

Legend

- Underline text expected response from partners
- *I used bold italic font for my proposed response and questions to partners*
- Yellow highlighted text corresponds to topic related to WP1 users studies and field trials
- Pink highlighted text corresponds to topic related to Open space application
- Pink highlighted text corresponds to topic related to WP2: Presbycusis compensation
- Pink highlighted text corresponds to topic related to Car application: (WP3-WP4)
- Pink highlighted text corresponds to topic related to WP6: l'City Management
- Pink highlighted text corresponds to topic related to WP5 : Dissemination, exploitation and labellisation
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P: 18, L16-19: Impact of the project is difficult to assess at this stage. It could be very good for the open space sound system, if combined algorithms for sound processing and product-service combinations will ultimately produce results that will really help and satisfy primary end-users. A good impact is not likely to be realised for the car system within the project time.

WP1 : l'City Evaluation : end-users studies and field trials

1/ Study on users requirements

- (p4- L7-8) Study on users requirements to be published in peer reviewed journal. CENTICH ?
- (p14 L31-32): the end user needs have been delayed significantly and so none were available prior to the mid term review.
- (p11, L50) Good summary provided for both stations and in cars.
- (p12, L7) Task 1.1 has been completed but fails to be adequately reported
- (p12, L3-4) Some people did the test without their hearing aids, so were not fully representative. *This group was very useful to assess the hearing aid effect on localization and intelligibility (CENTICH: adds this argument into deliverable D1.1-1.4 and indicates here the section of it as reference)*

2/ (P4, L20-21) it is not acceptable that the evaluation reports are covered in other deliverables. In fact the evaluation work fails to be adequately reported. CENTICH writes a response to be sent the 2nd of April

3/ Evaluation by end-users

- P9, L15-16 Both systems must be tested on a sufficient number of older users with hearing impairment and the results must be reported. P13, L14 : Subjective tests on end users will be used, but it is not clear how many people will undergo the objective test.
- CENTICH : *write a first response for the 2nd of April and proved at the 2nd review*
- P9, L16 These reports should become public deliverables. *This is already the case D1.1-1.4 and 1.8 are the evaluation reports by subjective tests and they are public.*

Commentaire [S1]: Merging D1.1 with D1.4 permit grouping protocol with the results of the studies and therefore easier to understand. Indeed ecological protocol as new approach needs to be in the same report in order to be

4/(p12, L1-4): The partners **found difficulties in getting agreement** with the national bodies to get the station announcements information. **CENTICH and AA** ?

5/ (p15, L20-21) Applied ethics: However, the presentations and the answers provided by the consortium seem to indicate that the necessary steps to address ethics and data privacy issues were taken. **CENTICH**: *indicates here the section of D1.1-D1.4 on ethic as reference.*

Open space application (WP2-WP3)

1/second period

(P3, L1-4) : should be on:

- Development of the Learning Algorithm to take into account background sound
- Integrating this algorithm into a closed loop feedback system

2/ P10, L13 open space system is close to market

3/ (p12, L9-16) **Demo for WP2 and WP3**: Learning and frequency enhancements algorithms were already available. These are now being tested in this application, looking at frequency and amplitude enhancement. **Can model hearing loss in sounds**. They are looking at using their digital audio processor. They are adding the speech conformer, which is already available. The presbycusis compensation is the algorithm that is being developed in this project. **Both algorithms were developed during the project and presented at the demo.** The demo showed a good improvement for sounds to the end user with hearing loss. They are now working on using further compensation using a microphone integrated in to the loudspeaker.

