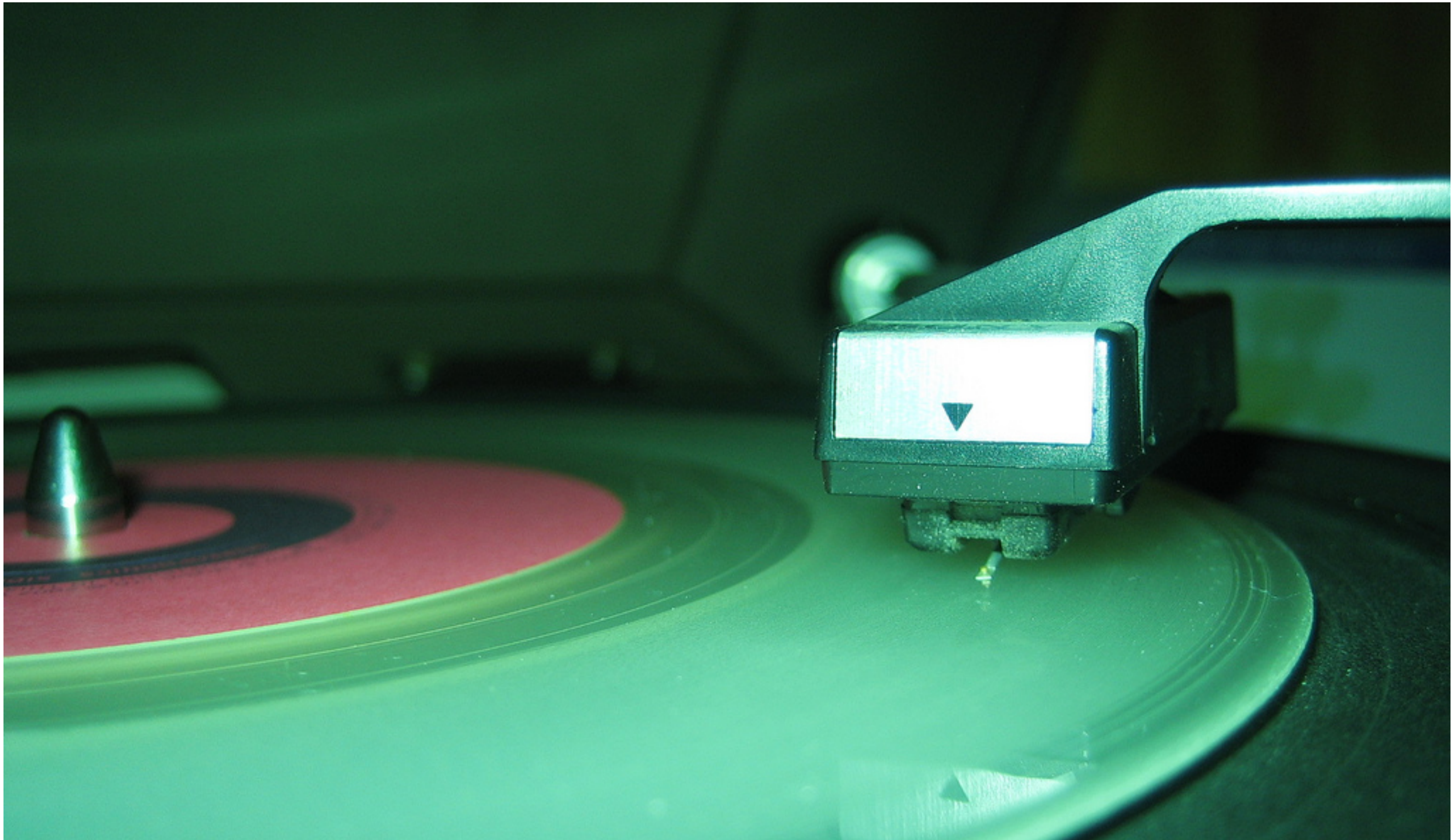

CHANGING OUR TUNE

Scoping the potential of the Australian music industry to address climate change

March 2014

Institute for Sustainable Futures

UTS

green music australia

ABOUT THE AUTHORS

The Institute for Sustainable Futures (ISF) was established by the University of Technology, Sydney in 1996 to work with industry, government and the community to develop sustainable futures through research and consultancy. Our mission is to create change toward sustainable futures that protect and enhance the environment, human well-being and social equity. We seek to adopt an inter-disciplinary approach to our work and engage our partner organisations in a collaborative process that emphasises strategic decision-making.

For further information visit: **www.isf.uts.edu.au**

Research team: Fiona Berry, Laura Wynne and Chris Riedy.

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FOREWORD

What have musicians got to do with climate change?

Actually, quite a lot.

Most fundamentally, we are citizens of this small planet. All of us are going to have to grapple with global warming and we musicians, at the creative edge of society, should be among the first.

At a more mundane level, our industry has an outsized footprint but so many people who want to lighten it if given the right advice.

With extreme weather already painting a picture of the harsher world we're creating, musicians are realising that we, like everyone else, are part of the problem - and that means we can be part of the solution. What's more, as culturally influential people who have a long and proud history of involvement in movements for change, we are in a great position to lead others towards a greener world.

But we can only do so genuinely if we are leading by example.

That's why *Green Music Australia*'s first project has been this excellent piece of research by the Institute of Sustainable Futures, mapping out the music scene in terms of its direct environmental impacts and its lines of influence. This first step gives us clear directions towards greening up our act.

If we can facilitate serious action by people across the music scene in cutting energy use and waste streams, adopting solutions like LED stage lighting, onsite renewable energy, compostable plates and cutlery at festivals, recycled card CD cases and much more, we can create a cohort of wonderfully influential champions and bring benefits that will flow across our whole society.

I hope you'll find this report as interesting and useful as I have and that it will inspire you to join *Green Music Australia* in harnessing the cultural power of the music scene to build a greener world.

Tim Hollo

CEO, Green Music Australia

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EXECUTIVE SUMMARY

This report summarises the results of a Climate Action and Engagement Scoping Study conducted by the Institute for Sustainable Futures for Green Music Australia. The research provides a snapshot of the Australian music industry's impact, level of awareness and opportunities for improvement with regards to sustainability and climate action.

Key objectives of this research were to:

- Identify key stakeholders and their role in the music industry;
- Understand and document existing efforts for climate action in the music industry;
- Note key trends in the music industry;
- Identify opportunities for reduction of climate impact; and
- Assess the availability of data to calculate the music industry's carbon footprint.

Methodology

A major aim for this project was to identify key leverage points for facilitating action on climate change within the industry. The first step in doing so was to map key stakeholders in the industry and links between these stakeholders. Due to the lack of literature available regarding the industry's structure and scale, this required a great deal of research and consultation. The following pages contains a map of the Australian music industry which was created using systems thinking and the information gathered throughout this consultation.

Once all stakeholders (and links between them) were identified, it was necessary to understand the nature of each stakeholder's influence (both within the industry and with regards to external stakeholders) and the scale of their direct environmental impact. The table following the map outlines the results of this analysis, and describes the relative influence and impact of each stakeholder group in the Australian Music Industry.

Key findings

Key findings from the scoping study into the level of awareness and opportunities for improving climate impact of the Australian music industry are:

- Environmental consciousness exists within the industry, but action is constrained due to a lack of time and resources;
- The Australian music industry is in a state of rapid change due to the digitisation and democratisation of the industry;
- The Australian music industry rarely documents or coordinates activities, which makes data collection a difficult task, complicating efforts to develop a carbon footprint for the industry; and
- Communications channels used in the industry are generally informal, with few publications or formal communications existing to facilitate relationships between stakeholders

Next steps for Green Music Australia

Currently, a range of disparate initiatives are underway across the music industry to reduce the industry's environmental impact, including guidance for event managers to measure their impact, and efforts to improve the sustainability of festivals. There is an opportunity for Green

Music Australia to coordinate efforts and communicate about these actions throughout the rest of the industry.

Further research and engagement is required to understand the nature of environmental impacts of the Australian music industry, in order to identify opportunities for change and to facilitate behaviour change and cooperation among stakeholders.

Green Music Australia has an opportunity to capitalise upon the potential of both artists and audiences to facilitate action and change with respect to environmental impact. These two stakeholder groups, sitting at either end of the Australian Music Industry Map, and have enormous potential for change, given their role as creators and consumers of the products around which the industry revolves. Green Music Australia should aim to facilitate and encourage initiatives involving artists and audiences to improve environmental impact.

Research and engagement should target key stakeholders which have the greatest potential to implement and facilitate change in the industry. These key stakeholders are those that have the greatest environmental impact and those which have the greatest level of influence within the industry (as identified in the table that follows the map overleaf). Those stakeholders identified as having greatest influence and impact are:

Significant Influence

- Artists
- Audiences
- Artist Managers
- Media
- Festivals
- Record labels
- Copyright Organisations
- Booking Agents/Promoters
- Peak bodies

Significant Environmental Impact

- Audiences
- Festivals
- Digital distribution companies
- Venues
- Manufacturers
- Transport

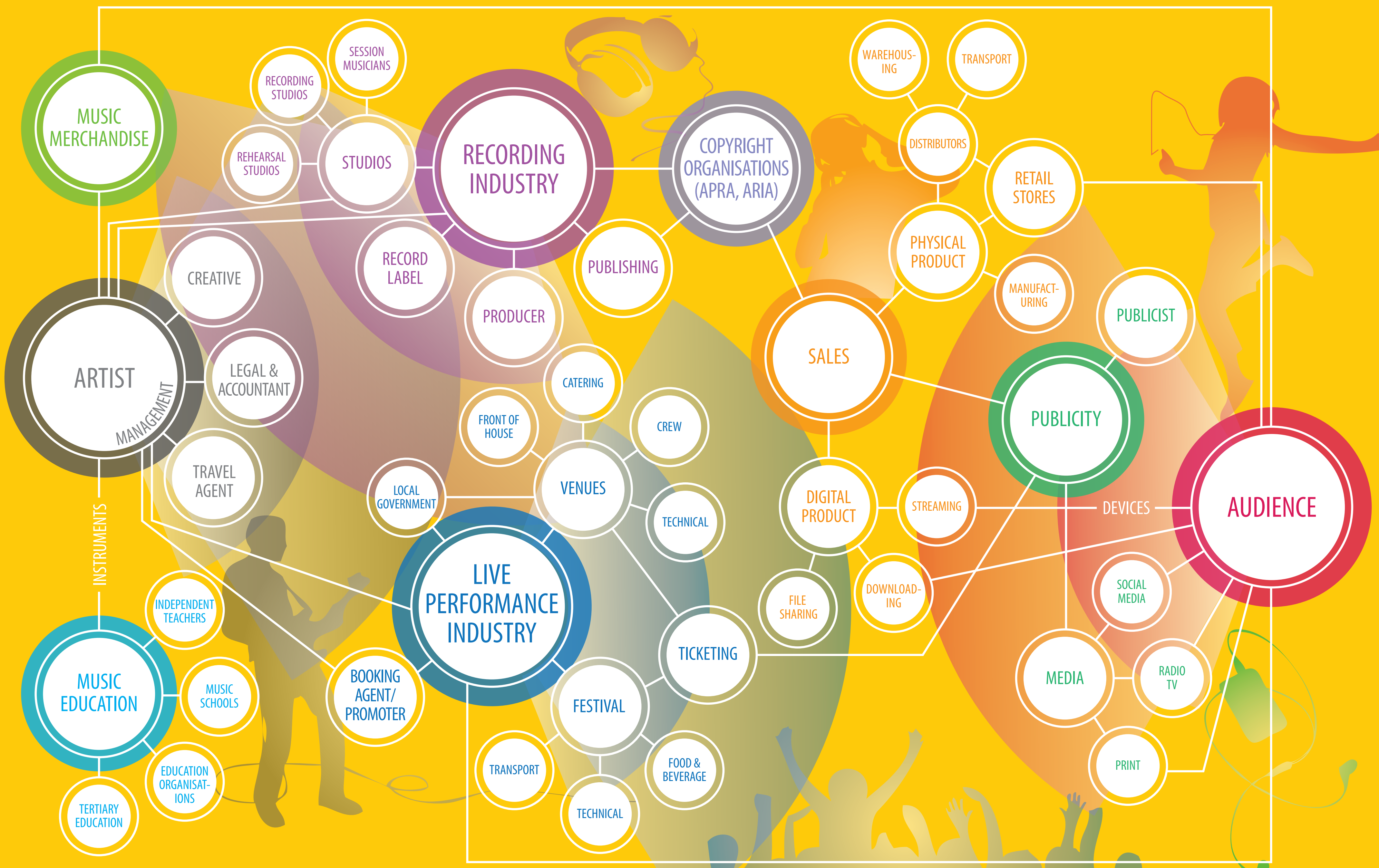
These stakeholders are best positioned to either implement change through their own activities, or to influence and encourage others to undertake changes to reduce environmental impact.

This research has found that the music industry has enormous untapped potential for change. By facilitating, encouraging and coordinating efforts to reduce the environmental impact of the industry, Green Music Australia has a significant opportunity to not only encourage the industry to improve its own environmental footprint, but to encourage the industry to use its voice and reach to encourage change among the broader Australian economy. For many generations, music has been a voice for social change and action, and a huge opportunity exists within Australia to use this role to encourage action to address climate change.

AUSTRALIAN MUSIC INDUSTRY MAP

Institute for Sustainable Futures

green music australia



Peak Bodies (such as Music Council of Australia, Live Performance Australia, Australian Independent Record Labels Association and Association of Artist Managers etc.) play a key role but are not represented on the map as they are seen to be related to various stakeholders in the Australian music industry.

This map was developed in 2014 by the Institute for Sustainable Futures, University of Technology Sydney in collaboration with Green Music Australia.

Stakeholder	Influence (internal)	Influence (external)	Environmental Impact (Direct)
Artist	HIGH	HIGH	MEDIUM
Audiences	HIGH	HIGH	HIGH
Artist Manager	HIGH	LOW	LOW
Media	HIGH	HIGH	MEDIUM
Festivals	HIGH	HIGH	HIGH
Record labels	HIGH	LOW	LOW
Copyright Orgs	HIGH	LOW	LOW
Booking Agent/ Promoter	HIGH	HIGH	LOW
Peak bodies	HIGH	LOW	LOW
Digital distribution	MEDIUM	HIGH	HIGH
Venues	MEDIUM	HIGH	HIGH
Local government	MEDIUM	MEDIUM	LOW

Stakeholder	Influence (internal)	Influence (external)	Environmental Impact (Direct)
Ticketing companies	MEDIUM	HIGH	LOW
Distributors	MEDIUM	LOW	MEDIUM
Music Education	MEDIUM	HIGH	LOW
Studios	MEDIUM	LOW	LOW
Publicist	MEDIUM	MEDIUM	LOW
Producers	MEDIUM	MEDIUM	LOW
Publishers	MEDIUM	LOW	LOW
Retail Stores	LOW	MEDIUM	MEDIUM
Merchandising	LOW	MEDIUM	MEDIUM
Transport	LOW	LOW	HIGH
Manufacturers	LOW	LOW	HIGH

1 KEY FINDINGS

- ✓ **Environmental consciousness but lack of resources**
- ✓ **Music industry is in a state of rapid change**
- ✓ **Music industry rarely documents or coordinates activities**
- ✓ **Communications channels**
- ✓ **Further research and engagement is required**

ENVIRONMENTAL CONSCIOUSNESS

This research identified a strong awareness of environmental issues throughout the music industry – particularly among artists, artist managers and within the festival sector. Interviews revealed a reasonable level of awareness of the impacts of the industry's activities, and a degree of interest in understanding and minimising these impacts.

