



**ESPERIMENTA
TIKKA XJENZA**

EVALUATION REPORT 2022

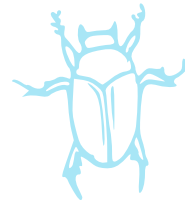
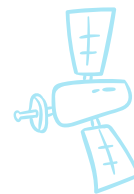
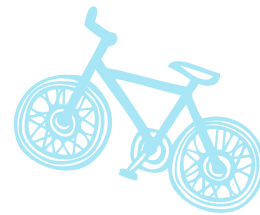


GOVERNMENT OF
MALTA

MINISTRY FOR EDUCATION,
SPORT, YOUTH, RESEARCH
AND INNOVATION
PARLIAMENTARY SECRETARIAT
FOR YOUTH, RESEARCH
AND INNOVATION



**NATIONAL
STEM
ENGAGEMENT
WORKING GROUP**





ESPERIMENTA TIKKA XJENZA

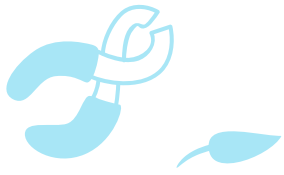


EVALUATION REPORT

Context: Project Summary & Key Findings

- The 2020 telephone survey conducted by EMCS Ltd. targeting the residents of Cottonera and Kalkara suggested that a considerable percentage of the population of the 4 targeted localities (Bormla, Birgu, Isla and Kalkara) has not visited Esplora. Most respondents (77%) stated that they use science and technology in their everyday life. When asked what activities they would like to engage with during a science festival, 14% mentioned science experiments, 14% mentioned science-related film screenings followed subsequently by 13% who mentioned science-related food stalls. The latter reinforces the fact that the service mentioned most as a suggestion at a science festival was food (39%).
- 76% of respondents stated that health is one of the topics that interest them most in science and that the two most preferred areas to have a science festival are Dock 1 in Cospicua (24%) or the Senglea shoreline (11%).
- The most preferred method of advertisement was television.
- Such responses have formed the basis of Esplora's first-ever science festival 'Esperimenta Tikka Xjenza' which took place on Saturday 23 July from 6pm to 11pm at the historical Birgu Couvre Porte. The main aim of the festival also mirrored the results and conclusions drawn from the telephone survey and was to further highlight the relevance of science in daily life and that science is fun and accessible to all irrespective of gender, socioeconomic status, ethnicity, and level of education.





- Esperimenta Tikka Xjenza was organised by the STEM Engagement Team at Esplora in conjunction with the STEM Engagement Working Group. It was designed and marketed as a small, intimate community event taking place in one of the target localities (Bormla, Birgu, Isla and Kalkara), with the intention of organising similar activities in the other three localities in future years. It was decided that the first edition of the festival - in the aftermath of Covid-imposed restrictions - would be a one-evening event rather than a full weekend. One of the festival's goals was to reach out to a population that statistically is less inclined to visit a science centre, as a first step towards changing their perception towards science and science activities.

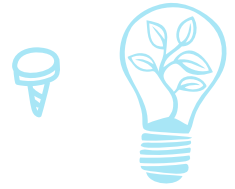
The festival was entirely free of charge.

- The festival was an overall success with an audience turn-out of around 400 people.
- A separate online survey was disseminated to all potential external stakeholders and Esplora personnel, aimed at gaining constructive feedback on the overall project cycle. The main external stakeholders participating in the festival were representatives from Studio 18, Moveo Dance Company, Tombs Creatius, Shark-lab Malta, BirdLife Malta, JA Malta, Ambjent Malta, Atelier Manuel Recycled Wooden Toys, and Faculty of Engineering within the University of Malta.

