An analysis of attitudes and behavioral trends of music fans in Germany and Scotland.

Francisco Tigre Moura
Damian Leschik
Sandro Carnicelli Filho
Gayle McPherson
Emma Reid
Live FM: Fan Monitor is an applied research project, which aims to contribute to stakeholders in the music industry and academics. Its mission is to share research findings in an accessible format and shed light into relevant issues in the entertainment sector.

LivelInnovation.org is an independent academic initiative. Its mission is to develop and share research and educational content. The main areas of interest involve marketing, creativity and technology experiences, mostly applied to contexts of live experiences.
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COLLABORATORS

Germany

PROF. DR. FRANCISCO TIGRE MOURA
IU UNIVERSITY OF APPLIED SCIENCES
francisco.tigre-moura@iu.org

PROF. DR. DAMIAN LESCHIK
IU UNIVERSITY OF APPLIED SCIENCES
damian.leschik@iu.org

Scotland

DR. SANDRO CARNICELLI FILHO
UNIVERSITY OF THE WEST OF SCOTLAND
sandro.carnicelli@uws.ac.uk

PROF. DR. GAYLE MCPHERSON
UNIVERSITY OF THE WEST OF SCOTLAND
gayle.mcpherson@uws.ac.uk

DR. EMMA REID
UNIVERSITY OF THE WEST OF SCOTLAND
emma.reid@uws.ac.uk

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2021 was a year of hope and uncertainty. Hope, as many countries managed to vaccinate much of their populations against the Coronavirus and impose public health measures that helped limit the spread of the virus. As a result, the pandemic seemed to be controlled in many parts of the globe. On the other hand, a new raise of cases related to variants of the Coronavirus brought back a sense of uncertainty.

During this period of hope and uncertainty, the industry of live events and concerts restarted its engines. Small venues held events, large arenas reopened with reduced capacity and many outdoor events took place. The entertainment sector was back.

And it was during this period that the 2021 edition of the Live FM: Fan Monitor was conducted. It addressed many relevant issues to the industry: risk perceptions, ticket purchase behaviors, role of artists in raising awareness to timely topics and much more. We hope the results will shed light on timely discussions.

Moreover, the pandemic also accelerated processes of societal change. Consequently, attitudes and behaviors of fans are also expected to change at a more rapid pace. So research monitors are more important than ever before.

Finally, and hopefully, 2022 will be a year of opportunities and challenges. Restrictions are expected to be lifted in many countries and life is expected to enter the long awaited “new normal”. Accurately addressing the new needs and expectations of fans will be a challenge. But the immense demand will represent an extraordinary opportunity.

So hope you enjoy the report and see you next year, in the new edition of the Live FM: Fan Monitor.

Francisco Tigre Moura
The 2021 edition of the Live FM: Fan Monitor revealed important findings in regards to the perceptions of music fans in Germany and Scotland.

**Technology & innovation.** First, music fans regard their personal privacy as very important and are rather reluctant to the idea that facial recognition technologies may make venues and live experiences safer. The use of artificial intelligence in music was perceived as positive, but only by respondents with a high familiarity with the topic. Virtual reality remains being perceived as a cutting-edge technology, although the ownership of VR devices and the interest in consuming VR related products in music remains low.

**Environment and society.** Sustainability and climate change are perceived as extremely important topics. Fans are not bothered by the engagement of their favorite artists in environmental issues, and they believe the music industry should do much more to enhance the awareness to the topic.

The mix of politics and music remains a sensitive topic. Very few fans follow artists with opposing political view to theirs, and are unsure whether artists should be politically engaged online.

**Attendance and ticket purchase.** Overall, respondents in Scotland were more active in attending concerts in 2021 than respondents in Germany. Respondents in Scotland felt also safer in attending concerts in different venue sizes and formats (indoor and outdoor). Overall, fans in Germany revealed a higher risk perception and were less willing to purchase tickets for 2022.

**Marketing and consumption.** Overall respondents in both countries indicated that they believe music streaming services do not pay a fair amount to musicians. They also revealed a high willingness to switch, given that a new streaming service provider would deliver a fairer pay to musicians.
LIMITATIONS

The data here presented was collected online and offline in Germany and Scotland between the months of September and December 2021. The measurements were defined through a discussion among scholars and industry stakeholders. The population of the study was defined as active music concert goers, based on their frequency of attendance on the year of 2019 and self-evaluation of involvement towards music.