However, a recurrent theme emerging throughout the research was that a lack of resources seriously constrains the industry and stakeholders' ability to take action. Pressures on time, a lack of funds, and competing priorities relating to the core business of industry stakeholders have been found to present significant barriers to action on environmental issues. Almost half of the artists in Australia have non-arts jobs to supplement their income, meaning that time spent focusing on music is limited and competes with other income-generating activities (Throsby and Zednik, 2010). Further, most musicians earn only small incomes from their artistic activities, and more than half of all Australian artists earned less than $10,000 from their creative income (Throsby and Zednik, 2010), meaning that musicians' time is generally split between artistic and non-artistic activities, leaving little time for them to participate in efforts to reduce environmental impact.

As well as a lack of resources, a lack of guidance and coordination was identified as another reason for low levels of environmental action being undertaken across the music industry. There are currently few resources to guide musicians or artist managers in understanding the nature of environmental impact and how to mitigate their impact. Similarly, there are few efforts to engage consumers (audiences and fans) with regards to understanding the impact of their role in the music industry. This is discussed later in the report as an important opportunity for GMA.

STATE OF RAPID CHANGE

As is discussed in Section 4, the industry is undergoing significant changes to the way music is produced, sold and consumed, with a major shift to digital product. This shift is altering revenue profiles and supply chains across the industry.

Further, a reduction in physical product sales is likely to be linked to a significant reduction in environmental impact in at least one area, though may be associated with growth in another. It is important to understand the implications of these changes for the impact profile of the industry.

A change is also underway with regards to ownership of key interests – which tend to be undergoing consolidation in large companies, and also the ease with which stakeholders can establish their services and products, due to the proliferation of technology and opportunities to communicate digitally.

This state of flux presents significant challenges for environmental action as it provides competing changes and adjustments for stakeholders to manage. However, it may also present opportunities for new behaviours to be more easily integrated than they may have been with established practices.

LACK OF DOCUMENTATION AND COORDINATION

One of the major findings of this research was that there is limited data available about the scale, structure and 'inner workings' of the Australian music industry.

The inadequacy of data relating to current and past environmental impacts presents a serious challenge for future phases of research – particularly with regards to defining a clear boundary as to identifying the supply chain of 'music'. Significant data collection may be required in order to quantify specific impacts, particularly carbon emissions, given that boundaries of operations and ownership are currently unclear. More targeted research on particular aspects of music (such as recording, distribution, venues, digital services) is likely to achieve more measurable outputs. Internationally, this approach has been taken for specific aspects of the industry such as festivals and CD manufacturing.

COMMUNICATIONS CHANNELS

Formal communication channels are reportedly unlikely to be an effective means of engaging industry stakeholders. Due to time pressures and entrenched industry behaviours, formal communications channels which might be utilised in other industries are unlikely to be useful for the music industry.

The Australian Music Industry has a directory in the Australian Music Industry Directory (The Music, 2014), however resources skills and knowledge are more generally shared by word-of-mouth. The industry is based heavily on 'who you know'.

A significant opportunity exists to utilise informal communications channels through which the industry is accustomed to communicating both amongst stakeholders and with a broader audience. These informal channels include social media – Facebook, YouTube, Twitter – and informal connections between individuals. For example, a YouTube video featuring a celebrity spruiking the benefits of switching to a different CD packaging is likely to be a more powerful behaviour change tool than a fact sheet about the same topic.

Formal industry meetings are the exception to the informal communication that usually takes place within the industry. Conferences such as the Big Sound conference held annually, and the SxSW festival held in Texas each year are large industry gatherings which present excellent opportunities for communication about the environmental impact of the industry.

FURTHER RESEARCH AND ENGAGEMENT

Further research and engagement is required to understand the nature of emissions sources and environmental impacts, to identify opportunities for change and to facilitate behaviour change and cooperation among stakeholders. Research and engagement should target key stakeholders which have the greatest potential to implement and facilitate change in the industry. These key stakeholders, identified in the report, are those that have the greatest environmental impact and those which have the greatest level of influence within the industry. These stakeholders are best positioned to either implement change through their own activities, or to influence and encourage others to undertake changes to reduce environmental impact.

2 INTRODUCTION

Music is central to the cultural life of contemporary Australia (Australia Council for the Arts, 2012). Almost every Australian engages with music on a regular basis, and millions purchase recorded music and attend live performances each year.

However, the environmental impact of this invaluable cultural sector is relatively unknown. While there is some awareness that the environmental costs of CD manufacturing, touring, festivals, venues and data centres is not insignificant, little effort has been undertaken to quantify this impact. This lack of understanding has fuelled an uncertainty relating to strategies that might mitigate impact. Thus – apart from a few sporadic initiatives – the Australian music industry has seen very few attempts to minimise the environmental impact of its activities.

In the UK, a not-for-profit organisation called Julie's Bicycle has pioneered research into the environmental impact of the UK's creative industries. Based on a foundation of peer-reviewed research, Julie's Bicycle works with over 1000 arts organisations across the UK and internationally to help them measure, manage and reduce their environmental impacts. In 2007, Julie's Bicycle released its 'First Step' report (Bottrill et al, 2007), which outlined a carbon footprint of the music industry and suggested directions for future investigations and action.

This project aims to eventually emulate the excellent work that Julie's Bicycle has undertaken in the UK, and to adapt it to the Australian context. This first stage of investigations aims to understand the profile of the music industry, sources of environmental impacts, barriers and opportunities for action, and to scope the potential for quantifying and documenting the carbon footprint of the Australian music industry.

Green Music Australia engaged the Institute for Sustainable Futures at the University of Technology, Sydney, to undertake this Climate Action and Engagement Scoping Study. For more information about Green Music Australia, see ***Appendix A***.

THIS REPORT

This report summarises research activities conducted by the Institute for Sustainable Futures. The scoping study provides a snapshot of the Australian music industry's impact, level of awareness and opportunities for improvement with regards to sustainability and climate action.

Key objectives of the research were to:

- Identify key stakeholders and their various roles in the industry;
- Understand and document existing efforts for climate action;
- Note key trends in the industry;
- Identify opportunities for improvement of climate impact; and
- Assess the availability of data to calculate the industry's carbon footprint.

In order to achieve the above objectives, a literature review and a series of interviews were undertaken. The literature review assessed key papers and articles as well as Australian literature on the subject. Interviews were undertaken with a range of stakeholders to supplement information in the literature and enrich our understanding of the Australian context.

Following a description of the methodology employed throughout this research project, the report identifies key trends that are affecting the music industry. A map of the Australian music industry is then presented, generated through discussions with key industry stakeholders and informed by the literature. Following this are descriptions of each of the stakeholders identified on the map, including their industry role, size and scale, influence and likely environmental impacts. The report then provides a summary of opportunities for estimating the impact of the music industry, outlines barriers and opportunities, and makes recommendations for next steps for Green Music Australia.

A NOTE ON TERMINOLOGY

The focus of this project was upon the climate impacts of the music industry – specifically, the carbon emissions generated by the industry's activities. However, discussions and references which relate to the environmental impact of the industry more broadly (including waste, water and ecological impacts) were not excluded from the investigation. Thus, this report uses both 'climate impact' and 'environmental impact' to discuss the potential effects that the industry might have upon the environment, though the primary focus remains on the carbon emissions profile of the industry.

This report uses the term 'music industry'. A report by Hoegh-Guldberg (2005) recommends the use of the term 'music sector' to more broadly describe all of the activities which happen in the industry – especially those creative processes and performances, as the term 'industry' was seen to be exclusive of those processes which did not result in some kind of production or sale. However, while acknowledging the important contribution of Hoegh-Guldberg to advancing a framework by which to analyse the activities associated with the production of music, the authors use the term 'music industry' throughout this report to capture all activities that occur from artist to the audience. This is due to this term being firmly established as the descriptor of choice for those operating within the industry and those interviewed for this report.

3 METHODOLOGY

This scoping study has been identified as a first step for Green Music Australia to achieve their mission to 'harness the social and cultural power of the music scene to lead the way to climate action'. The study sought to capture a qualitative snapshot of the Australian music industry's impact, level of awareness and opportunities for improvement for climate action. The following methods were used to complete this research:

- A **literature review** of the Australian music industry's size, scale and supply chain to identify:
  - Boundaries of the industry and its components
  - Current initiatives with respect to climate change
  - Key stakeholders across the supply chain.
- **Four initial interviews** and **nine attitudinal interviews** with key stakeholders and across the supply chain to document:
  - Industry structure and key connections
  - Popular communication methods
  - Trends that might catalyse or inhibit change
  - Levels of influence and impact within the supply chain
  - Current understanding and attitudes towards the environment, including enablers and barriers.
- **A briefing note**, which was reviewed by the GMA Board, to describe:
  - Industry size, value and structure (preliminary industry map)
  - Trends, inhibitors and enablers to climate action
  - Economic, political and social influences.
- Drawing on the above resources to provide informed medium- and long-term recommendations for GMA in a **scoping and engagement study report (this report)**, reviewed by the GMA Board.

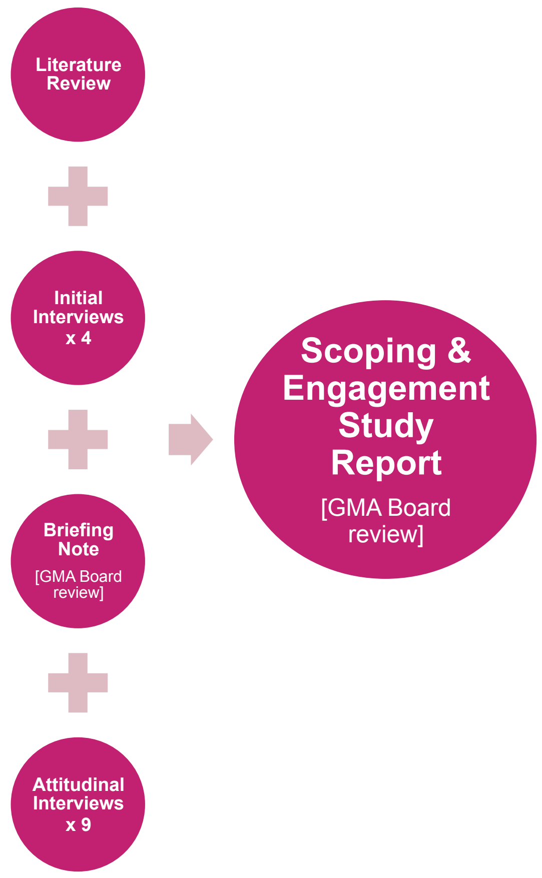


Figure 1: Methodology for the Scoping and Engagement Study.

Appendix B contains list of interviewees who participated in the scoping study.

4 KEY TRENDS

- ✓ **Consolidation and vertical integration**
- ✓ **Digitisation of music**
- ✓ **Democratisation of music**

CONSOLIDATION AND VERTICAL INTEGRATION

A key trend in the Australian music industry is the increasing consolidation of key interests and the vertical integration of several components of both the recorded and live music branches of the industry.

Increasingly, ticketing, promotion, artist management and venue interests are being consolidated. Live Nation is a key example of this, as it is a company with interests in promotion, ticketing, touring and artist management.

The shift to digital is also increasing consolidation of the recording sector, as record labels reduce their reliance on publishers, distributors and retailers by producing reduced numbers of physical goods and increasingly publishing and distributing digital files in-house, simply uploading digital music to online retail sites such as iTunes.

This consolidation is resulting in the increasing concentration of decision-making ability in a smaller group of people within the industry. As a result, the ability to facilitate change such as climate initiatives sits with this smaller group of people. However, these people also have significant potential to prevent or stall change, and thus play a pivotal role in the establishment of any wide-scale initiatives.

DIGITISATION OF MUSIC

In 2005, digital music sales in Australia were worth only $8m of a $520m market (ARIA, 2012). By 2012, this had grown to represent $184.3m of a $398m dollar market – around 46% of the market value. Digital product sales (54.7%) overtook physical product sales (45.3%) in 2013 for the first time in Australia (ARIA, 2014), and many radio stations are digitising their libraries. Digital music is delivered via digital distribution services, downloads, streaming, file sharing and listened to on digital devices.

The decline in physical product sales is contributing to a changing revenue profile across the industry. Previously, the majority of revenue across the industry originated from recorded music sales. Interviews suggest that this business model has shifted significantly, with declining revenue due to digital consumption and music piracy being replaced by an increasing revenue stream related to live music and touring. Morrow (2013) reports an increasing shift towards ‘collapsed’ copyright, where the performance, mechanical and songwriting copyright are rolled into one, due to this being more suitable for online consumption of music. Interviews suggested that artists will be significantly worse-off unless regulation relating to streaming services can be improved to deliver adequate royalties. Copyright issues relating to digital music are complex.

There is a strong perception emerging within the industry that digital has ‘greened up’ the process of delivering recorded music to consumers. At present, this is largely unsupported by evidence. Indeed – digital music has changed the patterns of manufacturing, transport and distribution and reduced the size of these operations, however the impact of data storage, digital distribution and digital listening devices remains unknown.

DEMOCRATISATION OF MUSIC

With the increasing proliferation of affordable, high-quality recording technology, and the prevalence of opportunities to share music online, distributing music to a wide audience is becoming easier for a growing number of artists. Once, the record contract was a make-or-break deal for a musician's career. Now, musicians can achieve fame or success by recording at home and distributing via social media such as SoundCloud, Facebook, MySpace, Bandcamp and the Triple J Unearthed website.

This increase in the abundance of digital distribution outlets for music is arguably resulting in an increase in opportunities for entrepreneurship and innovative approaches to artist management (Morrow, 2013). Artist managers (including self-management) have now become more important than record companies in determining how music is distributed and promoted.

This shift is also facilitating reduced tension between artists' roles as creators and their roles as commodity producers. Morrow (2013) notes that changes to an artist's ability to control their own career may facilitate less perceived tension between creativity and commerce as artists (and their managers) increasingly organise their own commodification. It should be noted, however, that these changes – while perhaps increasing accessibility and commercial interference – may also result in reduced income streams for artists.

