Certification of Vegan and Vegetarian Products: V-Label's Redesign

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Abstract This article is a response to a problem detected in the identification and distinction of the labels of the certification program of V-Label, a non-profit organization that advocates for the plant-based movement. Currently, the certification is based in two existing labels, one of which identifies and guarantees that the products that contain it are vegan, while the other does the same for vegetarian products. However, the visual similarity between the two increases the likelihood of confusing them when making a purchase. Thus, this article can be inserted in graphic design and communication area, but also in the area of branding, and intends to reflect on how to reconcile the familiar sense of an identity already widely recognized with solutions that communicate it in a more clear and efficient way, reinforcing trust in the brand and in the labels that represent it. V-Label presents itself as a means for reflection on the contribution of design to the plant-based movement which, for ethical, ecological, and social reasons, deserves to be encouraged and helped to grow. For these reasons, the project presented proposes not only to find solutions that correct the initial problem and lead to a more effective identification and distinction between vegan and vegetarian products, but also proposes to demonstrate the contribution that design can have for the growth and visibility of plant-based movement.

Keywords Certification labels · Communication · Rebranding · Identity

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1 Introduction

V-Label is a quality and certification label for vegan and vegetarian products, managed by an NGO of the same name. The V-Label is a project supported by the European Vegetarian Union (EVU), being recognized for its high experience in animal and environmental protection and legislative intervention within the European Union. This article derives from the observation that the current design of the labels of the certification program managed by V-Label is fragile and contains graphic problems, which was seen as an opportunity for an intervention both in terms of the graphic component and strategic communication. The results that will be presented will focus on the analysis of existing problems in the brand and its respective labels, with subsequent development of a new design proposal for them, based on theoretical knowledge such as branding, shape, typography, color, and composition.

Products bearing the V-Label on their packaging mean that consumers do not need to look closely at the list of ingredients of a product to be sure that it is vegan or vegetarian. Companies and producers who decide to join the certification program can, if their products meet the criteria set by the organization, include one of the labels on their packaging. The V-Label, which has been asserting itself as a remarkable and highly recognized project, has accompanied and helped the growth of the plant-based market. The labels immediately attract potential buyers and are also a graphic indicator of a growing trend in the demand for more sustainable, healthy, and ethical products.

Efficient label design is important, not only for the companies that purchase such labels and wish to include them on their products without printing and/or production issues, but also for consumers by helping them make choices quickly, clearly and with confidence.

V-Label currently manages two labels—one vegan and one vegetarian—which are visually very similar, which turned out to be the starting point for this study. Vegan and vegetarian products are usually placed in proximity in the same sections in a store. Given that these are included in the packaging layout with reduced dimensions, it is natural and common for them to get confused. This confusion is mainly relevant for the vegan public, who do not consume products with any type of animal derived ingredient. Therefore, even if a product holds a V-Label, it may not be enough to avoid mistakes. Thus, this factor can contribute to a sense of distrust in the organization, on the part of consumers.

It should also be noted that, although "vegans remain a niche with a little over 1 percent of the population" [13], that number extrapolated to the 445 million people in the European Union [8] gives a perception of the magnitude of consumers that can potentially be affected. If the V-Label aims to help consumers interested in plant-based products to identify them clearly and quickly, the simple fact that the design of the two labels is so similar goes against the values and goals outlined by the organization, in addition to going against the principles that lead to the distinction of any object or design.

2 Thematic Framework

"Although veganism (100% plant-based lifestyle) is not a new phenomenon as such, in recent years vegan eating has gained heightened visibility in public discussion in many Western countries. The reasons for this include the intensifying discourses on animal rights-related aspects which lie at the heart of veganism, the environmental and health-related problems caused by animal production and consumption, and a new interest in vegan eating as part of sustainable lifestyle political movements" [12].

The World Health Organization defines plant-based diets as "a diverse range of dietary patterns that emphasize foods derived from plant sources coupled with lower consumption or exclusion of animal products" [31].

Therefore, plant-based diets are grouped into 6 that are considered the most common:

(a) *Vegan diets*—omit all animal products, including meat, dairy, fish, eggs and (usually) honey.
(b) *Lacto-vegetarian diets*—exclude meat, fish, poultry, and eggs, but include dairy products such as milk, cheese, yoghurt, and butter.
(c) *Lacto-ovo vegetarian diets*—include eggs and dairy, but not meat or fish.
(d) *Ovo-vegetarian diets*—exclude meat, poultry, seafood, and dairy products, but allow eggs.
(e) *Pesco-vegetarian (or pescatarian) diets*—include fish, dairy and eggs, but not meat.
(f) *Semi-vegetarian (or flexitarian) diets*—are primarily vegetarian but include meat, dairy, eggs, poultry, and fish on occasion, or in small quantities (Ibidem).

With the growing discussion regarding healthier and more ethical consumption with less environmental impact, the demand for, and consequent offer plant-based alternatives has increased. These alternatives also "provide an example of how material change may instigate reconfiguration in eating: the recent rise of vegan foods on the market has opened up opportunities for the development of novel meanings and competencies, enabling changes in everyday performance also among non-vegans" [12]. Vegan certification and labelling are increasingly established and evolving for non-food consumption [13].

On World Vegan Day 2020, the German company Veganz conducted a market study with around 2,600 participants from seven European countries, from vegans to omnivores, to understand their eating and shopping habits. According to the study, the vegan trend is strongest in Germany. Extrapolated for the current population of 83.1 million people (as of June 2020), the study results show that 2.6 million people—around 3.2% of the population—are vegan and about 3.6 million (4.4%) are vegetarian [30]. Compared with previous studies carried out in 2016, which pointed out that the number of vegans in Germany were 1.3 million, it is concluded that in just 4 years the number of vegans doubled [22, 30].

In this study, it was also possible to understand that more than 30% of participants claimed to follow a diet that aims to reduce or exclude meat, which means that there

is many Europeans who are within the spectrum of plant-based diets: 1.9% are vegan, 3.1% are vegetarian, 2.9% are pescatarian and 22.9% are flexitarian [30].

