

PEVT Meeting in Dublin, Feb 13th 2020

This meeting took place in order to progress towards defining an evaluation process and criteria for the evaluation of BroadWay solutions that will enable operational mobility for responders across Europe. This meeting builds upon initial concepts that were discussed during the first Practitioner Evaluation team meeting held in Brussels in January 2019, and further grouped in a webex held on May 7th 2019.

All Members of the PEVT were invited. All in all, 22 practitioners took part of the workshop*.

The outcome of this meeting is intended to inform the BroadWay group of Procurers (Technical Validation Committee - TVC) of the progress of PEVT, and to inform the direction of the prototype phase of the BroadWay project.

The meeting followed this Agenda:

Agenda

9:30	Registration and Administration	
10:00	Opening & Introduction of Participants	U. Kippnich
10:15	Welcome of our project officer	M. Brandt
10:30	Update Broadway	D. Lund
10:45	Coffee	
11:00	International work in the field: IRONORE 2019	U. Kippnich
11:15	Definition of the goals/solutions <ul style="list-style-type: none"> a short introduction to our methods using Trial Guidance Methodology (TGM) 	M. Selzer
12:00	Scenarios	U. Kippnich
12:30	Lunch	
13:30	Short wrapup of the outcome of the first meeting	M. Selzer
13:45	Discussion of capability needs regarding pan-European operational mobility and developing key criteria (KPI- key performance indicator) for evaluation of scenarios	All
15:15	Coffee	
15:30	Conclusion and next steps	U. Kippnich, M. Selzer
16:15	End	U. Kippnich

In addition, Graham Tait from Fire and Rescue, New South Wales, Australia gave a short overview of the Australian bush fires and their control.

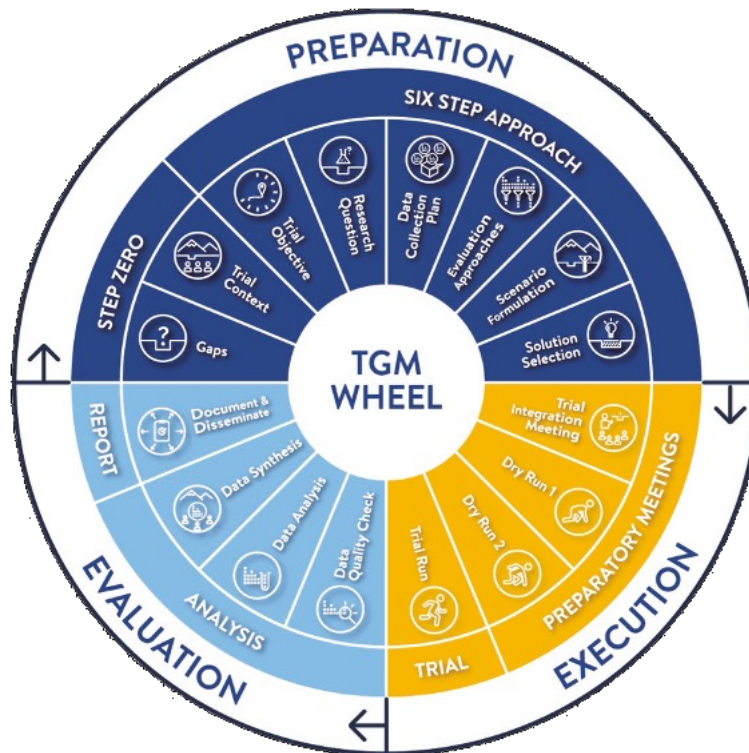
Trial Guidance Methodology (TGM)

The Broadway Project decided to follow the Trial Guidance Methodology developed in the Driver+ project (www.driver-project.eu)



This methodology aims to design trials in a methodological way to find out if and how innovative solutions can help resolving your needs.

The method is well summarised in the TGM Wheel. A full guidance can be found <https://tgm.ercis.org>:



In Step Zero, the gaps are defined. Our main gap is the lack of a pan European broadband system. Step Zero is followed by the six step approach. The six step approach was started in Brussels in January 2019 by identifying the trial objectives. These were discussed and grouped in a webex meeting in May 2019.

In Dublin 2020, we worked in initial ideas on Evaluation and finding research questions.

- What shall be evaluated in trials of BroadWay solutions?
- What criteria do we need that the solution fits its purpose?

All the results of the evaluation will be passed to the BroadWay Technical Validation Committee (TVC) in order to help them to take decisions on the proposed solutions through the pre-commercial procurement process.