On a similar theme, the democratisation of music could dilute the overall influence of artists to create environmental change. As connections between elements of the supply chain become less secure and impacts are increasingly dispersed, the ability to measure and reduce impact from this part of the supply chain is increasingly challenging. Actions that require unified or coordinated effort across the industry, such as those GMA may seek to implement, may prove to be particularly difficult to implement given these shifts.

Given the rise of social media, audiences now expect to connect with artists in more ways than just attending live performances. In addition to hearing their music via digital streaming and downloading (audio and video), live performance, CDs and vinyl; fans can also engage with artists via Facebook, Twitter and Instagram. These social media channels allow audiences to hear and see artist's messages and positions on key issues that matter to them.

Public funding for the arts, via organisations such as the Australia Council for the Arts and state and local funding bodies, also provides an opportunity for artists to independently produce music and tour the country – removing the importance of record labels and promoters as 'middle men' in the industry. In 2010-11, the Australia Council invested $84.7m in music (Australia Council for the Arts, 2011).

Crowdfunding channels – including Kickstarter and Pozible – are presenting an alternative means of funding albums for both new and established artists. Record labels are also using crowdfunding channels to engage with artists and audiences. For example, record label MGM recently partnered with Pozible offering musicians the option to have their crowdfunded albums, singles (physical and digital) and/or merchandise orders fulfilled by MGM's retail subsidiary, Waterfront Records (Pozible, 2014). Usually, record production relies on investment by record labels in order to be viable. This involvement of record labels in crowdfunding projects may indicate that record labels see crowdfunding as a challenge to usual patterns of funding recorded music.

5 SCOPING AND MEASURING CLIMATE IMPACT

5.1 MEASURING IMPACT

Prior to embarking on measuring the climate impact or 'carbon footprint' (i.e. tonnes of greenhouse gas emissions) of the Australian music industry, it is important to reference guidance on greenhouse gas accounting.

5.1.1 Defining Boundaries

INFLUENCE & CONTROL: Identifying the level of influence and control that each sector or component has over its emissions is of crucial importance to creating a baseline or carbon footprint. The Global Reporting Initiative (GRI) provides a decision tree for setting boundaries for measuring impact, as illustrated in Figure 2.

The GRI defines control and influence as follows:

- ***Control:*** the power to govern the financial and operating policies of an enterprise so as to obtain benefits from its activities.
- ***Significant influence:*** the power to participate in the financial and operating policy decisions of the entity but not the power to control those policies.

Identifying the levels of significant control and influence for each component of the Australian music industry will likely involve adapting guidance from an organisation to a sector/industry level. The GRI provides an 'event organiser's sector' supplement to its guidelines, but not for a whole creative arts industry or sector as yet.

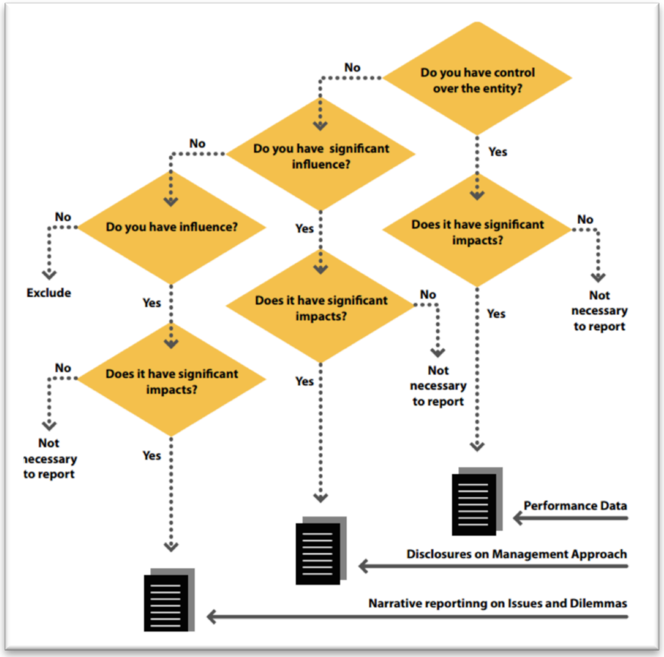


Figure 2: The Global Reporting Initiative's decision tree for setting boundaries.

(Global Reporting Initiative, 2011).

OPERATIONS: Once the degree of control and influence is determined, it is then possible to identify the operational boundaries. This involves identifying emissions associated with key operations such as buildings, transportation, equipment and materials.

5.1.2 Categorising Emissions

Once operational components are defined, it is then possible to categorise sources of emissions. The GHG Protocol identifies 'scopes' of emissions as:

- **Scope 1** or direct (owned or controlled stationary sources such as use of natural gas on site, vehicles etc);
- **Scope 2** or indirect (from the generation of purchased electricity); and
- **Scope 3** or other (all other indirect emissions). (World Resources Institute and World Business Council for Sustainable Development, 2004).

Figure 3 provides an example of the categorisation of emissions from an organisation.

The accuracy of an emissions footprint will be determined by the availability of, and access to, data on emissions sources in the industry. It is likely that assumptions may need to be made using resource benchmarks and high-level data on sector sources.

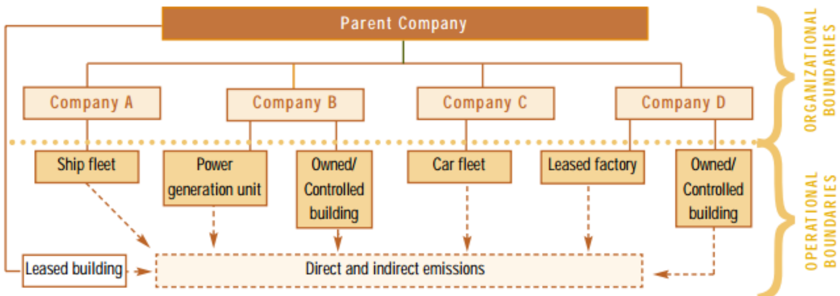


Figure 3: Example of categorising emissions based on operational and organisational boundaries.

(World Resources Institute and World Business Council for Sustainable Development, 2004).

5.2 SYSTEMS THINKING AND LEVERAGE POINTS

It is perhaps not surprising that a key finding of this research was the Australian music industry is a very complex system. It is important for any approach to measuring environmental impact of such a complex system to use systems thinking.

Systems thinkers place strong emphasis on identifying 'leverage points', or places within a complex system where a small shift in one thing can produce big changes other elements (Meadows, 1999). However, leverage points are always not intuitive. Working towards the wrong leverage points could have the opposite effect of that intended (Meadows, 1999). Systems contain physical stocks as well as non-material stocks (Meadows, 1999). In the Australian music industry, physical stocks include digital recordings, CDs, music videos, instruments and revenue. Non-material stocks include self-confidence, creativity, trends, success and credibility. The music system in Australia also contains inflows, outflows, positive and negative feedback loops and information flows.

Systems theory could be applied as a way to identify key leverage points to effect positive environmental change within the Australian music industry. In this case, it could help GMA to identify the most effective and efficient change opportunities.

5.3 DEVELOPING A MAP OF THE AUSTRALIAN MUSIC 'SYSTEM'

Considering that the eventual goal of this work is to facilitate the measurement of impacts across the music industry, and apply carbon accounting methodologies, it was necessary to map the various components of the 'music system' in Australia. It is hoped this will enable identification of the physical and non-material stocks and flows, inter-relationships between components and key leverage points for change.

Drawing on the literature review, which was supplemented by information gathered via the interviews, a map was created of the Australian music industry to provide a basis for next steps for GMA – whether that be quantification of impacts and/or identifying key leverage points in the industry for climate action.

A preliminary map was developed at the Briefing Note stage of this project and shared with interviewees in the attitudinal interviews in order to gain feedback. A key piece of feedback on this map was the fact that the industry and its various supply chains do not necessarily operate in a linear fashion. While music begins with the artist, and is eventually received by the audience, there are various methods by which this occurs – some indirect flows involving many stakeholders, and some direct involving few stakeholders. Much of this is dependent on the resources available to an artist and the journey they choose to transform their creative output into a commercial product.

During our research we identified a number of other maps created to visually represent the Australian music industry. The most notable of these was a map developed to represent a 'statistical' view from a comprehensive study *A Statistical Framework for the Music Sector* (Hoegh-Guldberg and Letts, 2005) funded by the Music Council of Australia. This study has led to the development of the *Music in Australia Knowledge Base* website (Hoegh-Guldberg et al, 2014). This website seeks to provide information on 'all activities related to the social, cultural and economic role of music in Australia' (Hoegh-Guldberg et al, 2014). It contains the most comprehensive collection of literature on the industry across categories of:

- **Performance:** creative musical activities (composition, live and mediated performance);
- **Infrastructure:** the supportive industries and activities that enable the music sector to exist and develop; and
- **Innovation:** covering the substantial role of technology, research, information and new activities in the music sector (Hoegh-Guldberg et al, 2014).

Other maps have been developed to represent particular components of the industry (such as recording), however, the purpose of these maps is largely to educate emerging artists and industry newcomers about operations, rather than illustrate environmental impact.

Figure 4 provides a map to illustrate the complexity and structure of the Australian music 'system' or industry. The map may be read either from left to right (starting with artists who create music, and flowing through to audiences who listen to music) or by focusing on key components (the larger circles) in order to identify interrelationships between sub-sectors of physical and non-material flows. While it is difficult to represent the creative, economic and environmental capital on one diagram, this map presents a starting point for taking a broad view of the industry and its stakeholders, before launching into more detailed analysis (whether quantitative or qualitative). Interviews revealed that neither physical nor non-material products flow in a consistent, linear fashion from artist to audience. Therefore, simple linear flows have been minimised as much as possible on the map. Two key sectors – recording (the making of the music) and live performance (experiencing live music events) were confirmed by those interviewed as useful categorisations of two key supply chains. Interestingly, these two sectors have little interaction. Music education and merchandising are identified as key elements of the industry, particularly as relates to artists and audiences. Peak bodies (listed in Appendix C) also play a key role but are not represented on the map as they are seen to be related to multiple stakeholders in the industry and are therefore not easily captured in simple visual terms. Other key stakeholders include copyright organisations, who work closely with the recording industry via licensing and sales, as well as publicity and media which play a role in delivering music to audiences and fans. Also included are physical devices such as instruments used by artists to create music and music devices such as iPods, stereos, record players and smartphones used by audiences to listen to – and watch – music.

In order to fill the gap between the international guidance for carbon accounting and the mapping of the Australian music industry, several criteria were identified with key research questions, as outlined in Table 1. It is hoped that considering these questions will help to characterise the industry broadly, and inform future stages of research. It is important to understand each stakeholder in terms of both the 'influence' and 'environmental impact' criteria. For example, a particular sector of the industry may have minimal environmental impact but substantial influence (such as via decision making) to change environmental impact in another part of the supply chain – and thus both elements are significant.

In Section 6, each component of the music industry map is described further using these criteria to:

- Provide the much-needed documentation about the industry and its boundaries and levels of influence;
- Enable easy identification of opportunities for climate action;
- At a high level, raise awareness of the industry's environmental impact; and
- Enable a foundation for more detailed research into the industry's environmental impacts.

Following this, Section 6.6 provides a table of key stakeholders likely to be crucial for facilitating change in the industry, categorised as high, medium or low across the criteria of influence and impact (direct and indirect). Note these categorisations are not the results of detailed quantitative analysis, but rather are from qualitative analysis based on a literature review and interviews. Interviews were not conducted with stakeholders from all parts of the industry, therefore further research and interviews would help to increase the accuracy of these descriptions.

Table 1: Criteria and Research Questions behind analysis of the Australian Music Industry Map.

CRITERIA	Research Questions
Industry role	What role does this stakeholder play in the Australian music industry? What kinds of activities do they undertake on a daily basis?
Size and scale	What is the general scale of this stakeholder group? Does any quantitative data exist about this?
Communications and reach	How frequently does this stakeholder communicate to others in the industry? Who (to which other stakeholders)? How widely?
Influence	What level of influence does this stakeholder have over decision making that could influence change at a large scale?
Environmental impact	What environmental impacts are associated with this stakeholder's activities in the Australian music industry? What is the scale of this impact generally? Is the impact direct or indirect?

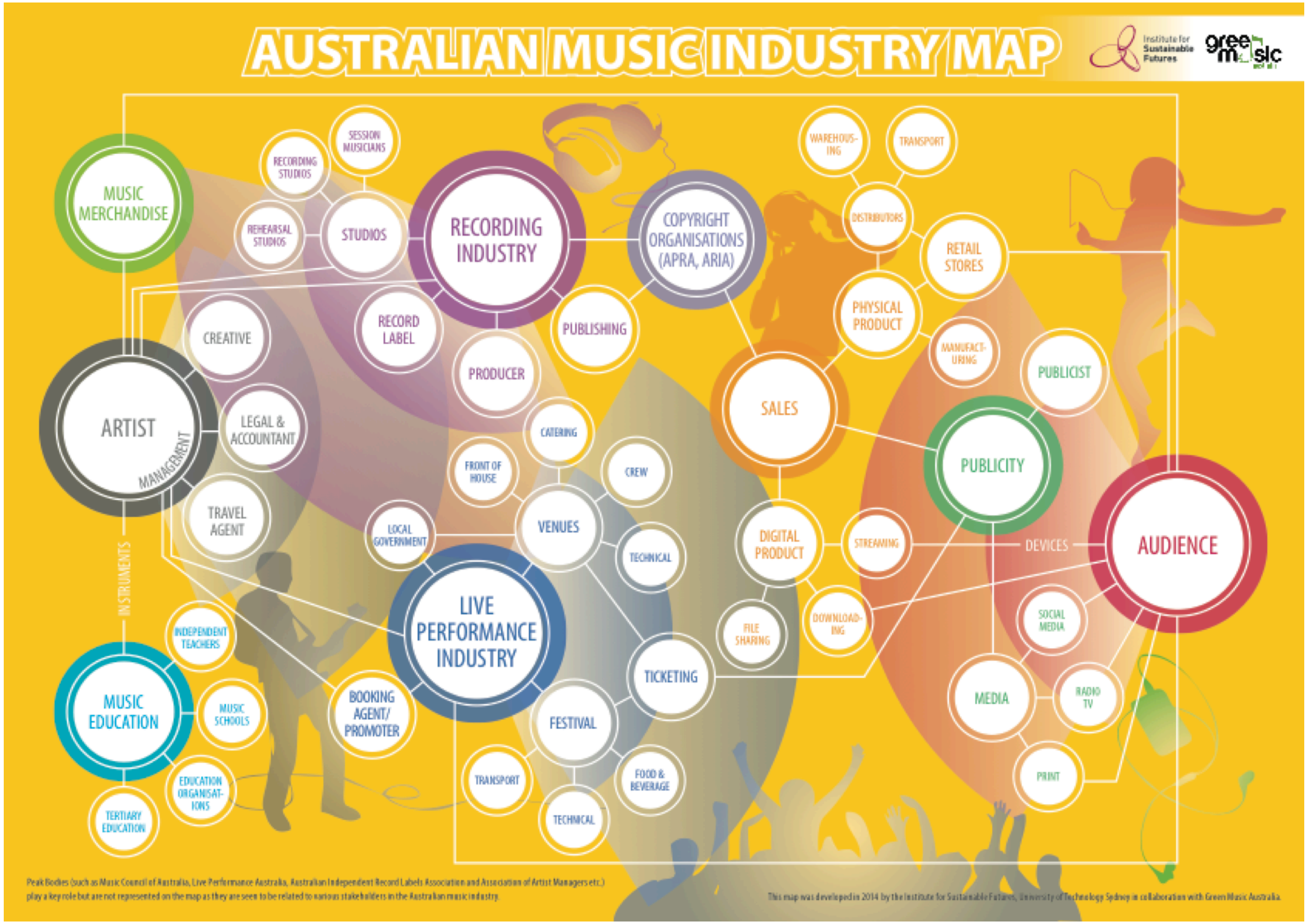


Figure 4: **Map of the Australian music 'system' or industry**

6 STAKEHOLDERS

6.1 ARTISTS AND MANAGEMENT

ARTISTS

Industry role: Artists are at the heart of the music industry. It is their songwriting, recordings and live music that drive the entire industry. Their creative and intellectual output becomes the product which fuels the rest of the industry. Musicians are the largest sub-group of artists in the country, making up 25% of the professional artist population (Australia Council for the Arts 2012). There is a large spectrum of artists, including those who have higher profiles to independent and emerging artists.

