



*SmartCities*

## Project Initiation Document

Pilot name: Bluetooth

Municipality: BIS GmbH Bremerhaven

Work-package: WP 3 Customer Services

Date: 2009-12-01/ 2010-07-28 rev.

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## 1. Introduction

A project initiation document [PID] is a document that brings together in one place the key information needed to start, manage and evaluate a pilot.

**All stakeholders should be informed of the development of a PID, and the final PID should be agreed and signed off by the management in municipal partners.**

The PID should contain information setting out the "who, what, why, when and how" for the local pilot. It should define all major aspects of the pilot, and can be used as a key part in the management of the delivery of the pilot and sets the baselines that will be used in any assessment of the pilot's success.

All Smart Cities partners are expected to produce a PID for each local pilot. These will be used by the project and by local partners to measure progress against the aims and objectives set out in each pilot's PID. Many partners will already be expected to develop PIDs for their pilots: in this case relevant information should be copied into this form.

## 2. Pilot information

This section sets out the basic information about your pilot.

### 2.1. Pilot name

What's your pilot project called?

Bluetooth Service

### 2.2. Pilot acronym

Does the pilot have an acronym? [e.g. SCRAN?] If not, leave blank.

### 2.3. Pilot website

Does the pilot have a local website? If not, leave blank.

In process under [www.bremerhaven.de](http://www.bremerhaven.de)

### 2.4. What type of initiative is the pilot?

Select **all** that apply to your pilot.

- |                                     |                      |                          |                            |
|-------------------------------------|----------------------|--------------------------|----------------------------|
| <input checked="" type="checkbox"/> | Project or service   | <input type="checkbox"/> | Award scheme               |
| <input type="checkbox"/>            | Network              | <input type="checkbox"/> | Promotion/awareness scheme |
| <input type="checkbox"/>            | Strategic initiative | <input type="checkbox"/> | Other                      |

### ***2.5. Pilot country***

- |                                     |             |                          |        |
|-------------------------------------|-------------|--------------------------|--------|
| <input type="checkbox"/>            | Belgium     | <input type="checkbox"/> | Norway |
| <input checked="" type="checkbox"/> | Germany     | <input type="checkbox"/> | Sweden |
| <input type="checkbox"/>            | Netherlands | <input type="checkbox"/> | UK     |

### ***2.6. Pilot city/region***

Bremerhaven

### ***2.7. Pilot start date***

August 2009

### ***2.8. Pilot finish date***

Approx. November 2010

### ***2.9. Pilot operational date***

When did your pilot go 'live' to the public/businesses?

Prototype test phase start: August 2010 (Duration 6 month)  
Installation in 10 info-terminals will be finish latest October 2010

### 3. Background to the pilot

Set out the context for the pilot: why are you interested in doing this work, what issues do you need to address, why do you feel you need to address them etc..

There is an increasingly international competition between Europe's regions concerning business, inhabitants, jobs, customers and visitors. Each Region has its particularities, so Bremerhaven is focusing on maritime themes which are based on its historical and geographical situation. The hereby expected portfolio of a city or a region is characterized by a mixture of history, geography, industries, images and intangibles items. It needs a firm establishment based on all possible channels of communication, namely pictures, text, maps, guides and others services and offers to attract the customer's/tourists interest, to convince a businessman to establish his company in Bremerhaven or to keep the inhabitants from moving.

For the publication of city related information different media channels are currently being used like flyers, static signs, websites, etc. to exist beside each other because they are appropriate for a specific purpose.

The customers desire to get free or low cost up-to-date information while being outside. To meet these requirements, Bremerhaven is currently using 22 Information Terminals at central places in and around the city centre, aiming to bridge the information gap the customer faces whilst being outside and in need of information. The terminals are a result of the Interreg IIIB Project SEAPORT. Currently only tourist attractions are displayed at the terminals. Considering the customers wishes to provide all kinds of information about the City and the region, the themes of information on these Information Terminals need to be expanded. Bremerhaven wants to give free of charge and tailored information to all customers (target) groups , e.g. young people, elderly people, businessmen, visitors/tourists, etc. These Terminals are yet insulated points of information, which provide information via screen and are being online-updated centrally. Bluetooth can easily be used as a free of charge medium, it is integrated in almost every mobile phone, which guarantees easy access to this services.