According to another recent study within the framework of the "Smart Protein" project by ProVeg, it is also visible a huge growth in the plant-based market in Europe. The plant-based food sector has grown by 49% over the past three years and is now valued at €3.6 billion. The meat alternatives sector grew by 68%, the vegetable drinks (a.k.a. vegetable milk) sector grew by 36% and the vegan cheeses sector saw a triple-digit increase—112%. And the highest of all, "plant-based fish with a 623% growth rate over the past two periods", says the report [19].

In the case of processed foods, as the ones mentioned above, consumers cannot easily determine or verify whether a product is vegan (in comparison with unprocessed food, such as fruits and vegetables). "The list of ingredients is only of limited help as it is only listing the substances that belong to the ingredients per legal definition. In addition (…) various components of food do not legally belong to the ingredients and therefore do not need to be declared in the ingredients list. These include processing aids, carrier substances, food additives and food enzymes". When purchasing or consuming a product consumers can neither prove if a product is really vegan nor if it was produced without animal derived products. "Consumers have to rely on their trust that a product labelled as vegan is truly vegan" [9].

Hence the need for labels to contain all relevant information regarding the product, even though Regulations and legislation on food labels vary enormously from country to country. "One of their primary functions is to enable consumers to make informed decisions by showing key product information and claims. Food labels can also help consumers with storage advice and give dates for safe consumption, which can help reduce food wastage. Food labels typically offer guidance on specific contents or allergens, helping people manage their consumption of these ingredients, nutrients, and calories" [17].

With so much offer available, it becomes useful for the consumer that the labels contain information to that can be read quickly so that they can understand which options are more in line with their preferences or dietary restrictions. For this reason, companies and producers choose to submit their products to a certification process. Numerous organizations offer certification for specific standards and each of them works within a different scope. From religious institutions to independent certification bodies and government institutions, there are hundreds of groups that inspect, test, and certify food products around the world using a wide range of standards. After the certification process, these organizations allow food and beverage companies and suppliers to use their certification logos or marks on their product labels to indicate that they meet those standards [15], helping them make informed choices based on their preferences: a quality label. This works as a guarantee for the producer that certain product has gone through a process and has been independently certified for meeting the necessary requirements to carry the label. The same applies to plant-based products. To be able to navigate in a sea of options and to avoid limiting issues such as reading the ingredients list, a recent V-Label report shows that consumers are increasingly relying on independent labelling to help them identify vegan and vegetarian options quickly, confidently, and transparently [24].

Due to the importance of such labels, several nonprofits that advocate for the plant-based movement also started offering certifications programs for vegan and vegetarian products. These services operate mainly (but not exclusively) in the food sector and at the same time encourage the creation of new products. The growing number of products, in turn, helps perpetuate concrete changes in society and helps to protect the animals and the environment. The certification programs consist of a license that can be acquired for any vegan or vegetarian product, if the attribution parameters are met, so that a logo or label related to the organization responsible for certification can be included on the packages. These labels are a guarantee for the consumer that the product they are purchasing actually meets all the requirements to be considered vegan or vegetarian. The labels are also visible to consumers interested in plant-based products and help vegans to shop without constantly consulting ingredient lists. They also help companies recognize a growing vegan market, as well as bringing the word Vegan—and the lifestyle it represents—into the mainstream [29].

The labels also provide a temporary solution to another dilemma that arises in the European context: presently there is no consensus around the concept 'vegan' and 'vegetarian' throughout Europe and without explicit and accurate legislation, consumers may be misled by product labeling [21]. Since there is no legally binding definition or regulation of the use of the term 'vegan' and 'vegetarian', that can lead to a lack of transparency in communication from the producers' side and there are no guarantees even if the product is described on the label as "vegan" and "vegetarian". Article 36, paragraph 3(b) of the European Food Information Regulation (EU) No. 1169/2011 lays down that the European Commission should issue an implementing act defining the requirements for the voluntary labelling of food suitable for vegans or vegetarians. Until today, this has not happened since there is no deadline for the implementing act. Despite numerous initiatives from vegetarian and vegan associations and consumer protection organizations emphasizing the importance of a uniform definition and regulation for the labelling of vegan food, especially in the light of increasing numbers of vegan consumers [9].

This is a regulatory problem that allows the existence of products with information that is not transparent or even incorrect. Many companies and producers use their own labels for their products. When creating these labels, however, they define their own criteria for vegan and vegetarian products, which results in inconsistencies. These self-made labels are not subject to checks by independent bodies, which means that incorrect labelling can sometimes go unnoticed by consumers [26]. That's why it is recommended, in order to increase credibility, that producers of vegan food should certify their products with third-party labels at least until the European Commission achieves an agreement on a legally binding definition and issue uniform regulations on the use of the term 'vegan' and 'vegetarian' [9].

3 Project Development

V-Label is an internationally recognized, registered seal for labelling vegan and vegetarian products and services [25]. It is considered an independent certification, which means that companies interested in including the label on their product contact the organization responsible for certification. After an analysis of the composition and the manufacture process, the guarantee that the products meet all the requirements and the payment of the stipulated amount, the company that invested in the label can start carrying it on the packaging of their products and including it in communication materials.

For consumers, V-Label is a guide to identify plant-based choices at a glance and for businesses is a way of increasing their trustworthiness and transparency in vegetarian and vegan labelling [27]. The Switzerland-based V-Label GmbH coordinates international cooperation on the V-Label, as the holder of the trademark rights, and is supported by the European Vegetarian Union (EVU), "an umbrella organization for numerous European organizations active in the field of veganism and vegetarianism" [28].

Following a critical analysis of V-Label's current vegan and vegetarian labels according to criteria of shape, typography, color, and composition, in order to understand whether the current design is appropriate for the target audience, whether it evokes the intended symbolic connotations, whether it is properly perceived and whether the communication of the message is clear and legible.

