# Berc

The Start-Up

Berc is a start-up established in December 2023 by the founder Carlotta Di Cretico, who graduated in Law from the University of Turin and student at the LL.M. in European Business and Social Law held by Bocconi, with a strong interest in promoting the use of new technologies to create a social impact.

Berc is a smartphone application that aims to allow women to return home safely, through the use of Artificial Intelligence: once started, the application allows users to be geolocalized and initiate a direct call to the authorities when the background noises analyzed by the system make dangerous situations evident.

A worrying report

Important research conducted by the Italian Ministry of Internal Security and the Department of Public Security - Central Directorate of Criminal Police - has highlighted an increase in spy crimes related to gender violence and in particular we have witnessed an increase in sexual violence crimes complaints of 40% in the decade from 2013 to 2022. Crimes related to stalking also remain numerous, not to mention those related to domestic violence, which partners or ex-partners of the victims mainly perpetrate.

The data is significant and the need for direct intervention towards prevention is evident.

Numbers of complaints received in Italy in 2013 and 2023.
Source: Italian Ministry of Internal Security.
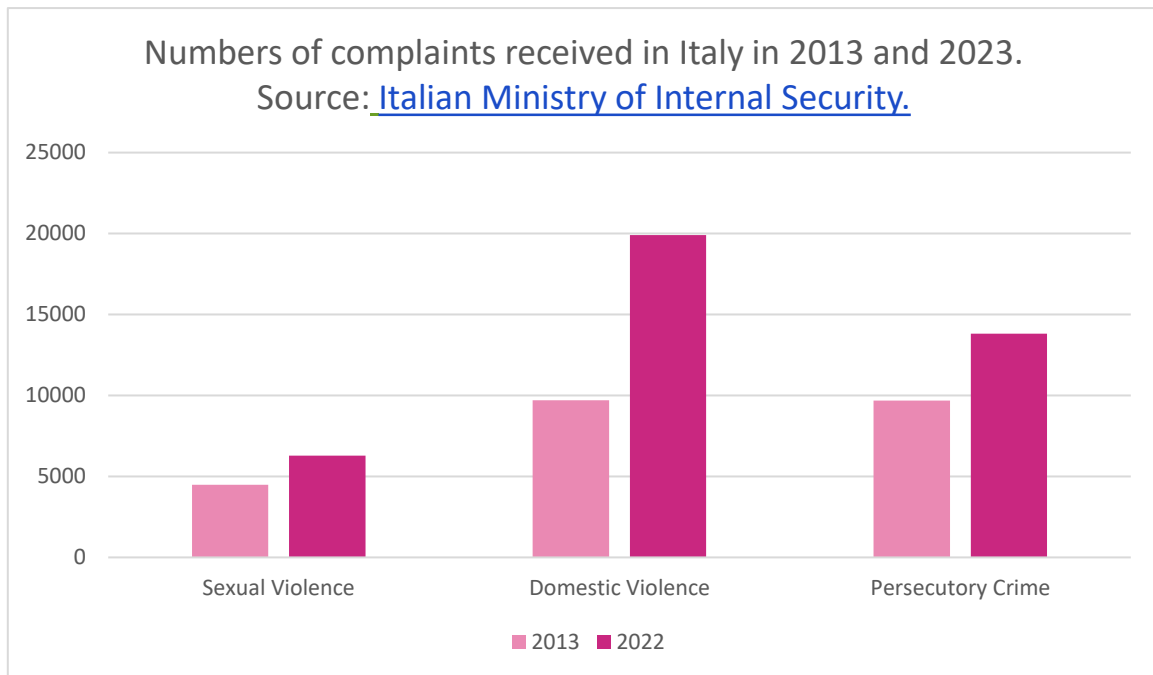
This report highlights the need for an intervention primarily aimed at protecting Italian women, and for this reason, the application will be initially launched in Italy, although to establish itself over time as a reference point for the entire community of European women

Why Invest in Berc

Berc features very low development costs, and the use of artificial intelligence for the interpretation of audio data allows for significant savings in terms of back-office costs. Envisioning widespread adoption with the payment of subscription fees (even modest) from individual users and the interest of companies willing to establish partnerships due to their sensitivity to the issue, the costs would be completely covered with a significant profit margin.