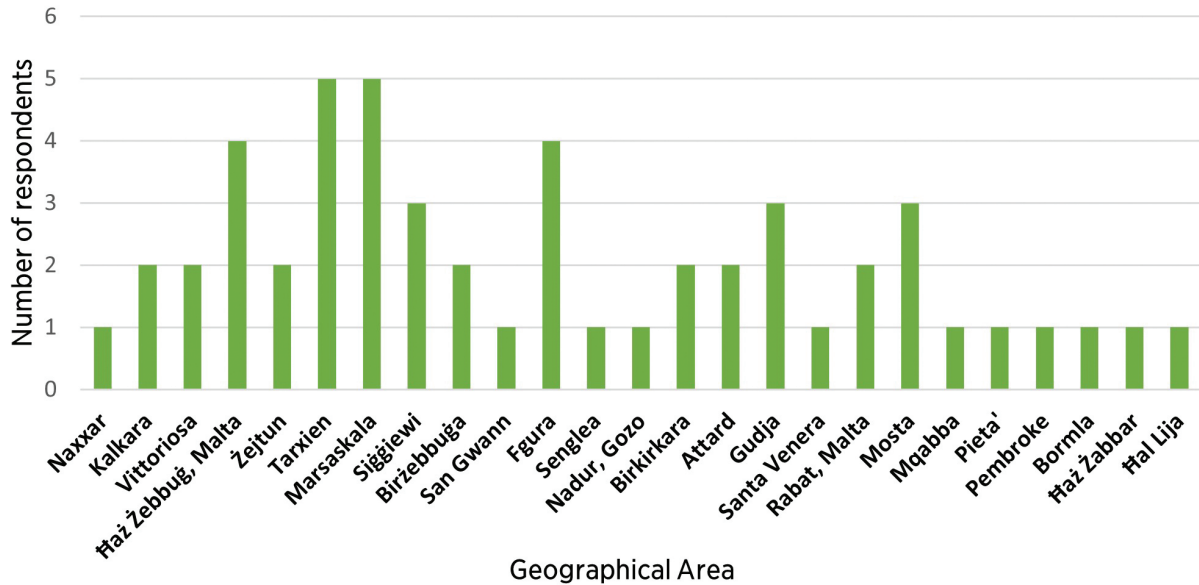
Audience Profile

- The festival offered a number of outputs to its visitors including a theatrical performance by Studio 18, a dance performance by Moveo Dance Company, an interactive science show presented by one of Esplora's science communicators, STEM storytelling sessions, wooden games, tinkering activities, various science experiments and demonstrations showcased by six external stakeholders, a short film, and a human library.
- Approximately 400 visitors were present at the festival.
- The most popular activities were those characterised by higher levels of public engagement and interactivity.
- Some activities could have benefitted if session timings did not overlap.
- The majority of visitors came from the southeastern region of Malta. Such data would be potentially significant for future festivals since it determines whether 'Esperimenta Tikka Xjenza' Festival's first edition has managed to attract an audience from Cottonera and Kalkara from Cottonera and Kalkara, this being one of the festival's goals.. As indicated in the bar chart below, attendance from Cottonera appears to have been satisfactory. Of course, the impact of such outreach events can only be fully appreciated over time.





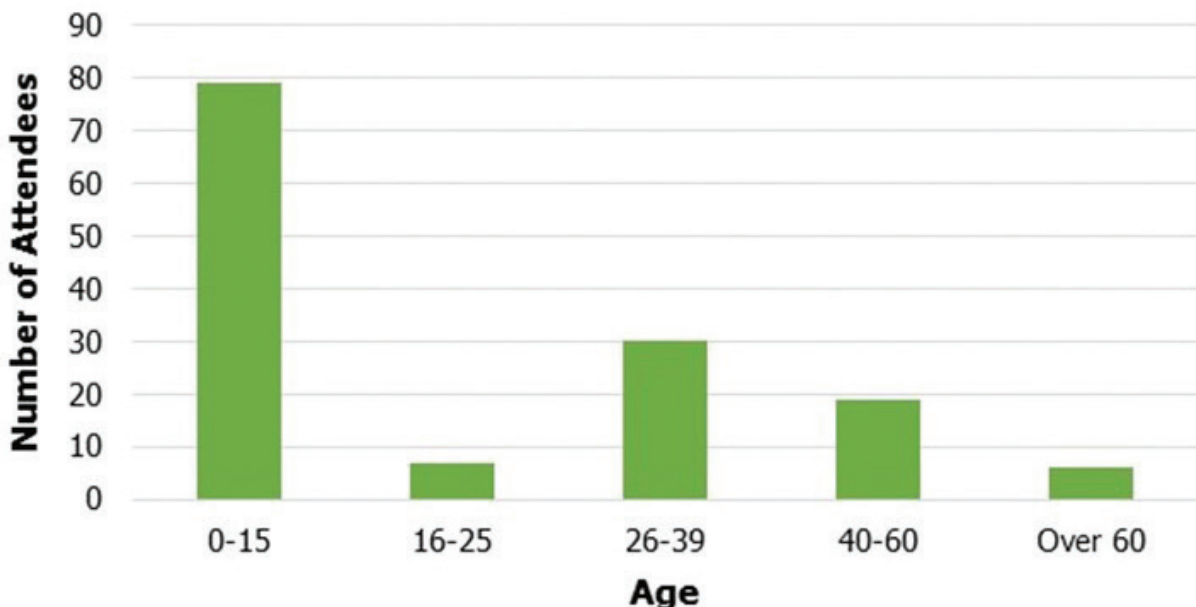
Audience Demography - Geographical Area



Representative sample based on 10% of attendees.