Terms

In this analysis, some specific terms will be used to describe the labels. For the sake of simplification and to avoid repeatedly explaining their meanings, we will present their definitions below:

Label the current design in its entirety; the term that encompasses all visual elements (Fig. 1).

Fig. 1 Visual representation of the term "label"

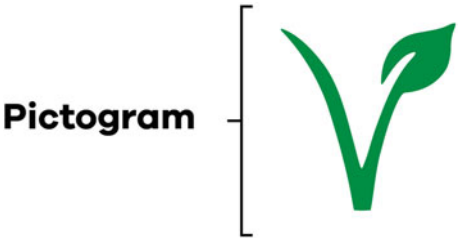


Fig. 2 Visual representation of the term "pictogram"

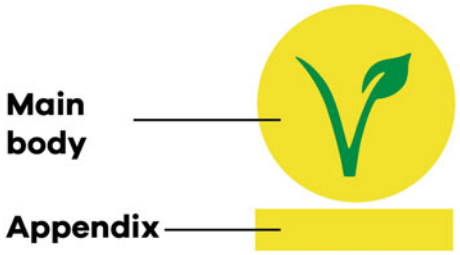


Fig. 3 Visual representation of the terms "main body" and "appendix" in terms of shape

Pictogram the icon of the letter "V" with a leaf on the upper right corner (Fig. 2).

Shape Main body and appendix: when it comes to the shapes that constitute the label, the circle that contains the pictogram will be defined as the main body, while the rectangle situated below will be defined as appendix (Fig. 3).

Text information this term will be used to define the text located in the appendix that indicates whether the product we are purchasing is vegan or vegetarian.

The text information appears translated depending on the country where the product is purchased, for example, a product certified in Portugal will be indicated with the word 'vegano' or 'vegetariano', but the same product in Germany will be indicated with the word "vegan" or 'vegetarisch'. The english version will be used for this analysis (Fig. 4).

Additional information the text placed inside the main body that follows its circular shape will be defined as additional information. It contains generic information, such as the indication of V-Label's website (V-Label.eu) and the name of the organization that originated the project (European Vegetarian Union) (Fig. 5).

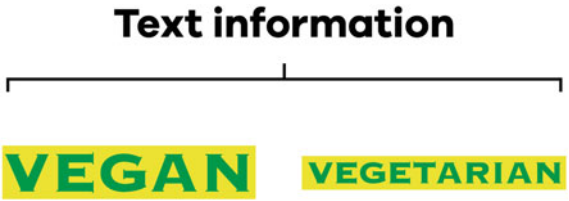


Fig. 4 Visual representation of the term "text information"

Fig. 5 Visual representation of the term "additional information"

Existing Shape

Jiang et al. concentrated their research on a basic, potentially eye-grabbing feature of logos: their shape. Consumers spontaneously generate product- or company-related imagery when processing the information, and shape-activated associations are utilized during imagery generation.

The soft versus hard associations elicited by circular and angular shapes, respectively, are found to be critical to the evaluation of physical product attributes (comfortableness and durability) and nonphysical attributes (a company's customer sensitivity). So, they came up with the hypothesis that a circular logo is likely to result in the company being perceived as more customer sensitive than an angular logo. And during their research, they demonstrated that the mere circularity/angularity of a logo is powerful enough to influence the inferences that consumers draw about products and the attitudes they have toward them [11].

The label is composed by two shapes: a circle that contains part of the information and a rectangular appendix below. It is considered that the shape chosen for the main body—the circle—works due to its simplicity, effectiveness, and appealing character. But also, for the symbolic connotations that we can associate with the brand—sensitivity, care, and nature protection (Fig. 6).

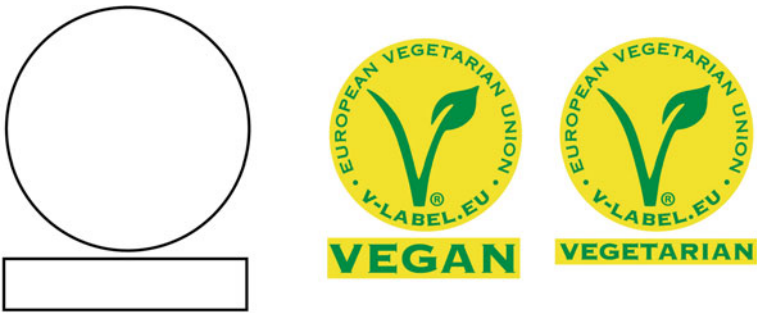


Fig. 6 Analysis of the shapes that constitute the labels

Fig. 7 Isolated word "vegan" for font analysis

Despite the choice of shape for the main body being so efficient and eye-grabbing, making the consumer associate certain qualities with the brand, a part of the information, probably the most important, is in the appendix: the information that is, nonetheless, the indication that the product we are purchasing is vegan or vegetarian.

If there are two labels and each ones serves to certify different products, it is pertinent to question whether it makes sense for both labels to have the same shape.

Main Information

As mentioned above, the label contains the information that indicates whether the product is vegan or vegetarian in the appendix located below the main body. A bold fond, with serifs (Cooperplate) in all capital letters was used for the text information (Fig. 7).

The same font was used for the additional information, but on a smaller scale within the composition of the label, when compared to the text information.

"When talking about typefaces, designers and researchers discuss two main issues: readability, overall ease of reading; and legibility, recognizing individual letters. The conventional wisdom is that serifed typefaces have higher readability. This is because the serifs lead the eye in a line across the page" [20].

Serifs can be described as extensions, protrusions, or finishing strokes extending from the ends of a character. They also serve to distinguish typefaces with similar shapes from each other are said to enhance readability by guiding the eye from one character to the next [23].

However, in the case of the label, the text information consists of a single word that is usually applied in small bodies of text. So should the ease of movement of the eye across the page even be a concern?

When selecting text type, production issues should be considered. For instance, when going very small, there's a possibility for disappearing thin strokes and other details, especially when printed [23].

