BEST
BioEthanol for Sustainable Transport

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Communication programmes in BEST: 2006-2009

Recommendations and lessons learned

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This report is produced within the European project BEST - Bioethanol for Sustainable Transport.

BEST deals with the introduction and market penetration of bioethanol as a vehicle fuel, and the introduction and wider use of flexible fuel vehicles and ethanol cars on the market.

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Executive Summary

This report describes the communication activities in the EU project BEST, Bioethanol for Sustainable transport. BEST focuses on the introduction and market penetration of bioethanol as a vehicle fuel, and the introduction and wider use of bioethanol cars and buses. The participating cities/regions are: Biofuel Region (SE), Brandenburg (DE), Somerset(UK), Rotterdam (NL), Basque Country and Madrid (ES), La Spezia (IT) Nanyang (China) São Paulo (Brazil) Coordinating City is Stockholm (SE). The project is co-financed by the European Commission within the 6th framework; Sustainable Energy Systems/Alternative Motor Fuels: Biofuel Cities. The project started in January 2006 and will continue to the end of 2009.

This is the final report for Work Package 7, Dissemination and Communication but reflects information for the first three years of the project (months 1-36) only. Focus has been on identifying recommendations, lessons learned and best practice that may be of use to similar projects and clean fuel initiatives. Detailed information regarding specific BEST activities can be found in several other available BEST reports including the local communication reports for each site. See www.best-europe.org for more information about available reports and contacts. Note that this report Updated detailed lists covering the full project period will be provided in the last version of the periodic activity report at the conclusion of the project.

Main findings and recommendations

Reaching key stakeholders: Produce a few key materials used in several contexts and channels to reach key target groups. Within BEST, policymakers were often reached through personal meetings or formal public consultation channels, but public opinion was also important in reaching this group. Messages focused on environmental benefits, energy security and in some cases, local economic development. Fleet managers required information focused on practical needs and showing that bioethanol vehicles could meet performance requirements, environmental goals, and also be cost-efficient (where infrastructure and incentives made this argument credible) The general public was reached through media channels that present general and sometimes biased information about bioethanol. Ongoing contact with the general media complemented by public events and particularly "experience-oriented" demonstrations in public buses and taxis helped convince the public that bioethanol is a reliable, market-ready technology that can be produced sustainably.

Managing communication along steps and across the chain: Although BEST communication strategies were tailored to each site's market development status, communication was not solely focused on current buyers but also on those groups that require long exposure to bioethanol vehicles before they will consider buying them. Even a targeted communication initiative can reach several target groups. Therefore, sites can focus on target groups with imminent purchase or policy decisions but with an eye to identifying indirect impacts on other target groups such as the general public. In the same way, sites can produce information materials for prioritised target groups that can also be leveraged to provide information to other groups at little added marginal cost.

Common messages, local approaches: Local market development for bioethanol depends on local fuel and vehicle supply and market incentives. Nevertheless, public debate regarding the sustainability and food security aspects of bioethanol vehicles were driven by international NGOs and networks and were common across these diverse sites. This suggests that the globalization of media and its local impacts has made centrally coordinated responses more efficient. A number of local communication programs should however be sensitive to local contexts and utilize local social capital. Sometimes, local and central programs worked well in combination. For example, the Light House Tours were a centrally-organized program, offered by BFR that helped local communication coordinators present a best practice example and then relate it to the local context.

Shooting the rapids: navigating unforeseen circumstances: If there was one "surprise" in the BEST project, it was the shift from a relatively positive media at the project start in 2006 to a lively local,

national and even global debate in late 2007. Many sites felt unprepared for the intensity of this debate, even if they could offer arguments to support local projects. A lesson learned was that sites could help each other by sharing experiences and information. Small seminars and detailed Internet-accessible materials were key communication channels for responding to sustainability concerns. A strong recommendation to other projects is to address concerns openly and honestly and provide as much factual information as possible, particularly in cooperation with "legitimate" sources such as universities or other scientific bodies. In other cases, BEST communicators struggled to maintain public awareness and debate regarding important incentives. In these cases, BEST communication managers maintained a steady flow of relevant information linked to current events and ensured that project and fuel information was available when policy issues were debated in the media.

Specific recommendations

BEST communication programmes included a variety of tools and resources including web sites, printed materials and contact lists, as well as comprehensive events, demonstrations and training that helped target groups experience bioethanol and FFV's. This report reviews recommendations for producing similar programmes as well as for managing knowledge resources and evaluating results.

tools and resources

- Produce a local web site only if it is clearly linked to other communication materials and events. Use existing internet channels but also investigate sites managed by other legitimate sources such as fuel advisory services and other clean vehicle sites. Necessary to work actively to monitor and increase traffic. Learn how to, or consult an expert!
- Print a few materials that can be readily available for a number of general activities such as a brochure, but focus on flexible graphic and informational elements that can be tailored to key target groups and new situations.
- Work actively with contact databases and map other relevant ways to reach your target groups through networks, newsletters etc produced by others
- Badging vehicles can be effective in raising project and fuel awareness, but users may be unwilling or unable to incorporate project logos, particularly on municipal or private vehicles. On the other hand, users often appreciate badging that shows that the vehicles are clean and/or fuelled by a renewable resource.

Media relations

- Build trusting, long term relations with journalists including those covering technology, environment, regional development and motoring.
- Release as much factual and sourceable information as possible, perhaps in cooperation with legitimate and trusted sources of information.
- Strive to help journalists meet their needs and utilize their potential to act as a bridge between project communicators and stakeholders or seek help from professionals who can.
- Media training especially crisis communication can be helpful tool to get your messages correct. This should be a core component of any similar project, planned at the outset.
- Be prepared for both disinterest and heightened interest based on misinformation or tangentially related issues. Present the project as a reliable resource for unbiased information.

events, study visits, meetings and test fleets

- Produce a few major events, particularly in conjunction with milestones such as fuel station openings or new bioethanol bus services
- Meet your target group where they are rather than expecting them to seek you out. Participate in commonly produced or external events to leverage communication materials and position

bioethanol in the context of larger issues such as local economic development or climate change remediation.

- Study visits can be an important tool for introducing bioethanol to key customers such as fleet managers or local politicians.
- Personal meetings are critical for helping public and private fleet managers understand the costs and benefits of using ethanol to their own organization.
- Testing is believing. Test drives are as important in showing similarities in vehicle performance and driving techniques as they are in highlighting differences.

sales and service training

- Many target groups will be introduced to bioethanol and FFV's through dealers or bus drivers. Their information regarding bioethanol sustainability, refuelling, and other issues not typically asked when purchasing or using conventionally fuelled vehicles must be balanced, reliable, correct and current.
- Most manufacturers have existing training contracts and institutions that may effectively and efficiently be used to train personnel in bioethanol-related issues.

knowledge management

- Advertising the project itself is only valuable in as much as it helps raise awareness for the market development potential of bioethanol. It may be most important to focus on the benefits of the technology than "branding" the project.
- Although most communication initiatives should be local, issues and concerns such as bioethanol as food vs. fuel were global in scope and effectively addressed using central communication resources—as long as they could be flexibly utilised locally.
- A professional communications background is critically important to creating and producing effective marketing and dissemination of the project and its objectives. However these individuals also need support from a range of project spokespeople, experts and other "mouthpieces".

analysis and feedback

- Many tools for analysis and feedback of communication materials such as websites are readily available and are inexpensive or free. However, skills, time and resources are required to make sense of what statistics regarding media hits or web traffic really mean.
- Communication managers should work closely with other work package groups that produce evaluations of user attitudes, awareness and mindsets and hopefully include metrics most relevant to communication programmes in these evaluations.
- An evaluation programme will typically include both analyses produced within the project and analyses and indicators produced in other contexts.

Final comments

BEST delivered many times the number of vehicles planned and contributed to market development in Europe and elsewhere. Communication resources budgeted within BEST were modest, but were effectively leveraged and combined with other resources, both in communication metrics such as media entries, in increasing refuelling facilities, and arguably even in fuel and vehicle sales. Nevertheless, some sites found it difficult to maintain media and public interest in bioethanol issues as policy decisions regarding incentives or removing tax barriers stalled—while others struggled to respond to adapt to media environment that seemed to turn from positive to negative overnight.

The experiences and lessons learned from communication programmes within the BEST project highlight the importance of communication in any market development initiative and can hopefully guide projects with similar ambitions.

Introduction

This report describes the communication activities in the EU project BEST, Bioethanol for Sustainable transport. This report is the final report for Work Package 7, Dissemination and Communication. Focus has been on identifying recommendations, lessons learned and best practice that may be of use to similar projects and clean fuel initiatives.

Detailed information regarding specific BEST activities can be found in several other available BEST reports including the local communication reports for each site. See www.best-europe.org for more information about available reports and contacts. Note that this report reflects information for the first three years of the project (months 1-36) only. Updated detailed lists covering the full project period will be provided in the last version of the periodic activity report at the conclusion of the project.

The BEST project

The project BEST, Bioethanol for Sustainable Transport, focuses on the introduction and market penetration of bioethanol as a vehicle fuel,and the introduction and wider use of bioethanol cars and buses. The strategic objectives for BEST are to:

- mitigate greenhouse gas emissions growth;
- reduce over-dependency on oil; and
- promote biofuels for transport

The project started in January 2006 and will continue to the end of 2009. During the project more than 67,000 bioethanol cars and 140 bioethanol buses have been introduced, demonstrated and evaluated. Fuel stations for E85 and ED95 fuel have opened. Low blends with petrol and diesel have been developed and tested. The table below notes the project targets for each site:

Targets and sites	Flexi-fuel cars and conversions	Ethanol buses	Hybrid ethanol-electric buses	E95 Fuel pumps for buses	Ethanol-diesel vehicles	Ethanol-diesel fuel pumps	E10 fuel pumps	E85 fuel pumps
Stockholm	4103	127		5				25
Biofuel Region, Sweden	2501				2	1		55
Rotterdam	2955							12
Somerset	46							5
Basque Country	200						12	4
Nanyang	10	4		1				2
Madrid	25	5		1				3
La Spezia	10	3		1				1
São Paolo		1	3	1				
Brandenburg	80							12
Total	9930	140	3	9	2	1	12	120

Table 1: Targets and sites in BEST: Bioethanol for Sustainable Transport. 48 month period.

Through BEST, the participating cities and regions aimed to prepare a market breakthrough for bioethanol vehicles and bioethanol. Another objective was to inspire others to follow. During the

project several incentives promoting bioethanol cars and buses and bioethanol fuels have been introduced locally and in some cases at the national level. Some of the sites faced barriers to the introduction of bioethanol in the beginning of the project and in certain locations these are still not solved. The barriers have mainly been taxation and regulation issues.

The participating cities/regions are: Biofuel Region (SE), Brandenburg (DE), Somerset(UK), Rotterdam (NL), Basque Country and Madrid (ES), La Spezia (IT) Nanyang (China) São Paulo (Brazil) Coordinating City is Stockholm (SE).

The project is co-financed by the European Commission within the 6th framework; Sustainable Energy Systems/Alternative Motor Fuels: Biofuel Cities. The project started in January 2006 and will continue to the end of 2009.

This report gives information about all the work conducted within WP7 Communication and Dissemination in the BEST project. Please refer to www.best-europe.org to access available reports from the project.

The "S-Curve"

BEST supports market development for bioethanol vehicles. The project's main strategy has been to identify and support the specific phases characteristic of new market development. The S-curve describes the development of markets for many new technologies, including computers and mobile phones. When new technologies are first introduced, the market is dominated by so-called "early adopters" which are buyers with a special interest in new technologies or in the particular qualities of a specific technology (such as lower environmental impact). Over time, as market volume increases, new suppliers enter the market and the technology continues to develop. Market barriers including high purchase price, missing information or perceived shortcomings in quality diminish and demand increases, prompting producers to add new models to the market. When the new product has reached a so-called "acceptance level" or critical mass, mainstream consumers begin to be interested in it. Market share begins to increase rapidly until it reaches a maximum penetration and is considered a mature product offering.

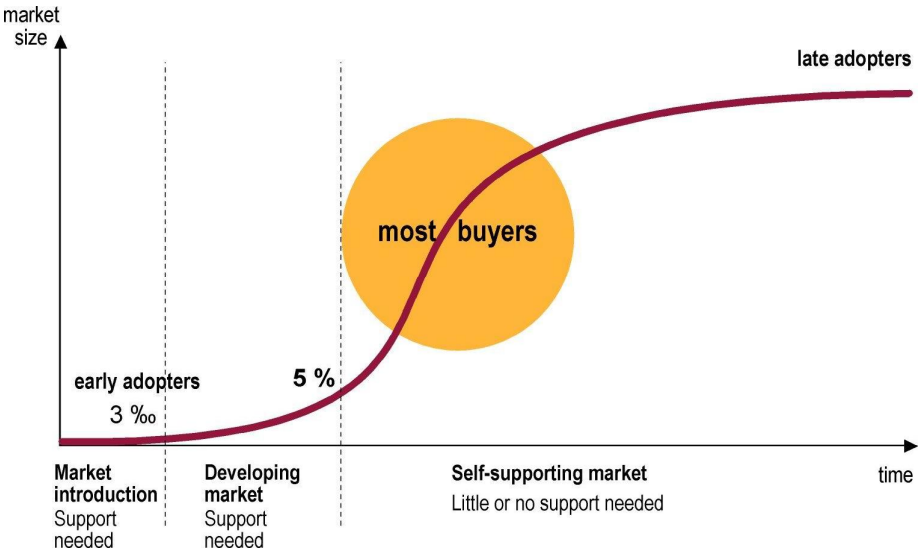


Figure 1: S-curve showing the relation between time and market penetration of new technology

Variations of S-curve models and similar market development models such as the "market staircase" can be used to identify the steps and strategies that can shorten the market introduction phase or raise the potential for maximum market penetration.

Most of the BEST sites were in an early market introduction phase for bioethanol vehicles at the inception of the BEST project, though there was considerable variation among cities. For example São Paolo had extensive experience with ethanol, and demonstration projects, but was new to the use of E95 and hybrid electric vehicles. Incentives and demonstrations were contributing to a growing market in Stockholm but had been constrained by few vehicle offerings. Bioethanol awareness, acceptance and debate also shows some commonality across cities, although some issues were more context-specific. For example, sites had local production of bioethanol and in some cases where local production was seen as contributing to regional development. In other cases the opposite was true: the necessity of importing fuel was an issue that communication managers for BEST needed to address.

Communication programs in BEST

The communication program for BEST was organized as Work package 7 (WP7: Marketing and Dissemination). The objectives of this work package were to:

- promote the dissemination, exploitation and marketing of the project results in order to maximise the European adoption of Bioethanol as a fuel;
- use dissemination and marketing to encourage followers to repeat BEST actions at new sites; and
- use local awareness raising activities increase the use of bioethanol as fuel and compare work at different sites to find efficient ways to communicate about bioethanol

The budget for BEST WP7 was approximately 20% for coordination and 80% for the sites. This corresponds to a total communication budget of about 2.5 million Euros for a 48 month period of which about 1.8 million in expenditures had been reported by the end of month 36. WP7 thus corresponds to a little more than 10% of total BEST Budget. In total WP7 corresponded to 129 man months budgeted for a 48 month period, of which 110 had been used by month 36. Budgeted and actual expenditures varied widely by site. In part this reflects local communication ambitions but also the extent to which sites could leverage existing and external communication resources for BEST. Some sites had small expenditures within the BEST Work Package 7, but nevertheless produced extensive communication programs that were directly or indirectly related to BEST. Note that non-staff expenditures represent a far larger share of to-date expenditures than of budgeted expenditures.[1] This reflects the fact that many external expenditures such as producing brochures and web sites accrue in the early and mid-stages of the project, but also that sites used external skills and services to a higher extent than foreseen due to complex competence needs.

The biannual comprehensive report of communications programmes to the EU required significant staff time and budget expenditures that could otherwise have been used in external communications programmes.

