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ANNEX IV (E)

NEW DIRECTIONS AND FRONTIERS FOR MONETIZATION OF CARNIVAL

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1. INTRODUCTION

Carnival in Trinidad & Tobago has evolved from its humble beginnings two centuries ago, into a complex multi-layered festival that has become known as “the greatest show on Earth”. Embodying cultural expressions as varied as masquerade, steelband, calypso and fetes, Carnival provides a rich range of opportunities for performance, and the production of entertainment and related goods and services. Recognising that Trinidad & Tobago Carnival is at a critical stage of development with significant growth potential, the National Carnival Commission (NCC), has commissioned a study to identify how best to design an industrial policy to maximise the socio-economic dimensions of carnival. This report focuses on the new opportunities presented by information and communication technology (ICT), specifically how to expand the new frontiers of monetizing carnival through film and video gaming.



1.1. BACKGROUND

The celebration of Carnival has expanded in scope so that significant entrepreneurial activities have developed to service the cultural activities taking place during the festive Carnival season. The entrepreneurial activities that have developed around the carnival continues to grow and widen in scope and are making significant contribution to wealth creation in the national economy the extent of which remains to be measured. Apart from the economic contribution of the festive season there is also a need to measure the social value of the carnival industry particularly about cultural expressions and the creation of intellectual property.

While occasional studies have been conducted, the NCC, as the established governing body, recognises the need for a comprehensive, model-based continuous measurement of the impacts of this major national festival to national growth and development from which strategic investment initiatives can be identified and resources channelled for the continued development of the industry.

In the period of Carnival 2014 (late February/ early March 2014), a team of researchers attended major events in Port of Spain as well as regional carnival activities, observing the activities and interviewing a wide range of participants, patrons and (other) stakeholders. This field analysis revealed that while some carnival activities are profitable or have the potential to become viable enterprises, others are unsustainable and are being kept alive by public subsidies.

While our primary goal is the design of an industrial policy for carnival, we recognise that, as the major event in the calendar of cultural activities in Trinidad and Tobago, Carnival has deep significance to people across the nation and in the (Caribbean) diaspora.

In contemplating an industrial policy for carnival we make a distinction between which performances cum entertainment activities and activities should be left to market forces – i.e. financed competitively by the private sector and coordinated by competition for profit? And on the other, which performances and activities should be financed by government and the NGO community as cultural infrastructure?

The basic thrust of policy, in this sense, is to sort activities that qualify for either (a) public investment to upgrade the cultural infrastructure of carnival performance; or (b) public incentives and policy supports for private investment to intensify competition and thereby increase the productivity, quality, and profitability of private carnival performance.

Ultimately, we aim to strike a balance between the two categories, with the goal of identifying strategic investment initiatives, and the appropriate resources required for the sustainable development of the carnival industry as a whole.

However, going beyond the notion of just improving carnival performance, this research has led us to a developing area that suggests the possibility of exponential growth, and return on investment. By tapping into this burgeoning area - using the ICT interface to transform carnival staples such as mas, steelpan and calypso into intermediates for films and video games - Trinidad and Tobago can produce innovative value-added products that enhance the visibility and economic viability of carnival.

As we explore the interplay between carnival, film and videogaming, we also contemplate how to improve the carnival production process, which will ultimately improve the sustainability of the carnival industry.

1.2. REPORT STRUCTURE

In the first section of this document, we will review the current methods of monetizing carnival, especially as it relates to calypso, steelpan, and mas. In the second section, we will explore the new frontiers of carnival through the parallel technologies of film and video game production.



2. REVIEW OF THE CURRENT METHODS OF MONETIZING CARNIVAL

The existing methods of monetizing carnival focus on performance. Each of the main forms, i.e. Calypso, Steelpan, and Mas, has its own, unique methods of monetization. There are some overlaps in the methods, which suggest the possibility for greater synergies in extracting the gains they provide. Investments in infrastructure, incentives for carnival development, and public/private partnerships to expand carnival-based entrepreneurship will provide new opportunities to monetize carnival.