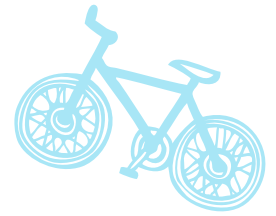
- Considering that the festival has welcomed a high percentage of children between the age of 0-15, adults aged of 26-39, and senior adults between the age of 40-60 (see bar chart below), one can conclude that 'Esperimenta Tikka Xjenza' science festival has attracted far more families with children than youths and senior adults over 60.

Audience Demography - Age



Representative sample based on 10% of attendees.





- Although the majority of visitors provided positive feedback regarding the overall planning and execution of the festival, some participants provided a constructive overview of how the festival could be improved in the future.
- Most of the external stakeholders who responded to the online survey argued that their overall experience at Esperimenta Tikka Xjenza was good especially since the festival was well-organised, varied in its activities, and highly hospitable.

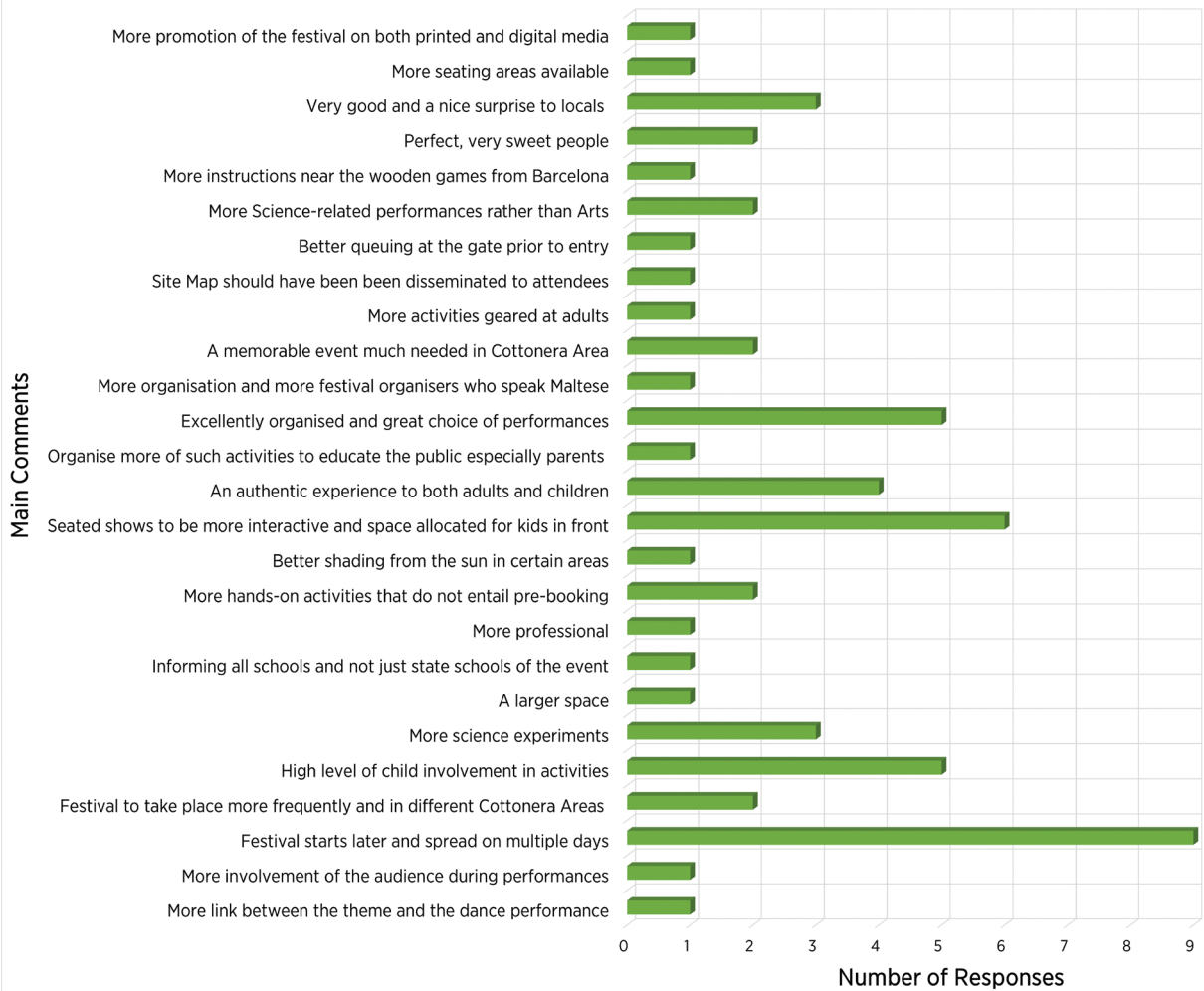
Visitor's Overall Feedback

- The majority of respondents attended all the activities and hence, it can be argued that the feedback collected is more valuable and representative.
