Ticketing platforms and big data strategies:
data analysis in the live entertainment industry in France

Introduction

The informatization of ticketing systems in the field of performing arts in France has led to the emergence of an entire industry dedicated to the marketing of events and to gaining knowledge about audiences. Nowadays, ticketing platforms and services are increasingly being associated with capturing and enhancing audience data. Unlike an actual ticket office, which provides only limited information on audiences, informatized ticketing solutions make it possible to collect a wider range of data – in particular about a person's identity, consumption habits, and browsing habits. This dramatic increase in data production and data collection reflects a situation where the use of big data strategies has provided new perspectives in marketing communication, optimization of customer relationship, and sales growth in the entertainment industry (e.g. venues, theaters, sites, etc.).

As a first approach, we may consider that the term "data" is used to refer to any information (or the representation of such information), in combination with it being stored on a computer (Autorité de la concurrence, Bundeskartellamt, 2016). The massive production of data generated by the development of information technologies is often characterized by the three "V's" identified by Meta in 2001 – pointing out the great volume and variety of such data, as well as the velocity at which it is produced (Laney, 2001). Value and veracity are two other criteria which may now be added to these characteristics, drawing our attention to the inherent quality of available data. Even though there is no established definition for "big data" – whose features remain vague, and often depend on how companies which specialize in that question define these words (Delort, 2015; Simon, 2015) – this concept, however, offers the advantage of "[describing] the recent developments which have taken place in digital technologies over the past two decades" (Autorité de la concurrence, Bundeskartellamt, 2016, p. 5). Its main merit is to show that the services and business models developed in the digital economy often imply that this data is acquired in massive volumes, and then processed and used for various purposes.

If we apply this questioning to the field of the performing arts in relation with the informatization of ticketing services, we engage in a reflection upon the strategic dimensions of big data. How do platform operators collect and monetize the data generated by ticketing services? In what way may the appropriation of audience data generate value and market power? To what strategies and power relations can the development of big data within this industry lead? How efficient is the entertainment industry in collecting this data and implementing the technologies required for using such data?

This paper aims at shedding light on the strategies designed to use ticketing data in the field of performing arts in France: it relies mainly on a set of ten individual and semi-structured interviews conducted with a group of platform managers and digital solution professionals. The table below presents the main features of their services. Selecting a limited group of professionals has allowed us to perform a manual analysis of the contents; moreover, as these

professionals cover a large spectrum of the ticketing activity, we have been able take into account a variety of situations. The information collected through this process and structured around the strategic, economic, and technological issues of ticketing systems will be used to highlight the competitional dynamics within the performing arts industry and to reveal the different approaches in terms of data that may be adopted by the players involved in these activities.

Table 1. List of interviewed players

	Date of creation	Services provided
Artishoc	2001	Direct ticket distribution and audience management
Delight	2015	Collection, processing, and analysis of audience data
Digitick (branch of Vivendi)	2004	Direct and indirect ticket distribution and audience management
Placeminute	2010	Direct and indirect ticket distribution and audience management
SecuTix (branch of ELCA)	2002	Direct ticket distribution and audience management
Sirius	1995	Direct ticket distribution and audience management
Supersoniks	2000	Direct ticket distribution and audience management
Tatouvu Starter Plus	1991	Subscription for reservations for live events
Tech4Team	2013	Audience analysis and dynamic pricing based on yield management
Weezevent	2008	Direct ticket distribution and audience management

1. The ticketing market, between direct and indirect distribution

In France, the ticketing market has undergone important mutations since the end of the 1980s (Aubin, 2015). At the time, companies specializing in the production of software for professionals started to equip the businesses with on-site and in-house ticketing management solutions. Distribution networks appeared in the 1990s with the creation of France Billet and Ticketnet: they were in charge of managing a stock of tickets issued by live entertainment companies, and these tickets where then sold through their outlets. With the development of e-commerce, the ticketing system was using a new sales channel, but spectators buying e-tickets still had to exchange them for actual tickets before they could enter the venue. In 2007, the regulatory framework evolved: a decree authorized the issuance and use of dematerialized tickets, which encouraged the development of the market, the multiplication of operators, and the emergence of new value propositions. Far from being limited to ticket management and other logistical aspects, ticketing is now part of a wider approach and has now been integrated into audience data, with a marketing communication perspective.