2.1. CALYPSO

For calypso, monetizing is based primarily on (a) shows by TUCO and by the private sector (local or foreign); (b) performances in fetes; and (c) preparation of ringtones and jingles for advertising, and for scores in film. Royalties for music use are paid through collective management arrangements. However, it must be noted that sales of CDs and online (via direct downloads) are no longer lucrative because the sharing arrangements of the majors are unfavorable to copyright-holders and because of widespread piracy.



2.2. STEELPAN

For steelpan, monetizing occurs through the sales of manufactured pan instruments and pan tuning services; earnings from performance in general shows, orchestras (whole and miniature, and participation in orchestras as single pans); and through earnings from performances in competitions. Royalties and sponsorships also contribute to earnings.



2.3. MAS

Mas is largely monetized through the sale of space to play mas to both band members and non-members; band launchings and other fetes; the sale of other services to players through the 'truck on the road' (part of the all-inclusives); consulting services to other carnivals; and business-to-business services.¹

Notwithstanding the evident diversity of products, most of these carnival activities revolve around performances. From the standpoint of policy, monetizing opportunities can be enhanced through greater synergies related to improving the technologies, management and marketing of the aforementioned activities. To improve such performance-oriented activities and products, policymakers and the stakeholders can consider several strategies.



¹ Ferdinand, N. (2014). "Technical Description of Mas' Production", NCC Report., for a comprehensive account of how Mas' is monetized.

2.3.1. ACCESS TO INFORMATION

The first strategy would be to upgrade the supply, sharing, and communication of information used in the development of carnival-enhancement policies. People need to know what is happening in order to plan their own participation, and this type of crowd-sourcing gives them the opportunity to participate in policy development. This approach literally ensures “socially sensitive and widespread stakeholder participation when arriving at the optimal policies and strategies as well as successful policy implementation”.

2.3.2. CARNIVAL SANITATION

A second strategy would be to improve public investment in carnival sanitation, especially in the communities central to carnival, and to continue to upgrade crime prevention and protection during the festival.

2.3.3. TRAFFIC MANAGEMENT

A third strategy, which would be geared towards addressing the sea of traffic that is drowning carnival, is to improve public investment in mass transit and other traffic-related solutions. There is a pressing need to reduce the increasing carnival-based traffic bottlenecks, and to minimize delays in access to an exit from the carnival events, while allowing sufficiently free traffic flows for non-carnival purposes. This is linked to the establishment of better and more predictable routes for the street parades. These routes need to be fixed well ahead of time.

2.4. INVESTMENT AND INCENTIVES

2.4.1. HISTORIC CENTRES AND SITES

There is need for public investment in incentives and infrastructure to integrate historic centres and sites, such as Picadilly, into the carnival development process. There can be greater benefits to the community, when the public and private sectors collaborate in the development of carnival museums. Increasing government budget allocations, to strengthen the cultural foundations of carnival as street performance, will augment the abovementioned measures.

2.4.2. INCENTIVES FOR INFRASTRUCTURAL INVESTMENTS

Benefits can be gained from increased incentives for private investment in permanent infrastructure – fixed capital. Benefits of this could be increased capital formation and productivity, and reduced capital destruction. Another measure to reinforce the growth of the carnival economy at multiple levels is to increase public and private investment in vending infrastructure, especially along the parade routes. Given the trend where small-scale vendors are finding it increasingly difficult to make sales at carnival, it could be beneficial to create designated spaces for them into the permanent infrastructure (e.g. the Craft Village at the Savannah). The benefits to be derived from designated vending space include

improved microenterprise sales, and a greater distribution of carnival-related economic benefits. This would broaden and strengthen the economic base of the country.

2.4.3. THE BUSINESS OF CARNIVAL

No effort should be spared in speedily and effectively establishing an incentive regime for businesses to get more involved in “the business of carnival”. For example, the possibility exists to privatise certain key events at the Savannah and Skinner’s Park. There is also considerable scope for investing in specialised facilities for carnival, and specifically for music, mas and pan. Another measure in enhancing the business of carnival is to develop the carnival supply chain. This could be done through the introduction of general music schools in the existing institutions. Such schools could specialise in (a) pan, tassa, and other cultural music forms; (b) supporting pan manufacturing and improvements in the making of mas and carnival art – not merely bikini and beads; (c) if the evidence suggests it, act to encourage private investment to compete with the imports of inputs or organize the import-competing production directly; and (d) develop a formal curriculum and teach “The Business of Carnival” to carnival-based entrepreneurs, enthusiasts, investors and other key stakeholders.