For the data collection, non-probability sampling techniques were applied. In specific, convenience, snowball and voluntary response sampling methods. The survey was distributed directly and indirectly on university mailing-lists, shared on social media platforms of the institutions and of the researchers, to industry stakeholders and on LiveInnovation.org. Moreover, in Scotland, data was also collected during three days of the TRNSMT festival. In Germany, services from Talk Online Panel were used for voluntary response sampling.

The project was also funded by IU University of Applied Sciences, through the "IU Kompass". Gift vouchers were raffled to motivate participation. A total of 1,890 respondents answered the survey. After data screening, a final valid sample of 1,573 respondents was used for the analysis (Germany= 1,173; Scotland=400). All analysis were conducted on SPSS V25 and tests of frequencies, cross-tabulation, Chi-Square, correlation and independent Samples t-Test were done.

LIMITATIONS

The application of non-probability sampling techniques represent a limitations of the study. Thus, findings are not representative of the respective populations, and thus, results cannot be generalized.

Moreover, the data was collected during a period (year of 2021) of constant attitude change and general uncertainty, given the developments of the pandemic in each country. The measures taken by each respective governments, at the time of the data collection, to address the pandemic may have also impacted the perceptions of respondents.
SAMPLE

Germany

Scotland

1,173
valid respondents

Female 57.1%
Male 42.6%
Diverse 0.3%

400
valid respondents

Female 70.5%
Male 29.5%
Diverse 0.3%

AGE

LEVEL OF EDUCATION

LIVEINNOVATION.ORG
In the 2021 edition of the Fan Monitor, we decided to focus on three important topics related to technology and innovation:

- **Facial Recognition Technologies (FRT).** Facial recognition technologies have enabled not only the identification of humans based on facial traits, but also the understanding of emotions and even personality traits. In the context of live entertainment, it is often communicated as an important tool to enhance safety. But would fans enjoy the experience knowing that they can be easily identified? How much does their personal privacy matter to them? And would they actually feel safer?

- **Artificial intelligence (AI).** One of the many applications of AI in music is for the composition process of songs. Algorithms can identify patterns within musical structures, and thus, create autonomously or in collaboration with humans, completely new songs. But does the use of AI make artists more creative? How familiar are fans with AI? Would it disappoint them to know their favorite artists is using AI to compose songs?

- **Virtual reality (VR).** Virtual reality has long enabled humans to experience fully immersive virtual experiences. In the case of the music industry, it could potentially represent an extraordinary new revenue stream. But how many people actually even have VR glasses? Do fans even consider VR a cutting-edge technology? Would they be actually interested in consuming music related products in VR?
General perceptions on facial recognition

Insight
Further analysis revealed statistical difference only in regards to the relevance of privacy for respondents. In this case, respondents in Germany suggested a greater importance to privacy.

32.1% of respondents in Germany believe that concerts and festivals will be safer if venues use facial recognition technologies.

38.6% of respondents in Scotland believe that concerts and festivals will be safer if venues use facial recognition technologies.

Fans will enjoy live experiences less if facial recognition technologies are used in concert venues.
Interestingly...

- Importance of personal privacy was **negatively correlated** \((r= -0.109, p=0.000)\) with the impression that concerts would be safer if FRT is used.

- Importance of personal privacy was **positively correlated** \((r= 0.168, p=0.000)\) with the impression that fans will enjoy less the live experiences if FRT is used.

- The perception that concerts and festivals will be safer if FRT is used was **negatively correlated** \((r= 0.168, p=0.000)\) with the impression that fans will enjoy less the live experiences if FRT is used.