Nowadays, live entertainment companies may use one of two marketing models when it comes to informatized ticketing – depending on whether this activity is managed in-house or outsourced. In the direct distribution model, the company itself is in charge of selling the tickets, using technical solutions for on-site or online sales (Rodrigue, Sirius, SecuTix, Weezevent, IREC, Supersoniks, Tick&Live, etc.). In 2016, 93 % of French theaters were equipped with a ticketing software program –77 % of which also used an e-ticketing system. This is a sign that this model has become prevalent in these organizations' marketing practices (Denizot and Petr, 2016, p. 21). On the other hand, entertainment organizations may opt for an indirect distribution system via networks such as France Billet (Fnac), TicketMaster (Live Nation), or Digitick (Vivendi). These three operators capture most of the French market, but other, smaller companies have also positioned themselves by catering for niche markets. Such is the case, for instance, for BilletReduc or Ticketac, which have specialized in tickets at a reduced price, or Theatre Online, which focuses on theater events. Most of the time, entertainment organizations choose a double system of distribution (direct and indirect) and a diversity of platforms so as to multiply ticketing channels and maximize their visibility (Competition Authority, 2014).

Figure 1. Ticketing distribution models
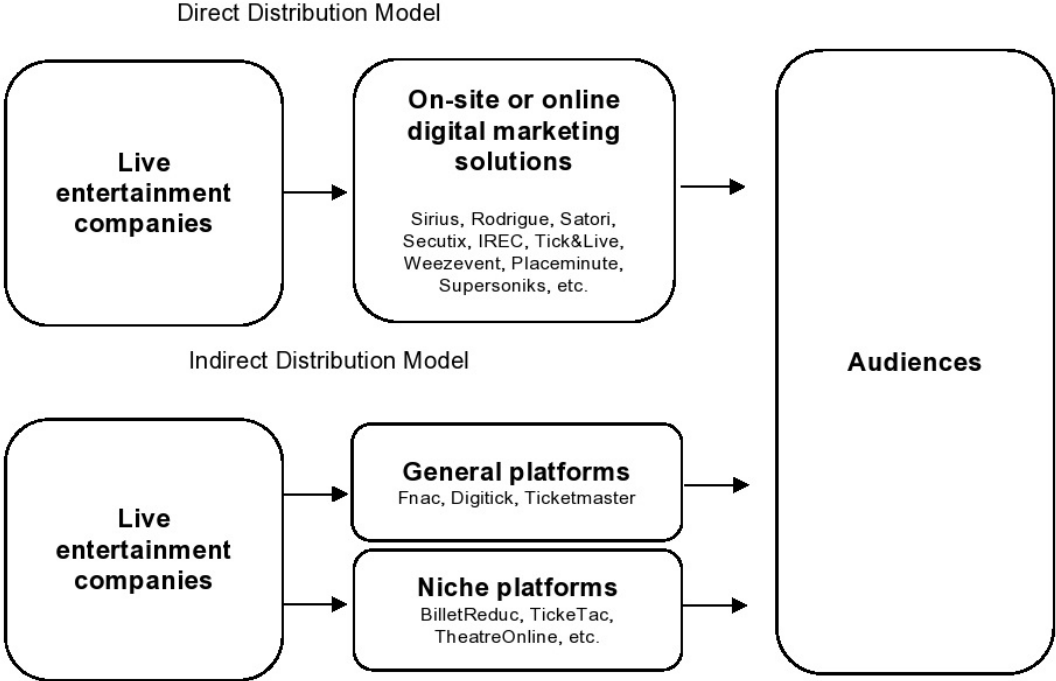
2. Types of data and collection models

In their activities, ticketing platforms and services massively collect various categories of data on audiences. This data consists of personal information used to identify and characterize Internet users: information related to their identity and how to contact them, to their payment methods, socio-demographic characteristics, preferences and interests, as well as online surfing habits. Operators may also compute audience

measurement data, i.e. aggregate statistical information on the popularity and use of the websites.

