

# Boranka - the largest volunteer reforestation campaign in Europe in terms of the number of volunteers and the number of planted trees

Lovorka Gotal Dmitrović <sup>1\*</sup>, Darijo Čerepinko <sup>2</sup>, and Nikola Jozić <sup>3</sup>

<sup>1</sup> Assoc.Prof. PhD of the University North, Croatia, University Center Varaždin, Križaničeva 31b, Varaždin, Croatia

<sup>2</sup> Assoc.Prof. PhD of the University North, Croatia, University Center Varaždin, Križaničeva 31b, Varaždin, Croatia

<sup>3</sup> PhD student of the University North, Croatia, University Center Koprivnica, Trg Žarka Dolinara 1, Koprivnica, Croatia

**Abstract.** Public education campaigns and strategically used public relations tactics could enhance broad goals of environmental protection and restoration through building awareness and enticing to action. In case study of Boranka, one of the most successful non-profit ecological campaigns it is presented how by using element of green marketing, smart PR strategies, easy-to-use tools and engaging, emotinal story a number of people could be brought together into collective eco-friendly action. Over the course of four years Boranka resulted in more than 100,000 new trees that have been planted in burned areas throughout Croatia with more than 8,500 volunteers participating in seeding activities while over the HRK 2,170,000 (over the €288,000) was collected in funds and almost HRK 5,000,000 (about €664,000) in material goods, services and advertising space.

## 1 Introduction

Forest fires represent a great danger for forest lands and forests in the Republic of Croatia, especially in the southern (Mediterranean) parts of the country. According to Rosavec [1], increased danger is present in all areas under the influence of the Mediterranean climate. Fires degrade the ecosystem and disrupt its stability, which reduces biodiversity and increases the relaxation of the area.

In the last two decades of the 20<sup>th</sup> century, the annual burnt area in the Mediterranean countries was estimated at about 600,000 ha, which is almost twice as much as during the 70's of the 20<sup>th</sup> centuries. In the period from 1998 to 2004, there were a total of 115,666 fires covering a total of 1,250,892 ha. From 1996 to 2005, there were a total of 3,324 forest fires in the Republic of Croatia, of which 2,792 or 84.00 % were in the karst area. The total burned area in the karst and continental areas of Croatia is 183,015 ha, of which the karst area

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\* Corresponding author: [lgotaldmitrovic@unin.hr](mailto:lgotaldmitrovic@unin.hr)

accounts for 175,199 ha or 95.73 %. The average burned area per fire in the karst area is 62.75 ha. [2]

The danger of forest fires is due to significant climate changes, which are constantly increasing (long hot summers, warm autumn, strong winds, long periods with very high temperatures). As the number of fires and their destructiveness increases from year to year, huge forest complexes disappear, the appearance of the environment changes, the quality of the forest soil deteriorates, the ecological balance is disturbed, and the damage to the economy is enormous and difficult to compensate.

Unfortunately, the cause of almost 99 % of all fires is an anthropogenic factor: burning of weeds on agricultural land, thrown unextinguished cigarette butts, unextinguished campfires, various environmental incidents. [2] Fires, whether caused by human carelessness or by chance, are one of the most important factors in shaping landscape diversity. [3]

Unlike progressive succession, in which plant cover develops in the direction of the most complex, in our country, climatic and paraclimatic forest communities, fire acts in the opposite direction. It initiates a regressive succession, i.e., from the forest phytocenosis to the simplest ones - stony, grassland, garig, maquis, scrub, etc. The impact of a forest fire on vegetation, erosion and soil composition is manifested in changes in the concentration of organic matter, the content of salt and mineral nitrogen in the surface soil layers. [4]

Restoration is carried out by biological (planting and sowing of plants) and technical works (protective works to preserve climazonal vegetation) on afforestation with pioneer species. Planting is mostly focused on conifers (black pine (*lat. Pinus nigra*), coastal pine (*lat. Pinus pinaster*), common cypress (*lat. Cupressus sempervirens*) and Arizona cypress (*lat. Cupressus arizonica*)), in contrast to planting where deciduous trees (honey oak (*lat. Quercus pubescens*), black ash (*lat. Fraxinus ornus*), black hornbeam (*lat. Ostrya carpinifolia*), European nettle tree (*lat. Celtis australis L.*)).

