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Case Background

With roots dating back to medieval Europe, the celebration of Mardi Gras, also known as Shrove Tuesday, Fat Tuesday, or Carnaval, has a long history that has touched many parts of the world. The celebration, initially meant to mark the custom of using all of the fats in the home before the Catholic fasting season of Lent, has evolved to become a large festival (Encyclopaedia Britannica, 2025). New Orleans, Louisiana in the United States is one place known for its celebration of Mardi Gras, now characterised by grand parades, fancy costumes, and beaded necklaces. New Orleanians today call it the 'Greatest Free Show on Earth!' (Mardi Gras New Orleans, n.d.).

When first established in New Orleans in 1718, Mardi Gras was celebrated through society balls, similar to the formal balls that take place today (Mardi Gras New Orleans, n.d.). Other traditions emerged over time, including parades in the 1830s, 'krewes' in the 1850s, 'throws' in the 1870s, culminating in Mardi Gras gaining status as a legal holiday in Louisiana in 1875 (Mardi Gras New Orleans, n.d.; Owens, 2019). Today, krewes, or social clubs, plan, fund, and host parades where decorated 'floats' go through neighbourhoods and commercial areas of the city. Krewes are an integral part of Mardi Gras and spend an estimated \$10 million each year to fund the festival (Weiss & Schloss, 2024). Many krewes have their own parades, carrying a maximum of 3,000 riders on up to 80 decorated floats (Krewe of Endymion, n.d.). At the parades, thousands of parade-goers stand along the street watching decorated floats, local bands, and dance troupes, hoping to catch throws, such as beads, stuffed animals, cups, or hats, from the krewe members on the floats.

Figure 1Example Throws at Mardi Gras



Note: Selection of illustrative Mardi Gras 'throws' including (A) beads (iStock, 2011); (B) plastic cups (Camellia Brand, 2024); (C) coins or 'doubloons,' (WhereY'at, 2019); (D) hats (eBay, n.d.)

Mardi Gras has also historically been a platform for protest and resistance in the form of parody and satire that challenge social norms. For example, when all white, male krewes were established, emphasising elitism, Black Krewes and Women's Krewes emerged to address racial and gender inequities (Barrett, 2018). Today, parody and satire persist at the festival, often in the form of costumes or float decorations. Recent parades have included commentary about city infrastructure, a controversial play call by the National Football League, and the New Orleans City Council (See Figure 2).

Figure 2

Social Commentary and Satirical Floats at Mardi Gras



Note. (A) Decorated float with commentary about city infrastructure such as 'I hate road work!' and 'Damn these potholes!' (Goldring, 2024). (B) Mardi Gras float with satirical commentary related to a bad call by a National Football League referee. Krewe members are dressed as referees and the float includes artwork of the coach saying, 'Are you blind?' and a referee saying, 'I see nothing!' (Granger, 2019). (C) Decorated float titled 'What a Bunch of Boobs,' satirically showing images of various city council members as 'The Krewe of Drips and Discharges' (Stanton, 2023).

Today, Mardi Gras is a major tourism event, with more than 40 parades across approximately 8 weeks bringing over 1 million visitors to the city and \$890 million in direct and indirect impact on the New Orleans economy (Weiss & Schloss, 2024; NewOrleans.com,

n.d.). To make this financially possible, krewes have embraced throws as a central vehicle for funding Mardi Gras, an otherwise free and unsponsored festival (Sachs, 2023). According to the non-governmental organisations (NGOs) leaders interviewed for this project, to generate revenue to fund the parades, krewes source and import throws, which are then marked up and sold to members who throw the items in the annual parades. They also explained that as Mardi Gras has grown in scale, the number of throws has increased to support that growth, underpinned by required minimum purchase quantities for krewe members who participate in the parades. Over time, throws have become a ubiquitous part of the festival, with krewe slogans like 'throw until it hurts' (Krewe of Endymion, n.d.), underscoring the prominence of throws amongst other festival practices. The increase in quantity has driven a shift away from the higher-quality throws of the 1900s, which included glass bead necklaces, coconuts, and candies, to mass-produced products that are largely imported from East Asia (Owens, 2019). When discussing the throws at Mardi Gras today, one krewe member we interviewed described it as 'quintessential throw-away culture...fast fun.'

This fast fun, however, generates a lot of waste. According to data from 2023, over 2.5 million pounds of waste were generated over just an 11-day period of Mardi Gras (Ready NOLA, 2024). Not only does this incur a substantial cost of approximately \$1.5 million each year to the city for waste management (Weiss & Schloss, 2024), but it also creates problems for local infrastructure. In 2018, 93,000 pounds of Mardi Gras beads were found clogging storm drains, decreasing the efficacy of the drainage system in a city that is already at a high risk of flooding (NPR, 2018). Furthermore, Mardi Gras beads contain a variety of toxic chemicals such as lead, flame retardants, and phthalates, which can enter the water system (Boudreaux, 2021; Gearhart & Peña, 2013). In one study, tested beads were found to contain up to 472 parts per million (ppm) of lead, significantly over the 100 ppm limit for children's products in the United States (Ecology Center, 2020). Beyond the environmental and health issues, Mardi Gras throws are often sourced from factories with extremely poor working conditions. Beads, Bodies, and Trash provides a behind-the-scenes look into Mardi Gras bead production, describing the shocking factory working conditions, including 15-hour shifts, low wages, and little concern for employee wellbeing (Redmon, 2015). This harsh production environment of beads stands in stark contrast with the festival's joyous spirit.

Despite the multitude of issues associated with throws, shifting away from low-quality items has been difficult, in part because of the cultural and social context of Louisiana. The state is in the Deep South of the USA, a Republican area with strong conservative values such

as individual freedom, limited government, and free markets (Johnson, n.d.), making regulation a difficult topic regardless of the rationale. Additionally, Louisiana's economy is heavily reliant on fossil fuel and chemical companies, creating tension towards environmental initiatives and climate change movements. This political and economic context of the state substantially impacts environmental attitudes and sustainable behaviours (Casper et al., 2022), making it a critical consideration within any conversation about a more sustainable Mardi Gras. As we will explain later, it is essential that our work is mindful of this. In the end, we hope that our recommendations can make a meaningful contribution towards achieving a green Mardi Gras.

1 Introduction

New Orleans Mardi Gras is one of the largest free, unsponsored carnivals in the world (Sachs, 2023). Considering the number of visitors it draws, one can easily see why it is an integral part of New Orleans' spirit. Whilst the growth of Mardi Gras has undoubtedly had a positive economic impact on the local community, the environmental impacts are less positive. In light of the detrimental effects of the throwaway culture associated with Mardi Gras presented in the case background, change is essential to ensure long-term sustainability of the festival. Building on Mair and Smith's (2022) approach, we define sustainability as a holistic, three-dimensional practice aimed at reducing environmental harm, espousing environmental, social, and economic pillars. Thus, in addition to curbing waste, we shall also consider cultural preservation and sustainable business conduct. Our objective is to achieve a notable reduction in throw-related waste from Mardi Gras that is seen by the community as a reflection of local values and maintains all aspects of sustainability. Although there are other environmental concerns related to Mardi Gras, this paper will be focusing on the waste from throws.

Reflecting on the case background, for climate change and environmentally related messaging to be effective, it must be framed in a way that is compatible with the local political and social context. Particularly, Casper et al. (2022) argue that framing sustainability in ways that align with conservative values, such as emphasising personal responsibility and economic benefits, could encourage broader participation in environmental initiatives. Similarly, the American Academy of Arts and Sciences (2023) recommends working on shifting social norms within communities, emphasising shared identities, and framing climate action as an in-group rather than an ideological issue. By fostering social cohesion, preserving culture, and

showcasing local traditions and art in a way that aligns with local values, events like Mardi Gras can be an instrument for long-term transformation (Mair & Smith, 2022).