The collection of this data is based on various sources and collection methods. First the data is directly collected from the spectators, who complete forms and provide information – especially when registering, booking, contacting customer services, participating in online games or publishing comments. A second source of data is generated by certain websites and their associated smartphone applications, via follow-up tools such as cookies and web beacons, which automatically collect information when users connect to the site. Social networks may also provide data when social modules are connected to the ticketing services. The Facebook Connect function, for instance, which allows someone to connect to an e-ticketing service using their Facebook account, is an opportunity to collect data about the user through the social network. Finally, the databases that have been generated may also be enriched, completed, or complemented with other databases from public or private sources.

Let's say we're collecting data from a ticketing software program: we synchronize this data, and we see that the gender data for all the individuals is missing. What we do is use the INSEE (*National Institute for Statistics and Economic Research)* database, which tells us that if your name is Matthieu, there are 99,9 % chances that you're a man, and if your name is Clara, then you're likely to be a woman. Every genderless Matthieu will be counted as man, every genderless Clara will be counted as a woman. […] We do that for gender – same thing with age, same with their socio-professional category based on their postcode. (Tech4Team).

In accordance with French laws and regulations, Internet users may – in some instances – choose how their information will be used, in particular in the case of advertising, which require their prior authorization as part of an opt-in procedure.[1] Internet users also have the right to access and change their personal data, and to block their use by another party.

Collected data may be sent on to other recipients – for example, to the live entertainment companies which organized the events in the first place; other companies or branches belonging to the same group; commercial partners to which this data is sent for advertising or marketing purposes; or service providers taking part in the management of the customer relationship, especially when it comes to placing, processing, and paying an order. Additionally, operators may disclose data when they are legally obliged to do so or if it is required to protect their activities or enforce existing rights (complying with general sale conditions, disputing settlement procedures, etc.). The conservation and dissemination of data is a process which equally meets requirements in terms of event organization and event management as it does to commercial goals and legal matters. In the direct distribution model, data remains the property of live entertainment companies equipped with software and ticketing solutions, whereas in the indirect distribution model data belongs to the platforms, which use it for their own benefit.

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[1] E-mail commercial solicitations allow an exception regarding existing customers: preliminary agreement is not required when the solicited person is already a customer of the company and when the solicitation involves products or services similar to those already provided by the company.

Table 2. Data collected by ticketing services

Data sources	Collection method
Audiences	- Forms used for registering, placing an order, contacting, rating, or participating in a game - Publication of ratings and comments - Information provided in e-mails or telephone conversations
Platforms and applications	- Monitoring tools such as cookies and web beacons
Social networks	- Social modules
Other companies or sources	- Data produced by cross-checking or enriching existing public databases (electoral register, INSEE, etc.) or private databases provided by other companies or organizations
Types of data	
Individual data	
Identification and contact data	- Name, password, mailing address, IP address, e-mail, phone number, country of residence, etc.
Socio-demographic data	- Date of birth, age, sex, etc.
Payment data	- Credit card number
Preferences data	- Browsing history, shopping history, and live show ratings
Behavioral data	- Information on how the platform is used (browser, webpages, activities, user's previous website, user's next website, etc.) - Information on how the application is used (GPS localization, type of device used, frequency of using the application, etc.) - Information on how the user responds to e-mails (opening the e-mail, clicking on the links, etc.)
Aggregate data	
Audience measurement data	- Number of pages visited, website's traffic, visitors' activities on the website, frequency of visits, etc.

3. Use of data by indirect distribution platforms

For a live entertainment company, the advantage of resorting to the indirect distribution model is that it provides access to technologies making it possible to sell tickets more easily – and more importantly, platforms allow for larger dissemination and larger audiences. These perspectives in terms of visibility are complemented by a network of affiliated websites (blogs, webzines, media, etc.) which provide ticketing RSS feeds from these platforms. In return, the supplier is compensated for each ticket that is sold, as a commission is added to the basic price of the ticket. Furthermore, live entertainment companies are subject to changes in the platforms' standard terms and conditions, which do not always work to their benefit. In 2014, for instance, Digitick revised its pricing policy by changing the application fee for print-at-home tickets from

€ 0.50 per ticket to € 1.45 per shopping cart. This caused anger amongst organizers, as the price of their tickets suddenly increased (Chapuis, 2014). Thus, using indirect distribution platforms has a financial cost, and weakens companies' ability to control their marketing strategy, especially when setting the prices.