Assuming that the label will mostly be perceived in reduced size, as it is usually added to packaging without being its focus and without overpowering the design composition, it makes sense to question whether the use of a serif font is appropriate. In this case, a serif font contains details that not only can be lost in the printing process but will also not add much legibility to the single word text information.

The usage of a serif for the additional information can also be questioned for the reasons mentioned above. These reasons are exacerbated by the fact that the additional information is present in an even smaller size within the composition of the label, which suggests that even more details could be lost in the printing process.

It is considered the usage of capital letters and a bold font as positive points.

The use of boldface is a good way to achieve emphasis by way of weight contrast and works even better for stand-alone words or phrases. If na even stronger emphasis

is desired, all caps can be very useful if utilized sparingly and intentionally, as it creates a very noticeable emphasis [23].

Due to the importance of the message that wants to be conveyed in the text information, it makes perfect sense it appears in a bold font in all caps.

Color Palette

Of the design elements available to the designer of visual communications, color and contrast play key roles in visual perception, and the strategic use of these can contribute to the effectiveness of visual communications design. Color and contrast have the capacity to enhance the cognitive organization of incoming visual information as per the Gestalt 'laws' of visual perception, a theory that remains a reference to design practices.

When it comes to visual communications design, line and form are clearly important design elements; however, it is color and contrast that plays a more important role in terms of visual communications design due to their role in attracting attention and their capacity to enhance or mitigate the Gestalt laws of perception [18].

The label contains the pictogram, the text information, and the additional information in a dark green color over a bright yellow background. It is considered that these are two highly contrasting shades, which is a very positive aspect. But if there are two labels and if each serves to certify different products, it is again pertinent to question whether both labels should have the same color (Fig. 8).

It can also be questioned if a consumer suffers from a condition that makes it difficult to distinguishing colors, what solutions can be put into practice to handle such situations.

For example, in the case of a colorblind consumer, the condition doesn't mean that they can't see any color at all, or that they see things in grayscale. It's a decreased ability to see color, or a decreased ability to tell colors apart from one another. Color blindness should be taken into consideration for anyone in the design field, since color theory is an integral feature in successful design, and a lot of decisions are

Fig. 8 Analysis of the colors that constitute the labels

based on the feeling and emotion derived from colors. It is important to cater for a widest audience and mitigate possible issues with the design [7].

4 Composition

In V-Label's case, the label doubles as the seal quality for vegan and vegetarian products and as the company's logo.

Logos (or labels in this case) are particularly important in stores as a means of speeding recognition of products [10]. If the labels are critically analyzed, it can be seen that these are basic compositions, with just a few elements, but that the only difference between them is the text information located in the appendix. Even so, that difference will only be noticed after an effort to read the text—"Vegan" or "Vegetarian" (Fig. 9).

The rationale is that pictures are perceived faster than words. This is important because many company communications are seen for only a brief time, for example when walking by products on shelves a supermarket [10], like in the case of V-Label.

If logos should accelerate the recognition of a brand or company, if images carry more weight than text and if the consumer, generally, only perceives the logo in a short period of time, it can be questioned whether the visual strategy of basing the entire distinction between the two labels on a small text body is the most efficient.

4.1 Problems Survey

Globally, consumers are increasingly looking for healthy, ethical, and cost-effective products with low environmental impact, which is driving the demand for vegan and vegetarian alternatives.

Fig. 9 Visual representation of the conclusions drawn from the visual analysis of the labels and their distinctive elements

Fig. 10 V-Label's vegan and vegetarian labels with application of the Gaussian Blur effect in Photoshop at 15 pixels

With the growing number of options available, consumers are increasingly relying on independent labelling [24]. Thus, the importance of V-Label's work but also the importance of an effective design.

After an analysis of V-Label's current label design, it was possible to identify a series of issues that can be easily resolved through the intervention of the designer. The questions raised during the analysis were:

Does it make sense that both labels have the same shape?

Does it make sense the usage of a serif font that contains details that could be lost in the printing process and that will not add legibility, or even identity to the text?

Does it make sense that both labels have the same color?

Does it make sense to base the whole distinction between labels in the text information located in the appendix? (Fig. 10).

If the labels are submitted to a blur test (applying the Gaussian Blur filter at 15 pixels on Photoshop), simulating the way they could be perceived by a consumer with a poor sight, there is proof that there are not enough elements that allow for a proper distinction between the vegan and the vegetarian labels. This similarity can cause confusion and demands an extra effort to carefully examine the label.

This visual similarity between these two seals is not in accordance with the company's own identity—to bring clarity and security to the consumer.

This article's goal is to answer each of the questions raised through a redesign project and, in the end, obtain distinct solutions, which communicate a clear message, in accordance with the company's values and which respond to the anxieties of consumers.

The relevance of this project lies in the fact that the V-Label sells two similar labels for different attribution criteria. This alone is proof enough that there are big differences between plant-based products. And the difference them products should be clarified and communicated.

4.2 Project Program

A redesign project should take into consideration the equity the company has already built around their identity. Many times, however, significantly change brand identity might mean going a step too far when all that's needed is a refinement of the design. When the identity has become a little dated or has communication issues but consumers' familiarity with it is high, it is often enough to make small adjustments and fine-tune the design. These improvements should refine and consolidate the visual identity [1].

As concluded in the critical analysis, the current label has some deficiencies in terms of design and communication, but it also has positive aspects that can and should be considered when redesigning it. The degree of recognizability points to the fact that the current label should not be radically altered, and principle of continuity should be adopted.

Familiarity

"Logo recognition occurs at two levels. First, consumers must remember seeing the logo (correct recognition). Second, logos must remind consumers of the brand or company name (recall). The former depends largely on the design itself. Given equal exposures, a more memorable design will be recognized more easily than a less memorable one. Therefore, facilitating recall of the company logo starts with selecting a design that is recognized easily" [10].

