GSMA

MWF Mobile & Wireless Forum

Risk Communication Guide for Mobile Phones and Base Stations

Practical guidance and support on good risk communications practice for the mobile industry

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

We invite you to find out more at www.gsma.com/emf

Follow the GSMA on Twitter: @GSMA

The Mobile & Wireless Forum is an international association of companies with an interest in mobile and wireless communications. The MWF focuses on a range of issues concerning mobile and wireless devices including RF health and safety, certification testing standards and requirements, counterfeit issues and accessibility.

Further information on the MWF can be found on our website at www.mwfai.org

Acknowledgements:

The input of members of the GSMA and the MWF is acknowledged.

The guidance is not compulsory and does not replace existing national regulatory requirements or industry practices. Effective risk communication practices take account of the prevailing social, political and administrative traditions and regulatory frameworks in a country.

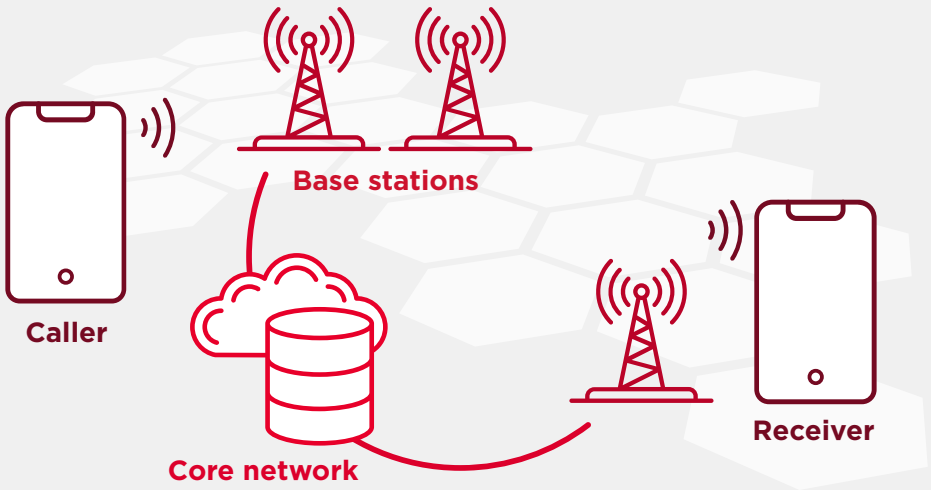
Published: September 2023

Contents

1. Introduction and background

Mobile phones and other wireless technologies have become an integral part of everyday life.

How do mobile phones work?



While many people recognise the personal benefits of mobile services, local officials and the public may have concerns about the radio signals used by antenna sites and mobile devices. These concerns may lead to delays in acquiring new antenna sites, to negative media stories and pressure on politicians to adopt further restrictions.

Research in several countries shows that a significant percentage of the population has a poor understanding of the need for nearby antenna sites and how antenna locations are selected; the operation of mobile phones; and how levels of radio signals are regulated and controlled.

Many mobile phone users do not understand the need for a network of nearby antennas.

Recognising the importance of effective communication, the Electromagnetic Field (EMF) Project of the World Health Organization (WHO) produced a booklet on risk communication that contains the following definition:

RISK COMMUNICATION:
An interactive process of exchange of information and opinion among individuals, groups and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risks, that express concerns, opinions, or reactions to risk messages, or to legal and institutional arrangements for risk management.

Risk communication skills.

Risk communication is more effective when there is cooperation within the mobile industry and where trusted scientists and public officials are involved.

It is important that people working in the mobile industry improve their understanding of why people may be concerned and develop skills to respond to those concerns through consideration, anticipation and effective management.

The Objective

This document aims to provide practical guidance and support on good risk communication practice for people working in the mobile industry, especially those who are facing public concerns about radio signals.

While it does not address social or other issues around mobile telecommunications many of the communication principles will still apply.

This document aims to improve understanding of:

1. Why and how people perceive radio signals the way they do.
2. Effective ways of addressing perceived risks of radio signals – the who, what, when and how of risk communication.
3. 'Golden Rules' of risk communication.
4. Options for responding to perceived risks of radio signals.

The emphasis is on anticipating where people may have concerns and then using effective communication approaches to minimise the potential for heightened concerns in the community.

Additional information on related science, technology and policy topics may be found at: www.gsma.com/emf and www.emfhealth.info

Distinguish between Hazard and Risk.

It is important to distinguish between a hazard and a risk.

A *hazard* is something that could potentially harm a person's health.

Risk is the likelihood, or probability, that a person will be harmed by a particular hazard.

For example: driving a car is a potential health hazard. Driving a car faster presents an increased risk. It is possible to reduce risks but there is no such thing as a zero risk.

In explanations never compare a voluntary risk (such as driving) to an involuntary risk.

2. Risk and Risk Perception Factors: Why are People Concerned?

Communication about the location of base station antennas or use of mobile phones is sometimes characterised by high levels of concern about the subject and very little trust in those promoting the technology.

Risk communication skills are needed where concern is high and the level of trust is low.

Effective risk communication aims to promote understanding of the proposals and of the importance and benefits of mobile communications.

The essential goal is also to establish your organisation as a source of information that can be relied upon and to show that your organisation takes the concerns of individuals seriously and treats all people with respect. A secondary goal is to inform and educate.

The primary objective of effective risk communication is to establish a good working relationship with stakeholders.

The secondary objective is to convey information.

It is tempting to believe that education of the public will make concerns go away. However, conflicts are often due to a clash of values or interests, rather than a lack of understanding. The facts are important but so also is the process of communicating the facts.

A level of trust must be established **before** trying to communicate with those who are concerned about the proposals. People will not accept information from someone they do not trust.

It is also likely that your organisation will be more trusted to explain the technology than to comment on scientific research.

Trust is not something that can be expected or demanded. It may take a great deal of time and effort to establish and it can be quickly damaged by a small mistake or instance of poor judgement.

Trust is hard to earn and easy to lose.

Remember that just presenting facts will never be persuasive for some people. This is because there have been many false claims by officials, scientists and even regulators in the past over a wide range of environment and health issues.

People tend to place more weight on information that confirms their existing views.

People now have access to a wide range of alternative views and sources of information to support their own interpretations. Not all of this information is equally accurate but people may find it difficult to judge the reliability of claims about scientific research.

A key test is whether scientists' research results can be replicated (reproduced by other scientists). Research that is well conducted[1] usually goes on to be published in a peer-reviewed scientific journal. Unfortunately the quality of peer review is not uniform and publication alone is not always a guarantee of quality.

The Sense About Science guides[2] address topics like peer review, understanding statistics and making sense of science stories.

Quality in scientific studies.

Relevant quality measures will depend on the type of study being performed. They include:

1. **Blind** collection/analysis of the data to eliminate any individual or observer bias;
2. Adequate description of **dosimetry** for independent replication or confirmation;
3. Inclusion of **positive controls** to confirm the outcomes;
4. Inclusion of **sham-exposed controls** to compare the data with those in RF exposure conditions;
5. Adequate **temperature control** to ensure that cells or animals are not reacting to the ambient temperature rather than to the exposure;
6. Detailed **participant selection** (inclusion and exclusion criteria) and consideration of basic confounders such as age, sex and socio-demographic factors for epidemiological studies.

Understand people's perceptions of risks because this is their reality.

People's behaviour depends upon opinions, emotions and perceptions about possible risks. These are formed by what people read, see and experience. Age, gender, cultural background, family and education all influence risk perceptions.

Precautionary recommendations are likely to increase concern.

The process of communicating about radio signals may increase concern because the public may not have considered the issues previously. When this is linked to precautionary messages, such as how to reduce exposures, it may be interpreted as confirming the possibility of a risk.

The WHO warns against precautionary measures such as arbitrary reductions of safety limits as this may undermine confidence in their scientific base.

The consequences of such arbitrary limits can include the need for more base stations in order to establish an effective network, with associated potential for network deployment delays and increased costs.

When faced with calls for precaution, point out the protective exposure standards with large safety margins, the technical features that minimise unnecessary exposures, the ongoing research and the availability of consumer information as existing precautionary measures.

In addition, as mobile telecommunications systems are an international technology, it is always preferable to follow international standards. If local safety standards are to differ from internationally published guidance, then it is important that there is a sound justification for doing so.