Typically, the data related to customers who book their tickets using this method is not controlled by live entertainment companies. Distribution networks remain the owners of customer files, and – with the exception of Digitick – they refuse to provide them. For operators, this data is necessary for the management of bookings and for the commercial relationship with audiences (sending the tickets, providing information, assistance, etc.). Furthermore, this data is used to enhance the understanding of their customers' tastes and browsing habits, so as to improve the services they offer – for instance by adjusting the websites' ergonomics, diversifying advertised events and developing recommendation engines ("Customers who liked this also liked that"). Data-based behavioral targeting techniques and message personalization methods are used to provide advertisements related to the spectator's interests – including on the websites of other companies and social networks. The aim is also to send commercial messages to spectators via e-mail or text message so that they can buy other products or tickets to other events – which may be sold by external partners. Finally, the data is used to protect the company's and its partners' rights, and to detect illegal actions (bank frauds, delivery frauds, etc.). In this perspective, the data may be used to determine the risk level associated with booking frauds and to identify additional security measures (suspending the order, requesting supporting documents, offering an alternative method for the provision of tickets, etc.).

Databases create value and allow platforms to manage their customer relationships more efficiently; as such, they represent a strategic issue which exposes the tensions between the different players of this market. This has been echoed by various ticketing professionals interviewed throughout this investigation. Indirect distribution platforms have been criticized for capturing data in an exclusive way and using events organized by other parties to maximize customer retention – a process which is then monetized through different methods. When they are asked to provide open access to their data, operators invoke the impossibility to communicate the data extensively because of the current legal restrictions to data dissemination.

Data monetization is an essential activity for distributors. When you buy a ticket, there is an opt-in box – the famous CNIL box. If you tick this box, you accept that the Fnac company may potentially send you any commercial offer, whether directly linked to what you have bought or not. [...] It may also be a problem for us when our event is part of a festival, because providing information on our audience to a distributor like Fnac means potentially giving them the possibility to later advertise events organized by rival companies. (Weezevent)

What I see is that Digitick, for a start, is sending newsletters. They try to advertise certain events. But Ticketnet goes even further: not only do they send information about events, but they also send their partners' offers. For example, when you buy a ticket on Ticketnet, you will receive an e-mail offering a half-price subscription to the *Figaro* newspaper: this subscription is actually advertized by Ticketnet. (Placeminute)

This strategy, used by indirect distribution platforms to manage data in an exclusive way, poses a problem to entertainment companies, as many of them would like to have access to customer files to gain a better understanding of their audiences and develop communication actions. From their point of view, their access to these databases

should be made legitimate as it balances the risk they take and the investments they make when organizing an event – all the more so as the databases have been developed based on their own audiences and their own activity of creating and advertizing events. In this context, there are more and more of them which would prefer using ticketing solutions that allow them to sell their tickets directly, especially via their own websites, and to collect customer data associated with the bookings.

4. How data may be used by live entertainment companies

Direct distribution has generated an entire new market in France. It now includes a large range of companies which provide technical solutions enabling live entertainment companies to sell their tickets themselves and which develop services to capitalize on audience data. In addition to established companies specializing in the creation of software and the provision of digital services, new players – start-ups, communication agencies, etc. – have emerged with the blossoming of online ticketing services. It is thought that this tendency to opt for direct distribution models started in the early 2000s, when music festivals were confronted with declining record sales: as a consequence, it became necessary for them to make as much profit as possible from live performances by optimizing their ticket offer. Nowadays, a number of operators on the market belong to indirect distribution networks – for example, the Tick&Live (Fnac) company, or the Digitick Systems platform and the 3e Acte software (Digitck): this is a sign of a growing interest from major groups for this type of activity.

Several methods may be used to implement the direct distribution of tickets: on-site sale, using software solutions dedicated to the digital management of ticketing services, or self-service ticketing solutions. In return, operators receive compensation for each ticket that is sold, or may charge a fee for using their platform. Having their own ticketing services allows live entertainment companies to collect large data sets and improve their understanding of audiences. Data is used through CRM (Customer relationship management) tools dedicated to capturing, processing, and analyzing customer-based information. More precisely, the aim is to be able to centralize all the contacts, to analyze them, and to segment them depending on different criteria; to launch advertising campaigns, especially via e-mail and text messages; and to manage every interaction with the customers in the database. By grouping and streamlining data analysis, marketing actions and support activities (booking, customer services, etc.), these technologies should allow for the optimization of the company's relationship with its customers, in order to improve customer retention and increase their turnover.