Core Value and Target Customer

The brand is a reference to the Berkana rune, a symbol of the power and primordial freedom of women. The Berkana rune is the twenty-first rune of the ancient Germanic runic alphabet. It is

associated with the letter "B" and the sound "B". The shape of the rune resembles an upside-down "B", with two vertical lines connected by a horizontal or curved line at the top. Berkana often represents fertility, rebirth, well-being, and support. It is also associated with feminine energies, motherhood, and protection.

These elements of the rune are not aimed at caging femininity in precise and stringent parameters but are aimed at the rediscovery of femininity that can be expressed in various forms, which can be rediscovered first and foremost through safety and freedom of movement because by exploring the world with confidence it is possible to better explore one's intimate interiority.

The idea behind the brand is to give women back their innate sense of playfulness and joy, too often oppressed by the dangers to which they are exposed. This tool is a safety support, which allows women to regain their dynamism and safety, especially when traveling.

The usefulness of the application consists mainly in allowing geolocalization and timely intervention by the police, which is not always possible because the consequences of attacks can vary and include immobilization or the inability to dial the number of emergencies.

The target customer is therefore a woman, of any age or ethnicity. The sense of community will not be made up of other elements than the common intent to rediscover one's freedom without conditioning one's lifestyle so that fear does not become the rule.

Compared to competitors, here the report does not provide for immediate contact with the emergency contacts indicated by the user for various reasons: because emergency contacts often cannot offer timely intervention, because the violence is often perpetrated by people who are intimately connected to the victims and finally because the independence from the intervention of others for the acquisition of a sense of security is one of the key elements of the concept underlying the product.

Product and Services

1. The user is in a situation in which she does not feel safe: she needs emotional and practical support since she is in a situation of concrete or potential danger.

2. The user launches the application, which starts a geolocalization automatically (following the consent expressed by the user at the time of installation).

3. The listening artificial intelligence (which starts its activity following the pressing of the appropriate button) records and analyzes environmental noises. The capacity and precision of artificial intelligence are constantly fed by audio sources present in sound libraries freely accessible online, and can be trained to recognize <u>requests for help</u>, <u>scuffles</u>, and more generally <u>noises attributable to aggression</u>.

4. In case of danger detected by the Artificial Intelligence, the sound is transmitted to the Back Office operators, who can detect the user's position and listen directly to the environmental noises (also for listening, consent to the processing of data during use of the app).

   a. If the danger is ascertained as imminent and concrete, the back office operators alert the authorities and share the information relating to geolocation with them.

   b. If the danger is uncertain, the operators contact the user through a direct call from the app, ascertaining the authorities in the event of a lack of response from the user.

5. The user can also activate the direct alarm button, which starts the call directly addressed to the authorities, or deactivate the functionality of the app in the absence of danger or even keep listening to the artificial intelligence active but deactivate the listening to any back office operators contacted previously.

Essential elements for the development of Berc

- Smartphone application;

- Audio database for building a library aimed at training Artificial Intelligence in sound recognition;

- Back office system for data collection.

Costs

The costs for the design, programming, and development of the application, the management system, and the training of artificial intelligence are variable but likely to be around 30,000 euros.

Additional services that can be offered after the launch

Some services that may be offered to the public include:

1. Free awareness-raising activities against gender violence in collaboration with non-profit associations;

2. Group and individual psychological support services following the activation of the alarm system (group services are free, individual services are at a reduced price for the client compared to the market price, through the request for state funds);

3. Following the success of the application on the market, the creation of a line of jewelry equipped with a similar signaling device whose operation is independent of that of the smartphone.

Marketing

As a general principle, the marketing plan will not resort to the lever of fear but will aim to associate the product with a sense of trust, optimism, and security.