- A significant number of visitors replied that the festival was very well organised, fun, and educational but that it would have benefitted from being longer and spread over multiple evenings. Other comments revolved around more child-oriented activities, more science experiments, more opportunities for dialogue with the audience, and greater variety in outputs selected, potentially with some being specifically catered for adults and youth. All the comments are collectively presented graphically in the bar chart below.





Visitors' Overall Comments

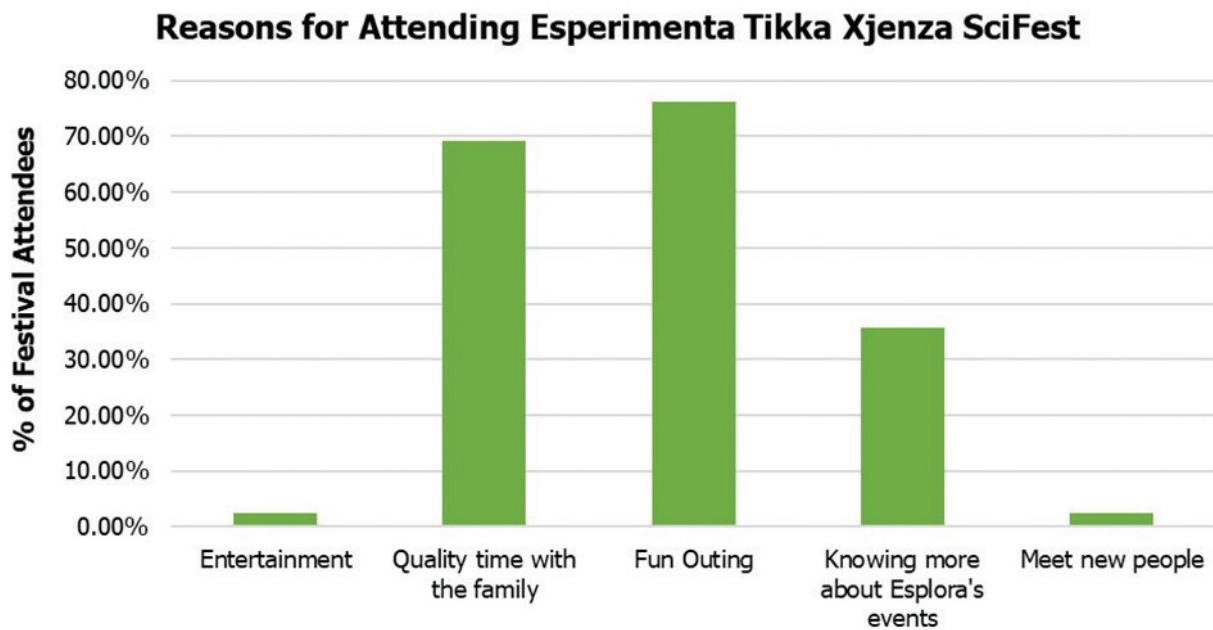


Representative sample based on 10% of attendees.





- Based on the majority of visitors' responses, one can argue that festivals retain their characteristic of entertaining their audience and of presenting science in a fun manner. This could be one potential reason to justify why the majority of festival attendees claimed that they decided to attend the festival as a fun outing with family and friends (76%) followed by having some quality time with family members (69%). Other reasons for attending Esperimenta Tikka Xjenza are represented in the bar chart that follows.



Representative sample based on 10% of attendees.