Some logos will create a sense of familiarity even when they have never been seen before. This could be the result from a logo evoking a familiar meaning or from the design being like well-known symbols. Familiar-looking stimuli tend to be perceived and processed faster, which is particularly important for logos.

Either way, familiarity can benefit a logo because it can increase affect, create more consensually held meanings and a more cohesive image. and even enhance choice of a brand if brand experience is limited. A sense of familiarity can be maximized by selecting a unique, but easily interpreted, design of a familiar object (Ibidem).

"Collectively, color, symbol, shape, and lettering contribute to what Lightfoot and Gerstman define as visual equity. Visual equity is the value derived from 'visual form', that is the 'look and feel' of the brand. Visual equity contributes towards brand recognition (…) helps to communicate a brand's desired image" and, especially in V-Label's case, it enables a brand to stand out on the supermarket shelf [2] (Fig. 11).

Based on these concepts and the brand's own history, it makes sense that the redesigned labels do not radically break with the current V-Label design. Thus, in

Fig. 11 Pictogram with the letter "V" with a leaf at the top right top as the familiar element to bridge the gap between the current design and the redesign proposal

order to adopt a principle of continuity with the pre-existing label, it was decided to keep the pictogram of the "V" with a leaf that both characterizes and makes the current label recognizable. Thus, a familiar element is maintained for the consumer, which allows both correct identification and recall of the brand.

Shape

The choice to keep the pictogram implies the use of other strategies to increase the distinction between the vegan and vegetarian labels. Color and typographic composition will play an important role, but other strategies should be explored. This is especially important to avoid possible confusion in case the consumer suffers from a condition that makes it difficult to distinguishing colors or even when printing in high contrast.

"Form is generally more resistant to environmental variation relative to color. Perception of color is sensitive to changes in the angle from which a viewer perceives them as well as by the brightness of the environment. Shape and form, by contrast, are less affected by such situational variation. Form more so than color detail provides information about the essential nature of depicted objects. (…) Although there may be times in which color can be critical for identification—such as when the color of a tomato (green vs. red) signals its palatability (less edible vs. more edible, respectively)—generally speaking, color relative to form is less informative about the essential nature of objects and is treated as redundant or unnecessary information" [14].

As for the issue of the base shape being the same for both labels, this appears not to make much sense, since the shape is a key element in communication. Not only is it an element that is easy to work with and adapt within the composition, but it also has the greatest resistance to variations in situation.

As such, it is intended to make the distinction not only through color and typographic composition, but also through shape, by choosing two basics but clearly different shapes. As previously mentioned, the circle was a good choice for the current V-Label and can clearly be used for the redesign of one of the labels, leaving only a second shape to be chosen for the other label.

Form can be analyzed according to different criteria and functions. Chen et al. developed a study on recognition with the argument starting with the degree of simplicity and raised some new questions that concern the memory and recognition of form. It was questioned whether regular figures are better remembered than irregular ones simply because they contain more synthetic visual information. There was an observable bias in perception for simple configurations, straight lines, circles, and other simple orders in opposition to random shapes in their day-to-day lives [3], 365–74).

Chen et al. also mentioned a visual perception experiment conducted by Hochberg, that presented silhouette forms, where it was concluded that the threshold for recognition was the lowest with the simplest form: first the circle; secondly the rectangle (Ibidem) (Fig. 12).

Having these concepts in mind, it makes even more sense to keep the current shape of the V-Label—the circle—for one the labels. And it also makes sense to use

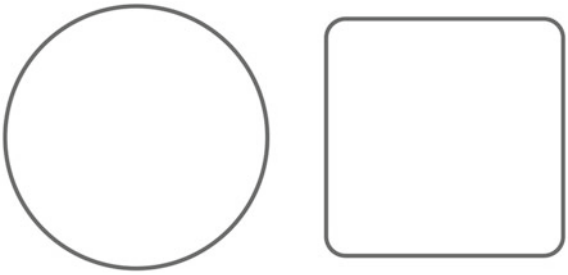


Fig. 12 Distinct shapes chosen for the labels' redesign proposal

a square shape for the second label. Since the word "vegetarian" is longer than the word "vegan", the square shape will be assigned to the vegetarian label. The square will have rounded corners to maintain the same visual language as the circle.

Typography

"Typefaces create atmosphere. They spark emotions and express historical, contemporary, or cultural connotations — all before the text is read. Subtle messaging via the physical characteristics of typefaces prompts viewer participation. Some faces are casual or dignified, others mechanical or playful". A fitting typeface personality makes an impression and when text in limited quantity, such as title pages or short headings, striking display faces work nicely [5].

If early roman letters designed for printing were based upon early handwritten manuscripts and the roman capitals carved on the buildings of the Roman Empire.

It seems, therefore, logical to reason that traditional and historical factor played a major part in the custom of using typefaces with serifs for text in the Western world.

The legibility theory of roman typefaces was developed after romans had been used a considerable time for text, and not because they are presumably superior in legibility. It was only in the beginning of this century that sans serifs were designed in greater numbers.

According to McLean the first sans serif appeared in Britainin 1816 and the first lowercase sans serif in 1835.

If first letters designed for typographic printing were based in imitating the blackletters that copyists drew with a pen, in order to make the printed book equal to the book made in the medieval scriptorium, they rapidly shifted form and sought inspiration from the *capitalis monumentalis* carved on buildings of the Roman Empire—upper case—and the Carolingian alphabet (commanded to be drawn by Carlos Magno) —lower case—also inspired by Roman manuscripts, made on waxed boards or papyrus. It therefore seems logical to conclude that there were factors based on history and tradition that played a role in the current use of serif fonts. In contrast, the emergence of sans serif fonts dates to a more recent period, more precisely from the grotesque typefaces of the early nineteenth century [6].

With these concepts in mind and circling back to the choice of a serif font: in addition to the problems already mentioned, namely the possibility lost details in the printing process without any increase in the legibility, a font with serifs has an

Fig. 13 Text information when applied the chosen font for the redesign proposal

associated historical component and a more conservative personality. For the labels' redesign, it was decided to adopt a more modern and striking approach through typography, proceeding with a bold, geometric, with high readability sans-serif font (Fig. 13).