1.1 Existing Interventions

In recent years, there have been various attempts to make Mardi Gras greener. Some successful efforts have been made, with many gaining momentum in recent years. 'Recycle Dat!', an initiative started in 2023 through combined efforts of volunteers, NGOs, the City of New Orleans and its tourism office, has created recycling points for beads, aluminium cans, and glass bottles (Sachs, 2023). Whilst this initiative represents progress, the scale of the problem and the lagging community awareness still leave some visitors, including the paradegoer we interviewed, feeling unable or unmotivated to find convenient recycling at parades, highlighting the remaining work to be done. Furthermore, as NGO leaders expressed in our interview, the low quality of many throws today makes recycling an insufficient solution as beads often break or are not worth the effort to recycle. Some krewes have stepped in to act, such as the Krewe of Rex banning plastic packaging, introducing aluminium cups, and shifting the focus to reusable throws that reflect New Orleans' culture, like handmade soaps, Jambalaya mix, and coffee (Sachs, 2023). Furthermore, multiple parades have banned single-use plastic beads, replacing them with meaningful throws that can be reused (Bloom, 2025). However, as a krewe member that we interviewed revealed, the cost of sustainable throws like biodegradable beads or local products acts as a barrier to large-scale adoption.

Current successful interventions honour local traditions, rely on collaboration between organisations, harness the power of passionate volunteers, and engage eco-conscious paradegoers whilst maintaining economic viability, highlighting the existence of the momentum for positive change. We aim to build on this momentum and maximise its potential, leveraging behavioural science insights.

1.2 Methodology and Structure

To inform this report, we consulted various sources of information including economic impact reports, news articles, academic publications, and publicly available data. In addition, we conducted three semi-structured interviews with a krewe member, leaders of involved NGOs, and a parade-goer to gain a deeper understanding of the issues at hand. Our analysis

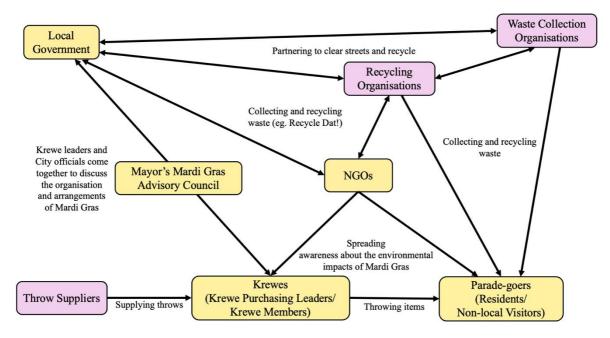
will first present the key stakeholders of Mardi Gras, explaining their motives and involvement, and adopting Activity Theory to broaden the scope of analysis. Next, aided by Installation Theory, the main points of intervention will be identified. Lastly, solutions toward a green Mardi Gras will be proposed, divided into efforts to maximise sustainability within the current system and longer-term objectives of ambitious, lasting, and broad-scale behaviour change. Through addressing multiple leverage points and time frames, whilst being mindful of the local context, we believe our recommendations can foster positive, meaningful change.

2 Analysis

2.1 Stakeholder Analysis

Numerous stakeholders are involved in the organisation of Mardi Gras, from the production of beads to the planning of parades, waste collection, and the recycling process. Whilst stakeholders of Mardi Gras consist of krewes, parade-goers, local government, Mayor's Mardi Gras Advisory Council, NGOs, throw suppliers, waste collection organisations, and recycling organisations (see Figure 3), this analysis will focus on five key stakeholders: krewes, parade-goers, local government, Mayor's Mardi Gras Advisory Council, and NGOs. Descriptions of the key stakeholders are below, followed by their motives displayed in Table 1.

Figure 3Stakeholder Map



Note. A map illustrating the relationships between stakeholders involved in Mardi Gras. Key stakeholders are highlighted in yellow.

Krewes

As discussed in the case background, krewes are the central organisations planning Mardi Gras parades. Given the longstanding history of Mardi Gras, there exists a popularity hierarchy between krewes which plays a notable role in driving krewe decisions (New Orleans, n.d.). As explained by the NGO leaders interviewed, most krewes have a purchasing leader who chooses throws from suppliers, which are then sold to krewe members to generate revenue for krewe activities, alongside the collection of membership fees (see Appendix B). One of the determinants of krewe popularity is believed to be the quantity of throws. In an interview, a krewe member expressed, 'In terms of being the biggest [krewe], I think there's a direct connection to how much stuff is being thrown'. He also commented on the practice of having a required minimum purchase quantity of throws for krewe members who ride in the parades, explaining that it is 'a very hefty minimum, and not necessarily in dollars terms, but in terms of having to get at least this number of beads to throw'. The pressure to be a top-tier krewe alongside the minimum purchasing requirements acts as a barrier to purchasing fewer, higher-quality throws, and leads most riders to choose lower-quality items like beads or plastic trinkets.

Parade-goers

Parade-goers of Mardi Gras can be categorised into residents and non-local visitors. Residents often attend Mardi Gras as an annual tradition, and as described by the parade-goer interviewed, 'a way to connect with the culture'. Meanwhile, non-local visitors come from all over the world and may be participating in Mardi Gras for the first time. Given the differences between these two groups, expectations of the festival as well as underlying values like environmentalism may greatly vary amongst the crowd in attendance. While non-locals may have less personal connection to the festival's traditions, making changes to its practices easier to accept, they are likely less motivated than local residents to recycle, as they do not directly experience the environmental consequences, such as flooding caused by clogged drains.

Local Government and Mayor's Mardi Gras Advisory Council

The government oversees the preparation of the city for Mardi Gras and ensures the smooth running of the parades. Their responsibilities include providing the public with real-time updates about the parades, ensuring participant and krewe safety, creating throw regulations, and clearing streets after parades. They are also particularly concerned with press coverage and the economic impact brought to the city by Mardi Gras (City of New Orleans, 2024). Concerning environmental objectives, The Office of Resilience and Sustainability and 'NOLA Ready' also work with community partners to collect beads and recyclable waste through the 'Recycle Dat!' initiative (City of New Orleans, 2024). Meanwhile, the Mayor's Mardi Gras Advisory Council consists of krewe leaders and city officials (Municode Library, n.d.). As there is not any single official organiser of Mardi Gras, the council manages the intergroup organisation, planning efforts, and provides recommendations to the City Council on topics such as throw restrictions and which krewes will parade each year (Municode Library, n.d.).

NGOs

Several sustainability-focused NGOs are collaborating with krewes and local government officials to raise awareness and develop solutions for Mardi Gras sustainability issues such as waste. Programs like *VerdiGras* educate the community about the issues any time of the year such as through a children's book called 'The Smirch of Mardi Gras' (VerdiGras, n.d.). Other NGOs such as Grounds Krewe and Glass Half Full promote sustainability during the festival through 'Recycle Dat!' recycling stations, 'The Recyclists

Marching Krewe,' which collects aluminium cans and plastic bottles from parade-goers, and recycling challenges with local businesses (Glass Half Full, n.d.; Grounds Krewe, 2025). Grounds Krewe has also actively worked to provide a solution to the lack of sustainable throws, partnering with local businesses and volunteers to source locally made, sustainable throws which can then be purchased by krewe members. Furthermore, Grounds Krewe is leading the development of the *Sustainable Mardi Gras Coalition*, an organisation that will bring concerned stakeholders from in and outside of New Orleans together to address sustainability at Mardi Gras.

Table 1Overarching Motives of Key Stakeholders

| Key Stakeholders | Overarching Motives for Participation in Mardi Gras | | | | | |
|-------------------|--|--|--|--|--|--|
| Krewes | Krewe Leaders: | | | | | |
| | · Social: Maintaining the reputation of the krewe | | | | | |
| | · Economic: Generating revenue for the krewe | | | | | |
| | Krewe Members: | | | | | |
| | · Social: Pride in parade; Impressing parade-goers; Sharing an experience with friends and family; Indicating economic | | | | | |
| | status necessary to participate in krewes | | | | | |
| | · Cultural: Maintaining a long-standing local tradition | | | | | |
| Parade-goers | Residents: | | | | | |
| | · Social: Seeing family and friends | | | | | |
| | · Cultural: Preserving the tradition of Mardi Gras | | | | | |
| | Fun: Opportunity to dress up and party with local | | | | | |
| | community; Participate in unique local custom (e.g. | | | | | |
| | catching throws) | | | | | |
| | Non-local Visitors: | | | | | |
| | Learning: Curiosity about the experience of Mardi Gras and the Louisiana culture | | | | | |
| | | | | | | |
| | Social: Meeting new people and spending time with | | | | | |
| | existing friends | | | | | |
| | Fun: Party experience; Participate in local customs | | | | | |
| Local Government | Social: Safeguarding the reputation and economic growth | | | | | |
| and Mayor's Mardi | of the city; Pride in maintaining a local tradition | | | | | |
| Gras Advisory | · Safety: Ensuring the smooth running of the parades | | | | | |
| Council | | | | | | |
| NGOs | Environmental: Minimising the environmental impacts of | | | | | |
| | Mardi Gras | | | | | |

Note. A table describing the overarching motives of the key stakeholders involved in Mardi Gras.

