



STRATEGIES FOR SUSTAINABLE EVENTS

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Foreword

The Ministries of Education and Economic Affairs, in the Netherlands, are investing in knowledge development through Centres of Expertise. Those are extensive collaborations between universities and the industry with the aim to make knowledge richer and more accessible.

One of these is the Centre of Expertise for Leisure, Tourism and Hospitality (CELTH), which has been running since 2013. It is an initiative of the following University of Applied Sciences: NHTV (Breda), HZ (Vlissingen) and Stenden (Leeuwarden). In CELTH there is close collaboration with national and international industry, and with the academic universities of Wageningen, Tilburg and Groningen, building on previous activities in the field of education and research.

CELTH aims on developing and distributing knowledge about leisure, tourism and hospitality, so this domain is better able to co-drive the sustainable social and economic development of society. The focal areas include: future consumer behavior, new value creation and sustainable development. In this booklet we highlight some of the results of the CELTH project "Sustainability Strategies for Events." This project ran from September 2015 to December 2016.

Hans Dominicus
Director of CELTH



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INTRODUCTION

Marisa P. de Brito and Elena Cavagnaro



Photo credit: Lindsay Fox
Website: EcigaretteReviewed.com

The Netherlands boasts a large events and festivals sector. More than 700 festivals are organised annually, with over 3000 visitors attending. The business is also becoming more competitive, with nearby countries like Germany and the UK also offering a large portfolio of events.

The Dutch sector wants to become more sustainable and enhance competitiveness. Therefore, the Green Events platform was established in 2014 to stimulate and exchange knowledge of environmentally friendly events. This is one of the key partners of this CELTH project, bringing in the participation of eight large Dutch festivals: Amsterdam Open Air, DGTL, Extrema Outdoor, Into the Great Wide Open, Mysteryland, Solar Weekend, Welcome to the Village, and Zwarte Cross. These festivals have a good track record for innovative concepts and are considered forerunners in working towards sustainability. At the same time they are looking to move ahead still further. Those eight festivals, together with Green Events and Stitching Nederland Schoon have signed a Green Deal with the Dutch central government with the intention of becoming waste-free festivals (see Table 1.1). Two other major partners in this project are the

Green Deal

Green Deals are agreements between the Dutch central government and other parties. Those other parties can be companies, civil society organizations and local/regional governmental bodies. The Green Deal helps to carry out sustainable plans by setting up sustainability targets for energy, water resources, biodiversity, mobility, waste, and other aspects.

In a Green Deal, the government tries to eliminate bottlenecks in sustainable plans by modifying laws and regulations, by bringing organizations together and being a negotiator/mediator when needed, or by helping in the development of innovative solutions or tools.

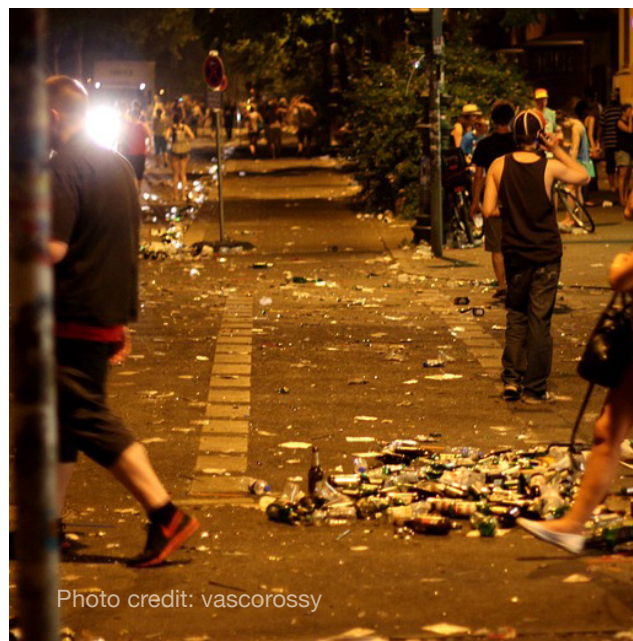
▲ *Table 1.1. Green Deal. Source: www.rijksoverheid.nl*

1 CELTH project: Sustainability Strategies for Events (2015-2016).

2 <http://www.greenevents.nl/index.php/green-deal/>

3 The results regarding this specific objective will appear at Wilco Camp's Master thesis, Stenden University of Applied Sciences, forthcoming (2017).

Municipality of Leeuwarden and one of the major Frisian festivals, Welcome to the Village (WttV). Leeuwarden has been chosen as European Capital of Culture in 2018 and has committed in the Bid Book to deliver a sustainable event. In January 2016, WttV got together with other major Northern Dutch festivals to found Innofest, an initiative co-financed by the European fund for regional development to work on innovations for festivals. Innofest approaches festivals as a living lab for innovation to foster sustainable development. It focuses on five themes: waste, energy, logistics, temporary buildings and water.



Waste is not only undesirable in an environmental and social sense, but also in terms of business. Resources are paid for beforehand and end up wasted. Reducing waste is not only a step towards environmental sustainability—it can boost the economic health of a festival. Waste has therefore been chosen as the main research theme for this CELTH project. The project aims were threefold: 1) assessing strategies to tackle specific waste issues, such as cigarette butts and plastic cups, 2) understanding the effect of waste on the experience of festival visitors, and 3) providing tools for festivals. Regarding the latter, a particular aim is checking on the applicability of existing green certification schemes in the context of Leeuwarden 2018 given its specific objectives to foster the 5E (Ecology; Entrepreneurship; Empowerment; Europe and Experience) and the concept of *mienskip* (a Frisian word for ‘open community’) on which these are based.

Partners of this CELTH project	Directly involved
KNOWLEDGE PARTNERS	
University of Applied Sciences (UAS) NHTV, Breda University Stenden UAS	Research Groups: Events & Placemaking (NHTV); Sustainability in Hospitality and Tourism (Stenden)
SECTORAL PARTNERS	
Green Events (representing 8 festivals)	DGTL
Municipality of Leeuwarden (representing Leeuwarden 2018)	Welcome to the Village

▲ Table1.2. Partners of this CELTH project

This project, Sustainability Strategies for Events, was conducted by NHTV and Stenden University of Applied Sciences (UAS) under the auspices of CELTH from September 2015 to December 2016. Both NHTV and Stenden UAS have a line of research on Sustainability & Events. This project therefore builds on previous research from these two UAS's. In particular it builds on the line of research of Dr Marisa de Brito, senior researcher of the "Events & Placemaking" research group, NHTV Academy of Leisure; and on the research of UAS professor Dr Elena Cavagnaro, head of the "Sustainability in Hospitality and Tourism" research group on drivers of pro-social and pro-environmental behaviour.

Relevant Websites

Innofest

<http://innofest.com/>

Green Deal "Wastefree Festivals"

<http://www.greendeals.nl/gd-187-afvalvrije-festivals/>

Green Events

<http://www.greenevents.nl/>

2018 Leeuwarden

<http://www.2018.nl/>



Dr Marisa P. de Brito, lecturer and senior researcher on sustainability and the circular economy at the research group "Events & Placemaking" of the Academy of Leisure at NHTV, University of Applied Sciences.



UAS Professor Dr Elena Cavagnaro, head of the Research Group "Sustainability in Hospitality and Tourism", on drivers of pro-social and pro-environmental behaviour at Stenden University of Applied Sciences.