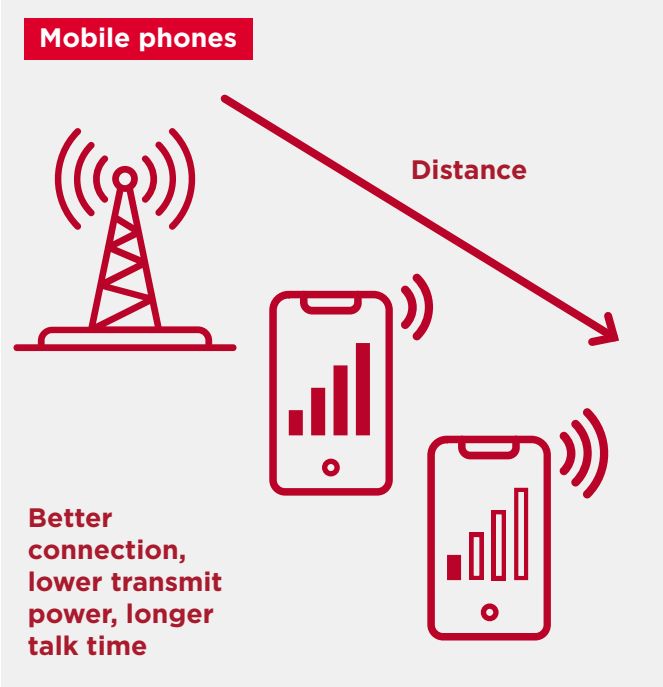
The international guidelines are designed to be protective of all persons and no special precautions are needed for mobile phone use.

If individuals are concerned, independent authorities say the best way to reduce exposure is by limiting phone calls, using text based services or simply using a hands-free kit to keep the phone away from the head and body.

1. European Commission, SCENIHR (Scientific Committee on Emerging and Newly Identified Health Risks), Potential health effects of exposure to electromagnetic fields (EMF), 27 January 2015.
2. https://senseaboutscience.org/guides/

3. Perceptions About Mobile Phones

People may have read claims that there might be risks from long-term mobile phone use or that some people are more sensitive to radio signals. Mobile phone users may attribute symptoms to their own mobile phone use. Parents may recognise the personal safety benefits for their children and also be concerned about possible health risks. (See also Appendix 1 on the IARC classification of RF-EMF.)



Many people do not understand how a mobile phone works. They do not understand that the phone transmits and receives radio signals and that the phone uses less power when the network connection is good, such as nearer to an antenna site.

Mobile phones are tested at the highest certified power level in laboratory conditions, however, the power is constantly adjusted during a real call to operate at the lowest possible level.

Importantly, the international safety guidelines are designed to be protective of all persons, including children and pregnant women, against all established health hazards.

The WHO concludes that while self-reported symptoms[3] are real, there is no scientific basis to link the symptoms to exposure to radio signals. Furthermore, the WHO says that treatment should focus on medical management of the reported symptoms and not on reducing exposure to radio signals.

People can choose to reduce their exposure to mobilephone radio signals.

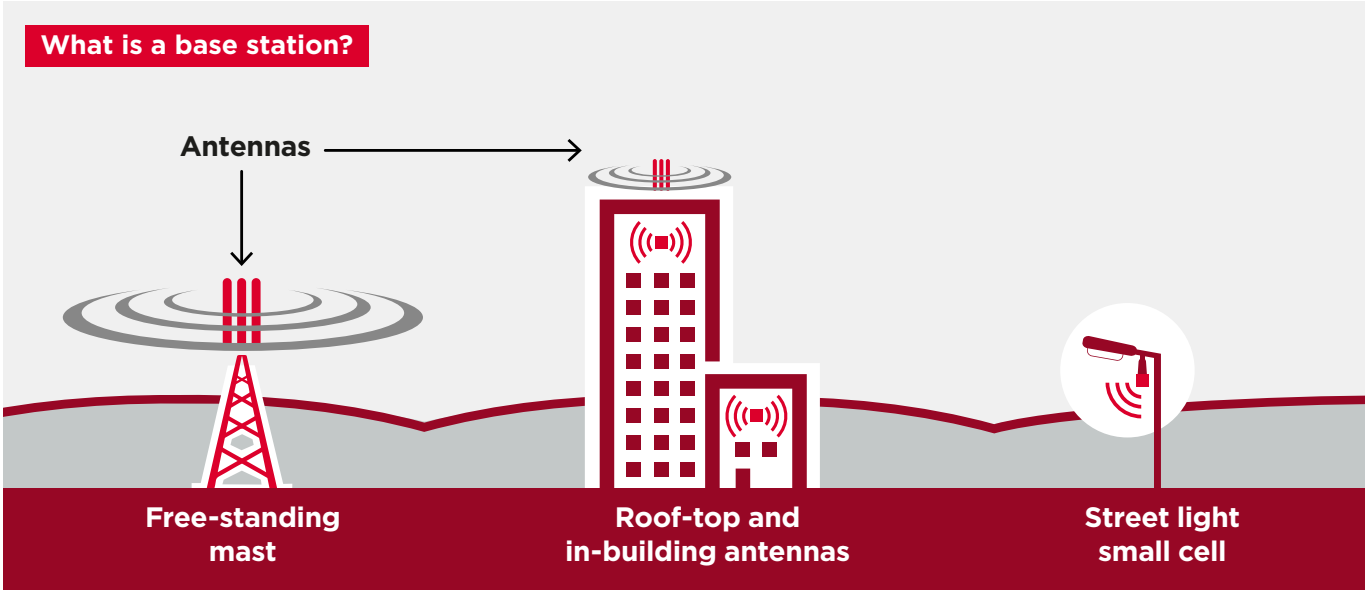
It is important to recognise that with mobile phones there is generally choice about usage. If users are concerned they can take steps to reduce exposure, but remember the WHO says that there is no reason for concern.

Key Communication Points – Phones

- A phone is a low power radio transmitter and in good coverage operates at a similar level to the other wireless devices we use on a daily basis.
- Mobile phones are tested for compliance at maximum power and international exposure guidelines are designed to be protective of all persons.
- If users are concerned they can reduce their exposure by using a handsfree kit, limiting the length of calls or using messaging apps.

3. The WHO recommends the term Idiopathic Environmental Intolerance attributed to Electromagnetic Fields (IEI-EMF). Other terms that are used include “electrosensitivity” or “electromagnetic hypersensitivity”(EHS).

4. Perceptions about Antenna Sites



Mobile network antenna sites are called base stations. They can be freestanding, mounted on rooftops or inside buildings, or on streetlights. Radio signals are generally transmitted outwards from the antennas not downwards. The supporting structure does not transmit.

In addition to health concerns, people may have questions about base station proximity, visual aspects and other matters.

People's perceptions about antenna sites or radio base stations are quite different to their perceptions of mobile phones. This is because possible risks due to the radio signals from antenna sites score highly on many of the perception characteristics or so-called dread factors that can cause heightened public concern.

People dread, meaning that they worry more about, some diseases than other health conditions.

Note that very few of the these perception characteristics relate exclusively to the science of radio signals and health. The most important risk perception factors are discussed below and their influence on acceptance is summarised in the figure on the next page.

Low trust in those in authority.

The public may feel let down by past experiences of trusting government or industry, and often refer to examples such as tobacco and asbestos.

However, there are international safety recommendations, the mobile industry is subject to regulation and the WHO states that there are no established health risks from low-level radio signals.

Fear of both chronic and catastrophic effects on health.

Some people are concerned that there may be unknown long-term health effects. People may also liken radio signals to nuclear radiation and fear incurable serious illness.

Radio signals are not x-rays. The only established effects are related to heating from very high-level exposures. Many decades of research on radio signals, using the same methods that show health risks from other agents, has found no scientifically established long-term health hazards from low-level exposures to radio signals.

Radio signals are not well understood by the public.

Exposure to radio signals can not be perceived, it is unseen and unheard. Radio signals may be perceived as new and unfamiliar. When people don't understand how something works they will often assume the worst.

Typical levels from base stations in publicly accessible areas are far below international safety recommendations. This is comparable to radio and television broadcast services, which have been in operation for the past 70 or more years without any adverse health consequence being established.

Risks appear to be scientifically uncertain and scientists appear to disagree.