### General perceptions on artificial intelligence

Scale ranging from 1-Fully disagree to 5-Fully agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>Germany</th>
<th>Scotland</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am familiar with Artificial Intelligence (AI).</td>
<td>3.14</td>
<td>3.56</td>
</tr>
<tr>
<td>Artists that use AI to compose music are creative.</td>
<td>2.95</td>
<td>3.15</td>
</tr>
<tr>
<td>It is OK for my favorite artist(s) to use AI to compose music.</td>
<td>3.20</td>
<td>2.99</td>
</tr>
<tr>
<td>I feel excited about the use of AI in the music industry.</td>
<td>3.24</td>
<td>2.96</td>
</tr>
</tbody>
</table>

**Insight**

Further analysis revealed statistical difference only in regards to with familiarity with AI and the belief that musicians using AI to compose music are creative.
It is OK for my favorite artist(s) to use AI to compose music.

![Pie chart showing percentage of respondents]

**Interestingly...**

- Familiarity with AI is **positive correlated** with considering artists creative for composing with AI ($r = .247, p = .000$), thinking it is OK for your favorite artists to use AI ($r = .255, p = .000$) and to feel excited about the use of AI in the music industry ($r = .230, p = .000$).

- Believing that the use of AI is a form of creativity is highly **positively correlated** with thinking it is OK for your favorite artists to use AI ($r = .743, p = .000$) and to feel excited about the use of AI in the music industry ($r = .684, p = .000$).

**Who owns virtual reality glasses?**

- 7.4% of respondents in Germany own a VR headset.
- 15.4% of respondents in Scotland own a VR headset.
General perceptions on virtual reality.

Scale ranging from 1-Fully disagree to 5-Fully agree

Insight

Further analysis revealed statistical differences between both countries on all three items.

In general, respondents in Germany seemed less interested in consuming music related content.

I am interested in watching live concerts in VR.

Interestingly...

- Believing VR is a cutting-edge technology is positive correlated with being interested in consuming music related content in VR ($r = .486, p = .000$) and being interested in watching live concerts in VR ($r = .380, p = .000$).
Facial recognition technologies (FRT). Personal privacy remains a very important issue for respondents in both countries and it is highly correlated with the perception towards facial recognition technologies. There is an uncertainty of whether facial recognition technologies can provide safer environments and negatively affect the live experience. This is mostly due to the level of awareness towards the technology and its possible applications. Thus, its implementation must be taken carefully, with clear communication to fans.

Artificial intelligence (AI). Overall, respondents in Scotland seemed more accepting of the use if AI, although the general excitement towards its use in music is not high. The acceptance of AI as a tool for creativity and co-creation with humans is positively correlated with the familiarity with the technology. Thus, educating fans for the possibilities of artificial co-creation with humans is imperative for a higher acceptance.

Virtual reality (VR). Despite being perceived as a cutting-edge technology by participants in both countries, the ownership of VR devices remains extremely low. Equally low is the interest in watching live concerts in VR. Much further research is needed in order to identify strategies for enhancing the acceptance and adoption of VR in the music industry.
In the 2021 edition of the Fan Monitor, we decided to focus on three important topics related to environment and society:

- **Sustainability.** The world is facing unprecedented environmental challenges. Sustainable production and consumption are pivotal steps in contributing to a healthy environment. But do fans even consider sustainability to be an important topic? How do they evaluate their own behaviors during live events? Do they think, for example, that the music industry should do more to promote sustainable behaviors?

- **Climate change.** The global temperature raise is leading to continuous catastrophic natural disasters. Given the magnitude of this issue, all sectors and industries must act. But how much do fans consider climate change to be a threat to humanity? Do fans feel bothered if artists promote content related to climate change? And what is their view on how much the music industry has done to raise awareness towards this topic?

- **Politics.** Recent years have been marked by extreme political polarization, in large, due the use of algorithms online for content recommendation. So do fans follow artists that have political views that are different to theirs? Do they enjoy when their favorite artists are politically engaged online? And do they believe it is damaging for artists to share their political views online?
General perceptions on sustainability

Insight
Interestingly, no statistical difference was found when contrasting the importance of sustainability for respondents and the self evaluation of their behaviors.