2

CIGARETTE BUTTS: VIEWS AND TOOLS

Marisa P. de Brito

Photo credit: Reinald Kirchner

Why?

“Cigarette butts are the most common form of litter in the world, as approximately 5.6 trillion cigarettes are smoked every year worldwide” (Slaughter et al., 2011). Almost all smokers throw their cigarette butts on the ground. Many assume that the cigarette will deteriorate easily without major consequences. Although controlled composting can accelerate deterioration, almost all filters are made of more than 12,000 acetate fibres, which can take from 18 months to 10 years to deteriorate¹. Cigarette butts in contact with water will leak hazardous chemicals such as cadmium, arsenic and lead within the hour, polluting waterways and damaging living organisms. Thus, the environmental impact of cigarettes is far underestimated.

Though many festivals have environmental programs, priorities often lie in areas other than waste alone. Often attention is reserved for plastic waste, campsite waste (including leftover tents and camping material), materials left behind when dismantling stages, and so on. This is not surprising: these forms of waste have been the focus of abundant research and practices. Cigarette waste and its challenges have attracted less research attention. At the same time there have been recent technological advances in cigarette recycling, and there are more solutions for cigarette waste collection. It is therefore time for a new look at this issue.



The objective here is to gain insight into:

- a) the views of festival visitors regarding cigarette butts waste at festivals
- b) steps to be taken by festivals regarding cigarette waste

How?

The research was conducted by consulting offline and online resources, and by field research. The latter included individual interviews, a creative session with festival visitors (both smokers and non-smokers), and expert interviews with festival organizers.

Cigarette butts

- § Awareness
- § Perception (litter)
- § Preventing
- § Remarks from festival visitors.
- § Known or practiced concepts.
- § How to implement rethinking / changing the mindset.
- § The sustainability message you want to get across
- § Engagement and co-creation with the visitors.
- § Reuse reduce recycle.

▲ Table 2.1 Experts' interview: topic list

Cigarette butts

- § Festival selection
- § Experience
- § Feedback
- § Personal view on cigarette litter
- § Contextual influence on littering

▲ Table 2.2 Festival visitors' interview: topic list

What is known

Cigarette butts on the ground are not considered a big nuisance by most people. Since the streets in Dutch cities are cleaned often (removing about 80% of the cigarette butts from the ground), the bulk of cigarette litter is not visible. At the same time and because other waste is also removed, the remaining 20% is likely to be noticed (NederlandSchoon, 2015)

Almost all smokers throw their cigarette butts on the ground when smoking outdoors. Research shows that for some smokers only law enforcement would prevent them from littering. More than 50% claim they would change behaviour upon being better informed of the negative environmental effects, while about 80% of smokers state they would throw their cigarette butts in a suitable ashtray if available². However, research from Australia suggests that smokers will not walk more than 12m to find a street ashtray. Smokers also prefer dedicated ashtrays with a good design so their hands remain clean (Campbell, 2007).

It is known that disorder generates disorder. The so-called 'broken window theory' predicts that if visible damage to a building is not quickly repaired or visible littering is not swiftly cleaned, people feel free to act against social norms such as littering, damaging public and private property and even stealing (Wilson and Kelling, 1982; Keizer, Lindenberg and Steg, 2008). Thus, waste attracts waste.

What do festival visitors think?³

Before and after the festival

Though there is research indicating that about 50% of festival-goers are inclined to pay a higher

entrance fee to help lower its ecological impact (Moore, 2012), the cleanliness of a festival is not the first thing potential visitors think about when purchasing a ticket. The interviewees, smokers and non-smokers, were unanimous about this:

"... I visit the festival for the music, people and the atmosphere of it. Not by the look of cigarette butts on the ground."

Likewise, the cigarette waste at the festival is not something that sticks in visitors' minds once the festival is over.

During the festival

- Both smokers and non-smokers consider cigarette butts to be waste.
- Smokers are not bothered by cigarette litter on the ground:

"... It is so normal."

"People are just too lazy to go somewhere and throw them away properly."

- Non-smokers are bothered by cigarette litter on the ground:

"I always thought it was disgusting but since it is so 'normal' I never paid attention to it. But with all the rubbish on the ground I always make sure I wear closed shoes. So now thinking about it, I would love it if all that rubbish would not be on the festival grounds anymore."

"...Cigarette butts do not belong on the ground."

Footnotes

1. See Special Issue on The Environmental Burden of Cigarette Butts at the Journal "Tobacco Control", Issue 20 (1), May, 2011. Accessible at http://tobaccocontrol.bmj.com/content/20/Suppl_1.toc.

2. www.schoongooienvecht.nl

3. The results here are based on the interviews with festival visitors (smokers and non-smokers), unless stated otherwise. All the interviews took place in Breda in September/October 2015.

4. The results here are based on the interviews with festival organisers, unless stated otherwise. All the interviews took place face-to-face or via email September/October 2015.

What do festival organizers think?⁴

- Flicking cigarette butts on the ground has always been socially accepted.
- Whether cigarette butts are perceived as a problem depends of the location of the festival.
- When a festival takes place at a beach, butts must be sifted out by hand, which is costly.
- Cigarette butts on the ground are not (yet) perceived as a problem.

“No one has ever complained about it”

In addition, and though interviewed festival organizers so far have not experienced cigarette littering as a large problem (and therefore have not been particularly proactive about it), they are open to new options for cigarette waste.

What factors reinforce littering?

- Product context: it smells bad and needs to be extinguished.
- Personal context: lack of awareness of environmental damage + laziness.
- Psychological context: smokers are not bothered by cigarette butts on the ground.
- Social context: it is acceptable.
- Physical context: no proper alternatives to littering (lack of infrastructure).
- Environmental context: waste attracts waste.

What can help?

Here we present both existing and potential concepts that can be adopted by festivals in dealing with cigarette waste. The different concepts can be used to simply create awareness, to collect the cigarette waste stream separately, or to innovate established partnerships to recycle the waste. Each festival can determine its next step according to its ambitions and means.

Considerations to take in stimulating the collection of cigarette butts at festivals:

- Fun and interactive
- Easily accessible
- A reward system (risk: non-smokers may

feel discriminated against)

- Affordability (costs versus gains)
- Co-creation and/or participation
- Recycling opportunities: cigarette butts are recyclable



Photo credit: Asher Floyd

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CATEGORY	CONCRETE EXAMPLE
Infrastructure	<ul style="list-style-type: none"> - (Portable) cigarette ashtrays - (Sand) cigarette receptacles - Floor tiles for cigarette butts - Sticking boards for cigarette butts
Guerilla Campaigns	Giant Cigarette Butts by Carbon Creative & Keep Britain Tidy https://www.carboncreative.net/2014/news/big-butts-small-buttsits-small-problem/
Partnerships	Cigarette Recycling (e.g. Terra Cycle) http://www.terracycle.nl/nl/
Playfulness	“Caution Smoking Hot” Areas Playful Bins (e.g. glowing in the dark or polite bins) Play with your Vote http://www.stembak.nl/
Powerful Campaigns	“If you don’t pick it they will” (endangering wildlife campaign) https://adsoftheworld.com/media/print/endangered_wildlife_trust_lighter by Endangered Wildlife Trust, South Africa
Products made of recycled cigarettes	e.g. bricks http://www.archdaily.com/tag/recycled-materials
Street Art	3D Chalk (e.g. Leon Keer 3D work commissioned by city of Breda) http://www.streetpainting3d.com/3d-breda-brabantplein

▲ Table 2.3 *What may help?*



Dr Marisa P. de Brito, lecturer and senior researcher on sustainability and the circular economy at the research group “Events & Placemaking” of the Academy of Leisure at NHTV, University of Applied Sciences.