Three Scenarios were formulated, building upon the original 8 defined:

- A fire on a ferry during the Olympic summer games in France in 2024
- A forest fire
- Following a drug transport from Spain to Germany.

Further work will define details of these scenarios to help inform the trial evaluation.

Workshop in Dublin

The trial objectives were defined in Brussels 2019 and were grouped during a Webex meeting with all practitioners. This was made according to the TGM. The grouping we made was criteria regarding

- People
- Things
- Environment

Then, each criterion was given a continuous number in order for all steps to be traced later.

For discussion during the workshop, the practitioners were split into three groups. Each group worked on a defined number of criteria. They crosschecked them to each other and tried to define additional research questions and Key Performance Indicators (KPIs). All this will be used to give input to the technical developer team and later to evaluate the Broadway trials.

Please find the results of the discussion attached in the list at the end of this document. In summary, the following three groups of criteria and questions were of special interest:

1. Regarding design and specifications, they need a device that is easy to use (setup, groups...), easy to explain and that works under all conditions (heavy weather, humidity, smoke, heat...). The device must be usable with firefighters' gloves. The battery should last at least 12 hours in heavy duty and shall be easy to change.
2. Technical requirements are excellent coverage, seamless roaming, nearly no interruption from one system to another and capability. The limit of the size of the system and the limit of number of users should be clearly specified. Dispatchers shall have the possibility to push and pull information and to set up groups.
3. The last group of criteria deals with the subjective meaning of the users. This will be evaluated via questionnaire during the trials. Practitioners should be involved in the developing process of the device, too, to provide direct feedback to the TVC.



Generally speaking, the practitioners are looking for improved operational situational awareness capabilities.

Another important question that arose was data security:

- Where will data be stored and how will it be secured?

The aim is to have contact between PEVT and TVC during the whole process of development. It is important to give and to get feedback, for that the system does not go into a wrong direction. There are several definitions to be made:

- What exactly is “the user”?
- Which different roles do we have?

The PEVT will evaluate the Pilot and report directly to the TVC to contribute to their assessment of the Pilot, and its constituent components. This shall also include the provision of a guidance methodology to help support the PEVT to define activities, referred to as trials where use of the pilot system is made using realistic use cases and scenarios.

The research questions with regard to the request for tender documents

The BroadWay Request for tender has already specified a certain scope for practitioner evaluation. This document predates and significant meeting of the Practitioner Evaluation Team

Public Safety Operations will be enhanced by the availability of pan-European mobile broadband. Operational Mobility refers to the fact that a public safety responder practitioner will be able to carry out their operations wherever they physically are, and with anyone in their communication group wherever they are. All communications shall not be restricted by geopolitical boundaries.

The request tender document states some technically oriented objectives that can be translated to a practitioner viewpoint. The outcome of the workshop is used to make a link between the RFT and the views of practitioners expressed during the Dublin meeting as listed in the table at the end of this document.

The following lists three subobjectives in the BroadWay request for tender giving a practitioner viewpoint:



PREv2 Practitioner Evaluation of MC services

RFT Text:

MCPTT, MC video, MC data - for group, emergency and broadcast communication.

This can be translated into the practitioner viewpoint:

- *exchange critical information about the disaster using rich media in real time between first responders on the field.*
- *The ability to access, exchange, and manage critical information securely within and across public safety agencies and jurisdictions*
- *real-time access, collection, and distribution of information concerning threats, hazards, and conditions in a manner tailored to public safety operations*

Research Questions:

- Can I exchange critical information (audio, video, data) with other participants of my group when using pan-European network? Yes/No
- Do I have real time access to critical information when using pan-European network? Yes/No
- Do I have always the connection through pan-European network (no matter who are the users and how many users are on the network) Yes/No
- Do I have seamless connection when crossing the border? Yes/No
- Can I exchange critical information (audio, video, data) with participants of other country when using pan-European network? Yes/No
- Can I use same app on different devices? Yes/No
- Can I easily get necessary talkgroups on my device – either I am on my network or I am on pan-European network? Yes/No

PREv3 Practitioner Evaluation of MC Applications, making use of MC services

RFT Text:

Geospatial applications: Automatic Vehicle & Personal Location (AVPL) for outdoor geospatial positioning for all PPDR assets.

This can be translated into the practitioner viewpoint:



- *Information from the field is continually monitored and exchanged also in real time with a Control room.*
- *Location services easy to use*

Research Questions:

- Do I have connection with my Control room all the time? Yes/No
- Do I have connection to all participants of my group when using pan-European network? Yes/No
- Do I have information what is the location of other participants of my group? Yes/No

PREv4 Practitioner Evaluation of Information services enhanced by Operationally mobile MC Applications and Services

RFT Text:

MC data services for database query across different countries shall be supported for BroadWay scenarios.