[1] Note that staff expenditures include both own staff and subcontractors

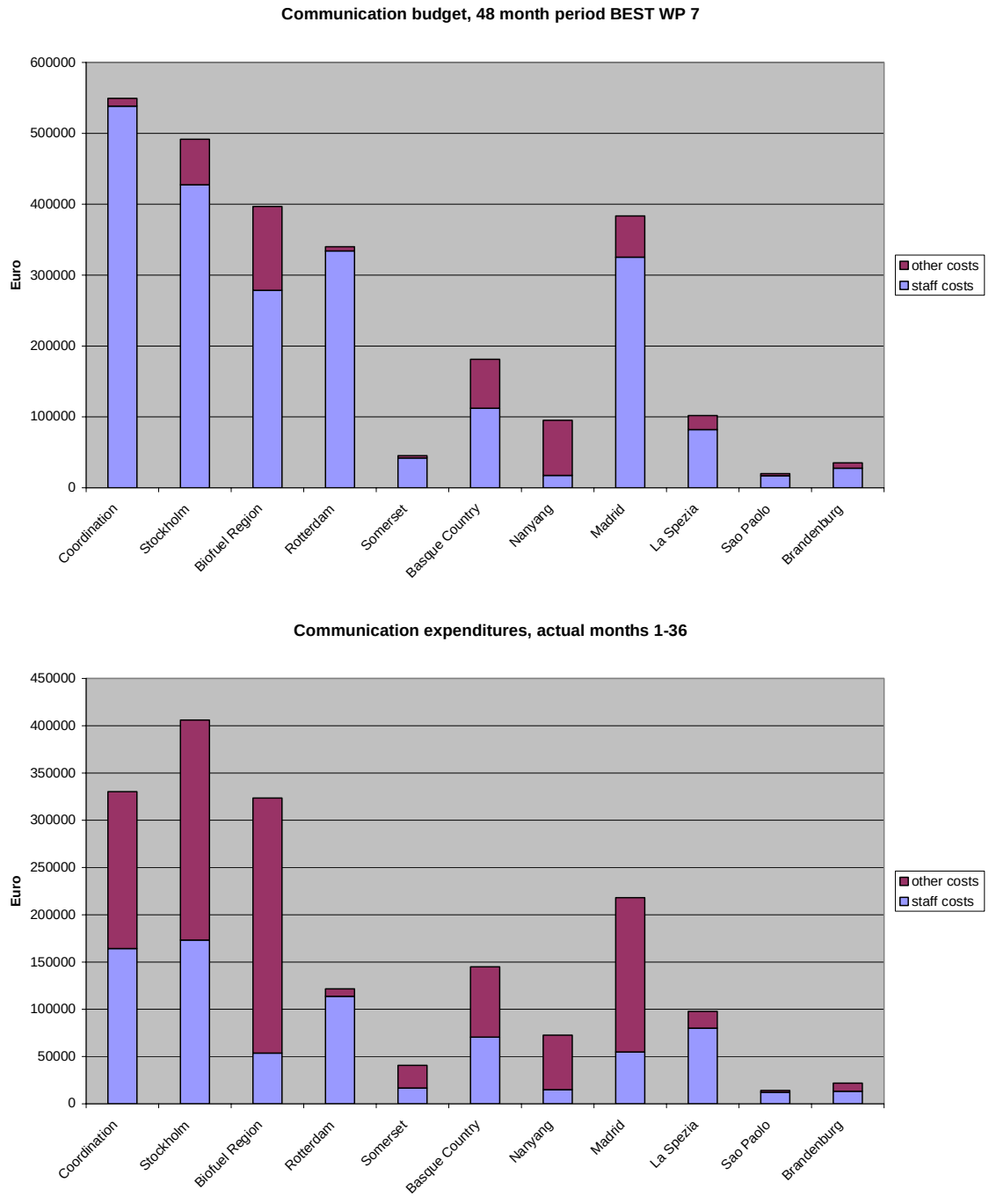


Figure 2: Communication budget and actual expenditures in BEST, months 1-36

Public awareness and media trends, 2006-2009

Before the start of the BEST project in 2006, sites describe the general media interest in ethanol as positive but rarely reported. When reported, ethanol was described as a clean alternative to petrol and a potential tool for reducing carbon emissions. Starting in mid-2006, however, wheat and other grain shortages prompted the media to question ethanol feedstocks and describe production techniques in more detail. A few local regions such as the Biofuel Region in Sweden also noted an increase in media interest in bioethanol as a development opportunity for the region's forestry and pulp industries.

2007 saw a far greater variety in ethanol reporting and a generally critical media attitude. In areas such as Stockholm with a longer experience using flexi-fuel vehicles, the media began to ask how often

flexi-fuel vehicles were actually running on an alternative fuel. This was particularly relevant in light of national policies being discussed that would provide incentives for clean vehicles, such as exemption from local congestion charges. As 2007 progressed, BEST sites around the world noted an increasing number of questions regarding whether or not more energy was consumed to produce ethanol than it offers. The “food vs. fuel” debate focusing on the best use for bioethanol feedstocks increased as the global grain shortage was reflected in soaring prices. Some media sources blamed grain price increases on the production of bioethanol, often without also presenting arguments that this was unfounded.

In 2008, the viability and sustainability of bioethanol was often questioned in the media. For example, a Swedish newspaper presented a picture showing how much bread could be produced for one tank of E85. In markets where ethanol does not enjoy price subsidies or is for example taxed as other alcohol products, the high relative cost of ethanol was a constant issue in the media. Journalists began to ask about the life cycle costs and emissions related to ethanol use compared to other alternative fuels. Global organizations became engaged in the sustainability issues related to bioethanol and raised local media awareness of these issues in every BEST local media environment. Many sites spend most of their communication resources responding to journalists questioning the value of BEST as a socially, economically or environmentally sustainable resource.

While the media attention to ethanol and bioethanol at times reflected a global debate not always fully understood or described correct by local media, the communication programs within BEST served as an important resource. BEST communication managers were able to use the seemingly negative media environment towards bioethanol to disseminate facts and other information about bioethanol. The BEST sites and partners chose to present both positive and negative aspects of bioethanol and discuss both technical, economic and sustainability challenges openly and honestly. This has resulted in a current media attitude that is more balanced. The press continues to raise important issues regarding bioethanol, but most BEST sites note that local media coverage is more balanced, more nuanced, and better informed.

1. Target groups for communication

Almost all sites had target groups for communication that represent all phases of market introduction and these varied little across sites. Prioritised target groups were municipal and private fleets including taxis, private companies, local and national politicians. During the years of the project the relevance to also prioritize the general public with communications grew. In a few cases also students was prioritized. In a few cases such as São Paolo, politicians and investors with a specific interest in carbon management or carbon trading were also included. Although the BEST project and bioethanol was of interest to research and development organizations, these were generally not targeted for communications since the focus was on groups considered critical to achieving a market breakthrough for a market-ready technology rather than new technological developments. As a representative from the Basque country noted, “top priority was given to target groups which by their volume could have captive fleets or serve as opinion leaders.” Non-governmental organizations were not a focus for targeted communications for most sites, though many sites found that their local projects could become targets for NGO campaigns against biofuels or ethanol. Therefore, several sites actively sought contact with NGO’s to exchange information and experiences and openly discuss challenges and problems encountered. In some instances ongoing contact with NGO’s resulted in their taking a more positive stance regarding the sustainability potential of using bioethanol.

Though most sites considered their markets still in the pre-introduction phases, communication programmes also needed to reach the types of users and buyers associated with other phases. In other words, communication is needed both for ”ready” buyers and users, but also for other groups that influence current buyers or need early and continued exposure to the new technology.

Another reason for communicating simultaneously to several target groups is that bioethanol acceptance requires change across the entire system of fuel and vehicle production, distribution and use. The Biofuel Region describes this as ”communicating across the chain” because weaknesses in any of the links—in fuel production, supply, vehicle production, service or policy—can hinder the market introduction of bioethanol.

Getting the incentives right: local and national authorities and politicians

This target group included persons in key positions regarding local or national initiatives, regulations and programs in the field of transportation, environment and energy. It also included people involved in creating opinions in e.g. media or networks for fleet managers, or in a broader sense working with sustainable transportation and sustainable development. This group was very important to amplify outreach of BEST overall communication as well as BEST local communication. BEST sites focused on specific policy issues that promoted bioethanol production or use (such as fuel price subsidies, free parking or congestion charge rebates) or hindered it (such as taxes classifying ethanol as equivalent to drinking alcohols.) Some sites were able to directly lobby or otherwise reach these opinion and policy leaders; in other cases they were reached through more general awareness-raising or public opinion campaigns.

Early adopters: municipal fleets

Public authorities are typical early adopters of new technologies for vehicles. Municipal fleet purchases of flexi-fuel or dedicated ethanol vehicles are often critical for building the necessary volume to justify the provision of public refuelling infrastructure. The vehicles also play an important role in spreading knowledge about FFV’s to society and building confidence in the technology. A survey produced in Rotterdam indicated for example that seeing local authorities using FFV’s is a

major motivator for other organizations and companies to own and use bioethanol vehicles.[2] Publicly-owned vehicles may enter the private market in resale. It is perhaps no coincidence that the sites with the largest numbers of publicly-operated FFV's are also the sites with the largest numbers of privately operated FFV's.

This target group is often highly motivated to demonstrate environmentally friendly technologies and has the fleet support necessary to operate and service the vehicles. However, public bodies are complex organisations and political decisions may be required to stimulate action. Inter-departmental relations may also slow or limit introductions of new technologies or methods, as might uncertainty over the requirements or stipulations of public procurement legislation. Divergence between local and national targets, as was observed in Nanyang, can also impede the speed of introduction.

Key messages that BEST projects used to approach municipal and other public fleets included information about the applicability of flexible-fuel vehicles to different conditions (climate, traffic, topography, etc) and for different types of activity (private transport, public transport, waste collection, home service, etc). Because bioethanol is often used in flexible-fuel vehicles, it was important to communicate information about refuelling opportunities and environmental benefits to ensure that individual personnel refuel with bioethanol as often as possible.

Building critical mass: company car managers and drivers, taxis

Company cars account for a significant proportion of the resale market, so the purchasing decisions of companies impact directly upon the overall composition of fleets in cities and nations. Flexible fuel vehicles are a proven technology and may therefore be a viable alternative for companies seeking to promote an environmental profile or take advantage of public incentives for alternatively fuelled vehicles while ensuring that the vehicles will meet their commercial needs. However, the decision to purchase FFV's and use bioethanol to fuel them is in fact often shared by a company fleet manager and individual personnel. People in this group are not active in discovering the project and bioethanol through general media channels. They must therefore be continuously served with messages, news, etc. from the project, and it is preferable that the local partners are the senders and that the messages are transformed to native language and local/national context. Therefore reaching this target group requires a range of communication tools, activities and information. Information regarding fuel price and supply seems to be of particular importance. Examples of this type of program are found in Stockholm, Biofuel Region, Rotterdam, Somerset, Madrid, La Spezia, and Brandenburg.

Mature market buyers: general public and students

Although it may take some years before bioethanol is considered a mass market vehicle fuel, BEST sites invested communication resources in reaching the general public and schoolchildren. One reason is that mass market or late adopters are characterised by their need for a long period of exposure to a technology before using it themselves. The earlier they hear about bioethanol as a viable vehicle fuel, the sooner they may be willing to accept it themselves. Another reason is that channels to reach a broader audience like media is also good channels to also reach the less interested in the target group above: company car managers and –drivers, taxi etc. A third reason was that many BEST vehicles were in public service, so even late adopters may in fact be early users of bioethanol vehicles as they ride public buses or vans. A few sites such as the Biofuel Region had programs for secondary students as well, developing the skills and knowledge necessary for making bioethanol production a sustainable industry in this part of Sweden.

[2] Attitude and acceptance of potential users of ethanol vehicles: report on qualitative marketmarketmarket exploration driving on bioethanol (E85) in Rotterdam and its region. BEST deliverable 9.6 and 9.7, February 2007.

Increasing impact: other cities and countries

Market development in any one city or site is a function of national and indeed international market development. Factors identified as particularly important to mass market consumers such as purchase price, fuel availability or fuel price are determined by global markets and in relation to an array of external factors. Therefore, a stated goal for BEST and BEST communication was increasing impact in other cities and countries.

Generally, presenting project information at national and international conferences, and participating in networks and common communication projects were resource-effective channels for reaching out to other sites. Examples of common projects and networks include the EU projects Biofuel Cities and CATALIST (within Civitas) which have the express aim of spreading best practice from several projects or cities. The centrally produced BEST communications (presentation leaflets, newsletters, website etc) served to support this communications.

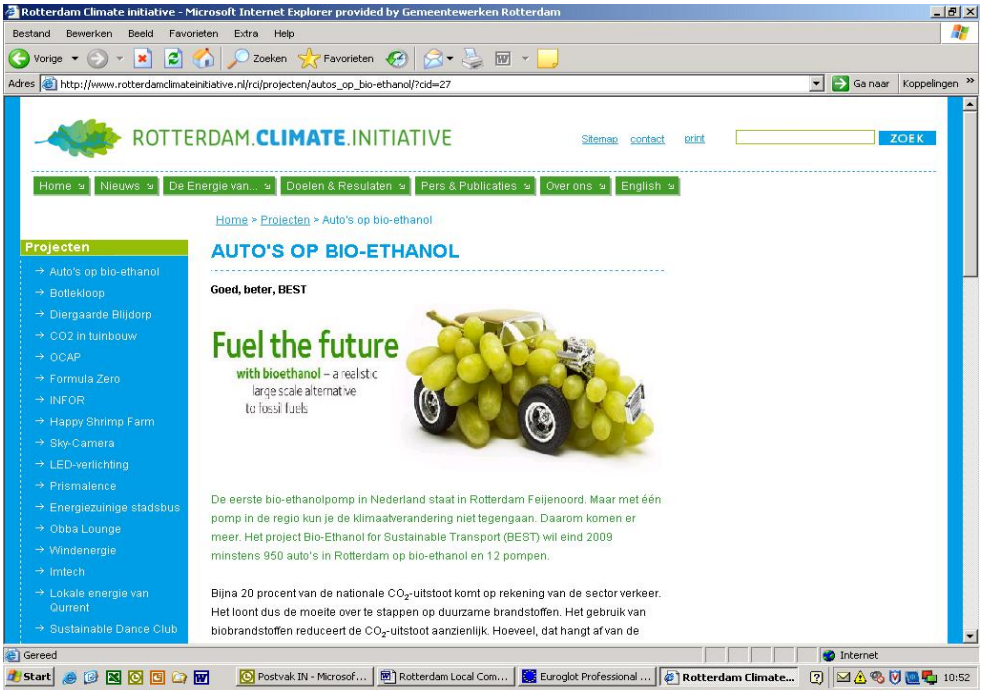
2. Materials and resources

The BEST project needed to be efficient and effective in its production and use of key materials that could be used in a variety of contexts. A common strategy was to produce either materials that would appeal to all target groups, or produce target-specific materials and also use these materials where appropriate to reach other audiences.

web sites

All BEST sites had information available through the Internet, most through web sites or site sections dedicated to the local or central project and relevant information about biofuels for vehicles. (A list of BEST-related websites is provided as an appendix to this report). Some sites were constrained to presenting local project information through their local authority website. Some others worked actively with several websites that complemented each other with information regarding BEST and biofuels. The content of some bioethanol websites was determined by a general web editor with responsibility for many other topics other than BEST or bioethanol, while other sites were able to determine content themselves and/or develop independent sites. In some cases content could be determined independently but was hosted on an organisational website. For instance, BEST and bioethanol information in the Basque Country was hosted on the Basque Energy Board domain but could be developed and revised independently. Some sites felt that it was preferable to have an independent dedicated website with content managed by specialist topic web editors for this type of project, rather than disseminating material through for example a local authority website. Dedicated websites had more freedom and flexibility to provide tailored information, tools and dialogue forums than those produced within other sites. On the other hand, dedicated websites required a more substantial commitment of personnel and resources to attract visitors and update information.

Web sites were a useful tool for providing up to date information about both the project and particular issues and concerns about biofuels. Many sites noted that the sections that provided questions and answers about biofuels and clean vehicles, and downloadable fact sheets, reports and scientific articles, were particularly popular. Most sites provided information about refuelling sites. Sites promoting several clean vehicle technologies, for example in Rotterdam and Stockholm, provided an online decision support tool to help potential buyers such as fleet managers determine whether or not bioethanol vehicles meet their performance, environmental and cost specifications. (See examples at www.schonevoertuigenadviseur.nl and www.miljofordon.se)



BEST project information on the Rotterdam Climate Initiative website (www.rotterdamclimateinitiative.nl)

Sites attracted visitors through established channels such as links to other sites and links to information in newsletters, presentations and press releases. (See Section 7 for a discussion of tools and methods for tracking the sources used to find out about BEST sites.) A common reflection across sites is that it can be difficult for visitors to find a dedicated website in the mass of information available and that investments in websites are wasted if not carefully coordinated with other communication channels. Nanyang and many other sites frequently sent emails to target groups when web information was updated and found that these had particular benefit in raising web traffic when important news or debate was current in the media. Since bioethanol media coverage can be vulnerable to incomplete or even incorrect information in the media, web sites became a critical tool for disseminating both general and detailed factual information. Indeed, sites report that journalists often downloaded background information from BEST – related web sites.

Some sites used the web to provide open forums and invite dialogues about the use and effects of bioethanol. These became popular when concerns about “food vs. fuel” from ethanol feedstocks were being publicly debated. Several sites report that inviting debate underscored the seriousness and legitimacy of the BEST project and its aim to approach difficult issues openly and honestly. Some sites included web surveys to gauge interest in particular subjects. When interpreting results from these types surveys it is important to understand that they often reflect special interests rather than the information needs of all web site visitors.