3

WELCOME TO THE VILLAGE
FIGHTS AGAINST CIGARETTE BUTT

Elena Cavagnaro, Wilco Camp, Amber Herrewijn

Why?

Together with Malta, the city of Leeuwarden in the Netherlands has been elected European Cultural Capital for 2018 (LWD18). With events such as Into the Great Wide Open (Vlieland), Welcome to the Village (Leeuwarden), Oerol (Terschelling), the Harlinger Visserijdagen (Harlingen) and the Frisian Solar Challenge Race, LWD18 hopes to attract 3 million visitors to the region in 2018.

All events to be organized during LW2018 are intended to showcase its main principles. These principles are summarized in five E's: Europe, Entrepreneurship, Empowerment, Experience and Ecology. Ecology includes themes centring on economy and energy; water; food and sustainable agriculture; nature and landscape. One of the ambitions expressed in the Bid Book is to become the most sustainable Capital of Culture ever and to leave a positive legacy in terms of environmental protection and socio-economic development.

Nature and landscape are very important for outdoor festivals and even more so when these festivals are held in green areas that have also a key recreational function throughout the year. This is the case of one of the major Frisian festivals, Welcome to the Village (WttV). WttV is a music festival held annually in July nearby Leeuwarden in the so-called 'Groene Ster', a green area with a beautiful lake that is used as recreational space by the surrounding communities. WttV is very sensible to the positive and negative impact that the festival can have on the natural environment, and has

already implemented several sustainability measures through the years. Interestingly, WttV sees itself as a small community mirroring all the socio-economic and environmental challenges of larger communities, such as providing food for its inhabitants, offering good transportation options, generating energy and managing waste. In contrast to real communities, the community of a festival is closed by a fence and therefore easily controllable. In this sense, festivals offer a perfect setting to experiment with sustainable solutions that, if successful, can be applied to the wider society. Thanks to this vision, WttV responded very favourably to the proposal to join the CELTH research 'Sustainable Strategies for Events' and after some consultation asked the researchers to focus on the issue of cigarette butts. As was shown in Chapter 2, cigarette butts are an issue at festivals and have also a major negative impact on the environment.



Photo credit: Unsplash

How?

The aim of the project was to nudge event participants into not throwing cigarette butts on the ground. Nudging is a form of intervention where people are gently led to act in a more appropriate way. Previous research has shown that smokers refrain from throwing a cigarette on the ground when the ground is clean and when there are easily accessible options to properly dispose of the cigarette butt (Tchinda Tsayem & Cavagnaro, 2013). Therefore we chose an appropriate location at the festival (a location with clear boundaries) and planned three consecutive interventions: to clean the ground completely before the start of the first act (day one); clean the ground and distribute portable ashtrays (day two); clean the ground and set up boards where people could stick their cigarette butts to help form a work of art (day three).

Day	Intervention
1.	Clean the ground completely before the start
2.	Clean the ground completely before the start Distribute portable ashtrays
3.	Clean the ground completely before the start Set up (arty) boards where people can stick their cigarette butts

▲ Table 3.1 The experiment at WttV: interventions per day

To measure the success of the interventions, three complementary techniques were used: counting of the butts left on the ground, observation and mini-interviews. Smoker behaviour was observed, e.g. whether they looked for a way to dispose of a cigarette butt properly or directly threw it on the ground. Smokers were interviewed to understand why they did or did not throw their butts on the ground and to discuss their appreciation of the different interventions. The cigarette butts were counted at the beginning and at the end of the day to have a general idea of the magnitude of the problem before and after each intervention. The final count was done before dusk.

Where?

The research area on the festival grounds was approximately 2,375 m², about one tenth of the total festival grounds. The area consisted of a stage area with dance floor, a grass area with some seating and a bar area. The area had its own programming and was named 'Blessum' by the festival organizers.



▲ Figure 3.1 'Blessum' the festival area where the experiment was held.

What?

During the three day festival quantitative as well as qualitative data was collected. In this section, a short overview is given of the main and most interesting findings per day. The findings are then compared and analysed to evaluate the success of the interventions that were taken. An overview of the lessons learned concludes the chapter.

Day 1 Baseline measurement

At the start of the first day of WttV the research area was swept clean of cigarette butts and other litter. During this day only observation was used to detect the normal behaviour of smokers. Researchers observed whether smokers were looking for a way to dispose properly of their cigarette butts; whether they were throwing them directly on the ground immediately or after having found no alternative; or whether they were creating other options such as (for example) using a drink cup to dispose of the butts. Researchers were very careful to prevent influencing behaviour. After a period of four hours and after the closing of the afternoon programme the research area was swept completely, yielding a count of 651 butts with an average of 275 visitors per hour to the site. Calculation shows the average disposal of 0.59 cigarette per person per hour. Although observation was challenging during the most crowded hours of the time frame, observations proved that almost all visitors threw their butts directly on the ground. The few visitors that tried to discard their butts otherwise had to search for a place to do so or had to resort to creating their own solutions such as using a cup as ashtray. When the area was swept for the final counting of the day, visitors started to ask questions to the researchers on what they were doing. When explaining the project most visitors pointed out that they were not really aware of this being a problem and that there were no easily accessible alternatives to dispose of their cigarette butts.

Day 2 Portable ashtray intervention

The first intervention to be tested was portable ashtrays.

The area was cleaned at the start of the day, counting 1,612 butts. These butts were left during the night programme, a period where no observation or other interventions were held. When the musical programming of the day began, portable ashtrays were actively handed out by the researchers ensuring that all smoking visitors entering 'Blessum' had access to a portable ashtray. On this day visitors were asked whether they were planning to use the ashtray and if they thought it was a good solution to the problem of cigarette butts on the ground. At the end of the day and seven hours after the start of the programming, 612 butts were swept from the ground, with an estimated average of 425 festival-goers visiting the area per hour. The result was an average of 0.20 butts discarded per

person per hour. It could therefore be concluded that the intervention with portable ashtrays on day 2 resulted in a decrease of 65% compared to the baseline measurement on day 1. When asked if they would use this solution over 90% of the visitors (60 out of 67) answered positively.

Accepting the ashtray

"Great solution, love this!"

"I have been looking for these"

"I will use this for sure (but maybe less when I am drunk)"

"Cool!"

"Really? for free?!"

"I feel ashamed to through it on the ground, but I could not find an ashtray anywhere"

Declining the ashtray

"No pockets"

"These things stink"

"It won' t matter cigarette butts are already everywhere"

▲ Table 3.2 Some quotes from visitors who accepted/rejected the ashtray.

Several visitors also suggested improvements to make this solution work even better such as:

- Combine it with a lighter
- Provide an area to extinguish the butts
- Include a small area to extinguish the butt inside the portable ashtray
- Include a compartment to put my drinking coins
- Work together with a design school to improve the design

During the observations the researchers noticed that the number of smokers increased as the day progressed. After a few hours smokers started actively approaching us asking for a portable ashtray.

▼ Figure 3.2: A visitor puts the portable ashtray at use. A visitor puts the portable ashtray at use.