Processing customer data may pave the way to a better understanding of audiences as well as identify target marketing strategies based on spectators' profiles and implement retention programs. It has been demonstrated that 78 % of French theaters use ticketing software and services to send information to audiences; 51 % of them seize this opportunity to send targeted special offers; and 30 % conduct a behavioral analysis of their audiences (Denizot and Petr, 2016, p. 23). These tools are also used within the company for activity monitoring purposes, especially when conducting assessments and producing reports on the firm's activity. In addition to the data they collect about their audiences, entertainment companies may now resort to services from other companies which collect and provide external customer data. A start-up like Delight, for instance, has specialized in grouping and processing databases from entertainment producers and various ticketing sources: they develop algorithms for data analysis and

recommendations, making it possible for companies to reach potential spectators outside their typical audience, based on their tastes. Whether the aim is to increase customer retention or reach new audiences, many interviewed platform managers – especially those who have reached an advanced stage in the development of such technical tools – have stressed the importance of changing our perception of ticketing services: these cannot be reduced to their mere transactional functions but should be considered as a useful way to gain knowledge on audiences and improve customer relationship.

One source of data being used, which is super-efficient and automatically implemented, is people who buy their tickets online and don't print them. The tool detects whether people have printed their tickets – and then they have a routine which will automatically send you a message, 24 or 48 hours before the event: "Dear customer, we are looking forward to having you at our venue tomorrow. Please do not forget to print your tickets. […]" We had one client who used to launch massive marketing campaigns – two or three times a month, with an average segment of 100,000 addresses – a barrage of e-mails, really. We held a few meetings with them recently and they told us that over the last year they had launched 234 campaigns, but that the average segment size was 3,000. So the messages are more targeted, they're better adjusted. (SecuTix).

In order to share certain resources, live entertainment companies may opt for pooled ticketing solutions. Such is the case for the *Fédérations des lieux de musiques actuelles* [Federation of live music venues], the *Syndicat des Musiques Actuelles* [Contemporary music organization], and the *Réseau Ile-de-France de musiques actuelles* [Ile-de-France network for contemporary music], which have launched, in collaboration with the Supersoniks operator, a ticketing project relying on the solidarity between companies. Within this model, several organizations choose the same ticketing solution and implement a pool funding process to develop and maintain these services. Prices are adjusted based on the volume of tickets, which means that small companies will pay less. In this way, it is based on a solidarity principle. Beside this strategy aimed at sharing costs, pooled ticketing services may also be used to share databases. This is the service offered by operators such as SecuTix and Artishoc: they bring companies together around a single ticketing service in which databases are also pooled. The idea is to create a common audience directory that may be accessed by every company so as to have information on their own customers. This system allows companies to retain control over their customer files while pooling the maintenance of this database through a common system designed to update the contact list. This is, for example, the preferred approach for projects developed within the same geographical area: such systems have been implemented in the city of Reims, grouping together the main cultural actors of the region (museums, theaters, operas, etc.) since 2014 around a common ticketing service and a common database.

Other methods have emerged to allow live entertainment companies to use the data generated by ticketing services. Since the summer of 2015, many music festivals in France have started to implement cashless payment and ticket validation systems in the form of electronic cards or wristbands. Spectators may transfer their tickets onto these chip-equipped items or transfer a certain amount of money to make payments during the event. This is a flourishing market and many start-ups have recently positioned themselves – for example MyBee, Nemopay (bought in 2015 by Weezevent) or Yuflow. For live entertainment companies, these smart technologies improve access control but also simplify the transactions and reduce the waiting time in food areas. In return, it is possible to collect data on the customers' consumption habits, their comings and goings in the different areas, and the popularity of these areas: the analysis of this data may be

used to optimize space management and physical flows management (spectators, stocks, staff, etc.) (Salaun, 2016). From a marketing point of view, this data may inform advertising campaigns based on audience behavior.