Throughout a musician's career, the profile of their income is likely to change – initially, a musician will earn the majority of their income from live performance. As they become well known, they begin to enjoy earnings from record sales and royalties.

Size and scale: Ernst & Young (2011) estimate that there were 22,677 (6,395 full-time equivalent) artists working in live music performance in the Australian music industry in 2011. More up-to-date figures are not available.

Communications and Reach: Communications with the rest of the industry are generally conducted via the artist manager, unless the artist is self-managed. However, many have direct communication with fans due to social media. Musicians have some of the highest follower numbers on social media, and are incredibly influential in this sphere.

Influence: The entire industry revolves around the artists, so they are highly influential. Artists have a great potential to influence change through communication with their fans – they are extremely influential – especially with young fans through social media.

Successful artists can have influence over their record label and promoter, however few artists are in such a privileged position. Successful artists can make demands relating to particular requirements or standards for production via contractual agreements. Celebrity endorsement has been identified as a significant opportunity for artists to endorse and to fast track initiatives.

Interviewees recognised the leadership role high profile artists can play in creating opportunities for emerging artists (and audiences) to increase environmental awareness and action (e.g. via partnering with an environmental not for profit).

Environmental impacts: Artists are generally supportive of protecting the environment and reducing their impact. This research has found that there is a strong perception that artists generally have a culture of wanting to care for the environment – indeed, one interviewee suggested that the very sense of being a musician is a commitment to a sense of 'other' and 'a world outside themselves'. However, constraints on resources often mean that these intentions do not necessarily translate into reduced environmental impact. Increasing self-management is now meaning that artists have improved opportunities to control and manage their own impacts. Therefore cost also presents a barrier to reducing environmental or climate impacts as less impactful methods often are, or perceived to be, more costly.

In Australia, touring is associated with very large environmental impacts due to the distance between major cities – artists must either fly or drive great distances between performances. It is increasingly challenging to avoid these activities, as touring is a major income stream. Opportunities to perform live at opposite ends of the country within a short period often arise with little time for the preparation required to plan ahead and reduce environmental impact. International tours are also highly impactful due to Australia's great distance from other countries.

The use of digital communication (such as Skype) can enable collaboration that was previously only possible by face-to-face means, however opportunities to minimise impacts using these means may be limited.

ARTIST MANAGEMENT

Industry role: Artist managers are responsible for managing the business of artists. Managers allow artists to focus on writing and performing. They are involved with bookkeeping, scheduling and planning, booking travel, developing network and liaising with other contacts such as record labels and promoters. They also liaise with creative, legal, accountants and travel agents, as well as publicists and media – they touch 'all the jigsaw puzzle pieces that fit together to create an artist's career' (Morrow, 2013).

Size and scale: Members of the Association of Artist Managers estimate that there may be around 160+ music managers operating in Australia. There is no formal accreditation or education program for music managers in Australia.

Communications and Reach: Artist managers talk to just about everyone in the industry – they deal with the copyright organisations, booking agents, record labels, lawyers, accountants, promoters, session artists, recording studios, merchandise producers. Managers are in regular contact with booking agents, marketing and Artist and Repertoire (A&R) people. A&R people are influential staff in record labels as they are responsible for identifying, signing and nurturing new talent.

Artist managers have recently established a Facebook group in Queensland as a form of communication and to share contacts and ideas. Social media is an increasingly common means of sharing contacts and ideas between artist managers.

Influence: Artist managers have 'immense influence over every aspect of an artist's career' – particularly in the early stages (Morrow 2013). Artist managers are very important for decision making as represent artist interests and serve as contact points with all points of the industry. An identified opportunity relates to empowering managers with the information needed to help artists make the right decisions about reducing their environmental impact. Managers have an opportunity to influence artists but tend to lack the information to do so. Managers lacking the desire to address environmental impact may not see a marketing opportunity associated with environmental action.

Artist managers have significant influence on artists, as they often make recommendations and help to set direction. The exact degree of influence will depend upon the particular relationship between artist and manager – some have more influence than others. Artist managers may influence the environmental impact of an artist by suggesting that environmentally-sound practices fit with the 'image' or 'brand' of an artist (Morrow, 2013).

Environmental impacts: Impacts from the direct activities of artist managers appear to be relatively low, as they work in home offices and generate few direct emissions. Some emissions are associated with travel if managers are required to travel with artists on tour.

Artist managers interviewed for this study mentioned that they had made efforts to reduce their impact by using Skype to avoid unnecessary travel. However, they also recognised the difficulties associated with attempting to reduce travel through videoconference facilities such as Skype as certain parts of the industry are not yet open to this form of communication.

The indirect impacts of artist managers can more greatly impact on the environment. For example, by making decisions on behalf of the artist (e.g. requiring carbon offsets when purchasing flights or disregarding an environmentally friendly type of merchandise). At times, decisions are made without consultation with the artist and predominantly are done on the basis of cost and/or profit margin, related directly to an artist manager's income.

6.2 AUDIENCES

Industry role: Audiences are the key drivers behind the music industry's operations and supply chains. As consumers, fans dictate demand for music through a variety of communication and media channels.

Size and scale: A survey of 3000 Australians administered by the Australia Council for the Arts in 2010, found that nearly all interviewees intentionally listen to recorded music, and over half attend live performances (Australia Council for the Arts, 2010). 10% of Australians surveyed play a musical instrument and 5% participate in organised singing. As illustrated in Figure 5, participation in music is highest in 15-24 and 25-34 year-old age groups in Australia, based on this survey.

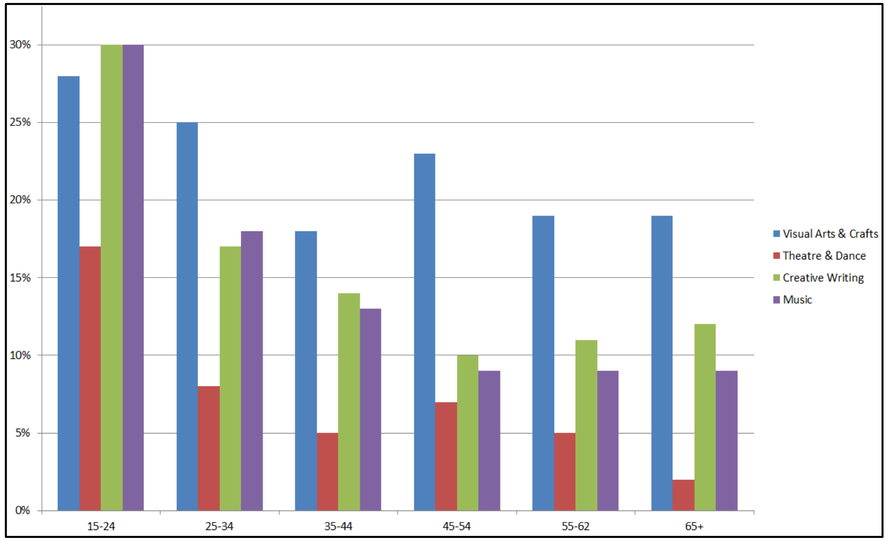


Figure 5: Levels of creative participation in the Australian arts by age.
(Australia Council for the Arts, 2010).

Communications and Reach: Music reaches many individuals in through a variety of means – including iPods, concerts, cafes and restaurants, gyms, television and film, the internet – and connects people socially.

Audiences are connected to the industry via music media and via distribution of physical and digital product. The artist and their music acts as the conduit for this connection with the industry.

The ability of audiences to receive and communicate messages from the Australian music industry is immense – particularly using social media.

Influence: Audiences can have an effect on suppliers due to consumption choices. There are opportunities to get them on board with initiatives and campaigns through a range of strategies. Audiences can be strongly influenced by artists – via their messages, behaviour, image and all aspects of their music, and celebrity endorsement is regularly used to influence the behaviour of consumers.

Environmental impacts: Audiences engaging with music can have a large environmental impact through their demand for physical product (such as CDs, vinyl records, merchandise and educational materials) and digital product (digital streaming, downloading and file sharing via computers, mobile phones and notebooks).

Another large impact relates to audience travel to live performances, particularly those attracting large numbers of audiences from a large geographical area, such as festivals which attract large audiences to a single venue. An opportunity to reduce these impacts may lie in encouraging audiences to seek alternatives to vehicle travel.

The generation of waste from consumption of food and beverages at live performances can be significant, as can packaging from purchasing physical product.

Environmental action by audiences varies based upon the level of awareness individuals have of their environmental impact. There is an opportunity for the music industry to act as a conduit for environmental education to facilitate reduced environmental impact on the part of audiences.

6.3 RECORDED MUSIC

The Australian Recording Industry Association reports that **the recording sector was worth $398 million in 2012** (ARIA, 2012). The recording sector has been in a period of decline since 2005 – when it was worth around $528 million. The increase in the value of the recorded music industry in 2012 represented the first upwards trend in the industry since 2009.

RECORD LABELS

Industry role: Record labels sign contracts with artists for the rights to record and sell music.

Size and scale: The four major labels operating in Australia are international companies – Universal (EMI), Sony, MGM and Warner. Independent record labels are those that are majority owned in Australia. There are 180 members of the Australian Independent Record Labels Association, ranging from self-release artists to bigger companies. Key independents include Mushroom and Inertia. ABC and other broadcasting corporations often perform functions of record labels, too.

Communications and Reach: It is reportedly quite hard to engage with the larger record labels, as they are large, profit-driven corporate entities. However, record labels have significant reach as they are well connected with a broad range of artists, managers, retailers, distributors, publishers, publicists and media.

Influence: Artist and Repertoire (A&R) people within record labels are reportedly very influential – they make key decisions.

Environmental impacts: Environmental impacts associated with record labels relate to the product which is eventually produced from the recording process. While these impacts are captured under 'digital product' and 'physical product' in the map, it is worth noting that record labels guide decisions that influence these productions. There may be opportunities for artists and managers to work with labels to ensure that impacts are minimised – for example, in opting to use cardboard packaging for CDs, rather than plastic.

PUBLISHING

Industry role: Once a song or piece of music is written, the publisher seeks to deliver the song, via negotiating agreements, to as many mediums as possible to obtain royalties for an artist. The role of publisher is pivotal in the music industry. In exchange for their services, publishers collect a share of the royalties generated by their writers' works (APRA AMCOS, 2014).

Record labels also often play the role of publisher for artists they have signed. A publisher gets rights to sync music to visual mediums via a 'sync deal'.

Size and scale: There are hundreds of publishing companies in Australia.[1] Major publishing companies include Sony Music, Mushroom Publishing and Alberts Publishing. Publishers are often subsidiaries of larger parent company record label.

Communications and Reach: Given that the publisher is responsible for maximising licensing revenue for the commercial use of their artists' musical works, the publisher has large reach in the industry and communicates with many other representatives across the industry supply chain. Through agreements with publishing companies in other countries ("sub-publishers"), music publishers are able to promote their writers' works for licensing in other parts of the world, and monitor royalty collection internationally (APRA AMCOS, 2014).

Influence: A publisher has great influence over the life of a song and can give a piece of music a long life on radio, film, television and more.

Environmental impacts: The publishing of music is not a direct source of environmental impact, however, successful publishing of a song or composition could lead to significant distribution and manufacturing of the

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[1] A list of publishers with memberships to APRA AMCOS can be found at www.apra-amcos.com.au/musiccreators/musicpublishers.aspx).

[2] Australian Music Industry Directory (The Music, 2014) releases a "Power 50" edition which profiles the most powerful people in the industry including bloggers, artists, and peak body

music for years. Environmental awareness of the impacts of publishing is generally not a priority for publishers in Australia.

Publishers will be relevant to any decision by artists not to allow their work to be used advertising environmentally destructive products or companies.

PRODUCER

Industry role: A music producer is essentially a project manager for the recording, mixing and mastering of music product. The producer generally provides vision for the music, the sound and goals of the project, and can inspire, assist and guide an artist. Producers can be musicians, engineers, remixers and mentors. Today's technology makes recording and mixing music as a producer possible for any individual (Shepherd, 2009). This creates a lot of competition in the industry.

A key characteristic of a producer is 'musicality', and the ability to see the 'big picture' to allow the artist to focus on details of writing and performance (Shepherd, 2009).

Size and scale: Most music producers are either sole traders or associated with other industry components such as record labels or recording studios. Reportedly, there are at least 100 producers operating within Australia.

Communications and Reach: Music producers are well connected with artists, recording studios and record labels, however probably have limited reach throughout the rest of the industry.

Influence: A producer has more influence of the style and vision of music than on any physical output. They are closely involved in the creative process, so largely influence the 'non-material' flows in the music system. However, producers can be hugely influential in an artist's career, and thus there may be opportunities to utilise their influence in the industry to facilitate change.

Environmental impacts: Producers work as project managers, contributing to and advising on songwriting, arrangement and performance – and thus there is not a large impact associated with their activities. The impact of the work they do is largely associated with studios, which are discussed in the next section.