With the success of the iPhone and similar smart devices we see an increasing demand for information exchange with these devices. The Bluetooth approach will enable customers to integrate the information available on our portals with their smart phones and take information with them for later use.

#### 3.1. Pilot topics

Select **all** that apply to your pilot

- |   |   |
|---|---|
| <input type="checkbox"/> Efficiency & Effectiveness, Benchmarking | <input type="checkbox"/> Interoperability       |
| <input type="checkbox"/> Inclusive eGovernment                    | <input type="checkbox"/> Legal Aspects          |
| <input type="checkbox"/> eIdentity and eSecurity                  | <input type="checkbox"/> Multi-channel Delivery |

<input type="checkbox"/>	eParticipation, eDemocracy and eVoting	<input type="checkbox"/>	Open Source
<input type="checkbox"/>	eProcurement	<input type="checkbox"/>	Policy
<input type="checkbox"/>	Services for Businesses	<input checked="" type="checkbox"/>	Regional and Local
<input checked="" type="checkbox"/>	Services for Citizens	<input type="checkbox"/>	User-centric Services
<input type="checkbox"/>	High Impact Services with Pan-European Scope	<input type="checkbox"/>	Other
<input type="checkbox"/>	Infrastructure		

### 3.2. Pilot sector

Select **all** that apply to your pilot

<input checked="" type="checkbox"/>	Communication (infrastructure)	<input type="checkbox"/>	Internal market
<input type="checkbox"/>	Crime, Justice and Law	<input type="checkbox"/>	Local/Regional Community Development
<input checked="" type="checkbox"/>	Culture and Media	<input type="checkbox"/>	Procurement
<input type="checkbox"/>	Customs	<input type="checkbox"/>	Social Security
<input type="checkbox"/>	Education, Science and Research	<input checked="" type="checkbox"/>	Social Services
<input type="checkbox"/>	Electricity/Gas	<input type="checkbox"/>	Tax
<input type="checkbox"/>	Employment	<input type="checkbox"/>	Travel, Transports and Motoring
<input type="checkbox"/>	Environment	<input type="checkbox"/>	Water
<input type="checkbox"/>	Fire Services	<input type="checkbox"/>	Other Social Services
<input type="checkbox"/>	Healthcare	<input checked="" type="checkbox"/>	Other / Tourism

### 3.3. Target users of pilot

Select **all** that apply to your pilot

<input type="checkbox"/>	eGovernment	<input checked="" type="checkbox"/>	Disadvantaged/deprived communities
<input type="checkbox"/>	Administrative	<input type="checkbox"/>	Families and children at risk
<input type="checkbox"/>	Business (self-employed)	<input type="checkbox"/>	Homeless
<input type="checkbox"/>	Business (industry)	<input type="checkbox"/>	Minorities and migrants
<input type="checkbox"/>	Business (SME)	<input checked="" type="checkbox"/>	Older people (60+)
<input checked="" type="checkbox"/>	Citizen	<input type="checkbox"/>	People living in poverty and/or precarity
<input checked="" type="checkbox"/>	Civil society	<input type="checkbox"/>	People with anti-social and criminal behavior

<input type="checkbox"/>	Intermediaries	<input checked="" type="checkbox"/>	People with disability
<input checked="" type="checkbox"/>	Other / Tourism	<input type="checkbox"/>	People with health and long-term care problems
<input type="checkbox"/>	eHealth	<input type="checkbox"/>	People with no or poor digital literacy
<input type="checkbox"/>	Add Patients	<input type="checkbox"/>	SMEs, associations and intermediaries
<input checked="" type="checkbox"/>	General public	<input type="checkbox"/>	Unemployed people
<input type="checkbox"/>	Health authorities	<input type="checkbox"/>	Young people at risk of marginalisation
<input type="checkbox"/>	Health professionals	<input type="checkbox"/>	Other
<input type="checkbox"/>	eInclusion	<input type="checkbox"/>	Women
<input checked="" type="checkbox"/>	Any citizen	<input type="checkbox"/>	

### 3.4. Description of target users

Please describe your target group and provide some information on size, composition and needs.