Choosing a geometric and sans-serif font also tackles any potential issue that a serif font could bring to the printing process. This font will be used for both the text and the additional information.

Composition

It's often explored the idea that graphic simplicity allows for a better identification and recognition of images, objects, or ideas. But how can the concept of simplicity be inserted in the context of V-Label's redesign—where the labels are already, by themselves, simple compositions widely recognized by the public?

Graphic simplification aims to express the characteristics of an object clearly and additionally make it more recognizable and memorable. Simplifying a design can be more difficult than adding elements to it—simplification means not only deleting the details of the objects, but also emphasizing key points on specific details [3], 365–74).

Taking this concept into account, it can be argued that V-Label's original design, despite its simple composition and recognizability, the detail that there are two distinct vegan and vegetarian labels was not emphasized. That said, one might even argue its total recognizability—the public may be familiar with the colors and shapes of the label and may even look for it while shopping. But they also may fail to properly identify the label of the product they are purchasing, confusing the vegan with the vegetarian label.

Murchie and Diomede explained that the signal to noise ratio is a useful concept to determine the amount of information to present where clearly communicating information (high signal) with minimal degradation due to excess material (low noise) is the goal. When in doubt, simplicity should be chosen over complexity, by taking away everything in a visual (including text) until there are only the essentials there [16].

In the redesign proposal, in addition to the changes already mentioned earlier in terms of familiarity, shape and typography -, it was decided to take advantage of some elements of the current composition—namely the pictogram of the "V"—and part of the additional information that mentions the V-Label website. The remaining additional information—namely the indication of the organization European Vegetarian Union—and the appendix, will not be included. These were considered as non-essential elements that add noise to the composition.

The description of how the elements will be organized follows.

We opted for a centered design, within the limits of the shape. It was considered unnecessary to add more text information or appendices outside such limits (Fig. 14).

Regarding the typographic composition, due to the length of the word "vegetarian" (when compared with the word "vegan"), it was decided to divide it into 3 parts. The typographic arrangements of the words in 3 lines, or 1 line, respectively, are yet another differentiating element between the two labels (Fig. 15).

Inside the main body, the letters intertwine with the pictogram in an organic composition. Merging the elements allowed for the text information to grow and occupy a large percentage of the label without taking away from the familiar element that is the pictogram (Fig. 16).

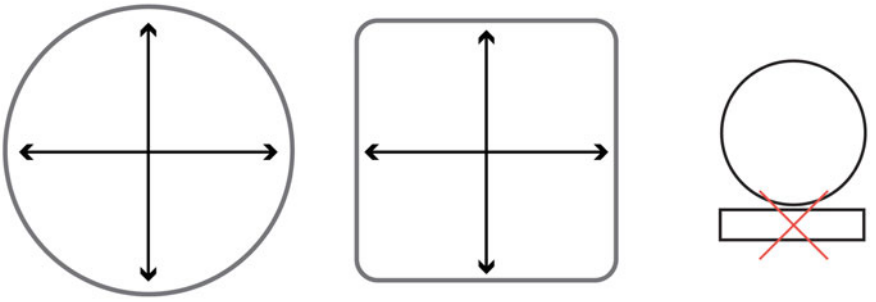
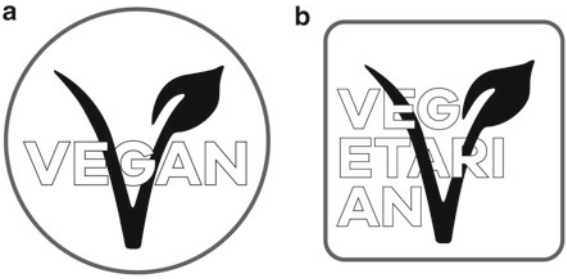


Fig. 14 Centered composition without appendices

Fig. 15 Composition of the text information

Fig. 16 Combination of elements: shape, text information and pictogram



Color

When revisiting the matter of the labels' color, even though it has already been argued that color should not be taken as the only and most important distinguishing factor, it is nevertheless pertinent to pick different colors for the labels. The limitations of basing the distinction on color alone are:

(1) the consumer may suffer from a condition that makes color distinction difficult.
(2) the producer may want to print the labels in high contrast or in just one color and
(3) the perception of color is sensitive to changes in the angle from which a consumer perceives them as well as by the brightness of the environment [14].

However, color combined with other elements of the composition is another available means to reach the objectives of the labels' redesign.

Color, if appropriately selected, may bring inherent and immediate value to the brand, like a carefully chosen name. Colors evoke a variety of associations that, without prior conditioning, can be used to communicate a brand's desired image in the consumer's mind [2].

Next, the results of applying color to the labels are presented.

For the labels to have different colors, the yellow was kept as the dominant color for the vegetarian label and the colors green was assigned for the vegan label for its association with nature and plants. Since the design elements are grouped within the label's limits, it was important to select a neutral color for the text, in this case white. The pictogram was kept in the same shade of green of V-Label's branding, not only for the sake of familiarity, but also for contrasting with the new proposed colors.

On the original V-Label uses primary yellow, in CMYK color mode with 100% yellow. But since the redesign proposal doesn't make use of appendices and concentrates the information within the label's limits, the legibility of white text would be compromised on a background in CMYK color mode with 100% yellow, so it is proposed to add 25% magenta.

A white frame/border It was also added to ensure that the labels always stand out, even when applied on backgrounds with images or similar colors to the ones used (Fig. 17).

Fig. 17 Final proposal for the labels' redesign

4.3 Evaluation of Design Results

An online survey was conducted on a platform called Jotform, aiming to demonstrate the efficacy of the redesign proposal. A multiple-choice form was created that contained images of similar vegan and vegetarian products already certified by V-Label and participants were asked to identify the vegan products in the images as opposed to the vegetarian one.