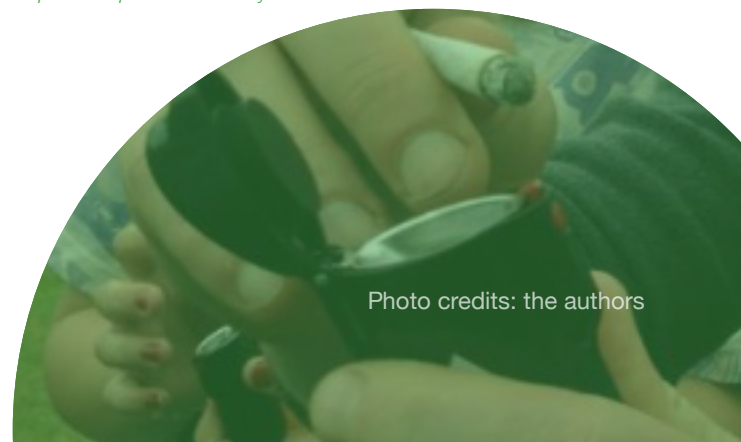


Photo credits: the authors

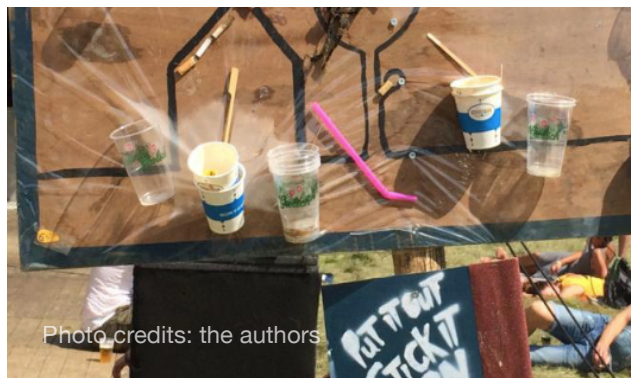
Day 3 Cigarette butt art creation intervention

The second intervention, on the third and last day of the festival, consisted of boards covered with a sticky substance that were placed on the grounds. These boards were designed by Minerva Art School in Leeuwarden. The idea behind the board was that by putting their cigarette butts on the board, smokers could create a work of art. Below each board there was a small blackboard with the text “Put it out, stick it on!”

Before the programming began the area was cleaned, counting 1,140 butts. After a period of seven hours 553 butts were counted with an average of 175 visitors per hour on site. This day results showed an average of 0.45 butts discarded per person per hour. The intervention of placing artboards for cigarette disposal on day 3 resulted in a decrease of almost 24% compared to the baseline measurement on day 1.

It is notable that this day, a Sunday, had a slow start in the programme and visitor numbers. During the observations the number of smokers seemed to be lower than the other days. Furthermore the number of families with children seemed to be higher. Researchers observed several children playing with the art boards by sticking grass on them, or cups. When visitors were asked whether they thought that the art boards were an innovative solution and if they would help to dispose properly of cigarette butts, 15 out of 39 visitors responded positively, a percentage of 62% being less enthusiastic about the solution of art boards as butt disposals.

▼ *Figure 3.3 One of the art boards was positioned alongside the bar near a trash bin.*



▲ *Figure 3.4 An art board with several type of waste on it.*

Positive remarks

- “Good idea”
- ”Nice and playful”
- ”You should place more”

Negative remarks

- “Didn’t notice or didn’t realize it was for cigarettes (14 times)”
- ”There is too much other stuff on the boards”
- ”Fun for once but not a solution”

▲ *Table 3.3 Remarks about the sticky posts.*

The observations of this day confirmed that it was unclear what the boards were for. It was observed several times that they were also used to stick on other things than cigarette butts. See also remarks in Table 3.2. This happened not only at the ‘Blessum’ ground. Art boards were placed all over the festival and most of them had other litter items stuck on them in addition to cigarette butts.

When asked if they had a better solution to the problem of cigarette butt disposal, visitors gave several suggestions. Some of these suggestions are included in the cigarette butt research toolbox (Chapter 2). The most frequently-mentioned solution (14 times) was simply adding ashtrays, sand receptacles and other places to discard cigarette butts. Better signage and information-sharing on the problem was suggested to create awareness. Other innovative solutions were mentioned, such as bolting ashtrays to the tables or using ashtray drones.

Conclusion

It is shocking to realize the amount of cigarette butts disposed of during this festival. At the beginning of day two 1,612 cigarette butts were counted, all of which were left over of the first

night of programming. Add to this figure the 651 cigarette butts counted during the first four hours of the first day, and you come to a total of 2,263 cigarette left on the grounds. As 'Blessum' only represents 1/10 of the total festival area, if we multiply the number of cigarette butts dropped in "Blessum" by ten we come to the figure of 22,630 presumably discarded on the total WttV grounds during only 9 hours of this three-day festival. This figure is, of course, only an estimate and other factors might influence the total number of cigarette butts left on the ground of the whole festival, such as the total number of visitors and the presence of easily-accessible disposal options. Nevertheless, if the total number of cigarette butts in the 'Blessum' area counted during the three-day experiment is multiplied by 10 this would result in a staggering 45,680 butts discarded during the three-day festival. It should be noticed that this estimate includes the decrease observed during the intervention but still excludes the final clean-up after day three, Sunday night.

Although these numbers emphasize the serious nature of the issue of cigarette butt disposal at festivals, the results also show the willingness of the visitors to change their behaviour. Festival-goers are simply unaware of the problem or unable to find a suitable place to discard cigarette butts. During day two of the experiment a decrease of 65% was measured. Day three, although less successful, still showed a decrease of almost 24% in cigarette butt disposal on the grounds compared to day one – the day when no intervention was deployed except cleaning the festival grounds at 'Blessum'. As most visitors are willing to be part of the solution, the organization should take the initiative to facilitate the efforts of festival-goers in discarding their cigarette butts in an effortless, non-condescending and sustainable way, thereby maintaining (and probably enhancing) the festival experience of the visitors.

Recommendations

Provide the festival-goer with easy and clearly marked ways to discard their cigarette butts. This includes:

- Providing portable ashtrays
- Providing disposal places such as ashtrays and sand receptacles all over

- the festival grounds
- Creating awareness without being condescending
- Using nudging
- Using art
- Talking with people
- Actively cleaning, including cigarette butts
- Practice what you preach: make sure that people working for the festival set a good example

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4

**HARD CUPS: THE
CASE OF DGTL 2016**

Marisa P. de Brito and Hugo Smorenburg

In 2016 the DGTL Festival chose to introduce hard cups with a deposit/refund system.¹

Why?

DGTL is an electronic dance music (EDM) festival that takes place relatively early in the Dutch festival season. It is a two-day festival held at the NDSM wharf in Amsterdam. In 2016 it took place on Easter weekend in late March, attracting about 40,000 people.

Sustainability gets due attention at DGTL under the program DGTL Revolution. DGTL is one of the festivals active in the Green Events platform that also signed the Green Deal with the Dutch Ministry on reducing waste. In 2016 DGTL chose to focus on plastic waste by introducing hard cups with a deposit/refund system. In doing so, DGTL had a central research question:

What is the impact of the introduction of the hard cup system on

- a) the visitors?
- b) the organization of the festival?

How?