STUDIOS

Industry role: Studios are facilities in which music can be rehearsed, recorded, mixed and produced. Studios might be owned by artists, record labels, production companies or broadcasters. Artists are choosing to record at home and on their computers more often due to the growth of electronic music production and the recent availability of high-quality and affordable home-recording equipment.

Size and scale: Recording studios are a variety of sizes and scales. They could be owned by small businesses, large record labels or broadcasters.

Communications and Reach: Studios are connected with record labels and artists, as well as artist managers. These are high-traffic facilities for a number of stakeholders in the industry.

Influence: Studios (both rehearsal and recording) can be a place where bands, musicians, engineers and producers strongly influence each other. As musicians spend a lot of time at studios and see them as central to their creative processes, environmental initiatives by studios (owners and operators) have the potential to be quite influential. Studios have an opportunity to educate visitors about impacts and action (e.g. posters about environmental impact and awareness). Similarly, the studio provides an outlet for an artist to influence studio owners, others involved in the creative process and the infrastructure required for this process (such as energy consumption of the studio facility). Artists then communicate the experiences of rehearsing and recording in these facilities with other artists. There is opportunity for studios to create positive feedback loops in the with regards to influencing change.

Environmental impacts: The environmental impacts of recording studios stem from their building-operation energy consumption. Operation of musical equipment and recording systems likely consumes a large amount of energy, however this is likely to be small relative to the impacts of other sectors of the industry.

6.3.1 COPYRIGHT ORGANISATIONS

Industry role: Copyright organisations represent the rights in the musical works and any published performances of these works. They represent song writers, lyricists, record labels and recording artists. Key organisations in Australia are PPCA, ARIA and APRA/AMCOS. These organisations ensure that the creators of musical works and recordings are compensated for use of their work by broadcasters, films, advertisements and businesses.

Size and scale: APRA/AMCOS and ARIA are two of the largest organisations in the Australian music industry with a large number of members and significant networks throughout the recording sector. Organisations like PPCA tend to be bigger than they used to be as licencing revenue has become increasingly important to artists

Communications and Reach: Copyright organisations deal with radio stations, who have agreements covering the use of recorded music each year; with businesses outside of the music industry – PPCA has contact with 60,000 business with licence arrangements; as well as artists and songwriters whose work is covered by licences and who receive royalty payments from the organisations. Copyright organisations have enormous reach across the industry as their activities are important to all artists, managers and record labels.

Influence: As collectors and distributors of licencing revenue upon which a very large number of stakeholders are dependent, copyright organisations have significant influence within the industry. They play a role not only in coordinating activities across the industry but also in creating change across a number of supply chains and have great potential to be a strong change agent in the Australian music industry.

Environmental impacts: This sector's impact is likely to be relatively small, as they are not involved in any production. Main sources of emissions are likely related to consumption of paper/cardboard for advertising and promotional material.

6.3.2 SALES

DISTRIBUTORS

Industry role: Distributors are responsible for the supply of physical product (CDs and vinyl) to sales outlets. This involves the transport of the product from the manufacturer to a warehouse facility and from the warehouse to a retail store – though sometimes product might be transported directly to the retail store without being warehoused first.

Size and scale: Key companies including Inertia, Stomp, Vitamin Records, MGM, Sony and Universal. There are less than ten major distributors in Australia, with a number of smaller businesses dealing with niche distribution and smaller volumes. Sub-sectors of distribution include warehousing and transport, which are likely to have significant environmental impacts.

Communications and Reach: It is unclear the extent to which distributors are connected with the rest of the industry. However, there are clearly strong connections with retailers, publishers, manufacturers and record labels, due to these being key connections for their core business activities.

Influence: Distributors are reportedly very influential when it comes to determining packaging and manufacturing specifications. They have the ability to demand the use of plastic (instead of cardboard) cases. They also control the ability of artists to get product to market, and are therefore relatively influential.

Environmental impacts: This sector's impact is likely to stem largely from the emissions associated with moving physical product around the world and around the country. Although patterns of distribution have changed due to an increase in digital product sales, the impacts of this transportation are likely to be significant.

MANUFACTURING

Industry role: Manufacturing companies produce physical products (CDs and vinyls) for record labels and artists. Different companies focus on different elements of manufacturing – including packaging, printing, CD manufacture – while some deliver a combination.

Despite the growth in digital distribution, CD recordings are still requested from artists by record labels and radio stations, and are sold at live performances. Retail stores and live performances remain the primary means of selling physical product.

Many independent artists question the need for CDs but may still have them manufactured so as to have an adequate number to sell to fans at concerts. Genres other than pop and electronic still have a heavy reliance on CDs. In Australia, there has been a resurgence of vinyl records recently, though much of this is manufactured in Europe.

Size and scale: Around 15 companies in Australia are thought to be directly connected to CD manufacturing. Very few 'replicated' CDs (more than 500 units) actually get produced in Australia – most are produced in Taiwan or elsewhere, however there is a growing demand for small runs of 'duplicated' CDs (less than 500 units) manufactured in Australia. A growing trend in producing vinyl is sending more production offshore, particularly to Europe (especially the Czech Republic) and demand for USB storage is also growing, however CDs remain the main medium for music in a physical format.

Communications and Reach: Manufacturers are likely to be relatively poorly connected to the rest of the industry. Most manufacturing happens offshore and there appear to be few stakeholders who have direct connections with manufacturing.

Influence: Manufacturers are unlikely to be influential stakeholders due to them being somewhat disconnected from the rest of the industry and being located offshore. They are also generally bound to carry out the requests of record labels and publishers and by environmental regulations in the country they are operating in (such as a price on carbon or renewable energy requirements).

Environmental impacts: Emissions from CD and packaging manufacturing are some of the industry's most significant impacts. Plastic jewel CD cases have an enormous impact. According the UK study by Julie's Bicycle, each case has around 646g CO_2 associated with its production (Bottrill et al., 2007).

Most of these emissions can be avoided by using cardboard packaging (reportedly 95% less emissions than plastic). Costs for cardboard packaging are currently still relatively high in smaller runs, however, cardboard packaging is now a growing industry trend as it is easier to transport than plastic which can crack and damage.

There is some CD-recycling infrastructure in place but it is relatively uncommon. The CDs themselves cannot be made from recycled plastic and cannot currently be recycled or reused. Reportedly, plastic jewel cases are increasingly being seen as 'old fashioned'. This presents an opportunity to encourage the industry to adopt alternatives.

Impacts are also associated with paper for printing inserts and inks for printing on CDs and inserts. Some inks contain VOCs, however vegetable-based inks are now industry standard.

Little is known about the environmental impact of producing vinyl records in Australia.

Generally in the Australian music industry there is not a lot of action to ensure that physical product is produced in an environmentally-friendly manner. Often these decisions are driven by an artist's individual view and the 'image' or 'brand' developed by the artist manager or record label.

The popularity of digital devices such as iPods and smartphones mean the impact from the manufacture, use and disposal of electronic equipment is growing. With the high rate at which new models of digital devices are being released, this impact is significant, though as-yet unquantified.

RETAIL STORES

Industry role: Music retail stores sell physical products to consumers. These products may include CDs and vinyls, as well as DVDs, listening devices and merchandise.

Size and scale: There are reportedly around 1,000 independently-owned record stores in Australia (Record Store Day, 2014). These independent operators are increasingly under threat from growing competition from large retailers such as JB Hi Fi, as well as digital distribution, and have been in decline for a number of years. Key nation-wide retailers include JB Hi Fi who have over 200 stores in Australia, and Sanity – Australia's largest music retailer with over 230 stores.

Communications and Reach Retail stores are primarily connected with audiences, and with distributors.

Influence: This research did not uncover the extent of influence enjoyed by retail stores. However, given the increasing concentration of music sales with a small number of large retailers (such as Sanity and JB Hi Fi) there is likely to be a consolidation of influence with regards to decision making with a smaller number of individuals.

Environmental impacts: As a conduit between distributors/manufacturers and audiences, the environmental impacts of retail stores are not likely to be hugely significant, and are likely limited to bulk packaging waste, advertising material and building energy consumption. However, retail stores can play a role in determining the types of products and packaging which are acceptable, and thus can influence emissions in other components of the sector.

DIGITAL DISTRIBUTION

Industry role: Digital distribution of music has grown significantly over the last decade. In 2013, digital music revenue (54.7%) overtook revenue from physical music product (45.3%) for the first time in Australia (ARIA, 2014). Digital distribution has three key streams – downloading, file sharing and streaming.

- ***Downloading*** involves services such as iTunes selling digital files to consumers for them to keep and play on their devices.
- ***File sharing*** services are similar – except that they occur between users and are illegal in the sense that they do not pay for the copyrights of the files that are shared and downloaded.
- ***Digital streaming*** involves companies 'streaming' music files via an internet connection.

In Australia, digital streaming revenue almost doubled in 2013 and now makes up 5.9% of the total market value, while total digital download revenue stayed steady in 2013 with an increase of 0.5%, as digital album unit sales rose 7.88%. This increase in digital revenue across downloads and streaming did not make up for a decrease of 25.5% in revenue from physical products, despite vinyl unit sales increasing by almost 77% in 2013 (ARIA, 2014).

There are several options for distributing music digitally. An artist may choose to distribute their digitally mastered home recordings from their own website, place their recording with a digital aggregator or link directly to a subscription/streaming service or a download service.

Size and scale: There are currently a large range of digital music services operating in Australia – reports note at least 15 services currently operating (ARIA, 2012), though some estimates have the number as high as 32. Digital distribution services such as Tunecore facilitate upload of recordings to multiple streaming services (up to 60) within Australia and internationally. This enables music to be distributed by individuals artists or managers as an alternative to using a record label. Tunecore also collects artist royalties.

Communications and Reach: Digital services have direct connections with huge audiences via the internet. They also tend to have relationships with artists and publishers and – to some extent – copyright organisations.

Influence: The extent to which these services can influence other organisations in the industry is unclear. However, their role as a new player in the industry presents an opportunity for a change of practice and behaviour.

Environmental impacts: There is a strong perception that the switch to digital is leading the 'greening' of the music industry, however there have been no studies in Australia as yet to support this view.

Emissions are produced through the operation of data centres and music devices such as iPods, iPhones, smart phones and computers.

Repeated streaming of individual tracks may not be a desirable long-term solution with respect to energy consumption (Bach, 2012). Repeated streaming is associated with a new impact each time a song is streamed, rather than a single impact profile associated with purchase of a download file.

Data centres are associated with an enormous global emissions profile, particularly with the growth in online data storage on virtual networks and 'clouds'. By 2020, it is expected that emissions from data centres will outstrip those of the global airline industry (Thrash, 2012).

6.3.3 PUBLICITY

PUBLICISTS

Industry role: Publicists assist artists, record labels, tour promoters and festival operators in promoting products and events. Their activities are usually centred around a particular campaign such as an album release or a live tour.

Size and scale: Given that many publicists operate across sectors (promoting not just musician but other artists, designers, producers) it is hard to get a clear picture of how many publicists are operating within the music industry.

Communications and Reach: Publicists are reportedly very good communicators, especially on social media. They are connected with a wide range of other stakeholders both within the industry and within the broader creative and commercial landscape. The bread and butter of publicists lies in making connections and developing strong networks.

Influence: Publicists are reportedly important in decision making in the industry. Publicists connect with a large number of other key stakeholders including artists, record labels, promoters and festivals, and their involvement can help boost careers. They also control and manage communication with audiences to a significant extent. There is a potential role for publicists to either encourage or discourage publicity for environmental initiatives or decisions that relate to environmental impact.

Environmental impacts: The activities of publicists have very few direct emissions.

MEDIA

Industry role: Music media plays a key role in broadcasting, communicating and promoting activities of the music sector. Radio, in particular, is a key component of music media, ensuring that music products reach audiences. TV and social media as music channels have grown massively in recent years.

Size and scale: There are several key elements to media as relates to the music industry: social media, radio, TV and print media. Key social media channels used by the music industry include YouTube (which has a growing role in distributing and sharing music videos to a broad audience), Twitter and Facebook. Radio has traditionally provided a key outlet for broadcasting both new and old music, and remains a key means by which audiences hear new releases. There are hundreds of radio stations in Australia, most of which play at least some musical content, and many of which are entirely devoted to music such as ABC Classic FM, Triple J, Dig Music and FBi Radio. Radio stations are also moving to digital and online broadcasting as well as traditional analog broadcasting. Print media remains an important source of communication for the industry, however key publications such as The Music (formerly Drum Media) are increasingly looking to establish online platforms.

Communications and Reach: Music media is a key means for the industry to communicate with its audience – it allows the industry to promote products, campaigns, events and initiatives. The music media also helps to determine what is 'cool' and newsworthy – they are vital for any successful campaign.

Influence: Music media is incredibly influential – radio stations such as Triple J are so influential that they have been criticised for heavily shaping the sound of Australian music (Clarke, 2014). The media's influence can work up and down the supply chain. In particular, the festival sector can be incredibly competitive and this can be fuelled by media coverage and promotion.

Environmental impacts: Environmental impacts relate to the equipment used to power the radio stations, as well as waste generated through the disposal of CDs. Print media generates significant waste – especially due to the manner in which street press is distributed.

6.4 LIVE MUSIC

The venue-based live music industry was worth $1.21 billion in 2009/10 financial year (Ernst & Young, 2011).

6.4.1 FESTIVALS (INCLUDING FOOD AND BEVERAGE)

Industry role: Festival promoters stage large, often multi-day, events, and bring international artists to tour Australia – usually to outdoor venues and large audiences. Australian festivals peak in the summer months. The Australian festival scene enjoyed considerable growth from the early 1990s until recent years, when festivals have begun to struggle under growing competition. 25% of Australians over 15 years of age attended at least one concert in a 12-month period (DEWHA, 2010).

The festival industry is extremely competitive – operators can influence others by upping the standards.

Size and scale: Interviews revealed that festival interests are dominated by no more than around a dozen individuals across Australia.

Communications and Reach: A large number of young Australians attend festivals every year, especially in Australia's major cities. The nationally-touring annual Soundwave festival attracts 75,000 punters in Sydney alone (Strahan, 2013). Older Australians also attend festivals and anecdotal evidence suggests this demographic tend to be relatively willing to spend on 'green measures'.

Influence: Festival operators have a reasonable amount of influence as they are responsible for an enormous number of decisions relating to the production, including lighting, stage, sound equipment, location, transport, etc.

Festival producers have influence not only over event design, but also on audience impact through provision of marketing of programs such as carbon offsetting, recycling, composting, carpooling and tree planting.

Environmental impacts: Festivals, as temporary venues, can have significant environmental impacts compared to permanent venues. Audience travel is a significant impact, as many attendees travel by car to reach festivals, often travelling long distances compared to other venues which may be close to public transportation. While equivalent figures are not available for the Australian music industry, annual audience travel to music events accounts for 43% of greenhouse gas emissions from the UK music industry (Bottrill et al, 2009).

