How to identify unmet needs in health?
these are our methods

The approaches used by GET to identify unmet needs included:

1. **In depth interviews**. One to one exchanges with stakeholders knowledgeable in the market. For instance CIOs, medical directors, clinical opinion leaders or patient association representatives. The advantage is that you obtain very deep knowledge, and potentially a partner or at least an advisor. You will need to confirm the insights with a wider audience to validate them.

2. **Focus groups**. A focus group is a form of qualitative research in which a group of people are asked about their perceptions, opinions and beliefs. It identifies and prioritizes unmet needs common to several people at the same time, but has to be properly conducted to avoid contamination of opinions and requires a logistical effort to physically bring together the group.

3. **Unmet need corner**. This approach aims to take advantage of relevant (eHealth) events to capture information, while minimizing the logistical overhead of contacting and visiting time-pressed stakeholders. Attendees of the event are asked to propose needs, using an innovative visual format to attract attention. It requires coordination with the event organizer and pro-

activity to motivate participation of the attendees.

4. **On-line surveys.** Web tools can be a relatively economical way to collect feedback from a wide audience. Both structured and unstructured information can be easily managed and analysed by the web tools. However, information has to be very clear to get valuable answers.

5. **Third party challenges**. Related to Open Innovation, a paradigm that assumes that firms can and should use external ideas as well as internal ones. In this case the need is already identified by a sponsor organization seeking solutions. Interested solution providers submit proposals and a selection process takes place, so one of them is awarded. Apart from cash, visibility and recognition, participants winning the challenge may also get a partner to support making the idea a reality. Competition can to be tough in these challenges.

6. **Informal exchanges.** Unmet needs can also be identified through informal exchanges e.g. conversations in the workplace, reading the news etc.

You can access the lessons learnt from these methods by clicking here

2

Methods to identify
unmet needs in eHealth

In depth interviews

In the provision of the Fill the Gap service , one to one interviews with experts were organized to identify unmet needs. Chief Information Officers (CIOs) of local private and public Healthcare organizations were initially selected. Though the interviews can in principle be done on-line, only face to face interactions were arranged, visiting them in their place of work. The conversations were not recorded to avoid off-putting the speaker, but written notes were taken.

The process followed in GET was:

1. Each stakeholder is contacted via email explaining the purpose of the visit, expected duration and proposed time slot. Follow up calls were made to those that did not respond in a reasonable time.

2. A script is prepared to serve as the guide for the conversation.

3. The interview takes place using this script.

   - **Explanation of the objectives** of the meeting in the context of identifying unmet needs.

   - **Background of the organization and role.** Ask general questions regarding the organization they work for and their role within it. These questions also serve as an ice-breaker.

   - **Organization strategy.** Identify the priorities of the Healthcare organization in the near and mid-term future, including the ones of the IT department.

   - **Unmet need identification.** Directly ask for unmet needs and continue exploring until you have a full understanding of the origin of the need, not just its consequences.

   - **Recap and farewell.** Highlight of the most relevant findings and follow up actions if any. Thank them for their contribution. You could ask them to recommend contacts to set up other interviews.

4. The collected information is assessed shortly after the visit. Unmet needs are explicitly written down.

5. If required, a follow up call can be made to confirm the assessment and clarify any questions.

Some hints and recommendations

Depending on your interest, you could target other types of stakeholders apart from managers, like healthcare professionals or patient association representatives, and adjust the script accordingly.

Methods to identify
unmet needs in eHealth

Let them talk first about their priorities. If your would like to validate an idea, introduce it after some initial needs have been verbalized from their side. Observe their reaction, including body language, and write down their answer.

Benchmark your proposal against the priorities they initially referred to, and assess if they are in the same level of relevance, so you can evaluate if you are addressing a "must have" or a "nice to have". People tend to work better with comparison rather than with verbalization, so encourage them to come up with new areas of need. Read more lessons learnt in [this document](#).

The advantage of "In depth interviews" is that you can obtain valuable insight in one interaction with relatively easy logistics (a meeting in their place of work). As a bonus, the stakeholder could even become a partner of your project, or at least an advisor in the development of your solution.

However, you will need to confirm the insight with a wider group of stakeholders and experts to validate the input, since the information you receive can be very specific to personal interests of your contacts and/or the circumstances of the organization they work for.

Methods to identify
unmet needs in eHealth

Focus groups

A focus group is a form of qualitative research in which a group of people are asked about their perceptions, opinions and beliefs. Questions are asked in an interactive group setting where participants are free to talk with other group members. They have been widely used in marketing, to acquire feedback regarding new products usually at the early stages of product concept development.