Insight
Scale ranging from 1-Fully disagree to 5-Fully agree

<table>
<thead>
<tr>
<th>Perception</th>
<th>Germany</th>
<th>Scotland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability is an important topic for me.</td>
<td>71.3%</td>
<td>76.6%</td>
</tr>
<tr>
<td>Normally, my consumption behaviors during concerts and music festivals are sustainable (e.g. bring own water, use only glass).</td>
<td>76.6%</td>
<td>79.4%</td>
</tr>
<tr>
<td>The music industry should do more to promote sustainable behaviors among music fans.</td>
<td>82.7%</td>
<td>82.7%</td>
</tr>
</tbody>
</table>

of respondents in Germany consider sustainability to be an important topic for them.

of respondents in Germany believe the music industry should more to promote sustainable behaviors among music fans.

of respondents in Scotland consider sustainability to be an important topic for them.

of respondents in Scotland believe the music industry should more to promote sustainable behaviors among music fans.

Age distribution of who believe that "the music industry should do more to promote sustainable behaviors".

Insight
Results from this item strongly reinforce, once again, the need for the music industry and live events to do more to induce sustainable behaviors of fans.

It represents a clear trend and need across all age groups.
Normally, my consumption behaviors during concerts and music festivals are sustainable.

Interestingly...

- Believing sustainability is important is **positive correlated** with considering one's own behaviors as sustainable during concerts ($r = .400, p = .000$) and believing that the music industry should do more to promote sustainable behaviors ($r = .618, p = .000$).
- Judging one's own behaviors as sustainable during concerts is **positive correlated** ($r = .386, p = .000$) with believing that the music industry should do more to promote sustainable behaviors.

General perceptions on climate change and music

**Insight**

Significant statistical differences were only found in regards to the second item.

Nevertheless, respondents in both countries seem rather unbothered if their favorite artists promote content on climate change.
It annoys me when my favorite artist(s) promotes content related to climate change online.

Interestingly...

- Believing climate change is a serious threat is **negatively correlated** with being annoyed by one’s favorite artist posting about the topic on social media ($r=-.419, p=.000$).

- Believing climate change is a serious threat is **positively correlated** with believing that the music industry should do more to raise awareness to the topic ($r=.658, p=.000$).
General perceptions on politics and music

Scale ranging from 1-Fully disagree to 5-Fully agree

Insight
Significant statistical differences were only found in regards to the last two items.

Interestingly, in both countries, fans do not seem to follow artists with opposing political views to theirs.

Some of my favorite artists have a different political view to mine.

<table>
<thead>
<tr>
<th>Germany</th>
<th>Scotland</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.6%</td>
<td>18.7%</td>
</tr>
</tbody>
</table>

of respondents in Germany admire artists with an opposing political view to theirs.

of respondents in Scotland admire artists with an opposing political view to theirs.

Interestingly...

- Admiring artists with a different political view than yours is positively correlated with believing it is damaging for one's artistic career to promote political content online ($r = .248$, $p = .000$).

- Admiring artists with a different political view than yours is negatively correlated with enjoying when your favorite artists is politically engaged online ($r = .248$, $p = .000$).
• **Sustainability.** The overall impression by respondents in both countries is clear: sustainability is a key topic and they believe the industry should do more to raise awareness. This is also found when contrasting different age and gender groups. Respondents were also critical towards their own behaviors during concerts. This reinforces the need for the industry to find innovative ways of creating novel experiences, which can both inform and inspire towards sustainability issues.

• **Climate change.** As expected, fans in both countries find it an extremely relevant topic. They do not feel disturbed if their favorite artist promotes such content online and they believe the industry should do more to raise awareness. Similar, and related to sustainability, such findings will hopefully enhance the notion that the entertainment sector can, and should, engage and educate fans more while delivering transformative experiences.

• **Politics.** The mix of politics and music remain a sensitive topic. Very few fans follow artists with different positioning to theirs and this is negatively correlated to the online political engagement of artists. Given the divisive nature of the topic, fulled by algorithms and recommender systems online, the influence of political polarization on the acceptance of artists is expected to continue playing a pivotal role.
ATTENDANCE & TICKET PURCHASE.

Rationale of Questions.

In the 2021 edition of the Fan Monitor, we decided to focus on three important topics related to attendance and ticket purchase:

- **Concert attendance.** 2021 was a year where the music industry re-opened its doors to live events. Vaccinated fans were allowed to attend events, and concerts with various sizes took place. But how much did fans actually attend? Were they mostly indoor or outdoor concerts? How safe did they feel in attending events with different sizes?