This can be translated into the practitioner viewpoint:

- *Using of mobile information services without disruption and exchange critical information with local public safety services.*
- *enabling secure, reliable, and easy-to-use access to and sharing of critical information across a variety of sources.*

Research Questions:

- Is connection to the database established no matter where the user is (on own network or on pan-European network)? Yes/No
- Are there additional signing necessary to access the database when on pan-European network? Yes/No
- How can I be sure that connection is secure?



Attendees

Public Protection and Disaster Relief (PPDR)	
Police	13
Fire	6
Medical response	1
Civil protection	2

Countries	
Australia	1
Belgium	1
Finland	2
France	2
Germany	2
Greece	1
Ireland	6
Netherlands	2
Northern Ireland	1
Norway	2
Slovenia	1
United Kingdom	1

Attendees: Merle Medick, Finian Joyce, Jörg Kosanke, Etienne Lezaak, Eugene Lynch, Jeff McNamara, Geir Myhre, Igor Bogataj, Victor Erikslund, Heikki Rippa, Don Brennan, Kevin Cronin, Henning Fjellet, Jos Haemers, Paddy Mulvey, Bertrand Charrel, Vasileios Kazoukas, Jean-Philippe Moiron, James Hallahan, Keith Smith, Graham Tait, Christiaan Velthausz.

The following pages provide the outcomes of the meeting in Dublin, grouped in the context of

- People
- Things
- Environment/Circumstances



	People	Linked to	Research question	KPI
3	Common standards and training (m) (training before trials is important, Training and education)	1,6,7,11	Do we have a standard user interface? How shall the user interface of the device be standardised?	User interfaces on the mobile device needs to be standardised and the same for each activity, regardless of the supplier of the device or application. Practitioner subjective opinion to be assessed.
6	Usefulness, ease to setup (user experience) (linked to usefulness, Setting up the talk groups easily done)	1,3,7,11	Can the user use the system with none or minimal training?	Can a user, use the BroadWay system without specialist training? How much training is needed? Practitioner subjective opinion to be assessed.
7	Functionality, ease to use (m) Setting up the talk groups easily done	1,3,6,11	Can talk groups be set up easily?	Is it simple enough? Practitioner subjective opinion to be assessed.
11	High usability and scalability	3, 7,6,1	How can the system grow? (Scalability, capacity, No of users)	Can the system be extended while keeping original system? Limit of size of system/No of users

				Can the prototype/pilot give a reasonable expectation of scaling? Practitioner subjective opinion to be assessed.
1	Operational skills (personal matter)	3,6,7, 11	How many hours of training are required to become competent as an End user of the device ?	Is Time to familiarise on device/application less than 2 hours
23	E2E encryption	29, 18,2,9		Must guarantee security of data on device/on CCRoom
18	DMO (own country, other countries, all users, multipurpose) (will not be part of Broadway)	29, 23,2, 9		
29	Permission to access the local network on each country (political)	18, 23, 9,2	Political! Who will care for that? Where is the data stored and how will it be secured?	Practitioner subjective opinion to be assessed.
9	Security against any infiltrations (trust)	2, 23, 9,18	<u>How do practitioners determine their trust in the system?</u> <u>What factors are important?</u>	Are practitioners satisfied with the Security of the system ?

				Practitioner subjective opinion to be assessed.
2	Trust on the system (securely evaluated, high security level) (m)	9,23, 23 29 18	(personal matter)	
4	Feedback from end-users (during the trial, training!)			
5	Questionnaire for different user groups (different PPDR disciplines)			Questionnaire needs to be customized for different user groups – very many required

	<u>Things</u>	<u>Linked to</u>	<u>Research question</u>	<u>KPI</u>
8	Operational in every working environment (rural, urban, mountains, seaside, sea ,) for all PPDRs		Can the device work in all weather conditions, working situations, environments? How is Battery life impact? How can autonomy be guaranteed?	Autonomy : Battery should be active in all circumstances for 12 hours in high duty circles. Possibility to change Battery easily (hot swap). Device needs to last for 7 years Practitioner subjective opinion to be assessed.
10	Easy administration. (talk groups, new organizations) (-> easy setup) User friendly			One training for different devices For dispatchers: to push and pull information and to set up groups (Video, voice, Data, Multimedia) Ease of setup of workstations in managing network and information from different countries Using one workstation, Trainer explains to classroom with device 2,3 etc Practitioner subjective opinion to be assessed.