When scientists argue it becomes difficult for the public to know who to turn to for reassurance. Openness is a key first step to establish trust, so acknowledge uncertainty and differing interpretations, explain why they exist and place them in the context of what is already known.

It is advisable to refer people to independent official sources of information such as national regulators, health authorities and the International EMF Project of the WHO. Emphasise that the mobile industry is not a health authority and is guided by the conclusions of independent health authorities.

Influence of risk perception factors on acceptance

ACCEPTANCE				REJECTION
	High	***Trust***	Low	
	Low	***Health hazard***	High	
	High	***Understanding***	Low	
	Low	***Scientific uncertainty***	High	
	High	***Control***	Low	
	Low	***Risk to children***	High	
	Many	***Benefits***	Few	
	Low	***Media controversy***	High	

There is no personal control over exposure once the site is operating.

People will accept risk in their lives, but most people want to be able to have some level of control over it. Local residents may want to have a say where an antenna site is built. At least they wish to know that their concerns have been acknowledged.

Ensure that your communications show people that their concerns have been heard. Explain what has been done in response and what can or cannot be changed and why.

Once people become used to a base station in their neighbourhood they might cease to worry about it. Effective risk communication is decisive in supporting this process.

Children are perceived to be particularly at risk.

People have a natural instinct to protect children. Parents may perceive that the health of children is threatened when antennas are placed near homes or schools. There is no scientific reason to avoid locating antennas on or near schools. In fact exposures in the school may be lower when antennas are placed on school buildings because the signals are directed outwards not downwards. However, given the potential for a negative reaction it may be useful to consult with school representatives before a formal application is made.

Specific households and communities are affected with few clear benefits.

In addition to fears about radio signals, people may worry about effects on property prices and the appearance of the antennas. There may be a sense of injustice that sometimes creates real anger because affected people may feel their own interests are being overlooked for others' benefit. People may also object because a neighbour is benefiting from the antenna site rental rather than their own property.

It is important to help people to understand the need for antenna sites and to explain the improved coverage of having antennas near to where people live and work.

Media attention, human interest stories make good copy.

Local media will generally heighten or amplify concerns about an issue by reporting stories in a sensationalist way. Local communities trying to obstruct the power of a national company make an interesting story.

It is important to work positively with the media to show them the real community benefits that come from improved mobile telecommunications and provide them with independent expert sources so they do not have to rely on the information provided by protestors or critics. Respect the deadlines of reporters and the need for differing types of materials by different media outlets (press, radio, TV).

Social media may amplify inaccurate information.

Social media allows any individual to potentially reach as many people - if not more than - as mainstream media. The lack of traditional gate-keepers is one reason why inaccurate information may spread farther and faster on-line than true information. Similarly, people are more likely to "like" and share posts that confirm their existing opinions.

More information on use of social media is provided in Appendix 4.

Key Communication Points – Antenna Sites

- Typical exposures from antenna sites are far below of international safety recommendations. These levels are broadly comparable to radio and television broadcast services that people already accept.
- The WHO states that considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak radio signals from base stations cause adverse health effects.
- Radio signals have been in use for more than 100 years and studies of high powered broadcast transmitters have uncovered no increased health risk for nearby communities.

5. Effective Risk Communication

This section considers how to achieve effective risk communication to improve the nature and focus of community consultation in the site deployment process.

In particular, effective risk communication emphasises the need to:

1. Improve transparency about the antenna siting process.
2. Build a working relationship as a trustworthy and reliable party.
3. Provide stakeholders with trusted sources for information or get such third parties involved.
4. Emphasise the benefits associated with improved mobile communications.
5. Find ways of providing people with a sense of involvement in the project, however small, to reduce their sense of powerlessness.

Figure A:
Key Steps in Applying Effective Risk Communication

Step 1
Consider the Issues
- How important is the site?
- Are there sensitive local siting issues?
- Are there any other local community concerns?

Step 2
Identify your audiences
- Who is directly affected?
- Who else will take an interest: the media; politicians; regulators?
- Are there any other interests or even conflicting interests that may be relevant?

Step 3
Consider the Issues
- Do they understand the need?
- Do they have concerns about alleged health issues?
- Is the site intrusive?

Step 4
Develop a communications approach and methods

Employ communications methods based on
- Notification;
- Consultation; or
- Dialogue

Step 5
Apply good practice risk communication methods

Follow the 10 Golden Rules
1. Choose Words Carefully
2. Use Three Key Messages
3. Guarantee Compliance
4. Use Simple Language
5. Empathise
6. Use Pictures
7. Listen Actively
8. Timing
9. Consider Appearances
10. Be Careful about Talking to Larger Groups

Step 6
Consider the Issues and Respond
- Are the proposals: – acceptable; or – in need of amendment?
- Keep people informed of the outcome

Explain the facts clearly.

It is important to be honest about the facts, to explain them as clearly as possible without jargon and to demonstrate that every step is being taken in compliance with safety recommendations.

When discussing safety recommendations, explain how they were developed, what they cover and how compliance is assured. This will help people to put the proposals into perspective.

A picture speaks a thousand words so use diagrams and pictures as much as possible.

Understand public perceptions and anticipate community responses.

It is not possible to predict accurately how people will respond to an issue every time. However, improved understanding of what motivates public reactions makes it more likely that potential issues are anticipated with responses planned and initiated before an issue becomes a crisis.

Increase effectiveness by involving affected groups but avoid false expectations.

Development and operations can be severely hampered and delayed as a result of local protests about a new site construction.

For sites where opposition is anticipated, it may be possible to give people or their representatives an opportunity to contribute to the decision making process. In many cases such participation will be determined by national regulatory procedures.

It is very important not to create false expectations. It should always be clear that participation does not mean a veto or guarantee that there will always be a mutually acceptable solution.

Improve dialogue and reduce tension.

By giving people the opportunity to express their opinions, and feel that their voice is being heard tension will be reduced. It can also help to minimise misunderstandings.

Dialogue can also reduce the amount of media attention as industry and affected stakeholders are seen to seek a better understanding of the position of others.

Do not retreat from dialogue because you fear opposition as refusing to engage in a dialogue will make people think that there is something to hide.

If dialogue is not feasible then consider direct communication with selected stakeholders or other approaches as outlined in Appendix 2.

If people do not perceive you as trusted and credible, then there is little chance that they will accept the information that you provide.

You need to think about likely questions in advance and provide good answers. People will have more faith in someone who is prepared to respond to specific issues. If you don't know an answer don't speculate. Instead, commit to providing an answer by a specified time and deliver on the commitment.

People use four factors when deciding if you are a trusted and credible source:

1. Are you seen to be responsive to their concerns?
2. Does what you say and how you say it make sense to people?
3. Do they think you are professionally competent?
4. Are you seen to be honest and truthful when dealing with people?

Short-term judgments are based largely on verbal and nonverbal communications. Long-term judgments are influenced by actions and performance. Once judgments are made they are difficult to change.

In high-concern, low-trust situations, you need to be as perfect a communicator as humanly possible. **This requires preparation, practice and training.** This will ensure that your own reputation and that of your organisation remain intact.

Industry Coordination.

In some countries, trade associations or other similar bodies coordinate the production of common information materials. Such mobile industry bodies may also be involved in outreach to stakeholders.

6. Developing a Risk Communication Process

This section provides an overview of the main issues that need to be addressed during roll-out of a network in order to ensure that public and stakeholder concerns are identified in advance and addressed efficiently.

This draws upon a number of national approaches that have been applied in the mobile telecommunications sector. Specific approaches need to be adapted to national legal, regulatory and societal frameworks. See also Appendix 3 that provides additional guidance for countries lacking formal procedures.

A national approach consistently applied by all mobile network providers may be helpful to reduce public concern. Communities do not care who may or may not be at fault, real or perceived mistakes by one company will affect other sites.

1. Site Assessment to Understand Local Conditions

It is not possible to give every site the same level of attention. However, practical experience will show that some locations are more likely to generate local opposition.

A good understanding of community concerns allows potential issues to be addressed early in the deployment process to prioritise communications and avoid crises.

A standardised approach to site assessment can ensure that local communities and other stakeholders are treated in a consistent manner. It also emphasises from the outset the importance of community concerns and public perceptions.

However, this does not necessarily mean adopting a mechanistic approach (where say classification B = action x, y and z). The factors influencing the development of concern and protest are complex so it is important to be flexible and ensure effective risk communication when concerns arise.