## **2 Public relation campaigns and their role in environmental protection**

Since its introduction as corporate and later as a tool for political campaigns, public relation practices were often seen by ecological activists and scholars alike as a mean used against public goods and environmental protection goals with history of discreditation of important independent voices and ecological figures throughout the world. Concept of Corporate Social Responsibility (CSR) that was introduced during the latter half of twentieth century also often played the green card with high probability of alienating customers when the policy of the corporation was at odds with what was presented through communication [5]. However, more and more individuals, companies and activists were using tools and practices of public relations [6] to convey a message and incite actions important not only for environmental protection but also for adaptation of new beliefs, habits and behaviors that could improve different important environmental and social issues.

Grundey and Zaharia [7] proposed eight elements to be considered when analyzing ecologically oriented marketing activities. Those elements are: (1) Targeting, (2) Green design, (3) Green positioning, (4) Green pricing, (5) Green logistics, (6) Marketing waste, (7) Green promotion and (8) Green alliance. Targeting would consider new ways of advertising, development of new brands and whole units dedicated to principles of green and ecologically friendly products. Green design would consider minimizing all sorts of offset in the process of production – an executive decision closely related with green pricing, green logistics and waste management. As a final results green promotion should become the normal strategic policy of the organization which will enable forming of green alliances across the stakeholder spectrum and bring them all closer to whatever goal the organization sets to reach either environmental or social goals.

Smart use of public relation tactics and strategies could, for example, enhance recycling [8] or driving [9] habits. Research [10, p. 49] found that “public relations ranked higher in effectiveness than advertising or marketing in nine areas: (1) brand reputation, (2) corporate reputation, (3) cultivating thought leaders, (4) strategy development, (5) launching a new product, (6) building awareness, (7) generating word of mouth, (8) message development, and (9) overcoming a crisis”. When ecological issues are considered especially important are the areas 6 to 9 and combined with new product launch it could bring the most effective results, as will be shown later in the article. If such an approach is united with elements of marketing activities shown in [7], public relation theory predicts a successful outcome of overall campaign activities [10, p.131].

To achieve effective PR campaign, or to determine its value, it is essential to follow and grade basic elements of campaign planning [10, p. 182]: (1) Situation; (2) Objectives; (3) Audience; (4) Strategy; (5) Tactics; (6) Calendar/timetable; (7) Budget; and (8) Evaluation. Situations in which an organization is forced to use public relations cover problem solving and crisis situation, launch of a new product or dealing with special, usually one-time issues such as environmental crisis or forest fires. Strategically, it is important to define guidelines for achieving stated objectives through audience involvement and their expected response to a message sent through appropriate communication channels. When all the elements are selected properly, audience response to call to action message should be realized in attaining the key performance indicators (KPI's), as certain ecologically oriented approaches show [11].

### 3 Project implementation and results

The national campaign – Boranka was organized by the Scout Association of Croatia (*cro. Savez izviđača Hrvatske - SIH*) in partnership with Croatian State Forests Enterprise (*cro. Hrvatske šume*) and the Croatian Mountain Rescue Service (*cro. Hrvatska gorska služba spašavanja - HGSS*). Starting on September 1<sup>st</sup> 2018, main goal of the campaign was to encourage the public to actively participate in the reforestation campaign. The idea was to provide the opportunity for the people to “create new life from the ashes” by using crayons made from the ash remnant after the fire to make drawings that could be uploaded to an online website and application and thus for every drawing of the tree one new tree was planted.

The crayons are called Boralice (a wordplay consisting of the Croatian word for pine (Cro. BOR) and bojalice or bojice – Croatian word for crayons). Crayons were distributed through mass media, public institutions, schools, kindergartens, but also in other public spaces and the campaign that followed invited people to “plant” their drawn tree in the virtual forest on boranka.hr with a possibility for a donation of some symbolic sum to cover for other expenses.