All clues present on the packaging that alluded a product's suitability for a particular diet were eliminated, for example, words like "vegan", "egg" or "cheese". The only indicator that allowed the distinction between vegan and vegetarian products was the label.

The survey consisted of three initial questions related to the age, country, and diet of the participants, followed by 12 questions with product images (6 with the current V-Label and 6 with the redesign proposal) where participants were asked to identify the vegan products. On the final question, participants should state which labels they thought allowed for a better identification, the current or the proposed ones (Figs. 18 and 19).

In the 12 questions aimed at identifying the vegan product, there were images with the products side by side and identified as A and B. The participants could choose between the answer "A", "B" or "non-perceptible". The latter was placed for cases in which it was not possible to identify the vegan product at all. Several examples were presented, such as individual and similar products from the same brand, similar products from different brands, groups of similar products from the same brand, groups of different products and from different brands—to reflect how these could be perceived on a supermarket. The response time of each participant was measured

Fig. 18 Products containing the current label design

Fig. 19 Products containing the proposed redesigned label

in each of the 12 questions with product images, to find out whether the redesign proposal would allow for faster identification of the vegan product.

One of the limitations of this study stems from the fact that the questions do not appear in a random order as the participant is filling out the survey.

The results obtained are presented below. In this analysis the term "current design" refers to questions containing product images with the current V-Label and the term "redesigned proposal" refers to questions containing product images with the labels developed for this study (Figs. 20, 21, and 22).

The survey had 100 participants, the majority aged between 18 and 47 years old. More than half of the participants are in Portugal (58%), followed by Macao (16%) and Germany (13%). Most respondents identify themselves as followers of a flexitarian diet (41%), followed by an omnivore diet (37%) and a pescatarian diet (9%) (Fig. 23).

In the 12 questions aimed at identifying the vegan product, the 100 participants were able to correctly identify the vegan product on average 83.5% of the time.

In the 6 questions that refer to the current design, the sum of the correct answers of all participants is 478, which means that vegan products were correctly identified 478 times. On average, the 100 participants were able to correctly identify the vegan product 79.6% of the time, which is below the average.

In the 6 questions referring to the redesign proposal, the sum of the correct answers of all participants is 524, which means that vegan products were correctly identified 524 times. On average, the 100 participants were able to correctly identify the vegan product 87% of the time, which is above the average.

Still in the 12 questions aimed at identifying the vegan product, the 100 participants said that the difference between a vegan and vegetarian product was not perceptible on average 10.92% of the time.

Fig. 20 Participants' age

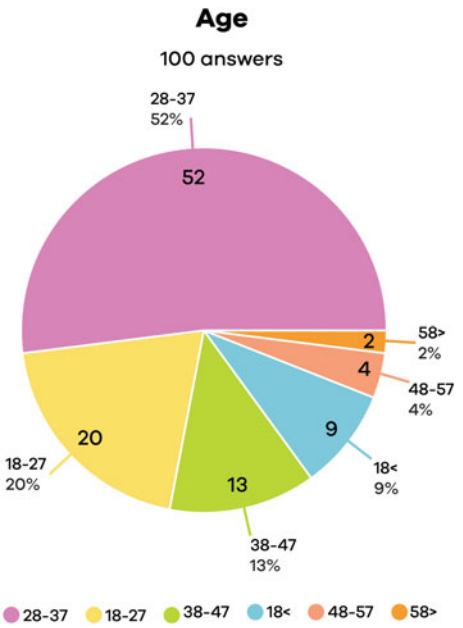
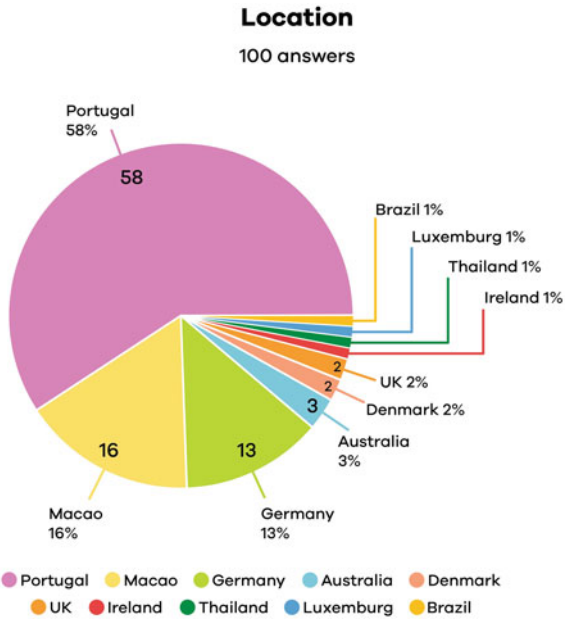


Fig. 21 Participants' location



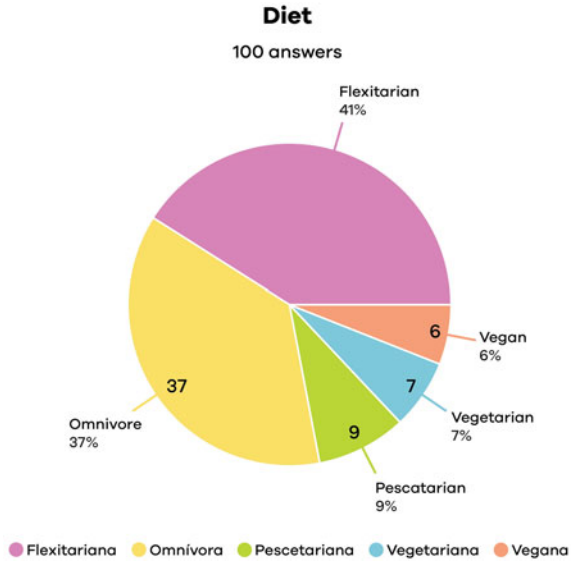


Fig. 22 Participants' diet

Average time					
		Current design		Design proposal	Global
	Quest. 4	00:02:50	Quest. 7	00:01:41	
	Quest. 5	00:02:20	Quest. 8	00:01:30	
	Quest. 6	00:01:53	Quest. 9	00:01:21	
	Quest. 10	00:01:14	Quest. 11	00:01:01	
	Quest. 12	00:00:52	Quest. 13	00:00:43	
	Quest. 14	00:00:34	Quest. 15	00:00:23	
Average response time		00:01:37		00:01:06	00:01:22

