

Welcome
To
Black and Green II
Tools
for
Sustainable Formulation

Dr Simon R Gibbon
AkzoNobel Research Development & Innovation

Black and Green?

Tools for Sustainable Formulations

Part 2

10th November 2010

University of York, UK



RSC | Advancing the
Chemical Sciences

Formulation
Science & Technology



Would like to thank our exhibitors and sponsors



ZINSSER
ANALYTIC

SCI MED
Scientific & Medical Products Ltd

Formulation
Science & Technology



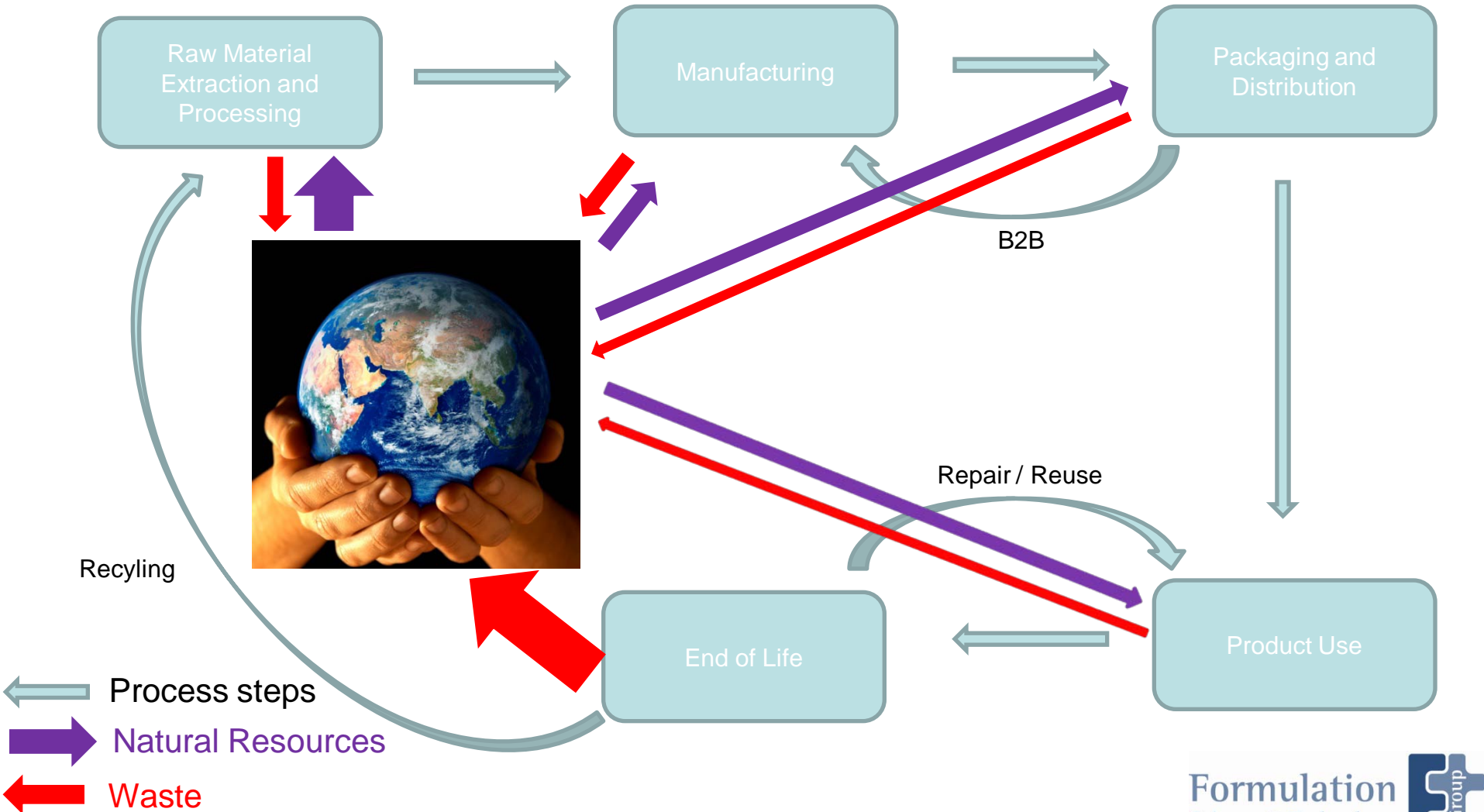
Black and Green II

Background – Accelerating Change

- Old World
 - Oil (raw materials)
 - Bottom Line - Economics
- New World
 - Less oil (raw materials)
 - Raw material instability
 - Regulation
 - Customer awareness
 - Triple Bottom Line:
 - Economics
 - Sustainability
 - Social accountability