The **smarter aspect of this project is to analyse the background noise, reverberation, crowd level aspects, numbers and location of loudspeakers aspects, and try and compensate for this. I think that there are some little misunderstood, is it possible to add light correction to this text above?**

WP2: l'City Audio Processing: Presbycusis compensation

1/ **P9, L31** : **Public access to the sound database**: **P13, L29-30** This would be of benefit to the external community and should be considered as a public deliverable. **AA and CRF do you agree do enable access via our website? If you agree when ? AA could you finalize the database access ?**

2/ **Pre-compensation algorithms as open source**:

- P10 L15-16: For the open space system the consortium should be encouraged to make the code for the frequency enhancement open source. This way there is likely to be take-up and European citizens will benefit.
- P17, L23-26: The SME partner ActiveAudio proposes to offer the algorithm improvements free of charge as an included extra in its range of products, especially a processor named NUT in which the algorithms can be downloaded. Active Audio thinks it will be difficult to charge for public systems. This means that the community will benefit but not individual partners. There was no mentioning of other considerations on this issue.
- P15, L2-4: Business and exploitation aspects should be considered, but the chances are better that these improvements could also be taken up if the codes are made open source, as it was hinted by the partner responsible for its development.

Commentaire [S2]: Mériem do you unsertand ?

As discussed with Regis and Sylvie, an exploitation license will be signed between CEA and SME.

The consortium agreement signed by all partners indicates that "... therefore the CEA who has the property of these algorithms will be licensed with any partner who will exploit these algorithms. Of course, the CEA makes every effort to increase the value of these algorithms on the market and as it has the habit of doing for its entire production of R & D work.

3/D2.2 Quality criteria : It is proposed that they continue on with the development of the combined processes and propose that as a future standard. Here the feedback from primary end users is extremely important. CENTICH, AA and LinkLab your proposal

4/ Task 2.2 on pre-compensation algorithms:

- D2.4 Pre-compensation algorithms: has been delayed due to the addition of the car indoor alarm, e.g seat belt alarm. It was explained why this was added, but not what effect this delay would have on the later deliverables. (P14, L15-16) D3.2 and D3.4 have both been delayed by 6 months. This is due to a delay in task 2.2. However, it was not made clear why there was a 6-month delay in the design of digital filters. (p16, L18-19) Also, many of the delays have been blamed on the end user involvement, but many of the technical work has also hit significant delays e.g Task 2.2 **LINKLAB please reply to this** ?
- It is proposed that this work is removed from the second part of the project, or at least that only minimal efforts are dedicated to it. **LINKLAB could you find out with any other available it was mistaken for.**

5/ p14, L42-p15, L4 : **Integration and Exploitation** : The sound system for indoor spaces is building upon an existing hardware and software solution and is already showing improvements in sound quality from combining available algorithms with newly developed algorithms. These stand a chance of improving further over the second period and also to be fully tested in live applications.

Car application: (WP3-WP4)

1/P10, L13-14: car system will still be only a proof of concept at the end of the project. *We agree only for outdoor alarms if the microphone-array won't be miniaturized and the glass microphone cannot be used in an array by algorithms. More about algorithms integration on DSP, For in-car alarms, CEA and LinkLab translated PMs to integration in order to obtain a prototype available and tested during the project.* **Christian could you confirm?**

Commentaire [S3]: At TELNET for UPD, we can integrate detection on DSP. What about ENEA ?

2/ P9, L7-10: Minimum efforts should be allocated to the indoor car alarm as there is insufficient focus and effort available to meet the original goals without adding new goals, which are not essential to the project. It is better save such new related areas of interest for when the core technologies have been completed, after the end of this project.

2/ **New structure proposed by the midterm review committee** (p2):

- Ascertaining the most suitable car loudspeaker system: **=task 3.5**
- Develop the algorithm for processing the microphone sound : **EPFL, CEA and CRF Do you understand?**
- Develop the methods for analysing the sound data for the car to determine direction : **topic of task 4.2**
- Develop the alarm system (audio and visual) : **purpose of tasks 2.4 for audio close to**

Commentaire [S4]: D3.2 : livable en M24

Commentaire [CG5]: This task is in progress by TUM and Linklab.

end (M24) and 4.3 that is starting (M19). So it will not be possible to merge them. LinkLab and CRF do you agree?

- Integrate the final system components into a car **topic of tasks 3.4, 3.5 with their last delivery on M24, and task 4.4 (CRF could you give us information about this task ?)** and carry out field trials with end users **and task 1.3 (CENTICH give us information about this task and task 1.2)**
- Ascertain the performance/ cost benefits **task 1.3 and 5.2. AA and CRF could you give us information on the progress on task 5.2?**

P9, L7 : WP3 and WP4 then focus on the car system, with the tasks listed earlier clearly identified.

