ENERGY SAVING PIPELINE CAPSULE GOODS TRANSPORT

FOODTUBES™
The transport internet – really fast food

Summary 4 Slides	St Andrews Prize 8 Slides	Croydon Urban & Rural 41 Slides	March 08 Texas Conference	EC R&D proposal JUN 07	State of the Art	Proposal Summary
Project Team	WHAT-IF? Interactive Financials	Statistics & Basic Calculations	Targets Calculation	Sponsors	St Andrews Prize Summary	Home Page

PROPOSITION: 92% of the energy used to transport food and other supermarket goods, is spent on moving the vehicles; only 8% is used to move the goods. FOODTUBES proposes scientific research of the concept that by replacing heavy road vehicles (HGVs) with lightweight cargo-capsules running in pipelines, directly to and from loading bays in shops, distribution, processing and food-production centres – i.e. by changing the existing logistics industries - that billions of litres of fuel and up to 18% of the CO_2 added to the air each year, would be saved. No pipeline-capsule system on this scale exists. This project will create a new energy-efficient industry and reduce the costs of food and other goods.

A focused pre-competitive research and technology project

Work programme topics addressed:

- A new civil-engineering infrastructure and industrial logistics systems for transporting, warehousing and storing food and other consumer goods.
- Recommendations for the optimum design and construction of a mass-transit goods pipeline-capsule transport system, demonstrated in a computer simulation model.
- Design of lightweight, computer controlled, long-distance cargo-capsules.
- Substantial savings of energy of billions of litres of fuel in Europe.
- Substantial annual reduction, up to 18%, in the global CO_2 added to the atmosphere.
- Recommendations for the optimum materials to be used in the pipeline-capsule system.
- Recommendations for the most applicable primary and sustainable sources of energy production (electricity) to power the FOODTUBES system.
- The basis for a new, sustainable manufacturing and maintenance business, for the European market and for export world-wide.
- Reality-tested with a business-plan-forecast and presentations to industrialists, civil-engineers and financiers.

Coordinator:
Mr Noel HODSON

SUMMARY

Type: Science and Technology research project to design and implement a new transport system.

Team: 17 Individual participants. 14 Participating organisations.
The project depends on the expertise and inventiveness of the entire Team. Unusually, therefore, the participants' and organisations' profiles are shown early in this proposal document.
World-class science & technology team: Pages 7-17 & Pages 93-99

Funds Requested: €1.5 million.
Summary of Staff effort: Page 79

Period: 24 months.
Gantt Chart or Chronogram: Page 103

Objectives: The main objectives are to scientifically test the proposition that FOODTUBES could save billions of litres of fuel and tonnes of atmospheric CO_2 – and to demonstrate the practicality and effectiveness of a typical FOODTUBES system, so as to enable, after this project, a full demonstration pipeline to be built.
Main activities of this project: Pages 31 and 37

S&T QUALITY: The science, technology, engineering, experience, research capabilities and quality of the people who will undertake to achieve the objectives are paramount. Pipeline technologies date back to antiquity and are used worldwide – but as major transport systems their use has been sidelined and neglected. The Team is being asked to design an ideal system based on the current state-of-the-art, in a short time.
World-Class Team: Page 20

Soundness of Concept: The basic idea was proposed by the coordinator, Noel Hodson, and is summarised in two extracts from his work-notes. The scientists and engineers who have studied the concept and those who joined this project have said "It will work". The project is to test those intuitive conclusions by adding the 98% of perspiration to the 2% of inspiration.
Table – Replace HGVs with Lightweight Capsules: Page 32
Table – FOODTUBES targets (to be tested by the project Team): Page 35.

Progress beyond the State of the Art: If and when FOODTUBES achieves its objectives, it will have greatly advanced the State of the Art. No system, such as is proposed, exists.
THE STATE OF THE ART OF PIPELINE CAPSULES TRANSPORT: Page 39

S&T Methodology: Is detailed in the Work-Packages. The centres of excellence that are participating will lead the S&T Work-Packages with the help of liaison from experienced coordinators.
WP1.1 INNOVATION & SOLUTIONS etc: Pages 62 to 75