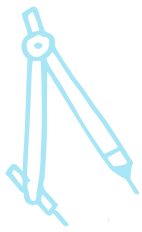
In this digital age, one could expect that most visitors got to know about 'Esperimenta Tikka Xjenza' via social media (Howell, et al., 2019, Greenwood, Perrin, and Duggan, 2016^{1,2}), mainly through Facebook posts that were constantly monitored and well-managed by Esplora's Marketing Team. This can be justified by the fact that the first Facebook post for 'Esperimenta Tikka Xjenza' had an organic audience reach of 10,050³ (see Figure 1), one of the highest values recorded in comparison with other promotional material shared on Esplora's Facebook pages.

1 Howell, E. L., et al. (2019) Engagement present and future: Graduate student and faculty perceptions of social media and the role of the public in science engagement. *PLoS One* [online]. 14 (5), pp. 1-20. [Accessed 25 August 2022].

2 Greenwood, S., Perrin, A. and Duggan, M. (2016) *Social Media Update 2016* [online]. USA: Pew Research Center. [Accessed 25 August 2022].

3 Catania, E.D. (2022) Esperimenta Tikka Xjenza Marketing Campaign. *Campaign Insights: Esperimenta Tikka Xjenza*. 21 February. [Accessed 25 August 2022].





Esplora Interactive Science Centre

Published by Elaine Catania · 3 June ·



We are so excited to present this first edition of Esperimenta Tikka Xjenza 🧪🔬🧴

Esplora will be delivering science to the community in a fun-filled event showcasing everything we do best: science shows, games, tinkering, STEAM performances, storytelling and more!

📅 23rd July 2022

Place: Couvre Porte | Birgu

The... See more



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MID-LEVELS EDUCATION
MID-LEVELS RESEARCH
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NATIONAL STEM ENGAGEMENT WORKING GROUP



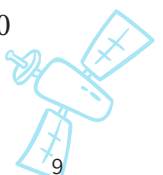
10,606
People reached

263
Engagements

↑ +3.5x higher
Distribution score

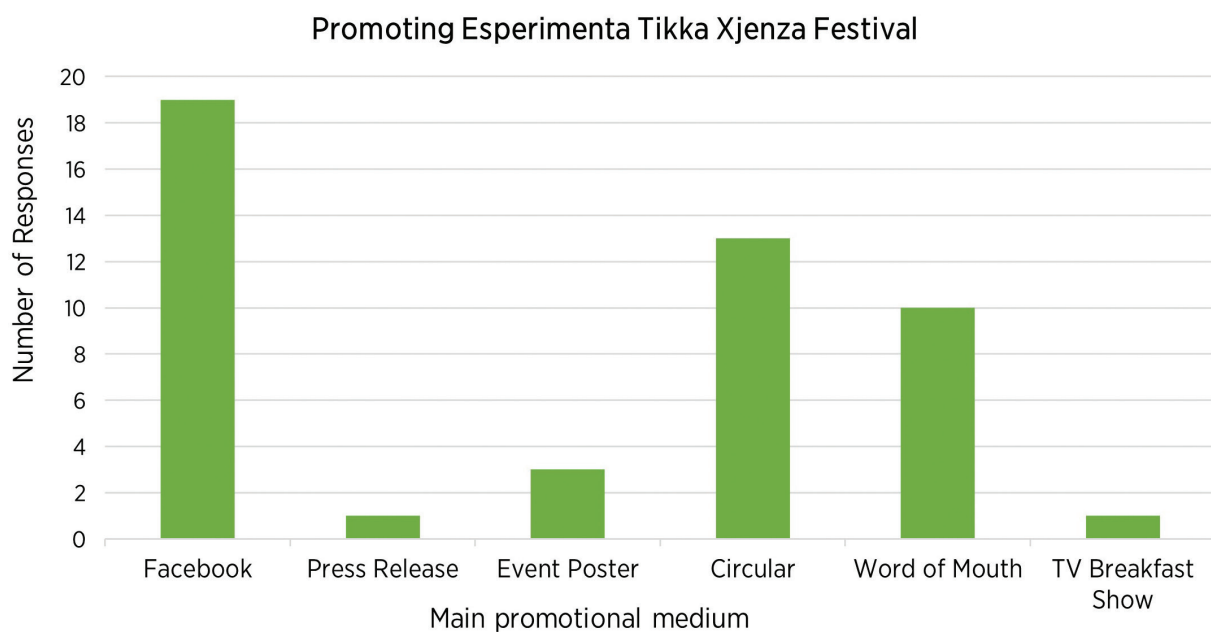
Boost post

Figure 1: Esperimenta Tikka Xjenza First Post on 1st June 2022 Organic Reach - over 10,000 people reacted.