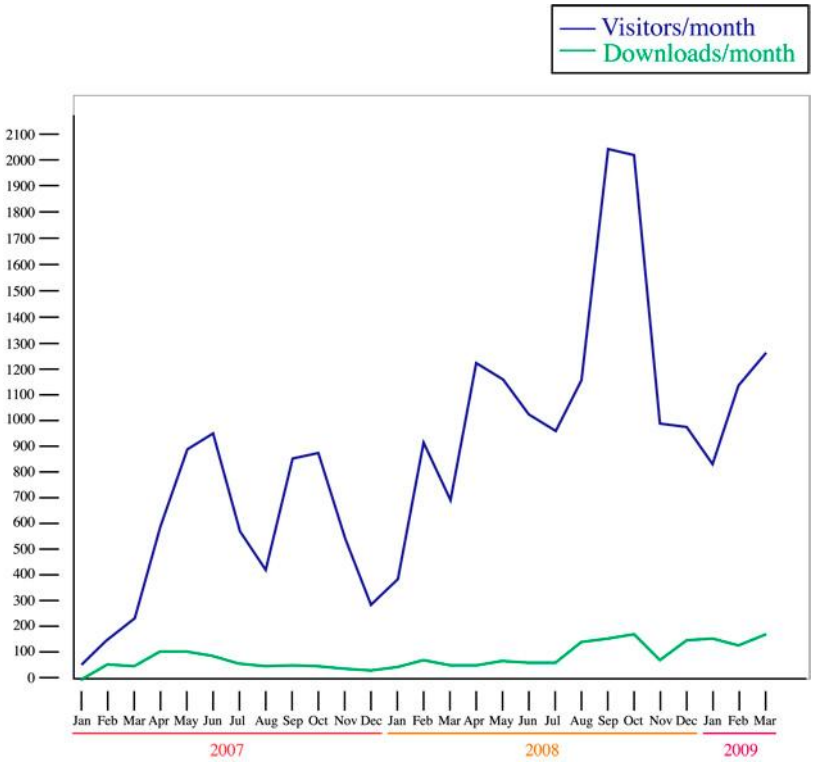


Figure 3: web site traffic from www.bioethanolmadrid.es shows a large variation in the number of visitors but a rather more stable frequency of downloaded documents and other materials.

Stockholm compared the traffic that was attracted to a "sender-oriented" website providing project information (www.stockholm.se/miljobilar) and another tailored to the needs of specific target groups (www.miljofordon.se) and found that, as expected, more visitors were attracted to the target group-oriented website. However, the project website was an important repository for background information including project descriptions, newsletters, reports and official information. The two sites therefore complemented each other.

Visitor trends and similar statistics are available for most of the dedicated websites (Stockholm, Biofuel Region, Madrid and Rotterdam as well as for www.best-europe.org). The details are reported in the biannual dissemination reporting books. The other BEST sites were not able to organize tools to analyze visitor trends and other web statistics, in many cases because the "owner" of the hosting site was not able or willing to organize this type of analysis for organizational, technical and financial reasons.

In addition to web-based advisors, several sites offered telephone advisory services The Basque Country had an ambitious service programme linked to a local energy information announcement on the radio as well as a public Internet forum where visitors could pose questions. This service received 250 inquiries between December 2006 and October 2008, about eleven per month. The opening of the southern Europe's first bioethanol pumps in the Basque provinces of Gipuzkoa and Alava sparked public interest in bioethanol and led to a sharp increase in calls, as shown in Figure 4 below. Interestingly, however, the Basque province of Bizkala, which lacks a bioethanol pump, has generated the most calls of the Basque Country's three provinces. (more information and analysis of the Basque Country's telephone service is available as BEST Deliverable D7.08).

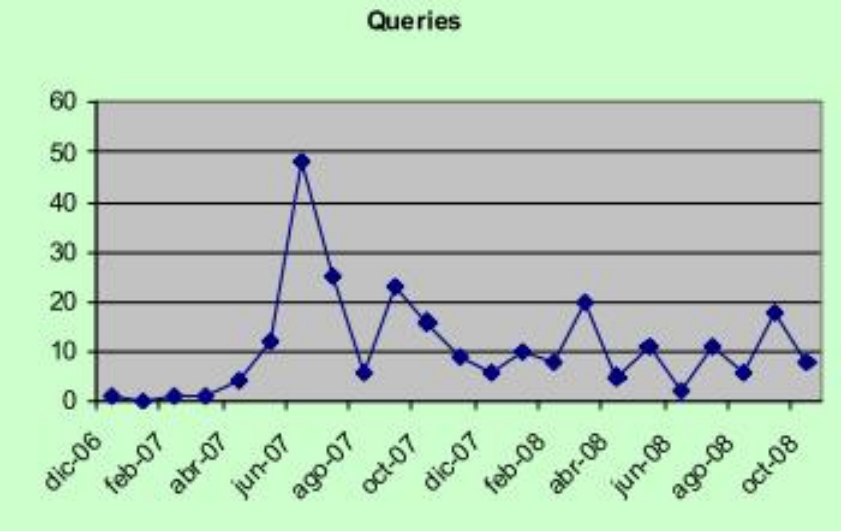


Figure 4: Telephone queries to the advisory service offered in the Basque Country

The Somerset County Council offers a series of themed contact numbers for members of the public to access its services. “Somerset Direct” is a service that allows information to be passed directly to the caller to cover basic enquiries. For more involved enquiries the caller would be routed through to the Somerset Site coordinator or the Local Communications Manager based in Somerset County Council. Stockholm and Rotterdam had similar tools and applications that helped individuals match their needs with available vehicles and information about infrastructure and incentives.

Madrid established and maintained a “Bioethanol Directory” that included contact detail for many different players involved in the bioethanol market in Spain. This became a key reference resource for a variety of target groups including producers of fuels and vehicles, engineering companies and consultants, specialised med media, regional and national administrations, and interested individuals.

BEST project web site

The project also produced project website www.best-europe.org: This was used as communicative hub for the BEST project, i e to provide news, results, extended information, further contacts, etc. the content was produced to also be possible to use as input to other (local/national) communications produced within (and outside!) the BEST-project.

Fel! Objekt kan inte skapas genom redigering av fältkoder.

Local contact lists and BEST Friends

Most BEST sites were managed by a local authority, an institutional setting within which the establishment of a registry or customer contact list may be regarded as overambitious or even inappropriate Nevertheless, targeting key decision makers such as local political leaders, authorities or fleet managers requires identifying specific individuals and developing ongoing contact with them. Therefore, BEST sites created contact lists and updated contact information on an ongoing basis. Often, it was most efficient to obtain contact information from cooperation partners, from other intra-organizational sources or purchase addresses commercial registries. Hiring a person dedicated to develop and update contact lists proved to be an efficient use of communication resources.

BEST Friends is a “club” open to cities, organizations, and companies that are already involved in, or plan to work to increase the use of bioethanol fuels and bioethanol vehicles. BEST Friends is a mechanism to facilitate their work by offering information exchange and knowledge support. The BEST Friends get the opportunity to get in contact with other BEST Friends, i.e. other actors in the same situation as their organisation. The BEST Friend can use the BEST Friends logotype in internal and external communication

Organisations can apply to become a BEST Friend via a web form on www.best-europe.org. The applicants accepted as BEST Friends gain access to the BEST Friends protected area on this website. They are also assigned a contact person, either the local manager in the BEST site in their country, or, if there is no BEST site, the BEST coordinator is the contact person. (A list of BEST Friends is presented at the end of this report).

A reflection from the BEST sites is that the BEST Friend programme was a potentially valuable resource but did not reach its full potential. Sites did not reach a consensus regarding the most important goals of the initiative. One example was the responsibility for BEST Friends representing other cities. Although promoting the spread of BEST actions to other cities was clear objective in the BEST project, it could be difficult for sites to balance resources devoted to communicating local activities and to helping other cities. BEST Friends became an efficient tool for building and augmenting local contact lists but did not develop into a forum for exchanging experiences and discussing common challenges with other cities. This was partly due to the fact that the roles and responsibilities for the central coordinator and the local communication managers were not clearly established when BEST Friends launched.

The experience of the BEST project and local site managers with contact lists suggests that similar projects should first review the possibilities to gather and use contact information locally or nationally. Central communications coordinators that distribute project information throughout Europe should ensure that local partners are aware of contacts in or near their sites and that partners maintain updated registries to reach them. Moreover, sending out “centralized” information throughout Europe makes the message per definition more distant and “far away” from the context of the receiver and may therefore be viewed as less relevant. Local and central communicators must continuously work to find the most appropriate individual, language, and media channel for reaching key contacts. For some receivers centrally produced messages may be appropriate,. For most, however, a version reflecting a local/national context is much more powerful. To be able to do this the local communication managers need to maintain a contact registry.

printed materials

As in other clean vehicle campaigns and European projects, both local sites and the central coordination produced and distributed a variety of photos and supporting graphic material. It was considered important to have a few graphic elements that were centrally produced, such as the BEST project logo and convention-style “roll-ups” as well as the development of several graphic elements that could be flexibly applied in local communication programmes. However, because a significant share BEST communication was developed in cooperation with other local programs, other biofuel projects or organizations, it was not considered necessary or feasible to enforce the use of a complete graphic profile in the local sites. On the other hand, some sites designed a graphic identity for their own local programs and specific campaigns, for example the “muévete con otra energy/move yourself with other energy” campaign in Madrid. In Somerset, a professional photographer was employed for conferences, events and key milestones within the project to build up a stock of images for use throughout the project.

Fel! Objekt kan inte skapas genom redigering av fältkoder.

BEST graphics produced by the central communication team were incorporated into local press kits and other information materials such as these in La Spezia and Nanjing

Some BEST sites produced a newsletter for the local project and also contributed to newsletters produced by others. The Basque Country produced a digital newsletter that reached about 2100 subscribers three times per year. BFR and BAFF in Sweden produced monthly digital newsletters that reached 500 and 2500 subscribers respectively. In Stockholm, the newsletter covering all clean vehicle programs has over 2800 paper subscribers and 900 email subscribers. 44% of subscribers are companies, about one fifth are municipalities and fifteen percent are members of the general public. Single issues can also be downloaded. A 2007 evaluation of reader responses to the Stockholm Clean Vehicle newsletter note that most found the newsletter helpful, relevant and credible.

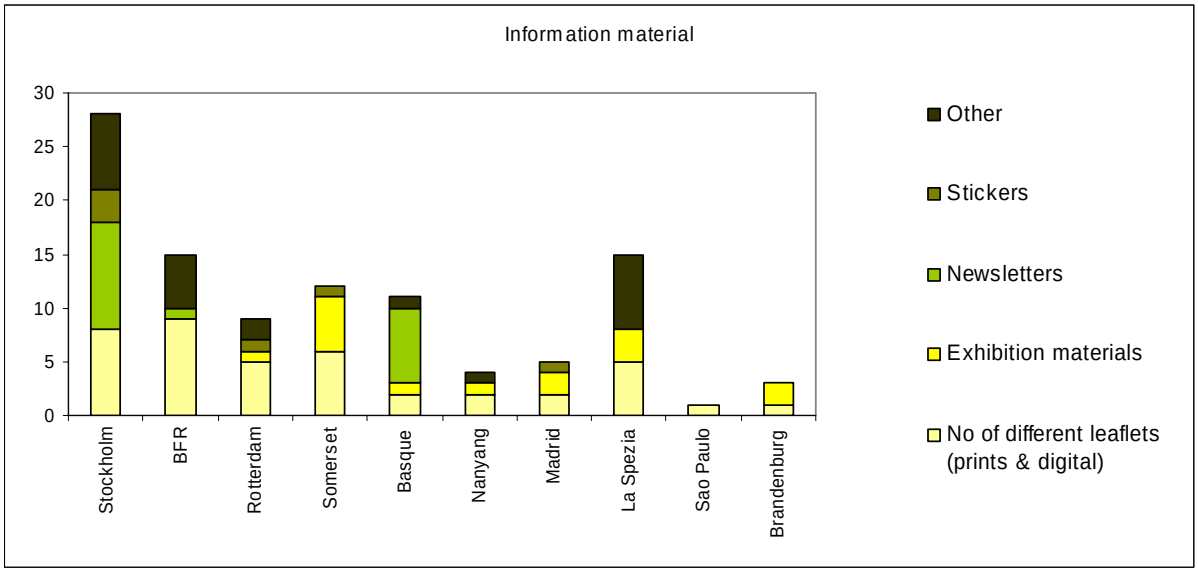


Figure 5: Over one hundred unique printed materials were produced within BEST

The Biofuel Region produced an entire 24-page newspaper each year that was distributed to all households as a newspaper supplement in the six local newspapers. Stockholm has to date produced three supplements in a major local newspaper, each reaching about 110 000 people. In general, sites

noted that these types of media channels are more appropriate for discussing ongoing themes, reports from evaluations, interviews and company profiles than for disseminating pressing news. Sites also noted that project newsletters were an effective channel for internal communication that promote project cohesion as well as disseminating information within local administrations.

As in most European projects, the BEST co-financed demonstration vehicles were required to be badged with the BEST logo and EU flag and some also included other signage indicating that the vehicle was using bioethanol. Badging vehicles can be a simple and important way to send the message that bioethanol is already a viable vehicle fuel. Many sites noted that badging buses (in São Paolo) or municipal fleet vehicles driven by high profile local figures such as politicians (in Rotterdam) was important to building interest in bioethanol. The Basque Country created a unified standard design for filling stations as well, to both raise awareness of the fuel and create a specific visual identity that helped ensure consumers that they were refuelling with the correct blend. (E5, E10, E85).

BEST Bioethanol buses in São Paolo and Nanyang

However, badging is not always possible or even preferable. In Somerset, some cars need to avoid a distinct look, for example cars used in child protection services. Many companies and authorities have strict rules regarding how cars must be or may not be labelled. Some sites noted that labelling a car with for example a company name as well as a European Union logo, BEST logo and other such information can produce a confusing mix of messages. BEST sites found that both willingness and interest in badging vehicles varied widely. An important lesson for future projects is that fleet managers may agree to badge vehicles without being aware of rules established by a company or administration's information or communication departments that may prevent badging. São Paolo noted that creating a distinct look for demonstration buses used in regular service was highly successful in raising awareness and inviting feedback from both drivers and passengers, many of whom felt proud to be riding in an environmentally friendly bus. However, some passengers were confused if the buses looked different from the buses normally in service.

For users of the cars, it was preferable to communicate that the vehicles were fuelled with bioethanol or were FFV's or "clean vehicles" rather than badging them as BEST vehicles. This was also more in line with project aims, since the project aims to raise awareness about bioethanol and FFV's rather than about the BEST project as such. The central communication coordinators found that producing a fairly discreet sticker, particularly for the project logo, increased the probability that private individuals and fleet managers would also badge the cars with the project logo.

Recommendations: tools and resources

- Produce a local web site only if it is clearly linked to other communication materials and events. Use existing internet channels but also investigate sites managed by other legitimate sources such as fuel advisory services and other clean vehicle sites. Necessary to work actively to monitor and increase traffic. Learn how to, or consult an expert!
- Print a few materials that can be readily available for a number of general activities such as a brochure, but focus on flexible graphic and informational elements that can be tailored to key target groups and new situations.
- Work actively with contact databases and map other relevant ways to reach your target groups through networks, newsletters etc produced by others
- Badging vehicles can be effective in raising project and fuel awareness, but users may be unwilling or unable to incorporate project logos, particularly on municipal or private vehicles. On the other hand, users often appreciate badging that shows that the vehicles are clean and/or fuelled by a renewable resource.

3. Media relations

The BEST project received significant media attention in several types of media channels including TV, radio, newspapers, Internet sites, and academic journals. Notices, articles and debates could be found not only in the motor media/sections but also in channels and general media sections focusing on general news, environmental issues, new technologies, and world affairs.

All BEST sites maintained close contact with the local and national press and prepared press kits including pictures, articles and fact sheets about both the project and about bioethanol as a vehicle fuel. The Biofuel Region (BFR) took a proactive stance to media relations, continuously communicating project and technology progress and also authoring debate articles in the editorial pages of the major daily papers in northern Sweden.

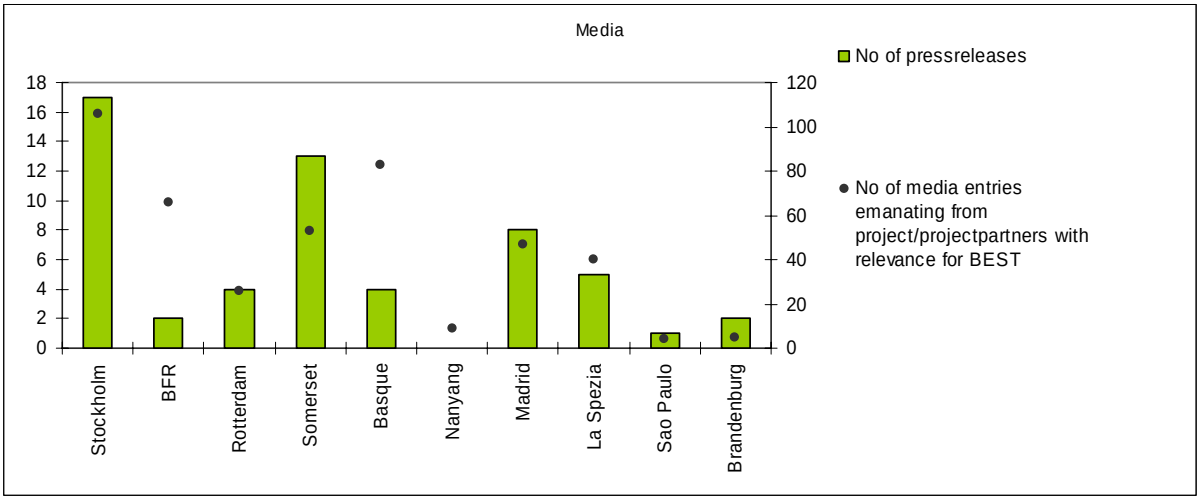


Figure 6: BEST sites produced over fifty press releases (left vertical axis) and maintained an ongoing contact with the media which resulted in over 440 project-related media entries(right vertical axis).