2/ **P3, L11-13:** If the consortium considers there is insufficient time to carry on with two types of loudspeaker design then they should focus on the one they believe will provide results within the project cost and timescale. **Christian could you reply?**

3/ **P4, L1-2:** The results from the trials using the microphone array also need to be written up as a deliverable. Ideally this would be a public deliverable.

5/ **P10, L19-23:** For the car system, if the results are encouraging then the partners may consider further development. However, it is recognised that car manufacturers would require an end product, and this would need to be produced by a tier-2 supplier. The consortium would therefore need to identify potential companies to produce the system and work with them on the development. If the complete system is not viable, but one particular aspect is, then this should be exploited by the relevant partner. **CRF could you reply?**

6/ On the review content (p12, L18 – p13, L21):

- about microphone array : Sound was approximately 1m from the microphone. **Patrick I don't understand, could you comment the reviewer remark?**
- They have still to decide which of the algorithms to use. **Clemens, could we answer that the algorithm chain is now described into the D4.2 ?**
- Demo of pre-compensation in 4 different car scenarios was given, an improvement in all cases was noted. Now they are looking at using learning algorithms to take into account in car noise.
- Car glass is quite efficient compared to a standard microphone. Now that they have a car they intend to try all car glass panels. At the moment everything is written in Matlab and is really only a proof of concept. **Christian will reply** Trials are yet to be done on **the windows all around the car** to ascertain how the signals differ **Christian is it ok?** **At the review the test results were explained well and good conclusions were presented on the initial lab trials.**
- The data from these trials was available in September 2013. However, it is not being used by EPFL to look at the performance of their array. **Patrick could you reply?** The car will be tested with the microphones in June/ July putting this work more than 6 months behind schedule **WP4 leader could you reply ?**

Commentaire [CG6]: This remark corresponds to a specific experiment during the development of the microphone array. There is no direct link with the previous mentioned points.

Commentaire [S7]: P13 progress in technology innovation : part of deliverables

Commentaire [CG8]: This was not part of the task we had to do.

7/ Deliverables (p14):

- **D.3.1** : glass microphone : explanation as to why this particular size or materials were chosen. **Christian could you reply ?**
P16, L1-2 Also some technical reports (for instance D3.1 and D3.3) deserve more detail and explanation. A well-written executive summary may contribute to the understanding of complex issues at stake. **Christian could reply or update your summary or table of content ?**
- D4.2 : D4.2 has been delayed by 5 months, but no reason has been provided as to why. **Clemens and Elena could you reply ?**
- D4.3 They have used commercial microphones and sound card, with its associated software, which is good as it reduces the project risk. The assembly process is described in sufficient detail.

8/ **p15, L6-10: Integration and Exploitation** : The in-car system is on the other hand only at the early concept stage yet. It is still considered a major challenge to the consortium to get to the stage where a full system will be realised and tested before the end of the project, even with a 6-month extension. It is more likely that aspects of the systems, such as the databases of sounds will be available at the end of the project, and could be made available for use by other people wishing to look at this application.

9/ **P17, L30-32**: The representative of CRF (Fiat Research) stated that in view of industrialisation a comparison of different solutions will be needed before a feasibility study even can start. Cost was discussed and it is likely that the solution would be cost prohibitive.

Commentaire [S9]: Regarder la présentation de Giorgio

9/ **P16, L21-23**: The consortium has not got a technical risk plan other than a chapter in the DoW. They have however got a risk mitigation consensus regarding the loudspeaker for the car. They are working with a conventional loudspeaker if the glass device does not work. **WP3-WP4 leaders, could you provide a plan of risk for car application?**

WP6: l'City Management

1/ P15, L27-32 : Overall the project management is of insufficient quality, both in terms of monitoring technical progress and risk and overall deliverables deadlines. There is in fact no other document yet on the general, **financial and risk management of the project than the DOW**, although D6.3 Communication Tools deals with work processes from the communicational point of view.

P15, L37: no Milestones were planned and indicated.