Citizens need a bundle of services and information to manage their life in their city/municipality. Concerning demographic change processes, services have to be adapted to the requirements of elderly people. Business people or tourists visiting a region need tailored information about their concerns. Communication channels have to be specific to the target groups. Information has to be affordable, provided quickly and with low threshold (see chapter 3).

### 3.5. Type of service

Select the **one** that best applies to your pilot

<input type="checkbox"/>	Not applicable/not available	<input type="checkbox"/>	IT infrastructures and products
<input type="checkbox"/>	Awareness-raising information	<input type="checkbox"/>	Participation
<input type="checkbox"/>	Training and education	<input checked="" type="checkbox"/>	Inclusive services of general interest
<input type="checkbox"/>	Content provision	<input type="checkbox"/>	Other

### 3.6. Overall implementation approach

Select the **one** that best applies to your pilot

<input type="checkbox"/>	Public administration
<input checked="" type="checkbox"/>	Private sector
<input type="checkbox"/>	Non-profit sector
<input type="checkbox"/>	Partnerships between administration and/or private sector and/or non-profit sector

## 4. Pilot description

These sections of the PID describe what the pilot will do and how it will do it.

### 4.1. Objectives

What outcomes should be delivered by the pilot? (Business case/benefits should be set out in Section 5)

Bridging the information gap by providing free of charge information indoor (e.g. in public building, museums...) and outdoor (bus stations, city centre, retail centres). This pilot is regarded as a test case for the Bluetooth channel. The test case will be accommodated by an acceptance study, usage and information demand will be monitored (ref. "Customer profiling"). Experience with this channel and technology will be shared with other partners. The main objective is to install and offer new and modern e-services to reach a great scope of target groups.

### 4.2. Approach

How will the pilot do this?

The city aims to provide low threshold information free of charge for everyone able to use a mobile phone. Extending the "guidance on all aspects of life" concept ("Lebenslagenkonzept") to a mobile access via Bluetooth is an innovative service that has not been established yet anywhere else in the North Sea Region.

The Bluetooth service which is integrated in the info-terminals will be advertised through special labels with a Bluetooth icon.

### 4.3. Deliverables

What outputs/processes/procedures/definitions will be delivered by the pilot?

Research needs to find out how to speed up data transmission, how to improve transmission of high data volume, best-case practices for transmission aspects (push-pull models), development of vandalism-safe indoor and outdoor hotspots. The innovative aspect lies in the overall approach of an information system of all kinds of public information, tailored to specific customer (target) groups.

This functional process contains aside from the selection buttons on the start page, respective submenus for the selection of the Bluetooth services at the location of the info-terminals (Location Based Services). This means, Bluetooth services, which orientate themselves to the specific environment (e.g. audio file for the location, etc.), combined with general information about the region or entertaining and informative services (pictures, music, etc.).

The existing content management system must be extensively expanded and revised for integration directly into the start and selection mask construction of the existing and new info-terminals in Bremerhaven and in the surrounding region. In this way we will be able to comply with the new requirements through the Bluetooth services and should the situation later arise with the expansion of service scenarios.

The generic development of solutions as well as the co-design will help to build-up a solution which can be realised by other partners as well and which also will be innovative and attractive to be take over by the region or the federal states.

### 4.4. Exclusions

What issues are **outside** the scope of the pilot?

Production of audio data's for several points of interest (POIs) to implement these data's as one Bluetooth service.

#### ***4.5. Constraints***

What issues constrain the pilot? (These will include financial, technical, and timing issues.)

Technical issues: data transmission, transmission of high data volume, development of vandalism-safe indoor and outdoor hotspots.

- Data transmission and data speed of Bluetooth technology is very limited and quite slow when it comes to bigger data volumes. The Project is looking for better techniques to improve data transmission via Bluetooth.
- For the outdoor use vandalism-safe transmitting stations (hotspots) with well functioning features regarding speech and text messages are required. The existing Information Terminals can be used as hotspots. In areas without a terminal, new hotspots have to be built.
- Price fluctuations depend on the choice of hardware components.
- Call for tenders depend on customer feedback.

#### ***4.6. Assumptions/dependencies***

Set out the assumptions you have made at the beginning of the pilot – particularly if your pilot is dependent upon other projects/pilots. Identify external factors which may affect the pilot.