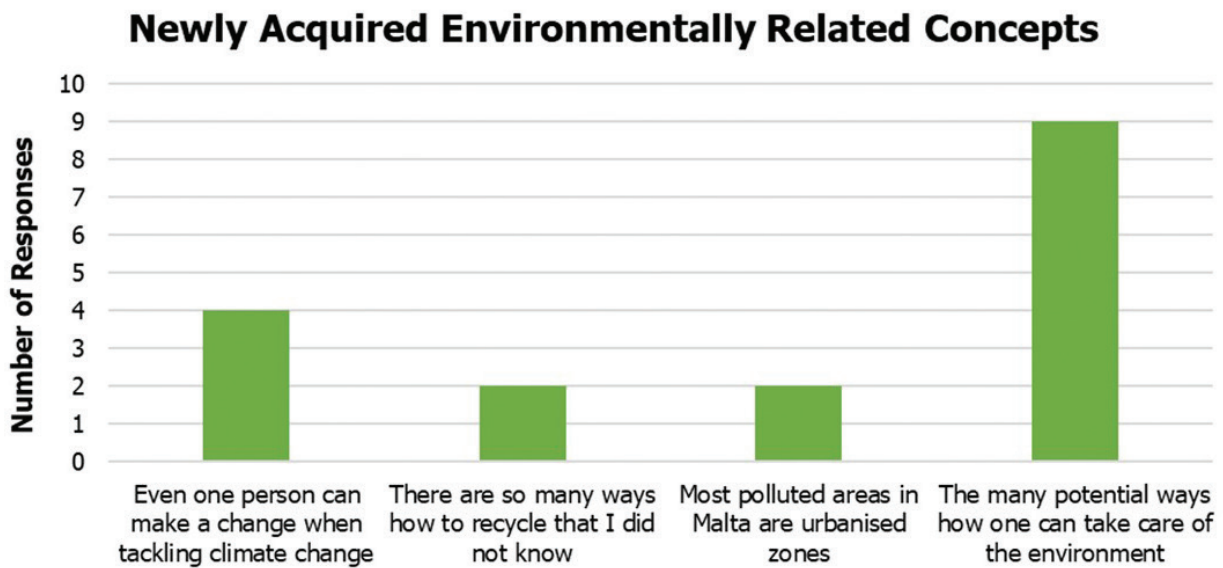
It is also important to note, however, that this is data of just one organic post and does not include the campaign that was done on Facebook and Google Ads as well as the other promos on Google Business Page and Instagram as well as the other organic posts on Facebook. Alongside such visibility on Esplora’s social media platforms, there had also been other media through which visitors got to know about the festival as illustrated graphically below.



Alongside offering its audience an enjoyable experience, ‘Esperimenta Tikka Xjenza’ was also aimed at raising more awareness and enhancing visitors’ current knowledge regarding the drastic changes in Earth’s climate and all the associated repercussions that this is leaving on humanity and the overall biodiversity on Earth.



Such an acquisition of new knowledge⁴ took place non-formally using new innovative ways that the general population is not used to, such as through creative arts, gamification, and storytelling – all potential tools that can be effectively used to enhance the process of science learning. The festival’s theme “Environmental Sustainability for Wellbeing” was once again chosen in line with responses collected via the 2020 telephone survey. Below are some visitor comments concerning their learning experience at Esperimenta.



Representative sample based on 10% of attendees.

⁴ Bultitude, K., McDonald, D. and Custead, S. (2011) The rise and rise of science festivals: An international review of organised events to celebrate science. *International Journal of Science Education, Part B* [online]. 1 (2), pp. 165-188. [Accessed 25 August 2022].





External Stakeholders at Esperimenta Tikka Xjenza – An Overview

- A separate online survey was disseminated to all external stakeholders who offered their contribution to this new Esplora initiative. In total the online survey was sent to 26 different external stakeholders and 23 Esplora staff members and there has been a positive response rate with a total of 32 responses gathered in a time span of three weeks.
- The questions selected sought to enable target respondents to share their thoughts, opinions, and overall perception of the festival whilst at the same time coming up with recommendations and new suggestions that would act as potential tools to further improve the overall planning, implementation, and execution of similar projects organised by Esplora in the future.