During the 4 years of campaign more than €952,000 was collected in funds, material goods and services, and more than 100,000 trees were planted with the help of 8,500 volunteers. Since the Republic of Croatia has 3,871,833 inhabitants according to the latest population census, of which 175,783 are children under the age of 5 and 181,804 are children between the ages of 5 and 9, and 868,638 people are over 65 [12], the campaign involved about 0.32% of the active population of the Republic of Croatia.

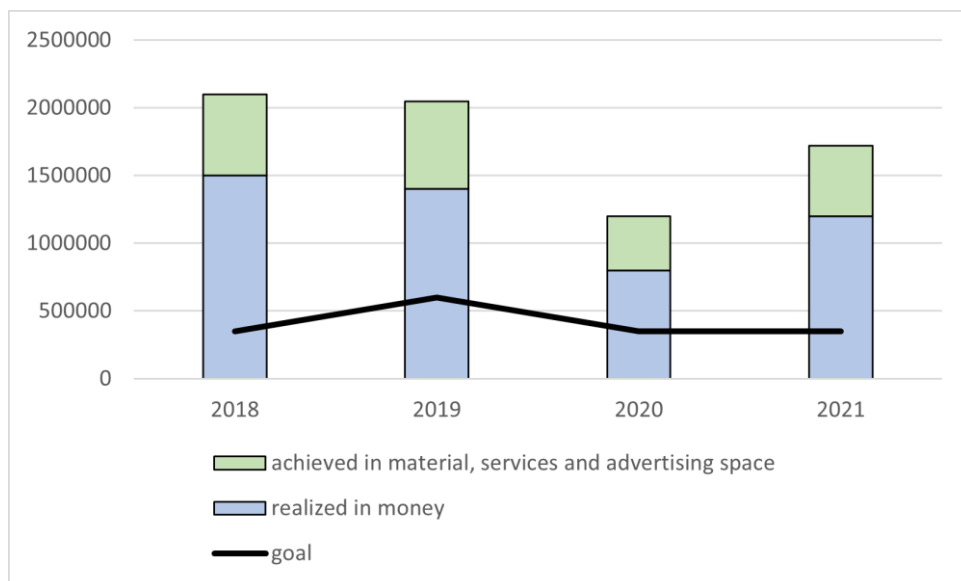
The creative and visual identity of the campaign was designed and implemented by the Imago Ogilvy company and the Bornfight agency created a web application of “virtual forest” at [www.boranka.hr](http://www.boranka.hr), all free of charge. Brand of Karbon (part of Eurocom Group) manufactured Boralice, a pastel crayon (also free of charge) and distributed 150,000 pieces during the campaign. Volunteers organized by the Association of Croatian Scouts (*cro. Savez izviđača Hrvatske – SIH*), Croatian Forests (*cro. Hrvatske šume*) and the Croatian Mountain Rescue Service (*cro. Hrvatska gorska služba spašavanja - HGSS*) were responsible for

planting a real seedling at the sites and participants that uploaded their drawing were able to trace the location, name the tree and be a part of its “upbringing”.

Boranka became one of the most awarded non-profit campaigns in the history of Croatia and the Association of Scouts of Croatia (*cro. Savez izviđača Hrvatske – SIH*) won the European Citizen Award for 2020, an award for exceptional achievements in the promotion of European values and unity granted by the European Parliament.

### 3.1 Collection of financial resources from sponsors and donations from citizens

At the beginning of the campaign in 2018, the goal was to collect funds for afforestation with 10,000 seedlings, saplings, and seeds to cover the anticipated cost of HRK 350,000 (about €46,500). Based on the results from 2018, a more ambitious goal of HRK 600,000 (about €80,000) was set for 2019. Due to the situation with COVID-19, it was uncertain whether the project would continue and in what form so the goals for 2020 and 2021 were set as they were in the initial year of HRK 350,000 (about €46,500). The presentation of goals and results of the donations from sponsors and citizens for each year respectively is presented in Figure 1.