- Compatibility between information and devices (e.g. sending contact data to a phone that does not know what to do with it)
- Technical issues regarding Bluetooth standard/revision and compatibility on the device side
- Range issues related to a possible push-model
- User experience with Bluetooth (e.g. the customers not knowing where to enable the Bluetooth feature on the device side)

## 5. Business case

Set out why your municipality feels the pilot is necessary, what the pilot seeks to achieve, and what benefits it will deliver. Include how these benefits will be measured (e.g. increased customer satisfaction, faster processing etc.).

### 5.1. Summary/overview

Practical concepts for an easy to use information system according to the target groups (e.g. business people: information about industrial estates, retail sites, conference venues, business fairs and hotels; the society: information about public bodies, public services, schools, recreational points of interest (theatre, cinema...), medical care, social care for inhabitants. This customer orientated information system would complement the widespread concept of "guidance on all aspects of life" (Lebenslagenkonzept) which is implemented in most of the municipalities and cities websites on a new (mobile) level and matches the government strategy towards better customer orientated services provided by public authorities. The concept is supported by the federal government, enables the customer to get all the necessary information concerning his needs at once.<sup>1</sup>

<sup>1</sup> The "Lebenslagenkonzept" ignores the structure of the local administration and is strictly orientated at the needs of the society. The e-government service is generated through the view of the customer, not of the administration. The customer's requirements are being structured on an internet portal according to different situations in life like marriage, relocation etc.) The customer can ask for all the necessary information concerning his needs at once.

### 5.2. Customer benefits

Information about public bodies, public services, recreational points of interest (theatre, museum, cinema etc.) for inhabitants and tourists.

### 5.3. Performance benefits

Efficiencies are gained from:

- Identifying where there is potential for shift to more efficient channels and how to achieve that
- Controlling through heatmap analysis and optimizing the e-services

### 5.4. Employee benefits

### 5.5. Financial benefits

Free of charge for the users

### ***5.6. Project benefits***

The generic development of solutions as well as the co-design will help to build-up a solution which can be realised by other partners as well and which also will be innovative and attractive to be take over by the region or the federal states.

The pilot will act as a test model to be shared as part of the infrastructure of the entire project.

Learning that can be applied by partners and that shows the value.

## 6. Pilot management/organisation

Set out the organisational structure that will manage your pilot. This should include relevant senior managers, project/pilot managers and staff. Please indicate how the pilot will be managed.

The project director and the project manager of BIS GmbH will manage the pilot. The technical knowledge and experience are available through external experts (i-ventions GmbH and monavista GmbH).

## 7. Staff/financial resources

Set out what resources are available to deliver the pilot. This should include what budget and staff the pilot can call upon.

### 7.1. Funding sources

Select **all** that apply to your pilot

- |                                     |                         |                                     |                                  |
|-------------------------------------|-------------------------|-------------------------------------|----------------------------------|
| <input checked="" type="checkbox"/> | Public funding EU       | <input checked="" type="checkbox"/> | Public funding local             |
| <input type="checkbox"/>            | Public funding national | <input type="checkbox"/>            | Private sector                   |
| <input type="checkbox"/>            | Public funding regional | <input type="checkbox"/>            | Charity, voluntary contributions |

### 7.2. Overall cost/budget (€)

€135,902 (see Appendix 10.2)

### 7.3. Contribution from local funds (€)

€67,951 (see Appendix 10.2)

### 7.4. Contribution from Smart Cities (regional, in €)

€127,400 (see Appendix 10.2)

### 7.5. Contribution from Smart Cities (transnational, in €)

€8,502 (see Appendix 10.2)

### 7.6. Staff resources

€60,816 (see Appendix 10.2)

## 8. Reporting framework

How will the pilot report progress, both to local management and to the Smart Cities project? How will the pilot's timelines and reporting mechanisms link with reporting for the Smart Cities project?

Press releases, local BIS website, project website, BIS and Smart Cities newsletters, Smart Cities monthly activity report, Smart Cities wiki.

Reports will be presented to Smart Cities Steering Committee meetings and/or workshops.

### 8.1. Baselines/zero measuring

What baselines do you have? Do you have evidence to how the pilot is need for this project?

Improve the e-services for visitors and customers in a city and to raise the possibility to access information. Since 2003 annual visitor surveys show the increasing demand for free of charge information via new technologies.