- **Ticket purchase for 2022.** 2022 is expected to be the year when, hopefully, live events will gather momentum and reignite the entertainment industry. Artists in different stages in their careers, and festivals, have all announced dates and tickets are available for purchase. Having purchased them represents an important behavioral intention, which provides indication of what to expect. So how much have fans bought tickets for 2022? And how safe do they feel in doing so?

- **Risk perception.** Given the nature of the global pandemic, risk perception is a factor which must be permanently monitored. It does not allows us to predict future behavior, but is another factor that provides an important indication of possible future behavior.
Concert attendance in 2021

- **Germany**
  - Attended indoor concerts in 2021: 10.4%
  - Attended outdoor concerts in 2021: 14.6%

- **Scotland**
  - Attended indoor concerts in 2021: 20.1%
  - Attended outdoor concerts in 2021: 49.2%

Currently, how safe do you feel to attend...

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Germany</th>
<th>Scotland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small indoor concert (max. 500 people)</td>
<td>2.85</td>
<td>3.77</td>
</tr>
<tr>
<td>Medium indoor concert (500-5,000 people)</td>
<td>2.34</td>
<td>3.52</td>
</tr>
<tr>
<td>Large indoor concert (over 5,000 people)</td>
<td>2.02</td>
<td>3.27</td>
</tr>
<tr>
<td>Outdoor concerts</td>
<td>4.26</td>
<td>4.06</td>
</tr>
</tbody>
</table>

**Insight**

Further statistical analysis comparing both countries revealed significant differences on all four scenarios. This suggests that music fans in Germany are less likely to attend music concerts than in Scotland.

Ticket purchase for 2022

- **Germany**: 22.2% of respondents had bought tickets for music concerts in 2022.
- **Scotland**: 48.2% of respondents had bought tickets for music concerts in 2022.
Health concerns in concerts in 2022

In 2022, I trust promoters will create safe environments where fans will not fear COVID-19 contamination.

In 2022, I will only attend music concerts if strict health measures are implemented to prevent contamination (e.g. social distancing, hand sanitizer, masks).

Insight

Further statistical analysis comparing both countries revealed significant differences on both questions. This reaffirms the facts that fans in Germany seem more cautious towards attending concerts in 2022.

How risky do you feel it is to purchase tickets for music concerts in 2022?

Ticket holders for 2022: 2.59
Non-ticket holders for 2022: 3.51
Ticket holders for 2022: 2.33
Non-ticket holders for 2022: 2.59
In 2022, I trust promoters will create safe environments where fans will not fear COVID-19 contamination.

In 2022, I will only attend music concerts if strict health measures are implemented to prevent contamination (e.g. social distancing, hand sanitizer, masks).
**KEY INSIGHTS.**

**03 ATTENDANCE & TICKET PURCHASE.**

- **Concert attendance.** In general, behaviors and perceptions towards concert attendance in 2021 were much more positive in Scotland than in Germany. Fans attended more concerts and felt safer. Although large indoor concerts remain with low acceptance, small and medium sizes indoor concerts (and especially outdoor concerts) are perceived as rather safe.

- **Risk perception.** As expected, due to the low concert attendance in 2021, respondents in Germany felt more concerned towards attending concerts, purchasing tickets for the following year and trusting that satisfactory measures will be implemented by event organizers. Respondents in Scotland felt much safer.

- **Ticket purchase for 2022.** Again, respondents in Scotland demonstrated a much more active behavior and almost half of respondents had purchased tickets for 2022. This is truly encouraging for the industry. As for Germany, the industry must act in order to communicate and provide safe experiences. Communication will be key to reducing the perceived concerns and enhance behavioral intentions. Nevertheless, findings on risk perception are also a reflection of how each country dealt with the pandemic and the state of it at the time of response (September-December 2021). Thus, findings must be interpreted with care.
Streaming services. Music streaming service providers have revolutionized the music industry. It has democratized the sharing of music and provided great value for money for fans. On the other hand, much criticism is made regarding its financial model and financial return for musicians. So how do fans feel about it? Do they believe musicians are paid fairly by music streaming service providers? Would they be willing to switch to streaming services that provided a fairer pay to musicians?