The meaning of creating a **community** for sharing stories is to build an **Internet Of Purpose**: the concept that Philip Kotler and Christian Sarkar[1] identify as the involvement of the user to make him feel an active part of the operation - in this case of the awareness-raising operation.

1. Market Analysis:

<u>Competitors in the Italian market</u>: The main competitive applications such as **B-safe** are available exclusively in English and do not require the intermediate use of artificial intelligence: they are designed exclusively for situations in which emergency intervention is necessary, while Berc is a valid tool that can be activated even without there being necessarily an imminent danger and is developed for Italian women (with the aim of possible expansion into other countries).
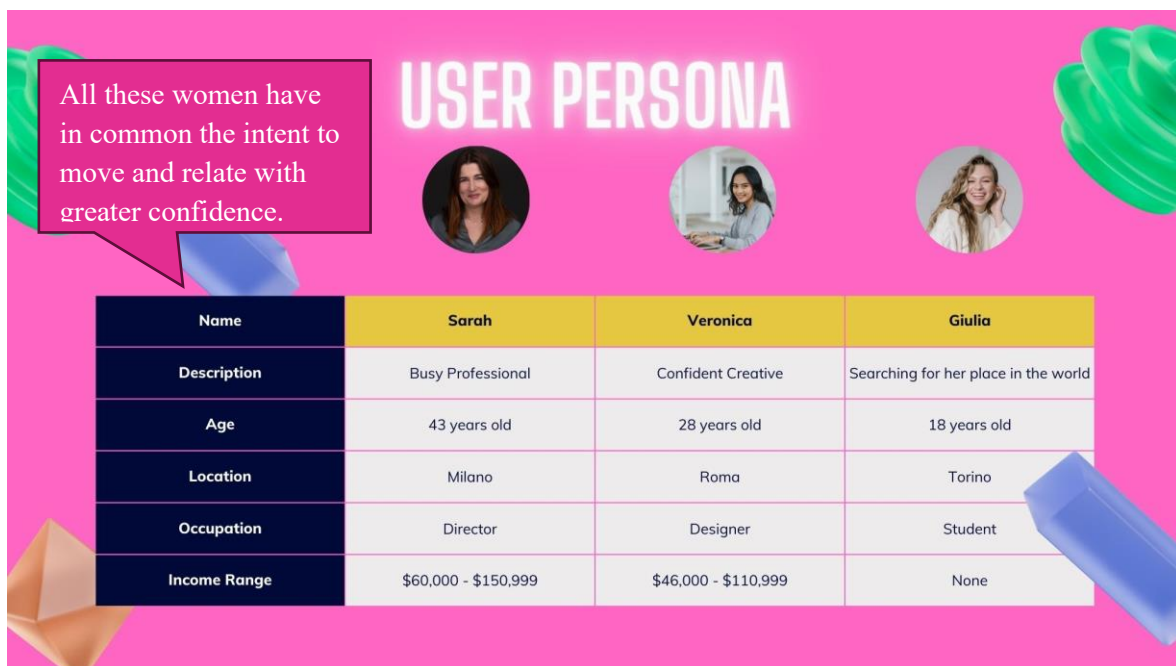
2. Brand Positioning:

The app will immediately be accessible to all women, as the costs will be reduced to the sum of 2.99 euros per month. The use of artificial intelligence will make it possible to reduce costs for users and,

---

[1] P. Kotler, C. Sarkar, *Brand Activism. Dal Purpose all'azione.* Hoepli, Milano, 2020.

given the relevance of the topic, this could also be possible thanks to partnerships with companies interested in engaging on the topic.

The Brand's narrative coincides with the affirmation of movements to combat violence against women and will be accompanied by significant awareness-raising on the issue. As anticipated, the narrative will mainly focus on the affirmation of an instrument of freedom, and not on the increase of fear or psychosis linked to the theme.

3. Marketing Channels:

- Use social media with targeted and engaging content on platforms popular among Italian women, such as Instagram and Facebook.

- Collaborate with medium influencers whose audience size is medium and not too large and female role models in Italy to promote the app, such as @ritacap.