2.2 Activity Theory

Activity Theory (AT) examines human behaviour by focusing on the relationship between individuals and the objects they interact with in real-world activities (Lahlou, 2017). It views actions as goal-oriented and influenced by both internal motives and external contexts. The theory emphasises that individuals continuously adapt their actions to the conditions they encounter, creatively using their environment to achieve their goals. It also highlights that activity is shaped by cultural and social contexts, linking individual development to societal influences.

We used AT to map the various actions carried out by stakeholders before, during, and after the parade (see Figure 4 and a more detailed version in Appendix A). This provided a detailed understanding of the process and allowed us to identify intervention points for enhancing sustainability at Mardi Gras. Two key intervention points, marked in red, were identified for their high potential to drive change. The first targets krewe leadership during the planning phase, particularly their decision-making on how to engage the crowd. The second focuses on parade-goers, specifically their disposal of unwanted throws, used cans, and other waste. The following section will provide a more detailed analysis of the specific points of intervention.

Figure 4Stakeholder Activity Map (own depiction)

| | Planni | ng | 香 | Parade | 9m | Post Parade |
|--|---|---|--------------|---|--|---|
| Krewe Leaders | Determine parade theme/ l parade, logistics, select, ar buy throws | | Ride in floa | at/ Throw items to parade-goers | Go to kre ball or af party | |
| Krewe Members | Plan, make or buy costumes | Buy throw items from krewe | Ride in flo | at / Throw items to parade-goers | Go to kr ball or a party | |
| Parade-goers | ar | lan transport, outfit, nd who they want to tend Mardu Gras with | | ade and catch throws/ Socialise ls and strangers/ Eat, drink, and | Go to no location (Home, French Quarter, | unwanted throws in waste bins, recycling sites, or o |
| Local Government | Discuss any policy change to Mardi Gras/ Review parade permit applications Plan waste management a security | schedule and routes | appropriate | al-time updates/ Enforce e security and police personnel, acilities, and waste management | | |
| Mayor's Mardi Gras Advisory Council | Discuss the organisation a Mardi Gras/ Share recomm City Council (e.g. recomm which krewes will parade | nendations to the nendations on | | | | |
| NGOs | | | | | | |
| | Offer krewes support to plan and execute more sustainable parades/ Plan for festival-specific programmes | Coordinate with the city and other partners on relevant programmes (e.g. Recycle Dat!) | | maintain on-site programmes ner engagement, recycling | 1 | Bring collected materials for recycling/ Evaluate and repor programme success |
| Throw Suppliers | Produce selected throws to leaders | | | | | |
| Waste Collection Organisations | Resource planning based on expected needs for Mardi Gras | | | Clear | up waste fron | n streets |
| Recycling Organisations | | | | | v p | Recycle collected throws and vaste/ Refurbish, repackage a ortion of used beads, and esell them to krewes next yea |

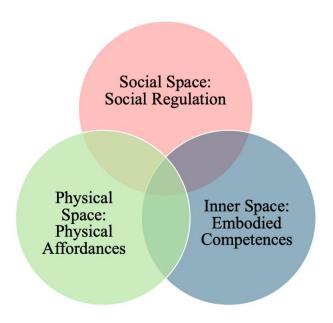
Note: The activity map shows the activities relevant stakeholders execute before, during and after the Mardi Gras parades.

2.3 Installation Theory

Installation Theory (IT) proposed by Lahlou (2017) explains how human behaviour is shaped and regulated by three interconnected layers which create a cohesive system that channels behaviour in relatively predictable ways:

- 1. **Physical Affordances:** The material affordances that guide or constrain behaviour, influencing how individuals act within a specific context.
- 2. **Embodied Competences:** The internalised skills and interpretive systems that individuals use to understand and respond to situations.
- 3. **Social Regulation:** Societal norms, rules, and institutions that influence behaviour by creating expectations and pressures to conform.

Figure 5
Installation Theory by Lahlou (2017)



Note: The interconnectedness of the three layers of IT.

IT can be applied to every step of the activities carried out by different stakeholders. However, to allow a focused analysis, we leveraged IT to analyse the selected points of intervention, as marked in Figure 5 above.

1st point of intervention: Parade Planning

One key intervention point lies in the planning and preparation phase of the parade, particularly in the decision-making of krewe leaders on the logistics of the parade and selection of throws.

Physical Affordances

The availability of certain products through established suppliers and the ease of bulk purchasing can limit the range of options considered by the leaders. Additionally, the way throws are displayed in catalogues can implicitly guide purchasing decisions, favouring more eye-catching but less sustainable options.

Embodied Competences

The krewe leader's decision-making is influenced by embodied competences, such as their focus on throws as a central element of the parade, their knowledge of different throw manufacturers, and their beliefs about which items parade-goers prefer. Minimising costs and generating revenue for the krewe also plays a significant role, driving a preference for cheaper, mass-produced items. A major challenge is that these leaders often lack clear information on what types and quantities of throws, as well as viable substitutes for throws, would optimise the visitor experience. Additionally, they may not be fully aware of the environmental and social impact throws like mass-produced plastic beads.

Social Regulation

Social regulation further constrains their choices. Many leaders adhere to tradition, continuing to purchase the same types of throws used in previous years. Furthermore, social pressure to conform may make leaders reluctant to change their practices by replacing throws with alternative ways of audience engagement, for fear of putting their krewe at a competitive disadvantage. They may also face resistance from krewe members or even risk losing their position if their choices are perceived as too radical.

2nd point of intervention: Post-Parade Activity

This point of intervention revolves around the waste and recycling behaviours of the parade-goers at the parade. The significant amount of waste and throws left on the ground, often clogging drains, highlights a gap in proper disposal and recycling practices.

Physical Affordances

The quantity, visibility, and convenience of recycling stations may make it difficult for participants to dispose of the throws properly. Additionally, the large quantity of throws can be difficult to carry, making it significantly easier for paradegoers to leave things on the ground. Without physically easy options for responsible disposal, consumers often take the simpler path, choosing the waste bin or the ground.

Embodied Competences

Lacking awareness and understanding of the available recycling options to the public may also contribute to low usage rates. Given that recycling efforts at Mardi Gras are still relatively new, many parade-goers, especially those who are residents and have attended multiple years, may default to historical behaviours of putting beads on the ground. This behaviour by the residents further complicates the challenge, as it creates a visible social norm that is then adopted by visiting parade-goers. Furthermore, many individuals lack intrinsic motivation, such as personal environmental concerns, to ensure proper waste disposal.

Social Regulation

Many participants do not perceive littering as a significant issue, as discarded throws have long been an accepted part of Mardi Gras culture. Additionally, as described by the krewe member and parade-goer interviewed, a widely recognised norm discourages picking up beads or other discarded throws from the ground, referring to those who do as 'a bottom sucking mud dweller'. Those who attempt to recover and recycle items may risk social disapproval, reinforcing wasteful practices. As a result, large amounts of waste remain on the streets, contributing to costly clean-up efforts and environmental hazards such as drain blockages. Moreover, there is a lack of extrinsic motivation to encourage proper disposal. Currently, there are no widespread incentive programs such as gamification, reward systems, or penalties, to influence behaviour.

3 Proposed Interventions

To make Mardi Gras more sustainable in the near-term whilst laying the foundation for deeper, system-level change in the long term, we propose two sets of interventions. The first aims to maximise sustainability within the current system by increasing awareness of and engagement with existing sustainability initiatives through posters and billboards, gamification, and digital integration. The second set focuses on more transformative change and includes reimagining parades to shift focus away from throws, changing krewe business models to support this change, and leveraging social pressure to further promote sustainability within krewes.

3.1 Intervention Set 1: Maximise Sustainability within the Current System

Whilst making Mardi Gras broadly sustainable will be a long-term undertaking, there are ways to make improvements within the current system and address intervention point #2 in Figure 3. Existing recycling programs for throws and other packaging waste, such as cans and bottles, are growing in scale but can benefit from additional engagement tactics.