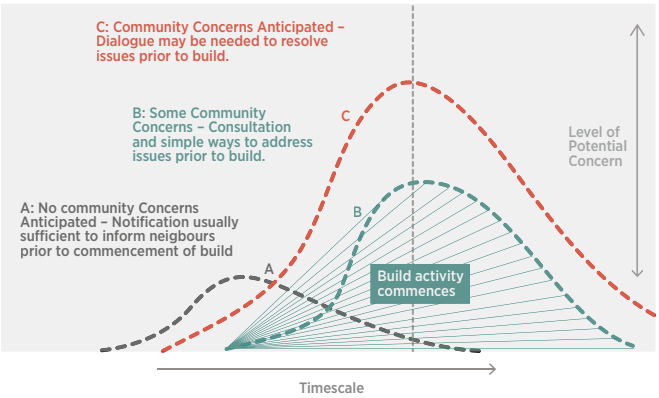
In advance, the following questions should be considered to assess a site:

- What are the local community issues? Are there any important social or environmental factors at work? Include all information you have easily available, from site visits, stakeholder input, media records and local authorities.
- Who are the key stakeholders? Identify those individuals or organisations who stand to be affected by the proposal or who could affect the outcome.
- What is the best approach based on these factors? Use a combination of consultation tools and techniques which best fit the issues and the stakeholder profile.

2. Anticipating Risk Perception

It is generally much more effective to address concerns early in the deployment process rather than later when views may have become entrenched.

Anticipating Risk Perceptions



It is much easier to help people to form opinions than to change opinions.

Proactive rather than reactive communication shows that you are acting responsibly, that you want to establish a relationship and demonstrates your commitment to understanding community concerns.

Health issues may be a mask for other concerns.

While it may seem that concern about possible health issues are the key concern, it is also helpful to pay strong attention to the visual appearance and local amenity issues associated with antenna sites. Objections on health grounds are often a way of formalising 'Not In My Back Yard' (NIMBY) objections to visual intrusion and feared loss of property values.

There are many factors that influence the price paid for a specific property and it is difficult to separate possible effects of nearby antenna sites. Many antennas are painted, or enclosed (for example, false chimneys) or otherwise positioned to visually blend with the environment.

Good visual design that reduces the visual impact of antennas is generally worthwhile and is likely to improve community acceptance.

However, be aware that suggestions of hiding antenna sites may contribute to alarm. In some cases, careful site design may trigger accusations that a danger is being hidden.

3. Choosing a Risk Communication Technique

There are many risk communication techniques that can be applied to a particular situation. The techniques can be grouped in three broad approaches:

Notification for the majority of sites may be limited to the landowner, the local authority, affected public utilities and others as required by national regulations. It is helpful if notification can be standardised both within and between network operators as this is less confusing to potential landlords and local authorities.

Notification by poster or letter might be an appropriate means in some locations.

This is basic information provision, a one-way communication approach.

Consultation might be sensible for locations with the potential for opposition, such as community facilities, locations with high amenity value or for sites with potentially high perceived impact. This could mean a longer period of notification, allowing time to resolve any issues with landowners and neighbours through more careful design, location choice and perhaps timing of works.

Consultation by letter, telephone or a meeting could be appropriate measures for sites where some opposition is expected either regarding planning and environmental issues or community concern.

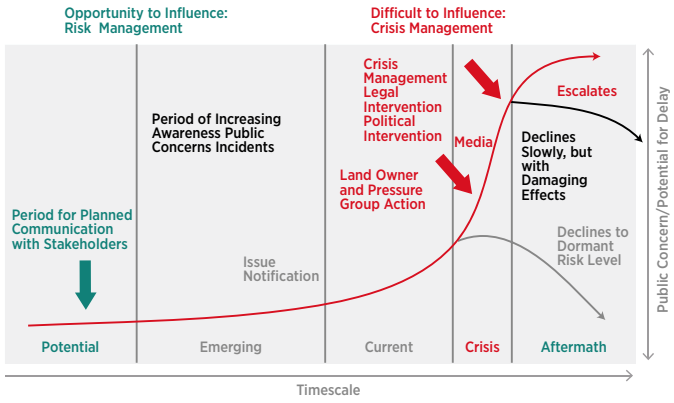
This is *two-way* information exchange between operator and key stakeholders.

Dialogue might be necessary for environmentally sensitive areas or locations with complex concerns such as schools or hospitals or where protests have occurred previously. Prior discussions can be undertaken with land owners, neighbours, local authorities and other stakeholders to develop agreements in advance of deployment. This will require a longer lead time to reduce or remove potential delays to deployment.

Dialogue should be considered for sites where community concerns are anticipated to run high or have the potential to do so. This is a planned communication process aimed at building trust and avoiding large-scale public events and media campaigns.

This is a *multiple* exchange of information between operator and all stakeholders.

Issue Lifecycle



It is good risk management to anticipate and address community concerns. As seen in the diagram of concerns, early *risk management* is better than *crisis management* of outraged communities who feel they have not been consulted with fairly.

Early intervention can minimise delay due to public concern.

In respect of a specific situation and the level of potential concern, a combination of different risk communication measures and approaches might be helpful.

Appendix 2 summarises advantages and disadvantages of different risk communication approaches for a range of stakeholder groups.

7. Guidance on Risk Communication in Practice

The three underlying practicalities to address in risk communication are:

1. What information is being communicated (The Message).
2. Who is delivering the information (The Messenger).
3. How the information is being communicated (The Means).

The Message: the message should always be simple and concise. It could comprise a statement backed up with supporting evidence or third party authorisation and should lead the audience to a conclusion.

The Messenger: Continuity in the relationship is of key importance and a local contact person is preferable to someone from 'the headquarters'. Ideally the same representative would be available throughout all contact with a particular community or group of interested stakeholders. This makes it easier for a relationship to develop and to be maintained.

As the messenger, you should pay attention to body language, both in terms of observing local customs and how you present yourself.

As with the message it might be helpful to involve trusted third parties who have a higher credibility. Consider the possibility of coordinated communications and alliances with credible university scientists, doctors, citizen advisory groups, trusted local officials, and national or local opinion leaders.

The Means: Think about the most appropriate way to communicate with your audience. This should be based on who your stakeholders are, an assessment of their needs and the type of proposal under consideration.

Different communications approaches will suit different situations, but general principles to consider include the following:
— keep the communication short and concise.
— make positive statements.
— avoid using technical or industry jargon.
— be responsive to the concerns of the audience and listen carefully.

Use leaflets, hand outs, diagrams or posters with good visual detail as much as possible. Heightened public concerns are best addressed in smaller scale interactions supported by a toolkit of accessible information materials rather than large open public meetings.

When selecting locations, try to choose neutral ground like meeting rooms in the offices of town or city officials.

Identifying and understanding stakeholders

The key to effective risk communication is to know your audience.

What do we mean by stakeholders?
Stakeholders are those individuals or organisations who are likely to experience an impact (directly or indirectly) as a result of the proposed activity. Stakeholders are also those people who are able to influence whether or not a proposal will proceed.

For consultation activities to be as effective as possible, it is important to ensure that the most appropriate stakeholders are included in the process.