Waste is a major impact from food and beverage suppliers, with packaging being a key contributor to waste generation. Most beverages are sold in disposable containers at festivals and large venues, resulting in enormous amounts of plastic and aluminium waste. Food is also mostly sold in single-use containers.

Festivals are increasingly reporting on their environmental impact – for example see Falls Festival (2013).

FESTIVALS AND TOURS: TECHNICAL AND TRANSPORT

Industry role: Technical and transport suppliers provide production services to tours and festivals. This includes lighting, transportation, sound systems, stage set-ups and front-of-house support.

Size and scale: Operators in production are usually small businesses or sole traders. It is very hard to get a sense of exactly how many operators are currently working in this space in Australia.

Communications and Reach: Technical, transport and crew have limited interaction with the rest of the industry, beyond the festival organisers by whom they are employed.

Influence: Production and crew have a low-level of influence within the industry. They are generally recruited as sub-contractors and carry out the needs and demands of festival and tour operators, often with tight budgets.

Environmental impacts: Production tends to travel around the country with touring festivals or artists, rather than being sourced in each location. This significantly increases environmental impact due to the transportation footprint associated with driving or flying equipment and crew around the country.

Lighting and stage production is responsible for significant consumption of energy in the live performance sphere. The energy associated with running huge sound systems is currently unavoidable.

LED lighting, which is highly energy efficient, is becoming increasingly common in venues. LED products have reached a level of high quality, however, there are many companies selling low-quality LED products. This is partly because it is a relatively new technology and many companies and consumers are unaware of the factors that determine the quality of LED products.

6.4.2 VENUES

INCLUDING FRONT OF HOUSE, CATERING, CREW AND TECHNICAL

Industry role: Venues host live music performances. Venues make most of their revenue from alcohol sales, rather than ticket sales, however they rely on ticket sales to get people through the door. Venue operators might include state or local government.

Size and scale: The venue-based live music sector contributes an enormous amount of revenue to the sector. Around 41.97 million patrons attend 328,000 live music performances at nearly 4,000 venues across Australia annually (Ernst & Young, 2011). There are hundreds of owners and operators of small-to-medium venues, and consolidated interests who own a few large venues. Some large venues have state or local government ownership or management – for example, over one hundred different venues in Sydney are owned by councils. Regional performing arts centres tend to have state government ownership or management.

Communications and Reach: Venues provide a conduit for the industry to connect with audiences. Venues are a key component of the industry in that they provide a channel for what is increasingly becoming the dominant source of artist income – live performance.

Influence: Venue owners are reasonably influential because promoters, booking agents and artists rely upon them to secure tours and gigs. However, the drivers for venues to effect change are not well established and they may be less likely to influence patrons attending events.

Environmental impacts: The size of the environmental impact is unclear, however it is identified as stemming mainly from electricity consumption (especially for lighting, sound systems and air conditioning) and waste generation (food and beverage containers) and audience transport to and from the site. Venues have an opportunity to measure and manage their impact more easily than other stakeholders in the live performance sector – they can monitor bills and clearly see the impact of various actions. They have direct control over their electricity consumption and waste generation.

Large opportunities lie in the greening of venue catering, as this is a current generator of waste, and likely relies upon unsustainable supply chains, rather than on locally sourced food and beverages.

Some venues have demonstrated interest in improving their environmental performance and have invested in retrofits and upgrades via companies such as Creative Environment Enterprises – there is a growing interest in lowering bills and improving performance. A recent redevelopment of the Sydney Theatre has been seen by the industry as a best-practice sustainability retrofit in Sydney's music scene, and may set an example to others in the industry.

Currently, innovation with regards to energy efficiency for technical components of venue operations are not meeting industry needs. Energy-efficient LED lighting is increasingly popular (and products are readily available on the market) but quality varies and cheaper options – at a similar cost to traditional lighting – are often lower quality and do not live up to expectations. Sound systems still require enormous amounts of energy.

One interview identified an issue raised in the industry regarding the likely impact of carbon pricing upon performing arts organisations. Lighting, sound and air conditioning are associated with energy consumption and are affected by increases in electricity pricing. However, many barriers to saving energy are present, including requirements such as temperature control to minimise impacts on specific instruments being used. On the other hand, printing of programs and tickets has reduced in recent years. Decisions regarding recycling often rest in the hands of the venue and are influenced by the provision of recycling services by the local jurisdiction.

There are significant opportunities to improve the impact of venues. Initiatives such as those carried out by Combat Wombat (Elefant Traks, 2014), who have toured exclusively with a biodiesel-powered generator, may provide examples to the rest of the industry about what can be achieved.

6.4.3 BOOKING AGENT/PROMOTER

Industry role: A booking agent liaises with artists, artist managers and venues to arrange live music performances. Promoters differ from booking agents in that they tend to deal exclusively with high-profile artists and large venues, and often make significant investments to fund projects such as bringing international artists to perform in Australia.

Size and scale: There are a few (around 5-6) key promoters operating in the industry, dealing with high-stakes, high-publicity projects. There are a small number of players dealing with smaller projects, but these promoters are less influential than the major promoters. The number of booking agents operating in Australia is not currently known.

Communications and Reach: Promoters are well-connected individuals who tend to be key drivers of action in the industry. Promoters are increasingly associated with recorded music interests, ticketing companies and venues through vertical integration of key interests. Booking agents are well connected with artists, venues and artist managers.

Influence: Reportedly, promoters are the key drivers of decisions and actions in the live music sector. Activities in the industry are largely dependent on the types of risks promoters are prepared to make, the investments they make and the decisions they make and endorse. Promoters tend to invest their own money – given that they control investment decisions, they tend to be quite influential.

Environmental impacts: Promoters and booking agents are likely to have small impacts as individual operators. However, the type of investment decisions promoters make have flow-on effects to different elements of the industry, especially in live performance.

6.4.4 LOCAL GOVERNMENT

Industry role: Councils across Australia play a key role in delivering live music to local communities. Many councils run local music festivals (some free) and own performing arts venues in their local government area. They are the closest level of government to communities, and as such many local governments invest significant amounts of funding, time and resources into building creative capital in their cities. Councils are the primary regulators of festivals, outdoor tours, and indoor venues. Their regulatory decisions have significant influence how these activities operate.

Size and scale: There are 562 local governments in Australia.

Communications and Reach: The number and size of local governments in Australia provides an opportunity for the local government sector to communicate to local citizens and community groups across the country via events and through venue management.

Influence: Local councils are facilitators of delivering music to members of the local community. However, there is some influence through this delivery mechanism, and through local government regulations and policies, to connect with and influence citizens that other commercial or not-for-profit entities cannot access. Local governments can also encourage citizens to use walking and cycling facilities and public transportation they provide to attend events and festivals in their local government area.

Environmental impacts: Many local councils in Australia are proactive in developing Sustainability and Climate Action Plans and several have set targets for reducing greenhouse gas emissions in their local government area. This is likely to include those owned facilities where live performance is delivered. There is opportunity to reduce impacts associated with the operation of these facilities across energy, water, waste, materials and transportation.

6.4.5 TICKETING COMPANIES

Industry role: Ticketing companies are the conduit by which audiences connect to music played at venues and festivals. These companies often play a pivotal role when it comes to an artist delivering their music live to fans.

Size and scale: Ticketing in Australia has for many years been dominated by two major companies – Ticketek and Ticketmaster. Smaller companies in Australia include Sticky Tickets, OzTix, Ticket Solutions, TicketDirect, VenueTix and GreenTix.

Communications and Reach: Ticketing companies are often vertically integrated with other organisations in the Australian music industry and therefore have large commercial operations which communicate with a variety of stakeholders. Live Nation (which owns Ticketmaster) is a US-based company that includes promotion (Live Nation Concerts), ticketing (Ticketmaster), artist management (Front Line Management) and promotion (Live Nation Network). As audiences must go through ticketing companies to attend live performances, the reach of ticketing companies is significant. Some venues have exclusive ticketing arrangements with certain companies.

Influence: Ticketing companies could have a strong influence on an audience, through the process of selling tickets, and through messaging on their websites and tickets. They are unable, however, to influence the upstream processes of artistic creative processes and recording, as they are reliant on this product for their existence.

Environmental impacts: The impact associated with ticketing is largely from the online space used to sell tickets via websites, printing and distribution of hardcopy tickets and merchandise associated with marketing and advertising. It is likely that the latter processes are outsourced to smaller suppliers who offer services at low cost. There is a trend toward digital ticketing (using mobile devices) but it is not widely used in Australia at this stage. GreenTix is an organisation which offers customers an option to offset the emissions from their travel to events through an additional charge when purchasing tickets.

6.5 OTHER

MERCHANDISING

Industry role: Merchandising companies design and manufacture branded products for artists to sell at live performances and through retail stores. Historically, artists may have derived income mostly from recording, however, merchandising is an increasingly important revenue stream for artists. Merchandise is sold at live performances, through retail stores or via online stores.

Size and scale: Merchandise has apparently grown significantly over the last five years. Reportedly, there are a few major companies involved in merchandising (such as Love Police and American Apparel) and many smaller companies. Much of the production of music merchandise sold in Australia occurs overseas where labour costs are cheaper. Producing merchandise that uses sustainable methods during manufacture and distribution (such as t-shirts with organic materials) is not common in Australia.

Communications and Reach: Merchandising is connected with artists, artist managers and audiences.

Influence: The messaging and communication delivered on merchandise can be a powerful social change tool. The types of materials, messages, images and themes that are portrayed on merchandising, may present an opportunity to communicate messages and influence audiences.

Environmental impacts: The resources required to manufacture and distribute merchandise can be significant, particularly if the product is being imported from overseas. Materials such as textiles, plastics and metals are used to create clothing, books, publicity materials, media and more which can be very resource intensive. Many high profile artists require dedicated freight (road or air) to carry merchandise on tour.

MUSIC EDUCATION

Industry role: Many Australians are exposed to music education throughout their lives – indeed, most young Australians experience music as a compulsory curriculum element in most jurisdictions.

Music education uniquely contributes to the emotional, physical, social and cognitive growth of all students (Pascoe et al., 2005).

Music education providers in Australia could be categorised as follows:

- Schools
- Tertiary institutions
- Educational organisations
- Independent teachers.

Education departments and schools deliver curricula developed by education providers and organisations. Federal and state education departments also play an important role in funding and delivering music education in Australia. There are also a large number of music teachers who operate independently of schools and institutions. At a tertiary level, universities and conservatoriums offer degrees and certificates in music education.

Size and scale: 5,175 full time equivalent students were enrolled in 98 award programs in public tertiary institutions ranging from certificates to doctorates in 2010 (Music Council of Australia, 2011).

A survey of 3000 Australians conducted by the Australia Council for the Arts found that over 90% believed the arts should be an important part of the education of every Australian (Australia Council for the Arts, 2010).

A 2003 national report on trends in school music education provision in Australia found as few as 23% of state schools provide students an effective music education, in private schools it is closer to 88% (Stevens, 2003).

However, a 2005 National Review of Music Education in Australia (Pascoe, 2005) found that successive restructuring within education systems has led to a reduction in music-dedicated services located either centrally or in districts/regions. This may have shifted due to changes in the education and arts funding landscape since that time, especially with the introduction of a new national curriculum, however this research has not discovered updated information to outline the current state of music education.

For artists, a more comprehensive education in, not only music curriculum, but also business management and marketing is required.

Communications and Reach: Music education has enormous reach with regards to artists. Most artists will start (and many will continue) their musical career with a teacher – whether through a formal education organisation, school or conservatorium, or through informal lessons conducted by sole traders.

Influence: Music education institutions tend only to have influence upon the artists they are exposed to. However, a teacher – much like a producer later in a musician's career – can have an enormous role in shaping the type of artist that a musician becomes. In this way, teachers and educators can be greatly influential.

Environmental impacts: Environmental impacts from education are likely to be limited to the emissions from operations such as running buildings and small venues. The size of these emissions is currently unclear, but assumed to be relatively small.

PEAK BODIES

See **Appendix C** for a list of peak bodies. These peak bodies are not included on the Australian music industry map as they are seen to be related to multiple stakeholders throughout the industry and thus are not easily visually represented.

Industry role: Peak bodies provide advocacy, training, networking opportunities and negotiate award conditions. Examples include Australian Independent Record Labels Association, Live Performance Australia, the Association of Artist Managers, Australian Performing Rights Association, Australian Recording Industry Association and the Australian Entertainment Industry Alliance.

Size and scale: The size and scale of industry associations varies greatly depending on context. This is largely dependent on the role they play within the industry and the type and size of the stakeholder group that they represent. The Australia Council for the Arts also plays a significant role in determining how government funding is allocated and spent in the Australian arts sectors. In 2010-11, the Australia Council invested $84.7m in music (Australia Council for the Arts, 2011). Established national bodies (such as Musica Viva) will often be allocated more funding than smaller organisations (such as performance arts groups). Government grants are administered through the Australia Council and state organisations such as Music NSW.

Communications and Reach: APRA and ARIA reportedly provide excellent formal communications channels for the industry, as many industry players are members. APRA has around 100,000 industry memberships.

Influence: Peak bodies play a pivotal role in the delivery of funding and coordination in the Australia music industry. With large membership bases and structured information and resources, industry practices have the potential to be influenced on a large scale by peak bodies. Peak bodies, for example, can connect with artist managers via the Association of Artist Managers, recording labels via the Australian Independent Record Labels Association and live performance venues via Live Performance Australia. In addition, peak bodies have the ability to influence state and federal government agencies who develop regulations relating to the industry.

Environmental impacts: The direct environmental impacts of these organisations tends to be limited to operational impacts relating to office operations and energy consumption. This is thought to be minimal.

6.6 HIGH INFLUENCE AND IMPACT STAKEHOLDERS

The following table outlines the level of direct environmental impact and level of influence of each stakeholder on the Australian Music Industry (internal and external to the industry).

Table 2: Influence and impact of stakeholders.