The research was conducted by consulting offline and online resources, by including a mini-questionnaire about the hard cups in the main DGTL questionnaire on the festival experience, and by conducting participant observation at DGTL festival. After the festival a focus group made up of volunteers and employees was held,

and some visitors were interviewed. DGTL had to weigh carefully the decision to introduce the system given that it would imply great operational changes and training of personnel. The introduction of the refund/deposit system was associated with a wristband. Each visitor would preload cash on the wristband, either beforehand online or on site during the festival. Visitors who had signed up before the festival could receive a refund for unused funds after the festival. At the festival site, every time a visitor bought a drink, a deposit of half credit would be retained. On returning the cup, that deposit would be refunded. DGTL communicated about the system in the press, via social media and on its site (see figure 4.2).



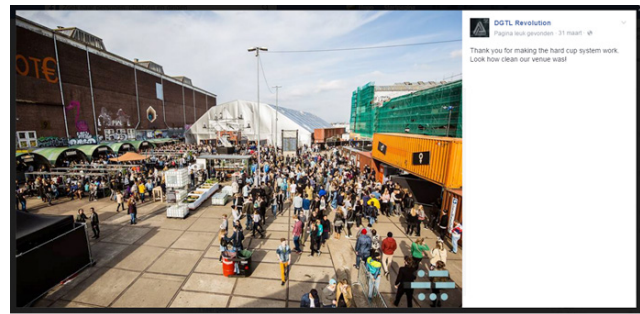
▲ Figure 4.1 Hard-Cup Deposit/Refund System @ DGTL

Method	Data collection	Focus
Desk-Research	(Online) Resources	Practices/theories
Mini-questionnaire	Online	Experience of visitors
Participant observation	@ DGTL festival	Behaviour of visitors
Focus Group	Volunteers/employees (After DGTL festival)	Organisational issues
Interviews	Visitors (After DGTL festival)	Experience of visitors

Given the behaviour at the festival, visitors can be put in four categories regarding the hard cup deposit/refund system:

- Too familiar: understanding the system “too” well: the pickers
- Familiar: good understanding of the system
- Unfamiliar, seeking info: visitors actively seeking information about the system
- Unfamiliar: lack of understanding of the system (observable actions)

After the festival, DGTL also posted pictures on Facebook with a thank-you note to the visitors: “Thank you for making the hard cup system work. Look how clean our venue was!” (see Figure 4.2).



▲ Figure 4.2: Thank you note by DGTL at facebook regarding the hard-cup system

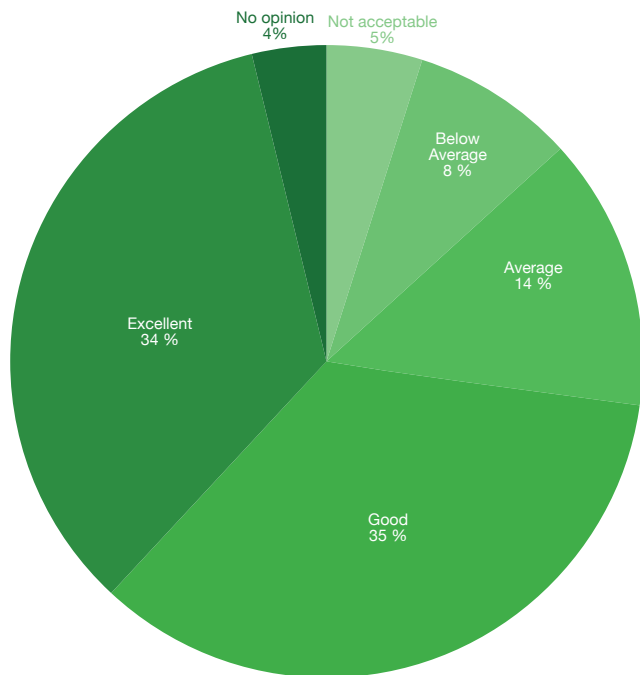
What: a clean festival

What could be observed is that the amount of waste on the ground was minimal in comparison to festivals without a refund system. However, both refundable waste (bottles and some cups) and non-refundable waste (like cigarette butts & cigarette packs, carrier trays & food packages) was still present. Visitors seemed to be less familiar with the value of the water bottles. The amount of waste was somewhat time-dependent, with higher cleanliness during the day compared with the evening. In addition, waste was most present around the stages, while open areas remained rather clean.

What: the opinion and experience of the visitors

There was a generally positive attitude towards the hard cup system with about 70% of the visitors finding it Excellent/Good. Only 5% found it unacceptable. Visitors considered the sustainability aspect (hard cups being more sustainable than soft cups) very important or important by more than 50%. The sustainability aspect also gains in importance when compared, for instance, with the qualitative characteristics of the cup, like its texture or material (see figure 4.3 and 4.4).

Regarding the use of wristbands for payments, interviewed visitors said that the absence of information during the festival regarding credits left on the wristband was unsatisfactory.

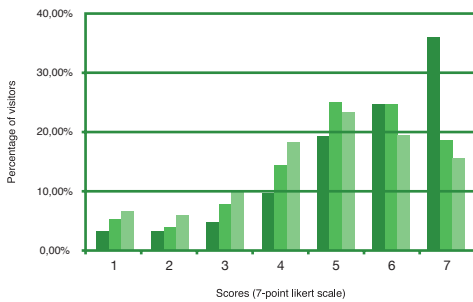


Meaning on hard cup deposit system

▲ Figure 4.3 Hard-Cup Deposit/Refund System @ DGTL

What: the experience of the organization

- Generally positive attitude among employees and volunteers towards the hard cup initiative at DGTL.
- Partly because of the last-minute decision to introduce this system, the organisation had operational and communications issues.
- For instance there was not time to thoroughly inform and train the staff about the changes that the system entailed.



▲ Figure 4.4: Hard-Cup Deposit/Refund System

- It can be reused/it is more sustainable (than soft cups)
- The (hard) texture of the cup
- The material of the cup

Take away lessons

There was a generally positive attitude towards this sustainable initiative at DGTL among organization, staff, volunteers and audience. The deposit/refund system was made smoother by the use of the wristband as well (contactless payments/refunds). Perhaps if the organization had had more time to introduce the system, both operations and communications would have been even smoother. Now there were some glitches. Apparently there were also different degrees of familiarity with a deposit/refund system: some visitors may have experienced similar systems at other festivals. Besides, some individuals may “get” the system more quickly than others. Exhibit 4G lists some suggestions.

- Combining deposit/refund with contactless payments (wristband) is a good practice transparency on credits: displays with scan function (near the bar)
- Managing expectations of audience is key
- Push/pull of timely information about hardcup system (e.g. via an app).
- Let visitors self-categorise themselves regarding familiarity, and give info. accordingly
- Consider alternative for return without refund: bins to donate cup
- Besides a “trash-coordinator” have as well “trouble-shooters” on site
- Have a take-home message ready for the audience.

▲ Exhibit 4.G . Take away lessons and suggestions

This report does not address costs. Of course, a hard-cup system involves considerable investment. In addition, there are many alternatives when considering which types of cups to use at events (disposable, biodegradable, paper cups, and so on) and many ways to close the loop (recycling, aerobic composting, and so on). New technologies like 3D printing also open further possibilities. It is beyond the purpose of this report to describe all the alternatives and their respective advantages and disadvantages. As previous research has shown (TNO, 2007) , it is important to take into account the total drinking system (sourcing, use-phase, and after-use) in order to make the right decision.