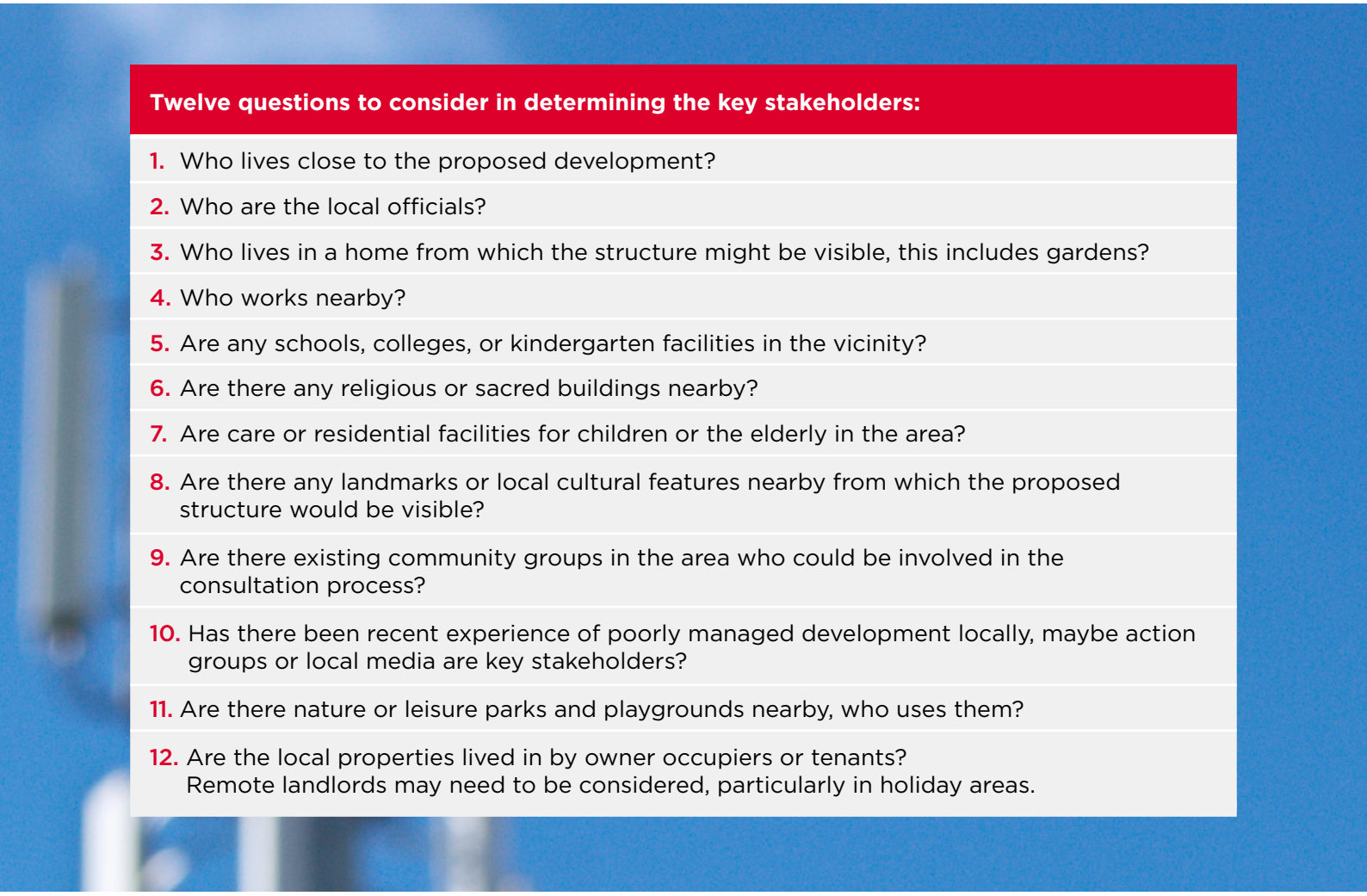
How do we identify these individuals or groups?
To identify key stakeholders start by looking at the widest possible range of interested parties.

This can include those with professional or technical expertise, financially involved parties and those with local and community knowledge. The affected communities may not be restricted to the immediate vicinity of the site. For example, parents bringing their children to a nearby school or a group of non-resident users of a local park or conservation area.

Key people in this process are:

- The decision makers, for example, local officials, leaders or politicians.
- Those people directly affected by the decision, for example, local residents.
- Relevant interest groups, for example, activist groups, conservation bodies.

There may be interests that are not clearly stated that can influence decision making.



Twelve questions to consider in determining the key stakeholders:

1. Who lives close to the proposed development?
2. Who are the local officials?
3. Who lives in a home from which the structure might be visible, this includes gardens?
4. Who works nearby?
5. Are any schools, colleges, or kindergarten facilities in the vicinity?
6. Are there any religious or sacred buildings nearby?
7. Are care or residential facilities for children or the elderly in the area?
8. Are there any landmarks or local cultural features nearby from which the proposed structure would be visible?
9. Are there existing community groups in the area who could be involved in the consultation process?
10. Has there been recent experience of poorly managed development locally, maybe action groups or local media are key stakeholders?
11. Are there nature or leisure parks and playgrounds nearby, who uses them?
12. Are the local properties lived in by owner occupiers or tenants? Remote landlords may need to be considered, particularly in holiday areas.

What are the likely concerns of stakeholders? What are their needs and interests?

It is important to address stakeholder concerns and to understand their needs before and during consultation. For example, they may be unwilling to meet your timescales for decisions. They may need more time to address the issues, if the information is very novel to them or if they find it difficult accessing the information, possibly due to language barriers.

You cannot expect stakeholders to understand, let alone accept, your network needs if you are not prepared to understand, acknowledge and address their needs.

Stakeholders may have any number of motivating factors, including protection of the work or home environment, health concerns, financial loss (or gain), political or self promotion, implementation of local or national regulations, duty to represent the wider community, delivery of project milestones, or fear of the unknown.

Some might also use the health issue to disguise their real interests. However, not dealing seriously with them might make you suspect in the eyes of those who are honestly concerned, so it is most effective to acknowledge people's concerns and address them at face value.

Understanding these values takes effort and requires listening, responsiveness and dialogue on an ongoing basis. The better you understand your stakeholders' values and motivations, the better you will be able to address their concerns and find a way forward.

8. Ten Golden Rules for Effective Risk Communication

There is a small group of key concepts that can be learnt and practised to improve your ability to communicate effectively in high-concern, low-trust situations.

Risk communication is dynamic and should adjust to the audience and the issue lifecycle.

It is important to respond quickly to concerns even if the complete answer is not available. Provide information as early as possible and follow with updates as they become available.

Preparation is key to being able to respond quickly; it includes well-designed and tested materials, nominated spokespersons and company procedures to authorise statements as an issue develops.

1. Choose Words Carefully

Use *clear, non-technical language* that aims for understanding and knowledge building. Make sure that you understand the information needs of your audience. Be careful not to sound or be condescending. Personalise your communications to show openness and build trust.

Comparisons can be used to make facts more understandable but should not be used to gain acceptance or trust.

For example, compare levels either before and after the antennas are installed or with safety recommendations but note that some people may be concerned about levels below the recommendations. It is best to pre-test comparisons to ensure that they deliver the intended response and don't generate more questions than answers.

Listen carefully to what is being said and pay close attention to body language. Be aware of your emotions and those of your audience.

2. Use Three Key Messages

In high-concern circumstances people may feel threatened and this disrupts their ability to process information. It is recommended that no more than *three key messages* are provided during communications with highly concerned parties. Too much information may confuse and irritate.

To make that information count, you should ensure that your primary messages are *clear, concise, provided early and repeated* for emphasis. If you provide more than three key messages you run the risk of the most important issue being forgotten.

Getting Across Your Key Messages — It helps to address people's perceptions if you:

1. Make the issue visible to people. Show diagrams of the proposal. Show comparisons of the levels of radio signals before and after installation.
2. Point out the benefits. Tell people about improvements to service but do not try to 'sell' the technology to the community.
3. Give people a sense of involvement. Local communities may have advice on improving the design or location of the antennas that could be accommodated.

3. Guarantee Compliance

Remember that you are not a health expert. People will ask you for a guarantee that there is no risk from exposure to radio signals. There is no such thing as 'zero risk' and absolute safety cannot be proven. So it is unreasonable for people to ask you for a health guarantee.

However, you can guarantee that the site and equipment will be built and operated to meet all relevant safety recommendations. Any changes to those recommendations will also be met.

Example: Health — We always put the health of the public, and our employees before all else.

- We comply with the national safety requirements.
- The scientific research to date shows that operated within the safety recommendations this technology is regarded as safe for all individuals.
- We understand that you may be worried about this, so we will provide independent assessment of the levels of radio signals before and after the antenna becomes operational.

This key message technique applies to all types of communication: conversations, presentations, fact sheets, brochures, display materials and videos.

Your key messages can be supported by other forms of communication materials, which would either re-emphasise the same key point or provide independent verification.

For example, the message 'We always put the health of the public, our customers, and our employees before all else' could be supported with the relevant WHO fact sheets.

4. Use Simple Language

Try to keep the amount of technical terminology, industry jargon and abbreviations to a minimum. Using unfamiliar terms for your audience can alienate them whereas making the effort to carefully explain what you mean and checking that everyone understands what you are saying will help to establish you as trustworthy and credible.