**Fig. 1.** Financial resources

In 2018, more than HRK 600,000 (about €80,000) in funds and HRK 1,500,000 (about €200,000) in material goods, services and advertising space were gathered following the increase in 2019 with more than HRK 650,000 (over €86,000) in funds and HRK 1,400,000 (about €186,000) in material goods, services and advertising space collected respectively. During the pandemic years more than HRK 400,000 (over €53,000) was gained in 2020 and HRK 520,000 (over €69,000) in 2021 in funds and HRK 800,000 (over €106,000) in 2020 and HRK 1,200,000 (over €159,000) in 2021 in material goods, services, and advertising space respectively.

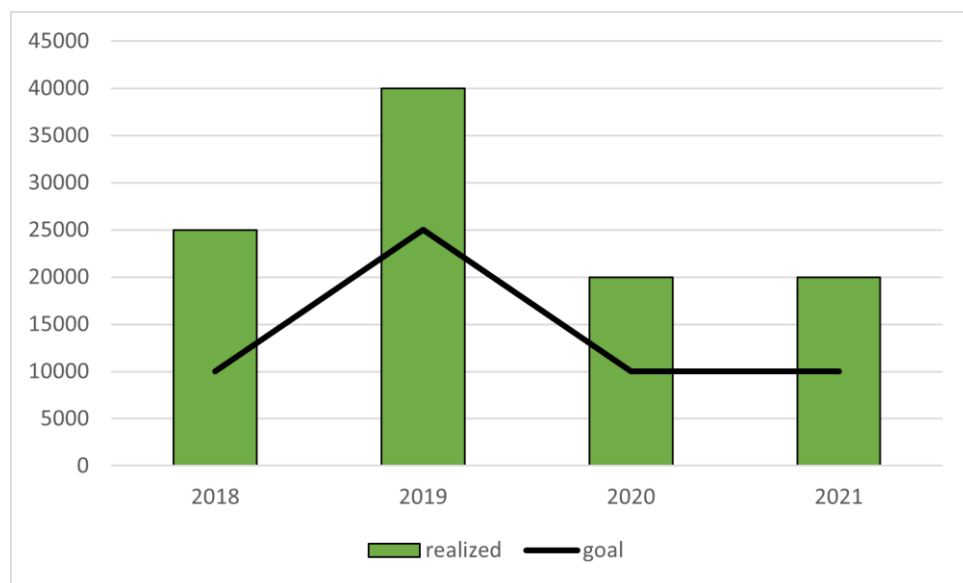
In 2018, the funds received surpassed the targeted sum by 71 %. There was 300+ appearances in commercial and non-commercial media with estimated value of more than HRK 1,800,000 (about €239,000). In 2019 surpass in funds was 8 % and there were 350+

media clips amassing almost HRK 2,000,000 (about €265,500) estimated in advertising value.

In 2020, the financial goals were exceeded by 15% with 200+ campaign appearances estimated at advertising value of HRK 1,000,000 (about €133,000), even though focused on public sphere was concerned with direct dangers of pandemics and earthquakes that hit Croatia during the months of March and December. For the fourth year in a row in 2021 the goals were exceeded by more than 50 %.

### 3.2 Planting of new trees on burnt areas

Annual goal for new trees planted in burnt areas was defined regarding the expected number of volunteers who could plant the seedlings and seeds. In 2018 the goal was relatively modest but after initial impressive results the goal for 2019 was upgraded. In 2018, the goal was to plant 10,000 trees and in 2019 25,000 trees respectively, but during pandemic years reduced to pre-pandemic numbers. The relationship between the goal and the results for planting new trees on burnt areas is shown graphically in Figure 2.