3.1.1 Gamification of Recycling Collection Bins

As part of our efforts to maximise environmental conservation in the context of current practices, we propose the gamification of existing recycling bins. Gamification refers to the utilisation of game-design elements in a non-gaming context (Baptista & Oliveira, 2019). This method intends to create value for the user by creating a synergy between engagement and functionality, ultimately leading to a more enjoyable experience, and bringing benefits for both parties (Baptista & Oliveira, 2019). Specifically, we aim to transform the utilitarian behaviour of recycling into a hedonic process that brings enjoyment to the recycler, making it more likely that parade-goers take up the desired behaviour. This could be achieved through 'poll bins' which have two compartments, each featuring a fun yet divisive statement. For instance, the question 'Day Parade vs. Night Parade' would be displayed on the top half of the bin, whilst the bin itself would be divided into two parts, with 'Day' and 'Night' written on each respective compartment, letting the person place their beads in the one that aligns with their opinion (see Figure 6).

Figure 6Illustration of Bead Recycling Gamification Voting Bins



Note: Ballot bin where individuals can 'vote' with their beads by putting them in one of two compartment options, here shown as 'Day Parade versus Night Parade'. Other statements can include 'Jambalaya vs. Gumbo¹', 'Daiquiri vs. Hurricane²' and 'Sidewalk Side vs. Neutral Ground³'.

According to Self-Determination Theory, for a behaviour to occur due to intrinsic motivations, which is what voluntary recycling requires, three components must be fulfilled: autonomy, competence, and relatedness (Kovisto & Hamari, 2019). In this solution, autonomy is achieved because individuals are free to decide whether they wish to partake or not and have a choice between two options whilst voting. Competence needs are met because everyone can

¹ Jambalaya and Gumbo are two typical dishes in Louisiana cuisine.

² Daquiris and Hurricanes are two popular drinks associated with New Orleans.

³ 'Neutral Ground' refers to the side of the parade opposite of the houses, where parade-goers stand on a median.

tackle the challenges of voting via beads, especially as the issues presented are opinion-based. Lastly, relatedness is fulfilled by using relevant statements for parade-goers, particularly residents, increasing their personal identification with the task. Gamification of recycling bins provides a relatively cheap and fun way of promoting recycling throughout the parade, in a way that supersedes political divides to instead focus on shared local identity and is in line with the joyous spirit of the festival.

3.1.2 Removing Hassle with Recycling Locator in Mobile App

There are currently several parade tracker mobile apps available that provide information about the parades to parade-goers. One of the apps is WWL Parade Tracker, a service of the New Orleans television station WWL-TV, that offers schedules of parades, real-time GPS tracking, parade, and krewe information. By leveraging the existing recycling efforts through the 'Recycle Dat!' initiative and collaborating with the WWL Parade Tracker app, recycling bin and site locations can be digitally integrated into the existing Mardi Gras map tool, allowing for added convenience and removing consumer hassle (see Figure 7).

Hassle, defined as an irritating and distressing demand (Kanner et al., 1981), is a psychological barrier to sustainable behaviours. For instance, parade-goers may perceive recycling as a hassle, especially if sites are not easily identifiable. This increases their likelihood of avoiding sustainable measures, leaving their waste on the ground or in a general waste bin (Roth & Cohen, 1986). To address this, organisers can intentionally minimise disruption and make sustainable behaviour easier (de Vries et al., 2019). By displaying clear locators of recycling sites, the hassle of having to look for recycling sites can be removed, increasing the likelihood of recycling.

Figure 7

Mock-up Design of a Recycling Locators In-App Page



Note. A mock-up design of recycling locators integrated into the existing Mardi Gras map tool in the WWL Parade Tracker app. Please note that the above figure is not to scale and is for illustrative purposes only.

3.1.3 Local Campaign Regarding Sustainability at Mardi Gras

By strategically shaping public perception and engagement, local campaigns, delivered through billboards and social media, serve as a powerful tool for raising awareness of sustainability issues and driving lasting behavioural change (Durbin & Filer, 2021). These campaigns, led by the *Sustainable Mardi Gras Coalition*, can act as a bridge between intervention points #1 and #2, addressing both immediate improvements and long-term mindset shifts. The first campaign focuses on enhancing recycling and waste disposal within the current Mardi Gras system, whilst the second seeks to reshape perspectives on cheap throws and promote more sustainable traditions. All campaign posters will feature QR codes linking to an informative website with actionable steps to make Mardi Gras more sustainable, inclusive, and supportive of the local community.

The first campaign aims to increase recycling rates by encouraging visitors to properly dispose of cans, bottles, and recyclable throws. To highlight the local consequences of inadequate recycling, the campaign features posters such as the example shown below (Figure 8) illustrating how discarded beads clog Louisiana's drainage system, leading to floods and environmental damage. The messaging calls on all Mardi Gras attendees to recycle, making responsible disposal a community effort. Another exemplary poster can be found in Appendix C.

This campaign will take place in a situated context, meaning it targets behaviour directly at the location where it occurs (Yamin et al., 2019). Posters will be strategically placed along parade routes to ensure high visibility and maximum impact on parade-goers' decision-making in the moment. To effectively engage conservative audiences, the campaign frames sustainability in terms of foundational aspects of morality like heritage, purity, and local responsibility, rather than abstract environmental concerns (Haidt et al., 2009). The poster visually connects blocked drains and flooding, which is a real and recurring issue in Louisiana, to excessive waste during Mardi Gras. Furthermore, the image of a pelican, the state bird, appeals to regional pride and environmental stewardship. By leveraging this approach, the campaign aligns with local values, increasing the likelihood of behavioural change.

Figure 8Mock-up Poster for the First Campaign

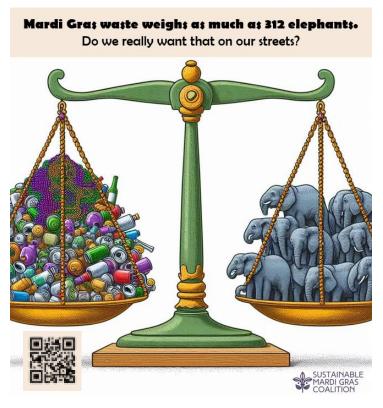


Note. The poster connects discarded beads and throws causing a flood, depicting the lack of recycling as a trigger for dramatic consequences. Image generated by Microsoft, Microsoft Designer, 2025; see Appendix E for the prompt.

The second campaign aims to encourage a shift toward fewer, more sustainable, locally-made alternatives through a billboard in a high-traffic area, such as Interstate 10 in Downtown New Orleans. To reinforce this message, the Sustainable Mardi Gras Coalition can facilitate a social media campaign throughout the year to engage and activate the community. As krewe decisions about throws take place far in advance of Mardi Gras, the campaign intends to shift community and participant expectations outside of Mardi Gras season to ultimately create demand-side pressure on krewes to adopt more sustainable purchasing practices in the long run. The exemplary campaign graphic (Figure 9) visually compares the weight of annual Mardi Gras waste to elephants, using a rhetorical question to prompt reflection on whether this level of waste is justifiable. By simply presenting concrete numbers of waste produced, the campaign enhances audience autonomy and competence, allowing individuals to draw their own conclusions, a practice found to reduce resistance to change (Pelletier et al., 2010). A further example of a campaign poster can be found in Appendix C.

Figure 9

Mock-up Poster for the Second Campaign



Note. A poster depicting a comparison between the amount of waste produced during Mardi

Gras to the weight of elephants to encourage a reduction in and potential substitution of throws. Image generated by Microsoft, Microsoft Designer, 2025; see Appendix E for the prompt.

3.2 Intervention Set 2: System Change for Long-Term Sustainability

In the longer-term time horizon, minimising waste generation at Mardi Gras by addressing intervention point #1 is key to overarching sustainability. Given the local values of limited government and the concern about losing the traditions of the festival, a bottom-up, more grassroots approach to system change will be critical to ensure community buy-in and satisfied stakeholder motives.

