


NISP practitioners use expertise to facilitate synergies
between businesses



Synergy delivers bottom line for businesses involved that
invariably delivers environmental and social benefits

NISP member workshops



Who are NISP 10,000+ Members

Corporates

- Metronet
- Premier Automotive Group
- BOC
- Clancy
- IKEA
- Johnson Matthey
- Wedgwood
- Sainsburys
- Rentokil
- Millennium Chemicals
- Lafarge Cement
- Coors Brewers
- Thames Water
- Veolia
- Tarmac
- Balfour Beatty

SMEs

- B.C.R Company
- G&P Batteries
- Overtone Recycling
- Premier Waste
- Renewable Energy Growers
- Pennine Fibre Industries
- Firth Rixson Castings
- Country Chef
- The Cheese Co.
- Green BioDiesel
- Alutrade
- Betts
- Kingpin
- Auto Waste Solutions

Micros

- Link Waste
- Arrow Environmental
- Marches Wood Energy Network
- Akristos
- Kito Engineering Solutions
- Facility Water Management
- Enviro (Grimsby)
- Clarkson Enterprises
- Sustainable Resources
- Advantage Waste Brokers
- UK Recycling
- Analytichem

KEY POINTS

- **Business led**
- **10,000 + members (March 2008)**
- **All sizes: Multi-nationals, SMEs, Micros, Entrepreneurs**
- **All sectors dealing with all resources**

Working with Strong Partnerships

- Industry Associations (e.g. CBI, IoD, FDF)
- Environment Agency (e.g. on problematic wastes, protocols, better regulation)
- Local Government (e.g. LGA)
- RDAs – NISP is embedded in SEEDA RES and Zero Waste Region plans
- Business support partners: Envirobusiness, WRAP, Envirowise, ReMades, Business Links, SBPs, SECBE etc...
- BERR/DIUS (Technology programmes)
- UKTI (inward investment/export of environmental technologies)



Achievements to date

Programme Outputs so far

Outputs	Total return over 5 yrs
Additional Sales to Industry	£632,657,195
Cost Saving to Industry	£551,638,760
Private Investment	£88,103,076
CO₂ Reduction	19,481,945 t
Waste diverted from landfill	19,075,440 t

Other benefits

<i>CVA</i>	<i>£ 1,184,295,955</i>
<i>GVA</i>	<i>£ 471,943,110</i>
<i>TEVA</i>	<i>£ 1,656,239,065</i>
<i>Cost-Benefit Ratio</i>	<i>0.0638</i>
<i>Benefit/Cost Ratio</i>	<i>15.6836</i>
<i>Corporation tax</i>	<i>£ 122,705,209</i>
<i>Income tax</i>	<i>£ 23,875,500 (from additional employment)</i>
<i>VAT on additional sales:</i>	<i>£ 110,715,009 HMT fiscal return</i>
<i>NISP Tax multiplier</i>	<i>14.5</i>

Why is NISP successful?

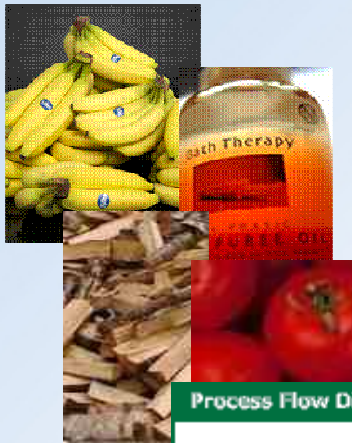
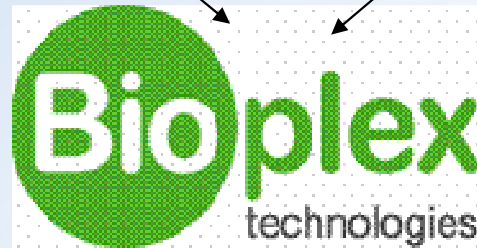
- **Engagement model** – all of industry not just the waste sector, NISP deals with energy, expertise, logistics, services, assets, transportation, and water too
- **Holistic** – brings together a broad range of industries, sectors and skills and creates new networking opportunities for its Members
- **Demand led** – driven entirely by the requirements of its Member companies
- **Action / outcome orientated** with practitioners working with businesses day-to-day

NISP Vision

*“Bring about long term business culture change through **profitable** actions that result in **measurable** environmental and social benefits making a significant contribution to **international sustainability**”*

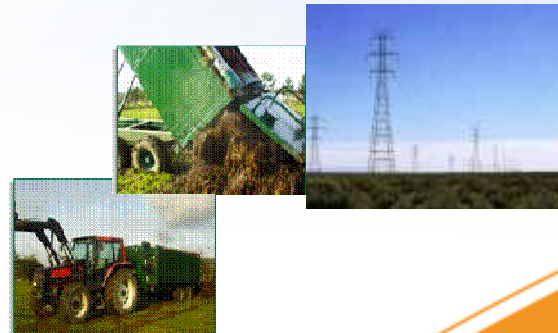
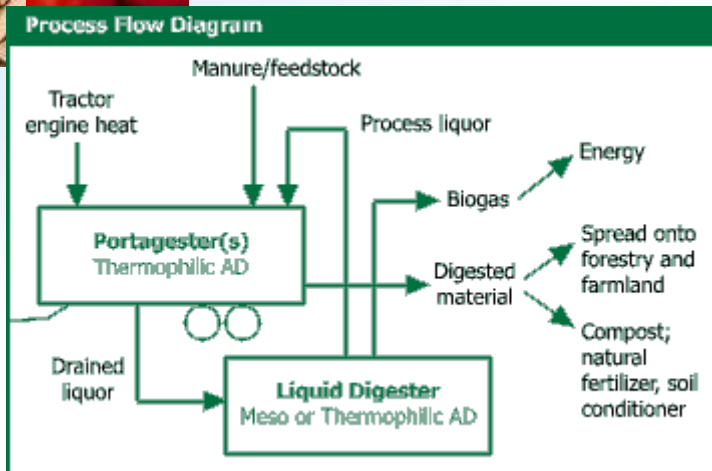
Some Case Studies

Case Study: NEW COMPANY



Benefits

- £250,000 private investment
- 7,000 ton waste diverted from landfill
- £440,000 cost savings to the industry
- 18,500 ton water savings
- 7 new jobs
- 5,156 ton carbon savings



Case Study – Thames Water & Peel Ports Medway



- Silts and fines from Thames Water's Victorian mains replacement works
- Recovered and re-processed by H. Sivyer
- Barged down R. Thames and up R. Medway by GPS Marine
- Re-used on Peel Ports Medway's engineering works at Hoo Island , near Chatham Docks:

- Thames Water
- H. Sivyer
- GPS Marine
- Peel Ports Medway
 - Carbon emissions reduced by: 12,152 tonnes
 - Waste diverted from landfill: 100,000 tonnes
 - Additional sales generated: £1.62 million
 - Jobs saved: 2



Where the IS approach might lead for Investors in Recycling...

- Sourcing matches for existing and planned capacity
- Helping find real estate and sites that fit your needs
- Expanding and deepening your network of clients + introducing IS approach to your supply chain
- Assisting with funding applications
- Supporting contact with regulators
- Facilitating IS cultural change with your employees



Next NISP Workshop

Construction & Utilities Sector Workshop

• 9.45am – 2pm, 23rd October, Epsom Downs



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