As noted above, the media interest in bioethanol and in the BEST project was closely linked to the temperature and tone of public debate. Media interest in demonstration projects such as BEST was of course heightened when local or national policies were announced or debated in the press. Events such as opening new filling stations or hosting major conferences with high profile attendees such as mayors or national politicians generally received significant media coverage in the local press.

Media coverage of the E95 launching ceremony in São Paolo

The "food versus fuel" debate caused almost all sites to revisit and revamp their media relations strategies, most often with a focus on correcting misinformation and responding to criticism. This was supported by the BEST coordination team, who held a special workshop to allow site communication managers to discuss a common response to concerns about bioethanol such as food shortages and resulting higher cereal prices as well as sustainability questions. This also led to the production of

common materials citing research and statistics that could frankly and openly respond to concerns raised in the media. Since the negative issues were fairly similar and concurrent in the BEST sites, this was a clear example where central communication coordination was an effective tool for responding to unforeseen media debates. Another common response to negative media coverage was to produce local materials such as media supplements (Stockholm) or leaflets (Somerset) that directly responded to current issues. The Biofuel Region produced a series of public lectures called "Myths and Truths about Bioethanol" which toured to 11 cities across Sweden. BFR also countered negative media coverage with the announcement of verifiable sustainable bioethanol by the local producer SEKAB which proved extremely effective.

The BEST sites found it helpful to provide verifiable sources for statistics and sustainability claims and working with sources considered impartial or otherwise legitimate such as universities or experts. Some hosted media events at university sites and/or in cooperation with scientific experts, such as the October 2007 introduction of an E95 bus at the Polytechnic School of the University of São Paolo hosted in cooperation with the National Centre for Reference in Biomass (CENBIO) and the Institute of Electrotechnics and Energy (IEE).

A lesson learned from BEST sites' media relations is that much time and energy was spent building trustful relations with journalists. In the Basque Country, for example, the BEST communication team established personalised contacts with journalists who came to understand that they could count on the BEST project for timely and accurate information. This proved to be particularly important when dealing with journalists unfamiliar with the complexity of fuel sustainability or food production issues. Despite personal relations with journalists, however, many sites reported that journalists were often reassigned; maintaining relations with the press was therefore meant continuous contact with a changing cadre of journalists.

Recommendations: Media relations

- Build trusting, long term relations with journalists contributing to several types of media including those covering technology, environment, regional development and motoring.
- Release as much factual and sourceable information as possible. Consider working in cooperation with legitimate and trusted sources of information to avoid misunderstanding or scepticism from the press corps.
- The most effective way to work with the media is to understand their needs and harmonize them with your own. Strive to help journalists meet their needs and utilize their potential to act as a bridge between project communicators and stakeholders or seek help from professionals who can.
- Media training especially crisis communication can be helpful tool to get your messages correct.
- Be prepared for both disinterest and heightened interest based on misinformation or tangentially related issues. Present the project as a reliable resource based for unbiased information.

4. Special events, study tours and conferences

A significant share of communication resources was devoted to the production of or participation in events. Over 120 separate events included information about BEST and bioethanol and included over 13 700 participants.

A sampling of BEST events

- ETA Florence presented the BEST project during the ENERGETICA event in Rome
- São Paolo launched the E95 bus with local politicians, students and partners at the University of São Paolo
- Rotterdam held summer Biofuel barbecues as networking events for fleet managers, fuel station owners and local project managers.
- The Basque Country participated in technical seminars on transport and energy for transport technicians and fleet owners that attracted over 700 participants.
- The Biofuel Region produced several special topic seminars focusing on the regional development potential for bioethanol, the short term production potential of biomass for biofuels, and renewable energy issues.
- La Spezia helped organize a "Fuel the Future" seminar at the European Parliament
- Brandenburg participated in a Bioenergy Conference in Cottbus
- Nanyang hosted a biofuels seminar for researchers and government delegates at Tsinghua University
- Stockholm arranged an open seminar on biofuels and sustainability with experts from all over the country in discussions

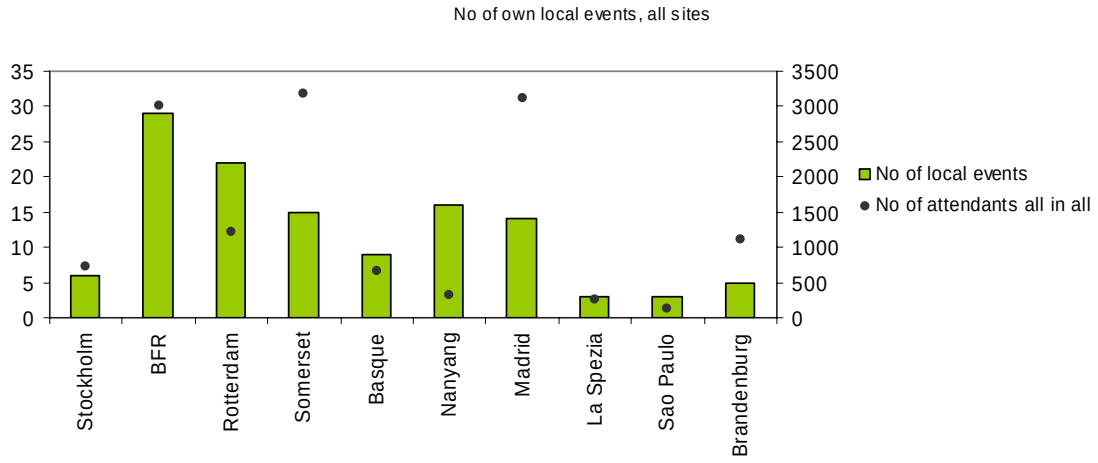


Figure 7: Over 120 separate events included information about BEST and bioethanol and included over 13 700 participants. (months 1-36)

BEST – supported events included a variety of formats and forums, from large international conferences to small workshops with fewer than fifty participants. The variety of events and forums reflects the need to reach target groups differently. Early adopters and other buyers in the pre-market introduction phase required specific information often well suited to small workshops and seminars that gave participants ample opportunity to ask questions. Small workshops were also well suited to discussing sensitive or complex issues, since they offered more opportunity for follow-up questions or clarifications than large conference presentations. These workshops were often popular and in Stockholm, seminars were often overbooked, with prospective participants calling for several days in hopes of getting a seat. Because the most popular seminars were generally those that dealt with current debates such as bioethanol sustainability, local managers often faced difficult choices between larger venues that could accommodate more participants, and more intimate events appropriate to presenting more nuanced material.

Larger events including national and international conferences were more effective in attracting media attention and in raising awareness for the BEST project and for bioethanol among other biofuels or other alternative fuels. BEST communication managers noted that participating in large conferences was an effective way to establish contacts with other cities, organisations and projects interested in bioethanol. Local events were also noted as an important way to meet local interests such as farmers unions, local business organisations, politicians and local community groups face to face. This was critical when presenting and discussing sustainability issues related to bioethanol.

Another strategic question was how much energy to devote to producing own events and how much to participating in events organised by others. Sites focused on reaching target groups, which was often most effectively achieved by participating in broadly themed events covering several types of fuels or climate changes issues. This had the advantage of reaching stakeholders with little awareness of FFV's or bioethanol that might have been difficult to attract to a more narrowly focused "one-issue" event.

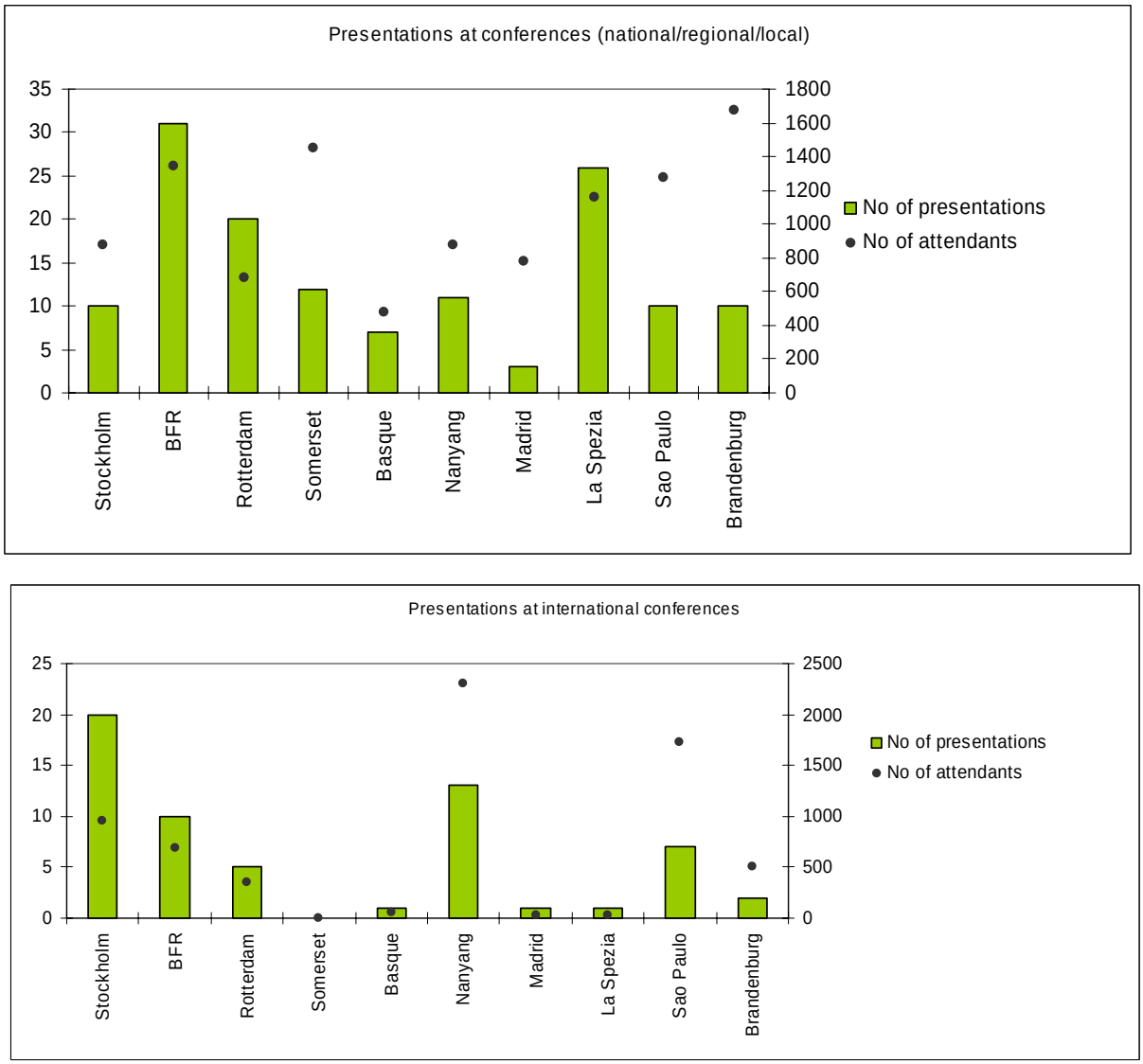


Figure 8: BEST sites participated in over sixty local, regional and national conference reaching over 6600 participants and over 140 international conferences reaching 10 500 participants.

BEST and bioethanol could also leverage launch events for Saab BioPower in Europe, E85, E100 and BioPower Hybrid Concept cars in motor shows. During 2007 the Saab 9-3 BioPower was launched during spring and summer, with major activities during July in Fiskebäckskil outside Gothenburg with more than 600 international visitors. The "release the power of nature" campaign was very successful promoting Saab BioPower. Events were held in the USA, Belgium, Sweden, Austria, Iceland, France,

Spain, and China and included both motor industry events, sustainability forums such as the Tällberg conference, professional conferences such as the European Renewable Energy Conference, and meetings with political leaders.

All sites found that both were necessary and complementary aspects of a communication program. Events organised by others were naturally less costly to participate in and helped to position BEST and biofuels as a community initiative or among other biofuel projects. Demonstration vehicles, leaflets and powerpoint presentations could often be quickly mobilized and revised to suit specific events. Event produced by sites themselves offered the opportunity to set agendas and frame debates. Site-produced events often centred around an important project announcements such as the opening of a new refuelling station. Many of the larger site-produced events incorporated open exhibitions, test drives and seminars of interest to the general public with site visits and seminars targeted at specific groups such as local authorities or company fleets. Some larger events and "open days" also incorporated several types of alternative fuels.

Study visits and the Light House tour[3]

A major coordinated activity offered by BEST was the production of so-called Light House tours. Full day road trips were organized for each site to visit Stockholm and the Biofuel Region for first hand experience of the Swedish developments. The Light House tours offered practical hands-on experience, as well as an insight into policy developments. The program followed a systematic approach and all the steps in the process were explained. The tour typically included study visits, presentations, lectures and meetings with people who 'walk the talk' – the people who 'have done it themselves'. The Light House tours usually involved groups of up to 30 people from each site including politicians, civil servants, journalists, fleet owners, franchisee owners of fuel stations, NGOs, private company representatives, key stakeholders, etc.

Local sites made frequent mention of the Light House tours as opportunities to invite local decision-leaders such as politicians or journalists as well as target buyers such as fleet managers to experience how bioethanol can work throughout the system chain. The power of seeing bioethanol in practice and understanding how the "pieces of the puzzle" fit together was particularly effective in convincing sites less familiar with bioethanol.

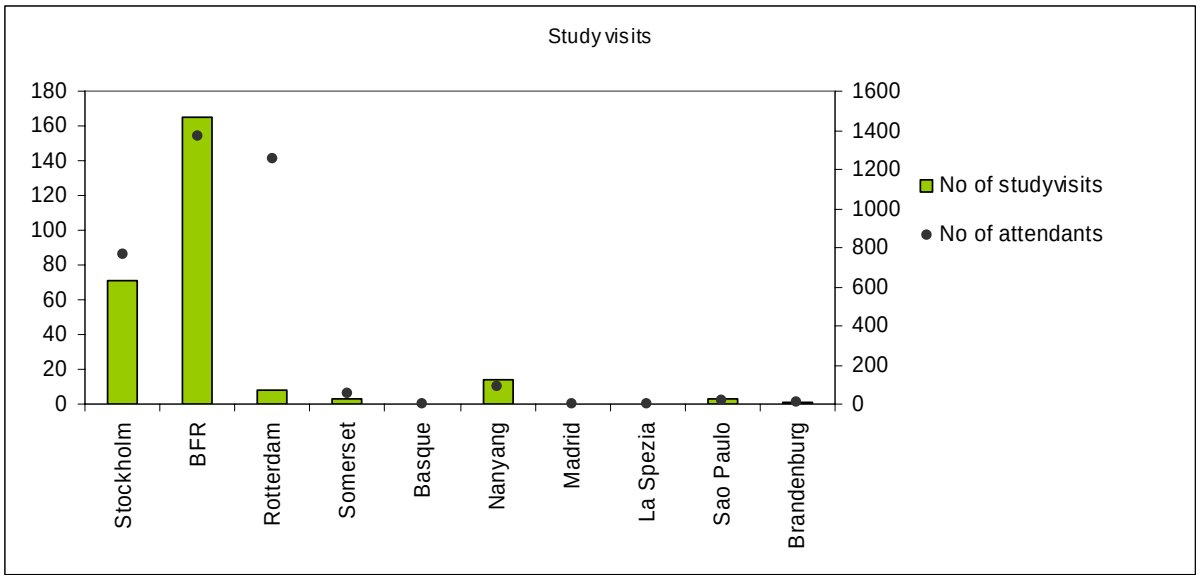


Figure 9: BEST sites produced over 260 study events involving a total of over 3500 participants

[3] The Light House tour was coordinated and funded through BEST Work Package 8, internal knowledge transfer. However, it is described here because many sites used this program to also reach out to external target groups.

Most local sites, particularly those with vehicles and/or fuel production already in operation, also produced study tours. Somerset County, for example, hosted four study visits from two local authorities, a delegation of international scientists from the Royal Society, as well an interested national company, operating locally in Somerset. Nanyang hosted several tours of its bioethanol plant for researchers, automakers and fuel producers. Several other sites hosted study visits for project partners, fleet managers and local authorities but also NGO's (São Paolo) and university students (Rotterdam, Nanyang).

Sites note that study tours alone cannot remove hinders to bioethanol market development. Nevertheless, study tours in sites with different preconditions can raise awareness among decisionmakers of the importance of incentives to removing market barriers. Visitors to Sweden, where ethanol fuel is competitively priced compared to petrol, could help intensify local debates in other countries regarding the taxation of ethanol as alcohol or subsidies for clean vehicles in general.