2.4.4. REBRANDING TRINIDAD & TOBAGO IN THE GLOBAL SPACE

There is no better time than now to truly globalize carnival and ensure that Trinidad and Tobago is rebranded as “The Home of Carnival” in the global market space. This will take significant effort as other countries are now actively pursuing the carnival development and globalization programmes.

Underpinning all of these measures is the need to integrate the national carnival experience, ensuring that carnival-related benefits accrue to the widest cross-section of society. A special project should be undertaken to explore the benefits and mechanisms of integrating the national carnival experience and its presentation.

However, all of these policy solutions focus on upgrading performance as final output and do not fully address the significant multipliers that can be gained from strengthening the ICT-Carnival interface that is already emerging in phenomena such as the Phi-Pan. They also do not address the fact that Port of Spain and all the other major cities are very much at carrying capacity. Significant gains are also possible from the use of carnival in ICT-based products and the use of ICT-based technologies in carnival production. This report focuses on the use of carnival as an intermediate, with specific reference to film and gaming.

3. NEW FRONTIERS – CARNIVAL AS INTERMEDIATE

A major thrust of policy should be to immediately strengthen all of the above initiatives by (a) increasing investments in the development and application of ICT solutions for current carnival *production* activities, and (b) increasing investment in the development and application of ICT solutions for current carnival *marketing* activities.

Both sets of investments must (a) seek to improve net profit creation; (b) increase the net intermediate resource development (through carnival outputs) - mainly by improving technology and increasing the supply intermediates relative to the use rate; (c) increase the net capital - mainly by increasing the rate of development of productive capital and its technologies; and (d) increase the role of market forces in determining price and unit costs.

The solutions must take account of two trends. The first trend is the evolution of the ‘commons’ in ICT. New developments in ICT are turning much of the supporting intellectual property into public goods. The second trend is the evolution of new majors like iTunes. These majors worsen the distribution of income, and yield very small rewards to operators in small economies when they fix value into supporting intellectual property. Policy must increasingly look at income security and augmentation to compensate for the two effects above.

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Such complex challenges need a comprehensive and multi-layered response. Policymakers are encouraged to consider a model which is being used successfully in many countries – that of a high quality international standard research and business incubator dedicated to generating new ICT-based (carnival) solutions. Before developing on these concepts, it is instructive to see what the World Bank’s InfoDev Programme had to say about business incubation in its “A Model for Sustainable and Replicable ICT Incubators in Sub-Saharan Africa” Report (2009):

“The business incubation idea suggests that from grouping a number of companies in one location, providing them access to business services and sources of capital, under the tutelage of an incubator manager who is experienced in business, successful companies will result. Since the early 1980’s the incubation concept has been employed in both developed and less developed countries with generally favorable results. The combination of reasonably priced rents, training, and mentoring, introductions to potential investors, and the atmosphere of success that pervades business incubators inspires entrepreneurs to make the best use of their resources and achieve the financial stability that allows them to grow.”²

²Worldbank (2009). “A Model for Sustainable and Replicable ICT Incubators in Sub-Saharan Africa”, World Bank InfoDev Programme Report. Retrieved from: http://www.infodev.org/infodev-files/resource/InfodevDocuments_734.pdf

So, as it relates to carnival research and incubators, results-oriented research is translated into business solutions by incubator graduates who emerge as entrepreneurs, complete with the capacity to operate on the information hyperway. It is possible that these research centres and business incubators could be integrated in the carnival villages to provide more access to primary data and create direct, hands-on experience for budding entrepreneurs.

In contemplating how to expand monetization options through ICT, two opportunities come to the fore – film and video gaming. As we explore the interplay between carnival and film, and carnival and video gaming, we also examine how to improve the process of production of inputs and outputs, which ultimately will improve the profitability and viability of the carnival industry.