Within the GET context, we organized focus groups bringing together patients and stakeholders, with around 10-14 participants including a moderator and a note taker.

A methodology based on the expertise of Sandra Bates, member of the GET project Advisory Board, was followed. More information in Sandra's book "*The social innovation imperative*", and the work of Tony Ulwick and its Outcome Driven Innovation based on the jobs to be done theory. There are many more references in the literature and we suggest that after reading your best picks, you choose which approach best suits your needs.

As a summary, this is how the GET focus groups were executed in what is a simplified version of the above methodologies:

1. Participants are identified and contacted. For this example, patients were invited to participate.

2. Logistics are arranged. Look for a suitable room for the expected amount of people, and make sure you have the needed material (boards, pens, post-its).

3. A detailed script is prepared to serve as a guide for the focus group.

4. The event takes place using the script to structure it.

   - **Welcome and introduction.** The moderator thanks the attendees for their time and briefly introduces himself and the note-taker. Participants are asked to introduce themselves.

   - **Explanation of the objectives and structure**. The script was structured in ´themes´ about how information and knowledge is managed by patients in different situations. In addition to questions, some scenarios were also used to make the exercise easier to understand.

   - **Interaction management.** For each theme, we asked open ended questions and proposed scenarios. Every time a potential unmet need is identified, the participant is asked to write it down in a post-it and hand it to the moderator. The moderator sticks them in the board.
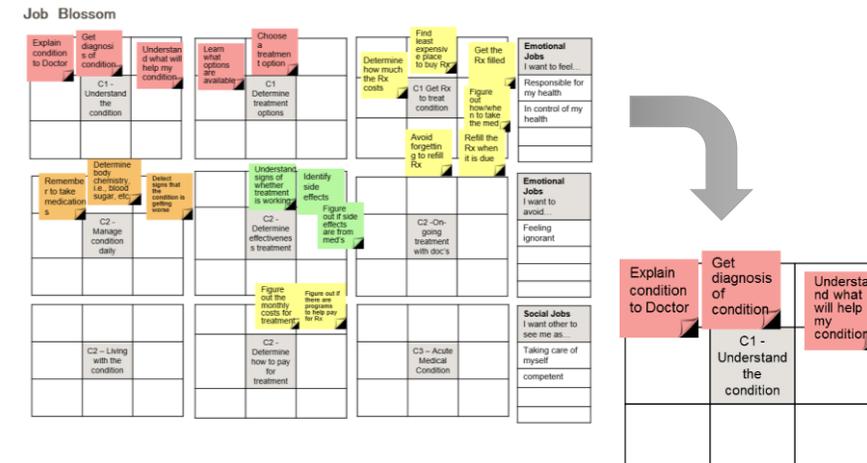
Methods to identify
unmet needs in eHealth

- **Clustering of needs.** When all the themes are done, the different ideas in the post-its are grouped together in what we call "categories". Some proposals may be too granular and it helps conceptually to create umbrella concepts that cluster them. The categories are given a name and moved to a new board called the "need blossom" in Sandra Bates' methodology. The rest of the post-it are then moved from the first board to the need blossom, and placed around the category they best fit in (see picture below).

- **Need blossom discussion.** The need blossom helps to organize the participants' inputs around high level key concepts represented by the categories. Participants help to better characterize the categories by adding new insight about them.

- **Prioritization of outcomes**. Not all needs are equally relevant. In order to focus your efforts, there should be a quantification of the insights, at least at the category level. There are two key criteria: a) how important is each item, and b) how well it is currently satisfied. Items are then listed and each participant is asked to mark (1-lowest/ 5-highest) them under these criteria: importance and current satisfaction. Data is collected and aggregated. Items with an average mark of 4-5 in importance and 1-2 in current satisfaction are the main areas of opportunity. The moderator highlights them and

starts a conversation about them to get further insight, especially from those participants with little contribution during the meeting.

- **Thank you and farewell**. Thank again the attendees, and let them know about the intended use of the collected information.

5. **Hospitality.** Light refreshments are available for attendees as an acknowledgment of their contribution and time. It can also be a good opportunity to continue to gather relevant information. Some people feel more open to raise topics in a more private setting, like the casual conversations that take place during this time. Be a proactive listener, and watch for new opportunities during these exchanges.

6. **Assessment**. The collected information is assessed shortly after the meeting. The most relevant unmet needs are described in detail.