Stakeholder	Influence (internal)	Influence (external)	Environmental Impact (Direct)
Artist	HIGH	HIGH	MEDIUM
Audiences	HIGH	HIGH	HIGH
Artist Manager	HIGH	LOW	LOW
Media	HIGH	HIGH	MEDIUM
Festivals	HIGH	HIGH	HIGH
Record labels	HIGH	LOW	LOW
Copyright Orgs	HIGH	LOW	LOW
Booking Agent/ Promoter	HIGH	HIGH	LOW
Peak bodies	HIGH	LOW	LOW
Digital distribution	MEDIUM	HIGH	HIGH
Venues	MEDIUM	HIGH	HIGH
Local government	MEDIUM	MEDIUM	LOW

Stakeholder	Influence (internal)	Influence (external)	Environmental Impact (Direct)
Ticketing companies	MEDIUM	HIGH	LOW
Distributors	MEDIUM	LOW	MEDIUM
Music Education	MEDIUM	HIGH	LOW
Studios	MEDIUM	LOW	LOW
Publicist	MEDIUM	MEDIUM	LOW
Producers	MEDIUM	MEDIUM	LOW
Publishers	MEDIUM	LOW	LOW
Retail Stores	LOW	MEDIUM	MEDIUM
Merchandising	LOW	MEDIUM	MEDIUM
Transport	LOW	LOW	HIGH
Manufacturers	LOW	LOW	HIGH

7 BARRIERS TO CLIMATE ACTION

- ✓ **Lack of resources**
- ✓ **Lack of coordination**
- ✓ **Lack of information and guidance**
- ✓ **Problems with communication**
- ✓ **Materiality**

Lack of resources

Stakeholders within the music industry are generally constrained with regards to time, human resources and money. This results in a strong focus on activities that advance the core business of the industry – producing music product (whether live or recorded music), and limited resources available for secondary concerns such as environmental impact. Artists are particularly constrained with regards to time and money – to the extent that many are forced to take on non-music-related jobs to maintain a steady income.

Further, the seasonal nature of the Australian industry, in which a flurry of activity is experienced throughout peak festival season over summer, means that resources are stretched for six months of the year, leaving little time for consideration of matters not central to the core business of the industry.

Lack of coordination

Despite the large number of industry organisations and peak bodies (see Appendix C) that operate across the industry, there is no central coordinating body that relates to all stakeholders in the industry. Further, the industry lacks data collection systems and there are generally no clear standards or processes by which the music industry should collect information or data. Very little is documented about the activities of the industry.

There appears to be a vacuum with regards to ‘go-to’ organisations that can act as a repository for information on best practice in the industry. While some organisations provide this role for specific purposes, they tend to operate in limited jurisdictions or narrow scope.

Lack of information and guidance

There appears to be a significant lack of guidance and information about the music industry’s environmental impact or about how to take action to minimise impact. Though some event guidelines exist (such as the SEMS tool), these are primarily targeted at large events and venues, and may not be useful for the majority of small operators within the industry.

In particular, there appears to be a gap in information for artists and artist managers in helping them minimise their environmental impact throughout their career. Artists, who are primarily concerned with production of creative material, often have little understanding of whether or how they can control the environmental impacts of their activities. Further, artists managers are primarily concerned with securing income streams for the artists and managing legal concerns, and thus have limited awareness of how to guide artists in making environmentally responsible decisions.

Problems with communication

Due to the informal nature of much of the communications in this sector, finding a communication method by which to capture the attention of a broad range of stakeholders is challenging. Most communication is informal, face-to-face, and very little is documented. It is reportedly difficult to communicate with a broad range of stakeholders (excepting at large industry gatherings such as Big Sound).

Further, the language often employed in communications about environmental impact is likely to be foreign to many in the industry, and thus will not be engaging for stakeholders. There is a lack of audience-appropriate guidance material for artists and artist managers, as well as for other industry stakeholders.

Materiality

Many stakeholders in the supply chain do not see environmental management as core business (or even peripheral business). That is, it is not material to their operations and governance. Most decision points are reached without any consideration of environmental matters. The lack of regulation of environmental impacts in the Australian music industry also contributes to the focus on 'business as usual'. Internalising environmental and climate action into the business model of key stakeholders in the music industry presents a significant challenge.

8 OPPORTUNITIES FOR CLIMATE ACTION

- ✓ **Potential for artists and audiences to create change**
- ✓ **Competition and the 'cool' factor**
- ✓ **High level of environmental consciousness**
- ✓ **Use of social media channels**

Potential for artists and audiences

Throughout the research and interviews, it was affirmed that the potential of musicians and audiences to create change is enormous. 25% of Australians over 15 years attended at least one concert in a 12-month period (DEWHA, 2010), and of these many attended more than one event – meaning that the potential audience for messages of change is large. The vast majority of Australians engage with a product of the music industry on a daily basis. Music is a powerful medium and has great potential to influence and empower a broad range of demographic groups. This opportunity is seen as incredibly large and relatively untapped. In particular, older Australians were noted as being a considerable demographic group which has the potential to be greatly influenced by the music industry – baby boomers are significant consumers of music product (in revenue terms) and are a large proportion of the population. Utilising their frequent interaction with the music industry could help to facilitate change in the broader population.

Celebrity endorsements are commonly used in marketing commodities as the power of celebrity is recognised to create an enormous opportunity to influence purchasing behaviour. There remains a significant opportunity to utilise the personalities and celebrities of the music industry to encourage and facilitate change with regards to environmental impact.

Creating a groundswell of action on the climate issue through musicians and audiences will likely flow to creating action in the industry supply chain. The establishment of programs to empower artists and audiences – and create a powerful dialogue on climate action – remains a challenge, and also an opportunity. Ensuring that environmental change can be easy, time efficient and implemented at a low-cost for stakeholders such as artists, artist managers, music educators, recording company leaders and venue owners and operators is paramount.

Competition and the 'cool' factor

The music industry thrives on competition – which presents a significant opportunity with regards to implementing initiatives which seek to minimise environmental impact. Through including an element of competition within any environmental action initiative in the industry, there is the potential to capitalise upon the high degree of competitive spirit which drives much action and innovation in the industry.

This will be especially realised if environmental action can be utilised as a marketing or branding tool. This may be via a certification or rating system that industry players can use to assess and promote their environmental performance, and might provide incentives to improve their impact. This may be the first step (as has occurred with other certification schemes) to the introduction of environmental or climate action regulations in the industry.

Further, the music industry – like many sectors of the arts – is built upon generating a perception of being 'cool'. The popularity of artists, genres, listening modes and listening devices is generally driven by perceptions relating to how fashionable or cool a particular trend might be. Establishing environmental action as a 'cool' activity or one associated with 'cool' people, might help to firmly ingrain environmental action within the activities of the industry. This will also help to ensure that minimal environmental impacts are something with which young musicians will aspire to be associated.

Environmental consciousness

There is a high level of consciousness about environmental impacts from those who were interviewed for this research. An interviewee for this project suggested that an awareness of the environment and culture is 'at the very heart of the essence of being a musician'. A great opportunity exists to capitalise on this high level of awareness – which does not exist in many other sectors of the Australian economy.

There is a need to ensure that this awareness translates into action. In order for this to happen, industry stakeholders will need significant guidance and support. There is a need for guidelines, checklists, resources and information to be provided to industry stakeholders about their impact and how to reduce it. In particular, artists – who reportedly have a high level of interest in environmental issues – need to be supported to make environmentally responsible decisions and to lead change in the industry. Given that environmental action sits outside the core business of musicians as creators of cultural product, there is a need to ensure that they are provided with adequate information and resources to assist them to undertake action and facilitate widespread change in the industry.

Use of social media channels

While 'traditional' communications channels and engagement methods might be difficult to use effectively within the industry, great opportunities exist relating to the use of social media and other innovative communications methods. Artists and artist managers, as well as publicists, promoters, festival operators and the music media, are adept at using a range of social media channels to communicate within the industry and with audiences. This presents a great opportunity to utilise unconventional means for engaging and educating stakeholders about the impacts of the industry's activities upon the environment. Specifically, videos could replace fact sheets, and online tools could replace detailed guidelines as a means of communicating information to artists and other stakeholders.

9 DISCUSSION

This report has described the research process and findings of the Climate Action Scoping Study. The research has begun to identify opportunities for initiating climate action throughout the Australian music industry. Catalysing effective climate action will rely on a two-pronged approach – one which seeks to bring about change those stakeholder groups who have ***significant influence*** within the Australian music industry (i.e. internally), and those stakeholders who have ***significant environmental impact***. This research has identified stakeholders who, at this stage of research, fit these categories (see Section 6.6) and GMA should focus time and resources on these stakeholders. It is recommended that GMA conduct:

a) More detailed research, including beginning to quantify impact and

b) More engagement via GMA's networks as the research develops, and that these research and engagement efforts should focus primarily on stakeholders with key stakeholders. These key stakeholders are:

Significant Influence[2]

- Artists
- Audiences
- Artist Managers
- Media
- Festivals
- Record labels
- Copyright Organisations
- Booking Agents/ Promoters
- Peak bodies

Significant Environmental Impact

- Audiences
- Festivals
- Digital distributors
- Venues
- Manufacturers
- Transport

These industry components present particular opportunities to catalyse widespread industry change and a significant improvement in environmental impact. Understanding the particular context in which these stakeholders operate and the motivations they may have for particular behaviours will be key to stimulating change. Further, detailing and quantifying the environmental profile of these highly impactful activities will help to define the degree of impact and how to form an effective strategy for mitigating impact.

Research has found that the intrinsic values of many in the music industry – in particular, artists – are linked to awareness of the environment and a desire to protect natural resources. This presents a significant opportunity, as it means initiatives do not necessarily need to change the opinions and mindsets of stakeholders, but rather provide them with strategies and actions that they can implement to enact their environmental sympathies. Tapping in to these values and motivators is likely to be crucial to the success of any environmental action strategy.

The future efforts of Green Music Australia should focus on understanding and engaging with these key stakeholders.

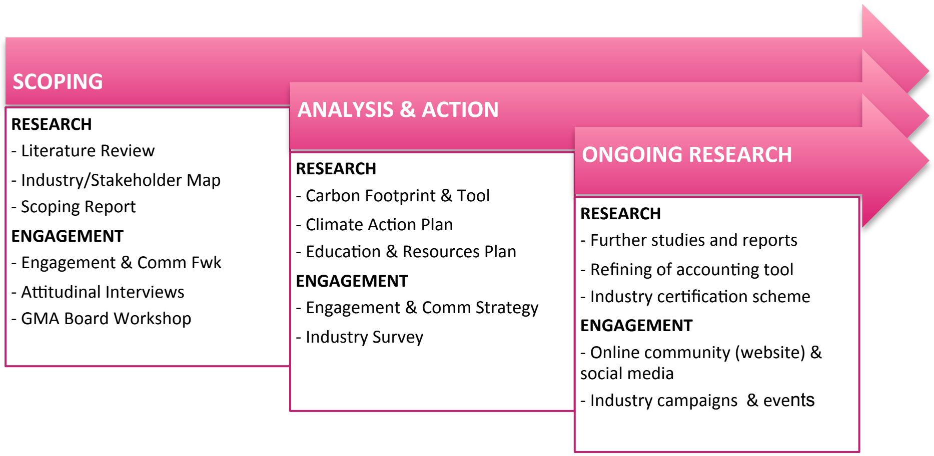
[2] Australian Music Industry Directory (The Music, 2014) releases a "Power 50" edition which profiles the most powerful people in the industry including bloggers, artists, and peak body representatives. This may be a useful resource for identifying the key individuals within stakeholder groups. One person on the 'Top 10 list', Nick O'Byrne, was interviewed for this study.

10 NEXT STEPS

10.1 FUTURE RESEARCH PRIORITIES

Future phases of research beyond this scoping study for Green Music Australia are **analysis** (including carbon footprint of the industry and pilot climate action plan), **action** (including establishment of an online community via the Green Music Australia website www.greenmusic.org.au), and **ongoing research**. Two parallel tracks of research and engagement could form the next steps of Green Music Australia's approach, as illustrated in Figure 6.

Figure 6: Future Steps for Green Music Australia, Research and Engagement



The process of identifying the key components of the music industry, in addition to creating a map to show physical and non-material flows, has created a foundation for more detailed analysis of the music industry's environmental or climate impact. Targeted research on particular aspects of music industry activity (such as recording, distribution, venues or digital services) is likely to achieve measurable outputs – as has been considered for aspects of the industry internationally. Detailed studies to develop carbon footprints for the industry components identified as having high environmental impact in Australia could begin with:

- Audiences
- Festivals
- Digital distribution
- Venues (large, medium, small)
- Manufacturing.

It should be noted, however that in other countries such as the UK with more defined regulations for the arts sector relating to environmental performance, measuring impact may be more streamlined than in Australia where very little regulation of impact exists and the majority of action is voluntary and philanthropic.

Consumer and audience research could be undertaken to understand how environmental messages delivered by artists and other industry stakeholders could influence audience and industry behaviour, and which messages would be most effective.

Analysis of the life cycle impacts of digital product compared to physical product in Australia also presents an opportunity for future research, to explore the perception that environmental impacts are lower as a result of the trend to digital.

The use of systems thinking to identify key parameters, stocks and flows and opportunities for enabling social change via movements in the Australian music system presents a significant area of research for change.

It is envisioned that, given the limited amount of literature available, stakeholder interviews will form the basis of much of the future research proposed.

10.2 A ROLE FOR GREEN MUSIC AUSTRALIA

A number of clear opportunities for Green Music Australia have emerged throughout this research. At a high level, GMA could play a role in:

- Coordinating and bringing together disparate environmental and climate actions currently underway in the Australian music industry (particularly across geographies)
- Identifying 'the problem', such as calculating and communicating the emissions of the industry.
- Educating, raising awareness and lobbying for environmental change in the Australian music industry.
- Making it easy for those in the industry who are time and resource poor to make steps towards reducing their impact with simple and straightforward actions that increase credibility and empowerment

GMA could also:

- Identify key gaps in information and educational tools and resources, in particular those that can be taken up by time-poor organisations and individuals in the industry e.g. short videos;
- Lead, facilitate and coordinate cross-sectoral approaches to climate action and create a flow of information between organisations, individuals and geographies;
- Generate baseline information on the industry's climate impact and its relation to Australia's total climate impact – this could include making the map of the Australian Music Industry an interactive online or gamified resource where each component or sector's impact (and opportunities for reducing impact) can be explored in more detail;
- Identify ways to use the music industry's audience base as leverage, in particular via the use of artists or music education, to motivate climate action;
- Identify ways to use the Australian environmental movement's key leaders and organisations (such as environmental not-for-profits or social businesses) as platforms for campaigns for greening the music industry (e.g. an artist or band in partnership with WWF or GetUp);
- Provide examples of successes and challenges of climate action through case studies;
- Create and support a social media strategy for climate action in Australia's music industry;
- Empower older generations who actively participate in the music industry to advocate for 'greener music';
- Advocate on behalf of the Australian music industry for climate action policy;
- Compile a central source of information on the environmental impact of the music industry – GMA's website may serve as the hub;
- Utilise and contribute to (as an alternative or in addition the above) the *Music in Australia Knowledge Base* (www.musicinaustralia.org.au) when conducting future research. The *Knowledge Base* is a comprehensive resource and could inform an approach to further developing a framework for evaluating the music industry's environmental impact;
- Create a space for the development of an environmental 'community of practice' for the music industry to be established that informally shares knowledge, skills and experience (this may be via GMA or *Knowledge Base* websites);
- Provide links to existing industry infrastructure such as education programs and other initiatives;
- Link environmental education and the music industry through to school students via the new curriculum;
- Provide a checklist for artists and artists managers regarding environmental action such as key actions that could be undertaken by musicians;
- Establish an environmental certification scheme for merchandising companies, artists or other companies in the industry. This could be promoted by an industry organisation such as Triple J, to give credibility and help spread reach. Introduce (like other successful schemes such as Julie's Bicycle Industry Green Tool and in Australia the Green Building Council of Australia's Green Star Tool for building

certification) the scheme as voluntary, and build support to then lobby for mandatory/regulatory requirements;

- Advocate for grant applications to require environmental eligibility criteria; and
- Pilot projects for climate action that test approaches and methods, to allow for learning and to gauge interest in such projects.