Acknowledge that you are simplifying and provide references to supporting documents. Do not oversimplify, as you may seem to be ill informed or hiding the truth.

5. Empathise

Express yourself as caring about people's concerns. Remember that people won't care what you know and what you want to tell them until they know that you care.

So demonstrate that you care by telling people that you do. For example: 'I understand that you could be worried by some of the reports about living near antenna sites.'

6. A Picture is Worth a Thousand Words

People are able to retain more information through the provision of illustrative materials. Visual documents can help people to understand the various sources of radio signals in the environment or imagine how a proposal might look and can improve understanding of what is being considered.

It is important to ensure that people understand the images in the way that you intend. Ideally they should be tested with target audiences before use. Ask questions to ensure that the information is understood.

7. Listen Actively

People are often more concerned about issues such as trust, credibility, control, benefits, competence, fairness, empathy and courtesy than about quantitative risk assessment. If people feel that they are not being heard, they cannot be expected to listen.

Provide people with plenty of time to tell you what they think. Ask questions and don't interrupt or try to give them a response until they have had time to get everything off their chest.

Demonstrate that you are listening with your body language and by writing down notes.

8. Timing

It goes without saying that meetings should always be attended promptly. If you are running late do as much as you can to let people know what the situation is, and when you expect to arrive.

If you are responsible for organising a meeting, think about the most convenient time for your audience. Think about work days, school times and holiday periods.

9. Appearance

Think about how you present yourself when you first encounter a stakeholder, either on the telephone, at a meeting or on site. Always be polite. The first contact is very important in convincing people that you are committed to working in an open, honest way.

Body language accounts for a very large part of effective communication. Through non-verbal communication such as body language we can convey information about how we feel, what we are thinking, our respect for our audience and our social status.

10 Talking to Larger Groups of People

Public meetings are the least effective forum for dealing with high-concern, low-trust issues. If you have to attend a public meeting, you must not rely upon it as an effective communication method and will need to consider a range of supplementary and alternative communication methods.

A better approach is the 'drop-in session' where people can read information and talk to staff on a one-to-one basis. If you do have to hold or attend a public meeting, the advice in the accompanying box may help.

Key pointers to adopt for a public meeting

- Prepare, think about likely issues that will arise and consider how you will answer them. Plan three key messages you want to get across.
- Think carefully about when and where the meeting will be held, to make it as easy as possible for people to attend and give plenty of notice of the details.
- Ensure that visual presentations are not cluttered, cramped or overpowering.
- Supplement your presentation with other materials, such as fact sheets that can be taken away.
- Ensure that information provided is straightforward, jargon-free and concise. Graphs should be as simple as possible and explained in layman's terms.
- Set a time limit and clear agenda.
- Keep presentations short with key messages delivered in the first part of the speech.
- Remember that the purpose of the meeting is to seek a cooperative approach not a conflict.
- Ask questions. This ensures that you gain a fuller understanding of stakeholder issues and also demonstrates that you are actively listening and interested in what people think.
- Write down all the main points raised and make sure any promised actions will be addressed.
- If possible, ensure there is an effective, preferably independent chairperson to run the meeting.

9. Conclusions

Effective risk communication is based on anticipating possible reactions, understanding the audience and conveying clear information that addresses people's concerns and allows you to establish your organisation as responsible and trustworthy.

Plan communication activities well and pre-test materials whenever possible so that they are effective with the target audience. Ensure that company representatives have been trained in effective presentation and communication skills. Build in an evaluation process so that future efforts will be more effective.

When communicating, focus on the issue of concern and help people to understand the complete picture, while recognising that people want straightforward answers. In order to build trust, be open about the limits of scientific research but convey what is known. Watch for unintended consequences of your communication activities.

Even if you communicate well, there will be times when a mutually acceptable agreement is not possible. However, your actions can ensure that your own reputation and that of your organisation remain intact and future proposals may be easier.

If applied carefully and consistently, the techniques presented in this guide should assist you to address concerns and deliver network deployments with less community opposition and delay.

10. Further Reading

GSMA, EMF and Health
www.gsma.com/emf

ICNIRP, 1998: Risk Perception, Risk Communication and its Application to EMF Exposure. Proceedings of the International Seminar on Risk Perception, Risk Communication and its Application to EMF Exposure, Vienna, Austria, October 22-23, 1997.
www.icnirp.org

Mobile & Wireless Forum, EMF & Health
www.emfhealth.info

WHO, 1999: EMF Risk Perception and Communication. Proceedings. International Seminar on EMF Risk Perception and Communication. Ottawa, Ontario, Canada, August 31 – September 1, 1998.
https://apps.who.int/iris/handle/10665/65936

WHO, 2002: Establishing a Dialogue on Risks from Electromagnetic Fields. Geneva: World Health Organization. Originally published in English by WHO in 2002, it is now available in many additional languages.
www.who.int

The Debunking Handbook 2020.
https://sks.to/db2020

Africa Check, Chequeado and Full Fact. 2020: Communicating Fact Checks Online.
https://fullfact.org/about/research/

Appendix 1: The IARC Classification of RF-EMF

One of the more difficult issues to explain is the International Agency for Research on Cancer (IARC) classification of radio frequency electromagnetic fields (RF-EMF), including mobile phones, as a possible human carcinogen (IARC group 2B).

The IARC Hazard Classification Process
IARC is an agency of the World Health Organization (WHO). IARC looks at a wide range of different "agents" – that is substances or activities that include chemicals, complex mixtures, processes, occupational or environmental exposures, cultural or behavioural practices, biological organisms, and physical substances. Being a scientific organisation, IARC uses a classification system based on the strength of the available scientific evidence for any association with cancer. Further details are available on the IARC Monographs website: https://monographs.iarc.who.int/

IARC establishes independent Working Groups of scientists to review the scientific evidence in relation to particular agents and the Working Group meets to consider the evidence as a whole. They aim to achieve consensus among Working Group members regarding the strength of the evidence and how to classify the agent(s) under consideration.

Of course the science is not always clear. There will be good studies and there will be contradictory studies. There are also very different types of research studies to consider. The Working Group will consider:

- ***Exposure data*** – how humans are exposed to the substance or process under review.
- Studies of cancer in humans – these may be ***population studies or experimental studies***.
- Studies of cancer in experimental animals – usually from ***laboratory animal*** *tests.*
- ***Mechanistic studies*** and other data – are there known physical processes (mechanisms) at work that can explain any association?

For each type of study the Working Group examines the *strength of the evidence* and also the extent to which one type research evidence supports another. For each type of evidence they assess whether the strength of evidence is *sufficient, limited* or *inadequate.* They also look at consistency of evidence, for example, are associations reported in population studies supported by the controlled animal laboratory studies.

Finally, the body of evidence is considered *as a whole* in order to reach an overall evaluation of the extent to which an agent may or may not cause cancer in humans.

The IARC Classifications
Since 1971, IARC has evaluated more than 1000 agents. This includes alcohol, asbestos, benzene, formaldehyde, drinking coffee, hair colouring products, powerline frequencies, shiftwork that involves circadian disruption, and paracetamol.

For each agent reviewed, IARC uses four categories to classify the strength of the scientific evidence that exposure to the agent may be a cancer *hazard* (not the size of the potential *risk*).

IARC Monographs Human Cancer Hazard Classification

	IARC Group	Typical examples of evidence	Examples of agents
Higher level of certainty ↓	**Group 1** Carcinogenic to humans (126 agents)	*Sufficient* evidence in humans.	Smoking, exposure to solar radiation, alcoholic beverages, ionizing radiation
	Group 2A Probably carcinogenic (94 agents)	*Limited* evidence in humans. *Sufficient* evidence in experimental animals.	Emissions from high temperature frying, DDT, eating red meat, night shift work
	Group 2B Possibly carcinogenic (322 agents)	*Limited* evidence in humans. Less than *sufficient* evidence in experimental animals.	Gasoline engine exhaust, working as a hairdresser or barber, low frequency magnetic fields, radio frequency fields
Lower level of certainty	**Group 3** Not classifiable (500 agents)	Inadequate evidence in humans. *Inadequate* evidence in experimental animals.	Drinking coffee, crude oil, mercury, paracetamol, static electric or magnetic fields

Agents classified by the IARC Monographs, volumes 1-133, June 2023[4].
IARC combined group 3 and group 4 in 2019. IARC working groups are encouraged to add that an agent is "probably not carcinogenic to humans" when justified.