Some hints and recommendations:

- The more homogenous the group (eg. patients with the same pathology), the more agreement you will get among the participants. If you address an area that is very horizontal (eg. Medication Adherence) and invite participants with different diseases, you will get very different responses because the therapies are different. As a result, it would not be easy to get consensus and/or clear priorities. On the other hand, if it is too homogenous the market can be too small and if the profiles are too similar, you are not collecting the variety of views. A trade-off is desirable.

- The moderator has a key role. S/he should let everybody express their opinion (though some will always talk more than others), and should prevent the monopolization of the conversation by a few participants. Also, s/he should avoid biasing the conversation with their own views.

- Go to the root cause. Keep on asking till is understood the ultimate cause or job to be done that is critical to the participants.

- If you have doubts about approach or execution, seek external advice from people with experience and/or read current literature.

- As always, preparation is critical. Compose a good script and rehearse until you feel confident with it.

- Remember that till the last person leaves, you can collect valuable inputs even in casual conversations.

- Use your common sense and avoid any confrontation. Make it fluid and ideally fun. It should be an enjoyable experience for all involved.

Focus groups can produce new insights induced by the group dynamics, as listening to others stimulates memories and ideas. However, the setting can also influence participants and obtain answers the participants feel the moderator wants to hear (especially if the script is subtlety designed to validate a pre-conceptualized theory). If the group includes patients and doctors, the lack of anonymity can limit the open exchange. As with in depth interviews, several editions of the focus group with different actors should give you more confidence in the answers if they converge.

Methods to identify
unmet needs in eHealth

Unmet need corner

The GET consortium tested a new novel approach to collect unmet needs in a cost-effective way. The idea is to leverage the presence of stakeholders in eHealth events, and ask them about their unmet needs on the spot.

To attract attention and engage the audience of the event, a visually attractive space (the *unmet need corner*) was designed. The setting makes use of an array of envelopes arranged in a big matrix. Each envelope contains a card that participants use to write down their contribution. Visitors are asked to provide an unmet need per card, together with affiliation and contact information, and the card is then placed in an envelope. To get inspiration, visitors can read needs provided by previous contributions. Questions about the objectives of the initiative and further explanations are answered by the personnel staffing the corner.

To maximize visual impact, the appearance of the corner should be as attractive as possible, and you may choose to make use of a table with chairs to facilitate writing. The corner should be located in a *hot spot* that gets a lot of visitor traffic. Those *hot spots* can be at the catering area, the exhibition space or close to the entrance.

You can increase the level of interest by directing visitors to the corner, including it as a feature in the conference programme and announcing it in a plenary.

The outcomes will vary depending on how successful you are engaging the visitors, and how well they can recall unmet needs. Prepare a concise yet informative pitch about what you are doing and why. A selection of good examples also helps.

You can choose to tailor this approach to meet your specific context and resources.

8

Methods to identify
unmet needs in eHealth

On-line surveys

There is a plethora of web tools that can cost-effectively collect information over a wide on-line audience (eg. Google Forms or Survey Monkey). The tools can gather both closed and open answers from hundreds of people. All that is required is to create a web survey and share it with your contacts.

Critical factors to the success of the survey are the size of your network, the trust you generate, and the motivation you provoke to fill the data. If your network is small, you could partner with other organizations (eg. patient associations) to leverage theirs. Otherwise you can target social media or web platforms with traffic from your target group.

For trust, make sure that privacy and security concerns are properly addressed. Be transparent about your intended use of the data and the value the responders may get out of it.

Responders need to understand the question and its context to provide proper answers. We recommend you make concise and easy to understand questions, and add explanatory context below them (something that is possible with most tools). The use of examples can be tricky because you may alienate or narrow down the scope with them, so use them with judgement.

It is usually a good idea to have a combination of open and closed questions, and make the critical ones compulsory to be answered. Avoid including a lot of questions that require significant time from your responders and probably decrease the response rate. Before public dissemination, you may want to share the web form with some stakeholders of your confidence, to spot errors or improve wording. A deadline should be stated in the dissemination, to encourage timely completion.

Very positive about online surveys is that you can get information from a large number people worldwide, even in different languages. Besides, the information is already in digital format which facilitates its analysis.

Be aware though that open surveys do not have statistical power because they are not randomized. So the collected information only reflects the views of the responders, which may not be representative of your target population. For instance, it may sorely reflect the views of those that are technologically savvy and do not mind using web tools.

Therefore, your conclusions are indicative, and should be contrasted with other, more diverse samples. Having said that, if a lot of people from your survey agree on identifying the same unmet need, it is reasonable to assume that there will be a market for it, though its size may not be the one of the whole population.