The introduction of yield management practices within the entertainment industry is a phenomenon that has been observed for several years now in France. The Tech4Team company has been a leader in the field, drawing from experiments conducted in the United States. A widespread practice in the hotel industry and within airlines and rail companies, these dynamic ticketing management techniques are based on price differentiation. The idea is to maximize the generated turnover and the venue's rate of occupancy by controlling the volume of tickets sold for each price level. For example, this can be achieved by offering reduced prices when the seats are booked long in advance – or at the last minute. It is also possible to use the availability of seats as a pricing factor by changing – based on the demand – the number of seats sold on a certain platform, or the categories of seats on offer. In the end, yield management means streamlining practices which can already be observed in entertainment venues, where professionals in charge of ticketing have already made such adjustments – although in a less systematic and sophisticated manner. Nowadays, it is in the world of festivals and the world of sports that the use of yield management techniques based on ticketing data are the more successful. In France, the final of the 2016 Coupe de la Ligue (a soccer competition) was the first sport event using real-time dynamic pricing. Seen as a great prospect for ticketing services within the entertainment industry, yield management is still in its infancy. Among the underlying principles of this method, flexible pricing is the more challenging one: many entertainment companies use more traditional approaches when it to comes to ticketing, and questions may be raised, in the case of subsidized companies, about how this principle may be compatible with public service principles. According to a platform manager interviewed in this research, it seems that it is also complicated to lower the prices on platforms where tickets are usually displayed directly to the final customer.

I don't think this model can work, because it's very complicated in the ticketing industry to lower the prices. [...] When you visit a ticketing platform, the price given is the base price. For a plane ticket, before getting the price of your ticket, there are always two or three steps: the price is not displayed directly to the final customer. If your ticketing service gives the price directly, what are you going to say to a customer who noticed that the prices are lower ten days later? That's what I always tell my clients: you have the right to increase your prices, but never to lower them. If you lower them, you're going to alienate those who bought their tickets before that. (Placeminute)

Because of the intense competition and the multiplication of operators, direct distribution offers seem to move away from an isolated and autonomous ticketing model; rather, they tend to implement a 360-degree feedback model, offering a complete ecosystem for the management of marketing processes and ticketing services. Progressively, platforms and software solutions have integrated more and more dimensions to their initial base of ticketing services, from multi-support and multi-channel sales to customer management – including access control solutions, customer services, 3-D visualization of venues, dynamic pricing, cashless payment, and accounting data. The idea with 360-degree offers is to provide access, via a single platform which is customizable based on the entertainment company's profile, to an extensive range of functionalities covering as many aspects as possible of the company's activities. For ticketing operators, these extensions rely on in-house developments, but also on external partnerships, through agreements concluded with other companies which have developed technologies in a specific domain and are bringing their own added value to

the service offer. The versatility of ticketing services is aimed at facilitating the coordination and management of resources related to marketing and communication with audiences, so as to develop a consistent strategic approach.

5. How may entertainment companies acquire data?

Although this issue receives more and more attention, the adoption of new data management technologies by entertainment companies should not be taken for granted. While during the interviews platform managers have highlighted the interest generated by their initiatives, gladly providing successful examples, they have also reported certain challenges in the performing arts industry regarding how to acquire data. Integrating digitalized ticketing services has not always led to an extensive use of the generated data. Several factors may explain this situation. Using large volumes of data is a process whose implementation may be complex and expensive for entertainment companies, as they do not always have the required in-house resources and competencies to manage them and equip themselves with adequate software infrastructure. Beyond the question of the required resources, it is the very organization of the companies and the functioning of the teams that may prove a hindrance, because the process of adapting business line processes and managing change is a challenging one. A parallel may be drawn with the tendency of entertainment companies to "play down the importance of support functions in favor of their core activities"; in other words, the "requirements in terms of digital resources are placed in the common, undifferentiated pot of requirements as legal, marketing, accounting requirements, etc." (Nicolas, 2015).