Acknowledgements:

We would like to thank DGTL for being open to carrying out and disseminate this research. In particular we would offer a word of thanks to our contact persons, Jorrit Huijsman and Milan Meyberg.

Photo credit: Hugo Smorenburg

Footnotes

1. <https://dgtl.nl/well-use-hard-cups-and-bottles>
2. <https://dgtl.nl/>
3. The questionnaire had more than 3,000 responses.



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5

ATTITUDES ON WASTE AND FESTIVAL EXPERIENCE

Kirsten Stam and Vincent Neveu

Why?

Festivals are putting effort into becoming more sustainable. In order to stimulate sustainable behaviour among the audience, however, more needs to be known about visitors' attitudes towards waste and how that affects the audience's experience of the festival.

Therefore, an audience survey was setup to investigate the following:

- To what extent do visitors' attitudes towards waste affect their festival experience?
- To what extent do environmental concerns and perceived cleanliness affect sustainable behaviour?
- Do socio-demographic characteristics (like gender, education, age etc.) play a role?

Answering these questions is a starting point for festivals to develop new strategies to stimulate sustainable behaviour in visitors.

- Background characteristics/ demographics
- Attitudes towards waste
- Festival experience
- Attitudes on sustainability and environmental issues
- Sustainable behavior

▲ Table 5.1. Audience survey topics

How?

To give answer to the questions posed above, we used an online survey composed of 22 questions. The questions were posed in both Dutch and English; however, for this chapter we only consider the data collected in Dutch. The questions of the survey can be divided into five groups: background characteristics/ demographics, attitudes towards waste, festival experience, attitudes on sustainability and environmental issues and sustainable behaviour (see Exhibit A).

The data was collected between June 15th and July 15th, 2016. The online link to the survey was

sent to students of the Academy for Leisure of NHTV. Those students then invited family and friends to fill in the questionnaire too. Researchers and partners in the project also helped to spread the survey.

Only respondents who went to a Dutch outdoor festival in the past 12 months were asked to complete the survey. The questionnaire had to be answered with one festival in mind.

Who?

In total 221 festival visitors, aged between 17 and 66, completed the survey. The average age was almost 29, with more women respondents than men (about 60/40). Somewhat over 60% of festival visitors have a higher education degree (either applied sciences or university). In addition, 50% of the respondents attended a large festival (more than 15,000 visitors) and 44% either a small or medium-sized festival. About 60% were repeat visitors, i.e. they had attended the festival before.

Attitudes on waste

In the survey, respondents answered the question 'To what extent were the festival grounds of [the Festival] clean enough, according to you?'. They could answer on a scale from 'not at all', to 'to a large extent'. The results of the survey shows that approximately 28% of the respondents are either negative or neutral about the cleanliness of the festival they visited, while about 72 percent were positive or very positive about it. In addition, respondents were asked how important clean festival grounds were to them. The results show that 23% of the respondents were either indifferent or neutral about the cleanliness, while 77% of the visitors said that it was important or very important.

Festival experience

The experience of the festival visitors was measured in two ways: firstly, respondents answered questions about how safe, pleasant and happy they felt on the festival grounds, and secondly they answered questions about their affective experience, rating a total of six items such as 'during the festival I was excited', 'during the festival I felt a sense of adventure'. The questions on affective festival experience were derived from a study on festival experience of De

Geus et al. (2016). If we combine the questions on safety, pleasantness and happiness, we obtain an average score on these items and we can do the same for the six questions relating to affective festival experience. If we then consider the results, it turns out that over 90% of the visitors felt safe, happy and pleasant at the festival they visited. In addition, affective festival experience had an average rating of 5 on a scale of 1 to 7. Visitors thus rated their affective experience moderate to high.

Environmental attitudes

Respondents were asked to answer questions on how much they were concerned with environmental issues as well. Respondents rated seven statements such as 'I would give part of my income if I were certain that the money would be used to prevent environmental pollution' and 'When humans interfere with nature it often produces disastrous consequences', on a scale from 1 (totally disagree) to 7 (totally agree). The results of the survey show that almost 30% of the respondents are not concerned with the environment or are indifferent, while 70% are either somewhat or very concerned.

Sustainable behaviour

The last topic that was addressed in the questionnaire was about festival visitors' current

sustainable behaviour. On the question about whether they tried to reduce waste at the festival site, 50% of the visitors answered that they did so to some extent or to a large extent. In addition, almost 50% separated their waste on the festival grounds and about 80% used the waste bins on the festival grounds to dispose of their waste. Most respondents are willing to walk 5 to 20 metres to the nearest waste bin. When respondents were asked who they believed was responsible for cleaning up the waste on the festival grounds, they answered in the first place that the organisers of the festival were responsible, after that the visitors (including themselves) and lastly the city or municipality in which the festival is organized.

Relationships between attitudes on waste and festival experience

The main interest of this study was to determine whether and to what extent attitudes on waste and perceived cleanliness affect the festival experience of visitors. The assumption is that waste on the festival grounds negatively affects the festival experience. Conversely, cleaner festival grounds will affect the festival experience positively. If we consider the combined answers to the questions about how safe, pleasant and happy one felt on the festival grounds, we find that more cleanliness is indeed related to a better festival experience. Also for the second measure of festival experience, affective experience, we find that cleanliness has a positive effect. Even if we take into account respondents' gender, age and education levels, we still find these positive effects of cleanliness on festival experience. When we take into account the environmental attitudes of the respondents, we find that it does not matter whether one is more or less concerned with the environment: all respondents who experienced a cleaner festival had a better festival experience.

Relationships between environmental concerns and sustainable behaviour

We can determine as well whether there is a relationship between the degree of environmental concerns and the sustainable behaviour that people display. The results show that respondents who are more concerned with the environment also display more sustainable behaviour (they try to reduce waste more, separate waste more and use the waste bin more often). This is the case when we take into account the gender,



Photo credit: Billy Hicks

age and education levels of the respondents. Furthermore, older respondents display more sustainable behaviour compared to younger respondents.

The relationship between perceived cleanliness and sustainable behaviour

Lastly, we are interested in whether the perceived cleanliness at the festival grounds affects sustainable behaviour in visitors. The results show that cleanliness only affects the degree to which one uses the waste bin to dispose of waste. Cleanliness was not related to the other forms of sustainable behaviour, such as separating waste at the festival grounds and trying to reduce waste during the visit.

Conclusion

The perception of cleanliness positively impacts feelings of safety, happiness and pleasure and it leads to a more positive affective festival experience. On the other hand, more waste on the festival grounds has the opposite effect. In addition, the more one is concerned with the environment, the more one is likely to display sustainable behaviour on the festival grounds. Lastly, the older one is and the more cleanliness one experiences, the more sustainable behaviour one displays. So, all in all, the efforts of festival organisers to maintain cleaner festival grounds (through reducing cup waste, cigarette waste,

and other forms of litter) are likely to have a positive impact in making the audience behave more sustainably and have a more positive festival experience.

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6

SELF-ASSESSMENT IN DESIGNING SUSTAINABLE FESTIVALS

Marisa P. de Brito

Design Framework for Sustainable Festivals: D-iscover, D-evelop, D-eliver		Self-Assessment Questions
D-iscover ...	Values & Vision	What are the values of my festival? What is the vision of my festival?
D-evelop ...	Sustainability & Partnerships	How to increase sustainability-orientation? Which partnerships are needed?
D-eliver ...	Innovativeness & Walking the talk	Where is the festival going to innovate? Is the festival still walking the talk?