Correct answers					
		Current design		Design proposal	Global
	Quest. 4	79	Quest. 7	82	
	Quest. 5	86	Quest. 8	90	
	Quest. 6	85	Quest. 9	86	
	Quest. 10	76	Quest. 11	88	
	Quest. 12	83	Quest. 13	90	
	Quest. 14	69	Quest. 15	88	
Total correct answers		478		524	
Average of correct answers		79.66666667		87	83.5

"Non-perceptible" answers					
		Current design		Design proposal	Global
	Quest. 4	14	Quest. 7	12	
	Quest. 5	11	Quest. 8	5	
	Quest. 6	13	Quest. 9	7	
	Quest. 10	20	Quest. 11	9	
	Quest. 12	11	Quest. 13	5	
	Quest. 14	18	Quest. 15	6	
Total "non-perceptible" answers		87		44	
Average of "non-perceptible" answers		14.5		7.333333333	10.91666667

Fig. 23 Results obtained on the online survey: average response time, correct answers, "non-perceptible" answers

In the 6 questions referring to the current design, the sum of the "non-perceptible" answers of all participants was 87. On average, the 100 participants said that it was not possible to identify the vegan product 14.5% of the time, which represents a number above the average.

In the 6 questions referring to the redesigned proposal, the sum of the "non-perceptible" answers of all the participants is 44. On average, the 100 participants said that it was not possible to identify the vegan product 7.3% of the time, which represents a number below the average.

The average response time recorded for each participant for each of the 12 questions was 01:22 s. The average response time for the 6 questions referring to the current design was 01:37 s while the average response time for the 6 questions referring to the redesigned proposal was 01:06 s. The time that each participant took on average to identify the vegan product is lower when products carry the redesigned labels (Fig. 24).

which label do you think works best to allow for a better identification?

In the final question, participants were asked to express if they had a preference on which labels should be used to identify vegan and vegetarian products. 80% of respondents said they preferred the redesigned labels. 14% of respondents said they preferred the current labels and 6% said they had no preference.

Through this survey, it was possible to conclude that the labels developed for this study were well received by the respondents, with 80% of them expressing their preference for the redesigned version. More importantly, it was possible to verify that the proposed redesign of the labels led to more correct identifications of vegan products or groups of products, and that the identification occurred in a shorter time, when compared to the current label design.

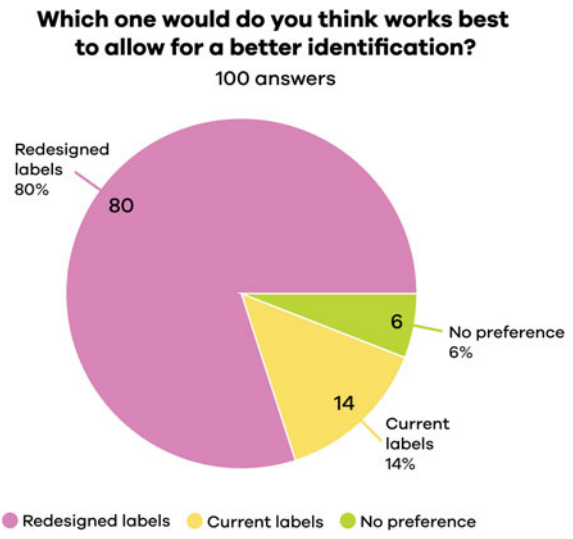


Fig. 24 Results obtained on the online survey final question:

4.4 Final Considerations

This study aimed at redesigning V-Label's vegan and vegetarian labels so that their identification and distinction would be clearer and more efficient. The pertinence of the redesign is premised on understanding the current social context regarding the growth in the number of supporters of plant-based diets, the role played by organizations that advocate for plant-based movement and how the manage certification programs for vegan and vegetarian products. The success of the project stems from the recognition of a need to clearly identify plant-based products and graphic interventions based on theoretical knowledge about branding, shape, typography, color, and composition.

Using V-Label's specific case and its current labels design, it was possible to conclude that the differentiation between them is insufficient, considering their use in a store context, where usually vegan and vegetarian products are found in the same sections, with the labels applied in a small scale the product's packaging. The analysis of the current visual aspect of the labels, made it possible to derive the existing problems and how they could be solved, leading to a design improvement and the creation of communication strategies in accordance with the organization's goals. The solutions presented are the result of a literature analysis, which allowed the construction of a solid project, based on specific methodologies of the discipline.

After the online survey, it was possible to conclude that the presented solutions allow for a faster identification and better distinction between vegan and vegetarian products. The proposed solutions led to better recognition by consumers, regardless of their level of prior knowledge of the labels themselves or the of the certified products. It is highlighted the role of design as a support for the growth of the plant-based movement. In addition to fulfilling the functional requirement of a proper identification of plant-based products, the labels also allow for a clear distinction between the adequacy of the product to a given diet. The proposed labels also reflect the innovative aspect of the organization, which intends to keep up with the current trends, while supporting the plant-based movement with innovative projects and solutions.

It is recognized that the project should be continued in the future, namely in the deepening of communication strategies and standardization of all the company's communication platforms, such as website and social media. This project should also lead to discussions regarding progresses that are being made in the food sector and regarding new products that will emerge soon, that can be an important piece to reduce humanity's environmental footprint without compromising taste. For example, it is expected that soon it will be possible to purchase lab grown meat and fish, which, despite not being plant-based products, could be considered cruelty-free products. It would be interesting to discuss what visual solutions can be found that allow organizations to certify these product categories.

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