12	Achieve effective communication Speed of response (linked to quality of net)		Capacity - Genuine multicast designed using one talkgroup e.g. EMBMS evolved multimedia broadcast/Multicast service	Limit of users for one multimedia group (e.g. 1000) Practitioner subjective opinion to be assessed.
13	Problem with fallback mode of operation <u>(will be not covered by Broadway)</u>		Does it work without infrastructure? Proximity service?	Max distance between 2 devices Mesh capability
14	Use of different applications on different devices (different PPDRs have different devices and systems)			Access to various apps on different devices
17	Artificial intelligence for language translation -> other project Bridging capabilities for translation – voice to text message			
19	PTT capability	20, 21	Does PTT interrupt data transfer ?	Must not stop data when PTT is activated Practitioner subjective opinion to be

				assessed.
20	Talk group setup time	21, 19		Should have pre-arranged groups Practitioner subjective opinion to be assessed.
21	Fleetmaps ready (pre-arranged groups) Later! Important for trials	20, 19	Can I easy fleetmap ? Can I trust that I know enough about the fleet map on the ground ?	Creation/understanding of new groups must be easy Practitioner subjective opinion to be assessed.
22	Standardized accessories			Must be usable with gloves (firefighters! Rescue services!) Practitioner subjective opinion to be assessed.
15	Deployment with minimum efforts Setup vs deployment! Both is important	24	Is their any time required to set up the system for international operations?	Must be transparent for the end user Back haul must be easy Practitioner subjective opinion to be assessed.
24	Situational awareness capabilities (application) – channeled back to the center	15	Is the situational awareness of the international context improved ?	Practitioner subjective opinion to be assessed.

25	<p>Mission critical capabilities – good GPS location and tracking capabilities</p> <p>+ mission critical services!</p>		<p>Is my service always available, regardless of location or environment ?</p> <p>Can I understand the situation of my colleagues ?</p>	<p>Must know all the time where are my teams that are engaged in a foreign country</p> <p>Must see all units of all countries involved</p> <p>Practitioner subjective opinion to be assessed.</p>
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	<u>Environment/circumstances</u>	<u>Linked to</u>	<u>Research question</u>	<u>KPI</u>
16	Functional 24/7	26,27,28	Can I trust that service will be available 24/7	Practitioner subjective opinion to be assessed.
26	Quality of service Connectivity and continuity of service (fluidity – uninterrupted) – roaming! (WiFi – LTE and other networks, systems)	16, 27, 28	How long is interruption to transition from one system to another? Do I need to notice service interruption? If there is intrruption, am I well informed?	Is it less than 5 seconds? Practitioner subjective opinion to be assessed.
27	Robustness of the system	26, 28, 16	Am I satisfied with coverage? How is this communciated to me	24/7 (geographical) coverage, 100% transparent to the user Practitioner subjective opinion to be assessed.
28	Cross-border information, dynamic situations and multiple situation rooms in different countries	26, 27, 16 3,21,24		

30	Priority in network (needs to always work)	33, 35, 38, 16,25,26,29	How can we guarantee secure connectivity across networks/talkgroups?	Coverage, Capability, Connectivity, seamless roaming
33	Security of the information (network information, where are the radios etc....) -> E2E	30, 35, 38, 9,2,33,28		
35	Crisis country is lead country (political)	30, 33, 38	Does the system support Governance appropriate to the case study?	Practitioner subjective opinion to be assessed.
38	Different Security levels based on European standards on different devices	30,33, 35	Does security follow international standards ?	Practitioner subjective opinion to be assessed.
31	Preemption			Priority across networks must be secured Connection must be instant and seamless
32	Reliability (-> trust)			
34	Everybody can use his "own" device		Can I bring my own device from my daily work ?	
36	Pan-European evaluation (large sample) -> trials			The loading capacity needs to be evaluated – small/medium/large?
37	Based on European standards (m)			
39	Monitoring of voice and data		Is voice and data recorded and	

	traffic		minorities according to international standards? Is there a standard for that?	
40	Capture network data – correlation between technical validation and practitioners (TVC – PEVT)		Who has the ownership across the boundaries? Data? Resources? Do I understand who is custodian/ownership of the data ?	
41	Needs to connect to external radio systems (narrow band?) not in the scope of BW		Can I interact with my narrow band systems ?	
42	Not only commercial operators (any broadband network can be used)			
43	At least one Mission Critical operator in every country		Am I satisfied that my national mission critical operator has full control?	Practitioner subjective opinion to be assessed.