Personal meetings

One of the most common reflections from BEST communication managers is the importance of face to face meetings and individual contacts with three key groups: fleet managers, filling station operators, and decision makers such as local or national politicians. In the two first cases, these individuals are in the position to purchase vehicles or provide refuelling opportunities, two critical pre-introduction phase target groups. Convincing local and national politicians to support bioethanol is also critical to hastening market development and "shifting the S-curve" and was especially important to sites with existing laws, taxes or regulations that put bioethanol at a disadvantage relative to other fuels.

Personal meetings were often important to helping key individuals understand the types of support available to them and tailoring support to meet individual needs. For example, the Basque Country targeted filling station through a special series of personal and small group meetings complemented by other communication materials. BEST project members visited more than 40 filling stations, of which five had already installed bioethanol pumps and 14 more were in the process of installing them. These meetings were conducted throughout the three provinces of the Basque Country and involved more than eight institutions. This was complemented by graphic support materials to help new bioethanol filling station owners with a tool to advertise and inform their customers about the correct use of different bioethanol mixtures such as E5, E10 and E85. Bioethanol filling stations were also provided with leaflets and other information material to inform current and potential users about the advantages of using ethanol.

Test fleets

Any innovation is by definition unfamiliar, and one of the most powerful tools that can be brought to bear in a market development initiative is giving users the opportunity to experience the new technology first hand. Some new technologies require experience to help users accept the new skills they require—learning to use a computer "mouse," for instance. In the case of bioethanol, test fleets fill a somewhat different function, namely to help consumers, users and politicians understand that operating a bioethanol car or bus is similar to operating a conventionally powered car. In other words, test fleets and demonstrations help to counteract a common misconception that environmentally friendly vehicles being difficult to run and have inferior performance.

Studies produced within BEST and elsewhere underscore the importance of experience in changing mindsets towards bioethanol. BEST surveys produced in 2007 and 2008 show that about half of respondents who had the opportunity to use bioethanol cars were more positive after having had the opportunity to use them, while only 11 percent were more negative. Those with experience using bioethanol cars can also become important ambassadors for bioethanol: over 80 percent of BEST users surveyed would recommend bioethanol cars to others. In other words, offering test and demonstration fleets can be an important part of a communication program for market development because they

help to “demystify” bioethanol as a viable vehicle fuel and therefore can shorten the time it takes for a mass market to accept this clean technology. (*The BEST experiences with Bioethanol Cars*, D 1.19)

Within the BEST project, Saab provided demonstration fleet vehicles in several regions throughout Europe. In Stockholm and São Paolo, Saab Saab BioPower cars were available as for test drives. In Stockholm and São Paolo these were part of the standard dealer/retailer test drive offerings and in BEST regions in Spain, Italy, the Netherlands and the UK they were available upon request. Ford produced an active program of loaning vehicles to fleets (public and private) and key policy influencers. The vehicle demonstration and presentation secured FFV sales to the UK Government's Environment Agency. Vehicles were lent to fleets, national and local governments’ representatives, policy makers/influencers and media. All BEST countries had access to at least one vehicle and some markets such as the UK had access to several Ford vehicles. Some Ford vehicles were loaned for a few days and others one week. The longest loan of vehicles was 6 months to the Vice-President of the National Farmers Union (UK). The process of identifying demonstration vehicles lent for longer periods, such as the Ford FFV’s, was through other communication activities such as media relations or direct contacts with local politicians or fleet operators, including public fleets such as the police or fire brigades.

Most of the BEST sites had demonstration vehicles that were loaned to key influencers and potential buyers such as private fleets. Rotterdam maintained its own test fleet comprised of as many different brands and models possible that can run on bioethanol in cooperation with Ford, Saab and Volvo. These vehicles were use mostly available to local public and private fleet managers but individuals were also invited to test drive the vehicles as part of local events.

Rotterdam’s test fleet

A lesson learned from the demonstration and loaner fleet programs is that they can take significant time and energy to administer in immature markets, particularly due to the lack of bioethanol refuelling infrastructure. Shorter loan periods were necessary in areas in the very early market development stages as a result.

Recommendations: events, study visits, meetings and test fleets

- Produce a few of your own events, particularly in conjunction with major public milestones such as fuel station openings or new bioethanol bus services
- Meet your target group where they are rather than expecting them to seek you out. Participate in commonly produced or external events to leverage communication materials and position bioethanol in the context of larger issues such as local economic development or climate change remediation.
- Internal knowledge transfer initiatives can also incorporate external target groups and common study visits can be an important tool for introducing bioethanol to key customers such as fleet managers or local politicians.
- Personal meetings are critical for helping early adopters with an important role in achieving critical mass, such as public and private fleet managers, understand the costs and benefits of using ethanol to their own organization.
- Testing is believing. Test drives are as important in showing similarities in vehicle performance and driving techniques as they are in highlighting differences.

5. Sales and service training

Saab and Ford had responsibility for training sales and service personnel in the particular characteristics of flexible fuel vehicles and bioethanol. Since dealers are independent enterprises, manufacturers have limited authority to ensure that dealers and service personnel communicate accurate and complete information to the buyers and users of ethanol cars. Nevertheless, there are agreements, for example between Ford and its dealerships, that compel dealers to show that they have compiled a minimum number of training points each year, though they type of training is generally unspecified. Ford has promoted flexi-fuel vehicle training by sponsoring competitions, providing online/DVD materials including self-tests, and producing fact sheets, brochures, handbooks and updates. Ford notes the importance of providing these materials in the local language.

Training insurance companies gives immediate results

Ford produced information material used in meetings and seminars to educate the insurance industry about FFV/E85. This led to reductions in insurance costs of around 15% for FFV products.

Saab introduced the Bio Power concept suitable for E85 fuel to the Swedish and Scandinavian markets from autumn 2005. For European Union markets a staged introduction began with the UK/Ireland, Germany, The Netherlands, Belgium and France being the first in summer 2006. Southern and Eastern Europe introduction followed in early 2007. All Swedish dealer sales staff were trained in the BioPower concept.

Training materials were available in all common languages and continuously rolled out where the BioPower concept was launched. Saab also sponsored special on site training days for a Ethanol and BioPower training day for employees and journalists. During 2007 BioPower training material was updated with 9-3 BioPower. Saab dedicated staff for co-operation with BEST Demo fleets and test cars for BEST regions. A mandatory sales training course (about one hour) is available in 9 languages. All dealer personnel have access through the Internet and GM Academy.

Training of this type has the advantage of being able to utilise an existing infrastructure for dealer and service personnel training and manufacturer-sponsored programmes are often eagerly accepted by local dealers with little previous experience with flexi-fuel vehicles or bioethanol. A key difference, and a lesson learned from experience with bioethanol as well as other alternative fuels sold through traditional dealer channels, is that retail staff require a far more comprehensive package of information than usually required for selling conventional cars. For example, the Ford training package provides information on the supply of refuelling stations, European projects, national and local incentives, environmental benefits and owner operation and maintenance requirements specific to flexi-fuel vehicles. Dealers and sales personnel were educated on the broad issue of climate change and understanding environmental impacts using concepts such as “well-to-wheel” analysis and how to calculate carbon footprints. Training emphasized that bio-fuels will play an increasing role as a transport fuels and that FFV’s are flexible enough to meet future fuel standards.

Recommendations: sales and service training

- Many target groups will be introduced to bioethanol and FFV's through traditional sales and service institutions such as dealers and service stations. Therefore, mechanics, bus drivers and car salesmen also need information about issues regarding bioethanol such as the production of the fuel, its sustainability profile, fuel prices and operations costs, and incentives for its use.
- Most manufacturers have existing training contracts and institutions that may effectively and efficiently be used to train personnel in bioethanol-related issues.
- Dealerships and sales personnel are crucial spokespeople for bioethanol. Their information must be balanced, reliable, correct and current. Sales personnel will often find themselves in discussions regarding not only model specifications and price, but also bioethanol sustainability, refuelling station infrastructure, and other issues not typically asked when purchasing conventionally fuelled vehicles.

6. Knowledge management issues

The BEST project is comprised of cities and regions that want to learn from each other and share experiences in order to maximize the adoption of bioethanol as a vehicle fuel. This implies a need for a central mechanism to spread results to other sites and coordinate the dissemination of common messages.

The central communication function of a European project of this type may seem relatively straightforward. However, the experience of the BEST project highlights some issues and lessons that may be useful to projects with similar ambitions.

Communicate the project, the fuel or the benefit?

Central communication coordinators find themselves with a double mandate to communicate the projects—almost as a brand—or the ambitions of the project. Certainly, these go hand in hand. However, the relative weight given to communicating the project and the technology has consequences for the communication plan and its outcomes.

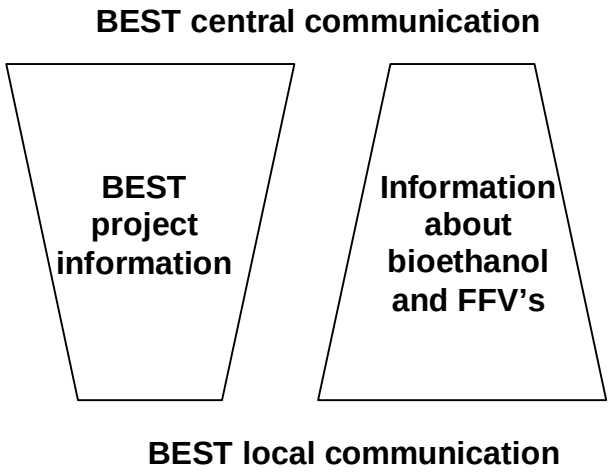


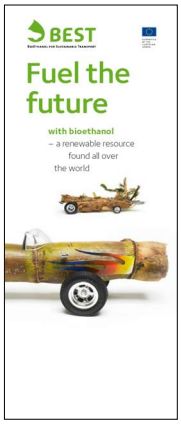
Figure 10: While in general BEST prioritized biofuel and vehicle market development over project "branding", BEST central communication focused on project information that could be flexibly incorporated into local contexts and local communication programmes placed more emphasis on providing information about biofuel and vehicle issues.

The BEST project coordinators chose to prioritize the messages of the project over its branding. This meant focusing on raising awareness of bio-ethanol as a fuel and providing information together with other networks, projects and organizations with similar aims. Nevertheless, providing central project-specific communication materials helped support the internal cohesion of the project as well as an identity that communicated key messages in international forums. The project web site, logo and other graphic and signage elements were provided to all sites. As noted above, the applicability of these materials is site and context-dependent. It is easy for project messages to become "muddied" if they try to position BEST activities as a European project, a municipal or regional project, or a bioethanol fuel promotion initiative. Sites report that the most successful positioning of bioethanol was often as part of a larger strategy such as a clean vehicle or climate change-related programme. Examples include Stockholm's Clean Vehicle Strategy, the Clinton Climate Initiative in Rotterdam and the climate programme in Madrid.

Central or local contacts?

Any communication initiative organised as a consortium will face the difficult decision of how to balance resources between central and local communication. As noted, in general the BEST project chose to produce a number of centrally produced materials, events and meetings focused on areas of common interest. These had three major functions. The first was providing "pieces of the puzzle" such as common facts, graphic elements, banners and report templates that could be flexibly incorporated into local contexts. The second was supporting internal resource-sharing among communication managers. A third was providing an official "face" for BEST that helped the project access major international conferences and national or European institutions.

Fel! Objekt kan inte skapas genom redigering av fältkoder.



The project produces a newsletter on the projectlevel, distributed both electronically and as a printed paper versions. Also common, Project presentation folder, roll-ups, flyers and posters for exhibitions was developed

Format etc	Comment
BEST logo + guidelines	Available in English, Portuguese, Italian, Spanish Pantene, CMYK, black and white, negative, gif and jpeg
BEST visual identity + guidelines	Illustrations + bylines
Illustrations – feedstock-cars + pay-off "fuel the future" developed and available for project partners.	– feedstock-cars Pay-off
BEST PowerPoint	Template
BEST Reports Word-report template for all BEST deliverables that will not be produced as prints	Template
Simple fact sheets (can be produced directly from project web-site)	First available at project web-site Produced on demand
BEST Friends logotype + instructions	Pantene, CMYK, black and white, negative, gif and jpeg
BEST overall Communication portfolios	Provided to report project progress and share practice experience across sites
BEST web	Updated periodically, see www.best-europe.org
BEST news	Produced periodically
BEST project presentation folder	Produced centrally
BEST project rollups and posters	Produced centrally, templates available

Table 2: Common and centrally produced materials for BEST coordination and sites

As noted above, both the central communication coordinators and the local site coordinators maintained contact lists. A BEST-specific innovation was the BEST Friends project which was intended as an umbrella for both local and international contexts that could match users and interested parties with a clearing-house for information in a club-like environment.

Local sites reported that central communication was an effective and often critical resource in two instances. The first was the production of what might be described as "club goods", products and resources that were easily tailored to specific contexts and BEST-project specific. The second, perhaps less obvious, was the coordination of a common response to unexpected questions such as sustainability issues or the "food vs. fuel" debate. In this case, the central coordination could quickly mobilize reliable and legitimate sources to respond to issues common to all sites, and sites could complement these with information and research relevant to the local context.

A fuel among many?

A decision critical to both the central project and each local site is whether to present bioethanol alone or as one of many alternative fuels. Bioethanol has been presented in BEST both through bioethanol-specific media channels and also among other types of biofuels and/or other alternative fuel vehicle types.

Evaluations of potential buyers show that almost all are motivated the environmental performance of bioethanol vehicles and are therefore at least initially equally interested in bioethanol and for example electricity, biogas, RME or other fuels/fuel blends. "Fuel advisors", were popular tools for fleet managers seeking to match policy requirements and environmental goals with vehicles that could meet their performance specifications. For this group in particular, bioethanol often "matched up" well against fuels that could be used in fewer models or for which refuelling infrastructure was even less well developed.

A reflection from producing materials presenting several fuels is that the complexity of sustainability analysis and its sensitivity to parameter specification can make it difficult for single-fuel-oriented projects to come to an agreement about how and what information to present. Virtually any claim regarding the environmental effects of alternative fuels is based on assumptions regarding fuel production, vehicle performance and local conditions and "pick a winner" comparisons are always vulnerable to criticism from specific interests. Even variables such as fuel consumption can vary widely by make, model, climate and driver behaviour. For these reasons, comparative websites were often produced by local authorities or organisations without a preference for a single fuel or vehicle types. Nevertheless, bioethanol and other biofuel supporters were often active contributors to these sites. The sites noted the importance of using a well-reputed source for this type of comparative analysis or advice.

Specific campaigns or ongoing communication?

The issue of balancing resources for communication to heavier, temporary campaigns or ongoing communication was of particular interest to the BEST communicators. Stockholm, whose local authority has perhaps the most extensive experience in demonstrating and communicating a variety of clean vehicles technologies, had previously found that , events and press releases focused in campaigns produced over a limited time was an effective use of resources. In the sea of information and competition for media and public attention, according a significant share of resources to campaigns is generally more effective than ongoing communication of less intensity. However, the experience of the BEST project was that ongoing communication was relatively more important than it had been with previous clean vehicle campaigns. Many other sites that describe campaigns actually produced a variety of smaller initiatives over a longer time period. Indeed, even communications with dedicated, time-limited campaigns must have ongoing communications as a steady base to retain

interest and provide information to those who become interest in bioethanol as a result of a shorter campaign.

The reasons for this difference between bioethanol and previous experiences with other clean vehicle projects may relate both to the maturity of the technology and the increasing the general public's familiarity with clean vehicles. The relative market readiness of ethanol vehicles also meant that they were no longer considered as novel as for example fuel cell vehicles further from market introduction. As ethanol vehicles and refuelling facilities become more common, the focus of attention shifts to practical issues that arise as they are used in everyday life: filling stations that open or existing ones that run out of fuel, concerns about fuel production or new ways to verify bioethanol sustainability, new vehicles put into service or vehicles that break down. This requires a communication program nimble enough to respond to externally-generated circumstances rather than one focused on raising general interest in the vehicles or fuel. As may be expected, therefore, a review of the BEST sites notes a relative emphasis on dedicated campaigns in sites that consider themselves further from a self-sustaining market level (and therefore in more need of general awareness-raising campaigns) and less in more mature markets that instead needed a steady flow of communication responding to market-generated issues. Providing an ongoing stream of balanced materials reflecting the practicality and benefits from the utilization of sustainably produced bioethanol can help sites avoid becoming "drawn into responding to every adverse media article."

Nevertheless, dedicated campaigns were preferred across BEST sites to reach specific target groups, most notably public and private fleet managers, companies and politicians. When a specific message such as a new incentive or sales drive was current, BEST communicators planned comprehensive and integrated packages of events, study tours, press releases, leaflets and mail contacts to these specific groups.

A professional communicator or a bioethanol expert?

A common dilemma facing projects like BEST is the question of who should be in charge of communications. On the one hand, a successful communication programme requires a coordinator with communication experience, with the skills necessary to manage and optimise the flow of information to target groups. On the other hand, this type of project communicates much information that is fairly technical and addressing issues requires intimate knowledge of the fuel's properties, sustainability effects and vehicle specifications.