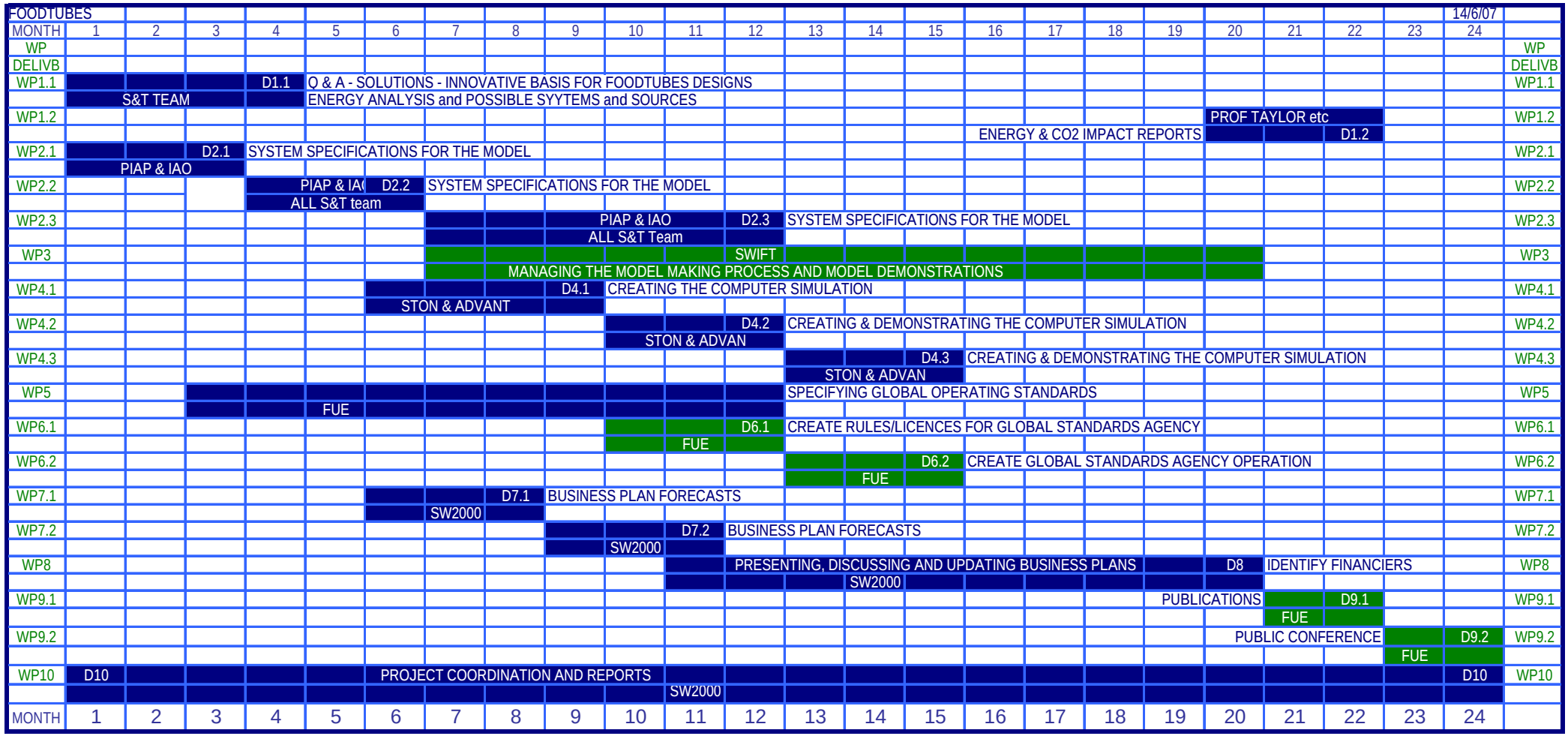
IMPLEMENTATION: There is an excellent and experienced team of planners and coordinators, backed by long experienced partner organisations, all with skills in managing projects of this sort.

OVERALL STRATEGY OF THE WORK-PLAN & INTERDEPENDENCIES: Pages 60 to 94.

IMPACT: The FOODTUBES is expected to have significant impacts, whether or not it triggers a full-scale commercial roll-out as planned.

IMPACT – IMMEDIATE RESULTS: Page 100

PUBLICATIONS: The day to day, interim reports of FOODTUBES will be confidential and IPR will be registered where possible – but all final discoveries, models, specifications and know-how will be freely published to encourage and enable global adoption of the S&T and exploitation of the system, to help to reduce global-warming as soon as possible. Uptakers and sponsors will be sought from today (JUN 2007)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