The IARC classification of Radio Frequency fields (RF)

On 31st May 2011 following a Working Group meeting, radiofrequency electromagnetic fields were classified as *possibly* carcinogenic to humans (Group 2B), based on limited evidence of an increased risk for two types of brain cancer, associated with long term wireless phone use. The evidence was judged as inadequate for other types of cancers, occupational and environmental exposures, such as from wireless networks.

IARC[5] state in their summary of results:

> *"The evidence was reviewed critically, and overall evaluated as being limited among users of wireless telephones for glioma and acoustic neuroma, and inadequate to draw conclusions for other types of cancers. The evidence from the occupational and environmental exposures mentioned above was similarly judged inadequate"*

Clearly, it is important to put this into perspective and the best way is to refer to the explanation given by the WHO[6]:

> *"Based largely on these data, IARC has classified radiofrequency electromagnetic fields as possibly carcinogenic to humans (Group 2B), a category used when a causal association is considered credible, but when chance, bias or confounding cannot be ruled out with reasonable confidence."*

In comments on the classification many health authorities have stated that the IARC classification is an indication that further research is needed. They have also pointed out that individuals can take steps to reduce their personal exposure from use of mobile phones.

Importantly, the WHO continues to highlight that the international RF-EMF exposure limits are based on a detailed assessment of the available scientific evidence.

4. https://monographs.iarc.who.int/agents-classified-by-the-iarc/
5. http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf
6. https://www.who.int/news-room/fact-sheets/detail/electromagnetic-fields-and-public-health-mobile-phones

Appendix 2: Risk Communication Approaches

Notification (One-Way Communication)					
Target Audience	**Approach**	**Objectives**	**Summary of Process**	**Good points**	**Bad Points**
Concerned Communities	Community affairs contact	Contact point and escalation coordination	Have a single point of contact for all communications with concerned community members	Provides consistent and reliable exchange of information	Requires dedicated community affairs specialist who will have to field the majority of concerns – this can be very demanding
General Public	Corporate website or external dedicated website by operators	Provide further information	Have a single source of information on the web to support consistent messaging and information provision	Information should be consistent and can be amended to make new information available quickly	Not all citizens have access to the internet and this may disadvantage some people; the information needs to be kept up-to-date and checked for accuracy, consistency and readability; the information may not be trusted
The Media	Public Relations	To raise awareness and improve interest in the issues. To stimulate interest in participation	Use of all media channels to issue information and promote the concepts under consideration. Production of written and display materials	Reaches a wide range of stakeholders and general public	Requires dedicated communications team; Some element of message control can be lost
Local Community The Media	Newsletters	To notify and stimulate interest within an entire community. To ensure that employees are aware of options/proposals under consideration	Delivers information about the proposed development and seeks stakeholder views from the entire community, either through an existing newsletter, or through a specifically developed publication	Allows message to be controlled. Reaches all households in the selected community. Encourages staff to be transparent in decision making. Demonstrates that staff views are as important as other stakeholder views	Does not guarantee that information will be read. Poor literacy level may act as a barrier to accessing information
Neighbours	Notify immediate/directly affected community	To notify those people likely to be affected by any decisions made	Direct correspondence sent to local stakeholders, with information on options/ proposal and how to participate in decision making process	Ensures people most likely to be affected by decisions receive appropriate information	Information may not be read
Local Community Local Community Leaders	Public Meeting	To make information accessible to local stakeholders and public, and enable discussion of issues	Provides an opportunity for a large group of potentially affected individuals to find out about plans and to question and comment on them directly	Can provide information to a wide group of people, and enables interactive dialogue. Questioning can improve understanding of the issues from all stakeholder perspectives. Can help build trust and credibility	Generally difficult to predict outcome and can easily degenerate into confrontation

Consultation (Two-Way Communication)					
Target Audience	**Approach**	**Objectives**	**Summary of Process**	**Good points**	**Bad Points**
Immediate Neighbours	Door knock	To directly engage on an individual level with public stakeholders	Targeted information delivery direct to key stakeholders at each household in a community	Controls the message. Takes information direct to key stakeholders	Requires trained staff to undertake activity. Time and labour intensive
Neighbours Local Community Local Community Leaders The Media	Information Road Show	To take information direct to general stakeholders	Travelling, staffed display with information on the concepts under consideration	Supports social learning. Allows information to be provided and clarified to a general audience. Permits some qualitative feedback	Limited target audience. Requires rapid, good quality response to stakeholder input
Regulators and Local Officials	Consult early with regulators and local officials	Provides decision makers with information and enables significant issues to be addressed early on in the process	Direct correspondence or verbal communication with key relevant council officers, with information on options/proposal and plans for decision making process	Can help to foster a positive relationship with the officials. Demonstrates transparency in decision making	Officials may sometimes be too busy to participate in pre-application consultation
Local Politicians	Consult with local politicians early	Enables detailed and controlled information to be read by key local decision makers and policy formers	Direct correspondence or verbal communication with key relevant council members, with information on options/proposal and plans for decision making process	Local politicians will have strategic local knowledge which they will use in providing their official response to proposals. Detailed and controlled information can be provided direct to a key target audience. It can establish credibility with key local decision makers for being open and "up front" with information	There may be a conflict of allegiance for councillors, for example, between community values and political stances. Sometimes councillors will not comment on a proposal until an official planning application has been submitted. A lack of response may not be indicative of a lack of interest in the issue and this could be misleading in assessing feedback. Letters may not be read. The issue may be used politically during election periods
Local Politicians Regulators and Local Officials	Presentations to local decision makers	To involve local policy and decision makers	Tailored briefing sessions to a group of invited, relevant Councillors	Targets selected stakeholder representatives. Provides an opportunity for mutual understanding of needs and concerns. Enables discussion around a range of issues. Lends itself to sharing understanding rather than confrontation	There is a risk that the wider public may not always support the output of such closed-invite discussions. This can be time and labour intensive. It may be viewed as lobbying
Local Community Leaders	Consult with community representatives	To use existing community contacts to cascade information to stakeholders	Information about the proposal can be sent directly to people representing the wider community. Face to face meetings with community representatives can begin the cascade of information into a community	Opportunity exists to reach a wide range of people living in, working in, visiting, or using the resources of the area, through trusted networks	May not reach the socially isolated members of community. Message may be modified to suit local community agendas
Local Community Leaders Neighbours and 'hard-to-reach' groups	Notify representatives of sensitive activities	To involve hard to reach stakeholders and consider specific view points	Information about the proposal can be sent directly to people representing the stakeholder views of special interest groups	Can help to involve 'hard-to-reach' groups; Helps to ensure that special interests are considered	Not representative of wider public view points
Politicians Regulators and Public Officials	Consult with politicians	To involve policy makers and strategic viewpoints.	Providing information about the proposal to local politicians and gaining feedback from a strategic figurehead on behalf of the range of communities with an area	Politicians can act as credible sources of information, and therefore providing information to communities through the local politician might help you to engage stakeholders	Politicians might adopt strong stances during election periods, that will influence stakeholder perceptions, if they consider that this will be helpful in their own canvassing