Some sites found that a dedicated communication professional helped to provide a more strategic framework for communication activities that otherwise risked being reactive or ad hoc. The Biofuel Region, for example, found that it was necessary to hire an information officer midway through the project to better structure communication activities and combine communication activities with other project actions. This also helped BFR analyse the current attitudes and issues relevant to specific target groups and revise communication activities accordingly.

There is an important distinction to be made between who coordinates, plans or executes a communication programme for projects of this type, and the many experts that may contribute to programmes as spokespeople or sources. The recommendation that most sites would give to similar projects is to use professional communicators, not least because of their expertise in structuring comprehensive communication programs that can integrate graphic, media, information and event elements. Many sites also noted that professional communications experts were called upon in times of "crisis" when local projects were faced with delicate communications issues reflecting several aspects of local public policy. On the other hand, there was concern across the BEST sites that "generalist communicators" did not have the expertise to respond to specific concerns that required a deep understanding of bioethanol's chemical composition, environmental impact or production process.

In sum, most BEST sites would recommend using a professional communicators with access to local or central experts that can help respond to specific concerns. A recent communications workshop

organized within BEST also suggested that two types of media training for project and technology experts could be core components when managing future programs. First, general communication experts need training in how to articulate complex technical issues associated with bioethanol and flexi-fuel vehicles. Second, bioethanol experts need general media training to prepare them for situations in which they will be asked to meet the press.

Recommendations: knowledge management

- Advertising the project itself is only valuable in as much as it helps raise awareness for the market development potential of bioethanol. It may be most important to focus on the benefits of the technology than "branding" the project.
- Although most communication initiatives should be local, issues and concerns such as bioethanol as food vs. fuel were global in scope and affected many diverse sites in similar ways. A global media market may have increased the need and effectiveness of central communication resources—as long as they can be flexibly utilised by local communication managers.
- A communication manager with a professional communications background is critically important to creating and producing effective communication and dissemination of the project and its objectives. These individuals also use a range of project spokespeople, experts and other "mouthpieces" to help messages get heard in the sea of information with which target groups are confronted.
- Media training for experts, and technical training in fuel and vehicle specifics for communication professionals, should be a core element in any bioethanol vehicle project.

7. Feedback for evaluation: Analysis and surveys

BEST communicators employed a wide range of analysis and evaluation tools, both to analyze stakeholder and target group interest, awareness and concerns, and also to evaluate the impact of communication programs within BEST.

Target group and stakeholder analysis

Because BEST studied market development and market breakthroughs for bioethanol, communication programmes utilized stakeholder analyses produced in other parts of the project. Common surveys were used, and revised locally, to evaluate user attitudes to bioethanol and awareness of the characteristics and potential of bioethanol as a vehicle fuel. Stakeholders were defined according to where in the production and use chain they fit in (feedstock, production, vehicles, distribution, taxes and regulation, end users).

Another interesting way of prioritising target groups, used for example in the Biofuel Region, was to analyse how motivated and how much power they have to influence change. Target groups with significant power and high motivation can become "ambassadors" for change, whereas target groups with little power but high motivation can be provided with more knowledge and arguments to help build critical mass. Target groups with low motivation but significant power usually need to be communicated with on their own terms and approached personally rather than through mass media channels. Finally, those with neither motivation nor power to enact change are usually not worth prioritizing in communication programmes; they will follow when a critical mass is reached.

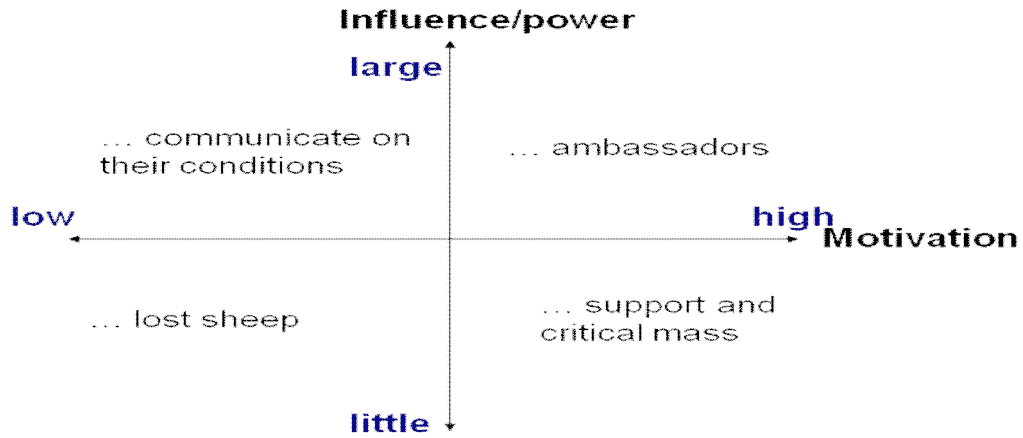


Figure 11: A model for mapping stakeholder influence on market development used in the Biofuel Region

In order to create effective communication programmes, some sites such as Stockholm, the Biofuel Region and Madrid supplemented this analysis with surveys of the types of communication and information channels used by specific target groups. This helped communication programmes choose the type of materials and media channels most effective in reaching for example fleet managers or political leaders.

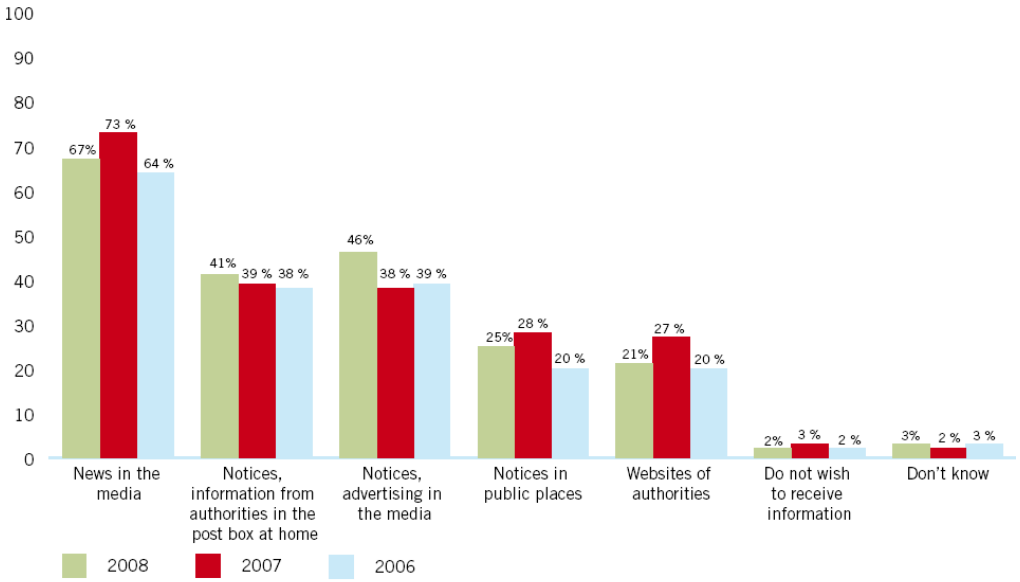


Figure 12: Preferred sources of information about climate change and clean cars in Sweden, used by both Stockholm and BFR to choose effective media channels for bioethanol communication programmes. (Source: Swedish Environmental Protection Agency, *The General Public and Climate Change 2008*, Report 5905, Nov. 2008.)

Nanyang mapped stakeholders and their relationship to each other to better understand both direct and indirect channels used to access information and affect attitudes regarding bioethanol. Nanyang also used the results of national surveys show the channels people use to access information about the environment, and this led to campaigns focused on the two main channels, TV/radio and papers/magazines.

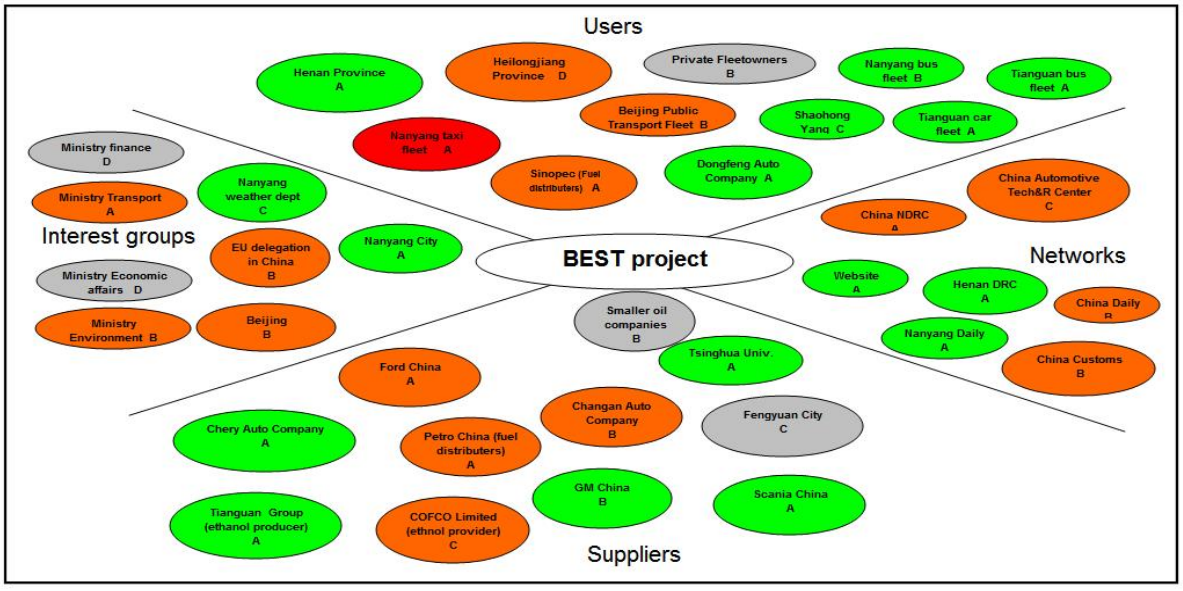


Figure 13: a schematic mapping of BEST-relevant stakeholder relationships in Nanying

Analysis of communication programme effectiveness

BEST sites measured the effectiveness of their communication programmes using a variety of available tools. Web sites can and should be evaluated using parameters such as the number of unique visitors, the number of repeat visits, and searches used to direct visitors to BEST site or bioethanol information. This type of statistics in combination with other web analytic tools is also essential in improving web site performance. A variety of tools is available for free.

Sites also measured the number of articles and stories/features appearing on radio and television. In some cases the hosting organization had existing media evaluation tools and resources that could accomplish this. The BEST project central coordination offered sites a media tool (meltwater news) that provided a daily record of media entries, opportunities for more in-depth analysis, and an application making it easy to publish the media entries on their own websites. Some sites used this service extensively to evaluate the effect of media campaigns, identify those media sources most engaged in bioethanol issues and their general stance, and track media interest over time.

Web site traffic was a common evaluation metric and is easily measured using readily available web site evaluation software. Sites warn that when using web traffic statistics in evaluating programmes, communication managers must bear in mind that different web analyzing tools do not produce comparable data. They should preferably be used only to study trends over time, and as a tool to improve web site traffic. In other words, increased web traffic may reflect the effectiveness of a public awareness campaign, a general media debate, or (most often) both. Web evaluation applications can also show communication managers what pages have been most often viewed or files downloaded.

Sites with web information embedded within another site such as an organizational or municipal web site found that it was difficult to collect web statistics for their specific parts. Sometimes this was due to technical problems, but more often reflected the fact that the needs of BEST, as an individual local project, were not prioritized by the responsible webmaster.

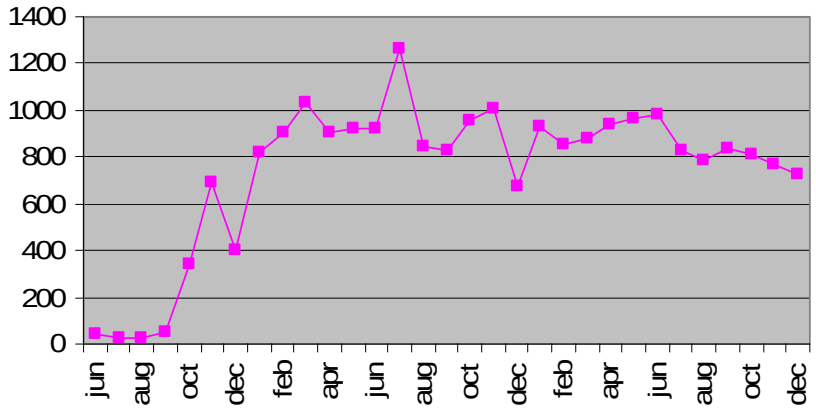


Figure 14: visitors to the BEST project website (www.best-europe.org) over a 30month period, 2006-2008. Web counts are often easy to generate using available web site applications but should be complemented by other types of evaluations to determine what share of traffic is generated from communication campaigns and what share from public interest sparked by initiatives and debate external to the project.

Other media evaluation tools such as radio, newspaper and television mentions may be more or less sophisticated, and their value in assessing communication effectiveness depends on how they are used. Therefore, sites such as Nanyang, Stockholm and BFR commissioned consultants and/or universities to analyse the relationship between communication efforts and resulting press exposure.

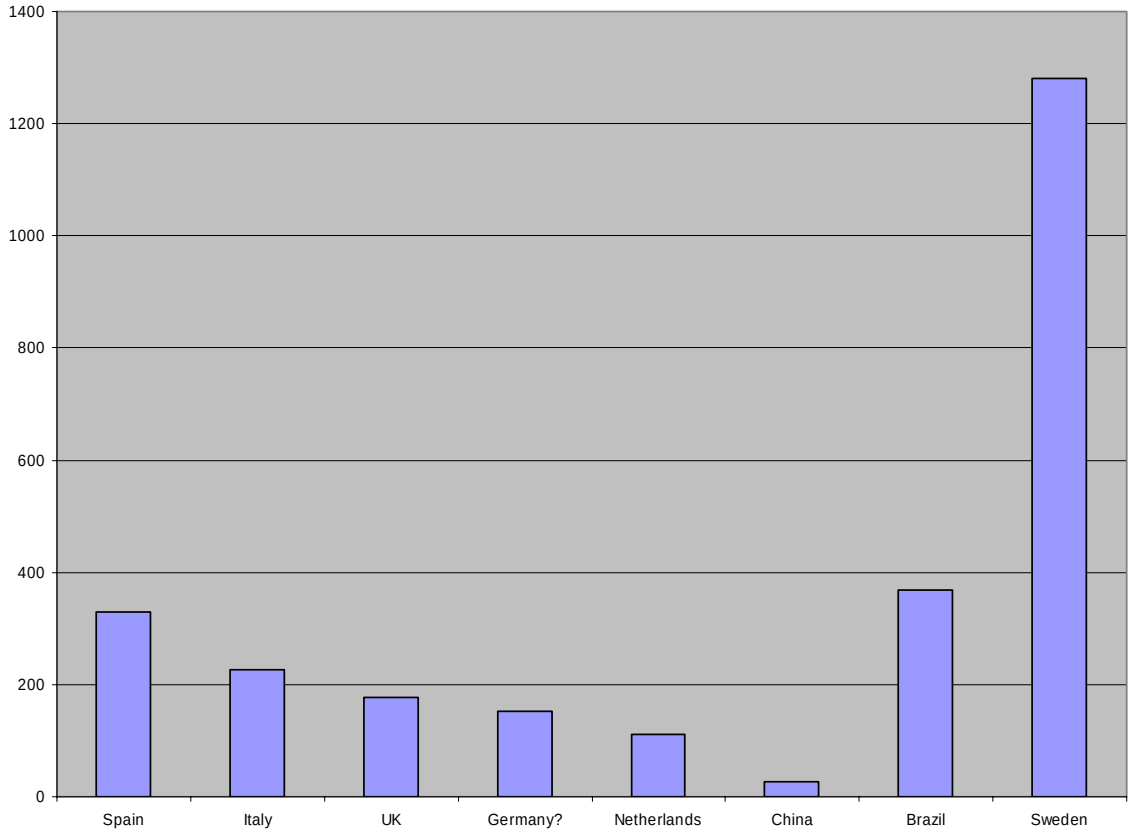


Figure 15: Google "hits" for the exact BEST project name "Bioethanol for sustainable transport." using the advanced search option to filter for various regions As expected, most hits originate from the project coordinator Sweden. The searches were done one day in May 2009.

As noted above, web communities and telephone query and advisory services can be important sources for feedback from target groups. Telephone services in particular can help reach beyond the attitudinal parameters measured in questionnaires to discover the hinders and milestones related to changing mindsets among potential users and buyers. Surveys nevertheless provided important input regarding the pervasiveness of local concerns and indicated the broad themes of interest to potential biofuel users. BEST had several user and potential user evaluation programmes produced in other work packages.

Rotterdam found that local newspapers and websites often produced surveys of their own readers to gauge their interest in biofuels and willingness to accept biofuel for vehicles. These underscored the importance of hinders such as fuel price and availability to market development. For example, www.autoweek.nl published a survey of 2000 web visitors on July 25th 2008 asking how important environmental factors are when buying a new car and reporting that only 7.6 percent would consider using E85 as a primary vehicle fuel unless it had a clear financial benefit. By contrast, the newspaper *Trouw* published a survey of 1576 respondents on September 1, 2008 in which 60 percent of respondents reported being willing to use biofuels if there were enough refuelling stations.