3.1. GENERAL REPRESENTATION

The production of carnival and filmmaking are both dynamic creative processes that share a number of parallels. In film production, every step of actually creating a film must be carefully designed and planned. Carnival has the same features.

In film production, the film is pre-visualized by the director, and may be storyboarded to create a visual blueprint of what the shot sequence should be. In the creation of a masquerade band, visual images are also used during conceptualisation to map out the story. Carnival calls for costumes, props, sets, music and other inputs for performance. Film requires all these tools and more. These similarities suggest that carnival lends itself as an intermediate product that can to be translated into film. However, in order to obtain high quality audiovisual outputs, a well-designed process is required. To see the options clearly, let us journey through the technology of film production.

3.2. THE TECHNOLOGY OF FILM PRODUCTION AND THE POTENTIAL USE OF CARNIVAL

Filmmaking uses a variety of socioeconomic and cultural information and contexts, and a range of cinematographic technologies, to create and portray a story as motion picture with audio-visual effects. Its production process might be described for policy purposes as follows:

3.2.1. STORY DEVELOPMENT AND SCRIPTING

The first step in film production is story development and scriptwriting. The story may be an original idea or an adaptation of a book or a play, or may be based on a true story. After identifying a theme or underlying message, the producer works with writers to prepare a synopsis. Next, they produce a step outline that breaks the story down into one-paragraph scenes that concentrate on dramatic structure. Then comes the treatment - a detailed description of the story, its mood, and characters. Thereafter, a screenwriter writes a screenplay over a period of several months. The screenplay may go through several re-writes to improve dramatization, clarity, structure, characters, dialogue, and overall style. Then the producer and screenwriter prepare a film pitch and present it to potential financiers. If the pitch is successful, the film receives a “green light”, which means that someone offers financial backing. The parties involved negotiate a deal and sign contracts. Once all the parties have met and the deal has

been set, the film may proceed into pre-production. By this stage, the film should have a clearly defined marketing strategy and target audience.

In general, story development and scriptwriting is a creative and iterative process of researching and conceptualizing a story, developing a narrative, writing a play for representation as a motion picture with desired audio-visual effects. Masquerade takes similar path, as stories are chosen and developed into narratives. There is a natural convergence between carnival and film, as the content of carnival suggests an unlimited source for rich and diverse narratives. These stories, which bring theatre to the forefront of carnival, may have to do with any part of the global experience: consider, for example, the “Wonders of Africa” or the “Great Buildings of India”.

3.2.2. CAST IDENTIFICATION & CREW SELECTION

Cast identification in film is similar to that of carnival, in that, it is a repetitive trial process of selection of actors, dancers, singers, models and other performers, including musicians. The competitive aspects of carnival can be considered like an audition process, where the best players/ performers become stars. The Kings and Queens of Carnival, Calypso Monarch and Band of the Year are all examples of this fact. Note that, through the creation of stars, i.e., players with images that are idealized persona, film achieves high capacity to penetrate most markets in the global economy. Carnival is poised to follow suit.

As in carnival, film production must also involve selection of a crew of technical experts, whose skills are combined to bring ideas into reality. The Director is primarily responsible for the storytelling, creative decisions and acting of the film. The Assistant Director manages the shooting schedule and logistics of the production, among other tasks. The Storyboard Artist creates visual images to help the Director and Production Designer communicate their ideas to the production team. A Unit Production Manager/ Line Producer manages the production budget and production schedule.

A quartet of technical designers are responsible for the look of a film, notably the Production Designer who creates the visual conception of the film; the Art Director who makes production sets; Costume Designer who creates the clothing for the cast; and the Make-up and Hair Designer who works closely with the Costume Designer and crew to create a certain look for the characters. Similar roles exist in the production of Mas or Calypso and contribute significantly to the enhanced presentation and performance that many carnival artistes strive to attain.