▲ Table 6.1. Self-assessment for Sustainable Festivals. Adapted from De Brito & Terzieva (2016).

As we have noted, the world of events is becoming more competitive. At the same time the various stakeholders (governmental bodies, sponsors and affected communities) call for insight on expenditure and environmental and socio-economic impact.

Below follows a self-assessment tool for festivals wanting to deliver environmental and social value. The tool is presented in steps. For each step there are self-assessment questions (Table 6.1). The steps and tool are based on the 3D-Design framework for Festivals as proposed by De Brito and Terzieva (2016) after analysing several European festivals, including Boom (Portugal) and Roskilde (Denmark). These festivals are well-known for their sustainability endeavours.

D-iscover stands for looking inwards and outwards. Festivals can start with the following questions: What are the values of my festival? What is the vision of my festival?

D-evelop what is needed. The questions to pose at this stage are: in what way can the festival be (more) sustainability-oriented? What partnerships are needed?

D-eliver a sustainable and authentic experience: The festival can search for innovation opportunities, perhaps in relation with a previous year. Where is the festival going to innovate? Is the festival still walking the talk?

Those self-assessment questions are meant to ignite deeper discussions and work. The result

hopefully will be as presented in the DO-BeHave Model (Figure 6.1), which serves as a checklist:

TO DO: walk the talk and innovate.

TO BE: visionary with authentic values.

TO HAVE: sustainability-orientation and strategic partnerships.



▲ Figure 6.1 . Self-assessment for Sustainable Festivals. Adapted from De Brito & Terzieva (2016).

Reference:

De Brito, M.P. and L. Terzieva (2016), Key Elements for designing a strategy to generate social and environmental value: a comparative study of Festivals, *Research in Hospitality Management* 6(1): 51-59.



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A photograph of a desk setup. In the top left, a white cup of coffee sits on a matching saucer. To the right, a portion of a silver laptop is visible, showing the keyboard with keys like 'tab', 'shift', and 'ctrl'. In the bottom left, a spiral-bound notebook is open. A silver pen lies horizontally on the wooden desk surface. A large green circle is overlaid on the bottom left, containing the number '7' and the title of the chapter.

7

**THE FUTURE OF EVENTS: TOWARDS
SUSTAINABLE BUSINESS MODELS**

June Calvo-Soraluze, Marisa P. De Brito
and Roberto San Salvador del Valle

Why?

Besides sustainability, there are three clustered socio-technological trends affecting supply chains and networks, including the events sector:

1. A demanding, well-connected and participative consumer, not shy about expressing needs and wants in chat rooms and on social media. Caring and sharing seem to be raising in today's society.
2. New digitalised and robotised forms of supply (e.g. 3D printing).
3. Big Data & Consumer Data Analytics: the by-product of the highly digitalised and interconnected world we live in today.

This poses challenges for the sector and therefore to educational schools in education the events manager of the future. This chapter brings forward insights on the needed competences for the Event Managers of the future and it includes the views of event experts on industry trends, future challenges, and the professional competences needed to face these challenges. This is based on research conducted by Calvo-Soraluze et al. (2015).

ten leading European companies in the event sector plus international event researchers from NHTV-Breda University of Applied Sciences. The focus group process followed the usual processes of formulation of questions, selection of participants, recording, transcription, and analysis. Here we put forward some of the outcomes and reflections.¹

What?

The experts identified the following key challenges for Events:

- Understanding and connecting with the consumer
- Use of new technology and data

In particular, the following needs were highlighted by the experts:

- Designing personalized experiences and deepening co-creation.
- Social media and technological integration in the organization.

Change	- Changes in demand: societal and consumption changes - Changes in supply: (technological) possibilities
Need	- The event manager: a NEED for a new professional profile
Challenge	- HELPING industry and Educational Institutes COPING with the CHALLENGE

▲ Figure 7.1: Motivating this research

How?

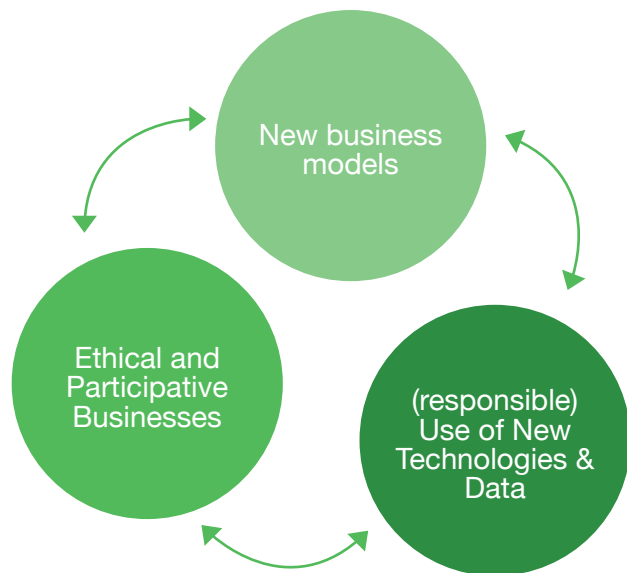
The work is based on desk research and on the input from Dutch experts (both academics and practitioners) using a focus group research technique. The focus groups were held in Breda in March 2015. In total there were 5 different focus groups, with a mix of 7 or 8 professionals and researchers: Dutch event professionals from

Thus, what professionals most want from young graduates and professionals are:

1. Experience design skills.
2. Transmedia management and social media skills.
3. Online information management skills.

Toward Sustainable Business Models

For events to be sustainable, it is essential to do that, it is essential to ground their new business models in ethical and participative businesses with responsible use of technologies and data (see Figure 7.2.). Experts were relatively aware of the need to generate new value and the responsibility that comes with new technologies and data. However, professionals were less able to articulate explicit skills that are associated with striving for an ethical and participative business. This is perhaps because this question moves beyond skills and knowledge (such as legal competences), and touches upon ‘qualities’ such as awareness of social responsibility and ethical sensitivity. San Salvador del Valle and Calvo-Soraluze (2013) do argue that managing experiences has to do with facilitating well-being.



▲ Figure 7.2: Towards Sustainable Business Models

Knowledge and skills must be accompanied by values and emotional intelligence. For events to be revolutionary in terms of sustainability, as expressed by Cavagnaro and Curiel (2012), there must be a generation of festival leaders with “care for others” (altruistic) and “care for you and me” (biospheric) values.

References

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San Salvador del Valle, R. and Calvo-Soraluze, J. (2013), Tourism Policy Makers and Managers as Generators of Meaningful Leisure Experiences, Knowledge, Skills and Values by the New Professionals, Journal of Tourism Research & Hospitality 2 (3):1-8.

Footnotes

1. This was part of a larger study, June Calvo Soraluze's PhD thesis (2016) “Generacion de Experiencias de Ocio en Los Festivales de Musica”, Deusto University, Bilbao (in Spanish).



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8

WRAP-UP

Marisa P. de Brito and Elena Cavagnaro

Photo credit: Esther Westerveld
Website: <https://www.flickr.com/photos/westher/4505227459/in/photostream/>

Festivals can be seen as communities that, even though they are limited in space and time, have to tackle issues similar to those of larger communities such as neighbourhoods, cities and even nations. Though festivals are in the world of generating meaningful experiences, both festivals and day-to-day communities have to find an answer to practical questions such as:

- From where and how will food reach my community?
- How do I get enough water for daily use?
- How do I get people moving from and to the site?
- How do I dispose of the waste generated by all activities taking place?