Vinyl products. Retro products, such as vinyl records and players, enable a consumption experience rich with an emotional connection between consumers and a moment in their past. Moreover, vinyl records have brought back the tangibility aspect of music, lost in the digital era. But who is actually purchasing vinyl? How is the adoption in each country? And do consumers perceive value for money for it?
Perception of streaming services

Insight
Further statistical analysis comparing both countries revealed no significant differences in regards to the fairness pay to musicians. This suggests that music fans in both countries believe that streaming providers do not pay a fair amount to musicians.

![Graph showing perceptions of streaming services in Germany and Scotland]

- 25.8% of respondents in Germany are familiar with how music streaming services pay musicians.
- 10.9% of respondents in Germany believe streaming services pay musicians a fair amount.
- 34.6% of respondents in Scotland are familiar with how music streaming services pay musicians.
- 15.4% of respondents in Scotland believe streaming services pay musicians a fair amount.

Brand switching of streaming services

- 35.8% of respondents in Germany would be willing to switch to a music streaming service that pays musicians more money.
- 48.6% of respondents in Scotland would be willing to switch to a music streaming service that pays musicians more money.
**Streaming Services & Vinyl Products.**

**Interestingly...**

- Familiarity with how music streaming services pay musicians is **positively correlated** with the willingness to switch to a service which provides a fairer pay to musicians ($r = .262$, $p = .000$).

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Which music streaming service are you currently subscribed to and paying for?

- **52.7%** of respondents in **Germany** use **Spotify**, as their main music streaming service.

- **67.5%** of respondents in **Scotland** use **Spotify**, as their main music streaming service.

- **12.0%** of respondents in **Germany** use **Amazon Music** as their main music streaming service. It represents the second largest share among respondents.

- **13.3%** of respondents in **Scotland** use **Apple Music** as their main music streaming service. It represents the second largest share among respondents.
Who owns vinyl?

- **Scotland**: 28.9% of respondents own a vinyl player.
  - Male: 45.4%
  - Female: 54.6%

- **Germany**: 34.8% of respondents own a vinyl player.
  - Male: 31.8%
  - Female: 68.2%

**I am interested in purchasing vinyl records of my favorite artist(s).**

- **Scotland**: 41.4% of respondents are interested in purchasing vinyl records from their favorite artist.
- **Germany**: 29.1% of respondents are interested in purchasing vinyl records from their favorite artist.

**Vinyl records provide a good value for money.**

- **Scotland**: 34.6% of respondents believe vinyl records provide a good value for money.
- **Germany**: 27.1% of respondents believe vinyl records provide a good value for money.
• **Streaming services.** Fans reported a rather low familiarity with how much musicians are paid. Nevertheless, the general impression is that the financial return to musicians is not enough. Moreover, that they would be willing to switch to a music streaming service provider that delivers a fairer financial return to artists. For example, this was the impression of almost half of the all respondents in Scotland, and reinforces the need for further discussions on payment models for music streaming services to musicians.

• **Vinyl products.** Nearly one third of respondents in both countries were vinyl player owners. Interestingly, females represented the majority of owners in both countries. Overall, respondents in Scotland indicated a higher interest in purchasing vinyl records from their favorite artists and perceived greater value for money than respondents in Germany (although the perception in neither of the countries was rather high).
Contact

For a copy of this report or more information regarding the project, please contact Prof. Dr. Francisco Tigre Moura at francisco.tigre-moura@iu.org or go to the Live FM: Fan Monitor page at LiveInnovation.org/fanmonitor.

Reference


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WOULD YOU LIKE TO COLLABORATE ON THE 2022 EDITION OF THE FAN MONITOR?

Contact.

PROF. DR. FRANCISCO TIGRE MOURA
IU UNIVERSITY OF APPLIED SCIENCES
francisco.tigre-moura@iu.org

The Melody of Statistics (SPSS Edition) is an e-guide, which introduces statistics and help students conduct a series of tests in IBM SPSS.

Sounds Like A Thesis! is an e-book to help students write their thesis by providing valuable tips for all chapters and the thesis presentation.
Research to collaborate.
Educate to inspire.