P15, L39-40: More up-to-date reports on financial and efforts progress should be made available.

p16, L21: The consortium has not got a technical risk plan other than a chapter in the DoW.

2/ P15, L42-45 : template for the deliverables : number and title of the deliverable and the expected and actual deliverable date. It is suggested that this is revised for all later deliverables.

P16, L1-2 : A well-written executive summary may contribute to the understanding of complex issues at stake. (L4) in pdf format. all edits are checked and accepted before release. Some of the deliverables provided to date include the edits and missing information is highlighted. (L10) A better and more up-to-date reporting is again highly recommended.

P10, L4-6 Overall

- the management of project coherence,
- focussed research,
- communication and collaboration needs improving.

The management of the project in the second stage needs to focus on delivering the work plan, ensuring that the partners' activities are integrated and the deliverables are provided in a timely manner.

2/ P3, L38-40 The revised work plan as presented at the meeting is not adequately addressing the shortcoming. Instead the consortium needs to agree on a more focused work plan for the second period with the two applications separated.

P3, L7-8: Consortium Re-structures the work plan, with the car application as one work package and the open space application as a second work package. P9, L5: WPs 2, 3 and 4 should be restructured.

P3, L42-44: Since there is considerable technical development still required in the car application, a clear work plan must be produced. The topics listed above must be discrete tasks, with clearly defined deliverables and milestones.

3/ P3, L44: There needs to be a risk plan associated with this

P16, L34-35: It is requested that a risk plan is prepared and followed for the second part of the project.

4/ P3, L32-34: Technical developments have been running almost in isolation, with very little partner integration

P3, L44 and regular meetings to ensure that issues are noted and addressed, as per risk plan.

P9, L14-15 Regular meetings, either face to face or by video conferencing need to take place and any slip in the work plan should be addressed.

(p16, L13-14) : frequencies of the meetings are insufficient for this consortium, with the technical work required. This should be increased in the second period.

5/ p3, L15-17: 6 month extension will be required to ensure that both systems are adequately tested by end users and the results collated and reported upon.

P17, L6-7: The plan is now significantly off the actual work being undertaken. It is proposed that the work plan is restructured for the second period and probably a 6-month extension provided.

6/ P4, L16-18: A 6-month delay for the deliverables submission has been accepted and at that point the actual costs should relate to the planned costs for the first 18 months. L23-24 The consortium has obviously paid little attention to the deliverables required for the first period, despite having spent approximately 80% of their planned budget to date. (L26-28) It is strongly recommended that the consortium rectify these shortcomings of the first period, with an effort put into ensuring all the work done is documented and related to the person months of effort, as specified in the work plan.

7/ P9, L27-28: **(Need of)** well written reports

8/ p:11, L26-29 assesment after the 24-month period to ensure that all the deliverables required for the first period have been satisfactorily completed and the work plan for the second part of the

project is clear, well managed and has a suitable risk plan associated with it. The costs spent would also need to be reviewed to ensure that they are in line with the work completed.

8/ On the review content (p11, L40-43): The **management presentation** gave figures for man months of effort, but not costs. It is important that the costs for the first 18 months are provided by the end of February. If these are more than 80% of the expected costs then, then should be thoroughly reviewed as the work completed is considered to be less than 80% compared to the original plan of work

P16, L47-17, L3 : Many of the deliverables have slipped by up to 6 months up to the mid term review. Yet, when looking at the person months of effort most of the partners have spent close to their limit. This needs to be investigated. It is anticipated that the mid term costs should be spent when all of the deliverables listed with a revised date in red are submitted. Closer control needs to be put on this for the second part of the project.

9/ p14, L39-40: At the moment the two applications are at a significantly different point in terms of technology readiness levels.

10/p 16, L18-19: Also, many of the delays have been blamed on the end user involvement, but many of the technical work has also hit significant delays e.g Task 2.2. ***Other technical delay might be explained (by Sylvie).***

P16, L25-26: They have stated that the delays were not in the technical work. However, in WP2, 3 and 4 there are many deliverables that are delayed by 6 months. And many later deliverables have been cancelled.