In general, ticketing operators point to a lack of vision from businesses. Many live entertainment companies have only started to catch a glimpse of what may be achieved with this data, and their understanding of what is at stake remains limited. For instance, the fact that certain companies consider their databases as a stock (which implies a static approach) rather than a data feed (which requires constant maintenance) goes to show how their representation is out of step with the reality of data processing (Artishoc, 2016, p. 29). Accepting data-based analyses and integrating them into the actions of a company "is based on a quantitative culture – and this is not a widespread approach" (Delort, 2015, p. 73). Resorting to these technologies also implies to have a medium- or long-term vision, as it takes time to implement an efficient data system. The manager of Artishoc, for instance, has explained that it typically takes a year after implementing their software within an entertainment venue to produce data that can be considered consistent ("data integrity"), and two to three years to produce data considered as intelligent ("data intelligence"). In this context, many businesses are still at a stage where they conduct strategic experiments in terms of big data – but too often it is not followed by meaningful action.

They discover data they had never seen before. Recently, for example, when we finished integrating all their archives, they discovered that they were able to establish a kind of ideal customer profile for their core subscribers, with very specific attendance profiles. They had never seen such aggregate data. Maybe they had the impression that they knew their audience, but they never had any actual data. And this has allowed them to develop lots of ideas about marketing methods and retention processes. They are only starting to understand the potential of this data. (Supersoniks)

First, there is both a financial cost and a staffing cost. You need someone to process the data. And in general, a lot of major events are still being managed by associations which, for a vast majority

of them, operate with teams made up of volunteers (few of them are actually permanent employees) and they do not always have a lot of knowledge on digital issues. [...] It's like with many other things – they talk about it, but few of them actually do it. It is often the major companies who do it. [...] In our client portfolio, I'd say it concerns almost exclusively major groups – and among those that I meet, many of them say they are willing to approach this issue, but few of them are in an advanced stage at the moment. (Weezevent)

Lastly, the interviews conducted with ticketing platform managers have revealed inequalities across businesses when it comes to acquiring solutions to use data. The differences that have been observed are firstly related to the lines of business concerned – with music festivals, for instance, being in a particularly advanced stage of this process as compared with businesses such as theaters, which favor more traditional communication and marketing approaches. Moreover, there seems to be a divide between public and private entertainment industries. Subsidized venues appear to be more mature regarding these solutions because they have a larger workforce and have already initiated in-house reflections on their audiences and retention formulas. Conversely, private venues seem to be characterized by limited staff, which leads them to reduce their reflection on audiences to the bare minimum and outsource most of the ticketing services to indirect distribution platforms. The last diverging point that we may point out is related to the size of live entertainment businesses, as larger and wealthier venues seem more capable of positioning themselves regarding these technologies than smaller venues. These fault lines show, if needed, that there is no homogeneous pattern in the expansion of the big data phenomenon; rather, the way these technologies are acquired, as well as the implementation of supporting strategies, are different depending on the type of live entertainment company, their resources, and their field of activity.

Conclusion

The analysis provided in this paper regarding the live entertainment industry in France shows that the nature of the data generated by ticketing platforms and services, as well as its sources, its volumes, and the methods to capitalize on them, are multiple and have sparked the interest of different market players.

We can observe that indirect distribution platforms have adopted an exclusive strategy to capture and manage data; this data is used to enhance their services, manage bookings and customer relationships, and develop their commercial activities. As for direct distribution platforms, their strategy is to improve access to data and build services based on their customer files. By relying on these technical solutions, entertainment companies are then able to create their own ticketing systems, collect audience data and use them as they choose (customer relationship management, customer targeting, etc.). New businesses have also emerged and have been developing services which focus on ticketing services and data analysis – including new cashless systems and yield management techniques. At the level of live entertainment companies, resorting to informatized ticketing services raises questions regarding the companies' readiness to use the data that is associated to them. At least, we can say that nowadays this appropriation is highly differentiated, as the practices are in a more or less developed stage depending on the companies' profiles and fields of activity.

The advantages provided by the possession of data is a cause for concern in the entertainment world, because of their concentration and of the way direct distribution platforms may block access to them: as such, these platforms represent highly powerful players in terms of audience and visibility. In the face of this challenge, there have been

more and more pressing demands in the industry to change this situation and open access to data so that live entertainment companies may recapture the value generated from marketing their shows via these platforms. A perspective that has been frequently mentioned is to encourage the use of trusted third-parties, which may bring the different market players together and combine their data using a collaborative approach (Nicolas, 2015). The idea then would be to pool the data within an interprofessional entity which would play the role of a trusted third-party and be in charge of its governance, laying down the modalities regarding how to use and share the data, so as to create value for industry players.

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