3.2.1 A New Participation Method for Mardi Gras

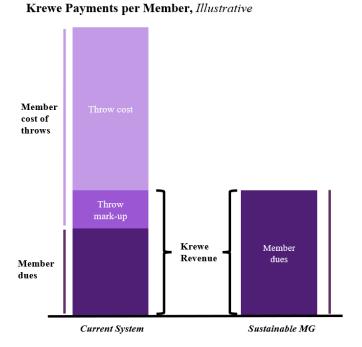
To maintain crowd excitement and engagement as well as rider satisfaction and fun, whilst minimising environmental impact, we propose a new participation approach for parades. Instead of throws, each parade can have a themed routine that, over the course of the parade, is taught to the crowd by krewe members. Before the parade, each krewe would create a 3 to 5-minute routine including elements such as singing, dancing, cheers, or call-and-response chants that relates to the theme of the parade. At roughly 30-minute intervals throughout the parade, the riders on the floats would 'teach' the routine in 15 to 30 second increments, with the goal of parade-goers knowing the full 'routine' by the end of the parade.

The shift away from beads to using a non-material participation form offers a few distinct benefits. Primarily, it allows for a more environmentally friendly participation method, whilst still satisfying the motives of parade-goers and krewe members. Furthermore, it leverages the potential for identity and social cohesion that events like Mardi Gras provide (Foley et al., 2007). For events to be more socially and environmentally sustainable, pure entrepreneurialism can be replaced by social entrepreneurialism, whereby events aim to enhance the social fabric of communities in addition to being financially lucrative (Foley et al., 2007). Shifting the focus of krewes from making a profit with throw sales to creating engaging routines that provide a unique and shared experience for parade-goers can foster social cohesion and ensure that Mardi Gras is sustainable in a more holistic sense.

3.2.2 Rethinking Krewe Business Models

A critical part transitioning to a sustainable Mardi Gras is fulfilling the financial incentives and motives of krewes. Addressing the current krewe business model, which generates revenue from the collection of membership fees and sale of throws, to maintain the level of revenue necessary to sustain krewe activities, we propose that krewes shift to a fees-only-based model, increasing member fees to offset the additional revenues that come from throw sales today. We believe that this revenue structure, along with the routine-based engagement at parades, could maintain krewe revenues and crowd engagement whilst requiring less total expenditure per member. To further detail this, we have included an illustration of the increased member dues that could be used to offset the revenue from throws (see Figure 10).

Figure 10Krewe Payments per Member Illustration

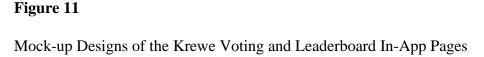


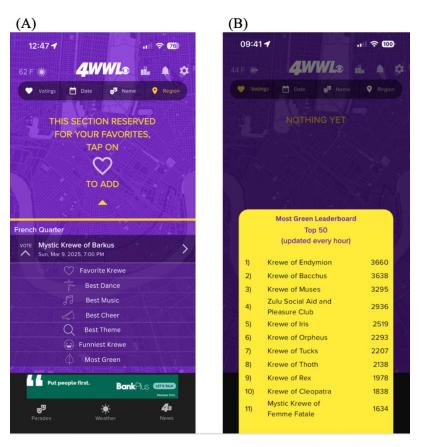
Note: Krewes could increase member dues to offset lost throw revenue whilst still requiring less total expenditure per member.

3.2.3 Krewe Leaderboard

To further pivot the focus of Mardi Gras away from throws, we will incentivise other krewe behaviours by leveraging competition. The existing WWL Parade Tracker App allows users to mark krewes as 'favorites', with overall user data then compiled and shared as a 'Favorites Leaderboard'. As part of the long-term set of interventions, we propose expanding the current leaderboard to include additional voting categories (see Figure 11). After clicking on the name of the krewe, users can vote for additional aspects of the krewes on top of the existing 'Favorite Krewe' category, including 'Best Dance', 'Best Music', 'Best Cheer', 'Best Theme', 'Funniest Krewe', and 'Most Green', and a separate leaderboard corresponding to each category will also be added.

Leaderboards allow participants to compare their performance to others (Sailer et al., 2017). This results in the creation of social pressure to increase participant's level of engagement (Burguillo, 2010), enhancing krewes' awareness and behaviour related to competitive categories. Following our proposal of adding a themed routine, the 'Best Dance', 'Best Music', and 'Best Cheer' categories can encourage krewes to focus on creating engaging routines, diverting their attention away from throws. Similarly, the 'Best Theme' and 'Funniest Krewe' categories motivate krewes to utilise Mardi Gras as an opportunity to address social matters and challenge social norms in fun and innovative ways. Meanwhile, the 'Most Green' category is designed to capture parade-goers' overall perceived 'greenness' of the krewes and parades to initiate awareness of sustainability and promote the adoption of sustainable practices. Specific elements of the current-day Mardi Gras that may lead to negative long-term environmental impacts, such as costumes and floats, are deliberately excluded.





Note. Mock-up designs to demonstrate how krewe voting and leaderboard can be implemented in the WWL Parade Tracker app. (A) Example of how parade-goers can vote for different categories by tapping on the respective logos. (B) Illustration of a leaderboard for the 'Most Green' voting category. Please note that the rankings are for illustrative purposes only.

4 Discussion and Limitations

In this paper, we provided solutions toward a more sustainable Mardi Gras by addressing the environmental impacts of waste from throws. Using interviews with Mardi Gras stakeholders, we aimed to provide both realistic and holistic interventions whilst aligning with the local context and satisfying the motives of the key stakeholders. After identifying parade planning and post-parade activity as the two main points of intervention using AT and IT, we proposed two sets of interventions. Targeting post-parade activity, the first set of interventions builds on existing efforts to maximise sustainability within the current system through the gamification of recycling collection bins, the creation of digital recycling locators, and the

delivery of local campaigns using billboards and social media. The local campaign serves as a bridge between the two sets of interventions, with the second set aiming to extend beyond the existing system to foster a long-term transformative shift away from the focus on throws. Focusing on parade planning, we proposed the addition of a routine as a new participation method, changing the krewe business model, and creating a krewe leaderboard to incentivise competition.

The detrimental impact of waste is not limited to Mardi Gras, and whilst our solutions were built around Mardi Gras, they can also be generalised to address other carnivals and large-scale events. For instance, the five-day Glastonbury Festival leaves behind 2,000 tonnes of waste each year (Towens, 2025). Here, recycling can be encouraged by applying our first set of interventions. Meanwhile, despite the Trinidad and Tobago Carnival being renowned for its vibrant and elaborate costumes, producing and transporting just a single carnival costume bra was estimated to generate 37.68 kg of carbon dioxide emissions (Gibbs, 2025). Although costumes are a significant aspect of the carnival, just as beads are to Mardi Gras, the implementation of our second set of interventions and the introduction of a new engagement method may facilitate a shift in attention and reduce the reliance on unsustainable costumes.

However, our solutions are also subject to limitations. Firstly, due to the scope of this paper, we only explored interventions centred around throws at Mardi Gras. As such, we did not discuss other potentially wasteful practices such as float creation or krewe costumes. Furthermore, other environmental impacts, such as carbon emissions from cargo shipping, passenger travel, or the towing of the floats were not addressed (Hedgepeth, 2024). Future research may wish to broaden the focus of interventions beyond waste management.

Secondly, given the limited timeframe, the interventions are not piloted, and our understanding of long-term sustainability behaviours is also hindered. Particularly, our second set of interventions pivoting around a transformational shift in attention may be subjected to the Cultural Inertial Model, which theorises that perceived changes in a static culture might lead to reactions to reduce further change (Armenta et al., 2022). Moreover, whilst we framed our solutions in ways that align with Louisiana's conservative values, further testing is needed to assess how well the sustainability messages in our interventions are perceived by the stakeholders. Finally, some of our interventions, for example the implementation of the local campaign, require reaching out to stakeholders and making sure that they are sufficiently financed. Therefore, further research is needed to ensure that our solutions produce the desired

results. Despite these challenges, we believe that the interventions proposed are powerful and capable of driving change. *Alors, laissez les bon temps verts rouler*⁴!

⁴ 'Laissez les bon temps rouler' is a French saying that is the unofficial slogan of Mardi Gras, meaning 'Let the Good Times Roll'. To capture our sustainability efforts, we have added 'verts' or 'green' to this phrase, making it 'So, let the good 'green' times roll'!