11/ P16, L30-35: D6.3 (Communication Tools) describes the structure of the work and reporting, and thus the process that the consortium should be following from the communicational view. However, there is little evidence of many of the procedures being adopted.

In this report there is no mention of risk, which is of concern as the project clearly has a major risk as a result of the late signing of the Italian partners and the extremely high technical challenges inherent in the programme.

P16, L37-38: The project uses Dokuwiki on their website for restricted communication, but it wasn't evident how often the partners actually use it. (L41-43) there is little evidence of well-balanced communication, collaboration and decision making between the partners. This needs to be improved in the second period if they are going to meet their goals.

12/ P17 L13-15 IPR : The set of potential products and services that may come out of the project, and the specific partnership of the project justifies strong continued attention for IPR issues.

WP5 : l'City Dissemination, exploitation and labellisation

P17, L45-46: All partners have put insufficient efforts on dissemination activities

P17 L20-21: The main benefit is in the audio processor, where new algorithms are being applied and processed.

P17, L23-26 - The SME partner ActiveAudio proposes to offer the algorithm improvements free of charge as an included extra in its range of products, especially a processor named NUT in

which the algorithms can be downloaded. Active Audio thinks it will be difficult to charge for public systems. This means that the community will benefit but not individual partners. There was no mentioning of other considerations on this issue.

P17, L30-32: The representative of CRF (Fiat Research) stated that in view of industrialisation a comparison of different solutions will be needed before a feasibility study even can start. Cost was discussed and it is likely that the solution would be cost prohibitive.

1/ p17, L45-46 : The only events attended have been organised by the AAL, which only partially attract their potential market stakeholders. *Sylvie will list here the dissemination activities out of AAL activities*

P18, L5-6: There is also a 3 page (not dated) Poster Spin, a poster made for presentation in Stockholm and a Project Fact Sheet.

P3, L19-23 : Dissemination activities can also be intensified and separated out as the open space application is close to market whereas the car application is still at proof of concept stage. For the open space application the consortium is encouraged to focus dissemination activities on public bodies and/or private stakeholders who are responsible to public announcements in open spaces. For the car application they should focus on disseminating knowledge of their sound database.

P9, L28-29 Excellent communication with potential customers and benefiting individuals on real and practical short-term results.

P4, L4-11 An adequate dissemination plan should be prepared and the partners should focus on the secondary end users who will be responsible for implementation.

- The end user study should be written up and made public. Ideally this would be submitted to a peer reviewed journal.
- The sound databases should be made public if possible and under well considered conditions,
P9 : 'Speech Intelligibility' process is considered as a standard for testing audio systems, particularly those in open spaces where the current methods are not considered adequate.
- as should the final algorithm for frequency enhancement and learning as should the final algorithm for frequency enhancement and learning. (P15, L14)The open source code for the open spaces would be of benefit to the AAL community if it were taken up.

P18, L2-3: However; with a good identification of relevant events attended by the targeted stakeholders and adequate efforts from all project partners, this insufficiency in dissemination activities can be inverted.

3/ P9, L22-24 Business plan development and dissemination activities should rise on the daily agenda of the project partners, focussed on secondary end-users and become an integrated part of the job, to prevent dead end street effects.

4/ P10, L1-2 To trigger attention and feedback of primary users associations could help achieve the right focus.

P9 : 'Speech Intelligibility' process is considered as a standard for testing audio systems,

particularly those in open spaces where the current methods are not considered adequate.

5/ p10, L25-27 : 'Speech Intelligibility' process is considered as a standard for testing audio systems, particularly those in open spaces where the current methods are not considered adequate.

8/ p18 :The Project Brochure is very brief and forgets to mention AAL as one of the funding partners ***The mistake is to use the AAL brochure of our project as brochure of our projet. We have to modify it in order to have our own brochure.***

Deliverables: P17, L36-38 Unfortunately there has been no updating of this website since then, despite it being clearly stated in D5.5 exactly what would be done in April 2013. no reference to the AAL funding. no mention of any of their dissemination activities. needs to be improved in the next period.

New structure of work plan

(P9, L5-6): WP2 should be for the indoor system and so any of the loudspeaker work required from WP3 for this application should be moved to WP2.

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