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3.2.3. SHOOTING

The raw elements for the film are recorded during the film shoot. Shooting is a repetitive and iterative process of using appropriate technologies, such as video cameras, to create footage that is aimed at generating a sequence of images that represents the story as motion picture. In masquerade or calypso, at this stage, through performance, the stories come alive on the streets and on the carnival stage. Central to film shooting is choreography - the creation and coordination of the movement and dance of the film. Choreography exists in carnival in its current form, but only to a limited extent. However, this area is ripe with potential. Peter Minshall has repeatedly drawn attention to the importance of choreography in refining carnival performance. Through repetition for refinement of expression in acts and scenes, film can translate these new stories into sharper versions of the idealizations already attempted by carnival. Some films feature segments that are shot in the controllable environment of a studio sound stage, whereas outdoor sequences call for filming on location. That controllable element is missing from carnival. By incorporating carnival into film, one can gain the benefits of that type of environment.

3.2.4. EDITING

Editing is a repetitive and iterative conceptual and technical process of using and refining footage, selecting and combining footage shots, and using and refining sound, to create a motion picture complete with desired audiovisual effects. At this stage, the film Sound Designer must also create the aural conception of the film. In collaboration with the Composer, who creates new music to accompany the performance, the Sound Designer manages the overall audio engineering of the entire film. This is where the music of carnival fits in. Music is recorded and mixed on set, captured as dialogue, presence and sound effects. Once produced, all the images, sound, and visual effects of the recorded film are also edited in this context. While editing has rarely been used in the production of carnival, we can draw inferences about the value of this process from the way Peter Minshall refined the presentation of his carnival bands to represent the fine art of theatrical performance.

3.2.5. DISTRIBUTION

When completed, the motion picture is marketed and distributed – i.e. screened in cinemas and/or released via another outlet, e.g. DVD, television, or an internet platform. Screening is a process of using appropriate technologies to display and evaluate the results of the editing process. Performances of carnival events are already being captured and broadcasted, however, there is significant scope for the development of new distribution modalities and channels. This stage is critical, as it anchors all the efforts to monetize carnival through the use of ICTs.

As we contemplate how to effectively use carnival in film, there are few general points to note:

- I. Film commands attention by creating new content annually. Carnival also already provides new inputs on an annual basis. While most of carnival activity is concentrated in Port of Spain, there are several regional carnivals e.g. Carapichima and Paramin, which if given the right incentives could grow and develop into sustainable festivals that can also provide worthwhile inputs for film annually.

- II. Cinematographic technologies allow for controlled distribution of film.
- III. However, notwithstanding the possibilities offered by film technology, film production is also negatively affected by the problem of the commons plaguing all IP-based products, and by the growing need to rely on distributors with global power to gain adequate access to the global market.

From this analysis, it is clear that if viable outlets are available, film provides new monetizing opportunities by the use of carnival as intermediate inputs.

3.3. THE TECHNOLOGY OF VIDEO GAME PRODUCTION

As we progress further along the continuum exploring how ICT can be used to expand new frontiers for monetizing carnival, the next logical step is to contemplate video gaming.

A video game is a computer programme complete with art, audiovisual components, and gameplay with significant randomisation. As audiovisual technology continues to develop, we are seeing a remarkable convergence in the production processes of films and video games. Computer generated imagery (CGI) and special effects (SFX) are two tools that originated in the video game industry and have successfully made the transition to film. Both CGI and SFX have given rise to new developments, such as performance-capture, in which every nuance of an actor's performance (specifically movement, voice and facial expressions) is recorded and mapped onto an animated character that exists virtually.

Game design is a collaborative process involving conceptualisation, writing skills, content creation including artistic and musical inputs, rule specification, and high-quality programming. Given the multi-layered nature of carnival, it can produce or inspire much of the music, art and concepts of gameplay. While some carnival outputs may lend themselves to be transformed into elements of a video game, video game development is a complex step-by step process, which must be efficiently managed from start-to-finish.

In contemplating the establishment of an ICT business incubator that focuses on the development of video games, one can be guided by the following outline of the process, which can be tailored for implementation in Trinidad & Tobago.

The first task in game design is to choose one or more game development methods/overlaps. The next task is to engage and fund script writing, and programming



teams of competing game developers--whether as small groups of individuals or larger businesses - for commercial / PC games, and/ or independent (Indie) games.