Methods to identify
unmet needs in eHealth

3rd party challenges

In the last years, there is a growing trend of organizing challenges, prizes and competitions so that organizations can tap into external talent to develop new products and services. It is partly related to the popularity of the open innovation and crowdsourcing paradigms.

Typically, a sponsor organization identifies a challenge and sets up a procedure so external persons can submit their ideas following some guidelines. Proposals are then evaluated, and winners are announced. The competition usually awards (cash) prizes to stimulate participation, together with the opportunity to work together with the proposer to push the solution further. Actually, the latter may become the biggest reward for the entrepreneur. At a minimum, the winner gets visibility and recognition.

Due to the popularity of the approach, there are a number of on-line platforms that liaise with sponsor organizations, set up challenges and manage the registration and communication. Some of the best well known marketplaces are Innocentive, Yet2.com or the European Innoget.

Some challenges are multi-stage and even request a fee to enter -like the Qualcomm tricorder X prize with 10M$ in prizes-, while the majority award some thousands of euros in cash with a very straightforward procedure (on-line submission of documentation).

There are also specialized platforms that only publish Digital Health related initiatives, like healthdatachallenges.com. For example, at the time of writing the Aetna foundation challenge, with 4.5M€ in prizes, seeks solutions that empower members of underserved populations to take control of their health with real-world solutions that fit into their everyday lives through technology they are already using. Some Pharmaceutical companies like Janssen have set up their own challenges, so information should be searched directly in their websites.

Some challenges restrict the participation to some geographies (usually the USA), but even so it could be worth to get to get to know them to identify requests at a global level. In Europe, the new research framework Horizon 2020 managed by the European Commission includes a new instrument called Horizon Prizes, that aims to deliver breakthrough solutions to specific issues. Each of them has a 1M€ budget. One of the Prizes is related to eHealth, and promotes the development of an affordable device (a food scanner) that will allow citizens to make informed choices on food intake in a quick and non-invasive manner. There are also EU projects that support the identification of unmet needs in Health and maintain a list of challenges and opportunities, like FISTAR.

Methods to identify
unmet needs in eHealth

Needlessly to say, the competition is tough especially for those with the biggest prizes so the success ratios are low. Therefore you should carefully evaluate if you have the time, resources and stamina to follow through. On the up side, if you win you would not only get cash, visibility and recognition but also a potential partner (the sponsor organization) to make your idea a reality.
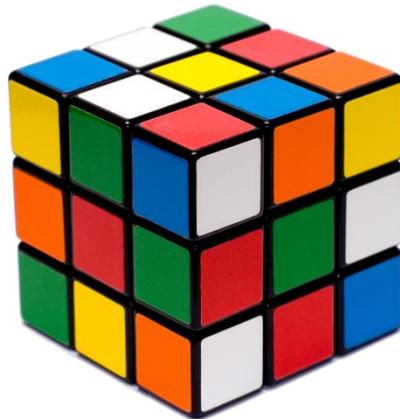
Informal exchanges

Casual private conversations with healthcare professionals or managers can help you to identify current pain points or bottle necks. Be quick to spot them, and ask for a follow up conversation once you have given them a thought. A related source can be speakers in conferences or public events that talk about difficulties or hidden areas of need.

Also, from time to time articles appear in the (social) media with food for thought and hints. Typical sources include end-of-year articles that identify trends for the coming year (examples here and here), or content produced by Digital Health accelerators like Rock Health, TMCx, etc. Watch out, some of them can be very technology driven, rather than coming from a real demand in health.

About the project

The GET project delivers four high-impact services to eHealth SMEs and entrepreneurs in order to boost their growth and move them to the next level of competitiveness. Each life-transforming service has been designed to provide cross-border value to a different target group of companies. It will do by offering training, mentoring, market intelligence, support and, above all, quality contacts.

These services are:

- **Get on track** Targets early-stage companies, start-ups and entrepreneurs. It supports them to optimize their business model and commercialization strategy.

- **Get funded** Designed for SMEs looking for a second round of funding. It provides training, resources and networking opportunities with investors at European level.

- **Get global** Helps mature SMEs to access international markets by putting them in contact with foreign commercialization partners and potential customers.

- **Get inspired** Identifies and disseminates unmet needs in eHealth that can become business opportunities for entrepreneurs and SMEs.

If you want to know what GET can do for you, access resources or receive insight

Contact us!

project@get-ehealth.eu

www.get-ehealth.eu

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This document is a deliverable of the European Project GET, funded by the European Commission with Grant Agreement number 611709

12