Dialogue (Multiple Communication Exchanges)					
Target Audience	**Approach**	**Objectives**	**Summary of Process**	**Good points**	**Bad Points**
Local Community Local Community Leaders The Media	Open House Meetings	To make information accessible to local stakeholders and public, and to enable discussion of the issues	Replaces the public meeting as the main way of creating a local presence and dialogue with residents and others. Taking the form of an informative drop-in session, the loosely structured format allows interested parties to find out about issues at their own pace	Avoids the stress and heat of a public meeting by allowing interested parties to find out about issues at their own pace without the pressure of speaking before a large group of people. Can be arranged at the invitation of a local group. Fosters small group and one-on-one discussions. Avoids confrontation and builds credibility	May attract a limited audience. - Potentially difficult to document public input, due to the loose structure. Staff intensive. It has the potential to be hijacked by local activist groups
Local Community Local Community Leaders	Community Event Presence	To raise awareness among wider stakeholders	Having a presence / staffed display at pre-established community events, such as summer fairs or country shows, providing general information and answering questions about proposals	Accessible and user friendly approach	Unlikely to reach entire local community. Timetable restrictions according to local events programme
Regulators NGOs/ Pressure Groups Community Leaders	National Stakeholder Forum roundtable workshops	To include interested parties with wide ranging perspectives, and involve them in considering policy and options	National stakeholder groups invited to nominate representatives to join forum. Approximately 25 members can be accommodated	National perspective. Allows expert review of other stakeholder input as well as special interest contribution. Supports learning	Stakeholder analysis required to ensure representativeness and inclusiveness in membership. May require payment to members. Requires facilitation. Members may not remain involved for the entire process
Individual members of the public	Telephone hotline	To provide access to information and feedback	People can be referred to the information hotline for further details or to lodge comments on proposals	Provides a flexible feedback option, suiting peoples other commitments. Overcomes potential issues with literacy barriers	Requires trained staff and professional management
The wider public and informed individuals	Web-based Consultation	To notify and gain feedback from wider stakeholder interests	Dedicated website with facility to accommodate feedback	Accommodates individuals' availability for participation. Can provide easy access to documents for those seeking extra detail. Participants can be invited via email or may seek to become involved directly. Can reach large numbers of people easily and at relatively low cost	Not all sectors of population have internet access. Requires rapid, good quality response to stakeholder input. Only those with an interest are likely to participate, rather than providing a representative sample of the population

Appendix 3: Additional Guidance for Countries Lacking Formal Procedures

For countries where the standards may not be formalized, where local permitting processes are uncertain, and yet the pressures for deployment are great, good practice risk communication suggests:

1. **Make it clear that phones and base stations comply with international limits**

2. **Minimise the local impacts, especially visual impact**

3. **Address the myths and misunderstandings.**

Communicate compliance with exposure limits
Public confidence needs to be established through compliance with the regulatory standards and making information available to confirm that phones and base station sites comply with health and safety guidelines.

In some countries, the RF exposure standard may not be specified. In addition, the antenna siting requirements may be unclear and may change from one administrative area to another. Under these circumstances it is important to provide documentation and reassurances to confirm that all reasonable steps have been taken to meet the current international standards and good practices. It is essential from a risk communication perspective to make clear that there is "nothing to hide" – that rolling out mobile communication networks is a well-understood process and uses established technology.

Minimise the local impacts, especially visual impact
Locating base stations within communities, while essential to efficient network operation, can increase anxiety due to their proximity to people and where they live. If it is feasible, steps to improve the appearance and to minimize the visual impact of base station antenna deployment on local communities will reduce public concern. In developing countries, the local infrastructure can seem untidy and less well organized than in other countries. Under these circumstances it is important not to make things worse visually. A general guide is to design consistent with similar structures in the surrounding area. However, rigid policy solutions are unlikely to be effective as base stations often change with time as new mobile network operators join the market, as different parts of the radio spectrum becomes commercially available, and as the technology evolves.

Address the myths and misunderstandings
Experience shows that common myths and misunderstandings about mobile phones and base stations can be quickly established and difficult to dispel. Early communication about radio signals with potentially concerned stakeholders is preferable to late or no communication. All the experience and evidence confirms that communicating with people too late in the process merely causes distrust and anxiety. Early communication allows time to better explain the process and find agreed solutions.

Common myths that surround mobile phones and antenna sites tend to arise because of some of the risk perception factors that were described in Chapters 2, 3 and 4. Some of those perception factors are "cognitive" – which means that they are influenced by facts and information (how much power does an antenna site transmit in comparison to other sources of radio signals?). Other perception factors are "affective" – which means that they are influenced more by emotion (will I get a brain tumour if I have been using my mobile phone a lot at work?). People's overall perceptions of risk from mobile phones and from antenna sites will involve both types of influence to a greater or lesser extent.

Myths and misunderstandings are difficult to dispel because they often emphasize the emotional factors such as fear (of cancer or infertility) and lack of trust (in mobile phone companies and governments). One approach is to "debunk" the myths – that is to try to dispel them by calling them "irrational". However, while it may seem attractive to "put the record straight" in this way, this type of approach is likely to fail because it creates a barrier between those who refer to the myth and those who ridicule them for doing so. If people believe that you think they are behaving irrationally – they will not listen to you or read your information.

The best way to deal with myths and misunderstandings is to take your time, be patient and address each issue as it arises.

Greatest success is achieved by working with trusted local stakeholders to explain why the myths and misunderstandings are both inaccurate and unhelpful. Use trusted third parties – a local doctor, schoolteacher, or religious leader as a "bridge" into a local community. Provide them with support – visual information, explanations and the confidence to help others better understand the issues. Dispelling the myths and misunderstandings is important – but it is best achieved as part of a planned and targeted approach to working with local stakeholders.

Two observations emerge from this. First, that it is not just in the developing countries that myths and misunderstandings occur because it is risk perception that predisposes people to listen to and repeat them.

Secondly, that it is essential to remember certain key aspects of risk communication guidance when trying to dispel these misunderstandings, namely:

- People will not accept information from people they do not trust – especially if they feel they are being "talked down to" or "made fun of".
- A more effective way is to build bridges with trusted third parties who can then help to dispel the myths and misunderstandings.
- Keep the language simple, avoid using technical jargon, and use diagrams where possible to make things clear.

Appendix 4: Additional Guidance for Social Media

Social media offers opportunities to promote awareness of information from credible sources. It also presents risks due to genuinely held concerns or inaccurate claims that can spread widely. Social media also carries an expectation of dialogue not simply one-way communication.

The immediacy of social media means that issues may develop quickly, which can shorten the expectations for a timely response. Algorithms can also influence the reach of information.

Authorities are addressing overall media and risk literacy, including how to recognise reliable information, due to the challenges of misinformation and disinformation on social media.

Apply good risk communication practices.

Risk communication activities related to EMF should be consistent with an organization's overall social media policy.

Regardless of whether communication is via traditional or social media the good communication practices outlined in this document should be applied.

There are different views among experts on engaging with critics on social media. If choosing to engage with critics, the focus should be on demonstrating empathy and acknowledging valid concerns rather than engaging in a prolonged debate.

Choose the right format for each social media platform.

Some social media platforms are better suited to short content and informative graphics. Other platforms allow longer form communication.

Understanding the target audience and the communication objectives can inform the platform selection.

Countering misinformation.

Success in countering misinformation relies on trust in the source and practical techniques such as using screenshots to avoid sharing misinformation.

Not all claims need a response and it may be counterproductive to correct a false claim that is not widely discussed.

Develop, test and use clear messages Scientific information can be complex and difficult to express in terms and formats suitable for social media. A clear article is the most effective way to communicate facts. Well-designed visual materials can be supportive of the content and increase sharing.

Clear information from trusted sources can be reposted. This can be done publicly or directly to the person who has posted.

Measure effectiveness.

As with all communication approaches, it is important to measure effectiveness. Each social media platform provides tools to monitor engagement with posts. This information can be used to refine activities.

Debunking misinformation

Because misinformation is sticky, it's best pre-empted. This can be achieved by explaining misleading or manipulative argumentation strategies to people.

For debunking to be effective, it is important to provide detailed refutations. Provide a clear explanation of (1) why it is now clear that the information is false, and (2) what is true instead. When those detailed refutations are provided, misinformation can be "unstuck." Without detailed refutations, the misinformation may continue to stick around despite correction attempts.

(extracts from The Debunking Handbook 2020)

Responding to negative social media.

As noted on the previous page, there are differing views among experts on how to engage with critics. A wave of social media criticism may require a response. Here are some tips to consider.

1. **Don't delay.** If a complete answer is not available, then use a holding statement while the claim is investigated. Follow-up when more is known.
2. **Convey empathy.** Responses should employ a caring tone that shows the issue is being taken seriously.
3. **Customise responses.** Adjust responses and avoid using the same response to every comment.
4. **Consider taking the discussion off-line.** Some comments are better dealt with via direct messages or offering a person-to-person discussion. If you do this, post a public message indicating that you would like to contact/discuss the issue - so that others know that you are dealing with the issue.
5. **Scheduled social media.** Consider whether to pause planned social media communications for the duration of the risk communication situation.

GSMA Head Office
1 Angel Lane
London
EC4R 3AB
United Kingdom
Tel: +44 (0)20 7356 0600

Mobile & Wireless Forum
Rijvisschestraat 124,
9052 Ghent, Belgium