Although these types of surveys are often not scientific because they report self-selected respondents, they help to raise awareness of biofuels and other clean vehicle technologies. Journalists publishing these types of survey results will also most often compare them to similar surveys, providing an opportunity for disseminating information regarding attitudes, underscoring benefits or correcting false public impressions.

The most effective way to determine the effect of a communications campaign is to produce measurements and surveys during and/or directly afterwards. Metrics can include the number of press entries, newsletter subscriber surveys, seminar feedback forms, message or campaign recall statistics

et cetera. Within BEST, these types of evaluations were produced with varying frequency. This was in part because they require significant budget resources but also in some cases reflects missed opportunities. Nevertheless, this type of evaluation is particularly important in planning upcoming communication initiatives. This can often be achieved without producing detailed and comprehensive analyses. Communication managers can learn from surveys produced by others, note changes in benchmark values from previous campaigns, and track the types of media channels and messages that produce the best results. This information and resulting insights are valuable inputs when developing communication strategies.

Recommendations: analysis and feedback

- Many tools for analysis and feedback of project-produced communication materials such as websites are readily available. Some are even inexpensive or free. However, skills, time and resources may be required to interpret and make sense of what statistics regarding media hits or web traffic really mean.
- A project such as BEST almost always includes several evaluations user attitudes, awareness and mindsets regarding bioethanol and/or other fuels. Communication managers should work closely with other work package groups and hopefully include metrics most relevant to communication programmes in these evaluations.
- An evaluation programme will typically include both analyses produced within the project and analyses and indicators produced in other contexts.

8. Conclusions

reaching key stakeholders

For projects like BEST with several target groups and limited resources, sites emphasized the importance of producing a few key materials that could be used in several contexts and then focusing on those channels that would reach key groups. This could for example mean producing materials with the most highly prioritised target groups in mind, but utilising these materials as appropriate to reach other target groups as well.

Policymakers and others responsible for incentives critical to market development were often directly contacted through personal meetings but also through formal public consultation channels. Sites noted that reaching the general public was an important indirect channel for affecting policy. Messages focused on environmental benefits, energy security and in some cases, local economic development.

Fleet managers, public and private, required information focused on their unique practical needs in combination with the visions and goals of the organizations they served. Messages focused on showing that bioethanol was a market-ready technology supported by a professional sales and service network that could meet performance requirements, environmental goals, and also be cost-efficient, practical alternatives (where infrastructure and incentives made such an argument credible)

The general public and other future buyers were interested in how bioethanol relates to other alternative fuels in terms of performance and environmental sustainability. This group may be particularly vulnerable to rumours because its interest in and exposure to bioethanol is sporadic and generally accessed through media channels that present only a very general, and sometimes biased or polarized sense of the cost, benefits and local and global effects of bioethanol. The most appropriate media channel is therefore ongoing contact with the general media complemented by public events and particularly “experience-oriented” demonstrations in public buses and taxis. These help convince this group that bioethanol is a reliable, market-ready technology.

managing communication along steps and across the chain

BEST focused on identifying market development stages and crafting appropriate incentives and communication strategies tailored to each site’s market development status. However, once stakeholders are identified it becomes evident that communication cannot be solely focused on current buyers but also on those groups that require long exposure to bioethanol vehicles before they will consider buying them. On the other hand, project sites have limited resources and seek to target communication resources.

One relevant reflection from BEST sites is to recognize that even a targeted communication initiative can reach several target groups. As BFR notes, information is also education, key decision makers are also residents, and late adopters are also early users if they ride public buses. Therefore, sites can focus on target groups with more imminent purchase or policy decisions but with an eye to identifying indirect impacts on other target groups such as the general public. In the same way, sites can produce information materials for prioritised target groups that can also be leveraged to provide information to other groups at little added marginal cost.

common messages, local approaches

As expected, the local context determining the market development for bioethanol depends on local fuel and vehicle supply as well as preconditions such as market incentives. Nevertheless, an interesting reflection from the BEST project is that the concerns about bioethanol and public debate regarding the sustainability and food security aspects of bioethanol vehicles were driven by international NGOs and networks and were in fact fairly common across these diverse sites. This suggests that the globalization of media and its local impacts has made centrally coordinated responses more efficient.

A number of local communication programs should stay local. Many influential individuals and target groups could only be approached through local programs sensitive to local contexts and utilizing local social capital. Sometimes, local and central programs worked well in combination. For example, the Light House Tours were a centrally-organized program, offered by BFR that helped local communication coordinators present a best practice example and then relate it to the local context.

shooting the rapids: navigating unforeseen circumstances

If there was one "surprise" in the BEST project, it was the shift from a relatively positive—if only marginally interested—media at the project start in 2006 to a lively local, national and even global debate in late 2007. Many sites felt unprepared for the intensity of this debate, even if they could offer arguments to support local projects. A lesson learned was that sites could help each other. In March 2008 the central coordinators organized a one day workshop in Cottbus that included discussion of how to approach the negative and often misleading media debate regarding bioethanol.

Sites deftly combined central and local information and integrated it into a variety of communication materials. Small seminars and detailed Internet-accessible materials were noted as key communication channels for responding to sustainability concerns. A strong recommendation to other projects is to address concerns openly and honestly and provide as much factual information as possible, particularly in cooperation with "legitimate" sources such as universities or other scientific bodies.

In other cases, BEST communicators struggled with the opposite problem. Rather than a dynamic and enthusiastic media, they struggled to maintain public awareness and debate regarding for example EU, national or local policy development. These important issues are often not considered "newsworthy" unless a policy decision is imminent. BEST communication managers focused on maintaining a steady flow of relevant information linked to current events and making sure that project and fuel information was available when policy issues were debated in the media.

Final comments

BEST was a successful project delivering many times the number of vehicles planned and contributing to market development in Europe and elsewhere. Communication resources budgeted within BEST were modest, but were effectively leveraged and combined with other resources to produce impressive results, both in communication metrics such as media entries, in increasing refuelling facilities, and arguably even in fuel and vehicle sales. Nevertheless, some sites found it difficult to maintain media and public interest in bioethanol issues as policy decisions regarding incentives or removing tax barriers stalled—while others struggled to respond to adapt to media environment that seemed to turn from positive to negative overnight.

The experiences and lessons learned from communication programmes within the BEST project highlight the importance of communication in any market development initiative and can hopefully guide projects with similar ambitions.

References

Note: most of the following are unpublished internal project documents. For a list of available project reports, see www.best-europe.org

Primary sources, WP 7

- Communication Plan—Overall Project Level. D7.1, version 3(4)
- Local communication report Basque Country, D7.2, v.1
- Local communication report_ BioFuel Region, D7.2, final version
- Local Communication Report—La Spezia, D7.2, v. 1
- Local Communication Report—Madrid. D7.2, v.1, (April 2009)
- Local Communication Report Nanyang, May 2009-06-26
- Local Communication Report —Rotterdam. D7.2, (May 2009)
- Local Communication Report—São Paolo, Brazil, D7.2 (Final version, May 2009)
- Local Communications Report—Somerset, April 2009
- Local Communication Report—Stockholm, April 2009
- National dissemination and project updates, D7.05
- Report on most frequent questions from telephone queries, D7.05
- Report on website development, D7.09

Additional project sources

- The Best Experiences with Bioethanol Cars—WP1 Final Report. D1.19, April 2009-06-26
- Report on the experiences from the NanYang test fleet D1.09
- Report on experiences from the Ford test fleets, D1.10
- Report on the experiences from the Saab test fleets, D1.11
- Report on driver attitudes towards flexifuel vehicles 1.14
- Short report on experiences of information and dissemination activities within BFR, D1.03
- Reports on attitudes towards flexi fuel vehicles (decision-makers) D1.07
- Report on the experiences of training car dealers and service staff by Ford D1.07
- Report on the experiences of training car dealers and service staff by Saab, D1.08
- Report on the campaign towards private companies and taxi companies D1.13
- Report on drivers and public attitude towards ethanol buses, D2.03
- A short report on information and educational activities towards high-schools, citizens and key decision-makers, D5.03
- Short report on information and educational activities towards the high-schools, citizens and key decision-makers and status, experiences and strategy incentives beyond BEST (Task 1 WP5) D5.11
- Short report on transfer of knowledge to the sites within the EU and China, D8.01
- Short report on the training courses, D8.02
- Short report on the “Light-House” Tours D8.03
- Short report on transfer of knowledge, D8.07
- A short report about consumers’ present knowledge, attitudes, beliefs, motives, and perceived barriers, to biofuel and vehicles including the purchase behavior, loyalty and fuel usage, D9.04
- Consumers and clean cars: Site comparisons of attitudes and purchase intentions, D9.05

- Results on first enquiry on attitudes and acceptance by (potential) users of ethanol vehicles D9.06
- Results on first enquiry how citizens and companies appreciate the involvement of the regional authorities in the introduction of ethanol vehicles. D 9.07
- Report on promotion campaign and customer satisfaction, D 9.09
- Report on survey of public attitudes towards bioethanol blends in Somerset County, D 9.22
- A comparative report about consumers attitudes, worldviews and purchase intentions for clean vehicles, D 9.24
- Report on survey of fleet operators' attitudes towards bioethanol vehicles and fuel D9.25
- Report on second and final stage of survey on fleet operators` attitudes towards bioethanol fuel and vehicles, D 9.25

BEST web sites

BEST Site	Web site (s)
BEST Coordination	www.best-europe.org
Basque Country	www.bioethanolmadrid.es; www.eve.es/foro
Biofuel Region	www.biofuelregion.se
Brandenburg	www.lausitz.de/Wirtschaft/de/Unternehmenshetzwerke/Best.html
La Spezia	www.etaflorence.it/best-italia
Madrid	www.bioethanolmadrid.es
Nanyang	www.chinabestproject.com
Rotterdam	www.schoevoertuigenadviseur.nl
São Paolo	http://cenbio.iee.usp.br
Stockholm	www.miljobilar.se; www.miljofordon.se

BEST Friends

Member	Country
Babcock & Brown Environmental Investments,	Australia
Forced Air Technologies	Australia
Cooperativa Rural de Electrificacion Ltda	Bolivia
SIPA	Bolivia
Retail engineering	Bulgaria
EN SYST LTD	Bulgaria
IG BioE - Swiss BioEthanol	Switzerland
Planair SA	Switzerland
Mobil ohne Fossil e.V.	Germany
PBS Ltd.	Finland
www.schwedenimport.com	Germany
National Technical university of Athens	Greece
Energo Invest kft	Hungary
Pro Invento Ltd	Hungary
Zala Hoeromu Kft	Hungary

ENHANCED BIOFUELS & TECHNOLOGIES INDIA LTD	India
IPDC	Ireland
Irish bioethanol limited	Ireland
Iaccess	Ireland
NowCar.ie	Ireland
Bio.C. Sas	Italy
SUSTAINABLE DEVELOPMENT INITIATIVE	Nigeria
Veiligheidsregio Rotterdam-Rijnmond	Netherlands
TOTAL Nederland NV	Netherlands
Volvo cars Netherlands BV	Netherlands
Provincie Noord Brabant	Netherlands
Duinn	Netherlands
Mitsubishi Motor Sales Nederland BV	Netherlands
GRIP	Norway
MZK Slupsk	Poland
SC EDUCATIONAL SRL	Romania
Head Engineering AB	Sweden
etanol.nu	Sweden
Adelsö Buss AB	Sweden
Government of Aragon, Department of Environment-CIAMA	Spain
ACCIONA	Spain
EcolaneTransport Consultancy	United Kingdom
Daniel Kawczynski MP	United Kingdom
British Sugar	United Kingdom
Lincolnshire County Council	United Kingdom
Nottingham City Council	United Kingdom
Biofuel Matters Ltd	United Kingdom
Merseytravel (Passenger Transport Authority and Executive for Merseyside)	United Kingdom
Ashley & Co Refinery Consultants Ltd	United Kingdom
Denbighshire County Council	United Kingdom
Preseli Rural Transport Association	United Kingdom

The BEST sites

Stockholm

Stockholm County in Sweden includes 26 municipalities with a total population of 1.9 million inhabitants. The Environment and Health Administration of the City of Stockholm leads Clean Vehicles in Stockholm and is responsible for coordination of BEST. Stockholm aimed to introduce 100 funded FFV's and 4000 non-funded FFV's within BEST.

As a consequence of previous demonstrations and incentives, Stockholm had already established a small market for flexi-fuel cars at the start of BEST. By 2006, Stockholm had the world's largest bioethanol bus fleet, with around 250 buses. In 2006, a total of 317,798 registered cars were present in the City of Stockholm, of which 6,837 were FFV's. A total of 838,717 vehicles were recorded in the Stockholm County, including 21,400 FFV's.

During BEST, the combination of the Clean Vehicles in Stockholm programme and Government policies have resulted in a more rapid market development than expected. Monetary incentives have been an important driving force in the latter stages of market development. Exemption from congestion charges in Stockholm increased clean vehicle sales in Stockholm County by 23% in 2008 (See BEST Report D 1.19). Low prices of renewable fuels between January and October 2008 and the lower employee benefit tax assigned to a clean company cars also boosted sales. However, other incentives such as the Swedish clean vehicle subsidy seems to have affected company purchases adversely by capitalising the value of the premium as lower second hand values on low-CO_2 cars.

By the end of 2008 the share of clean vehicles in the Swedish vehicle stock was approximately 5% and 8 % in Stockholm. Clean vehicles represent an ever-increasing share of the total vehicle fleet in Sweden and, by October 2008, had developed a market share of 35% of new vehicle sales in Sweden. Flexi-fuel vehicles represent 25% of all new vehicle sales. The market share of 5% in Sweden and 8% in Stockholm is significant, where vehicle turnover is slower than the United States or most EU Member States. Although the market is not yet self-sustaining it seems to have reached the developing market phase.

Biofuel Region

The Biofuel Region (BFR) in Sweden includes two counties, Västerbotten and Västernorrland, with a population of about 500 000 across a 77 100 km² territory. BFR currently comprises 13 municipalities, six companies and a regional association in Västerbotten as well as the Västernorrland County Administration Board. The National Road Authority and three universities also support BFR activities. BFR aimed to introduce 2500 non-funded FFV's within BEST.

At the beginning of 2006 a total of 242 541 cars were registered in BFR, of which 119 551 were in Västerbotten and 122 990 in Västernorrland. Of these, a very small proportion used biofuels – 1 539 cars in BFR, of which 786 were in Västerbotten and 753 in Västernorrland.

Within the BEST project, activities in Biofuel Region focused on public actors, private actors and taxi companies and drivers. Activities within the public sphere focused primarily on introducing FFVs to the fleets of the BFR member municipalities. The Biofuel Region is an organisation comprising 18 member municipalities in Northern Sweden. The members represent 18 of the 22 municipalities in Västerbotten County. Private sector activities focused on 'VIP' companies with high environmental profiles or commitments. The taxi community was given special focus, with taxi companies, drivers, and major customers procuring taxi services the target of communications.

Results in Biofuel Region have exceeded expectations. The original target of introducing 2500 non-funded FFV's was met early in the project and now more than 5000 FFV's operate in the region. This development mirrors national trends in Sweden, where incentives and regulations have helped boost uptake of FFV's. However, on the county level, the Biofuel Region shows must stronger results than

its neighbouring counties, suggesting that the information campaigns and work within BEST have contributed towards faster market development than may otherwise have been the case.

E85 is available at around 35-45% of fuel stations in the Biofuel Region, compared to 25-26% in Sweden nationally and far above the European average. The BEST project introduced 55 pumps to the region, and from 2004-2007, fuel stations installing pumps for E85 were offered 10 000 -20 000 litres of free fuel as an incentive.

Rotterdam

Around 1.1 million people live in the Rotterdam region. Rotterdam has ambitious plans to reduce CO_2 emission by 50% before 2025, via reuse of waste heat from industry, carbon capture and sequestration and projects directed towards use of clean vehicles and fuels. The BEST project aimed to contribute towards the strategic climate and environmental goals and the introduction of biofuels to the Netherlands. At the beginning of the project, there were no FFV's in the Netherlands. After twelve months of the BEST project, 35 flexi-fuel vehicles were in use in the Rotterdam region, but the total number of vehicles operating at the site was approximately 500 000. Rotterdam aimed to introduce 19 funded FFV's and 2936 non-funded FFV's within BEST.

There were no FFV's in operation when BEST was launched, but after three years of BEST there were almost 6000 FFV's in the Netherlands, 1800 of which are in the Rotterdam region.

Nevertheless, the failure of the national government to implement a commitment to rescind excise taxes on E85 has been an obstacle. A great deal of time and effort has been devoted to raising awareness about the potential of bioethanol as a transport fuel. Rotterdam formed a national working group for E85 issues in the Netherlands in which Ford and other stakeholders are participating. This group and local politicians in Rotterdam have informed the national government about the importance of the tax issue. The City and Region of Rotterdam have also introduced local measures to support market development, such as local subsidy arrangements for fuel pumps and awareness-raising campaigns.

