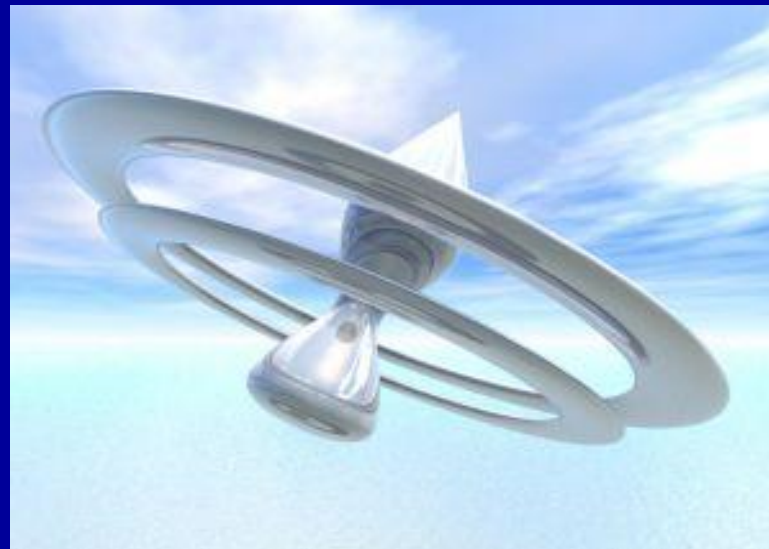




Scanning for Emerging Science and Technology Issues



Miriam Leis/Maurits Butter
15.06.2010

The SESTI project is funded under the European FP7 and researches the application of weak signals and emerging issues for improving the anticipatory intelligence of the European Commission and the EU Member States on future developments and issues

Project Overview

- Client : European Commission
- Duration : 2008 – 2010
- Category : Foresight Project
- Partners : TNO, University of Manchester, Austrian Institute of Technology, Dutch Ministry of Education, Culture and Science, Malta Council for Science and Technology, IPTS
- Regional focus : Developments relevant for the EU
- Frameset : Energy, health + open subject
- Main addressee : Policy makers

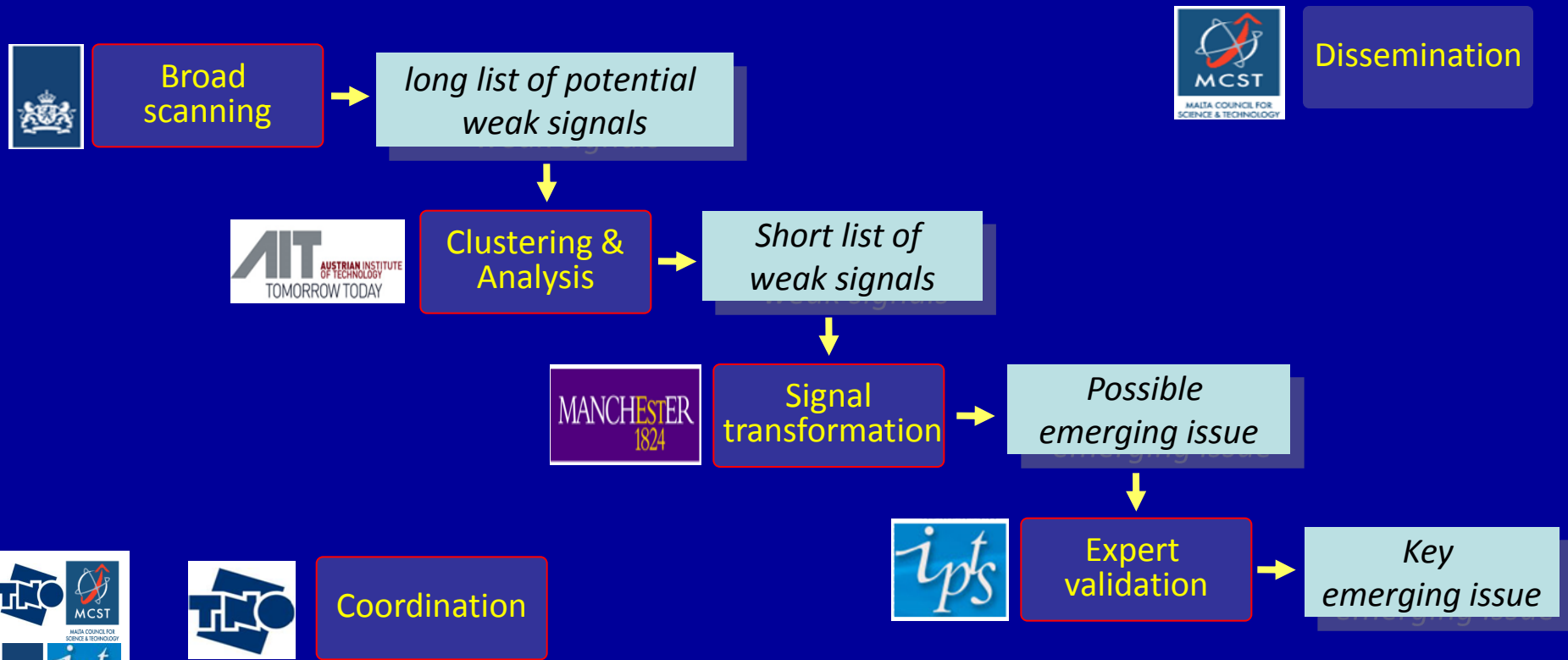


Overall Objectives of the Project

- Identifying emerging issues (= potential topics of future relevancy; future 'grand challenges' (??))
- Researching the added value of weak signal scanning for identifying emerging issues
- developing/improving the theoretical concept of weak signals (exploratory + evaluation)
- Assessing the strengths and weaknesses of several scanning methods (exploratory + evaluation)
- Identifying ways to connect scanning to the policy community
- Experimenting with ways to find "weak signals"



Project Plan



Major Sources

Initial phase, clustering, transformation

- Foresight communities (social web (blogs, twitter) websites, mailing lists), formal publications, surveys)
- Scientific communities (internet, publications, journals, surveys)
- News sources (social web (blogs, twitter), formal web-news, print media, TV/radio)
- Exchange between foresight communities

Validation of findings, “hypothesis”

- Conferences
- Surveys
- Expert workshops



What is a “Weak Signal” (working hypothesis)

- An observable that could be an early warning for change
- It is still not as evident as a trend (or hype) but requires sufficient validation (not mere speculation)
- Novelty to the target audience
- It is often related to other observables
- Different signals could point towards a similar direction which could lead to an emerging issue

Example findings: DIY science & technology, changes in perception about Human Enhancement Technologies, healthy-aging towards Life Extension/”anti aging 2.0”)



Research Questions

- Relation to mathematical “Weak Signal” concepts being used to predict earthquakes, volcano eruptions, tsunamis etc.?
- How do emerging issues emerge?
- Which sources are useful?
- Differences to other foresight concepts like ‘wild cards’, trends, hypes
- When is the signal too weak and when too strong?
- Why does an observable get attention?
- When does a “weak signal” turn into an ‘emerging issue’?
- Is ‘intuition’ a factor, and if, how to make it operational?

Thank You

www.sesti.info

miriam.leis@tno.nl