- Plan online and offline advertising campaigns in women's magazines, TV programs, and radio.

- Organize launch events and conferences in Italy (Universities, social hubs in the neighborhoods, anti-violence centers).

- Collaborate with local brands and companies to promote the app through strategic synergies.

- Create a podcast to collect testimonies and share experiences, creating real supportive interactions in the Community.

- Actively respond to user feedback and demonstrate a commitment to customer satisfaction.

- Monitoring and Analysis: use key metrics such as the number of downloads, engagement, and user retention to evaluate the effectiveness of the strategy. Adapt the strategy based on user feedback and data collected in the Italian market.

4. Distribution:

Berc will be released in its Beta version in Italy and will be available for the most popular operating systems (iOS through the App Store and Android through Google Play).

Back office:

When the call reaches the back office, operators initiate listening and record, in a dedicated Excel file, information concerning the last geolocation and any other details useful for immediate intervention. They then contact the authorities for prompt action.

The operators promptly share the collected information with the emergency services and provide them with a copy of the real-time updated geolocation to enable immediate intervention.

The number of operators on duty is determined based on downloads: presumably, a higher number of downloads will result in a greater need for monitoring and assistance. The possibility of anticipating the presence of an employee with training in social assistance is interesting, as it would also allow for her direct intervention to reassure victims in particularly concerning situations where they might have the opportunity to stay on the call and receive comfort until the police arrive.

Each operator will be assigned to a different geographical area, preferably related to her origins (for a better understanding of any phrases, threats, and expressions spoken in dialect).

Legal specifications: Patent

In Italy, as in many other countries, for an invention to be patentable, it must meet certain requirements established by industrial property law. The main requirements for obtaining a patent in Italy are:

- ✓ **Novelty**: The invention must be new, meaning it has not been disclosed in any way before the filing date of the patent application. This implies that it has not been described in publications, presentations, or used publicly before the filing.

- ✓ **Inventive Step (Non-Obviousness)**: The invention must involve an inventive step that is not obvious to a person skilled in the relevant technical field. In other words, it should not be a simple combination of existing knowledge in the sector.

- ✓ **Industrial Applicability:** The invention must be capable of industrial application, meaning it can be manufactured or used in some industrial sector.

- ✓ **Detailed Description:** The patent application must contain a comprehensive and sufficiently clear description of the invention so that a person skilled in the field can understand and reproduce the invention without undue effort.

- ✓ **Reproducibility:** The invention must be reproducible based on the information provided in the patent application. This means that the description must be detailed enough to enable a person skilled in the field to implement the invention.

Berc responds perfectly to all the requirements described here, therefore it is patentable in Italy as a technical solution to an existing problem.

The duration of the patent in this case is ten years, as it is a utility model. Utility models are not renewable. Their duration is usually set at ten years from the filing date of the application, and once this period expires, the protection provided by the utility model automatically ceases. It is not possible to extend the duration of the utility model through renewal or the payment of additional fees. After expiration, the invention becomes public domain, and others can freely use it without violating intellectual property rights.

Legal specifications: Trademark

To register a trademark in Italy, the main requirements are:

✓ Distinctiveness: the trademark must have the ability to distinguish the products or services of one company from those of others. It cannot be generic or directly descriptive of the nature of the products or services offered.

✓ Novelty and Originality: the trademark must not be identical or similar to already registered trademarks or well-known distinctive signs. It should have a degree of originality that makes it distinguishable from existing trademarks.

✓ Legality and Morality: the trademark must not be contrary to public order, morality, or good customs. It cannot contain offensive or illegal elements.

✓ Declaration of Actual Use or Intent to Use: in cases where the trademark has not yet been used, a declaration of intent to use in the future may be required. Alternatively, evidence of actual use of the trademark can be submitted.