E85 sales are not increasing in line with FFV sales. One reason is that Ford has been offering customer a higher performance FFV model for the same price as a lower performance conventional model and recently, the FFV's have become cheaper than the petrol versions. However, but customers are still fuelling FFV's with petrol. As long as the price of E85 is higher than the price of petrol, this is unlikely to change.

On the other hand, rising sales of FFV's has led to a diversification in the range of models available to consumers. The Ford Focus was the first FFV model available in the Netherlands, but now models from BEST partner Saab, as well as French manufacturers, Volvo and Mitsubishi are available.

In sum, the BEST project has made a market develop for FFV's and E85 in the Rotterdam Region and the Netherlands as a whole. Moreover, the development of this market has influenced and supported other markets for clean vehicles, leading to a slow diversification of the vehicle fleet and fuel supply.

Madrid

Madrid city has a population of 3.200.00 in a territory of 605.8 km². The city faces significant challenges related to air quality and increased CO2 emissions from rising urban transport. Activities within BEST are handled by the Directorate-General for Sustainability and Agenda 21 in the City of Madrid, but apply to the entire Madrid municipality. Of 276 633 vehicles registered in the city at the start of 2006, none were flexifuel vehicles and there was no E85 reference project in Spain. Madrid aims to introduce 25 FFV's and one municipal fuel pump within BEST.

Ford Spain manufactures FFV's in Valencia and has sold the FFV Focus on the Spanish market. However, the supply of E85 took time to establish because it requires a new fuel network and there is no national obligation for pump stations to offer biofuels. Bioethanol distribution is perceived as the major obstacle for market breakthrough; currently there are only about 20 pump stations with E85 in

Spain and several suppliers of the fuel (Bioethanol de la Mancha, which produces bioethanol from wine industry surplus, is now the distributor for the Madrid city fleet). Another issue specific to the Spanish market is the high percentage of diesel vehicles in operation. Thus, even though Madrid has had a favourable situation with FFV's entering the market on a gradual basis (as Ford and Volvo sell only FFV's for certain models), the scale of this transformation is limited and there is ongoing uncertainty about the supply of E85. Also, fuel distributors have been unable or unwilling to install fuel pumps for biodiesel and bioethanol due to limited space at existing urban filling stations or concerns about the market size due to the fact that E85 is still more costly than petrol when comparing price/energy content.

Madrid has used public procurement as a tool to drive market development. An E85 fuel pump was installed and the Municipality purchased 5 FFV's in 2006 and subsequently hired a further 20 FFV's on four-year leases. Procurement was also used to introduce FFV's to cleaning service fleets and the current service provider has procured 15 FFV's. An E85 fuel pump was also installed as part of the contract. The public transport company of Madrid (EMT) also purchased ED95 buses and installed the corresponding pump station in its facilities.

Although Spanish legislation has exempted biofuels from fuel taxes until 2012, bioethanol E95 was taxed as alcohol in Spain in the early stages of the project, increasing the cost of fuel and delaying the start of operation of the buses by several months. Another major obstacle has been fulfilling the requirements for permits to install fuel pumps, given that the City of Madrid opened Spain's first E85 and E95 pumps. It took three years before the first public E85 pump opened at a Shell filling station in Madrid in November 2008. There are currently three private E85 pumps and one public pump.

The debate over the sustainability of biofuels, and the relatively high price of E85 compared to petrol, has not deterred municipal politicians in Madrid about the need for a transition to clean vehicles and fuels. Madrid will continue to promote E85 whilst exploring use of hybrid vehicles and municipal fleet vehicles running on biogas from local waste facilities, in combination with natural gas.

Basque Country

The Autonomous Community of the Basque Country (Euskadi) comprises the territories of Bizkaia, Gipuzkoa and Araba, covering an area of 7 234 km^2 with a population of 2 140 908. The BEST project is based within the Basque Energy Board (EVE), which makes it unique within the BEST partners as the main driver lays on industry issues. Prior to the BEST project there were no registered flexifuel vehicles in the Basque Country but at the beginning of 2006 there were a total of 117 586 conventional cars. The Basque Country aimed to introduce 200 non-funded FFV's within BEST.

At the beginning of the project, there were no flexi-fuel vehicles and no bioethanol filling stations in the Basque Country. In the early stages of the project, EVE relied heavily on Swedish technical information and expertise from Scania and SEKAB, to build momentum and understanding. BEST provided an excellent platform for exchange and the Basque Country was able to learn from other sites. For example, EVE took two groups – politicians and technical staff – on "lighthouse tours" to Sweden. These tours helped consolidate and advance the project. There is now unanimous cross-party political support for the use of biofuels in the Basque Country and, even if the 11.9% target is not met by 2010, a long-term commitment to biofuels is assured.

In BEST, activities initially focused on developing the supply network for biofuels across the Basque Provinces. However, the majority were controlled by oil companies or franchisees not prepared to diversify their supply of fuels beyond conventional diesel and petrol fuels. Also, the high share of diesel vehicles in Spain made biodiesel a more attractive alternative. Working with the independent fuel distributors was a first step, enabling E85 to be introduced to the market. However, consumers often perceived independent fuel distributors to be of inferior quality, meaning E85 risks becoming seen as a low quality fuel if it is only available in these filling stations. There are now 6 E85 pumps – half of all E85 pumps in Spain – out of a total of over 250 fuel stations in the Basque Country. By the end of 2009, there will be 10 E85 pumps in the Basque Country, contributing towards a total of 35

biofuel pumps (there are also 25 biodiesel pumps) and EVE is aiming for 60 pumps, most selling both biodiesel and bioethanol, in the near future.

At present, only Ford, Saab, Volvo and Renault offer models in the Basque market. Most FFV's operating in the region are owned by municipalities and institutions. However, there is still a tendency to procure diesel vehicles, as diesel is perceived as a fuel that is less vulnerable to price fluctuations and E85 is associated with higher fuel consumption. In the coming years, work with public procurement will be intensified and a steering group will promote use of bioethanol. EVE will also highlight the Basque experience in other Spanish regions by providing study visits similar to the Lighthouse tours.

Brandenburg

The Bundesland of Brandenburg in the east of Germany has a population of 2.5 million inhabitants. In the south of Brandenburg, four counties and the university city of Cottbus form the "Innovative Energy Region", with 650 000 inhabitants. Brandenburg aimed to introduce 80 non-funded FFV's within BEST.

Brandenburg joined BEST in 2007 two years after the other sites, and was primarily focused on introducing FFV's and E85 to private fleets. The circumstances appeared to be right for market development – there was no tax on bioethanol until 2015, there were national incentives reducing the price of E85, and there was a small but growing fleet of FFV's in the region as well as local production of bioethanol. Participation in BEST aimed to expand sales of FFV's and the fuel supply network, and increasing production and consumption of bioethanol offered the potential to boost local agricultural and economic development in a relatively deprived region. Rye grown in the region can be used to produce bioethanol and a fuel producer moved its production plant to the region, taking advantage of national funds that provide grants covering up to 45% of investment costs of new facilities in eastern Germany. This producer then signed agreements with local farmers to purchase 650 000 tonnes of rye at a fixed price for bioethanol production.

However, several problems arose. A national subsidy programme for natural gas filling stations could be extended to E85, but only at publicly-owned fuel stations. A complex permitting process slowed introduction of refuelling stations. The local bioethanol producer faced similar struggles in identifying refineries prepared to accept bioethanol and faced production problems when the price of corn rose dramatically in 2007. The debate on the sustainability of biofuels increased local uncertainty. Nonetheless, sales of FFV's did increase in Brandenburg, in part because Ford sells FFV's for the same price as conventional vehicles.

By the end of 2008, there were a total of 9,735 Ford FFV's in Germany, of which 1,863 were in eastern Germany. There are now six filling stations offering E85 in Brandenburg, six in Berlin and a total of approximately 250 in Germany, mostly situated in the west and northwest of the country.

La Spezia

La Spezia, in the Liguria region of Italy has an area of 881 km² and a population of 215137. BEST activities in La Spezia are led by the Mobility and Transport divisions of the Municipality and Province of La Spezia, the public transport company ATC and ETA Florence Renewable Energies. 116 640 cars were registered in La Spezia at the start of 2006, but none of these were flexi-fuel vehicles. The municipal and provincial administrations made the introduction of biofuels a strategic priority, as part of their commitment to fight climate change and promote sustainable development. Transport has been targeted via the Provincial and Urban Strategic Plans for Mobility. La Spezia aimed to introduce 10 funded FFV's within BEST and this target has already been met. These vehicles have experienced no technical problems and drivers have reported positive experiences with bioethanol.

Nonetheless, the target of introducing 90 non-funded FFV's in La Spezia has been difficult to reach because the fuel price is considerably higher per litre when compared to fossil fuels. Bioethanol pays

the same excise duty as fossil fuels and consumers receive no tax reductions. The Province and Municipality of La Spezia have called for policy changes at the national level but this process will take several years.

FFV's are being driven in Northern Italy near the Swiss border, and consumers can purchase E85 in Switzerland for prices lower than those for fossil fuels in Italy. This is because Switzerland has introduced various exemptions and incentives to stimulate sales of E85.

The Municipality and Province of La Spezia are extremely interested in exploiting environmental technologies and as such remain committed to bioethanol. Buses running on ED95 have been introduced in La Spezia. However, price is a key determinant of policy. La Spezia is proud to have introduced FFV's and E85 to the public fleet, but disappointed that factors beyond their control have restricted further achievement.

Nanyang

Nanyang is located in the southwest of the Henan province in China and is a famous historical and cultural city. Thirteen counties are under the jurisdiction of Nanyang City, which covers an area of 26 600 km² where 10.5 million people reside. At the end of 2005, there were no flexi-fuel vehicles in Nanyang's registered vehicle fleet of 75,000. The introduction of bioethanol in Nanyang was a part of the city's 'Recycle Economy Framework' and part of a wider drive in China to reduce dependency on fossil fuels in transport fuels. Nanyang aimed to introduce 10 funded FFV's within BEST.

Nanyang was one of the first cities to demonstrate E10, partly because the city has a history of bioethanol production and partly because Nanyang is situated in Henan Province, which produces around 10% of all food products in China. By October 2003, all fuel stations in the City of Nanyang supplied E10 and all petrol vehicles (except those operated by the military) were using E10. To date, ten flexi-fuel vehicles are operating in Nanyang and even though this is less than anticipated, the demonstration attracts interest from the Central Government and fuel and automobile industries. However, with no local models available and high import duties, Nanyang was compelled to retrofit conventional vehicles to run on high bioethanol blends. Nanyang planned to use FFV's in the public taxi fleet, but at present the existing taxis have not reached their life expectancy and cannot be replaced. There is currently no price reduction or tax exemption for biofuels, meaning local incentives – such as free parking for FFV's – are the only type of incentives to purchase FFV's and use bioethanol.

The debate on "food versus fuel" had an impact on the attitudes of certain government authorities, fuel and automobile suppliers, and other stakeholders. This may have impeded progress towards reductions or exemptions from import duties and fuel taxes and certainly slowed the overall rate of progress for BEST in Nanyang. Nonetheless, climate change, energy security and rural development are also critical issues for China. Ten of China's 34 provinces now use E10 in their fuel supply and will continue to develop local markets, though infrastructure and vehicles will have to be prepared for this transition. High blends remain low on the Central Government's list of priorities.

On the provincial level, a large drive towards biofuels can be observed. Henan Province – where Nanyang is located - is China's most populous province, with over 100 million inhabitants. Around 80% of these residents work in agriculture and the province is keen exploit the potential of biofuels for rural economic development and to improve the local environment. This means that, in spite of the many challenges faced by Nanyang in the BEST project, the local government continues to support and work for use of FFV's using high blend bioethanol.

Somerset

With local grain production and local council interest in energy security and environmental sustainability, Somerset in the UK presented an ideal site for developing a bioethanol market. Interest in flexi-fuel vehicles and E85 emerged in Somerset when the local grain company Wessex Grain – who had been supplying wheat to Abengoa for bioethanol production – declared their interest in

developing a bioethanol production plant in Somerset. Their interest coincided with Somerset Council's plan to increase bioenergy in local energy production and for transport. The possibility of locally-produced bioethanol contributing to regional economic development proved attractive to many in Somerset and a coalition of actors was formed, including Wessex Grain, the public water company and Ford – who were keen to launch their Focus FFV model in the UK. The Ford Focus was already the UK's largest selling vehicle. Somerset aimed to introduce 46 non-funded FFV's within BEST. During the first year of the project, all targets were met: 10 vehicles were procured by the County fleet, 15 by the local police and others by actors including the UK Environment Agency, Wessex Water and Wessex Grain. 5 fuel pumps for E85 were installed.

Unfortunately, all plans had assumed that as the oil price rose, bioethanol would become more competitive. Instead, the price of raw materials including wheat rose, making E85 cost 25% more per kilometre than petrol. In this context, it proved impossible to sell more FFV's. The project team focused on raising awareness of the potential of bioethanol, in the hope of achieving new legislation providing fuel price parity with petrol per pence/km.

Despite an extensive communication effort focused on local and national decisionmakers, only around 150 FFV's are sold per year in the UK – and only one retailer sells high blend bioethanol in the UK. The global debate on "food versus fuel" focused attention on the sustainability of biofuels and on justice and equity issues in global trade. In Britain, media coverage of this issue was particularly hostile and Somerset's work became the subject of considerable criticism. Supportive local politicians found it no longer possible to introduce local incentive systems. As a result, in Somerset the BEST project shifted focus to identifying other UK local governments obliged by new regulations to conduct performance assessments to reduce CO^2 emissions. Contact with Nottingham and Reading was established and led to introduction of FFV's and buses in both cities. A national conference with actors including the Renewable Fuels Agency, Local Government Association and British Sugar, was held in Somerset on the issue of how to quantify CO^2 savings from biofuels and how local governments can implement biofuel policies.

Evidence suggests a changing tide. The Low Carbon Vehicle Partnership has commissioned a report on "Market Opportunities for High Blend Biofuels" which will be published in June 2009. This report highlights the experiences of the BEST project and will propose potential measures to assist introduction of FFV's and bio-fuelled buses and trucks in the UK. The UK government has instructed councils to conduct contingency planning exercises for "peak oil." Moreover, in January 2009 the government imposed a 3.5% target, rising to 10% in 2020. Such a target is only attainable if high blend bioethanol is introduced on a large scale. In response to critics, the government has linked these introductions to sustainability certification schemes.

São Paulo

The State of São Paulo in Brazil extends over an area of 248.209,43 km² and has a population of around 40 million. This represents 21.5% of the Brazilian population. The City of São Paulo has 11 million inhabitants and is the centre of one of the largest urban regions in the world with more than 17 million in the metropolitan area.

The State has extensive experience with bioethanol and flexi-fuel vehicles. The production of bioethanol began over 30 years ago, and currently the sugarcane industry generates in Brazil employs about one million people directly and 700 000 indirectly jobs. Brazilian ethanol expertise has led to impressive reductions of production costs. Since the introduction of the National Alcohol Programme PROÀLCOOL in 1975, the cost of producing ethanol has declined by 4 to 5 percent annually. 90.6% of cars registered in Brazil in 2007 were FFV's. São Paulo's participation in the BEST project involves demonstration of hybrid electric vehicles (HEV) running on bioethanol blends.

Hydrated ethanol is sold in Brazil roughly 70 to 80% of price of the gasohol (E25 gasoline/ethanol blend), depending on the region where fuel is sold and the harvesting season. In São Paulo City, for

example, hydrated ethanol is sold for roughly 50 to 60% of the price of gasohol. Taking into account that the consumption of ethanol fuelled cars is higher than the consumption of gasohol fuelled cars, the calculated price for ethanol is currently about 80% that of petrol. There is an ample supply of FFV makes and models. All new models produced by VW do Brazil are equipped with flexi-fuel engines and Fiat, Peugeot, Citroen, Renault, Honda, Ford and GM supply several models each. Based on this trend, all car manufacturers are expected to extend their market supply of models with flexi-fuel engines. Because Brazilian consumers in Brazil have a positive towards alcohol fuels, FFV sales in Brazil are growing enormously. During 2006, the production of FFV's reached a total of 1 249 062, a growth rate of more than 41 percent over 2005 levels.

Within BEST, it was necessary to solve some problems and barriers related the supply of the fuel additive needed to operate the buses. Delays within the local demonstration activities were mainly caused due to administrative barriers including contractual and legal requirements involving several departments and companies as well as import regulations and duties on the fuel additive imported from Sweden.

In late 2007 the E95 bus was officially introduced in São Paulo and since early 2008, one E95 bus is in continuous operation. The acquisition of two other E95 buses for the local demonstration activities in São Paulo was not feasible within the timeframe of the BEST project. After a long period of negotiations it was possible to reach an agreement between Toyota do Brasil and the Brazilian Oil Company Petrobras. Two HEV's were provided by Toyota do Brasil and operated by CENBIO, and one HEV is operated by Petrobras. The first results with the Prius owned by Petrobras show that the technologies implemented in the first generation Prius have lower pollutant emission than the limits established by law in Brazil, USA and Europe with satisfactory fuel consumption."