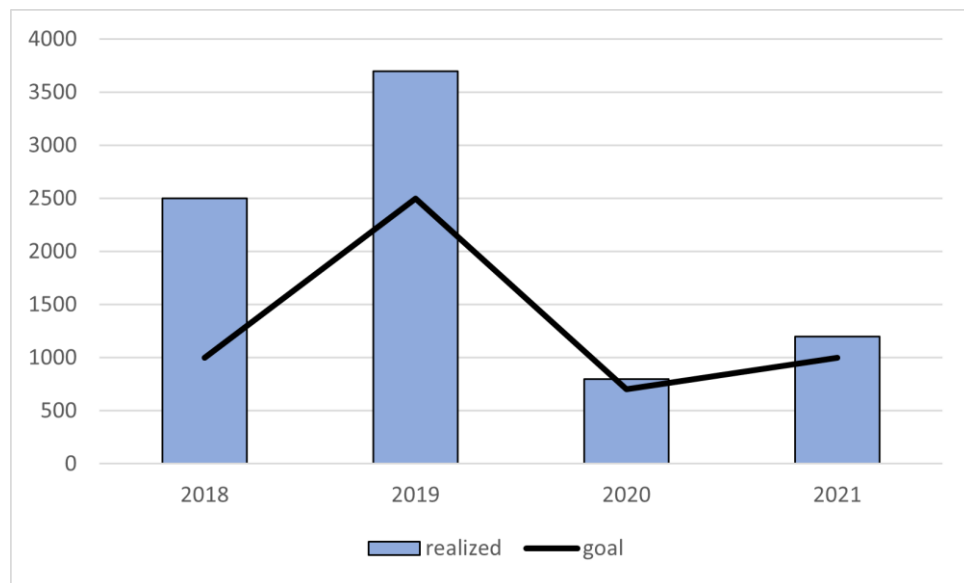
**Fig. 2.** Planting of new trees

The number of planted trees (seedlings and seeds) in 2018 was 25,000, in 2019 40,000, in pandemic years it was 20,000 trees per year. In the first year, targeted number was surpassed two and a half times. In 2019, 75 % more trees were planted then planned, while in 2020 and 2021, twice as respectively because the planting had to follow special epidemiological measures, which made the planting operations very difficult.

### 3.3 Number of volunteers

The goal for 2018 was to attract 1,000 volunteers, and more than 2,500 responded. According to overwhelming response, the goal for 2019 was to engage 2,500 volunteers, and more than 3,700 were supported the efforts. Again, during the pandemic years the goals were reduced due to epidemiological conditions, and the goal was to attract 700 volunteers in 2020 and 1,000 volunteers in 2021. In 2020, 800 volunteers responded, and in 2021, more than 1,200 (Figure 3).

In the first year, the goals were exceeded by 250 %. In the second year, despite setting more ambitious goals, almost 50% more volunteers than planned responded. In the third and fourth years, the goals were also exceeded (even 15 % and 20 % more volunteers participated than the target).



**Fig. 3.3.3** Number of volunteers

### 3.4 Communication strategies and design goals

When the process of building the product and the communication campaign is analyzed through elements of the ecologically oriented marketing [7] as presented in Table 1. It's obvious that the project included the green marketing ideas from the start. Bringing the reused ash into the hands of the public allowed for them to experience the dismay of the burnt tree and simultaneously use it to make a world a better place – as a goodhearted person, the main target audience, would do.

**Table 1.** Overview of the elements of the ecologically oriented marketing activities

Targeting	All the goodhearted people with focus on volunteers, parents, young people, children, business community, NGO's, other organizations in civil sector, government institutions, media, and influencers.
Green design	Product is made through reuse of leftover ash from burning sites.
Green positioning	By participating in activities and using the product through fun and user-friendly interface and application all the targeted groups have the opportunity to improve the devastated eco-system.
Green pricing	Cost of time and effort. All the production and logistic costs covered through donations.
Green logistics	Use of the network of the Scout Association of Croatia and partners, sponsors and participating organizations funded by donations. Part of the crayon sets delivered through partnership with printed media (included with daily newspapers).