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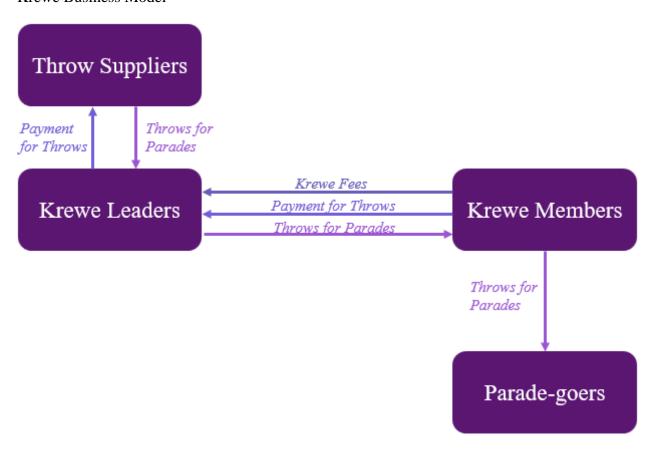
6 Appendix

A. Journey of the Throws (Activity Theory and Installation Theory)

| Task | Actor's Motives & Goals | Contributions from Actor | Actor's Rewards | Physical Affordances | Embodied Competencies | Social Regulation |
|--|--|---|---|--|--|--|
| Krewe purchasing leader chooses items for parade catalogue | Choose items that participants like to catch; choose items that can make the krewe money | Time to identify items | Social affirmation; revenue for the krewe | Catalogue | Knowledge about different throw manufacturers; beliefs about what throws visitors want to get | Leaders want to keep traditions (go with throws that have been bought before); keep prices low; conform to the laws and regulations |
| Krewe members select throw items to purchase | Choose items that parade participants will like; meet minimum spend threshold; stay within personal budget | Time to choose items; money to pay for items | Anticipation of throwing to make visitors happy | Catalogue | Most popular throw items | Required minimum purchase amount by krewe; historical norm around what types of items are thrown (e.g., beads, coins, etc.); social pressure to purchase many items |
| Throw producers make purchased items | Create desired product; generate revenue; meet production deadline | Time and energy to produce items | Business revenue | Factory and available machinery and materials | Skill to make desirable, cheap throws | Being in line with legal standards, e.g., working conditions. Potential pressure to produce ecofriendlier throws |
| Krewe members throw items at the parades | Make participants happy; have fun; get rid of all items | Throw items to give to participants; riding in parade | Happiness; fun; social affirmation | Number of throws purchased; floats; parade route | Throwing in the right frequency to even out distribution | Social norm around making people 'work' for the best throws |
| Parade-goers catch items from parade throws | Catch unique/ interesting items; have fun with family and friends | Attending parade / standing on the street; cheering and dancing; catching items | Happiness; fun; social affirmation | Space to carry items | Catching/ standing | Giving throws to kids; not fighting over throws |
| Parade-goers leave the parade and dispose of beads in bins or on the ground | Get home quickly; get rid of items that they don't want; avoid littering in the streets | Find a bin and drop throws or leave it on the ground | Getting rid of unnecessary throws | Presence of (recycling) bins | Knowledge of where (recycling) bins are | Picking up throws from the ground is considered inappropriate; active littering is also outside the norm |

B. Krewe Business Model

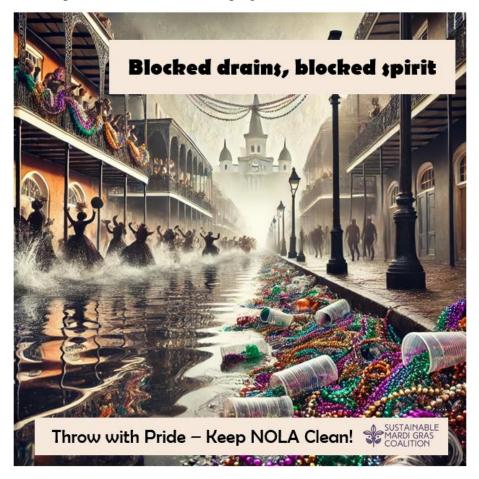
Figure 11Krewe Business Model



Note: A diagram illustrating the current krewe business model.

C. Campaign Poster Example

Figure 12Mock-up Poster for the First Campaign



Note: The poster connects the excessive waste left on the ground to potential drainage blockings, leading to reduced enjoyment during the festival. Image generated by OpenAI, ChatGPT, 2025; see Appendix E for the prompt.

Figure 13

Mock-up Poster for the Second Campaign



Note: The poster depicts volunteers krewe crafting sustainable Mardi Gras throws. The aim of this poster is to encourage buying local throws to support the community and economy of New Orleans. Photo used with permission of Grounds Krewe (2023).

D. Key Quotes from Interviews

NGO Leaders

- 'It was a pivotal moment when they found 93,000 pounds of Mardi Gras beads and just five blocks of our storm drain system. This was about five years ago where city below sea level, we need storm drains to pump water out of this city fast, or else we fill up like a bowl, and to find, you know, these really sort of superfluous, you know, just conspicuous over-consumption here for fun, products like clogging up our storm drain, that really changed a lot of the conversation.'
- 'There's not nothing been done yet. Carrot or stick between the city and the krewes, or any sort of policies to, you know, try to target outcomes, or, you know, to get away from this waste... that hasn't happened yet.'
- 'And so the parades require more resources every year that are competitive with each other, and the solution to getting bigger and better is always more money, which requires more people, more throws, more parades, and results in more waste.'
- 'There's the whole fact that we're sending millions of dollars every year out of the state across the world to import these products with a huge carbon footprint.'
- '[...] it does require taxpayer dollars, \$2.1 million just for 10 days and clean up.'
- 'I would say for the most part, what we've had the most success with is the grassroots effort where we're going and, you know, reaching riders who are in these parades, who are looking for change to happen.'
- '[...] one Captain who's like, you know what, [buying sustainable beads] not really for environmental reasons, but almost for, like, a marketing reason.'
- 'Obviously, top down has the highest impact, the quickest impact, but the bottom up will be the most sustainable and long lasting.'
- 'And I think there's another subject of captains who are like, well, I want to change, but the economic outlook of it is not good for the krewe, because right now we're importing products that are made of disposable plastic with foreign manufacturing really cheap.'
- 'So like [...] the krewe captains are making a huge margin of profit.'

- 'It is the only sort of spectacle performance in the world where the people who are entertaining the crowd are paying for the privilege of doing so, not vice versa.'
- 'And people aren't looking because they've already caught a lot of stuff, or they kind of, like, pretend like they're interested, and then the people throw it, and if it's not, like, right in their hands, they just let it hit the ground and it stays there.'
- '[The demand for throws is] different for people who live here and go to Mardi Gras every single year and go to many parades throughout a season, versus a visitor, it's their first time. This is the first parade they've been to. Their demand level is very high.'
- 'So the people who make most of the rules and decisions around how Mardi Gras happens is called the Mayor's Advisory Council of Mardi Gras. And unfortunately, that is just a collection of all the krewe captains and, you know, a couple of city representatives, unfortunately, that does not include any sort of voice of sustainability or resilience.'
- 'So one example is a krewe called the Krewe of Freret, and that was formed like in the last couple of decades, and they were the first krewe this year to officially ban all riders from throwing plastic beads or purchasing plastic beads for their parade. And some other krewes have followed suit.'

Krewe member

- 'It is so like imbued into the culture of South Louisiana, particularly New Orleans, that I would be a scrooge if I didn't celebrate Mardi Gras'
- 'There's, I think, a pervasive attitude that Endymion wants to be the biggest and the best krewe, and a lot of that is surrounding like the experience of the parade going through the city, and they very much encourage throwing a lot of beads.'
- 'Now that I'm on the krewe, I'm like, the person that gets to satisfy, like, that little kid who's screaming his head off like, like, my sole job is to like, you know, give away as much plastic beads and toys as I possibly can and that's an incredibly exhilarating experience.'
- 'There is a term called, like, "a bottom sucking mud dweller", or like you would never like... it is such a faux pas to pick up beads off the ground. Like, if it touches the ground, it is then useless, unless it is, like, really worth it.'
- 'So like our krewe sets a minimum for the amount that you can buy. And it's a very hefty minimum, and not necessarily in like

- dollars terms, but like in a you have to get at least this many number of beads to throw.'
- '[...] if there's only one or two things getting passed out the same time, it would kind of lose the Mardi Gras magic.'
- 'It is the quintessential like throw away culture, or fast, fast fun fast fashion.'
- 'There's some biodegradable beads that are becoming more main, maybe not becoming more mainstream, have been discussed, but they're more expensive, and that's what's discouraging krewes from getting them.'
- 'I would love for it to become a more sustainable festival.'
- 'I would try to avoid a governmental route [to become more sustainable]. I think community action would probably be the most beneficial way of doing it.'