### 8.2. How will you measure progress?

How will you show how your pilot is progressing?

Through the monthly activity report and stories at the Smart Cities website

### 8.3. How will you measure the impact of your pilot?

e.g. increased citizen awareness/use of a service

- Dissemination through promotion activities.
- User acceptance questionnaire, monitoring usage and collecting statistic data from the hotspots.
- Controlling through heatmap analysis, as a method of user behaviour click analyses and optimizing the e-services

#### 8.4. What local indicators will you use?

e.g. surveys of local citizens, businesses

Output indicator:  
 Conducting a study (assessment and comparison) – 1 study  
 Purchase of hardware, assembling (indoor and outdoor) – 10 hotspots

#### 8.5. What national/transnational indicators will you use?

e. g. levels of service use

- Acceptance of use by customer (target) groups
- Intensity of co-design process
- Improvement of quality of life in urban area

#### 8.6. What work-package/subtheme indicators will you use?

Bremerhaven Pilots	Result	Indicator		starting position	target
Bluetooth - generation of a study (assessment and comparison) , exchange of experiences	best-case scenario for easy to use information system tailored to target groups	no. of studies	(output indic.)	0	1
Bluetooth - purchase of hardware, assembling (indoor and outdoor)	vandalism-safe transmitting stations (Hotspots)	no. of hotspots	(output indic.)	0	10
Bluetooth - 9-month testing phase, monitoring	mobile access via Bluetooth as an innovative service model	acceptance of use by target groups	(result indic.)	0	1
Bluetooth - analysis, expertise	practice guide	intensity of co-design process	(result indic.)	0	1
Bluetooth - Local service point for authority, SME's, research and citizens	test model to be shared as part of the infrastructure of the whole project	improvement of quality of life in urban area	(result indic.)	low	high

## 9. Pilot plan

This should set out how the pilot will deliver the items set out in 4.3, including timelines for all deliverables and outputs.

- Starting Nov 2009: Bluetooth - purchase of hardware, assembling (indoor and outdoor) till May 2010
- May-July 2010: Roll-Out phase, steer all Bluetooth applications and further e-service-tools within a Customs-Management-System (CMS) and implement a new customer-friendly layout
- August 2010: 9-12 month testing phase, monitoring

## 10. Risks

Set out the main risks the pilot faces and what steps you will take to manage these risks.

Hard- and software as well as the application related the Bluetooth services won't be available respectively ready in due time.

Technical issues (outdoor capabilities, especially in rough environments)

## 11. Co-design

### 11.1. *With other organizations and institutional partners*

How are you working with other **local** organisations / institutional partners to co-design your pilot?

Cooperated work and test settings with the local university of applied science.

### 11.2. *Co-design with citizens and individuals*

How are you working with citizens and individuals to co-design your pilot?

Students and citizens test our services (survey through questionnaire) and help us to redesign the functions and contents. Furthermore through the heatmap analyses we get an overview which functions and content are important and which are unimportant.

### 11.3. *The impact of co-design*

How has this work changed your pilot – are you doing anything differently?

We want to learn from the feedback and test results (see 11.1, 11.2)

## 12. Transnational work

### 12.1. *Transnational links*

What other municipalities and pilots are you working with as you develop/deliver your local pilot?

We are in contact with Kortrijk to exchange know how and technical information for our local pilot.

### 12.2. *Transnational learning*

How are you incorporating transnational learning into the design/implementation of your pilot?

To transfer technical (hardware) or service elements (software, methods, design) to another partner or region concerning their specific needs. To get in exchange with project partners and discuss the method of Bluetooth and the usability.

### 12.3. *Transnational outputs*

How will your pilot contribute to the project's transnational outputs? What transnational outputs will it contribute to, and what do you expect the contribution to look like?

The question is it possible to design a technical Bluetooth service for more than one region and national partner?  
Define methodologies for user involvement, profiling customers (different target groups) and their needs (heatmap analyses and questionnaire), methodologies to transfer these needs in appropriate services, and techniques to fit the right channel to the specific services and customers thereby setting a framework for a higher level of e-services in the NSR.  
Transnational co-design: expert knowledge of the local university of applied science  
Co-design with target groups: students, citizens, tourists (questionnaire, heatmap analyses)