Marketing waste	Waste of the product is minimized. Crayons could be used for other purposes. Production is optimized through EuroKarbon partnership.
Green promotion	Boranka Public relations campaign and public education campaign in schools and kindergartens. Public relation activities delivered through support and partnership with major media outlets. Co-branding with sponsors and partners.
Green alliance	Scout Association of Croatia ( <i>cro. Savez izviđača Hrvatske – SIH</i> ); other project partners. 31 sponsors in the first year with number of organizations and individuals (famous athletes and artists; politicians, foreign ambassadors etc.) steadily rising through the years.

When describing targeted audiences Imago Ogilvy Agency stated that they paid special attention to following groups: (1) parents, because they are motivated by the desire to leave a better world for their children; (2) young people, because they are full of energy, optimism and faith that they can change the world; (3) children, because lessons learned in childhood affect and define the rest of our lives and define the direction of future generations; and (4) business community and organizations, because they increasingly lose contact with nature and often forget the importance of its preservation, although many companies have a sustainable development policies and practices.

Smart use of a public relations tools and tactics presented in Table 2. ensured the campaign success.

**Table 2.** Strategic areas used in public relation campaign

Brand reputation	Build from scratch as a ecologically and socially responsible project that enables people of Croatia to reforest the burnt areas while simultaneously having fun
Corporate reputation	Building on the reputation of Scout Association of Croatia ( <i>cro. Savez izviđača Hrvatske – SIH</i> ) and other partners project developed a strong sense of nature protection, conservation, and restoration.
Cultivating thought leaders	Use of the heads of the Scout Association of Croatia ( <i>cro. Savez izviđača Hrvatske – SIH</i> ) and other influential individuals to promote the green ideas among youth and children and to teach the importance of fire prevention as well as other goals stated above.
Strategy development	Use of fun activity reused materials and interactive web site to foster participation and awareness. Use of the influential individuals and partnership with media outlets to reach the audience. Reminder-campaigns to reinforce the initial campaign goals.
Launching a new product	Cooperation with major media outlets in delivering the crayons to broad number of interested individuals. Launching event with planting a first tree.
Building awareness	Media presence. Public education campaign in kindergarten and schools. Co-branding with other socially responsible brands. Collaboration with influencers, famous persons, community leaders etc.
Generating word of mouth	Through events access to targeted audiences and interactivity of the web site.



Message development	Based on positive and emotional response: You can do something even if only through drawing and use of a web site. Your action online counts. Furthermore, an emotional promotional video was created calling public to action.
Overcoming a crisis	Careful selection of partners in every segment of the campaign.

### 3.5 Overall results

Apart from results presented in chapters above, Boranka campaign also attain the great interest of educational institutions and more than 20,000 children participated in educational activities organized by the Scout Association of Croatia and project partners. Immediately after the second year of the project, Boranka was included in the elementary school textbooks for the pupils in the 6th grade as an example of successful nature protection and restoration project.

Over a period of 4 years, the campaign managed, without refreshing the creative concepts, visuals and messages, to maintain the interest of the public and continuously managed to encourage people to donate and to act – all this despite the pandemic and the earthquakes diverting the focus of the public (and the media).

After Prime Minister Andrej Plenković showed his appreciation for the project by personally planting a tree in the first year, in 2020 the President of the Republic of Croatia Zoran Milanović joined the reforestation campaign. The broad interest of the public and educational institutions resulted in the opportunity for Boranka to be presented in the Croatian Parliament in 2018 and referred as the “biggest volunteer reforestation action ever held in Croatia”, which was followed the successive years by the "Pride of Croatia" award and the Gold Medal for Special Merit awarded by the Croatian Parliament.

Over the years, Boranka has won numerous marketing awards, both national and international. Internationally, Boranka won an award as best experiential campaign of 2018 in SEMPL Festival (Slovenia), as well as two golden awards at Balticbest Festival in Tallin, Estonia and Golden Euro Effie at Effie Awards Europe in Brussels, a success even more important because it was non-profit sector campaign and it was the first time a campaign from Croatia or the region of South East Europe wins one of the most important marketing awards in Europe. Campaign won number of national awards too, being one of the most successful campaign in the recent decades.