Exactly because they are limited in space and time, festivals can be seen as a living lab where new solutions can be explored, prototyped and tested, in general, and, in the context of sustainability, in particular.

Festivals have in the last few years more and more taken on this role, and reached out to the business and research community to collaboratively develop sustainable solutions for the problem they encounter. Festivals started with the most tangible issues, such as the provision of food or the generation of energy, and are now eager to go further and tackle a more demanding problematic, such as different streams of waste.

This CELTH project, “Sustainable Strategies for Events” carried out by NHTV (Breda) and Stenden (Leeuwarden) University of Applied Sciences in Leeuwarden, is a direct result of the needs from the Events Sector (see Table 1.1). Green Events (representing several main Dutch festivals) and the Municipality of Leeuwarden (which will host the European City of Culture event in 2018) were the commissioners of this research (see Chapter 1).

1. Assessing strategies to tackle specific waste issues, such as cigarette butts, and plastic cups
2. Understanding the effect of waste on the experience of festival visitors.
3. Providing tools for festivals.

▲ Table 8.1 Objectives of this research project.

Chapter 2 was on cigarette littering, bringing forward the views of festival visitors regarding cigarette butts waste at festivals and what festivals can do regarding cigarette waste. A few remarks on the views of the audience: cigarette butts are seen as waste but acceptable (“normal”); there is little awareness of cigarette butts being “bad waste” (most think cigarette butts are easily biodegradable) and smokers are not really bothered by cigarette butts on



the ground. A key to reduce littering is to put forward easily accessible or fun and interactive solutions. Fortunately, there are many sources of inspiration: proper infrastructure at events (such as cigarette ashtrays or floor tiles); developing guerrilla marketing campaigns, street art and so on.

Chapter 3 reported on an experiment at Welcome to the Village, a festival in Leeuwarden. The experiment consisted of nudging the festival participants into not throwing cigarette butts on the ground by means of interventions, and the research included assessing the impact of the interventions. One intervention that proved successful was the distribution of portable ashtrays. This reduced cigarette littering by approximately 65%. Fortunately, both smokers and non-smokers are willing to help supply ideas about solutions, offering opportunities for festivals to co-create new initiatives with the audience.

Chapter 4 reported on the impact of the introduction of the hard cup system at DGTL Festival in Amsterdam, both on visitors and on the organisers of the festival. About 70% of visitors found the system Good to Excellent. The organisers had some issues with operations and communications as there was little time to inform and train the staff. There were also a number of practical recommendations such as giving the

audience a take-home message.

Chapter 5 reported the results of a survey investigating the link between visitors' attitudes towards waste and their festival experience. Not surprisingly, the results show that respondents who are more concerned with the environment also display more sustainable behaviour. In addition, the older one is and the more cleanliness one experiences, the more sustainable behaviour one displays. All in all, the efforts expended in having cleaner festivals grounds are likely to pay off. After all, all respondents who reported a cleaner festival had a better festival experience.

Chapter 6 proposed a tool to design sustainable festivals in three steps: Discover, Develop, and Deliver. Any festival can self-assess its values and vision, its sustainability orientation and current/needed partnerships, plus innovation opportunities.

Chapter 7 reported on the challenges, needs and skills festival organisers are looking for.


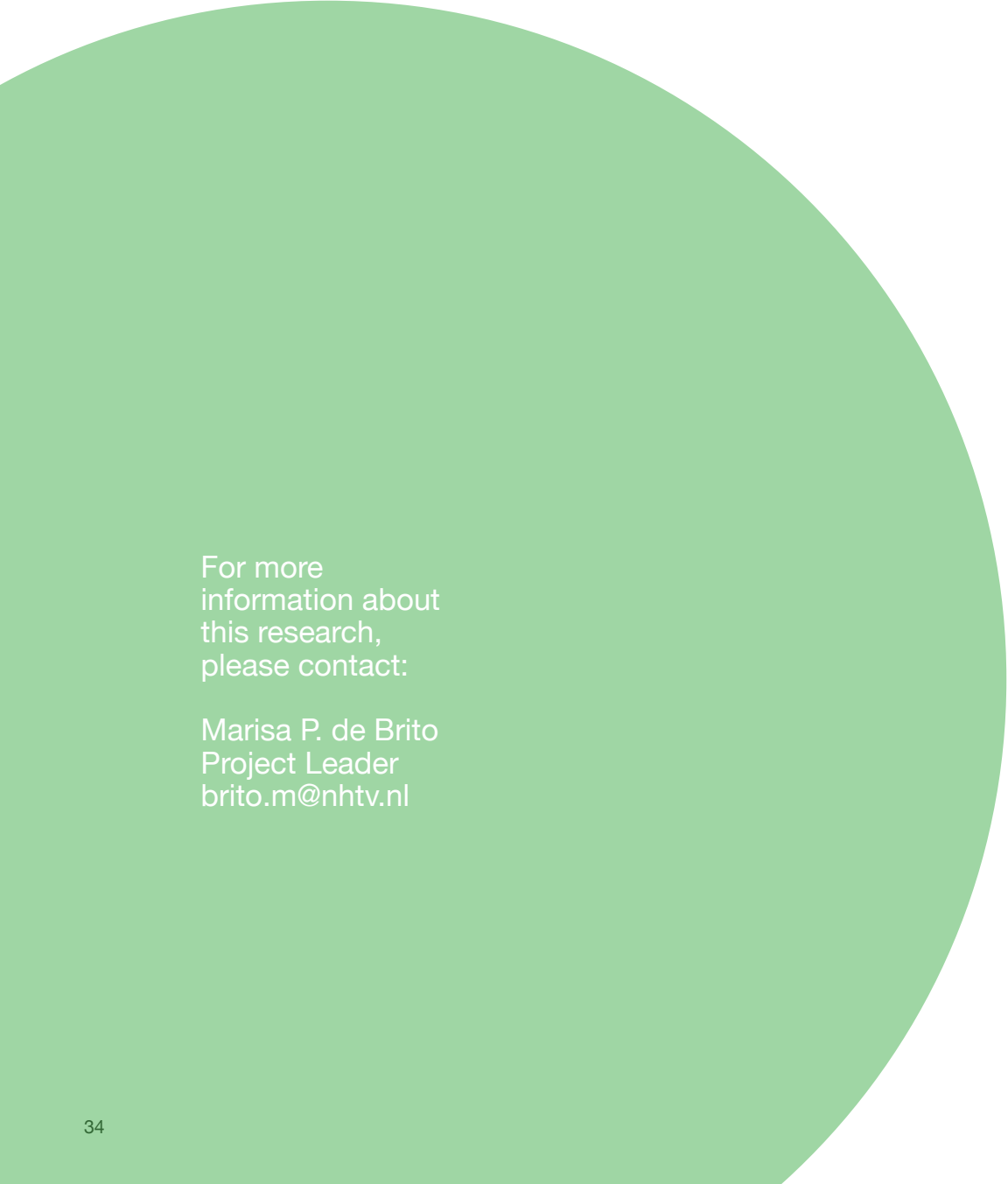
We could conclude that events that aim to be revolutionary in terms of sustainability require a generation of festival leaders with altruistic and biospheric values like those shared by those working closely together in this "Sustainable Strategies for Events" CELTH project



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