✓ Graphic Representation of the Trademark: provide a clear graphic representation of the trademark. For verbal trademarks, the simple name may be sufficient; for figurative or mixed trademarks, a graphic representation of the logo or symbol is required

In this case, the Berkana trademark was already registered (and renewed, therefore currently in use) by a company in the province of Naples, while the "Berc" trademark, bearing the pronunciation of the rune symbol, was free. The trademark is therefore registrable and fully compliant with the requirements required by Italian laws.
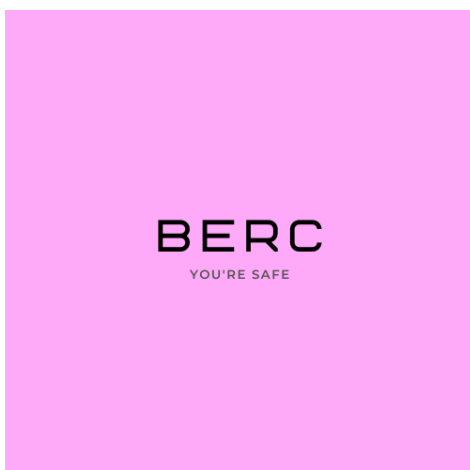
As regards the graphic component, this is also original and therefore susceptible to registration and legal protection.

In Italy, the duration of trademark protection is 10 years from the date of application. This period can be renewed indefinitely, provided that renewal fees are paid at 10-year intervals.

Therefore, each time you wish to renew the protection of the trademark, it's necessary to make the corresponding fee payments before the expiration date.

Legal specifications: Copyright

As specified in the case ruled by the Court of Justice of the European Union C-604/10 and as has been stated by the transposition of Directive 96/9/EC on databases, the audio database created through the collection of sounds from various libraries will constitute an original creation, as the organization and accessibility of the database will significantly differ from the audio libraries already in use. This database, precisely due to its originality, will be covered by copyright and will be utilized for training Artificial Intelligence.

In general, copyright protection for a database focuses on safeguarding the creative and organizational structure of the database rather than the data itself. In Italy, the duration of copyright protection for a database follows the provisions of copyright law.

Concerning databases, the duration of protection is typically 15 years from the creation of the database or its last substantial modification or update.

Legal specifications: Personal Data

Since both the definition of the territorial scope (art. 3 GDPR) and the material scope of application (art. 2 GDPR) provides for it, the entire data processing carried out will comply with the provisions of the European Regulation 679/2016.

As regards consent to processing, still in compliance with the GDPR, since it concerns identification and biometric data (Art. 4 GDPR), this will always be requested at the time of installation once and for all, preventing access to the functionality of the application in case of refusal or revocation of consent. For obvious functional and technical reasons, audio recordings and geolocation cannot be

carried out in the absence of consent and the application would lose its usefulness in the absence or revocation of consent to data processing.

By Art. 22 GDPR, rubricated as "Automated individual decision-making, including profiling", Artificial Intelligence cannot carry out automatic decision-making without the supervision of a human being. Consequently, for situations whose danger is ascertained by the system, the operators must verify the situation and carry out the treatment themselves. The system is the same as used by recognition systems, with the difference that the system bases its sources on audio data rather than visual data. As regards situations that are not alarming for Artificial Intelligence and not detected as such by the operators, the data collected will not be retained and will be anonymized and encrypted.

To guarantee the implementation of the concepts of Data protection by design and by default described in the art. 25 GDPR, all necessary measures will be adopted for transparent processing that complies with the regulation.

The first step will be the appointment of an external DPO, who will have the task of supervising the correct processing and appointment of data processors, who will likely be all DPO employees.

Berc will be the data controller and will undertake to guarantee respect for the rights of the interested parties, as indicated in the GDPR.

Offensive IP approach

The IP approach chosen is the offensive one: after the development of the app, it is expected to spread on a large scale, with a demand hypothetically higher than the ability of a start-up type company to satisfy it. Therefore it is planned to sell or grant licenses for the intervention of other developers.

This can be done through the **"Threat of Broad Licensing"**, which involves disclosure to a single party without releasing all the information, followed by the threat of disclosure if that party attempts to attack the intellectual property of the application.