To attract talent, one can generate a competition for game design documents that contain idea and concept development. Key steps in this process include: (a) the preparation of initial design documents or production plans; (b) the creation of clear and easy to understand documentation, with all the tasks, schedules and estimates for the development team; (c) the development of the high-level (general) concept or summary description; (d) the establishment of a pitch, which is a summary documentation presenting the main features and selling points of the game and why it should be developed; (e) the delineation of specific concepts, which are detailed documents including all the information produced about the game. This detailed aspect includes the high concept, genre, gameplay description - such as rules and methods of accumulating rewards, algorithms for “randomization and chaotic dynamics”, which are features, setting, and story, with all levels (acts, scenes) specified.

Other essential elements necessary for game design include concept artwork and sketches, sound effects, music, and voice-over. One also has to consider the target audience, hardware platforms, estimated schedule, marketing analysis, team requirements, risk analysis and details of budget implications of game production.

The next phase of the game design project is to prepare the broad game proposals or playable prototypes, complete with design specifics, algorithms and useable game scenarios. Thereafter, to detail the production routines for the games, complete with required assets and resources, and collaborators and staff, including sound engineers to develop sound effects, composers to develop songs and music for game, artists and creators, level designers for cutacts and cutscenes, level writers, programmers and source codes for all levels, complete with randomization and chaotic dynamics. It is also necessary to detail the production period (Gantt Chart) to full deployment for each level, and all levels, and for quality assurance and testing. The final aspect of game design is to arrange for game maintenance and futuristic development.

3.4. USING CARNIVAL IN GAMING

Videogaming appears to provide superior options to film, as the underlying options for idealization and star creation are ICT-based, and both the production and the consumption of the video game are interactive. Interactive consumption involves reward structures that allow competition against technology and/or competition against other persons, and these rewards can be readily monetized. If this type of consumption is made location-specific, such as in a carnival village, then monetization in this form opens wide options for market creation that are not readily susceptible to destruction by ICT and the IP-commons. This also converts piracy into an asset.

The development of a video game industry requires a multidisciplinary approach that brings together industry professionals, investors, students and academics with a view to creating innovative goods and services for a discerning global market. By creating such “incubator type facilities” and integrating them into carefully developed carnival villages, should improve the sustainability of these facilities. Functioning as cineplexes, cum gaming centres, these facilities will provide a wide range of

entertainment services and infrastructure in appropriate geographical areas, for example Port of Spain, Central, East, South and Tobago.

The creation of regional carnival villages will divert demand and resources outside of Port of Spain, thus helping to promote economic development in these areas, and will serve to ease serious capacity and logistic challenges that have arisen, as the metropolitan area has almost exceeded its carrying capacity.

The development and diversification of regional carnivals should help to improve the distribution of wealth across the country. This will in turn assist in “poverty reduction and inequality, and provide a more sustainable and secure access of citizens to their fundamental human rights and freedoms being pursued globally under the Rio+20 agenda and United Nations Development Agenda, post 2015.”

A final key measure would be to support the above initiatives with an annual “Carnival Trade and Invest Week” complete with a carnival conference and other such activities. Excellence in innovation and leadership can be highlighted in this forum, while further opportunities to harness the powers of entrepreneurship and investment are explored.³



³ For inspiration see the partnership model between Cornell University, New York City and Technion University, Israel. Wong, M. (2013). “Cornell NYC Tech: Building a Culture for Innovation on Roosevelt Island”, MetroFocus Magazine. Retrieved from: <http://www.thirteen.org/metrofocus/2013/07/cornell-nyc-tech-building-a-culture-for-innovation-on-roosevelt-island/>

REFERENCES

Ferdinand, N. (2014). "Technical Description of Mas' Production", NCC Report.

Worldbank (2009). "A Model for Sustainable and Replicable ICT Incubators in Sub-Saharan Africa", World Bank InfoDev Programme Report.

Retrieved from: http://www.infodev.org/infodev-files/resource/InfodevDocuments_734.pdf

Wong, M. (2013). "Cornell NYC Tech: Building a Culture for Innovation on Roosevelt Island", MetroFocus Magazine.

Retrieved from: <http://www.thirteen.org/metrofocus/2013/07/cornell-nyc-tech-building-a-culture-for-innovation-on-roosevelt-island>