Parade-goer (resident)

- '[...] it's another good way to connect with people that you're close to, almost in a way that, like a sporting event, brings people together.'
- 'When I was younger, I always wanted stuffed animals, but [now] I generally look for more, like utilitarian throws.'
- 'I would usually only bring the [beads] that I can hold on my body home. [...] I would not like take a bag of beads at this point and at home, because I know that there are street sweepers that come [...].'
- 'But now that I'm older, I'm like, this [number of beads being thrown] is a little much.'
- (When asked about what sustainability measures could be implemented) 'I would say probably having some kind of recycling situation, whether that be a bin or a stand along the parade route, so it's more accessible to individuals that are going to the parade to recycle throws.'
- 'I think the population of Louisiana at large is not as eager to implement aggressive sustainability practices [...].'
- 'And it would be really cool to be able to kind of preserve the cultural experience of Mardi Gras and something that I consider to be like humanity at its finest, like everyone's always so happy, and it's just a great, great experience. But like to be able to maintain that kind of experience in tandem with more sustainable initiatives, and being able to continue to do many Mardi Gras would be great.'
- 'I love seeing friends, and you're right, dancing and singing and drinking and like, it's so fun, but like, I get the least enjoyment out of catching throws now.'

E. Interview Transcript Excerpts

Interview 1: NGO Leaders

The interview

Date: 3 December 2024

Duration: 38 minutes

Place: Zoom

Interviewee

Demographic information:

Age: 30-40 years old

Gender: 1 male, 1 female

Relation to the topic: Leadership of New Orleans NGO focused on sustainability at Mardi Gras

Method of recruitment: Personal connection via research team member

Extract

Participant 1:

There's not nothing been done yet. Carrot or stick between the city and the krewes, or any sort of policies to, you know, try to target outcomes, or, you know, to get away from this waste that hasn't happened yet. Because I think everyone is kind of in the same mentality that like, well, what do we do without all of these throws now? Because, as is the case with every event in the entire world and every company in the entire world, there's only one you know path for growth, and that is to get bigger and bigger and bigger and bigger. And so the parades require more resources every year that are competitive with each other, and the solution to getting bigger and better is always more money, which requires more people, more throws, more parades, and results in more waste.

Interviewer:

So no backlash yet, but definitely growing community conversation, okay? And then in terms of that conversation, I mean, you mentioned residents. Do you feel like there's a general awareness of at least like local people in New Orleans, about this? Is it a concern? Maybe the subset of people that are speaking to [NGO] have a, you know, slight bias. But do you feel like it's growing in terms of the broader conversation?

Participant 1:

Absolutely, yeah, and I think that's something you know, [NGO] is a nonprofit. We're very focused on our initiatives that are about waste prevention and waste reduction. We do community outreach when we engage volunteers to help make our little sustainable froze. But this is maybe what [P2] is trying to tap into here, is that there are, you know, stakeholders. Maybe even if you don't ride in a parade, if you don't go to the parades, this is still relevant to you, not just for the waste issue, for the health and safety issue. The beads are made with really poor products that are toxic, unsafe for children. There's the whole fact that we're sending millions of dollars every year out of the state across the world to import these products with a huge carbon footprint.

There's the fact that, yes, it does require taxpayer dollars, \$2.1 million just for 10 days and clean up. So you might not have anything to do with Mardi Gras, yet you're still paying for it, and that will rub people the wrong way. So trying to tap in, into, you know, all of the stakeholders involved, and really get together. I think [P2] is working on something that is like a coalition of people, and that is even reaching people outside of New Orleans, you know, trying to find people who are saying, hey, what you know, we understand the threats that single use plastics are posing. And, you know, environments across the world, here's a very obvious case of something that is not needed. I mean, these are purely decorative, purely for fun, just, you know, they're like a side of effect of a big party.

Interviewer:

If we, you know, why can't we get away from these things first? Instead of, you know, as we also phase down single use plastics like straws and cutlery and grocery bags and those things, this would be a good place to start, because it's, you know, almost unnecessary in a way, yeah, definitely. Well, maybe then we'd love to hear more about kind of what your experience has been with [NGO], and how you felt about the conversations that you've had with krewes and other stakeholders in terms of adopting some of the more sustainable throws that you guys provide. And like, what has that what have those conversations have looked like.

Participant 1:

Yeah, well, there's two ways that you make change, and you guys probably know this, there's the top down approach, and then there's the bottom up approach, the grassroots, or the sort of policy that then gets down to all the people, I would say for the most part, what we've had the most success with is the grassroots effort where we're going and, you know, reaching riders who are in these parades, who are looking for change to happen, and some of them are even, were even on their way out of like being in the cruise, because they were so disgusted with all of the ways what their throw options were, getting these people, showing them that there is an alternative on the way, even though it's still very small at this point, and getting them to, you know, help support what we're doing, buying our products, talking to people, talking to the captains and their krewe, to see if they can get, you know, some sort of buy-in that has been the most successful for us.

But we've also had the opposite thing sort of happen, where we had, again, these krewes are competitive with each other. They hear this community conversation. They see what's going on globally, and then there's, like, one Captain who's like, you know what, not really for environmental reasons, but almost for, like, a marketing reason. I want to embrace sustainability as a part of this parade krewe, and so I the captain, am buying, you know, 10% of our throws for this parade, they're going to be sustainable, and I'm going to make sure that it's like celebrated in the media and everything, and it's that's the other way that it's happened for us. So we're doing a little bit of both. Obviously, top down has the highest impact, the quickest impact, but the bottom up will be the most sustainable and long lasting.

Interviewer:

Can you talk about maybe some of the krewes that have not been open to having this discussion and like, what have their main reasons been? Is it mostly economic?

Participant 1:

Sure, yeah, definitely. Mostly economic. There are some parade organizations who have captains and leaders who are involved in the throw distribution business. So they import these throws from East Asia, help design everything, and they're making money in this process. And so they're reluctant to change because of the financial benefits. And I think there's another subject of captains who are like, well, I want to change, but the economic outlook of it is not good for the krewe, because right now we're importing products that are made disposable

plastic with foreign manufacturing really cheap. We make a lot of money for the krewe when we sell a lot of these things. And if I were to just say, well, let's stop that, or phase that down dramatically, they're thinking, ooh, what does that mean for the future of the organization? Like, we still want to have the best parade possible. So it's tough for them to think through a future scenario that is way more about lower quantity, higher value, lower profit margin sales. I was, I was just gonna add, like, I think maybe visually, it's helpful to understand that like, for each rider. So like, let's say one parade or one krewe has, you know, maybe 1000 people riding in that parade. So there's like 30 floats, and each float has, you know, 50 people on it, and each person is throwing approximately, you know, 1000 plus trinkets throughout the course of the parade. And so these trinkets, or beads, or whatever, like comparing to what [NGO] is selling. You know, you can buy for you know, you can buy a dozen plastic, you know, lead paint coated beads for approximately the same price as like what you would purchase one of our sachets. [...]

Interview 2: Krewe member

The Interview

Date: 11 December 2024

Duration: 33 minutes

Place: Zoom

Interviewee

Demographic information:

Age: 20-30 years old

Gender: Male

Relation to the topic: Member of a prominent krewe

Method of recruitment: Personal connection via research team member

Extract

Interviewer:

Now we would like to move on to asking about sustainability in that specific context, just focusing a bit more on it. Have you ever thought about the environmental impact of Mardi Gras, and if so, what comes to mind?