10.3 OPPORTUNITIES FOR CLIMATE POLICY INTERVENTION

In the live performance sector, most regulation focuses on environmental health rather than environmental impact. There are currently very few regulations that seek to reduce environmental impact of an established event's operations. However, recent state and local environmental planning regulations have significantly impacted the ability for new events to gain permission to use new sites. Generally, environmental regulation is not seen as a key driver for change toward climate action in the music industry, but rather a barrier to particular activities in the industry.

Following a federal election and change of government from ALP to Liberal in 2013, Australia's climate policy is currently in question and uncertainty exists with regards to which direction the Federal government will take on addressing the issue. While no literature exists, anecdotal evidence from interviews suggests that there is significant concern in the Australian music industry about the future of climate policy in Australia and the risk of policy being removed completely. Key components of the existing policies under the Clean Energy Future Package are proposed to be repealed by the Government including the Carbon Pricing Mechanism and Renewable Energy Target. Several interviewees identified that less funding is available for the arts industry under the current Government, in an already-slow economic time. This has the effect of demotivating and inhibiting new action. Current climate action that is being supported by Federal government funding (such as through the current Energy Efficiency Information Grants awarded to Live Performance Australia) continues, however the future is uncertain and future rounds of grant funding have recently ceased. This inhibits long-term planning on these projects.

While some interviewees commented on the opportunity for musicians and artists to play a role in the Federal Government's Emissions Reduction Fund and Direct Action Plan (for example, utilising musicians and artists as key ambassadors for climate mitigation), others remained unsure of the opportunity for the industry to affect the direction of climate policy. There was agreement that a campaigning and policy response from the Australian music industry was important at a federal level, however no organisation currently has the resources to embark on these initiatives.

It was noted that state and local climate action policies continue to exist and provide possible opportunities for climate action in the industry. In addition, interviewees saw the current policy environment as an opportunity to catalyse individuals, especially artists and audiences, in a 'call to arms' for climate action campaigning, initiatives and events.

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APPENDICES

A. **ABOUT GREEN MUSIC AUSTRALIA**
B. **INTERVIEWEES**
C. **PEAK BODIES**
D. **KEY POLICIES AND REGULATIONS**
E. **CLIMATE ACTION EFFORTS**

A ABOUT GREEN MUSIC AUSTRALIA

Harnessing the cultural power of musicians to lead the way to a greener world

***Green Music Australia** is an independent, non-profit organisation that will galvanise, facilitate and organise efforts by the music scene to reduce its environmental footprint, and use the practical leadership it builds to drive broad cultural change.*

Green Music Australia is grounded in the long and proud history of musicians as cultural leaders. Musicians have played defining roles in every major social change battle from abolitionism to civil rights to feminism, always leading by example, breaking down barriers and demonstrating a better way. Music and musicians lift hearts, bring communities together, lead by example and point the way to a better world.

By facilitating serious action by people across the music scene in cutting energy use and waste streams, adopting attractive solutions like LED stage lighting, onsite renewable energy, reusable bottles, compostable plates and cutlery at festivals, recycled card CD cases, sustainable transport and more, we will create a cohort of articulate, influential champions and bring benefits that will flow across our whole society.

Green Music Australia will:

- **Build a greener world:** We will work with musicians, promoters, labels, venues, festivals, manufacturers, environmental consultants and many others to cut energy use, slash waste streams, use renewable energy and sustainable transport and more;
- **Make change easy:** By organising bulk purchasing and other innovative funding options, providing sustainability accounting tools and easily replicable models, and linking people with service providers, we will make it easy for anyone in the music industry to **reduce** their environmental impact, **save** money, **measure and explain** what they have done, and **involve** their fans in their efforts;
- **Bring our audiences with us:** We will run a **national public campaign** using the music scene's leadership to stimulate broad change across the community, building support for ambitious climate action at a personal, business and policy level;
- **Coordinate:** We will provide coordination and liaison, an ideas clearinghouse and repository of information and contacts for all working towards greening the music industry.

Green Music Australia's Board members are:

- **Tim Hollo:** Musician and environmentalist, member of FourPlay String Quartet, former Communications Director for the Greens
- **Asher Christophers:** founder of Austep Music
- **Mary Jo Capps**: CEO of Musica Viva Australia
- **Mahalath Halperin**: Architect, former President of Australian Solar Energy Society
- **Patrick Kelly**: Accountant for MONA
- **Mat Morris**: Sustainability Consultant, founder Sound Emissions, Manager North Byron Parklands
- **Katie Noonan**: World-renowned singer-songwriter
- **Anna Rose**: founder of the Australian Youth Climate Coalition and author of *Madlands: A Journey to Change the Mind of a Climate Sceptic.*

B INTERVIEWEES

Table 3: List of Interviewees for Scoping & Engagement Study.

NAME	ORGANISATION	POSITION	INITIAL INTERVIEW	ATTITUDINAL INTERVIEW
Leanne de Souza	Sole Trader	Artist Manager		X
Mary Jo Capps	Musica Viva	CEO		X
Meg Williams	Association of Artist Managers	Executive Director		X
Cathy Oates	Original Matters	Artist Manager		X
Nick O'Byrne	Australian Independent Record Labels Association	General Manager		X
Asher Christophers	Austep Music	Director		X
Suzanne Daley and Lisa Erhart	Live Performance Australia	Director (SD) and Project Partner (LE)	X	
Lynne Small	PPCA	General Manager		X
Dan Zilber	FBi Radio	General Manager, Music		X
Mat Morris	North Byron Parklands	General Manager	X	
Nicholas Filsell and Ian Scobie	WOMADelaide	Production Manager (NF) and Director (IS)	X	
Euan Williamson	Creative Environment Enterprises	Director	X	
Dean Ormston	APRA	Head of Corporate Services		X
Dan Nevin	(JB HiFi Now)		(Email correspondence only)	

Table 4: Sector coverage of interviewees.

Sector	Interviewed?	Who
Artist	Yes	Tim Hollo
Artist Manager	Yes	Meg Williams, Leanne de Souza, Cathy Oates
Promoter/Booking agent	No	
Festival	Yes	Mat Morris (North Byron Parklands); Nicholas Filsell and Ian Scobie (WOMADelaide)
Technical/transport	Yes	Euan Williamson (Creative Environment Enterprises)
Ticketing	No	
Venues	Yes	Mat Morris (North Byron Parklands) and Suzanne Daley (Live Performance Australia)
Local government	No	
Music education	Yes	Mary Jo Capps (Musica Viva)
Music merchandise	No	
Record label	No	
Studios	No	
Publishing	No	
Copyright organisations	Yes	Dean Ormston (APRA) and Lynne Small (PPCA)
Distributors	No	
Retail Sales	No	
Manufacturers	Yes	Asher Christophers (Austep Music)
Digital product distribution	No	Dan Nevin (JB HiFi Now) (Email correspondence only)
Publicists	No	
Media	Yes	Dan Zilber (FBi Radio)
Audience	No	
Peak Bodies	Yes	Suzanne Daley (Live Performance Australia) and Nick O'Byrne (Australian Independent Record Labels Association)

C PEAK BODIES

Australia Council for the Arts

Live Performance Australia (LPA)

Australian Recording Industry Association (ARIA)

Australian Performing Rights Association + Australasian Mechanical Copyright Owners Society (APRA|AMCOS)

Phonographic Performance Company of Australia (PPCA)

Australian Independent Record Labels Association (AIR)

Association of Artist Managers (AAM)

Australian Music Retailers Association (AMRA)

Australian Music Industry Network (AMIN)

Western Australian Music

Q Music

Music NSW

Music NT

Music Victoria

MusicSA

Music Tasmania

MusicACT

Australian Entertainment Industry Alliance

Music Council of Australia

Australian Music Association

Contemporary Music Working Group

Australian Music Performance Committee (AMPCOM)

Commercial Radio Australia (CRA)

Australian Music Publishers' Association Ltd (AMPAL)

Musicians' Union of Australia

Media Entertainment and Arts Alliance (MEAA)

D KEY POLICIES AND REGULATIONS

A range of policies affects different sectors of the industry in a variety of ways. The recording industry is mainly affected by the Copyright Act, while the live music sector is likely to be impacted by state and local regulations relating to liquor licencing, land use, noise and environmental health. Respondents in a study by Ernst & Young reported that regulation is a major barrier to owning/operating a live music venue in Australia (Ernst & Young, 2011). 69% of respondents said regulation relating to noise, liquor licencing, OH&S, planning and other requirements is a major barrier for the industry. Key components of legislation that relate to the music industry include:

- Copyright Amendment Act 2006 – Federal;
- Recorded Music Labelling Code of Practice – Classification of products managed by ARIA and AMRA (Australian Music Retailers Association);
- Liquor licencing laws in various states and territories (relating to live music performance, venues and festivals); and
- Planning, noise and environmental health regulations (local and state governments).

E CLIMATE ACTION EFFORTS IN THE INDUSTRY

While there are a number of existing efforts for climate action in the Australian music industry, these remain fragmented and focused primarily on the live performance sector.

Live Performance Australia's **Greener Live Performances** program has embarked on a number of initiatives, primarily funded by State and Federal Government grants. The focus has been on sustainability awareness, skills improvement and environmental performance of venues with respect to waste, water and energy. The Greener Live Performances website provides a range of resources for the live performance industry on reducing environmental impact (Live Performance Australia, 2013). A pilot program of Queensland venues has enabled access to data on impacts and a recognition program is driving competitive-based action. LPA is currently embarking on a range of initiatives to encourage energy efficiency in the live performance sector.

Various music festivals in Australia have embarked on climate action. Australia's **Live Earth** event in 2007 contributed significant funding to climate action. Festivals such as Splendour in the Grass, Bluesfest, Falls Festival, Harvest Festival, Meredith Festival, Golden Plains Festival and Peats Ridge Festival have addressed climate impacts in a variety of approaches from measuring impact to flagship initiatives for energy and water efficiency (as well as renewable energy), sustainable procurement and environmental and climate education. Some festivals have long-standing environmental sustainability initiatives and policies, such as WOMADelaide. Specific segments of the music industry internationally have recognised climate impacts such as the ***DJ's Against Climate Change*** initiative which coordinates offsets for air travel for DJ's internationally (some Australian DJ's participate).

Individual initiatives driven by industry or government organisations such as **Climarte (an NGO)**, the NSW **Green Arts** Project and **Reverb Adelaide** have created consortiums of organisations and activities which coordinate approaches to reducing environmental impact.

Individual venue owners have also embarked on climate action initiatives such as energy audits, water efficiency programs and waste reduction initiatives. AEG Ogden, who manages the largest entertainment venues across Australia and globally, have embarked on a comprehensive **1EARTH program**, which measures and quantifies the impact of its Australian facilities. The program is comprehensive and publicly reported in their global annual sustainability report.

Sustainability consultancies such as Creative Environment Enterprises, GreenShoot Pacific, Sustainable Event Solutions and Sound Emissions (no longer in existence) also play a key role in providing advice and facilitating climate action projects in the Australian music industry. These organisations contribute to the development of information and education resources, tools for measurement and provide environmental and climate action recommendations to industry organisations and individuals (such as the Good Green Production Bible Guide and the Event Legacy Guide by GreenShoot Pacific). One example is ***The Germinate Project*** with Creative Environment Enterprises and RMIT that design and build a mobile solar powered audio/visual production system which is used at live performances around Australia.

From the information gathered to date, recording organisations as well as suppliers that support the music industry appear to be limited in their climate actions. However, further research and interviews may reveal more information.

The following table presents a summary of current activities for climate action in the Australian music industry that have been identified to date.

Table 5: List of music-related projects in Australia that involve action on climate change.

Organisation	Project(s)	Project description	Weblink
Live Performance Australia (with EC3 Global, GreenShoot Pacific, Dynamic Ecosolutions)	• Greener Live Performances through Energy Efficiency • Greener Live Performances Recognition Program • Greener Live Performances Sustainability Leadership Program	Greener Live Performances will deliver information specifically developed for small to medium enterprises throughout the industry supply chain nationally including: • Fact sheets • Checklists • Energy efficient venue and event design guides • Management templates • Case studies • Greenhouse gas calculator tools	www.liveperformance.com.au/default.aspx?s=greener_live_performances
NSW Office of Environment and Heritage	Green Arts Project	The Green Arts Project is a network of Australian arts professionals, organisations and venues working towards greener live performance. Formed in January 2012, the core group of companies have come together to share their knowledge and experience and to collaborate on initiatives for sustainable performance practice. GAP will build networks and work with national and international arts companies to challenge the way we experience sustainable live performance.	www.greenartsproject.org
CLIMARTE	Arts for a Safe Climate	CLIMARTE harnesses the creative power of the arts to inform, engage and inspire action on climate change by a) producing, promoting and facilitating arts events b) providing a forum for the exchange of ideas and information on sustainable arts practice at an individual and organisational level. c) creating an alliance of arts practitioners and organisations that advocate for immediate, effective and creative action on climate change.	www.climarte.org
Various	Environmental and climate action initiatives at festivals	Falls Festivals, Peats Ridge Festival, WOMAdelaide, Meredeth Festival, Golden Plains Festival, Secret Garden, Woodford Folk Festival, Big Day Out	Various
Sustainable Living Foundation	Sustainable Events Planner	Assisting event facilitators, organisers and service providers, the Sustainable Events Planner helps reduce the ecological impact of an event and increases the sustainable event practices.	www.slf.org.au/eventplanner/about
International Standards Organisation (ISO)	ISO2021: Sustainable Event Management Systems	Developed by standards bodies internationally, ISO2021 is a management system standard similar in structure to other international standards such as ISO 14001 (Environmental Management Systems) and ISO 9001 (Quality Management Systems). It provides a framework to implement a system to manage an event's sustainability issues.	
GetUp	Australians for Climate Action	Online campaign with signatures demanding action on climate change by the Australian government. Artists are included in the list of celebrity signatories.	www.australiansforaction.org.au

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