External Stakeholders Overall Feedback

- 63% of respondents claimed that they had a good experience at ‘Esperimenta Tikka Xjenza’ followed by 28% claiming that their experience was exceptional and 9% rating their experience as being neither good nor bad. This indicates that the festival seemed to be an overall success in terms of it leaving a positive impact on anyone involved in its execution. Feedback was also collected from Esplora staff.
- The main justifications provided by those respondents who ranked their experience as either exceptional or good included the notion that:
 - there has been the opportunity to reach more people within the local communities surrounding Esplora;
 - visitors were given the chance to engage with science in a fun manner;



- the festival was very well-organised and it offered something different to Cottonera and Kalkara residents;
- there has been effective internal and external communication both before, during, and after the actual event;
- Esplora staff members were very welcoming and helpful;
- there has been a great atmosphere on-site where Couvre Porte's history, performing arts from the performances, and science came together and offered an authentic experience to all involved;
- there has been a very good response from visitors.

With regards to those respondents who had a neutral position when it comes to their overall experience during 'Esperimenta Tikka Xjenza', the main reasons provided revolve around the fact that:

- since the festival took place during the peak summer months, it would have been appreciated if more shade was provided to all the external stakeholders who were located in an area that had been highly exposed to sunlight;
- the human library, although a very interesting idea, was located in an area that was not visible to the festival attendees;

Tied with the fact that there has been effective internal and external communication through all the phases of this event, 94% of the respondents suggested that they had been provided with all the necessary information well in advance to be prepared for the festival. Contrarily, the other 6% of the respondents shared the opposite opinion claiming that:

- everyone involved should have been offered the same level of visibility and reach;
- there should have been more site plans installed in different areas rather than one being located in one place since this would have avoided a lot of walking around.





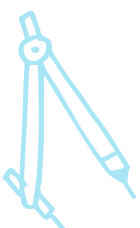
- An important question posed to stakeholders and staff members was whether the festival had somewhat reached its aim of contributing to narrowing the gap between local citizens and science. For this question, nearly all respondents (72%) believed that, although not evidence-based or quantified, ‘Esperimenta Tikka Xjenza’ did manage to achieve such a goal.
- Only 6% of the respondents answered with a ‘No’ whilst the other 22% of the respondents shared their insight into why they think that it is very difficult to measure such a criterion including also in that some visitors only attended the pre-booked activities and did not have the time to go around the other outputs offered during the festival due to the short time allocated to the whole event.
- From the responses collected it seems that external stakeholders acknowledge the importance of bringing together the sciences and the arts and portray them as two complementary worldviews⁵.

5 Andreasen, N.C. (2022) Creativity in art and science: are there two cultures? *Dialogues in Clinical Neuroscience* [online].14 (1), pp. 49-54. [Accessed 25 August 2022].





- In fact, 84% of respondents believe that the outputs offered during the festival – A theatrical performance, a dance performance, a science show by Esplora, a series of interactive ‘Xics del Xurrac’ wooden games from Barcelona, science busking by Esplora, a variety of stands showcasing science demonstrations and experiments, a short theme-related film, tinkering space, and a human library – were all appropriate.
- The remaining 15% responded in the negative without justifying why they think that such activities were not adapted to ‘Esperimenta Tikka Xjenza’ except for one response where it was pointed out that the science show failed to make reference to the concept of sustainability unlike the theatrical and dance performances and hence was less in line with the theme. One person also believed it should have been made clearer that the theatrical performance was for children aged 8+ in view of some of the terminology used. However, other people with children as young as 5 found it appropriate.
- The two diagrams that follow illustrate (a) the main suggestions offered by respondents on how ‘Esperimenta Tikka Xjenza’ can be an even greater success in the future and (b) an overview of the verbal feedback that both external stakeholders and Esplora staff received from visitors throughout the actual event.