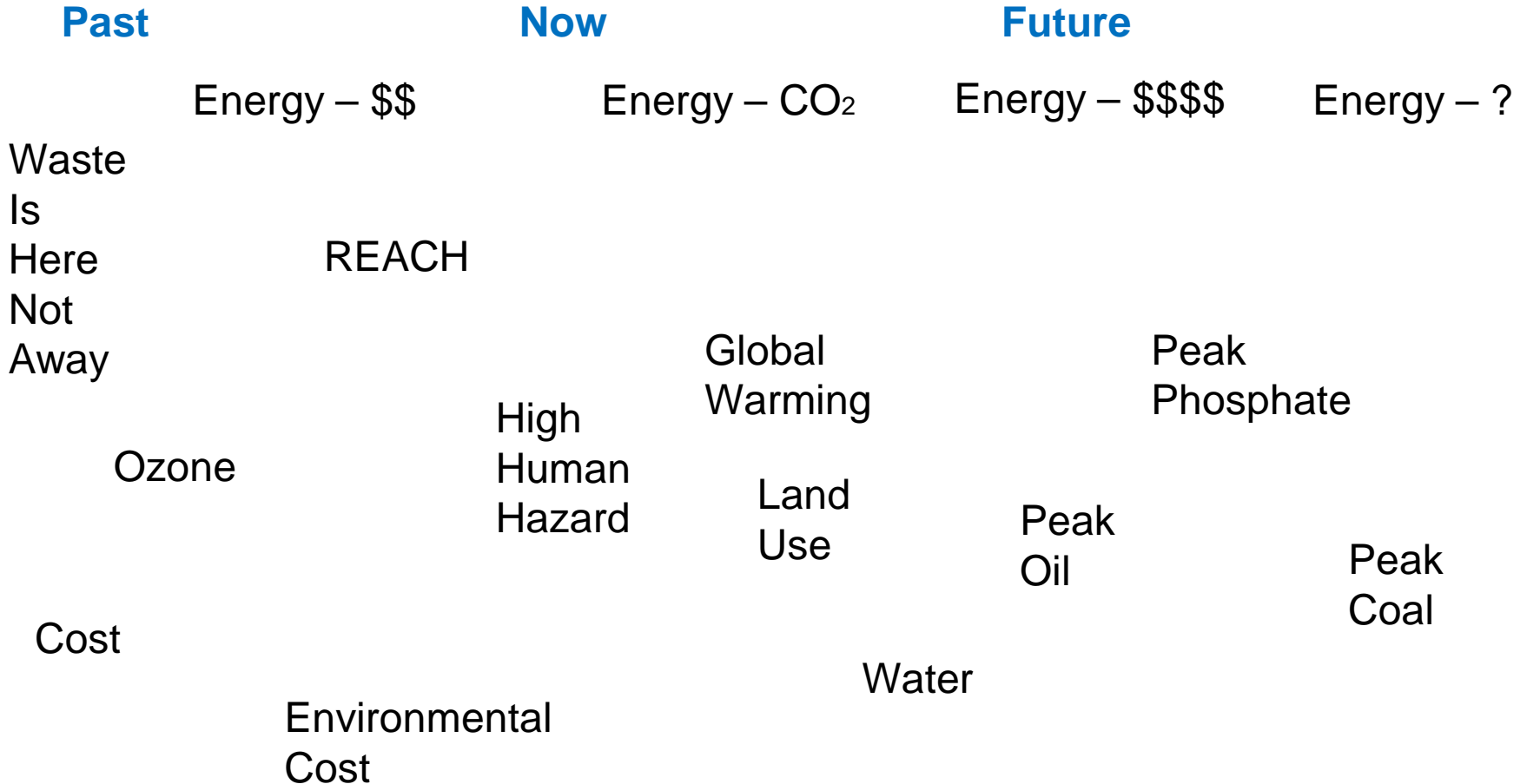
Black and Green II

Sustainability



Black and Green II

Short Term / Long Term Drivers



Black and Green II

Sustainability

- One World
- 1987 Brundtland Commission Report defined Sustainable Development as:
 - *“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”*
 - *“**Formulation** that meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