As the crown of the campaign's success, in 2021, Boranka was awarded the European Parliament's renowned "European Citizen" award for 2020, for merits in spreading European values.

## 4 Conclusion

Fires look scary and people are often instinctively involved in extinguishing them very quickly. But when the fire stops, many people think that the fire problem has been successfully solved.

In cases where there are no human casualties or material damage to personal belongings, the fire is quickly forgotten as if nothing had happened. It is forgotten that the importance of the forest for the life of all of us is much greater than burnt cars, real estate or other urban infrastructure. And that's why it is just as important as putting out the fire to restore the destroyed vegetation and to turn the burned areas back into a green forest. It is much more difficult to motivate citizens to take that step, and that is why it is necessary to give them a simple, inspiring tool that will get them started. It is necessary to enable them to feel that they



have the power to make something positive and useful with their hands - that they have the power to create a new life from ashes.

The idea of the Boranka campaign was to create a unique tool that would inspire people and enable them to get involved in the reforestation of burned areas. Classic means of advertising cannot achieve a strong enough impact on the wider community, therefore a unique promotional material was designed — Boralice.

Special crayons called Boralice were made from the ashes of the fire, and 115,000 of them were distributed to the citizens via the daily newspapers. Everyone was able to feel the ashes from the fire on their own hands, which aroused a special emotion that made it possible to connect the individuals with the project in a special way, and also showed that only small effort that is also fun is needed to create something useful. Most importantly, the Boranka offered a plausible promise of reforestation through drawing, donating and caring for the tree that was planted through the online platform boranka.hr. The site provided a virtual and interactive map of forest in which everyone could "plant" their tree, drawn on paper, by photographing their illustration and placing it on the page. The users could choose exactly where their tree would "grow" and what it would be called.

At any moment it was possible to revisit the virtual forest and look for the personalized tree that was planted. With an optional symbolic donation, the virtual tree becomes a real one that was planted on burned areas in the largest volunteer reforestation campaign in the history of Croatia.

Thus, a new life was born from the burnt ashes, a new green forest was created from the black embers. Because of its uniqueness, Boranka generated numerous media exposures and mentions, build a network of sponsors and partners and involve influential individuals – social and political leaders, famous artists and athletes and many other who wanted to be a part of a unique effort mediated mostly through digital channels.

In addition to media exposure and other public relation activities, the campaign was promoted through billboards, flyers, newspaper inserts, print ads and social networks to reach a wide target group and achieve defined goals.

Along with the mentioned promotional activities, Boranka also built a presence in educational institution engaging children and youth. Numerous educational activities were held in schools and kindergartens throughout Croatia.

The children had the opportunity to learn more about the consequences of fires and the importance of forest conservation. At the educational workshops, Boralice were also distributed and children drew trees that they would like to see in the future at the current fire sites.

But it was not enough to mobilize the public and educational institutions. In order to collect the targeted funds, the project needed help from various other organizations and institutions aiming on those stating importance of social responsibility and dedicated to such activities and sustainable business practices.

Therefore, the communication strategy for approaching companies was based on a careful selection of partners that were approached with special communication packages that were created to naturally fit into the communication of an individual brands. In addition, the communication campaign was timed in such a way that it allowed additional partners and sponsors to join even after the launch.

During the development of the product the elements of green design were used in order to stay candid and reliable, as shown in the previous chapters. The notion of sustainable and eco-friendly and important project is enhanced by the reputation of the main project partner - the Scout Association of Croatia.

Concerning public relation strategies, it is essential to craft a message that was easy to understand, to offer user-friendly ways of participation and to present an activity that is not time-consuming, fun if possible and delivering on a promise it would matter. Boranka

delivered on all the green design and public relation strategies and tactics mentioned above and for a reason is considered one of the most successful campaigns and projects of its type in Croatia and possibly abroad.

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