Participant:

Oh, yeah, it's horrible. Okay, let's think. Where do I even start? Like you, you catch the bead for and then like that bead is useful for a second, and then you throw it away. Or, like you, you forget about it, or it goes into a bag, and it goes up into your attic and you never think about that bead again. It is the quintessential like throw away culture, or fast, fast fun fast fashion. Then even, like, to the packaging on how, like, we receive the beads, like, it's all, I mean, it the beads are all plastic and, like, there's the bead itself, but then there's all, like, the plastic bags and like the ties that it's, you know, packaged in, that often, just gets thrown off the float and into the street. There are, I know there are some organizations that are trying to change. There's

some biodegradable beads that are becoming more main... maybe not becoming more mainstream... have been discussed, but they're more expensive, and that's what's discouraging krewes from getting them.

Interviewer:

Yeah, thank you. Next question is, have you noticed any sustainability related practices at the festival, like, for example, do they promote recycling? Do you see anything related to sustainability that is put on by the festival itself?

Participant:

No, I don't think so. Like, I can't think of anything that like the city does to promote recycling, um do you know if Endymion has, like, the trucks that are kind of towards the back of the parade that like, then recollect beads from the spectators? You know what I'm talking about.

Interviewer:

I do. Yes.

Participant:

I assume that Endymion has those. I kind of, I assume that those kind of follow all the, like, all of the krewes. I don't know where those beads end up.

Yeah, I was, yeah. I even remember, like, as a kid, like, that was always like, kind of like, that's how you knew the parade was over. Is like, whenever the truck came by to sweep up everything, but I don't know if those just end up in a landfill or if they're being recycled.

Interviewer:

Thank you. If you wanted to bring your own sustainable throws, would that be allowed based on your krewe rules, or do you have to purchase directly from the krewe, and you're working with what you can purchase?

Participant:

The latter. So for our krewe, we're not able to bring any of our own throws. You have to you have to work through the krewe. Other krewes allow you to bring your own throws on but not [my krewe].

Interviewer:

Do you think there's a larger conversation, like a community level discussion on the waste and sustainability surrounding Mardi Gras? But do you think that's something that the general public is concerned about, or not really?

Participant:

I would, I wouldn't say that there's large community discussion about it. I think it is discussed in some circles, but not across the community at large. I think it's thought of as kind of like a novel concept, a nice to do, but not something that would directly get implemented.

Interviewer:

Thank you. And do you personally think that more sustainable measures should be implemented for Mardi Gras? And why or why not? For example, you know, it's such an important event for the culture. Do you think that could be a way to balance maintaining the essence and beauty of Mardi Gras while making it more sustainable. Do you think it sounds like it must be really, really hard to find the right balance? And obviously you can suggest people to be more sustainable, but they also don't want to. You don't want to lose the essence of the van, which relies on these things being thrown so do you think, do you think this is feasible? And personally to you, what would that look like...like the right balance?

Participant:

I would definitely, I would love for it to become a more sustainable festival. And yes, I think there are many components of Mardi Gras that could remain very Mardi Gras and be more sustainable. I guess one piece of history is like, beads used to not be made out of plastic. They used to be glass beads, much more expensive produce. But like, even now, like, if there are any glass beads, like, they're very highly sought after, I guess I say that, like, what has been thrown has changed with time, and I don't see why it couldn't change more. Or I can't. I don't see why it couldn't change in the future. And, like I said, like, if there's no need for a bead to last for more than a second.

Interview 3: Parade-goer (Resident)

The interview

Date: 11 December 2024

Duration: 31 minutes

Place: Zoom

Interviewee

Demographic information:

Age: 20-30 years old

Gender: Female

Relation to the topic: Louisiana resident who grew up attending Mardi Gras

Method of recruitment: Personal connection via research team member

Extract

Participant:

I really enjoy the spectacle of all the floats. Um, they're very ornate. Especially in parades like Endymion and Bacchus. They're extremely extravagant. They have lights all over them. It's really interesting to see what the krewes come up with. And it's always a really, really enjoyable time spent with friends and family. Like it's another it's another good way to connect with people that you're close to, almost in a way that, like a sporting event, brings people together.

Interviewer:

Okay, great. Yeah, that sounds amazing. So now we go to the next section with which is all about throws. So have you ever caught any throws? I assume so. And if so, what were they? What kind of throws?

Participant:

Yes, I have there are typically plastic beads in most parades. Sometimes people will, depending on because they're, they're like the really big krewes, like the one that [friend] is in and then so like Bachhus and Endymion, but then a lot of the smaller neighborhoods in and around Louisiana will also have Mardi Gras, and those are definitely like a lower budget production, and they'll often reuse like things that they catch. But anyway, so sorry, many of them were plastic beads. And then there are occasionally other like household items they might throw, water bottles they might throw, like mirrors. Or there's one krewe that always has really interesting things called Muses. They throw their like signature throw is like a high heeled shoe that they decorate. There is another krewe called Zulu. They'll decorate coconuts, like real like plant coconuts with glitter and beads and flower feathers and so the primary throws are beads. Stuffed animals, maybe, like whoopie pies and then miscellaneous other kind of items, but there are a couple of krewes that have, like signature throws that they like to throw, but it's pretty much anything can be thrown off of a Mardi Gras float. The primary things are beads or stuffed animals, I would say.

Interviewer:

Okay, great. And what were your favorite throws among the catches?

Participant:

When I was younger, I always wanted stuffed animals, but I generally look for more, like utilitarian throws. I know one time [friend] caught a like an ice mold, like one that you can put in your freezer, put water in the ice, in the mold, and then make ice. And I thought that was super cool. So I really like things now that I can somehow bring home and use, because I'm not gonna take beads home and, like, make good use of them. It's kind of a very fleeting in the moment. Like, Oh, the excitement on something shiny, and then, like, you don't really use it again. So I really like things that have that I can use another situation.

Interviewer:

Yeah, so if you don't use those beads or other throws that are, like, not really useful, what exactly do you do with them, and how long do you keep them until you maybe dispose of them?

Participant:

Generally, not very long. My parents used to keep them for a really long time. I'm not really sure what they did with them, but I know as kids, we would like make other art and crafts out

of them, occasionally, not nearly we would not utilize all the beads, but a couple of them we would use to, like, make some kind of crafts. But in my adult life, I'm not really reusing the beads much.

And as far as the duration of time. If I'm traveling to go to Mardi Gras, I'm not going to hold on to the beads longer than for the duration of the trip, except in the event to like, bring them back to some friends that haven't, like, been able to see what that looks like. And that would only be like, a handful.

Interviewer:

Okay. So you would leave them straight at the, like, parade at the at the site, or would you take them, kind of home and, like, put them in the trash there?

Participant:

I would usually only bring the ones that I can hold on my body home, like only ones that are on my neck I would bring home. And then if I can't carry it on myself, I'm probably not going to hold on to it like I would not like take a bag of beads at this point and at home, because I know that there are street sweepers that come and they'll sweep the streets to get a lot of the debris off of it.

Interviewer:

Okay, that makes sense. And what do you think about the quantity of throws being thrown overall throughout Mardi Gras, and the quantity from, like, individual krewes?

Participant:

Um, it's a lot. It's definitely more significant at New Orleans Mardi Gras than in, like, some of the smaller neighborhood kind of productions that I mentioned earlier. But it's... it's definitely more than there are surely more beads than a person could keep on their person. Like, if you were not selective in which beads you are keeping and which ones you are not and you're discarding of you would be quickly overwhelmed with, like the number of beads on your neck.

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F. History of AI Chat

Using Microsoft Designer by Microsoft:

Figure 7:

"A poster for a billboard on raising sustainability at Mardi Gras. These are the notes on how the poster should look like: 3. Poster: "Mardi Gras Trash Travels Far". Visual:

• A plastic bead necklace floating in water, gradually fading into an image of polluted Louisiana wetlands and a dying pelican (state bird).

• A subtle ghosted overlay of a joyful Mardi Gras parade in the background.

Text:

"Our beads shouldn't end up in our bayous."

"Choose throws that stay part of our tradition, not our waterways."

Throw with Pride – Protect Our Home!"

Figure 8:

"Depict a balance scale. on the left side on the balance scale there is a huge mountain of Mardi Gras waste such as beads, empty cans and bottles put on a big and visible scale. on the right side of the balance scale, show several hundred elephants (make them small)"

Using ChatGPT by OpenAI:

Figure 12:

Retrieve the prompt conversation using the following link:

https://chatgpt.com/share/67e13bf7-0fc0-8012-97b6-3d7660bd5534