Black and Green II

Black and Green I – April 14th UoB

- External
 - Impact of regulatory changes on sustainability of products in Crop Protection
 - Sustainable materials in Fast Moving Consumer Goods Formulations: pressures and opportunities
- Ingredients
 - Silicone based solutions for sustainable building protection
 - Waste minerals as functional fillers
 - Formulation of barriers systems with clays for improved performance
- Formulation
 - Biofuels, opportunities and problems for formulations
 - Air filled emulsions - the ultimate low fat formulation
 - More from Less – encapsulated salt
- Approach
 - High Throughput Formulation Technology - making more from less

Black and Green II

Today's Programme

- **Ingredients**
 - The Role of Green Chemistry in Sustainable Formulations
 - The Green and Sustainable Chelate
 - The Hatch, Match and Dispatch of Nanomaterials
- **Formulation**
 - Sustainability in Coloration
 - Reduction or elimination of waste from production / formulation
 - Carbon Footprinting and Beyond for Decorative Paints
 - The Impact of Formulation on Carbon Footprint
- **Business**
 - Sustainability as a Key Strategic and Tactical Pillar

Black and Green II

Networking / Learn by Experience

- We hope you will be able to see wisdom for your industry in what other industries have already done
- Wide Range of Industries
 - Talks span hair dye to chemicals, span paints to detergents
 - Delegate span inks to timber protection, flooring to pesticides
 - Exhibitors bring emerging critical technologies: automation & nanotechnology
- Skills
 - Formulation
 - Regulation, strategy, organic chemistry, inorganic chemistry, natural product extraction, particle growth, nanotechnology, automation,
- Experience
 - Carbon footprint workshop
 - Formulation is changing so we all need to learn

Agenda

- 10:00 Registration and Coffee
- 10:30 Welcome to Black and Green Part 2
- 10:35 Plenary
- 11:30 Session 1 - Chair: Dr Simon Gibbon, AkzoNobel RD&I
- 12:30 Lunch, networking
- 13:20 The Impact of Formulation on Carbon Footprint – Workshop
- 14:50 Coffee and Tea
- 15:00 Session 2 - Chair: Dr David Higgins, FSTG
- 17:00 Close

Morning

- 10:35 The Role of Green Chemistry in Sustainable Formulations
 - Simon Breeden - Green Chemistry, University of York
- Session 1 - Chair: Dr Simon Gibbon, AkzoNobel RD&I
- 11:30 Sustainability in Coloration
 - Chris Pask, Dyecat
- 12:00 Dissolvine GL – the green and sustainable solution for a diverse application base
 - Tony Minshull, AkzoNobel Functional Chemicals
- 12:30 Lunch - networking

Afternoon

- 13:20 The Impact of Formulation on Carbon Footprint - An Interactive Workshop
 - Hosted by Intelligent Formulation: Dr Jim Bullock, Intelligent Formulation Ltd, with contributions from Innospec, GSK and Chemistry Innovation KTN
- 14:50 Coffee and Tea
- Session 2 - Chair: Dr David Higgins, FSTG

Afternoon

- Session 2 - Chair: Dr David Higgins, FSTG
- 15:00 Carbon Footprinting and Beyond for Decorative Paints
 - Dr P L Taylor, AkzoNobel Decorative Paints
- 15:30 BASF Sustainability as a Key Strategic and Tactical Pillar
 - Dr. Geoff Mackey, Sustainable Development & Communications Director, BASF Europe North
- 16:00 Project ZEAL - reduction or elimination of waste from production / formulation
 - Eddie Owen, GSK
- 16:30 The Hatch, Match and Dispatch of Nanomaterials
 - Prof. Ed Lester, Promethean Particles