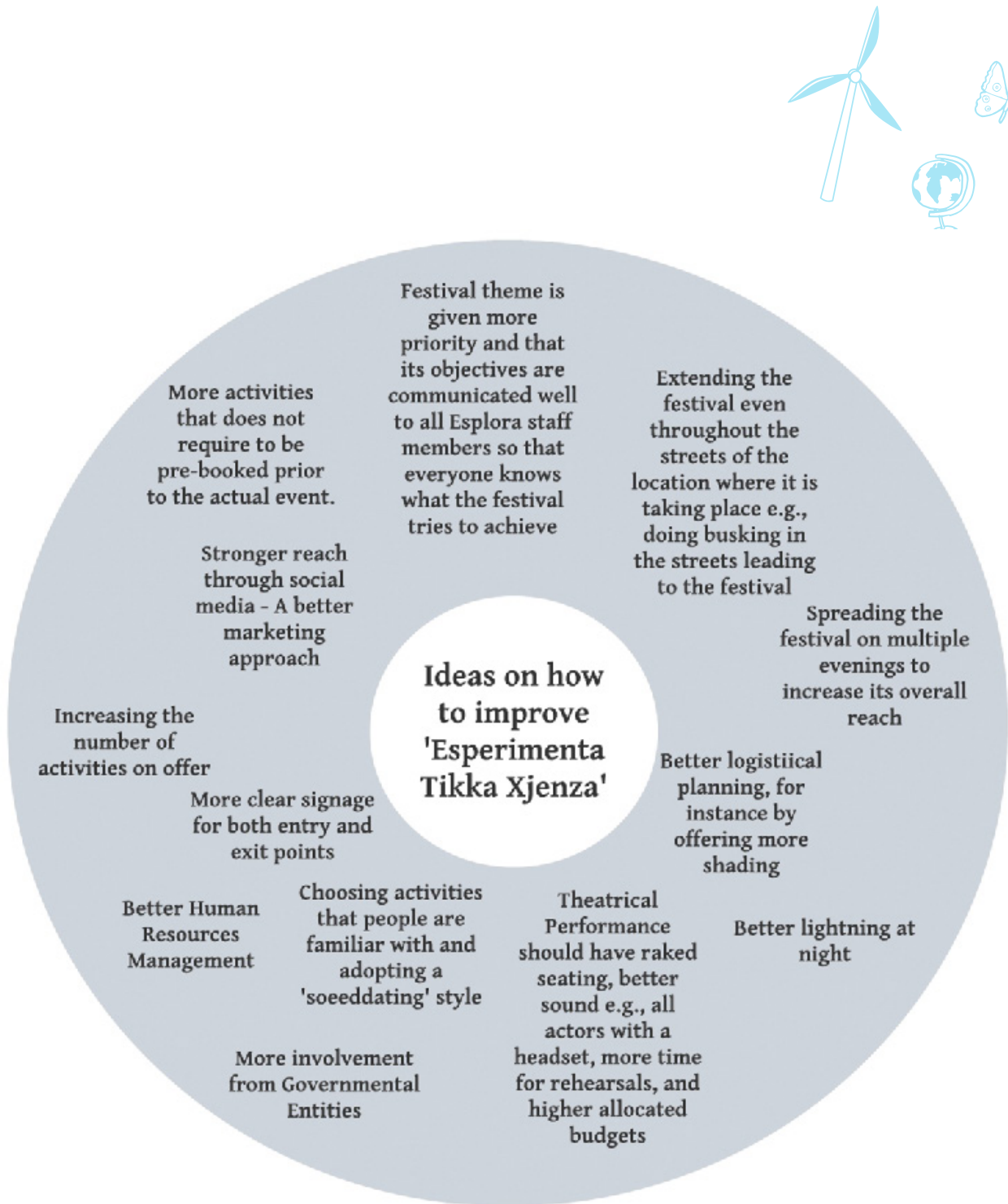


Figure 2: Main Suggestions offered by external stakeholders and Esplora Staff on how to improve 'Esperimenta Tikka Xjenza' in the future. This sample is obviously not exhaustive.



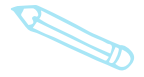
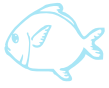


Figure 3: Main verbal feedback gathered from visitors during the actual festival whilst engaging in dialogue with external stakeholders and Explora staff. This sample is obviously not exhaustive.





Concluding Remarks and Lessons Learned

- ‘Esperimenta Tikka Xjenza’ Science Festival did reach its aim of delivering science to its target local communities but a stronger marketing campaign, improved communication with all the Local Councils of the targeted localities, and more opportunities to engage in dialogue with local residents would all potentially increase the number of visitors residing in Cottonera and Kalkara.
- Considering Malta’s tough summers and high temperatures, it would be more ideal if the festival takes place in June when temperatures are milder and the heat is more bearable.
- After its overall success, the festival needs to grow and potentially be extended on multiple evenings to attract more of its target audience.
- Pre-booking of performance bundles was a good idea since it avoided disappointment but at the same time, some visitors attending the performances did not manage to visit the other outputs offered during the festival.
- Whilst it was expected that the festival would target families with children, more work needs to be done to increase audience reach and potentially attract other types of visitors such as adolescents and senior adults.
- Future editions need to continue building on the principles of active learning, making sure technical terms are explained when necessary, but at the same time always allowing visitors to experiment and use their critical thinking skills. This goal was greatly achieved in the Xics del Xurrac show in which visitors were fully engaged with the wooden games with minimal instructions.



